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Section 1 **of** 4

Title: 222S Lab Analytical Report for Tank 241C106 Grab Samples 6C-96-1 Thru 6C-96-16 & 6C-96-17-FB [Pgs 1 Thru 573]

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"222-S LABORATORY ANALYTICAL REPORT FOR TANK 241-C-106, GRAB SAMPLES 6C-96-1 THROUGH 6C-96-16 & 6C-96-17-FB."

Ruth A. Esch
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222-S LABORATORY ANALYTICAL REPORT FOR TANK 241-C-106, GRAB SAMPLES 6C-96-1 THROUGH 6C-96-16 & 6C-96-17(FB)

PROJECT COORDINATOR: RUTH A. ESCH

Prepared for the U.S. Department of Energy
Office of Environmental Restoration
and Waste Management

by

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Part I consists of pages 1 through 2462 plus 107.1 through 107.16, 681.1 1725.1, and pages ii, 2, 21, 32, 39, 53, 65, 75, 109, 126, 673, 1197, 1303 and 2426 were intentionally left blank.

Part II consists of pages 2-1 through 2-139.

NARRATIVE

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FINAL REPORT FOR TANK 241-C-106
GRAB SAMPLES 6C-96-1, THROUGH 6C-96-16 AND 6C-96-17 (FB)

This report presents final analytical results for grab samples taken from tank 241-C-106 risers 1 and 7 between February 8, 1996 and March 1, 1996. Samples were received and subsampled at the 222-S Laboratory. Analyses were performed in accordance with the *Tank Sampling and Analysis Plan* (TSAP) for this tank (Schreiber, 1996), the *Safety Screening Data Quality Objective* (DQO) (Dukelow, et al. 1995), and the *Data Quality Objectives for Tank Farms Waste Compatibility Program* (Fowler, 1995).

In addition to the safety screening and waste compatibility analyses, a number of additional, non-routine tests were requested on sludge material from this tank. The results of these tests are included as Appendices.

Appearance and Sample Handling

Grab samples were taken from tank 241-C-106 during two separate sampling events. The first sampling was on 2/8/96; four samples were collected. The samples were received at the 222-S Laboratory on 2/8/96. Upon loading the samples into the hotcell for breakdown and subsampling, the four sample bottles were placed into a water bath to bring the samples to tank temperature. Due to a miscommunication of instructions the water bath heated to dryness resulting in the loss of the two supernate samples (6C-96-1 and 6C-96-2), and drying out of sludge sample 6C-96-3. The second sludge (6C-96-4) was overheated to ~200° C, but the jar remained intact with no apparent drying of the sample. A description of this occurrence may be found in the memo dated February 20, 1996, from R. A. Esch to J. L. Deichman included in the interim report (Part II of this document).

The tank was re-sampled on 2/24/96 (riser 1) and 3/1/96 (riser 7) to collect sufficient samples for the analyses. The samples were received at the 222-S Laboratory the same days that they were collected.

The information presented in Table 1 represents the appearance of the samples at the time that they were loaded into the hotcell at 222-S Laboratory. Changes in sample appearance that occurred after the samples were in the hotcell are described below.

Attachments 1 and 2 are provided as references for depicting the sample breakdown in the hotcell as well as relating the tank farm customer identification numbers with the 222-S Laboratory sample numbers. The subsamples generated in the laboratory for analysis are identified in these diagrams with their sources shown.

Appearance

As stated above, after the first set of samples were overheated, samples 6C-96-1 and 6C-96-2 were lost because the sample jars broke. Although sample 6C-96-3 was overheated to dryness, a decision was made to homogenize the sample with a mortar and pestle and perform a limited number of analyses. Since sample 6C-96-4 appeared to be relatively unaffected by the overheating, a decision was made to proceed with the planned breakdown of this sample.

When samples 6C-96-15 and 6C-96-16 were loaded into the hotcell, they both had approximately 10% settled solids. The laboratory was asked to attempt to collect the crystalline material from sample 6C-96-15 to determine if oxalate was present. However, after standing at ambient hotcell temperature for about a week, most of the solids had dissolved, leaving only a trace of solids on the bottom of the sample bottles. No crystalline material remained in sample 6C-96-15. Since there were insufficient solids to collect for analysis, a decision was made to perform a limited set of analyses on the supernate of sample 6C96-15. Sample 6C-96-16 is being held for possible future analysis.

Table 1: Appearance Information for Tank 241-C-106 Grab Samples

6C-96-1	1	2/8/96	2/8/96	404	~66	Trace	Clear yellow liquid; no organic layer; trace of yellow/brown solids and rust colored pieces of material
6C-96-2	1	2/8/96	2/8/96	404	~66	Trace	Clear yellow liquid; no organic layer; trace of rust colored flakes
6C-96-3	1	2/8/96	2/8/96	432	~38	100%	Brown/black solids with no apparent supernate or organic layer - dried sludge appeared to have a large quantity of crystalline material
6C-96-4	1	2/8/96	2/8/96	434	~36	100%	Brown/black solids with no apparent supernate or organic layer - sludge contained small pieces of hard white granular material
6C-96-5	1	2/23/96	2/24/96	420	~50	20%	Slightly cloudy yellow liquid; no organic layer; red/brown solids
6C-96-6	1	2/23/96	2/24/96	420	~50	80%	Slightly cloudy yellow liquid; no organic layer; red/brown solids
6C-96-7	1	2/23/96	2/24/96	434	~36	100%	Brown solids with no apparent supernate or organic layer - sludge contained large pieces of very hard solid material
6C-96-8	1	2/23/96	2/24/96	434	~36	100%	Brown solids with no apparent supernate or organic layer - no chunks of harder material were noted
6C-96-10	1	2/23/96	2/24/96	441	~29	100%	Brown solids with no apparent supernate or organic layer - sludge contained small granular pieces of material
6C-96-11	7	3/1/96	3/1/96	421	~53	82.3%	Cloudy yellow liquid; no organic layer; red/brown solids
6C-96-12	7	3/1/96	3/1/96	409	~65	1.2%	Clear yellow liquid; no organic layer; red/brown solids
6C-96-13	7	3/1/96	3/1/96	426	~48	~100%	Red/brown solids with a trace of supernate on top - no apparent organic layer
6C-96-14	7	3/1/96	3/1/96	426	~48	~100%	Red/brown solids with a trace of supernate on top - no apparent organic layer
6C-96-15	7	3/1/96	3/1/96	426	~48	14%	Clear yellow liquid; no organic layer; red/brown solids - solids appeared to have white crystalline material on the surface at the time the sample was loaded into the hotcell
6C-96-16	7	3/1/96	3/1/96	428	~46	9%	Slightly cloudy yellow liquid; no organic layer; red/brown solids - no visible crystalline material
6C-96-17 FB	1	2/23/96	2/24/96	264	206	None	Clear colorless liquid; no organic layer; no solids

* Sample depth is measured from the top of the riser to the mouth of the sample bottle

** Sample elevation is measured from tank bottom to mouth of the sample bottle

Breakdown

After the initial observation of the appearance of the samples a decision was made as to which samples would be analyzed and the sample type for several of the samples was changed due to the presence or absence of solids in the sample. Table 2 presents this information.

The supernate samples were ultra filtered in a centrifuge cone prior to subsampling for analysis. They are indicated as "Supernate" for the segment portion in the results summary table (Table 3).

The TSAP requested that the sludge samples be ultra filtered for maximum separation of solids and liquids. For comparison of this method to the standard practice of centrifugation and decantation of the supernate, a control sample of unfiltered solids was analyzed. These solid portions are identified as "Control Sample" for the segment portion. A small portion of sludge was centrifuged in tapered cones to obtain bulk density and dry particle density information. These segment portions are identified as "Centrifuged Solids". Any analyses performed on the "raw" uncentrifuged sludge are identified as "Sludge" for the segment portion.

Upon centrifugation of the first sludge sample, a separable organic layer was observed (identified on the table as "Potential Organic Layer"). Notification was made to East Tank Farms Shift Operations manager and to the program contact. A change was made to the TSAP to insert a step to precentrifuge the sludge to remove any separable organic material prior to filtration. The ultra filtered solids are identified as "Filtered Centrifuged Solids" as the segment portion. The liquid obtained from the filtered solids is identified as "Interstitial Liquid". Liquid removed from the precentrifugation step is identified as "Decanted Supernate".

Since the precentrifugation step separated most of the liquid from the sludge, there was insufficient filtered interstitial liquid remaining to perform all of the requested liquid analyses on this sample portion. For some of the sludges, there was enough decanted supernate from the precentrifugation step to perform some of the liquid analyses. For sample 6C-96-10, all of the decanted supernate was lost during the precentrifugation. In either case, analyses were assigned to the "Interstitial Liquid" and the "Decanted Supernate", according to the priority given from the Safety Program, to the extent that sample was available.

The potential organic layer (oil) that was separated after the centrifugation of samples 6C-96-7, 6C-96-10, 6C-96-11 and 6C-96-13 were analyzed for energetics by differential scanning calorimetry (DSC) and percent moisture by thermogravimetric analysis (TGA). The material from samples 6C-96-7 and 6C-96-13 was then shipped to the Pacific Northwest National Laboratory (PNNL) for further identification by gas chromatography/mass spectroscopy (GC/MS) and total organic carbon (TOC) analyses. The remaining two samples, 6C-96-10 and 6C-96-11, were analyzed for TOC and $^{238/239/240}Pu$ at 222-S Laboratory.

Table 2: Breakdown Information for Tank 241-C-106 Grab Samples

6C-96-1	Supernate	Sample lost by overheating, no analysis performed.
6C-96-2	Supernate	Sample lost by overheating, no analysis performed.
6C-96-3	Sludge	Sample dried due to overheating, special analysis performed.
6C-96-4	Sludge	Overheated, ultrafilter to separate solids and liquids, then subsample each phase.
6C-96-5	Supernate	Ultrafilter supernate in centrifuge at tank temperature, then subsample.
6C-96-6	Sludge	Archive for possible future analysis.
6C-96-7	Sludge	Ultrafilter to separate solids and liquids, then subsample each phase.
6C-96-8	Sludge	Remove separable supernate and subsample sludge for caustic demand, viscosity, particle size and compatibility mixing studies with AY-102.
6C-96-10	Sludge	Ultrafilter to separate solids and liquids, then subsample each phase.
6C-96-11	Sludge	Ultrafilter to separate solids and liquids, then subsample each phase.
6C-96-12	Supernate	Ultrafilter supernate in centrifuge at tank temperature, then subsample.
6C-96-13	Sludge	Ultrafilter to separate solids and liquids, then subsample each phase.
6C-96-14	Sludge	Remove separable supernate and subsample sludge for caustic demand, viscosity, particle size and compatibility mixing studies with AY-102.
6C-96-15	Supernate	Subsample supernate for metals (ICP) and anions (IC) analysis.
6C-96-16	Supernate	Archive for possible future analysis.
6C-96-17 FB	Field Blank	Subsample for liquid analyses.

The DSC and TGA results obtained for the oils gave very inconsistent results. It was believed that one cause of the inconsistency may have been the presence of supernate or sludge particles trapped in the oily material. Therefore, when the oil was separated from sample 6C-96-4 an attempt was made to "rinse" the oil to remove any sludge material. It was suggested by the Safety Program contact (H. Babad) that a solution of sodium nitrate (0.024 M solution) be used to perform the rinsing. The concentration of sodium nitrate to use for the solution was determined by taking the average nitrate concentration measured in the two supernate samples.

The sodium nitrate was added in a ratio of 17.26 g solution to 1 g of oily material. After the addition, foaming was observed that took approximately 30 minutes to "break up" leaving a clear red/brown (root beer colored) solution with a small amount of settled solids. The solution was centrifuged in an attempt to recover the oil. Only a very slight ring of material separated. The program contact was informed of the situation and a decision was made to only analyze the sample for $^{239/240}$Pu. The results corrected for the dilution factor of 17.26 are 7.35e-2 μCi/mL for the sample and 7.27e-2 μCi/mL for the duplicate.

Analytical Results Summary

The data summary table (Table 3) included in this report compiles all of the results for each subsample analyzed from the samples received. Through the visual inspection during sample breakdown it was noted that the subsamples appeared to be non-homogeneous (see sample description in Table 1). The numerous high relative percent differences (RPDs) between sample and duplicate results may be attributed to this non-homogeneity.

To verify this assumption one sample, the filtered centrifuged solids portion of sample 6C-96-10, was redigested for the fusion preparation for radionuclide analyses. In the original digest, RPDs for the analytes detected ranged from 88% -98%. Those for the reprep were much lower (0.66% - 10.1%). However, this increase in precision may just be coincidental. It should be noted that the sample results varied considerably between the two digests. Both sets of results (S96T000571 and reprep S96T002718) are reported in Table 3 to show the variability in the data as a result of sample non-homogeneity. No other samples were redigested for RPD failures.

Appendix 1 contains the chemist's report, *Processing and Sampling Results from Breakdown of Tank 241-C-106 Grab Samples.*

Appendix 2 contains the chemist's report, *Compatibility Study and Organic Extraction Results.* This report describes the waste compatibility study performed on mixtures of sludge from tank C-106 with supernate and sludge material from tank 241-AY-102.

The test plan for the extraction requested analyses to check for the presence of volatile compounds other than the extractant (methylene chloride) for informational purposes only. Semi-volatile organics, normal paraffin hydrocarbon and tributyl phosphate analyses were performed. The samples were spiked with a surrogate standard (hexadecane) with recoveries within method limits. The calibration check standards were within the method limits. Some of the results presented in Table 3 are proceeded with a qualifier. These are defined as: U = concentration was determined to be less than the quantitation limit; and J = estimated concentration of compound.

Appendix 3 contains the chemist's report, *Caustic Demand -- Tank C-106 Sludge.* This report describes the caustic demand study performed on raw sludge material from samples 6C-96-8 and 6C-96-14.

Internal memo number 75764-PCS96-050, "C-106 Viscosity and Particle Size Distribution Results" presents the results and discussion for the viscosity analysis for the supernate and the particle size distribution analysis for the sludge from samples 6C-96-8 and 6C-96-14. This report was included in the Interim report (part II of this document). The viscosity determination for the sludge from these two samples was not completed at the time of this report generation. The 222-S Laboratory is checking possible arrangements with PNNL laboratory to perform this analysis. However at this time no funding has been identified for this work.

Safety Screen Concerns

DSC - Differential Scanning Calorimetry

The DSC analyses were performed in duplicate on direct subsamples. The exothermic energy based on the dry weight of the subsample was calculated for all subsamples. The average of the thermogravimetric analysis (TGA) results for each subsample was used in the dry weight correction for that subsample. The standard recoveries for this analysis were within the required limits.

Five of the 39 subsamples submitted for analysis exceeded the notification limit of 480 J/g. Appropriate notifications were made. Two subsamples (S96T001527 and S96T002829) had no exotherm identified for the sample portion, but had a large exotherm (> 480 J/g) for the duplicate result. Both of these samples were rerun and the results were less than the notification limit in each case. Original and rerun results are reported in Table 3. The reruns are indicated with a "1" after the sample number. The other three samples were not reanalyzed.

High RPDs (>20%) were reported on 11 of the 39 subsamples. The high RPDs may be attributed to sample non-homogeneity. As noted above, only two samples were reanalyzed.

TGA - Thermogravimetric Analysis

The TGA analyses were performed in duplicate on direct subsamples. In most cases, the total weight loss that occurred below 200°C was reported as the % moisture of the sample. Weight loss steps that occurred above this temperature were not reported.

For 5 of the 39 subsamples submitted for analysis there was a second weight loss step that occurred at, or slightly above, 100°C that was not included in the % moisture result. For these samples, the chemist indicated that the weight loss was not from water. Four of these were interstitial liquids that were filtered from the sludges, and the fifth subsample was raw sludge material. Based on the observed appearances of the samples during breakdown, this weight loss could be from the presence of the organic oil material that appeared upon centrifugation of the raw sludge. It is possible that there may have been traces of this material that remained in the sludge after the "pre-centrifugation" step and was filtered out of the sludge with the interstitial liquid. For all but one of these samples there is a sharp endothermic peak on the DSC endotherm at this temperature that would correlate with the presence of organic material.

High RPDs (>20%) were reported on 5 of the 39 subsamples. The high RPDs were attributed to sample non-homogeneity and no reruns were performed. Two revisions of the procedure were used for this analysis. Analytical results would not differ because of this change.

Bulk Density

The bulk density values ranged from 1.45 to 1.76 g/mL with an average of 1.59 g/mL for the five centrifuged. The total alpha notification limit was re-calculated, as per the TSAP requirement, based on the highest bulk density result. Data for bulk density can be found in the hotcell notebook, WHC-N-912-1.

AT - Total Alpha

Total alpha activity (AT) was determined on direct subsamples for the supernates and on a fusion digest for the solid subsamples. The fusion preparation is indicated with an "F" in the aliquot class column (#A) in Table 3. There was insufficient material for AT analysis of the interstitial liquids filtered from the sludge samples.

The highest result of 3.67 μCi/g is nearly a factor of ten below the notification limit of 34.9 μCi/g. This notification limit was recalculated based on the highest bulk density result of 1.76 g/mL. The standard recoveries for this analysis were all within the required limits. There were high RPDs (> 20%) for three sludge samples and the field blank. One of the sludge samples was redigested and reanalyzed. The RPD on the reprep sample was less than 4%. As described earlier, only the one sludge sample was redigested for RPD failures. The high RPD of the field blank is attributed to low alpha activity, and no rerun was requested.

Compatibility Program Concerns

DSC - Differential Scanning Calorimetry - Energetics Decision Rule

For waste compatibility energetics decision concerns, the exotherm/endotherm ratio of the liquid samples is evaluated. This ratio must be less than one (1). This requirement is satisfied for all samples. The actual exotherm and endotherm results and the calculated ratios for those liquids that exhibited exotherms are presented in Table 4. The calculation of this ratio is not applicable for samples that did not exhibit exotherms. The data for endotherms and temperatures was obtained from the raw data. Only the endothermic energy attributed to water loss (near 100 °C) is used on the calculation. Two revisions of the procedure were used for this analysis. Analytical results would not differ because of this change.

Specific Gravity (Sp.G.) - Flammable Gas Accumulation Decision Rule

The Sp.G. of the waste is currently used for determination of the potential to cause an accumulation of flammable gases. The flammable gas decision rule requires that the weighted mean Sp.G. not exceed 1.41.

Seven subsamples were analyzed for specific gravity. The results ranged from 1.14 to 1.25.

Plutonium ($^{239/240}Pu$) - Criticality Decision Rule

$^{239/240}Pu$ concentration was measured for two supernate samples, three interstitial liquids and one decanted supernate to evaluate criticality safety for waste transfers. Insufficient sample material was available for this analysis on all interstitial liquid subsamples. The results for the supernate and decanted supernate subsamples, except the duplicate on supernate subsample S96T001024, were below the criticality prevention limit of 0.80 μCi/mL stated in the compatibility DQO. The one duplicate result was 0.81 μCi/mL. For the interstitial liquids, the results were in the range of 0.812 μCi/mL to 0.867 μCi/mL . There are no requirements for notification for this limit. The standard recoveries and RPDs for the liquid analyses were all within the required limits.

^{241}Am - Americium - Criticality Decision Rule

^{241}Am analysis was performed on two (2) of the supernate samples. Insufficient sample material was available to perform this analysis on the interstitial liquid subsamples. The results for samples S96T000855 and S96T001024 were less than the detection limit. For sample S96T000539 the results were only slightly above the detection limit of 1.20e-02 μCi/mL and therefore, had high RPDs. No rerun was requested. The standard recoveries for the liquid analyses were within the required limits.

Inorganic Analyses

pH

The pH analysis was performed on supernate, filtered centrifuged sludge, and the field blank samples. The average result for the field blank was 8.26. The sample results ranged from 10.09 to 12.52. The standard recoveries and RPDs were all within the required limits.

Ion Chromatography (IC)

The IC analysis was performed on direct subsamples of liquid samples, as indicated by a blank in the aliquot class column in Table 3. The solid subsamples were prepared by performing a water digest. This is indicated with a "W" in the aliquot class column in Table 3.

The standard recoveries for this analysis were within the required limits. High RPDs (> 20%) were reported on eight (8) of the 14 subsamples submitted for analysis. These high RPDs were attributed to sample inhomogeneity. The sludge samples were observed to contain pieces of material that appeared to be salt crystals. One triplicate analysis was performed on sample S96T000854 and results matched those of the duplicate. Additional reruns would not significantly improve the results due to the difficulty in obtaining representative samples of the crystalline material.

Table 4

Additional DSC Results for Tank 241-C-106
Waste Compatibility Study

Risers 1 and 7

Sample ID		Exothermic Energy (Joules/g)	Temp (° C)	Endothermic Energy (Joules/g)	Temp (° C)	Energy Ratio *
S96T001553						
6C-96-13	Samp	208.1	393.8	970.5	103.3	0.21
Organic Layer	Dup	167.9	429.7	665.4	90.4	0.25
S96T001566						
6C-96-13	Samp	118.9	371.2	1574.7	109.3	0.08
Interstitial. Liq.	Dup	96.8	373.2	1575.4	105.3	0.06
S96T001567						
6C-96-10	Samp	215.1	399.3	1401.2	109.3	0.15
Organic Layer	Dup	142.4	397.5	1395.2	107.3	0.10
S96T001681						
6C-96-11	Samp	5.5	373.0	1451.6	107.3	0.00
Interstitial. Liq.	Dup	5.5	366.9	1506.2	105.3	0.00
S96T002829						
6C-96-14	Samp	0.0	n/a	993.7	101.3	0.00
Slurry w/AY-10	Dup	580.2	283.8	1049.4	101.3	0.55
S96T002829						
6C-96-14 rerun	Samp	0.0	n/a	1338.3	97.3	0.00
Slurry w/AY-10	Dup	77.8	388.5	799.5	93.3	0.10

Energy Ratio = Exothermic Energy /Endothermic Energy
* - This ratio must be < 1 for Compatibility Energetics
n/a - Temperature not applicable when no exotherm observed

Occasional preparation blanks for nitrate and chloride showed results above the detection level. The levels of these analytes in the preparation blank are inconsequential when compared to the result for the sample. This contamination does not impact sample data quality.

Inductively Coupled Plasma Spectrophotometry (ICP)

The liquid subsamples were prepared for analysis by an acid adjustment of the direct subsample. This is indicated by a "D" in the aliquot class (A#) column in Table 3. Solid subsamples prepared for analysis by performing an acid digest are indicated by an "A", and fusion preparation is indicated by "F".

Only the QC for the required analytes (Al and U) were reviewed for this report. Other "opportunistic" analytes are included but were not reviewed for adherence to QC parameters. RPDs which exceed 20% are the result of sample inhomogeneity and reruns would not significantly improve the results. Table 5 shows a comparison of the result of the sample with that of the serial dilution for those required analytes that had a spike recovery outside the 75% - 125% range as set by the *Quality Assurance Plan for the 222-S Laboratories* (LabQAP). Serial dilutions are performed by diluting a sample by five. The results from the serial dilution may be found in the raw data and are signified by an "_L" at the end of the sample number. For acceptable performance the percent difference between the serial dilution and the undiluted results must be ≤10%. The results indicate that the accuracy of the analyses was acceptable. The standard recoveries for this analysis were within the required limits.

Occasional preparation blanks for aluminum showed results above the detection level. The levels of these in the preparation blank are inconsequential when compared to the result for the sample. This contamination does not impact sample data quality.

NH_3 - Ammonia

Ammonia was requested as an additional analysis and was performed on two (2) of the supernate samples and the field blank. All results were less than the detection. The standard recovery for this analysis was within the required limits.

TOC - Total Organic Carbon

TOC by persulfate analysis was performed on eight (8) solid subsamples, nine (9) liquid subsamples, and the field blank. The standard recoveries were within the required limits for all analyses. A high RPD occurred on sample S96T00854. No rerun was requested. Low spike recovery (82% and 77% respectively) was observed on samples S96T001551 and S96T001560. No rerun was requested. Low concentrations of TOC were noted in some preparation blanks, however the level is inconsequential when compared to the result of the sample. This contamination does not impact sample data quality. Two revisions of the procedure were used for this analysis. Analytical results would not differ because of this change.

Table 5

ICP Serial Dilution Results for Tank 241-C-106
Waste Compatibility Study

Risers 1 and 7

Sample ID	Analyte	Sample Result (µg/mL) Undiluted	Serial Dilution Result (µg/mL)	Percent Difference
S96T000538				
6C-96-5	U	1.87E+03	1.98E+03	6.0
Supernate				
S96T000556				
6C-96-7	Al	5.17E+04	5.27E+04	2.0
Filtd Cent Sld				
S96T000572				
6C-96-10	Al	5.18E+04	5.16E+04	0.4
Filtd Cent Sld				
S96T001023				
6C-96-12	U	1.48E+03	1.49E+03	0.5
Supernate				
S96T001542				
6C-96-4	Al	6.20E+04	6.49E+04	4.8
Filtd Cent Sld				
S96T001690				
6C-96-11	Al	3.81E+04	4.13E+04	8.3
Cent Sld				

Percent Difference = [(ABS(Sample - Serial Dilution))/Sample] X 100

TOC by coulometry analysis was performed on seven (7) liquid subsamples and the field blank. None of the results exceeded the notification limit of 30,000 μgC/mL (dry weight basis). The standard recovery, spike recovery and RPDs for this analysis were within the required limits.

TIC - Total Inorganic Carbon

TIC analysis was performed on two of the supernate samples and the field blank. Additional analyses were not possible due to insufficient sample material. The standard recovery, spike recovery and RPDs for this analysis were within the required limits.

TIC analysis was performed on four (4) of the filtered centrifuged solid subsamples and one (1) of the unfiltered centrifuged solid subsamples. Additional analyses were not possible due to insufficient sample material. The standard recovery, spike recovery and RPDs for this analysis were within the required limits. Two revisions of the procedure were used for this analysis. Analytical results would not differ because of this change.

Radionuclide Analyses

Through the visual inspection during sample breakdown it was noted that the subsamples appeared to be non-homogeneous. The high RPDs between sample and duplicate radionuclide results may be attributed to this non-homogeneity.

^{90}Sr - Strontium 90

^{90}Sr analysis was performed on two (2) of the supernate samples. The standard recoveries and RPDs for this analysis were within the required limits. Several preparation blanks showed results for strontium-90 slightly above the detection level. The levels in the preparation blanks are inconsequential when compared to the results for the samples. This does not result in an impact on sample data quality.

High RPDs were observed on two (2) interstitial liquid samples (S96T00563 and S96T001566). No reruns were requested.

GEA - Gamma Energy Analysis

GEA analysis was performed on 11 solid subsamples, nine (9) liquid subsamples, and the field blank.

Only cobalt-60 and cesium-137 and the associated QC were considered in this report. Additional analyses were not possible due to insufficient sample material. The standard recovery and spike recovery for this analysis were within the required limits. High RPDs occurred for Cs-137 on samples S96T000545 and S96T000571. No reruns were requested because of insufficient

sample material. Two revisions of the procedure were used for this analysis. Analytical results would not differ because of this change.

Actual detection limits for GEA analytes are not currently available. The latest GEA software does not currently report a minimum detectable activity (MDA). If an analyte is reported as "less than", the value reported is the detection limit.

Plutonium ($^{239/240}$Pu)

$^{239/240}$Pu concentration was measured for five (5) filtered centrifuged, one (1) centrifuged solid, and five (5) control subsamples. The results ranged from <0.0217 μCi/g to 1.65 μCi/g . The standard recoveries and RPDs were all within the required limits. Control subsample S96T001036 had a high RPD. No rerun was requested.

^{241}Am - Americium

^{241}Am analysis was performed on five (5) filtered centrifuged, one (1) centrifuged, and five (5) control subsamples. High RPDs showed on filtered centrifuged subsamples S96T000571, S96T001531, and control subsample S96T001541. The standard recoveries and preparation blank analyses were within the required limits. No reruns were requested. Two revisions of the procedure were used for this analysis. Analytical results would not differ because of this change.

^{99}Tc - Technetium 99

^{99}Tc analysis by liquid scintillation was performed on two (2) of the supernate samples and six (6) sludge samples. The Tc-99 analysis was performed on direct subsamples of liquid samples, as indicated by a blank in the aliquot class column in Table 3. Solid subsamples were prepared for analysis by performing a fusion preparation and are indicated by "F".

The standard recovery and blanks for this analysis were within the required limits. High RPDs were reported on samples S96T001024, S96T001563, and S96T001689. No reruns were requested because of insufficient sample material. Two revisions of the procedure were used for this analysis. Analytical results would not differ because of this change. The spreadsheet calculations used are all labeled LA-438-101, Rev D-2, even for those worklists that show revision B-3 was used. There are no calculation differences between the two procedure revisions.

Procedures

Table 6 lists the analytical procedures used for performing the safety screening analyses. Abbreviations for analyses are defined in the table notes.

Table 6: Analytical Procedures

DSC	Liquid/Solid	N/A	LA-514-113 Rev. B-1 & LA-514-113 Rev. C-1 LA-514-114 Rev. C-1
TGA	Liquid/Solid	N/A	LA-514-114 Rev. C-1 LA-560-112 Rev. B-1
Sp.G.	Liquid	N/A	LA-510-112 Rev. C-3
% Water	Liquid Solid	N/A	LA-564-101 Rev. F-1
pH	Liquid Solid	N/A	LA-212-106 Rev. A-0 LA-212-105 Rev. A-0
NH_3	Liquid	N/A	LA-631-001 Rev. B-2
OH (Caustic Demand)	Sludge	N/A	Herting Lab Instruction*
IC: Cl^-, F^-, PO_4^{3-}, SO_4^{2-}, NO_3^-, NO_2^-	Liquid Solid	N/A + LA-504-101 Rev. E-0	LA-533-105 Rev. D-1
ICP: Al, U	Liquid Solid	N/A ++ LA-505-159 Rev. D-0	LA-505-151 Rev. D-3 LA-505-161 Rev B-0
TOC	Liquid (furnace) Liquid/Solid (persulfate)	N/A	LA-344-105 Rev. C-0 LA-342-100 Rev. C-0 & LA-342-100 Rev. D-0

Table 6: Analytical Procedures

TIC	Liquid (furnace) Solid (persulfate)	N/A	LA-622-102 Rev. C-0 LA-342-100 Rev. C-0 & LA-342-100 Rev. D-0
AT	Liquid Solid	N/A +++ LA-549-141 Rev. F-0	LA-508-101 Rev. D-2
GEA: ^{60}Co, ^{137}Cs	Liquid Solid	N/A +++ LA-549-141 Rev. F-0	LA-548-121 Rev. D-1 & LA-548-121 Rev. E-0
^{90}Sr	Liquid Solid	N/A +++ LA-549-141 Rev. F-0	LA-220-101 Rev. D-1
^{241}Am	Liquid Solid	N/A +++ LA-549-141 Rev. F-0	LA-953-103 Rev. A-5 & LA-953-103 Rev. B-0
$^{239/240}Pu$	Liquid Solid	N/A +++ LA-549-141 Rev. F-0	LA-943-128 Rev. A-1
^{99}Tc	Liquid Solid	N/A +++ LA-549-141 Rev. F-0	LA-438-101 Rev. D-2
Bulk Density	Solid	N/A	Test Plan (Crawford, 1996)
NPH/TBP	Extracted Oil	Methylene Chloride Extraction	LA-523-437 Rev. B-0
SVOA	Extracted Oil	Methylene Chloride Extraction	LA-523-406 Rev. A-0

Notes:
* Herting Laboratory Instructions titled "Tank C-106 Caustic Demand" included in Appendix 3
+ Water digest procedure
++ Acid digest procedure
+++ Fusion digest procedure

Abbreviations:
N/A = not applicable (these are direct samples)
DSC = differential scanning calorimetry
TGA = thermogravimetric analysis
Sp.G. = specific gravity
% Water = percent water by gravimetric analysis
NH_3 = ammonia (by ion selective electrode (ISE)
OH = hydroxide
IC = ion chromatography
ICP = inductively coupled plasma
TOC = total organic carbon
TIC = total inorganic carbon
AT = total alpha
GEA = gamma energy analysis
^{137}Cs = cesium 137
^{90}Sr = strontium 90
^{241}Am = americium 241
$^{239/240}Pu$ = plutonium 239/240
^{99}Tc = technetium 99
NPH/TBP = normal paraffin hydrocarbons/tributyl phosphate
SVOA = semi-volatile organic analysis

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Dukelow, G. T., J. W. Hunt, H. Babad, and J. E. Meacham, 1995, *Tank Safety Screening Data Quality Objective*, WHC-SD-WM-SP-004, Rev. 2, Westinghouse Hanford Company, Richland, WA 99352.

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ATTACHMENT 1

C-106 GRAB SAMPLE BREAKDOWN

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Attachment 1 (1 of 9)
C-106 GRAB SAMPLE BREAKDOWN
Riser 1

432 in.

6C-96-3

S96T000530

This sample was inadvertantly overheated, the sample jar broke, and the solids dried out.

Homogenize dried solid by grinding

S96T002822

Water Digest Reprep

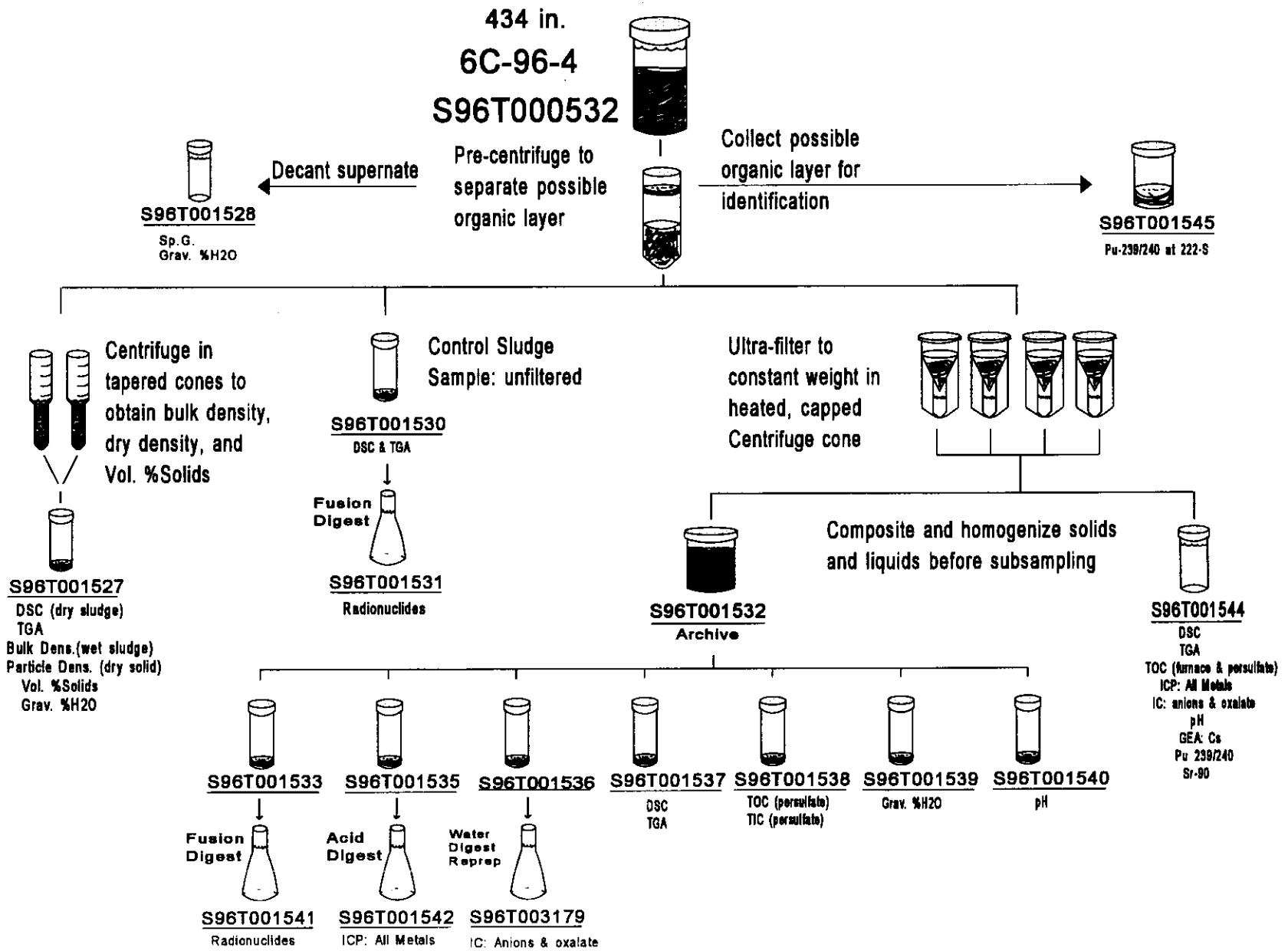
S96T003178

IC: anions & oxalate

S96T001526

DSC, TGA, and TOC

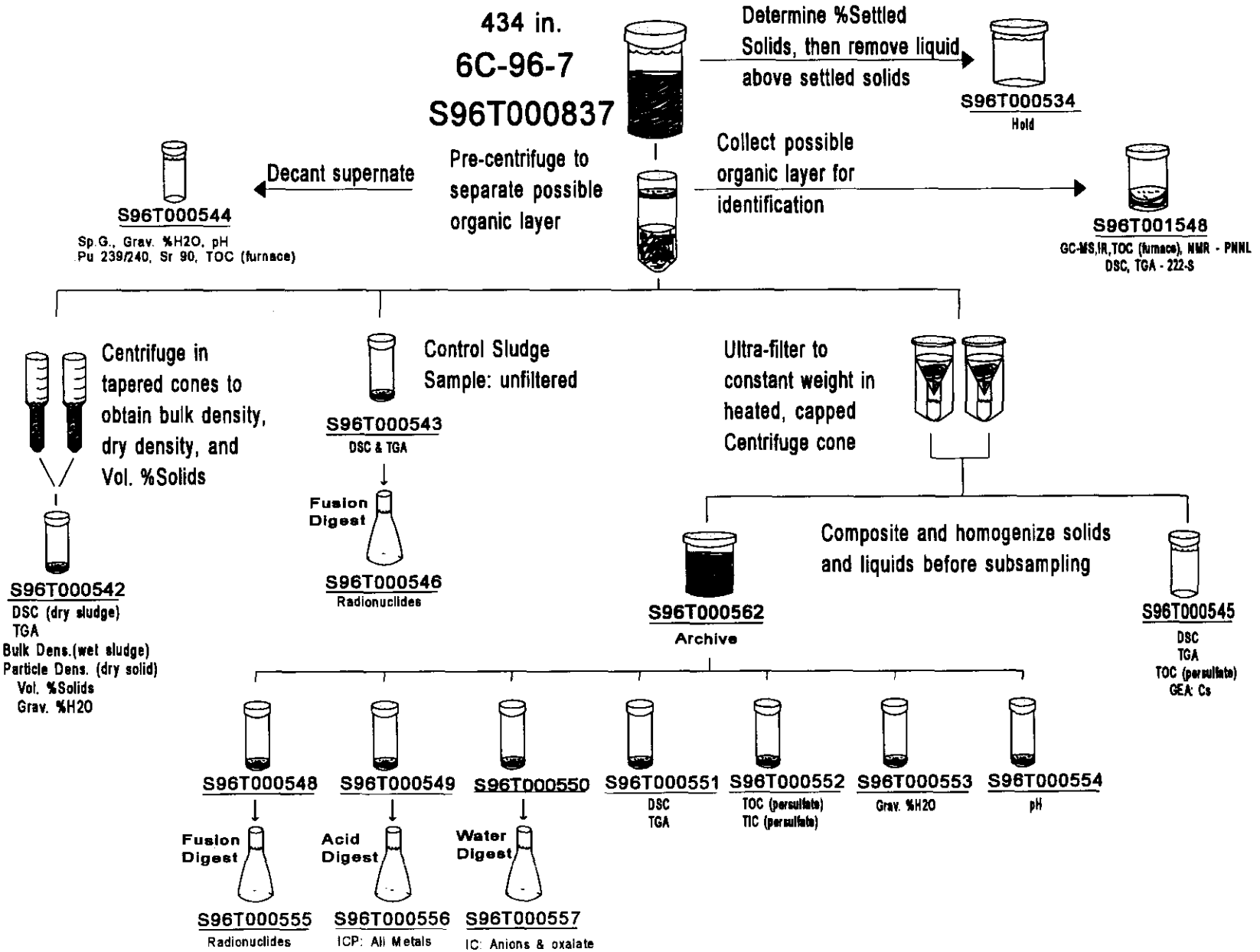
Attachment 1 (2 of 9)
C-106 GRAB SAMPLE BREAKDOWN
Riser 1



Attachment 1 (3 of 9)

C-106 GRAB SAMPLE BREAKDOWN

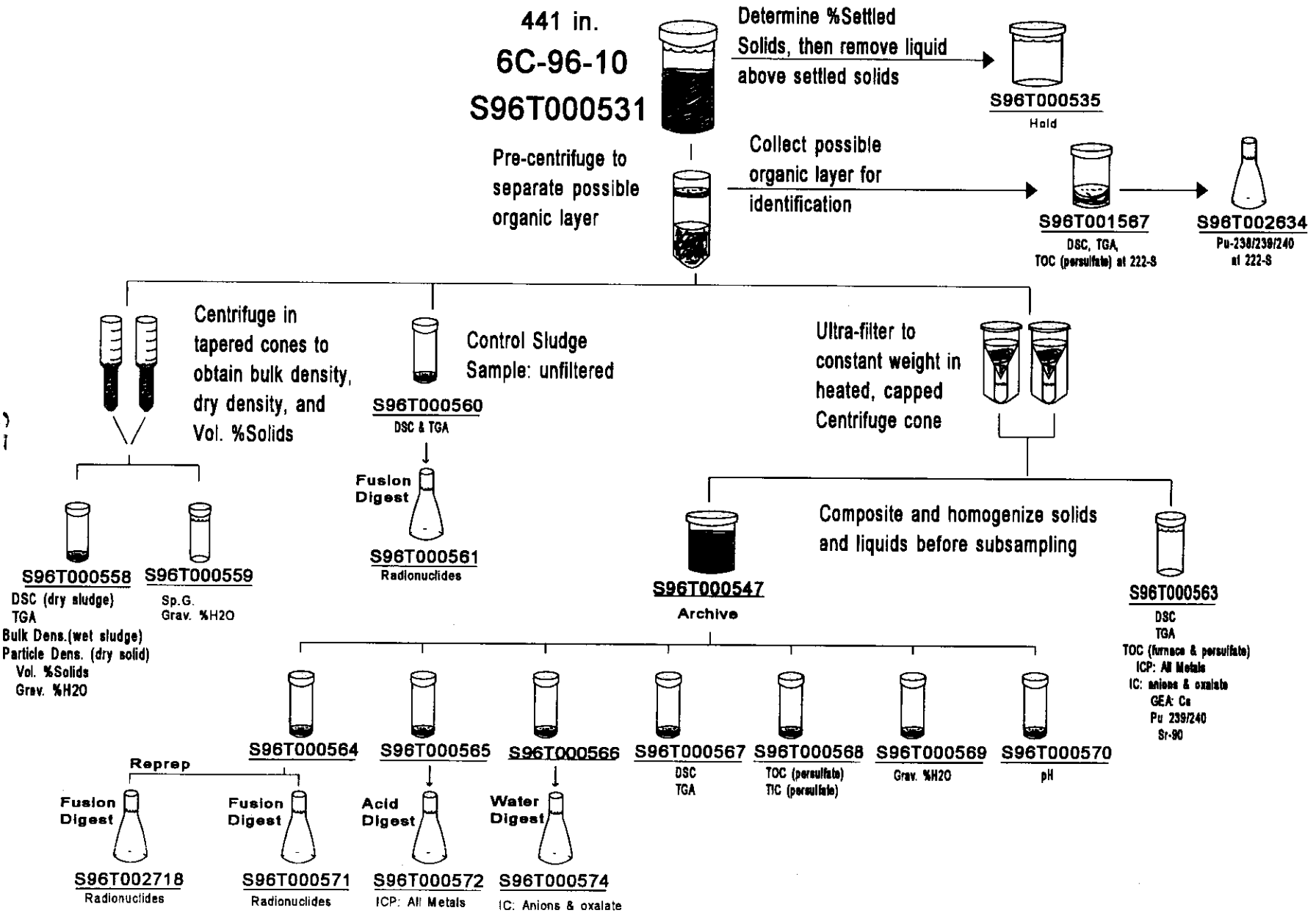
Riser 1



Attachment 1 (4 of 9)

C-106 GRAB SAMPLE BREAKDOWN

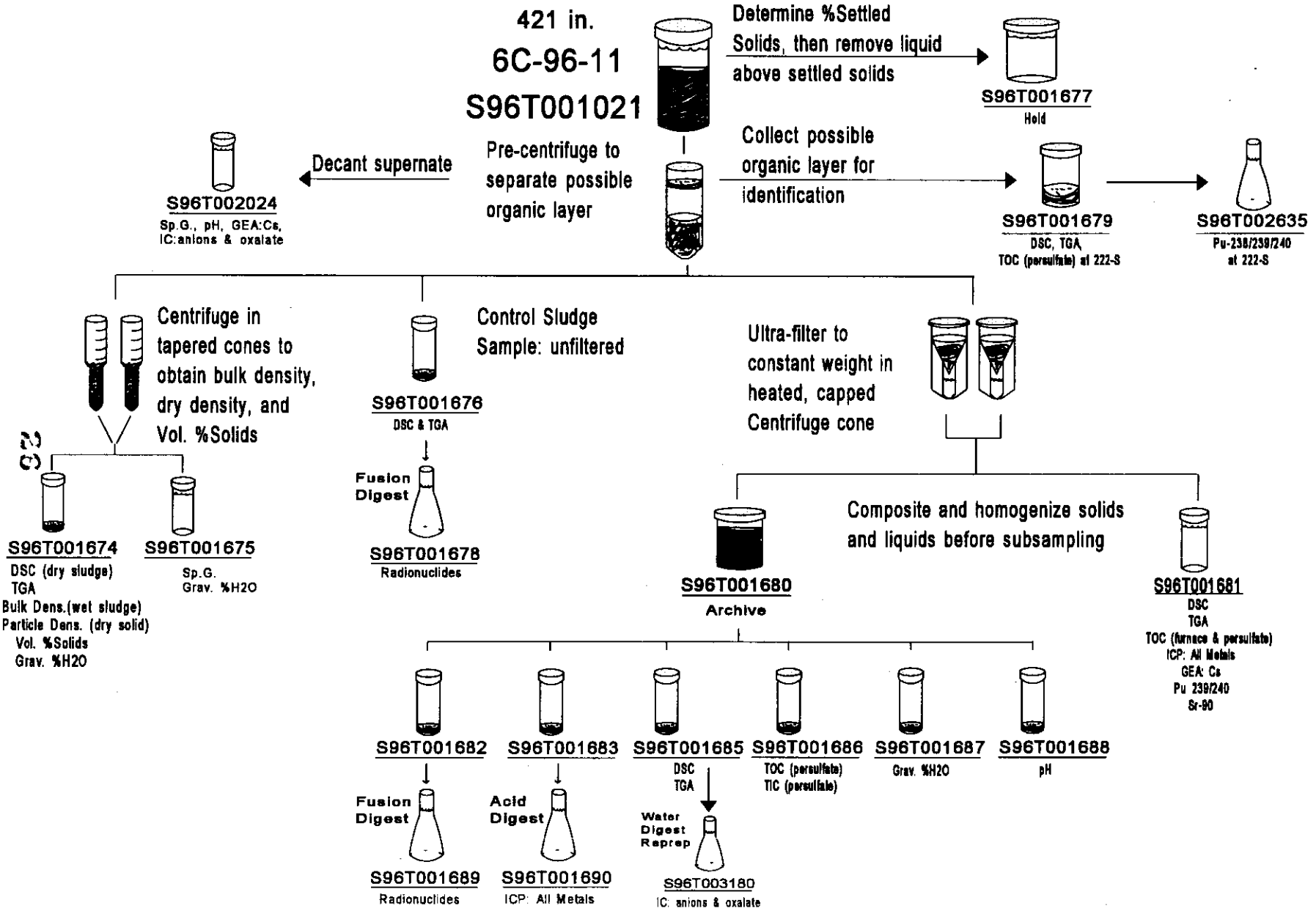
Riser 1



Attachment 1 (5 of 9)

C-106 GRAB SAMPLE BREAKDOWN

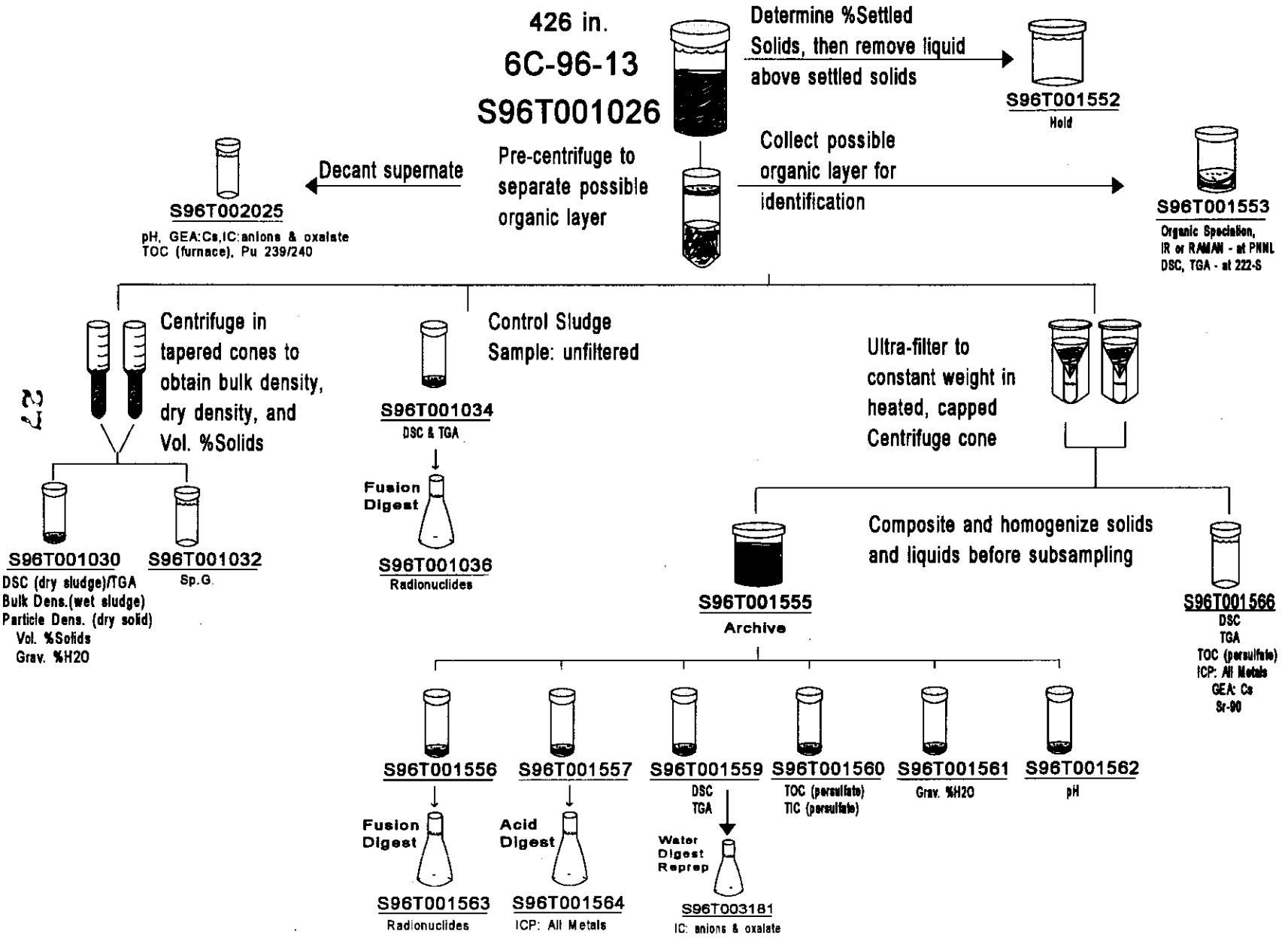
Riser 7



Attachment 1 (6 of 9)

C-106 GRAB SAMPLE BREAKDOWN

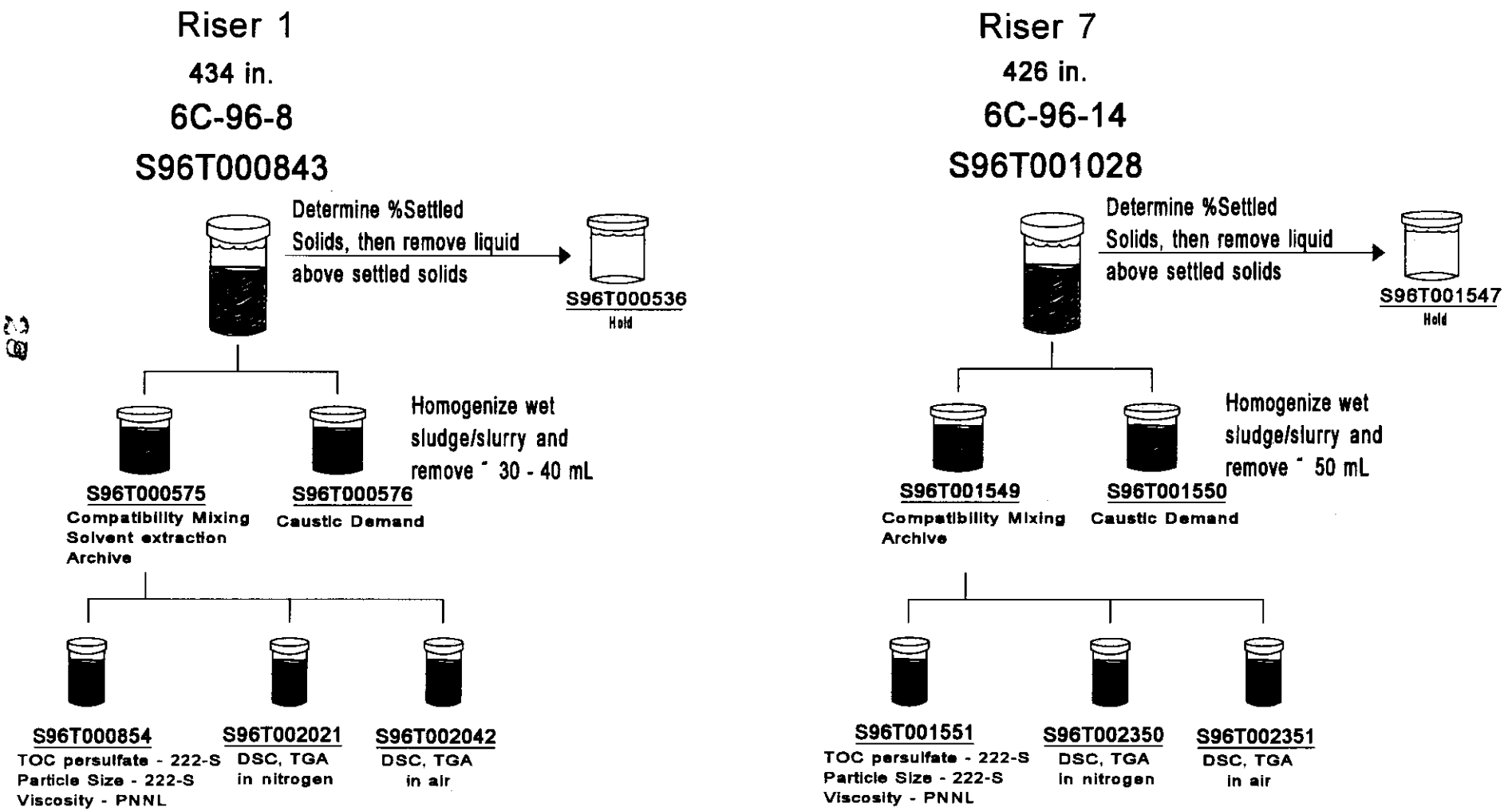
Riser 7



Attachment 1 (7 of 9)

C-106 GRAB SAMPLE BREAKDOWN

For Caustic Demand, Particle Size, Viscosity, and Compatibility Mixing Studies on Sludge Samples



Attachment 1 (8 of 9)

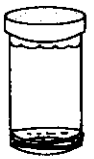
C-106 GRAB SAMPLE BREAKDOWN

Riser 7

426 in.

6C-96-15

S96T001027

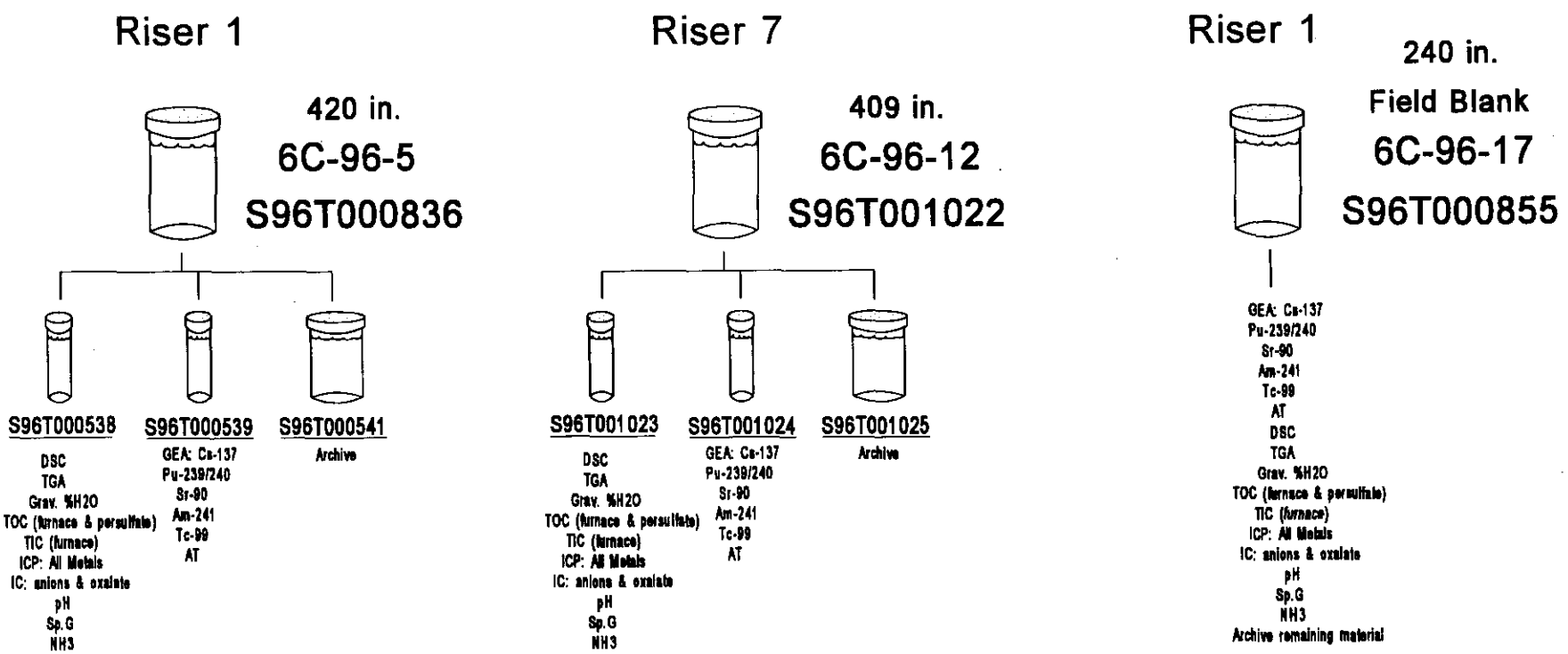


Determine %Settled Solids, then carefully remove liquid above settled solids

S96T001546

ICP: All Metals
IC: anions + oxalate

Attachment 1 (9 of 9)
C-106 GRAB SAMPLE BREAKDOWN



ATTACHMENT 2

AY-102/C-106 COMPATIBILITY STUDIES

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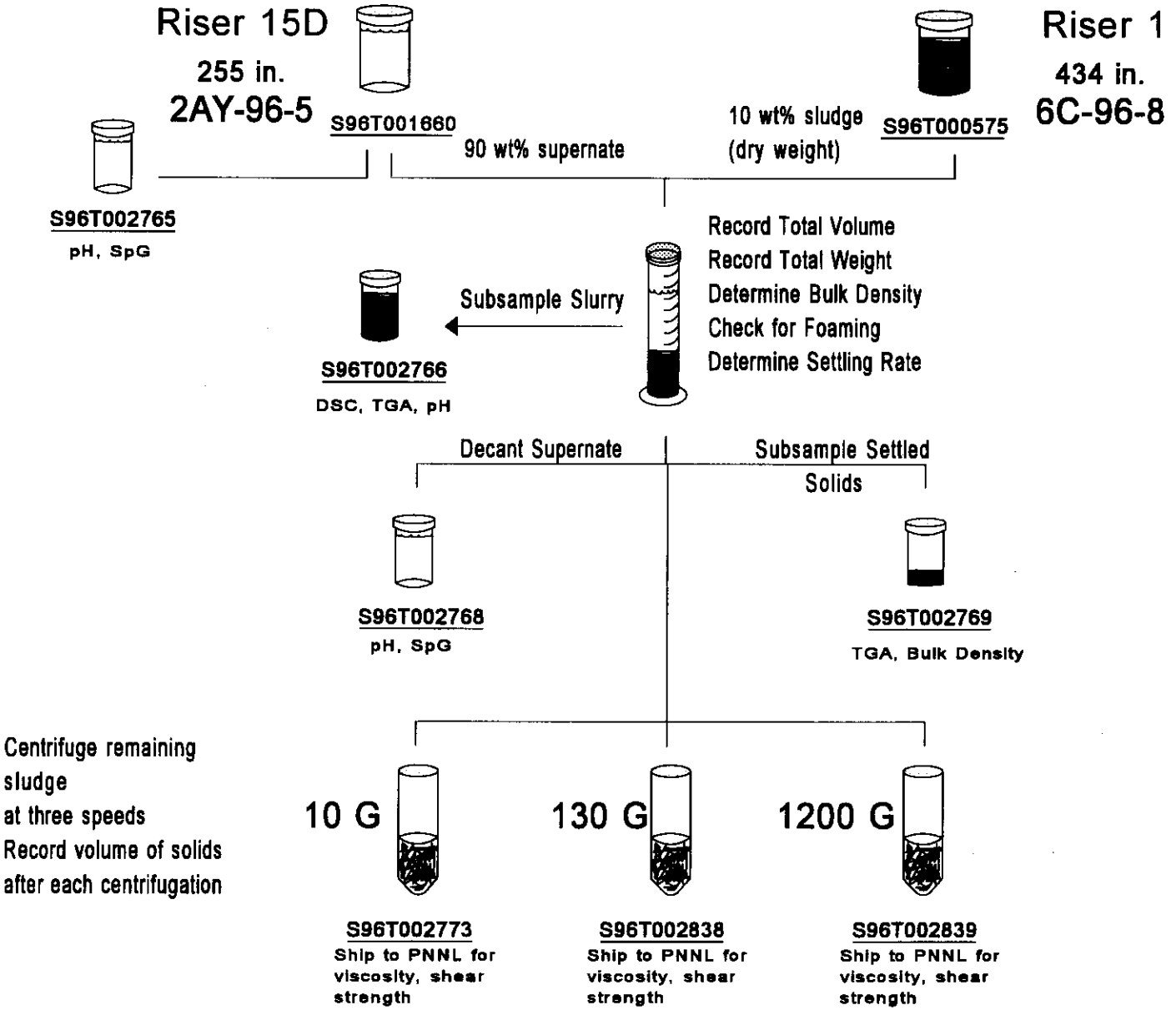
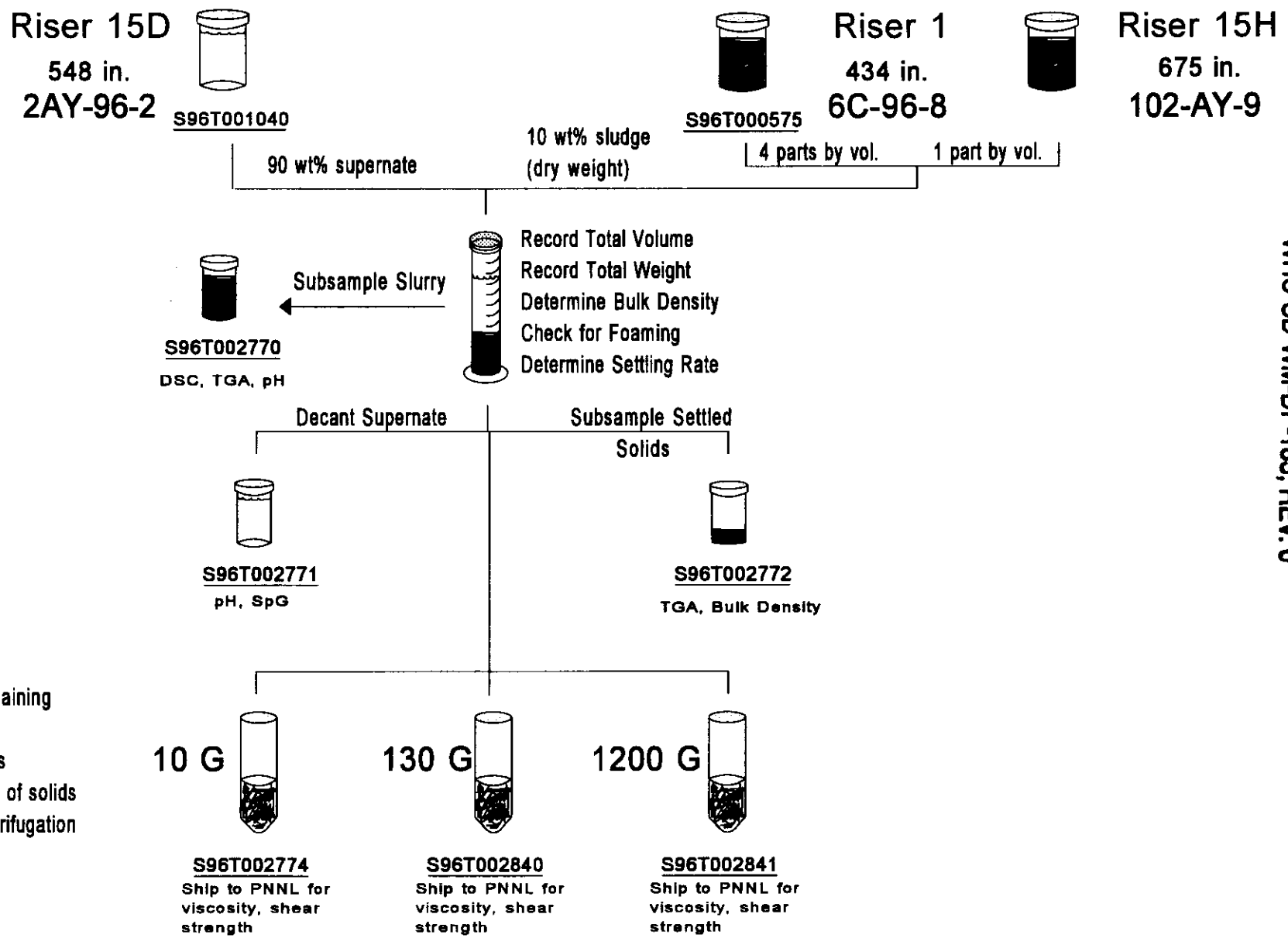
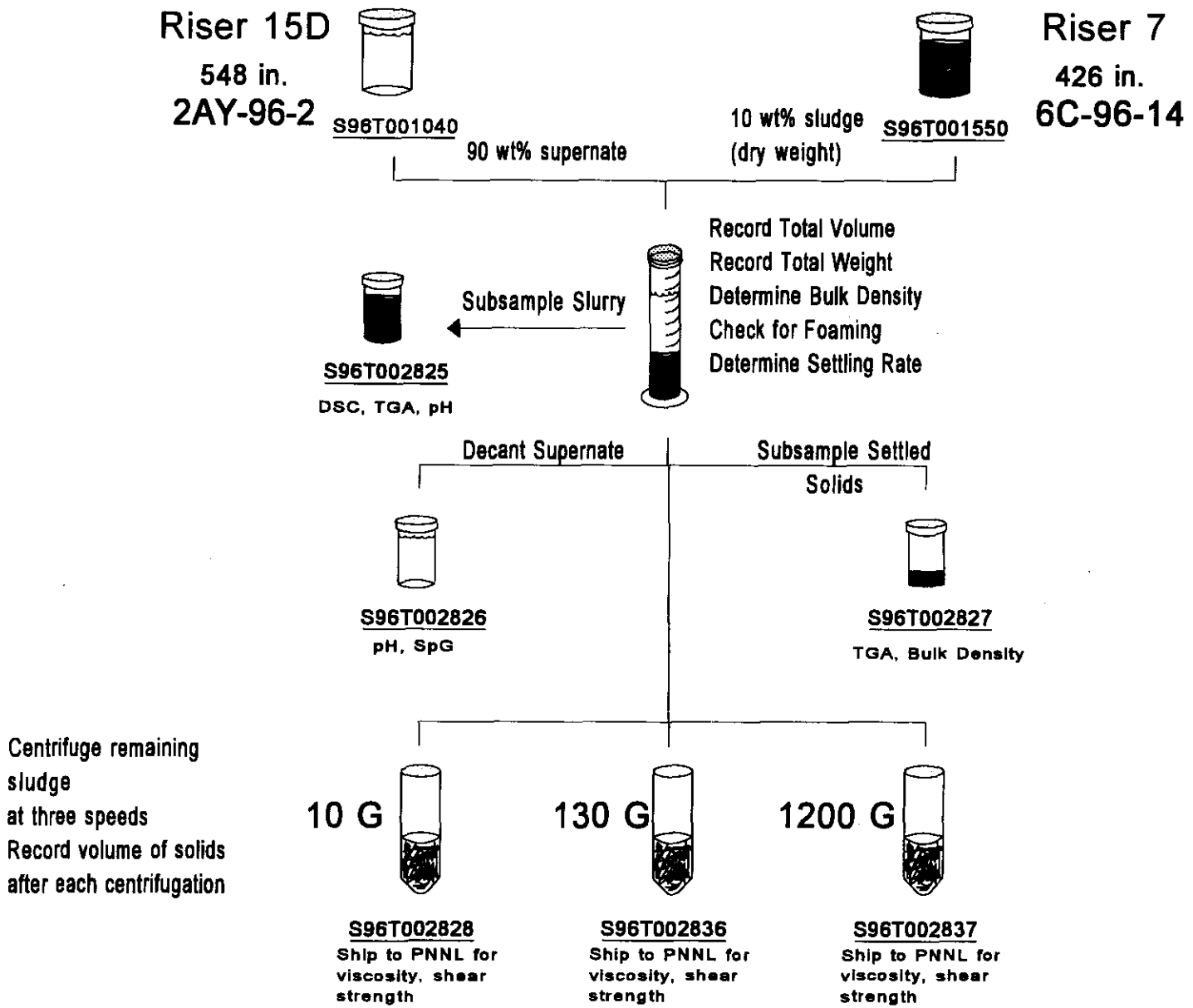
Attachment 2 (1 of 5)
AY-102/C-106 COMPATIBILITY STUDIES



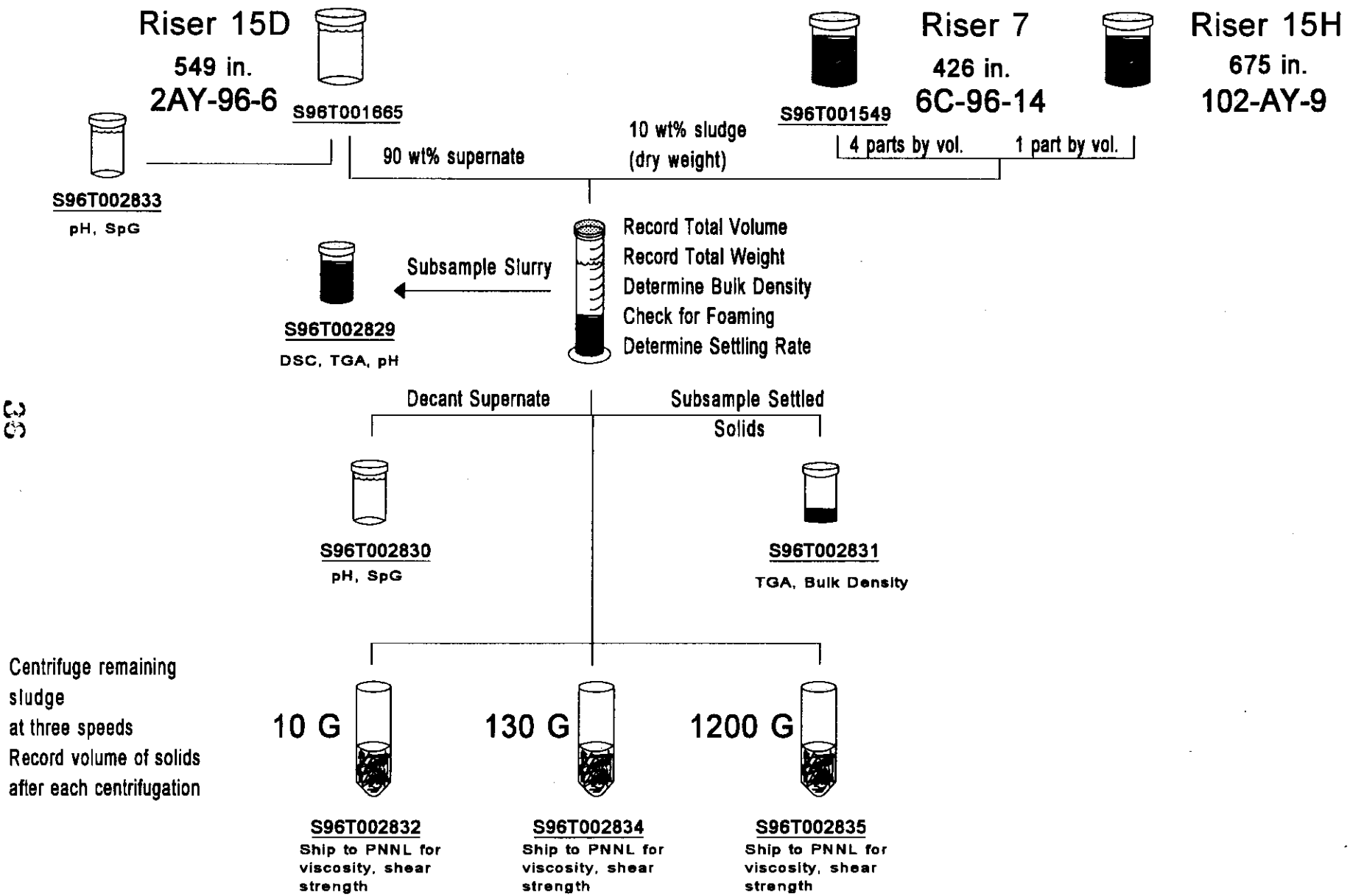
Attachment 2 (2 of 5)
AY-102/C-106+AY-102
COMPATIBILITY STUDIES



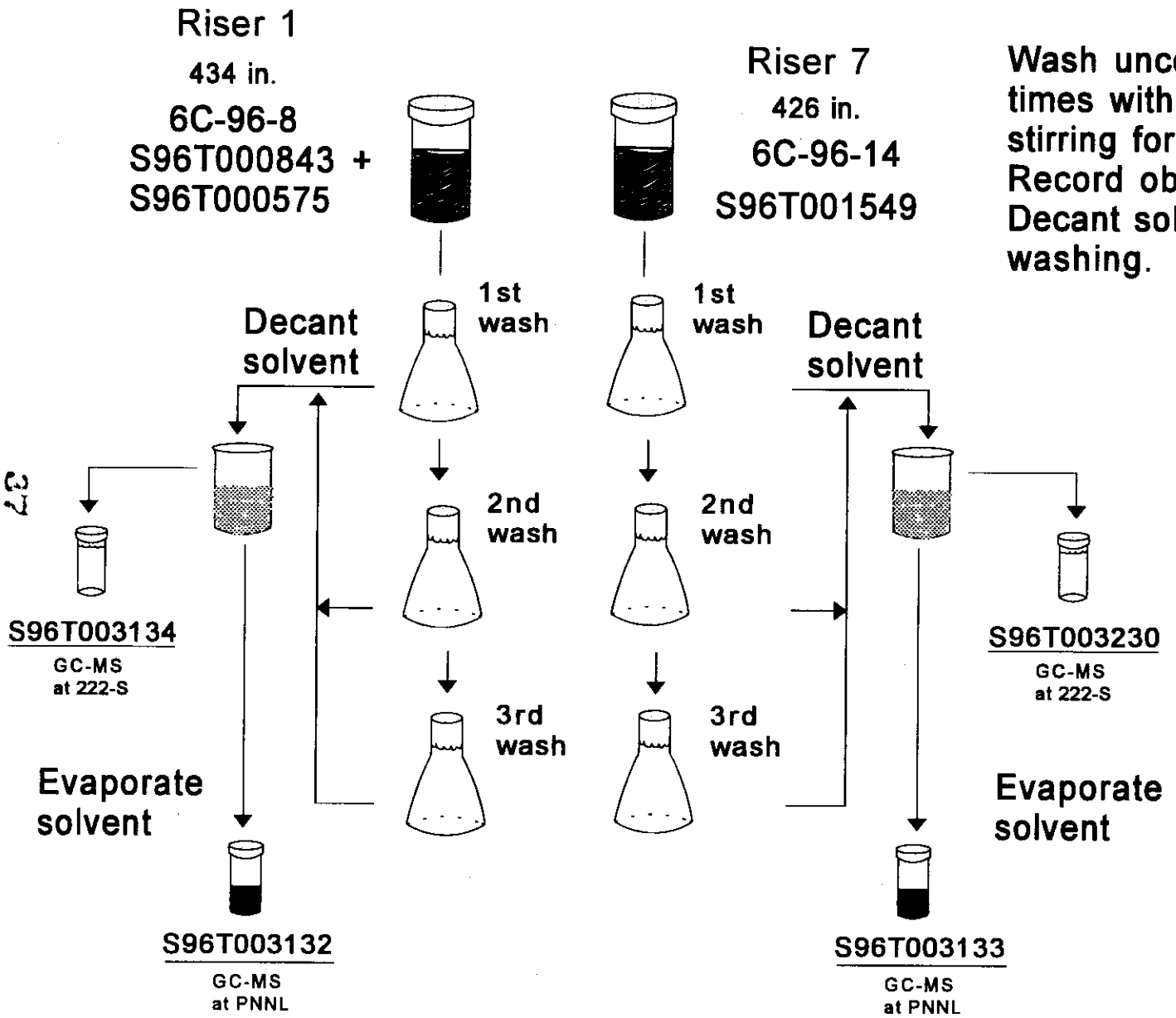
Attachment 2 (3 of 5)
AY-102/C-106 COMPATIBILITY STUDIES



Attachment 2 (4 of 5)
AY-102/C-106+AY-102
COMPATIBILITY STUDIES



Attachment 2 (5 of 5)
C-106 ORGANIC EXTRACTION



Wash uncentrifuged sludge 3 times with methylene chloride, stirring for 10 minutes each time. Record observations. Decant solvent after each washing.

APPENDIX 1

INTERNAL MEMO # 75764-PCS-96-052

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From: Process Chemistry and Statistics 75764-PCS96-052
Phone: 373-1972 T6-09
Date: June 19, 1996
Subject: PROCESSING AND SAMPLING RESULTS FROM BREAKDOWN OF TANK 241-C-106 GRAB SAMPLES

To: R. A. Esch T6-06

cc: J. R. Jewett_____ T6-09
BAC File/LB

References:

1. B. A. Crawford, "Preparation of Tank 241-C-106 Samples and Testing for Compatibility with Tank 241-AY-102 Supernate," WHC-SD-WM-TSAP-080, rev. 0 and rev. 1, Westinghouse Hanford Company, Richland, WA.

2. R. D. Schreiber, "Tank 241-C-106 Grab Sampling and Analysis Plan," WHC-SD-WM-TSAP-080, rev. 0 and rev. 1, Westinghouse Hanford Company, Richland, WA.

The attached tables summarize the data that were collected in controlled laboratory notebook WHC-N-912-1 to support the sample breakdown of grab samples obtained from tank 241-C-106. Copies of pages 18 through 121 of this notebook are attached to this report for reference. All work was performed according to testplan (Reference 1) and the Sampling and analysis plan (Reference 2). This notebook contains visual descriptions, sample breakdown and physical properties data that were gathered in processing these grab samples. The field blank sample 6C-96-17 was not included in the sample preparation and handling performed. Twelve samples taken from riser 1 and riser 7 at various depths were analyzed.

Table 3 lists the measurements to determine bulk density, water content by gravimetry and volume of solids. Bulk density was measured on wet sludge before centrifuging and is reported as the sum of the mass of material divided by the volumes of the sludge aliquots. Volume % solids measurements were taken as the volume of centrifuged solids divided by the volume of bulk material. Gravimetric % water was determined from drying sludge in the heated centrifuge in tapered cones over a period of days and in some cases weeks.

Water content results were quite variable, and subsequent differential scanning calorimetry (DSC) and thermogravimetric analysis (TGA) results indicate that not all of the water had been removed from the sludges over the days taken to dry them. Therefore, the values provided for dry particle density (table 4) are given as raw and corrected values.

In the corrected values the additional water measured in the dried sludges is added to the Pw value in the formula provided below. Generally the raw and corrected values show very little difference on comparison. This seems

to indicate that the variability in the water content of the sludges has very little contribution to the dry particle density. In other words, the largest contribution to wet sludge density as compared to dry particle density is attributed to interstitial liquids.

Specifically, the raw values reported are given by the following formula where the numerator represents the total mass of bulk sludge with the mass of interstitial liquids and water removed and the denominator represents the total volume of bulk sludge with volume of interstitial liquid and water removed.

$$\frac{W_1\left(1-\frac{Pw}{100}\right)-W_2}{\frac{(V_2-Pw)}{100}V_1}$$

Where W_1 = total weight of bulk sludge
W_2 = weight of interstitial liquid
Pw = weight % water removed in hot cell
V_1 = total volume bulk sludge
V_2 = volume % solids

As mentioned previously, the process notebook notes have been copied and sent to you for additional detail. If you have any further questions please feel free to call me at 373-1972.

B. A. Crawford

B. A. Crawford, Principal Scientist
Process Chemistry and Statistics

dls

Attachment: Tables 1-4

Table 1 - Visual Description and Volume % Settled Solids

Customer Sample ID	Visual Description	Vol, % Settled Solids	Notebook p.
6C-96-3	Sludge maintained form of container after heating to 200°C. Color is dark mocha brown. Sludge is dry. On close inspection appears to be like red clay clumped into large chunks. There is no evidence of charring. Chunks appear to be about 1 inch in diameter. Top chunk was darker brown while inner material was red-brown. A second chunk was flecked with yellow-white material. Majority of chunks are about 1/8 inch in diameter and are various colors of gray, light brown and white. Material is dry and crumbly like bentonite and is highly inhomogeneous.	NA	18
6C-96-4	Brown black solids, no apparent supernate	100%	18
6C-96-5	Slightly cloudy yellow liquid.	24.1%	40
6C-96-6	Slightly yellow liquid with reddish-brown solids. Solids are fine. After heating, supernate was dark orange and had yellow crust adhering to the inside of the sample jar. (Sample had been heated over at a minimum 24 hours to 200°C)	NA	40
6C-96-7	Brown sludge of thick soupy consistency. Contained several large pieces of very hard solid.	100%	53,63
6C-96-8	Brown sludge of thick soupy consistency. No chunks noted.	100%	53
6C-96-10	Brownish-red sludge. No supernate identified.	100%	53
6C-96-11	Cloudy yellow supernate with settled red-brown solids.	82.3%	46
6C-96-12	Trace of solids mostly supernate. Solids were fine and red-brown in color. Supernate was clear and yellow.	1.2%	46
6C-96-13	Brownish-red sludge with supernate.	100%	53
6C-96-14	Brownish red sludge.	100%	53
6C-96-15	Supernate with solids in bottom that seemed to dissolve on storing to the point where only trace amount of solid were remaining.	NA	69

Table 2 - Sample Breakdown by LABCORE Number

LABCORE ID	Origin	Gross sample(g)	Tare (g)	Net sample (g)	Notebook page
S96T000530	6C-96-3 parent	---	---	---	98
S96T000531	6C-96-10 parent	---	---	---	53
S96T000532	6C-96-4 parent	---	---	---	99
S96T000534	6C-96-7 supernate	96.47	85.43	11.04	54
S96T000535	6C-96-10 supernate	95.53	86.07	9.46	55
S96T000536	6C-96-8 supernate	103.16	85.59	17.57	57
S96T000538	6C-96-8 supernate	43.29	18.39	24.90	45
S96T000539	6C-96-6 supernate	43.25	18.89	24.36	45
S96T000541	6C-96-5 archive supernate	152.73	85.82	66.91	44
S96T000542	6C-96-7 dry sludge	20.72	20.37	0.35	81
S96T000543	6C-96-7 control	---	---	1.45	68
S96T000544	6C-96-7 interstital liquid	29.98	17.88	12.10	77
S96T000545	6C-96-10 filtered sludge	21.88	20.96	0.92	78
S96T000547	6C-96-10 filtered sludge	104.66	85.62	19.04	79

Table 2 - Sample Breakdown by LABCORE Number					
S96T000548	6C-96-7 filtered sludge	22.76	20.49	2.27	84
S96T000549	6C-96-7 filtered sludge	22.25	20.46	1.79	84
S96T000550	6C-96-7 filtered sludge	23.02	20.36	2.66	84
S96T000551	6C-96-7 filtered sludge	24.41	22.46	1.95	84
S96T000552	6C-96-7 filtered sludge	24.47	22.42	2.05	84
S96T000553	6C-96-7 filtered sludge	24.25	22.32	1.93	84
S96T000554	6C-96-7 filtered sludge	23.88	22.29	1.59	84
S96T000558	6C-96-10 dried sludge	23.51	22.55	0.96	82
S96T000559	6C-96-10 interstitia liquid	19.51	9.68	9.83	56
S96T000560	6C-96-10 centrifuged sludge	22.73	20.39	2.34	81
S96T000562	6C-96-7 filtered sludge	86.38	85.76	0.62	84
S96T000563	6C-96-7 filtered supernate	21.88	20.96	0.92	80,78
S96T000564	6C-96-10 filtered sludge	---	---	---	79

Table 2 - Sample Breakdown by LABCORE Number					
S96T000565	6C-96-10 filtered sludge	24.45	22.32	2.13	79
S96T000566	6C-96-10 filtered sludge	24.57	22.51	2.06	79
S96T000567	6C-96-10 filtered sludge	24.08	22.19	1.89	79
S96T000568	6C-96-10 filtered sludge	22.43	20.27	2.16	79
S96T000569	6C-96-10 filtered sludge	24.41	22.41	2.00	80
S96T000570	6C-96-10 filtered sludge	22.49	20.54	1.95	80
S96T000575	6C-96-8 archive	178.35	85.63	92.72	58
S96T000576	6C-96-8 caustic demand	166.94	86.21	80.73	58
S96T000836	6C-96-5 parent	---	---	---	42
S96T000837	6C-96-7 parent	---	---	---	53,76
S96T000840	6C-96-6 parent	310.22			42
S96T000843	6C-96-8 parent	---	---	---	57,97
S96T000854	6C-96-8 compat. test	31.22	15.59	15.63	98
S96T001021	6C-96-11 parent	---	---	---	46
S96T001022	6C-96-12 parent	177.72	---	---	46

Table 2 - Sample Breakdown by LABCORE Number					
S96T001023	6C-96-12 filtered supernate	20.82	18.17	2.65	48
S96T001024	6C-96-12 filtered supernate	21.13	18.91	2.22	48
S96T001025	6C-96-12 archive	157.87	85.78	72.09	47
S96T001026	6C-96-13 parent	---	---	---	53
S96T001027	6C-96-15 parent	---	---	---	69
S96T001030	6C-96-13 dried sludge	23.53	22.71	0.82	93
S96T001032	6C-96-13 filtered interstitia l liquid	15.80	15.54	0.26	91
S96T001034	6C-96-13 control	24.26	22.81	1.45	90
S96T001526	6C-96-3 dried raw sludge	23.21	22.55	0.66	101
S96T001527	6C-96-4 dried sludge	23.22	22.56	0.66	106
S96T001528	6C-96-4 interstitia l liquid	39.09	15.61	23.48	101
S96T001530	6C-96-4 control	22.33	20.31	2.02	101
S96T001532	6C-96-4 archive	117.43	85.18	32.25	103
S96T001533	6C-96-4 filtered sludge	24.56	22.66	1.90	103

Table 2 - Sample Breakdown by LABCORE Number					
S96T001535	6C-96-4 filtered sludge	24.25	22.26	1.99	104
S96T001536	6C-96-4 filtered sludge	23.79	22.19	1.60	104
S96T001537	6C-96-4 filtered sludge	23.52	22.29	1.23	104
S96T001538	6C-96-4 filtered sludge	24.31	22.53	1.78	104
S96T001539	6C-96-4 filtered sludge	24.48	22.39	2.09	104
S96T001540	6C-96-4 filtered sludge	24.50	22.39	2.11	104
S96T001544	6C-96-4 filtered interstitial liquid	30.43	15.62	14.81	102,103
S96T001545	6C-96-4 interstitial organic	problems encountered with solids washing			
S96T001546	6C-96-15 supernate	38.07	15.59	22.48	97
S96T001547	6C-96-14 supernate	105.65	78.31	27.34	97
S96T001548	6C-96-7 interstitial organic	15.01	14.01	1.00	73
S96T001549	6C-96-14 archive	179.13	78.19	100.94	98
S96T001550	6C-96-14 caustic demand	135.76	78.14	57.62	98

Table 2 - Sample Breakdown by LABCORE Number					
S96T001551	6C-96-14 compat. test	30.30	15.52	14.78	98
S96T001552	6C-96-13 archive	113.20	85.43	27.77	93
S96T001553	6C-96-13 interstitial organic	---	---	---	85
S96T001555	6C-96-13 archive	99.99	85.08	14.91	91
S96T001556	6C-96-13 filtered sludge	24.29	22.70	1.59	92
S96T001557	6C-96-13 filtered sludge	24.27	22.54	1.73	92
S96T001558	6C-96-13 filtered sludge	24.05	22.20	1.85	91
S96T001559	6C-96-13 filtered sludge	24.33	23.02	1.31	91
S96T001560	6C-96-13 filtered sludge	24.08	22.26	1.82	92
S96T001561	6C-96-13 filtered sludge	23.96	21.92	2.04	92
S96T001562	6C-96-13 filtered sludge	22.53	20.57	1.96	92
S96T001566	6C-96-13 filtered interstial liquid	18.38	15.55	2.83	90
S96T001567	6C-96-10 organic	8.28	7.71	0.57	82

Table 2 - Sample Breakdown by LABCORE Number

S96T001674	6C-96-11 dried sludge	22.47	22.33	0.14	95
S96T001675	6C-96-11 interstitial liquid	16.56	15.65	0.91	93
S96T001676	6C-96-11 control	24.66	22.24	2.42	93
S96T001677	6C-96-11 supernate	123.48	85.02	38.46	93
S96T001679	6C-96-11 interstitial organic	14.80	13.59	1.21	89
S96T001680	6C-96-11 archive	101.56	85.32	16.24	93
S96T001681	6C-96-11 filtered interstitial liquid	19.13	15.61	3.52	93
S96T001682	6C-96-11 filtered sludge	23.10	21.89	1.21	93
S96T001683	6C-96-11 filtered sludge	24.64	22.73	1.91	94
S96T001684	6C-96-11 filtered sludge	23.50	22.02	1.48	94
S96T001685	6C-96-11 filtered sludge	23.42	22.02	1.40	94
S96T001686	6C-96-11 filtered sludge	23.67	22.04	1.63	94
S96T001687	6C-96-11 filtered sludge	24.72	22.19	2.53	94

Table 2 - Sample Breakdown by LABCORE Number					
S96T001688	6C-96-11 filtered sludge	25.16	22.28	2.88	94
S96T002021	6C-96-8 raw sludge	19.84	15.22	4.62	96
S96T002022	6C-96-8 raw sludge	20.26	15.24	5.02	96
S96T002024	6C-96-11 interstitia l aqueous	30.55	13.71	16.84	95
S96T002025	6C-96-13 interstitia l aqueous	33.43	14.03	19.40	95
S96T002042	6C-96-8 raw sludge	20.26	15.24	5.02	95
S96T002350	6C-96-14 raw sludge	26.44	25.54	0.90	106
S96T002351	6C-96-14 raw sludge	27.49	26.44	1.05	107

Table 3 - Physical Properties of Tank 241-C-106 Samples

Sample ID	LABCORE ID	W(1) Net mass (g)	V(1) Volume (ml)	Density (g/ml)	W(3)[1] % water grav.	W(3)[2] % water TGA	V(2) vol. % Solids
6C-96-5	S96T000538	24.36	20.0	1.22	N/A	81.12	N/A
6C-96-12	S96T001023	21.48	17.5	1.23	N/A	79.03	N/A
6C-96-7	S96T000542	109.64	64	1.71	24.98	8.04	69.5
6C-96-10	S96T000558	68.75	39	1.76	22.86	11.71	85.2
6C-96-11	S96T001674	146.79	101.0	1.45	27.53	9.63	59.5
6C-96-13	S96T001030	74.64	49.0	1.52	---	9.24	67.3
6C-96-4	S96T001527	127.90	85.25	1.50	25.80	3.63	59.3

[1,2]Corrected values for particle density include the sum of hot cell water content and TGA result. Raw determinations were based on hot cell water loss alone.

Table 4 - Dry Particle Density

Sample ID	Raw Dry Particle Density	Corrected Dry Particle Density
6C-96-11	1.83	1.93
6C-96-13	*	1.93
6C-96-10	1.70	1.69
6C-96-7	1.84	1.87
6C-96-4	1.97	2.01

* Only one value reported, based on % water content from the control sample.

APPENDIX 2

INTERNAL MEMO # 75764-PCS-96-075

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Westinghouse Hanford Company | **Internal Memo**

From: Process Chemistry and Statistics 75764-PCS96-075
Phone: 373-1972 T6-09
Date: July 23, 1996
Subject: COMPATIBILITY STUDY AND ORGANIC EXTRACTION RESULTS

To: H. Babad S7-14
R. A. Esch T6-06
R. D. Schreiber R2-12

cc: for J. R. Jewett CHD T6-09
BAC File/LB

Several tests were requested to check for compatibility of tank 241-C-106 material with the supernate and tank sludge from tank 241-AY-102. The work was performed in support of sluicing activities which involve the use of tank 241-AY-102 supernate to transport tank 241-C-106 sludge to the final storage tank. The results of these tests follow.

Pretest tank 241-AY-102 sludges for Organic and 241-C-106 sludge for Organic Separation

An aliquot of tank 241-AY-102 sludge, identified as 102-AY-9, was collected from riser 15H at 675 inches prior to addition of caustic to the tank. The sludge was centrifuged at 1215 G for 10 minutes at approximately 55°C. After centrifuging, there was an interstitial liquid volume of 3.0 ml in 6.5 ml of bulk sludge material. There was no organic evident which may have separated from the sludge.

Under similar conditions as those stated above, tank 241-C-106 material was centrifuged at 10 G to mimic pumping conditions. There was no noticeable separation of organic from the sludge sample or interstitial liquid at these lower centrifuge speeds.

Supernate Characteristics

In addition to supernate from the sludge sample 102-AY-9, six other supernate samples were checked for foaming. The sample was vortexed with no foaming evident. By shaking the supernate, foaming occurred with subsequent break up in less than 5 seconds. This supernate was not used for the compatibility mixing as it was later learned that the sample was taken from tank 241-AY-102 prior to addition of caustic to the tank. Therefore, six other samples: 2AY-96-1, 2AY-96-2, 2AY-96-3, 2AY-96-4, 2AY-96-5, and 2AY-96-6 which were collected from the tank after the caustic addition (i.e., more representative of current conditions) were used. Each of the supernates was agitated with variable results.

In all cases where foaming did occur, the dissipation of foam was nearly immediate. Samples 2AY-96-1, 2AY-96-2 and 2AY-96-6 foamed with foam dissipation in less than 20 seconds. Samples 2AY-96-3, 2AY-96-4 and 2AY-96-5 either foamed with immediate dissipation or there was no sign of foaming. Since a large amount of supernate was required for the tests, three samples (2AY-96-5, 2AY-96-2 and 2AY-96-6) were used to perform the compatibility studies. In each case, key characteristics (ie. pH and specific gravity (SpG)) of the supernate were checked before and after mixing with the sludge.

In addition to checking supernate from tank 241-AY-102, supernate samples from tank 241-C-106 were checked for foaming. Supernate samples from the parent samples which correspond to the sludges being tested were observed after agitating. Sample S96T000536 (parent sample 6C-96-8) and sample S96T001547 (parent sample 6C-96-14) showed foaming with immediate breakup of the foam (within 5 seconds).

Tank 241-C-106 Sludge mixed with neat 241-AY-102 Supernate

Sludge from tank 241-C-106 parent samples 6C-96-8 and 6C-96-14 were mixed individually with supernate from tank 241-AY-102 (parent sample 2AY-96-5) (see table 1 for details).

Table 1 - Sludge mixed with 241-AY-102 (2AY-96-5)

Sludge ID	grad. Cylinder	wt. of supernate	wt. of sludge added	wt. % sludge
6C-96-8 (S96T000575)	A	53.31	9.98	11.4
6C-96-14 (S96T001550)	E	37.98	3.93	6.5 (10.3 wet sludge basis)

The weight % sludge value for total slurry was approximated for 10 weight % sludge. The exact concentration of sludge in the mixture was calculated as follows:

$$Wt.\ \%\ sludge = \frac{W_1 - W_2}{W_3 + W_1} * 100$$

where W_1 = mass of wet sludge
W_2 = mass of water in sludge = total sludge weight x % water content x .01

W_3 = mass of supernate

The weight of sludge to total slurry was requested as 10 weight % and was intended to be calculated on a dry weight basis. The 6C-96-8 sample was 11.4 weight percent after calculating. However, the concentration of 6C-96-14 sample was much lower at 6.5 weight percent once calculated. This discrepancy was due to incorrectly accounting for the interstitial liquid content of the sample. The weight % sludge content in the mixture based on wet sludge, however, is 10.3 weight %.

Settling Behavior of C-106 sludges with AY-102 Supernates

Before settling, samples of 6C-96-8 and 6C-96-14 in 241-AY-102 supernate were light yellow and clear. The sludge was red-brown with fine sand-like particles.

Upon mixing, all solids were suspended in the supernate. Separation of solids from the supernate occurred within 10 minutes for both samples of pure sludge from samples 6C-96-8 and 6C-96-14. The sludge from 6C-96-14 appeared to be settling out faster than the 6C-96-8 sample. Supernate appeared to be clear of suspended solids after 165 minutes (2 hours and 45 minutes).

The resultant pH difference and physical properties from the mixture obtained from the combination of tank 241-AY-102 supernate and pure tank 241-C-106 sludge are summarized in table 2. Sample 6C-96-8 shows an increase in pH in the suspended slurry and a small decrease in the resultant supernate. Sample 6C-96-14 shows a pH decrease in the slurry with a larger increase in the resultant supernate. The most profound difference is observed in the pH increase in the supernate which was mixed with 6C-96-14 sludge. An increase in specific gravity is observed in both samples after mixing the supernate with the 241-C-106 tank sludge. This SpG increase is observed in the supernate, as well as the resultant sludge.

Perhaps of even more importance, there was no exotherm noted for the combined solution. This indicates that the energetics of the mixture are not reactive. Interestingly, the water content of the sludges is fairly high after settling. The sample from 6C-96-14 appears to be particularly high with respect to the 6C-96-8 sample. However, both samples, 6C-96-8 and 6C-96-14 also show increases in solid mass and volume after settling (see table 6).

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Table 2 - Characteristics of Sludge Components Before and After addition of Supernate

Sample 6C-96-8: 241-C-106 Sludge with 241-AY-102 Supernate						
Fraction of Mixture	pH	SpG (g/ml)	% water by TGA	DSC (Joules)	Bulk Density (g/ml)	Vol. % settled solids
original supernate (S96T002765)	11.16	0.980	---	---	1.06	---
slurry (S96T002766)	11.22	---	96.24	0	---	17.85
resultant supernate (S96T002768)	11.10	1.005	---	---	---	---
resultant sludge (S96T002769)	---	1.27 (sludge)	73.78	---	1.23	---
Sample 6C-96-14: 241-C-106 Sludge with 241-AY-102 Supernate						
original supernate (S96T002765)	11.16	0.980	---	---	1.03	---
slurry (S96T002825)	11.12	---	95.78	0	---	7.69
resulting supernate (S96T002826)	11.50	0.988	---	---	---	---
resulting sludge (S96T002827)	---	1.52 (sludge)	95.08	---	1.32	---

Mixed Sludge from 241-C-106 and 241-AY-102

Sludge from parent sample 102-AY-9 was added to each of two graduated cylinders as described in table 3. With the exception of mixing the sludges in 4 parts C-106 sludge to 1 part AY-102 sludge proportions, the sludges were combined with supernate from tank 241-AY-102 in similar fashion as the previous sludges.

Upon mixing the mixed sludge with AY-102 supernate, there was no foaming, frothing, or bubble formation. The sludge remained brown and mixed quite well in the supernate.

Table 3 - Mixed sludge composition

Sample ID	Grad. Cylinder	AY-102 sludge added (g)	C-106 sludge added (g)	portion AY-102: C-106	AY-102 Supernate added	Wt. % sludge (dry weight basis)
6C-96-8 (S96T000575)	B	1.77	7.13	1:4.03	61.70	9.8
6C-96-14 (S96T001549)	D	1.79	7.32	1:4.09	54.47	10.2

Samples were vortexed until they were thoroughly mixed, then allowed to settle. Solids began to separate from the supernate within the first 10 minutes. After 205 minutes (3 hours and 25 minutes) had elapsed, the supernate was still cloudy and clearing. Since the pure sludge samples cleared in <2 hours and 45 minutes, the mixed sludge samples settled over longer time than the pure C-106 sludges. At the next reading (1200 minutes(20 hours)), the supernate was clear and yellow. A more exact time for appearance of clear supernate was not available. The 6C-96-14 mixed sludge dropped out of solution faster than the 6C-96-8 mixed sludge. This behavior is similar to that observed with the previous study. This seems to indicate some difference in settling behavior may occur with tank location in addition to sludge content when sluicing occurs. The 6C-96-14 sample settled 52 ml of suspended sludge within the first 10 minutes (which corresponds to a linear settling velocity of 0.84 cm/min.), with an initial settling rate of 5.2 ml/min which is more rapid than the previous run of 6C-96-14 material alone. The mixed sludge 6C-96-8 sample behaved similarly to the analogous C-106 sludge sample in all respects. The 6C-96-14 mixed sludge sample may be more rapid in settling due to the larger concentration of large particles than the other samples. While there was no particle size analysis performed to verify this, it was noted that the C-106 sample sludge contained a larger amount of chunks of material than previous samples. The settling rate is reported in table 4 by time elapsed from initiation of settling.

Table 4 - Settling Rate by Time elapsed from Mixing

Sample ID	Time Elapsed	Settling Rate	Linear Settling Velocity
6C-96-8	0 - 10 minutes	2.0 ml/ min	3.2e-1 cm/ min.
	10 - 20 minutes	1.8 ml/ min.	2.9e-1 cm/ min.

Sample ID	Time Elapsed	Settling Rate	Linear Settling Velocity
	20 - 30 minutes	0.3 ml/ min.	4.8e-2 cm/ min.
	30-105 minutes	0.067 ml/ min.	1.1e-1 cm/ min.
6C-96-8 with AY-102 sludge	0 - 10 minutes	1.9 ml/ min.	3.1e-1 cm/ min.
	10 - 20 minutes	2.0 ml/ min.	3.2e-1 cm/ min.
	20 - 30 minutes	0.70 ml/ min.	1.1e-1 cm/ min.
	30 - 40 minutes	0.25 ml/ min.	4.1e-2 cm/ min.
	40 - 60 minutes	0.15 ml/ min.	2.4e-2 cm/ min.
	60 - 205 minutes	0.043 ml/ min.	6.7e-3 cm/ min.
6C-96-14	0 - 10 minutes	2.0 ml/ min.	3.2e-1 cm/ min.
	10 - 20 minutes	1.2 ml/ min.	1.9e-1 cm/ min.
	20 - 30 minutes	0.15 ml/ min.	2.4e-2 cm/ min.
	30 - 105 minutes	0.027 ml/ min.	4.4e-3 cm/ min.
6C-96-14 with AY-102 sludge	0 - 10 minutes	5.2 ml/ min.	8.4e-1 cm/ min.
	10 - 20 minutes	1.0 ml/ min.	1.6e-1 cm/ min.
	20 - 30 minutes	0.05 ml/ min.	8.1e-3 cm/ min.
	30 - 40 minutes	*	*
	40 - 60 minutes	0.05 ml/ min.	8.6e-3 cm/ min.

*No difference between volume observations.

Rate constants based on a logarithmic decay of settling over time were calculated according to first order kinetics dependent on volume in ml. (See figures 1 and 2 which follow). The rate constants for 6C-96-8, 6C-96-8 with AY-102 sludge, 6C-96-14 and 6C-96-14 with AY-102 sludge are: 7.73×10^{-3} min^{-1}, 9.22×10^{-3} min^{-1}, 1.00×10^{-2} min^{-1}, and 1.03×10^{-2} min^{-1}, respectively, for 215 minutes. While relating this data back to information more suitable for observation of settling in relation to the tanks, these constants are not as useful as noting the

behavior described in the graphs in Figures 1 and 2 (attached).

Table 5 provides a comparison of supernate and sludge before and after mixing. The pH decreases when the supernate is mixed with the sludge. This pH decrease appears to be larger than that observed for 241-C-106 tank sludge alone and undoubtedly is due to the presence of 241-AY-102 sludge. The sludge used for the C-106/ AY-102 mixture includes sludge from tank 241-AY-102 which was taken before caustic was added to the tank.

Table 5 - Characteristics of Mixed Sludge Components Before and After addition of Supernate

Sample 6C-96-8 with 102-AY-9: Sludge with 241-AY-102 Supernate						
Fraction of Mixture	pH	SpG (g/ml)	% water by TGA	DSC (Joules)	Bulk Density (g/ml)	Vol. % settled solids
Original Supernate (S96T002833)	12.52	0.976	---	---	1.05	---
Slurry (S96T002770)	11.71	---	96.86	0	---	14.7
Resultant Supernate (S96T002771)	11.81	1.002	---	---	---	---
Resultant Sludge (S96T002772)	---	1.40 (sludge)	79.49	---	1.29	---
Sample 6C-96-14 with 102-AY-9: sludge with 241-AY-102 Supernate						
Original Supernate (S96T002833)	12.52	0.976	---	---	1.07	---
Slurry (S96T002829)	11.80	---	95.67	0	---	12.1
Resulting Supernate (S96T002830)	11.91	0.996	---	---	---	---
Resulting Sludge (S96T002831)	---	1.42 (sludge)	83.85	---	1.26	---

The amount of solids by volume appears to increase once the mixtures have settled. This is illustrated in table 6 where in all cases both the mass and volume of the sludges after settling are significantly greater than the mass and volume of the sludge in the starting material.

Table 6 - Solids before and after Settling

Characteristic	6C-96-8	6C-96-14	6C-96-8 with AY-102	6C-96-14 with AY-102
initial mass (g)	9.98	3.93	8.9	9.11
initial volume (ml)	9.0	3.0	10.0	7.5
final mass (g)	22.84	14.46	60.24	32.66
final volume (ml)	18	9.5	43.0	23

Sedimentation studies

Sedimentation studies were performed via centrifugation at various speeds to mimic hydrostatic forces within the tank and its relation to sludge layering. Data was relayed to PNNL. Results will be provided from PNNL separately.

Organic Extraction

There was limited sample in parent containers and associated archive containers for 6C-96-8 and 6C-96-14. Therefore, organic extraction was performed on each sample as opposed to duplicates on one sample. The sample was weighed into beakers and gently stirred once methylene chloride was added. There was no apparent foaming or bubbling upon addition of methylene chloride or stirring of the resulting mixture. Once the mixture was stirred for at least 10 minutes, the methylene chloride extract was collected in a 60 ml capped jar (see table 7 for details).

Table 7 - Organic Sludge washing

Sample ID	Wet sludge mass	methylene chloride added 1st wash	methylene chloride added 2nd wash	methylene chloride added 3rd wash	Dry sludge remaining after wash	g oil/g wet sludge
6C-96-8	9.70 g	20.11 g	14.94 g	16.36 g	5.28 g	0.066
6C-96-14	12.26 g	11.59 g	14.59 g	22.06 g	7.19 g	0.020

Two samples were removed from the extractant mixture for gas chromatography - mass spectrometry (GC/MS) analysis. These samples (Labcore number S96T003134), a sample and duplicate weighed 6.04 g and 7.72 g, respectively. The remaining sample was then subjected to evaporation by nitrogen sparge to less than 40 ml of total volume. The solvent was not completely removed within the time frame to release the samples from the hot cell for shipping to PNNL. Evaporation of remaining solvent was performed at PNNL and the amount of oil in the sludge was determined to be 0.058 g oil/g sludge for the 6C-96-8 sample and 0.018 g oil/g sludge for the 6C-96-14 sample. The lower oil concentration of the 6C-96-14 sample may have resulted from sample loss in processing, as the sample container was tipped during the first wash and sludge was lost but rinsed with solvent before proceeding with the remaining sample. The sludge mass was adjusted for the loss.

B. A. Crawford

B. A. Crawford, Principal Scientist
Process Chemistry and Statistics

bac

Attachments

Figure 1 - C-106 Sludge and AY-102 Supernate

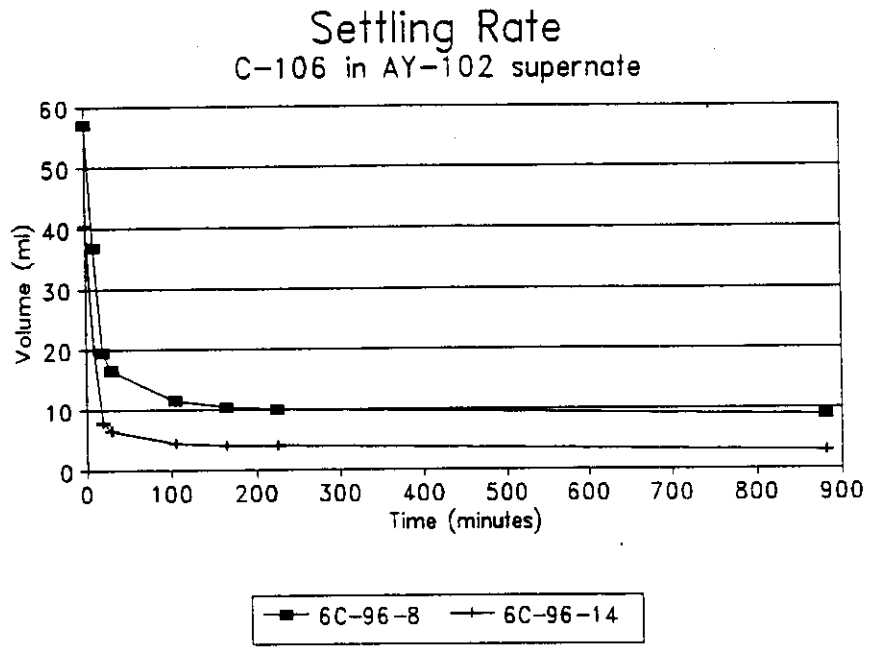
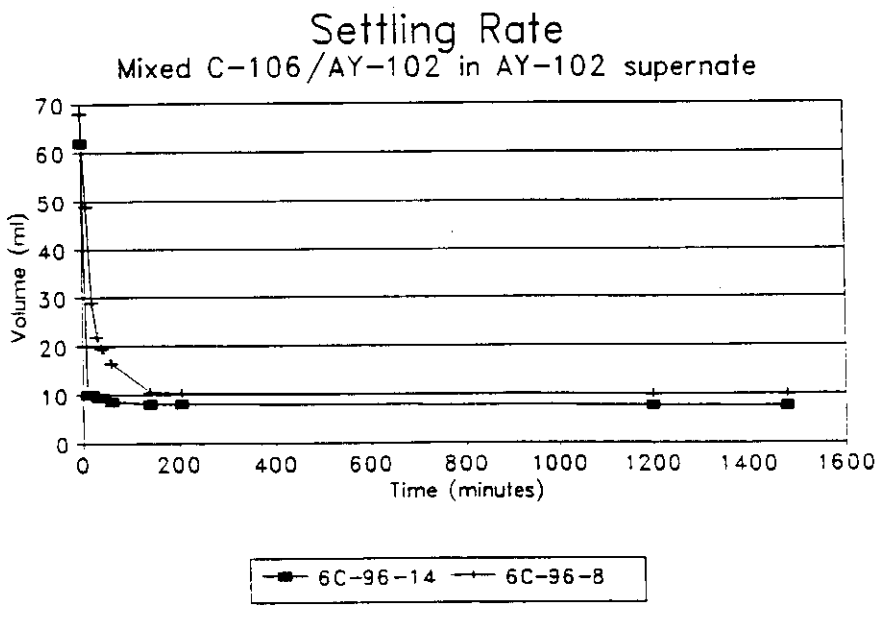


Figure 2 - Mixed C-106/AY-102 and AY-102 Supernate



APPENDIX 3

INTERNAL MEMO # 75764-PCS-96-071

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From: Process Chemistry and Statistics 75764-PCS96-071
Phone: 373-2532 T6-09
Date: July 15, 1996
Subject: CAUSTIC DEMAND -- TANK C-106 SLUDGE

To: R. A. Esch 7/16/96 T6-06

cc: H. Babad S7-14
T. M. Blaak S5-13
K. G. Carothers R1-51
B. A. Crawford T6-09
J. R. Jewett T6-09
J. M. Jones S5-13
D. A. Reynolds R2-11
DLH File/LB

Reference: Internal memo, B. A. Crawford to R. A. Esch, "Processing and Sampling Results from Breakdown of Tank 241-C-106 Grab Samples," June 19, 1996.

Caustic demand testing has been performed on two sludge samples from tank 241-C-106 (C-106). Results show that the buffering capacity of the sludge is not exhausted until approximately 1.0 to 1.3 moles of NaOH per liter of sludge has been added. (See Figure 1.) The buffering capacity is due to the presence of large amounts of sodium bicarbonate and amphoteric aluminum hydroxide. The difference in buffering capacity between the two sludge samples can be attributed to different levels of aluminum hydroxide.

In most previous caustic demand studies, the purpose was to determine how much saturated (19.5 M) NaOH solution would need to be added to a waste tank to bring the waste solution up to a specified free hydroxide concentration. In this case, there are no plans to add caustic to tank C-106. The purpose in this case was to predict how the C-106 sludge would behave when it is sluiced out of the tank and mixed with waste in a double shell tank. The results make it clear that the C-106 sludge will absorb significant amounts of hydroxide from a double shell tank waste that receives the sludge, resulting in dissolution of much, if not all, of the aluminum hydroxide.

Laboratory data are recorded in notebook number WHC-N-384-4, pages 40-46.

Experimental

Tank C-106 sample S96T000576 (see Reference 1 for a description of the sample history) was mixed with a spatula, and aliquots were transferred into five tared centrifuge cones labeled 1-5. Dilute (2.78 M) NaOH solution was added to each cone, which was mixed by vortexing immediately after the NaOH addition. Weights of sludge and added NaOH solution are shown in Table 1.

All five cones were then tumbled end-over-end for 24 hours to mix the samples and allow time for reactions to take place.

The five cones were centrifuged for two hours. The centrifuged samples all contained - from bottom to top - a centrifuged solids layer, a clear liquid layer, and a dark brown "oil" layer. The "oil" was very easily dispersed into the liquid layer by slight agitation, so it was not possible to cleanly separate the liquid layer alone for analysis. The liquid from each cone - along with an uncontrolled amount of the "oil" layer - was transferred to a sample vial for analysis of free hydroxide (OH^-), total inorganic carbon (TIC), and metals by inductively coupled plasma spectroscopy (ICP). No attempt was made to characterize the "oil" layer in any way.

Table 1. Weight/Volume Data for C-106 Sludge Sample S96T000576

	1	2	3	4	5
Weight of Sludge (g)	8.46	8.13	6.80	6.88	6.93
Wt of NaOH Added (g)	0.50	1.80	2.14	3.59	7.31
Vol of NaOH Added[1] (mL)	0.45	1.62	1.93	3.23	6.58
Total vol in cone (mL)	6.5	7.3	7.0	8.3	11.9
Vol 'fuged solids (mL)	3.8	3.8	3.3	3.3	3.2
Original Sample Vol (mL)	6.1	5.7	5.1	5.1	5.3
Vol actual solids[1] (mL)	1.8	1.8	1.6	1.6	1.6
Total liquid vol[1] (mL)	4.7	5.5	5.4	6.7	10.3
Wt 'fuged solids (g)	5.90	5.91	4.97	4.85	4.61
Sample ID S96R000...	387	386	388	389	390
Found [OH^-] Trial 1 (M)	< det	0.078	0.109	0.175	0.747
Found [OH^-] Trial 2 (M)	< det	0.070	0.106	0.166	0.747
Calculated[1] [OH^-] (M)	0.26	0.81	0.99	1.35	1.78

[1] Calculated values.

A sample of the NaOH stock solution was also submitted for free hydroxide analysis as sample S96R000391. Analytical results of duplicate analyses were 2.76 M and 2.80 M, for an average of 2.78 M free hydroxide.

Tank C-106 sludge sample S96T001550 was treated in similar fashion to sample S96T000576. Weights and volumes are shown in Table 2.

Table 2. Weight/Volume Data for C-106 Sludge Sample S96T001550

	1	2	3	4	5
Weight of Sludge (g)	6.74	6.16	5.95	5.57	7.12
Wt of NaOH Added (g)	0.49	1.31	1.95	3.83	7.30
Vol of NaOH Added (mL)	0.44	1.18	1.75	3.45	6.57
Total vol in cone (mL)	5.1	5.8	6.2	7.6	11.8
Vol 'fuged solids (mL)	2.9	2.5	2.4	2.4	2.8
Original Sample Vol (mL)	4.7	4.6	4.4	4.2	5.2
Vol actual solids[1] (mL)	1.2	1.2	1.1	1.2	1.3
Total liquid vol[1] (mL)	3.9	4.6	5.1	6.4	10.5
Wt 'fuged solids (g)	4.85	3.79	3.71	3.53	4.34
Sample ID S96R000...	381	382	383	384	385
Found [OH^-] Trial 1 (M)	< det	0.099	0.201	0.788	1.082
Found [OH^-] Trial 2 (M)	< det	0.099	0.201	0.800	1.141
Calculated[1] [OH^-] (M)	0.32	0.71	0.96	1.49	1.74

[1] Calculated values.

Calculations

The calculated hydroxide values represent what the free hydroxide concentrations would be if the only effect of mixing with the sludge sample were simple dilution of the added NaOH. To calculate the dilution factor, the volume of liquid in the cone before the NaOH addition had to be estimated. The volume of NaOH added was calculated by dividing the weight, which was measured, by the density of the solution (1.11136 g/mL) provided by the Standards Laboratory.

The total volume in each cone and the volume of centrifuged solids were determined by reading the graduations on the cone after the NaOH was added and the samples were mixed and centrifuged. The original sample volume was assumed to be the total volume minus the volume of NaOH solution added.

The "volume of actual solids" is an estimate based on some typical percent water values, provided by Ruth Esch, for similar tank C-106 centrifuged solids and supernatant liquid samples. The percent water values used were 33% water for the centrifuged solids and 77% water for the supernatant (or interstitial) liquid. The density of the supernatant liquid, 1.24 g/mL, was also provided by Ruth Esch. To convert volume of centrifuged solids to volume of actual solids, the following formula was applied, using Cone 1 from Table 2 as an example:

$$4.85 \text{ g c sol} * \frac{0.33 \text{ g } H_2O}{\text{g c sol}} * \frac{\text{g ISL}}{0.77 \text{ g } H_2O} * \frac{\text{mL ISL}}{1.24 \text{ g ISL}} = 1.7 \text{ mL ISL}$$

$$2.9 \text{ mL c sol} - 1.7 \text{ mL ISL} = 1.2 \text{ mL actual solids}$$

where c sol = centrifuged solids and ISL = interstitial liquid.

The total liquid volume in the cone was estimated by subtracting the actual solids volume from the total volume. The calculated free hydroxide value was then determined by multiplying the NaOH concentration (2.78 M) by the volume of NaOH solution added, and dividing by the total liquid volume.

Results

The free hydroxide analytical results are shown in Tables 1 and 2. The analyzed values are lower than the calculated values because some of the added NaOH undergoes reactions with the sludge. The buffering capacity of the sludge -- i.e., the amount of NaOH that reacts with the sludge -- can be determined from a graph of the data as shown in Figure 1.

For a plot of [NaOH] Found vs. [NaOH] Calculated, the ideal slope of a line through the points would be 1.0 if there were no interaction between the added NaOH and the sludge. That is, for every mole of hydroxide added, one mole of hydroxide would be found in the analysis. When the sludge reacts with the added NaOH, the result is less than one mole of hydroxide found for every mole added, and a slope of less than 1.0.

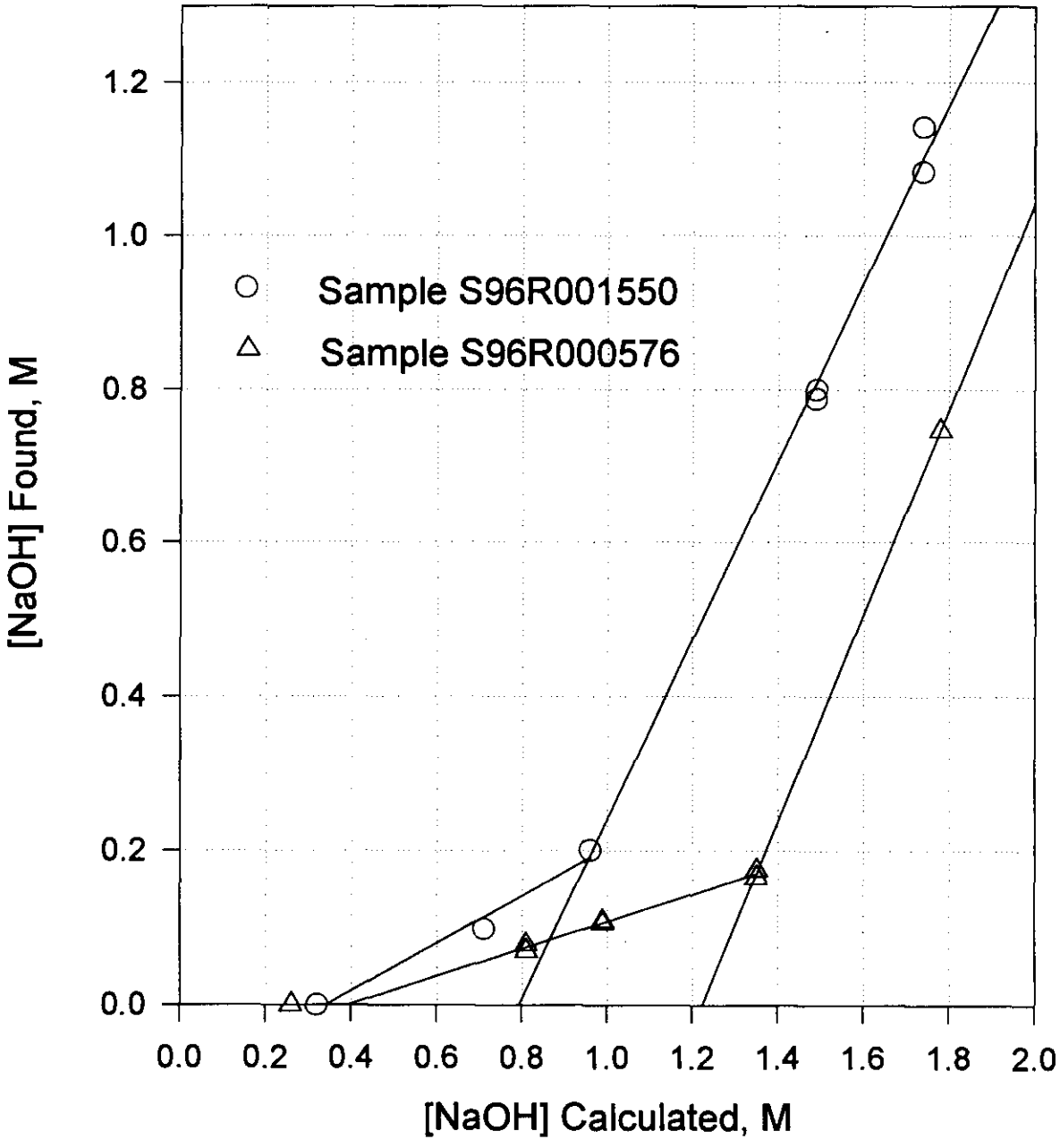
Both samples in Figure 1 show an initial slope of much less than 1.0, and a slope close to 1.0 after the buffering capacity of the sludge has been exhausted. For sludge sample S96T001550, the buffering capacity was exhausted when the [NaOH] Calculated was approximately 1.0 M. Sample S96T000576 reached the end of the buffering capacity at approximately 1.3 M calculated hydroxide. The difference between the two samples is largely due to the different amount of aluminum hydroxide that dissolved, as shown by the ICP results (Tables 3 and 4).

The data in Tables 3 and 4 help to show what happens to the sludge as NaOH is added. The top portion of each table shows the "raw" analytical results as reported in Labcore. The bottom portion of each table shows the molarity of each analyte corrected for the NaOH dilution. To convert from the raw data in μg/mL to the dilution-corrected values in molarity, the following conversion was used (cf. Al, Cone 5, Table 3):

$$\frac{7{,}790 \ \mu\text{g Al}}{\text{mL Tot Liq}} \times \frac{\text{mmol Al}}{27{,}000 \ \mu\text{g Al}} \times \frac{10.3 \text{ mL Tot Liq}}{(10.3 - 6.58) \text{ mL Orig Liq}} = 0.80 \text{ M Al}$$

where Tot Liq = total liquid, 6.58 = volume of NaOH added, and Orig Liq = volume of liquid in original sample before NaOH was added.

Figure 1. Tank C-106 Sludge Caustic Demand



For the dilution-corrected Na values, a further correction was made to account for the Na in the added NaOH. The number of mmoles of added Na was subtracted from the total mmoles of Na before dividing by the original liquid volume.

Table 3. ICP and TIC Results for C-106 Sludge Sample S96T000576

	1	2	3	4	5
	"raw" data, µg/mL				
Al	100	2,270	4,740	7,070	7,790
Cr	< 4	8	17	32	39
K	476	498	513	310	285
Na	86,900	79,300	81,000	78,700	73,200
P	242	485	524	561	470
S	1,810	1,390	1,250	1,000	682
TIC	19,300	18,500	17,400	16,400	12,100
	dilution corrected, Molarity				
Al	0.004	0.12	0.27	0.51	0.80
Cr	--	0.0002	0.0005	0.0012	0.0021
K	0.013	0.018	0.020	0.015	0.020
Na	3.88	3.72	3.93	4.02	3.89
P	0.009	0.022	0.026	0.035	0.042
S	0.062	0.061	0.061	0.061	0.059
TIC	1.78	2.18	2.25	2.65	2.79

Table 4. ICP and TIC Results for C-106 Sludge Sample S96T001550

	1	2	3	4	5
	"raw" data, µg/mL				
Al	ran out of sample	2,730	4,570	4,240	3,530
Cr		27	43	42	33
K		518	473	326	269
Na		94,400	91,300	84,900	81,400
P		406	478	371	300
S		1,770	1,520	1,110	882
TIC		19,500	17,900	14,000	10,900
	dilution corrected, Molarity				
Al		0.14	0.26	0.34	0.35
Cr		0.0007	0.0013	0.0017	0.0017
K		0.018	0.018	0.018	0.018
Na		4.56	4.59	4.74	4.80
P		0.018	0.024	0.026	0.026
S		0.074	0.073	0.075	0.074
TIC		2.18	2.28	2.52	2.43

If nothing happened when the NaOH was added, the dilution-corrected concentrations should be constant from left to right across each table. This is pretty much the case for sulfur and potassium, which appear to be unaffected by the added NaOH.

Chromium and phosphorus show steady increases with increasing NaOH, but the concentrations are so small as to have no noticeable effect on the observed free hydroxide concentrations. The chromium probably increases due to reaction of amphoteric chromic hydroxide:

$$Cr(OH)_3 + OH^- \longrightarrow Cr(OH)_4^-$$

The phosphate probably increases because the solubility of Na_3PO_4 increases with decreasing ionic strength of the liquid.

Aluminum increases because of the same amphoteric reaction as for chromium, changing the insoluble aluminum hydroxide to soluble aluminate ion. In the case of aluminum, the concentration is high enough to show a substantial effect on the observed free hydroxide. The difference in Al concentrations between the two sludge samples is of the same magnitude as the difference in their buffering capacities.

The TIC probably increases because the solubility of Na_2CO_3 increases with decreasing ionic strength of the liquid. This dissolution is unrelated to any reaction with NaOH. However, at the pH of the original sludge samples (approximately 10.1), a large fraction of the TIC is present as bicarbonate ion rather than carbonate ion. As the NaOH is added, the bicarbonate gets converted to carbonate:

$$HCO_3^- + OH^- \longrightarrow CO_3^{2-} + H_2O$$

Both the aluminum hydroxide reaction and the bicarbonate reaction contribute significantly to the buffering capacity of the sludge. When the C-106 sludge is mixed with waste in a double shell tank, the hydroxide concentration of the resulting waste mixture will be substantially less than the concentration calculated by simple dilution.

Please call me on 373-2532 if you have any questions about these findings.

D. L. Herting, Senior Principal Scientist
Process Chemistry and Statistics

dls

SAMPLE DATA SUMMARY

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Table 3: Data Summary Report
C-106 GRAB

RISER: 1
SEGMENT #: 6C-96-3

SEGMENT PORTION: Sludge (from Liquid Grab Sample)

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S96T001526			DSC Exotherm Dry Calculated	Joules/g Dry	n/a	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S96T001526			DSC Exotherm on Perkin Elmer	Joules/g	99.12	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S96T001526			% Water by TGA using Mettler	%	99.11	n/a	3.540	2.820	3.180	22.6	n/a	n/a	n/a
S96T001526			TOC by Persulfate/Coulometry	ug/g	93.20	1.600	6.05e+04	5.03e+04	5.54e+04	18.4	n/a	40.00	n/a
S96T003178		W	Fluoride-IC-Dionex 4000i/4500	ug/g	106.4	<1.30e-02	2.14e+02	267.0	240.7	22.0	105.9	109.1	n/a
S96T003178		W	Chloride-IC-Dionex 4000i/4500	ug/g	98.23	<1.70e-02	2.92e+02	310.0	300.9	5.98	92.91	142.6	n/a
S96T003178		W	Nitrite-IC - Dionex 4000i/4500	ug/g	93.91	<1.07e-01	1.32e+04	1.43e+04	1.37e+04	8.00	87.64	897.5	n/a
S96T003178		W	Nitrate by IC-Dionex4000i/4500	ug/g	104.1	5.770	2.96e+03	3.80e+03	3.38e+03	24.9	93.97	1.17e+03	n/a
S96T003178		W	Phosphate-IC-Dionex 4000i/4500	ug/g	103.1	<1.19e-01	1.66e+03	<1.40e3	n/a	n/a	94.69	997.5	n/a
S96T003178		W	Sulfate by IC-Dionex4000i/4500	ug/g	106.5	<1.36e-01	5.34e+03	5.23e+03	5.29e+03	2.08	97.78	1.14e+03	n/a
S96T003178		W	Oxalate by IC - Dionex 4000i	ug/g	107.5	<1.05e-01	3.08e+05	3.19e+05	3.13e+05	3.51	34.25	881.1	n/a

Table 3: Data Summary Report
C-106 GRAB

RISER: 1
SEGMENT #: 6C-96-4

SEGMENT PORTION: Centrifuged Solids (Grab Sample)

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S96T001527			Bulk Density of Sample	g/mL	n/a	n/a	1.500	n/a	n/a	n/a	n/a	5.00e-01	n/a
S96T001527			DSC Exotherm using Mettler	Joules/g	111.4	n/a	0.00e+00	1.00e+03	500.0	200	n/a	n/a	n/a
S96T001527 1			DSC Exotherm using Mettler	Joules/g	112.8	n/a	13.50	25.50	19.50	61.5	n/a	n/a	n/a
S96T001527			DSC Exotherm Dry Calculated	Joules/g Dry	n/a	n/a	0.00e+00	1.04e+03	520.0	200	n/a	n/a	n/a
S96T001527 1			DSC Exotherm Dry Calculated	Joules/g Dry	n/a	n/a	14.00	26.45	20.23	61.6	n/a	n/a	n/a
S96T001527			% Water by TGA using Mettler	%	99.31	n/a	3.630	3.540	3.585	2.51	n/a	n/a	n/a
S96T001527			Volume % Solids	%	n/a	n/a	59.30	n/a	n/a	n/a	n/a	n/a	n/a
S96T001527			% Water by Gravimetric	%	98.99	n/a	5.900	5.600	5.750	5.22	n/a	1.00e-01	n/a

Control Sample: Control Sample

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S96T001530			DSC Exotherm Dry Calculated	Joules/g Dry	n/a	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S96T001530			DSC Exotherm on Perkin Elmer	Joules/g	101.6	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S96T001530			% Water by TGA on Perkin Elmer	%	99.24	n/a	32.71	34.32	33.52	4.80	n/a	n/a	n/a
S96T001531	F		Technetium-99 Liq. Scint.	uCi/g	104.5	<1.42e-02	<1.43e-02	1.74e-02	n/a	n/a	n/a	1.40e-02	7.09E+00
S96T001531	F		Strontium-89/90 High Level	uCi/g	104.1	<1.20e-01	6.03e+02	589.0	596.0	2.35	n/a	2.83e-01	6.65E-01
S96T001531	F		Pu-239/240 by TRU-SPEC Resin	uCi/g	103.7	<1.55e-02	1.270	1.210	1.240	4.84	n/a	7.60e-02	1.37E+00
S96T001531	F		Cobalt-60 by GEA	uCi/g	101.4	<2.87e-01	<4.96e-01	<4.35e-1	n/a	n/a	n/a	4.96e-01	n/a
S96T001531	F		Cesium-137 by GEA	uCi/g	99.11	<8.64e-01	6.61e+02	625.0	643.0	5.60	n/a	n/a	0.940
S96T001531	F		Am-241 by Extraction	uCi/g	90.60	<1.73e-02	8.84e-01	1.100	9.92e-01	21.8	n/a	6.10e-02	2.24E+00
S96T001531	F		Alpha of Digested Solid	uCi/g	102.3	<4.91e-02	2.630	2.570	2.600	2.31	93.59	4.30e-02	9.54E+00

Decanted Supernate (Liquid Grab Sludge): Decanted Supernate (Liquid Grab Sludge)

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S96T001528			Specific Gravity	Sp.G.	97.74	n/a	1.230	1.246	1.238	1.29	n/a	1.00e-03	n/a
S96T001528			% Water by Gravimetric	%	98.14	n/a	76.70	76.80	76.75	0.13	n/a	1.00e-01	n/a

Filtered Centrifuged Solids: Filtered Centrifuged Solids

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S96T001537			DSC Exotherm Dry Calculated	Joules/g Dry	n/a	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S96T001537			DSC Exotherm on Perkin Elmer	Joules/g	101.6	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S96T001537			% Water by TGA on Perkin Elmer	%	99.24	n/a	22.14	26.07	24.11	16.3	n/a	n/a	n/a
S96T001538			TIC by Acid/Coulometry	ug/g	99.83	5.00e-01	2.54e+04	2.53e+04	2.54e+04	0.39	102.1	5.000	n/a
S96T001538			TOC by Persulfate/Coulometry	ug/g	92.36	1.600	1.48e+04	1.64e+04	1.56e+04	10.3	84.80	40.00	n/a
S96T001539			% Water by Gravimetric	%	99.32	n/a	27.10	23.10	25.10	15.9	n/a	1.00e-02	n/a
S96T001540			pH on SST Samples	pH	99.88	n/a	10.21	10.18	10.20	0.29	n/a	1.00e-02	n/a
S96T001541	F		Technetium-99 Liq. Scint.	uCi/g	104.5	<1.42e-02	<1.54e-02	1.75e-02	n/a	n/a	n/a	1.50e-02	7.12E+00
S96T001541	F		Strontium-89/90 High Level	uCi/g	104.1	<1.20e-01	6.65e+02	721.0	693.0	8.08	n/a	2.86e-01	6.36E-01
S96T001541	F		Pu-239/240 by TRU-SPEC Resin	uCi/g	103.7	<1.55e-02	1.420	1.480	1.450	4.14	n/a	8.10e-02	1.42E+00
S96T001541	F		Cobalt-60 by GEA	uCi/g	101.4	<2.87e-01	<5.48e-01	<5.72e-1	n/a	n/a	n/a	5.48e-01	n/a

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S96T001541		F	Cesium-137 by GEA	uCi/g	99.11	<8.64e-01	6.16e+02	671.0	643.6	8.55	n/a	n/a	1.02
S96T001541		F	Am-241 by Extraction	uCi/g	90.60	<1.73e-02	1.150	1.560	1.355	30.3	n/a	7.40e-02	1.69E+00
S96T001541		F	Alpha of Digested Solid	uCi/g	102.3	<4.91e-02	3.120	3.310	3.215	5.91	94.43	4.80e-02	9.29E+00
S96T001542		A	Silver -ICP-Acid Digest	ug/g	89.40	<1.00e-02	2.50e+03	1.51e+03	2.00e+03	49.4	n/a	6.140	n/a
S96T001542		A	Aluminium -ICP-Acid Digest	ug/g	91.00	1.17e-01	6.20e+04	5.44e+04	5.82e+04	13.1	n/a	30.70	n/a
S96T001542		A	Arsenic -ICP-Acid Digest	ug/g	94.00	<1.00e-01	< 61.40	<5.91e1	n/a	n/a	84.70	61.40	n/a
S96T001542		A	Boron -ICP-Acid Digest	ug/g	97.40	5.88e-01	59.20	72.10	65.65	19.6	87.82	30.70	n/a
S96T001542		A	Barium -ICP-Acid Digest	ug/g	94.00	<5.00e-02	3.79e+02	330.0	354.5	13.8	85.52	30.70	n/a
S96T001542		A	Beryllium -ICP-Acid Digest	ug/g	103.6	<5.00e-03	< 3.070	<2.95e0	n/a	n/a	91.70	3.070	n/a
S96T001542		A	Bismuth -ICP-Acid Digest	ug/g	89.60	<1.00e-01	< 61.40	<5.91e1	n/a	n/a	86.10	61.40	n/a
S96T001542		A	Calcium -ICP-Acid Digest	ug/g	91.20	<1.00e-01	1.17e+03	1.18e+03	1.18e+03	0.85	80.76	61.40	n/a
S96T001542		A	Cadmium -ICP-Acid Digest	ug/g	89.20	<5.00e-03	37.90	33.00	35.45	13.8	86.06	3.070	n/a
S96T001542		A	Cerium -ICP-Acid Digest	ug/g	96.60	<1.00e-01	2.42e+02	233.0	237.5	3.79	91.20	61.40	n/a
S96T001542		A	Cobalt -ICP-Acid Digest	ug/g	91.80	<2.00e-02	12.30	<1.18e1	n/a	n/a	88.10	12.30	n/a
S96T001542		A	Chromium -ICP-Acid Digest	ug/g	90.80	<1.00e-02	7.30e+02	660.0	695.0	10.1	84.36	6.140	n/a
S96T001542		A	Copper -ICP-Acid Digest	ug/g	91.60	1.10e-02	93.70	80.40	87.05	15.3	84.82	6.140	n/a
S96T001542		A	Iron -ICP-Acid Digest	ug/g	91.60	<5.00e-02	8.31e+04	7.15e+04	7.73e+04	15.0	n/a	30.70	n/a
S96T001542		A	Potassium -ICP-Acid Digest	ug/g	94.00	<5.00e-01	9.05e+02	644.0	774.5	33.7	77.82	307.0	n/a
S96T001542		A	Lanthanum -ICP-Acid Digest	ug/g	93.80	<5.00e-02	80.30	72.00	76.15	10.9	88.08	30.70	n/a
S96T001542		A	Lithium -ICP-Acid Digest	ug/g	94.20	<1.00e-02	< 6.140	<5.91e0	n/a	n/a	86.90	6.140	n/a
S96T001542		A	Magnesium -ICP-Acid Digest	ug/g	86.00	<1.00e-01	3.21e+02	283.0	302.0	12.6	79.10	61.40	n/a
S96T001542		A	Manganese -ICP-Acid Digest	ug/g	90.20	<1.00e-02	2.28e+03	2.00e+03	2.14e+03	13.1	78.58	6.140	n/a
S96T001542		A	Molybdenum -ICP-Acid Digest	ug/g	90.80	<5.00e-02	< 30.70	<2.95e1	n/a	n/a	86.80	30.70	n/a
S96T001542		A	Sodium -ICP-Acid Digest	ug/g	103.2	8.79e-01	1.40e+05	1.29e+05	1.34e+05	8.18	n/a	61.40	n/a
S96T001542		A	Neodymium -ICP-Acid Digest	ug/g	93.40	<1.00e-01	1.92e+02	176.0	184.0	8.70	87.22	61.40	n/a
S96T001542		A	Nickel -ICP-Acid Digest	ug/g	92.00	<2.00e-02	7.70e+02	694.0	732.0	10.4	86.38	12.30	n/a
S96T001542		A	Phosphorus -ICP-Acid Digest	ug/g	94.00	<2.00e-01	2.75e+03	2.50e+03	2.62e+03	9.52	57.92	123.0	n/a
S96T001542		A	Lead -ICP-Acid Digest	ug/g	86.20	<1.00e-01	2.90e+03	2.54e+03	2.72e+03	13.2	74.32	61.40	n/a
S96T001542		A	Sulfur -ICP-Acid Digest	ug/g	89.20	<1.00e-01	1.40e+03	1.14e+03	1.27e+03	20.5	74.82	61.40	n/a
S96T001542		A	Antimony -ICP-Acid Digest	ug/g	93.00	<6.00e-02	< 36.90	<3.54e1	n/a	n/a	89.70	36.90	n/a
S96T001542		A	Selenium -ICP-Acid Digest	ug/g	88.00	<1.00e-01	< 61.40	<5.91e1	n/a	n/a	84.70	61.40	n/a
S96T001542		A	Silicon -ICP-Acid Digest	ug/g	129.4	8.36e-01	3.81e+04	2.19e+04	3.00e+04	54.0	n/a	30.70	n/a
S96T001542		A	Samarium -ICP-Acid Digest	ug/g	91.80	<1.00e-01	< 61.40	<5.91e1	n/a	n/a	87.90	61.40	n/a
S96T001542		A	Strontium -ICP-Acid Digest	ug/g	92.20	<1.00e-02	25.60	22.90	24.25	11.1	86.16	6.140	n/a
S96T001542		A	Titanium-ICP-Acid Digest	ug/g	86.00	<1.00e-02	1.39e+02	122.0	130.5	13.0	80.10	6.140	n/a
S96T001542		A	Thallium -ICP-Acid Digest	ug/g	86.60	<2.00e-01	<1.23e+02	<1.18e2	n/a	n/a	82.10	123.0	n/a
S96T001542		A	Uranium -ICP-Acid Digest	ug/g	90.50	<5.00e-01	8.56e+02	1.14e+03	998.0	28.5	80.09	307.0	n/a
S96T001542		A	Vanadium -ICP-Acid Digest	ug/g	90.60	<5.00e-02	< 30.70	<2.95e1	n/a	n/a	86.50	30.70	n/a
S96T001542		A	Zinc -ICP-Acid Digest	ug/g	87.00	1.20e-02	60.60	49.80	55.20	19.6	84.44	6.140	n/a
S96T001542		A	Zirconium -ICP-Acid Digest	ug/g	98.80	<1.00e-02	9.42e+02	1.38e+03	1.16e+03	37.7	76.00	6.140	n/a
S96T003179		W	Fluoride-IC-Dionex 4000i/4500	ug/g	106.4	<1.30e-02	4.95e+02	142.0	318.3	111	n/a	56.77	n/a
S96T003179		W	Chloride-IC-Dionex 4000i/4500	ug/g	98.23	<1.70e-02	6.36e+02	261.0	448.7	83.6	n/a	74.24	n/a
S96T003179		W	Nitrite-IC - Dionex 4000i/4500	ug/g	93.91	<1.07e-01	1.19e+04	1.23e+04	1.21e+04	3.31	n/a	467.3	n/a
S96T003179		W	Nitrate by IC-Dionex4000i/4500	ug/g	104.1	5.770	3.08e+03	4.31e+03	3.69e+03	33.3	n/a	610.9	n/a
S96T003179		W	Phosphate-IC-Dionex 4000i/4500	ug/g	103.1	<1.19e-01	1.60e+03	1.98e+03	1.79e+03	21.2	n/a	519.2	n/a
S96T003179		W	Sulfate by IC-Dionex4000i/4500	ug/g	106.5	<1.36e-01	4.06e+03	3.85e+03	3.96e+03	5.31	n/a	593.5	n/a
S96T003179		W	Oxalate by IC - Dionex 4000i	ug/g	107.5	<1.05e-01	1.17e+05	4.30e+04	8.02e+04	92.5	n/a	458.5	n/a

Interstitial Liquid: Interstitial Liquid

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S96T001544			DSC Exotherm Dry Calculated	Joules/g Dry	n/a	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S96T001544			DSC Exotherm on Perkin Elmer	Joules/g	99.12	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S96T001544			pH Direct	pH	99.75	n/a	10.10	n/a	n/a	n/a	n/a	1.00e-02	n/a
S96T001544			% Water by TGA using Mettler	%	100.1	n/a	58.94	57.09	58.02	3.19	n/a	n/a	n/a
S96T001544			Tot. Organic Carbon by Coul.	ug/mL	100.0	1.00e-01	2.32e+03	2.31e+03	2.32e+03	0.43	95.10	55.00	n/a
S96T001544			TOC by Persulfate/Coulometry	ug/mL	92.36	1.600	1.87e+03	1.50e+03	1.68e+03	22.0	93.20	40.00	n/a
S96T001544			Strontium-89/90 High Level	uCi/mL	97.56	1.20e-02	8.40e-01	7.82e-01	8.11e-01	7.15	n/a	1.70e-02	5.37E+00
S96T001544			Pu-239/240 by TRU-SPEC Resin	uCi/mL	99.47	<2.61e-02	8.67e-01	8.39e-01	8.53e-01	3.28	n/a	6.50e-02	2.18E+00
S96T001544		D	Silver-ICP-Acid Dil.	ug/mL	97.80	<1.00e-02	< 4.010	<4.01e0	n/a	n/a	90.30	4.010	n/a
S96T001544		D	Aluminium-ICP-Acid Dil.	ug/mL	100.0	<5.00e-02	< 20.10	<2.01e1	n/a	n/a	95.30	20.10	n/a
S96T001544		D	Arsenic-ICP-Acid Dil.	ug/mL	103.0	<1.00e-01	< 40.10	<4.01e1	n/a	n/a	104.2	40.10	n/a
S96T001544		D	Boron-ICP-Acid Dil.	ug/mL	103.2	<5.00e-02	< 20.10	<2.01e1	n/a	n/a	100.3	20.10	n/a
S96T001544		D	Barium-ICP-Acid Dil.	ug/mL	104.0	<5.00e-02	< 20.10	<2.01e1	n/a	n/a	102.0	20.10	n/a
S96T001544		D	Beryllium-ICP-Acid Dil.	ug/mL	105.6	<5.00e-03	< 2.000	<2.00e0	n/a	n/a	102.0	2.000	n/a
S96T001544		D	Bismuth-ICP-Acid Dil.	ug/mL	101.4	<1.00e-01	< 40.10	<4.01e1	n/a	n/a	89.00	40.10	n/a
S96T001544		D	Calcium-ICP-Acid Dil.	ug/mL	103.2	<1.00e-01	< 40.10	<4.01e1	n/a	n/a	107.5	40.10	n/a
S96T001544		D	Cadmium-ICP-Acid Dil.	ug/mL	99.60	<5.00e-03	< 2.000	<2.00e0	n/a	n/a	94.00	2.000	n/a
S96T001544		D	Cerium-ICP-Acid Dil.	ug/mL	105.0	<1.00e-01	< 40.10	<4.01e1	n/a	n/a	102.0	40.10	n/a
S96T001544		D	Cobalt-ICP-Acid Dil.	ug/mL	100.0	<2.00e-02	< 8.020	<8.02e0	n/a	n/a	93.30	8.020	n/a
S96T001544		D	Chromium-ICP-Acid Dil.	ug/mL	98.80	<1.00e-02	< 4.010	<4.01e0	n/a	n/a	93.50	4.010	n/a
S96T001544		D	Copper-ICP-Acid Dil.	ug/mL	105.0	<1.00e-02	< 4.010	<4.01e0	n/a	n/a	102.3	4.010	n/a
S96T001544		D	Iron-ICP-Acid Dil.	ug/mL	102.0	<5.00e-02	< 20.10	<2.01e1	n/a	n/a	103.3	20.10	n/a
S96T001544		D	Potassium-ICP-Acid Dil.	ug/mL	101.4	<5.00e-01	5.92e+02	566.0	579.0	4.49	89.90	200.0	n/a
S96T001544		D	Lanthanum-ICP-Acid Dil.	ug/mL	102.6	<5.00e-02	< 20.10	<2.01e1	n/a	n/a	100.5	20.10	n/a
S96T001544		D	Lithium-ICP-Acid Dil.	ug/mL	106.4	<1.00e-02	< 4.010	<4.01e0	n/a	n/a	98.50	4.010	n/a
S96T001544		D	Magnesium-ICP-Acid Dil.	ug/mL	97.00	<1.00e-01	< 40.10	<4.01e1	n/a	n/a	91.30	40.10	n/a
S96T001544		D	Manganese-ICP-Acid Dil.	ug/mL	99.40	<1.00e-02	< 4.010	<4.01e0	n/a	n/a	95.80	4.010	n/a
S96T001544		D	Molybdenum-ICP-Acid Dil.	ug/mL	100.2	<5.00e-02	22.30	21.60	21.95	3.19	94.00	20.10	n/a
S96T001544		D	Sodium-ICP-Acid Dil.	ug/mL	105.0	<1.00e-01	1.10e+05	1.10e+05	1.10e+05	0.00	130.9	40.10	n/a
S96T001544		D	Neodymium-ICP-Acid Dil.	ug/mL	108.4	<1.00e-01	< 40.10	<4.01e1	n/a	n/a	112.5	40.10	n/a
S96T001544		D	Nickel-ICP-Acid Dil.	ug/mL	99.40	<2.00e-02	14.80	15.60	15.20	5.26	93.30	8.020	n/a
S96T001544		D	Phosphorus-ICP-Acid Dil.	ug/mL	102.0	<2.00e-01	3.52e+02	372.0	362.0	5.52	102.0	80.20	n/a
S96T001544		D	Lead-ICP-Acid Dil.	ug/mL	99.40	<1.00e-01	< 40.10	<4.01e1	n/a	n/a	96.50	40.10	n/a
S96T001544		D	Sulfer-ICP-Acid Dil.	ug/mL	99.40	<1.00e-01	2.37e+03	2.28e+03	2.32e+03	3.87	70.50	40.10	n/a
S96T001544		D	Antimony-ICP-Acid Dil.	ug/mL	96.80	<6.00e-02	< 24.10	<2.41e1	n/a	n/a	91.80	24.10	n/a
S96T001544		D	Selenium-ICP-Acid Dil.	ug/mL	106.0	<1.00e-01	< 40.10	<4.01e1	n/a	n/a	113.7	40.10	n/a
S96T001544		D	Silicon-ICP-Acid Dil.	ug/mL	95.60	<5.00e-02	< 20.10	<2.01e1	n/a	n/a	94.00	20.10	n/a
S96T001544		D	Samarium-ICP-Acid Dil.	ug/mL	105.8	<1.00e-01	< 40.10	<4.01e1	n/a	n/a	107.5	40.10	n/a
S96T001544		D	Strontium-ICP-Acid Dil.	ug/mL	103.4	<1.00e-02	< 4.010	<4.01e0	n/a	n/a	101.3	4.010	n/a
S96T001544		D	Titanium-ICP-Acid Dil.	ug/mL	99.00	<1.00e-02	< 4.010	<4.01e0	n/a	n/a	95.50	4.010	n/a
S96T001544		D	Thallium-ICP-Acid Dil.	ug/mL	97.20	<2.00e-01	< 80.20	<8.02e1	n/a	n/a	89.80	80.20	n/a
S96T001544		D	Uranium-ICP-Acid Dil.	ug/mL	100.0	<5.00e-01	1.54e+03	1.64e+03	1.59e+03	6.29	108.4	200.0	n/a
S96T001544		D	Vanadium-ICP-Acid Dil.	ug/mL	102.0	<5.00e-02	< 20.10	<2.01e1	n/a	n/a	97.50	20.10	n/a
S96T001544		D	Zinc-ICP-Acid Dil.	ug/mL	100.0	<1.00e-02	5.250	5.980	5.615	13.0	92.70	4.010	n/a
S96T001544		D	Zirconium-ICP-Acid Dil.	ug/mL	101.4	<1.00e-02	3.72e+02	378.0	375.0	1.60	101.1	4.010	n/a
S96T001544			Fluoride-IC-Dionex 4000i/4500	ug/mL	98.81	<1.30e-02	1.97e+02	199.0	198.2	1.01	n/a	14.44	n/a
S96T001544			Chloride-IC-Dionex 4000i/4500	ug/mL	93.17	<1.70e-02	5.84e+02	588.0	586.1	0.68	n/a	18.89	n/a
S96T001544			Nitrite-IC - Dionex 4000i/4500	ug/mL	98.61	<1.07e-01	2.59e+04	2.62e+04	2.60e+04	1.15	n/a	118.9	n/a

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S96T001544			Nitrate-IC - Dionex 4000i/4500	ug/mL	99.67	2.38e-01	9.43e+02	954.0	948.5	1.16	n/a	155.5	n/a
S96T001544			Phosphate-IC-Dionex 4000i/4500	ug/mL	100.7	<1.19e-01	5.85e+02	547.0	565.9	6.71	n/a	132.1	n/a
S96T001544			Sulfate by IC-Dionex4000i/4500	ug/mL	99.53	<1.36e-01	6.83e+03	6.86e+03	6.85e+03	0.44	n/a	151.0	n/a
S96T001544			Oxalate by IC - Dionex 4000i	ug/mL	100.2	<1.05e-01	2.19e+03	2.23e+03	2.21e+03	1.81	n/a	116.7	n/a
S96T001544			Cobalt-60 by GEA	uCi/mL	98.94	<2.16e-02	<3.38e-02	<2.27e-2	n/a	n/a	n/a	3.40e-02	n/a
S96T001544			Cesium-137 by GEA	uCi/mL	100.4	<6.06e-02	1.59e+02	157.0	158.0	1.27	n/a	n/a	0.550

Potential Organic Layer: Potential Organic Layer

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S96T001545			Pu-239/240 by TRU-SPEC Resin	uCi/mL	96.33	<3.03e-05	4.26e-03	4.21e-03	4.24e-03	1.18	n/a	3.06e-04	2.23E+00

Table 3: Data Summary Report
C-106 GRAB

RISER: 1
SEGMENT #: 6C-96-5

SEGMENT PORTION: Supernate

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S96T000538			DSC Exotherm using Mettler	Joules/g	96.66	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S96T000538			DSC Exotherm Dry Calculated	Joules/g Dry	n/a	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S96T000538			Ammonia by ISE-Std Additions	ug/mL	96.84	3.100	< 5.000	<5	n/a	n/a	n/a	5.000	n/a
S96T000538			pH Direct	pH	100.0	n/a	10.10	10.08	10.09	6.94	n/a	1.00e-02	n/a
S96T000538			Specific Gravity	Sp.G.	98.88	n/a	1.155	1.155	1.155	0.00	n/a	1.00e-02	n/a
S96T000538			% Water by TGA using Mettler	%	103.0	n/a	80.91	80.84	80.88	0.09	n/a	n/a	n/a
S96T000538			Tot. Inorg. Carbon by Coul.	ug/mL	103.0	<5.000	2.00e+04	2.02e+04	2.01e+04	1.00	81.90	105.0	n/a
S96T000538			Tot. Organic Carbon by Coul.	ug/mL	97.03	<5.000	3.36e+03	3.24e+03	3.30e+03	3.64	95.40	55.00	n/a
S96T000538			TOC by Persulfate/Coulometry	ug/mL	96.70	9.900	2.30e+03	2.18e+03	2.24e+03	5.36	119.0	40.00	n/a
S96T000538			% Water by Gravimetric	%	102.0	n/a	81.40	81.40	81.40	0.00	n/a	1.00e-02	n/a
S96T000538		D	Silver-ICP-Acid Dil.	ug/mL	100.8	<1.00e-02	11.20	9.690	10.45	14.5	80.10	4.010	n/a
S96T000538		D	Aluminium-ICP-Acid Dil.	ug/mL	98.40	<5.00e-02	< 20.00	<2.00e1	n/a	n/a	97.40	20.10	n/a
S96T000538		D	Arsenic-ICP-Acid Dil.	ug/mL	103.8	<1.00e-01	< 40.10	<4.01e1	n/a	n/a	100.8	40.10	n/a
S96T000538		D	Boron-ICP-Acid Dil.	ug/mL	100.4	<5.00e-02	< 20.00	<2.00e1	n/a	n/a	101.6	20.10	n/a
S96T000538		D	Barium-ICP-Acid Dil.	ug/mL	102.6	<5.00e-02	< 20.00	<2.00e1	n/a	n/a	98.60	20.10	n/a
S96T000538		D	Beryllium-ICP-Acid Dil.	ug/mL	104.0	<5.00e-03	< 2.000	<2.00e0	n/a	n/a	101.6	2.000	n/a
S96T000538		D	Bismuth-ICP-Acid Dil.	ug/mL	101.8	<1.00e-01	< 40.10	<4.01e1	n/a	n/a	100.8	40.10	n/a
S96T000538		D	Calcium-ICP-Acid Dil.	ug/mL	104.2	<1.00e-01	< 40.10	<4.01e1	n/a	n/a	105.3	40.10	n/a
S96T000538		D	Cadmium-ICP-Acid Dil.	ug/mL	102.8	<5.00e-03	< 2.000	<2.00e0	n/a	n/a	101.8	2.000	n/a
S96T000538		D	Cerium-ICP-Acid Dil.	ug/mL	105.6	<1.00e-01	< 40.10	<4.01e1	n/a	n/a	105.1	40.10	n/a
S96T000538		D	Cobalt-ICP-Acid Dil.	ug/mL	103.4	<2.00e-02	< 8.020	<8.02e0	n/a	n/a	101.8	8.020	n/a
S96T000538		D	Chromium-ICP-Acid Dil.	ug/mL	104.0	<1.00e-02	< 4.010	<4.01e0	n/a	n/a	102.8	4.010	n/a
S96T000538		D	Copper-ICP-Acid Dil.	ug/mL	104.2	<1.00e-02	< 4.010	<4.01e0	n/a	n/a	99.60	4.010	n/a
S96T000538		D	Iron-ICP-Acid Dil.	ug/mL	103.2	<5.00e-02	< 20.00	<2.00e1	n/a	n/a	102.3	20.10	n/a
S96T000538		D	Potassium-ICP-Acid Dil.	ug/mL	103.4	<5.00e-01	8.01e+02	658.0	729.5	19.6	67.30	200.0	n/a
S96T000538		D	Lanthanum-ICP-Acid Dil.	ug/mL	103.6	<5.00e-02	< 20.00	<2.00e1	n/a	n/a	101.1	20.10	n/a
S96T000538		D	Lithium-ICP-Acid Dil.	ug/mL	99.60	<1.00e-02	< 4.010	<4.01e0	n/a	n/a	97.90	4.010	n/a
S96T000538		D	Magnesium-ICP-Acid Dil.	ug/mL	97.60	<1.00e-01	< 40.10	<4.01e1	n/a	n/a	94.60	40.10	n/a
S96T000538		D	Manganese-ICP-Acid Dil.	ug/mL	100.6	<1.00e-02	< 4.010	<4.01e0	n/a	n/a	98.10	4.010	n/a
S96T000538		D	Molybdenum-ICP-Acid Dil.	ug/mL	103.8	<5.00e-02	29.30	25.00	27.15	15.8	101.5	20.10	n/a
S96T000538		D	Sodium-ICP-Acid Dil.	ug/mL	98.20	<1.00e-01	1.07e+05	9.68e+04	1.02e+05	10.0	n/a	40.10	n/a
S96T000538		D	Neodymium-ICP-Acid Dil.	ug/mL	105.2	<1.00e-01	< 40.10	<4.01e1	n/a	n/a	103.3	40.10	n/a
S96T000538		D	Nickel-ICP-Acid Dil.	ug/mL	101.6	<2.00e-02	18.40	15.70	17.05	15.8	100.0	8.020	n/a
S96T000538		D	Phosphorus-ICP-Acid Dil.	ug/mL	102.2	<2.00e-01	3.24e+02	300.0	312.0	7.69	90.20	80.20	n/a
S96T000538		D	Lead-ICP-Acid Dil.	ug/mL	102.0	<1.00e-01	< 40.10	<4.01e1	n/a	n/a	105.1	40.10	n/a
S96T000538		D	Sulfer-ICP-Acid Dil.	ug/mL	98.80	<1.00e-01	3.06e+03	2.71e+03	2.88e+03	12.1	n/a	40.10	n/a
S96T000538		D	Antimony-ICP-Acid Dil.	ug/mL	96.20	<6.00e-02	< 24.10	<2.41e1	n/a	n/a	98.10	24.10	n/a
S96T000538		D	Selenium-ICP-Acid Dil.	ug/mL	98.40	<1.00e-01	< 40.10	<4.01e1	n/a	n/a	101.6	40.10	n/a
S96T000538		D	Silicon-ICP-Acid Dil.	ug/mL	99.00	<5.00e-02	26.20	23.00	24.60	13.0	98.30	20.10	n/a
S96T000538		D	Samarium-ICP-Acid Dil.	ug/mL	100.4	<1.00e-01	< 40.10	<4.01e1	n/a	n/a	98.60	40.10	n/a
S96T000538		D	Strontium-ICP-Acid Dil.	ug/mL	101.8	<1.00e-02	< 4.010	<4.01e0	n/a	n/a	99.10	4.010	n/a
S96T000538		D	Titanium-ICP-Acid Dil.	ug/mL	100.4	<1.00e-02	< 4.010	<4.01e0	n/a	n/a	98.60	4.010	n/a
S96T000538		D	Thallium-ICP-Acid Dil.	ug/mL	99.00	<2.00e-01	< 80.20	<8.02e1	n/a	n/a	97.60	80.20	n/a

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S96T000538		D	Uranium-ICP-Acid Dil.	ug/mL	99.20	<5.00e-01	1.87e+03	1.77e+03	1.82e+03	5.49	56.65	200.0	n/a
S96T000538		D	Vanadium-ICP-Acid Dil.	ug/mL	103.4	<5.00e-02	< 20.00	<2.00e1	n/a	n/a	102.3	20.10	n/a
S96T000538		D	Zinc-ICP-Acid Dil.	ug/mL	101.6	<1.00e-02	5.090	4.050	4.570	22.8	101.8	4.010	n/a
S96T000538		D	Zirconium-ICP-Acid Dil.	ug/mL	102.0	<1.00e-02	4.45e+02	404.0	424.5	9.66	82.70	4.010	n/a
S96T000538			Fluoride-IC-Dionex 4000i/4500	ug/mL	100.7	<1.30e-02	3.17e+02	347.0	332.0	9.04	96.61	132.6	n/a
S96T000538			Chloride-IC-Dionex 4000i/4500	ug/mL	102.5	5.00e-02	2.48e+02	428.0	337.9	53.3	102.0	173.4	n/a
S96T000538			Nitrite-IC - Dionex 4000i/4500	ug/mL	103.5	<1.07e-01	2.91e+04	2.87e+04	2.89e+04	1.38	106.3	1.09e+03	n/a
S96T000538			Nitrate-IC - Dionex 4000i/4500	ug/mL	102.1	<1.40e-01	2.04e+03	1.58e+03	1.81e+03	25.4	103.1	1.43e+03	n/a
S96T000538			Phosphate-IC-Dionex 4000i/4500	ug/mL	103.1	<1.19e-01	<1.21e+03	<1.21e3	n/a	n/a	103.7	1.21e+03	n/a
S96T000538			Sulfate by IC-Dionex4000i/4500	ug/mL	99.53	<1.36e-01	7.46e+03	7.86e+03	7.66e+03	5.22	101.0	1.39e+03	n/a
S96T000538			Oxalate by IC - Dionex 4000i	ug/mL	105.3	<1.05e-01	3.65e+03	3.70e+03	3.68e+03	1.36	108.4	1.07e+03	n/a
S96T000539			Technetium-99 Liq. Scint.	uCi/mL	101.8	<3.54e-03	8.52e-02	9.23e-02	8.87e-02	8.00	n/a	4.00e-03	3.03E+00
S96T000539			Strontium-89/90 High Level	uCi/mL	95.12	8.00e-03	3.69e-01	3.62e-01	3.65e-01	1.92	n/a	2.00e-03	3.46E+00
S96T000539			Pu-239/240 by TRU-SPEC Resin	uCi/mL	88.28	<3.12e-03	7.40e-01	6.92e-01	7.16e-01	6.70	n/a	3.10e-02	1.65E+00
S96T000539			Cobalt-60 by GEA	uCi/mL	99.23	<1.99e-05	<5.71e-03	<6.13e-3	n/a	n/a	n/a	6.00e-03	n/a
S96T000539			Cesium-137 by GEA	uCi/mL	101.5	<5.81e-05	1.08e+02	107.0	107.5	0.93	n/a	n/a	0.210
S96T000539			Am-241 by Extraction	uCi/mL	80.13	<1.15e-02	1.50e-02	1.21e-02	1.35e-02	21.4	n/a	1.20e-02	4.65E+00
S96T000539			Alpha in Liquid Samples	uCi/mL	102.6	<3.84e-03	1.150	1.140	1.145	0.87	108.9	1.00e-02	5.03E+00

Table 3: Data Summary Report
C-106 GRAB

RISER: 1
SEGMENT #: 6C-96-7

SEGMENT PORTION: Centrifuged Solids (Grab Sample)

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S96T000542			Bulk Density of Sample	g/mL	n/a	n/a	1.710	n/a	n/a	n/a	n/a	5.00e-01	n/a
S96T000542			DSC Exotherm using Mettler	Joules/g	113.5	n/a	1.12e+02	89.10	100.5	22.8	n/a	n/a	n/a
S96T000542			DSC Exotherm Dry Calculated	Joules/g Dry	n/a	n/a	1.22e+02	97.14	109.6	22.8	n/a	n/a	n/a
S96T000542			% Water by TGA on Perkin Elmer	%	98.68	n/a	8.040	8.510	8.275	5.68	n/a	n/a	n/a
S96T000542			Volume % Solids	%	n/a	n/a	69.50	n/a	n/a	n/a	n/a	n/a	n/a
S96T000542			% Water by Gravimetric	%	98.14	n/a	9.800	10.00	9.900	0.22	n/a	1.00e-02	n/a

Control Sample: Control Sample

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S96T000543			DSC Exotherm Dry Calculated	Joules/g Dry	n/a	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S96T000543			DSC Exotherm on Perkin Elmer	Joules/g	95.82	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S96T000543			% Water by TGA on Perkin Elmer	%	99.41	n/a	29.76	32.47	31.12	8.71	n/a	n/a	n/a
S96T000546	F		Technetium-99 Liq. Scint.	uCi/g	99.47	<3.58e-02	5.51e-02	4.48e-02	5.00e-02	20.6	n/a	3.50e-02	5.81E+00
S96T000546	F		Strontium-89/90 High Level	uCi/g	92.68	6.20e-02	3.32e+02	342.0	337.0	2.97	n/a	5.30e-02	5.19E-01
S96T000546	F		Pu-239/240 by TRU-SPEC Resin	uCi/g	92.13	<3.43e-02	1.520	1.390	1.455	8.93	n/a	1.13e-01	2.03E+00
S96T000546	F		Cobalt-60 by GEA	uCi/g	96.66	<1.52e-01	<2.33e-01	<2.27e-1	n/a	n/a	n/a	2.33e-01	n/a
S96T000546	F		Cesium-137 by GEA	uCi/g	96.08	<2.04e-01	4.03e+02	417.0	409.9	3.41	n/a	n/a	0.580
S96T000546	F		Am-241 by Extraction	uCi/g	106.1	<2.54e-02	1.010	1.230	1.120	19.6	n/a	8.10e-02	3.4
S96T000546	F		Alpha of Digested Solid	uCi/g	118.0	<5.57e-02	2.880	2.570	2.725	11.4	106.4	7.20e-02	1.03E+01

Decanted Supernate (Liquid Grab Sludge): Decanted Supernate (Liquid Grab Sludge)

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S96T000544			pH Direct	pH	99.75	n/a	10.09	n/a	n/a	n/a	n/a	1.00e-02	n/a
S96T000544			Specific Gravity	Sp.G.	101.1	n/a	1.200	1.194	1.197	0.50	n/a	1.00e-03	n/a
S96T000544			Tot. Organic Carbon by Coul.	ug/mL	100.0	1.00e-01	2.07e+03	2.02e+03	2.04e+03	2.44	100.0	55.00	n/a
S96T000544			% Water by Gravimetric	%	98.65	n/a	78.80	78.80	78.80	0.00	n/a	1.00e-02	n/a
S96T000544			Strontium-89/90 High Level	uCi/mL	101.6	<2.06e-03	9.68e-01	8.93e-01	9.30e-01	8.06	n/a	4.00e-03	2.08E+00
S96T000544			Pu-239/240 by TRU-SPEC Resin	uCi/mL	92.39	<3.82e-03	7.69e-01	7.56e-01	7.62e-01	1.70	n/a	3.60e-02	1.96E+00

Filtered Centrifuged Solids: Filtered Centrifuged Solids

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S96T000551			DSC Exotherm using Mettler	Joules/g	113.5	n/a	2.87e+02	279.9	283.4	2.47	n/a	n/a	n/a
S96T000551			DSC Exotherm Dry Calculated	Joules/g Dry	n/a	n/a	3.29e+02	320.9	324.9	2.46	n/a	n/a	n/a
S96T000551			% Water by TGA using Mettler	%	102.2	n/a	9.440	16.11	12.77	52.2	n/a	n/a	n/a
S96T000552			TIC by Acid/Coulometry	ug/g	97.84	8.00e-01	2.56e+04	2.76e+04	2.66e+04	7.52	n/a	5.000	n/a
S96T000552			TOC by Persulfate/Coulometry	ug/g	92.03	3.100	2.47e+04	2.92e+04	2.70e+04	16.7	n/a	40.00	n/a
S96T000553			% Water by Gravimetric	%	98.14	n/a	18.90	19.20	19.05	0.38	n/a	1.00e-02	n/a
S96T000554			pH on SST Samples	pH	100.5	n/a	10.40	10.50	10.45	0.96	n/a	1.00e-02	n/a
S96T000555	F		Technetium-99 Liq. Scint.	uCi/g	99.47	<3.58e-02	4.09e-02	<3.53E-2	n/a	n/a	n/a	3.70e-02	6.26E+00
S96T000555	F		Strontium-89/90 High Level	uCi/g	92.68	6.20e-02	5.19e+02	523.0	521.0	0.77	n/a	1.14e-01	6.08E-01

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S96T000555		F	Pu-239/240 by TRU-SPEC Resin	uCi/g	98.69	<3.56e-02	1.320	1.280	1.300	3.08	n/a	8.90e-02	2.09E+00
S96T000555		F	Cobalt-60 by GEA	uCi/g	98.05	<4.73e-01	0.00e+00	<5.71e-1	n/a	n/a	n/a	n/a	n/a
S96T000555		F	Cesium-137 by GEA	uCi/g	98.56	<9.17e-01	5.96e+02	622.0	609.0	4.27	n/a	n/a	17.0
S96T000555		F	Am-241 by Extraction	uCi/g	106.1	<2.54e-02	1.330	1.220	1.275	8.63	n/a	9.60e-02	2.8
S96T000555		F	Alpha of Digested Solid	uCi/g	118.0	<5.57e-02	3.330	3.060	3.195	8.45	109.7	7.70e-02	9.94E+00
S96T000556		A	Silver -ICP-Acid Digest	ug/g	91.90	<1.00e-02	2.77e+03	2.02e+03	2.40e+03	31.3	n/a	11.00	n/a
S96T000556		A	Aluminium -ICP-Acid Digest	ug/g	96.60	1.18e-01	5.17e+04	4.42e+04	4.80e+04	15.6	1.38e+03	54.80	n/a
S96T000556		A	Arsenic -ICP-Acid Digest	ug/g	97.20	<1.00e-01	<1.10e+02	<9.43e1	n/a	n/a	95.60	110.0	n/a
S96T000556		A	Boron -ICP-Acid Digest	ug/g	108.8	5.40e-01	< 54.80	<4.72e1	n/a	n/a	99.40	54.80	n/a
S96T000556		A	Barium -ICP-Acid Digest	ug/g	97.60	<5.00e-02	3.04e+02	260.0	282.0	15.6	102.2	54.80	n/a
S96T000556		A	Beryllium -ICP-Acid Digest	ug/g	103.0	<5.00e-03	< 5.480	<4.72e0	n/a	n/a	98.40	5.480	n/a
S96T000556		A	Bismuth -ICP-Acid Digest	ug/g	92.40	<1.00e-01	<1.10e+02	<9.43e1	n/a	n/a	89.80	110.0	n/a
S96T000556		A	Calcium -ICP-Acid Digest	ug/g	100.2	4.59e-01	1.33e+03	1.12e+03	1.22e+03	17.1	91.02	110.0	n/a
S96T000556		A	Cadmium -ICP-Acid Digest	ug/g	94.60	<5.00e-03	33.30	27.10	30.20	20.5	94.16	5.480	n/a
S96T000556		A	Cerium -ICP-Acid Digest	ug/g	100.0	<1.00e-01	1.78e+02	174.0	176.0	2.27	106.1	110.0	n/a
S96T000556		A	Cobalt -ICP-Acid Digest	ug/g	98.40	<2.00e-02	< 21.90	<1.89e1	n/a	n/a	97.20	21.90	n/a
S96T000556		A	Chromium -ICP-Acid Digest	ug/g	97.00	1.70e-02	6.45e+02	552.0	598.5	15.5	107.3	11.00	n/a
S96T000556		A	Copper -ICP-Acid Digest	ug/g	92.80	2.60e-02	89.70	76.70	83.20	15.6	94.02	11.00	n/a
S96T000556		A	Iron -ICP-Acid Digest	ug/g	97.60	7.00e-02	6.87e+04	5.86e+04	6.36e+04	15.9	1.65e+03	54.80	n/a
S96T000556		A	Potassium -ICP-Acid Digest	ug/g	98.80	<5.00e-01	6.43e+02	588.0	615.5	8.94	118.1	548.0	n/a
S96T000556		A	Lanthanum -ICP-Acid Digest	ug/g	98.20	<5.00e-02	74.80	60.50	67.65	21.1	97.36	54.80	n/a
S96T000556		A	Lithium -ICP-Acid Digest	ug/g	95.80	<1.00e-02	< 11.00	<9.43e0	n/a	n/a	93.80	11.00	n/a
S96T000556		A	Magnesium -ICP-Acid Digest	ug/g	94.60	<1.00e-01	2.19e+02	187.0	203.0	15.8	95.58	110.0	n/a
S96T000556		A	Manganese -ICP-Acid Digest	ug/g	96.60	<1.00e-02	1.86e+03	1.59e+03	1.72e+03	15.7	136.5	11.00	n/a
S96T000556		A	Molybdenum -ICP-Acid Digest	ug/g	97.60	<5.00e-02	< 54.80	<4.72e1	n/a	n/a	96.00	54.80	n/a
S96T000556		A	Sodium -ICP-Acid Digest	ug/g	109.0	7.70e-01	1.61e+05	1.37e+05	1.49e+05	16.1	1.69e+03	110.0	n/a
S96T000556		A	Neodymium -ICP-Acid Digest	ug/g	98.00	<1.00e-01	1.39e+02	127.0	133.0	9.02	102.7	110.0	n/a
S96T000556		A	Nickel -ICP-Acid Digest	ug/g	97.20	<2.00e-02	6.45e+02	550.0	597.5	15.9	109.8	21.90	n/a
S96T000556		A	Phosphorus -ICP-Acid Digest	ug/g	99.80	<2.00e-01	2.58e+03	2.20e+03	2.39e+03	15.9	148.5	219.0	n/a
S96T000556		A	Lead -ICP-Acid Digest	ug/g	91.60	<1.00e-01	2.49e+03	2.15e+03	2.32e+03	14.7	148.3	110.0	n/a
S96T000556		A	Sulfur -ICP-Acid Digest	ug/g	95.60	<1.00e-01	1.39e+03	1.19e+03	1.29e+03	15.5	121.2	110.0	n/a
S96T000556		A	Antimony -ICP-Acid Digest	ug/g	96.60	<6.00e-02	< 65.70	<5.66e1	n/a	n/a	97.80	65.70	n/a
S96T000556		A	Selenium -ICP-Acid Digest	ug/g	97.80	<1.00e-01	<1.10e+02	<9.43e1	n/a	n/a	100.0	110.0	n/a
S96T000556		A	Silicon -ICP-Acid Digest	ug/g	135.2	2.27e-01	2.87e+04	2.47e+04	2.67e+04	15.0	736.3	54.80	n/a
S96T000556		A	Samarium -ICP-Acid Digest	ug/g	99.80	<1.00e-01	<1.10e+02	<9.43e1	n/a	n/a	101.4	110.0	n/a
S96T000556		A	Strontium -ICP-Acid Digest	ug/g	97.00	<1.00e-02	21.10	17.90	19.50	16.4	95.68	11.00	n/a
S96T000556		A	Titanium-ICP-Acid Digest	ug/g	91.60	<1.00e-02	1.20e+02	102.0	111.0	16.2	92.06	11.00	n/a
S96T000556		A	Thallium -ICP-Acid Digest	ug/g	88.60	<2.00e-01	<2.19e+02	<1.89e2	n/a	n/a	88.60	219.0	n/a
S96T000556		A	Uranium -ICP-Acid Digest	ug/g	94.40	<5.00e-01	8.30e+02	686.0	758.0	19.0	94.13	548.0	n/a
S96T000556		A	Vanadium -ICP-Acid Digest	ug/g	96.40	<5.00e-02	< 54.80	<4.72e1	n/a	n/a	95.80	54.80	n/a
S96T000556		A	Zinc -ICP-Acid Digest	ug/g	92.60	2.50e-02	39.60	35.20	37.40	11.8	93.38	11.00	n/a
S96T000556		A	Zirconium -ICP-Acid Digest	ug/g	104.2	<1.00e-02	49.30	39.40	44.35	22.3	151.7	11.00	n/a
S96T000557		W	Fluoride-IC-Dionex 4000i/4500	ug/g	96.10	<1.30e-02	2.09e+02	198.0	203.6	5.41	109.0	50.69	n/a
S96T000557		W	Chloride-IC-Dionex 4000i/4500	ug/g	99.11	3.30e-02	1.72e+02	169.0	170.4	1.76	99.37	66.28	n/a
S96T000557		W	Nitrite-IC - Dionex 4000i/4500	ug/g	97.74	<1.07e-01	1.35e+04	1.34e+04	1.35e+04	0.74	114.6	417.3	n/a
S96T000557		W	Nitrate by IC-Dionex4000i/4500	ug/g	97.72	<1.40e-01	1.27e+03	1.25e+03	1.26e+03	1.59	103.3	545.4	n/a
S96T000557		W	Phosphate-IC-Dionex 4000i/4500	ug/g	100.2	<1.19e-01	9.29e+02	985.0	957.0	5.85	109.7	463.7	n/a
S96T000557		W	Sulfate by IC-Dionex4000i/4500	ug/g	97.94	<1.36e-01	4.12e+03	4.11e+03	4.11e+03	0.24	105.1	529.8	n/a
S96T000557		W	Oxalate by IC - Dionex 4000i	ug/g	99.07	<1.05e-01	7.80e+04	7.70e+04	7.75e+04	1.29	110.4	409.3	n/a

Interstitial Liquid: Interstitial Liquid

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S96T000545			DSC Exotherm Dry Calculated	Joules/g Dry	n/a	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S96T000545			DSC Exotherm on Perkin Elmer	Joules/g	95.82	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S96T000545			% Water by TGA on Perkin Elmer	%	102.0	n/a	34.27	36.53	35.40	6.38	n/a	n/a	n/a
S96T000545			TOC by Persulfate/Coulometry	ug/mL	96.00	5.000	2.42e+03	2.43e+03	2.42e+03	0.41	95.50	40.00	n/a
S96T000545			Cobalt-60 by GEA	uCi/mL	96.11	<6.53e-04	<7.50e-03	1.08e-02	n/a	n/a	n/a	8.00e-03	n/a
S96T000545			Cesium-137 by GEA	uCi/mL	95.94	<4.94e-04	76.50	100.0	88.25	26.6	n/a	n/a	0.290

Potential Organic Layer: Potential Organic Layer

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S96T001548			DSC Exotherm using Mettler	Joules/g	112.5	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S96T001548			DSC Exotherm Dry Calculated	Joules/g Dry	n/a	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S96T001548			% Water by TGA using Mettler	%	103.9	n/a	34.16	35.78	34.97	4.63	n/a	n/a	n/a

Table 3: Data Summary Report
C-106 GRAB

RISER: 1
SEGMENT #: 6C-96-8

SEGMENT PORTION: Compatibility Study Mixture

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S96T002766			DSC Exotherm on Perkin Elmer	Joules/g	100.6	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S96T002766			pH Direct	pH	100.2	n/a	11.22	n/a	n/a	n/a	n/a	1.00e-02	n/a
S96T002766			% Water by TGA on Perkin Elmer	%	97.87	n/a	96.24	96.16	96.20	0.08	n/a	n/a	n/a
S96T002769			Bulk Density of Sample	g/mL	n/a	n/a	1.270	n/a	n/a	n/a	n/a	5.00e-01	n/a
S96T002769			% Water by TGA using Mettler	%	99.54	n/a	73.78	76.28	75.03	3.33	n/a	n/a	n/a
S96T002770			DSC Exotherm using Mettler	Joules/g	111.8	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S96T002770			pH Direct	pH	100.0	n/a	11.71	11.69	11.70	0.17	n/a	1.00e-02	n/a
S96T002770			% Water by TGA using Mettler	%	99.54	n/a	96.86	97.03	96.94	0.18	n/a	n/a	n/a
S96T002772			Bulk Density of Sample	g/mL	n/a	n/a	1.400	n/a	n/a	n/a	n/a	5.00e-01	n/a
S96T002772			% Water by TGA using Mettler	%	99.54	n/a	79.49	78.63	79.06	1.09	n/a	n/a	n/a

Decanted Supernate (Liquid Grab Sludge): Decanted Supernate (Liquid Grab Sludge)

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S96T002768			pH Direct	pH	100.2	n/a	11.10	n/a	n/a	n/a	n/a	1.00e-02	n/a
S96T002768			Specific Gravity	Sp.G.	101.2	n/a	1.005	9.97e-01	1.001	0.80	n/a	1.00e-02	n/a
S96T002771			pH Direct	pH	100.0	n/a	11.81	11.79	11.80	0.17	n/a	1.00e-02	n/a
S96T002771			Specific Gravity	Sp.G.	97.43	n/a	1.002	9.91e-01	9.96e-01	1.10	n/a	1.00e-02	n/a

Potential Organic Layer: Potential Organic Layer

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S96T003134			2-Butoxyethanol	ug/L	n/a	n/a	SEE TICS	NA	n/a	n/a	n/a	n/a	n/a
S96T003134			Nonane (C9)	ug/mL	n/a	n/a	U0.00e+00	n/a	n/a	n/a	n/a	50.00	n/a
S96T003134			Decane (C10)	ug/mL	n/a	n/a	U0.00e+00	n/a	n/a	n/a	n/a	50.00	n/a
S96T003134			Undecane (C11)	ug/mL	n/a	n/a	J 1.590	n/a	n/a	n/a	n/a	50.00	n/a
S96T003134			Dodecane (C12)	ug/mL	n/a	n/a	J 10.10	n/a	n/a	n/a	n/a	50.00	n/a
S96T003134			Tridecane (C13)	ug/mL	n/a	n/a	J 45.60	n/a	n/a	n/a	n/a	50.00	n/a
S96T003134			Tetradecane (C14)	ug/mL	n/a	n/a	J 27.60	n/a	n/a	n/a	n/a	50.00	n/a
S96T003134			Pentadecane (C15)	ug/mL	n/a	n/a	J 2.370	n/a	n/a	n/a	n/a	50.00	n/a
S96T003134			Tri-n-butylphosphate	ug/mL	n/a	n/a	J 31.90	n/a	n/a	n/a	n/a	50.00	n/a
S96T003134			Hexadecane (C16) Surr	ug/mL	n/a	n/a	83.50	n/a	n/a	n/a	n/a	50.00	n/a

Sludge (from Liquid Grab Sample): Sludge (from Liquid Grab Sample)

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S96T000854			TOC by Persulfate/Coulometry	ug/g	95.36	8.300	1.34e+04	9.32e+03	1.14e+04	35.9	n/a	40.00	n/a
S96T002021			DSC Exotherm using Mettler	Joules/g	97.72	n/a	33.50	100.6	67.05	100	n/a	n/a	n/a
S96T002021			DSC Exotherm Dry Calculated	Joules/g Dry	n/a	n/a	71.10	213.5	142.3	100	n/a	n/a	n/a
S96T002021			% Water by TGA using Mettler	%	99.93	n/a	59.60	46.16	52.88	25.4	n/a	n/a	n/a
S96T002042			DSC Exotherm Dry Calculated	Joules/g Dry	n/a	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S96T002042			DSC Exotherm on Perkin Elmer	Joules/g	92.02	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S96T002042			% Water by TGA using Mettler	%	99.16	n/a	60.45	60.55	60.50	0.17	n/a	n/a	n/a

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S96T002042	1		% Water by TGA using Mettler	%	99.83	n/a	56.10	54.50	55.30	2.89	n/a	n/a	n/a

Table 3: Data Summary Report
C-106 GRAB

RISER: 1
SEGMENT #: 6C-96-10

SEGMENT PORTION: Centrifuged Solids (Grab Sample)

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S96T000558			Bulk Density of Sample	g/mL	n/a	n/a	1.760	n/a	n/a	n/a	n/a	5.00e-01	n/a
S96T000558			DSC Exotherm Dry Calculated	Joules/g Dry	n/a	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S96T000558			DSC Exotherm on Perkin Elmer	Joules/g	98.45	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S96T000558			% Water by TGA on Perkin Elmer	%	98.68	n/a	11.71	14.00	12.86	17.8	n/a	n/a	n/a
S96T000558			Volume % Solids	%	n/a	n/a	85.20	n/a	n/a	n/a	n/a	n/a	n/a
S96T000558			% Water by Gravimetric	%	98.14	n/a	17.00	17.20	17.10	0.24	n/a	1.00e-02	n/a

Control Sample: Control Sample

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S96T000560			DSC Exotherm Dry Calculated	Joules/g Dry	n/a	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S96T000560			DSC Exotherm on Perkin Elmer	Joules/g	98.45	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S96T000560			% Water by TGA using Mettler	%	102.2	n/a	13.39	13.59	13.49	1.48	n/a	n/a	n/a
S96T000561	F		Technetium-99 Liq. Scint.	uCi/g	99.47	<3.58e-02	<6.43e-02	<5.53E-2	n/a	n/a	n/a	6.40e-02	6.35E+00
S96T000561	F		Strontium-89/90 High Level	uCi/g	92.68	6.20e-02	1.74e+02	152.0	163.0	13.5	n/a	4.80e-02	6.80E-01
S96T000561	F		Pu-239/240 by TRU-SPEC Resin	uCi/g	94.49	<5.300	<6.20e-02	<4.67E-2	n/a	n/a	n/a	6.20e-02	1.00E+02
S96T000561	F		Cobalt-60 by GEA	uCi/g	98.05	<4.73e-01	<2.05e-01	<1.88e-1	n/a	n/a	n/a	2.05e-01	n/a
S96T000561	F		Cesium-137 by GEA	uCi/g	98.56	<9.17e-01	1.98e+02	170.0	183.8	15.2	n/a	n/a	1.01
S96T000561	F		Am-241 by Extraction	uCi/g	105.5	<4.43e-02	4.26e-01	3.62e-01	3.94e-01	16.2	n/a	6.80e-02	3.95E+00
S96T000561	F		Alpha of Digested Solid	uCi/g	118.0	<5.57e-02	1.560	1.150	1.355	30.3	107.8	1.32e-01	2.00E+01

Decanted Supernate (Liquid Grab Sludge): Decanted Supernate (Liquid Grab Sludge)

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S96T000559			Specific Gravity	Sp.G.	101.1	n/a	1.156	1.150	1.153	0.52	n/a	1.00e-03	n/a
S96T000559			% Water by Gravimetric	%	98.65	n/a	79.30	79.30	79.30	0.00	n/a	1.00e-02	n/a

Filtered Centrifuged Solids: Filtered Centrifuged Solids

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S96T000567			DSC Exotherm using Mettler	Joules/g	99.82	n/a	69.70	94.70	82.20	30.4	n/a	n/a	n/a
S96T000567			DSC Exotherm Dry Calculated	Joules/g Dry	n/a	n/a	93.87	127.5	110.7	30.4	n/a	n/a	n/a
S96T000567			% Water by TGA using Mettler	%	101.7	n/a	26.22	25.27	25.74	3.69	n/a	n/a	n/a
S96T000568			TIC by Acid/Coulometry	ug/g	97.84	8.00e-01	2.93e+04	2.56e+04	2.74e+04	13.5	100.0	5.000	n/a
S96T000568			TOC by Persulfate/Coulometry	ug/g	92.03	3.100	2.04e+04	2.49e+04	2.26e+04	19.9	87.90	40.00	n/a
S96T000569			% Water by Gravimetric	%	98.14	n/a	26.30	27.30	26.80	1.37	n/a	1.00e-02	n/a
S96T000570			pH on SST Samples	pH	100.5	n/a	10.56	10.54	10.55	0.19	n/a	1.00e-02	n/a
S96T000571	F		Technetium-99 Liq. Scint.	uCi/g	99.47	<3.58e-02	<2.26e-02	<2.74E-2	n/a	n/a	n/a	2.30e-02	6.16E+00
S96T000571	F		Strontium-89/90 High Level	uCi/g	101.6	1.17e-01	1.86e+02	517.0	351.5	94.2	n/a	4.40e-02	5.50E-01
S96T000571	F		Pu-239/240 by TRU-SPEC Resin	uCi/g	94.49	<5.300	<2.17e-02	<2.79E-2	n/a	n/a	n/a	2.20e-02	1.00E+02
S96T000571	F		Cobalt-60 by GEA	uCi/g	96.66	<1.52e-01	<1.28e-01	3.51e-01	n/a	n/a	n/a	1.28e-01	n/a
S96T000571	F		Cesium-137 by GEA	uCi/g	96.08	<2.04e-01	2.05e+02	531.0	367.8	88.6	n/a	n/a	0.640
S96T000571	F		Am-241 by Extraction	uCi/g	103.7	<1.58e-02	5.32e-01	1.560	1.046	98.3	n/a	4.30e-02	2.71E+00

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S96T000571		F	Alpha of Digested Solid	uCi/g	118.0	<5.57e-02	1.320	3.570	2.445	92.0	107.2	4.50e-02	1.22E+01
S96T000572		A	Silver -ICP-Acid Digest	ug/g	91.90	<1.00e-02	1.42e+03	1.66e+03	1.54e+03	15.6	72.20	8.430	n/a
S96T000572		A	Aluminium -ICP-Acid Digest	ug/g	96.60	1.18e-01	5.18e+04	6.08e+04	5.63e+04	16.0	232.4	42.20	n/a
S96T000572		A	Arsenic -ICP-Acid Digest	ug/g	97.20	<1.00e-01	< 84.30	<9.86e1	n/a	n/a	96.00	84.30	n/a
S96T000572		A	Boron -ICP-Acid Digest	ug/g	108.8	5.40e-01	71.30	83.00	77.15	15.2	95.54	42.20	n/a
S96T000572		A	Barium -ICP-Acid Digest	ug/g	97.60	<5.00e-02	2.88e+02	340.0	314.0	16.6	97.20	42.20	n/a
S96T000572		A	Beryllium -ICP-Acid Digest	ug/g	103.0	<5.00e-03	< 4.220	<4.93e0	n/a	n/a	97.80	4.210	n/a
S96T000572		A	Bismuth -ICP-Acid Digest	ug/g	92.40	<1.00e-01	< 84.30	<9.86e1	n/a	n/a	89.00	84.30	n/a
S96T000572		A	Calcium -ICP-Acid Digest	ug/g	100.2	4.59e-01	8.82e+02	1.04e+03	961.0	16.4	101.4	84.30	n/a
S96T000572		A	Cadmium -ICP-Acid Digest	ug/g	94.60	<5.00e-03	39.90	44.50	42.20	10.9	92.26	4.210	n/a
S96T000572		A	Cerium -ICP-Acid Digest	ug/g	100.0	<1.00e-01	2.06e+02	199.0	202.5	3.46	98.92	84.30	n/a
S96T000572		A	Cobalt -ICP-Acid Digest	ug/g	98.40	<2.00e-02	< 16.90	<1.97e1	n/a	n/a	96.00	16.90	n/a
S96T000572		A	Chromium -ICP-Acid Digest	ug/g	97.00	1.70e-02	7.69e+02	884.0	826.5	13.9	92.22	8.430	n/a
S96T000572		A	Copper -ICP-Acid Digest	ug/g	92.80	2.60e-02	84.40	96.40	90.40	13.3	92.18	8.430	n/a
S96T000572		A	Iron -ICP-Acid Digest	ug/g	97.60	7.00e-02	7.03e+04	8.25e+04	7.64e+04	16.0	18.42	42.20	n/a
S96T000572		A	Potassium -ICP-Acid Digest	ug/g	98.80	<5.00e-01	6.12e+02	646.0	629.0	5.41	84.88	422.0	n/a
S96T000572		A	Lanthanum -ICP-Acid Digest	ug/g	98.20	<5.00e-02	59.10	72.30	65.70	20.1	96.20	42.20	n/a
S96T000572		A	Lithium -ICP-Acid Digest	ug/g	95.80	<1.00e-02	< 8.430	<9.86e0	n/a	n/a	94.60	8.430	n/a
S96T000572		A	Magnesium -ICP-Acid Digest	ug/g	94.60	<1.00e-01	2.25e+02	263.0	244.0	15.6	91.28	84.30	n/a
S96T000572		A	Manganese -ICP-Acid Digest	ug/g	96.60	<1.00e-02	1.75e+03	2.05e+03	1.90e+03	15.8	94.48	8.430	n/a
S96T000572		A	Molybdenum -ICP-Acid Digest	ug/g	97.60	<5.00e-02	< 42.20	<4.93e1	n/a	n/a	94.80	42.20	n/a
S96T000572		A	Sodium -ICP-Acid Digest	ug/g	109.0	7.70e-01	1.19e+05	1.41e+05	1.30e+05	16.9	1.84e+03	84.30	n/a
S96T000572		A	Neodymium -ICP-Acid Digest	ug/g	98.00	<1.00e-01	1.53e+02	170.0	161.5	10.5	96.66	84.30	n/a
S96T000572		A	Nickel -ICP-Acid Digest	ug/g	97.20	<2.00e-02	6.53e+02	755.0	704.0	14.5	88.94	16.90	n/a
S96T000572		A	Phosphorus -ICP-Acid Digest	ug/g	99.80	<2.00e-01	2.22e+03	2.60e+03	2.41e+03	15.8	122.7	169.0	n/a
S96T000572		A	Lead -ICP-Acid Digest	ug/g	91.60	<1.00e-01	2.55e+03	2.97e+03	2.76e+03	15.2	82.02	84.30	n/a
S96T000572		A	Sulfur -ICP-Acid Digest	ug/g	95.60	<1.00e-01	1.13e+03	1.32e+03	1.22e+03	15.5	93.96	84.30	n/a
S96T000572		A	Antimony -ICP-Acid Digest	ug/g	96.60	<6.00e-02	95.40	<5.91e1	n/a	n/a	83.88	50.60	n/a
S96T000572		A	Selenium -ICP-Acid Digest	ug/g	97.80	<1.00e-01	< 84.30	<9.86e1	n/a	n/a	98.80	84.30	n/a
S96T000572		A	Silicon -ICP-Acid Digest	ug/g	135.2	2.27e-01	2.27e+04	2.66e+04	2.46e+04	15.8	n/a	42.20	n/a
S96T000572		A	Samarium -ICP-Acid Digest	ug/g	99.80	<1.00e-01	< 84.30	<9.86e1	n/a	n/a	99.00	84.30	n/a
S96T000572		A	Strontium -ICP-Acid Digest	ug/g	97.00	<1.00e-02	17.70	20.40	19.05	14.2	95.70	8.430	n/a
S96T000572		A	Titanium-ICP-Acid Digest	ug/g	91.60	<1.00e-02	1.25e+02	147.0	136.0	16.2	89.62	8.430	n/a
S96T000572		A	Thallium -ICP-Acid Digest	ug/g	88.60	<2.00e-01	<1.69e+02	<1.97e2	n/a	n/a	87.60	169.0	n/a
S96T000572		A	Uranium -ICP-Acid Digest	ug/g	94.40	<5.00e-01	7.07e+02	890.0	798.5	22.9	104.1	422.0	n/a
S96T000572		A	Vanadium -ICP-Acid Digest	ug/g	96.40	<5.00e-02	< 42.20	<4.93e1	n/a	n/a	95.40	42.20	n/a
S96T000572		A	Zinc -ICP-Acid Digest	ug/g	92.60	2.50e-02	40.30	44.60	42.45	10.1	91.22	8.430	n/a
S96T000572		A	Zirconium -ICP-Acid Digest	ug/g	104.2	<1.00e-02	7.55e+02	890.0	822.5	16.4	180.4	8.430	n/a
S96T000574		W	Fluoride-IC-Dionex 4000i/4500	ug/g	96.10	<1.30e-02	1.94e+02	195.0	194.7	0.51	100.8	55.12	n/a
S96T000574		W	Chloride-IC-Dionex 4000i/4500	ug/g	99.11	3.30e-02	1.47e+02	133.0	140.0	10.0	95.06	72.07	n/a
S96T000574		W	Nitrite-IC - Dionex 4000i/4500	ug/g	97.74	<1.07e-01	1.04e+04	1.03e+04	1.03e+04	0.97	107.5	453.6	n/a
S96T000574		W	Nitrate by IC-Dionex4000i/4500	ug/g	97.72	<1.40e-01	1.83e+03	978.0	1.41e+03	60.7	93.81	593.2	n/a
S96T000574		W	Phosphate-IC-Dionex 4000i/4500	ug/g	100.2	<1.19e-01	3.52e+03	1.01e+03	2.27e+03	111	89.19	504.2	n/a
S96T000574		W	Sulfate by IC-Dionex4000i/4500	ug/g	97.94	<1.36e-01	3.32e+03	3.31e+03	3.32e+03	0.30	98.26	576.2	n/a
S96T000574		W	Oxalate by IC - Dionex 4000i	ug/g	99.07	<1.05e-01	6.90e+04	6.83e+04	6.86e+04	1.02	116.0	445.2	n/a
S96T002718		F	Technetium-99 Liq. Scint.	uCi/g	104.5	<1.42e-02	<3.52e-02	<3.70E-2	n/a	n/a	n/a	3.50e-02	6.92E+00
S96T002718		F	Strontium-89/90 High Level	uCi/g	110.6	8.13e-01	5.90e+02	639.0	614.5	7.97	n/a	6.41e-01	1.01E+00
S96T002718		F	Pu-239/240 by TRU-SPEC Resin	uCi/g	97.11	<3.90e-02	1.520	1.530	1.525	0.66	n/a	1.02e-01	2.08E+00
S96T002718		F	Cobalt-60 by GEA	uCi/g	98.94	<3.01e-01	<5.33e-01	<4.23e-1	n/a	n/a	n/a	5.33e-01	n/a
S96T002718		F	Cesium-137 by GEA	uCi/g	97.97	<4.49e-01	5.80e+02	633.0	606.3	8.74	n/a	n/a	1.10

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S96T002718		F	Am-241 by Extraction	uCi/g	101.3	<2.76e-02	1.870	1.690	1.780	10.1	n/a	1.45e-01	2.69E+00
S96T002718		F	Alpha of Digested Solid	uCi/g	114.1	<5.69e-02	3.500	3.640	3.570	3.92	89.14	9.20e-02	9.86E+00

Interstitial Liquid: Interstitial Liquid

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S96T000563			DSC Exotherm Dry Calculated	Joules/g Dry	n/a	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S96T000563			DSC Exotherm on Perkin Elmer	Joules/g	95.82	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S96T000563			% Water by TGA using Mettler	%	100.2	n/a	61.32	59.37	60.34	3.23	n/a	n/a	n/a
S96T000563			Tot. Organic Carbon by Coul.	ug/mL	103.4	2.00e-01	2.44e+03	2.44e+03	2.44e+03	0.00	95.50	55.00	n/a
S96T000563			TOC by Persulfate/Coulometry	ug/mL	96.00	5.000	2.35e+03	2.28e+03	2.32e+03	3.02	n/a	40.00	n/a
S96T000563			Strontium-89/90 High Level	uCi/mL	99.19	4.00e-03	1.230	6.35e-01	9.32e-01	63.8	n/a	8.00e-03	2.76E+00
S96T000563			Pu-239/240 by TRU-SPEC Resin	uCi/mL	93.44	<3.56e-03	8.12e-01	8.33e-01	8.23e-01	2.55	n/a	3.80e-02	1.59E+00
S96T000563		D	Silver-ICP-Acid Dil.	ug/mL	97.60	<1.00e-02	< 4.010	<4.01e0	n/a	n/a	92.80	4.010	n/a
S96T000563		D	Aluminium-ICP-Acid Dil.	ug/mL	96.60	<5.00e-02	< 20.10	<2.01e1	n/a	n/a	92.80	20.10	n/a
S96T000563		D	Arsenic-ICP-Acid Dil.	ug/mL	101.0	<1.00e-01	< 40.10	<4.01e1	n/a	n/a	103.8	40.10	n/a
S96T000563		D	Boron-ICP-Acid Dil.	ug/mL	101.8	<5.00e-02	< 20.10	<2.01e1	n/a	n/a	102.5	20.10	n/a
S96T000563		D	Barium-ICP-Acid Dil.	ug/mL	99.40	<5.00e-02	< 20.10	<2.01e1	n/a	n/a	99.00	20.10	n/a
S96T000563		D	Beryllium-ICP-Acid Dil.	ug/mL	103.8	<5.00e-03	< 2.000	<2.00e0	n/a	n/a	101.8	2.000	n/a
S96T000563		D	Bismuth-ICP-Acid Dil.	ug/mL	99.80	<1.00e-01	< 40.10	<4.01e1	n/a	n/a	95.50	40.10	n/a
S96T000563		D	Calcium-ICP-Acid Dil.	ug/mL	99.60	<1.00e-01	< 40.10	<4.01e1	n/a	n/a	99.00	40.10	n/a
S96T000563		D	Cadmium-ICP-Acid Dil.	ug/mL	100.8	<5.00e-03	< 2.000	<2.00e0	n/a	n/a	98.00	2.000	n/a
S96T000563		D	Cerium-ICP-Acid Dil.	ug/mL	100.4	<1.00e-01	< 40.10	<4.01e1	n/a	n/a	96.50	40.10	n/a
S96T000563		D	Cobalt-ICP-Acid Dil.	ug/mL	100.2	<2.00e-02	< 8.020	<8.02e0	n/a	n/a	97.00	8.020	n/a
S96T000563		D	Chromium-ICP-Acid Dil.	ug/mL	100.2	<1.00e-02	< 4.010	<4.01e0	n/a	n/a	98.50	4.010	n/a
S96T000563		D	Copper-ICP-Acid Dil.	ug/mL	100.6	<1.00e-02	< 4.010	<4.01e0	n/a	n/a	99.80	4.010	n/a
S96T000563		D	Iron-ICP-Acid Dil.	ug/mL	103.4	<5.00e-02	< 20.10	<2.01e1	n/a	n/a	105.2	20.10	n/a
S96T000563		D	Potassium-ICP-Acid Dil.	ug/mL	97.20	<5.00e-01	5.48e+02	564.0	556.0	2.88	96.40	200.0	n/a
S96T000563		D	Lanthanum-ICP-Acid Dil.	ug/mL	100.8	<5.00e-02	< 20.10	<2.01e1	n/a	n/a	101.0	20.10	n/a
S96T000563		D	Lithium-ICP-Acid Dil.	ug/mL	97.00	<1.00e-02	< 4.010	<4.01e0	n/a	n/a	92.00	4.010	n/a
S96T000563		D	Magnesium-ICP-Acid Dil.	ug/mL	96.80	<1.00e-01	< 40.10	<4.01e1	n/a	n/a	93.80	40.10	n/a
S96T000563		D	Manganese-ICP-Acid Dil.	ug/mL	100.2	<1.00e-02	< 4.010	<4.01e0	n/a	n/a	99.30	4.010	n/a
S96T000563		D	Molybdenum-ICP-Acid Dil.	ug/mL	99.20	<5.00e-02	21.30	<2.01e1	n/a	n/a	96.70	20.10	n/a
S96T000563		D	Sodium-ICP-Acid Dil.	ug/mL	96.60	<1.00e-01	1.03e+05	1.01e+05	1.02e+05	1.96	n/a	40.10	n/a
S96T000563		D	Neodymium-ICP-Acid Dil.	ug/mL	105.8	<1.00e-01	< 40.10	<4.01e1	n/a	n/a	105.5	40.10	n/a
S96T000563		D	Nickel-ICP-Acid Dil.	ug/mL	100.4	<2.00e-02	13.70	13.50	13.60	1.47	98.60	8.020	n/a
S96T000563		D	Phosphorus-ICP-Acid Dil.	ug/mL	108.8	<2.00e-01	3.71e+02	375.0	373.0	1.07	115.0	80.20	n/a
S96T000563		D	Lead-ICP-Acid Dil.	ug/mL	100.6	<1.00e-01	< 40.10	<4.01e1	n/a	n/a	99.50	40.10	n/a
S96T000563		D	Sulfer-ICP-Acid Dil.	ug/mL	98.20	<1.00e-01	2.48e+03	2.50e+03	2.49e+03	0.80	82.70	40.10	n/a
S96T000563		D	Antimony-ICP-Acid Dil.	ug/mL	94.60	<6.00e-02	< 24.10	<2.41e1	n/a	n/a	90.80	24.10	n/a
S96T000563		D	Selenium-ICP-Acid Dil.	ug/mL	102.6	<1.00e-01	< 40.10	<4.01e1	n/a	n/a	110.0	40.10	n/a
S96T000563		D	Silicon-ICP-Acid Dil.	ug/mL	95.20	<5.00e-02	25.80	26.90	26.35	4.17	95.10	20.10	n/a
S96T000563		D	Samarium-ICP-Acid Dil.	ug/mL	101.0	<1.00e-01	< 40.10	<4.01e1	n/a	n/a	102.0	40.10	n/a
S96T000563		D	Strontium-ICP-Acid Dil.	ug/mL	99.40	<1.00e-02	< 4.010	<4.01e0	n/a	n/a	99.30	4.010	n/a
S96T000563		D	Titanium-ICP-Acid Dil.	ug/mL	96.60	<1.00e-02	< 4.010	<4.01e0	n/a	n/a	96.00	4.010	n/a
S96T000563		D	Thallium-ICP-Acid Dil.	ug/mL	95.00	<2.00e-01	< 80.20	<8.02e1	n/a	n/a	85.80	80.20	n/a
S96T000563		D	Uranium-ICP-Acid Dil.	ug/mL	98.50	<5.00e-01	1.56e+03	1.57e+03	1.56e+03	0.64	102.3	200.0	n/a
S96T000563		D	Vanadium-ICP-Acid Dil.	ug/mL	102.0	<5.00e-02	< 20.10	<2.01e1	n/a	n/a	100.0	20.10	n/a
S96T000563		D	Zinc-ICP-Acid Dil.	ug/mL	100.6	<1.00e-02	< 4.010	<4.01e0	n/a	n/a	97.50	4.010	n/a
S96T000563		D	Zirconium-ICP-Acid Dil.	ug/mL	99.80	<1.00e-02	3.36e+02	336.0	336.0	0.00	100.6	4.010	n/a

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S96T000563			Fluoride-IC-Dionex 4000i/4500	ug/mL	95.42	<1.30e-02	2.36e+02	230.0	232.8	2.58	108.5	27.57	n/a
S96T000563			Chloride-IC-Dionex 4000i/4500	ug/mL	90.38	5.55e-01	3.04e+02	326.0	315.1	6.98	91.65	36.06	n/a
S96T000563			Nitrite-IC - Dionex 4000i/4500	ug/mL	97.95	<1.07e-01	2.91e+04	2.83e+04	2.87e+04	2.79	102.6	226.9	n/a
S96T000563			Nitrate-IC - Dionex 4000i/4500	ug/mL	93.97	2.05e-01	1.17e+03	1.14e+03	1.15e+03	2.60	94.46	296.9	n/a
S96T000563			Phosphate-IC-Dionex 4000i/4500	ug/mL	96.89	<1.19e-01	6.49e+02	609.0	629.0	6.36	97.80	252.2	n/a
S96T000563			Sulfate by IC-Dionex4000i/4500	ug/mL	95.56	<1.36e-01	7.76e+03	7.61e+03	7.69e+03	1.95	98.89	288.2	n/a
S96T000563			Oxalate by IC - Dionex 4000i	ug/mL	95.09	<1.05e-01	3.08e+03	3.09e+03	3.09e+03	0.32	98.43	222.7	n/a
S96T000563			Cobalt-60 by GEA	uCi/mL	96.11	<6.53e-04	<8.45e-03	1.24e-02	n/a	n/a	n/a	8.00e-03	n/a
S96T000563			Cesium-137 by GEA	uCi/mL	95.94	<4.94e-04	1.54e+02	153.0	153.5	0.65	n/a	n/a	0.200

Potential Organic Layer: Potential Organic Layer

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S96T001567			DSC Exotherm using Mettler	Joules/g	113.9	n/a	2.15e+02	142.4	178.8	40.7	n/a	n/a	n/a
S96T001567			DSC Exotherm Dry Calculated	Joules/g Dry	n/a	n/a	7.06e+02	467.7	587.0	40.7	n/a	n/a	n/a
S96T001567			% Water by TGA using Mettler	%	103.7	n/a	71.58	67.52	69.55	5.84	n/a	n/a	n/a
S96T001567			TOC by Persulfate/Coulometry	ug/mL	94.03	3.000	3.08e+04	3.48e+04	3.28e+04	12.2	n/a	40.00	n/a
S96T002634			Pu-239/240 by TRU-SPEC Resin	uCi/g	99.21	<3.10e-02	6.41e-01	6.31e-01	6.36e-01	1.57	n/a	4.60e-02	2.00E+00
S96T002634			Pu-238 by Ion Exchange	uCi/g	n/a	<3.10e-02	2.00e-01	2.01e-01	2.01e-01	0.50	n/a	4.60e-02	2.78E+00

Table 3: Data Summary Report
C-106 GRAB

RISER: 7
SEGMENT #: 6C-96-11

SEGMENT PORTION: Centrifuged Solids (Grab Sample)

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S96T001674			Bulk Density of Sample	g/mL	n/a	n/a	1.450	n/a	n/a	n/a	n/a	5.00e-01	n/a
S96T001674			DSC Exotherm using Mettler	Joules/g	97.72	n/a	19.70	109.6	64.65	139	n/a	n/a	n/a
S96T001674			DSC Exotherm Dry Calculated	Joules/g Dry	n/a	n/a	21.66	120.5	71.08	139	n/a	n/a	n/a
S96T001674			% Water by TGA using Mettler	%	99.93	n/a	9.630	8.430	9.030	13.3	n/a	n/a	n/a
S96T001674			Volume % Solids	%	n/a	n/a	59.50	n/a	n/a	n/a	n/a	n/a	n/a
S96T001674			% Water by Gravimetric	%	100.8	n/a	12.40	10.90	11.65	12.9	n/a	1.00e-02	n/a

Control Sample: Control Sample

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S96T001676			DSC Exotherm using Mettler	Joules/g	112.1	n/a	1.46e+02	137.2	141.6	6.21	n/a	n/a	n/a
S96T001676			DSC Exotherm Dry Calculated	Joules/g Dry	n/a	n/a	2.42e+02	227.8	235.1	6.21	n/a	n/a	n/a
S96T001676			% Water by TGA using Mettler	%	102.3	n/a	40.05	39.47	39.76	1.46	n/a	n/a	n/a
S96T001678	F		Technetium-99 Liq. Scint.	uCi/g	99.21	n/a	1.93e-02	2.75e-02	2.34e-02	35.0	n/a	1.80e-02	6.25E+00
S96T001678	F		Strontium-89/90 High Level	uCi/g	102.4	7.55e-01	3.83e+02	381.0	382.0	0.52	n/a	2.36e-01	7.89E-01
S96T001678	F		Pu-239/240 by TRU-SPEC Resin	uCi/g	100.3	<1.71e-02	7.75e-01	7.65e-01	7.70e-01	1.30	n/a	4.90e-02	2.01E+00
S96T001678	F		Cobalt-60 by GEA	uCi/g	99.96	<1.06e-03	<7.17e-01	<5.87e-1	n/a	n/a	n/a	7.17e-01	n/a
S96T001678	F		Cesium-137 by GEA	uCi/g	100.6	<2.56e-03	4.50e+02	408.0	429.1	9.79	n/a	n/a	1.55
S96T001678	F		Am-241 by Extraction	uCi/g	97.13	<1.31e-02	7.03e-01	7.15e-01	7.09e-01	1.69	n/a	6.10e-02	2.64E+00
S96T001678	F		Alpha of Digested Solid	uCi/g	102.3	<4.10e-02	1.500	1.620	1.560	7.69	91.09	6.10e-02	9.65E+00

Decanted Supernate (Liquid Grab Sludge): Decanted Supernate (Liquid Grab Sludge)

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S96T001675			Specific Gravity	Sp.G.	102.1	n/a	1.153	1.138	1.145	1.31	n/a	1.00e-03	n/a
S96T001675			% Water by Gravimetric	%	98.82	n/a	78.20	78.30	78.25	0.13	n/a	1.00e-02	n/a
S96T002024			pH Direct	pH	99.75	n/a	10.15	n/a	n/a	n/a	n/a	1.00e-02	n/a
S96T002024			Specific Gravity	Sp.G.	97.74	n/a	1.195	1.195	1.195	0.00	n/a	1.00e-03	n/a
S96T002024			Fluoride-IC-Dionex 4000i/4500	ug/mL	98.98	<1.30e-02	2.01e+02	209.0	205.1	3.90	127.5	14.44	n/a
S96T002024			Chloride-IC-Dionex 4000i/4500	ug/mL	99.75	<1.70e-02	2.58e+02	266.0	261.9	3.05	97.85	18.89	n/a
S96T002024			Nitrite-IC - Dionex 4000i/4500	ug/mL	103.5	<1.07e-01	2.59e+04	2.79e+04	2.69e+04	7.43	134.9	118.9	n/a
S96T002024			Nitrate-IC - Dionex 4000i/4500	ug/mL	103.1	<1.40e-01	9.81e+02	1.01e+03	995.5	2.91	97.23	155.5	n/a
S96T002024			Phosphate-IC-Dionex 4000i/4500	ug/mL	103.5	<1.19e-01	4.42e+02	480.0	460.9	8.24	101.3	132.1	n/a
S96T002024			Sulfate by IC-Dionex4000i/4500	ug/mL	101.6	<1.36e-01	6.69e+03	7.20e+03	6.94e+03	7.34	112.2	151.0	n/a
S96T002024			Oxalate by IC - Dionex 4000i	ug/mL	103.2	<1.05e-01	3.18e+03	3.45e+03	3.31e+03	8.14	106.3	116.7	n/a
S96T002024			Cobalt-60 by GEA	uCi/mL	93.30	<8.67e-04	<4.63e-03	<4.49e-3	n/a	n/a	n/a	5.00e-03	n/a
S96T002024			Cesium-137 by GEA	uCi/mL	90.88	<2.68e-03	1.28e+02	127.0	127.5	0.78	n/a	n/a	0.140

Filtered Centrifuged Solids: Filtered Centrifuged Solids

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S96T001685			DSC Exotherm Dry Calculated	Joules/g Dry	n/a	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S96T001685			DSC Exotherm on Perkin Elmer	Joules/g	100.3	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S96T001685			% Water by TGA on Perkin Elmer	%	99.39	n/a	32.54	31.29	31.91	3.92	n/a	n/a	n/a
S96T001686			TIC by Acid/Coulometry	ug/g	93.68	3.00e-01	2.32e+04	2.28e+04	2.30e+04	1.74	n/a	5.000	n/a
S96T001686			TOC by Persulfate/Coulometry	ug/g	94.03	3.000	2.00e+04	1.73e+04	1.86e+04	14.5	n/a	40.00	n/a
S96T001687			% Water by Gravimetric	%	98.99	n/a	34.10	34.10	34.10	0.00	n/a	1.00e-02	n/a
S96T001688			pH on SST Samples	pH	99.45	n/a	10.42	n/a	n/a	n/a	n/a	1.00e-02	n/a
S96T001689		F	Technetium-99 Liq. Scint.	uCi/g	99.21	n/a	2.97e-02	5.04e-01	2.67e-01	178	n/a	2.90e-02	6.23E+00
S96T001689		F	Strontium-89/90 High Level	uCi/g	102.4	7.55e-01	4.87e+02	523.0	505.0	7.13	n/a	4.36e-01	9.54E-01
S96T001689		F	Pu-239/240 by TRU-SPEC Resin	uCi/g	100.3	<1.71e-02	9.01e-01	9.26e-01	9.13e-01	2.74	n/a	7.40e-02	2.18E+00
S96T001689		F	Cobalt-60 by GEA	uCi/g	99.72	<2.20e-02	<3.03e-01	<4.13e-1	n/a	n/a	n/a	3.03e-01	n/a
S96T001689		F	Cesium-137 by GEA	uCi/g	100.9	<5.54e-01	4.83e+02	509.0	495.9	5.24	n/a	n/a	0.990
S96T001689		F	Am-241 by Extraction	uCi/g	97.13	<1.31e-02	1.030	9.80e-01	1.005	4.98	n/a	9.80e-02	2.85E+00
S96T001689		F	Alpha of Digested Solid	uCi/g	102.3	<4.10e-02	1.680	1.840	1.760	9.09	93.31	1.13e-01	1.23E+01
S96T001690		A	Silver -ICP-Acid Digest	ug/g	90.20	<1.00e-02	1.96e+03	1.25e+03	1.60e+03	44.2	139.0	3.830	n/a
S96T001690		A	Aluminium -ICP-Acid Digest	ug/g	91.40	1.09e-01	3.81e+04	3.77e+04	3.79e+04	1.06	130.2	19.10	n/a
S96T001690		A	Arsenic -ICP-Acid Digest	ug/g	93.80	<1.00e-01	< 38.30	<3.93e1	n/a	n/a	90.50	38.30	n/a
S96T001690		A	Boron -ICP-Acid Digest	ug/g	97.60	6.50e-01	25.80	30.70	28.25	17.3	90.36	19.10	n/a
S96T001690		A	Barium -ICP-Acid Digest	ug/g	94.00	<5.00e-02	2.22e+02	219.0	220.5	1.36	90.42	19.10	n/a
S96T001690		A	Beryllium -ICP-Acid Digest	ug/g	102.6	<5.00e-03	< 1.910	<1.97e0	n/a	n/a	97.50	1.910	n/a
S96T001690		A	Bismuth -ICP-Acid Digest	ug/g	91.20	<1.00e-01	< 38.30	<3.93e1	n/a	n/a	91.10	38.30	n/a
S96T001690		A	Calcium -ICP-Acid Digest	ug/g	91.60	1.28e-01	2.65e+03	2.50e+03	2.58e+03	5.83	84.64	38.30	n/a
S96T001690		A	Cadmium -ICP-Acid Digest	ug/g	89.60	<5.00e-03	23.90	24.80	24.35	3.70	88.24	1.910	n/a
S96T001690		A	Cerium -ICP-Acid Digest	ug/g	97.00	<1.00e-01	1.41e+02	152.0	146.5	7.51	94.62	38.30	n/a
S96T001690		A	Cobalt -ICP-Acid Digest	ug/g	92.40	<2.00e-02	< 7.660	8.350	n/a	n/a	90.60	7.660	n/a
S96T001690		A	Chromium -ICP-Acid Digest	ug/g	91.00	<1.00e-02	5.28e+02	538.0	533.0	1.88	90.42	3.830	n/a
S96T001690		A	Copper -ICP-Acid Digest	ug/g	92.00	1.10e-02	95.60	94.20	94.90	1.48	89.50	3.830	n/a
S96T001690		A	Iron -ICP-Acid Digest	ug/g	90.80	5.00e-02	4.59e+04	5.74e+04	5.16e+04	22.3	81.64	19.10	n/a
S96T001690		A	Potassium -ICP-Acid Digest	ug/g	93.00	<5.00e-01	5.53e+02	514.0	533.5	7.31	96.10	191.0	n/a
S96T001690		A	Lanthanum -ICP-Acid Digest	ug/g	94.40	<5.00e-02	49.60	47.80	48.70	3.70	91.60	19.10	n/a
S96T001690		A	Lithium -ICP-Acid Digest	ug/g	95.20	<1.00e-02	< 3.830	<3.93e0	n/a	n/a	92.00	3.830	n/a
S96T001690		A	Magnesium -ICP-Acid Digest	ug/g	86.40	<1.00e-01	2.50e+02	264.0	257.0	5.45	85.64	38.30	n/a
S96T001690		A	Manganese -ICP-Acid Digest	ug/g	90.80	<1.00e-02	3.21e+03	3.27e+03	3.24e+03	1.85	102.1	3.830	n/a
S96T001690		A	Molybdenum -ICP-Acid Digest	ug/g	91.40	<5.00e-02	< 19.10	<1.97e1	n/a	n/a	89.50	19.10	n/a
S96T001690		A	Sodium -ICP-Acid Digest	ug/g	103.6	8.77e-01	1.08e+05	1.08e+05	1.08e+05	0.00	n/a	38.30	n/a
S96T001690		A	Neodymium -ICP-Acid Digest	ug/g	93.80	<1.00e-01	1.28e+02	125.0	126.5	2.37	91.22	38.30	n/a
S96T001690		A	Nickel -ICP-Acid Digest	ug/g	91.80	<2.00e-02	5.15e+02	518.0	516.5	0.58	91.10	7.660	n/a
S96T001690		A	Phosphorus -ICP-Acid Digest	ug/g	96.80	<2.00e-01	1.76e+03	1.81e+03	1.78e+03	2.80	110.1	76.60	n/a
S96T001690		A	Lead -ICP-Acid Digest	ug/g	86.80	<1.00e-01	1.90e+03	1.95e+03	1.92e+03	2.60	89.66	38.30	n/a
S96T001690		A	Sulfur -ICP-Acid Digest	ug/g	90.20	<1.00e-01	9.18e+02	938.0	928.0	2.16	93.06	38.30	n/a
S96T001690		A	Antimony -ICP-Acid Digest	ug/g	93.40	<6.00e-02	< 23.00	<2.36e1	n/a	n/a	92.50	23.00	n/a
S96T001690		A	Selenium -ICP-Acid Digest	ug/g	88.60	<1.00e-01	< 38.30	<3.93e1	n/a	n/a	89.50	38.30	n/a
S96T001690		A	Silicon -ICP-Acid Digest	ug/g	125.0	7.70e-01	2.16e+04	2.05e+04	2.10e+04	5.23	72.84	19.10	n/a
S96T001690		A	Samarium -ICP-Acid Digest	ug/g	92.60	<1.00e-01	< 38.30	<3.93e1	n/a	n/a	91.10	38.30	n/a
S96T001690		A	Strontium -ICP-Acid Digest	ug/g	92.40	<1.00e-02	20.10	20.00	20.05	0.50	89.04	3.830	n/a
S96T001690		A	Titanium-ICP-Acid Digest	ug/g	86.20	<1.00e-02	87.40	87.50	87.45	0.11	83.24	3.830	n/a
S96T001690		A	Thallium -ICP-Acid Digest	ug/g	86.00	<2.00e-01	< 76.60	<7.87e1	n/a	n/a	85.00	76.60	n/a
S96T001690		A	Uranium -ICP-Acid Digest	ug/g	91.20	<5.00e-01	5.78e+02	588.0	583.0	1.72	87.90	191.0	n/a

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S96T001690		A	Vanadium -ICP-Acid Digest	ug/g	111.0	<5.00e-02	< 19.10	<1.97e1	n/a	n/a	89.10	19.10	n/a
S96T001690		A	Zinc -ICP-Acid Digest	ug/g	87.40	1.10e-02	62.30	87.40	74.85	33.5	87.56	3.830	n/a
S96T001690		A	Zirconium -ICP-Acid Digest	ug/g	99.20	<1.00e-02	1.62e+02	431.0	296.5	90.7	119.5	3.830	n/a
S96T003180		W	Fluoride-IC-Dionex 4000i/4500	ug/g	104.2	<1.30e-02	1.12e+02	344.0	228.2	102	n/a	49.60	n/a
S96T003180		W	Chloride-IC-Dionex 4000i/4500	ug/g	96.58	<1.70e-02	1.56e+02	153.0	154.3	1.94	n/a	64.87	n/a
S96T003180		W	Nitrite-IC - Dionex 4000i/4500	ug/g	93.91	<1.07e-01	8.22e+03	7.20e+03	7.71e+03	13.2	n/a	408.2	n/a
S96T003180		W	Nitrate by IC-Dionex4000i/4500	ug/g	102.8	5.910	2.65e+03	2.35e+03	2.50e+03	12.0	n/a	533.8	n/a
S96T003180		W	Phosphate-IC-Dionex 4000i/4500	ug/g	105.3	<1.19e-01	8.29e+02	<4.15e2	n/a	n/a	n/a	453.6	n/a
S96T003180		W	Sulfate by IC-Dionex4000i/4500	ug/g	105.7	<1.36e-01	2.53e+03	2.28e+03	2.41e+03	10.4	n/a	518.5	n/a
S96T003180		W	Oxalate by IC - Dionex 4000i	ug/g	105.3	<1.05e-01	7.82e+04	2.26e+05	1.52e+05	97.2	n/a	400.6	n/a

Interstitial Liquid: Interstitial Liquid

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S96T001681			DSC Exotherm using Mettler	Joules/g	101.6	n/a	5.500	5.500	5.500	0.00	n/a	n/a	n/a
S96T001681			DSC Exotherm Dry Calculated	Joules/g Dry	n/a	n/a	10.27	10.27	10.27	0.00	n/a	n/a	n/a
S96T001681			% Water by TGA on Perkin Elmer	%	99.27	n/a	48.47	44.37	46.42	8.83	n/a	n/a	n/a
S96T001681			Tot. Organic Carbon by Coul.	ug/mL	93.36	1.300	2.06e+03	2.08e+03	2.07e+03	0.97	96.30	55.00	n/a
S96T001681			TOC by Persulfate/Coulometry	ug/mL	93.36	6.500	1.64e+03	1.62e+03	1.63e+03	1.23	97.00	40.00	n/a
S96T001681			Strontium-89/90 High Level	uCi/mL	99.19	4.00e-03	6.71e-01	6.68e-01	6.69e-01	0.45	n/a	8.00e-03	3.75E+00
S96T001681			Pu-239/240 by TRU-SPEC Resin	uCi/mL	98.69	<1.67e-02	8.40e-01	8.34e-01	8.37e-01	0.72	n/a	4.90e-02	1.88E+00
S96T001681		D	Silver-ICP-Acid Dil.	ug/mL	98.20	<1.00e-02	< 4.010	<4.01e0	n/a	n/a	93.80	4.010	n/a
S96T001681		D	Aluminium-ICP-Acid Dil.	ug/mL	98.20	<5.00e-02	< 20.10	<2.01e1	n/a	n/a	96.00	20.10	n/a
S96T001681		D	Arsenic-ICP-Acid Dil.	ug/mL	102.2	<1.00e-01	< 40.10	<4.01e1	n/a	n/a	105.7	40.10	n/a
S96T001681		D	Boron-ICP-Acid Dil.	ug/mL	101.0	<5.00e-02	< 20.10	<2.01e1	n/a	n/a	101.3	20.10	n/a
S96T001681		D	Barium-ICP-Acid Dil.	ug/mL	99.20	<5.00e-02	< 20.10	<2.01e1	n/a	n/a	99.80	20.10	n/a
S96T001681		D	Beryllium-ICP-Acid Dil.	ug/mL	102.8	<5.00e-03	< 2.000	<2.00e0	n/a	n/a	101.5	2.000	n/a
S96T001681		D	Bismuth-ICP-Acid Dil.	ug/mL	99.60	<1.00e-01	< 40.10	<4.01e1	n/a	n/a	90.80	40.10	n/a
S96T001681		D	Calcium-ICP-Acid Dil.	ug/mL	97.60	<1.00e-01	< 40.10	<4.01e1	n/a	n/a	97.30	40.10	n/a
S96T001681		D	Cadmium-ICP-Acid Dil.	ug/mL	99.80	<5.00e-03	< 2.000	<2.00e0	n/a	n/a	96.00	2.000	n/a
S96T001681		D	Cerium-ICP-Acid Dil.	ug/mL	101.6	<1.00e-01	< 40.10	<4.01e1	n/a	n/a	99.30	40.10	n/a
S96T001681		D	Cobalt-ICP-Acid Dil.	ug/mL	101.8	<2.00e-02	< 8.020	<8.02e0	n/a	n/a	98.00	8.020	n/a
S96T001681		D	Chromium-ICP-Acid Dil.	ug/mL	100.6	<1.00e-02	< 4.010	<4.01e0	n/a	n/a	98.30	4.010	n/a
S96T001681		D	Copper-ICP-Acid Dil.	ug/mL	100.6	<1.00e-02	< 4.010	<4.01e0	n/a	n/a	99.80	4.010	n/a
S96T001681		D	Iron-ICP-Acid Dil.	ug/mL	100.0	<5.00e-02	< 20.10	<2.01e1	n/a	n/a	101.8	20.10	n/a
S96T001681		D	Potassium-ICP-Acid Dil.	ug/mL	101.2	<5.00e-01	5.41e+02	533.0	537.0	1.49	98.30	200.0	n/a
S96T001681		D	Lanthanum-ICP-Acid Dil.	ug/mL	98.60	<5.00e-02	< 20.10	<2.01e1	n/a	n/a	98.50	20.10	n/a
S96T001681		D	Lithium-ICP-Acid Dil.	ug/mL	100.4	<1.00e-02	< 4.010	<4.01e0	n/a	n/a	95.50	4.010	n/a
S96T001681		D	Magnesium-ICP-Acid Dil.	ug/mL	98.20	<1.00e-01	< 40.10	<4.01e1	n/a	n/a	94.80	40.10	n/a
S96T001681		D	Manganese-ICP-Acid Dil.	ug/mL	100.0	<1.00e-02	< 4.010	<4.01e0	n/a	n/a	98.00	4.010	n/a
S96T001681		D	Molybdenum-ICP-Acid Dil.	ug/mL	101.8	<5.00e-02	< 20.10	<2.01e1	n/a	n/a	104.0	20.10	n/a
S96T001681		D	Sodium-ICP-Acid Dil.	ug/mL	99.40	<1.00e-01	9.91e+04	9.56e+04	9.74e+04	3.60	n/a	40.10	n/a
S96T001681		D	Neodymium-ICP-Acid Dil.	ug/mL	99.80	<1.00e-01	< 40.10	<4.01e1	n/a	n/a	104.7	40.10	n/a
S96T001681		D	Nickel-ICP-Acid Dil.	ug/mL	99.80	<2.00e-02	11.50	11.30	11.40	1.75	96.60	8.020	n/a
S96T001681		D	Phosphorus-ICP-Acid Dil.	ug/mL	102.0	<2.00e-01	2.66e+02	275.0	270.5	3.33	103.1	80.20	n/a
S96T001681		D	Lead-ICP-Acid Dil.	ug/mL	99.20	<1.00e-01	< 40.10	<4.01e1	n/a	n/a	98.30	40.10	n/a
S96T001681		D	Sulfer-ICP-Acid Dil.	ug/mL	100.2	<1.00e-01	2.24e+03	2.15e+03	2.20e+03	4.10	79.60	40.10	n/a
S96T001681		D	Antimony-ICP-Acid Dil.	ug/mL	95.40	<6.00e-02	< 24.10	<2.41e1	n/a	n/a	91.00	24.10	n/a
S96T001681		D	Selenium-ICP-Acid Dil.	ug/mL	103.6	<1.00e-01	< 40.10	<4.01e1	n/a	n/a	118.7	40.10	n/a
S96T001681		D	Silicon-ICP-Acid Dil.	ug/mL	95.40	<5.00e-02	27.50	20.40	23.95	29.6	92.90	20.10	n/a

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S96T001681		D	Samarium-ICP-Acid Dil.	ug/mL	99.60	<1.00e-01	< 40.10	<4.01e1	n/a	n/a	102.5	40.10	n/a
S96T001681		D	Strontium-ICP-Acid Dil.	ug/mL	99.20	<1.00e-02	< 4.010	<4.01e0	n/a	n/a	99.50	4.010	n/a
S96T001681		D	Titanium-ICP-Acid Dil.	ug/mL	98.20	<1.00e-02	< 4.010	<4.01e0	n/a	n/a	97.50	4.010	n/a
S96T001681		D	Thallium-ICP-Acid Dil.	ug/mL	96.00	<2.00e-01	< 80.20	<8.02e1	n/a	n/a	92.00	80.20	n/a
S96T001681		D	Uranium-ICP-Acid Dil.	ug/mL	96.60	<5.00e-01	1.60e+03	1.50e+03	1.55e+03	6.45	98.85	200.0	n/a
S96T001681		D	Vanadium-ICP-Acid Dil.	ug/mL	101.2	<5.00e-02	< 20.10	<2.01e1	n/a	n/a	99.30	20.10	n/a
S96T001681		D	Zinc-ICP-Acid Dil.	ug/mL	102.2	<1.00e-02	< 4.010	<4.01e0	n/a	n/a	97.50	4.010	n/a
S96T001681		D	Zirconium-ICP-Acid Dil.	ug/mL	98.60	<1.00e-02	3.30e+02	319.0	324.5	3.39	98.70	4.010	n/a
S96T001681			Cobalt-60 by GEA	uCi/mL	97.28	<3.26e-04	<5.05e-03	<4.80e-3	n/a	n/a	n/a	5.00e-03	n/a
S96T001681			Cesium-137 by GEA	uCi/mL	97.05	1.00e-03	1.21e+02	121.0	121.0	0.00	n/a	n/a	0.140

Potential Organic Layer: Potential Organic Layer

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S96T001679			DSC Exotherm using Mettler	Joules/g	93.85	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S96T001679			DSC Exotherm Dry Calculated	Joules/g Dry	n/a	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S96T001679			% Water by TGA using Mettler	%	101.2	n/a	28.37	31.34	29.86	9.95	n/a	n/a	n/a
S96T001679			TOC by Persulfate/Coulometry	ug/mL	94.03	3.000	2.48e+04	2.20e+04	2.34e+04	12.0	n/a	40.00	n/a
S96T002635			Pu-239/240 by TRU-SPEC Resin	uCi/g	99.21	<3.10e-02	3.63e-01	3.57e-01	3.60e-01	1.67	n/a	2.80e-02	2.19E+00
S96T002635			Pu-238 by Ion Exchange	uCi/g	n/a	<3.10e-02	1.12e-01	1.00e-01	1.06e-01	11.3	n/a	2.80e-02	3.22E+00

Table 3: Data Summary Report
C-106 GRAB

RISER: 7
SEGMENT #: 6C-96-12

SEGMENT PORTION: Supernate

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S96T001023			DSC Exotherm using Mettler	Joules/g	108.3	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S96T001023			DSC Exotherm Dry Calculated	Joules/g Dry	n/a	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S96T001023			Ammonia by ISE-Std Additions	ug/mL	96.84	3.100	< 5.000	<5	n/a	n/a	99.00	5.000	n/a
S96T001023			pH Direct	pH	100.0	n/a	10.24	10.24	10.24	0.06	n/a	1.00e-02	n/a
S96T001023			Specific Gravity	Sp.G.	98.45	n/a	1.173	1.193	1.183	1.69	n/a	1.00e-03	n/a
S96T001023			% Water by TGA using Mettler	%	102.2	n/a	79.05	79.49	79.27	0.52	n/a	n/a	n/a
S96T001023			Tot. Inorg. Carbon by Coul.	ug/mL	103.2	<5.000	2.43e+04	2.46e+04	2.44e+04	1.23	99.00	105.0	n/a
S96T001023			Tot. Organic Carbon by Coul.	ug/mL	99.70	<5.000	2.49e+03	2.54e+03	2.52e+03	1.99	97.30	55.00	n/a
S96T001023			TOC by Persulfate/Coulometry	ug/mL	91.36	2.800	1.97e+03	2.09e+03	2.03e+03	5.91	97.90	40.00	n/a
S96T001023			% Water by Gravimetric	%	102.2	n/a	79.00	79.00	79.00	0.00	n/a	1.00e-02	n/a
S96T001023		D	Silver-ICP-Acid Dil.	ug/mL	100.8	<1.00e-02	9.210	9.930	9.570	7.52	87.10	6.010	n/a
S96T001023		D	Aluminium-ICP-Acid Dil.	ug/mL	98.40	<5.00e-02	< 30.00	<3.00e1	n/a	n/a	95.90	30.10	n/a
S96T001023		D	Arsenic-ICP-Acid Dil.	ug/mL	103.8	<1.00e-01	< 60.10	<6.01e1	n/a	n/a	100.4	60.10	n/a
S96T001023		D	Boron-ICP-Acid Dil.	ug/mL	100.4	<5.00e-02	< 30.00	<3.00e1	n/a	n/a	98.30	30.10	n/a
S96T001023		D	Barium-ICP-Acid Dil.	ug/mL	102.6	<5.00e-02	< 30.00	<3.00e1	n/a	n/a	95.80	30.10	n/a
S96T001023		D	Beryllium-ICP-Acid Dil.	ug/mL	104.0	<5.00e-03	< 3.000	<3.00e0	n/a	n/a	99.40	3.000	n/a
S96T001023		D	Bismuth-ICP-Acid Dil.	ug/mL	101.8	<1.00e-01	< 60.10	<6.01e1	n/a	n/a	102.6	60.10	n/a
S96T001023		D	Calcium-ICP-Acid Dil.	ug/mL	104.2	<1.00e-01	< 60.10	<6.01e1	n/a	n/a	102.1	60.10	n/a
S96T001023		D	Cadmium-ICP-Acid Dil.	ug/mL	102.8	<5.00e-03	< 3.000	<3.00e0	n/a	n/a	98.80	3.000	n/a
S96T001023		D	Cerium-ICP-Acid Dil.	ug/mL	105.6	<1.00e-01	< 60.10	<6.01e1	n/a	n/a	101.9	60.10	n/a
S96T001023		D	Cobalt-ICP-Acid Dil.	ug/mL	103.4	<2.00e-02	< 12.00	<1.20e1	n/a	n/a	99.80	12.00	n/a
S96T001023		D	Chromium-ICP-Acid Dil.	ug/mL	104.0	<1.00e-02	< 6.010	<6.01e0	n/a	n/a	100.1	6.010	n/a
S96T001023		D	Copper-ICP-Acid Dil.	ug/mL	104.2	<1.00e-02	< 6.010	<6.01e0	n/a	n/a	96.30	6.010	n/a
S96T001023		D	Iron-ICP-Acid Dil.	ug/mL	103.2	<5.00e-02	< 30.00	<3.00e1	n/a	n/a	99.30	30.10	n/a
S96T001023		D	Potassium-ICP-Acid Dil.	ug/mL	103.4	<5.00e-01	6.94e+02	788.0	741.0	12.7	107.3	300.0	n/a
S96T001023		D	Lanthanum-ICP-Acid Dil.	ug/mL	103.6	<5.00e-02	< 30.00	<3.00e1	n/a	n/a	97.80	30.10	n/a
S96T001023		D	Lithium-ICP-Acid Dil.	ug/mL	99.60	<1.00e-02	< 6.010	<6.01e0	n/a	n/a	96.80	6.010	n/a
S96T001023		D	Magnesium-ICP-Acid Dil.	ug/mL	97.60	<1.00e-01	< 60.10	<6.01e1	n/a	n/a	95.00	60.10	n/a
S96T001023		D	Manganese-ICP-Acid Dil.	ug/mL	100.6	<1.00e-02	< 6.010	<6.01e0	n/a	n/a	94.60	6.010	n/a
S96T001023		D	Molybdenum-ICP-Acid Dil.	ug/mL	103.8	<5.00e-02	< 30.00	<3.00e1	n/a	n/a	103.8	30.10	n/a
S96T001023		D	Sodium-ICP-Acid Dil.	ug/mL	98.20	<1.00e-01	1.08e+05	1.04e+05	1.06e+05	3.77	n/a	60.10	n/a
S96T001023		D	Neodymium-ICP-Acid Dil.	ug/mL	105.2	<1.00e-01	< 60.10	<6.01e1	n/a	n/a	100.1	60.10	n/a
S96T001023		D	Nickel-ICP-Acid Dil.	ug/mL	101.6	<2.00e-02	14.00	14.70	14.35	4.88	98.80	12.00	n/a
S96T001023		D	Phosphorus-ICP-Acid Dil.	ug/mL	102.2	<2.00e-01	2.53e+02	247.0	250.0	2.40	97.30	120.0	n/a
S96T001023		D	Lead-ICP-Acid Dil.	ug/mL	102.0	<1.00e-01	< 60.10	<6.01e1	n/a	n/a	102.4	60.10	n/a
S96T001023		D	Sulfer-ICP-Acid Dil.	ug/mL	98.80	<1.00e-01	2.49e+03	2.45e+03	2.47e+03	1.62	69.70	60.10	n/a
S96T001023		D	Antimony-ICP-Acid Dil.	ug/mL	96.20	<6.00e-02	< 36.10	<3.61e1	n/a	n/a	96.90	36.10	n/a
S96T001023		D	Selenium-ICP-Acid Dil.	ug/mL	98.40	<1.00e-01	< 60.10	<6.01e1	n/a	n/a	99.40	60.10	n/a
S96T001023		D	Silicon-ICP-Acid Dil.	ug/mL	99.00	<5.00e-02	< 30.00	<3.00e1	n/a	n/a	99.90	30.10	n/a
S96T001023		D	Samarium-ICP-Acid Dil.	ug/mL	100.4	<1.00e-01	< 60.10	<6.01e1	n/a	n/a	95.90	60.10	n/a
S96T001023		D	Strontium-ICP-Acid Dil.	ug/mL	101.8	<1.00e-02	< 6.010	<6.01e0	n/a	n/a	96.30	6.010	n/a
S96T001023		D	Titanium-ICP-Acid Dil.	ug/mL	100.4	<1.00e-02	< 6.010	<6.01e0	n/a	n/a	96.10	6.010	n/a
S96T001023		D	Thallium-ICP-Acid Dil.	ug/mL	99.00	<2.00e-01	<1.20e+02	<1.20e2	n/a	n/a	96.40	120.0	n/a

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S96T001023		D	Uranium-ICP-Acid Dil.	ug/mL	99.20	<5.00e-01	1.48e+03	1.41e+03	1.44e+03	4.84	76.80	300.0	n/a
S96T001023		D	Vanadium-ICP-Acid Dil.	ug/mL	103.4	<5.00e-02	< 30.00	<3.00e1	n/a	n/a	99.40	30.10	n/a
S96T001023		D	Zinc-ICP-Acid Dil.	ug/mL	101.6	<1.00e-02	< 6.010	<6.01e0	n/a	n/a	100.6	6.010	n/a
S96T001023		D	Zirconium-ICP-Acid Dil.	ug/mL	102.0	<1.00e-02	3.44e+02	333.0	338.5	3.25	92.80	6.010	n/a
S96T001023			Fluoride-IC-Dionex 4000i/4500	ug/mL	91.69	<1.30e-02	1.83e+02	184.0	183.4	0.54	105.1	14.44	n/a
S96T001023			Chloride-IC-Dionex 4000i/4500	ug/mL	99.49	<1.70e-02	3.20e+02	317.0	318.7	0.94	92.15	36.06	n/a
S96T001023			Nitrite-IC - Dionex 4000i/4500	ug/mL	92.18	<1.07e-01	2.42e+04	2.40e+04	2.41e+04	0.83	100.9	118.9	n/a
S96T001023			Nitrate-IC - Dionex 4000i/4500	ug/mL	93.16	4.44e-01	1.11e+03	1.12e+03	1.11e+03	0.90	88.27	155.5	n/a
S96T001023			Phosphate-IC-Dionex 4000i/4500	ug/mL	89.74	<1.19e-01	8.63e+02	845.0	854.0	2.11	81.68	132.1	n/a
S96T001023			Sulfate by IC-Dionex4000i/4500	ug/mL	92.08	<1.36e-01	6.54e+03	6.53e+03	6.54e+03	0.15	93.03	151.0	n/a
S96T001023			Oxalate by IC - Dionex 4000i	ug/mL	97.25	<1.05e-01	2.98e+03	2.98e+03	2.98e+03	0.00	97.25	116.7	n/a
S96T001024			Technetium-99 Liq. Scint.	uCi/mL	103.9	<3.65e-04	1.60e-01	4.79e-01	3.20e-01	99.8	n/a	2.57e-04	6.80E-01
S96T001024			Strontium-89/90 High Level	uCi/mL	95.12	8.00e-03	4.84e-01	4.82e-01	4.83e-01	0.41	n/a	2.00e-03	3.01E+00
S96T001024			Pu-239/240 by TRU-SPEC Resin	uCi/mL	88.28	<3.12e-03	7.38e-01	8.14e-01	7.76e-01	9.79	n/a	3.40e-02	1.67E+00
S96T001024			Cobalt-60 by GEA	uCi/mL	99.23	<1.99e-05	<6.19e-03	<5.55e-3	n/a	n/a	n/a	6.00e-03	n/a
S96T001024			Cesium-137 by GEA	uCi/mL	101.5	<5.81e-05	1.08e+02	110.0	109.0	1.83	n/a	n/a	0.210
S96T001024			Am-241 by Extraction	uCi/mL	80.13	<1.15e-02	<1.13e-02	<1.28E-2	n/a	n/a	n/a	1.10e-02	5.59E+00
S96T001024			Alpha in Liquid Samples	uCi/mL	88.23	<4.98e-03	9.28e-01	8.80e-01	9.04e-01	5.31	92.86	1.20e-02	5.11E+00

Table 3: Data Summary Report
C-106 GRAB

RISER: 7
SEGMENT #: 6C-96-13

SEGMENT PORTION: Centrifuged Solids (Grab Sample)

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S96T001030			Bulk Density of Sample	g/mL	n/a	n/a	1.520	n/a	n/a	n/a	n/a	5.00e-01	n/a
S96T001030			DSC Exotherm using Mettler	Joules/g	112.1	n/a	1.81e+02	258.9	219.9	35.5	n/a	n/a	n/a
S96T001030			DSC Exotherm Dry Calculated	Joules/g Dry	n/a	n/a	2.00e+02	285.6	242.6	35.4	n/a	n/a	n/a
S96T001030			% Water by TGA on Perkin Elmer	%	99.16	n/a	9.240	9.480	9.360	2.56	n/a	n/a	n/a
S96T001030			Volume % Solids	%	n/a	n/a	67.30	n/a	n/a	n/a	n/a	n/a	n/a
S96T001030			% Water by Gravimetric	%	98.99	n/a	19.30	22.40	20.85	14.9	n/a	1.00e-02	n/a

Control Sample: Control Sample

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S96T001034			DSC Exotherm using Mettler	Joules/g	100.9	n/a	87.40	66.70	77.05	26.9	n/a	n/a	n/a
S96T001034			DSC Exotherm Dry Calculated	Joules/g Dry	n/a	n/a	1.27e+02	96.81	111.9	26.9	n/a	n/a	n/a
S96T001034			% Water by TGA using Mettler	%	99.43	n/a	31.29	30.91	31.10	1.22	n/a	n/a	n/a
S96T001036	F		Technetium-99 Liq. Scint.	uCi/g	102.9	<1.62e-02	3.59e-02	2.41e-02	3.00e-02	39.3	n/a	1.70e-02	6.45E+00
S96T001036	F		Strontium-89/90 High Level	uCi/g	99.19	6.97e-01	1.24e+03	483.0	861.5	87.9	n/a	1.87e-01	4.24E-01
S96T001036	F		Pu-239/240 by TRU-SPEC Resin	uCi/g	97.90	<1.60e-02	1.200	8.95e-01	1.047	29.1	n/a	6.80e-02	1.82E+00
S96T001036	F		Cobalt-60 by GEA	uCi/g	101.4	<4.12e-01	<5.75e-01	<5.58e-1	n/a	n/a	n/a	5.75e-01	n/a
S96T001036	F		Cesium-137 by GEA	uCi/g	103.2	<4.46e-01	8.99e+02	716.0	807.6	22.7	n/a	n/a	0.810
S96T001036	F		Am-241 by Extraction	uCi/g	101.0	<1.28e-02	1.460	1.210	1.335	18.7	n/a	1.20e-01	2.62E+00
S96T001036	F		Alpha of Digested Solid	uCi/g	114.8	<6.30e-02	6.330	2.420	4.375	89.4	96.66	1.09e-01	6.97E+00

Decanted Supernate (Liquid Grab Sludge): Decanted Supernate (Liquid Grab Sludge)

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S96T001032			Specific Gravity	Sp.G.	n/a	n/a	I.S.	I.S.	n/a	n/a	n/a	1.00e-03	n/a
S96T002025			pH Direct	pH	99.75	n/a	10.09	n/a	n/a	n/a	n/a	1.00e-02	n/a
S96T002025			Tot. Organic Carbon by Coul.	ug/mL	100.0	1.00e-01	1.95e+03	1.95e+03	1.95e+03	0.00	103.0	55.00	n/a
S96T002025			Pu-239/240 by TRU-SPEC Resin	uCi/mL	96.33	<3.33e-03	7.73e-01	7.66e-01	7.70e-01	0.91	n/a	3.80e-02	1.66E+00
S96T002025			Fluoride-IC-Dionex 4000i/4500	ug/mL	98.98	<1.30e-02	1.91e+02	209.0	200.2	9.00	n/a	14.44	n/a
S96T002025			Chloride-IC-Dionex 4000i/4500	ug/mL	99.75	<1.70e-02	2.82e+02	293.0	287.2	3.83	n/a	18.89	n/a
S96T002025			Nitrite-IC - Dionex 4000i/4500	ug/mL	103.5	<1.07e-01	2.74e+04	3.05e+04	2.90e+04	10.7	n/a	118.9	n/a
S96T002025			Nitrate-IC - Dionex 4000i/4500	ug/mL	103.1	<1.40e-01	9.69e+02	1.10e+03	1.03e+03	12.7	n/a	155.5	n/a
S96T002025			Phosphate-IC-Dionex 4000i/4500	ug/mL	103.5	<1.19e-01	4.88e+02	558.0	522.8	13.4	n/a	132.1	n/a
S96T002025			Sulfate by IC-Dionex4000i/4500	ug/mL	101.6	<1.36e-01	7.19e+03	7.98e+03	7.58e+03	10.4	n/a	151.0	n/a
S96T002025			Oxalate by IC - Dionex 4000i	ug/mL	103.2	<1.05e-01	3.11e+03	3.47e+03	3.29e+03	10.9	n/a	116.7	n/a
S96T002025			Cobalt-60 by GEA	uCi/mL	93.30	<8.67e-04	<4.03e-03	<4.34e-3	n/a	n/a	n/a	4.00e-03	n/a
S96T002025			Cesium-137 by GEA	uCi/mL	90.88	<2.68e-03	1.04e+02	105.0	104.5	0.96	n/a	n/a	0.160

Filtered Centrifuged Solids: Filtered Centrifuged Solids

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S96T001559			DSC Exotherm Dry Calculated	Joules/g Dry	n/a	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S96T001559			DSC Exotherm on Perkin Elmer	Joules/g	100.3	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S96T001559			% Water by TGA on Perkin Elmer	%	99.39	n/a	21.28	26.12	23.70	20.4	n/a	n/a	n/a
S96T001560			TIC by Acid/Coulometry	ug/g	93.68	3.00e-01	2.64e+04	2.66e+04	2.65e+04	0.75	103.0	5.000	n/a
S96T001560			TOC by Persulfate/Coulometry	ug/g	94.03	3.000	1.60e+04	1.35e+04	1.48e+04	16.9	77.00	40.00	n/a
S96T001561			% Water by Gravimetric	%	98.65	n/a	25.90	26.70	26.30	3.04	n/a	1.00e-02	n/a
S96T001562			pH on SST Samples	pH	99.45	n/a	10.67	10.62	10.64	0.47	n/a	1.00e-02	n/a
S96T001563		F	Technetium-99 Liq. Scint.	uCi/g	102.9	<1.62e-02	4.11e-02	3.23e-02	3.67e-02	24.0	n/a	1.50e-02	4.90E-01
S96T001563		F	Strontium-89/90 High Level	uCi/g	99.19	6.97e-01	6.38e+02	683.0	660.5	6.81	n/a	1.86e-01	5.91E-01
S96T001563		F	Pu-239/240 by TRU-SPEC Resin	uCi/g	97.90	<1.60e-02	1.650	1.540	1.595	6.90	n/a	8.50e-02	1.76E+00
S96T001563		F	Cobalt-60 by GEA	uCi/g	101.4	<4.12e-01	<6.24e-01	<5.83e-1	n/a	n/a	n/a	6.24e-01	n/a
S96T001563		F	Cesium-137 by GEA	uCi/g	103.2	<4.46e-01	8.88e+02	892.0	890.2	0.45	n/a	n/a	0.810
S96T001563		F	Am-241 by Extraction	uCi/g	101.0	<1.28e-02	1.590	1.630	1.610	2.48	n/a	1.32e-01	2.54E+00
S96T001563		F	Alpha of Digested Solid	uCi/g	114.8	<6.30e-02	3.610	3.670	3.640	1.65	108.4	1.10e-01	9.56E+00
S96T001564		A	Silver -ICP-Acid Digest	ug/g	90.20	<1.00e-02	1.81e+03	3.33e+03	2.57e+03	59.1	n/a	4.220	n/a
S96T001564		A	Aluminium -ICP-Acid Digest	ug/g	91.40	1.09e-01	6.21e+04	6.45e+04	6.33e+04	3.79	n/a	21.10	n/a
S96T001564		A	Arsenic -ICP-Acid Digest	ug/g	93.80	<1.00e-01	< 42.20	<4.18e1	n/a	n/a	n/a	42.20	n/a
S96T001564		A	Boron -ICP-Acid Digest	ug/g	97.60	6.50e-01	79.30	61.30	70.30	25.6	n/a	21.10	n/a
S96T001564		A	Barium -ICP-Acid Digest	ug/g	94.00	<5.00e-02	3.67e+02	375.0	371.0	2.16	n/a	21.10	n/a
S96T001564		A	Beryllium -ICP-Acid Digest	ug/g	102.6	<5.00e-03	< 2.110	<2.09e0	n/a	n/a	n/a	2.110	n/a
S96T001564		A	Bismuth -ICP-Acid Digest	ug/g	91.20	<1.00e-01	< 42.20	<4.18e1	n/a	n/a	n/a	42.20	n/a
S96T001564		A	Calcium -ICP-Acid Digest	ug/g	91.60	1.28e-01	1.20e+03	1.27e+03	1.24e+03	5.67	n/a	42.20	n/a
S96T001564		A	Cadmium -ICP-Acid Digest	ug/g	89.60	<5.00e-03	36.50	38.90	37.70	6.37	n/a	2.110	n/a
S96T001564		A	Cerium -ICP-Acid Digest	ug/g	97.00	<1.00e-01	2.13e+02	251.0	232.0	16.4	n/a	42.20	n/a
S96T001564		A	Cobalt -ICP-Acid Digest	ug/g	92.40	<2.00e-02	10.30	11.10	10.70	7.48	n/a	8.450	n/a
S96T001564		A	Chromium -ICP-Acid Digest	ug/g	91.00	<1.00e-02	6.55e+02	682.0	668.5	4.04	n/a	4.220	n/a
S96T001564		A	Copper -ICP-Acid Digest	ug/g	92.00	1.10e-02	1.04e+02	108.0	106.0	3.77	n/a	4.220	n/a
S96T001564		A	Iron -ICP-Acid Digest	ug/g	90.80	5.00e-02	7.00e+04	7.29e+04	7.14e+04	4.06	n/a	21.10	n/a
S96T001564		A	Potassium -ICP-Acid Digest	ug/g	93.00	<5.00e-01	9.42e+02	932.0	937.0	1.07	n/a	211.0	n/a
S96T001564		A	Lanthanum -ICP-Acid Digest	ug/g	94.40	<5.00e-02	70.50	73.50	72.00	4.17	n/a	21.10	n/a
S96T001564		A	Lithium -ICP-Acid Digest	ug/g	95.20	<1.00e-02	4.900	5.090	4.995	3.80	n/a	4.220	n/a
S96T001564		A	Magnesium -ICP-Acid Digest	ug/g	86.40	<1.00e-01	2.79e+02	303.0	291.0	8.25	n/a	42.20	n/a
S96T001564		A	Manganese -ICP-Acid Digest	ug/g	90.80	<1.00e-02	3.01e+03	3.12e+03	3.06e+03	3.59	n/a	4.220	n/a
S96T001564		A	Molybdenum -ICP-Acid Digest	ug/g	91.40	<5.00e-02	< 21.10	<2.09e1	n/a	n/a	n/a	21.10	n/a
S96T001564		A	Sodium -ICP-Acid Digest	ug/g	103.6	8.77e-01	1.41e+05	1.35e+05	1.38e+05	4.35	n/a	42.20	n/a
S96T001564		A	Neodymium -ICP-Acid Digest	ug/g	93.80	<1.00e-01	1.74e+02	187.0	180.5	7.20	n/a	42.20	n/a
S96T001564		A	Nickel -ICP-Acid Digest	ug/g	91.80	<2.00e-02	7.08e+02	740.0	724.0	4.42	n/a	8.450	n/a
S96T001564		A	Phosphorus -ICP-Acid Digest	ug/g	96.80	<2.00e-01	2.71e+03	2.74e+03	2.72e+03	1.10	n/a	84.50	n/a
S96T001564		A	Lead -ICP-Acid Digest	ug/g	86.80	<1.00e-01	2.81e+03	2.85e+03	2.83e+03	1.41	n/a	42.20	n/a
S96T001564		A	Sulfur -ICP-Acid Digest	ug/g	90.20	<1.00e-01	1.67e+03	1.51e+03	1.59e+03	10.1	n/a	42.20	n/a
S96T001564		A	Antimony -ICP-Acid Digest	ug/g	93.40	<6.00e-02	< 25.30	<2.51e1	n/a	n/a	n/a	25.30	n/a
S96T001564		A	Selenium -ICP-Acid Digest	ug/g	88.60	<1.00e-01	< 42.20	<4.18e1	n/a	n/a	n/a	42.20	n/a
S96T001564		A	Silicon -ICP-Acid Digest	ug/g	125.0	7.70e-01	3.55e+04	2.95e+04	3.25e+04	18.5	n/a	21.10	n/a
S96T001564		A	Samarium -ICP-Acid Digest	ug/g	92.60	<1.00e-01	< 42.20	<4.18e1	n/a	n/a	n/a	42.20	n/a
S96T001564		A	Strontium -ICP-Acid Digest	ug/g	92.40	<1.00e-02	23.50	24.60	24.05	4.57	n/a	4.220	n/a
S96T001564		A	Titanium-ICP-Acid Digest	ug/g	86.20	<1.00e-02	1.15e+02	121.0	118.0	5.08	n/a	4.220	n/a
S96T001564		A	Thallium -ICP-Acid Digest	ug/g	86.00	<2.00e-01	< 84.50	<8.36e1	n/a	n/a	n/a	84.50	n/a
S96T001564		A	Uranium -ICP-Acid Digest	ug/g	91.20	<5.00e-01	1.06e+03	927.0	993.5	13.4	n/a	211.0	n/a

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S96T001564		A	Vanadium -ICP-Acid Digest	ug/g	111.0	<5.00e-02	< 21.10	<2.09e1	n/a	n/a	n/a	21.10	n/a
S96T001564		A	Zinc -ICP-Acid Digest	ug/g	87.40	1.10e-02	53.50	58.00	55.75	8.07	n/a	4.220	n/a
S96T001564		A	Zirconium -ICP-Acid Digest	ug/g	99.20	<1.00e-02	4.52e+02	1.10e+03	776.0	83.5	n/a	4.220	n/a
S96T003181		W	Fluoride-IC-Dionex 4000i/4500	ug/g	104.2	<1.30e-02	4.02e+02	119.0	260.3	109	97.63	52.21	n/a
S96T003181		W	Chloride-IC-Dionex 4000i/4500	ug/g	96.58	<1.70e-02	1.56e+02	197.0	176.4	23.2	149.4	68.28	n/a
S96T003181		W	Nitrite-IC - Dionex 4000i/4500	ug/g	93.91	<1.07e-01	1.16e+04	1.09e+04	1.13e+04	6.22	93.54	429.8	n/a
S96T003181		W	Nitrate by IC-Dionex4000i/4500	ug/g	102.8	5.910	9.89e+02	1.94e+03	1.46e+03	64.9	96.09	561.9	n/a
S96T003181		W	Phosphate-IC-Dionex 4000i/4500	ug/g	105.3	<1.19e-01	9.24e+02	1.08e+03	1.00e+03	15.6	97.44	477.5	n/a
S96T003181		W	Sulfate by IC-Dionex4000i/4500	ug/g	105.7	<1.36e-01	3.52e+03	3.12e+03	3.32e+03	12.0	100.6	545.8	n/a
S96T003181		W	Oxalate by IC - Dionex 4000i	ug/g	105.3	<1.05e-01	2.50e+04	8.25e+04	5.37e+04	107	99.80	421.7	n/a

Interstitial Liquid: Interstitial Liquid

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S96T001566			DSC Exotherm using Mettler	Joules/g	93.85	n/a	1.19e+02	96.80	107.8	20.5	n/a	n/a	n/a
S96T001566			DSC Exotherm Dry Calculated	Joules/g Dry	n/a	n/a	4.90e+02	399.3	444.9	20.5	n/a	n/a	n/a
S96T001566			% Water by TGA using Mettler	%	101.2	n/a	74.92	76.60	75.76	2.22	n/a	n/a	n/a
S96T001566			TOC by Persulfate/Coulometry	ug/mL	93.36	6.500	1.86e+03	1.83e+03	1.84e+03	1.63	n/a	40.00	n/a
S96T001566			Strontium-89/90 High Level	uCi/mL	96.75	1.20e-02	6.39e-02	8.86e-02	7.62e-02	32.4	n/a	2.40e-02	3.65E+01
S96T001566		D	Silver-ICP-Acid Dil.	ug/mL	97.40	<1.00e-02	8.510	9.270	8.890	8.55	92.20	4.010	n/a
S96T001566		D	Aluminium-ICP-Acid Dil.	ug/mL	96.20	<5.00e-02	48.10	66.90	57.50	32.7	90.00	20.10	n/a
S96T001566		D	Arsenic-ICP-Acid Dil.	ug/mL	100.4	<1.00e-01	< 40.10	<4.01e1	n/a	n/a	106.2	40.10	n/a
S96T001566		D	Boron-ICP-Acid Dil.	ug/mL	101.0	<5.00e-02	32.10	32.40	32.25	0.93	98.20	20.10	n/a
S96T001566		D	Barium-ICP-Acid Dil.	ug/mL	97.60	<5.00e-02	< 20.10	<2.01e1	n/a	n/a	100.0	20.10	n/a
S96T001566		D	Beryllium-ICP-Acid Dil.	ug/mL	102.6	<5.00e-03	< 2.000	<2.00e0	n/a	n/a	102.5	2.000	n/a
S96T001566		D	Bismuth-ICP-Acid Dil.	ug/mL	98.60	<1.00e-01	< 40.10	<4.01e1	n/a	n/a	90.00	40.10	n/a
S96T001566		D	Calcium-ICP-Acid Dil.	ug/mL	98.20	<1.00e-01	< 40.10	<4.01e1	n/a	n/a	100.8	40.10	n/a
S96T001566		D	Cadmium-ICP-Acid Dil.	ug/mL	100.2	<5.00e-03	< 2.000	<2.00e0	n/a	n/a	96.80	2.000	n/a
S96T001566		D	Cerium-ICP-Acid Dil.	ug/mL	98.60	<1.00e-01	< 40.10	<4.01e1	n/a	n/a	96.80	40.10	n/a
S96T001566		D	Cobalt-ICP-Acid Dil.	ug/mL	99.60	<2.00e-02	< 8.020	<8.02e0	n/a	n/a	97.00	8.020	n/a
S96T001566		D	Chromium-ICP-Acid Dil.	ug/mL	100.0	<1.00e-02	< 4.010	<4.01e0	n/a	n/a	98.30	4.010	n/a
S96T001566		D	Copper-ICP-Acid Dil.	ug/mL	99.00	<1.00e-02	< 4.010	<4.01e0	n/a	n/a	99.30	4.010	n/a
S96T001566		D	Iron-ICP-Acid Dil.	ug/mL	103.2	<5.00e-02	52.80	64.70	58.75	20.3	98.80	20.10	n/a
S96T001566		D	Potassium-ICP-Acid Dil.	ug/mL	97.80	<5.00e-01	6.71e+02	634.0	652.5	5.67	82.10	200.0	n/a
S96T001566		D	Lanthanum-ICP-Acid Dil.	ug/mL	99.60	<5.00e-02	< 20.10	<2.01e1	n/a	n/a	100.5	20.10	n/a
S96T001566		D	Lithium-ICP-Acid Dil.	ug/mL	95.00	<1.00e-02	< 4.010	<4.01e0	n/a	n/a	91.00	4.010	n/a
S96T001566		D	Magnesium-ICP-Acid Dil.	ug/mL	96.60	<1.00e-01	< 40.10	<4.01e1	n/a	n/a	94.30	40.10	n/a
S96T001566		D	Manganese-ICP-Acid Dil.	ug/mL	100.0	<1.00e-02	< 4.010	<4.01e0	n/a	n/a	99.00	4.010	n/a
S96T001566		D	Molybdenum-ICP-Acid Dil.	ug/mL	98.20	<5.00e-02	22.40	22.70	22.55	1.33	98.20	20.10	n/a
S96T001566		D	Sodium-ICP-Acid Dil.	ug/mL	95.80	<1.00e-01	1.13e+05	1.10e+05	1.12e+05	2.69	n/a	40.10	n/a
S96T001566		D	Neodymium-ICP-Acid Dil.	ug/mL	104.6	<1.00e-01	< 40.10	<4.01e1	n/a	n/a	105.2	40.10	n/a
S96T001566		D	Nickel-ICP-Acid Dil.	ug/mL	99.80	<2.00e-02	15.20	15.00	15.10	1.32	97.70	8.020	n/a
S96T001566		D	Phosphorus-ICP-Acid Dil.	ug/mL	112.2	<2.00e-01	3.68e+02	393.0	380.5	6.57	121.9	80.20	n/a
S96T001566		D	Lead-ICP-Acid Dil.	ug/mL	100.6	<1.00e-01	< 40.10	<4.01e1	n/a	n/a	102.8	40.10	n/a
S96T001566		D	Sulfer-ICP-Acid Dil.	ug/mL	99.60	<1.00e-01	2.73e+03	2.71e+03	2.72e+03	0.74	85.10	40.10	n/a
S96T001566		D	Antimony-ICP-Acid Dil.	ug/mL	105.6	<6.00e-02	< 24.10	<2.41e1	n/a	n/a	84.30	24.10	n/a
S96T001566		D	Selenium-ICP-Acid Dil.	ug/mL	100.6	<1.00e-01	< 40.10	<4.01e1	n/a	n/a	117.0	40.10	n/a
S96T001566		D	Silicon-ICP-Acid Dil.	ug/mL	94.40	<5.00e-02	1.18e+02	124.0	121.0	4.96	90.80	20.10	n/a
S96T001566		D	Samarium-ICP-Acid Dil.	ug/mL	98.80	<1.00e-01	< 40.10	<4.01e1	n/a	n/a	102.8	40.10	n/a
S96T001566		D	Strontium-ICP-Acid Dil.	ug/mL	97.80	<1.00e-02	< 4.010	<4.01e0	n/a	n/a	100.3	4.010	n/a

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S96T001566		D	Titanium-ICP-Acid Dil.	ug/mL	95.60	<1.00e-02	< 4.010	<4.01e0	n/a	n/a	96.80	4.010	n/a
S96T001566		D	Thallium-ICP-Acid Dil.	ug/mL	94.60	<2.00e-01	< 80.20	<8.02e1	n/a	n/a	86.50	80.20	n/a
S96T001566		D	Uranium-ICP-Acid Dil.	ug/mL	95.60	<5.00e-01	1.87e+03	1.83e+03	1.85e+03	2.16	99.85	200.0	n/a
S96T001566		D	Vanadium-ICP-Acid Dil.	ug/mL	101.4	<5.00e-02	< 20.10	<2.01e1	n/a	n/a	100.0	20.10	n/a
S96T001566		D	Zinc-ICP-Acid Dil.	ug/mL	100.8	<1.00e-02	< 4.010	<4.01e0	n/a	n/a	96.80	4.010	n/a
S96T001566		D	Zirconium-ICP-Acid Dil.	ug/mL	98.80	<1.00e-02	3.79e+02	375.0	377.0	1.06	99.90	4.010	n/a
S96T001566			Cobalt-60 by GEA	uCi/mL	98.44	<2.89e-03	<6.19e-03	<7.13e-3	n/a	n/a	n/a	6.00e-03	n/a
S96T001566			Cesium-137 by GEA	uCi/mL	96.31	<8.70e-03	1.35e+02	170.0	152.5	23.0	n/a	n/a	0.210

Potential Organic Layer: Potential Organic Layer

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S96T001553			DSC Exotherm using Mettler	Joules/g	113.9	n/a	2.08e+02	167.9	188.0	21.4	n/a	n/a	n/a
S96T001553			DSC Exotherm Dry Calculated	Joules/g Dry	n/a	n/a	7.54e+02	608.3	681.1	21.4	n/a	n/a	n/a
S96T001553			% Water by TGA using Mettler	%	103.7	n/a	72.40	30.11	51.26	82.5	n/a	n/a	n/a

Table 3: Data Summary Report
C-106 GRAB

RISER: 7
SEGMENT #: 6C-96-14

SEGMENT PORTION: Compatibility Study Mixture

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S96T002825			DSC Exotherm on Perkin Elmer	Joules/g	100.6	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S96T002825			pH Direct	pH	100.2	n/a	11.12	n/a	n/a	n/a	n/a	1.00e-02	n/a
S96T002825			% Water by TGA on Perkin Elmer	%	97.87	n/a	95.78	90.16	92.97	6.04	n/a	n/a	n/a
S96T002827			Bulk Density of Sample	g/mL	n/a	n/a	1.520	n/a	n/a	n/a	n/a	5.00e-01	n/a
S96T002827			% Water by TGA using Mettler	%	103.7	n/a	95.08	93.40	94.24	1.78	n/a	n/a	n/a
S96T002829			DSC Exotherm using Mettler	Joules/g	111.8	n/a	0.00e+00	580.2	290.1	200	n/a	n/a	n/a
S96T002829 1			DSC Exotherm using Mettler	Joules/g	114.2	n/a	0.00e+00	77.80	38.90	200	n/a	n/a	n/a
S96T002829			pH Direct	pH	100.0	n/a	11.80	11.79	11.79	0.08	n/a	1.00e-02	n/a
S96T002829			% Water by TGA using Mettler	%	99.54	n/a	95.69	96.02	95.85	0.34	n/a	n/a	n/a
S96T002831			Bulk Density of Sample	g/mL	n/a	n/a	1.420	n/a	n/a	n/a	n/a	5.00e-01	n/a
S96T002831			% Water by TGA on Perkin Elmer	%	99.61	n/a	83.85	85.53	84.69	1.98	n/a	n/a	n/a

Decanted Supernate (Liquid Grab Sludge): Decanted Supernate (Liquid Grab Sludge)

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S96T002826			pH Direct	pH	100.2	n/a	11.50	n/a	n/a	n/a	n/a	1.00e-02	n/a
S96T002826			Specific Gravity	Sp.G.	101.2	n/a	9.88e-01	9.72e-01	9.80e-01	1.63	n/a	1.00e-02	n/a
S96T002830			pH Direct	pH	100.0	n/a	11.91	11.90	11.91	0.08	n/a	1.00e-02	n/a
S96T002830			Specific Gravity	Sp.G.	97.43	n/a	9.96e-01	9.99e-01	9.98e-01	0.30	n/a	1.00e-02	n/a

Potential Organic Layer: Potential Organic Layer

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S96T003230			2-Butoxyethanol	ug/L	n/a	n/a	SEE TICS	NA	n/a	n/a	n/a	n/a	n/a
S96T003230			Nonane (C9)	ug/mL	n/a	n/a	U0.00e+00	n/a	n/a	n/a	n/a	50.00	n/a
S96T003230			Decane (C10)	ug/mL	n/a	n/a	U0.00e+00	n/a	n/a	n/a	n/a	50.00	n/a
S96T003230			Undecane (C11)	ug/mL	n/a	n/a	J 4.070	n/a	n/a	n/a	n/a	50.00	n/a
S96T003230			Dodecane (C12)	ug/mL	n/a	n/a	J 27.00	n/a	n/a	n/a	n/a	50.00	n/a
S96T003230			Tridecane (C13)	ug/mL	n/a	n/a	1.19e+02	n/a	n/a	n/a	n/a	50.00	n/a
S96T003230			Tetradecane (C14)	ug/mL	n/a	n/a	77.00	n/a	n/a	n/a	n/a	50.00	n/a
S96T003230			Pentadecane (C15)	ug/mL	n/a	n/a	J 6.270	n/a	n/a	n/a	n/a	50.00	n/a
S96T003230			Tri-n-butylphosphate	ug/mL	n/a	n/a	J 48.80	n/a	n/a	n/a	n/a	50.00	n/a
S96T003230			Hexadecane (C16) Surr	ug/mL	n/a	n/a	83.90	n/a	n/a	n/a	n/a	50.00	n/a

Sludge (from Liquid Grab Sample): Sludge (from Liquid Grab Sample)

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S96T001551			TOC by Persulfate/Coulometry	ug/g	95.36	8.300	2.97e+04	2.85e+04	2.91e+04	4.12	82.00	40.00	n/a
S96T002350			DSC Exotherm using Mettler	Joules/g	111.4	n/a	29.80	61.10	45.45	68.9	n/a	n/a	n/a
S96T002350			DSC Exotherm Dry Calculated	Joules/g Dry	n/a	n/a	83.15	170.5	126.8	68.9	n/a	n/a	n/a
S96T002350			% Water by TGA using Mettler	%	99.31	n/a	65.05	63.26	64.16	2.79	n/a	n/a	n/a
S96T002351			DSC Exotherm using Mettler	Joules/g	112.8	n/a	1.81e+02	218.1	199.3	18.8	n/a	n/a	n/a
S96T002351			DSC Exotherm Dry Calculated	Joules/g Dry	n/a	n/a	4.04e+02	487.9	445.9	18.8	n/a	n/a	n/a

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S96T002351			% Water by TGA on Perkin Elmer	%	97.43	n/a	56.03	54.56	55.30	2.66	n/a	n/a	n/a

Table 3: Data Summary Report
C-106 GRAB

RISER: 7
SEGMENT #: 6C-96-15

SEGMENT PORTION: Supernate

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S96T001546		D	Silver-ICP-Acid Dil.	ug/mL	97.80	<1.00e-02	< 4.010	<4.01e0	n/a	n/a	90.00	4.010	n/a
S96T001546		D	Aluminium-ICP-Acid Dil.	ug/mL	100.0	<5.00e-02	< 20.10	<2.01e1	n/a	n/a	96.30	20.10	n/a
S96T001546		D	Arsenic-ICP-Acid Dil.	ug/mL	103.0	<1.00e-01	< 40.10	<4.01e1	n/a	n/a	103.3	40.10	n/a
S96T001546		D	Boron-ICP-Acid Dil.	ug/mL	103.2	<5.00e-02	< 20.10	<2.01e1	n/a	n/a	101.0	20.10	n/a
S96T001546		D	Barium-ICP-Acid Dil.	ug/mL	104.0	<5.00e-02	< 20.10	<2.01e1	n/a	n/a	102.8	20.10	n/a
S96T001546		D	Beryllium-ICP-Acid Dil.	ug/mL	105.6	<5.00e-03	< 2.000	<2.00e0	n/a	n/a	102.5	2.000	n/a
S96T001546		D	Bismuth-ICP-Acid Dil.	ug/mL	101.4	<1.00e-01	< 40.10	<4.01e1	n/a	n/a	89.50	40.10	n/a
S96T001546		D	Calcium-ICP-Acid Dil.	ug/mL	103.2	<1.00e-01	< 40.10	<4.01e1	n/a	n/a	104.2	40.10	n/a
S96T001546		D	Cadmium-ICP-Acid Dil.	ug/mL	99.60	<5.00e-03	< 2.000	<2.00e0	n/a	n/a	94.80	2.000	n/a
S96T001546		D	Cerium-ICP-Acid Dil.	ug/mL	105.0	<1.00e-01	< 40.10	<4.01e1	n/a	n/a	100.8	40.10	n/a
S96T001546		D	Cobalt-ICP-Acid Dil.	ug/mL	100.0	<2.00e-02	< 8.020	<8.02e0	n/a	n/a	95.00	8.020	n/a
S96T001546		D	Chromium-ICP-Acid Dil.	ug/mL	98.80	<1.00e-02	< 4.010	<4.01e0	n/a	n/a	94.80	4.010	n/a
S96T001546		D	Copper-ICP-Acid Dil.	ug/mL	105.0	<1.00e-02	< 4.010	<4.01e0	n/a	n/a	102.3	4.010	n/a
S96T001546		D	Iron-ICP-Acid Dil.	ug/mL	102.0	<5.00e-02	< 20.10	<2.01e1	n/a	n/a	100.0	20.10	n/a
S96T001546		D	Potassium-ICP-Acid Dil.	ug/mL	101.4	<5.00e-01	5.08e+02	496.0	502.0	2.39	81.20	200.0	n/a
S96T001546		D	Lanthanum-ICP-Acid Dil.	ug/mL	102.6	<5.00e-02	< 20.10	<2.01e1	n/a	n/a	101.5	20.10	n/a
S96T001546		D	Lithium-ICP-Acid Dil.	ug/mL	106.4	<1.00e-02	< 4.010	<4.01e0	n/a	n/a	100.0	4.010	n/a
S96T001546		D	Magnesium-ICP-Acid Dil.	ug/mL	97.00	<1.00e-01	< 40.10	<4.01e1	n/a	n/a	92.00	40.10	n/a
S96T001546		D	Manganese-ICP-Acid Dil.	ug/mL	99.40	<1.00e-02	< 4.010	<4.01e0	n/a	n/a	96.00	4.010	n/a
S96T001546		D	Molybdenum-ICP-Acid Dil.	ug/mL	100.2	<5.00e-02	21.80	21.80	21.80	0.00	95.60	20.10	n/a
S96T001546		D	Sodium-ICP-Acid Dil.	ug/mL	105.0	<1.00e-01	1.10e+05	1.06e+05	1.08e+05	3.70	n/a	40.10	n/a
S96T001546		D	Neodymium-ICP-Acid Dil.	ug/mL	108.4	<1.00e-01	< 40.10	<4.01e1	n/a	n/a	109.5	40.10	n/a
S96T001546		D	Nickel-ICP-Acid Dil.	ug/mL	99.40	<2.00e-02	16.40	17.10	16.75	4.18	94.40	8.020	n/a
S96T001546		D	Phosphorus-ICP-Acid Dil.	ug/mL	102.0	<2.00e-01	2.92e+02	299.0	295.5	2.37	98.10	80.20	n/a
S96T001546		D	Lead-ICP-Acid Dil.	ug/mL	99.40	<1.00e-01	< 40.10	<4.01e1	n/a	n/a	96.30	40.10	n/a
S96T001546		D	Sulfer-ICP-Acid Dil.	ug/mL	99.40	<1.00e-01	2.42e+03	2.35e+03	2.38e+03	2.94	26.40	40.10	n/a
S96T001546		D	Antimony-ICP-Acid Dil.	ug/mL	96.80	<6.00e-02	< 24.10	<2.41e1	n/a	n/a	91.50	24.10	n/a
S96T001546		D	Selenium-ICP-Acid Dil.	ug/mL	106.0	<1.00e-01	< 40.10	<4.01e1	n/a	n/a	112.2	40.10	n/a
S96T001546		D	Silicon-ICP-Acid Dil.	ug/mL	95.60	<5.00e-02	< 20.10	<2.01e1	n/a	n/a	95.00	20.10	n/a
S96T001546		D	Samarium-ICP-Acid Dil.	ug/mL	105.8	<1.00e-01	< 40.10	<4.01e1	n/a	n/a	109.0	40.10	n/a
S96T001546		D	Strontium-ICP-Acid Dil.	ug/mL	103.4	<1.00e-02	< 4.010	<4.01e0	n/a	n/a	102.3	4.010	n/a
S96T001546		D	Titanium-ICP-Acid Dil.	ug/mL	99.00	<1.00e-02	< 4.010	<4.01e0	n/a	n/a	96.50	4.010	n/a
S96T001546		D	Thallium-ICP-Acid Dil.	ug/mL	97.20	<2.00e-01	< 80.20	<8.02e1	n/a	n/a	90.80	80.20	n/a
S96T001546		D	Uranium-ICP-Acid Dil.	ug/mL	100.0	<5.00e-01	1.76e+03	1.79e+03	1.78e+03	1.69	88.70	200.0	n/a
S96T001546		D	Vanadium-ICP-Acid Dil.	ug/mL	102.0	<5.00e-02	< 20.10	<2.01e1	n/a	n/a	98.30	20.10	n/a
S96T001546		D	Zinc-ICP-Acid Dil.	ug/mL	100.0	<1.00e-02	4.320	<4.01e0	n/a	n/a	93.20	4.010	n/a
S96T001546		D	Zirconium-ICP-Acid Dil.	ug/mL	101.4	<1.00e-02	3.81e+02	377.0	379.0	1.06	93.50	4.010	n/a
S96T001546			Fluoride-IC-Dionex 4000i/4500	ug/mL	98.81	<1.30e-02	2.23e+02	212.0	217.3	5.06	125.6	14.44	n/a
S96T001546			Chloride-IC-Dionex 4000i/4500	ug/mL	93.17	<1.70e-02	2.97e+02	295.0	295.8	0.68	99.75	18.89	n/a
S96T001546			Nitrite-IC - Dionex 4000i/4500	ug/mL	98.61	<1.07e-01	3.02e+04	3.04e+04	3.03e+04	0.66	96.88	118.9	n/a
S96T001546			Nitrate-IC - Dionex 4000i/4500	ug/mL	99.67	2.38e-01	1.00e+03	1.09e+03	1.05e+03	8.61	96.91	155.5	n/a
S96T001546			Phosphate-IC-Dionex 4000i/4500	ug/mL	100.7	<1.19e-01	5.13e+02	530.0	521.6	3.26	101.5	132.1	n/a
S96T001546			Sulfate by IC-Dionex4000i/4500	ug/mL	99.53	<1.36e-01	7.88e+03	7.90e+03	7.89e+03	0.25	103.8	151.0	n/a

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S96T001546			Oxalate by IC - Dionex 4000i	ug/mL	100.2	<1.05e-01	3.53e+03	3.50e+03	3.52e+03	0.85	101.1	116.7	n/a

Table 3: Data Summary Report
C-106 GRAB

RISER: 1
SEGMENT #: 6C-96-17

SEGMENT PORTION: Field Blank

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S96T000855			DSC Exotherm using Mettler	Joules/g	94.55	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S96T000855			Ammonia by ISE-Std Additions	ug/mL	106.8	5.80e-02	< 5.000	<5.00	n/a	n/a	104.0	5.000	n/a
S96T000855			pH Direct	pH	99.52	n/a	8.282	8.239	8.261	0.52	n/a	1.00e-02	n/a
S96T000855			Specific Gravity	Sp.G.	102.1	n/a	9.75e-01	9.74e-01	9.74e-01	0.10	n/a	1.00e-03	n/a
S96T000855			% Water by TGA using Mettler	%	101.9	n/a	1.00e+02	99.85	100.2	0.65	n/a	n/a	n/a
S96T000855			Tot. Inorg. Carbon by Coul.	ug/mL	97.17	<5.000	8.000	9.500	8.750	17.1	n/a	5.000	n/a
S96T000855			Tot. Organic Carbon by Coul.	ug/mL	103.0	9.00e-01	17.10	14.30	15.70	17.8	96.70	5.500	n/a
S96T000855			TOC by Persulfate/Coulometry	ug/mL	93.03	1.600	< 40.00	<40	n/a	n/a	85.00	40.00	n/a
S96T000855			% Water by Gravimetric	%	98.82	n/a	1.00e+02	100.0	100.0	0.00	n/a	1.00e-02	n/a
S96T000855			Technetium-99 Liq. Scint.	uCi/mL	102.6	<3.72e-05	<3.56e-05	3.84e-05	n/a	n/a	n/a	3.56e-05	7.04E+00
S96T000855			Strontium-89/90 High Level	uCi/mL	104.1	8.78e-07	1.79e-02	1.79e-02	1.79e-02	0.00	n/a	9.32e-07	2.26E-01
S96T000855			Pu-239/240 by TRU-SPEC Resin	uCi/mL	109.4	<3.66e-05	1.64e-05	1.63e-05	1.63e-05	0.61	n/a	3.66e-06	4.0
S96T000855		D	Silver-ICP-Acid Dil.	ug/mL	99.20	<1.00e-02	<1.00e-02	<1.00e-2	n/a	n/a	81.50	1.00e-02	n/a
S96T000855		D	Aluminium-ICP-Acid Dil.	ug/mL	97.80	<5.00e-02	2.82e-01	2.62e-01	2.72e-01	7.35	98.30	5.00e-02	n/a
S96T000855		D	Arsenic-ICP-Acid Dil.	ug/mL	101.6	<1.00e-01	<1.00e-01	<1.00e-1	n/a	n/a	100.0	1.00e-01	n/a
S96T000855		D	Boron-ICP-Acid Dil.	ug/mL	101.4	<5.00e-02	<5.00e-02	<5.00e-2	n/a	n/a	99.20	5.00e-02	n/a
S96T000855		D	Barium-ICP-Acid Dil.	ug/mL	98.40	<5.00e-02	<5.00e-02	<5.00e-2	n/a	n/a	96.90	5.00e-02	n/a
S96T000855		D	Beryllium-ICP-Acid Dil.	ug/mL	102.4	<5.00e-03	<5.00e-03	<5.00e-3	n/a	n/a	101.5	5.00e-03	n/a
S96T000855		D	Bismuth-ICP-Acid Dil.	ug/mL	98.80	<1.00e-01	<1.00e-01	<1.00e-1	n/a	n/a	96.20	1.00e-01	n/a
S96T000855		D	Calcium-ICP-Acid Dil.	ug/mL	98.80	<1.00e-01	6.870	6.740	6.805	1.91	98.90	1.00e-01	n/a
S96T000855		D	Cadmium-ICP-Acid Dil.	ug/mL	100.4	<5.00e-03	<5.00e-03	<5.00e-3	n/a	n/a	98.50	5.00e-03	n/a
S96T000855		D	Cerium-ICP-Acid Dil.	ug/mL	99.20	<1.00e-01	<1.00e-01	<1.00e-1	n/a	n/a	94.60	1.00e-01	n/a
S96T000855		D	Cobalt-ICP-Acid Dil.	ug/mL	101.2	<2.00e-02	<2.00e-02	<2.00e-2	n/a	n/a	99.20	2.00e-02	n/a
S96T000855		D	Chromium-ICP-Acid Dil.	ug/mL	101.4	<1.00e-02	<1.00e-02	<1.00e-2	n/a	n/a	98.50	1.00e-02	n/a
S96T000855		D	Copper-ICP-Acid Dil.	ug/mL	99.60	<1.00e-02	<1.00e-02	<1.00e-2	n/a	n/a	99.20	1.00e-02	n/a
S96T000855		D	Iron-ICP-Acid Dil.	ug/mL	101.0	<5.00e-02	5.20e-02	<5.00e-2	n/a	n/a	98.30	5.00e-02	n/a
S96T000855		D	Potassium-ICP-Acid Dil.	ug/mL	101.4	<5.00e-01	<5.00e-01	<5.00e-1	n/a	n/a	123.8	5.00e-01	n/a
S96T000855		D	Lanthanum-ICP-Acid Dil.	ug/mL	99.20	<5.00e-02	<5.00e-02	<5.00e-2	n/a	n/a	97.70	5.00e-02	n/a
S96T000855		D	Lithium-ICP-Acid Dil.	ug/mL	98.40	<1.00e-02	<1.00e-02	<1.00e-2	n/a	n/a	96.90	1.00e-02	n/a
S96T000855		D	Magnesium-ICP-Acid Dil.	ug/mL	97.80	<1.00e-01	1.37e-01	1.20e-01	1.29e-01	13.2	94.10	1.00e-01	n/a
S96T000855		D	Manganese-ICP-Acid Dil.	ug/mL	100.8	<1.00e-02	1.04e-02	1.05e-02	1.05e-02	0.96	98.50	1.00e-02	n/a
S96T000855		D	Molybdenum-ICP-Acid Dil.	ug/mL	101.2	<5.00e-02	<5.00e-02	<5.00e-2	n/a	n/a	98.50	5.00e-02	n/a
S96T000855		D	Sodium-ICP-Acid Dil.	ug/mL	97.40	<1.00e-01	18.50	18.30	18.40	1.09	104.2	1.00e-01	n/a
S96T000855		D	Neodymium-ICP-Acid Dil.	ug/mL	100.0	<1.00e-01	<1.00e-01	<1.00e-1	n/a	n/a	96.90	1.00e-01	n/a
S96T000855		D	Nickel-ICP-Acid Dil.	ug/mL	100.4	<2.00e-02	<2.00e-02	<2.00e-2	n/a	n/a	98.50	2.00e-02	n/a
S96T000855		D	Phosphorus-ICP-Acid Dil.	ug/mL	100.4	<2.00e-01	2.280	2.190	2.235	4.03	101.7	2.00e-01	n/a
S96T000855		D	Lead-ICP-Acid Dil.	ug/mL	101.0	<1.00e-01	<1.00e-01	<1.00e-1	n/a	n/a	101.5	1.00e-01	n/a
S96T000855		D	Sulfer-ICP-Acid Dil.	ug/mL	99.00	<1.00e-01	3.32e-01	3.20e-01	3.26e-01	3.68	95.20	1.00e-01	n/a
S96T000855		D	Antimony-ICP-Acid Dil.	ug/mL	94.20	<6.00e-02	<6.00e-02	<6.00e-2	n/a	n/a	90.80	6.00e-02	n/a
S96T000855		D	Selenium-ICP-Acid Dil.	ug/mL	98.20	<1.00e-01	<1.00e-01	<1.00e-1	n/a	n/a	97.70	1.00e-01	n/a
S96T000855		D	Silicon-ICP-Acid Dil.	ug/mL	95.00	<5.00e-02	7.36e-01	7.17e-01	7.26e-01	2.62	95.70	5.00e-02	n/a
S96T000855		D	Samarium-ICP-Acid Dil.	ug/mL	99.00	<1.00e-01	<1.00e-01	<1.00e-1	n/a	n/a	95.40	1.00e-01	n/a
S96T000855		D	Strontium-ICP-Acid Dil.	ug/mL	98.20	<1.00e-02	<1.00e-02	<1.00e-2	n/a	n/a	96.90	1.00e-02	n/a

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S96T000855		D	Titanium-ICP-Acid Dil.	ug/mL	98.20	<1.00e-02	<1.00e-02	<1.00e-2	n/a	n/a	96.20	1.00e-02	n/a
S96T000855		D	Thallium-ICP-Acid Dil.	ug/mL	97.00	<2.00e-01	<2.00e-01	<2.00e-1	n/a	n/a	86.90	2.00e-01	n/a
S96T000855		D	Uranium-ICP-Acid Dil.	ug/mL	96.70	<5.00e-01	<5.00e-01	<5.00e-1	n/a	n/a	89.60	5.00e-01	n/a
S96T000855		D	Vanadium-ICP-Acid Dil.	ug/mL	101.4	<5.00e-02	<5.00e-02	<5.00e-2	n/a	n/a	98.50	5.00e-02	n/a
S96T000855		D	Zinc-ICP-Acid Dil.	ug/mL	101.8	<1.00e-02	<1.00e-02	<1.00e-2	n/a	n/a	100.8	1.00e-02	n/a
S96T000855		D	Zirconium-ICP-Acid Dil.	ug/mL	98.60	<1.00e-02	<1.00e-02	<1.00e-2	n/a	n/a	95.40	1.00e-02	n/a
S96T000855			Fluoride-IC-Dionex 4000i/4500	ug/mL	101.0	<1.30e-02	9.60e-02	1.08e-01	1.02e-01	11.8	n/a	1.30e-02	n/a
S96T000855			Chloride-IC-Dionex 4000i/4500	ug/mL	97.72	<1.70e-02	14.98	15.00	14.99	0.00	n/a	1.70e-02	n/a
S96T000855			Nitrite-IC - Dionex 4000i/4500	ug/mL	103.0	<1.07e-01	6.32e-01	6.22e-01	6.27e-01	1.59	n/a	1.07e-01	n/a
S96T000855			Nitrate-IC - Dionex 4000i/4500	ug/mL	102.8	3.61e-01	1.567	1.600	1.583	1.89	n/a	1.40e-01	n/a
S96T000855			Phosphate-IC-Dionex 4000i/4500	ug/mL	98.53	<1.19e-01	4.59e-01	4.18e-01	4.39e-01	9.35	n/a	1.20e-01	n/a
S96T000855			Sulfate by IC-Dionex4000i/4500	ug/mL	101.1	<1.36e-01	1.342	1.280	1.311	4.58	n/a	1.36e-01	n/a
S96T000855			Oxalate by IC - Dionex 4000i	ug/mL	104.2	<1.05e-01	<1.05e-01	<1.05e-1	n/a	n/a	n/a	1.05e-01	n/a
S96T000855			Cobalt-60 by GEA	uCi/mL	100.4	<2.62e-05	<3.21e-05	<1.75e-5	n/a	n/a	n/a	3.21e-05	n/a
S96T000855			Cesium-137 by GEA	uCi/mL	100.0	<7.02e-05	4.41e-02	4.37e-02	4.39e-02	0.91	n/a	n/a	1.15
S96T000855			Am-241 by Extraction	uCi/mL	82.08	<1.16e-05	<1.60e-05	<1.73E-5	n/a	n/a	n/a	1.60e-05	5.27E+00
S96T000855			Alpha in Liquid Samples	uCi/mL	105.9	<1.44e-06	3.34e-05	2.05e-05	2.69e-05	47.9	113.6	3.85e-06	2.10E+01

PHOTOGRAPHS

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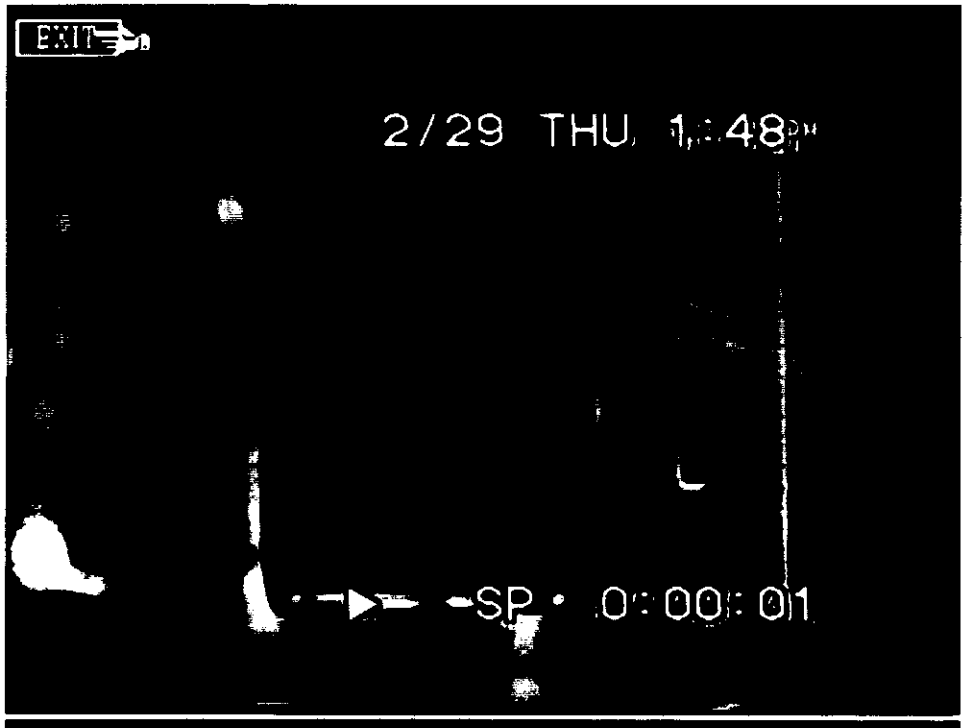
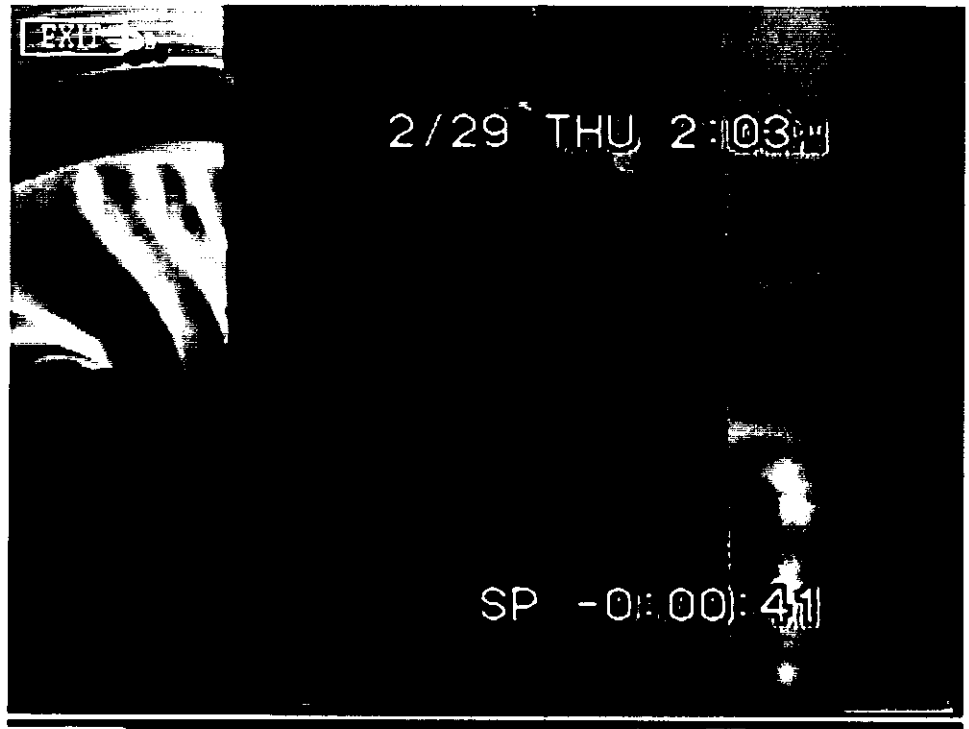
6C-96-5



6C-96-6



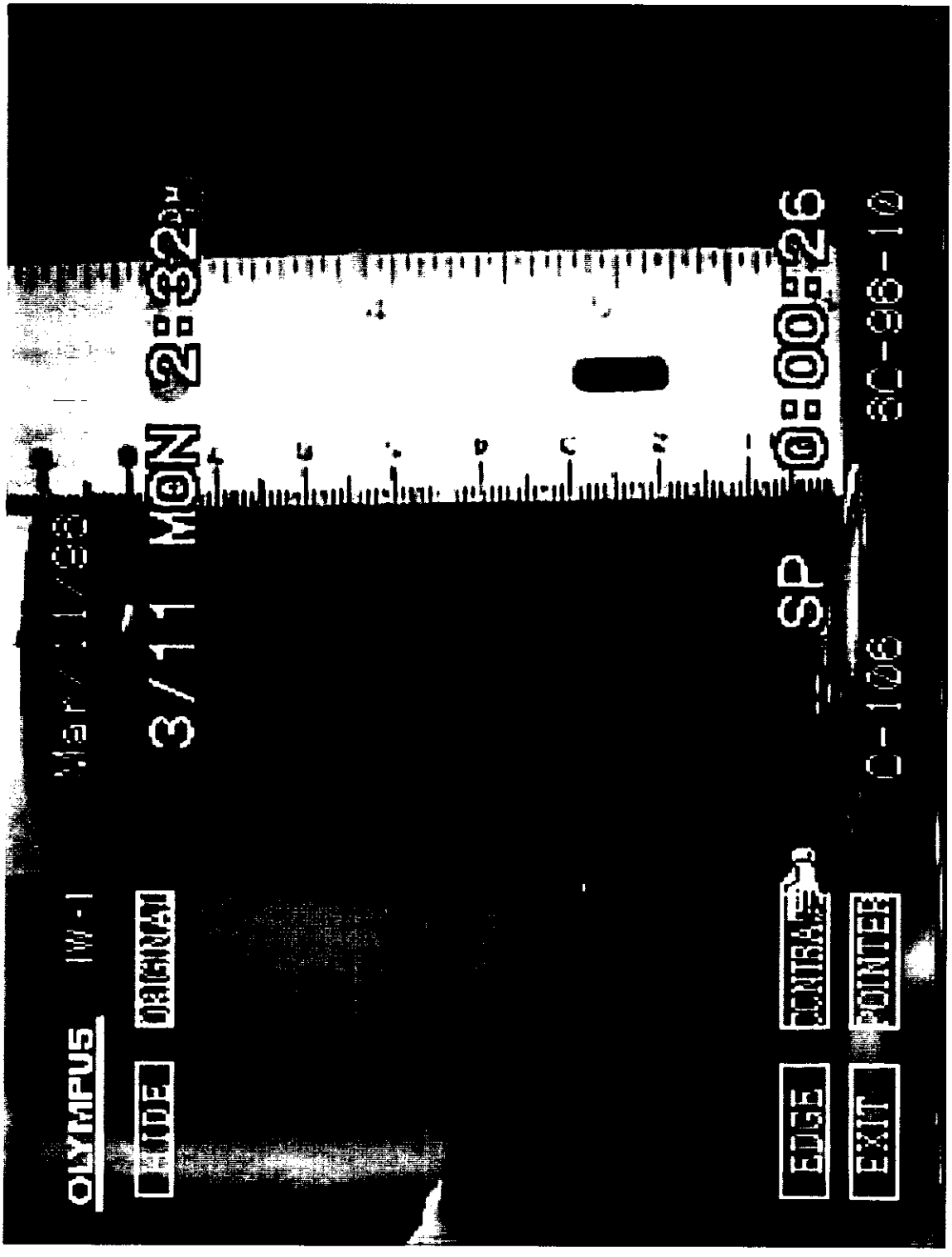
6C-96-8

OLVMPUS
WIDE
3/11 MON 2:29
SP
EXIT
POINTER

OLVMPUS
WIDE
3/11 MON 2:28
SP 0:00:59
EXIT
POINTER

6C-96-7

6C-96-10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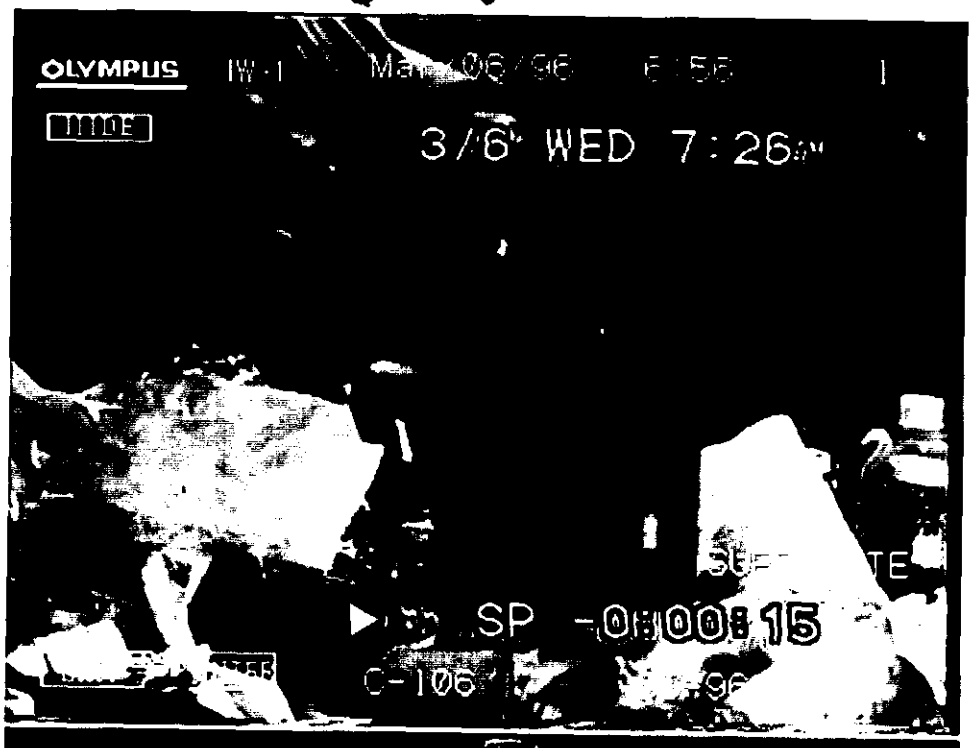
IW-1
MODE
DIAGRAM
EDGE
CONTRAST
EXIT
POINTER
Mar/11/98
3/11 MON 2:32
SP
0:00:26
C-106
6C-96-10

S96T001021

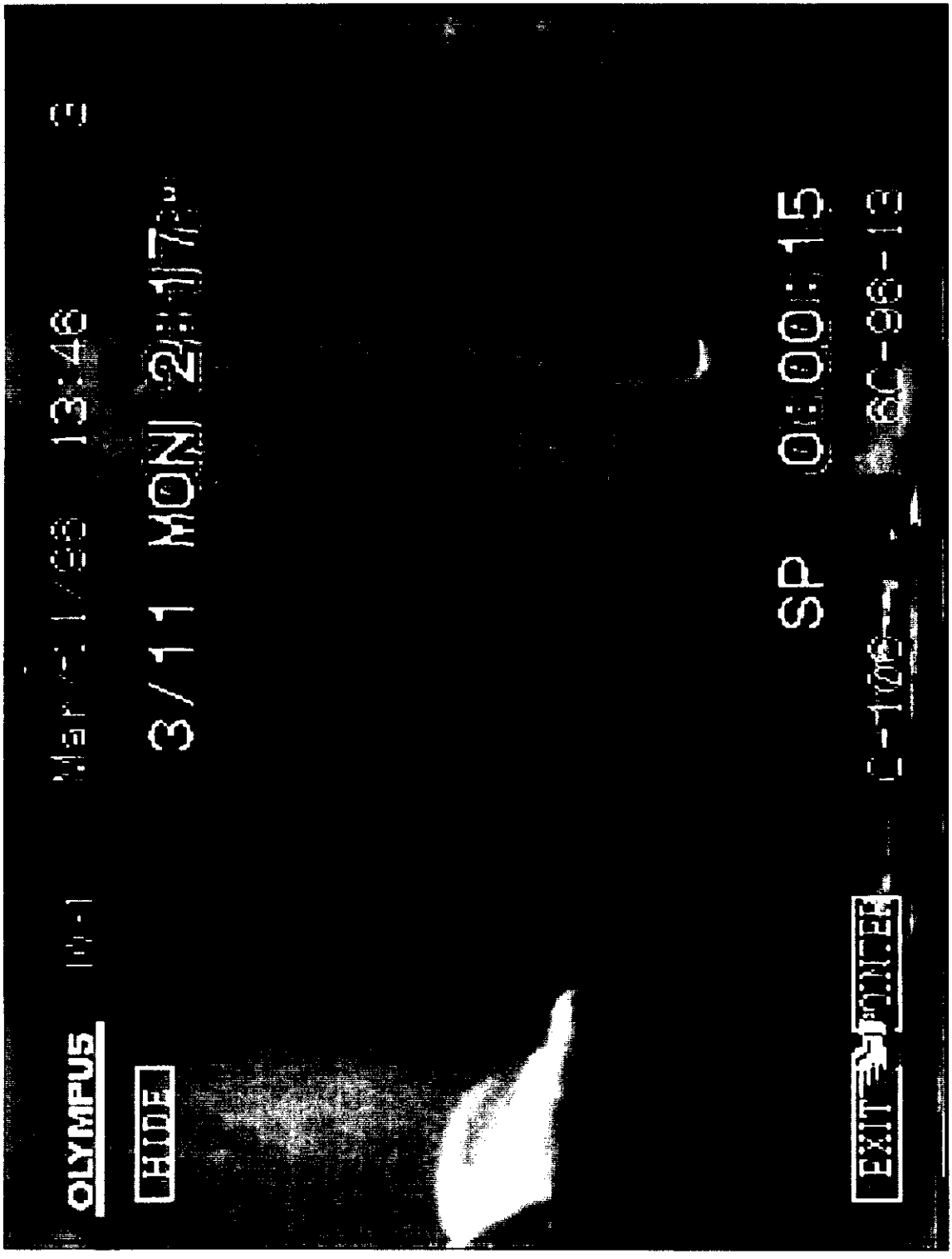
6C-96-11



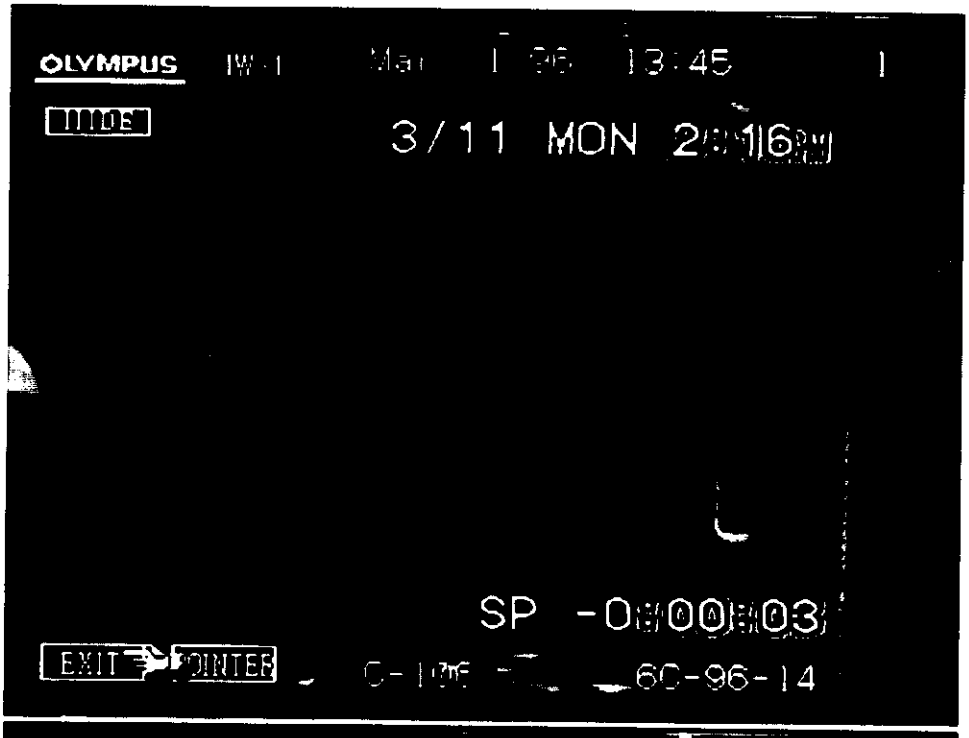
6C-96-12

S96T001022

6C-96-13



6C-96-14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IW-1
13:45
1
WIDE
3/11 MON
SP
EXIT
POINTER
6C-96-14

OLYMPUS
IW-1
13:45
2
WIDE
3/11 MON
SP
EXIT
POINTER
6C-96-14

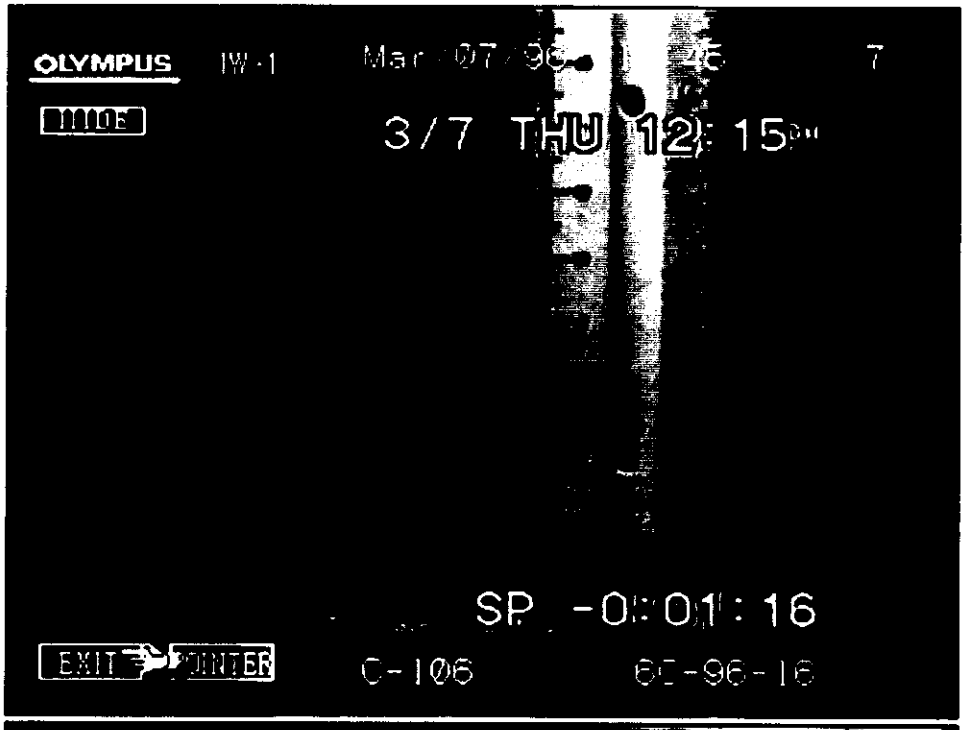
6C-96-15

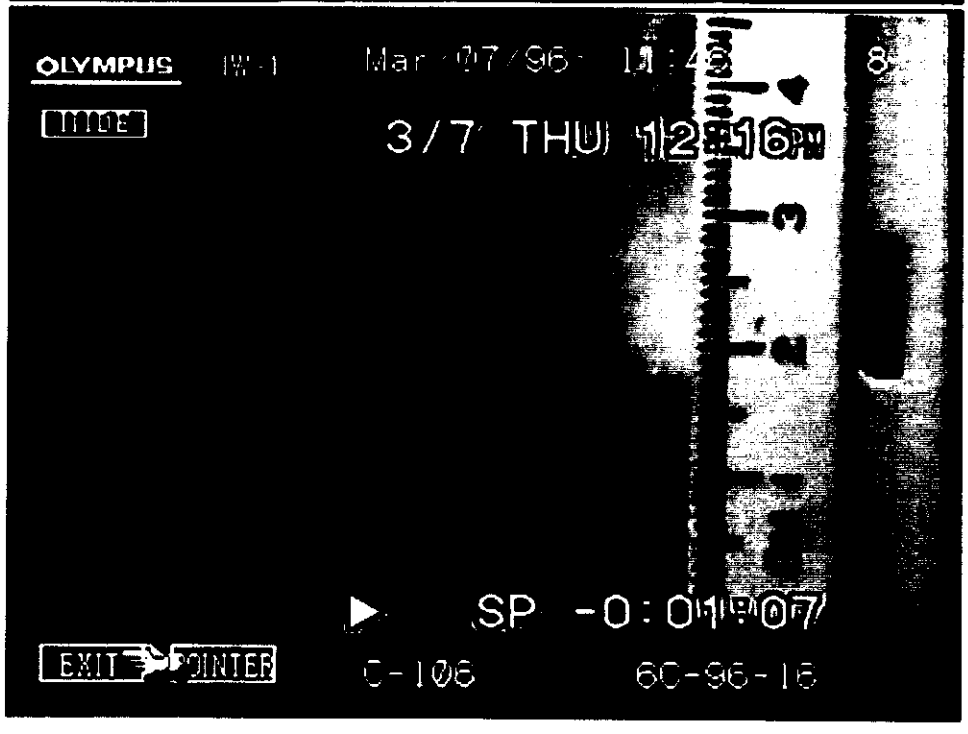
OLYMPUS
3/7 THU 10:25
SP -0:00:06
EXIT
POINTER

OLYMPUS
3/7 THU 10:28
SP -0:00:20
EXIT
POINTER

6C-96-15 after sitting in hotcell for 1 week

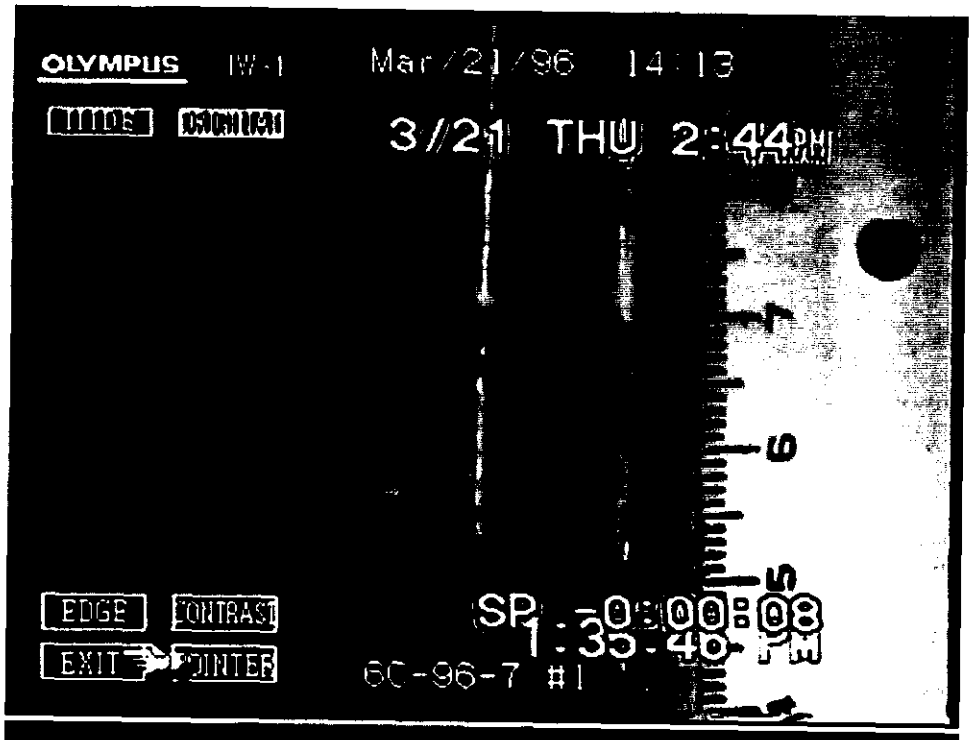
6C-96-16


OLYMPUS
IW-1
Mar 07 96
7
MODE
3/7 THU 12:15PM
SP -0:01:16
EXIT
POINTER
C-106
6C-96-16

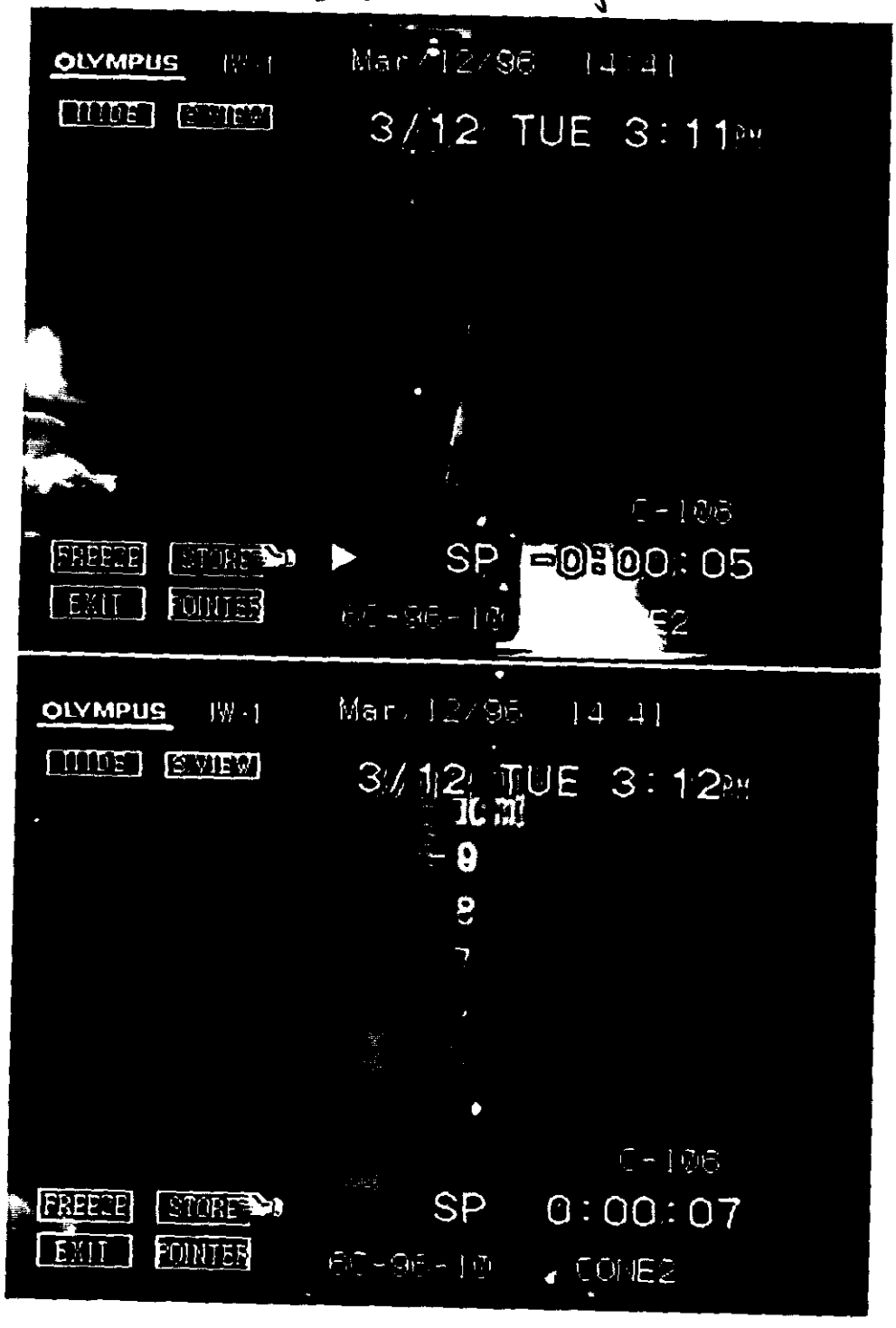

OLYMPUS
IW-1
Mar 07 96
MODE
3/7 THU 12:16PM
SP -0:01:07
EXIT
POINTER
C-106
6C-96-16

6C-96-16 after sitting in hotcell for 1 week

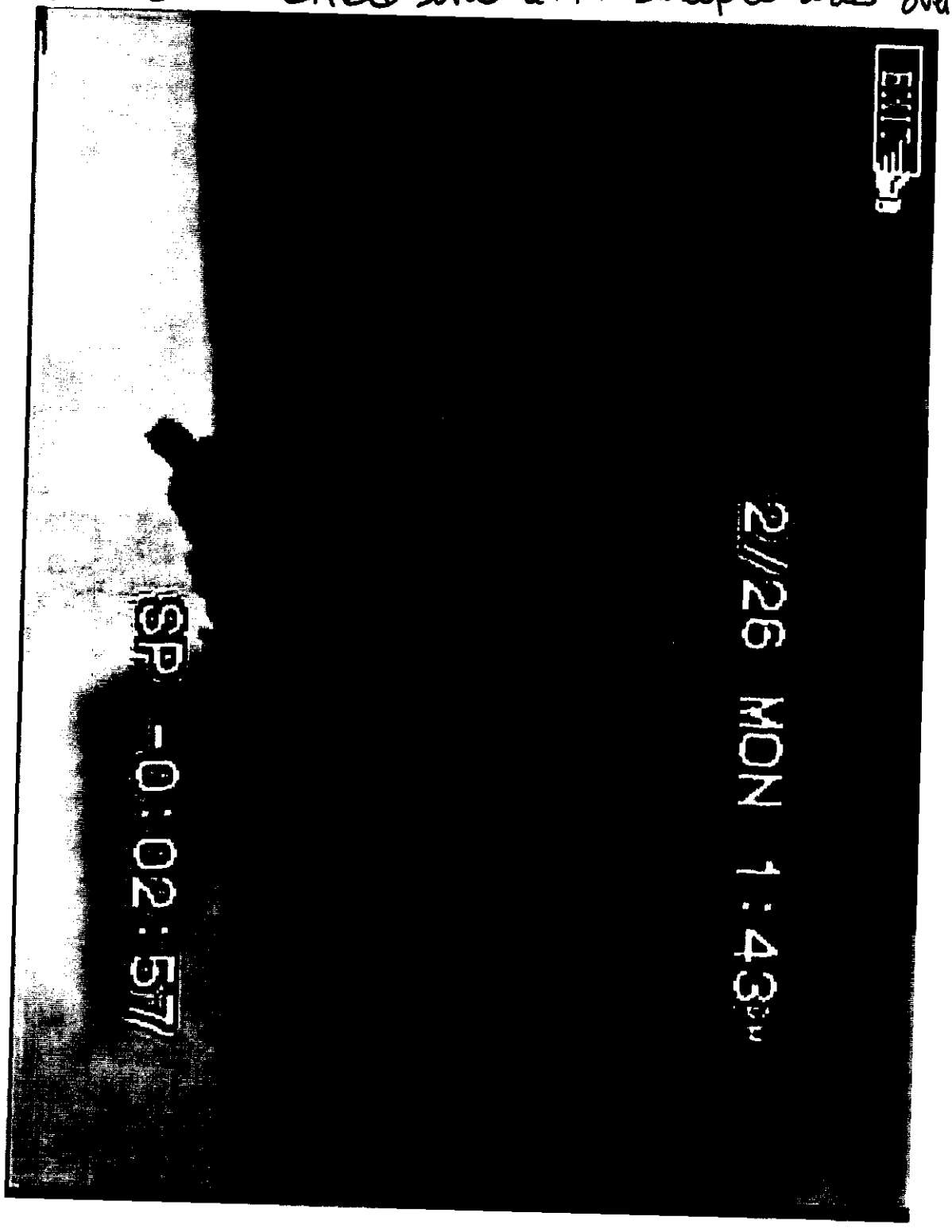
6C-96-7 shows oil layer after centrifugation



6C-96-10 shows oil layer after centrifugation



6C-96-3 dried solid after sample was overheated



SAMPLE PREPARATIONS

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LABCORE Data Entry Template for Worklist# 5962

Analyst: [illegible] **Instrument:** FUS01 SN16355 **Book #** _____

Method: LA-549-141 Rev/Mod F-0

Worklist Comment: Tank# C-106,Riser#1(6C-96-7,7C,10,10C (PC is rae) LL.rts!

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 BLNK-PREP			FUSION01	SOLID	1	.250	N/A	g/L
96000082	C-106 GRAB	2 SAMPLE	S96T000546	0 F	FUSION01	SOLID	N/A	.9436		g/L
		.2359g → .250l								
96000082	C-106 GRAB	3 SAMPLE	S96T000546	0 F	DOSE-02	SOLID	N/A	150		mrad/hour
96000082	C-106 GRAB	4 DUP	S96T000546	0 F	FUSION01	SOLID	.9436	1.0540	N/A	g/L
		.2635g → .250l								
96000082	C-106 GRAB	5 DUP	S96T000546	0 F	DOSE-02	SOLID	150	200	N/A	mrad/hour
96000082	C-106 GRAB	6 SAMPLE	S96T000555	0 F	FUSION01	SOLID	N/A	.8844		g/L
		.2211g → .250l								
96000082	C-106 GRAB	7 SAMPLE	S96T000555	0 F	DOSE-02	SOLID	N/A	165		mrad/hour
96000082	C-106 GRAB	8 DUP	S96T000555	0 F	FUSION01	SOLID	.8844	.9700	N/A	g/L
		.2425g → .250l								
96000082	C-106 GRAB	9 DUP	S96T000555	0 F	DOSE-02	SOLID	165	250	N/A	mrad/hour
96000082	C-106 GRAB	10 SAMPLE	S96T000561	0 F	FUSION01	SOLID	N/A	.5160		g/L
		.1290g → .250l								
96000082	C-106 GRAB	11 SAMPLE	S96T000561	0 F	DOSE-02	SOLID	N/A	40		mrad/hour
96000082	C-106 GRAB	12 DUP	S96T000561	0 F	FUSION01	SOLID	.5160	.6120	N/A	g/L
		.1530g → .250l								
96000082	C-106 GRAB	13 DUP	S96T000561	0 F	DOSE-02	SOLID	40	40	N/A	mrad/hour
96000082	C-106 GRAB	14 SAMPLE	S96T000571	0 F	FUSION01	SOLID	N/A	1.5148		g/L
		.3787g → .250l								
96000082	C-106 GRAB	15 SAMPLE	S96T000571	0 F	DOSE-02	SOLID	N/A	100		mrad/hour
96000082	C-106 GRAB	16 DUP	S96T000571	0 F	FUSION01	SOLID	1.5148	1.2024	N/A	g/L
		.3006g → .250l								
96000082	C-106 GRAB	17 DUP	S96T000571	0 F	DOSE-02	SOLID	100	250	N/A	mrad/hour

Data Entry Comments:

S96T000564- Sample is not homogenous.

S96T000560- Sample stuck to the bottle.

40ml con HNO3, <1% solids

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

LABCORE Data Entry Template for Worklist# 5962

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-------TEST------	MATRIX	ACTUAL	FOUND	DL	UNIT

Final page for worklist # 5962

CA Murphy 4-16-96
Analyst Signature / Date

Susan Bee 4/17/96
Analyst Signature Date

6C-96-7 / S96T000548 → S96T000555
6C-96-7C / S96T000543 → S96T000546
6C-96-10C / S96T000560 → S96T000561
6C-96-10 / S96T000564 → S96T000571
RHStah 2/28/96

Reviewed by RK Fuller 4/18/96

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

LABCORE Data Entry Template for Worklist# 8147

Analyst: [illegible] **Instrument:** ACD01 SN16355 **Book #** _____

Method: LA-549-141 Rev/Mod F-0

Worklist Comment: C-106 GRAB 6C-96-4 FUSION01 SKB

RUSH

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 BLNK-PREP			FUSION01	SOLID	1	.250	N/A	g/L
96000082	C-106 GRAB	2 SAMPLE	S96T001531	0 F	FUSION01	SOLID	N/A	2.1028		g/L
		.5257g → .250l								
96000082	C-106 GRAB	3 SAMPLE	S96T001531	0 F	DOSE-02	SOLID	N/A	780		mrad/hour
* 96000082	C-106 GRAB	4 DUP	S96T001531	0 F	FUSION01	SOLID	2.1028	2.1916	N/A	g/L
		.5479g → .250l								
96000082	C-106 GRAB	5 DUP	S96T001531	0 F	DOSE-02	SOLID	780	500	N/A	mrad/hour
96000082	C-106 GRAB	6 SAMPLE	S96T001541	0 F	FUSION01	SOLID	N/A	1.9148		g/L
		.4787g → .250l								
96000082	C-106 GRAB	7 SAMPLE	S96T001541	0 F	DOSE-02	SOLID	N/A	500		mrad/hour
96000082	C-106 GRAB	8 DUP	S96T001541	0 F	FUSION01	SOLID	1.9148	1.9681	N/A	g/L
		.4921g → .250l								
96000082	C-106 GRAB	9 DUP	S96T001541	0 F	DOSE-02	SOLID	500	500	N/A	mrad/hour

Final page for worklist # 8147

Teresa Murphy 5-16-96
Analyst Signature **Date**

Susan Bee 5/17/96
Analyst Signature **Date**

S96T001530 → 1531 (Light brown color after fusion) Solids may be present.
1533 → 1541 (yellow color after fusion. Fusion complete)

* NOTE: Incomplete fusion on sample # S96T001531. Both sample and dup did not fuse. Reddish-brown solids present in both sample. The sample had slightly more solids than the duplicate. RKFulk 5/17/96

Data Entry Comments:
Samples were not homogeneous
10ml HNO3, <1% solids

Reviewed by RKFulk 5/17/96

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

SUPER SUPER RUSH

LABCORE Data Entry Template for Worklist# 8456

Analyst: [illegible] **Instrument:** FUS01 SN16355 **Book #** _____

Method: LA-549-141 Rev/Mod F-0

Worklist Comment: C-106 S11CS,S11FS,S13CS,S13FS FUSIONS01 SKB

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 BLNK-PREP			FUSION01	SOLID	1	.250	N/A	g/L
96000174	C-106 GRAB	2 SAMPLE	S96T001678	0 F	FUSION01	SOLID	N/A	1.8392		g/L
		.4598g → .250l								
96000174	C-106 GRAB	3 SAMPLE	S96T001678	0 F	DOSE-02	SOLID	N/A	250		mrad/hour
96000174	C-106 GRAB	4 DUP	S96T001678	0 F	FUSION01	SOLID	1.8392	1.9588	N/A	g/L
		.4897g → .250l								
96000174	C-106 GRAB	5 DUP	S96T001678	0 F	DOSE-02	SOLID	250	400	N/A	mrad/hour
96000174	C-106 GRAB	6 SAMPLE	S96T001689	0 F	FUSION01	SOLID	N/A	.9924		g/L
*SEE NOTE		.2481g → .250l								
96000174	C-106 GRAB	7 SAMPLE	S96T001689	0 F	DOSE-02	SOLID	N/A	200		mrad/hour
96000174	C-106 GRAB	8 DUP	S96T001689	0 F	FUSION01	SOLID	.9924	.9972	N/A	g/L
		.2493g → .250l								
96000174	C-106 GRAB	9 DUP	S96T001689	0 F	DOSE-02	SOLID	200	250	N/A	mrad/hour
96000174	C-106 GRAB	10 SAMPLE	S96T001036	0 F	FUSION01	SOLID	N/A	1.8792		g/L
		.4698g → .250l								
96000174	C-106 GRAB	11 SAMPLE	S96T001036	0 F	DOSE-02	SOLID	N/A	650		mrad/hour
96000174	C-106 GRAB	12 DUP	S96T001036	0 F	FUSION01	SOLID	1.8792	1.8996	N/A	g/L
		.4749g → .250l								
96000174	C-106 GRAB	13 DUP	S96T001036	0 F	DOSE-02	SOLID	650	400	N/A	mrad/hour
96000174	C-106 GRAB	14 SAMPLE	S96T001563	0 F	FUSION01	SOLID	N/A	1.8684		g/L
		.4671g → .250l								
96000174	C-106 GRAB	15 SAMPLE	S96T001563	0 F	DOSE-02	SOLID	N/A	550		mrad/hour
96000174	C-106 GRAB	16 DUP	S96T001563	0 F	FUSION01	SOLID	1.8684	1.8792	N/A	g/L
		.4623g → .250l								
96000174	C-106 GRAB	17 DUP	S96T001563	0 F	DOSE-02	SOLID	550	650	N/A	mrad/hour

S96T001676 → S96T001678
1682 → 1689
1034 → 1036
1556 → 1563

Data Entry Comments:

1682: Not enough sample for .5g
Samples were not homogeneous 10ml con HNO_3, <10% DOLIDO

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

LABCORE Data Entry Template for Worklist# 8456

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-------TEST------	MATRIX	ACTUAL	FOUND	DL	UNIT

Final page for worklist # 8456

Analyst Signature 5-16-96 Date

Analyst Signature 5/17/96 Date

Data Entry Comments:

Reviewed by R K Fulle 5/17/96

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

WHC-SD-WM-DP-183, REV. 0

RERUN

LABCORE Data Entry Template for Worklist# 8634

Analyst: JAM **Instrument:** FUS01 SN16355 **Book #** _____

Method: LA-549-141 Rev/Mod F-0

Worklist Comment: C-106 GRAB FUSION01 REPREP SKB

RUSH

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-------TEST------	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 BLNK-PREP			FUSION01	SOLID	1	.250	N/A	g/L
96000082	C-106 GRAB	2 SAMPLE .2122g → .250l	S96T002718	0 F	FUSION01	SOLID	N/A	.8488		g/L
96000082	C-106 GRAB	3 SAMPLE	S96T002718	0 F	DOSE-02	SOLID	N/A	250		mrad/hour
96000082	C-106 GRAB	4 DUP .2046g → .250l	S96T002718	0 F	FUSION01	SOLID	.8488	.8184	N/A	g/L
96000082	C-106 GRAB	5 DUP	S96T002718	0 F	DOSE-02	SOLID	250	250	N/A	mrad/hour

Final page for worklist # 8634

JAMurphy 5-16-96
Analyst Signature **Date**

Susan Bee 5/17/96
Analyst Signature **Date**

S96T000564 → S96T002718 (Light yellow after fusion)

Data Entry Comments:
Samples were not homogeneous
40ml HNO_3, <1% solids

Reviewed by RK Fuller 5/17/96

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

LABCORE Data Entry Template for Worklist# 5964

Analyst: lmh **Instrument:** H2O01 [illegible] **Book #** _____

Method: LA-504-101 Rev/Mod E · 0

Worklist Comment: Tank# C-106,Riser#1 (6C-96-7,10 (PC is rae) LL.rts!

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 BLNK-PREP			H2ODIG01	SOLID	1	.100	N/A	g/L
96000082	C-106 GRAB	2 SAMPLE .5386g → .100l	S96T000557	0 W	H2ODIG01	SOLID	N/A	5.3860		g/L
96000082	C-106 GRAB	3 SAMPLE	S96T000557	0 W	DOSE-02	SOLID	N/A	15		mrad/hour
96000082	C-106 GRAB	4 DUP .5428g → .100l	S96T000557	0 W	H2ODIG01	SOLID	5.3860	5.4280	N/A	g/L
96000082	C-106 GRAB	5 DUP	S96T000557	0 W	DOSE-02	SOLID	15	15	N/A	mrad/hour
96000082	C-106 GRAB	6 SAMPLE .4953g → .100l	S96T000574	0 W	H2ODIG01	SOLID	N/A	4.9530		g/L
96000082	C-106 GRAB	7 SAMPLE	S96T000574	0 W	DOSE-02	SOLID	N/A	8		mrad/hour
96000082	C-106 GRAB	8 DUP .5043g → .100l	S96T000574	0 W	H2ODIG01	SOLID	4.9530	5.0430	N/A	g/L
96000082	C-106 GRAB	9 DUP	S96T000574	0 W	DOSE-02	SOLID	8	8	N/A	mrad/hour

Final page for worklist # 5964

[illegible] 4·23·96
Analyst Signature Date

[illegible] 4/25/96
Analyst Signature Date

Reviewed by RKFuller 4/25/96

Data Entry Comments: HPT: Scott Lauderbach

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

worklistrpt Version 2.1 05/15/95
05/02/96 13:23

LABCORE Data Entry Template for Worklist# 8277

Analyst: [illegible] **Instrument:** H2O01 SN16355 **Book #** _____

Method: LA-504-101 Rev/Mod E-0

Worklist Comment: C-106 6C-96-4 H2ODIG01 SKB

RUSH

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 BLNK-PREP			H2ODIG01	SOLID	1	.1000	N/A	g/L
96000082	C-106 GRAB	2 SAMPLE	S96T001543	0 W	H2ODIG01	SOLID	N/A	4.9430		g/L
		.4943g → .1000								
96000082	C-106 GRAB	3 SAMPLE	S96T001543	0 W	DOSE-02	SOLID	N/A	250		mrad/hour
96000082	C-106 GRAB	4 DUP	S96T001543	0 W	H2ODIG01	SOLID	4.9430	4.9440	N/A	g/L
		.4944g → .1001								
96000082	C-106 GRAB	5 DUP	S96T001543	0 W	DOSE-02	SOLID	250	250	N/A	mrad/hour

Final page for worklist # 8277

Teresa Murphy 5-16-96
Analyst Signature **Date**

Susan Su 5/17/96
Analyst Signature **Date**

S96T001536 → 1543

Data Entry Comments:
Samples were not homogeneous

Reviewed by RH Fuller 5/17/96

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

SUPER SUPER RUSH

worklistrpt Version 2.1 05/15/95
05/07/96 15:18

LABCORE Data Entry Template for Worklist# 8458

Analyst: JBM **Instrument:** H2O01 SN16355 **Book #** _____

Method: LA-504-101 Rev/Mod E-0

Worklist Comment: C-106 GRAB S11FS,S13FS H2ODIG01 SKB

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 BLNK-PREP			H2ODIG01	SOLID	1	.100	N/A	g/L
96000174	C-106 GRAB	2 SAMPLE	S96T001691	0 W	H2ODIG01	SOLID	N/A	5.6590		g/L
		.5659g → .100l								
96000174	C-106 GRAB	3 SAMPLE	S96T001691	0 W	DOSE-02	SOLID	N/A	250		mrad/hour
96000174	C-106 GRAB	4 DUP	S96T001691	0 W	H2ODIG01	SOLID	5.6590	5.7640	N/A	g/L
		.5764g → .100l								
96000174	C-106 GRAB	5 DUP	S96T001691	0 W	DOSE-02	SOLID	250	200	N/A	mrad/hour
96000174	C-106 GRAB	6 SAMPLE	S96T001565	0 W	H2ODIG01	SOLID	N/A	5.0880		g/L
		.5088g → .100l								
96000174	C-106 GRAB	7 SAMPLE	S96T001565	0 W	DOSE-02	SOLID	N/A	250		mrad/hour
96000174	C-106 GRAB	8 DUP	S96T001565	0 W	H2ODIG01	SOLID	5.0880	4.9250	N/A	g/L
		.4925g → .100l								
96000174	C-106 GRAB	9 DUP	S96T001565	0 W	DOSE-02	SOLID	250	250	N/A	mrad/hour

Final page for worklist # 8458

JBMurphy 5-16-96
Analyst Signature **Date**

Susan Bee 5/17/96
Analyst Signature **Date**

S96T001684 → S96T001691
1558 → 1565

Data Entry Comments:
Samples were not homogeneous

Reviewed by RK Falls 5/17/96

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

LABCORE Data Entry Template for Worklist# 8696

Analyst: JAM **Instrument:** H2O01 SN16355 **Book #** _____

Method: LA-504-101 Rev/Mod E-0

Worklist Comment: C-106 GRAB REPREP H2ODIG01 SKB

GROUP	PROJECT	S TYPE	SAMPLE#	R	A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 BLNK-PREP				H2ODIG01	SOLID	1	.100	N/A	g/L
96000082	C-106 GRAB	2 SAMPLE	S96T002821	0	W	H2ODIG01	SOLID	N/A	2.1720		g/L
		.5172g → .100l									
96000082	C-106 GRAB	3 SAMPLE	S96T002821	0	W	DOSE-02	SOLID	N/A	175		mrad/hour
96000082	C-106 GRAB	4 DUP	S96T002821	0	W	H2ODIG01	SOLID	2.1720	2.1360	N/A	g/L
		.5136g → .100l									
96000082	C-106 GRAB	5 DUP	S96T002821	0	W	DOSE-02	SOLID	175	175	N/A	mrad/hour

Final page for worklist # 8696

JAMurphy 5-17-96
Analyst Signature / Date

Susan Bee 5/17/96
Analyst Signature Date

S96T002822 → S96T002821.

Data Entry Comments:

Reviewed by RK Fell 5/17/96

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

LABCORE Data Entry Template for Worklist# 9285

Analyst: JAM **Instrument:** H2O01 AU1000 **Book #** _____

Method: LA-504-101 Rev/Mod E-0

Worklist Comment: C-106 CRAB SEG.3,4 H2ODIG01 SKB

SUPER SUPER RUSH

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 BLNK-PREP			H2ODIG01	SOLID	1	.100	N/A	g/L
96000082	C-106 GRAB	2 SAMPLE	S96T003178	0 W	H2ODIG01	SOLID	N/A	4.8870		g/L
		.4887g → .100l								
96000082	C-106 GRAB	3 SAMPLE	S96T003178	0 W	DOSE-02	SOLID	N/A	5		mrad/hour
96000082	C-106 GRAB	4 DUP	S96T003178	0 W	H2ODIG01	SOLID	4.8870	3.4820	N/A	g/L
		.3482g → .100l								
96000082	C-106 GRAB	5 DUP	S96T003178	0 W	DOSE-02	SOLID	5	5	N/A	mrad/hour
96000082	C-106 GRAB	6 SAMPLE	S96T003179	0 W	H2ODIG01	SOLID	N/A	2.5190		g/L
		.2519g → .100l								
96000082	C-106 GRAB	7 SAMPLE	S96T003179	0 W	DOSE-02	SOLID	N/A	25		mrad/hour
96000082	C-106 GRAB	8 DUP	S96T003179	0 W	H2ODIG01	SOLID	2.5190	1.7300	N/A	g/L
		.1730g → .100l								
96000082	C-106 GRAB	9 DUP	S96T003179	0 W	DOSE-02	SOLID	25	0	N/A	mrad/hour

Final page for worklist # 9285

JAMurphy 5-31-96
Analyst Signature **Date**

Susan Bu 5/31/96
Analyst Signature **Date**

S96T002822 → 3178
1536 → 3179

Data Entry Comments:
Sample 2822 → 3178 used in process
Sample 1536 → 3179 used in process
HPT - Gerry Gunnskey

Reviewed by R K Fuller 5/31/96

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

worklistrpt Version 2.1 05/15/95
05/29/96 10:08

LABCORE Data Entry Template for Worklist# 9286

Analyst: JAM **Instrument:** H2O01 AL110646 **Book #** _____

Method: LA-504-101 Rev/Mod E-0

SUPER SUPER RUSH

Worklist Comment: C-106 GRAB SEG.11,13 H2ODIG01 SKB

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-------TEST------	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 BLNK-PREP			H2ODIG01	SOLID	1	.100	N/A	g/L
96000174	C-106 GRAB	2 SAMPLE	S96T003181	0 W	H2ODIG01	SOLID	N/A	2.7390		g/L
		.2739g → .100l						JAM 5-31-96		
96000174	C-106 GRAB	3 SAMPLE	S96T003181	0 W	DOSE-02	SOLID	N/A	~~30~~ 5		mrad/hour
96000174	C-106 GRAB	4 DUP	S96T003181	0 W	H2ODIG01	SOLID	2.7390	4.3160	N/A	g/L
		.4316g → .100l								
96000174	C-106 GRAB	5 DUP	S96T003181	0 W	DOSE-02	SOLID	5	25	N/A	mrad/hour
96000174	C-106 GRAB	6 SAMPLE	S96T003180	0 W	H2ODIG01	SOLID	N/A	2.8830		g/L
		.2883g → .100l								
96000174	C-106 GRAB	7 SAMPLE	S96T003180	0 W	DOSE-02	SOLID	N/A	30		mrad/hour
96000174	C-106 GRAB	8 DUP	S96T003180	0 W	H2ODIG01	SOLID	2.8830	3.1510	N/A	g/L
		.3151g → .100l								
96000174	C-106 GRAB	9 DUP	S96T003180	0 W	DOSE-02	SOLID	30	7.5	N/A	mrad/hour

Final page for worklist # 9286

JAMurphy 5-31-96
Analyst Signature **Date**

Susan Bu 5/31/96
Analyst Signature **Date**

S96T001685 → 3180
1558 → 3181

Data Entry Comments: Sample 1685 → 3180 used in process
Sample 1558 → 3181 used in process
HPT - Gerry Gumiskey

Reviewed by RK Fuller 5/31/96

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

LABCORE Data Entry Template for Worklist# 5963

Analyst: lmh **Instrument:** ACD01 9216355 **Book #** WHC-2 (WHC1A)

Method: LA-505-159 Rev/Mod D-0

Worklist Comment: Tank# C-106,Riser#(6C-96-7,10 (PC is rae) LL.rts!

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 BLNK-PREP			ACIDIG01	SOLID	1	.050	N/A	g/L
		2 STD-PREP			ACIDIG01	SOLID	20	20	N/A	g/L
96000082	C-106 GRAB	3 SAMPLE	S96T000556	0 A	ACIDIG01	SOLID	N/A	4.3640		g/L
		.2282g → .050l								
96000082	C-106 GRAB	4 SAMPLE	S96T000556	0 A	DOSE-02	SOLID	N/A	400		mrad/hour
96000082	C-106 GRAB	5 DUP	S96T000556	0 A	ACIDIG01	SOLID	4.5640	5.3020	N/A	g/L
		.2651g → .050l								
96000082	C-106 GRAB	6 DUP	S96T000556	0 A	DOSE-02	SOLID	400	500	N/A	mrad/hour
96000082	C-106 GRAB	7 SPK	S96T000556	0 A	ACIDIG01	SOLID	20	20	N/A	g/L
		.2900g → .050l = 5.8000								
96000082	C-106 GRAB	8 SPK	S96T000556	0 A	DOSE-02	SOLID	~~N/A~~	~~400~~ 500	N/A	mrad/hour
96000082	C-106 GRAB	9 SAMPLE	S96T000572	0 A	ACIDIG01	SOLID	N/A	5.9300		g/L
		.2965g → .050l								
96000082	C-106 GRAB	10 SAMPLE	S96T000572	0 A	DOSE-02	SOLID	N/A	500		mrad/hour
96000082	C-106 GRAB	11 DUP	S96T000572	0 A	ACIDIG01	SOLID	5.9300	5.0720	N/A	g/L
		.2536g → .050l								
96000082	C-106 GRAB	12 DUP	S96T000572	0 A	DOSE-02	SOLID	500	500	N/A	mrad/hour
96000082	C-106 GRAB	13 SPK	S96T000572	0 A	ACIDIG01	SOLID	20	20	N/A	g/L
96000082	C-106 GRAB	14 SPK	S96T000572	0 A	DOSE-02	SOLID	~~N/A~~	450	N/A	mrad/hour
		.2951g → .050l								

Final page for worklist # 5963

Analyst Signature: [signature] Date: 4-20-96

Analyst Signature: Susan Bell Date: 4/25/96

6C-96-7/S96T000549 → S96T000556

Data Entry Comments: 6C-96-10/S96T000565 → S96T000572 RHS 4-22-96

Reviewed by RKFuller 4/25/96

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

LABCORE Data Entry Template for Worklist# 8346

Analyst: JAM **Instrument:** ACD01 SN14355 **Book #** _____

Method: LA-505-159 Rev/Mod 0-0

Worklist Comment: C-106 GRAB 6C-96-4 ACIDIG01 SKB

RUSH

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 BLNK-PREP			ACIDIG01	SOLID	1	.050	N/A	g/L
		2 STD-PREP			ACIDIG01	SOLID	20	20	N/A	~~g/L~~ D.F. 5-14-96 JAM
96000082	C-106 GRAB	3 SAMPLE	S96T001542	0 A	ACIDIG01	SOLID	N/A	4.8840		g/L
96000082	C-106 GRAB	4 SAMPLE .2442g → .050 l	S96T001542	0 A	DOSE-02	SOLID	N/A	400		mrad/hour
96000082	C-106 GRAB	5 DUP	S96T001542	0 A	ACIDIG01	SOLID	4.8840	5.0800	N/A	g/L
96000082	C-106 GRAB	6 DUP .2540g → .050 l	S96T001542	0 A	DOSE-02	SOLID	400	350	N/A	mrad/hour
96000082	C-106 GRAB	7 SPK	S96T001542	0 A	ACIDIG01	SOLID	20	20	N/A	~~g/L~~ D.F. 5-14-96 JAM
96000082	C-106 GRAB	8 SPK .2390g → .050 l	S96T001542	0 A	DOSE-02	SOLID	NA	350	N/A	mrad/hour

Final page for worklist # 8346

JAMurphy 5-16-96
Analyst Signature **Date**

Susan Bee 5/17/96
Analyst Signature **Date**

S96T001535 → 1542

Reviewed by RK Fuller 5/17/96

Data Entry Comments:
Samples were not homogeneous

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

worklistrpt Version 2.1 05/15/95
05/07/96 15:14

SUPER SUPER RUSH

LABCORE Data Entry Template for Worklist# 8457

Analyst: JAM **Instrument:** ACD01 SN16355 **Book #** _____

Method: LA-505-159 Rev/Mod 2-0

Worklist Comment: C-106 GRAB S11FS,S13FS ACIDIG01 SKB

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 BLNK-PREP			ACIDIG01	SOLID	1	.050	N/A	g/L
		2 STD-PREP			ACIDIG01	SOLID	20	20	N/A	~~g/L~~ D.F. 5-15-96 JAM
96000174	C-106 GRAB	3 SAMPLE	S96T001690	0 A	ACIDIG01	SOLID	N/A	5.2240		g/L
		.2612g → .050l								
96000174	C-106 GRAB	4 SAMPLE	S96T001690	0 A	DOSE-02	SOLID	N/A	300		mrad/hour
96000174	C-106 GRAB	5 DUP	S96T001690	0 A	ACIDIG01	SOLID	5.2240	5.0840	N/A	g/L
		.2542g → .050l								
96000174	C-106 GRAB	6 DUP	S96T001690	0 A	DOSE-02	SOLID	300	500	N/A	mrad/hour
96000174	C-106 GRAB	7 SPK	S96T001690	0 A	ACIDIG01	SOLID	20	20	N/A	~~g/L~~ D.F. 5-15-96 JAM
		.2611g → .050l								
96000174	C-106 GRAB	8 SPK	S96T001690	0 A	DOSE-02	SOLID	NA	350	N/A	mrad/hour
96000174	C-106 GRAB	9 SAMPLE	S96T001564	0 A	ACIDIG01	SOLID	N/A	4.7340		g/L
		.2367g → .050l								
96000174	C-106 GRAB	10 SAMPLE	S96T001564	0 A	DOSE-02	SOLID	N/A	350		mrad/hour
96000174	C-106 GRAB	11 DUP	S96T001564	0 A	ACIDIG01	SOLID	4.7340	4.7860	N/A	g/L
		.2393g → .050l								
96000174	C-106 GRAB	12 DUP	S96T001564	0 A	DOSE-02	SOLID	350	350	N/A	mrad/hour

Final page for worklist # 8457

JAMurphy 5-16-96
Analyst Signature **Date**

Jason Bu 5/17/96
Analyst Signature **Date**

S96T001683 → S96T001690
1557 → 1564

Data Entry Comments:
Samples were not homogeneous <1% solids

Reviewed by PKFalk 5/17/96

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

INORGANIC ANALYSES

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LABCORE Data Entry Template for Worklist# 6224

Analyst: DPB **Instrument:** DSC0 1 **Book #** 12N14B

Method: LA-514-113 Rev/Mod C-1

Worklist Comment: C-106 DSC-01 RUN UNDER N2. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R	A	-------TEST------	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD				DSC-01	LIQUID	28.45	27.5	N/A	Joules/g
96000082	C-106 GRAB	2 SAMPLE	S96T000538	0		DSC-01	LIQUID	N/A	Ø		Joules/g
96000082	C-106 GRAB	3 DUP	S96T000538	0		DSC-01	LIQUID	Ø	Ø	N/A	Joules/g

Final page for worklist # 6224

Daniel P. Bromley 3/9/96 1650
Analyst Signature **Date**

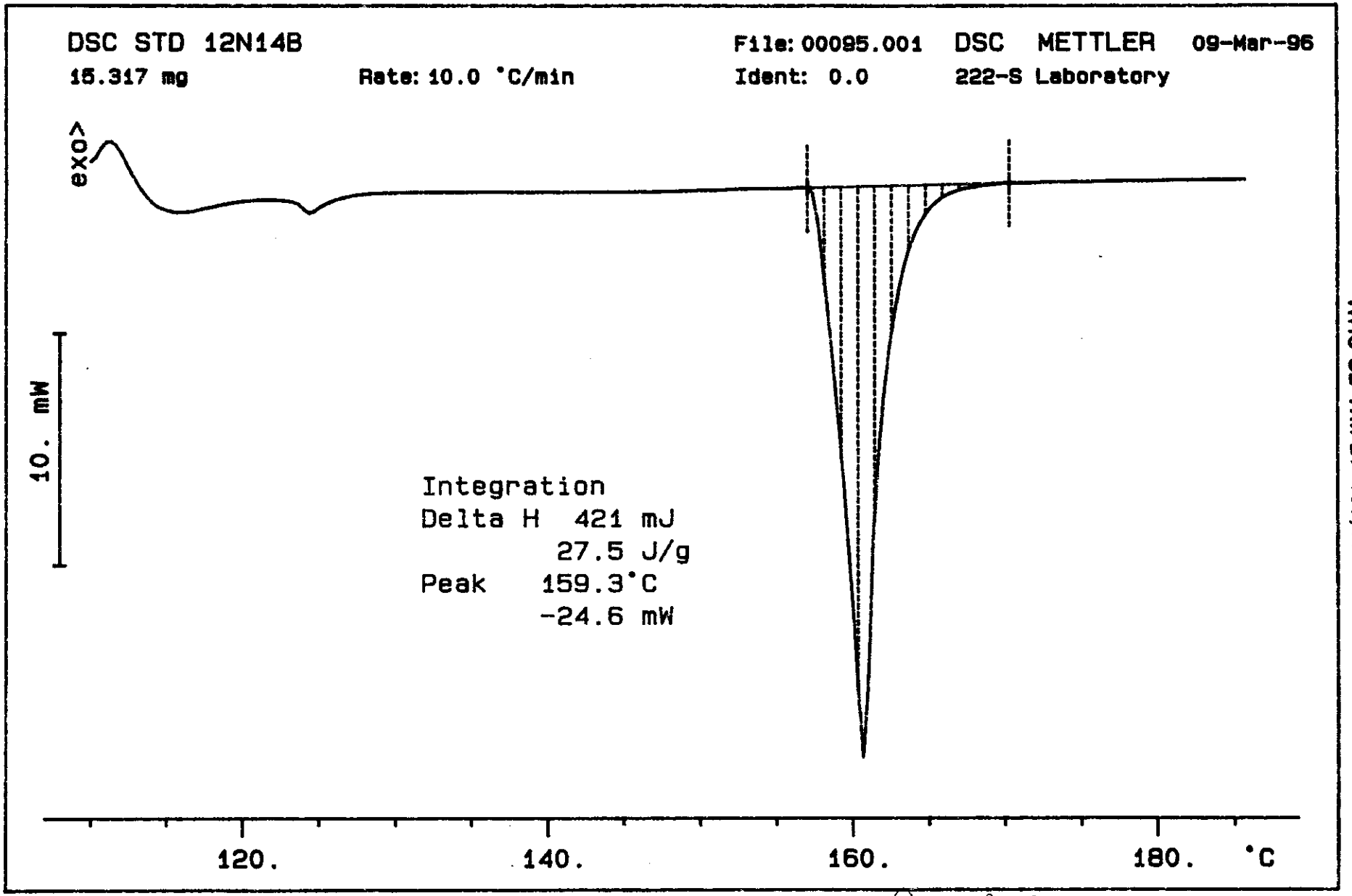
Analyst Signature **Date** 3-14-96

Verified by Blandina Valenzuela 3/18/96

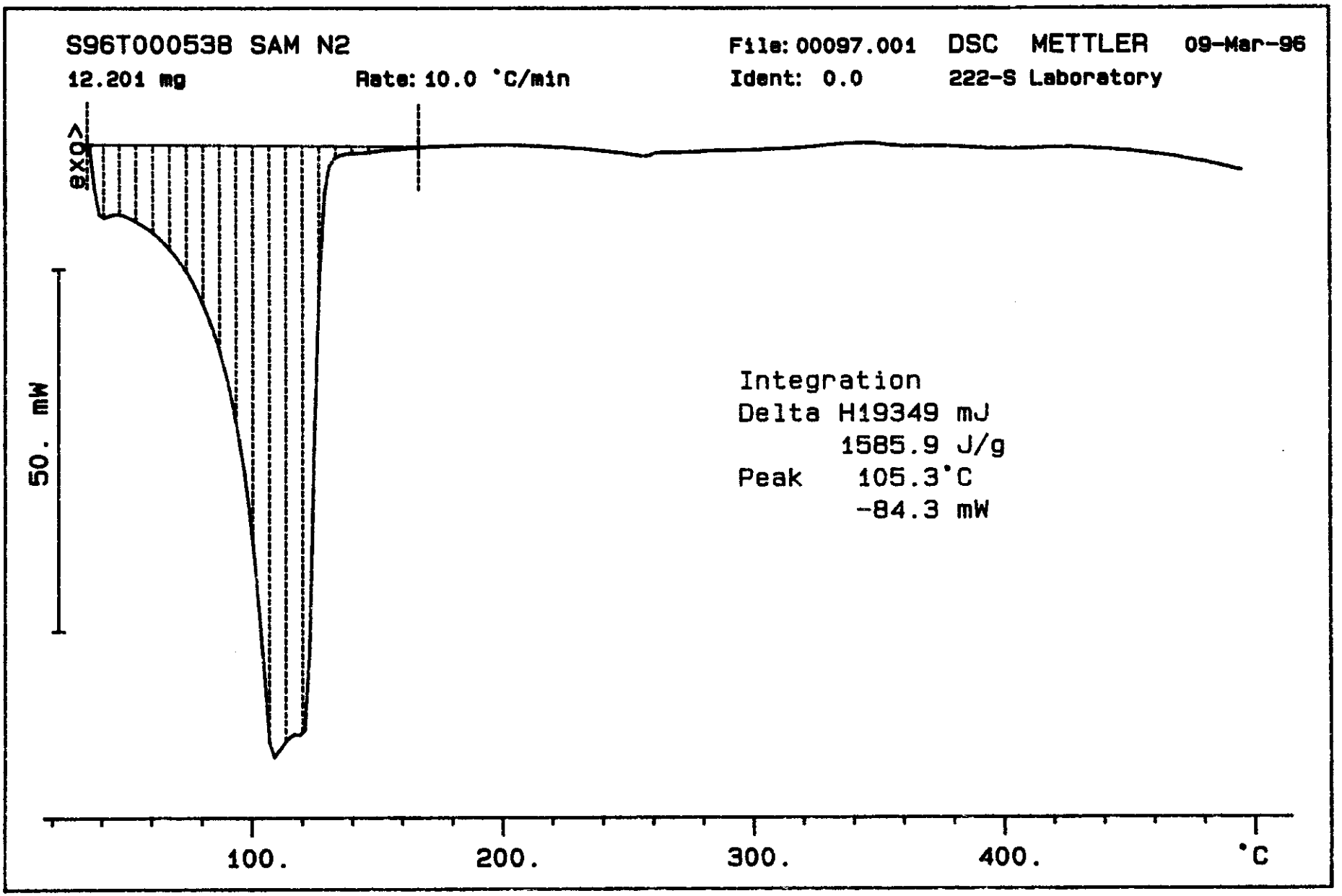
Data Entry Comments: Sample produced an endotherm at 105.3°C with a delta H of 1585.9 J/g

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 128 TO 130.



James P. Brady 3/9/96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12.201 mg
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File: 00097.001
Ident: 0.0
DSC METTLER
222-S Laboratory
09-Mar-96
<0X8
mW .05
Integration
Delta H19349 mJ
1585.9 J/g
Peak 105.3°C
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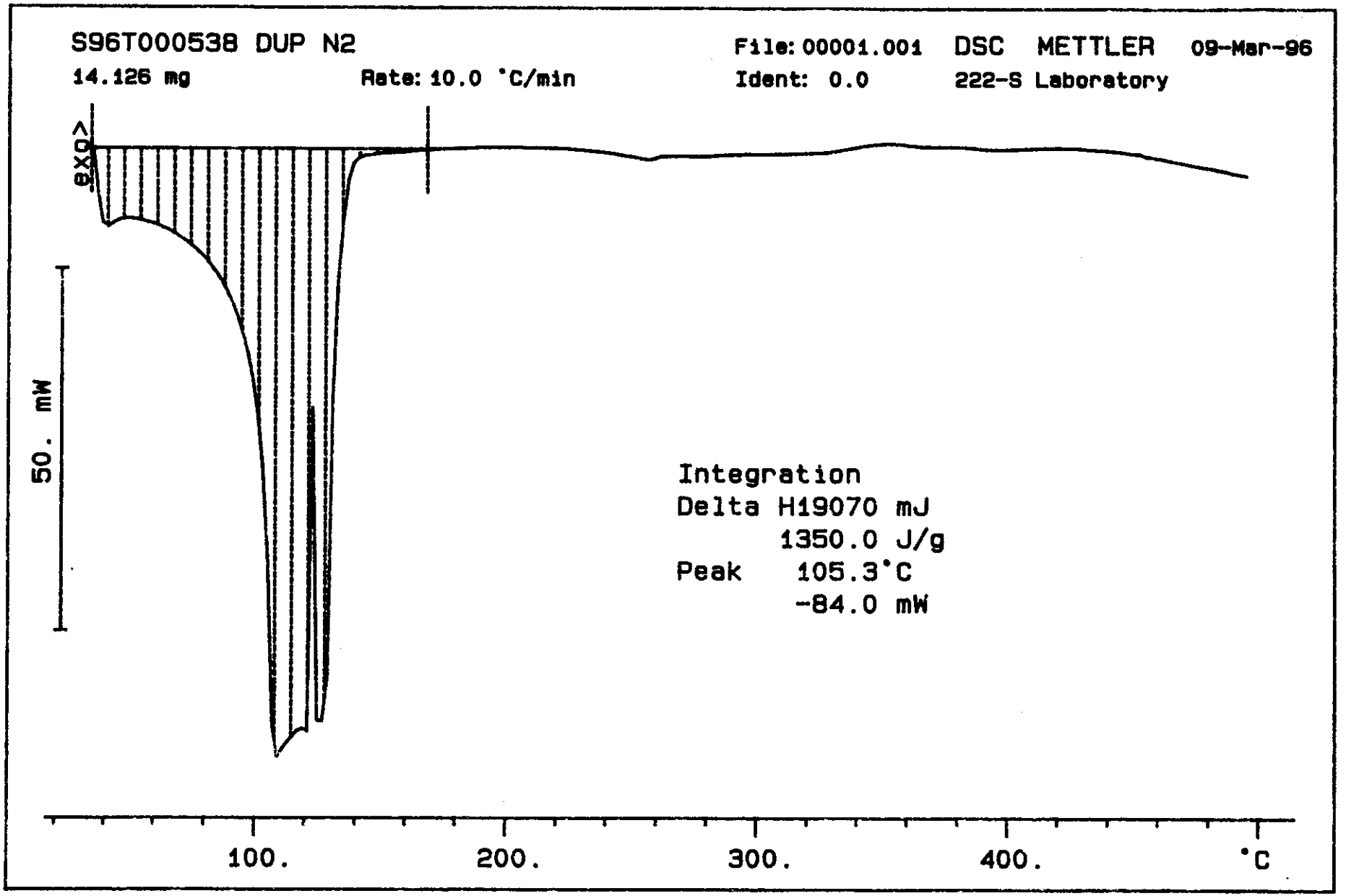
100.
200.
300.
400.
°C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14.126 mg
Rate: 10.0 °C/min
File: 00001.001
Ident: 0.0
DSC METTLER
222-S Laboratory
09-Mar-96
<EXO
50. mW
Integration
Delta H19070 mJ
1350.0 J/g
Peak 105.3°C
-84.0 mW
100.
200.
300.
400.
°C

LABCORE Data Entry Template for Worklist# 6349

Analyst: JPB **Instrument:** DSC0 1 **Book #** 12N14B

Method: LA-514-113 Rev/Mod C-1

Worklist Comment: C-106 DSC RUN UNDER N2. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R	A	-------TEST------	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD				DSC-01	LIQUID	28.45	30.8	N/A	Joules/g
96000174	C-106 GRAB	2 SAMPLE	S96T001023	0		DSC-01	LIQUID	N/A	Ø		Joules/g
96000174	C-106 GRAB	3 DUP	S96T001023	0		DSC-01	LIQUID	Ø	Ø	N/A	Joules/g

Final page for worklist # 6349

Daniel C. Bromley 3/4/96 PPB 3/10/96
Analyst Signature **Date** 3/10/96 1030

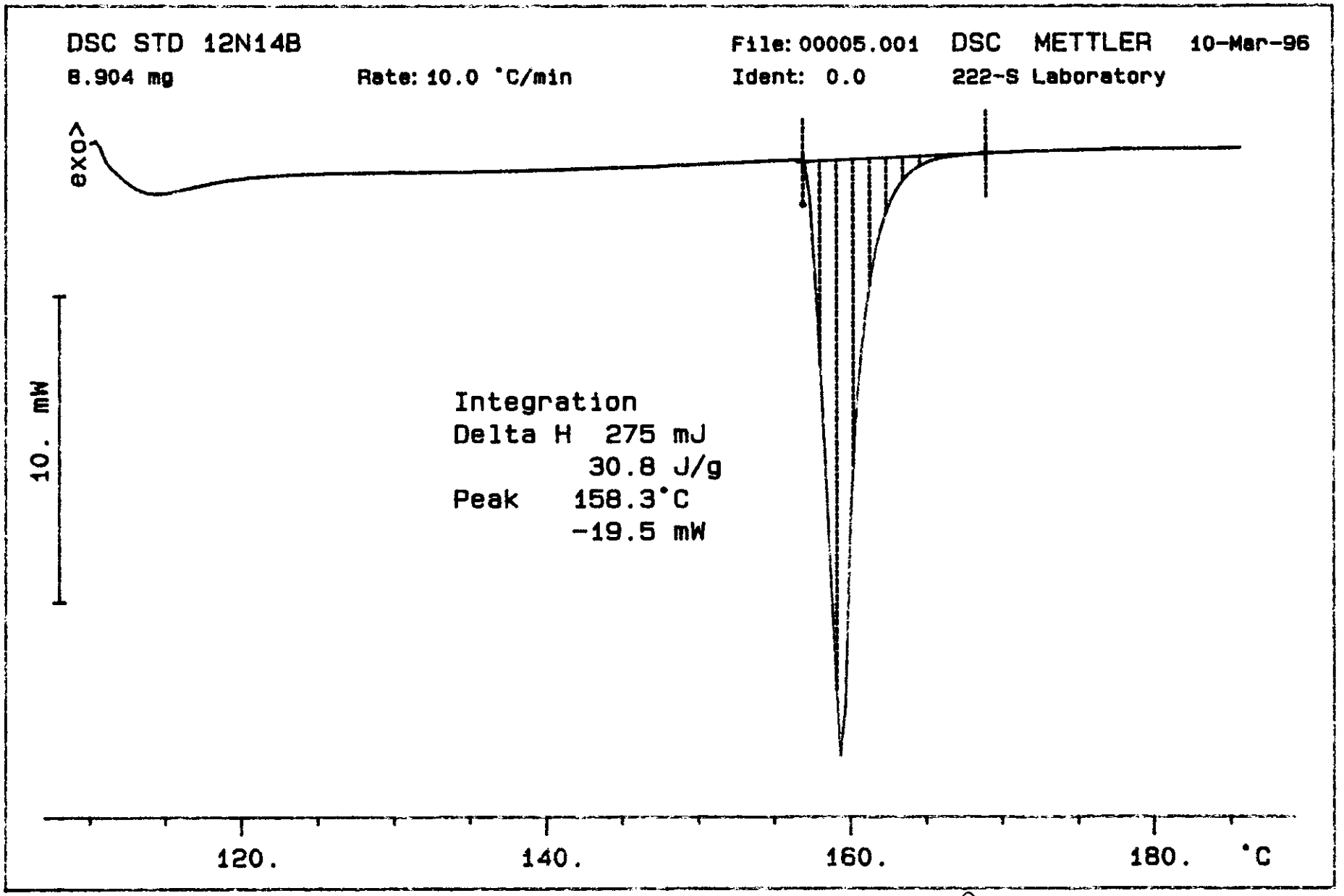
Verified by Blandina Valenzuela 3/18/96

Jay Hammel 3-14-96
Analyst Signature **Date**

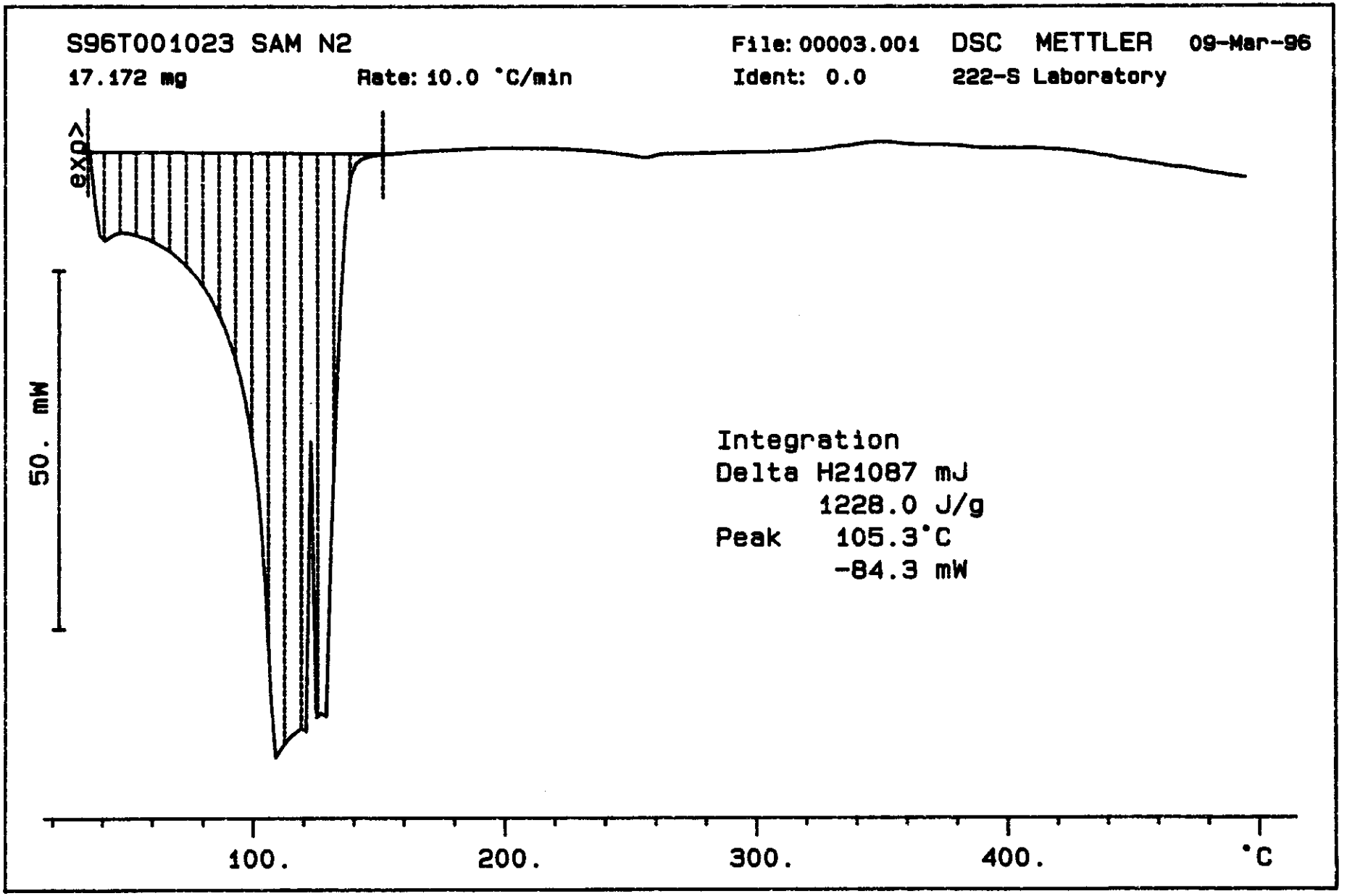
Data Entry Comments: Sample produced an endotherm at 105.3°C with a delta H of 1228.0 J/g.

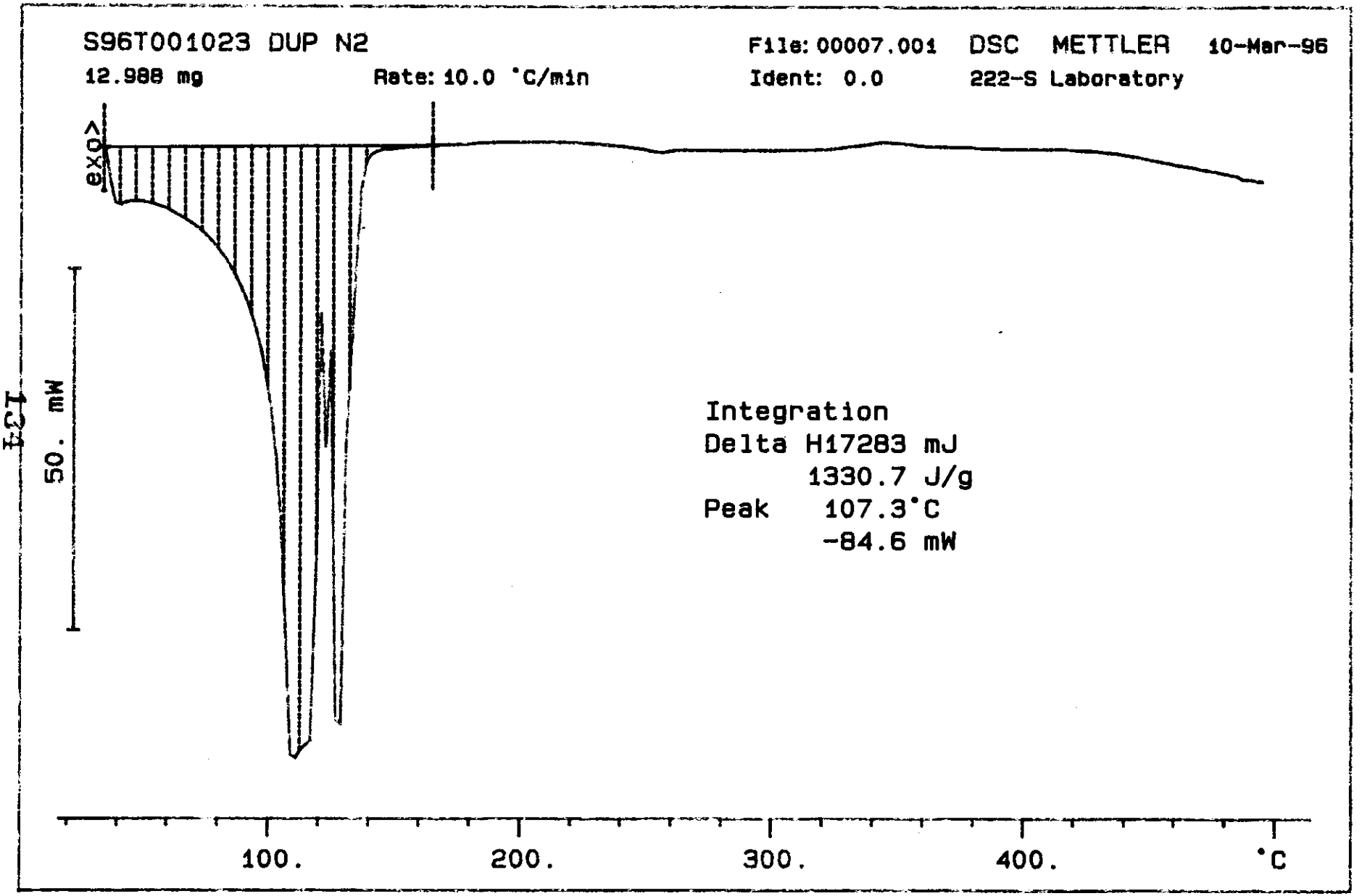
Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 132 TO 134.



Daniel P. Bromley 3/10/96


S96T001023 SAM N2
17.172 mg
Rate: 10.0 °C/min
File: 00003.001
Ident: 0.0
DSC METTLER
222-S Laboratory
09-Mar-96
<exo
50. mW
Integration
Delta H21087 mJ
1228.0 J/g
Peak 105.3°C
-84.3 mW
100.
200.
300.
400.
°C


S96T001023 DUP N2
12.988 mg
Rate: 10.0 °C/min
File: 00007.001
DSC METTLER
10-Mar-96
Ident: 0.0
222-S Laboratory
exo>
.05 mW
Integration
Delta H17283 mJ
1330.7 J/g
Peak 107.3°C
-84.6 mW
100.
200.
300.
400.
°C

LABCORE Data Entry Template for Worklist# 6847

Analyst: VLM **Instrument:** DSC0 1 **Book #** ~~75N8A~~ 12N14B HEA 4-9-96

Method: LA-514-113 Rev/Mod C-1

Worklist Comment: Please run C-106 DSCs under N2. bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R	A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD				DSC-01	LIQUID	28.45	26.9 *	N/A	Joules/g
96000082	C-106 GRAB	2 SAMPLE	S96T000855	0		DSC-01	LIQUID	N/A	Ø		Joules/g
		3 STD				DSC-01	LIQUID	28.45	31.3	N/A	Joules/g
96000082	C-106 GRAB	4 DUP	S96T000855	0		DSC-01	LIQUID	Ø	Ø	N/A	Joules/g

Final page for worklist # 6847

See attached for signatures
Analyst Signature Date

Heather Anastor 4-9-96
Analyst Signature Date

Verified by H Anastor 4-9-96

Data Entry Comments: Sample produced an endotherm at 95.3°C with a delta H of 1822.1 J/g

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

worklistrpt Version 2.1 05/15/95
03/21/96 11:14

WHC-SD-WM-DP-183, REV. 0

Page: 1

LABCORE Data Entry Template for Worklist# 6847

Analyst: VLM **Instrument:** DSC0 **Book #** ~~75N84~~ 12N14B HLG 4-9-96

Method: LA-514-113 Rev/Mod C-1

Worklist Comment: Please run C-106 DSCs under N2. bdv

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	STD				DSC-01	LIQUID			N/A	Joules/g
96000082	C-106 GRAB	2	SAMPLE	S96T000855	0		DSC-01	LIQUID	N/A			Joules/g
96000082	C-106 GRAB	3	DUP	S96T000855	0		DSC-01	LIQUID			N/A	Joules/g

Final page for worklist # 6847

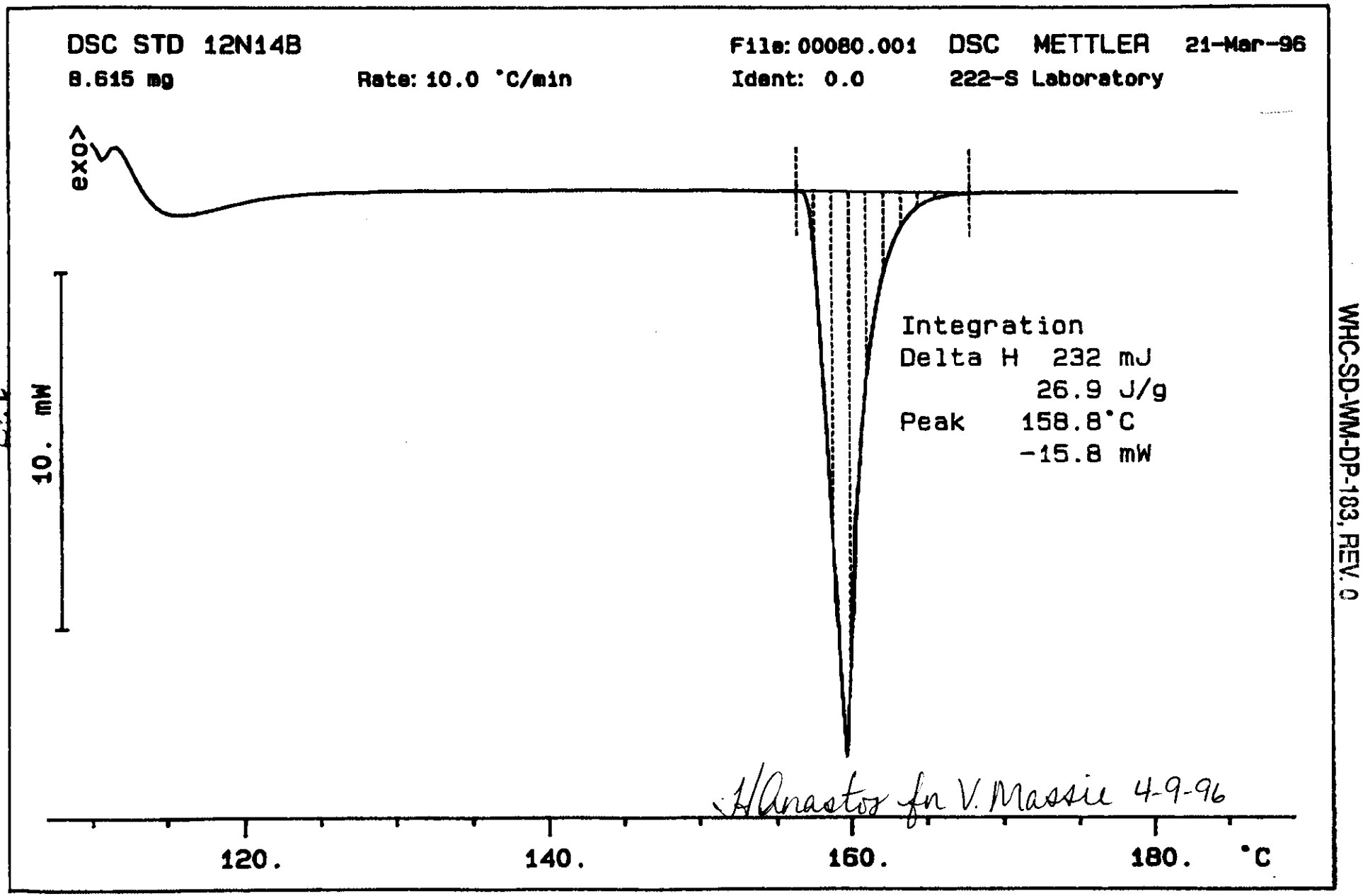
Analyst Signature Date

Valerie L Massie 03-22-96
Analyst Signature Date

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

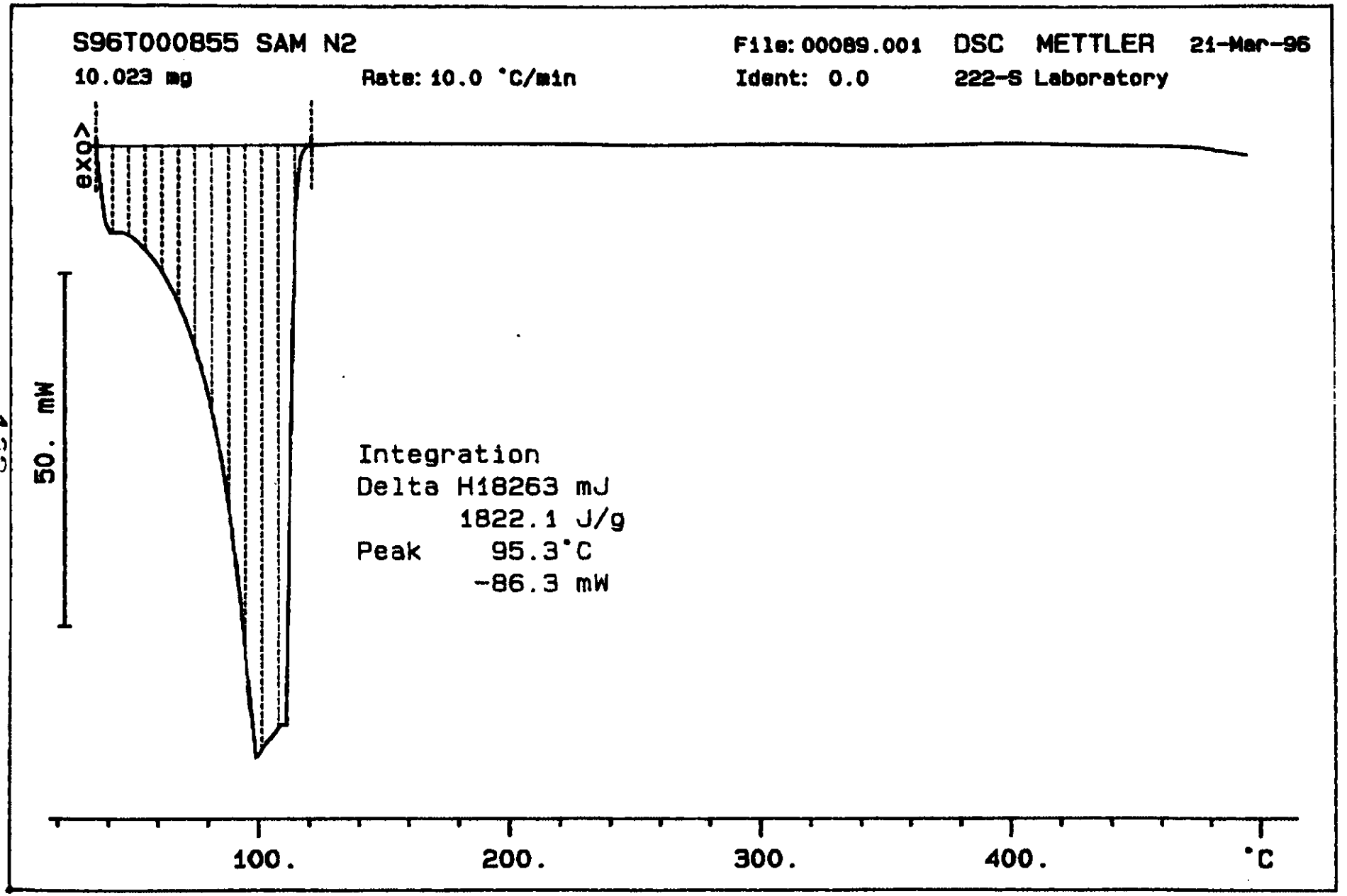
SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 137 TO 140.



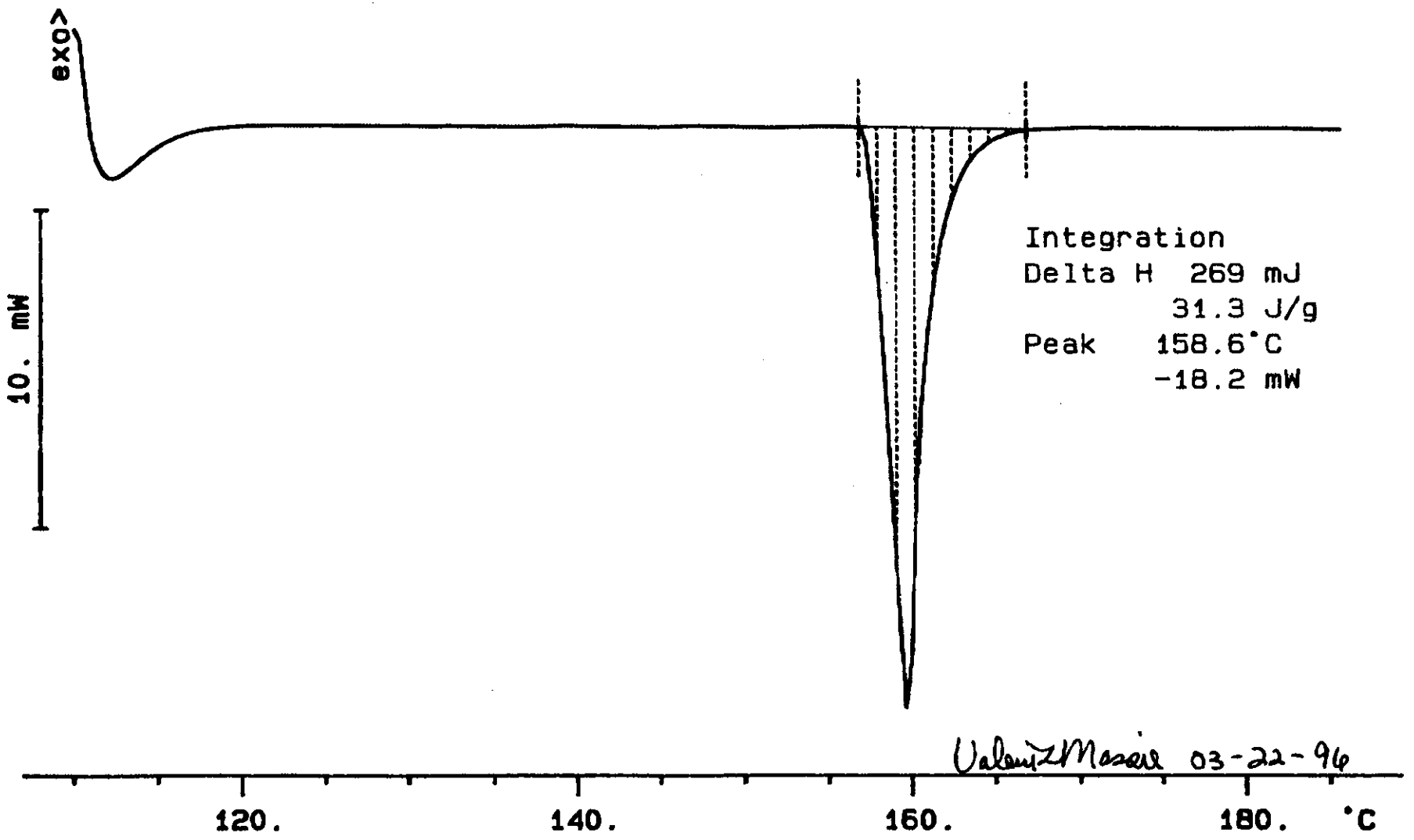
H Anastos for V. Massie 4-9-96

137

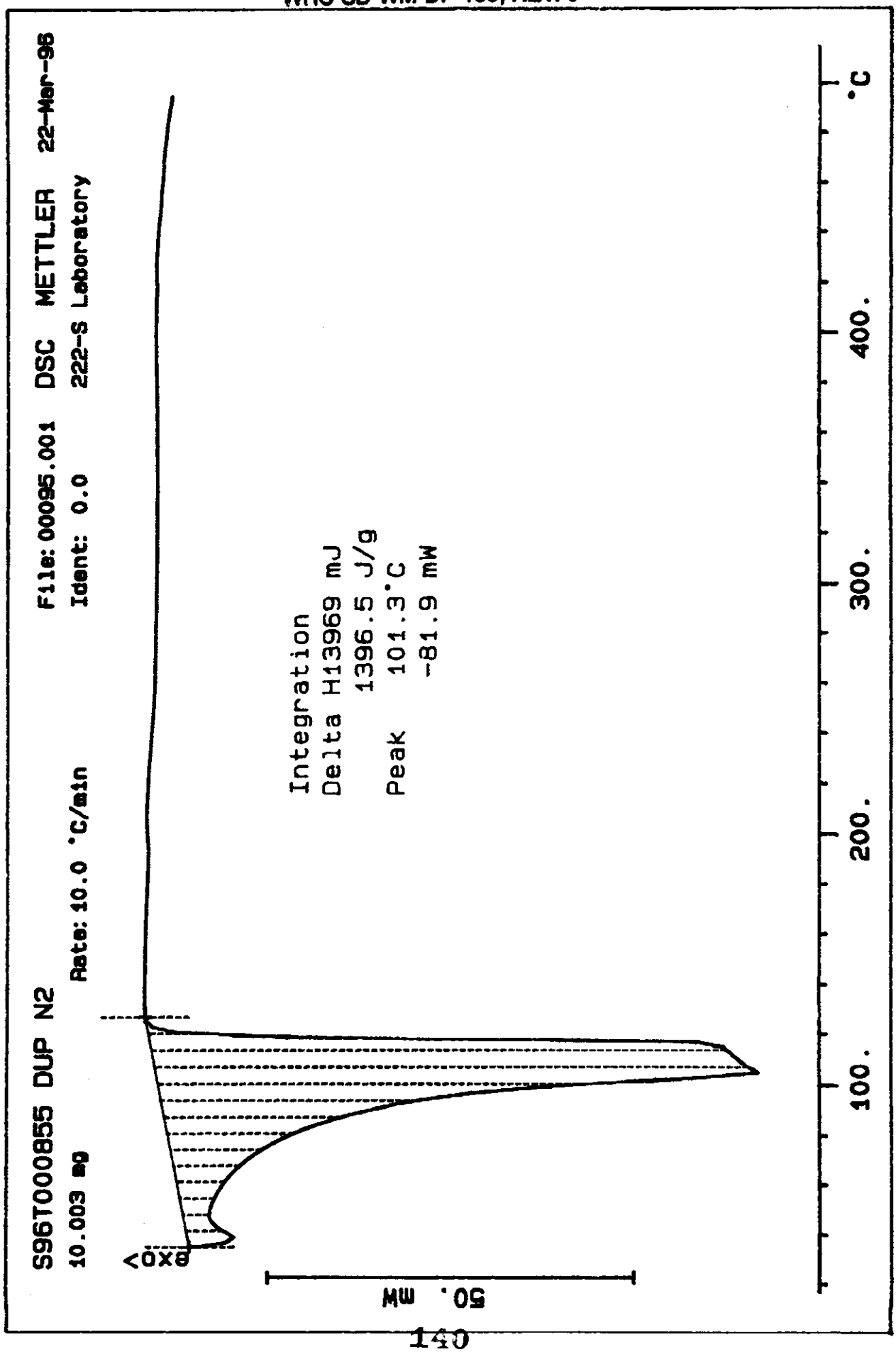
WHC-SD-WM-DP-183, REV. 0


S96T000855 SAM N2
10.023 mg
Rate: 10.0 °C/min
File: 00089.001
Ident: 0.0
DSC METTLER
222-S Laboratory
21-Mar-96
exo>
50. mW
Integration
Delta H18263 mJ
1822.1 J/g
Peak 95.3°C
-86.3 mW
100.
200.
300.
400.
°C

DSC STD 12N14B
8.615 mg
Rate: 10.0 °C/min
File: 00094.001
Ident: 0.0
DSC METTLER 22-Mar-96
222-S Laboratory



Valerie Masse 03-22-96



04/05/96 15:10 222 ANALYTICAL LAB 013

LABCORE Data Entry Template for Worklist# 7135

Analyst: RPM **Instrument:** DSC01 **Book #** 12N/4B

Method: LA-514-113 Rev/Mod C-1

Worklist Comment: C-106 FOR DSC01 PLEASE RUN UNDER N2 RUSH RUSH RTS!

GROUP	PROJECT	S TYPE	SAMPLE#	R	A	-------TEST------	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD				DSC-01	LIQUID	28.45	32.0 *	N/A	Joules/g
96000082	C-106 GRAB	2 SAMPLE	S96T001548	0		DSC-01	LIQUID	N/A	Ø		Joules/g
96000082	C-106 GRAB	3 DUP	S96T001548	0		DSC-01	LIQUID	Ø	Ø	N/A	Joules/g

Final page for worklist # 7135

RPM 3/29/96
Analyst Signature **Date**

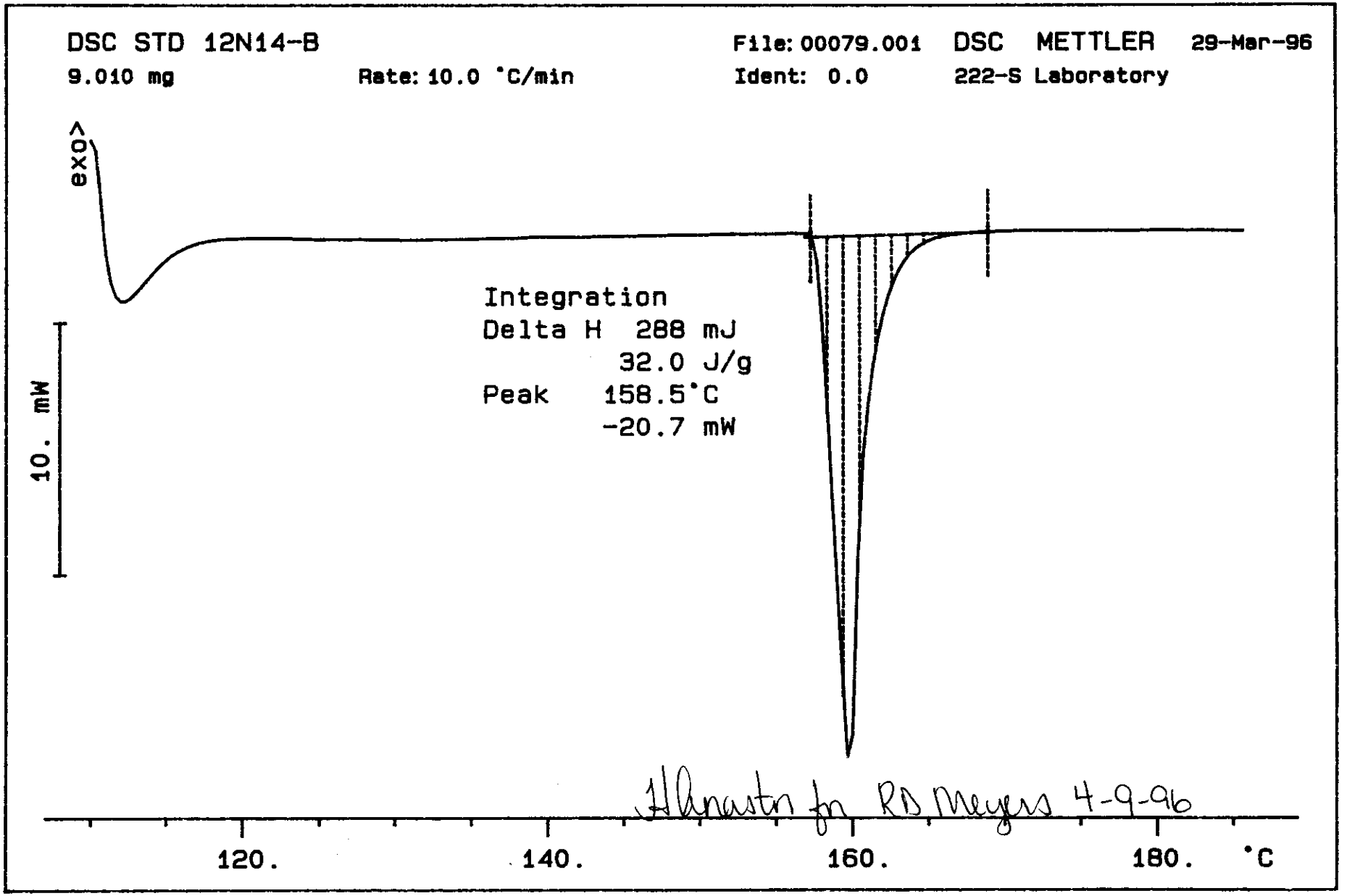
TE Wing 4/4/96
Analyst Signature **Date**

Verified by HAnastos 4-9-96

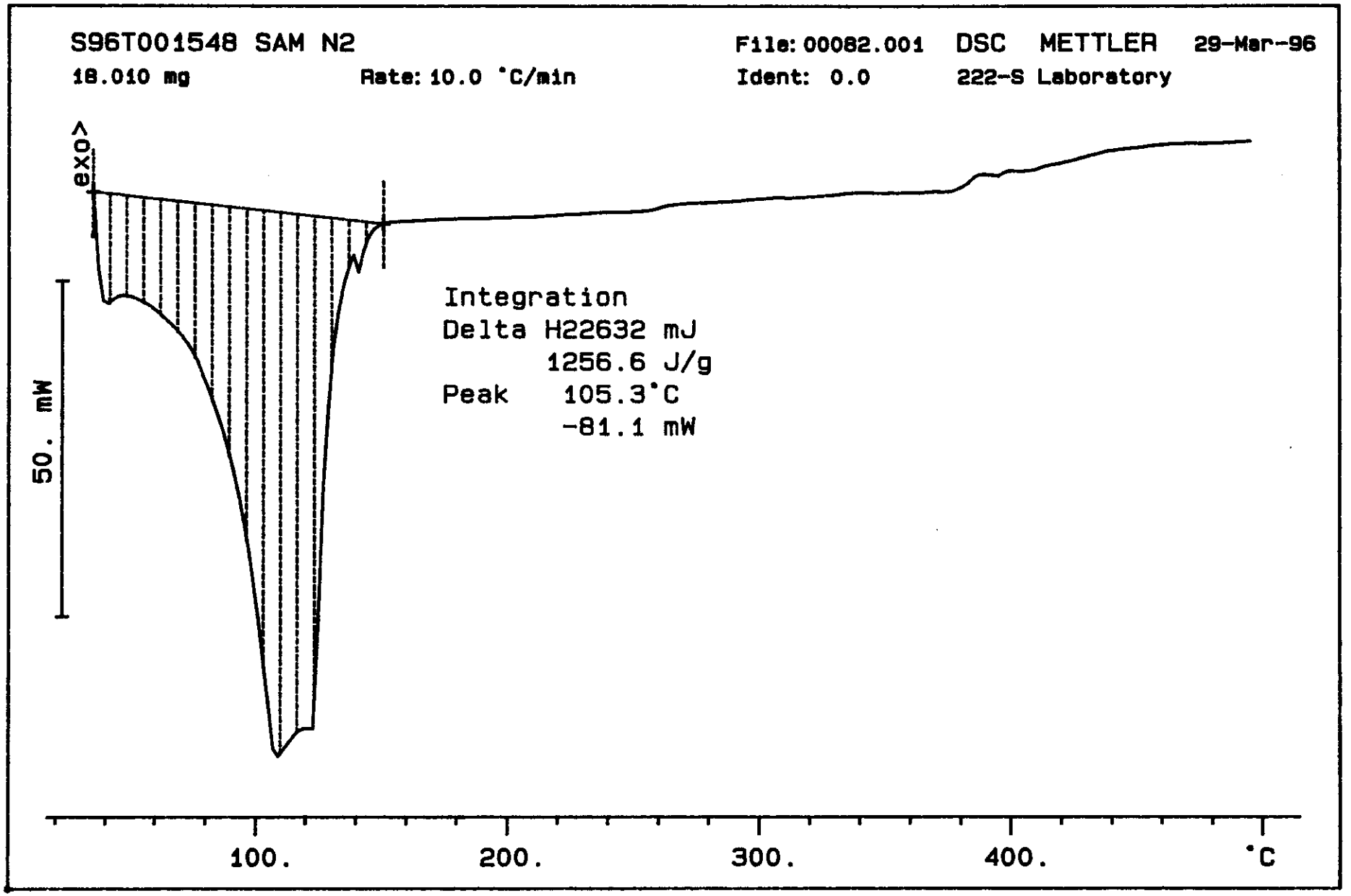
Data Entry Comments: S96T001548 baseline shifted slightly at approximately 340°C. The shift may be due to a change in heat capacity/thermal properties of the sample. The endotherm suggests there is something other than water in the sample due to the two peaks at approximately 120°C. The duplicate does not show this same baseline shift, however the endotherm does suggest the sample is different constituents,

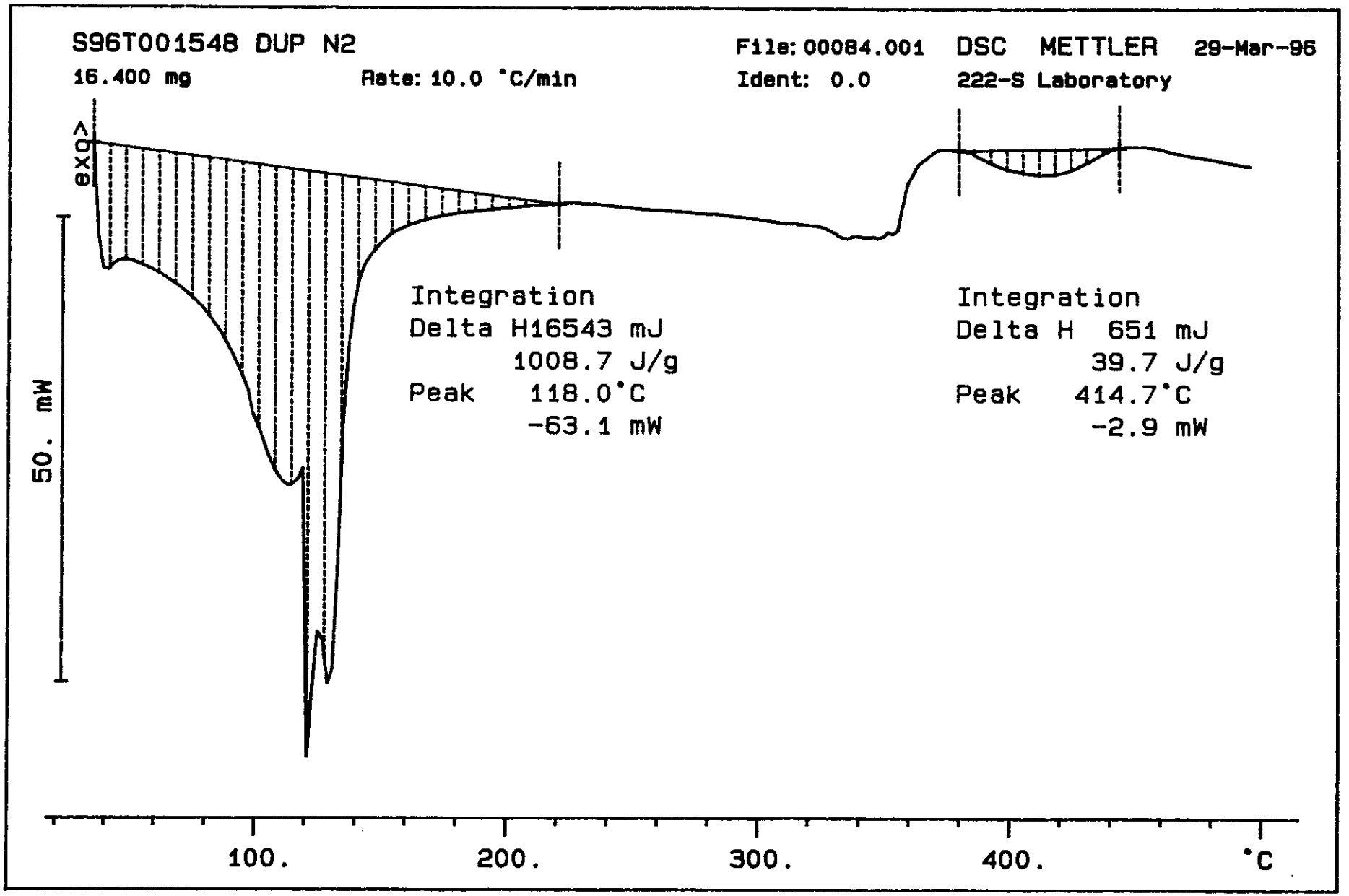
Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 142 TO 144.



H Anastn for RD Meyers 4-9-96


S96T001548 SAM N2
18.010 mg
Rate: 10.0 °C/min
File: 00082.001
Ident: 0.0
DSC METTLER
222-S Laboratory
29-Mar-96
<exo
mW .05
Integration
Delta H22632 mJ
1256.6 J/g
Peak 105.3°C
-81.1 mW
100.
200.
300.
400.
°C


S96T001548 DUP N2
16.400 mg
Rate: 10.0 °C/min
File: 00084.001
Ident: 0.0
DSC METTLER
222-S Laboratory
29-Mar-96
exo>
50. mW
Integration
Delta H16543 mJ
1008.7 J/g
Peak 118.0°C
-63.1 mW
Integration
Delta H 651 mJ
39.7 J/g
Peak 414.7°C
-2.9 mW
100.
200.
300.
400.
°C

LABCORE Data Entry Template for Worklist# 7207

Analyst: SMF **Instrument:** DSC0 3 **Book #** 12N14B

Method: LA-514-114 Rev/Mod C-1

Worklist Comment: C-106 FOR DSC PLEASE RUN UNDER N2

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	STD				DSC-03	SOLID	28.45	27.26	N/A	Joules/g
96000082	C-106 GRAB	2	SAMPLE	S96T000543	0		DSC-03	SOLID	N/A	Ø		Joules/g
96000082	C-106 GRAB	3	DUP	S96T000543	0		DSC-03	SOLID	Ø	Ø	N/A	Joules/g

Final page for worklist # 7207

See attached for signatures
Analyst Signature **Date** 4-9-96 BDY

[signature] 4-9-96
Analyst Signature **Date**

Reviewed 4/15/96 [signature]

Data Entry Comments: Sample produced two endotherms one at 115.88°C with a delta H of 942.07J/g, and second at 323.53°C with a delta H of 48.95J/g

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

LABCORE Data Entry Template for Worklist# 7207

Analyst: SMF **Instrument:** DSC0 _____ **Book #** 12N14B

Method: LA-514-113 Rev/Mod _____

Worklist Comment: C-106 FOR DSC PLEASE RUN UNDER N2

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	STD				DSC-01	SOLID			N/A	Joules/g
96000082	C-106 GRAB	2	SAMPLE	S96T000543	0		DSC-01	SOLID	N/A			Joules/g
96000082	C-106 GRAB	3	DUP	S96T000543	0		DSC-01	SOLID			N/A	Joules/g

Final page for worklist # 7207

Susie M. Fulton 4-7-96

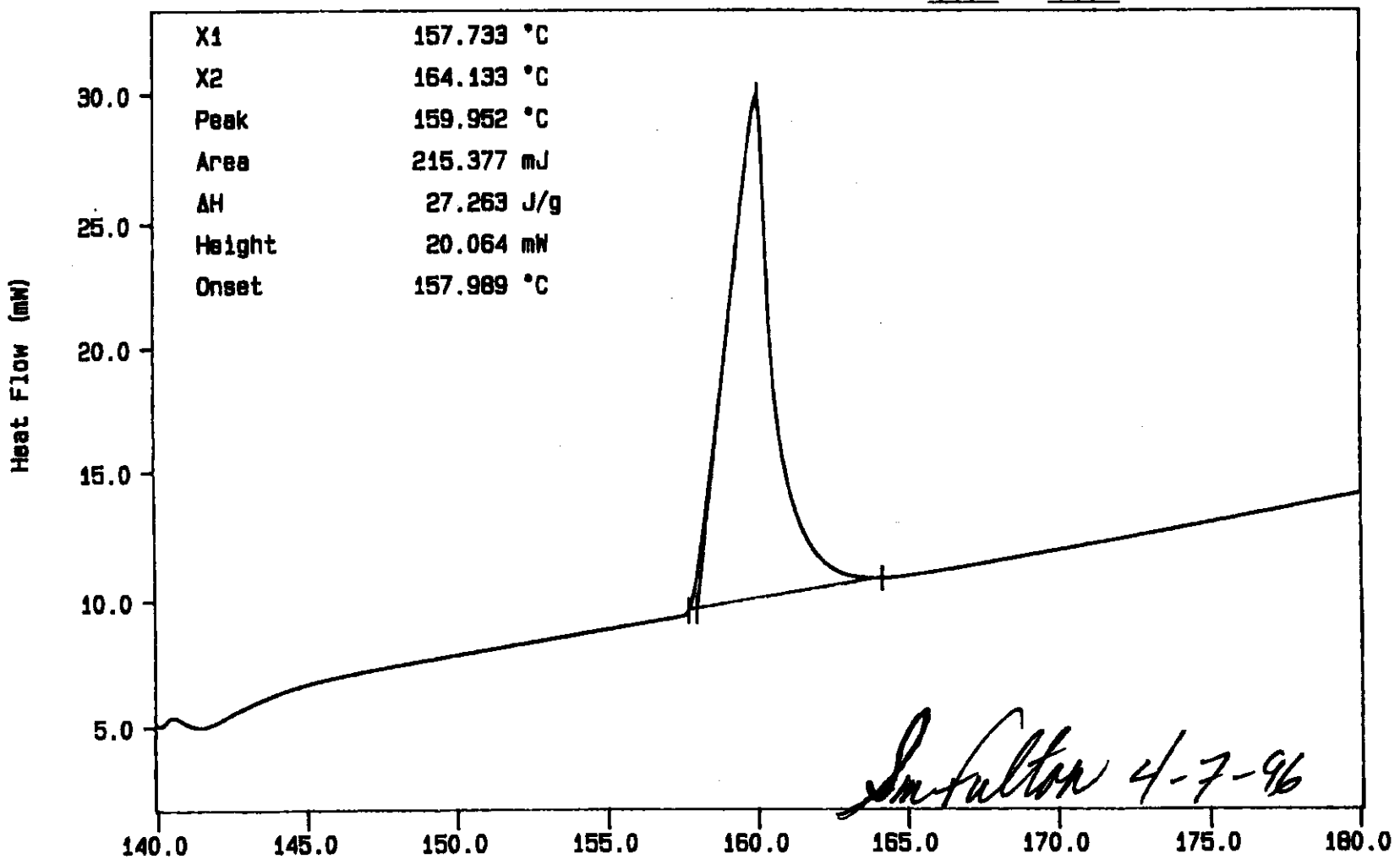
Analyst Signature **Date** **Analyst Signature** **Date**

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

Curve 1: DSC
File info: IND040701 Sun Apr 7 06:24:53 1996
Sample Weight: 7.900 mg
12N14-B INDIUM AT 10C\MIN

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 147 TO 149 .

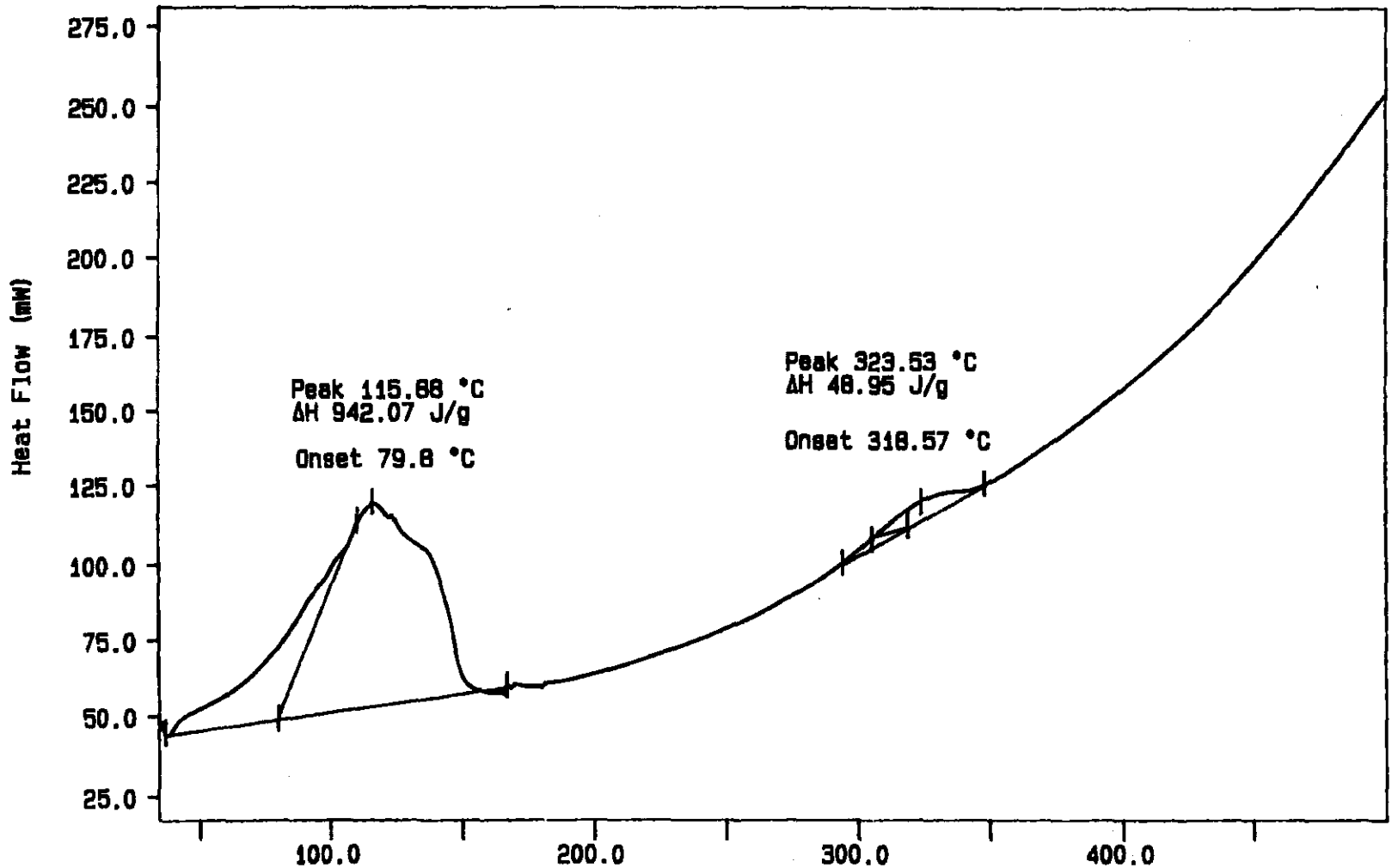


N2, EXOTHERM DOWN
TEMP1: 140.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 180.0 C

SM FULTON
PERKIN-ELMER
7 Series Thermal Analysis System
Sun Apr 7 13:50:30 1996

04/09/96 09:40 ☎509 372 2929 WESTINGHOUSE 022

Curve 1: DSC
File info: SAM040705 Sun Apr 7 14:53:25 1996
Sample Weight: 22.820 mg
S96T000543

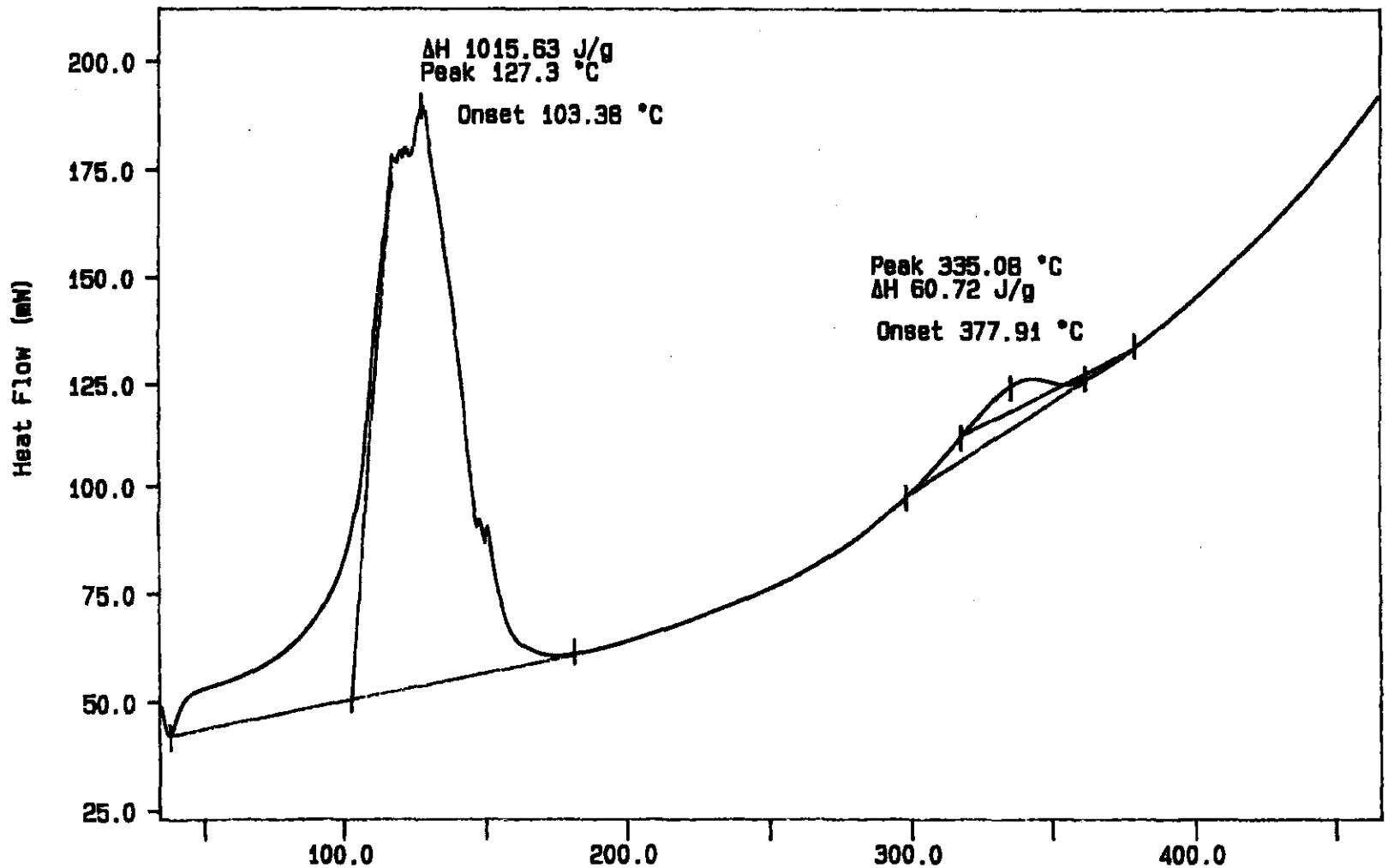


exotherm down, N2 purge gas
TEMP1: 35.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 500.0 C

SM FULTON
PERKIN-ELMER
7 Series Thermal Analysis System
Sun Apr 7 15:41:17 1996

04/09/96 09:41 ☎509 372 2929 WESTINGHOUSE 023

Curve 1: DSC
File info: SAM040706 Sun Apr 7 16:27:40 1996
Sample Weight: 32.130 mg
S96T000543 DUP



exotherm down, N2 purge gas
TEMP1: 35.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 600.0 C

SM FULTON
PERKIN-ELMER
7 Series Thermal Analysis System
Sun Apr 7 16:32:44 1996

LABCORE Data Entry Template for Worklist# 7388

Analyst: SMF **Instrument:** DSC0 1 **Book #** 12N14B

Method: LA-514-113 Rev/Mod C-1

Worklist Comment: C-106 RUN UNDER N2, SAMPLE IS DRY AND FLIGHTY,HIGH ALPHA.RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R	A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD				DSC-01	SOLID	28.45	32.3	N/A	Joules/g
96000082	C-106 GRAB	2 SAMPLE	S96T000542	0		DSC-01	SOLID	N/A	112		Joules/g
96000082	C-106 GRAB	3 DUP	S96T000542	0		DSC-01	SOLID	112	~~89~~ 89.1 4-8-96 GOV	N/A	Joules/g
96000082	C-106 GRAB	4 SAMPLE	S96T000551	0		DSC-01	SOLID	N/A	286.9		Joules/g
96000082	C-106 GRAB	5 DUP	S96T000551	0		DSC-01	SOLID	286.9	279.9	N/A	Joules/g

Final page for worklist # 7388

Susie M. Dalton 4-7-96
Analyst Signature **Date**

[signature] 4-9-96
Analyst Signature **Date**

Reviewed 4/15/96 [signature]

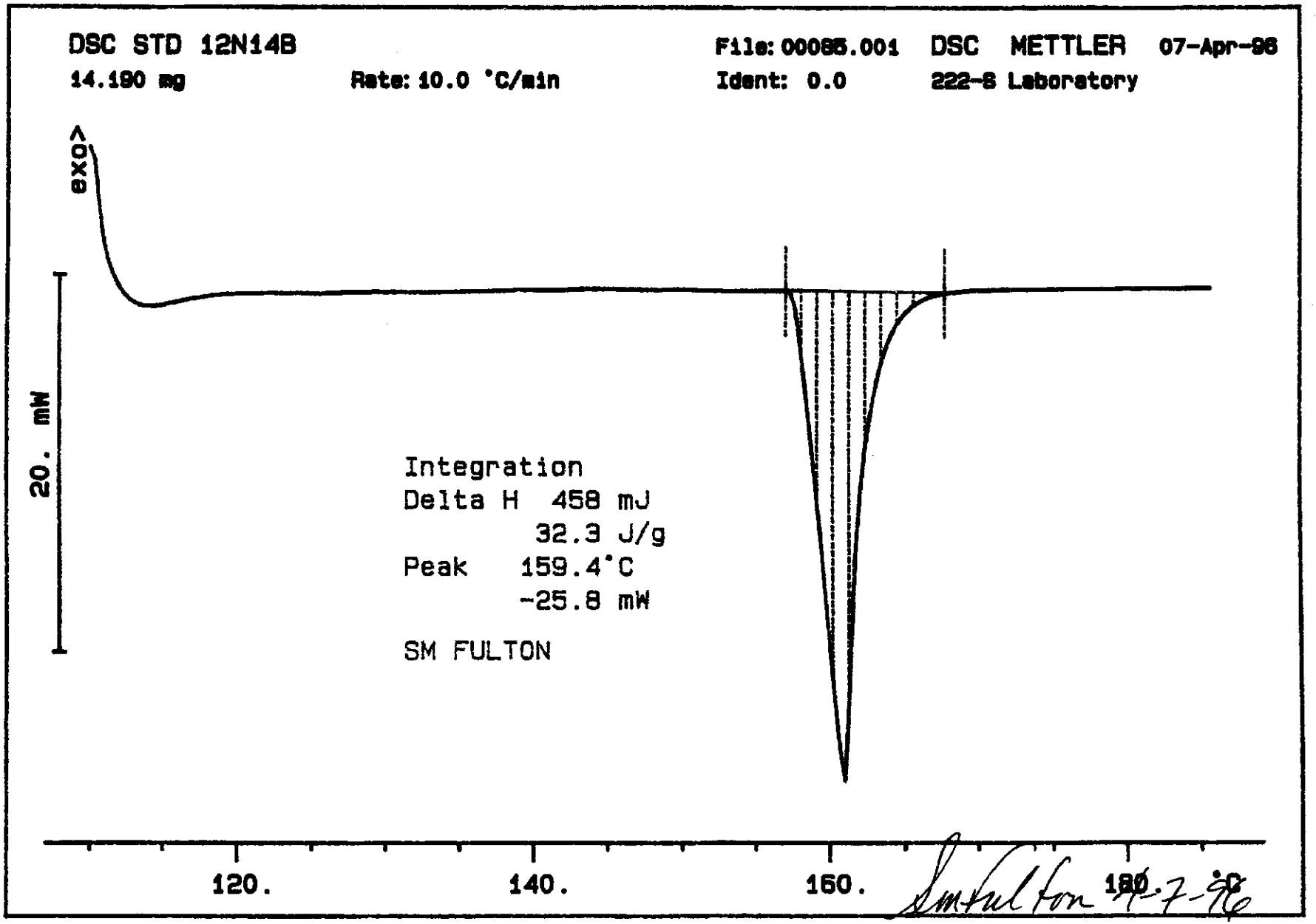
S96T000542 produced two endotherms, one at 111.9°C with a delta H of 381.6 J/g and second at 320.2°C with a delta H of 39.3 J/g. The results given are the sum of two ~~weight endo~~ 4/8/96 GOV exotherms.
S96T000551 produced one endotherm~~s~~, ~~one~~ 4/8/96 GOV 4-8-96 GOV at 66.5°C with a delta H of 429.3 J/g.

Data Entry Comments:

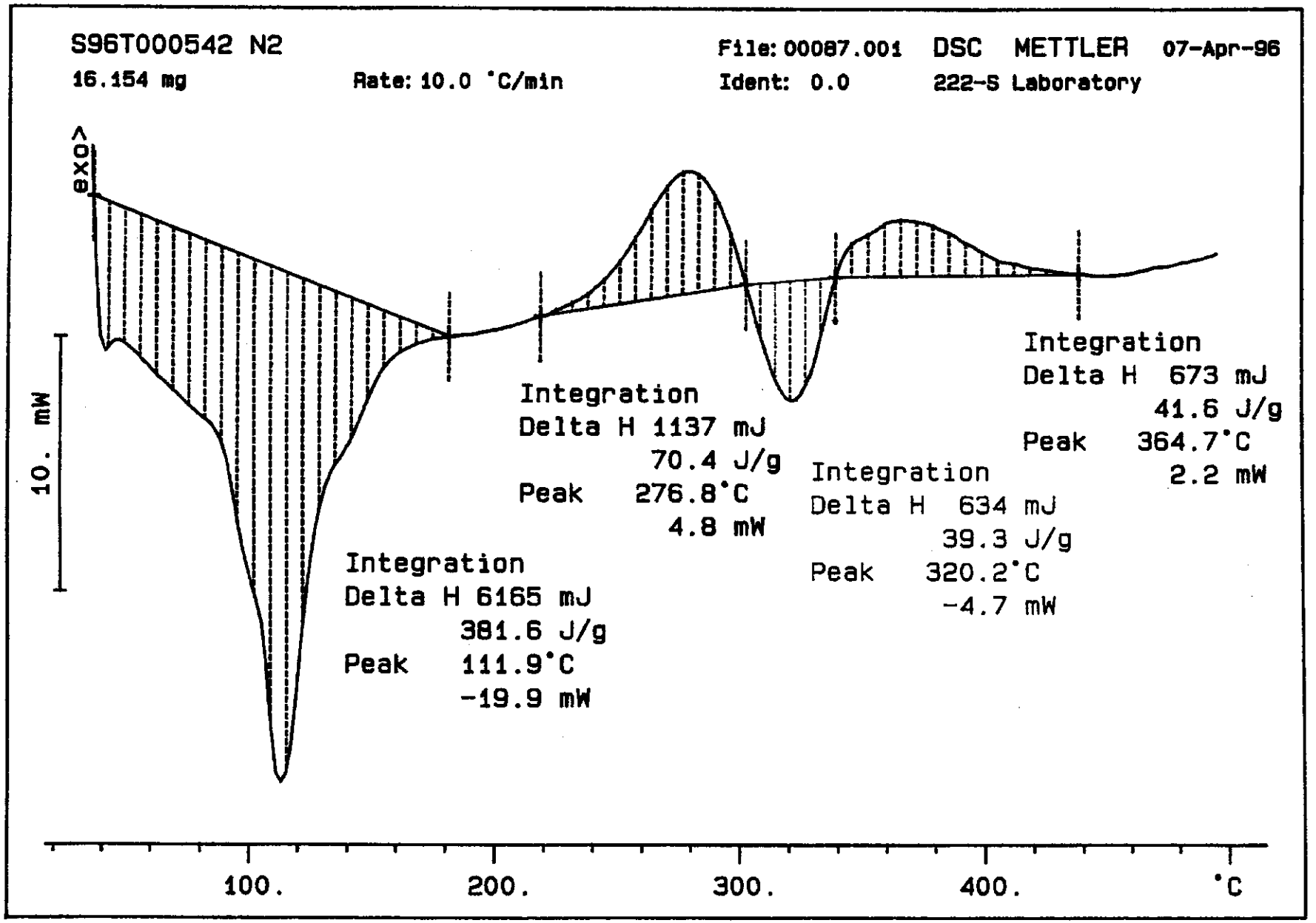
~~S96T000560 SMM - Dip on graph caused by hard being bumped SMF~~ SMF 4-7-96 SMF 4-7-96

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

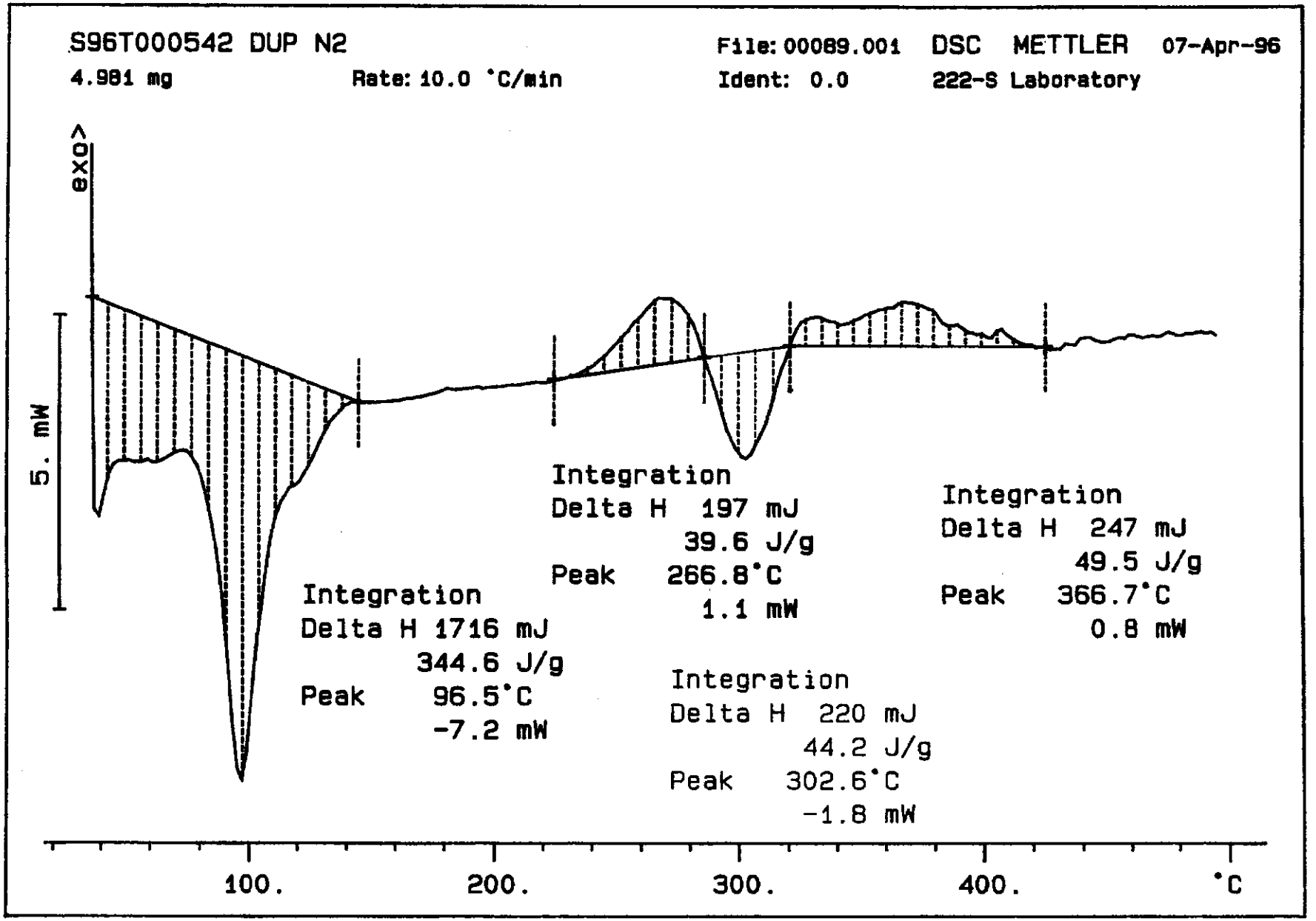
SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 151 TO 155.

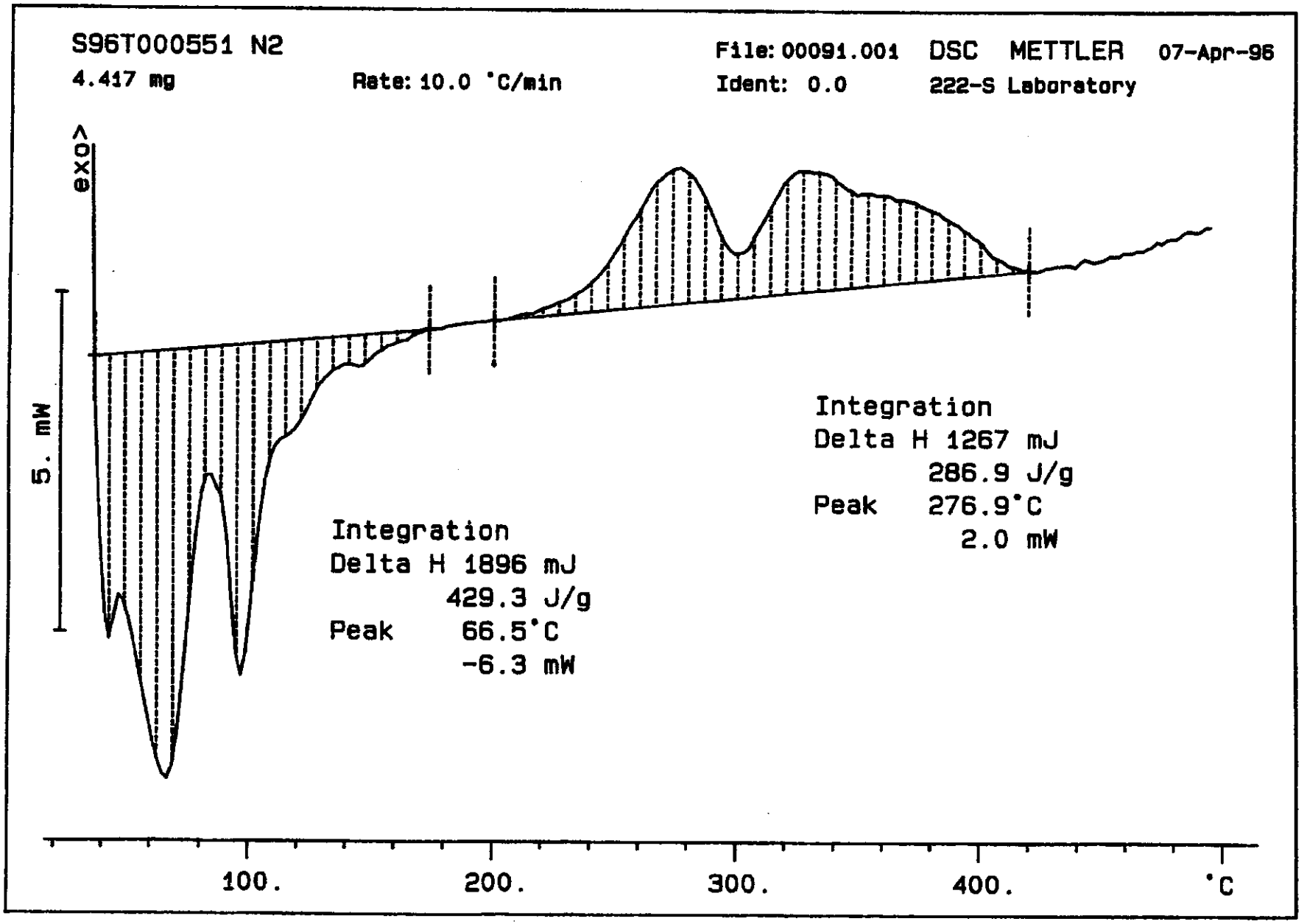


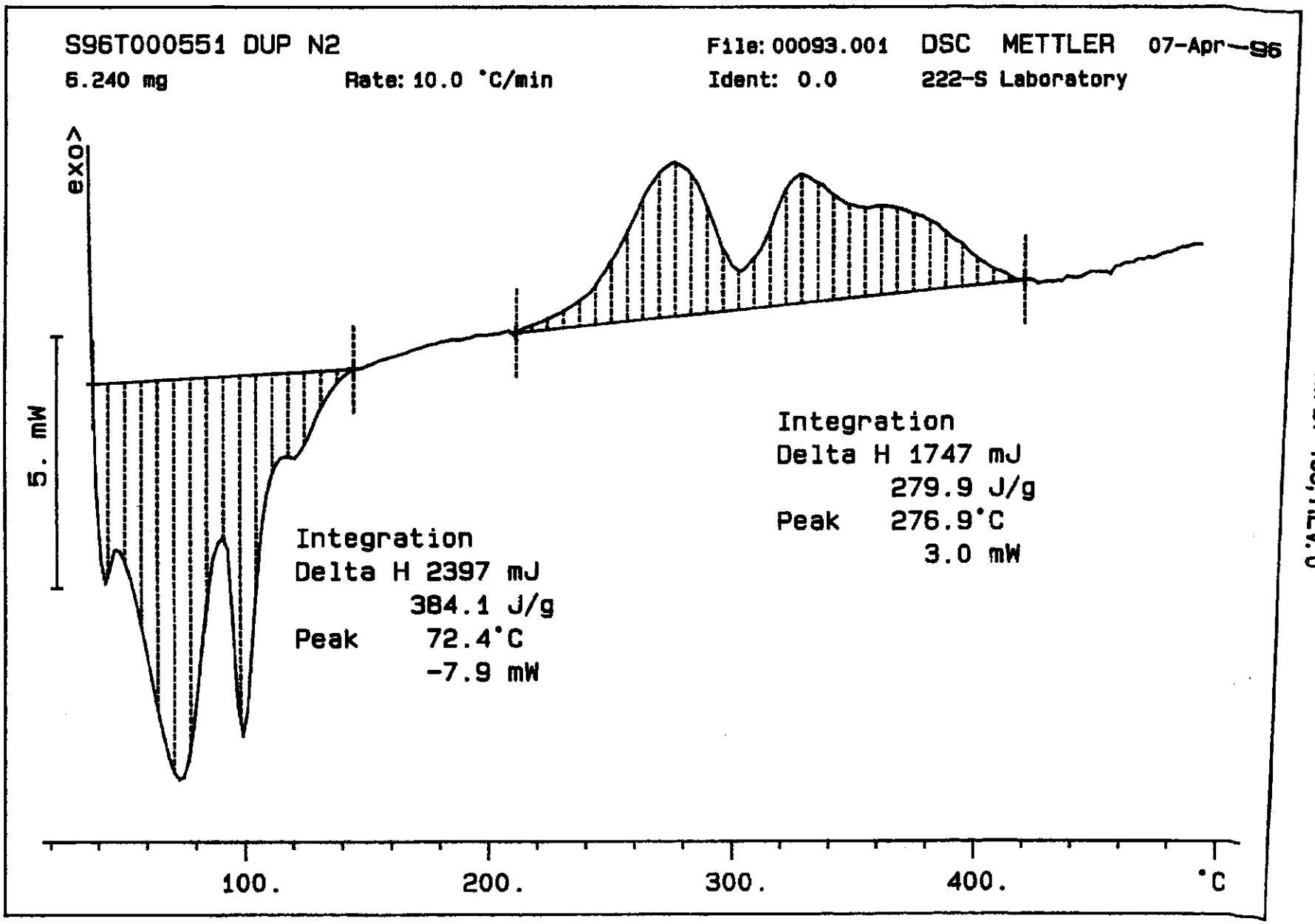
SMFulton 4-7-96



04/09/96 07:50 ☎509 372 2929 WESTINGHOUSE →→→ NO-924 2004 010


S96T000542 DUP N2
4.981 mg
Rate: 10.0 °C/min
File: 00089.001
Ident: 0.0
DSC METTLER 07-Apr-96
222-S Laboratory
exo>
5. mW
Integration
Delta H 1716 mJ
344.6 J/g
Peak 96.5°C
-7.2 mW
Integration
Delta H 197 mJ
39.6 J/g
Peak 266.8°C
1.1 mW
Integration
Delta H 220 mJ
44.2 J/g
Peak 302.6°C
-1.8 mW
Integration
Delta H 247 mJ
49.5 J/g
Peak 366.7°C
0.8 mW
100.
200.
300.
400.
°C


S96T000551 N2
4.417 mg
Rate: 10.0 °C/min
File: 00091.001
Ident: 0.0
DSC METTLER
222-S Laboratory
07-Apr-96
exo>
5. mW
Integration
Delta H 1896 mJ
429.3 J/g
Peak 66.5°C
-6.3 mW
Integration
Delta H 1267 mJ
286.9 J/g
Peak 276.9°C
2.0 mW
100.
200.
300.
400.
°C


S96T000551 DUP N2
File: 00093.001
DSC METTLER
07-Apr-96
6.240 mg
Rate: 10.0 °C/min
Ident: 0.0
222-S Laboratory
exo>
5. mW
Integration
Delta H 2397 mJ
384.1 J/g
Peak 72.4°C
-7.9 mW
Integration
Delta H 1747 mJ
279.9 J/g
Peak 276.9°C
3.0 mW
100.
200.
300.
400.
°C

LABCORE Data Entry Template for Worklist# 7389

Analyst: SMF **Instrument:** DSC0 3 **Book #** 12N14B

Method: LA-514-114 Rev/Mod C-1

Worklist Comment: C-106 RUN UNDER N2,SAMPLE IS DRY AND FLIGHTY,HIGH ALPHA. RCJ

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	STD				DSC-03	SOLID	28.45	28.01	N/A	Joules/g
96000082	C-106 GRAB	2	SAMPLE	S96T000558	0		DSC-03	SOLID	N/A	Ø		Joules/g
96000082	C-106 GRAB	3	DUP	S96T000558	0		DSC-03	SOLID	Ø	Ø	N/A	Joules/g
96000082	C-106 GRAB	4	SAMPLE	S96T000560	0		DSC-03	SOLID	N/A	Ø		Joules/g
96000082	C-106 GRAB	5	DUP	S96T000560	0		DSC-03	SOLID	Ø	Ø	N/A	Joules/g

Final page for worklist # 7389

See attached for signatures
Analyst Signature **Date** 4-9-96

Analyst Signature **Date** 4-9-96

Verified by Blandina Valenzuela 4-11-96

Data Entry Comments: Sample S96T000558 produced ~~an~~ 4-9-96 an endotherm at 108.2°C with a delta H of 513.6 J/g.
S96T000560 produced an endotherm at 111.2°C with a delta H of 351.4 J/g.

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

LABCORE Data Entry Template for Worklist# 7389

Analyst: SMF **Instrument:** DSC0 _____ **Book #** 12N143

Method: LA-514-113 Rev/Mod _____

Worklist Comment: C-106 RUN UNDER N2,SAMPLE IS DRY AND FLIGHTY,HIGH ALPHA. RCJ

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	STD				DSC-01	SOLID			N/A	Joules/g
96000082	C-106 GRAB	2	SAMPLE	S96T000558	0		DSC-01	SOLID	N/A			Joules/g
96000082	C-106 GRAB	3	DUP	S96T000558	0		DSC-01	SOLID			N/A	Joules/g
96000082	C-106 GRAB	4	SAMPLE	S96T000560	0		DSC-01	SOLID	N/A			Joules/g
96000082	C-106 GRAB	5	DUP	S96T000560	0		DSC-01	SOLID			N/A	Joules/g

Final page for worklist # 7389

S M Fulton 4-5-96

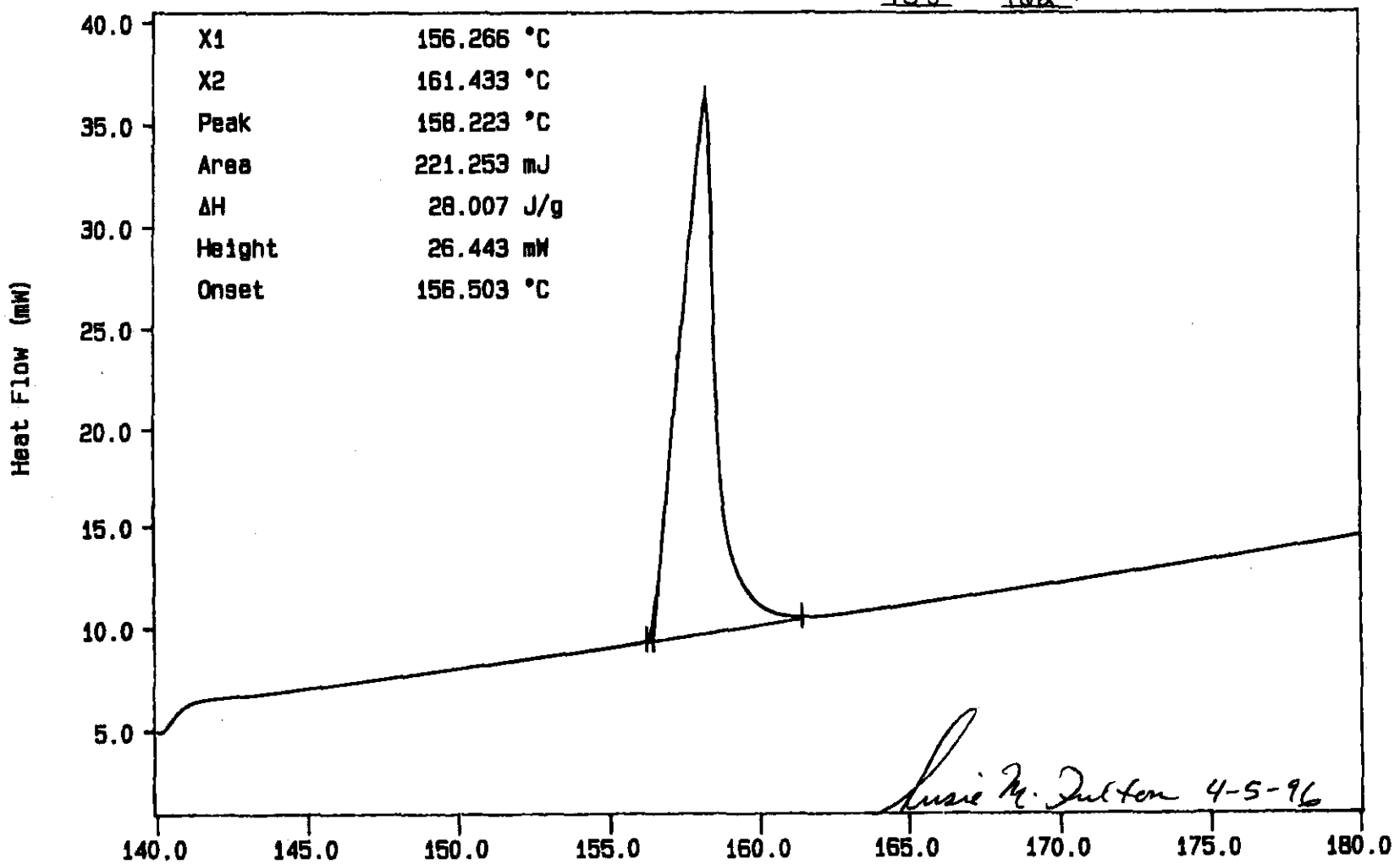
Analyst Signature **Date** **Analyst Signature** **Date**

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

Curve 1: DSC
File info: IND040501 Fri Apr 5 07:03:11 1996
Sample Weight: 7.900 mg
12N14-B INDIUM AI 10C\MIN

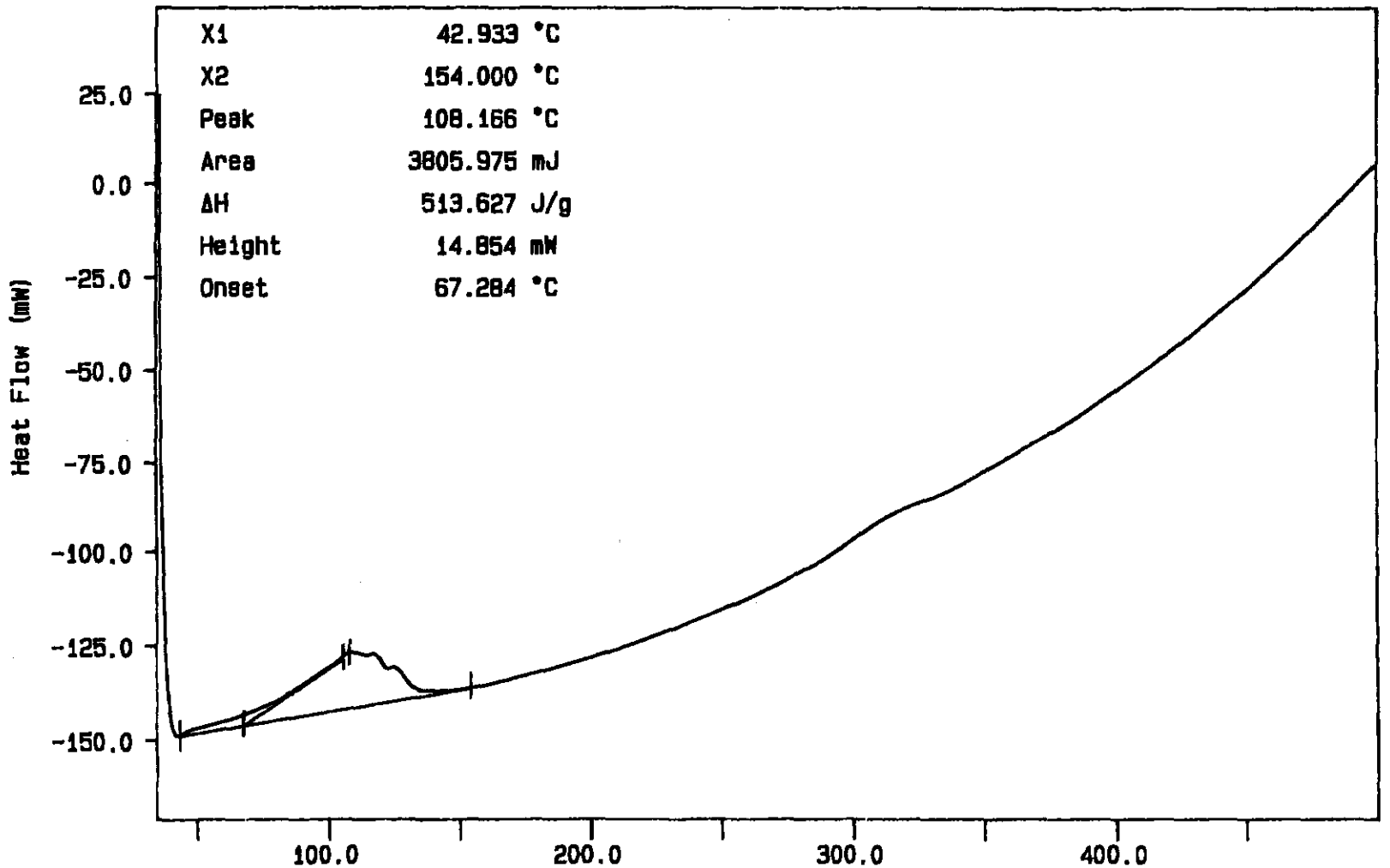
SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 158 TO 162.



N2, EXOTHERM DOWN
TEMP1: 140.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 180.0 C

SM FULTON
PERKIN-ELMER
7 Series Thermal Analysis System
Fri Apr 5 07:10:29 1996

Curve 1: DSC
File info: SAM040501 Fri Apr 5 10:05:39 1996
Sample Weight: 7.410 mg
S96T000558

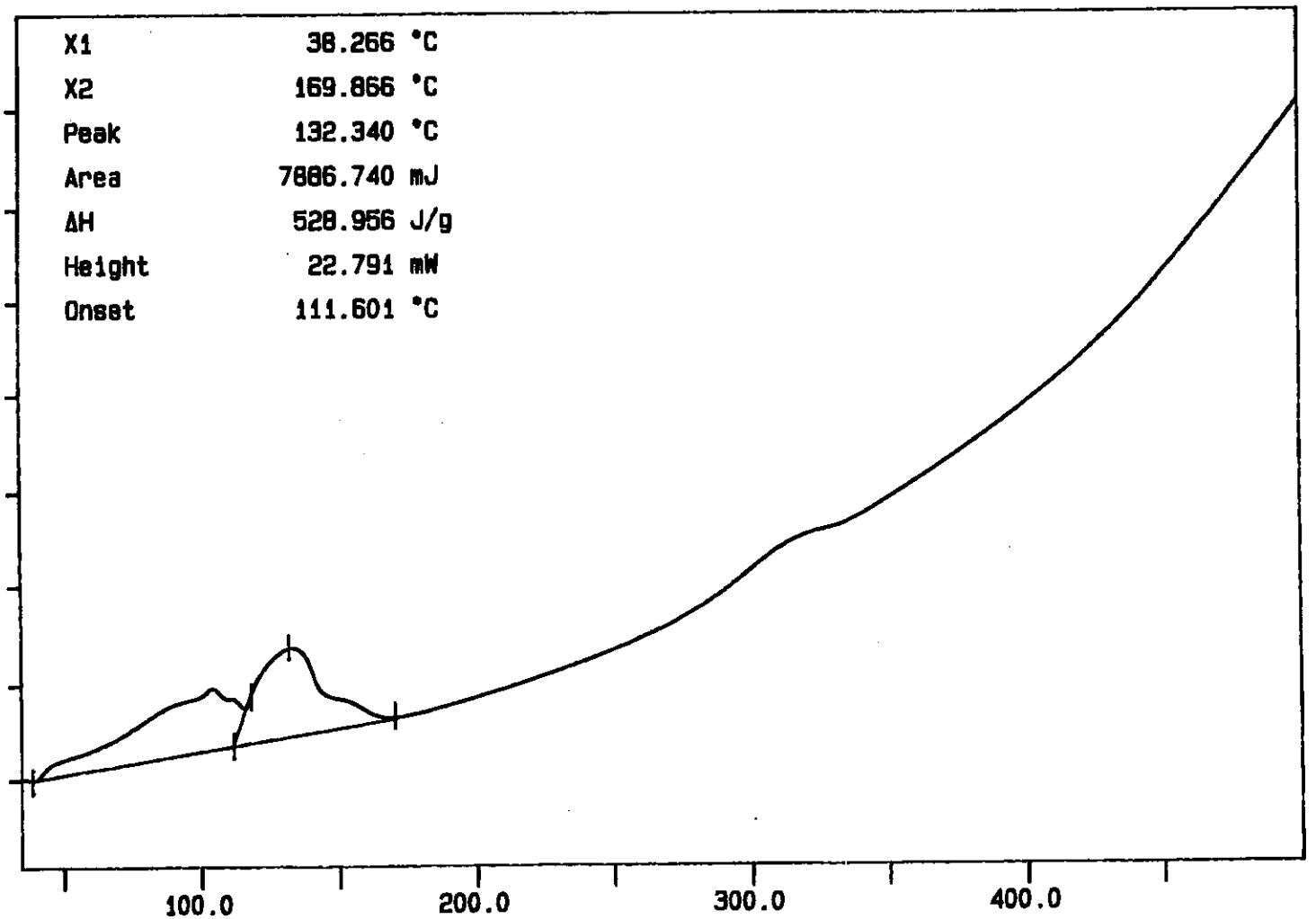


exotherm down, N2 purge gas
TEMP1: 35.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 600.0 C

SM FULTON
PERKIN-ELMER
7 Series Thermal Analysis System
Fri Apr 5 10:19:31 1996

04/09/96 09:38 ☎509 372 2929 WESTINGHOUSE 010

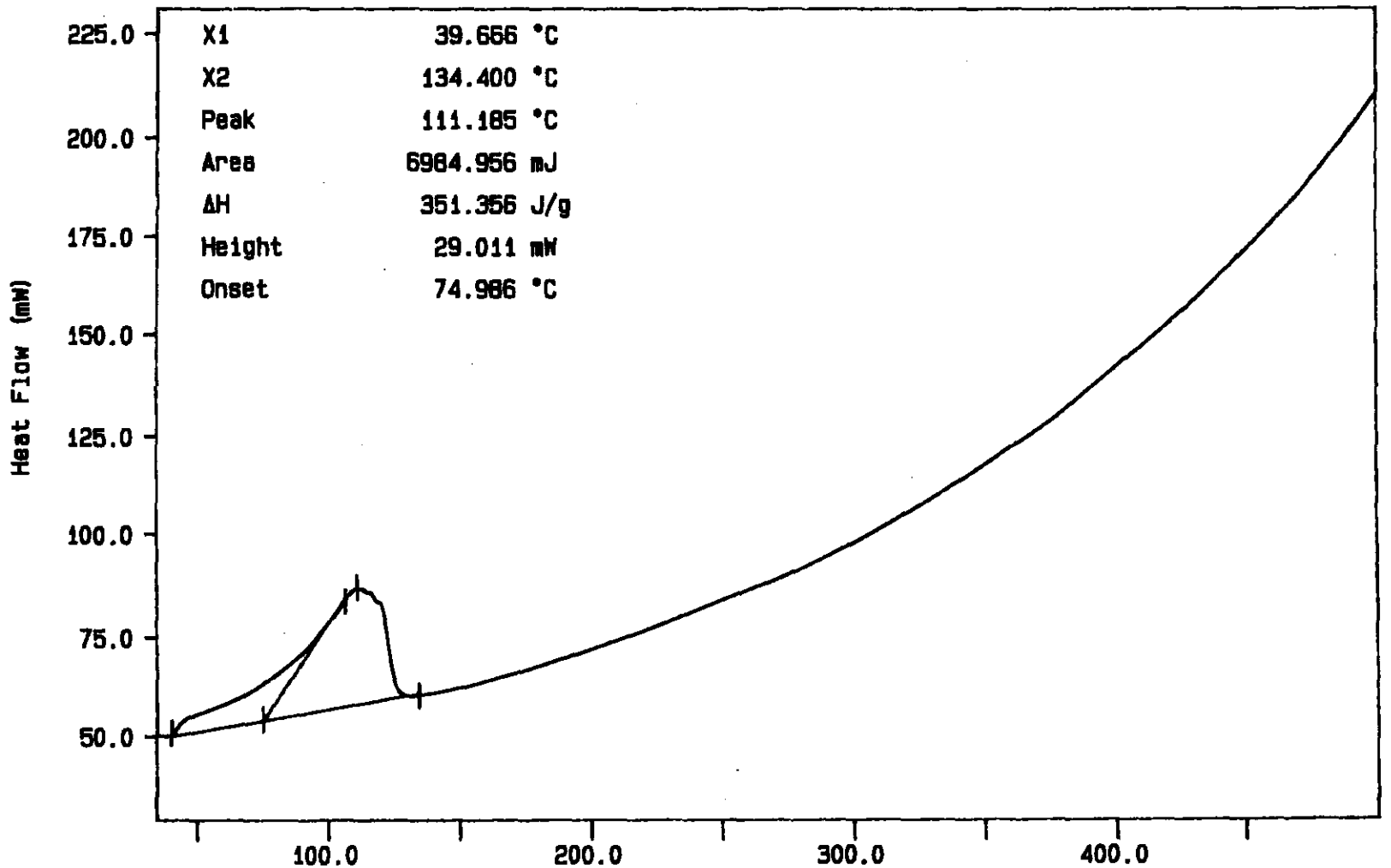
Curve 1: DSC
File info: SAM040502 Fri Apr 5 11:23:54 1996
Sample Weight: 14.910 mg
S96T000558 DuP
SMF 4-5-96



exotherm down, N2 purge gas
TEMP1: 38.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 600.0 C

SM FULTON
PERKIN-ELMER
7 Series Thermal Analysis System
Fri Apr 5 12:31:09 1996

Curve 1: DSC
File info: SAM040503 Fri Apr 5 13:32:36 1996
Sample Weight: 19.880 mg
S96T000560

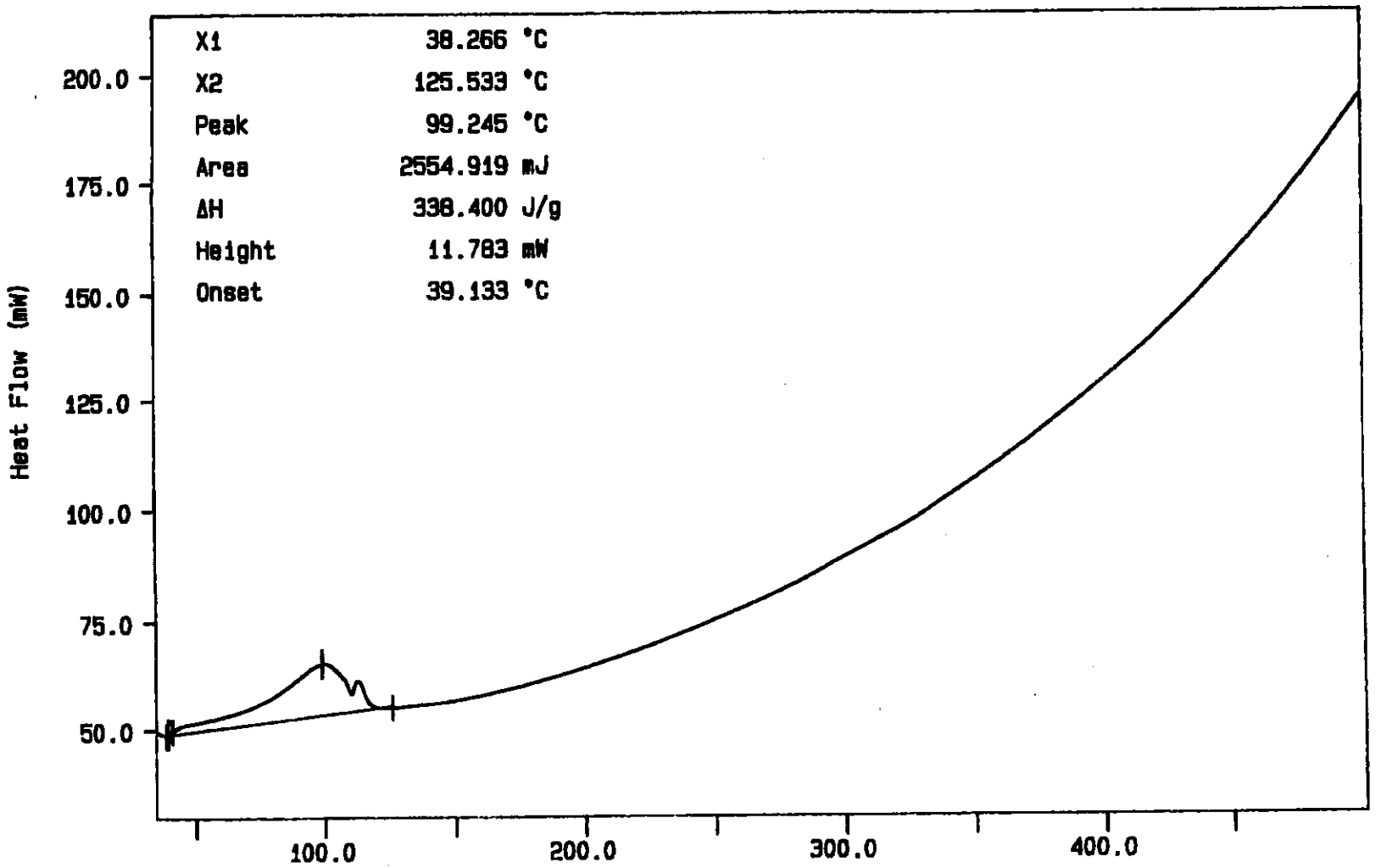


exotherm down, N2 purge gas
TEMP1: 30.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 500.0 C

SM FULTON
PERKIN-ELMER
7 Series Thermal Analysis System
Fri Apr 5 13:39:17 1996

04/09/96 09:38 ☎509 372 2929 WESTINGHOUSE ☑018

Curve 1: DSC
File info: SAM040504 Fri Apr 5 14:34:07 1996
Sample Weight: 7.550 mg
S96T000560 DUP



exotherm down, N2 purge gas
TEMP1: 35.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 500.0 C

SM FULTON
PERKIN-ELMER
7 Series Thermal Analysis System
Fri Apr 5 15:42:50 1996

LABCORE Data Entry Template for Worklist# 7391

Analyst: SMF **Instrument:** DSC0 1 **Book #** 12N14B

Method: LA-514-113 Rev/Mod C-1

Worklist Comment: C-106 RUN UNDER N2,SAMPLE IS DRY AND FLIGHTY HIGH ALPHA. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R	A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD				DSC-01	SOLID	28.45	28.4	N/A	Joules/g
96000082	C-106 GRAB	2 SAMPLE	S96T000567	0		DSC-01	SOLID	N/A	69.7		Joules/g
96000082	C-106 GRAB	3 DUP	S96T000567	0		DSC-01	SOLID	69.7	94.7	N/A	Joules/g

Final page for worklist # 7391

Sm Fulton 4-5-96
Analyst Signature **Date**

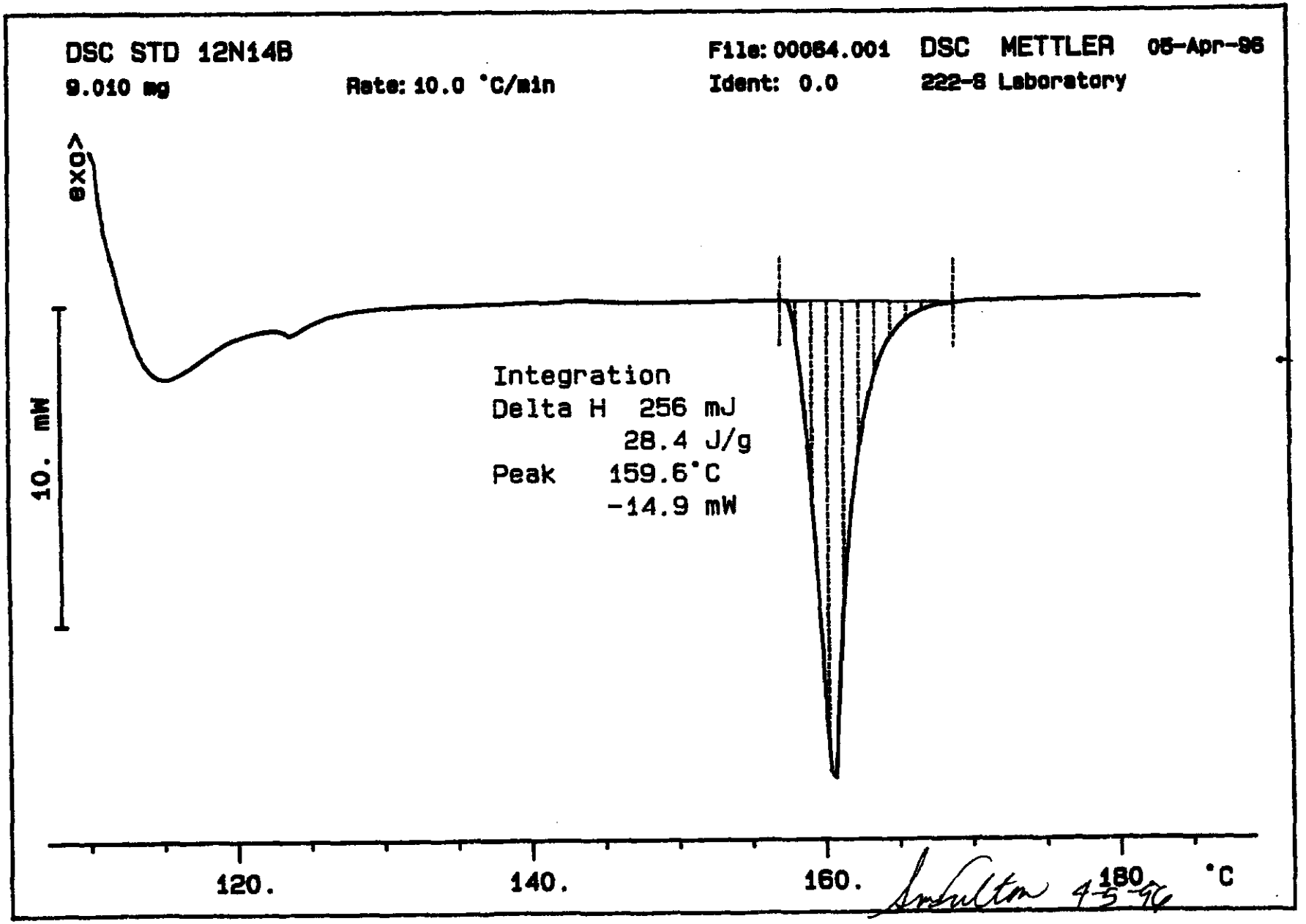
[signature] 4-9-96
Analyst Signature **Date**

Verified by Blandina Valenzuela 4-11-96

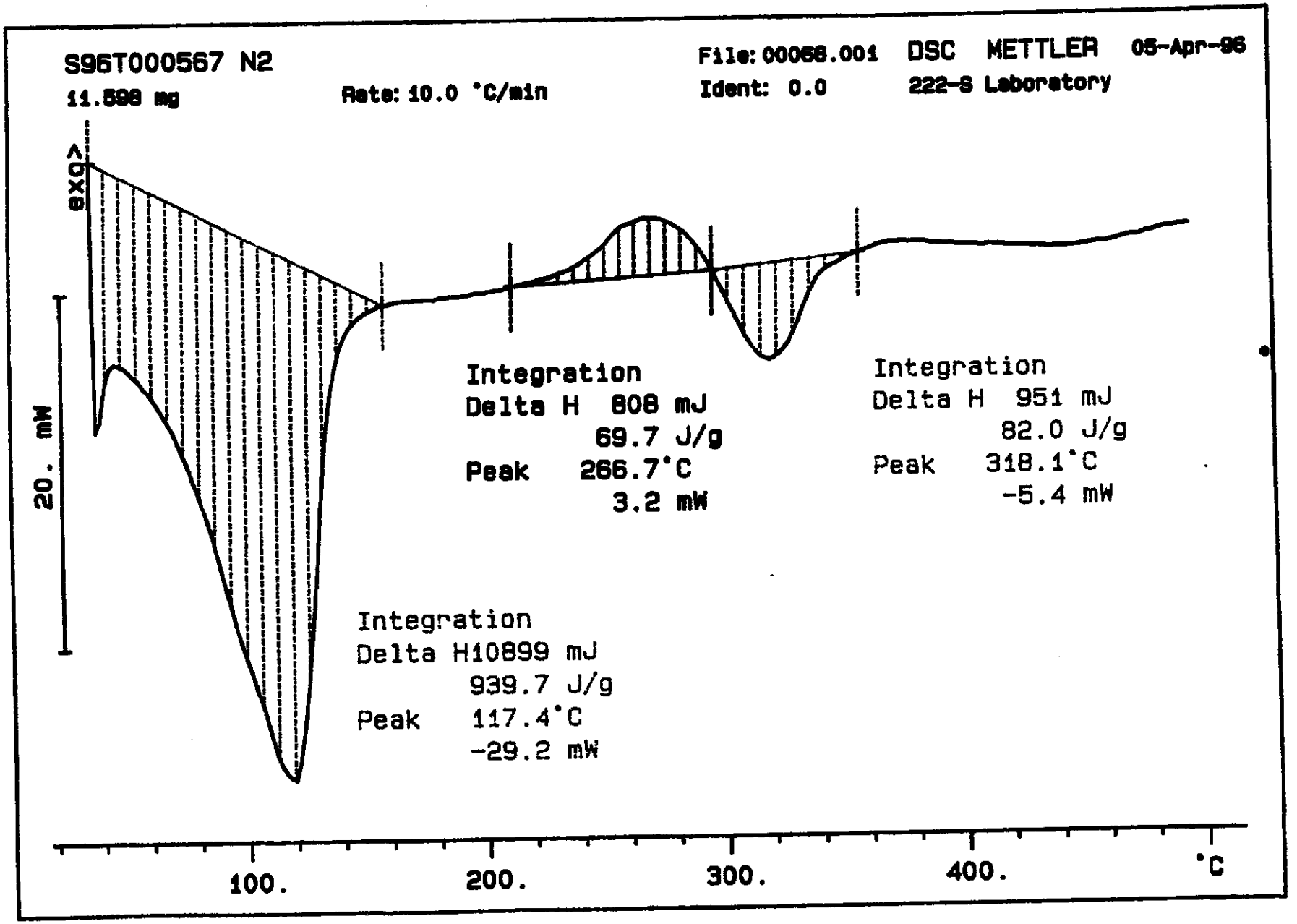
Data Entry Comments: Sample produced two endotherms one at 117.4°C with a delta H of 939.7 J/g and second at 318.1°C with a delta H of 82.0 J/g

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

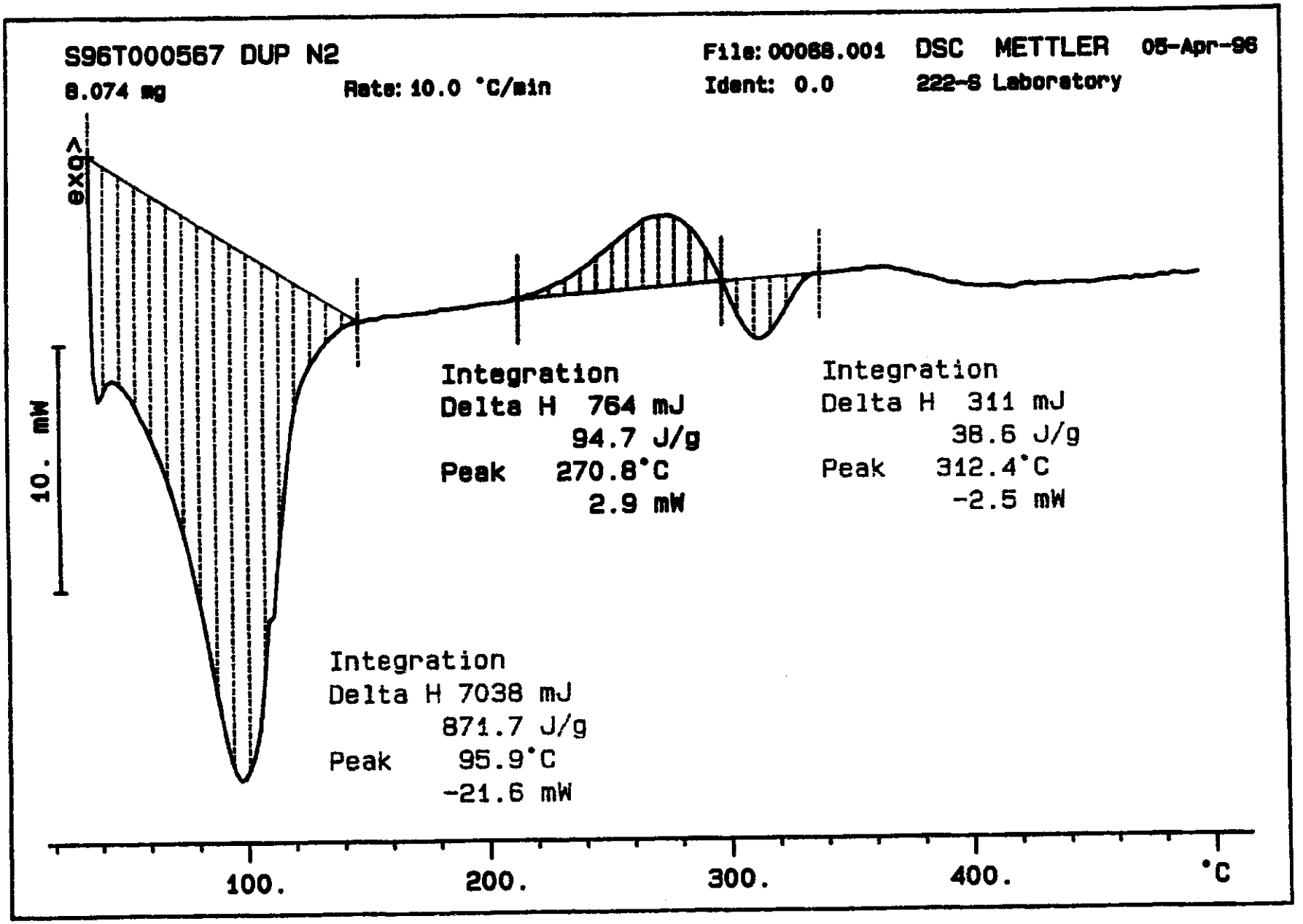
SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 1164 TO 1166.



04/09/96 10:01 ☎509 372 2929 WESTINGHOUSE →→→ MO-924 200W 001



04/09/96 10:01 ☎509 372 8928 WESTINGHOUSE → MU-924 007 010


S96T000567 DUP N2
8.074 mg
Rate: 10.0 °C/min
File: 00088.001
Ident: 0.0
DSC METTLER
222-S Laboratory
05-Apr-96
exo>
10. mW
Integration
Delta H 764 mJ
94.7 J/g
Peak 270.8°C
2.9 mW
Integration
Delta H 311 mJ
38.6 J/g
Peak 312.4°C
-2.5 mW
Integration
Delta H 7038 mJ
871.7 J/g
Peak 95.9°C
-21.6 mW
100.
200.
300.
400.
°C

LABCORE Data Entry Template for Worklist# 7405

Analyst: SMF **Instrument:** DSC0 3 **Book #** 12N14B

Method: LA-514-114 Rev/Mod C-1

Worklist Comment: C-106 RUN UNDER N2,SAMPLE IS DRY AND FLIGHTY,HIGH ALPHA. RCJ

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	STD				DSC-03	LIQUID	28.45	27.26	N/A	Joules/g
96000082	C-106 GRAB	2	SAMPLE	S96T000545		0	DSC-03	LIQUID	N/A	Ø		Joules/g
96000082	C-106 GRAB	3	DUP	S96T000545		0	DSC-03	LIQUID	Ø	Ø	N/A	Joules/g
96000082	C-106 GRAB	4	SAMPLE	S96T000563		0	DSC-03	LIQUID	N/A	Ø		Joules/g
96000082	C-106 GRAB	5	DUP	S96T000563		0	DSC-03	LIQUID	Ø	Ø	N/A	Joules/g

Final page for worklist # 7405

See attached for signatures
Analyst Signature **Date** 4-9-96

[signature] 4-9-96
Analyst Signature **Date**

Reviewed 4/10/96 [signature]

Data Entry Comments: BOV 4-9-96 S45 DH 4-9-96 S96T000~~5~~0563 produced one endotherm with the peak at 121.12°C with a delta H of 1716.3 J/g, the shape of the thermogram indicat two distinct compounds one being water the other possibly an organic.

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

S96T000563 produced one endotherm at 116.4°C with a delta H of 1800.8 J/g

worklistrpt Version 2.1 05/15/95
04/05/96 09:55

LABCORE Data Entry Template for Worklist# 7405

Analyst: SMF **Instrument:** DSC0 _____ **Book #** 12N14013

Method: LA-514-113 Rev/Mod _____

Worklist Comment: C-106 RUN UNDER N2,SAMPLE IS DRY AND FLIGHTY,HIGH ALPHA. RCJ

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	STD				DSC-01	LIQUID			N/A	Joules/g
96000082	C-106 GRAB	2	SAMPLE	S96T000545	0		DSC-01	LIQUID	N/A			Joules/g
96000082	C-106 GRAB	3	DUP	S96T000545	0		DSC-01	LIQUID			N/A	Joules/g
96000082	C-106 GRAB	4	SAMPLE	S96T000563	0		DSC-01	LIQUID	N/A			Joules/g
96000082	C-106 GRAB	5	DUP	S96T000563	0		DSC-01	LIQUID			N/A	Joules/g

Final page for worklist # 7405

Susie M. Dutton 7-7-96

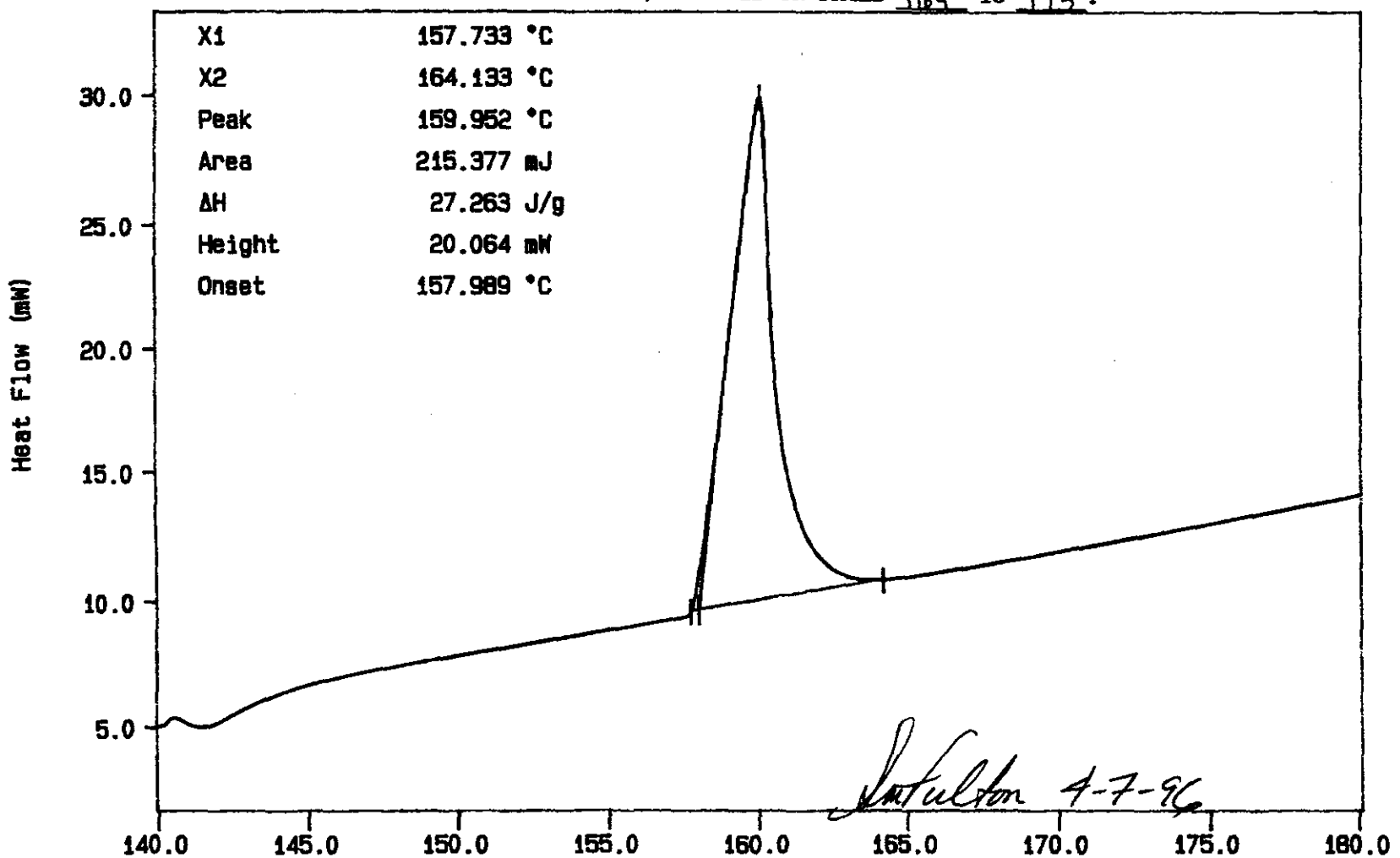
Analyst Signature **Date** **Analyst Signature** **Date**

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

Curve 1: DSC
File info: IND040701 Sun Apr 7 06:24:53 1996
Sample Weight: 7.900 mg
12N14-B INDIUM AT 10C\MIN

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 169 TO 173.

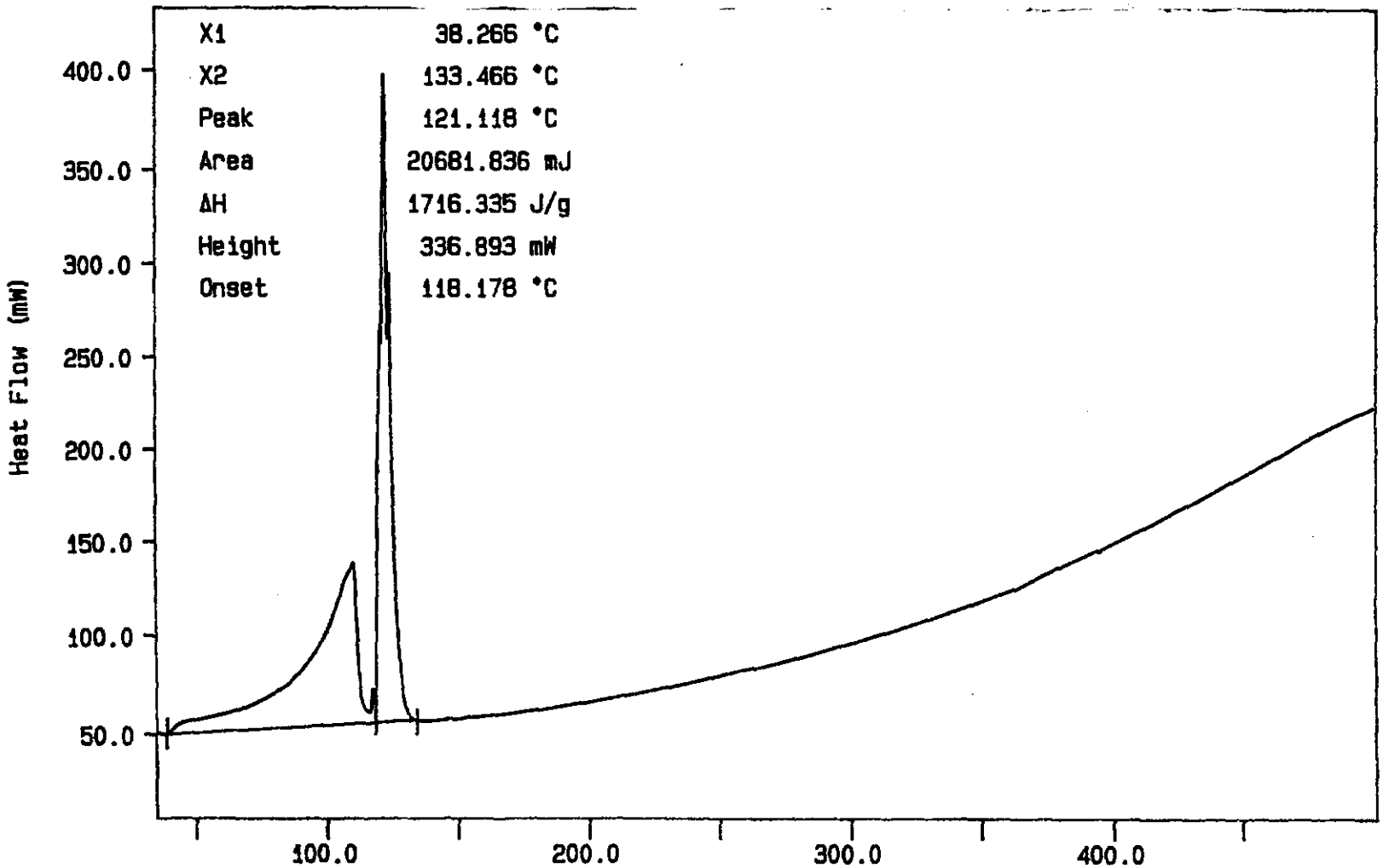


N2, EXOTHERM DOWN
TEMP1: 140.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 180.0 C

SM FULTON
PERKIN-ELMER
7 Series Thermal Analysis System
Sun Apr 7 06:32:47 1996

04/09/96 09:55 ☎509 372 2929 WESTINGHOUSE →→→ MO-924 200W 007

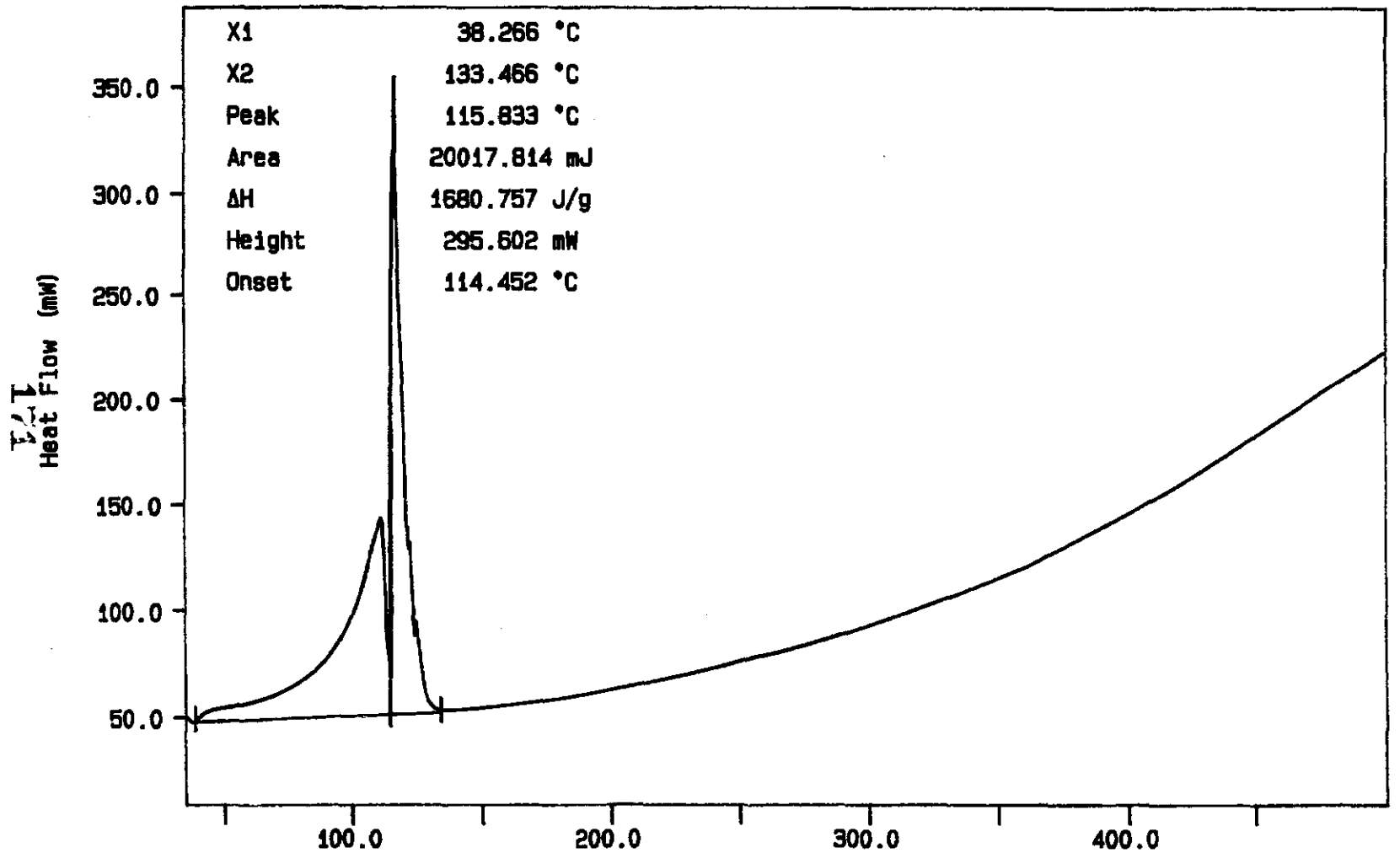
Curve 1: DSC
File info: SAM040703 Sun Apr 7 10:41:54 1996
Sample Weight: 12.050 mg
~~S96T000569 DUP~~ SHF 4-7-96
S96T000545



exotherm down, N2 purge gas
TEMP1: 35.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 600.0 C

SM FULTON
PERKIN-ELMER
7 Series Thermal Analysis System
Sun Apr 7 12:38:59 1996

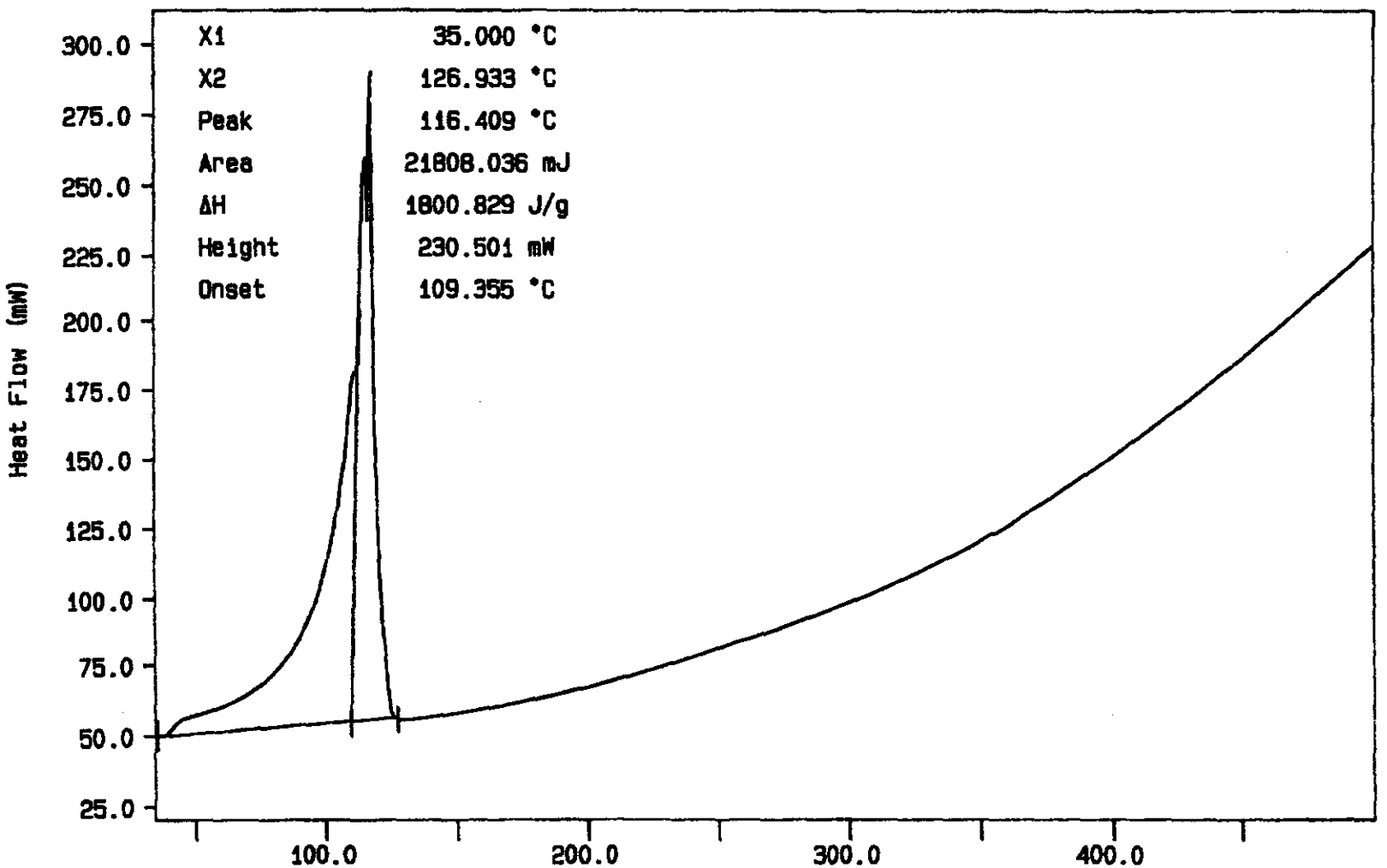
Curve 1: DSC
File info: SAM040704 Sun Apr 7 13:32:15 1996
Sample Weight: 11.910 mg
S96T000545 DUP



exotherm down, N2 purge gas
TEMP1: 35.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 500.0 C

SM FULTON
PERKIN-ELMER
7 Series Thermal Analysis System
Sun Apr 7 13:38:47 1996

Curve 1: DSC
File info: SAM040701 Sun Apr 7 07:54:13 1996
Sample Weight: 12.110 mg
S96T000563

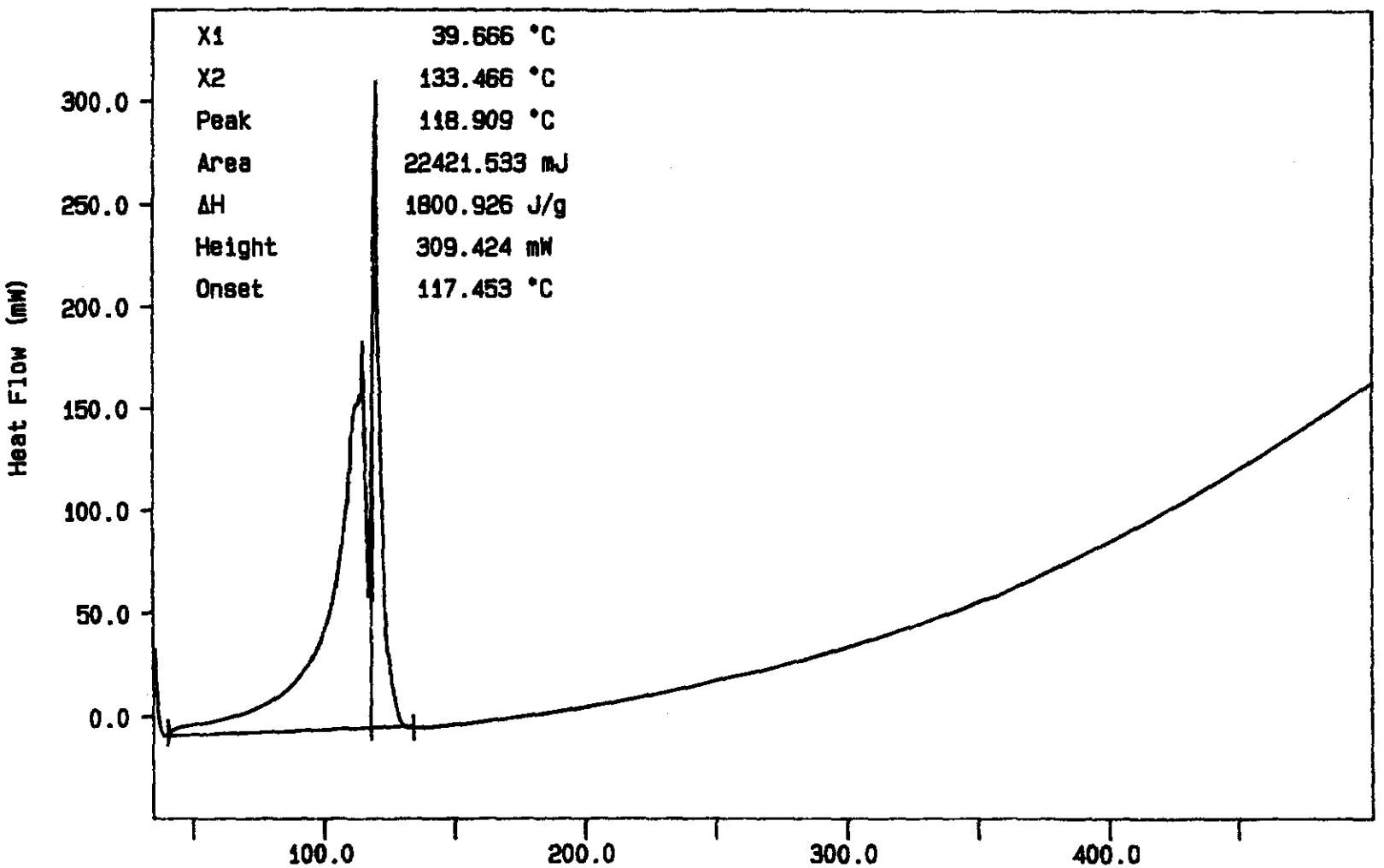


exotherm down, N2 purge gas
TEMP1: 35.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 500.0 C

SM FULTON
PERKIN-ELMER
7 Series Thermal Analysis System
Sun Apr 7 08:59:43 1996

172

Curve 1: DSC
File info: SAM040702 Sun Apr 7 09:34:22 1996
Sample Weight: 12.450 mg
S96T000563 DUP



exotherm down, N2 purge gas
TEMP1: 35.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 500.0 C

SM FULTON
PERKIN-ELMER
7 Series Thermal Analysis System
Sun Apr 7 09:51:23 1996

04/09/96 09:57 ☎509 372 2929 WESTINGHOUSE →→→ MO-924 2008 011

worklistrpt Version 2.1 05/15/95
04/08/96 10:22

LABCORE Data Entry Template for Worklist# 7452

Analyst: KK **Instrument:** DSC0 1 **Book #** 12A14-B

Method: LA-514-113 Rev/Mod C-1

Worklist Comment: C-106 DSC RUN UNDER N2 SAMPLE DRY AND FLIGHTY,HIGH ALPHA.RCJ

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	STD				DSC-01	LIQUID	28.45	26.7	N/A	Joules/g
96000174	C-106 GRAB	2	SAMPLE	S96T001566	0		DSC-01	LIQUID	N/A	118.9		Joules/g
96000174	C-106 GRAB	3	DUP	S96T001566	0		DSC-01	LIQUID	118.9	96.8	N/A	Joules/g
96000174	C-106 GRAB	4	SAMPLE	S96T001679	0		DSC-01	LIQUID	N/A	Ø		Joules/g
96000174	C-106 GRAB	5	DUP	S96T001679	0		DSC-01	LIQUID	Ø	Ø	N/A	Joules/g

Final page for worklist # 7452

Rob King 4/8/96
Analyst Signature **Date**

Jan Hannett 4-9-96
Analyst Signature **Date**

S96T001566 produced a large endotherm at 109.3°C with a delta H of 1574.7 J/g.

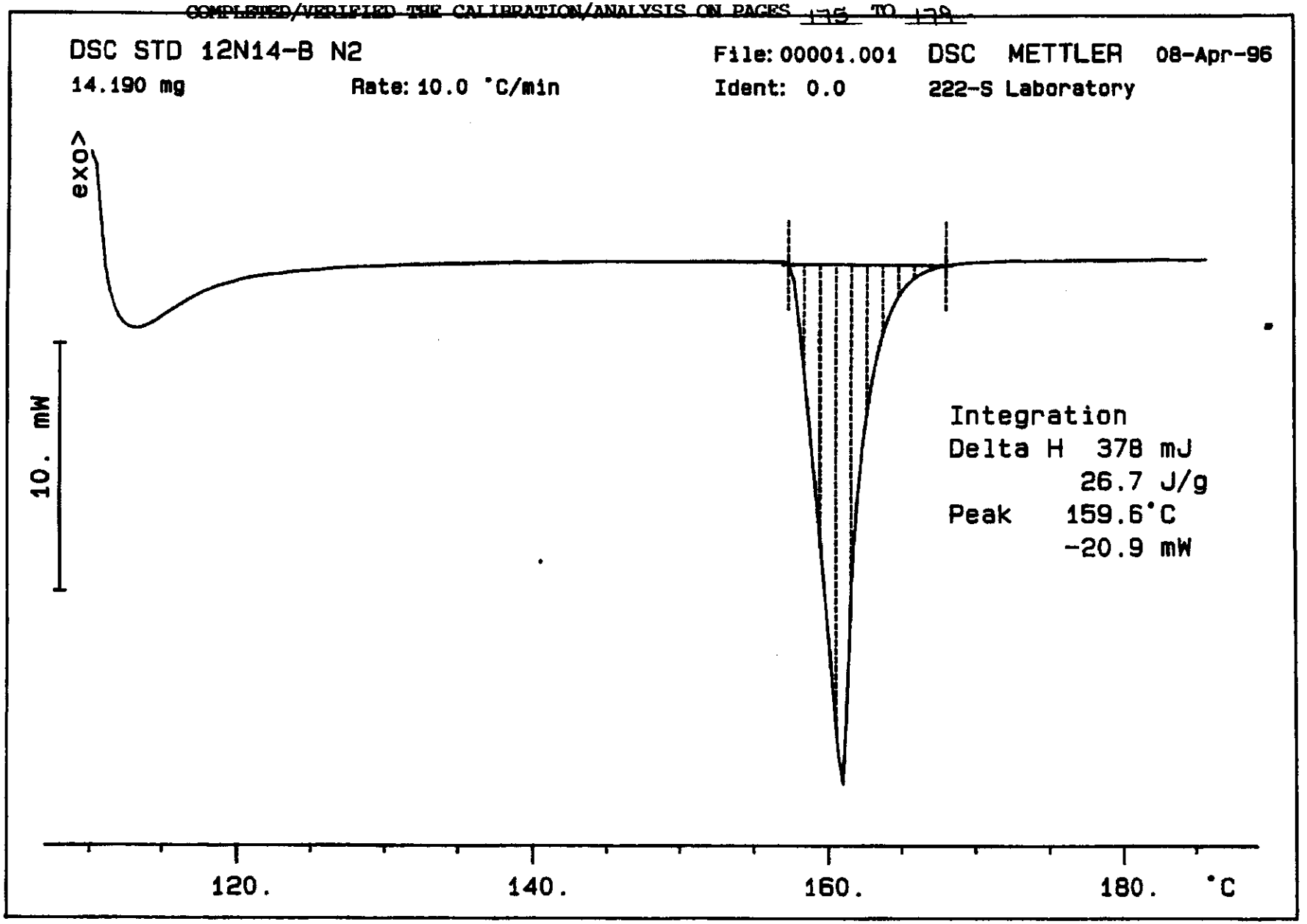
S96T001679 produced three endotherms, one at 123.4°C with a delta H of 973.8 J/g, one at 346.7°C with a delta H of 91.7 J/g, and another at 445.3°C with a delta H of 46.0 J/g.

Reviewed 4/12/96 Jan Hay

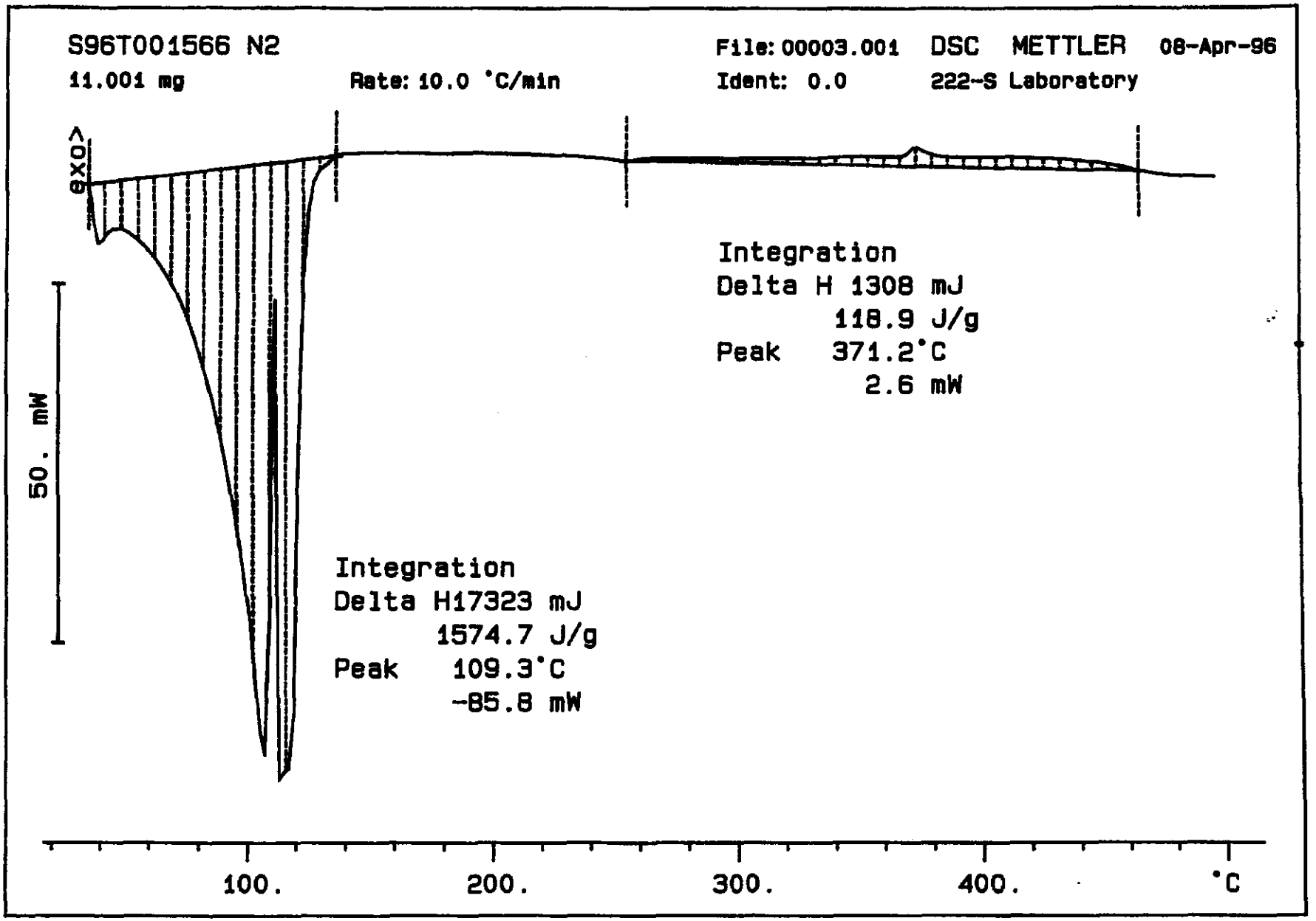
Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

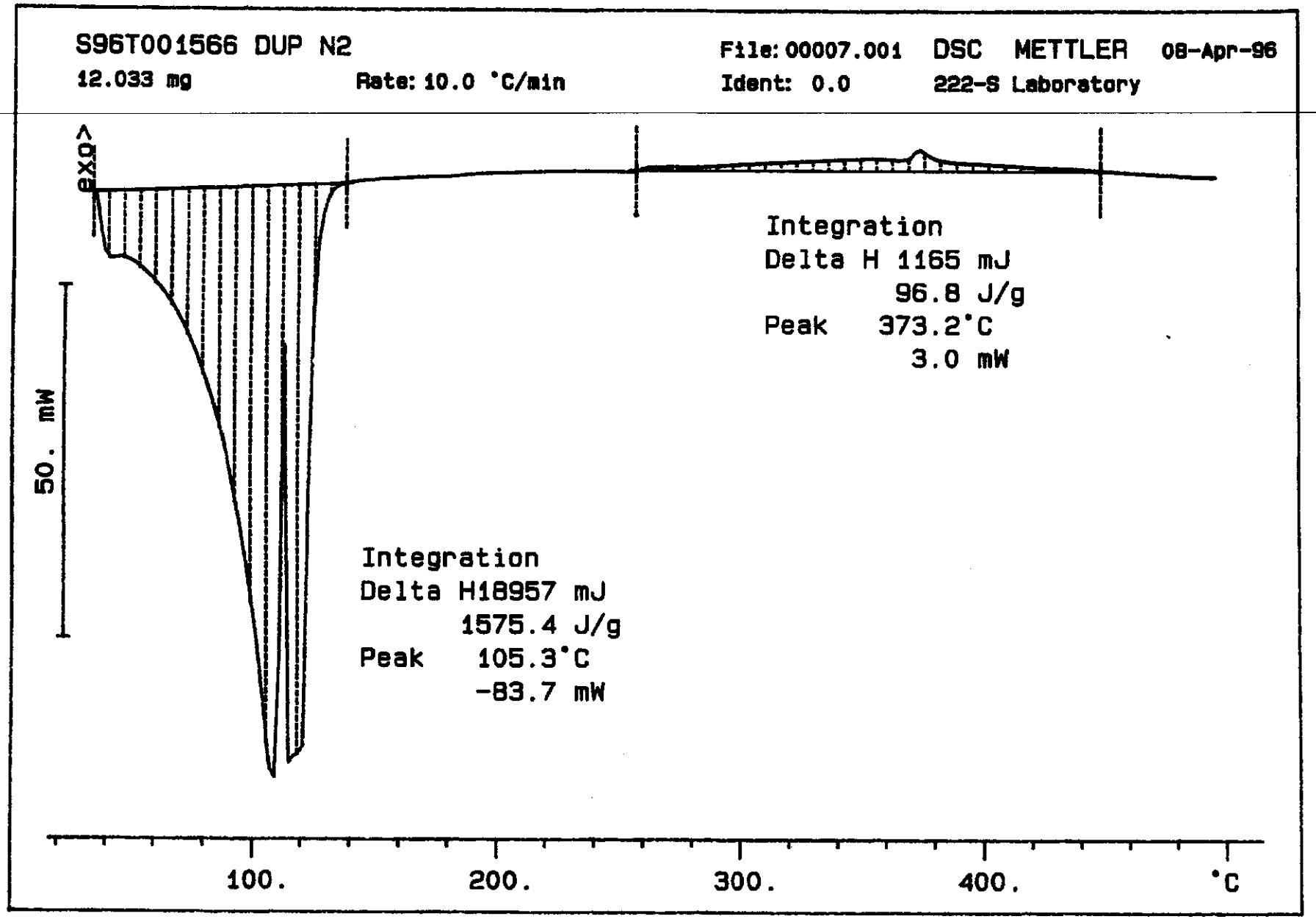
SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 175 TO 179

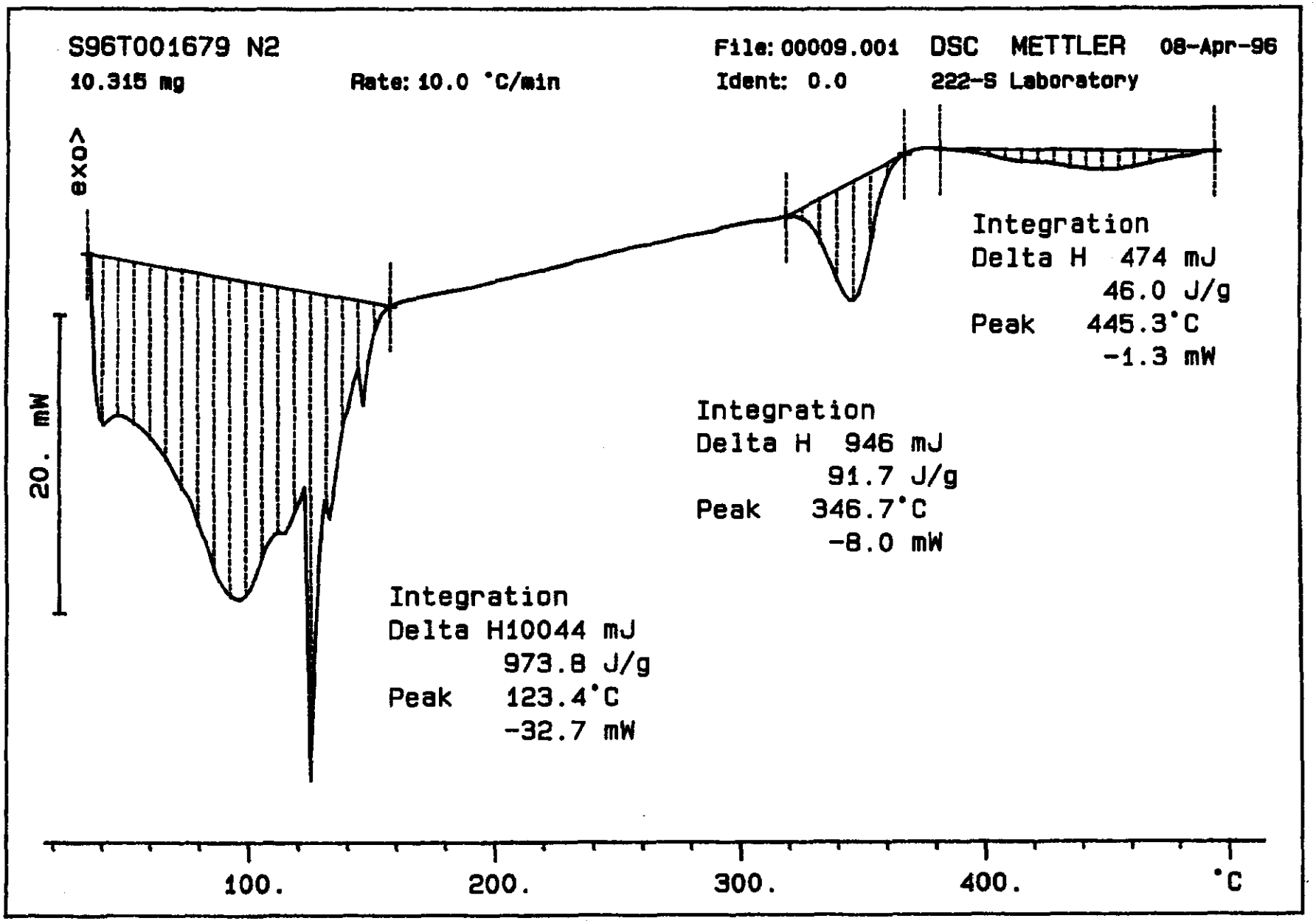


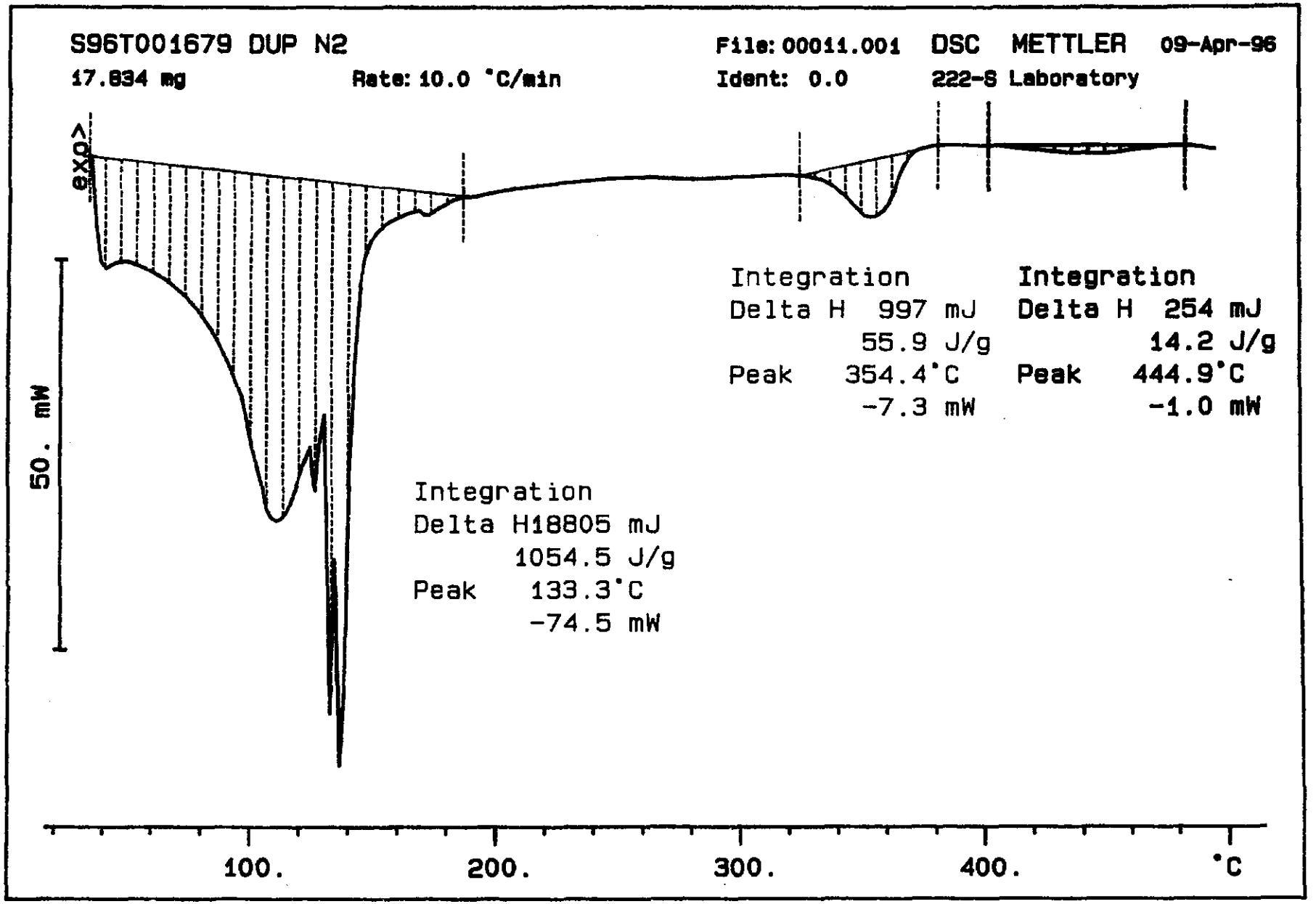
Not Nm 4/8/96



Rob King 4/8/96


S96T001566 DUP N2
12.033 mg
Rate: 10.0 °C/min
File: 00007.001
Ident: 0.0
DSC METTLER
222-S Laboratory
08-Apr-96
<exo
50. mW
Integration
Delta H 1165 mJ
96.8 J/g
Peak 373.2°C
3.0 mW
Integration
Delta H18957 mJ
1575.4 J/g
Peak 105.3°C
-83.7 mW
100.
200.
300.
400.
°C


S96T001679 N2
10.315 mg
Rate: 10.0 °C/min
File: 00009.001
Ident: 0.0
DSC METTLER
222-S Laboratory
08-Apr-96
<exo
20. mW
Integration
Delta H10044 mJ
973.8 J/g
Peak 123.4°C
-32.7 mW
Integration
Delta H 946 mJ
91.7 J/g
Peak 346.7°C
-8.0 mW
Integration
Delta H 474 mJ
46.0 J/g
Peak 445.3°C
-1.3 mW
100.
200.
300.
400.
°C



04/09/96 09:26 ☎509 372 2929 WESTINGHOUSE →→→ MU-824 2007 00/00

LABCORE Data Entry Template for Worklist# 7454

Analyst: [illegible] **Instrument:** DSC0 DSC01 **Book #** 12NHB

Method: LA-514-113 Rev/Mod C-1

Worklist Comment: C-106 DSC RUN UNDER N2,SAMPLE DRY AND FLIGHTY,HIGH ALPHA.RCJ

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	STD				DSC-01	LIQUID	28.45	32.4	N/A	Joules/g
96000082	C-106 GRAB	2	SAMPLE	S96T001567	0		DSC-01	LIQUID	N/A	215.1		Joules/g
96000082	C-106 GRAB	3	DUP	S96T001567	0		DSC-01	LIQUID	215.1	142.4	N/A	Joules/g
96000174	C-106 GRAB	4	SAMPLE	S96T001553	0		DSC-01	LIQUID	N/A	208.1		Joules/g
96000174	C-106 GRAB	5	DUP	S96T001553	0		DSC-01	LIQUID	208.1	167.9	N/A	Joules/g

Final page for worklist # 7454

[illegible] 4/9/96

Analyst Signature **Date** **Analyst Signature** **Date**

S96T001553 has endotherm of 970.5 J/g at 103°C + the duplicate has 2 endotherms of 665.4 J/g at 90°C and 52.0 J/g at 347°C. They look very different.

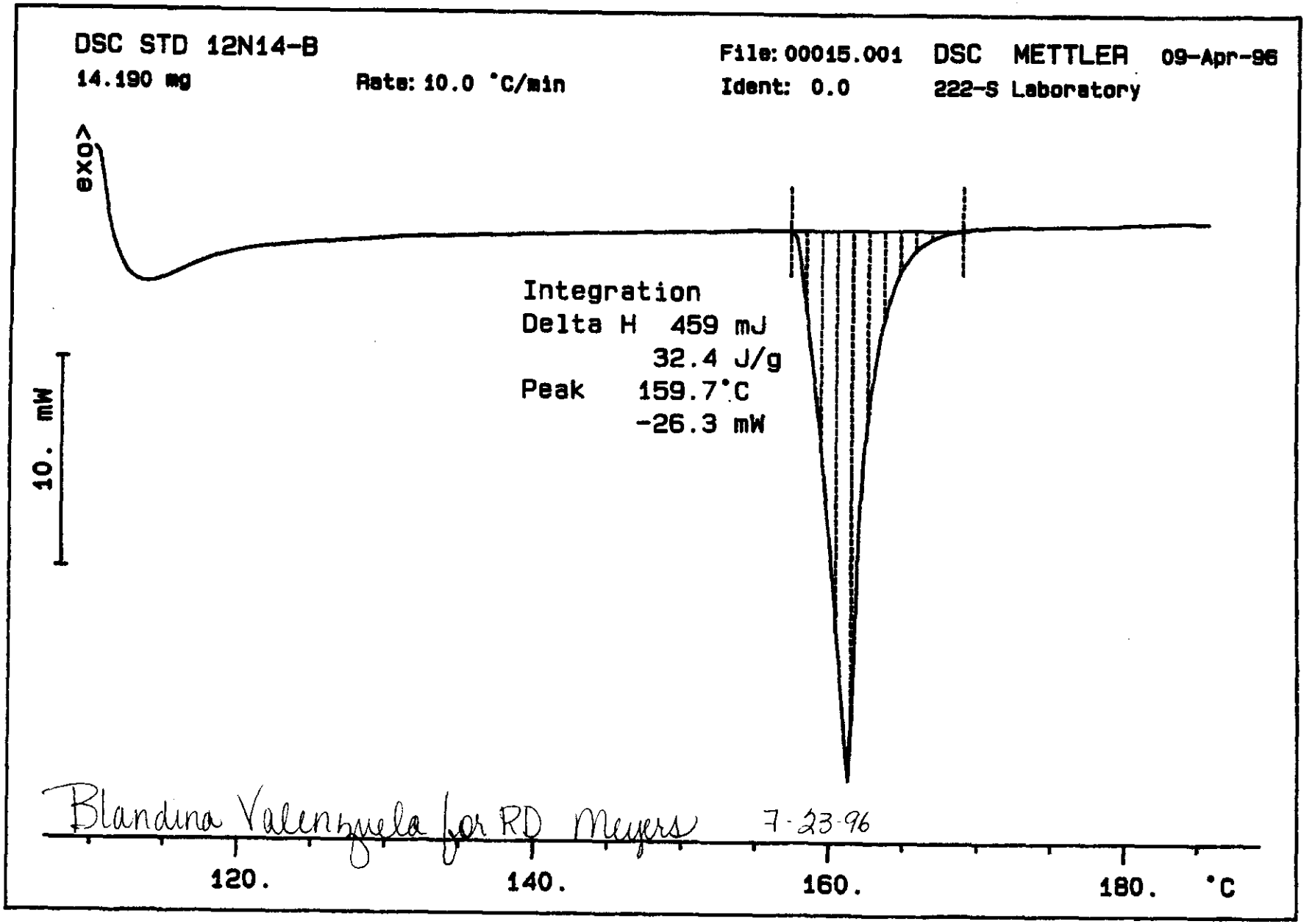
S96T001567 has an endotherm of 1401.2 J/g at 109°C and the duplicate has 1395.2 J/g at 107°C.

Entered + Verified 4/12/96 JMFuge

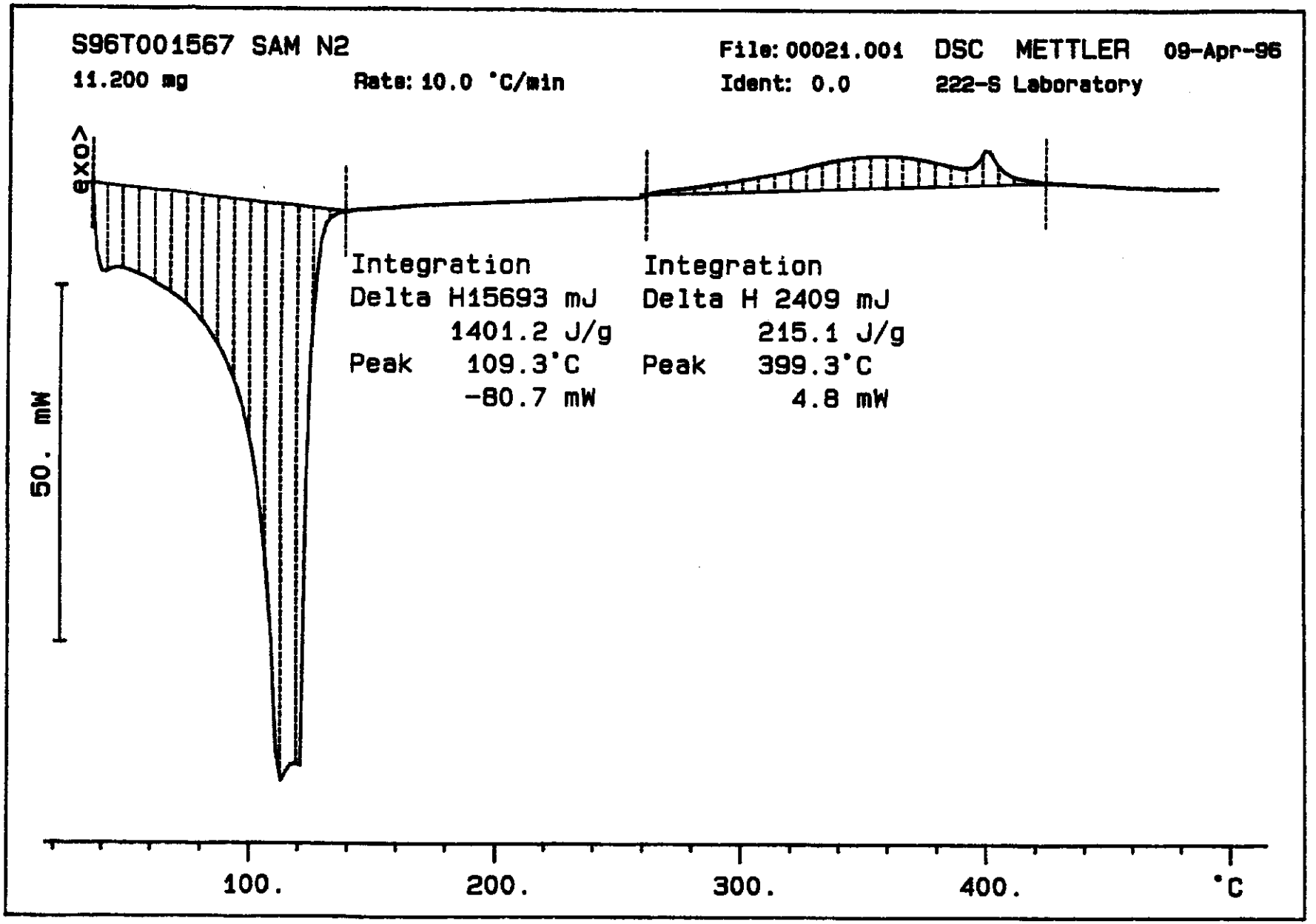
Data Entry Comments:

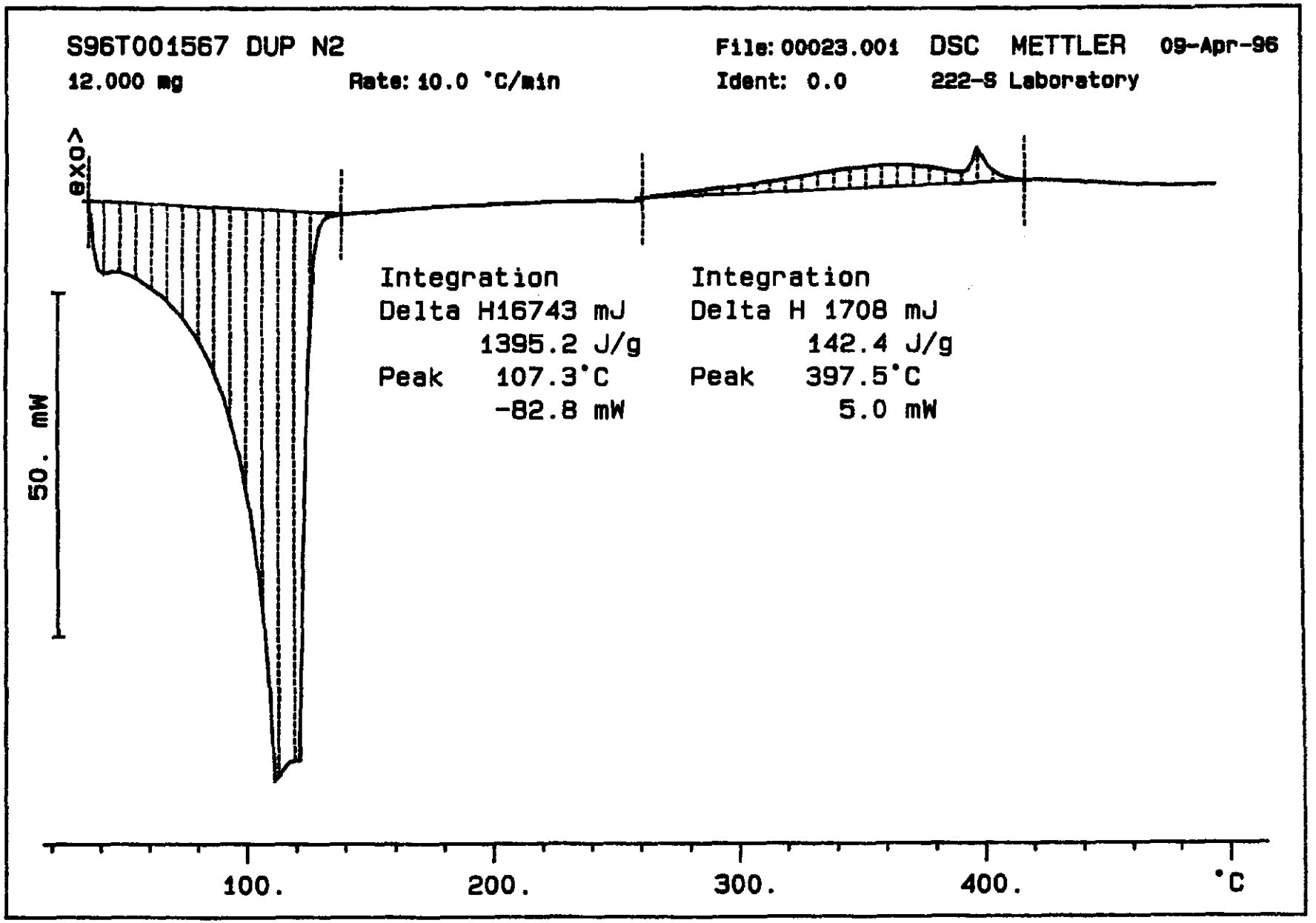
Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

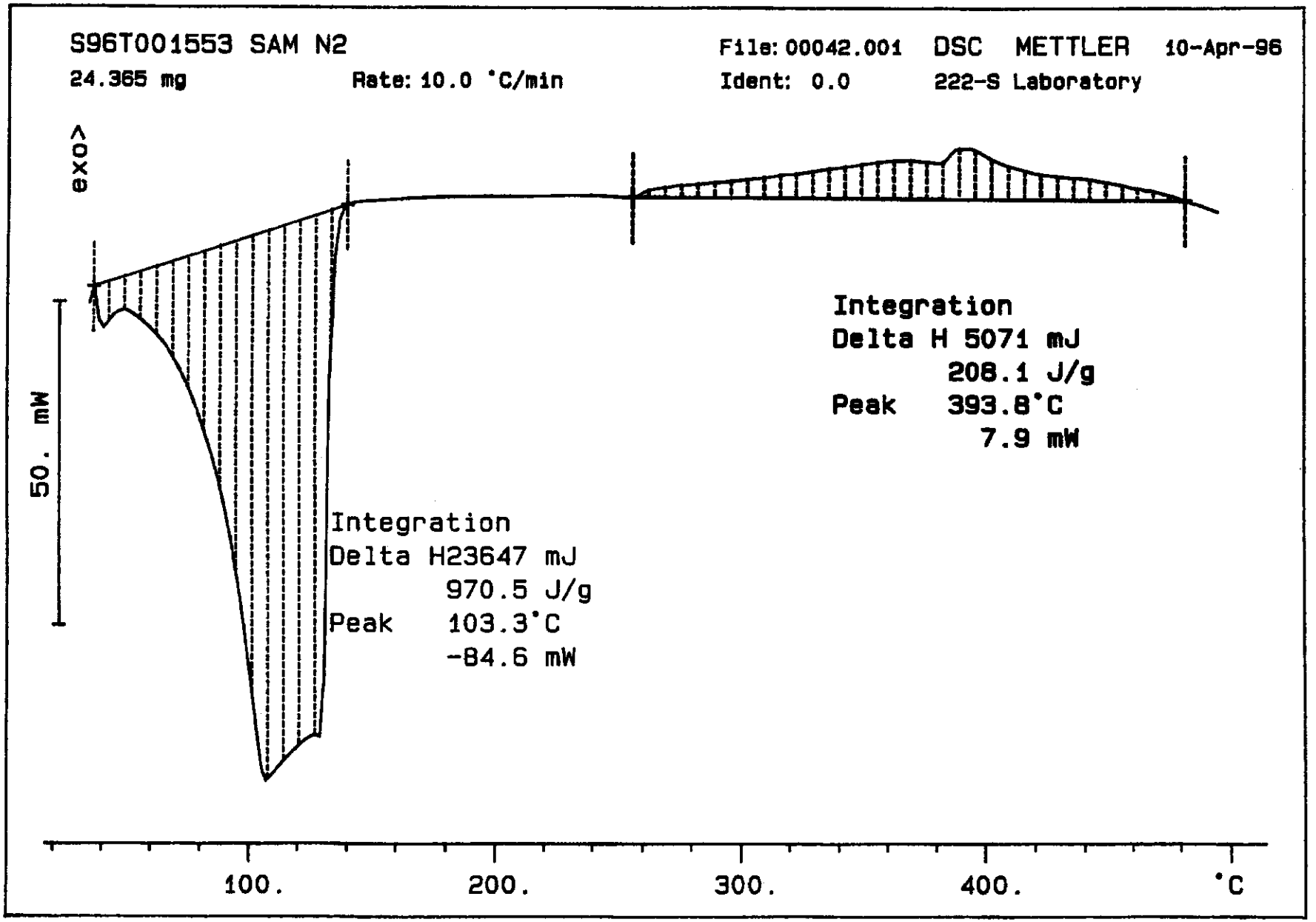
SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 181 TO 185.

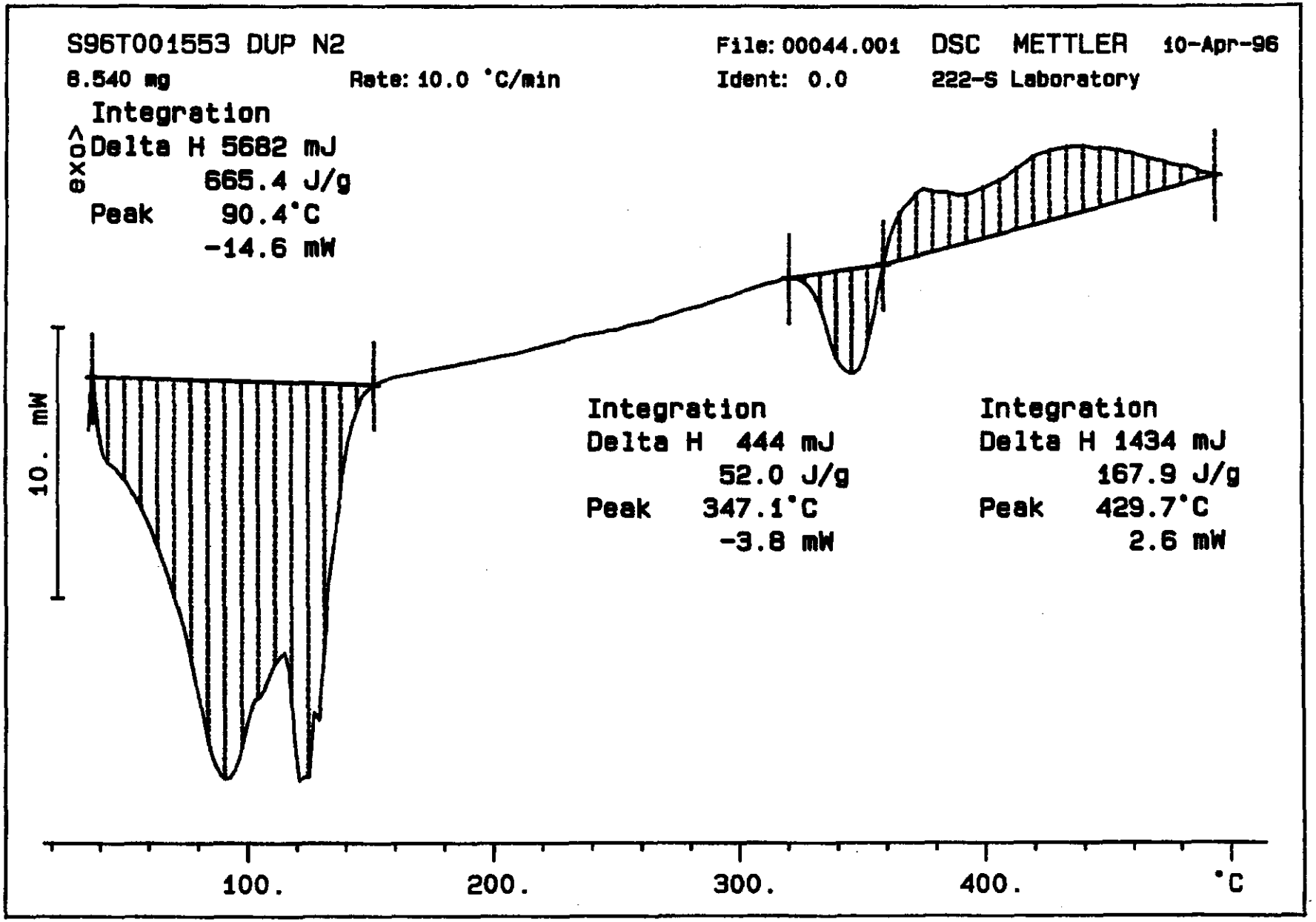


Blandina Valenzuela for RD Meyers 7-23-96


S96T001567 SAM N2
11.200 mg
Rate: 10.0 °C/min
File: 00021.001
Ident: 0.0
DSC METTLER
222-S Laboratory
09-Apr-96
exo>
50. mW
Integration
Delta H15693 mJ
1401.2 J/g
Peak 109.3°C
-80.7 mW
Integration
Delta H 2409 mJ
215.1 J/g
Peak 399.3°C
4.8 mW
100.
200.
300.
400.
°C


S96T001567 DUP N2
12.000 mg
Rate: 10.0 °C/min
File: 00023.001
Ident: 0.0
DSC METTLER
222-S Laboratory
09-Apr-96
exo>
50. mW
Integration
Delta H16743 mJ
1395.2 J/g
Peak 107.3°C
-82.8 mW
Integration
Delta H 1708 mJ
142.4 J/g
Peak 397.5°C
5.0 mW
100.
200.
300.
400.
°C


S96T001553 SAM N2
24.365 mg
Rate: 10.0 °C/min
File: 00042.001
Ident: 0.0
DSC METTLER
222-S Laboratory
10-Apr-96
exo>
50. mW
Integration
Delta H 5071 mJ
208.1 J/g
Peak 393.8°C
7.9 mW
Integration
Delta H23647 mJ
970.5 J/g
Peak 103.3°C
-84.6 mW
100.
200.
300.
400.
°C


S96T001553 DUP N2
File: 00044.001
DSC METTLER
10-Apr-96
6.540 mg
Rate: 10.0 °C/min
Ident: 0.0
222-S Laboratory
Integration
Delta H 5682 mJ
665.4 J/g
Peak 90.4°C
-14.6 mW
exo^
10. mW
Integration
Delta H 444 mJ
52.0 J/g
Peak 347.1°C
-3.8 mW
Integration
Delta H 1434 mJ
167.9 J/g
Peak 429.7°C
2.6 mW
100.
200.
300.
400.
°C

LABCORE Data Entry Template for Worklist# 7511

Analyst: PJM **Instrument:** DSC0 3 **Book #** 12N14B

Method: LA-514-114 Rev/Mod C-1

Worklist Comment: C-106 FOR DSC PLEASE RUN UNDER N2 RTS!

GROUP	PROJECT	S TYPE	SAMPLE#	R	A	-------TEST------	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD				DSC-03	SOLID	28.45	28.53	N/A	Joules/g
96000174	C-106 GRAB	2 SAMPLE	S96T001559	0		DSC-03	SOLID	N/A	Ø		Joules/g
96000174	C-106 GRAB	3 DUP	S96T001559	0		DSC-03	SOLID	Ø	Ø	N/A	Joules/g
96000174	C-106 GRAB	4 SAMPLE	S96T001685	0		DSC-03	SOLID	N/A	Ø		Joules/g
96000174	C-106 GRAB	5 DUP	S96T001685	0		DSC-03	SOLID	Ø	Ø	N/A	Joules/g

Final page for worklist # 7511

See attached for signatures

Analyst Signature **Date** 4-15-96 BDV

Verified by Blandina Valenzuela 4-15-96

Analyst Signature **Date**

Data Entry Comments: S96T001559 produced two endotherms, one at 106.98°C with a delta H of 525.54 J/g and second at 312.5°C with a delta H of 72.61 J/g.
S96T001685 produced two endotherms, one at 120.2°C with a delta H of ~~525~~ 816.1 J/g and second at 322.74°C with a delta H of 49.62 J/g. 4/15 BDV

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

LABCORE Data Entry Template for Worklist# 7511

Analyst: RJ McCown **Instrument:** DSC0 _____ **Book #** 12N14-B

Method: LA-514-~~113~~ 114 Rev/Mod C-1
RJM 4/14/96

Worklist Comment: C-106 FOR DSC PLEASE RUN UNDER N2 RTS!

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	STD				DSC-01	SOLID			N/A	Joules/g
96000174	C-106 GRAB	2	SAMPLE	S96T001685	0		DSC-01	SOLID	N/A			Joules/g
96000174	C-106 GRAB	3	DUP	S96T001685	0		DSC-01	SOLID			N/A	Joules/g
96000174	C-106 GRAB	4	SAMPLE	S96T001559	0		DSC-01	SOLID	N/A			Joules/g
96000174	C-106 GRAB	5	DUP	S96T001559	0		DSC-01	SOLID			N/A	Joules/g

Final page for worklist # 7511

RJ McCown 4/14/96
Analyst Signature **Date**

Analyst Signature **Date**

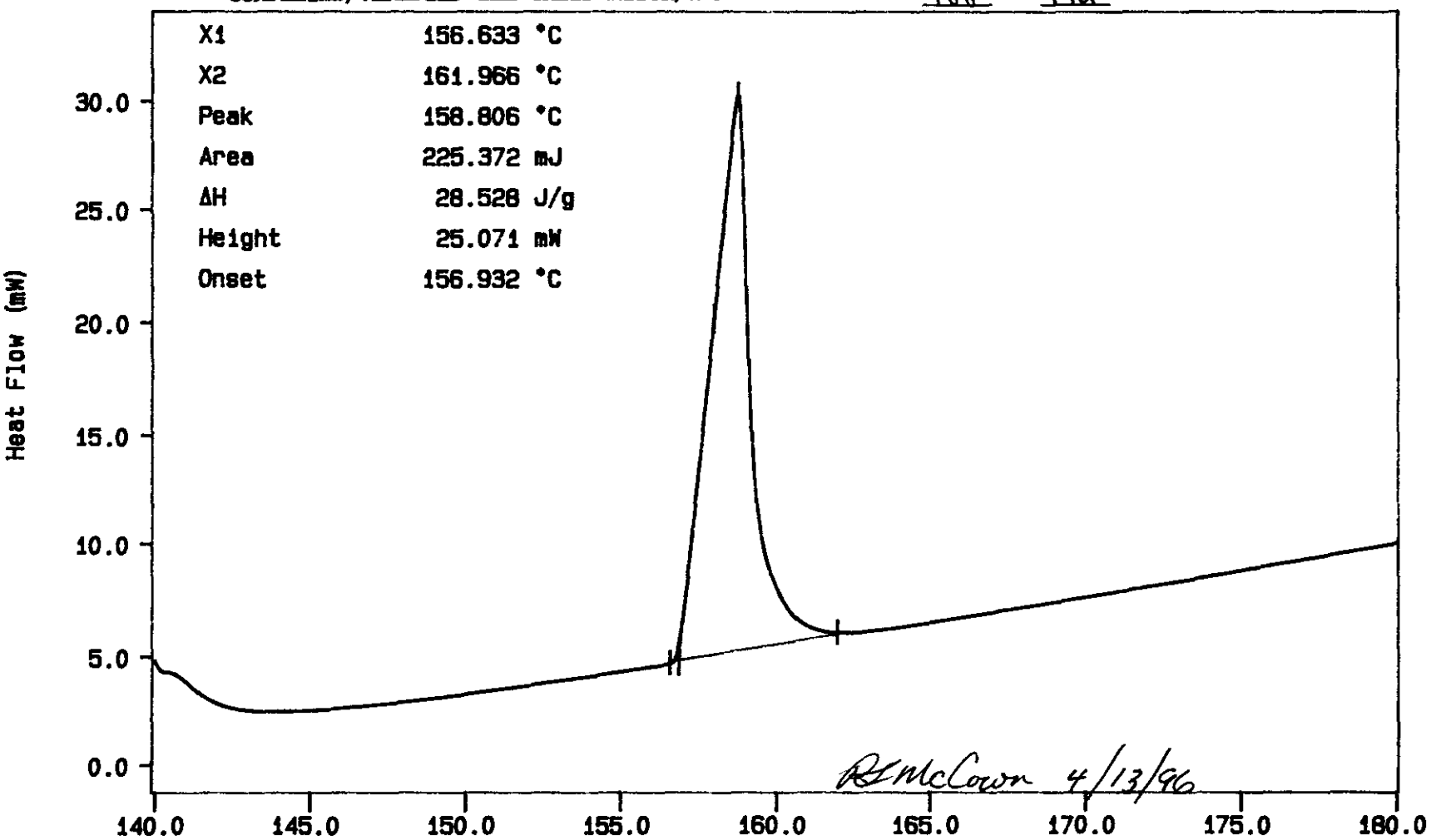
Other instrument was used.
4-15-96
BDV

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

Curve 1: DSC
File info: IND041301 Sat Apr 13 19:44:02 1996
Sample Weight: 7.900 mg
12N14-B INDIUM AT 10C\MIN

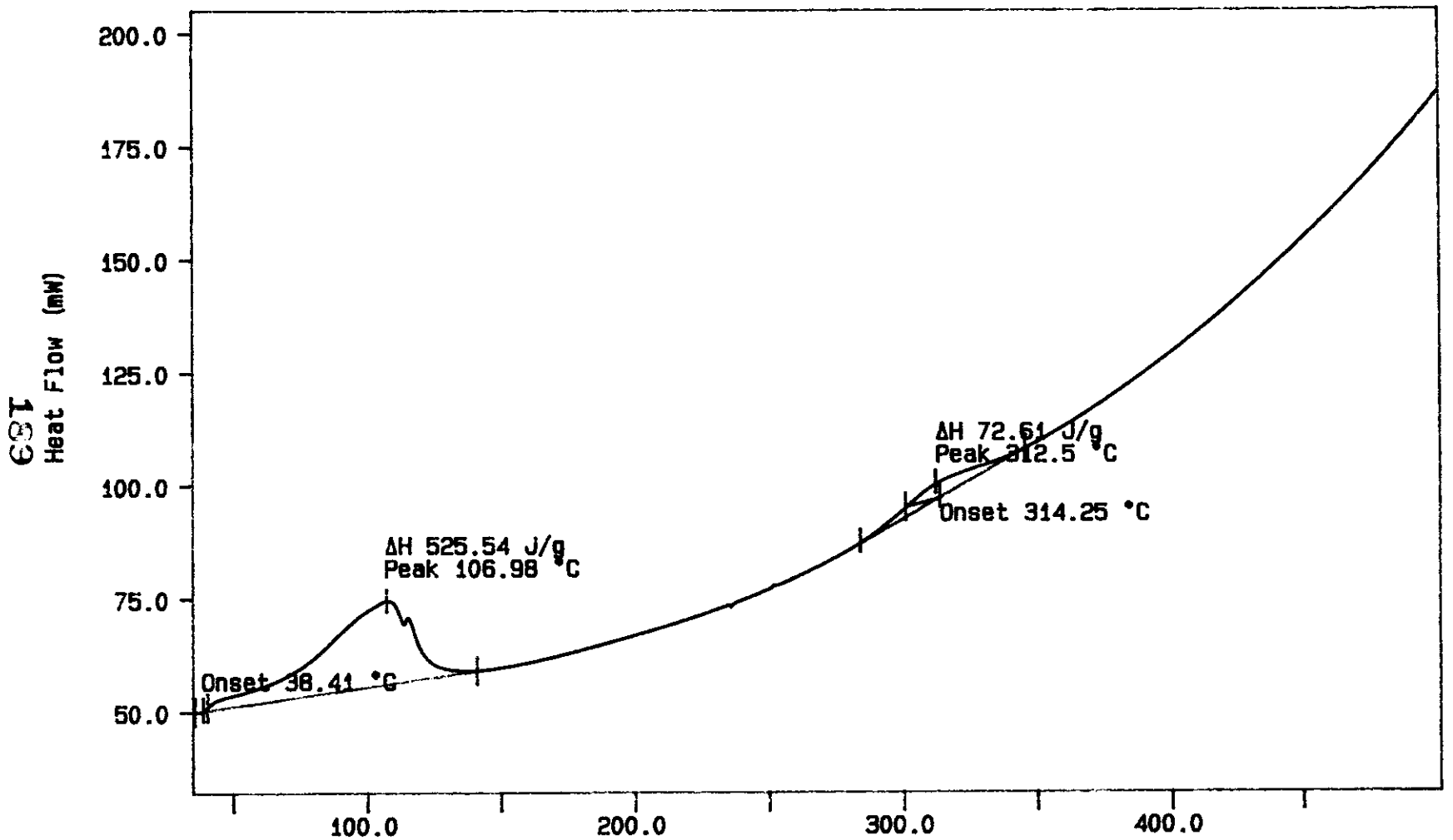
SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 188 TO 192.



N2, EXOTHERM DOWN
TEMP1: 140.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 180.0 C

PJ MCCOWN
PERKIN-ELMER
7 Series Thermal Analysis System
Sat Apr 13 19:53:20 1996

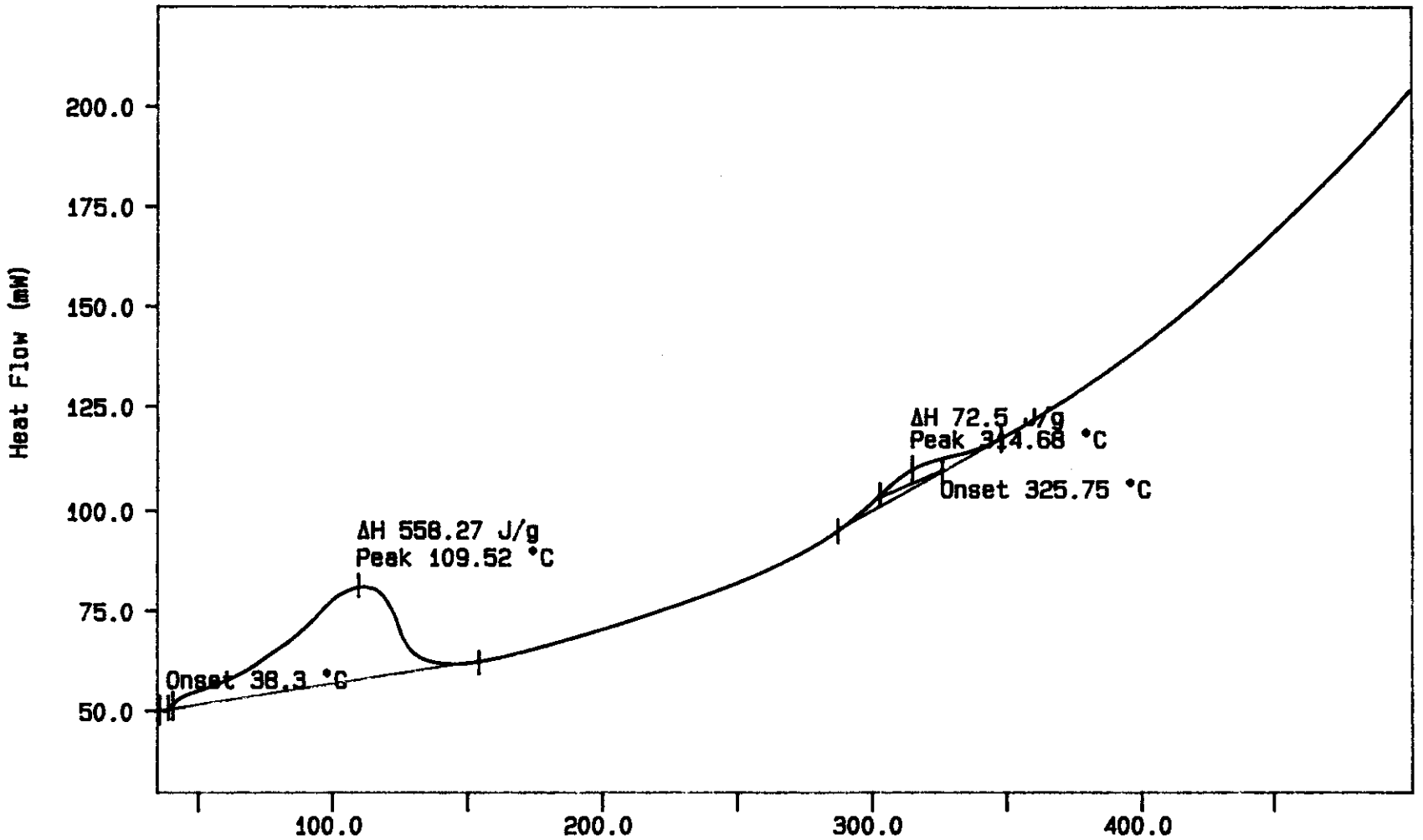
Curve 1: DSC
File info: SAM041402 Sun Apr 14 02:09:14 1996
Sample Weight: 8.550 mg
S96T001559 SAM



exotherm down, N2 purge gas
TEMP1: 35.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 600.0 C

PJ MCCOWN
PERKIN-ELMER
7 Series Thermal Analysis System
Sun Apr 14 02:10:07 1996

Curve 1: DSC
File info: SAM041403 Sun Apr 14 03:20:32 1996
Sample Weight: 11.920 mg
S96T001559 DUP

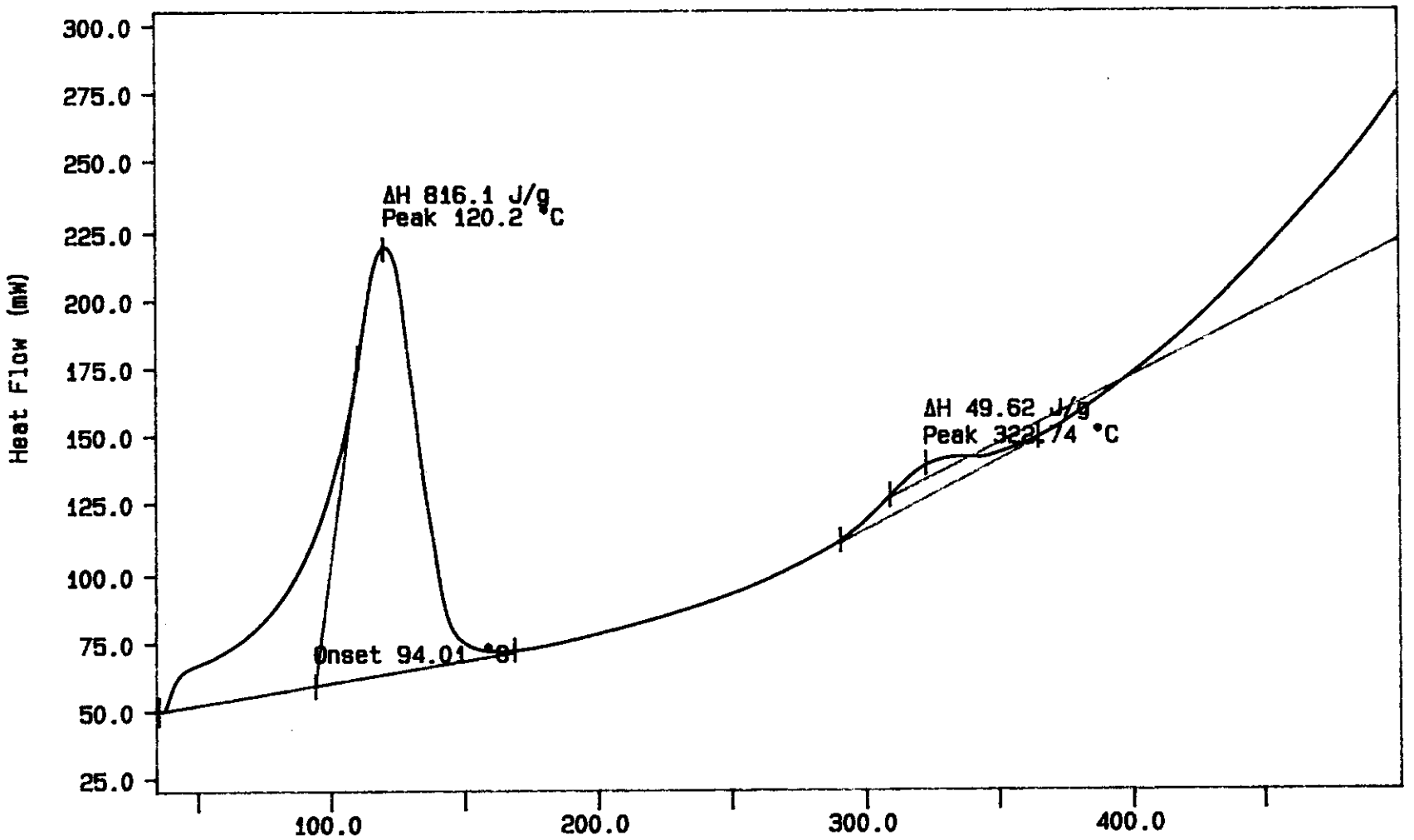


exotherm down, N2 purge gas

TEMP1: 35.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 500.0 C

PJ MCCOWN
PERKIN-ELMER
7 Series Thermal Analysis System
Sun Apr 14 03:21:20 1996

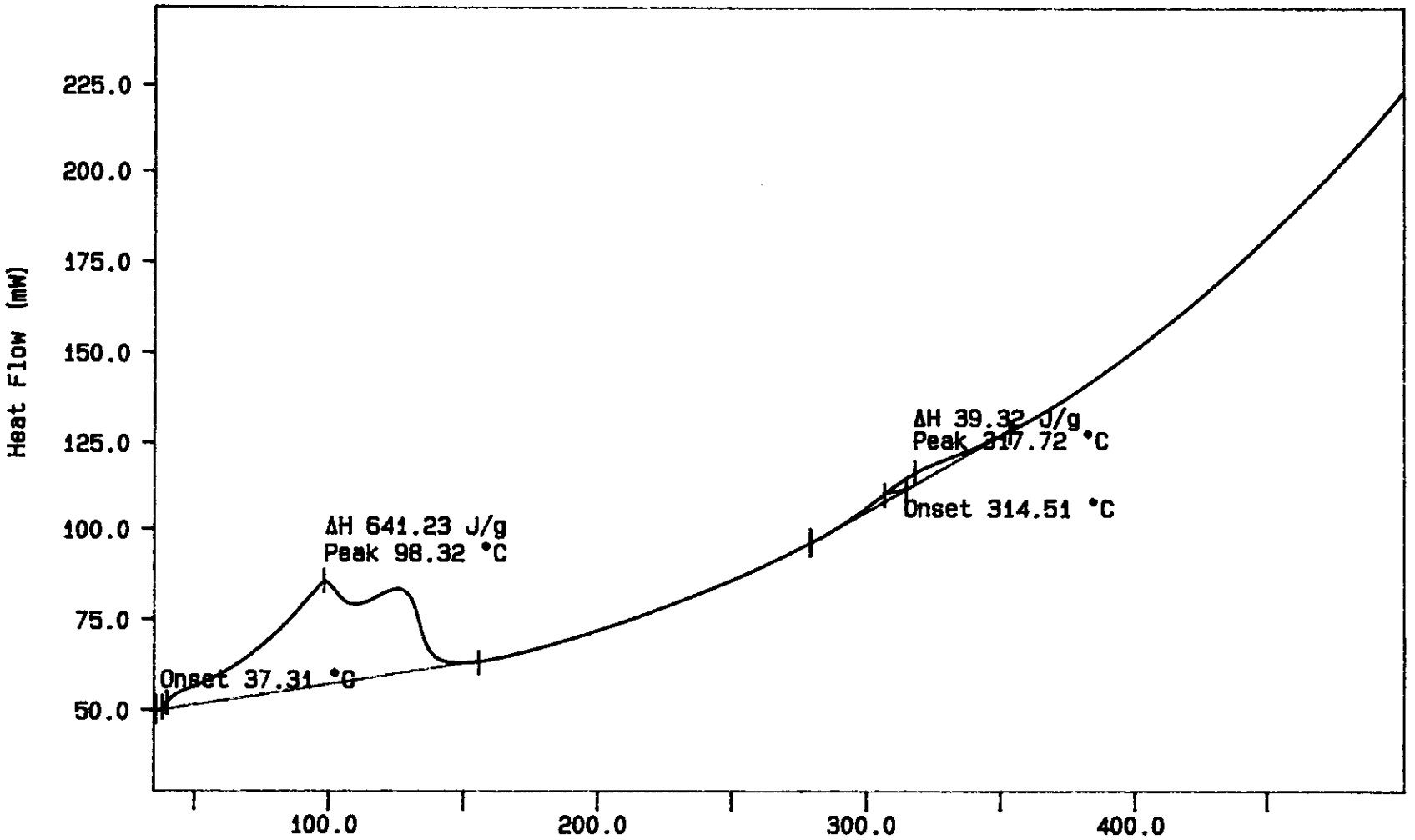
Curve 1: DSC
File info: SAM041301 Sat Apr 13 22:15:13 1996
Sample Weight: 46.030 mg
S96T001685 SAM



exotherm down, N2 purge gas
TEMP1: 35.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 500.0 C

PJ MCCOWN
PERKIN-ELMER
7 Series Thermal Analysis System
Sat Apr 13 22:28:57 1996

Curve 1: DSC
File info: SAM041302 Sat Apr 13 23:30:43 1996
Sample Weight: 15.050 mg
S96T001685 DUP



exotherm down, N2 purge gas

TEMP1: 35.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 600.0 C

PJ MCCOWN
PERKIN-ELMER
7 Series Thermal Analysis System
Sat Apr 13 23:35:51 1996

worklistrpt Version 2.1 05/15/95
04/09/96 10:45

LABCORE Data Entry Template for Worklist# 7515

Analyst: RK **Instrument:** DSC0 1 **Book #** 12N 14-B

Method: LA-514-113 Rev/Mod C-1

Worklist Comment: C-106 FOR DSC PLEASE RUN UNDER N2

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	STD				DSC-01	SOLID	28.45	28.7	N/A	Joules/g
96000174	C-106 GRAB	2	SAMPLE	S96T001034	0		DSC-01	SOLID	N/A	87.4		Joules/g
96000174	C-106 GRAB	3	DUP	S96T001034	0		DSC-01	SOLID	87.4	66.7	N/A	Joules/g

Final page for worklist # 7515

Rob King 4/12/96
Analyst Signature **Date**

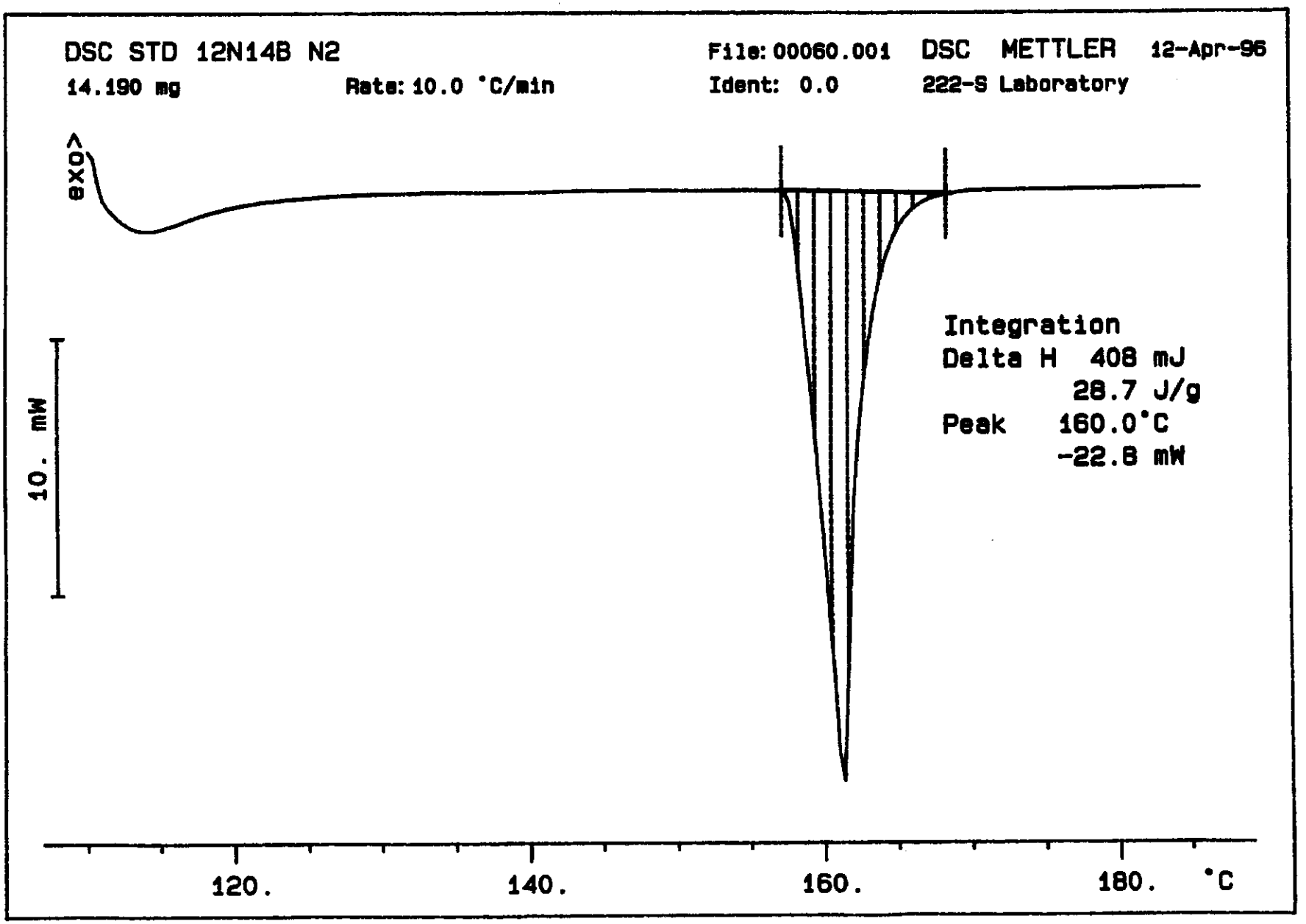
Gary Hammond 4/18/96
Analyst Signature **Date**

Verified by Blandina Valenzuela
4-22-96

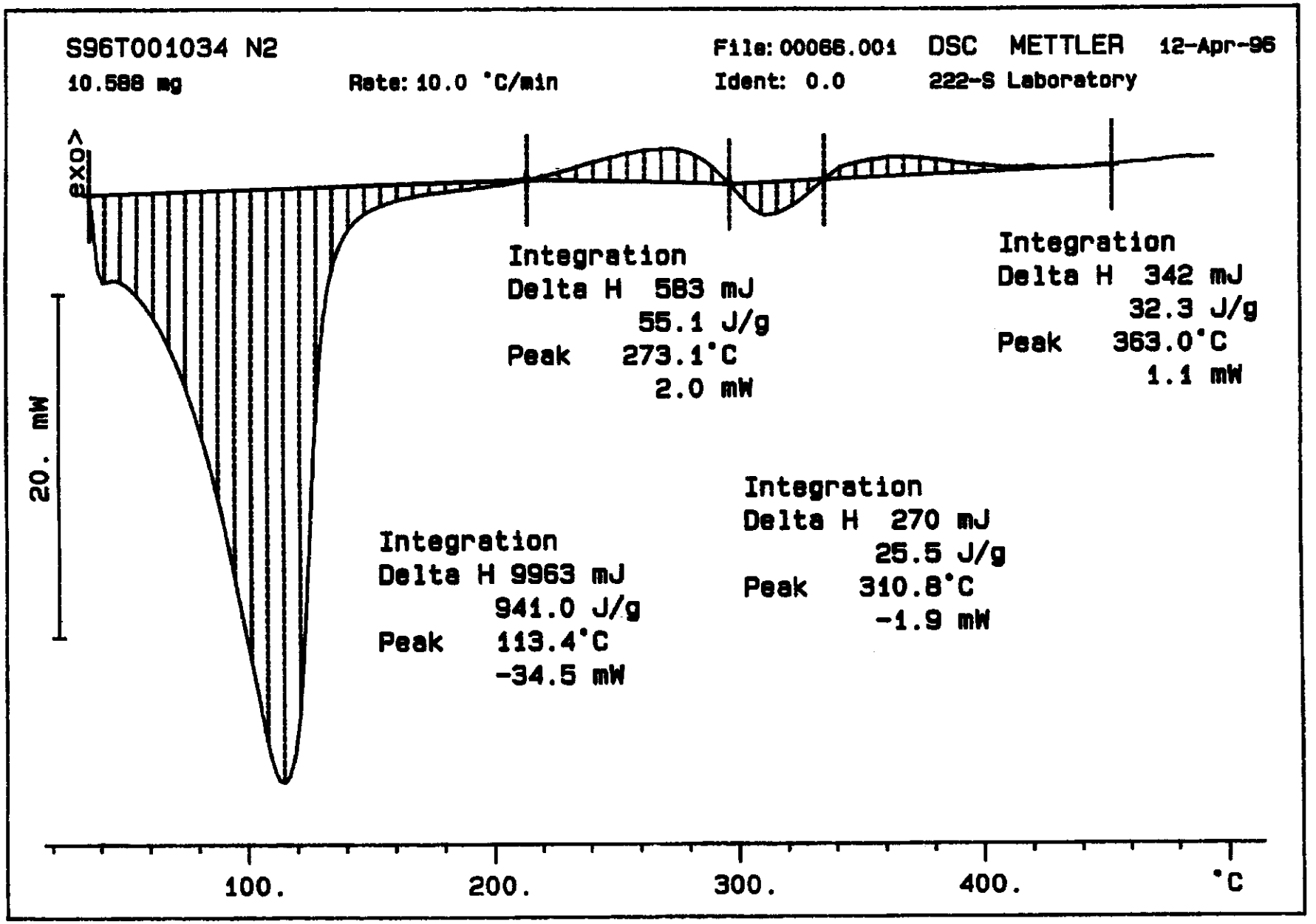
Data Entry Comments: Sample produced two endotherms, one at 113.4°C with a delta H of 941.0 J/g and second at 310.8°C with a delta H of 25.5 J/g.

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

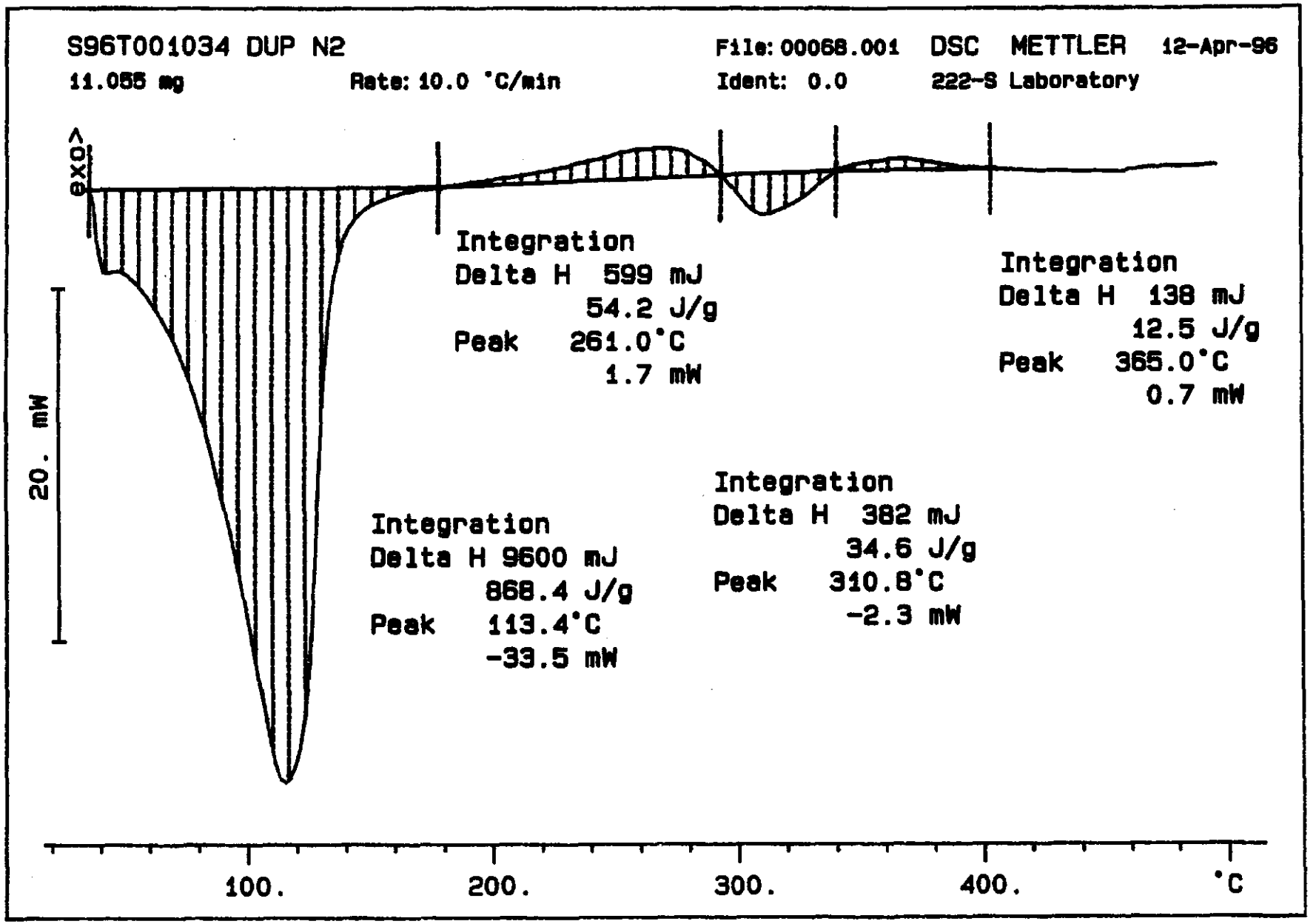
SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 194 TO 196.



Rob Kimp 4/12/96



Rob Thomas 4/12/96



Noh King 4/12/96

LABCORE Data Entry Template for Worklist# 7555

Analyst: EAL **Instrument:** DSC0 1 **Book #** 12N14 B

Method: LA-514-113 Rev/Mod ~~B-1~~ C-1 4-23-96 BDV

Worklist Comment: C-106 Grab. Run under nitrogen. new

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	STD				DSC-01	LIQUID	28.45	28.9 *	N/A	Joules/g
96000174	C-106 GRAB	2	SAMPLE	S96T001681	0		DSC-01	LIQUID	N/A	5.5		Joules/g
96000174	C-106 GRAB	3	DUP	S96T001681	0		DSC-01	LIQUID	5.5	5.5	N/A	Joules/g

Final page for worklist # 7555

A Lankhl 04-13-96
Analyst Signature **Date**

Gary Hammel 4-18-96
Analyst Signature **Date**

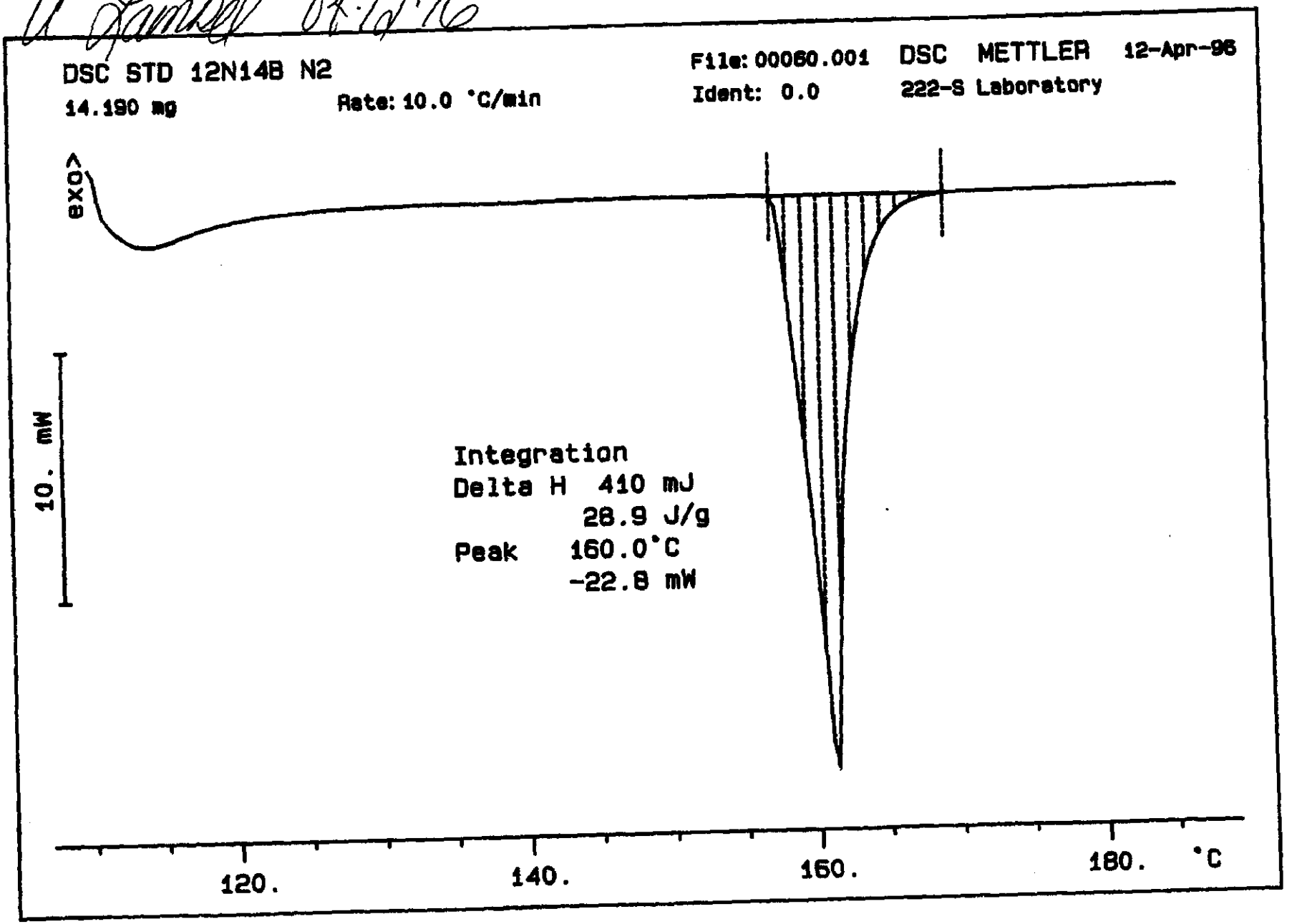
Verified by Blandina Valenzuela 4/22/96

Data Entry Comments: S96T001681 produced an endotherm with a delta H of 1451.6 J/g

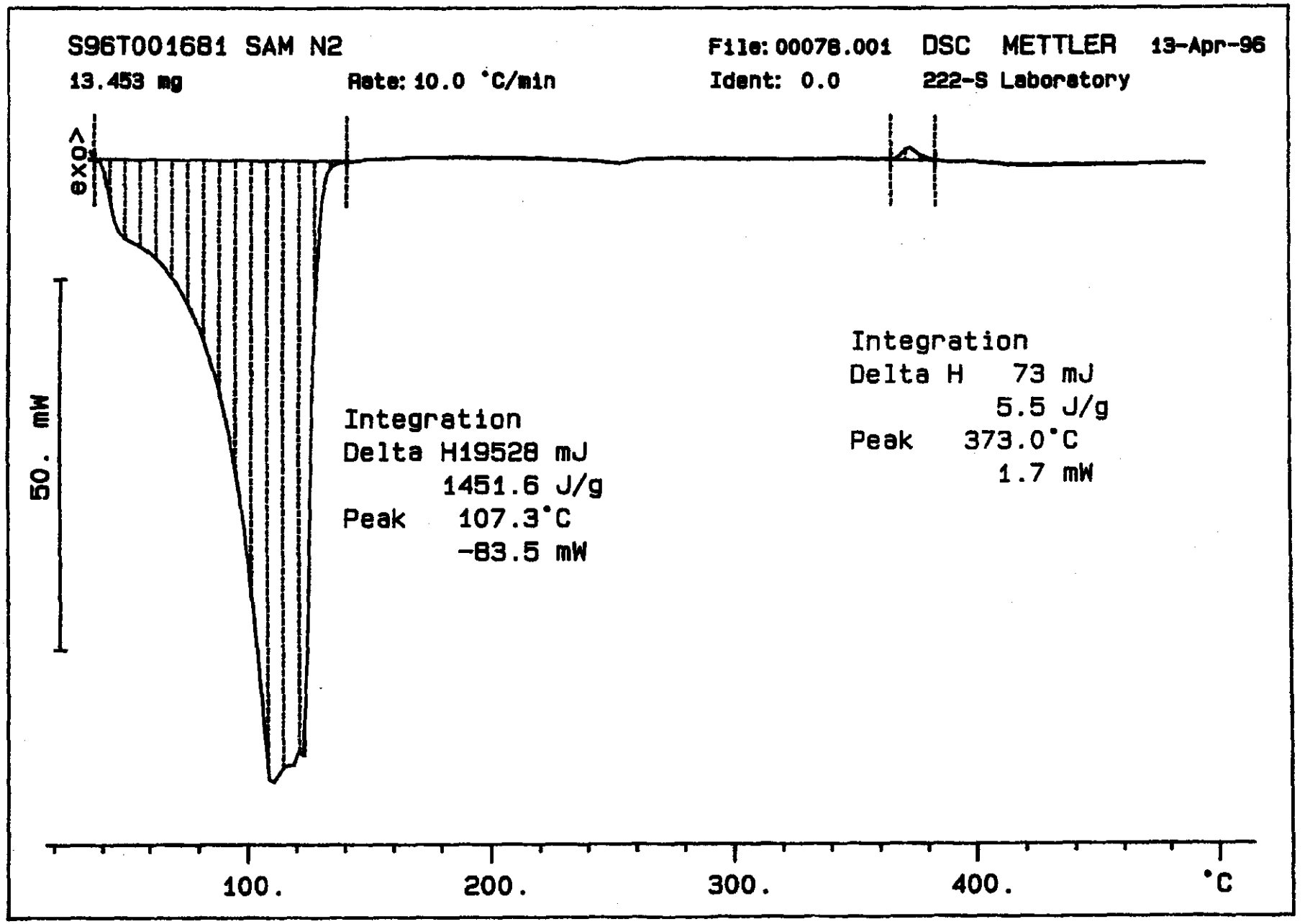
Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

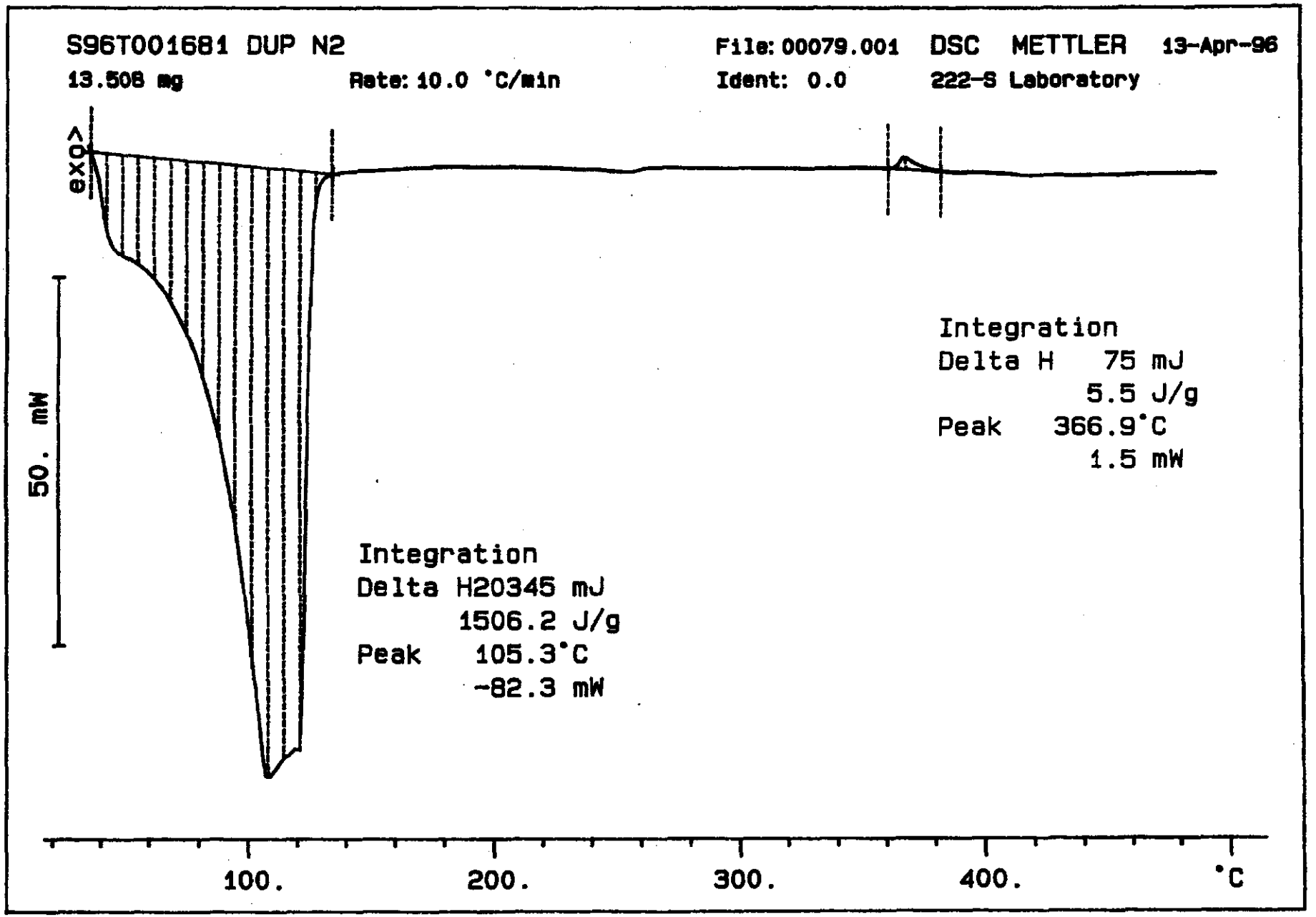
SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 198 TO 200.

A Lambell 04-17-96



04/17/96 14:03 ☎509 372 2929 WESTINGHOUSE →→→ MU-924 200W 000


S96T001681 SAM N2
13.453 mg
Rate: 10.0 °C/min
File: 00078.001
Ident: 0.0
DSC METTLER
222-S Laboratory
13-Apr-96
exo>
50. mW
Integration
Delta H19528 mJ
1451.6 J/g
Peak 107.3°C
-83.5 mW
Integration
Delta H 73 mJ
5.5 J/g
Peak 373.0°C
1.7 mW
100.
200.
300.
400.
°C


S96T001681 DUP N2
13.508 mg
Rate: 10.0 °C/min
File: 00079.001
Ident: 0.0
DSC METTLER
222-S Laboratory
13-Apr-96
exo>
50. mW
Integration
Delta H20345 mJ
1506.2 J/g
Peak 105.3°C
-82.3 mW
Integration
Delta H 75 mJ
5.5 J/g
Peak 366.9°C
1.5 mW
100.
200.
300.
400.
°C

LABCORE Data Entry Template for Worklist# 7564

Analyst: EAL **Instrument:** DSC0 DSC01 **Book #** 12N14B

Method: LA-514-113 Rev/Mod C.1

Worklist Comment: C-106 GRAB. Run under nitrogen. new

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	-------TEST------	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	STD				DSC-01	SOLID	28.45	31.9	N/A	Joules/g
96000174	C-106 GRAB	2	SAMPLE	S96T001676	0		DSC-01	SOLID	N/A	146.0		Joules/g
96000174	C-106 GRAB	3	DUP	S96T001676	0		DSC-01	SOLID	146.0	137.2	N/A	Joules/g
96000174	C-106 GRAB	4	SAMPLE	S96T001030	0		DSC-01	SOLID	N/A	180.9		Joules/g
96000174	C-106 GRAB	5	DUP	S96T001030	0		DSC-01	SOLID	180.9	258.9	N/A	Joules/g

Final page for worklist # 7564

A Lambel 04.10.96
Analyst Signature **Date**

Analyst Signature **Date**

The sample S96T001676 has an endotherm of 922.3 J/g at 115°C and the dup has 900.3 J/g at 123°C.

S96T001030 has an endotherm 550.4 J/g at 110.9°C; the duplicate has 578.2 J/g at 102°C.

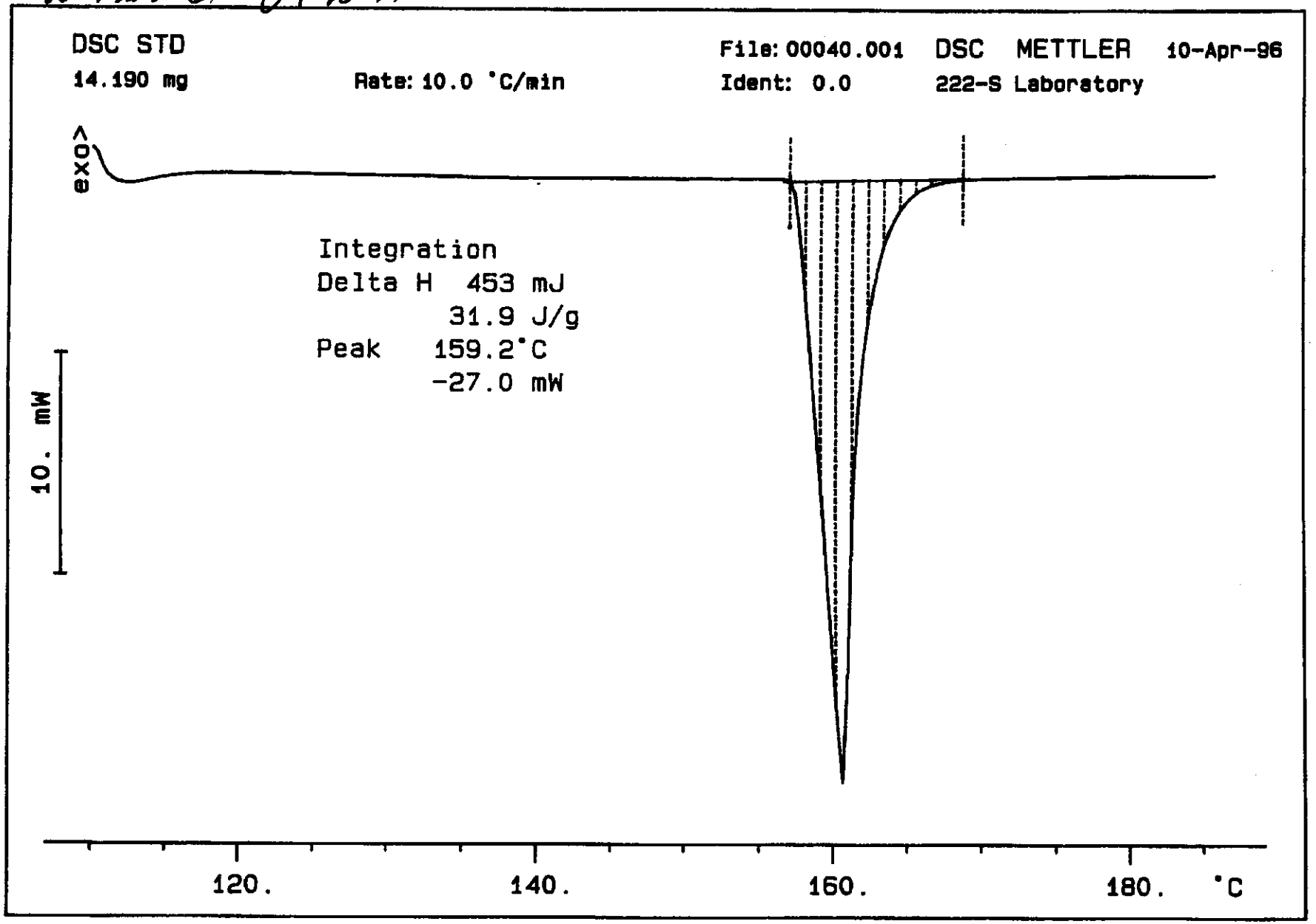
Entered & Reviewed 4/12/96 Jean Fuge

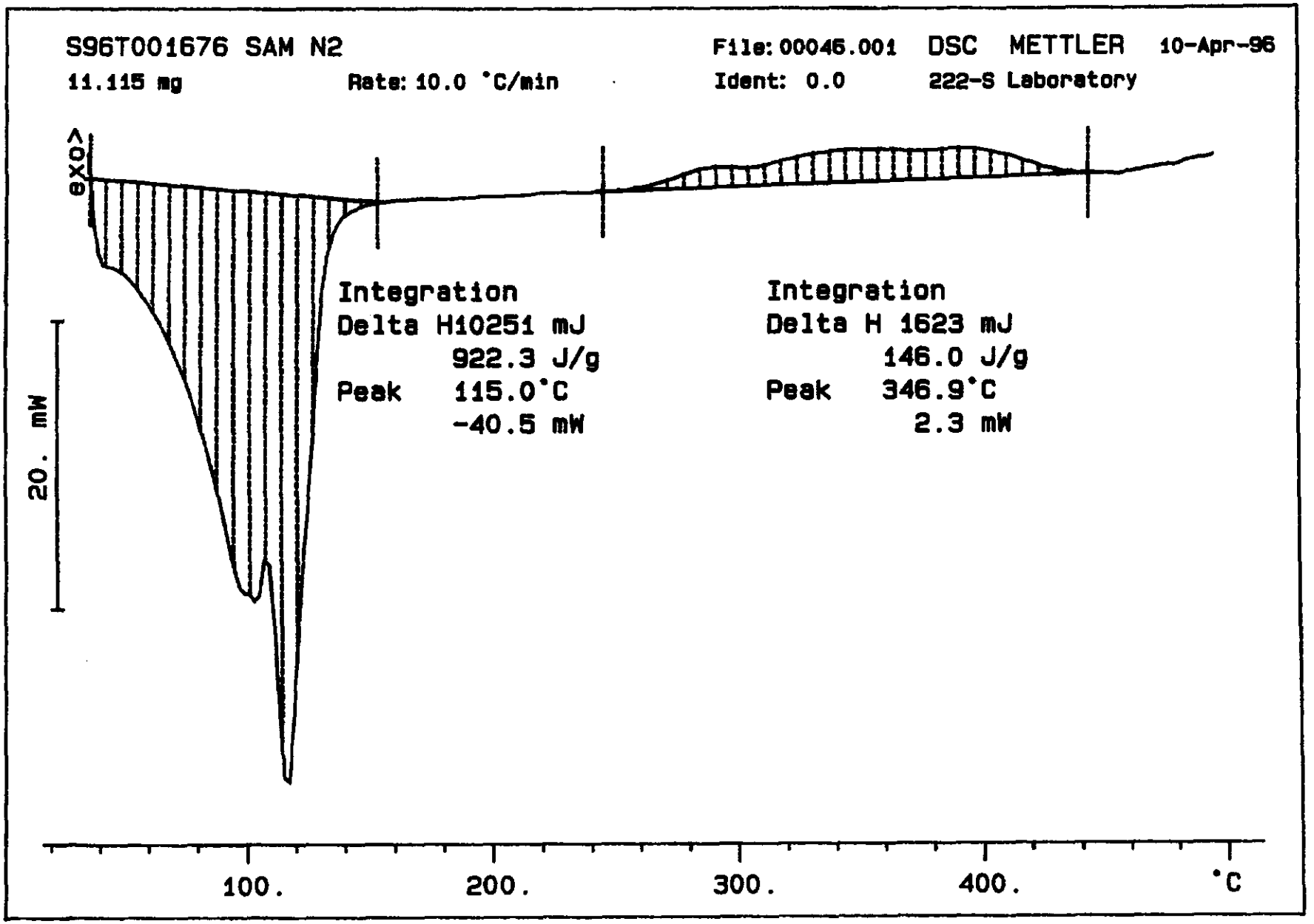
Data Entry Comments:

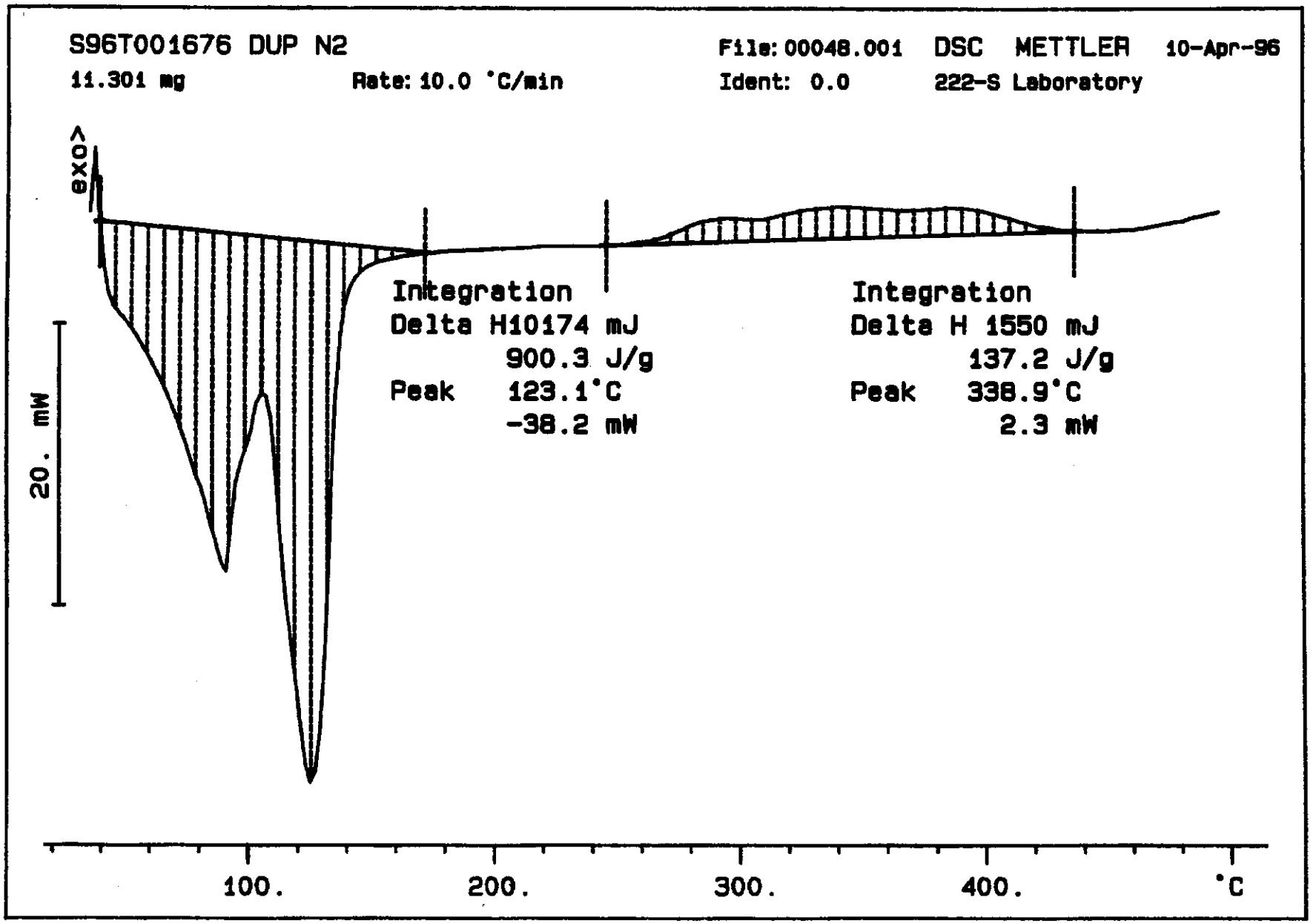
Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

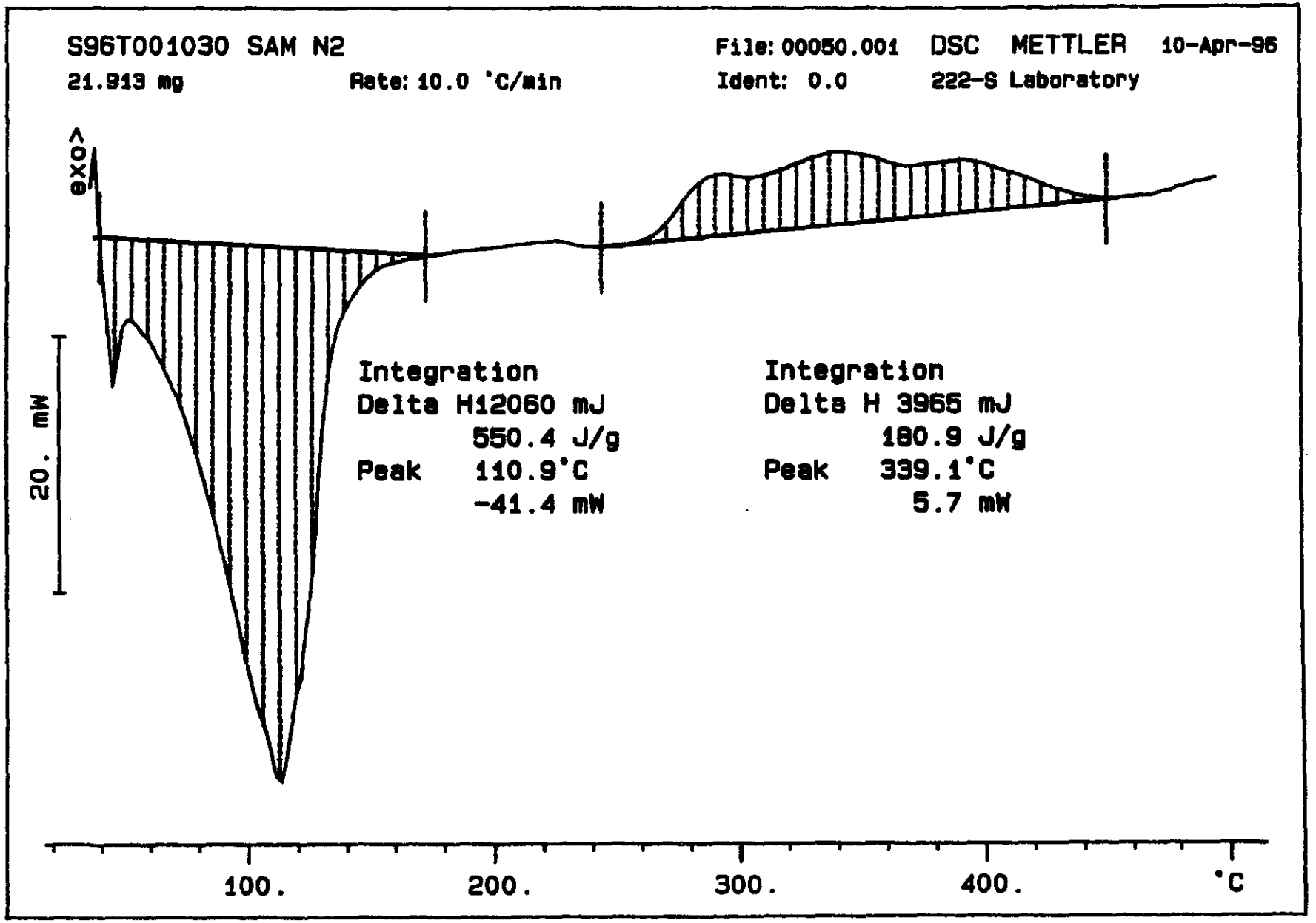
SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 202 TO 206.

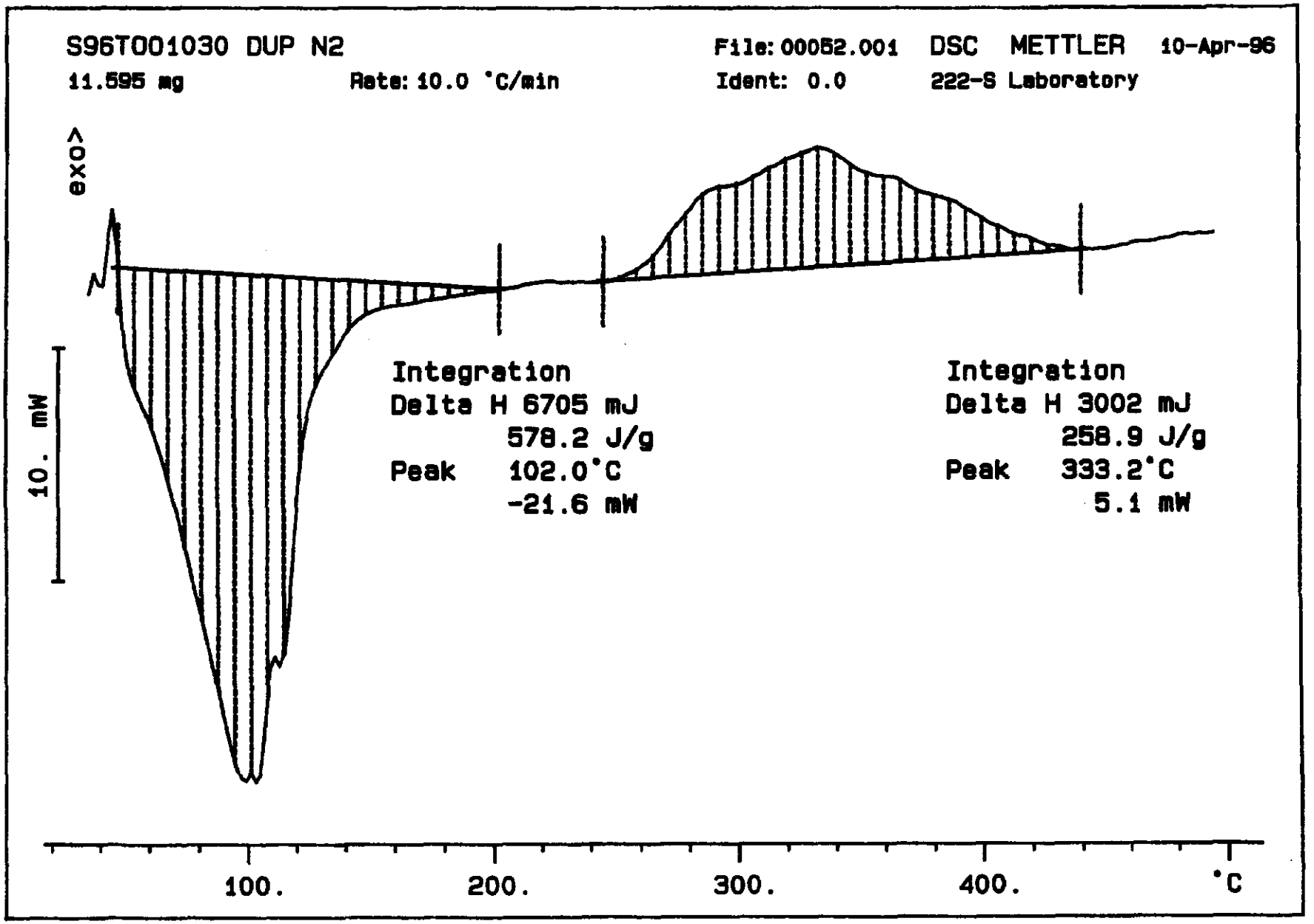
A Lambel 04-10-96




S96T001676 SAM N2
File: 00046.001
DSC METTLER
10-Apr-96
11.115 mg
Rate: 10.0 °C/min
Ident: 0.0
222-S Laboratory
exo>
Integration
Delta H10251 mJ
922.3 J/g
Peak 115.0°C
-40.5 mW
Integration
Delta H 1623 mJ
146.0 J/g
Peak 346.9°C
2.3 mW
20. mW
100.
200.
300.
400.
°C


S96T001676 DUP N2
11.301 mg
Rate: 10.0 °C/min
File: 00048.001
Ident: 0.0
DSC METTLER
222-S Laboratory
10-Apr-96
<exo
20. mW
Integration
Delta H10174 mJ
900.3 J/g
Peak 123.1°C
-38.2 mW
Integration
Delta H 1550 mJ
137.2 J/g
Peak 338.9°C
2.3 mW
100.
200.
300.
400.
°C


S96T001030 SAM N2
21.913 mg
Rate: 10.0 °C/min
File: 00050.001
Ident: 0.0
DSC METTLER
222-S Laboratory
10-Apr-96
exo>
20. mW
Integration
Delta H12060 mJ
550.4 J/g
Peak 110.9°C
-41.4 mW
Integration
Delta H 3965 mJ
180.9 J/g
Peak 339.1°C
5.7 mW
100.
200.
300.
400.
°C


S96T001030 DUP N2
11.595 mg
Rate: 10.0 °C/min
File: 00052.001
Ident: 0.0
DSC METTLER
222-S Laboratory
10-Apr-96
exo>
10. mW
Integration
Delta H 6705 mJ
578.2 J/g
Peak 102.0°C
-21.6 mW
Integration
Delta H 3002 mJ
258.9 J/g
Peak 333.2°C
5.1 mW
100.
200.
300.
400.
°C

LABCORE Data Entry Template for Worklist# 7781

Analyst: BDV **Instrument:** DSC01 **Book #** —

Method: LA-514-113 Rev/Mod —

Worklist Comment: Dry DSC for C-106 liquids. bdv

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
96000082	C-106 GRAB	1	SAMPLE	S96T000545	0		DSC-02	LIQUID	N/A	Ø		Joules/g Dry
96000082	C-106 GRAB	2	DUP	S96T000545	0		DSC-02	LIQUID	Ø	Ø	N/A	Joules/g Dry
96000082	C-106 GRAB	3	SAMPLE	S96T001548	0		DSC-02	LIQUID	N/A	Ø		Joules/g Dry
96000082	C-106 GRAB	4	DUP	S96T001548	0		DSC-02	LIQUID	Ø	Ø	N/A	Joules/g Dry
96000082	C-106 GRAB	5	SAMPLE	S96T000563	0		DSC-02	LIQUID	N/A	Ø		Joules/g Dry
96000082	C-106 GRAB	6	DUP	S96T000563	0		DSC-02	LIQUID	Ø	Ø	N/A	Joules/g Dry
96000082	C-106 GRAB	7	SAMPLE	S96T001567	0		DSC-02	LIQUID	N/A	706.4		Joules/g Dry
96000082	C-106 GRAB	8	DUP	S96T001567	0		DSC-02	LIQUID	706.4	467.7	N/A	Joules/g Dry
96000082	C-106 GRAB	9	SAMPLE	S96T000538	0		DSC-02	LIQUID	N/A	Ø		Joules/g Dry
96000082	C-106 GRAB	10	DUP	S96T000538	0		DSC-02	LIQUID	Ø	Ø	N/A	Joules/g Dry
96000174	C-106 GRAB	11	SAMPLE	S96T001553	0		DSC-02	LIQUID	N/A	754.0		Joules/g Dry
96000174	C-106 GRAB	12	DUP	S96T001553	0		DSC-02	LIQUID	754.0	608.3	N/A	Joules/g Dry
96000174	C-106 GRAB	13	SAMPLE	S96T001679	0		DSC-02	LIQUID	N/A	Ø		Joules/g Dry
96000174	C-106 GRAB	14	DUP	S96T001679	0		DSC-02	LIQUID	Ø	Ø	N/A	Joules/g Dry
96000174	C-106 GRAB	15	SAMPLE	S96T001023	0		DSC-02	LIQUID	N/A	Ø		Joules/g Dry
96000174	C-106 GRAB	16	DUP	S96T001023	0		DSC-02	LIQUID	Ø	Ø	N/A	Joules/g Dry
96000174	C-106 GRAB	17	SAMPLE	S96T001566	0		DSC-02	LIQUID	N/A	490.5		Joules/g Dry
96000174	C-106 GRAB	18	DUP	S96T001566	0		DSC-02	LIQUID	490.5	399.3	N/A	Joules/g Dry

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

LABCORE Data Entry Template for Worklist# 7781

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-------TEST------	MATRIX	ACTUAL	FOUND	DL	UNIT

Data entered + verified by

Final page for worklist # 7781

Blandina Valenzuela 4/22/96

Analyst Signature **Date**

Analyst Signature **Date**

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

LABCORE Data Entry Template for Worklist# 7782

Analyst: BDV **Instrument:** DSC01 **Book #** —

Method: LA-514-113 Rev/Mod —

Worklist Comment: Dry DSC for C-106 solids. bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R	A	-------TEST------	MATRIX	ACTUAL	FOUND	DL	UNIT
96000082	C-106 GRAB	1 SAMPLE	S96T000543	0		DSC-02	SOLID	N/A	Ø		Joules/g Dry
96000082	C-106 GRAB	2 DUP	S96T000543	0		DSC-02	SOLID	Ø	Ø	N/A	Joules/g Dry
96000082	C-106 GRAB	3 SAMPLE	S96T000551	0		DSC-02	SOLID	N/A	328.9		Joules/g Dry
96000082	C-106 GRAB	4 DUP	S96T000551	0		DSC-02	SOLID	328.9	320.9	N/A	Joules/g Dry
96000082	C-106 GRAB	5 SAMPLE	S96T000558	0		DSC-02	SOLID	N/A	Ø		Joules/g Dry
96000082	C-106 GRAB	6 DUP	S96T000558	0		DSC-02	SOLID	Ø	Ø	N/A	Joules/g Dry
96000082	C-106 GRAB	7 SAMPLE	S96T000560	0		DSC-02	SOLID	N/A	Ø		Joules/g Dry
96000082	C-106 GRAB	8 DUP	S96T000560	0		DSC-02	SOLID	Ø	Ø	N/A	Joules/g Dry
96000082	C-106 GRAB	9 SAMPLE	S96T000567	0		DSC-02	SOLID	N/A	~~391.6~~ 93.87	7-25-96 BDV 127.5	Joules/g Dry
96000082	C-106 GRAB	10 DUP	S96T000567	0		DSC-02	SOLID	7-25-96 ~~391.6~~ 93.87	~~532.0~~	7-25-96 BDV N/A	Joules/g Dry
96000174	C-106 GRAB	11 SAMPLE	S96T001676	0		DSC-02	SOLID	N/A	242.4		Joules/g Dry
96000174	C-106 GRAB	12 DUP	S96T001676	0		DSC-02	SOLID	242.4	227.8	N/A	Joules/g Dry
96000174	C-106 GRAB	13 SAMPLE	S96T001685	0		DSC-02	SOLID	N/A	Ø		Joules/g Dry
96000174	C-106 GRAB	14 DUP	S96T001685	0		DSC-02	SOLID	Ø	Ø	N/A	Joules/g Dry
96000174	C-106 GRAB	15 SAMPLE	S96T001559	0		DSC-02	SOLID	N/A	Ø		Joules/g Dry
96000174	C-106 GRAB	16 DUP	S96T001559	0		DSC-02	SOLID	Ø	Ø	N/A	Joules/g Dry

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

LABCORE Data Entry Template for Worklist# 7782

GROUP	PROJECT	S TYPE	SAMPLE#	R	A	-------TEST------	MATRIX	ACTUAL	FOUND	DL	UNIT

Data entered + verified by **Final page for worklist # 7782**

Blandina Valenzuela

Analyst Signature **Date** 4/22/96

Analyst Signature **Date**

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

LABCORE Data Entry Template for Worklist# 7985

Analyst: Jds **Instrument:** DSC0 1 **Book #** 12N14-B

Method: LA-514-113 Rev/Mod C-1

Worklist Comment: C-106 DSC RUN UNDER N2. RCJ

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	STD				DSC-01	SOLID	28.45	27.8	N/A	Joules/g
96000174	C-106 GRAB	2	SAMPLE	S96T001674	0		DSC-01	SOLID	N/A	~~33.5~~ 19.7	was 5-21-96	Joules/g
96000174	C-106 GRAB	3	DUP	S96T001674	0		DSC-01	SOLID	19.7	109.6	N/A	Joules/g
96000174	C-106 GRAB	4	TRIPL	S96T001674	0		DSC-01	SOLID	19.7	101.7	N/A	Joules/g
96000082	C-106 GRAB	5	SAMPLE	S96T002021	0		DSC-01	SOLID	N/A	33.5		Joules/g
96000082	C-106 GRAB	6	DUP	S96T002021	0		DSC-01	SOLID	33.5	100.6	N/A	Joules/g

Final page for worklist # 7985

See Attached for Signatures

Analyst Signature **Date** **Analyst Signature** **Date**

Validated by HAnastos 5.22.96

S96T002021 high RPD noted, however, a rerun will not be done unless requested.

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

LABCORE Data Entry Template for Worklist# 7985

Analyst: bds **Instrument:** DSC0 _____ **Book #** _____

Method: LA-514-113 Rev/Mod _____

Worklist Comment: C-106 DSC RUN UNDER N2. RCJ

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	-------TEST------	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	STD				DSC-01	SOLID			N/A	Joules/g
96000174	C-106 GRAB	2	SAMPLE	S96T001674	0		DSC-01	SOLID	N/A			Joules/g
96000174	C-106 GRAB	3	DUP	S96T001674	0		DSC-01	SOLID			N/A	Joules/g
96000082	C-106 GRAB	4	SAMPLE	S96T002021	0		DSC-01	SOLID	N/A			Joules/g
96000082	C-106 GRAB	5	DUP	S96T002021	0		DSC-01	SOLID			N/A	Joules/g

Final page for worklist # 7985

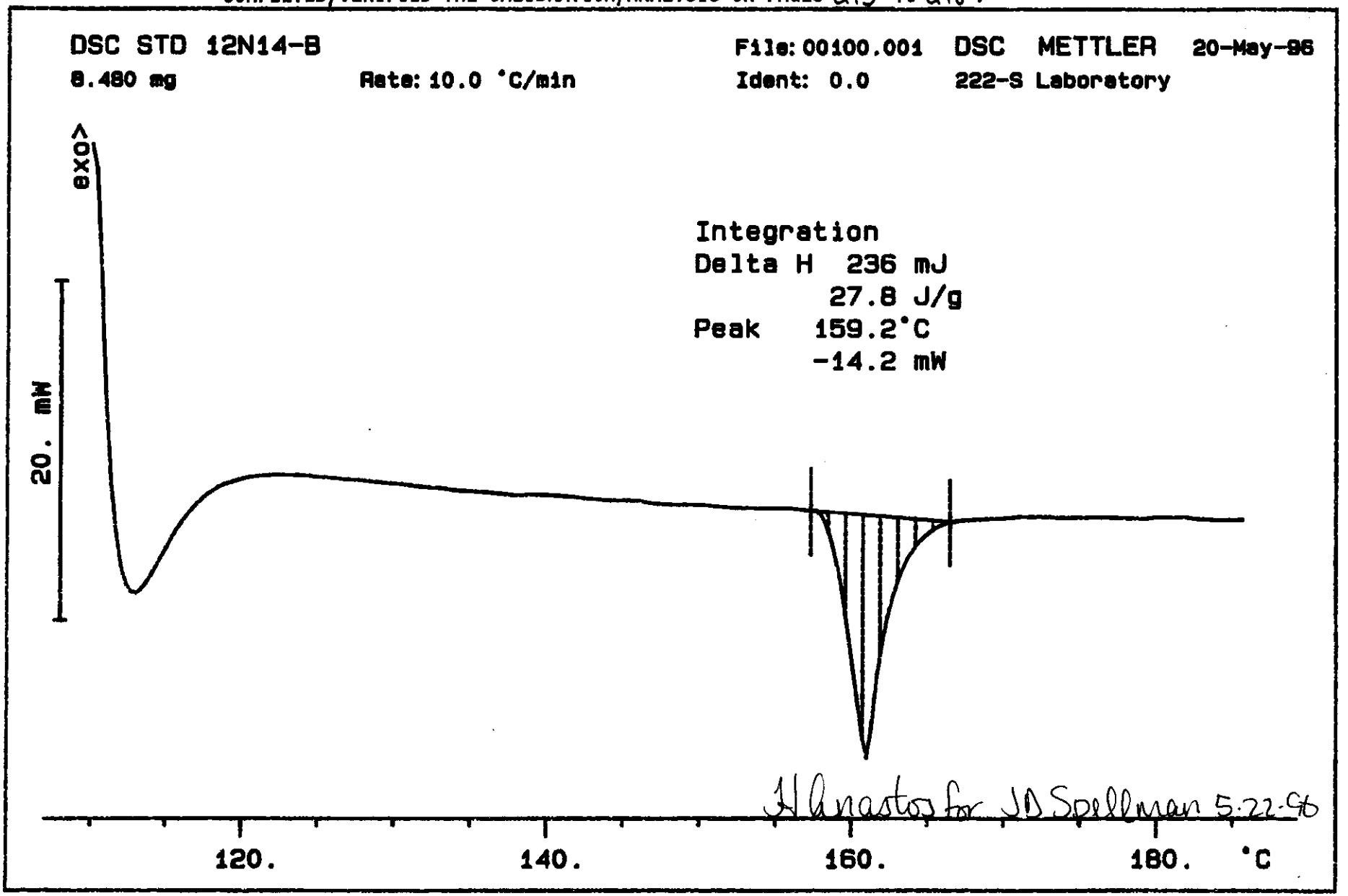
Analyst Signature Date 5-20-96

Analyst Signature Date 5/21/96

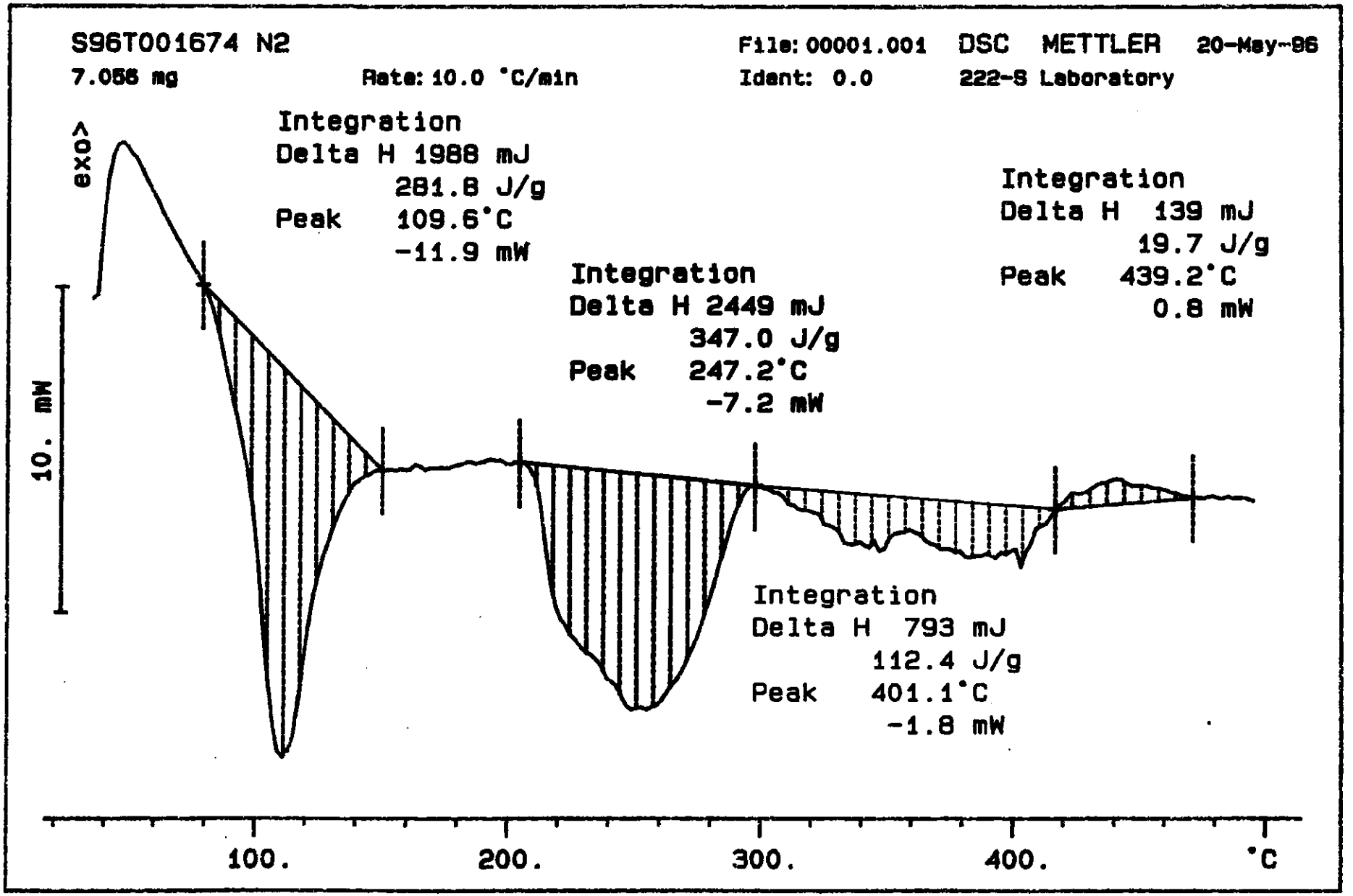
Data Entry Comments: 1674 Trip ran

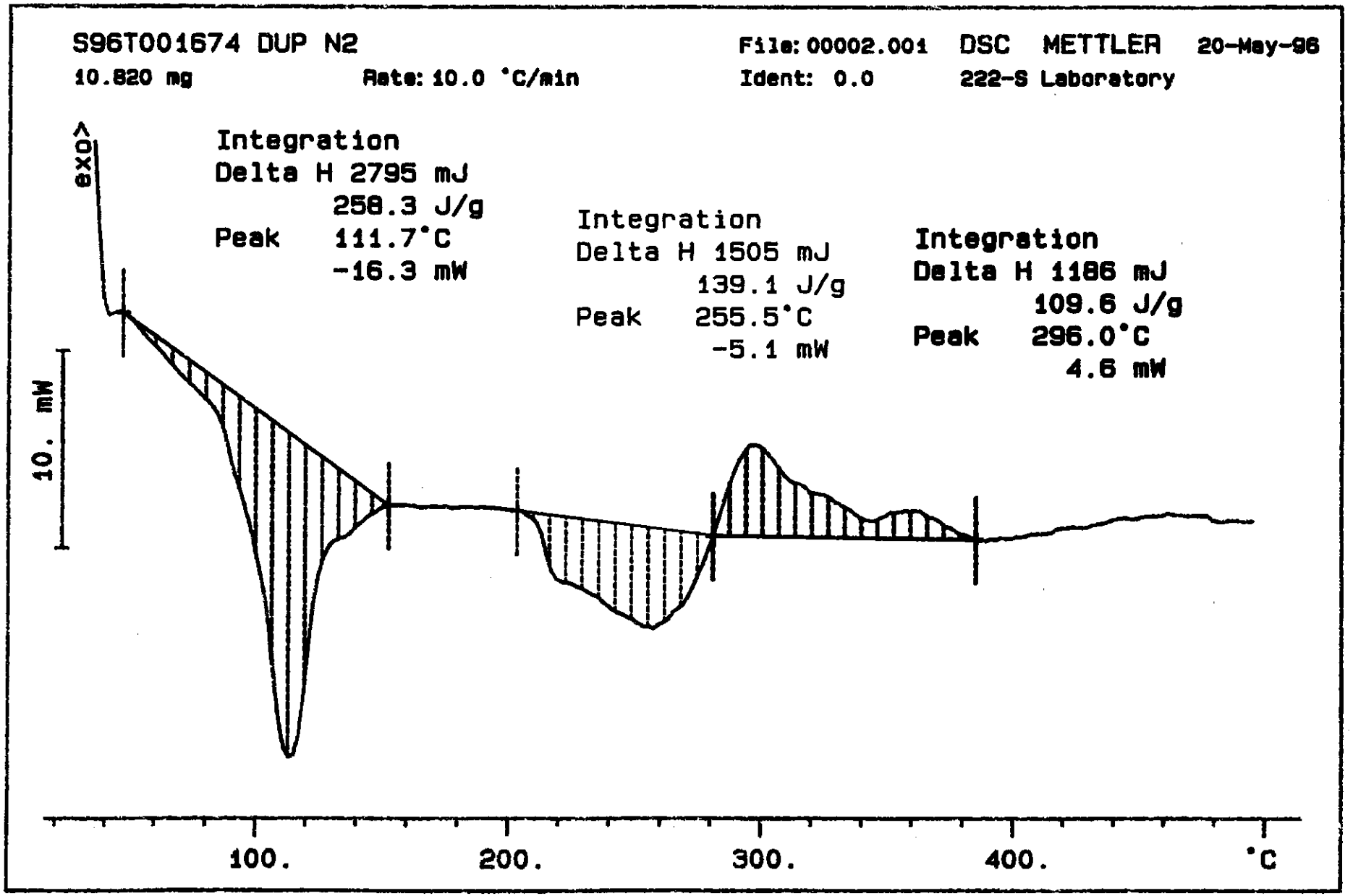
Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

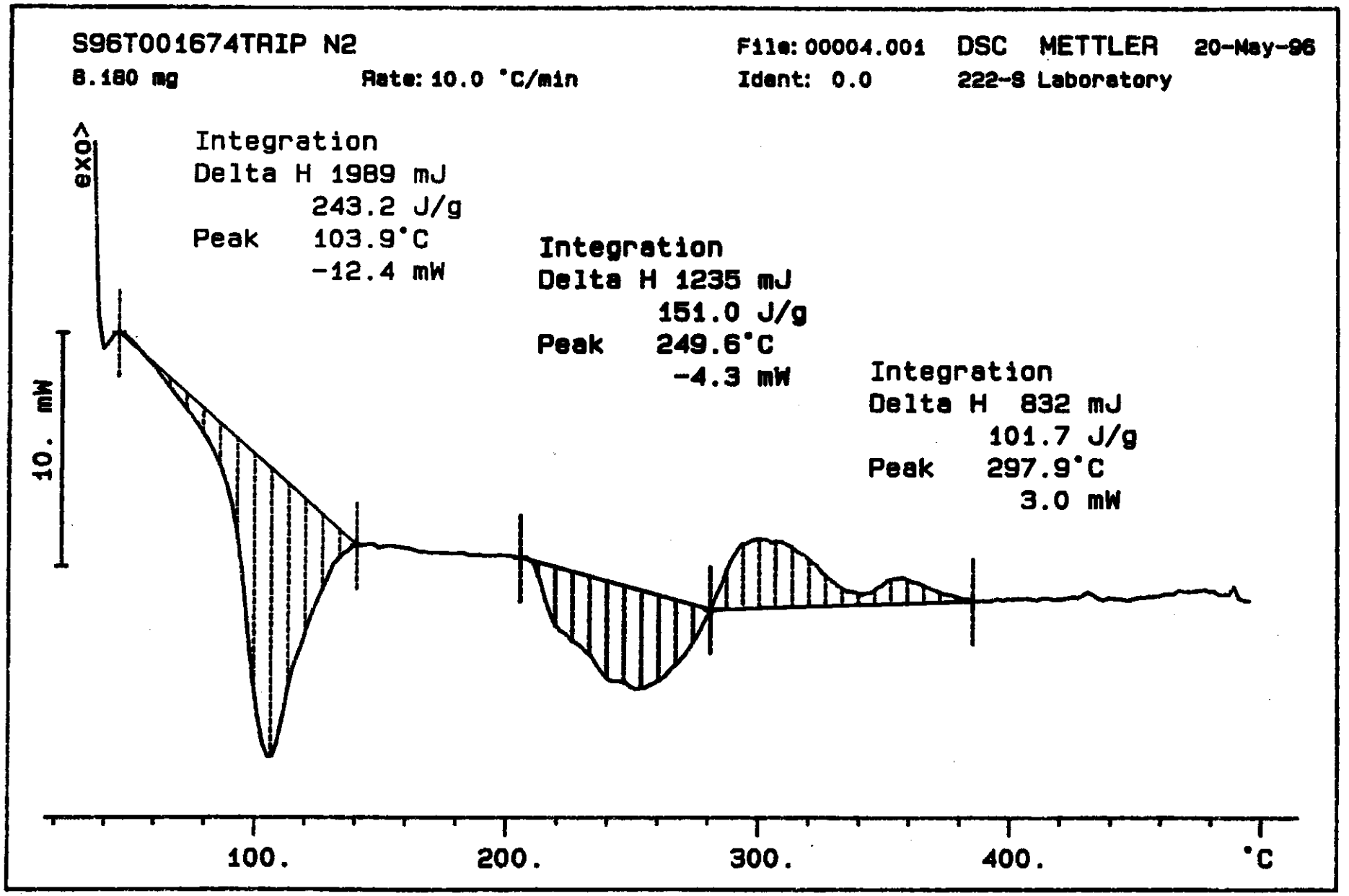
SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 213 TO 218 .

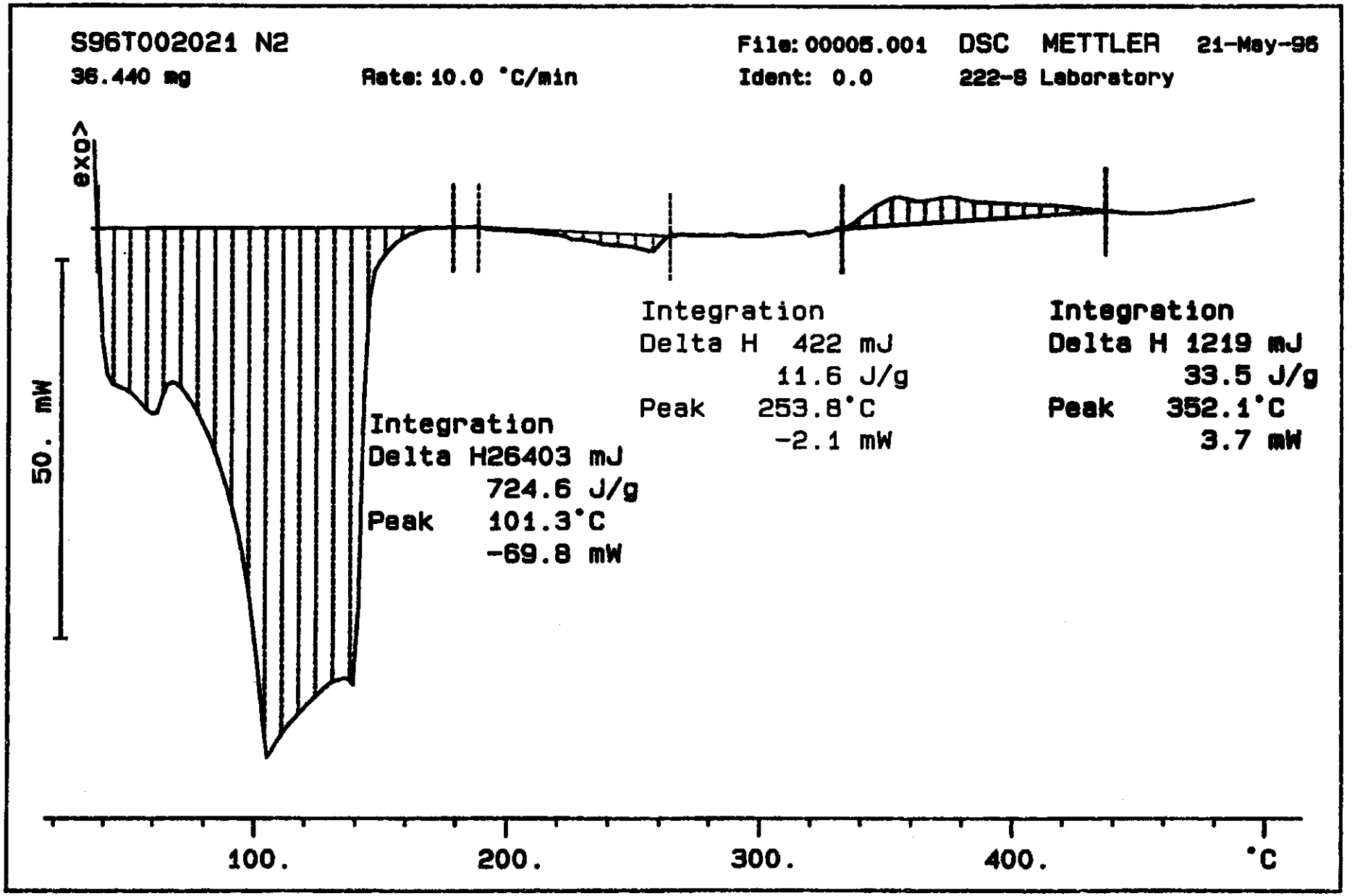


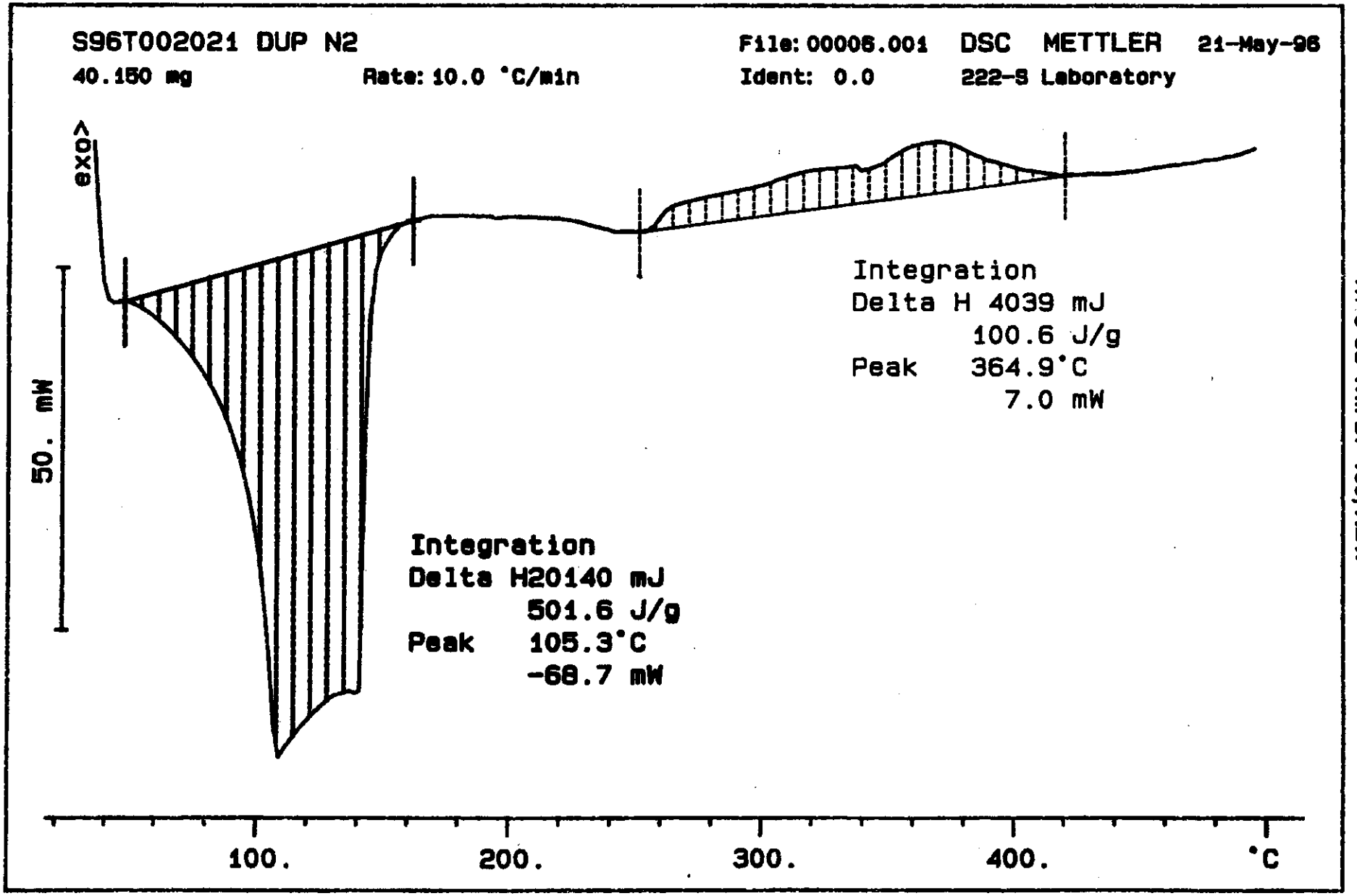
H Anastos for JD Spellman 5-22-96


S96T001674 N2
7.058 mg
Rate: 10.0 °C/min
File: 00001.001
Ident: 0.0
DSC METTLER 20-May-96
222-S Laboratory
<exo
10. mW
Integration
Delta H 1988 mJ
281.8 J/g
Peak 109.6°C
-11.9 mW
Integration
Delta H 2449 mJ
347.0 J/g
Peak 247.2°C
-7.2 mW
Integration
Delta H 139 mJ
19.7 J/g
Peak 439.2°C
0.8 mW
Integration
Delta H 793 mJ
112.4 J/g
Peak 401.1°C
-1.8 mW
100.
200.
300.
400.
°C


S96T001674 DUP N2
10.820 mg
Rate: 10.0 °C/min
File: 00002.001
Ident: 0.0
DSC METTLER
222-S Laboratory
20-May-96
exo
Integration
Delta H 2795 mJ
258.3 J/g
Peak 111.7°C
-16.3 mW
Integration
Delta H 1505 mJ
139.1 J/g
Peak 255.5°C
-5.1 mW
Integration
Delta H 1186 mJ
109.6 J/g
Peak 296.0°C
4.6 mW
10. mW
100.
200.
300.
400.
°C


S96T001674TRIP N2
File: 00004.001
DSC METTLER
20-May-96
8.180 mg
Rate: 10.0 °C/min
Ident: 0.0
222-S Laboratory
<exo
Integration
Delta H 1989 mJ
243.2 J/g
Peak 103.9°C
-12.4 mW
Integration
Delta H 1235 mJ
151.0 J/g
Peak 249.6°C
-4.3 mW
Integration
Delta H 832 mJ
101.7 J/g
Peak 297.9°C
3.0 mW
10. mW
100.
200.
300.
400.
°C


S96T002021 N2
36.440 mg
Rate: 10.0 °C/min
File: 00005.001
DSC METTLER 21-May-96
Ident: 0.0
222-S Laboratory
exo>
.05 mW
Integration
Delta H26403 mJ
724.6 J/g
Peak 101.3°C
-69.8 mW
Integration
Delta H 422 mJ
11.6 J/g
Peak 253.8°C
-2.1 mW
Integration
Delta H 1219 mJ
33.5 J/g
Peak 352.1°C
3.7 mW
100.
200.
300.
400.
°C


S96T002021 DUP N2
40.150 mg
Rate: 10.0 °C/min
File: 00006.001
Ident: 0.0
DSC METTLER
222-S Laboratory
21-May-96
exo>
50. mW
Integration
Delta H 4039 mJ
100.6 J/g
Peak 364.9°C
7.0 mW
Integration
Delta H20140 mJ
501.6 J/g
Peak 105.3°C
-68.7 mW
100.
200.
300.
400.
°C

LABCORE Data Entry Template for Worklist# 7987

Analyst: SMF **Instrument:** DSC0 3 **Book #** 12N14B

Method: LA-514-114 Rev/Mod C-1

Worklist Comment: C-106 DSC RUN UNDER N2. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R	A	-------TEST------	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD				DSC-03	SOLID	28.45	26.18	N/A	Joules/g
96000082	C-106 GRAB	2 SAMPLE	S96T002042	0		DSC-03	SOLID	N/A	Ø		Joules/g
96000082	C-106 GRAB	3 DUP	S96T002042	0		DSC-03	SOLID	Ø	Ø	N/A	Joules/g

Final page for worklist # 7987

See attached for signatures
Analyst Signature **Date** 5-3-96

Linda Coulin 5-7-96
Analyst Signature **Date**

Verified/Validated by Blandina Valenzuela BDV

Data Entry Comments: Sample produced an endotherm at 124.4°C with a delta H of 1069.4J/g

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

LABCORE Data Entry Template for Worklist# 7987

Analyst: SMF **Instrument:** DSC0 _____ **Book #** 12N14B

Method: LA-514-113 Rev/Mod _____

Worklist Comment: C-106 DSC RUN UNDER N2. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R	A	-------TEST------	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD				DSC-01	SOLID			N/A	Joules/g
96000082	C-106 GRAB	2 SAMPLE	S96T002042	0		DSC-01	SOLID	N/A			Joules/g
96000082	C-106 GRAB	3 DUP	S96T002042	0		DSC-01	SOLID			N/A	Joules/g

Final page for worklist # 7987

S M Fulton 4-29-96

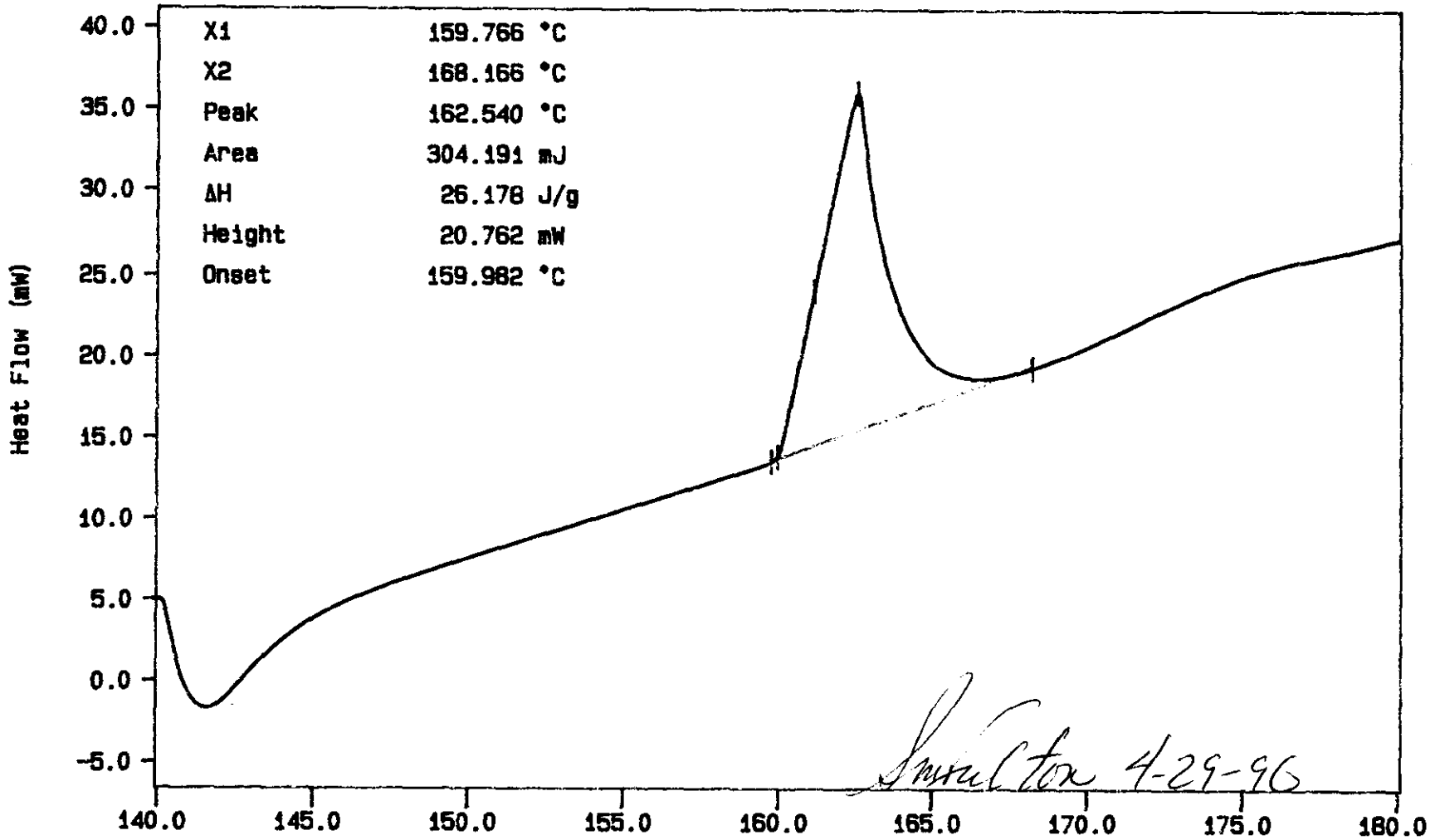
Analyst Signature **Date** **Analyst Signature** **Date**

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

Curve 1: DSC
File info: IND042904 Mon Apr 29 11:04:54 1996
Sample Weight: 11.620 mg
12N14-B INDIUM

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES aa1 TO aa3.

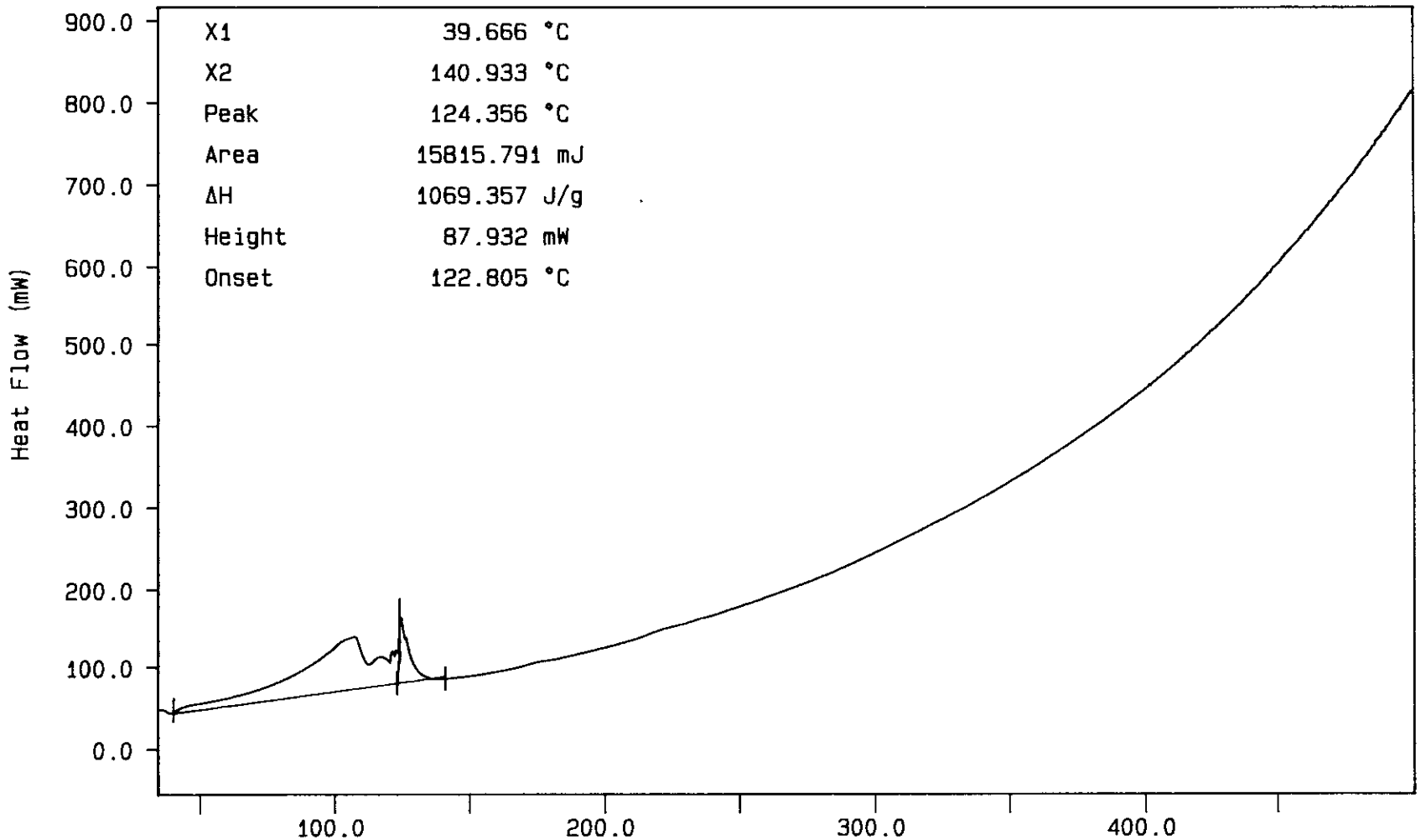


Smulton 4-29-96

N2, EXOTHERM DOWN
TEMP1: 140.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 180.0 C

PJ MCCOWN
PERKIN-ELMER
7 Series Thermal Analysis System
Mon Apr 29 11:06:20 1996

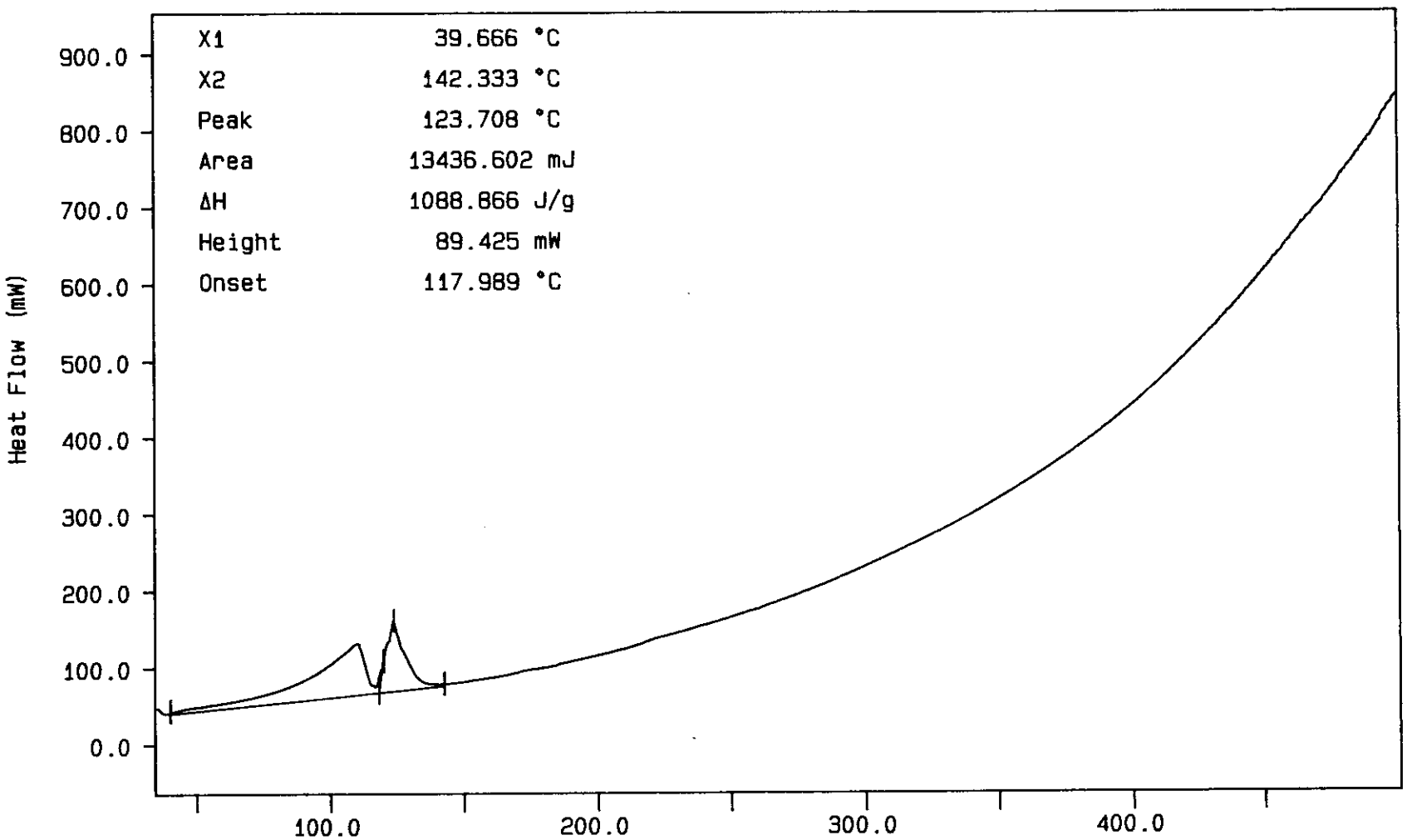
Curve 1: DSC
File info: SAM042901 Mon Apr 29 19:19:09 1996
Sample Weight: 14.790 mg
S96T002042



exotherm down, N2 purge gas
TEMP1: 35.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 500.0 C

SM FULTON
PERKIN-ELMER
7 Series Thermal Analysis System
Mon Apr 29 20:45:34 1996

Curve 1: DSC
File info: SAM042902 Mon Apr 29 21:21:11 1996
Sample Weight: 12.340 mg
S96T002024 DUP



exotherm down, N2 purge gas
TEMP1: 35.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 500.0 C

SM FULTON
PERKIN-ELMER
7 Series Thermal Analysis System
Mon Apr 29 21:21:32 1996

LABCORE Data Entry Template for Worklist# 8123

Analyst: SMF **Instrument:** DSC0 3 **Book #** 12N14B

Method: LA-514-114 Rev/Mod C-1

Worklist Comment: C-106 Grab. Run under Nitrogen. new

GROUP	PROJECT	S TYPE	SAMPLE#	R	A	-------TEST------	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD				DSC-03	LIQUID	28.45	28.20*	N/A	Joules/g
96000082	C-106 GRAB	2 SAMPLE	S96T001544	0		DSC-03	LIQUID	N/A	Ø		Joules/g
96000082	C-106 GRAB	3 DUP	S96T001544	0		DSC-03	LIQUID	Ø	Ø	N/A	Joules/g

Final page for worklist # 8123

See Attached for Signatures

Analyst Signature **Date** **Analyst Signature** **Date**

Validated by H Anastos 5-13-96

S96T001544 produced a very sharp endotherm immediately after the water peak.

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

LABCORE Data Entry Template for Worklist# 8123

Analyst: SMF **Instrument:** DSC0 3 **Book #** 12N14B

Method: LA-514-113 Rev/Mod _____

Worklist Comment: C-106 Grab. Run under Nitrogen. new

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	STD				DSC-01	LIQUID			N/A	Joules/g
96000082	C-106 GRAB	2	SAMPLE	S96T001544	0		DSC-01	LIQUID	N/A			Joules/g
96000082	C-106 GRAB	3	DUP	S96T001544	0		DSC-01	LIQUID			N/A	Joules/g

Final page for worklist # 8123

Susie M. Dutton 5-9-96
Analyst Signature **Date**

N E Wright 5/13/96
Analyst Signature **Date**

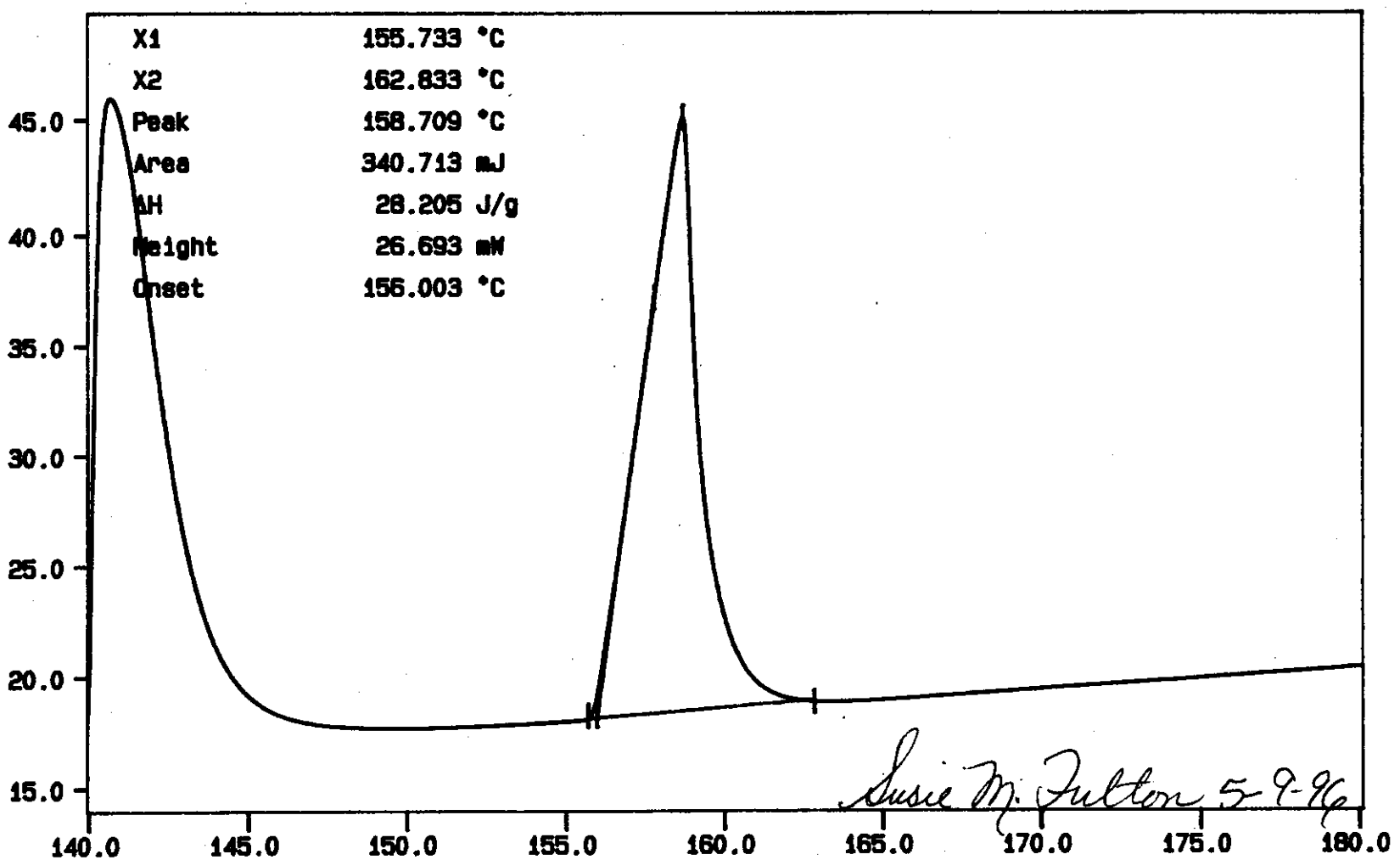
Other Instrument was used.

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

Curve 1: DSC
File info: IND050901 Thu May 9 04:06:00 1996
Sample Weight: 12.080 mg
12N14-B INDIUM AT 10C\MIN

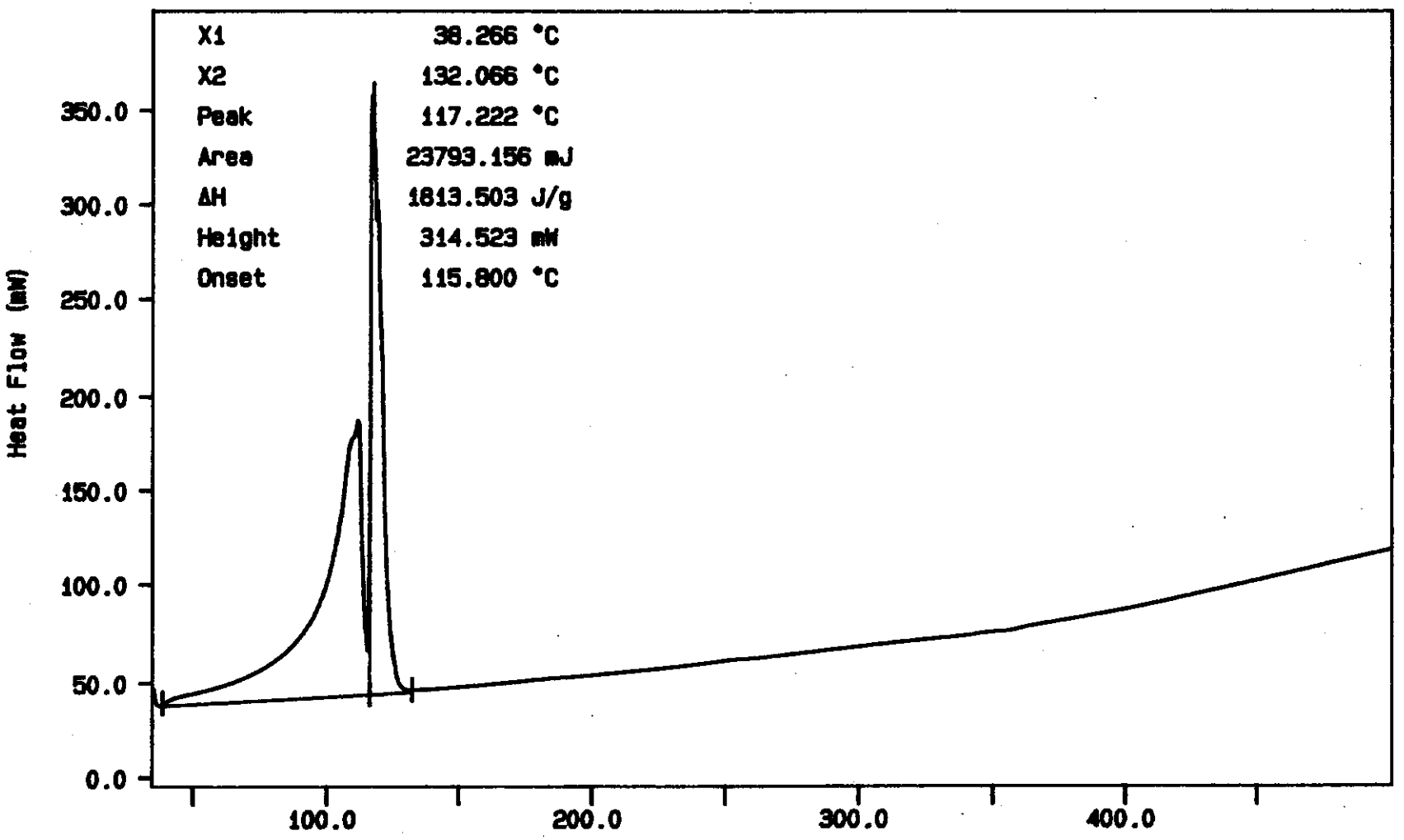
SIGNATURE ABOVE REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 226 TO 228.



N2, EXOTHERM DOWN
TEMP1: 140.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 180.0 C

KR MONTEITH
PERKIN-ELMER
7 Series Thermal Analysis System
Thu May 9 20:29:30 1996

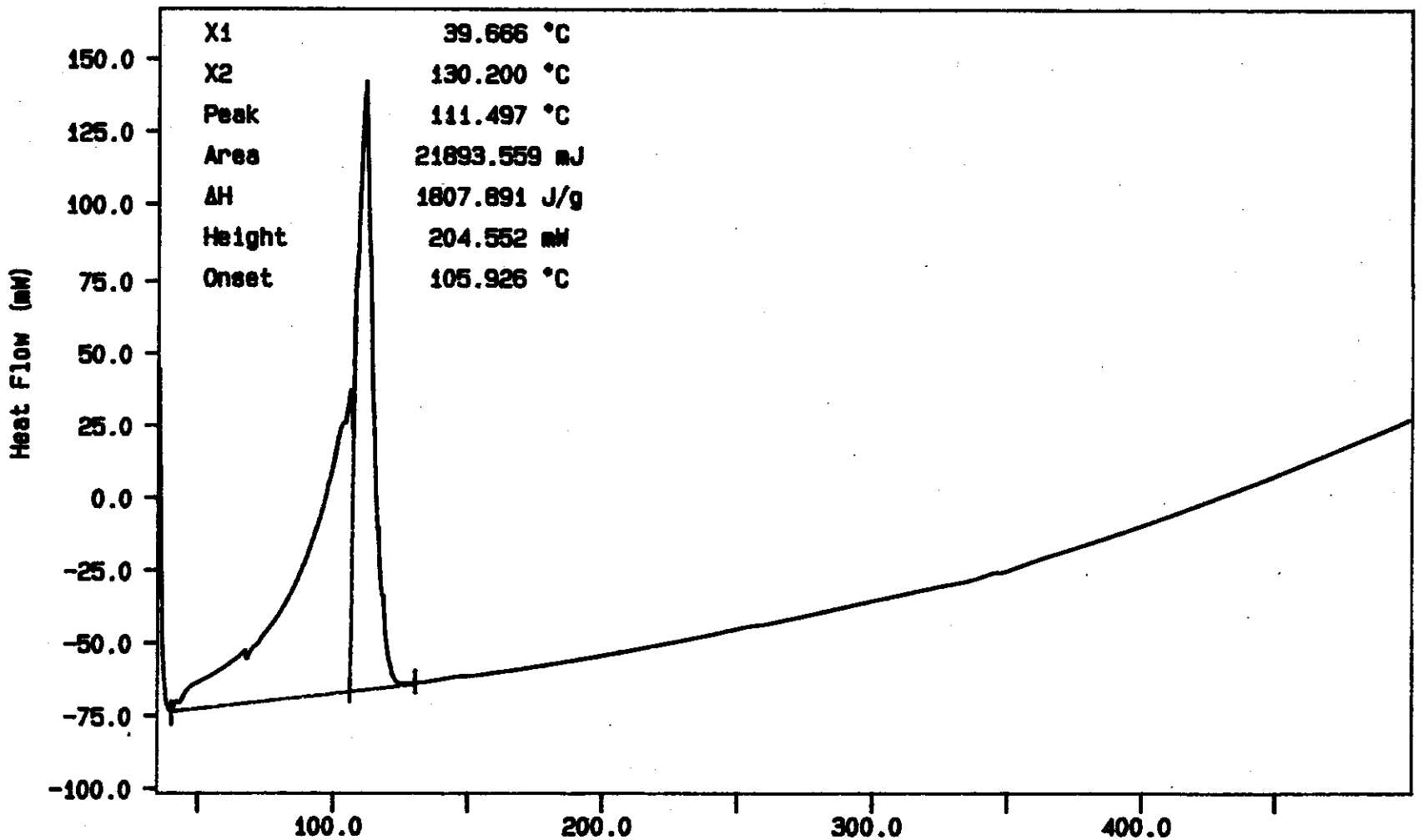
Curve 1: DSC
File info: SAM050903 Thu May 9 21:28:53 1996
Sample Weight: 13.120 mg
S96T001544



exotherm down, N2 purge gas
TEMP1: 35.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 500.0 C

SM FULTON
PERKIN-ELMER
7 Series Thermal Analysis System
Thu May 9 21:31:43 1996

Curve 1: DSC
File info: SAM050904 Thu May 9 22:21:33 1996
Sample Weight: 12.110 mg
S96T001544 DUP



exotherm down, N2 purge gas
TEMP1: 35.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 600.0 C

SM FULTON
PERKIN-ELMER
7 Series Thermal Analysis System
Thu May 9 22:36:56 1996

LABCORE Data Entry Template for Worklist# 8140

Analyst: SMF **Instrument:** DSC0 3 **Book #** 12N14B

Method: LA-514-114 Rev/Mod C-1

Worklist Comment: C-106 Grab. Run under nitrogen. new

GROUP	PROJECT	S TYPE	SAMPLE#	R	A	-------TEST------	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD				DSC-03	SOLID	28.45	28.20	* N/A	Joules/g
96000082	C-106 GRAB	2 SAMPLE	S96T001526	0		DSC-03	SOLID	N/A	Ø		Joules/g
96000082	C-106 GRAB	3 DUP	S96T001526	0		DSC-03	SOLID	Ø	Ø	N/A	Joules/g

Final page for worklist # 8140

See attached for Signatures

Analyst Signature **Date**

Analyst Signature **Date**

Validated by HAnastas 5-14-96

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

LABCORE Data Entry Template for Worklist# 8140

Analyst: SHF **Instrument:** DSC0 3 **Book #** 12N14B

Method: LA-514-113 Rev/Mod _____

Worklist Comment: C-106 Grab. Run under nitrogen. new

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	-------TEST------	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	STD				DSC-01	SOLID			N/A	Joules/g
96000082	C-106 GRAB	2	SAMPLE	S96T001526	0		DSC-01	SOLID	N/A			Joules/g
96000082	C-106 GRAB	3	DUP	S96T001526	0		DSC-01	SOLID			N/A	Joules/g

Final page for worklist # 8140

Susie M. Dutton 5-9-96 — Analyst Signature Date

K E Wright 5/13/96 — Analyst Signature Date

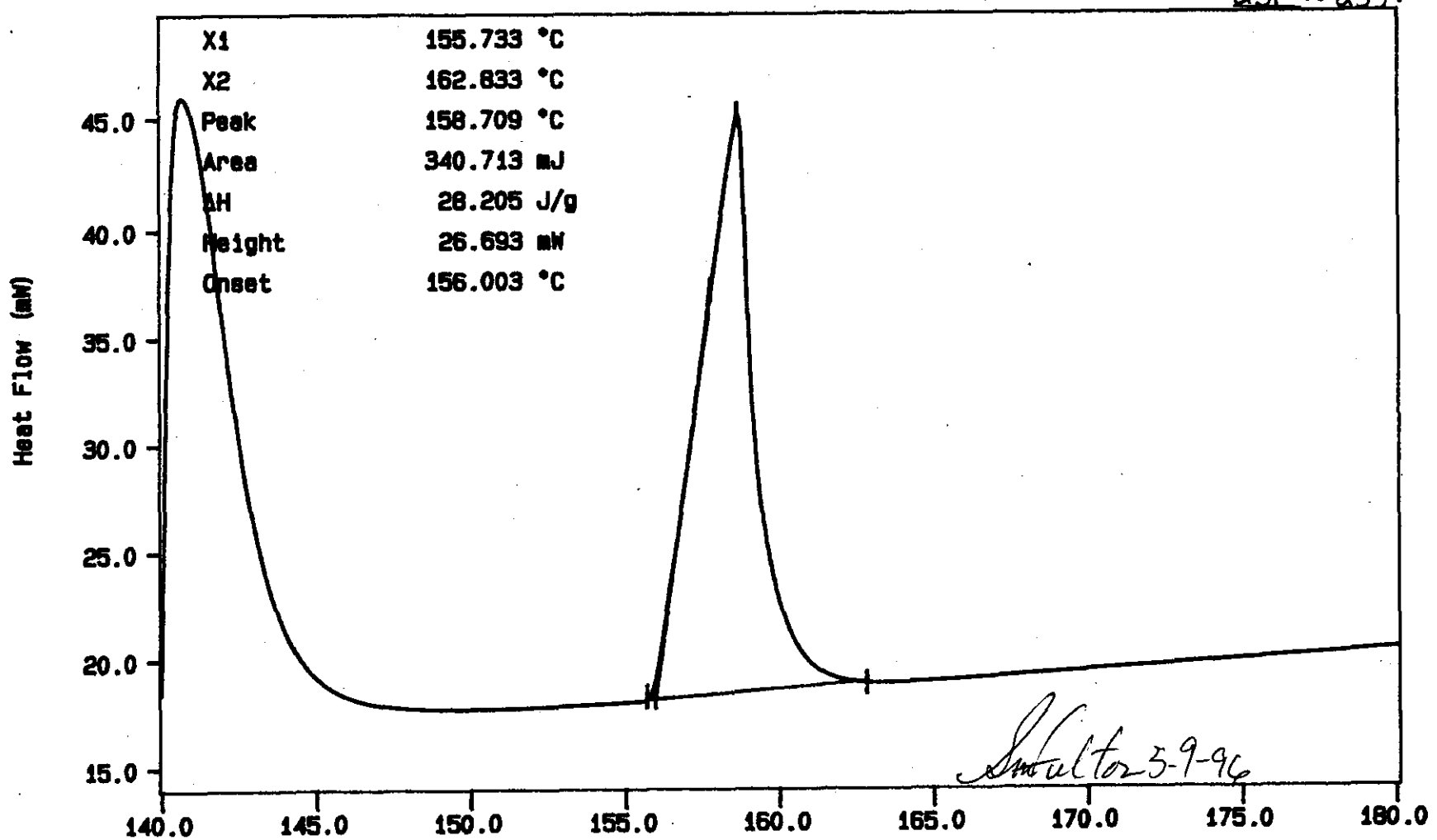
Other Instrument was used.

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

Curve 1: DSC
File info: IND050901 Thu May 9 04:06:00 1996
Sample Weight: 12.080 mg
12N14-B INDIUM AT 10C\MIN

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 231 TO 233.

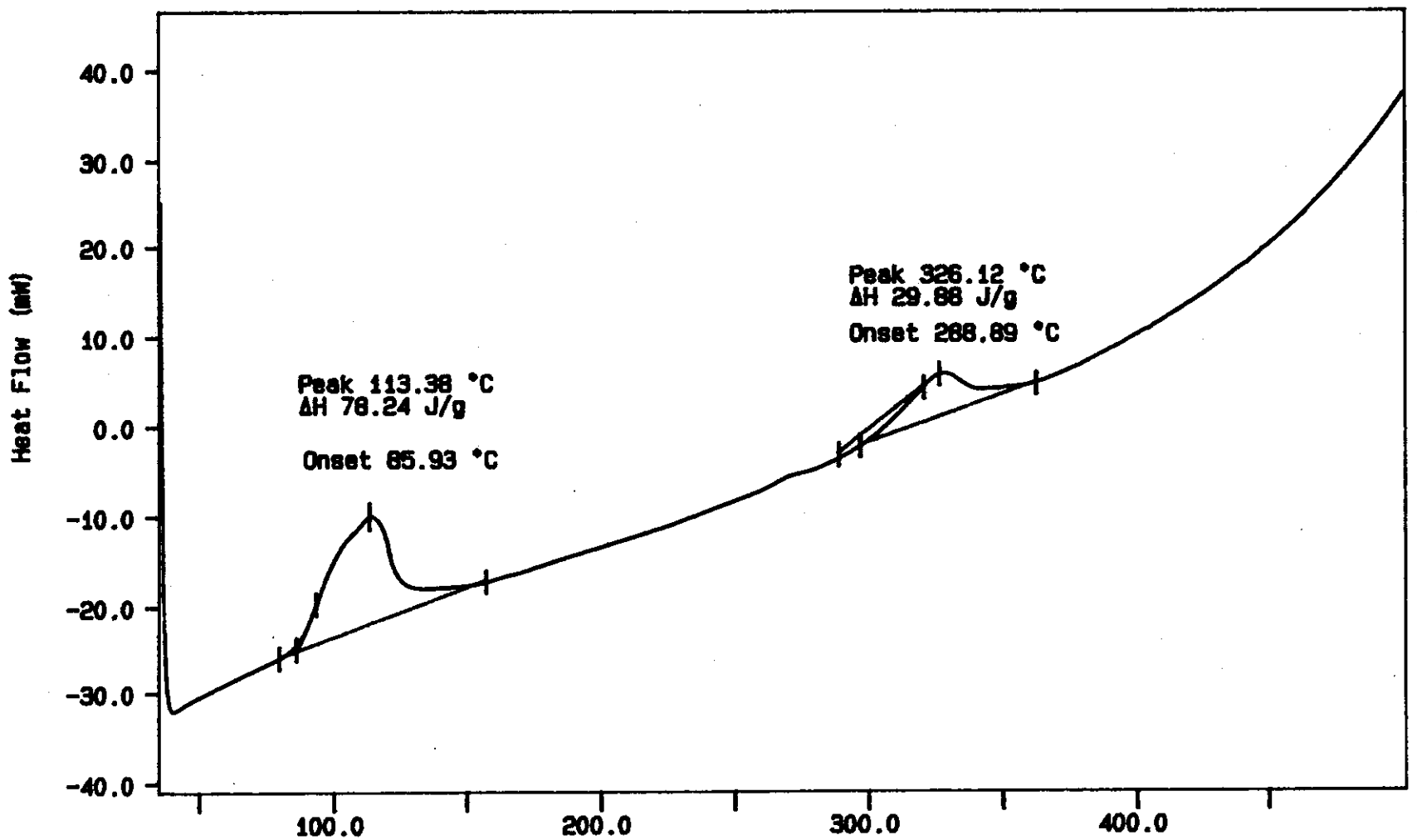


Smulter 5-9-96

N2, EXOTHERM DOWN
TEMP1: 140.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 180.0 C

KR MONTEITH
PERKIN-ELMER
7 Series Thermal Analysis System
Fri May 10 03:40:34 1996

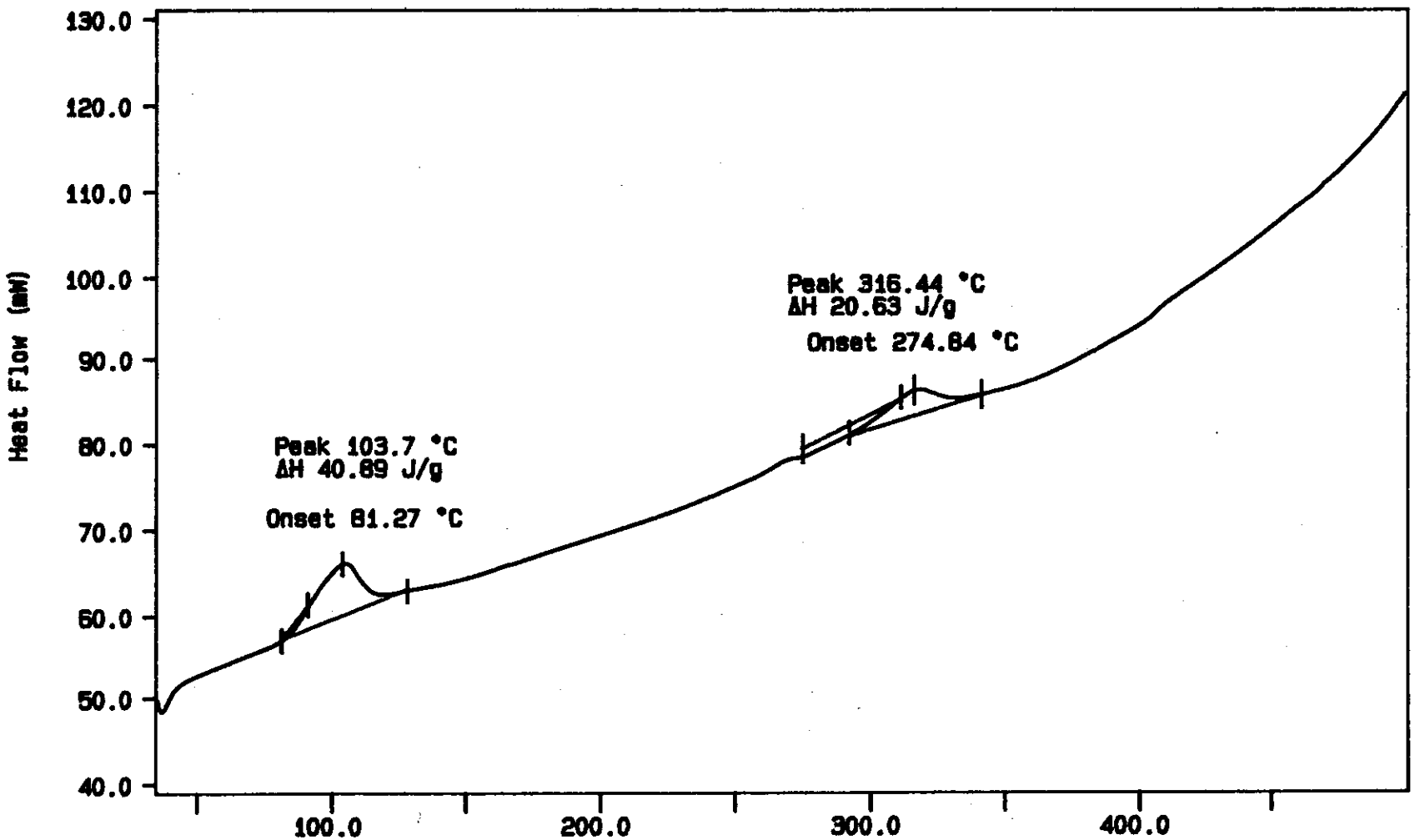
Curve 1: DSC
File info: SAM050905 Fri May 10 01:19:57 1996
Sample Weight: 26.580 mg
S96T001526



exotherm down, N2 purge gas
TEMP1: 35.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 500.0 C

SM FULTON
PERKIN-ELMER
7 Series Thermal Analysis System
Fri May 10 01:25:16 1996

Curve 1: DSC
File info: SAM050906 Fri May 10 02:17:58 1996
Sample Weight: 18.040 mg
S96T001526 DUP



exotherm down, N2 purge gas
TEMP1: 25.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 500.0 C

SM FULTON
PERKIN-ELMER
7 Series Thermal Analysis System
Fri May 10 03:17:44 1996

worklistrpt Version 2.1 05/15/95
05/13/96 10:29

LABCORE Data Entry Template for Worklist# 8141

Analyst: ADP **Instrument:** DSC0 3 **Book #** 12N14B

Method: LA-514-114 Rev/Mod C-1

Worklist Comment: C-106 Grab. Run under nitrogen. new

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	-------TEST------	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	STD				DSC-03	SOLID	28.45	28.91*	N/A	Joules/g
96000082	C-106 GRAB	2	SAMPLE	S96T001530	0		DSC-03	SOLID	N/A	Ø		Joules/g
96000082	C-106 GRAB	3	DUP	S96T001530	0		DSC-03	SOLID	Ø	Ø	N/A	Joules/g
96000082	C-106 GRAB	4	SAMPLE	S96T001537	0		DSC-03	SOLID	N/A	Ø		Joules/g
96000082	C-106 GRAB	5	DUP	S96T001537	0		DSC-03	SOLID	Ø	Ø	N/A	Joules/g

Final page for worklist # 8141

See Attached for Signatures

Analyst Signature **Date** **Analyst Signature** **Date**

Validated by HAnastos 5-13-96

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

LABCORE Data Entry Template for Worklist# 8141

Analyst: ADP **Instrument:** DSC0 3 **Book #** 12N14B

Method: LA-514-113 Rev/Mod C-1

Worklist Comment: C-106 Grab. Run under nitrogen. new

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	STD				DSC-01	SOLID			N/A	Joules/g
96000082	C-106 GRAB	2	SAMPLE	S96T001530	0		DSC-01	SOLID	N/A			Joules/g
96000082	C-106 GRAB	3	DUP	S96T001530	0		DSC-01	SOLID			N/A	Joules/g
96000082	C-106 GRAB	4	SAMPLE	S96T001537	0		DSC-01	SOLID	N/A			Joules/g
96000082	C-106 GRAB	5	DUP	S96T001537	0		DSC-01	SOLID			N/A	Joules/g

Final page for worklist # 8141

Anthony Parente 5-12-96
Analyst Signature **Date**

N E Wright 5/13/96
Analyst Signature **Date**

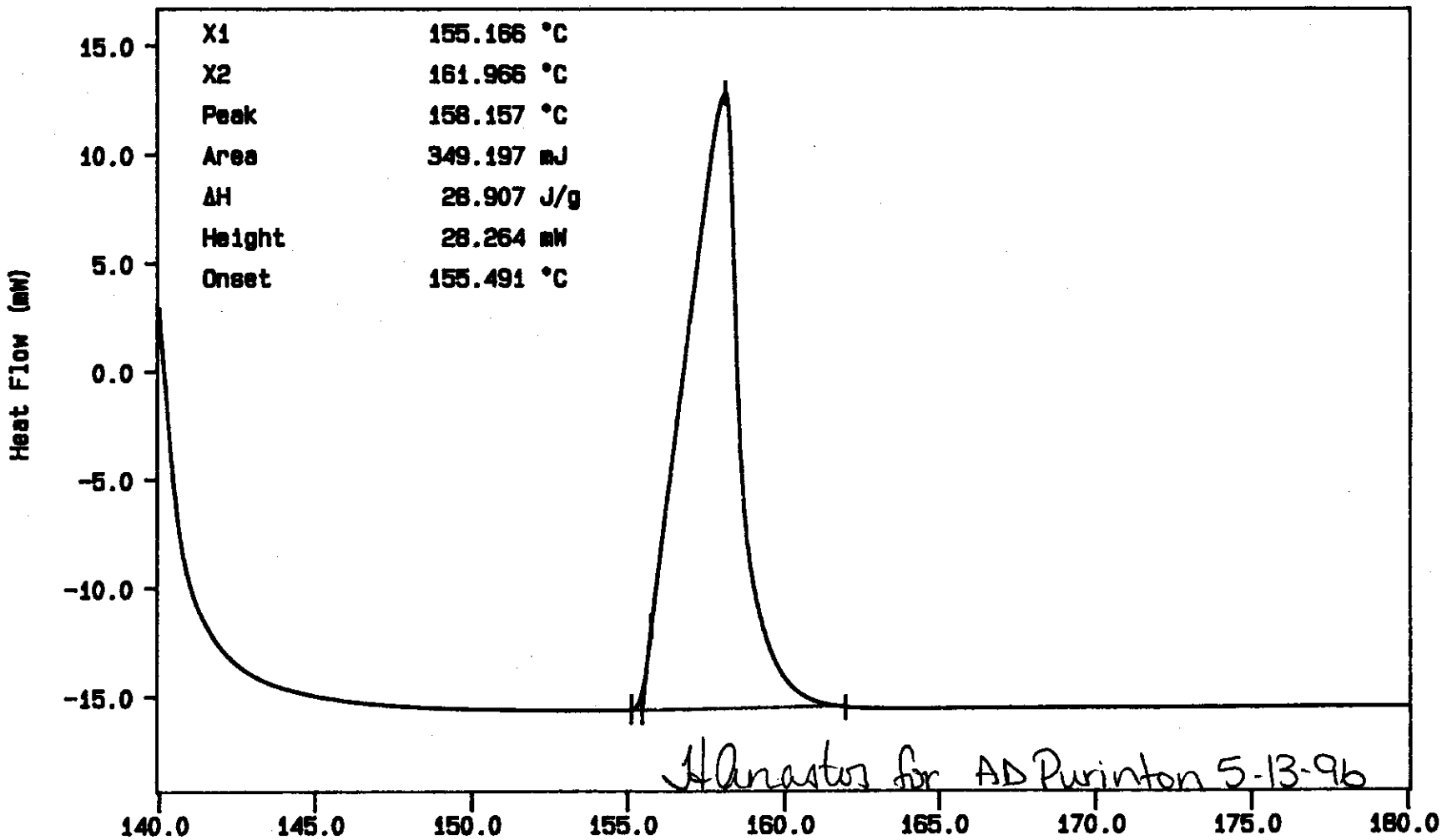
Other Instrument was used.

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

Curve 1: DSC
File info: IND051201 Sun May 12 05:48:54 1996
Sample Weight: 12.080 mg
12N14-B INDIUM AT 10C\MIN

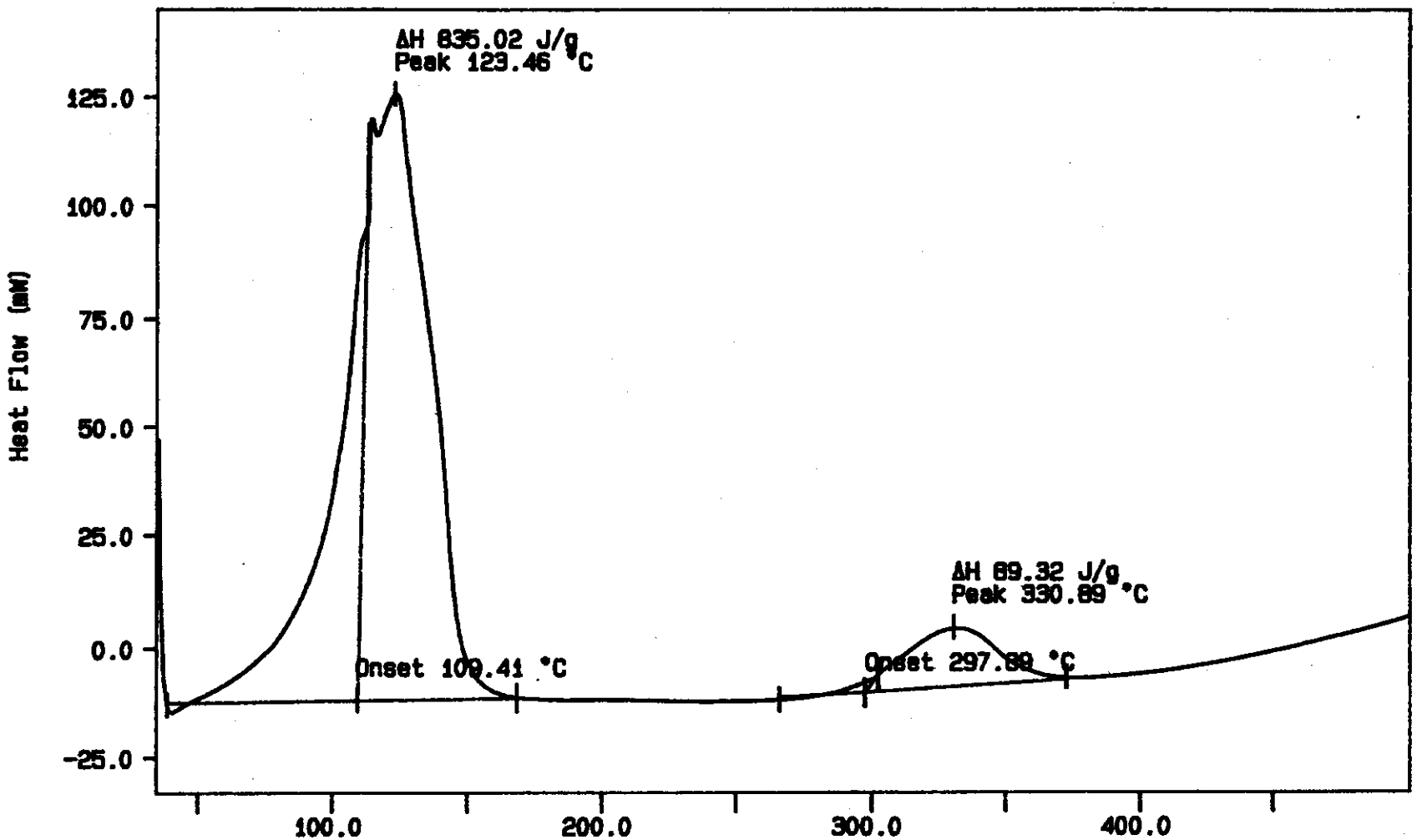
SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 236 TO 240.



N2, EXOTHERM DOWN
TEMP1: 140.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 180.0 C

AD PURINTON
PERKIN-ELMER
7 Series Thermal Analysis System
Sun May 12 05:52:05 1996

Curve 1: DSC
File info: SAM051204 Sun May 12 07:53:20 1996
Sample Weight: 37.120 mg
S96T001230 SAM
1530



exotherm down, N2 purge gas

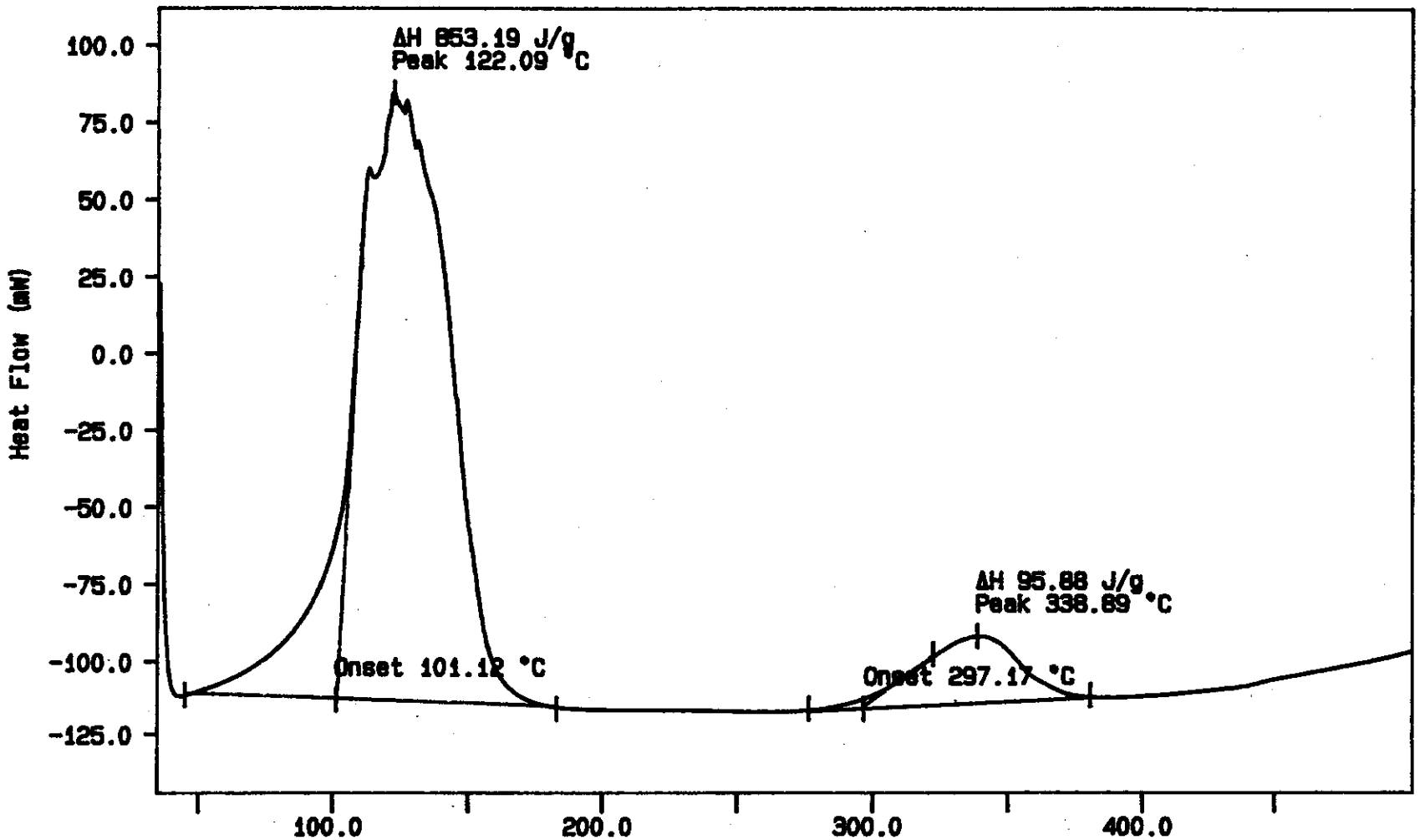
TEMP1: 35.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 600.0 C

AD PURINTON
PERKIN-ELMER
7 Series Thermal Analysis System
Sun May 12 08:08:57 1996

237

WHC-SD-WM-DP-183, REV.

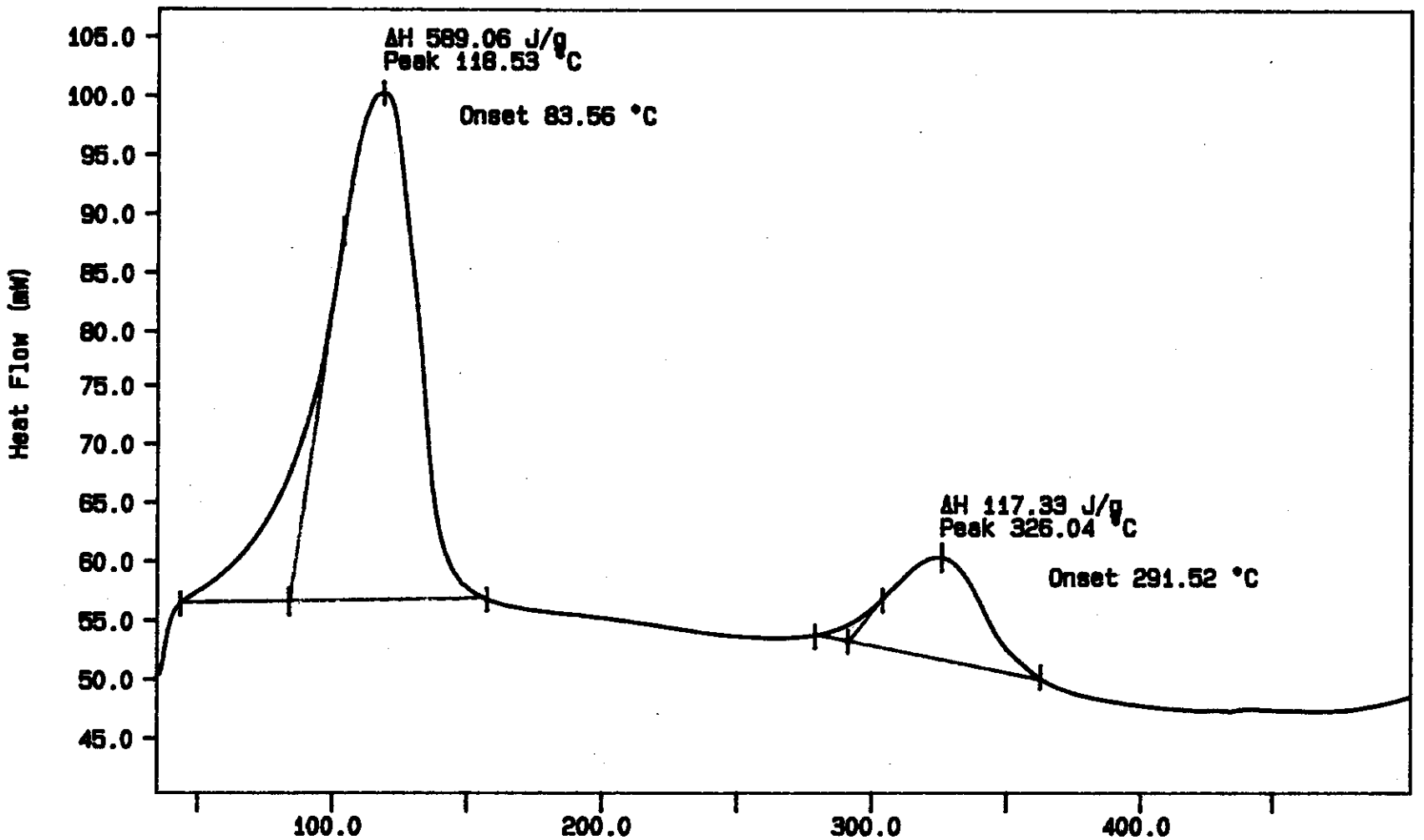
Curve 1: DSC
File info: SAM051205 Sun May 12 09:06:13 1996
Sample Weight: 59.300 mg
S96T001230 DUP 7/18/96
1530



exotherm down, N2 purge gas
TEMP1: 35.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 500.0 C

AD PURINTON
PERKIN-ELMER
7 Series Thermal Analysis System
Sun May 12 09:47:49 1996

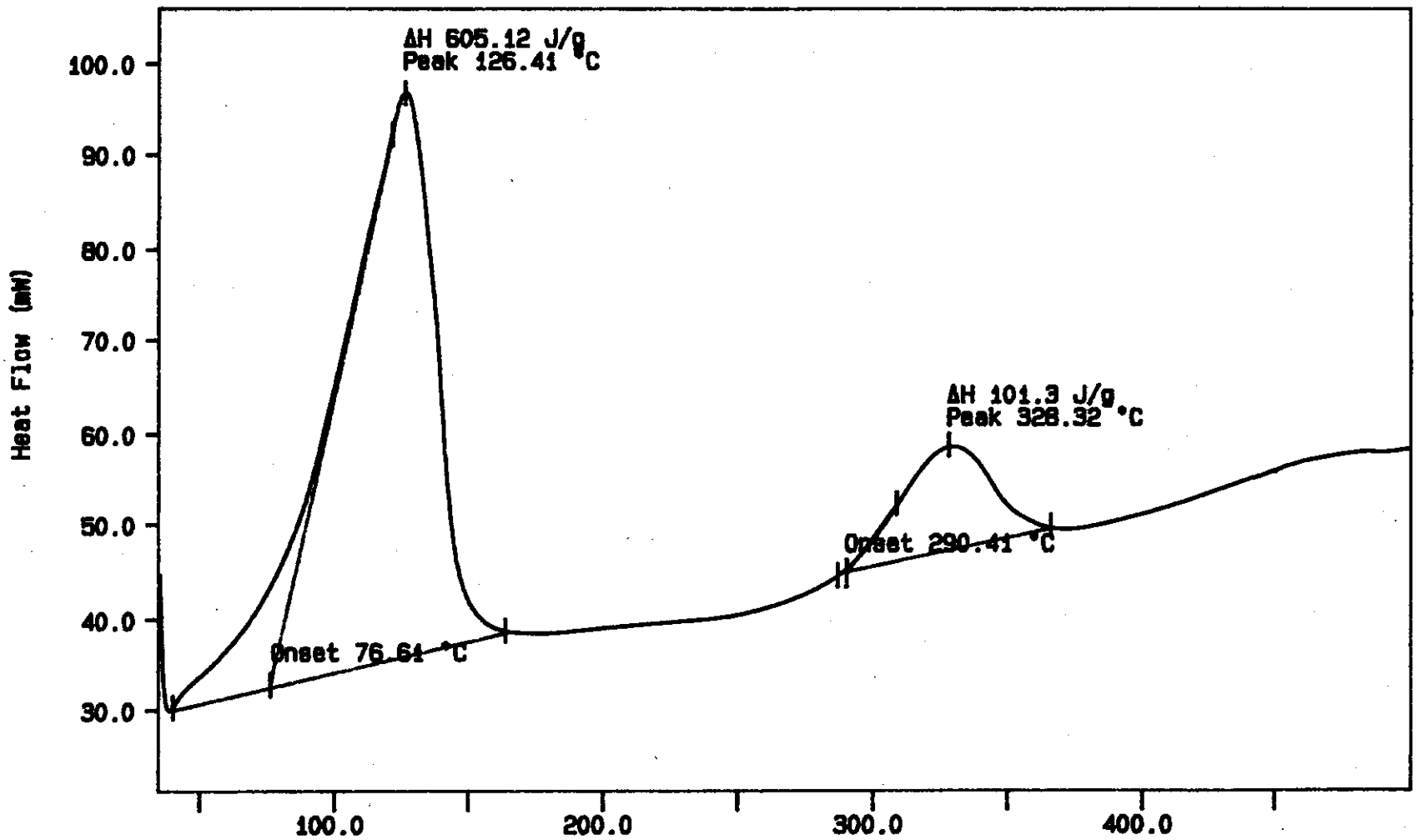
Curve 1: DSC
File info: SAM051206 Sun May 12 10:49:36 1996
Sample Weight: 18.020 mg
S96T001537 SAM



exotherm down, N2 purge gas
TEMP1: 35.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 600.0 C

AD PURINTON
PERKIN-ELMER
7 Series Thermal Analysis System
Mon May 13 09:35:21 1996

Curve 1: DSC
File info: SAM051207 Sun May 12 13:06:53 1996
Sample Weight: 26.280 mg
S96T001537 DUP



exotherm down, N2 purge gas
TEMP1: 35.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 600.0 C

AD PURINTON
PERKIN-ELMER
7 Series Thermal Analysis System
Sun May 12 13:08:44 1996

LABCORE Data Entry Template for Worklist# 8321

Analyst: SMF **Instrument:** DSC0 1 **Book #** 12N14B

Method: LA-514-113 Rev/Mod C-1

Worklist Comment: C-106 Grab. DSC-01.Run under Nitrogen. new

GROUP	PROJECT	S TYPE	SAMPLE#	R	A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD				DSC-01	SOLID	28.45	31.7 *	N/A	Joules/g
96000082	C-106 GRAB	2 SAMPLE	S96T001527	0		DSC-01	SOLID	N/A	Ø		Joules/g
96000082	C-106 GRAB	3 DUP	S96T001527	0		DSC-01	SOLID	Ø	1000	N/A	Joules/g
96000082	C-106 GRAB	4 TRIPL	S96T001527	0		DSC-01	SOLID	Ø	Ø	N/A	Joules/g
96000174	C-106 GRAB	5 SAMPLE	S96T002350	0		DSC-01	SOLID	N/A	29.8		Joules/g
96000174	C-106 GRAB	6 DUP	S96T002350	0		DSC-01	SOLID	29.8	61.1	N/A	Joules/g

Final page for worklist # 8321

See Attached for Signatures
Analyst Signature **Date**

Jan Hammitt 5-13-96
Analyst Signature **Date**

Validated by HAnasto 5-14-96

S96T001527 will be rerun due to differences in thermograms. Sample als shows no water.

S96T002350 SAM + DUP exotherms have different shapes, however, due to the low value, no rerun will be done.

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

LABCORE Data Entry Template for Worklist# 8321

Analyst: SMF **Instrument:** DSC0 **Book #** 12N14B

Method: LA-514-113 Rev/Mod

Worklist Comment: C-106 Grab. DSC-01.Run under Nitrogen. new

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	STD				DSC-01	SOLID			N/A	Joules/g
96000082	C-106 GRAB	2	SAMPLE	S96T001527	0		DSC-01	SOLID	N/A			Joules/g
96000082	C-106 GRAB	3	DUP	S96T001527	0		DSC-01	SOLID			N/A	Joules/g
96000174	C-106 GRAB	4	SAMPLE	S96T002350	0		DSC-01	SOLID	N/A			Joules/g
96000174	C-106 GRAB	5	DUP	S96T002350	0		DSC-01	SOLID			N/A	Joules/g

Final page for worklist # 8321

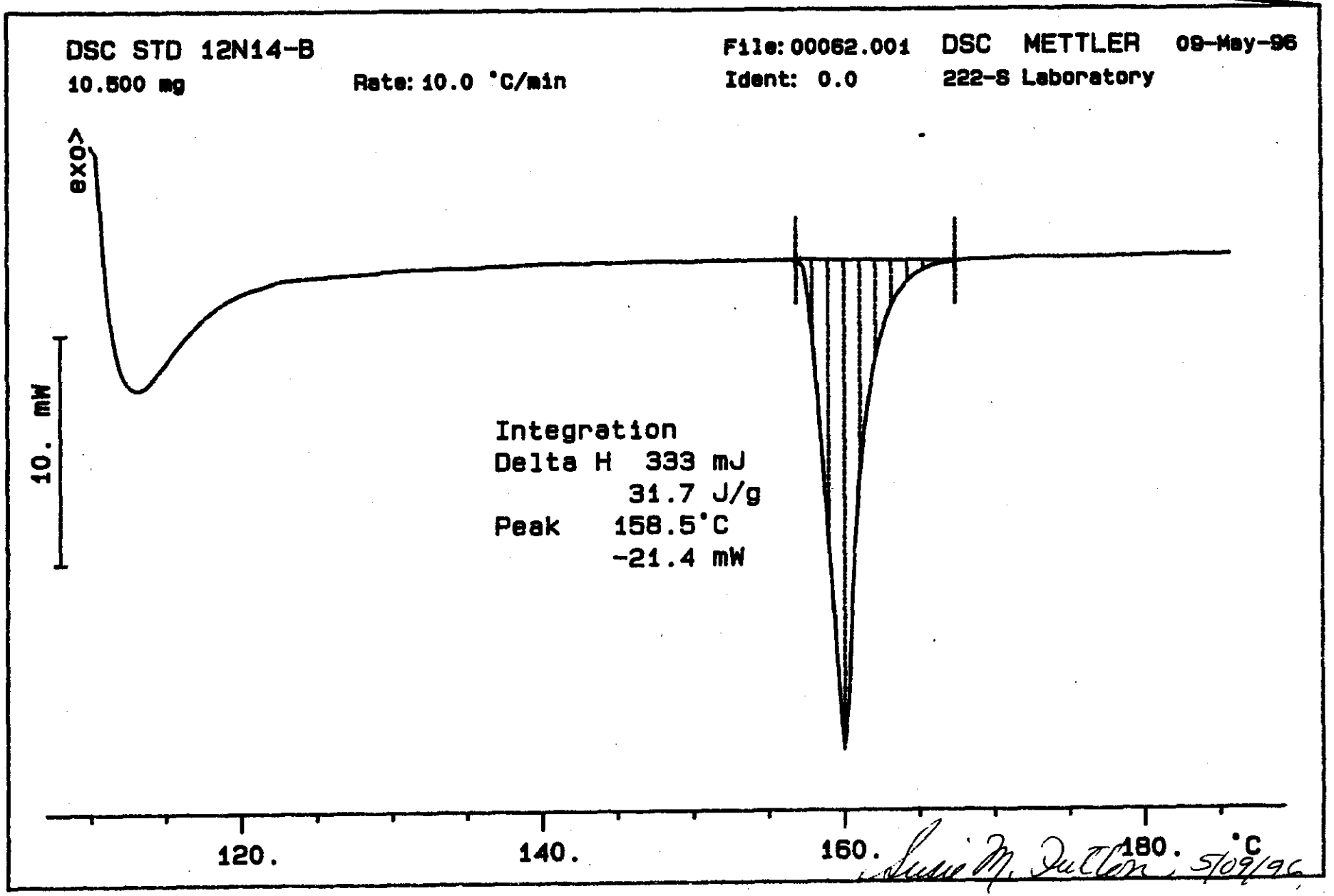
Susie M. Dutton 5-9-96

Analyst Signature **Date** **Analyst Signature** **Date**

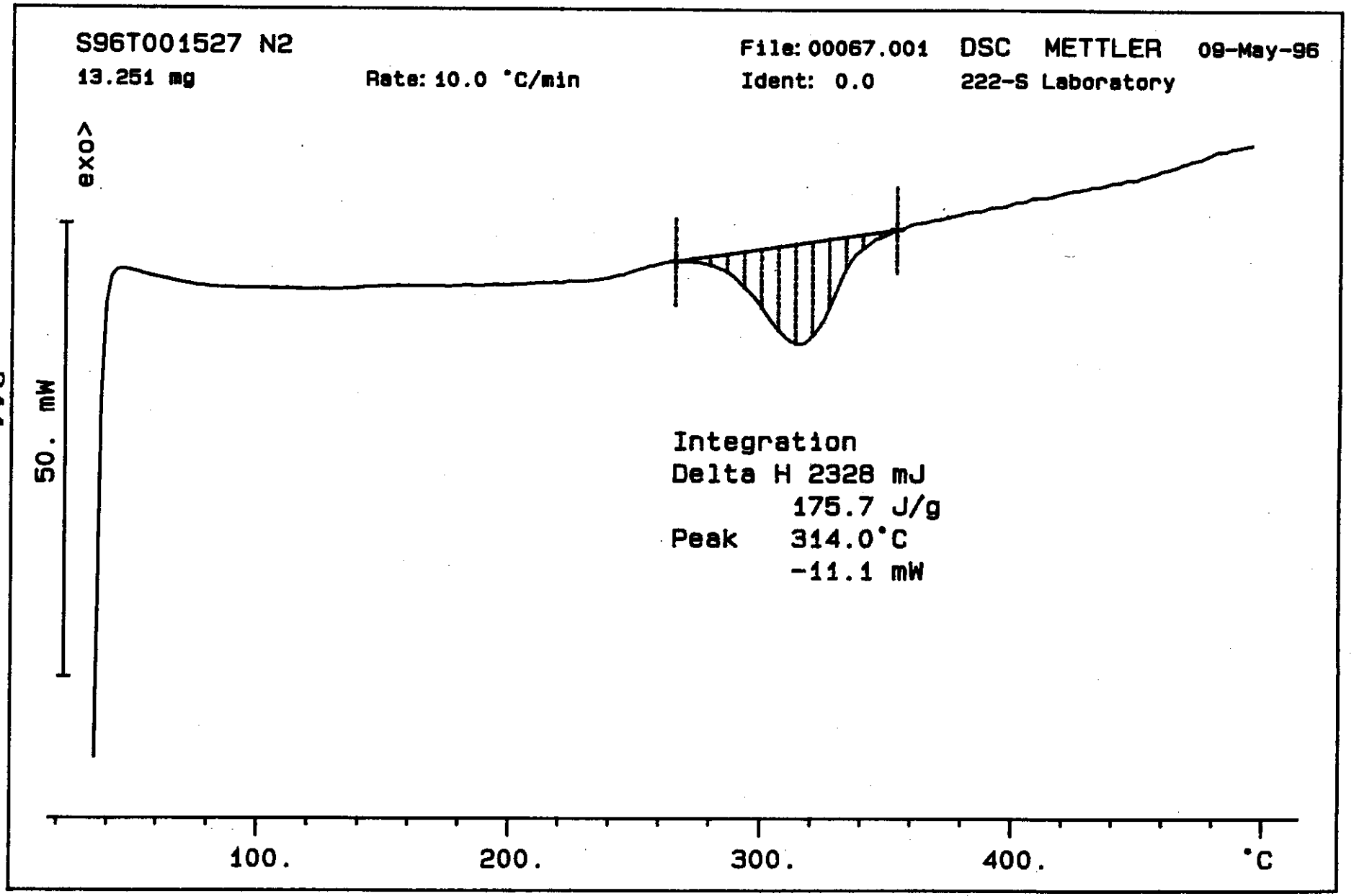
Data Entry Comments:

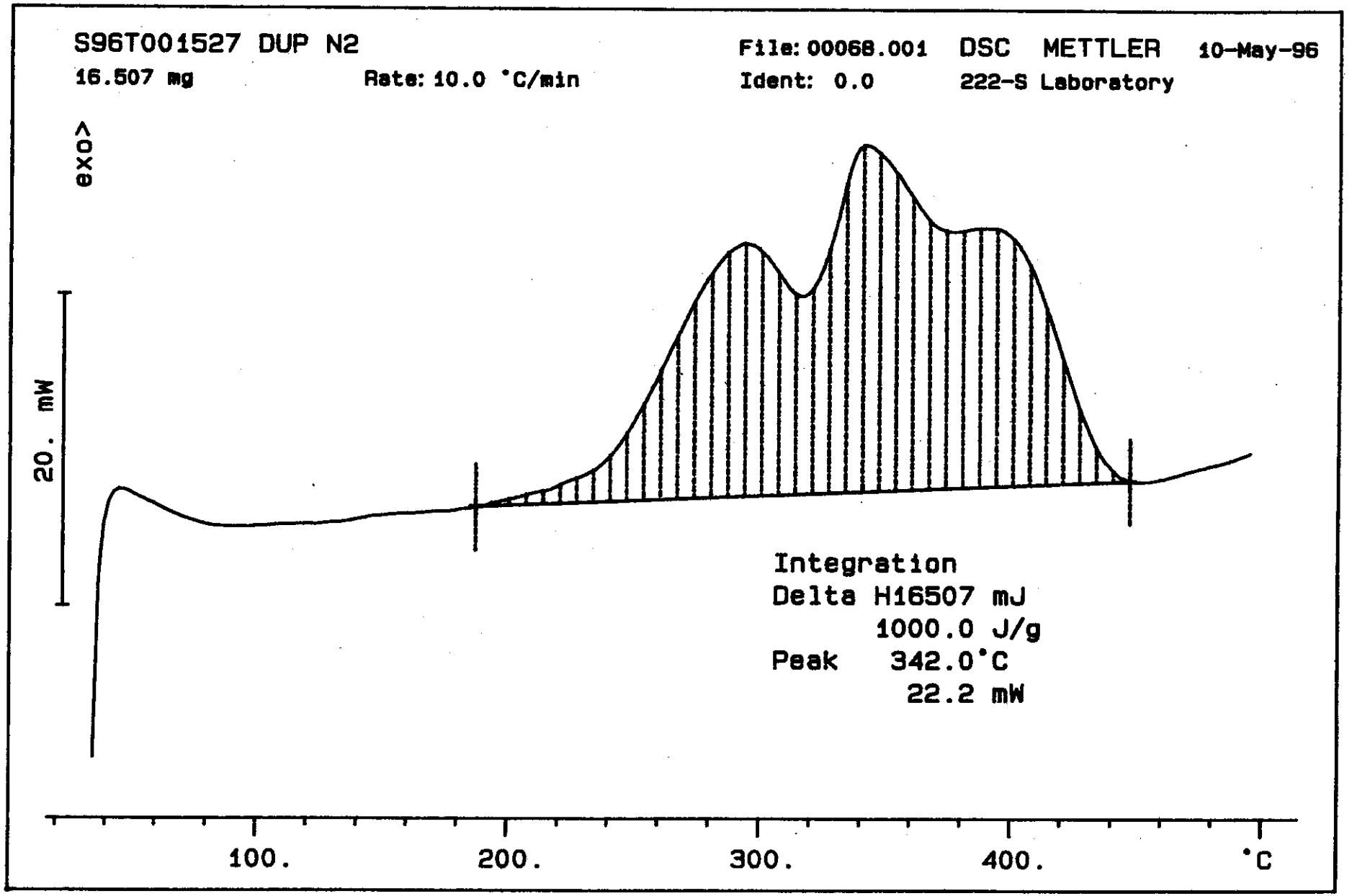
Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

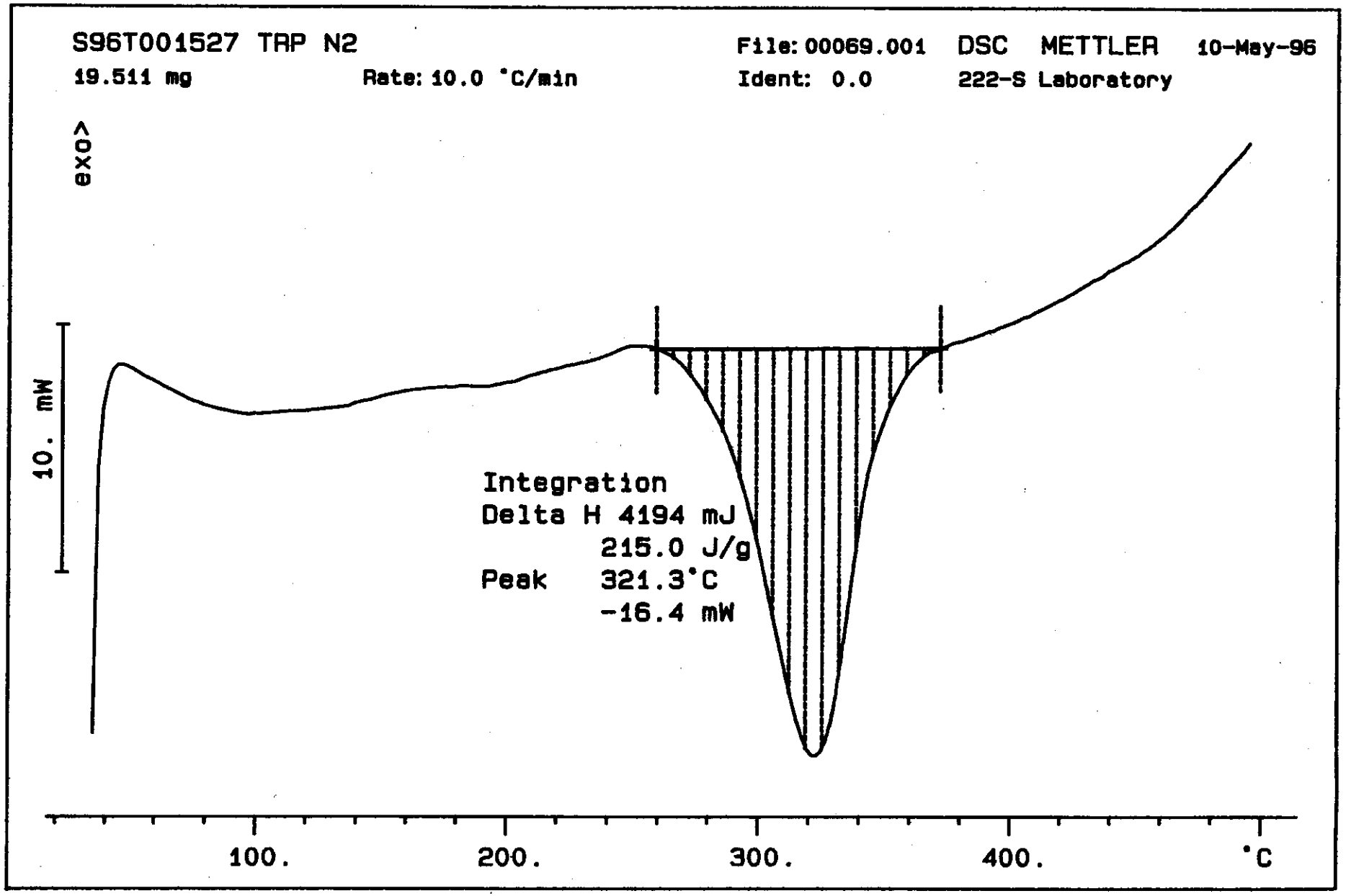
SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 243 TO 248.

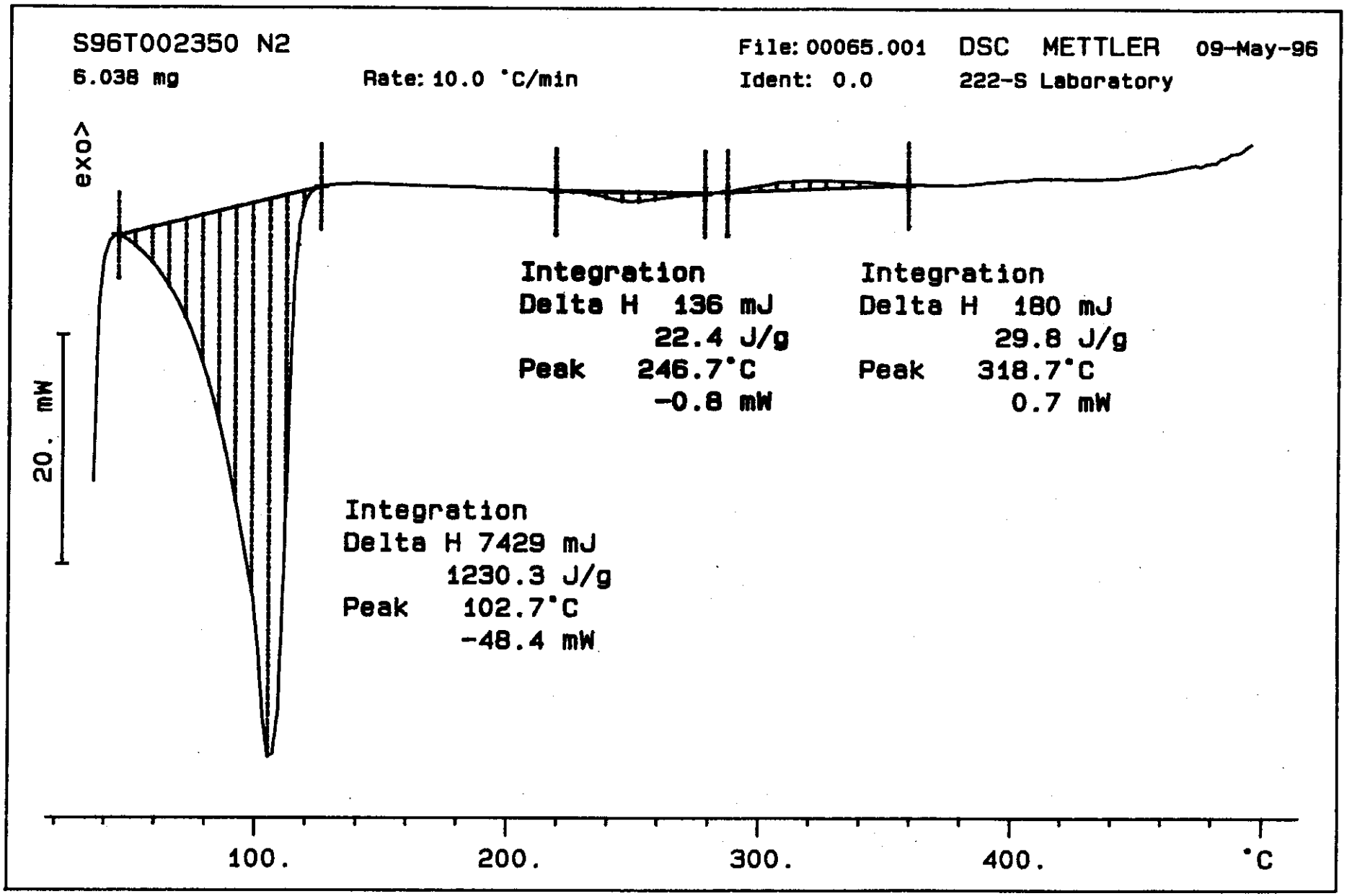


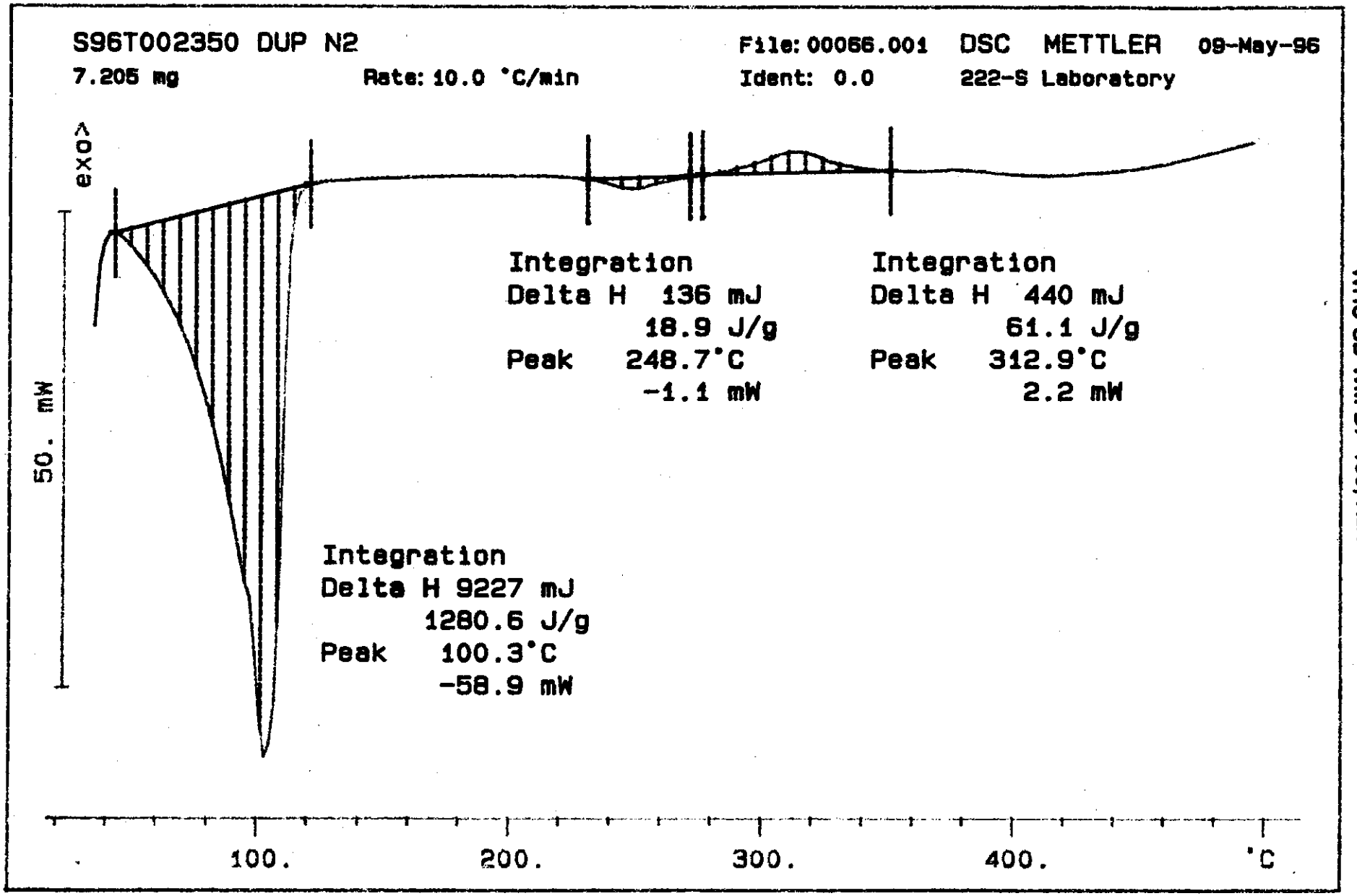
Susie M. Dutton 5/09/96


S96T001527 N2
13.251 mg
Rate: 10.0 °C/min
File: 00067.001
Ident: 0.0
DSC METTLER
222-S Laboratory
09-May-96
<exo
50. mW
Integration
Delta H 2328 mJ
175.7 J/g
Peak 314.0°C
-11.1 mW
100.
200.
300.
400.
°C


S96T001527 DUP N2
16.507 mg
Rate: 10.0 °C/min
File: 00068.001
Ident: 0.0
DSC METTLER
222-S Laboratory
10-May-96
<exo
20. mW
Integration
Delta H16507 mJ
1000.0 J/g
Peak 342.0°C
22.2 mW
100.
200.
300.
400.
°C


S96T001527 TRP N2
19.511 mg
Rate: 10.0 °C/min
File: 00069.001
Ident: 0.0
DSC METTLER
222-S Laboratory
10-May-96
exo>
10. mW
Integration
Delta H 4194 mJ
215.0 J/g
Peak 321.3°C
-16.4 mW
100.
200.
300.
400.
°C


S96T002350 N2
6.038 mg
Rate: 10.0 °C/min
File: 00065.001
Ident: 0.0
DSC METTLER
222-S Laboratory
09-May-96
exo>
mW .02
Integration
Delta H 136 mJ
22.4 J/g
Peak 246.7°C
-0.8 mW
Integration
Delta H 180 mJ
29.8 J/g
Peak 318.7°C
0.7 mW
Integration
Delta H 7429 mJ
1230.3 J/g
Peak 102.7°C
-48.4 mW
100.
200.
300.
400.
°C


S96T002350 DUP N2
7.205 mg
Rate: 10.0 °C/min
File: 00066.001
Ident: 0.0
DSC METTLER
222-S Laboratory
09-May-96
<exo
50. mW
Integration
Delta H 136 mJ
18.9 J/g
Peak 248.7°C
-1.1 mW
Integration
Delta H 440 mJ
61.1 J/g
Peak 312.9°C
2.2 mW
Integration
Delta H 9227 mJ
1280.6 J/g
Peak 100.3°C
-58.9 mW
100.
200.
300.
400.
°C

LABCORE Data Entry Template for Worklist# 8323

Analyst: SMF **Instrument:** DSC0 1 **Book #** 12D14B

Method: LA-514-113 Rev/Mod C-1

Worklist Comment: C-106 Grab. Run under AIR. new

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	STD				DSC-01	SOLID	28.45	32.1	N/A	Joules/g
96000174	C-106 GRAB	2	SAMPLE	S96T002351	0		DSC-01	SOLID	N/A	180.6		Joules/g
96000174	C-106 GRAB	3	DUP	S96T002351	0		DSC-01	SOLID	180.6	218.1	N/A	Joules/g

Final page for worklist # 8323

S Sutton 5-13-96
Analyst Signature **Date**

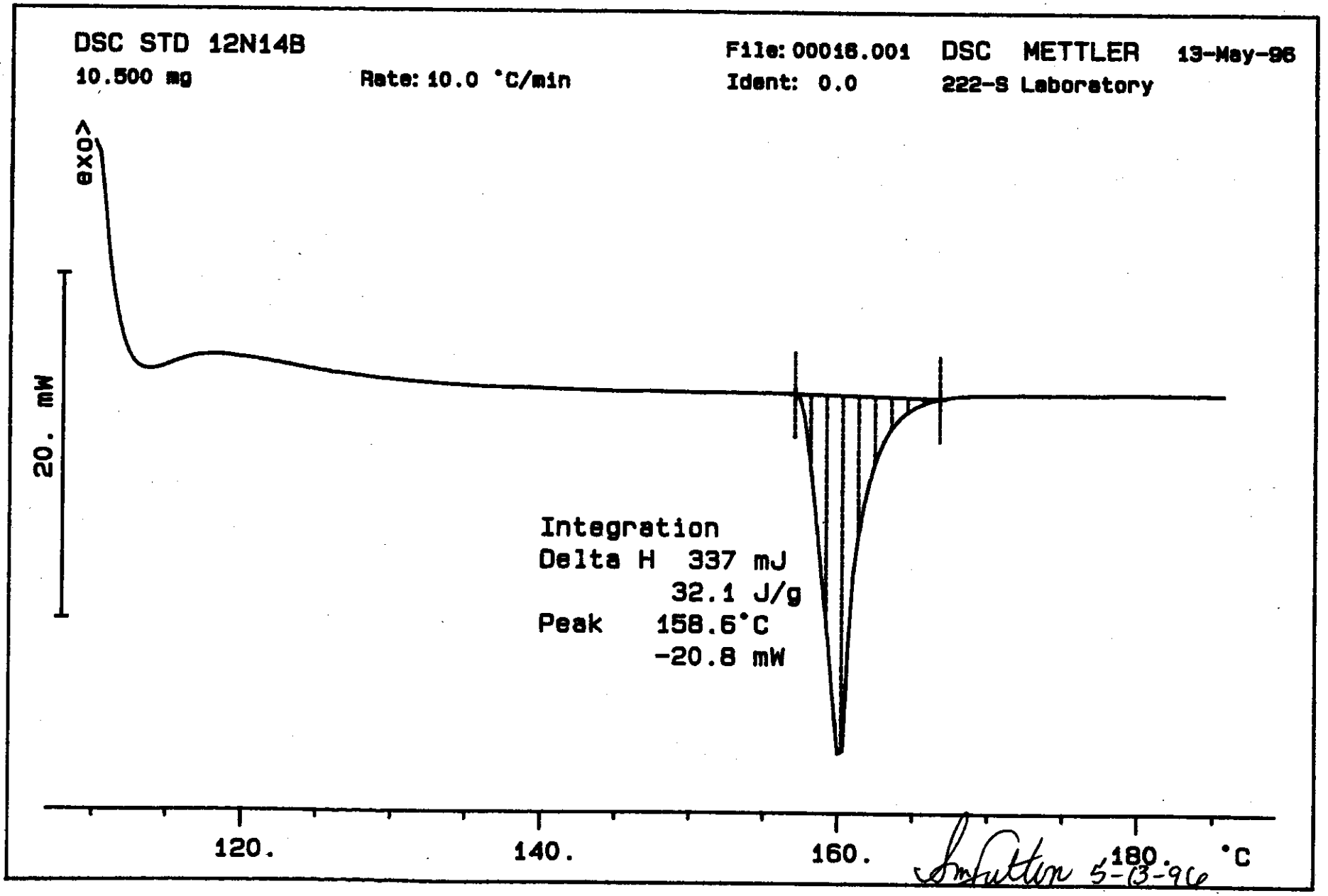
RL Fish 5-14-96
Analyst Signature **Date**

Validated by H Anastn 5-7-96

Data Entry Comments:

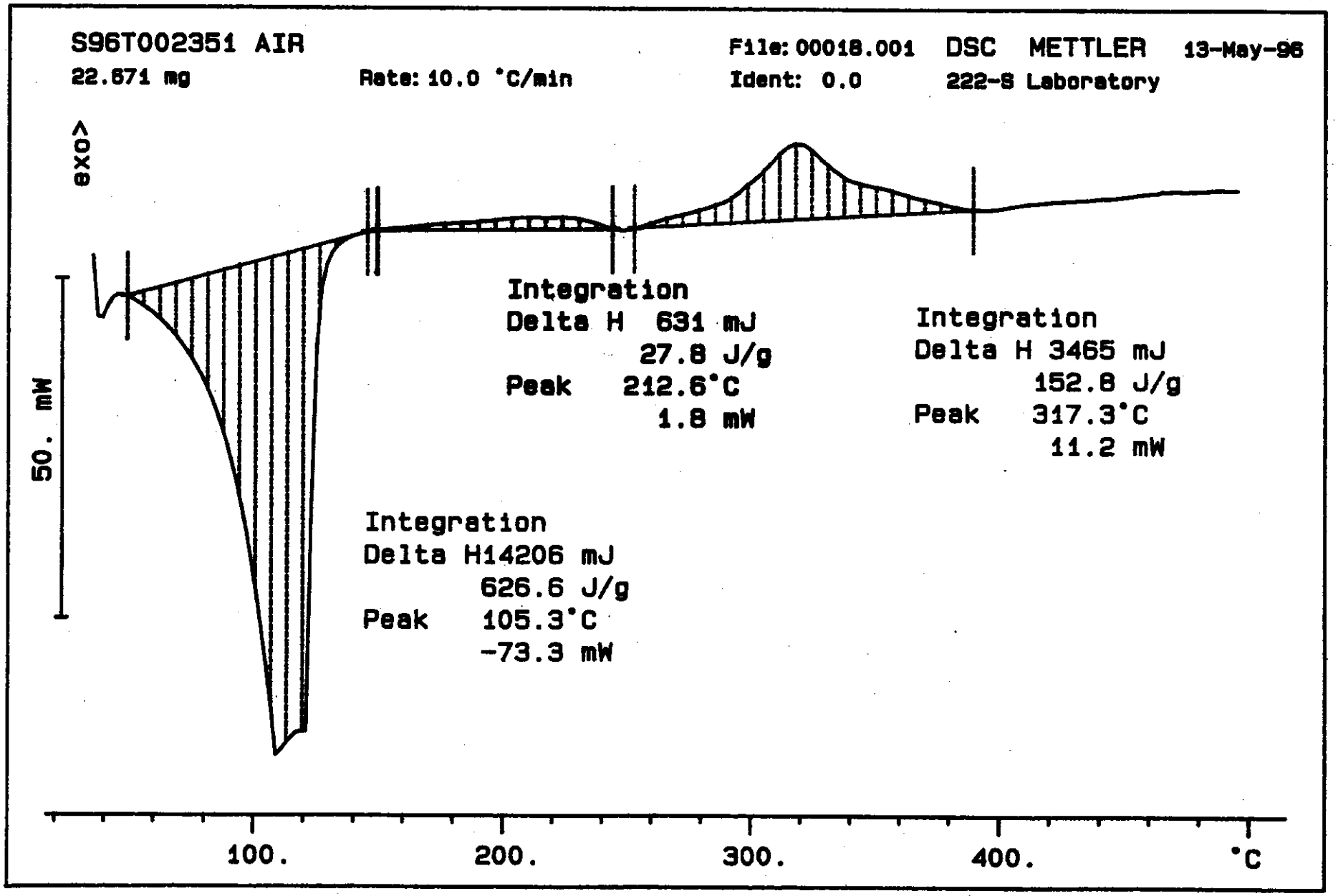
Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

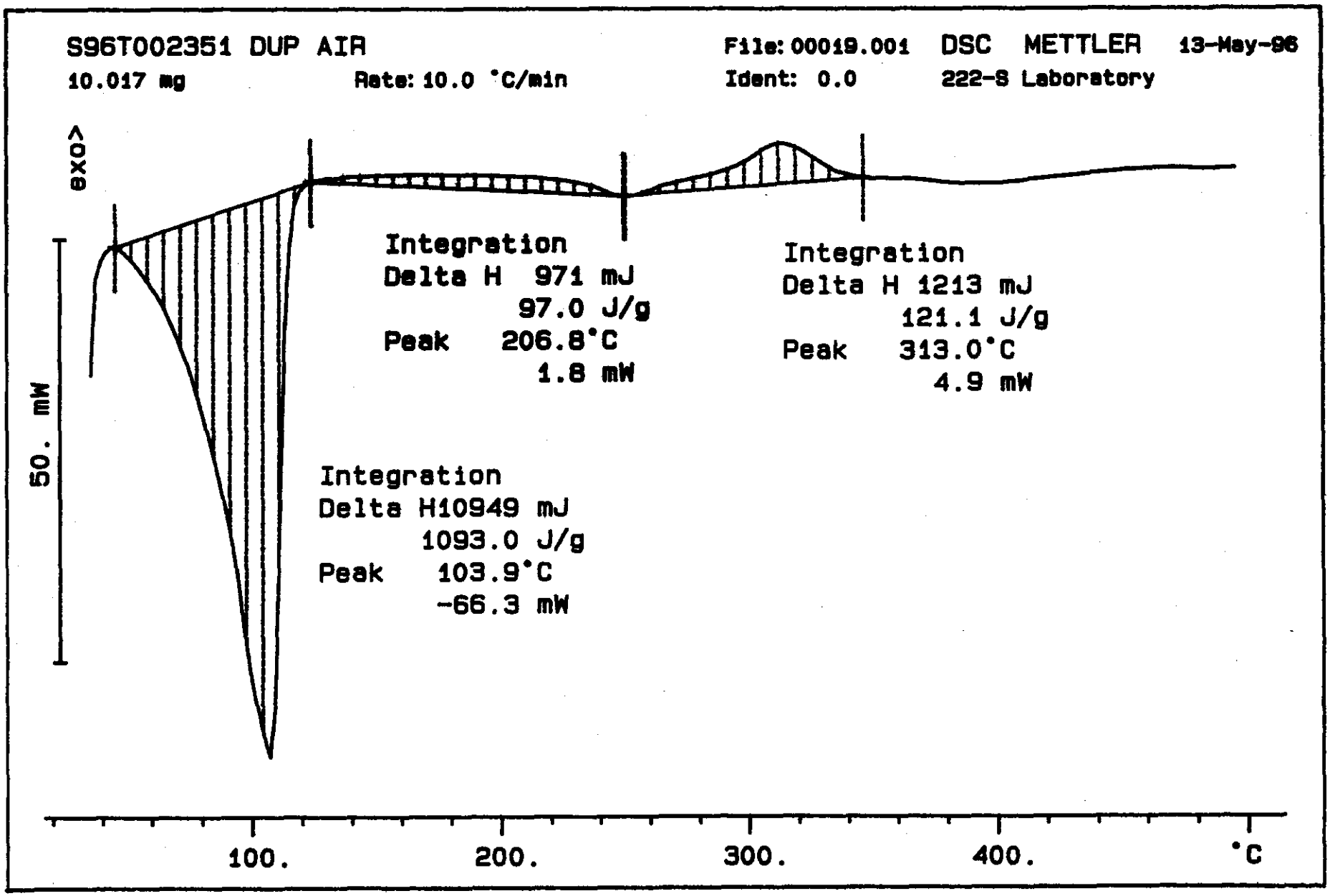
SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 250 TO 252.



S. Sutton 5-13-96

250


S96T002351 AIR
22.671 mg
Rate: 10.0 °C/min
File: 00018.001
Ident: 0.0
DSC METTLER
222-S Laboratory
13-May-96
<exo
mW .05
Integration
Delta H 631 mJ
27.8 J/g
Peak 212.6°C
1.8 mW
Integration
Delta H 3465 mJ
152.8 J/g
Peak 317.3°C
11.2 mW
Integration
Delta H14206 mJ
626.6 J/g
Peak 105.3°C
-73.3 mW
100.
200.
300.
400.
°C


S96T002351 DUP AIR
10.017 mg
Rate: 10.0 °C/min
File: 00019.001
Ident: 0.0
DSC METTLER
222-S Laboratory
13-May-96
<exo
50. mW
Integration
Delta H 971 mJ
97.0 J/g
Peak 206.8°C
1.8 mW
Integration
Delta H 1213 mJ
121.1 J/g
Peak 313.0°C
4.9 mW
Integration
Delta H10949 mJ
1093.0 J/g
Peak 103.9°C
-66.3 mW
100.
200.
300.
400.
°C

LABCORE Data Entry Template for Worklist# 8617

Analyst: SMF **Instrument:** DSC01 _____ **Book #** 12N14R

Method: LA-514-113 Rev/Mod C-1

Worklist Comment: Rerun. Please run C-106 DSCs under N2. bdv

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	STD				DSC-01	SOLID	28.45	132.1 (5/14/96 RDV)	N/A	Joules/g
96000082	C-106 GRAB	2	SAMPLE	S96T001527	1		DSC-01	SOLID	N/A	13.5		Joules/g
96000082	C-106 GRAB	3	DUP	S96T001527	1		DSC-01	SOLID	13.5	25.5	N/A	Joules/g

Final page for worklist # 8617

Susie M. Sutton 5-13-96
Analyst Signature **Date**

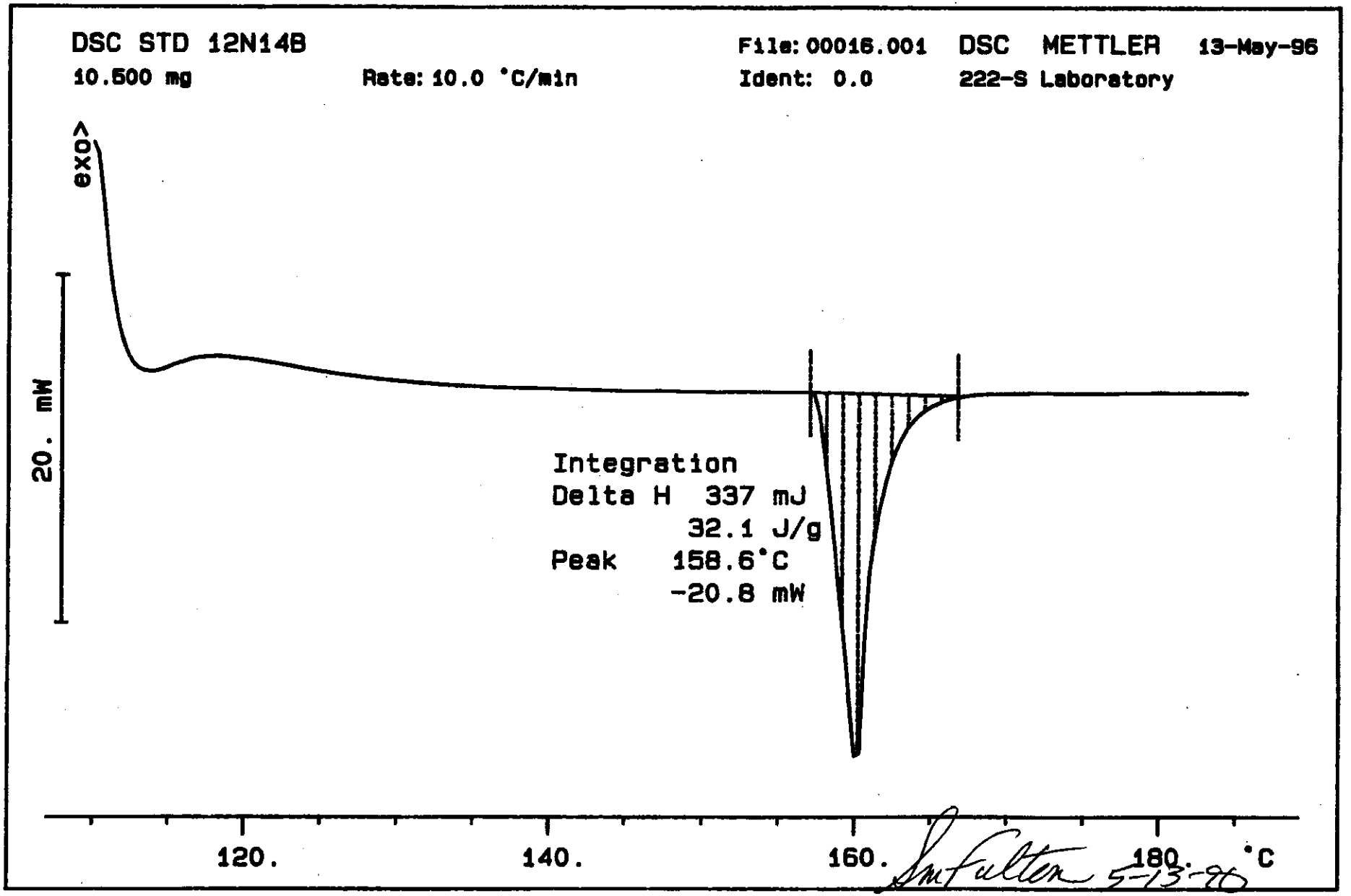
Gary Hammond 5-15-96
Analyst Signature **Date**

Validated by HAnastis 5-16-96

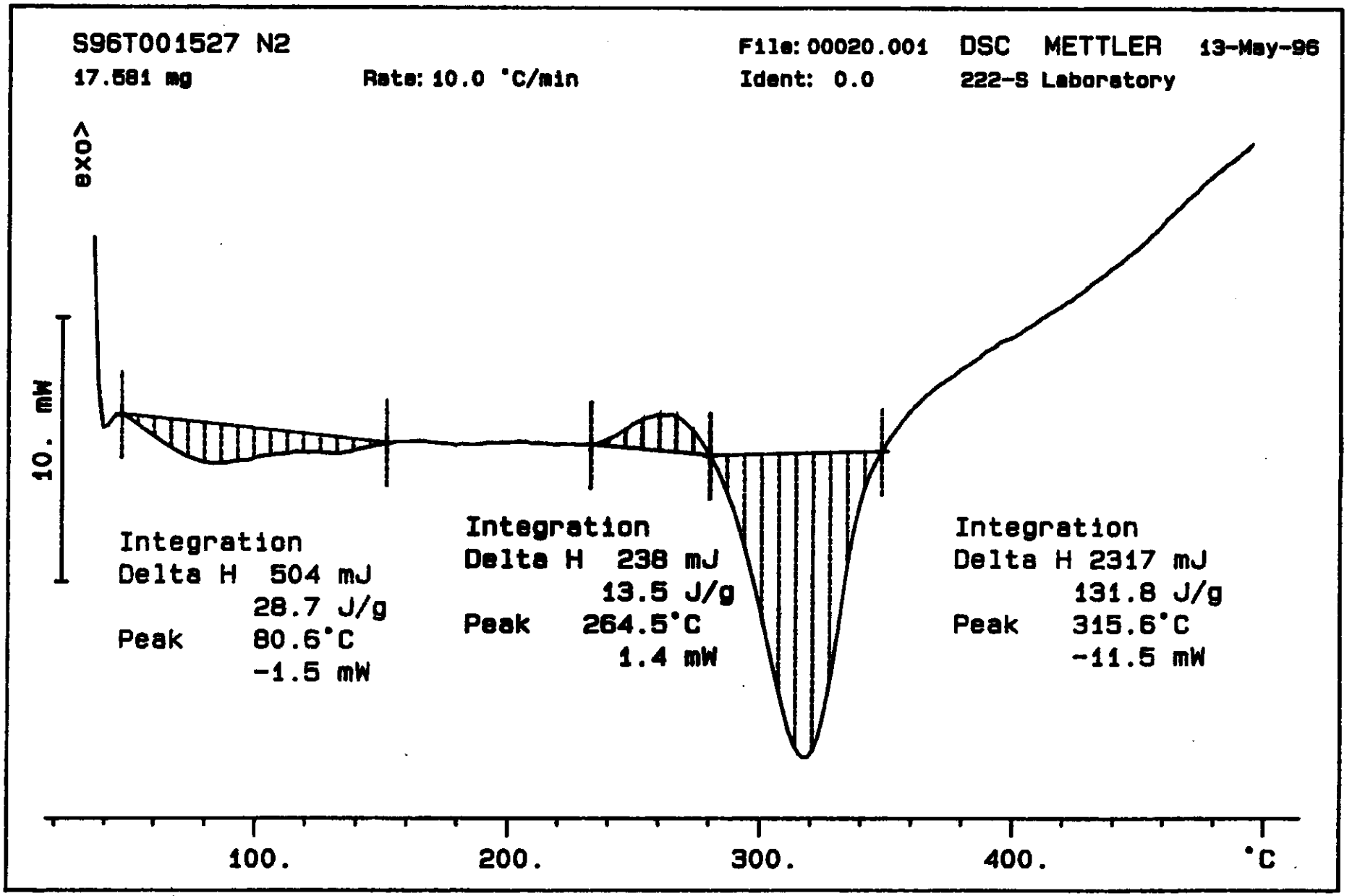
Data Entry Comments: Sample is very dry, powdery, with small clumps and light Brown in color. The end of the thermogram did show a strong drift in the exotherm direction, however the run completed prior to it returning to a baseline

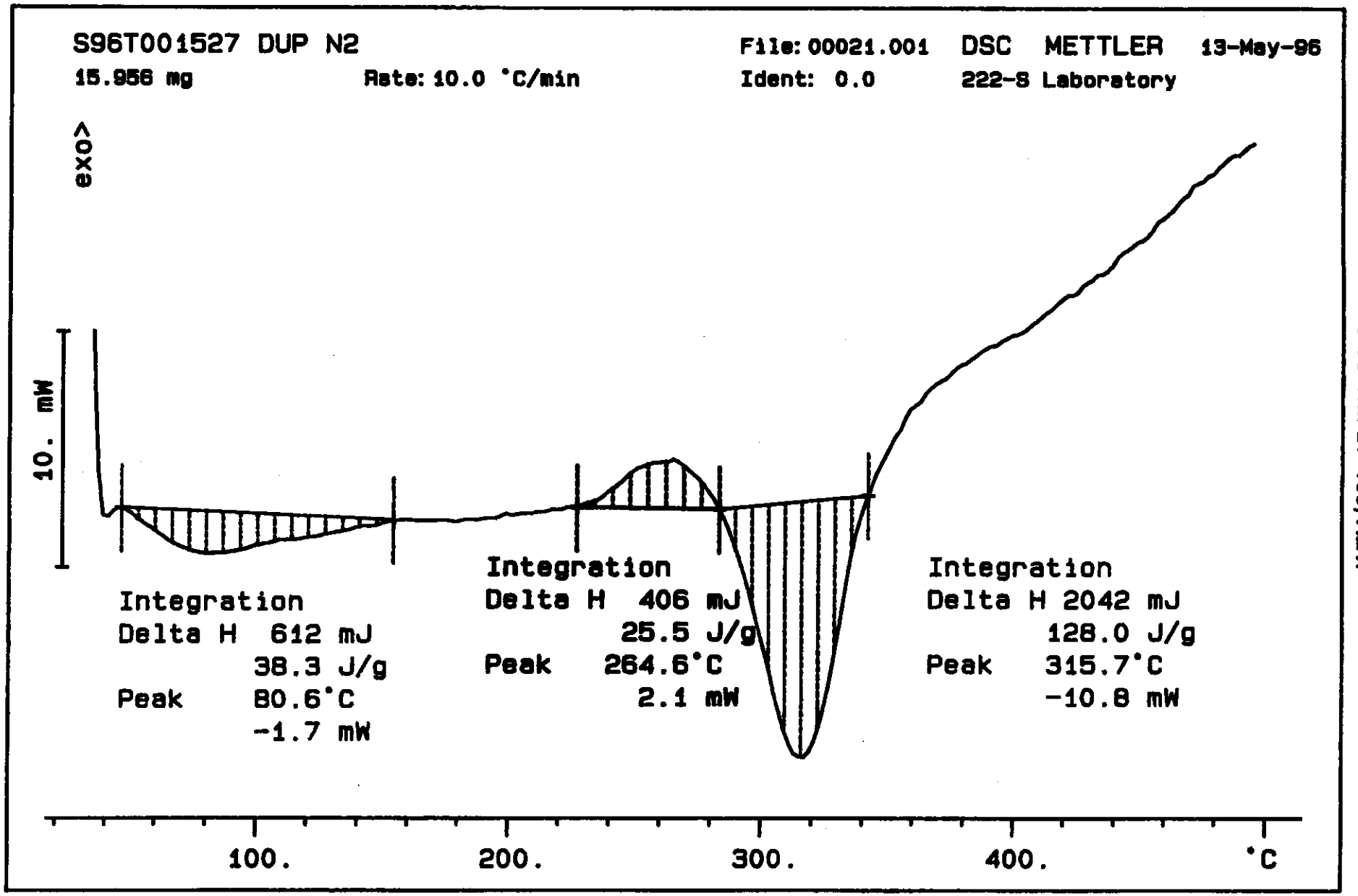
Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 254 TO 256.



S M Fulton 5-13-96


S96T001527 N2
17.581 mg
Rate: 10.0 °C/min
File: 00020.001
Ident: 0.0
DSC METTLER
222-S Laboratory
13-May-96
exo>
10. mW
Integration
Delta H 504 mJ
28.7 J/g
Peak 80.6°C
-1.5 mW
Integration
Delta H 238 mJ
13.5 J/g
Peak 264.5°C
1.4 mW
Integration
Delta H 2317 mJ
131.8 J/g
Peak 315.6°C
-11.5 mW
100.
200.
300.
400.
°C


S96T001527 DUP N2
15.956 mg
Rate: 10.0 °C/min
File: 00021.001
Ident: 0.0
DSC METTLER
222-S Laboratory
13-May-96
exo>
10. mW
Integration
Delta H 612 mJ
38.3 J/g
Peak 80.6°C
-1.7 mW
Integration
Delta H 406 mJ
25.5 J/g
Peak 264.6°C
2.1 mW
Integration
Delta H 2042 mJ
128.0 J/g
Peak 315.7°C
-10.8 mW
100.
200.
300.
400.
°C

LABCORE Data Entry Template for Worklist# 8827

Analyst: RDM **Instrument:** DSC0 3 **Book #** 12N14B

Method: LA-514-114 Rev/Mod C-1

Worklist Comment: C-106 FOR DSC01 CONTACT BLONDIE PRIOR TO RUN RTS!

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	STD				DSC-03	LIQUID	28.45	28.63*	N/A	Joules/g
96000638	C-106 GRAB	2	SAMPLE	S96T002766	0		DSC-03	LIQUID	N/A	Ø		Joules/g
96000638	C-106 GRAB	3	DUP	S96T002766	0		DSC-03	LIQUID	Ø	Ø	N/A	Joules/g
96000648	C-106 GRAB	4	SAMPLE	S96T002825	0		DSC-03	LIQUID	N/A	Ø		Joules/g
		5	STD				DSC-03	LIQUID	28.45	28.86	N/A	Joules/g
96000648	C-106 GRAB	6	DUP	S96T002825	0		DSC-03	LIQUID	Ø	Ø	N/A	Joules/g

Final page for worklist # 8827

See Attached for Signatures
Analyst Signature **Date**

[signature] 5-22-96
Analyst Signature **Date**

Validated by H Anastos 5-22-96

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

LABCORE Data Entry Template for Worklist# 8827

Analyst: RCOM **Instrument:** DSC0 3 **Book #** 12N4B

Method: LA-514-113 Rev/Mod C-1

Worklist Comment: C-106 FOR DSC01 CONTACT BLONDIE PRIOR TO RUN RTS!

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	STD				DSC-01	LIQUID			N/A	Joules/g
96000638	C-106 GRAB	2	SAMPLE	S96T002766	0		DSC-01	LIQUID	N/A			Joules/g
96000638	C-106 GRAB	3	DUP	S96T002766	0		DSC-01	LIQUID			N/A	Joules/g
96000648	C-106 GRAB	4	SAMPLE	S96T002825	0		DSC-01	LIQUID	N/A			Joules/g
96000648	C-106 GRAB	5	DUP STD	S96T002825	0		DSC-01	LIQUID			N/A	Joules/g

Final page for worklist # 8827

RCOM 5/17/96
Analyst Signature **Date**

Analyst Signature **Date**

SMfulton 5-18-96

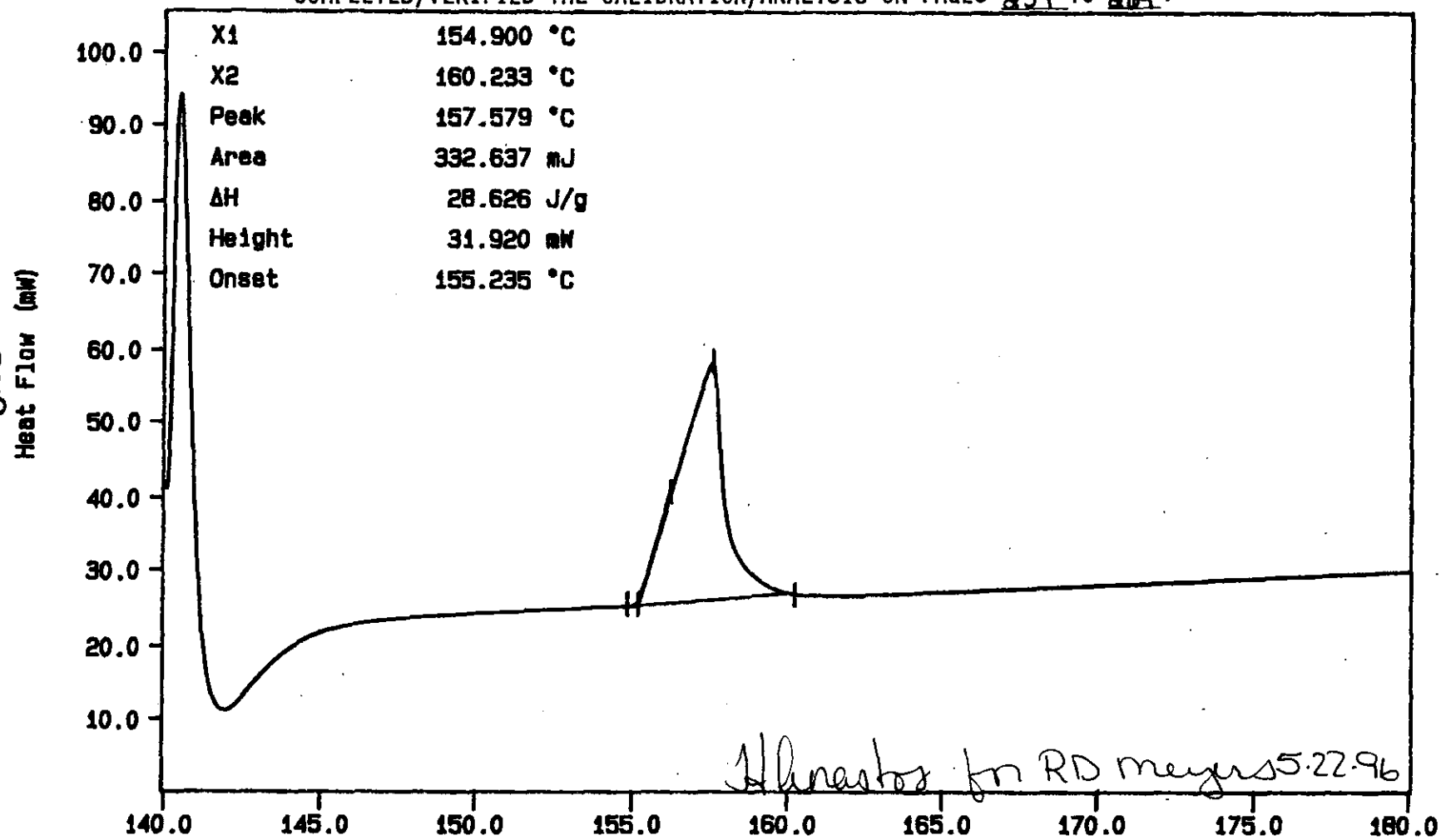
Other Instrument was used.

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

Curve 1: DSC
File info: IND051701 Fri May 17 05:51:20 1996
Sample Weight: 11.620 mg
i2N14-B INDIUM AT 10C\MIN

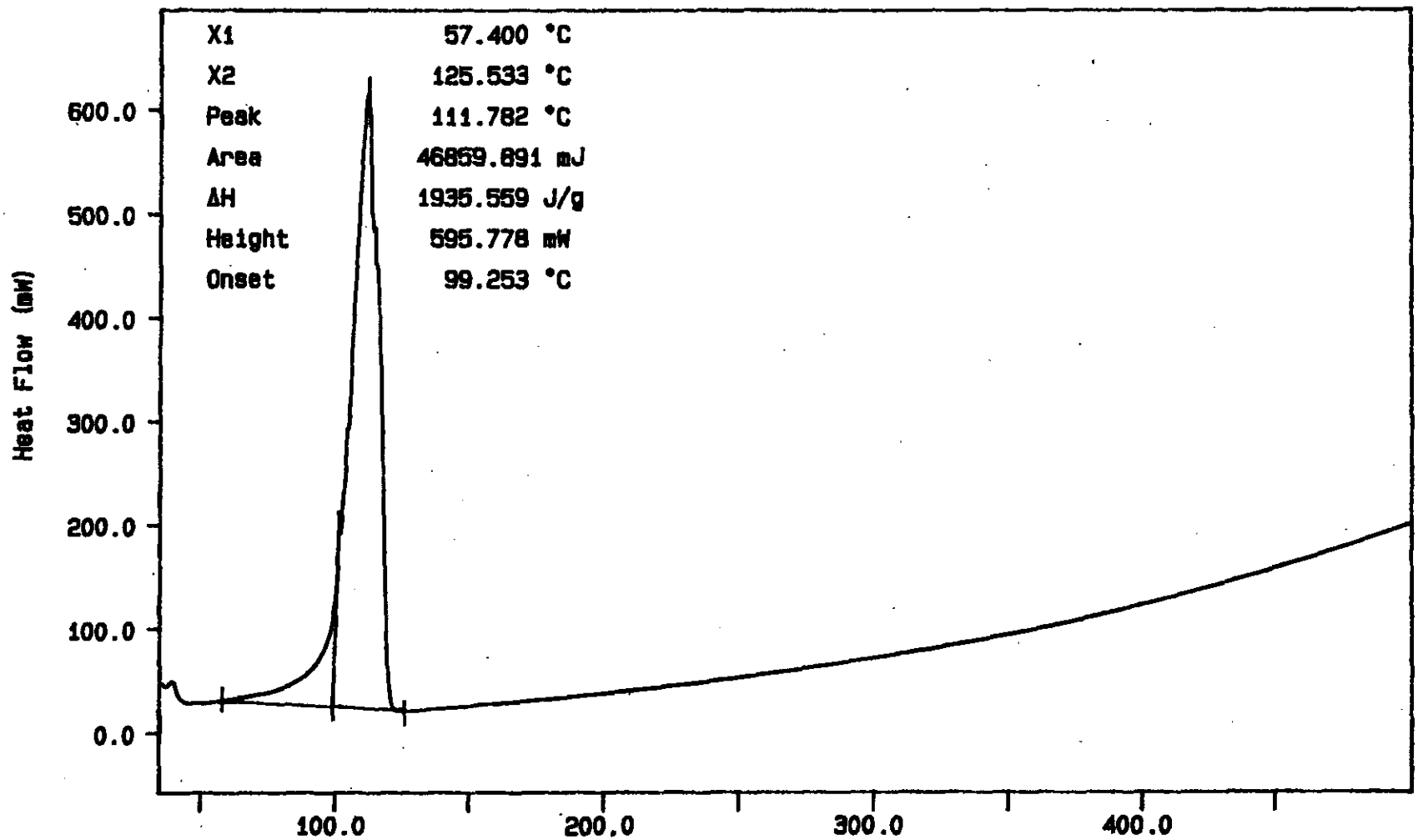
SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 259 TO 264.



N2, EXOTHERM DOWN
TEMP1: 140.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 180.0 C

RW KING
PERKIN-ELMER
7 Series Thermal Analysis System
Fri May 17 19:35:23 1996

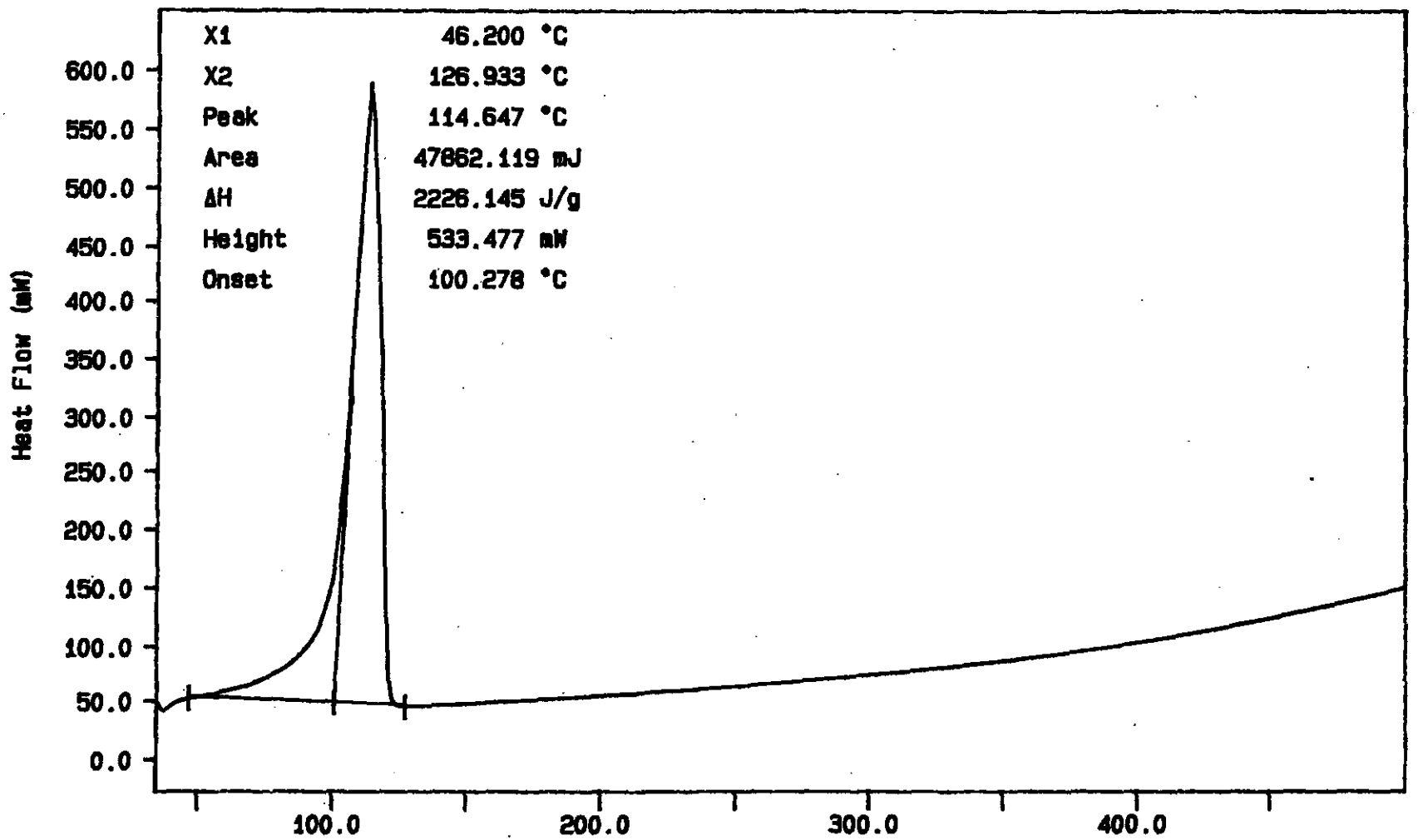
Curve 1: DSC
File info: SAM051705 Fri May 17 22:12:21 1996
Sample Weight: 24.210 mg
S96T002766



exotherm down, N2 purge gas
TEMP: 35.0 C TIME: 0.0 min RATE: 10.0 C/min
TEMP: 600.0 C

RD MEYERS
PERKIN-ELMER
7 Series Thermal Analysis System
Fri May 17 22:46:11 1996

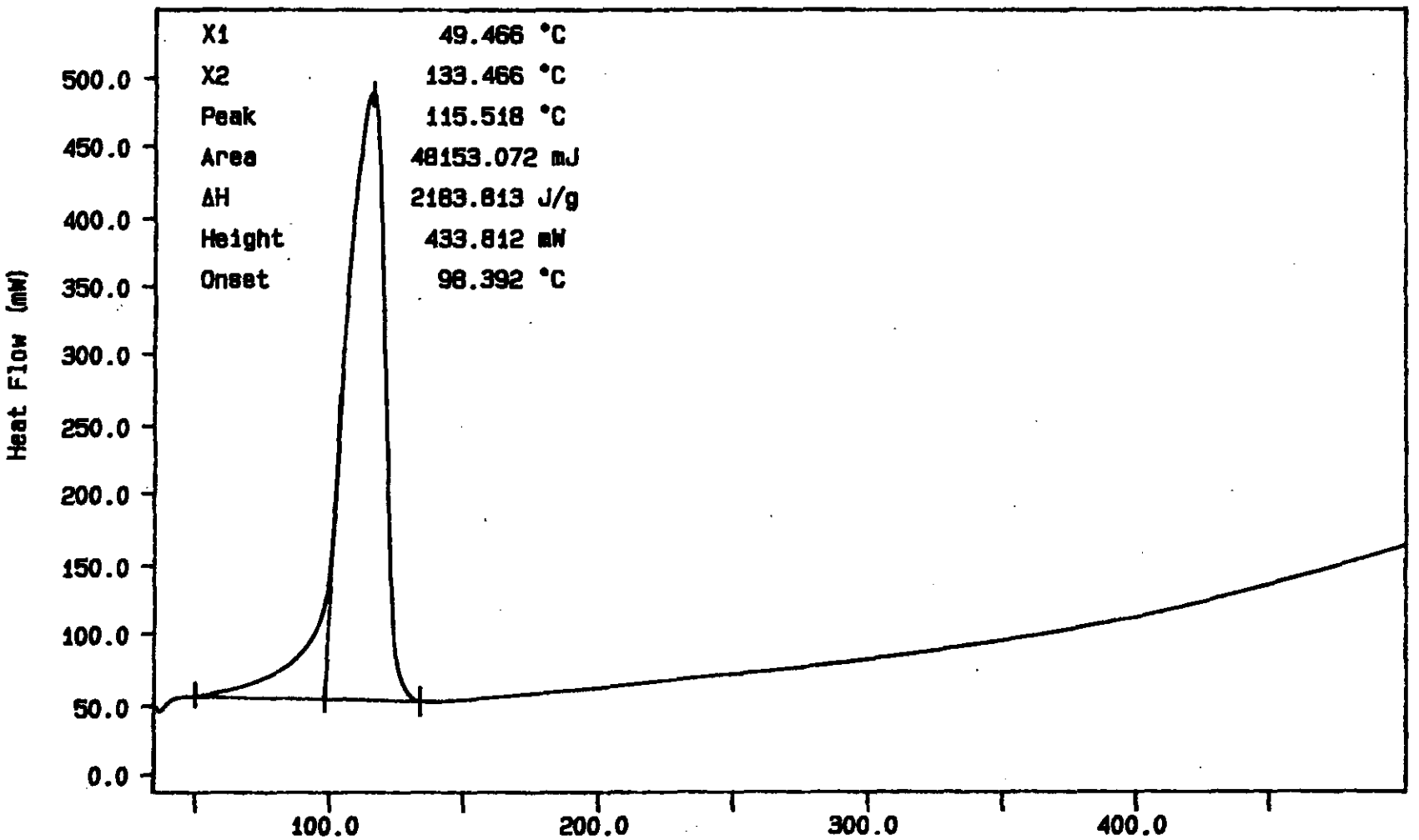
Curve 1: DSC
File info: qsav2 Sat May 18 01:18:44 1996
Sample Weight: 21.500 mg
S96T002766DUP



exotherm down, N2 purge gas
TEMP1: 35.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 500.0 C

AD MEYERS
PERKIN-ELMER
7 Series Thermal Analysis System
Sat May 18 03:04:25 1996

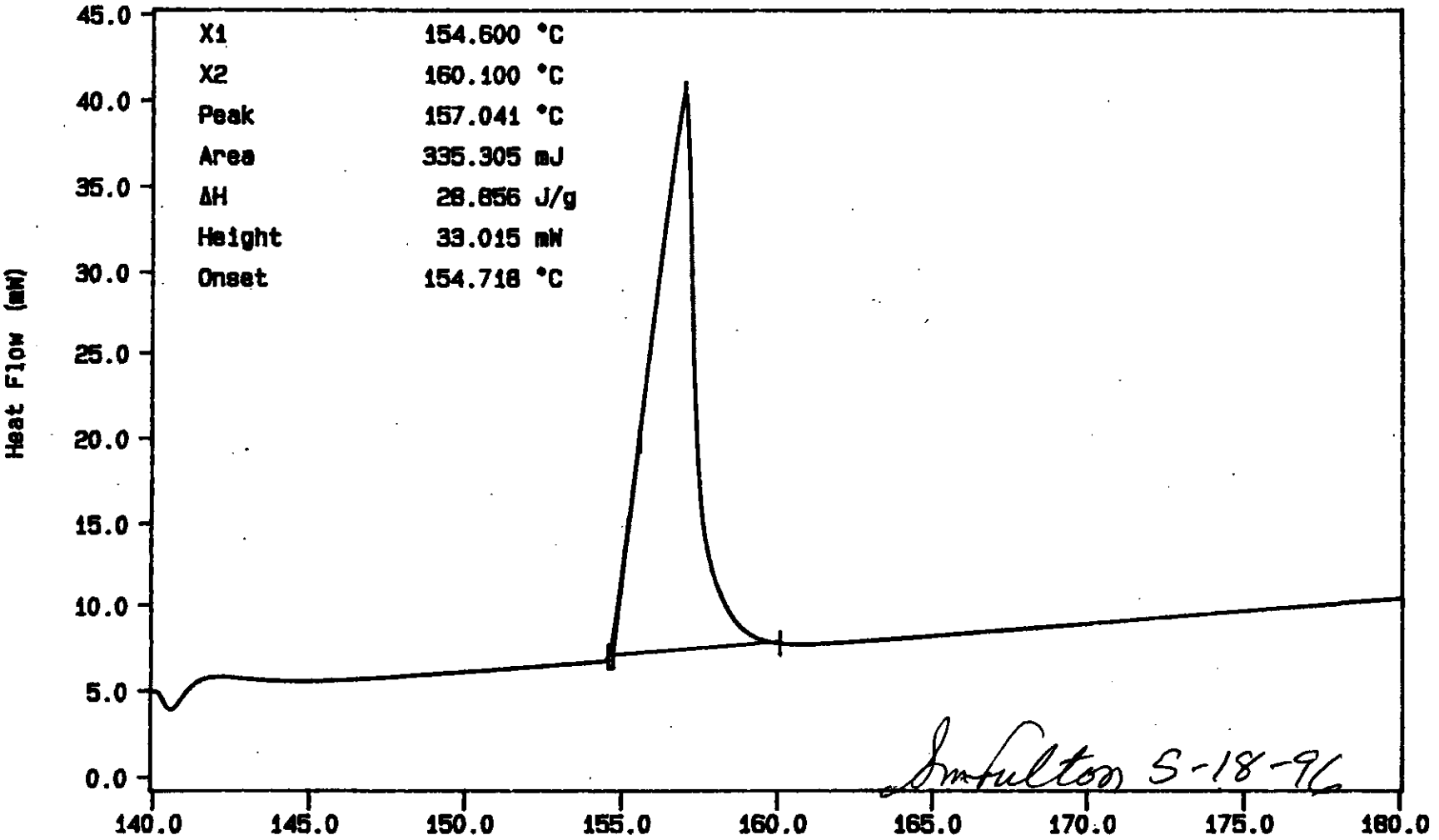
Curve 1: DSC
File info: SAM051802 Sat May 18 04:05:42 1996
Sample Weight: 22.050 mg
S96T002825



exotherm down, N2 purge gas
TEMP1: 25.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 600.0 C

RD MEYERS
PERKIN-ELMER
7 Series Thermal Analysis System
Sat May 18 04:17:40 1996

Curve 1: DSC
File info: IND051801 Sat May 18 06:34:12 1996
Sample Weight: 11.620 mg
12N14-B INDIUM AT 10C\MIN



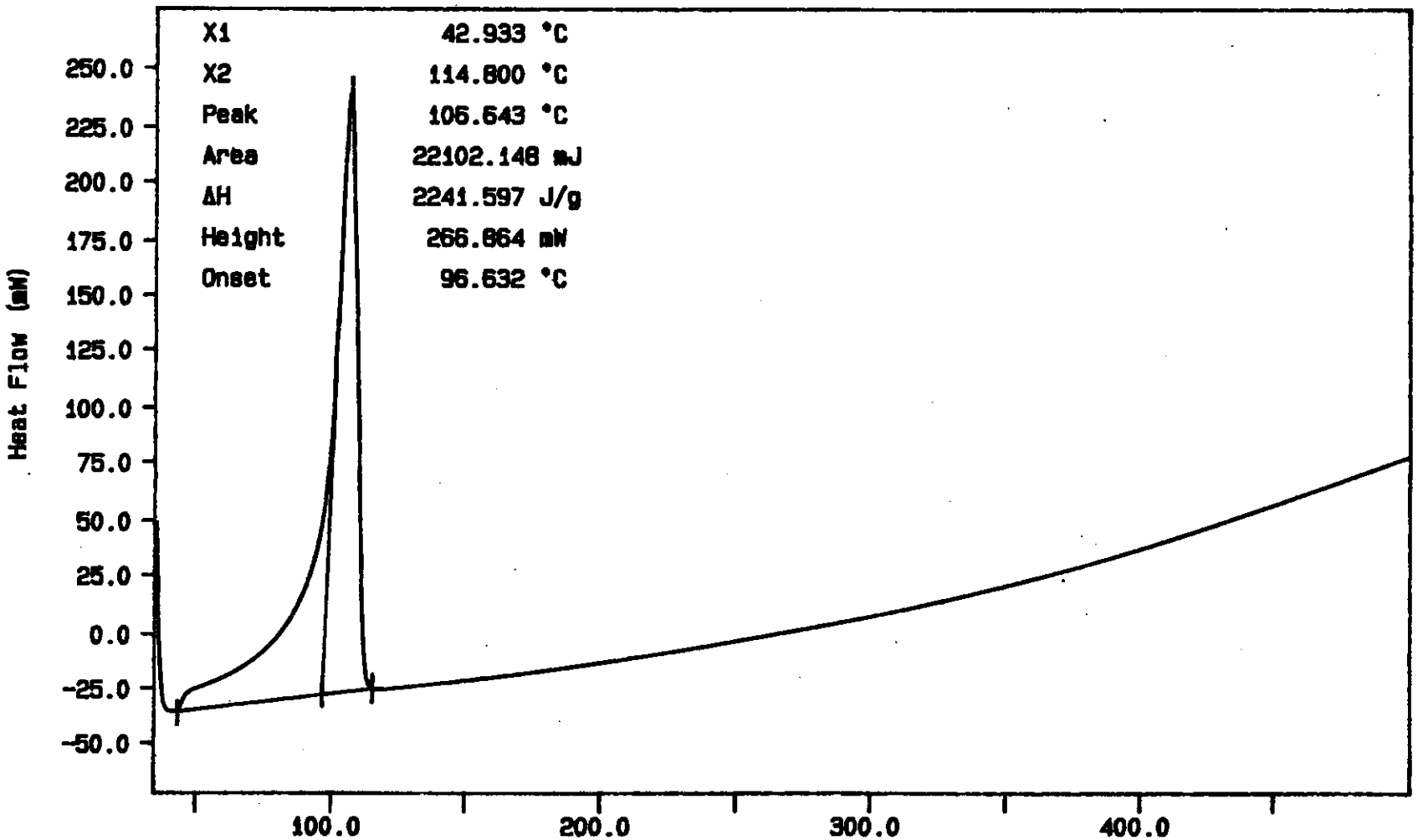
N2, EXOTHERM DOWN
TEMP1: 140.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 180.0 C

SM FULTON
PERKIN-ELMER
7 Series Thermal Analysis System
Sat May 18 06:36:14 1996

263

WHC-SD-WM-DP-183, REV. 0

Curve 1: DSC
File info: SAM051801 Sat May 18 07:25:38 1996
Sample Weight: 9.860 mg
S96T002825 DUP



axotherm down, N2 purge gas
TEMP1: 35.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 600.0 C

SM FULTON
PERKIN-ELMER
7 Series Thermal Analysis System
Sat May 18 08:25:08 1996

LABCORE Data Entry Template for Worklist# 8908

Analyst: RDM **Instrument:** DSC0 1 **Book #** 12N14B

Method: LA-514-113 Rev/Mod C-1

Worklist Comment: C-106 DSC RUN UNDER N2. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R	A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD				DSC-01	LIQUID	28.45	31.8	N/A	Joules/g
96000638	C-106 GRAB	2 SAMPLE	S96T002770	0		DSC-01	LIQUID	N/A	Ø		Joules/g
96000638	C-106 GRAB	3 DUP	S96T002770	0		DSC-01	LIQUID	Ø	Ø	N/A	Joules/g
96000648	C-106 GRAB	4 SAMPLE	S96T002829	0		DSC-01	LIQUID	N/A	Ø		Joules/g
		5 STD				DSC-01	LIQUID	28.45	31.8	N/A	Joules/g
96000648	C-106 GRAB	6 DUP	S96T002829	0		DSC-01	LIQUID	Ø	~~Ø~~ 580.2 NLa	N/A 5.20.96	Joules/g

Final page for worklist # 8908

See Attached for Signatures
Analyst Signature **Date**

Validated by H Anastor 5.22.96

R/Hall 5-22-96
Analyst Signature **Date**
14442

S96T002770 did show a shift in baseline at approximately 200-220°C this shift may be due to a change in heat capacity of the sample. The downward shift in baseline at the upper end of the temperature scale is due to the sample. Samples run after these produced a relatively straight baseline.

Data Entry Comments: S96T002829 sample and duplicate do not resemble one another. A shift in baseline again maybe due to a change in heat capacity. The sample will be rerun because of the differen in the shape of the ~~basel~~ thermogram

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code. 5/21/96

LABCORE Data Entry Template for Worklist# 8908

Analyst: RPM **Instrument:** DSC0 _____ **Book #** 12W14B

Method: LA-514-113 Rev/Mod C-1

Worklist Comment: C-106 DSC RUN UNDER N2. RCJ

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	STD				DSC-01	LIQUID			N/A	Joules/g
96000638	C-106 GRAB	2	SAMPLE	S96T002770	0		DSC-01	LIQUID	N/A			Joules/g
96000638	C-106 GRAB	3	DUP	S96T002770	0		DSC-01	LIQUID			N/A	Joules/g
96000648	C-106 GRAB	4	SAMPLE	S96T002829	0		DSC-01	LIQUID	N/A			Joules/g
96000648	C-106 GRAB	5	STD DUP	S96T002829	0		DSC-01	LIQUID			N/A	Joules/g

Final page for worklist # 8908

RPMyn 5/17/96
Analyst Signature **Date**

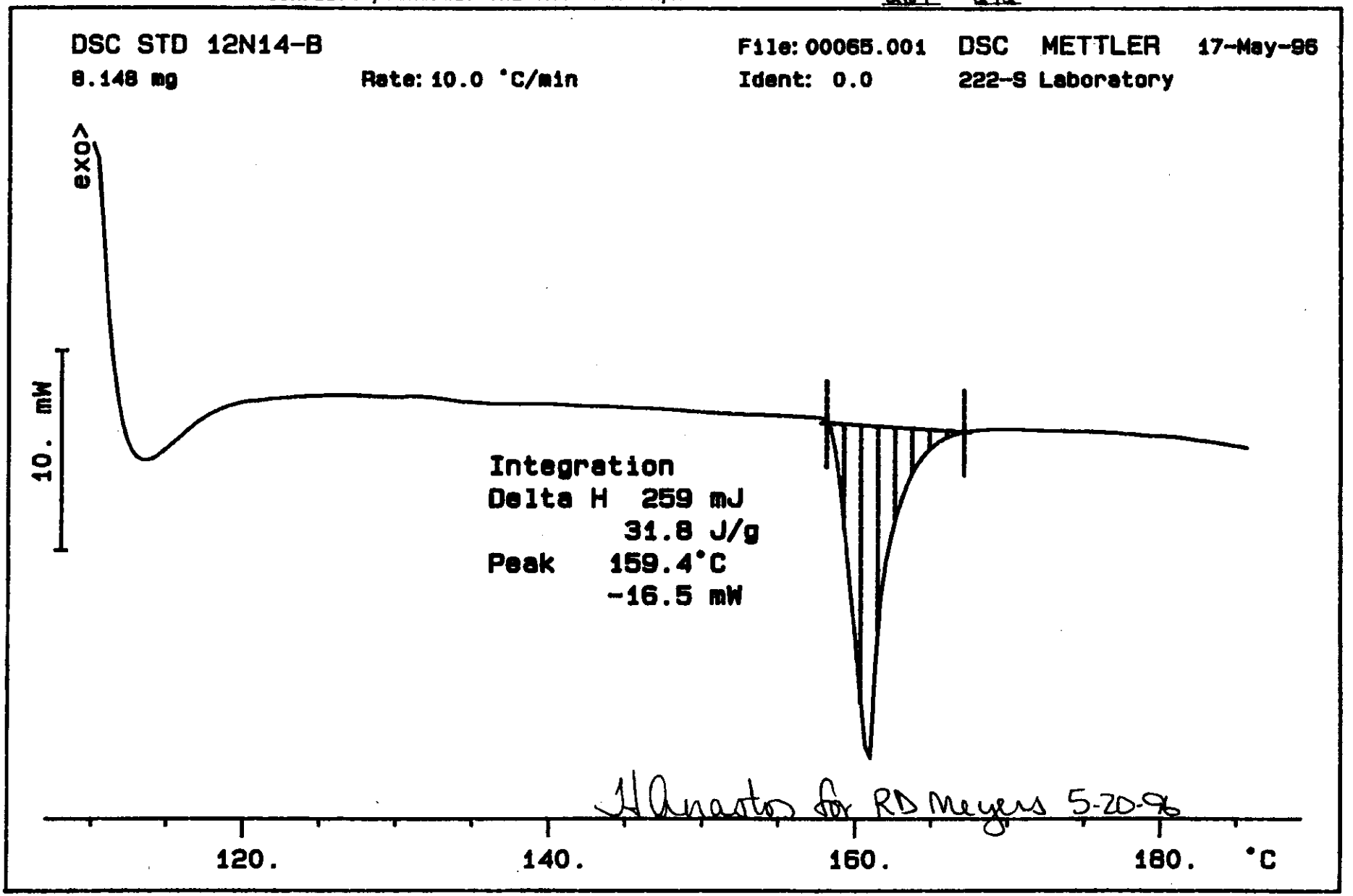
Analyst Signature **Date**

SM-Fulton 5-18-96

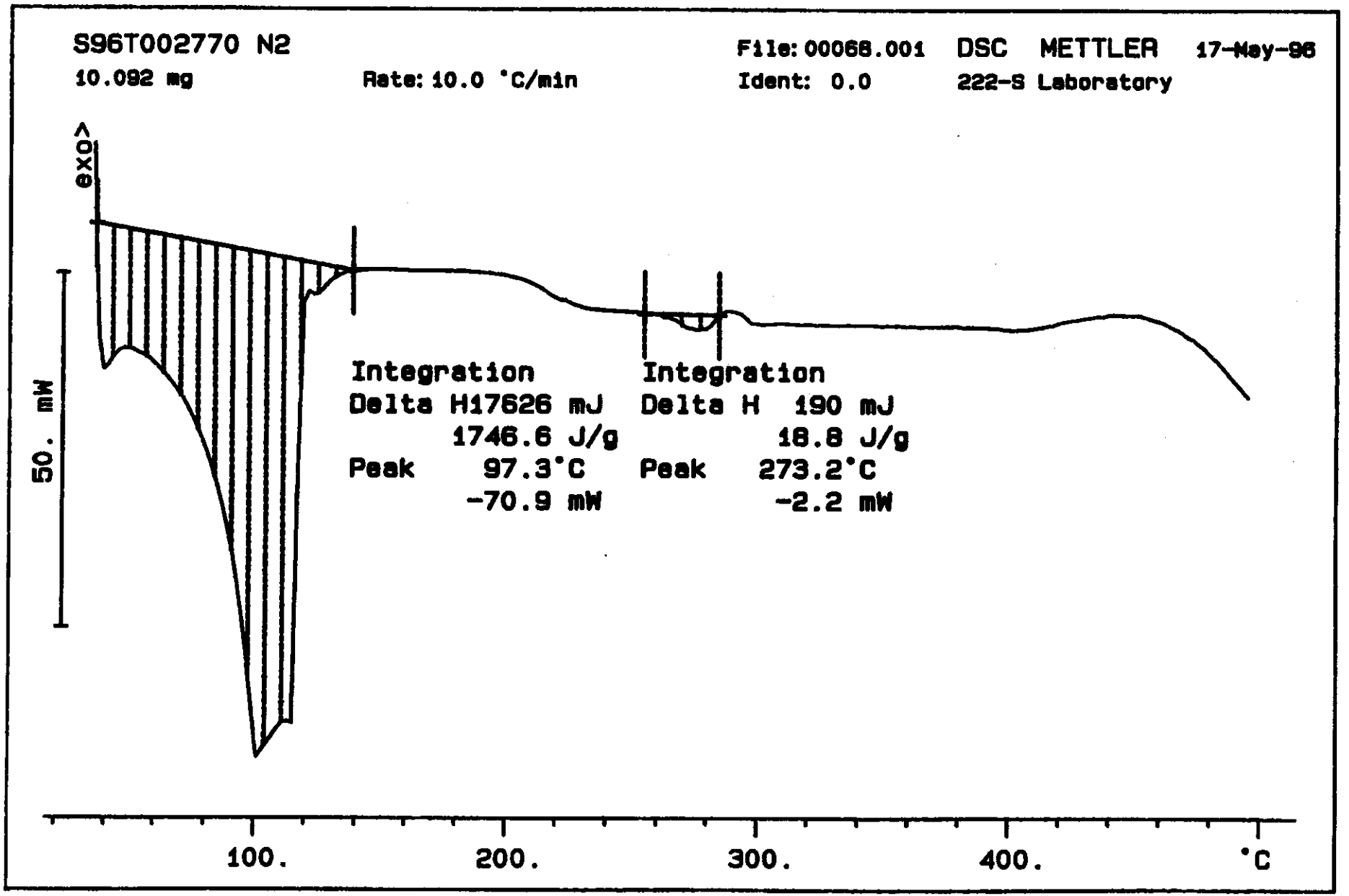
Data Entry Comments:

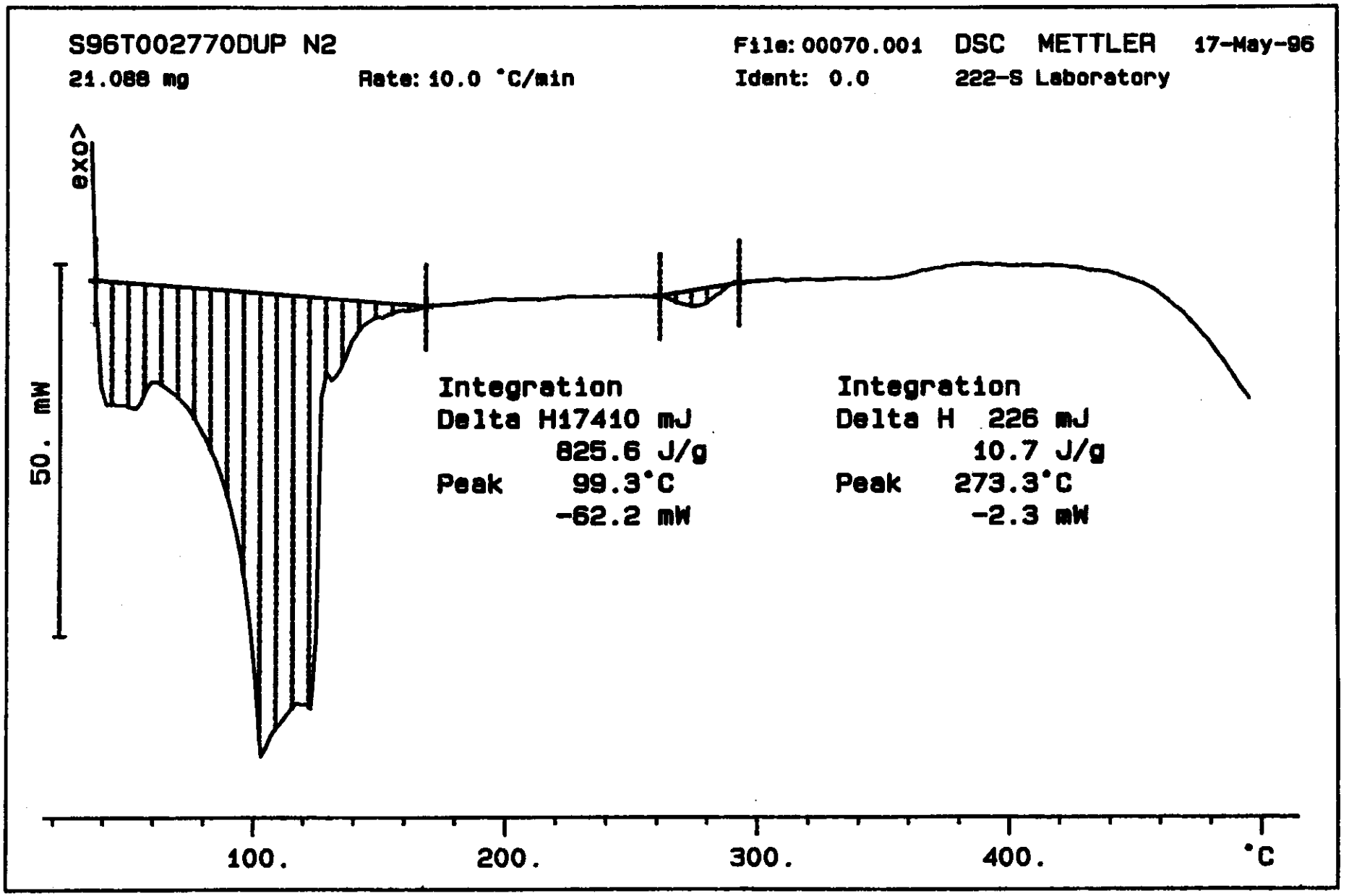
Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

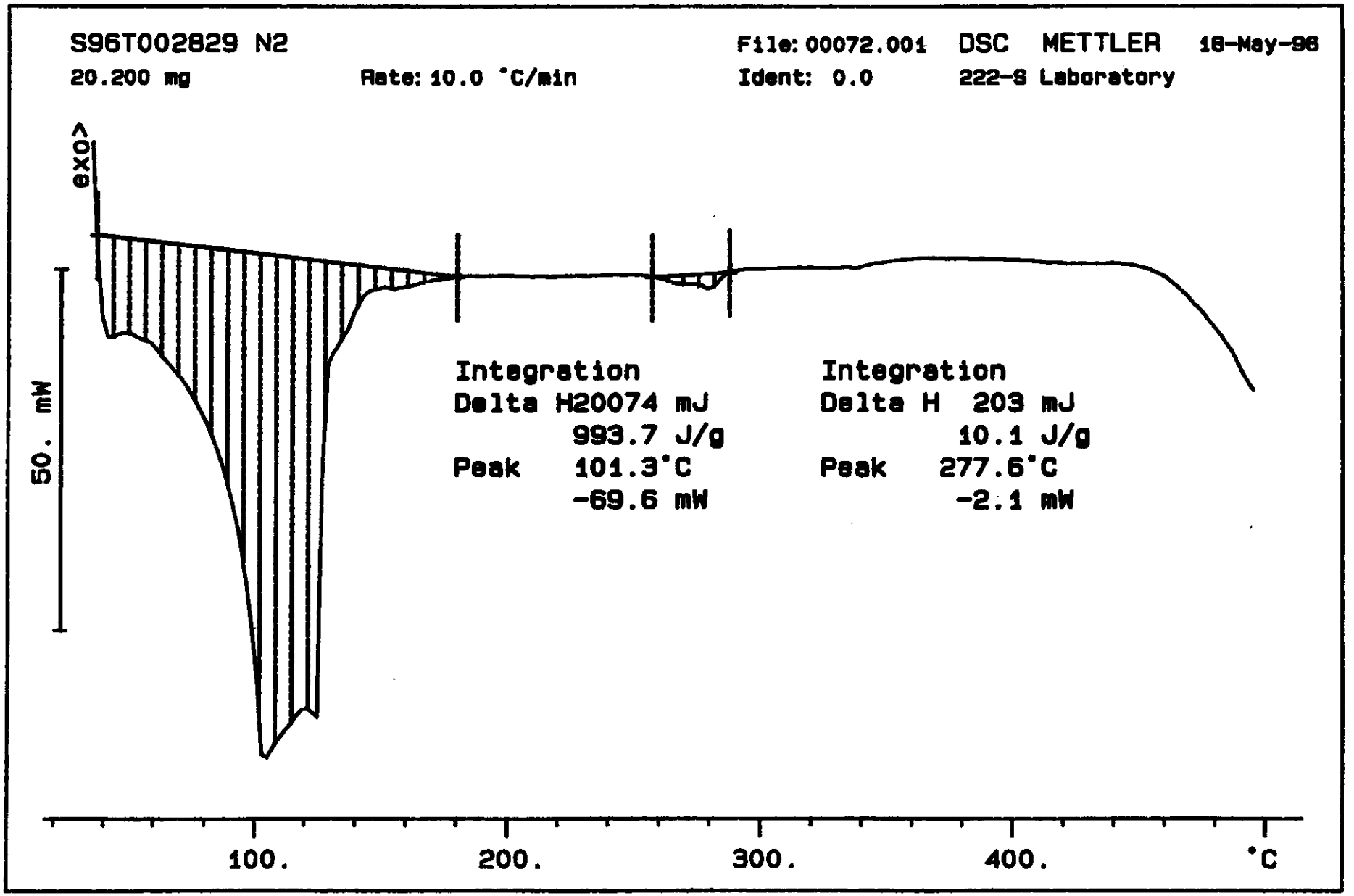
SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 267 TO 272.

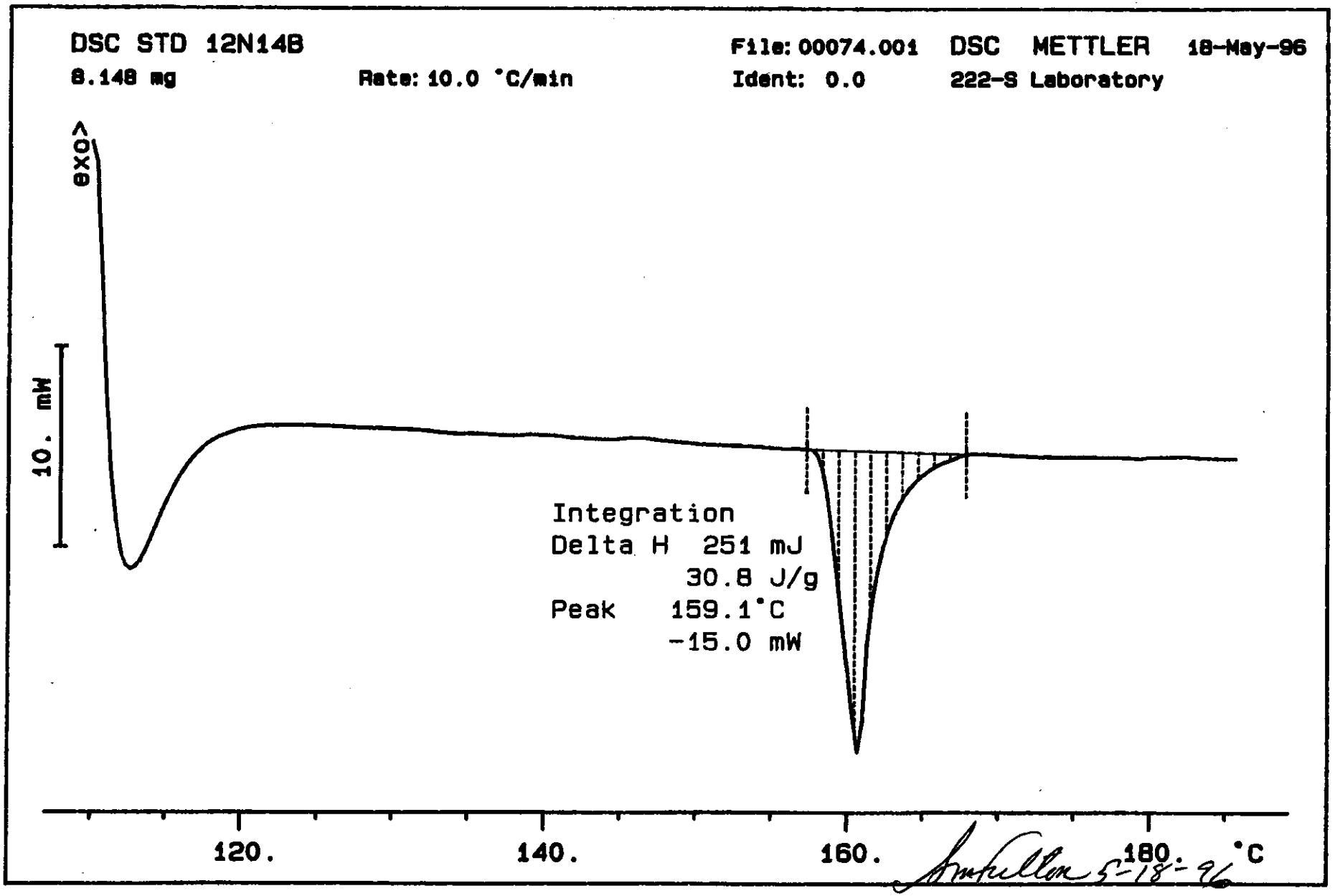


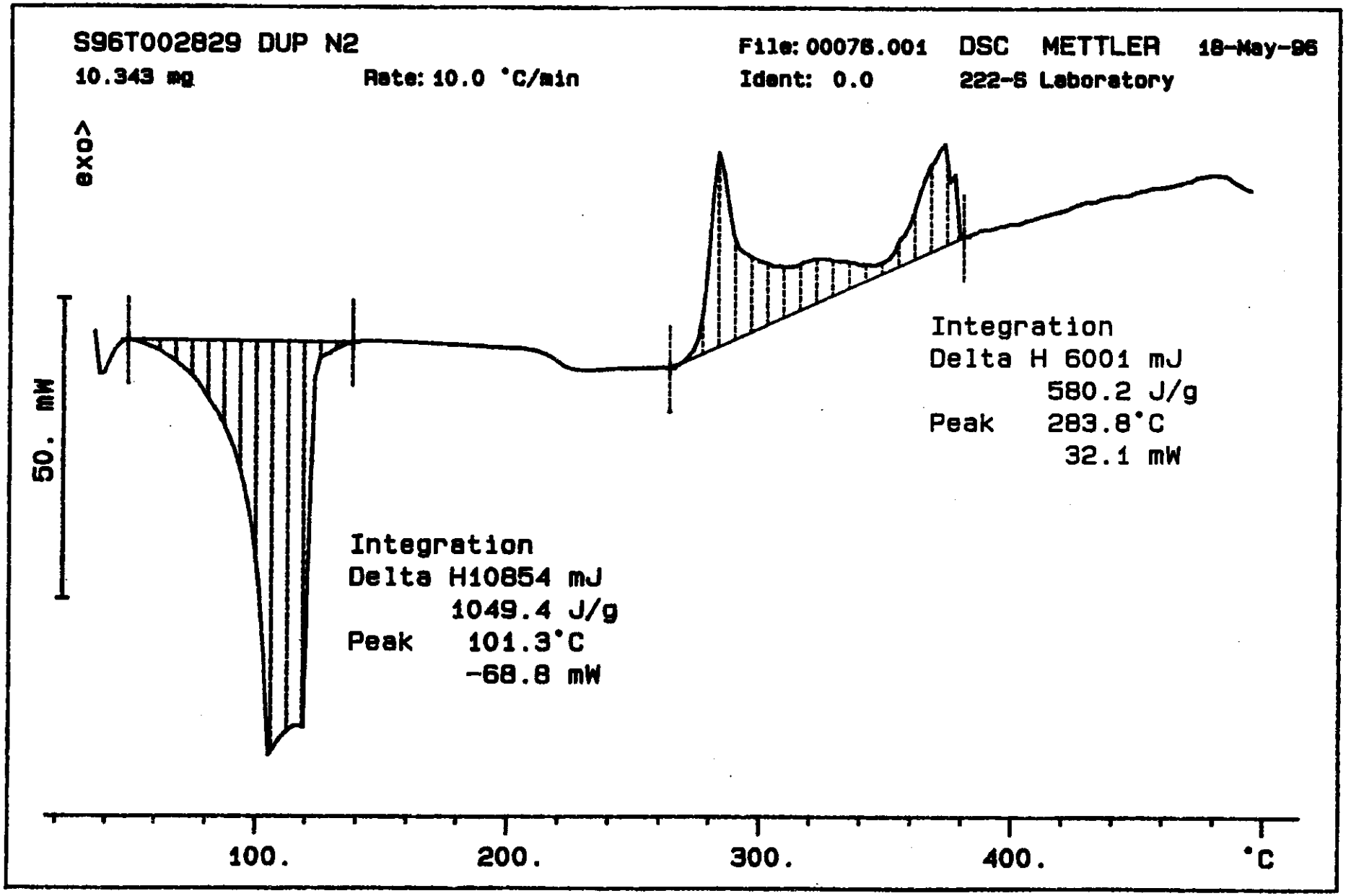
H Anastos for RD Meyers 5-20-96


S96T002770 N2
10.092 mg
Rate: 10.0 °C/min
File: 00068.001
Ident: 0.0
DSC METTLER
222-S Laboratory
17-May-96
exo>
50. mW
Integration
Delta H17626 mJ
1746.6 J/g
Peak 97.3°C
-70.9 mW
Integration
Delta H 190 mJ
18.8 J/g
Peak 273.2°C
-2.2 mW
100.
200.
300.
400.
°C


S96T002770DUP N2
21.088 mg
Rate: 10.0 °C/min
File: 00070.001
Ident: 0.0
DSC METTLER
222-S Laboratory
17-May-96
exo>
50. mW
Integration
Delta H17410 mJ
825.6 J/g
Peak 99.3°C
-62.2 mW
Integration
Delta H 226 mJ
10.7 J/g
Peak 273.3°C
-2.3 mW
100.
200.
300.
400.
°C


S96T002829 N2
20.200 mg
Rate: 10.0 °C/min
File: 00072.001
Ident: 0.0
DSC METTLER
222-S Laboratory
16-May-96
exo>
.05 mW
Integration
Delta H20074 mJ
993.7 J/g
Peak 101.3°C
-69.6 mW
Integration
Delta H 203 mJ
10.1 J/g
Peak 277.6°C
-2.1 mW
100.
200.
300.
400.
°C


DSC STD 12N14B
8.148 mg
Rate: 10.0 °C/min
File: 00074.001
Ident: 0.0
DSC METTLER
222-S Laboratory
18-May-96
exo>
10. mW
Integration
Delta H 251 mJ
30.8 J/g
Peak 159.1°C
-15.0 mW
120.
140.
160.
180.
°C


S96T002829 DUP N2
10.343 mg
Rate: 10.0 °C/min
File: 00076.001
Ident: 0.0
DSC METTLER
222-S Laboratory
18-May-96
exo>
.05 mW
Integration
Delta H10854 mJ
1049.4 J/g
Peak 101.3°C
-68.8 mW
Integration
Delta H 6001 mJ
580.2 J/g
Peak 283.8°C
32.1 mW
100.
200.
300.
400.
°C

worklistrpt Version 2.1 05/15/95
05/22/96 14:38

LABCORE Data Entry Template for Worklist# 9139

Analyst: BDV **Instrument:** DSC01 **Book #** —

Method: LA-514-113 Rev/Mod —

Worklist Comment: Dry DSC for C-106. bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R	A	-------TEST------	MATRIX	ACTUAL	FOUND	DL	UNIT
96000174	C-106 GRAB	1 SAMPLE	S96T001681	0		DSC-02	LIQUID	N/A	10.27		Joules/g Dry
96000174	C-106 GRAB	2 DUP	S96T001681	0		DSC-02	LIQUID	10.27	10.27	N/A	Joules/g Dry
96000082	C-106 GRAB	3 SAMPLE	S96T001544	0		DSC-02	LIQUID	N/A	Ø		Joules/g Dry
96000082	C-106 GRAB	4 DUP	S96T001544	0		DSC-02	LIQUID	Ø	Ø	N/A	Joules/g Dry
96000174	C-106 GRAB	5 SAMPLE	S96T002350	0		DSC-02	SOLID	N/A	83.15		Joules/g Dry
96000174	C-106 GRAB	6 DUP	S96T002350	0		DSC-02	SOLID	83.15	170.5	N/A	Joules/g Dry
96000174	C-106 GRAB	7 SAMPLE	S96T002351	0		DSC-02	SOLID	N/A	404.0		Joules/g Dry
96000174	C-106 GRAB	8 DUP	S96T002351	0		DSC-02	SOLID	404.0	487.9	N/A	Joules/g Dry

Final page for worklist # 9139

Blandina Valenzuela 5-22-96
Analyst Signature **Date**

Analyst Signature **Date**

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

CALCULATED DRY DSC			
SAMPLE NO.	DSC RESULT (J/g)	TGA RESULT (% water)	DRY DSC RESULT
S96T001681	5.5	46.42	10.27
1681D	5.5	46.42	10.27
1544	Ø	58.02	Ø
1544D	Ø	58.02	Ø
2350	29.8	64.16	83.15
2350D	61.1	64.16	170.5
2351	180.6	55.30	404.0
2351D	218.1	55.30	487.9

LABCORE Data Entry Template for Worklist# 9140

Analyst: BDV **Instrument:** DSC01 **Book #** —

Method: LA-514-113 Rev/Mod —

Worklist Comment: Dry DSC for C-106. bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R	A	-------TEST------	MATRIX	ACTUAL	FOUND	DL	UNIT
96000082	C-106 GRAB	1 SAMPLE	S96T001526	0		DSC-02	SOLID	N/A	Ø		Joules/g Dry
96000082	C-106 GRAB	2 DUP	S96T001526	0		DSC-02	SOLID	Ø	Ø	N/A	Joules/g Dry
96000082	C-106 GRAB	3 SAMPLE	S96T001527	0		DSC-02	SOLID	N/A	Ø		Joules/g Dry
96000082	C-106 GRAB	4 DUP	S96T001527	0		DSC-02	SOLID	Ø	1037	N/A	Joules/g Dry
96000082	C-106 GRAB	5 TRIPL	S96T001527	0		DSC-02	SOLID	Ø	Ø	N/A	Joules/g Dry
96000082	C-106 GRAB	6 SAMPLE	S96T001537	0		DSC-02	SOLID	N/A	Ø		Joules/g Dry
96000082	C-106 GRAB	7 DUP	S96T001537	0		DSC-02	SOLID	Ø	Ø	N/A	Joules/g Dry
96000082	C-106 GRAB	8 SAMPLE	S96T000542	0		DSC-02	SOLID	N/A	122.1		Joules/g Dry
96000082	C-106 GRAB	9 DUP	S96T000542	0		DSC-02	SOLID	122.1	97.14	N/A	Joules/g Dry
96000174	C-106 GRAB	10 SAMPLE	S96T001030	0		DSC-02	SOLID	N/A	199.6		Joules/g Dry
96000174	C-106 GRAB	11 DUP	S96T001030	0		DSC-02	SOLID	199.6	285.6	N/A	Joules/g Dry
96000174	C-106 GRAB	12 SAMPLE	S96T001674	0		DSC-02	SOLID	N/A	21.66		Joules/g Dry
96000174	C-106 GRAB	13 DUP	S96T001674	0		DSC-02	SOLID	21.66	120.5	N/A	Joules/g Dry
96000174	C-106 GRAB	14 TRIPL	S96T001674	0		DSC-02	SOLID	21.66	111.8	N/A	Joules/g Dry
96000174	C-106 GRAB	15 SAMPLE	S96T001034	0		DSC-02	SOLID	N/A	126.9		Joules/g Dry
96000174	C-106 GRAB	16 DUP	S96T001034	0		DSC-02	SOLID	126.9	96.81	N/A	Joules/g Dry
96000082	C-106 GRAB	17 SAMPLE	S96T001530	0		DSC-02	SOLID	N/A	Ø		Joules/g Dry
96000082	C-106 GRAB	18 DUP	S96T001530	0		DSC-02	SOLID	Ø	Ø	N/A	Joules/g Dry

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

LABCORE Data Entry Template for Worklist# 9140

GROUP	PROJECT	S TYPE	SAMPLE#	R	A	-------TEST------	MATRIX	ACTUAL	FOUND	DL	UNIT
96000082	C-106 GRAB	19 SAMPLE	S96T002021	0		DSC-02	SOLID	N/A	71.10		Joules/g Dry
96000082	C-106 GRAB	20 DUP	S96T002021	0		DSC-02	SOLID	71.10	213.5	N/A	Joules/g Dry
96000082	C-106 GRAB	21 SAMPLE	S96T002042	0		DSC-02	SOLID	N/A	Ø		Joules/g Dry
96000082	C-106 GRAB	22 DUP	S96T002042	0		DSC-02	SOLID	Ø	Ø	N/A	Joules/g Dry

Final page for worklist # 9140

Blandina Valenzuela 5-22-96

Analyst Signature **Date** **Analyst Signature** **Date**

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

C-106

CALCULATED DRY DSC			
SAMPLE NO.	DSC RESULT (J/g)	TGA RESULT (% water)	DRY DSC RESULT
S96T001526	Ø	3.18	Ø
1526D	Ø	3.18	Ø
1527	Ø	3.59	Ø
1527D	1000	3.59	1037
1537	Ø	—	Ø
1537D	Ø	—	Ø
542	112	8.28	122.1
542D	89.1	8.28	97.14
1030	180.9	9.36	199.6
1030D	258.9	9.36	285.6
1674	19.7	9.03	21.66
1674D	109.6	9.03	120.5
1034	87.4	31.10	126.9
1034D	66.7	31.10	96.81
1530	Ø	—	Ø
1530D	Ø	—	Ø
2021	33.5	52.88	71.10
2021D	100.6	52.88	213.5
2042	Ø		Ø
2042D	Ø		Ø
* 1527 T	Ø	3.59	Ø
1527	~~25.5~~ 13.5	3.59	14.0
1527 D	25.5	3.59	26.45
1674T ~~1674D~~ 7-23-96	101.7	9.03	111.8

LABCORE Data Entry Template for Worklist# 9142

Analyst: ADP/CAL **Instrument:** DSC0 1 **Book #** _____

Method: LA-514-113 Rev/Mod C-1

Worklist Comment: C-106 DSC Rerun. Run under N2.

GROUP	PROJECT	S TYPE	SAMPLE#	R	A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD				DSC-01	LIQUID	28.45	32.5 *	N/A	Joules/g
96000648	C-106 GRAB	2 SAMPLE	S96T002829	1		DSC-01	LIQUID	N/A	Ø		Joules/g
96000648	C-106 GRAB	3 DUP	S96T002829	1		DSC-01	LIQUID	Ø	77.8	N/A	Joules/g

Anthony Pinto 5-23-96 **Final page for worklist # 9142**

Q. Rambel 5-23-96 — Analyst Signature — Date

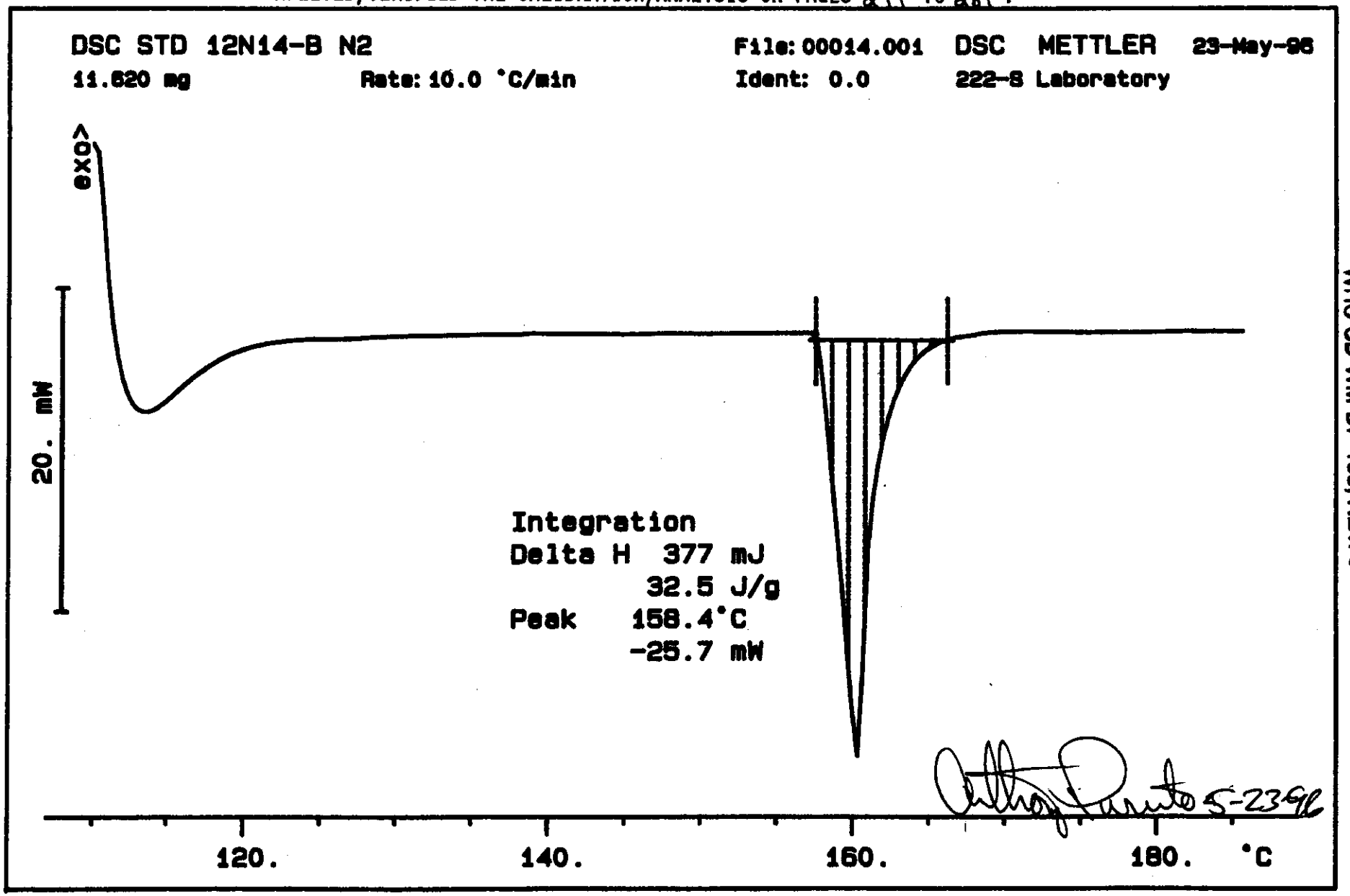
[illegible] 5-28-96 — Analyst Signature — Date

Validated by J Anastas 5-31-96 14668

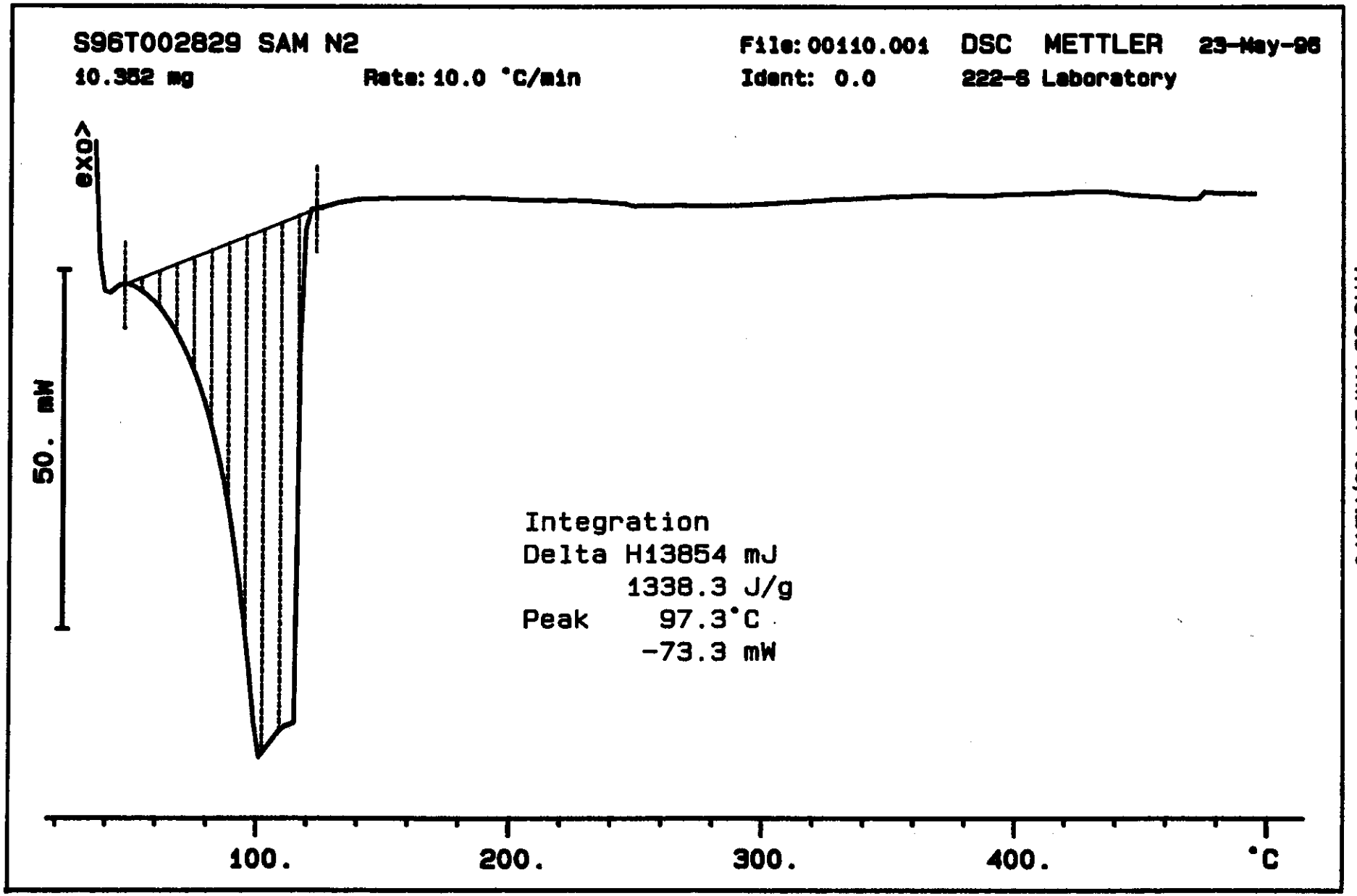
Data Entry Comments:

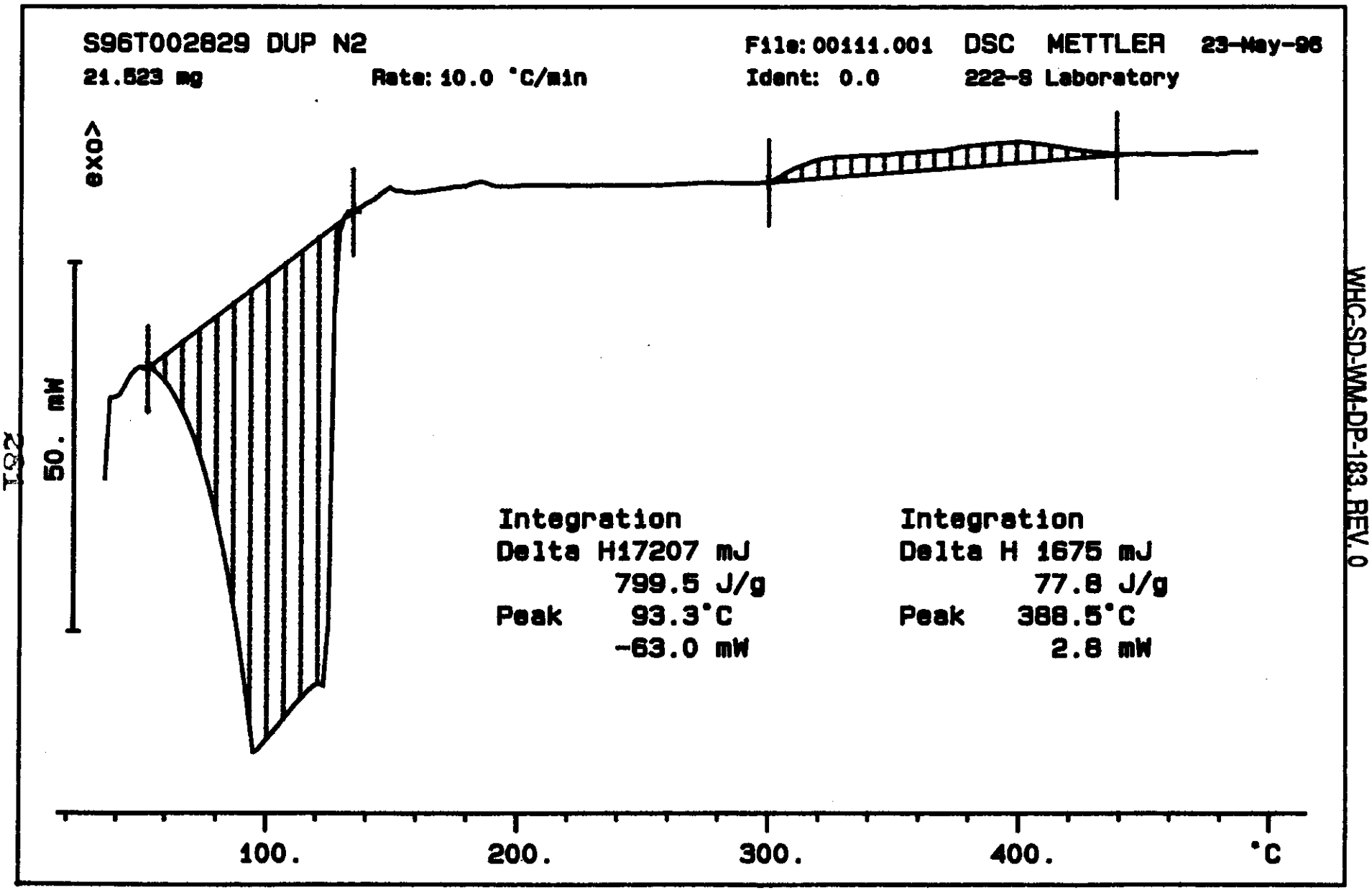
Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 279 TO 281.



Anthony Pinto 5-23-96


S96T002829 SAM N2
10.352 mg
Rate: 10.0 °C/min
File: 00110.001
Ident: 0.0
DSC METTLER
222-S Laboratory
23-May-96
exo>
50. mW
Integration
Delta H13854 mJ
1338.3 J/g
Peak 97.3°C
-73.3 mW
100.
200.
300.
400.
°C


S96T002829 DUP N2
21.523 mg
Rate: 10.0 °C/min
File: 00111.001
Ident: 0.0
DSC METTLER
222-S Laboratory
23-May-96
<exo
50. mW
Integration
Delta H17207 mJ
799.5 J/g
Peak 93.3°C
-63.0 mW
Integration
Delta H 1675 mJ
77.8 J/g
Peak 388.5°C
2.8 mW
100.
200.
300.
400.
°C

LABCORE Data Entry Template for Worklist# 9143

Analyst: BDV **Instrument:** DSC01 **Book #** —

Method: LA-514-113 Rev/Mod —

Worklist Comment: Dry DSC for C-106. bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R	A	-------TEST------	MATRIX	ACTUAL	FOUND	DL	UNIT
96000082	C-106 GRAB	1 SAMPLE	S96T001527	1		DSC-02	SOLID	N/A	14.0		Joules/g Dry
96000082	C-106 GRAB	2 DUP	S96T001527	1		DSC-02	SOLID	14.0	26.45	N/A	Joules/g Dry

Final page for worklist # 9143

Blandina Valenzuela 5-22-96

Analyst Signature **Date** **Analyst Signature** **Date**

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

LABCORE Data Entry Template for Worklist# 6223

Analyst: DPB **Instrument:** TGA0 1 **Book #** 75N84

Method: LA-560-112 Rev/Mod B-1

Worklist Comment: C-106 TGA-01 RUN UNDER N2. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R	A	-------TEST------	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD				TGA-01	LIQUID	59.2	60.99	N/A	%
96000082	C-106 GRAB	2 SAMPLE	S96T000538	0		TGA-01	LIQUID	N/A	80.91		%
96000082	C-106 GRAB	3 DUP	S96T000538	0		TGA-01	LIQUID	80.91	80.84	N/A	%

Final page for worklist # 6223

Daniel P. Bromly 3/9/96 1650
Analyst Signature **Date**

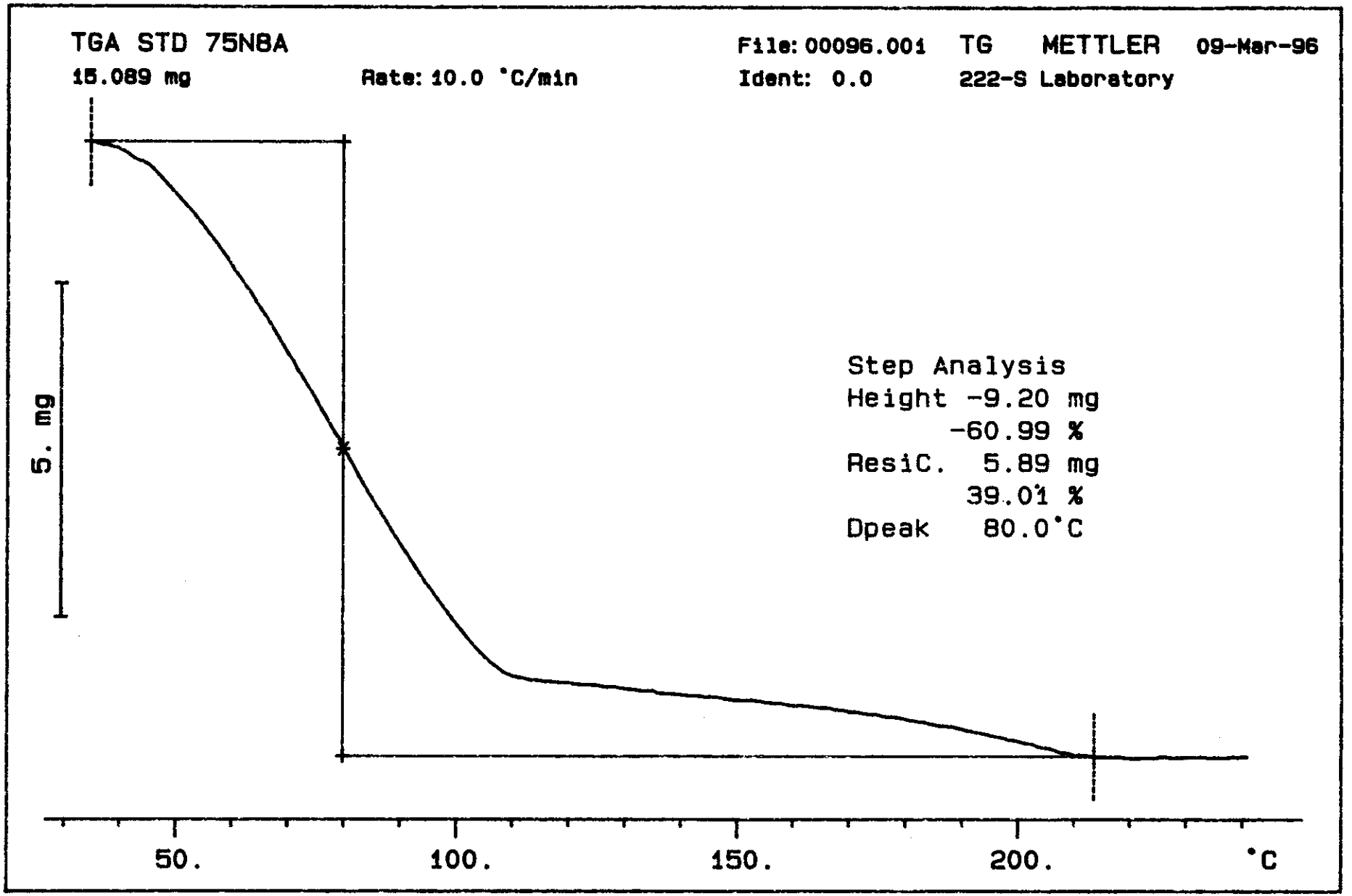
[illegible] 3-14-96
Analyst Signature **Date**

Verified by Blandina Valenzuela 3/18/96

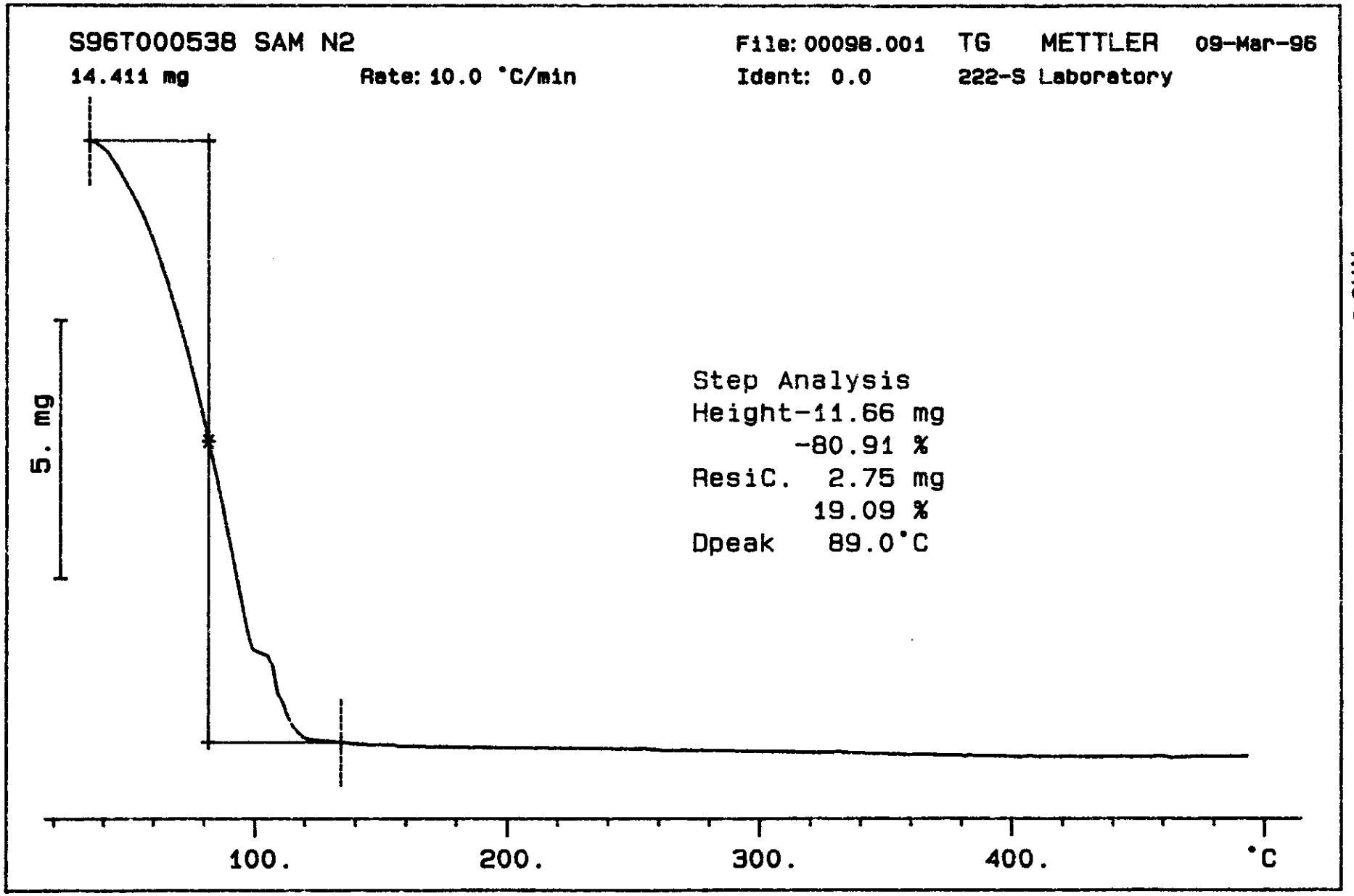
Data Entry Comments:

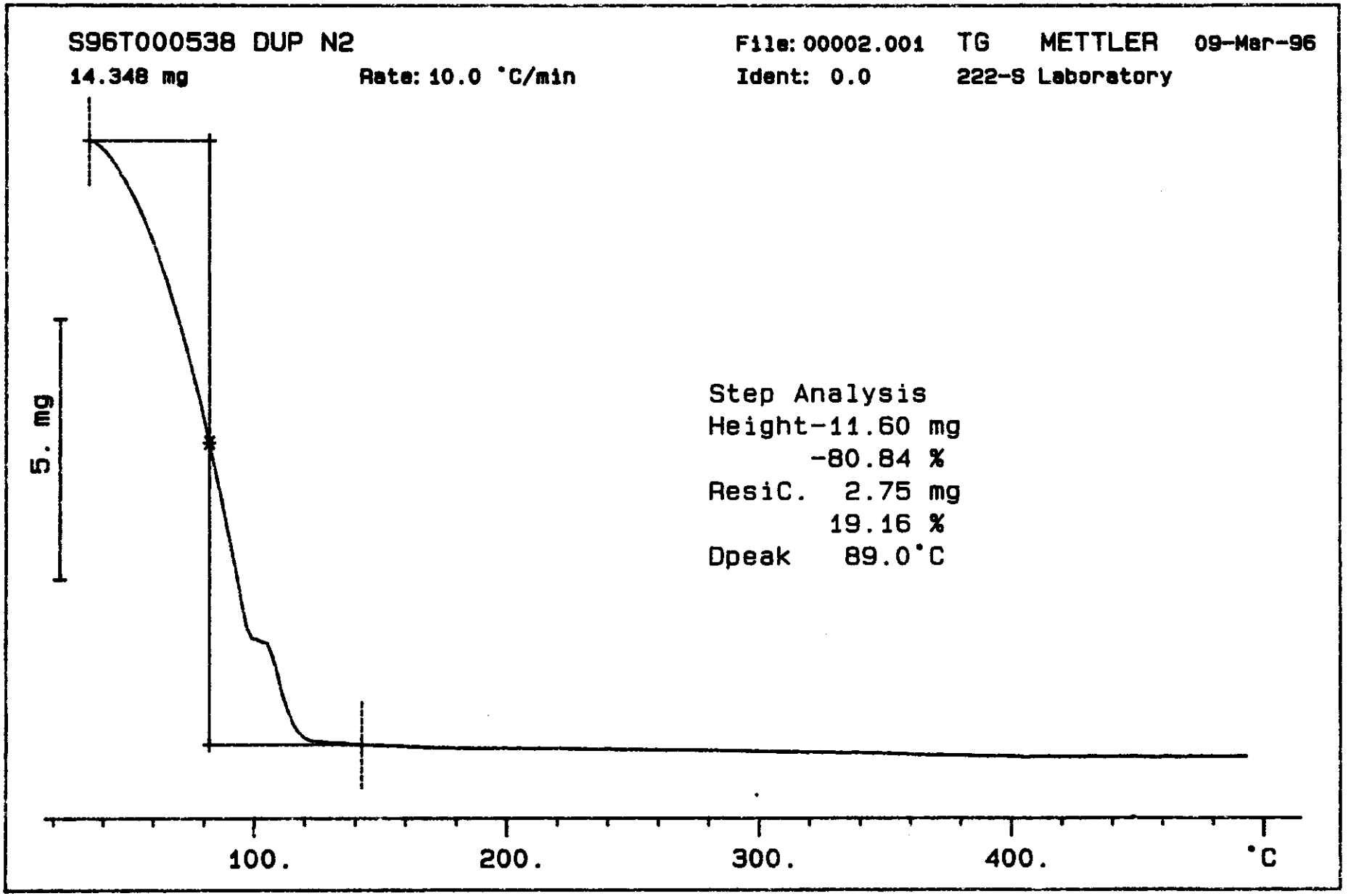
Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 284 TO 286.



David P. Bromley 3/9/96


S96T000538 SAM N2
14.411 mg
Rate: 10.0 °C/min
File: 00098.001
TG METTLER 09-Mar-96
Ident: 0.0
222-S Laboratory
5. mg
Step Analysis
Height -11.66 mg
-80.91 %
ResiC. 2.75 mg
19.09 %
Dpeak 89.0°C
100.
200.
300.
400.
°C


S96T000538 DUP N2
14.348 mg
Rate: 10.0 °C/min
File: 00002.001
TG
METTLER
09-Mar-96
Ident: 0.0
222-S Laboratory
Step Analysis
Height-11.60 mg
-80.84 %
ResiC. 2.75 mg
19.16 %
Dpeak 89.0°C
5. mg
100.
200.
300.
400.
°C

LABCORE Data Entry Template for Worklist# 6334

Analyst: DPB **Instrument:** TGA0 1 **Book #** 75N8A

Method: LA-560-112 Rev/Mod B-1

Worklist Comment: C-106 TGA RUN UNDER N2. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R	A	-------TEST------	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD				TGA-01	LIQUID	59.2	60.48	N/A	%
96000174	C-106 GRAB	2 SAMPLE	S96T001023	0		TGA-01	LIQUID	N/A	79.05		%
96000174	C-106 GRAB	3 DUP	S96T001023	0		TGA-01	LIQUID	79.05	~~79.46~~ 79.49	3/17/96 BW N/A	%

Final page for worklist # 6334

Daniel P. Bromley ~~3/9/96~~ 3/10/96 DPB
Analyst Signature **Date**

3/10/96 1030

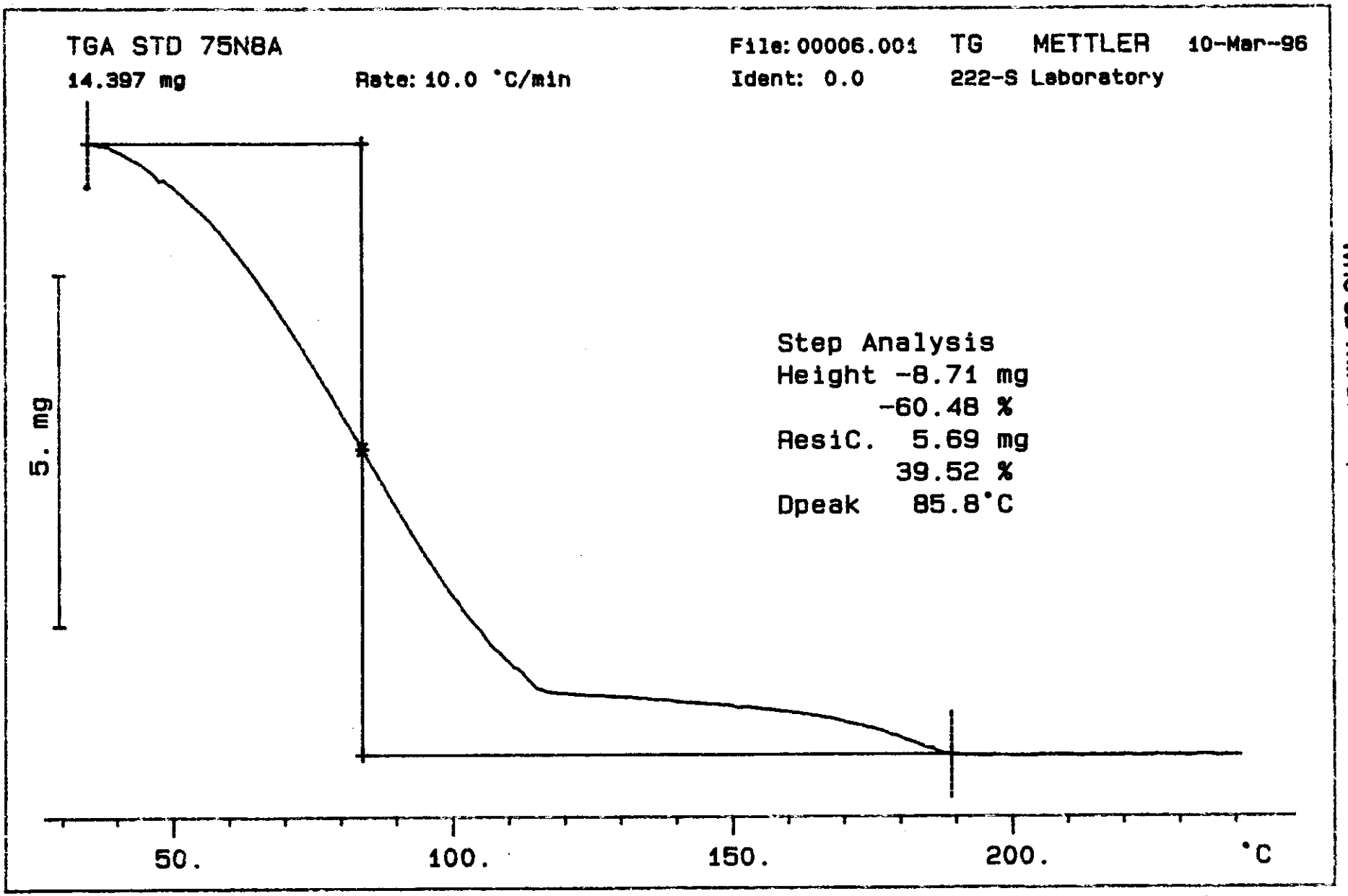
Verified by Blandina Valenzuela 3/18/96

Analyst Signature **Date** 3-14-96

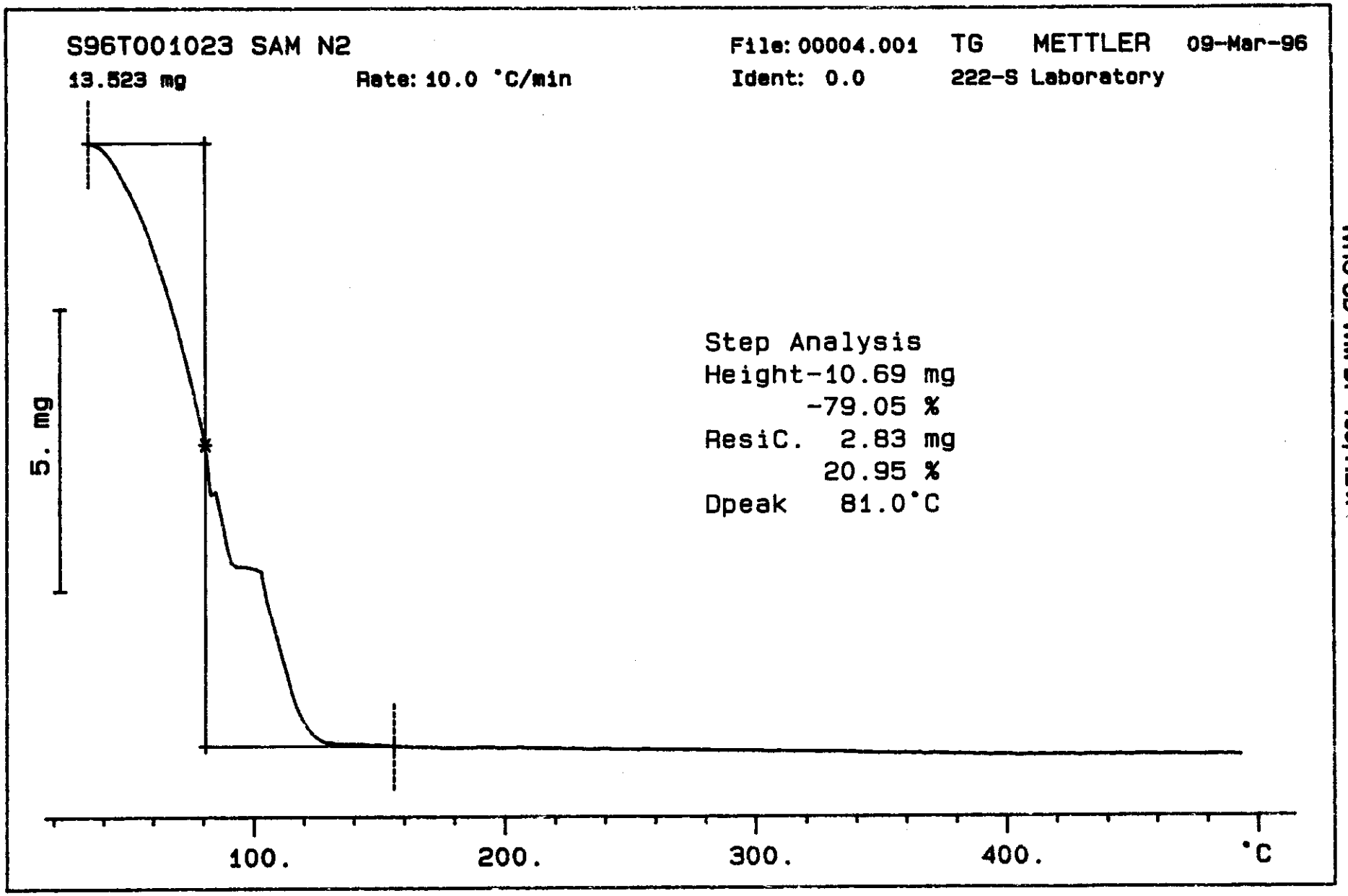
Data Entry Comments: The steps seen on the thermogram may ~~be~~ correspond with the split peaks seen on the DSC.

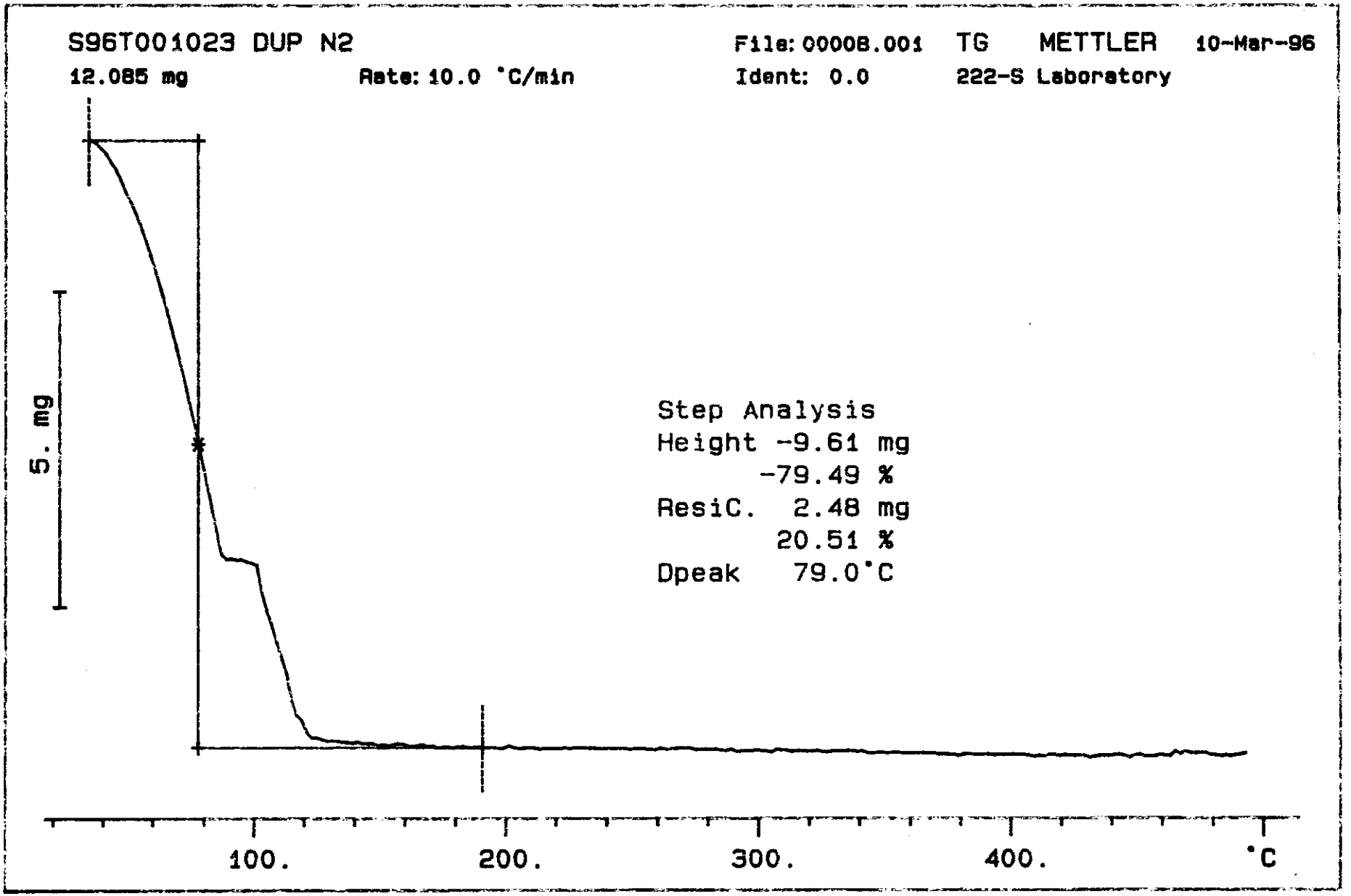
Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 288 TO 290.



Daniel P. Bromley 3/10/96


S96T001023 SAM N2
13.523 mg
Rate: 10.0 °C/min
File: 00004.001
TG METTLER 09-Mar-96
Ident: 0.0
222-S Laboratory
Step Analysis
Height -10.69 mg
-79.05 %
ResiC. 2.83 mg
20.95 %
Dpeak 81.0°C
5. mg
100.
200.
300.
400.
°C


S96T001023 DUP N2
12.085 mg
Rate: 10.0 °C/min
File: 00008.001
TG METTLER 10-Mar-96
Ident: 0.0
222-S Laboratory
5. mg
Step Analysis
Height -9.61 mg
-79.49 %
ResiC. 2.48 mg
20.51 %
Dpeak 79.0°C
100.
200.
300.
400.
°C

LABCORE Data Entry Template for Worklist# 6849

Analyst: VLM **Instrument:** TGA0 1 **Book #** 75N8A

Method: LA-560-112 Rev/Mod B1

Worklist Comment: Please run C-106 TGAs under N2. bdv

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	STD				TGA-01	LIQUID	59.2	60.34	N/A	%
96000082	C-106 GRAB	2	SAMPLE	S96T000855	0		TGA-01	LIQUID	N/A	100.49		%
		3	STD				TGA-01	LIQUID	~~100.49~~ 59.2	~~99.85~~ 60.49	N/A	%
96000082	C-106 GRAB	4	DUP	S96T000855	0		TGA-01	LIQUID	100.49	99.85	N/A	%

Hea 4-9-96

Final page for worklist # 6849

See Attached for Signatures
Analyst Signature **Date**

Analyst Signature 4-9-96 **Date**

Reviewed 4/15/96 James M. Fuge

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

LABCORE Data Entry Template for Worklist# 6849

Analyst: VLM **Instrument:** TGA0 1 **Book #** 9SN 84

Method: LA-560-112 Rev/Mod 8-1

Worklist Comment: Please run C-106 TGAs under N2. bdv

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	STD				TGA-01	LIQUID	59.2	60.34	N/A	%
96000082	C-106 GRAB	2	SAMPLE	S96T000855	0		TGA-01	LIQUID	N/A	100.49		%
96000082	C-106 GRAB	3	DUP	S96T000855	0		TGA-01	LIQUID	100.49	99.85	N/A	%

Final page for worklist # 6849

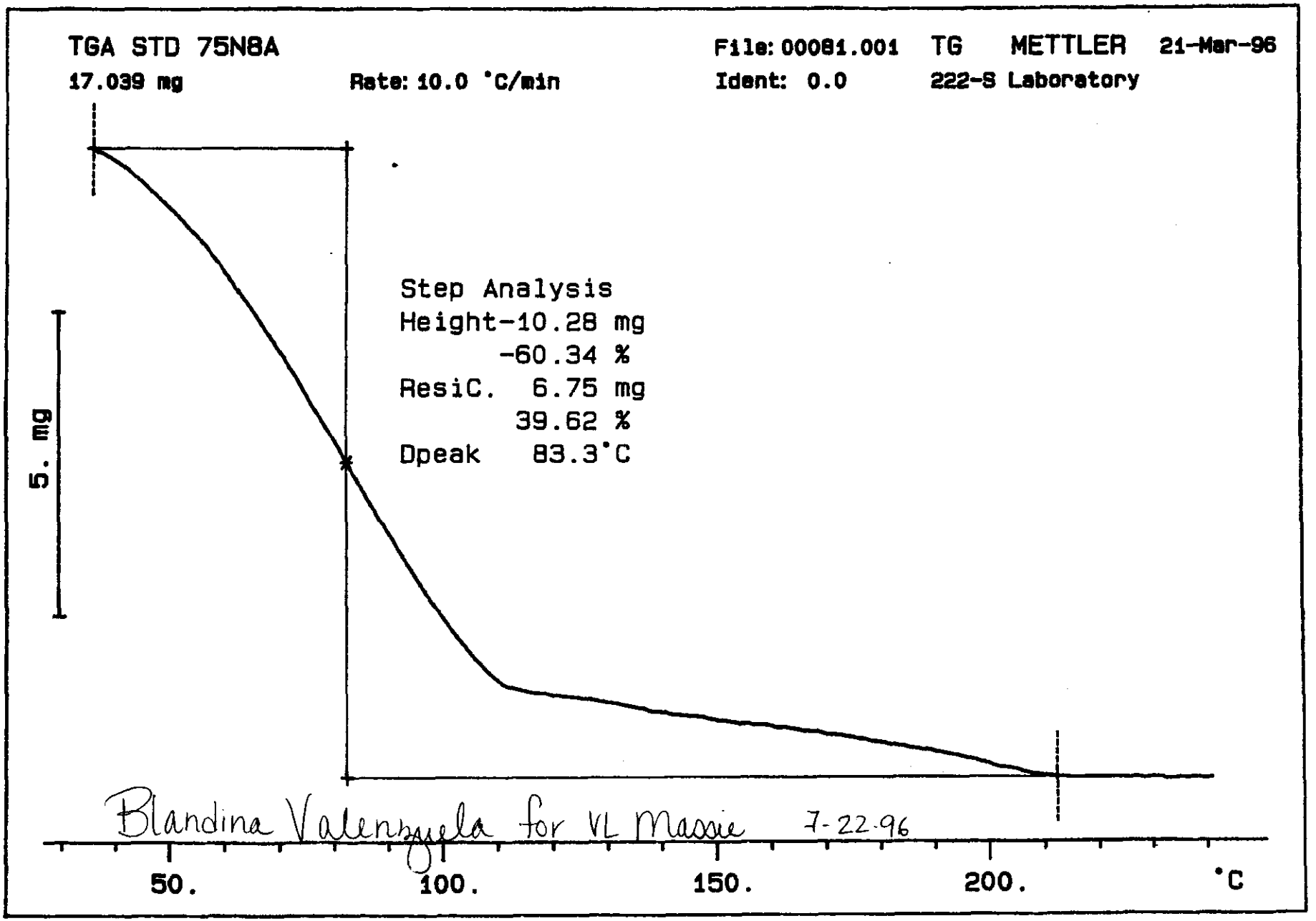
Analyst Signature Date

Valerie L. Mazzoni 03-22-96
Analyst Signature Date

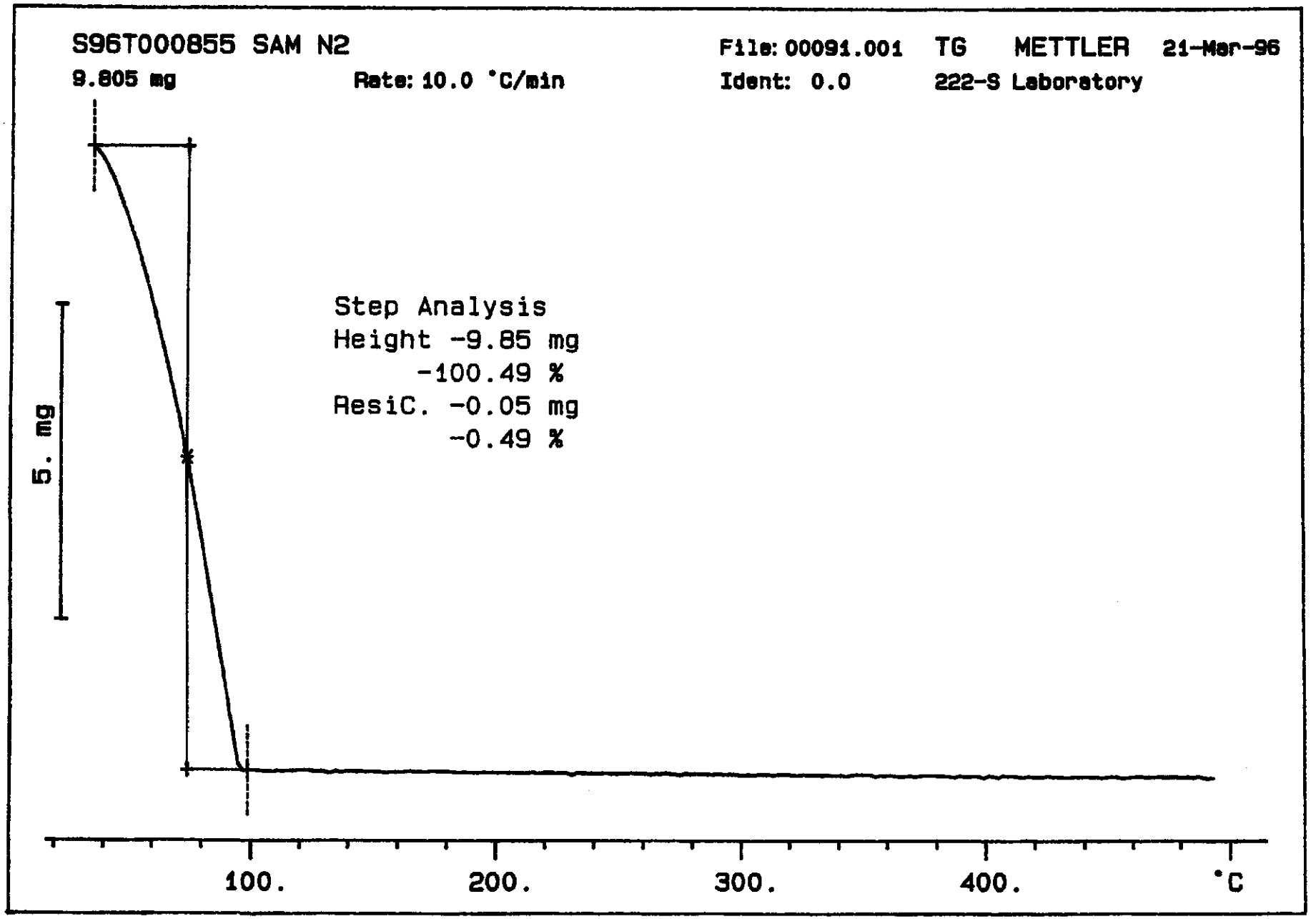
Data Entry Comments:

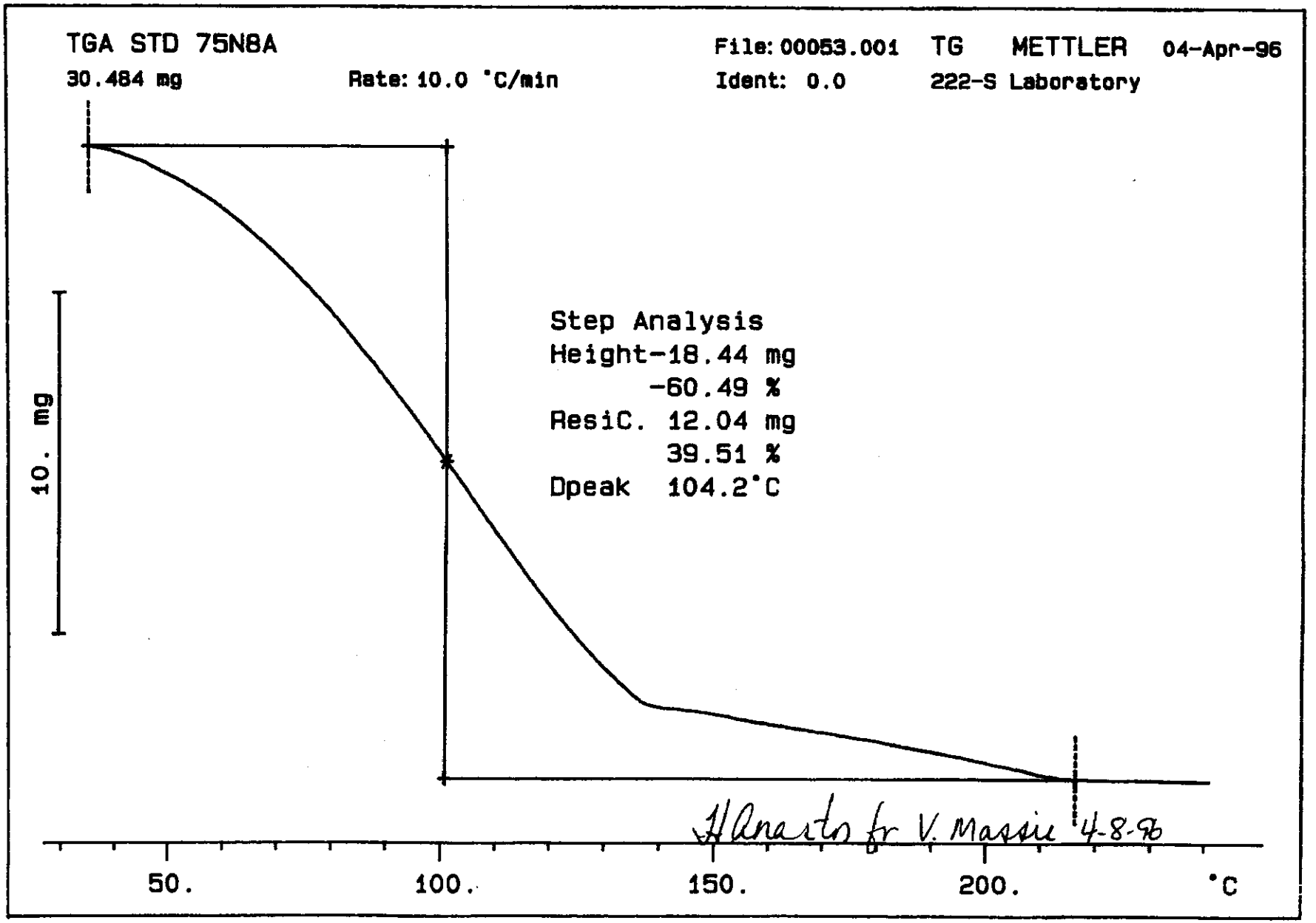
Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 293 TO 296.



Blandina Valenzuela for VL Massie 7-22-96


S96T000855 SAM N2
9.805 mg
Rate: 10.0 °C/min
File: 00091.001
TG
METTLER
21-Mar-96
Ident: 0.0
222-S Laboratory
Step Analysis
Height -9.85 mg
-100.49 %
ResiC. -0.05 mg
-0.49 %
5. mg
100.
200.
300.
400.
°C


TGA STD 75N8A
30.484 mg
Rate: 10.0 °C/min
File: 00053.001
Ident: 0.0
TG METTLER 04-Apr-96
222-S Laboratory
Step Analysis
Height-18.44 mg
-60.49 %
ResiC. 12.04 mg
39.51 %
Dpeak 104.2°C
10. mg
50.
100.
150.
200.
°C
H Anarts for V. Massie 4-8-96

WHC-SD-WM-DP-183, REV. 0

S96T000855 DUP N2

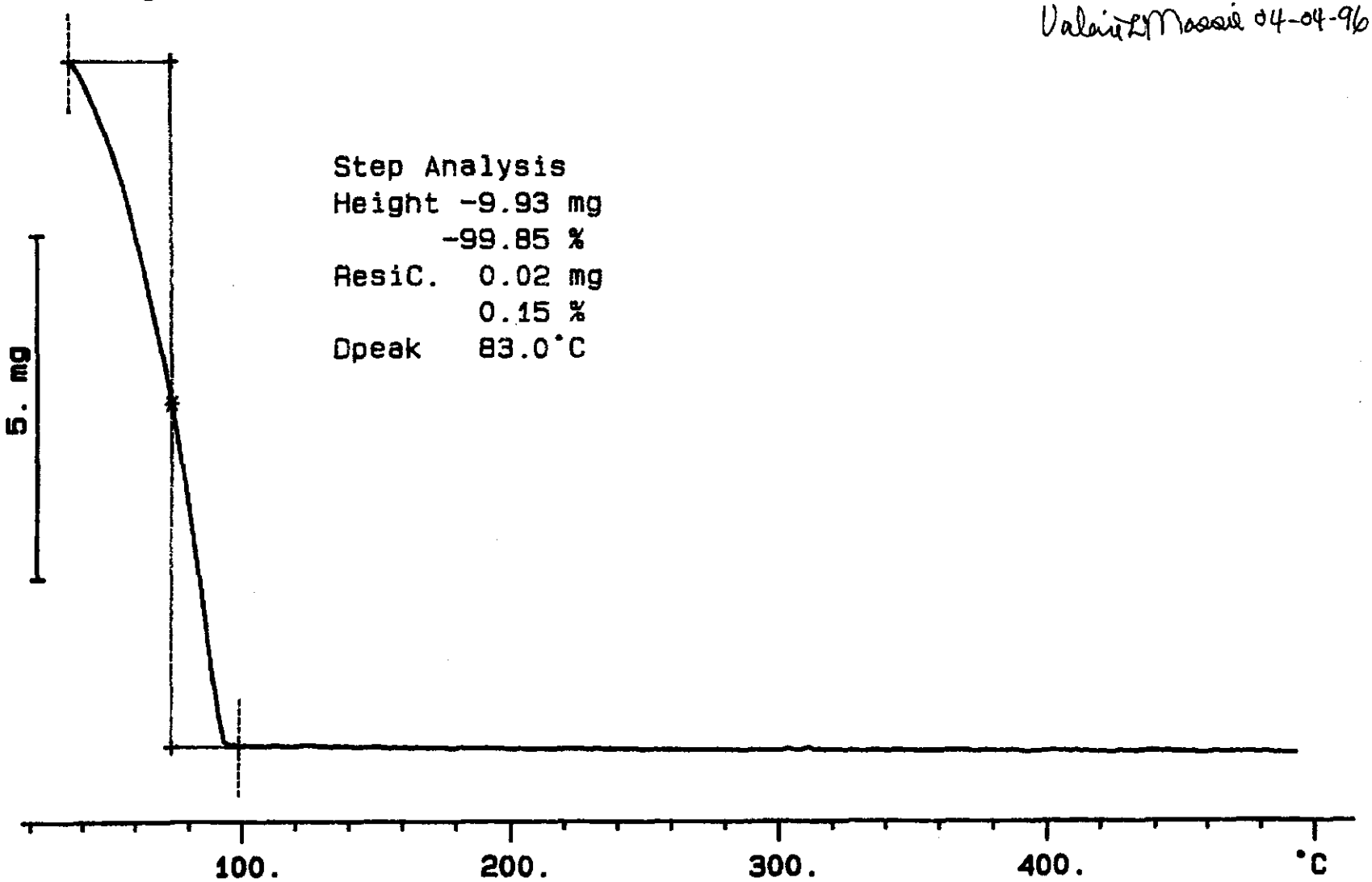
9.950 mg

Rate: 10.0 °C/min

File: 00059.001 TG METTLER 04-Apr-96

Ident: 0.0 222-S Laboratory

Valerie L Massie 04-04-96



LABCORE Data Entry Template for Worklist# 7134

Analyst: RJM **Instrument:** TGA01 **Book #** 100CN2

Method: LA-560-112 Rev/Mod B-1

Worklist Comment: C-106 FOR TGA-01 PLEASE RUN UNDER N2 RUSH RUSH RTS

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	STD				TGA-01	LIQUID	59.4	61.71	N/A	%
96000082	C-106 GRAB	2	SAMPLE	S96T001548	0		TGA-01	LIQUID	N/A	34.16		%
96000082	C-106 GRAB	3	DUP	S96T001548	0		TGA-01	LIQUID	34.16	35.78	N/A	%

Final page for worklist # 7134

RJMyn 3/29/96

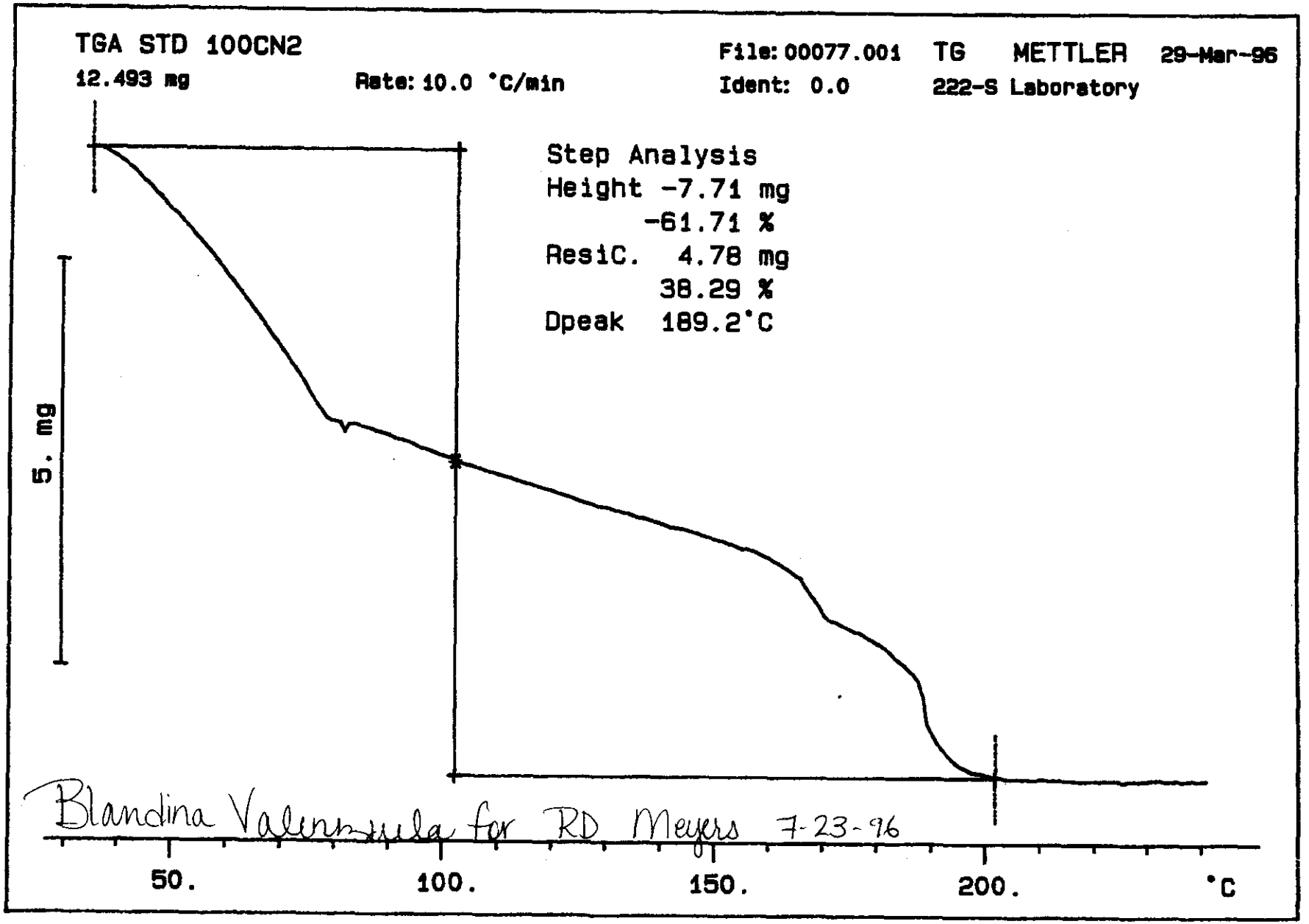
Analyst Signature **Date**

Analyst Signature **Date**

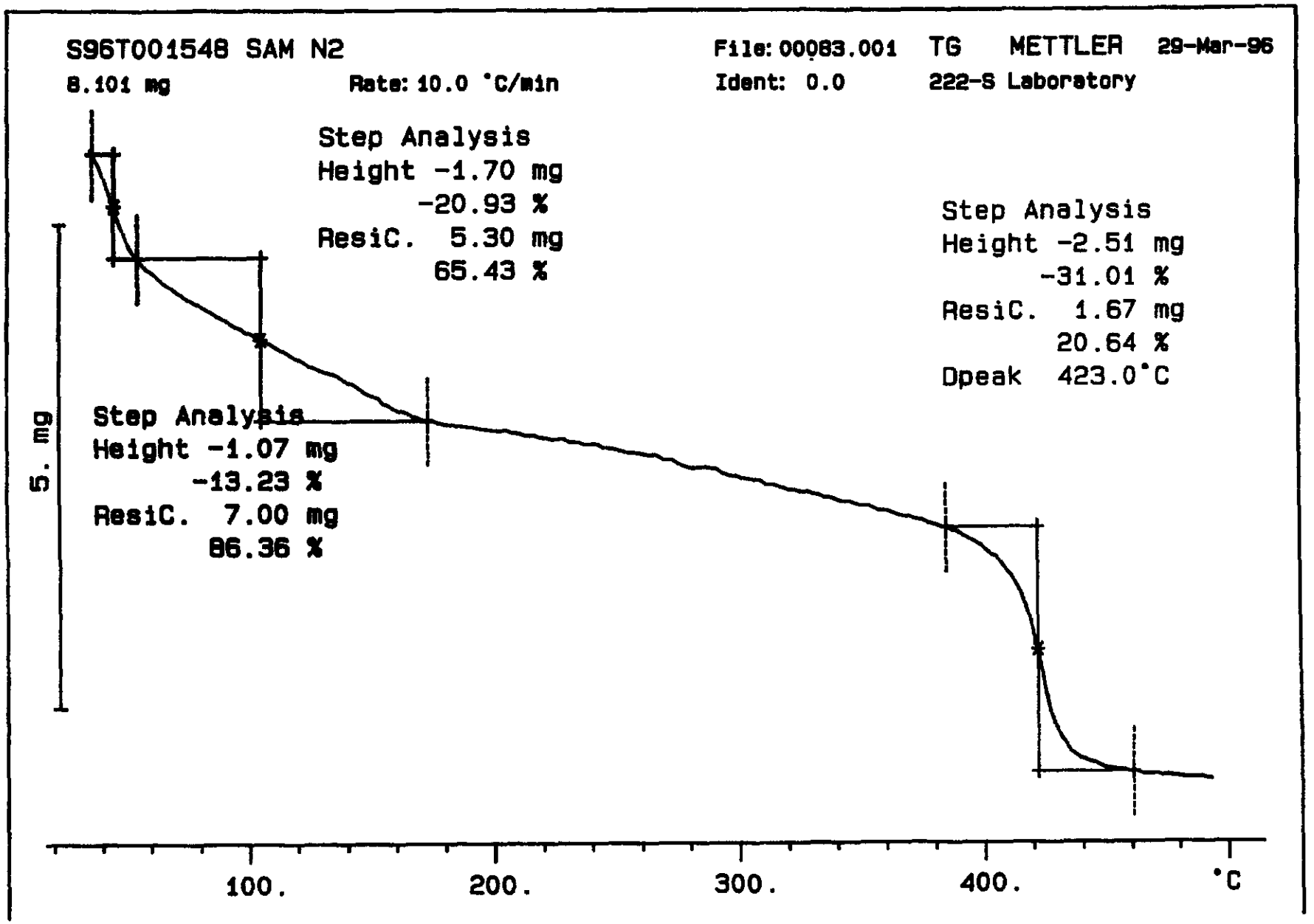
Data Entry Comments: Sample produced a ~~2~~ RJM 4/15/96 third weight loss step at approximately 420°C with 31.01% weight loss. The results given are the sum of two weight loss steps.

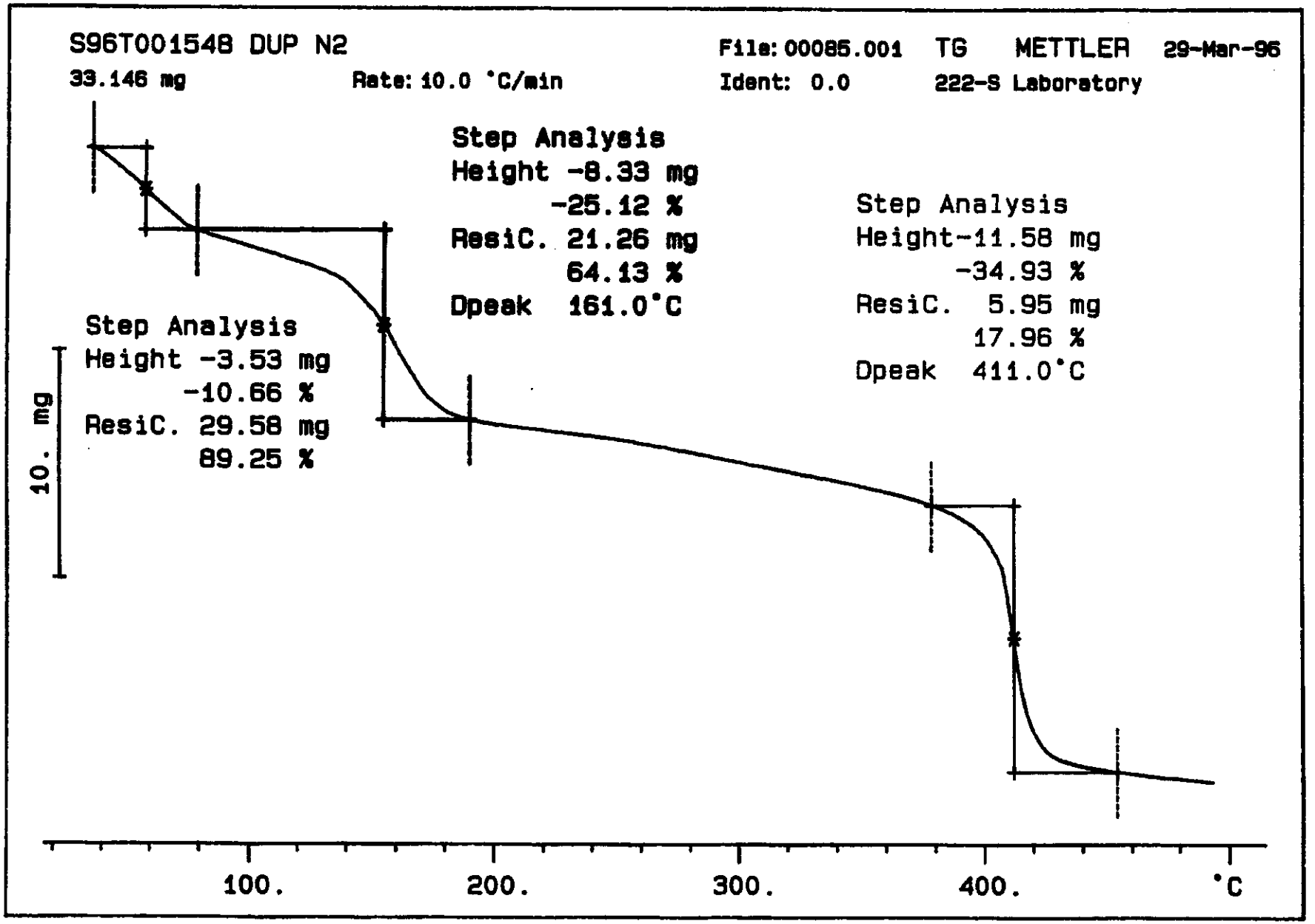
Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 298 TO 300.



Blandina Valenzuela for RD Meyers 7-23-96


S96T001548 SAM N2
8.101 mg
Rate: 10.0 °C/min
File: 00083.001
Ident: 0.0
TG METTLER 29-Mar-96
222-S Laboratory
Step Analysis
Height -1.70 mg
-20.93 %
ResiC. 5.30 mg
65.43 %
Step Analysis
Height -2.51 mg
-31.01 %
ResiC. 1.67 mg
20.64 %
Dpeak 423.0°C
Step Analysis
Height -1.07 mg
-13.23 %
ResiC. 7.00 mg
86.36 %
5. mg
100.
200.
300.
400.
°C


S96T001548 DUP N2
33.146 mg
Rate: 10.0 °C/min
File: 00085.001 TG METTLER 29-Mar-96
Ident: 0.0 222-S Laboratory
Step Analysis
Height -8.33 mg
-25.12 %
ResiC. 21.26 mg
64.13 %
Dpeak 161.0°C
Step Analysis
Height-11.58 mg
-34.93 %
ResiC. 5.95 mg
17.96 %
Dpeak 411.0°C
Step Analysis
Height -3.53 mg
-10.66 %
ResiC. 29.58 mg
89.25 %
10. mg
100.
200.
300.
400.
°C

LABCORE Data Entry Template for Worklist# 7259

Analyst: PJM **Instrument:** TGA0 3 **Book #** 82N8A

Method: LA-514-114 Rev/Mod C-1

Worklist Comment: C-106 TGA RUN UNDER N2. RCJ

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	STD				TGA-03	SOLID	59.2	58.85	N/A	%
96000082	C-106 GRAB	2	SAMPLE	S96T000543	0		TGA-03	SOLID	N/A	29.76		%
96000082	C-106 GRAB	3	DUP	S96T000543	0		TGA-03	SOLID	29.76	32.47	N/A	%

Final page for worklist # 7259

See Attached for Signatures.

Analyst Signature **Date** **Analyst Signature** **Date**

Verified by Blandina Valenzuela

The sample also produced a second weight loss step of 6.293%

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

LABCORE Data Entry Template for Worklist# 7259

Analyst: RJ McCown **Instrument:** TGA0 _____ **Book #** 8218A

Method: LA-~~560-112~~ 514-114 Rev/Mod C-1 RJM 4/18/96

Worklist Comment: C-106 TGA RUN UNDER N2. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R	A	-------TEST------	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD				TGA-01	SOLID			N/A	%
96000082	C-106 GRAB	2 SAMPLE	S96T000543	0		TGA-01	SOLID	N/A			%
96000082	C-106 GRAB	3 DUP	S96T000543	0		TGA-01	SOLID			N/A	%

Final page for worklist # 7259

RJ McCown 4/18/96
Analyst Signature **Date**

NC Wright 4/24/96
Analyst Signature **Date**

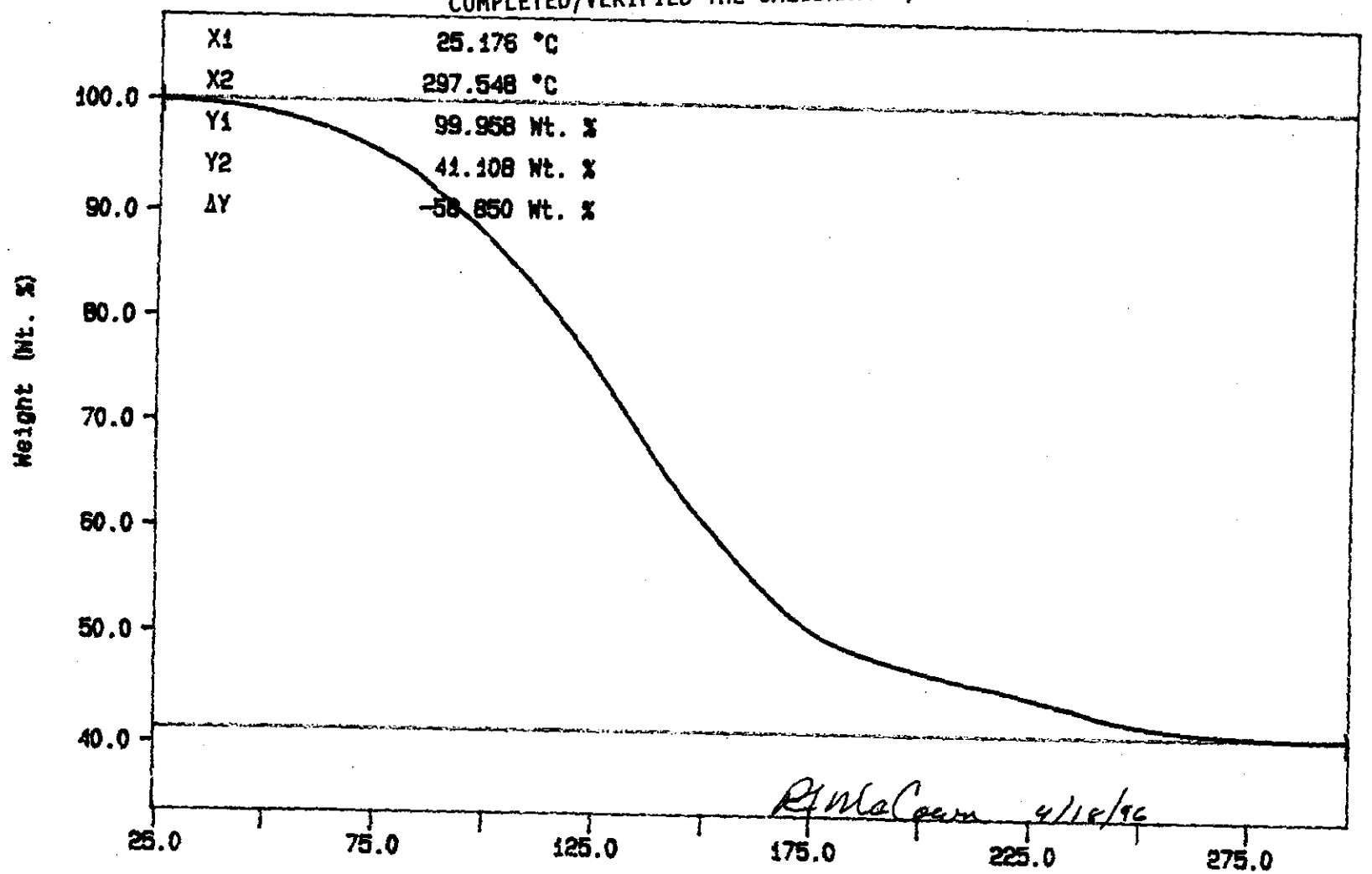
Other Instrument was used.

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

Curve 1: TGA
File info: TER041705 Wed Apr 17 18:57:56 1996
Sample Weight: 20.559 mg
TGA STD 82NB-A

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 303 TO 305.

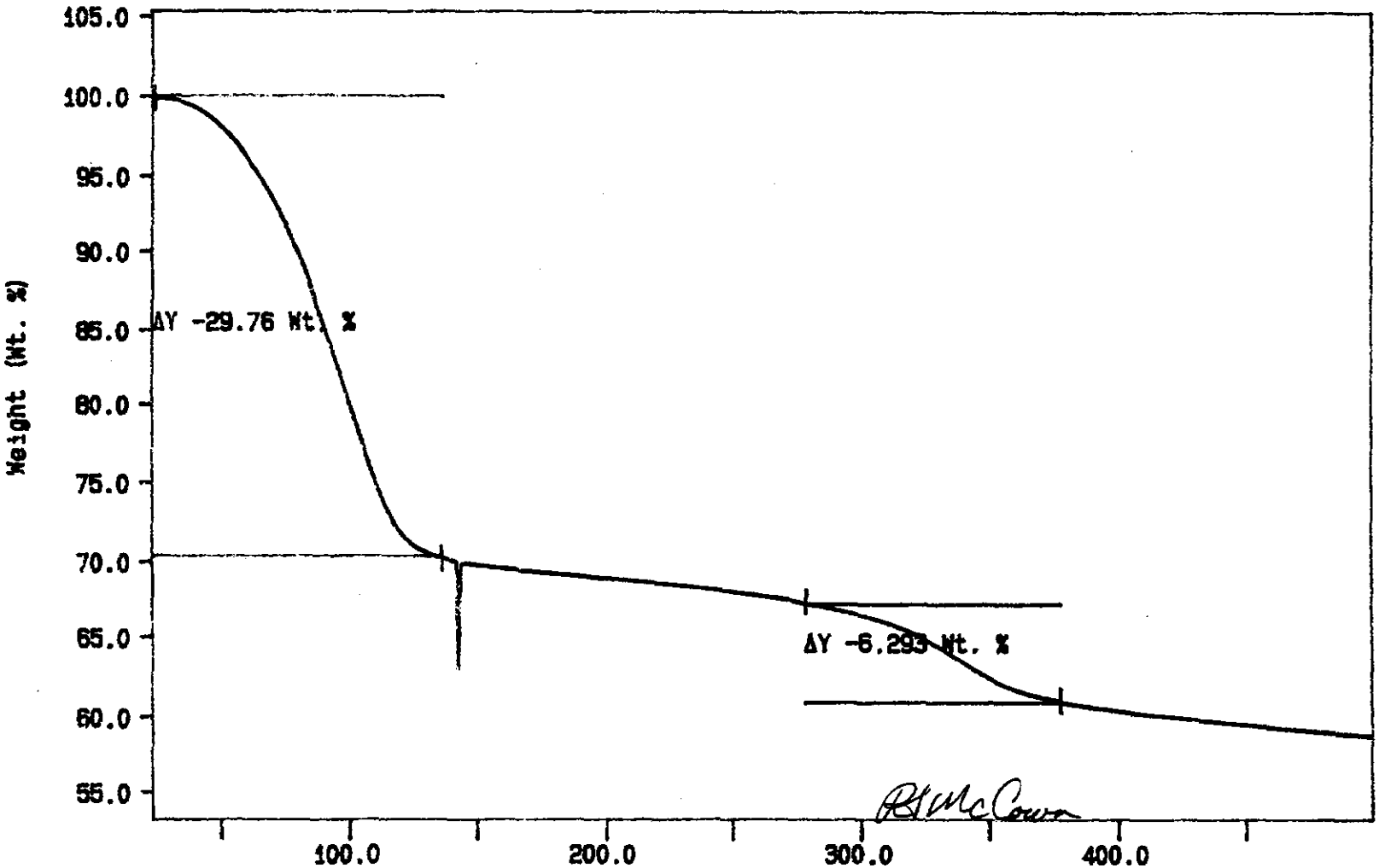


N2 10C/MIN
TEMP1: 25.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 300.0 C

PJ MCCOWN
PERKIN-ELMER
7 Series Thermal Analysis System
Thu Apr 18 01:33:37 1996

04/23/96 10:14 ☎509 372 2929 WESTINGHOUSE → MU-924 200M

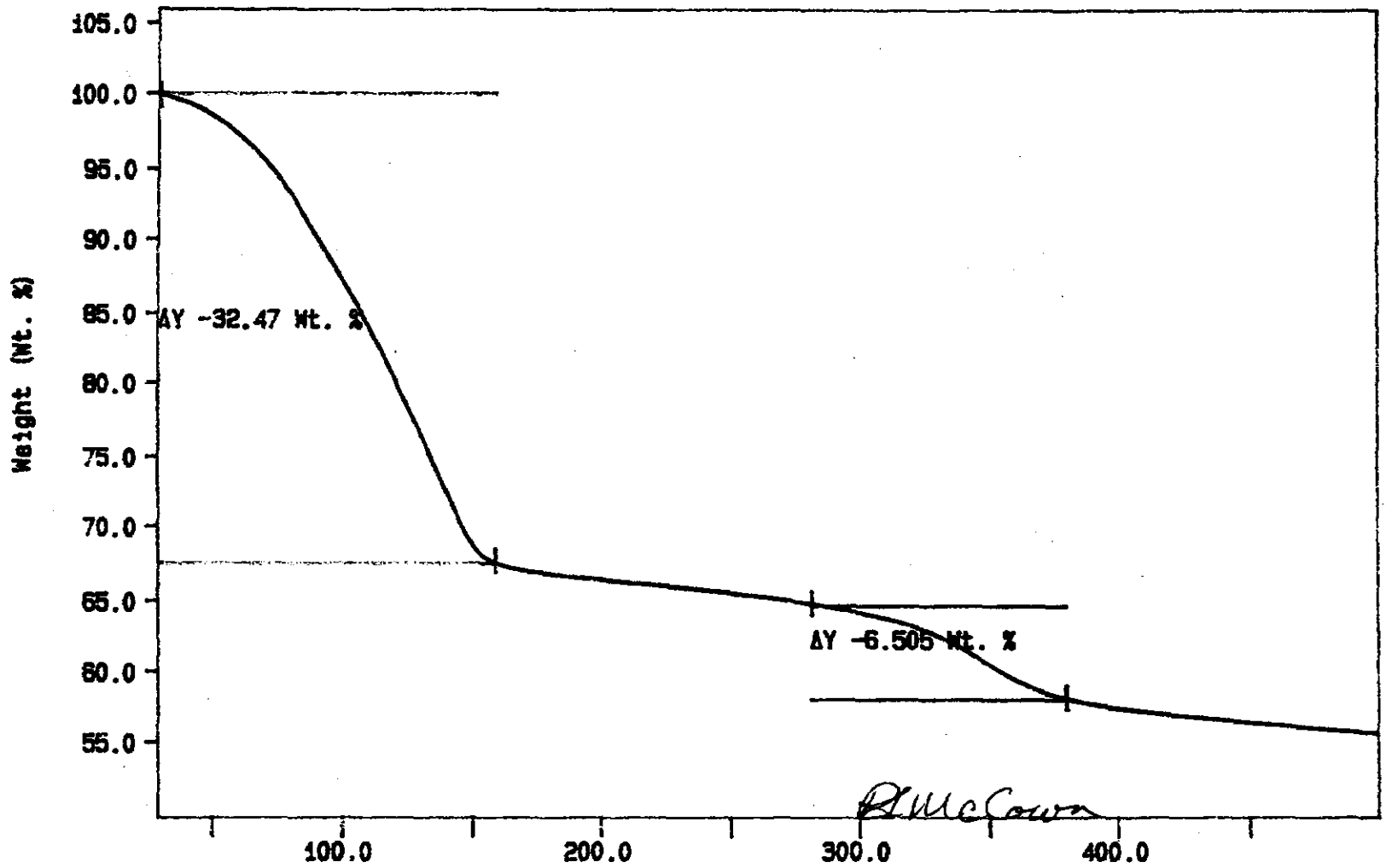
Curve 1: TGA
File info: SAM041801 Thu Apr 18 00:15:08 1996
Sample Weight: 9.951 mg
S96T000543 SAM



10C/MIN N2
TEMP1: 35.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 500.0 C

PJ MCCOWN
PERKIN-ELMER
7 Series Thermal Analysis System
Thu Apr 18 01:06:00 1996

Curve 1: TGA
File info: SAM041802 Thu Apr 18 02:18:16 1996
Sample Weight: 19.255 mg
S96T000543 DUP



10C/MIN N2
TEMP1: 85.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 800.0 C

PJ MCCOWN
PERKIN-ELMER
7 Series Thermal Analysis System
Thu Apr 18 02:20:25 1996

35

LABCORE Data Entry Template for Worklist# 7386

Analyst: SMF **Instrument:** TGA0 1 **Book #** 75N8A

Method: LA-560-112 Rev/Mod B-1

Worklist Comment: C-106 RUN UNDER N2 SAMPLE IS DRY AND FLIGHTY,HIGH ALPHA. RCJ

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	STD				TGA-01	SOLID	59.2	60.49 *	N/A	%
96000082	C-106 GRAB	2	SAMPLE	S96T000551	0		TGA-01	SOLID	N/A	9.44		%
96000082	C-106 GRAB	3	DUP	S96T000551	0		TGA-01	SOLID	9.44	16.11	N/A	%
96000082	C-106 GRAB	4	SAMPLE	S96T000560	0		TGA-01	SOLID	N/A	13.39		%
96000082	C-106 GRAB	5	DUP	S96T000560	0		TGA-01	SOLID	13.39	13.59	N/A	%

Final page for worklist # 7386

Susie M. Dutton 4-7-96
Analyst Signature **Date**

[illegible] 4-9-96
Analyst Signature **Date**

Verified by HAnastos 4-11-96

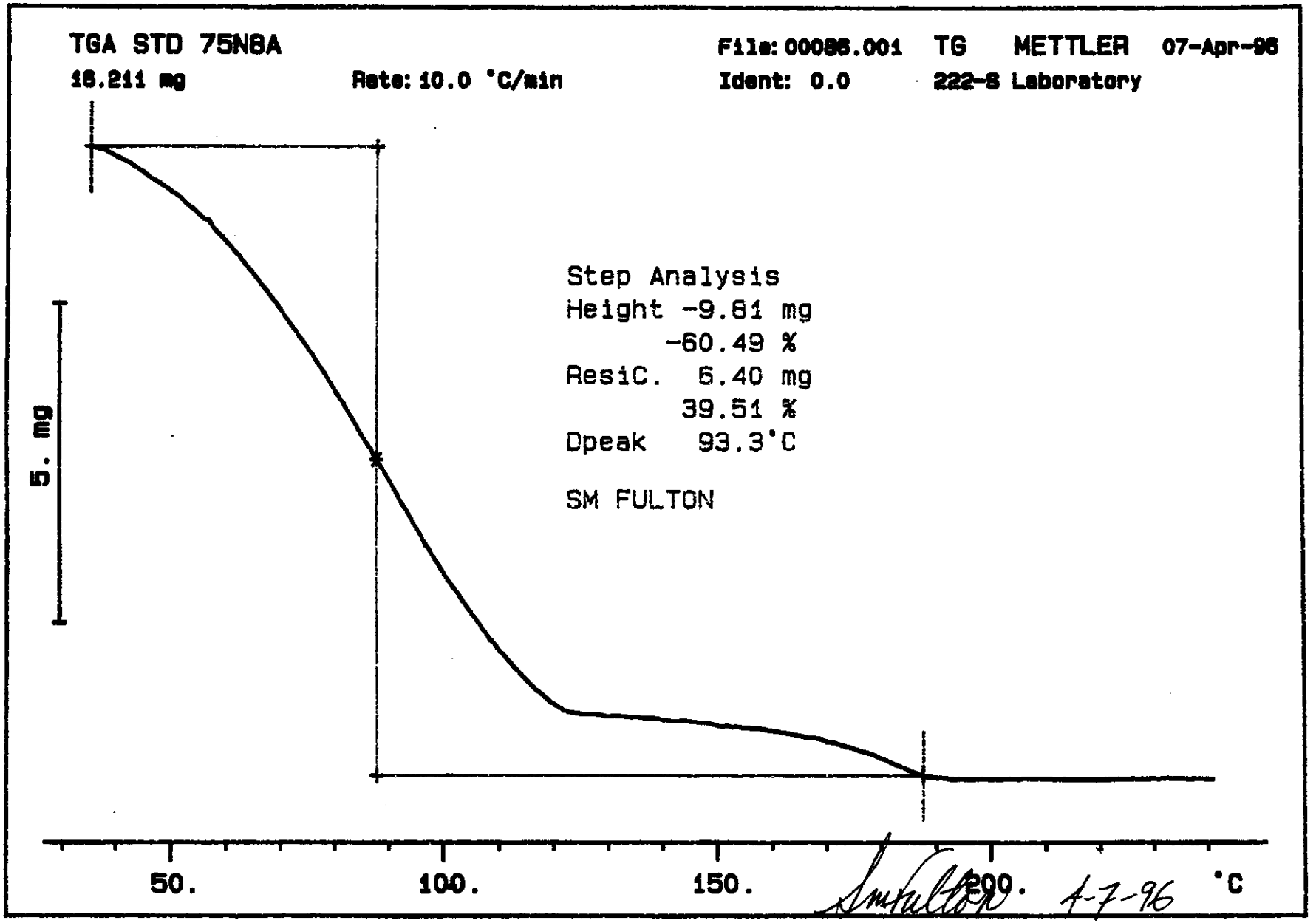
S96T000551 produced a second weight loss step of 7.14% at approximately 310°C.

Data Entry Comments:

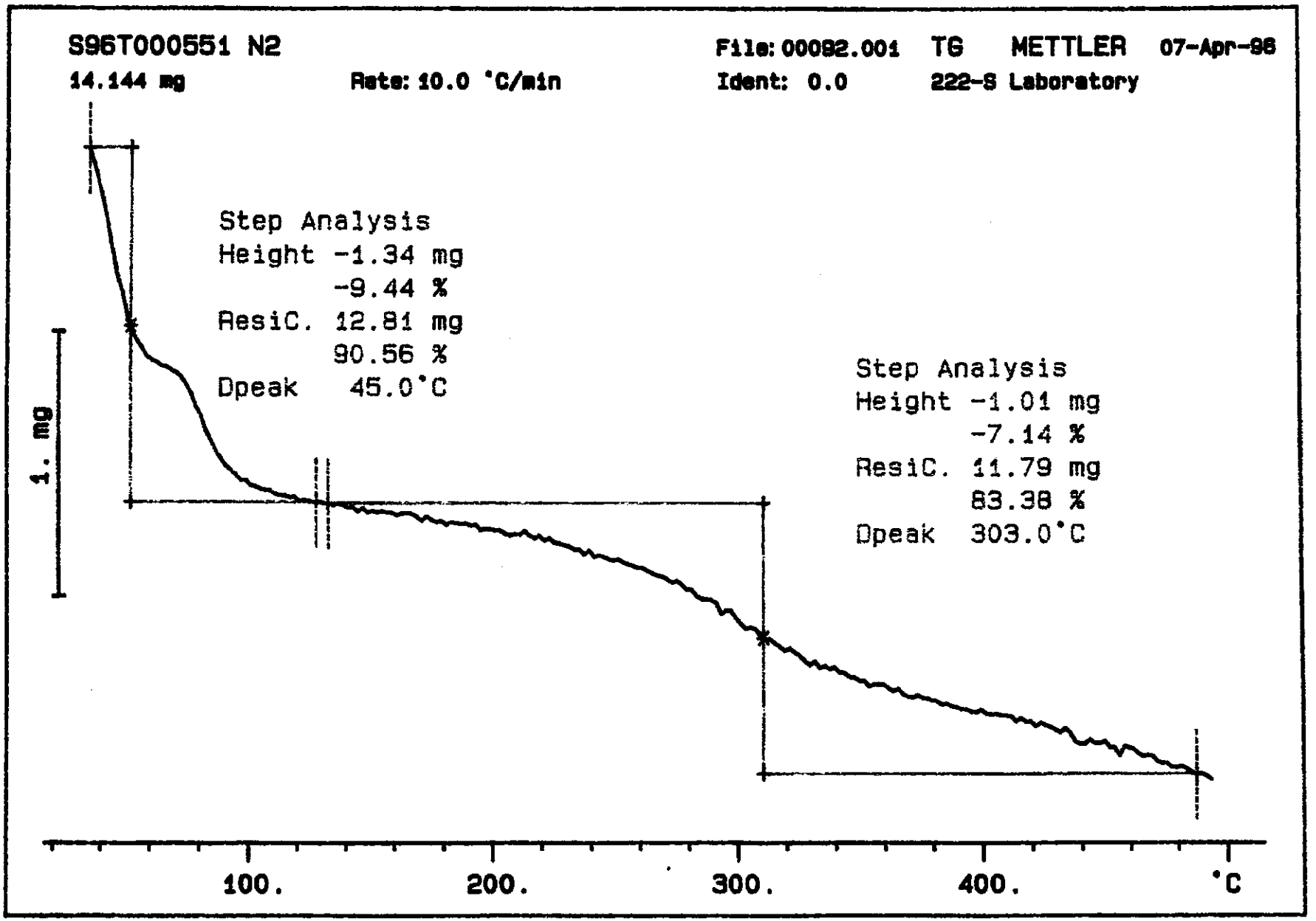
S96T000560 - dip on graph caused by hood being pumped. SMF

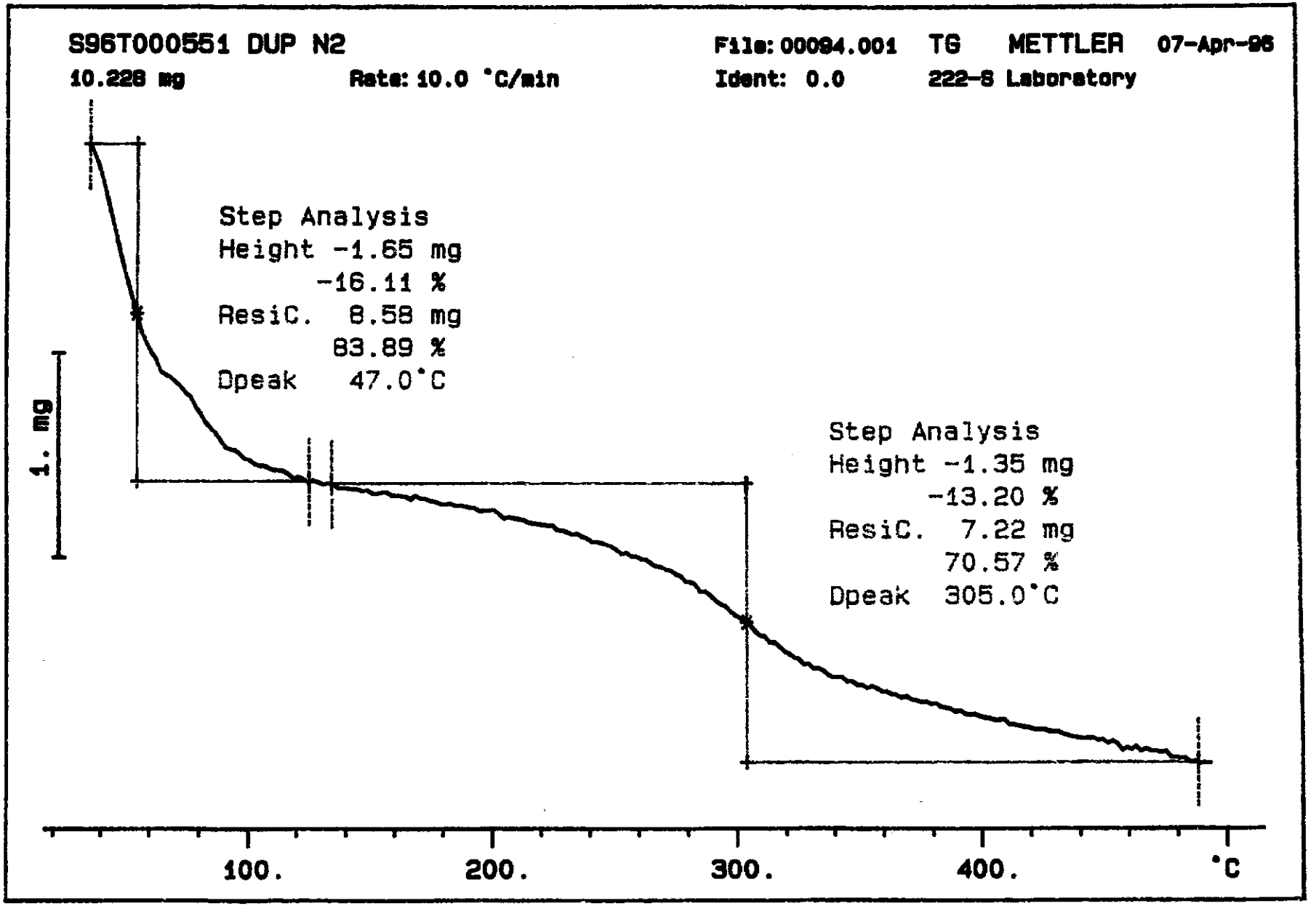
Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

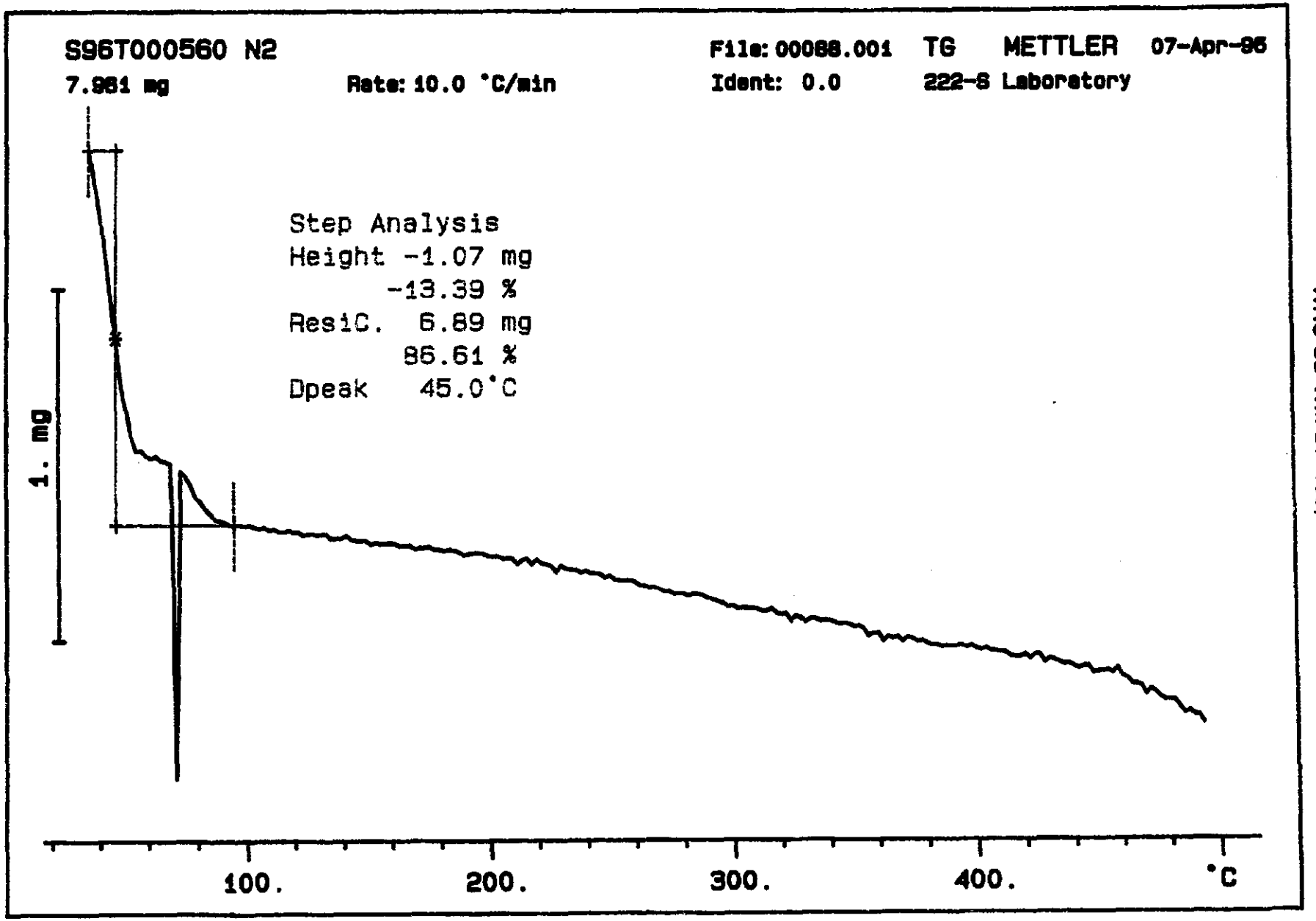
SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 307 TO 311.

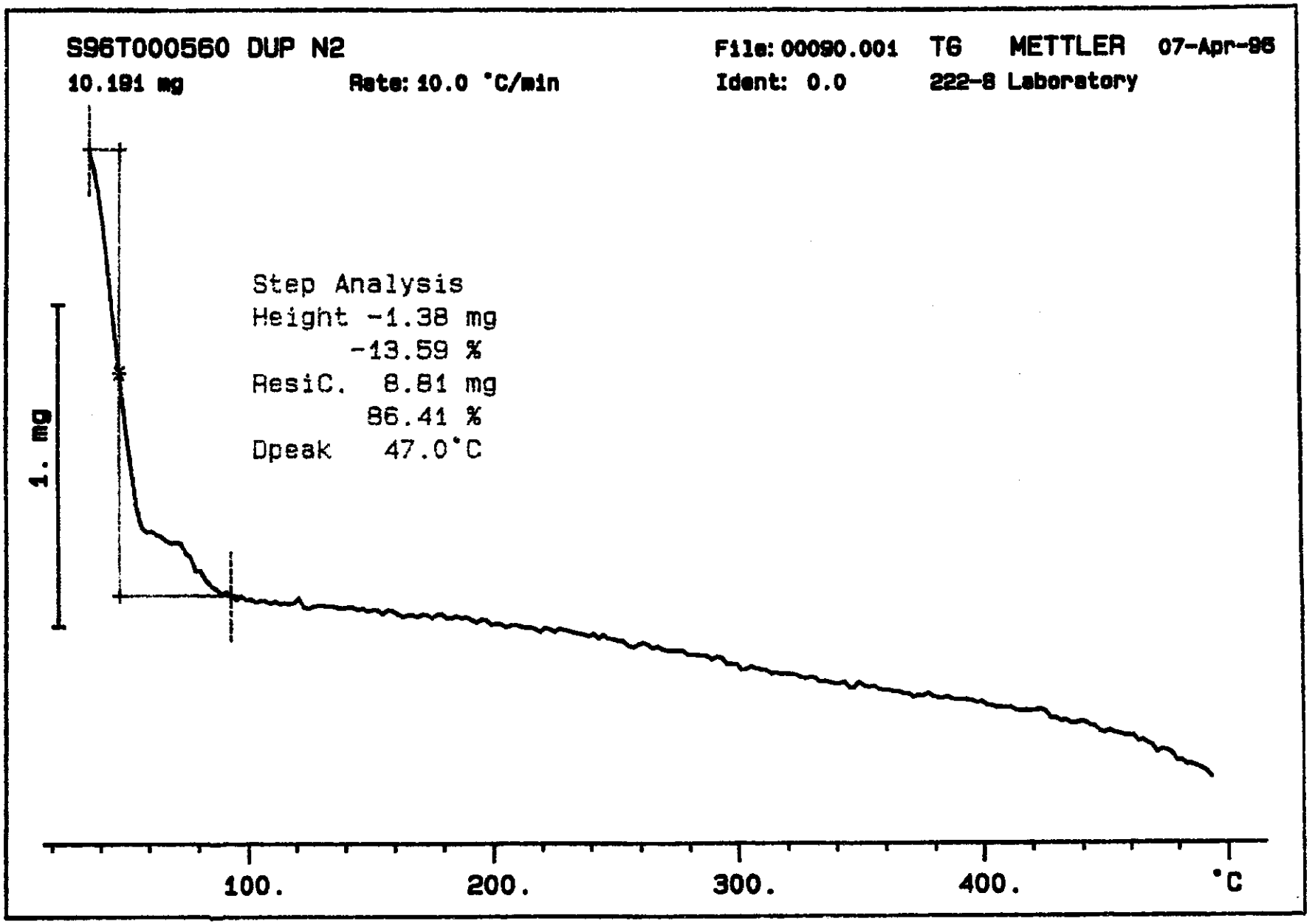


SMFulton 4-7-96


S96T000551 N2
14.144 mg
Rate: 10.0 °C/min
File: 00092.001
TG METTLER 07-Apr-96
Ident: 0.0
222-S Laboratory
Step Analysis
Height -1.34 mg
-9.44 %
ResiC. 12.81 mg
90.56 %
Dpeak 45.0°C
Step Analysis
Height -1.01 mg
-7.14 %
ResiC. 11.79 mg
83.38 %
Dpeak 303.0°C
1. mg
100.
200.
300.
400.
°C


S96T000551 DUP N2
10.228 mg
Rate: 10.0 °C/min
File: 00094.001
Ident: 0.0
TG
METTLER
222-S Laboratory
07-Apr-96
Step Analysis
Height -1.65 mg
-16.11 %
ResiC. 8.58 mg
83.89 %
Dpeak 47.0°C
Step Analysis
Height -1.35 mg
-13.20 %
ResiC. 7.22 mg
70.57 %
Dpeak 305.0°C
1. mg
100.
200.
300.
400.
°C


S96T000560 N2
7.961 mg
Rate: 10.0 °C/min
File: 00088.001
Ident: 0.0
TG
METTLER
222-S Laboratory
07-Apr-96
Step Analysis
Height -1.07 mg
-13.39 %
ResiC. 6.89 mg
86.61 %
Dpeak 45.0°C
1. mg
100.
200.
300.
400.
°C


S96T000560 DUP N2
10.191 mg
Rate: 10.0 °C/min
File: 00090.001
Ident: 0.0
TG
METTLER
07-Apr-96
222-8 Laboratory
Step Analysis
Height -1.38 mg
-13.59 %
ResiC. 8.81 mg
86.41 %
Dpeak 47.0°C
1. mg
100.
200.
300.
400.
°C

worklistrpt Version 2.1 05/15/95
04/04/96 14:53

LABCORE Data Entry Template for Worklist# 7387

Analyst: SMF **Instrument:** TGA0 1 **Book #** 75N8A

Method: LA-560-112 Rev/Mod B-1

Worklist Comment: C-106 RUN UNDER N2,SAMPLE IS DRY AND FLIGHTY,HIGH ALPHA. RCJ

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	-------TEST------	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	STD				TGA-01	SOLID	59.2	60.18	N/A	%
96000082	C-106 GRAB	2	SAMPLE	S96T000567	0		TGA-01	SOLID	N/A	26.22		%
96000082	C-106 GRAB	3	DUP	S96T000567	0		TGA-01	SOLID	26.22	25.27	N/A	%

Final page for worklist # 7387

S M Fulton 4-5-96
Analyst Signature **Date**

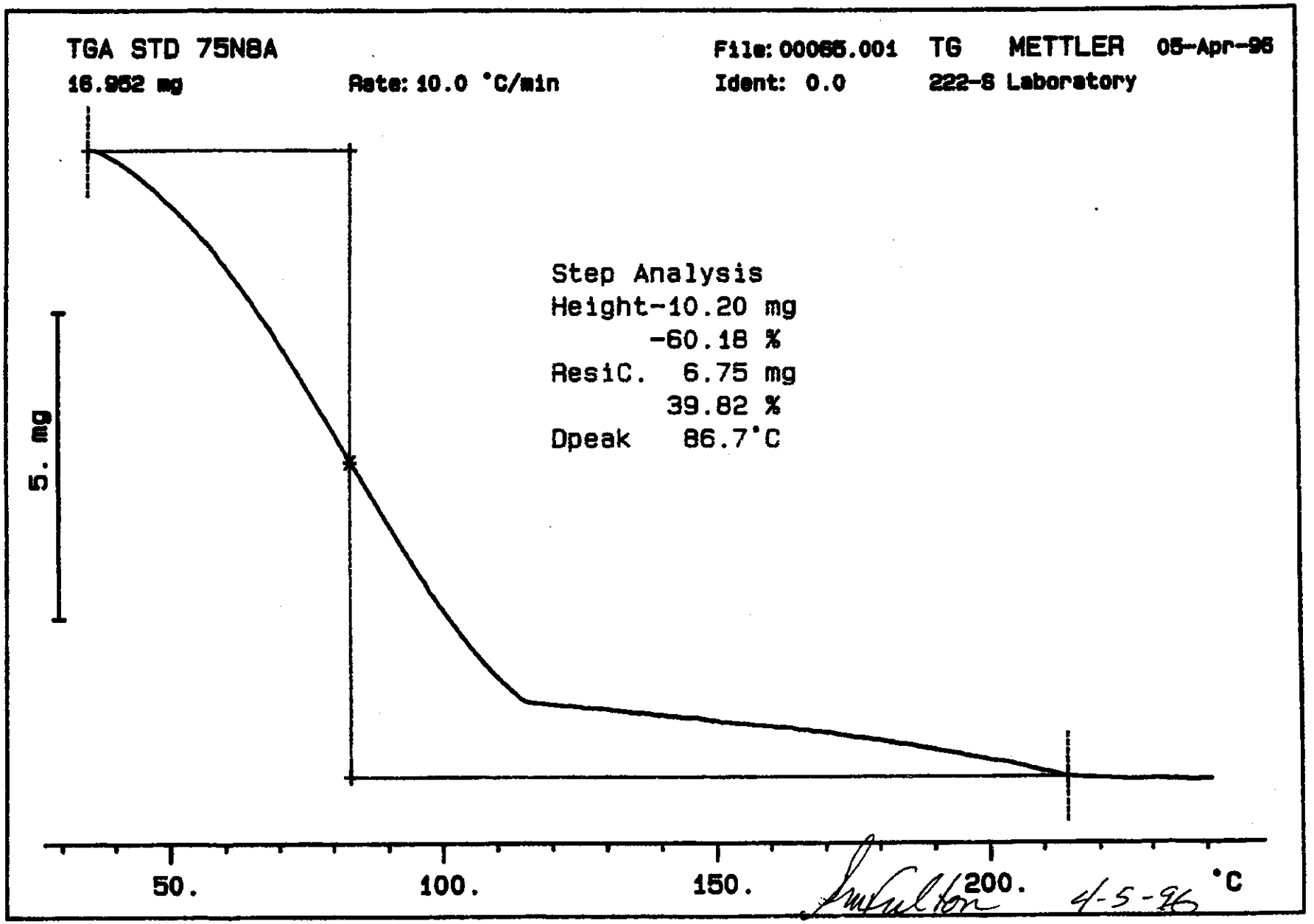
[signature] 4-9-96
Analyst Signature **Date**

Verified by H Anastas 4-11-96

Data Entry Comments: Sample produced a second weight loss step of 13.07% at approximately 300°C

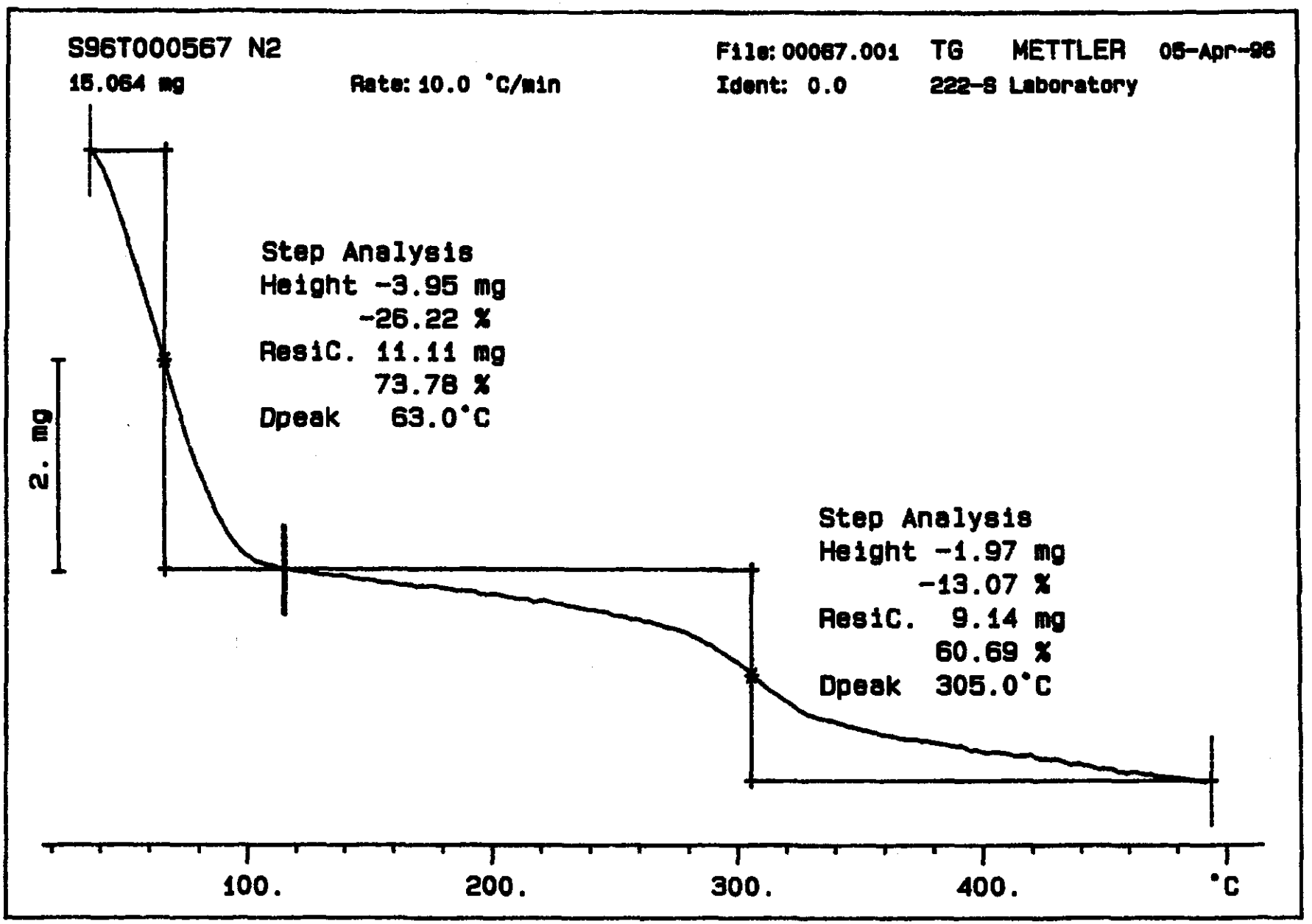
Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

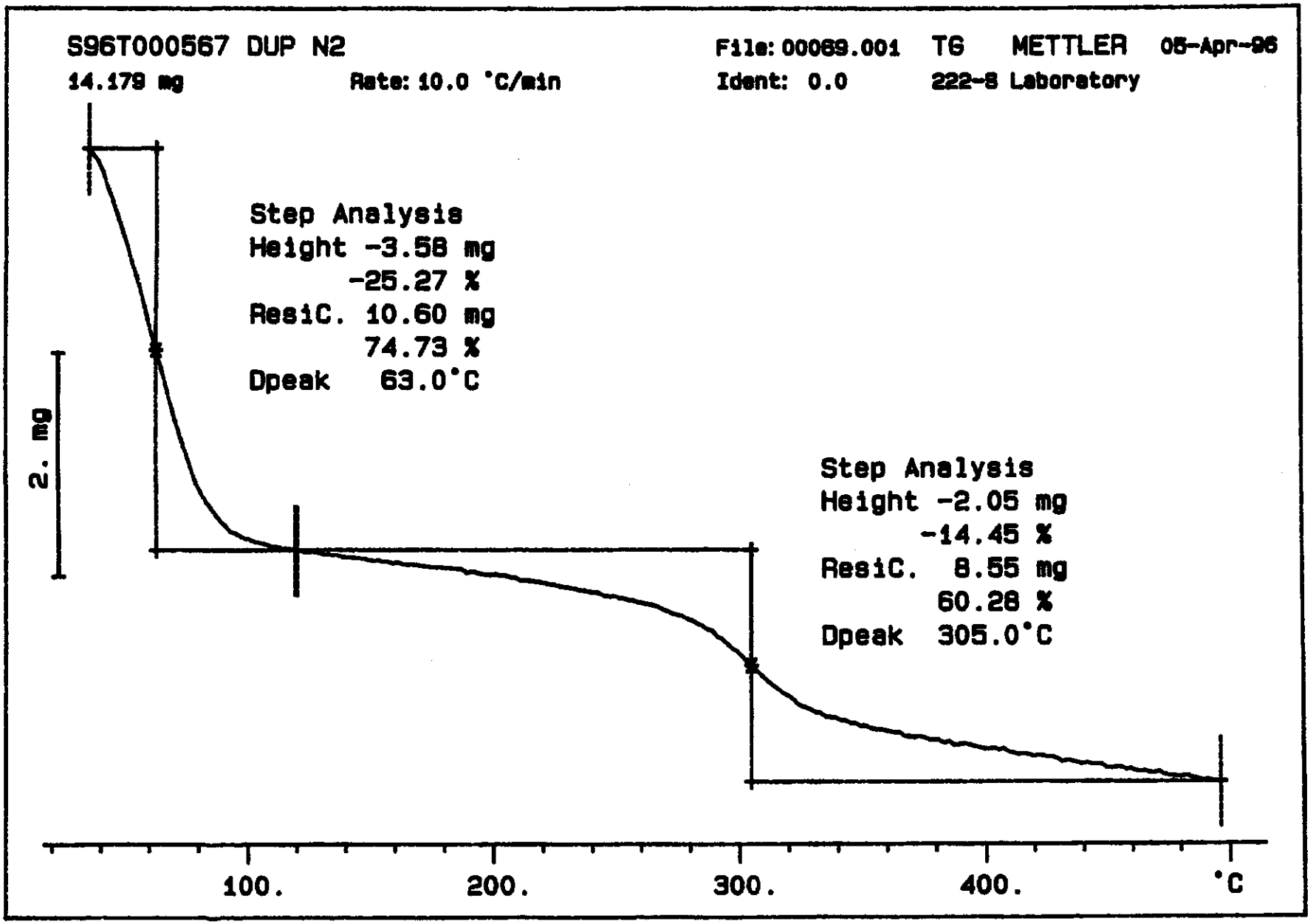
SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 313 TO 315 .



J. M. Fulton 4-5-96

04/08/96 14:41 ☎509 372 2929 WESTINGHOUSE →→→ MO-924 2004 007


S96T000567 N2
15.064 mg
Rate: 10.0 °C/min
File: 00067.001 TG METTLER 05-Apr-96
Ident: 0.0 222-S Laboratory
Step Analysis
Height -3.95 mg
-26.22 %
ResiC. 11.11 mg
73.78 %
Dpeak 63.0°C
Step Analysis
Height -1.97 mg
-13.07 %
ResiC. 9.14 mg
60.69 %
Dpeak 305.0°C
2. mg
100.
200.
300.
400.
°C


S96T000567 DUP N2
14.179 mg
Rate: 10.0 °C/min
File: 00069.001 TG METTLER 05-Apr-96
Ident: 0.0 222-S Laboratory
Step Analysis
Height -3.58 mg
-25.27 %
ResiC. 10.60 mg
74.73 %
Dpeak 63.0°C
Step Analysis
Height -2.05 mg
-14.45 %
ResiC. 8.55 mg
60.28 %
Dpeak 305.0°C
2. mg
100.
200.
300.
400.
°C

worklistrpt Version 2.1 05/15/95
04/09/96 09:06

LABCORE Data Entry Template for Worklist# 7404

Analyst: SMF **Instrument:** TGA0 3 **Book #** 75N8-A

Method: LA-514-114 Rev/Mod C-1

Worklist Comment: C-106 RUN UNDER N2,SAMPLE DRY AND FLIGHTY,HIGH ALPHA. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-------TEST------	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-03	LIQUID	59.2	60.40	N/A	%
96000082	C-106 GRAB	2 SAMPLE	S96T000545	0	TGA-03	LIQUID	N/A	34.27		%
96000082	C-106 GRAB	3 DUP	S96T000545	0	TGA-03	LIQUID	34.27	36.53	N/A	%

Final page for worklist # 7404

See attached for signatures
Analyst Signature **Date** 4-9-96

Analyst Signature **Date** 4-9-96

Verified by Blandina Valenzuela 4-11-96

Data Entry Comments: Sample produced ~~two~~ 4-9-96 RDV another distinct weight loss step which the chemist does not believe it is water therefore it did not get added together. The sample produced 37.91% weight loss at 150°C.

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

LABCORE Data Entry Template for Worklist# 7404

Analyst: SMF **Instrument:** TGA0 **Book #** 75N8A

Method: LA-560-112 Rev/Mod

Worklist Comment: C-106 RUN UNDER N2,SAMPLE DRY AND FLIGHTY,HIGH ALPHA. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R	A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD				TGA-01	LIQUID			N/A	%
96000082	C-106 GRAB	2 SAMPLE	S96T000545	0		TGA-01	LIQUID	N/A			%
96000082	C-106 GRAB	3 DUP	S96T000545	0		TGA-01	LIQUID			N/A	%

Final page for worklist # 7404

Susie M. Dalton 4-7-96
Analyst Signature Date

Analyst Signature Date

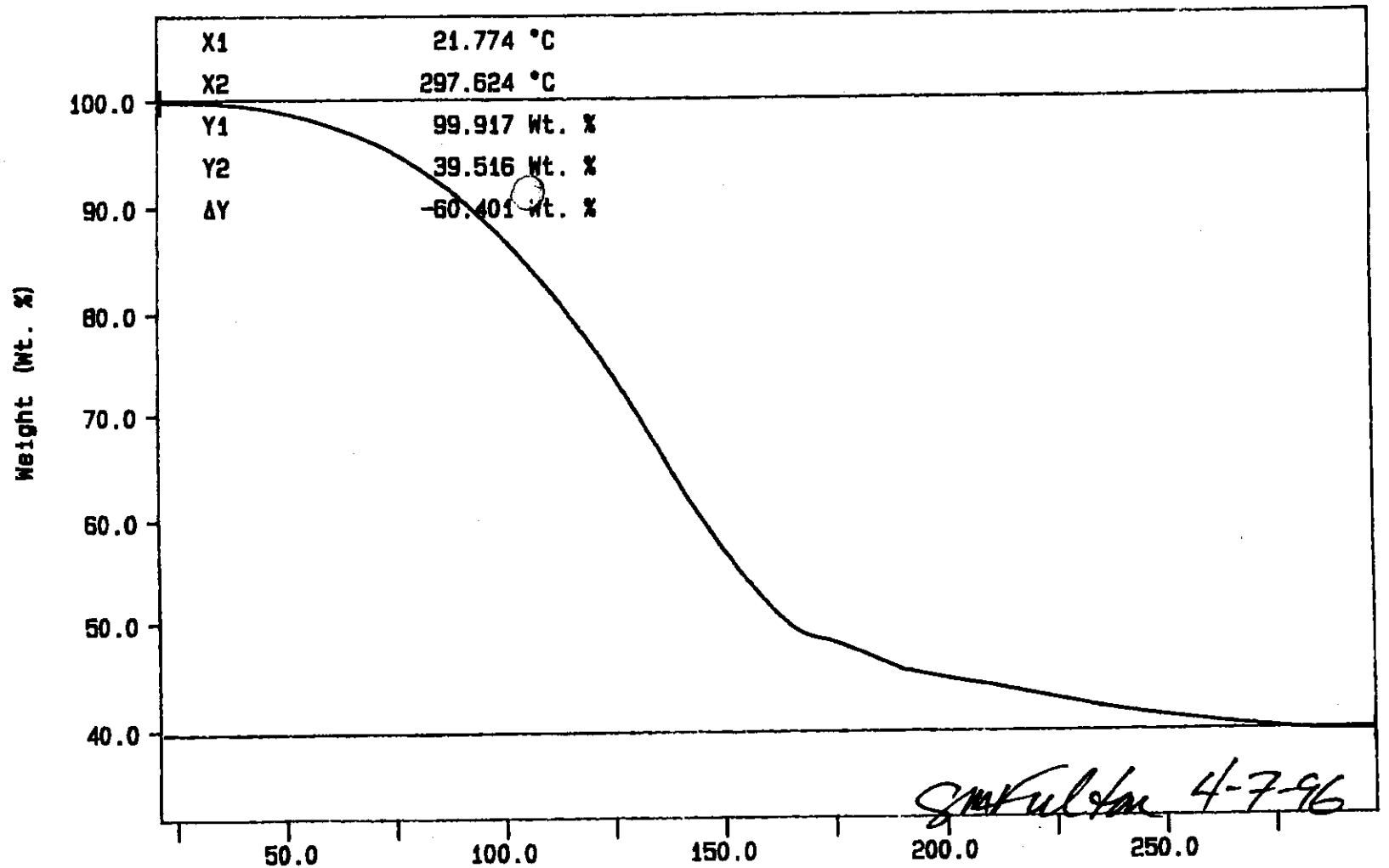
Other instrument was used.
4/11/96
BDR

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

Curve 1: TGA
File info: TER040701 Sun Apr 7 06:39:17 1996
Sample Weight: 17.389 mg
TGA STD 75N8-A

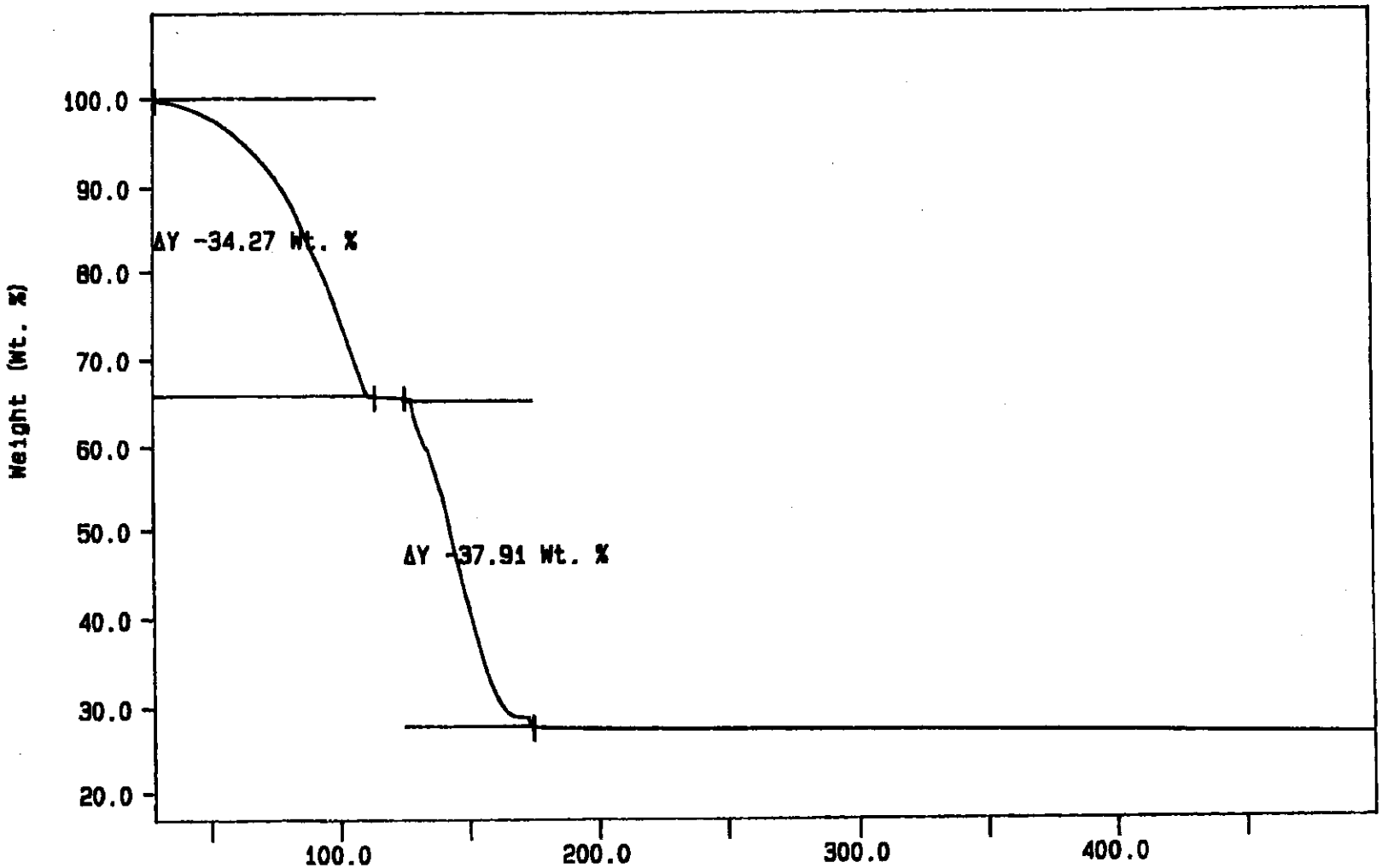
SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 318 TO 320.



N2 10C/MIN
TEMP1: 35.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 300.0 C

SM FULTON
PERKIN-ELMER
7 Series Thermal Analysis System
Sun Apr 7 06:45:33 1996

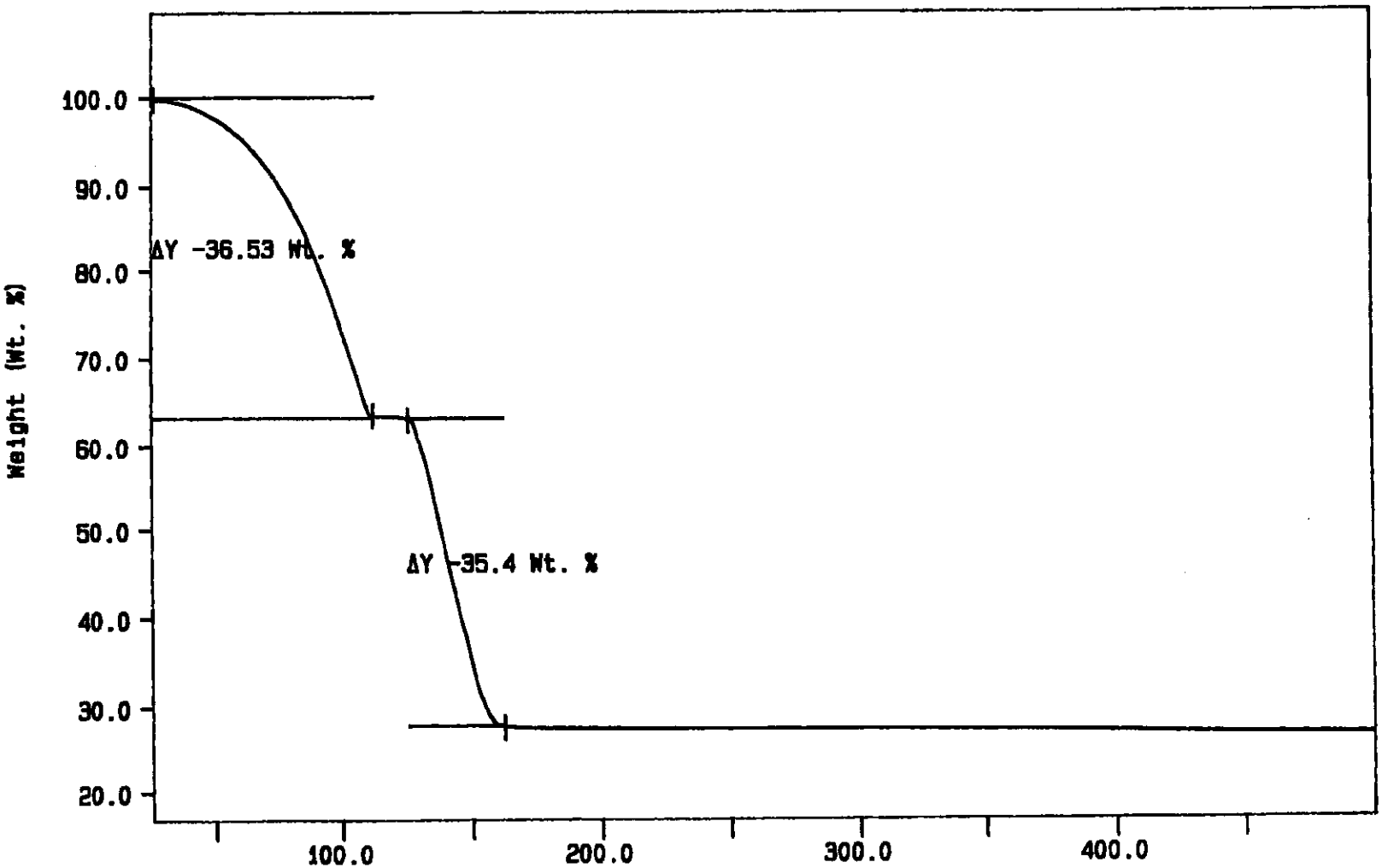
Curve 1: TGA
File info: SAM040701 Sun Apr 7 10:46:20 1996
Sample Weight: 10.598 mg
S96T000545



10C/MIN N2
TEMP1: 35.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 600.0 C

SM FULTON
PERKIN-ELMER
7 Series Thermal Analysis System
Sun Apr 7 12:44:57 1996

Curve 1: TGA
File info: SAM040704 Sun Apr 7 13:35:12 1996
Sample Weight: 9.159 mg
S96T000545 DUP



10C/MIN N2
TEMP1: 30.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 600.0 C

SM FULTON
PERKIN-ELMER
7 Series Thermal Analysis System
Sun Apr 7 13:45:10 1996

04/09/96 09:36 ☎509 372 2929 WESTINGHOUSE 012

worklistrpt Version 2.1 05/15/95
04/08/96 10:37

LABCORE Data Entry Template for Worklist# 7455

Analyst: RK **Instrument:** TGA0 1 **Book #** 7548-A

Method: LA-560-112 Rev/Mod B-1

Worklist Comment: C-106 TGA RUN UNDER N2,SAMPLE DRY AND FLIGHTY,HIGH ALPHA.RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R	A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD				TGA-01	LIQUID	59.2	59.9	N/A	%
96000174	C-106 GRAB	2 SAMPLE	S96T001566	0		TGA-01	LIQUID	N/A	74.92		%
96000174	C-106 GRAB	3 DUP	S96T001566	0		TGA-01	LIQUID	74.92	76.6	N/A	%
96000174	C-106 GRAB	4 SAMPLE	S96T001679	0		TGA-01	LIQUID	N/A	28.37		%
96000174	C-106 GRAB	5 DUP	S96T001679	0		TGA-01	LIQUID	28.37	31.34	N/A	%

Final page for worklist # 7455

Nola Kim 4/8/96
Analyst Signature Date

Jerry Hammond 4-9-96
Analyst Signature Date

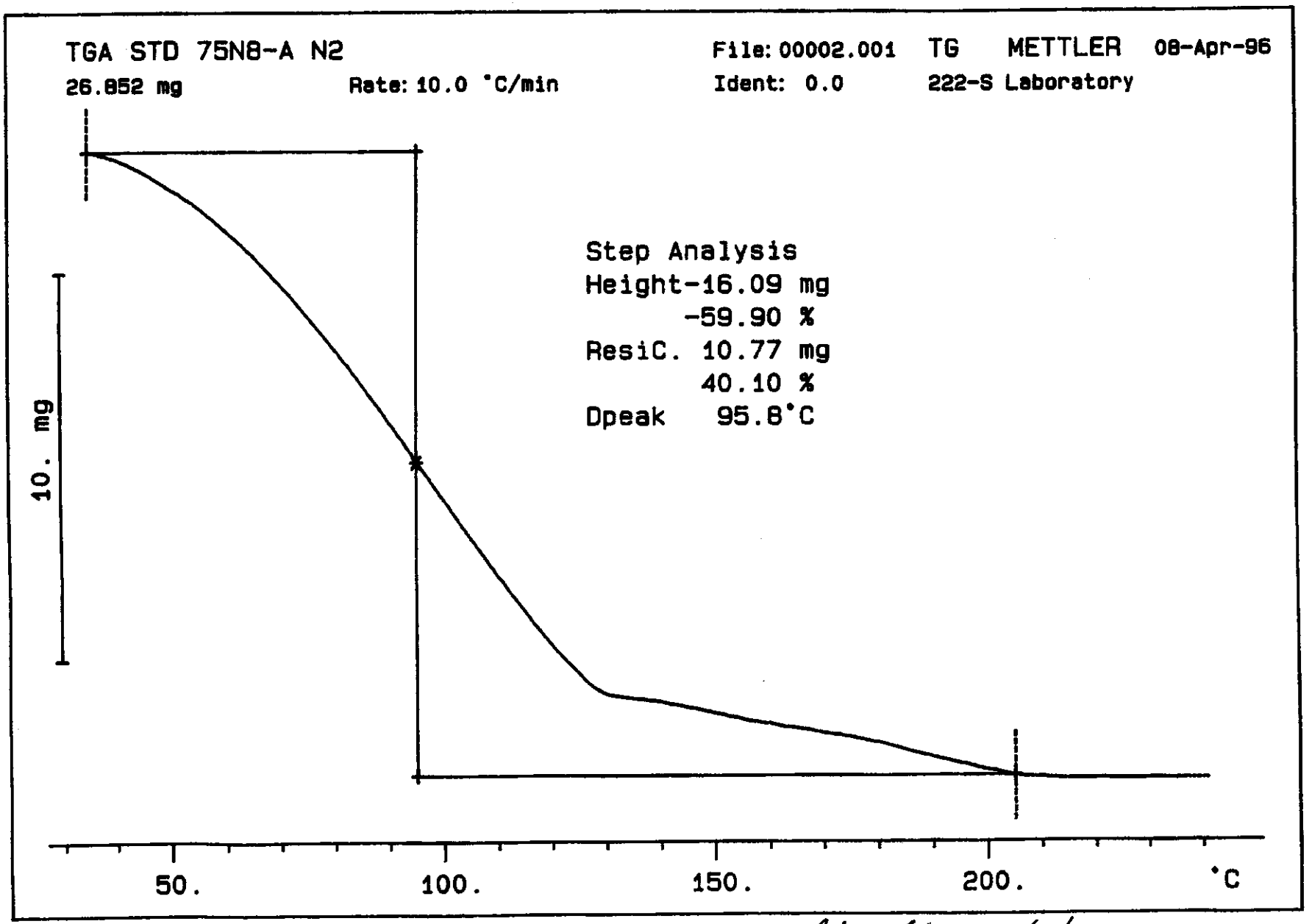
S96T001566 is the sum of two weight loss steps (51.67% + 23.25%). The dup has three weight loss steps (56.52%, 1.92%, + 18.12%)

S96T001679 is the sum of two weight loss steps (11.12% + 17.25%). The sample also had two additional weight loss steps of 18.51% and 17. 35.60%. The sample duplicate had 4-9-96 is the sum of three weight loss steps (10.01%, 6.83%, + 14.50%)

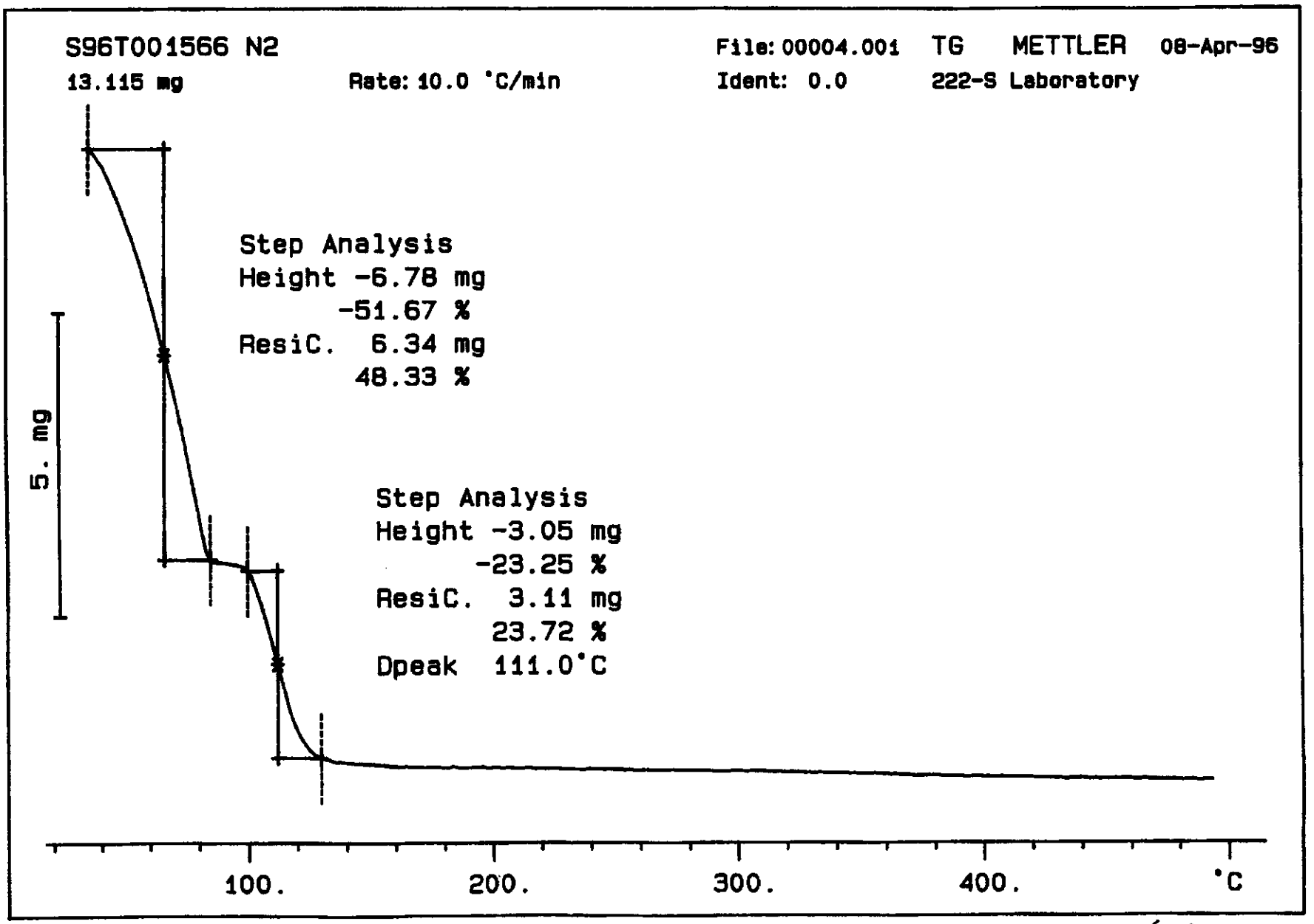
Verified 4/12/96 Jerry Frye

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

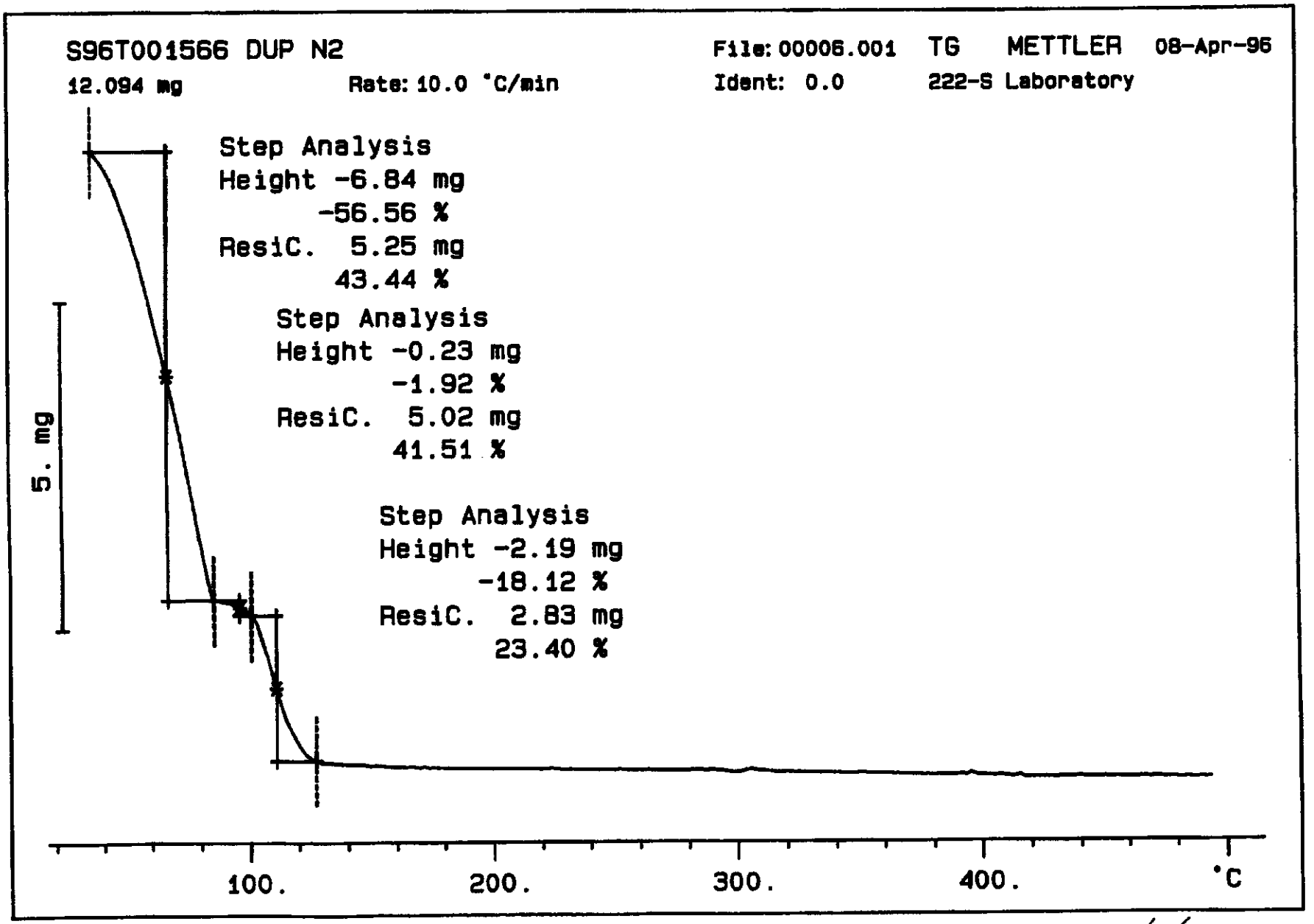

TGA STD 75N8-A N2
26.852 mg
Rate: 10.0 °C/min
File: 00002.001
TG METTLER 08-Apr-96
Ident: 0.0
222-S Laboratory
Step Analysis
Height-16.09 mg
-59.90 %
ResiC. 10.77 mg
40.10 %
Dpeak 95.8°C
10. mg
50.
100.
150.
200.
°C

Nhb Nhm 4/8/96

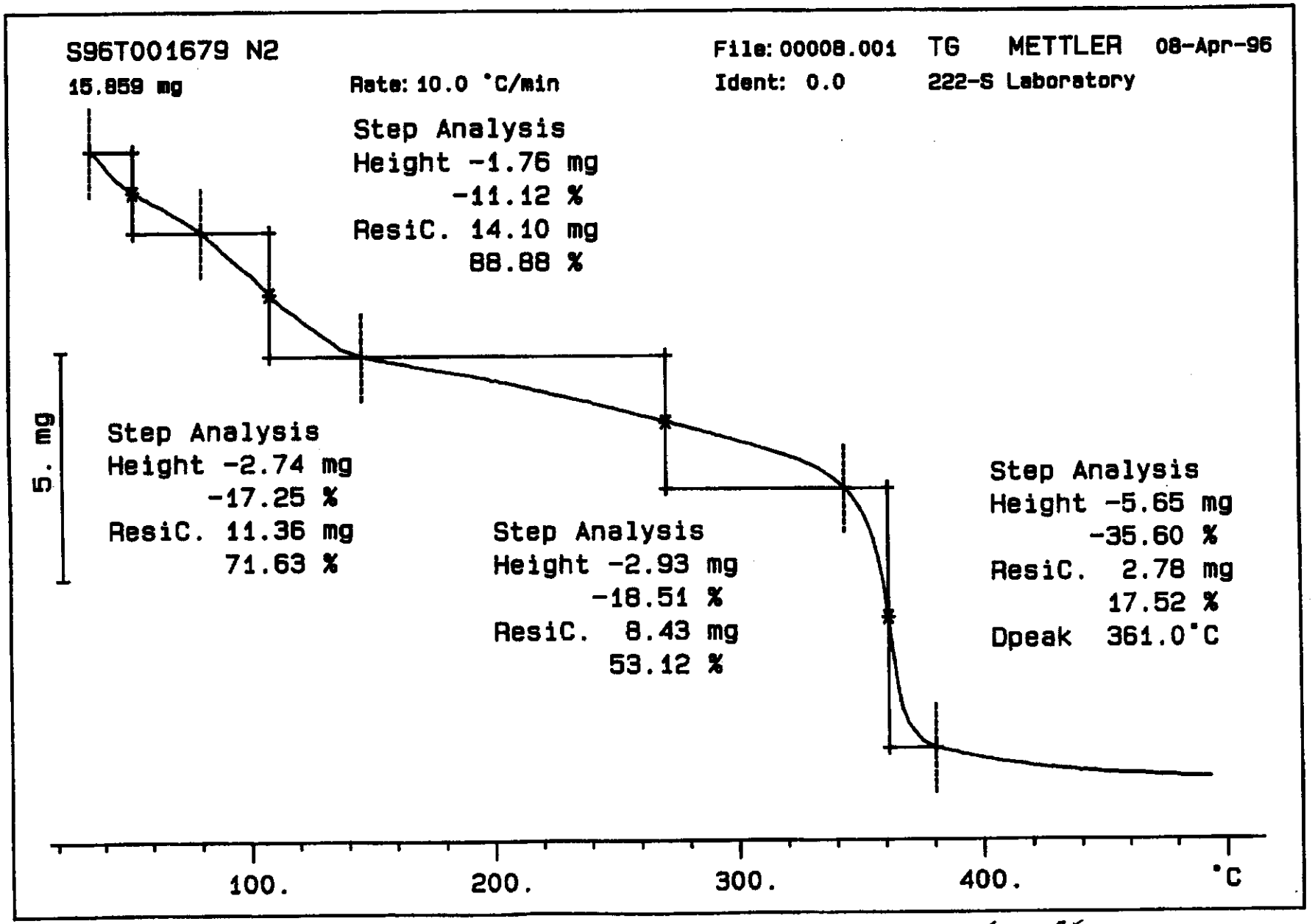


Rob King 4/8/96

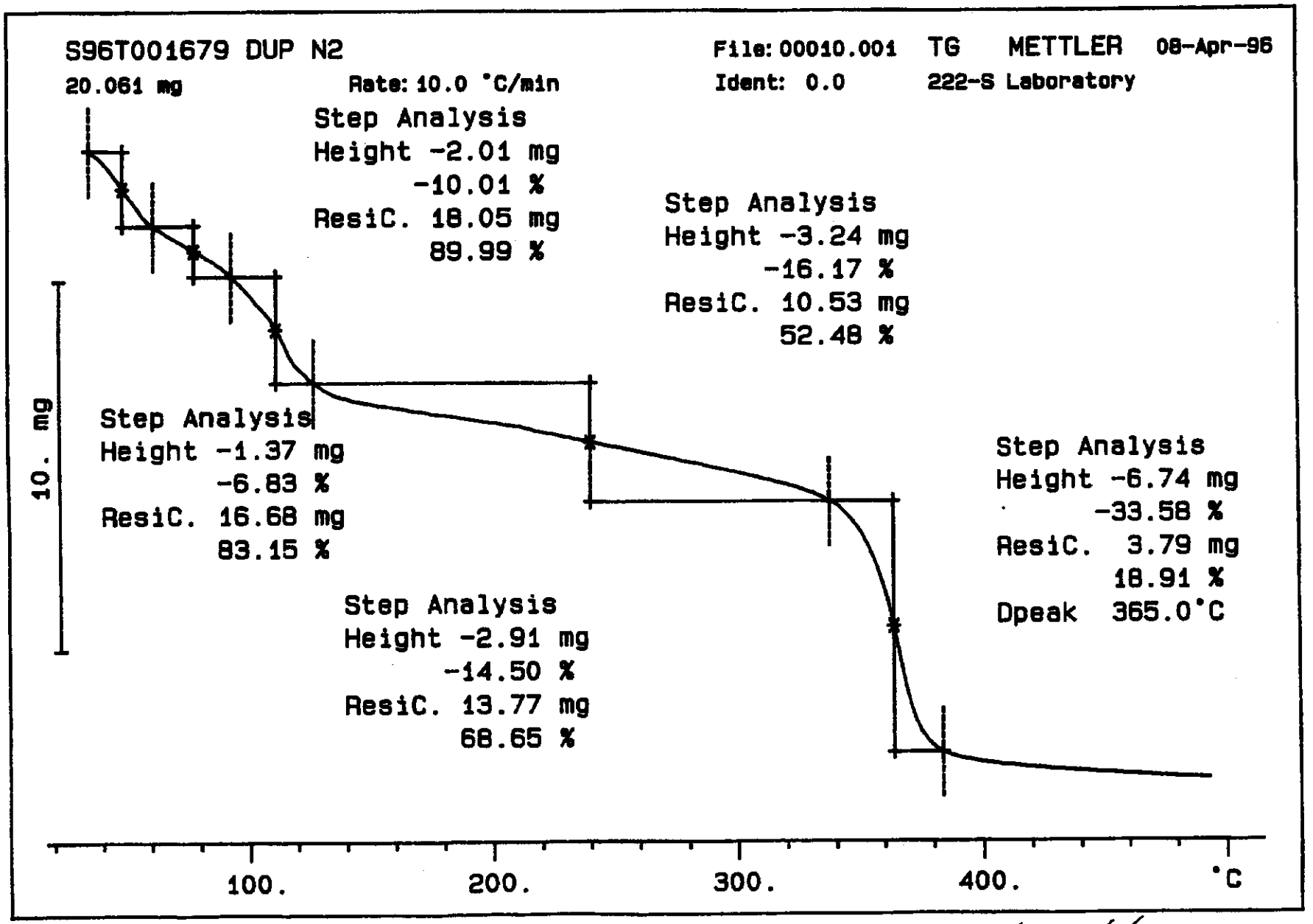
04/09/96 09:47 6787 717 809 TO:WHC-SD-WM-DP-183 PAGE 009



Nob King 4/8/96



Rob King 4/8/96



Rob King 4/9/96

LABCORE Data Entry Template for Worklist# 7456

Analyst: RDM **Instrument:** TGA0 TGA01 **Book #** 75NBA

Method: LA-560-112 Rev/Mod B-1

Worklist Comment: C-106 TGA RUN UNDER N2,SAMPLE DRY AND FLIGHTY,HIGH ALPHA.RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R	A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD				TGA-01	LIQUID	59.2	61.40	N/A	%
96000082	C-106 GRAB	2 SAMPLE	S96T001567	0		TGA-01	LIQUID	N/A	71.58		%
96000082	C-106 GRAB	3 DUP	S96T001567	0		TGA-01	LIQUID	71.58	67.52	N/A	%
96000174	C-106 GRAB	4 SAMPLE	S96T001553	0		TGA-01	LIQUID	N/A	72.40		%
96000174	C-106 GRAB	5 DUP	S96T001553	0		TGA-01	LIQUID	72.40	30.11	N/A	%

Final page for worklist # 7456

RDMyers 4/4/96
Analyst Signature **Date**

Analyst Signature **Date**

S96T001567 has a second weight loss step at 320°C of 5.14%, the duplicate had 8.70% loss.

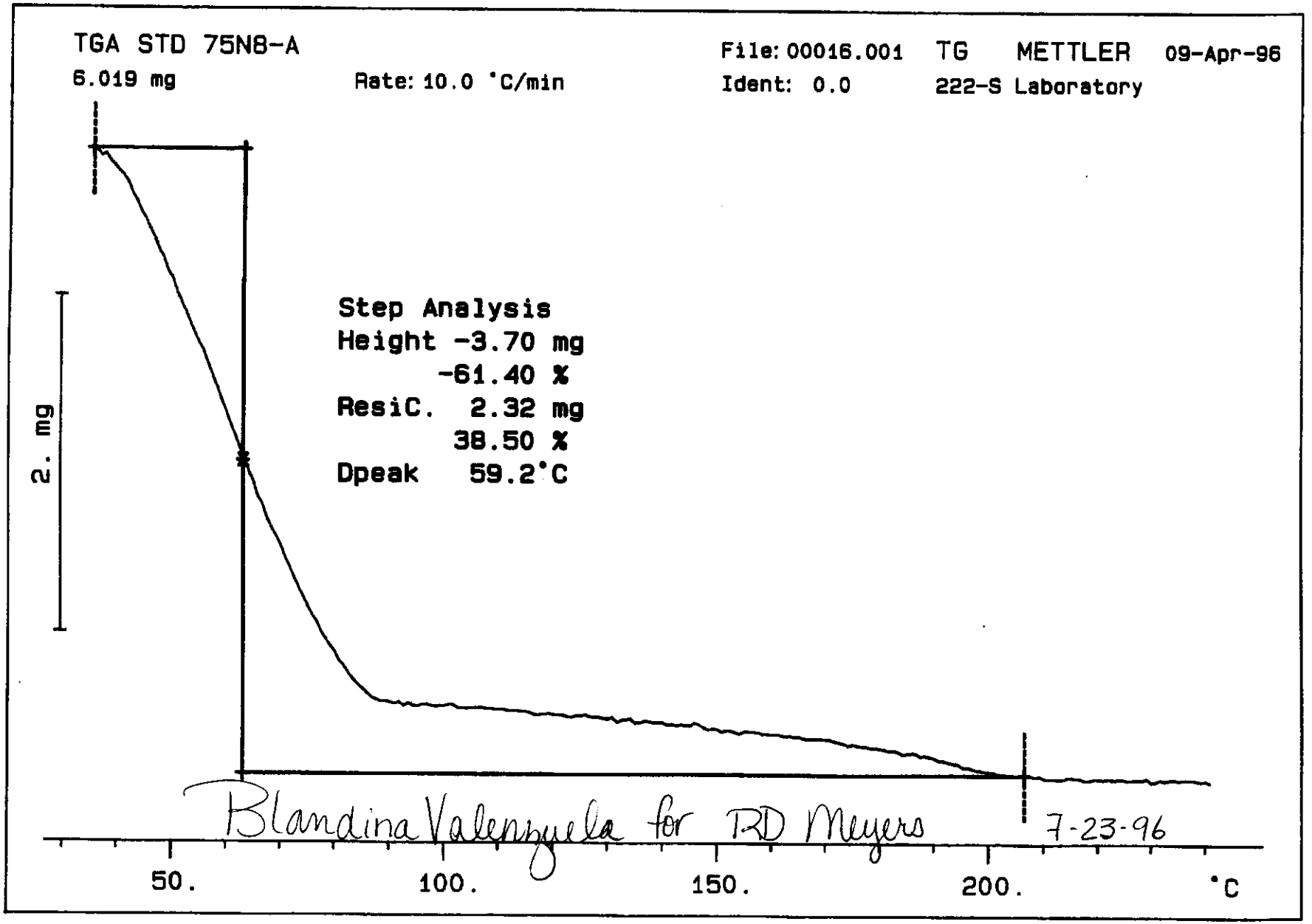
S96T001553 has two weight loss steps, the second step on the sample is 4.29% at ~~360~~ 375°C. The duplicate has a second step of 53.78% at 375°C. Sample & duplicate look very different.

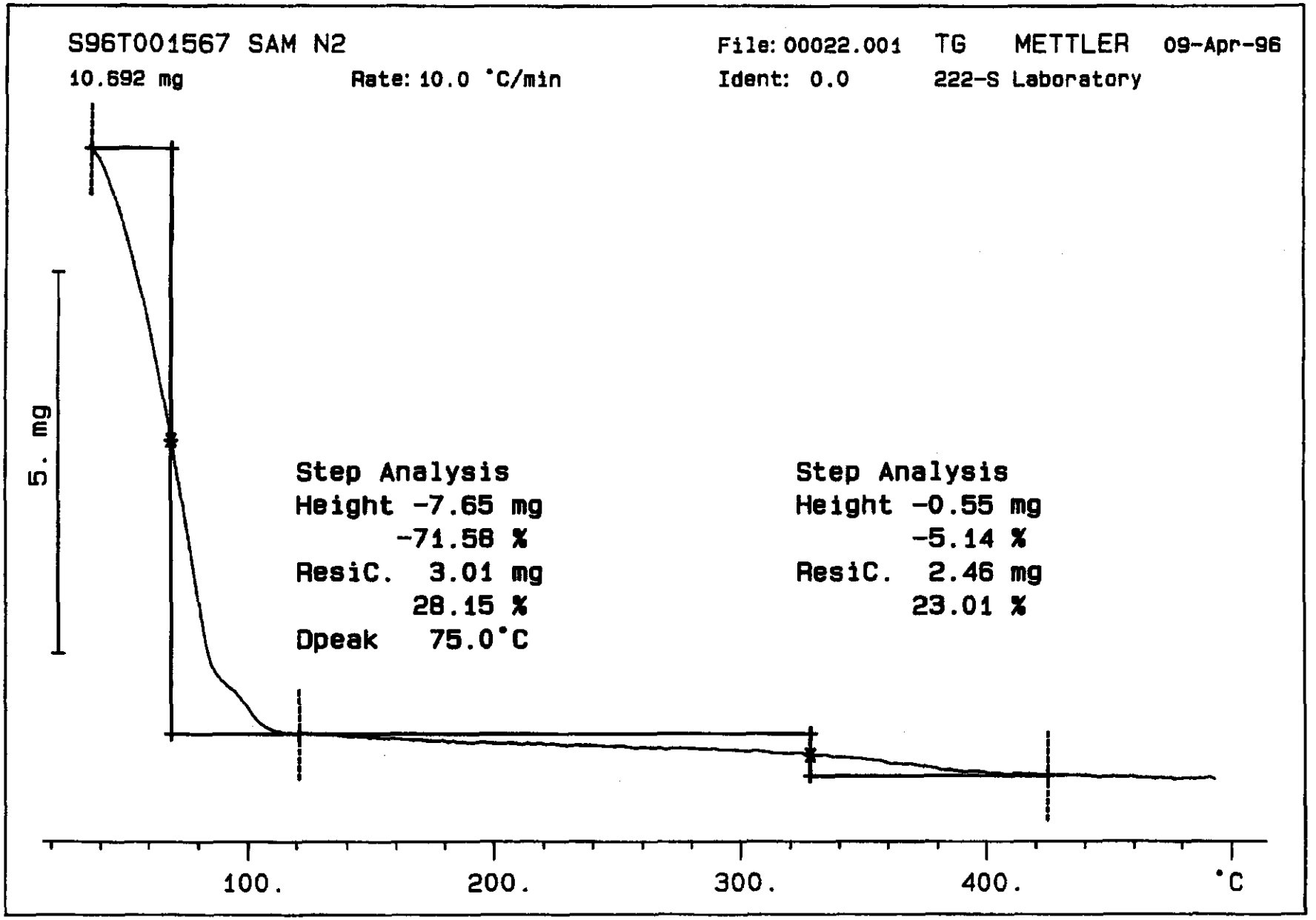
Entered & Reviewed 4/12/96 J. M. Fuge

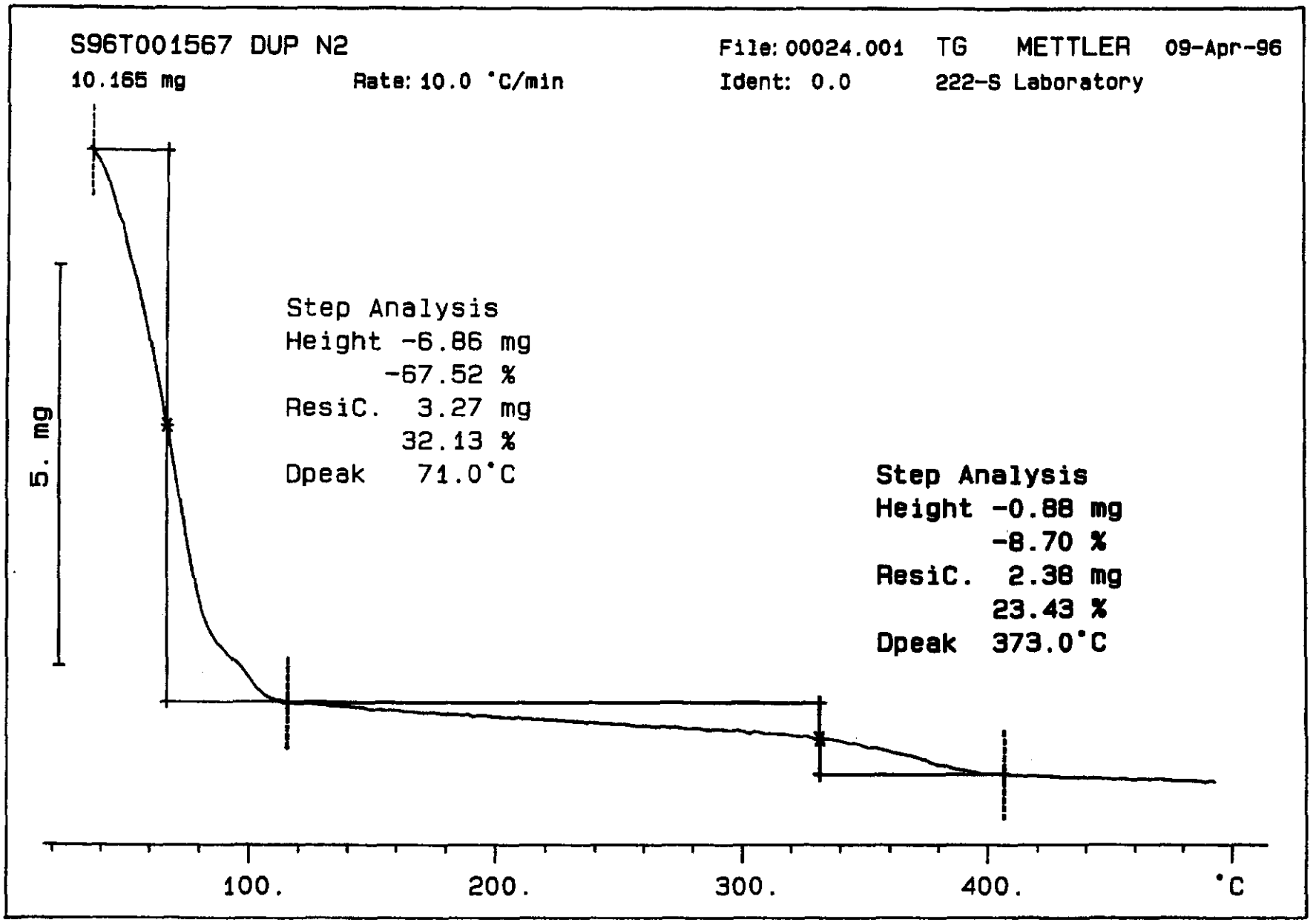
Data Entry Comments:

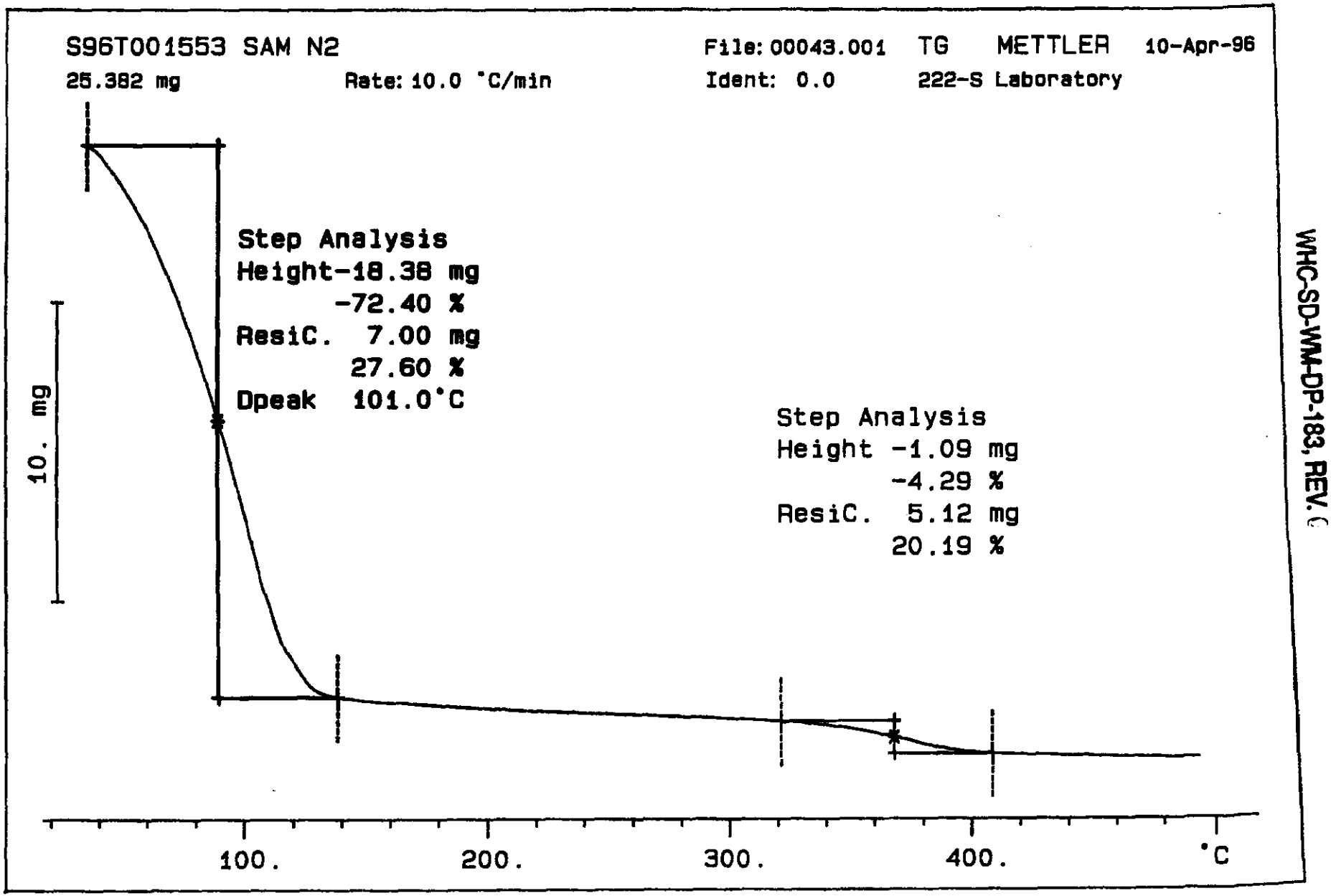
Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 328 TO 332.

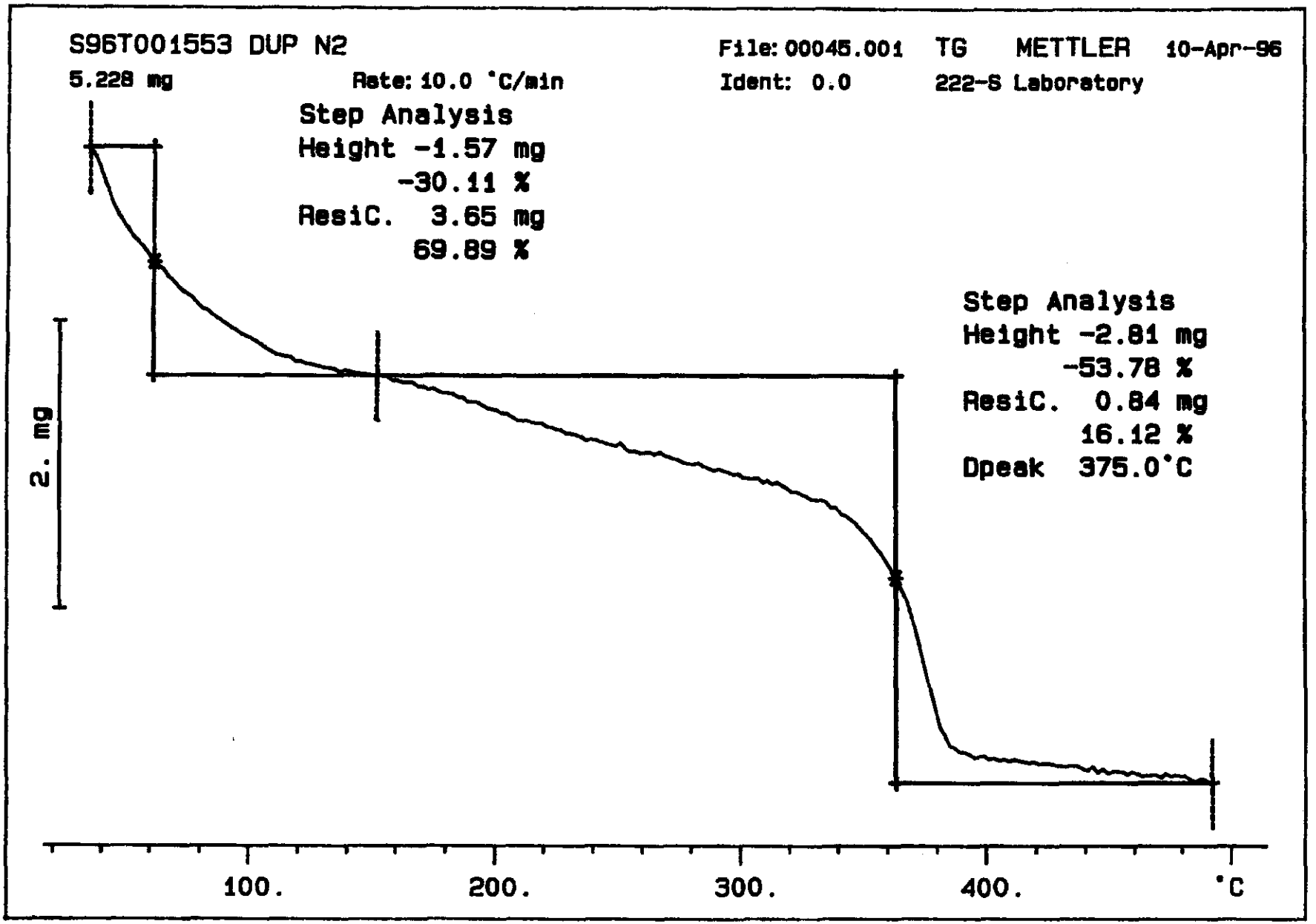



S96T001567 SAM N2
10.692 mg
Rate: 10.0 °C/min
File: 00022.001
TG
METTLER
09-Apr-96
Ident: 0.0
222-S Laboratory
5. mg
Step Analysis
Height -7.65 mg
-71.58 %
ResiC. 3.01 mg
28.15 %
Dpeak 75.0°C
Step Analysis
Height -0.55 mg
-5.14 %
ResiC. 2.46 mg
23.01 %
100.
200.
300.
400.
°C


S96T001567 DUP N2
10.165 mg
Rate: 10.0 °C/min
File: 00024.001 TG METTLER 09-Apr-96
Ident: 0.0 222-S Laboratory
5. mg
Step Analysis
Height -6.86 mg
-67.52 %
ResiC. 3.27 mg
32.13 %
Dpeak 71.0°C
Step Analysis
Height -0.88 mg
-8.70 %
ResiC. 2.38 mg
23.43 %
Dpeak 373.0°C
100.
200.
300.
400.
°C



04/17/96 14:50 ☎509 372 8787 RESTINGHOUSE ☎509 376 8008 ← ← MO-824 2000 T10 ☎


S96T001553 DUP N2
5.228 mg
Rate: 10.0 °C/min
File: 00045.001
Ident: 0.0
TG
METTLER
10-Apr-96
222-S Laboratory
Step Analysis
Height -1.57 mg
-30.11 %
ResiC. 3.65 mg
69.89 %
Step Analysis
Height -2.81 mg
-53.78 %
ResiC. 0.84 mg
16.12 %
Dpeak 375.0°C
2. mg
100.
200.
300.
400.
°C

LABCORE Data Entry Template for Worklist# 7512

Analyst: PJM **Instrument:** TGA0 3 **Book #** 82N8-A

Method: LA-514-114 Rev/Mod C-1

Worklist Comment: C-106 FOR TGA PLEASE RUN UNDER N2 RTS!

GROUP	PROJECT	S TYPE	SAMPLE#	R	A	-------TEST------	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD				TGA-03	SOLID	59.2	58.84	N/A	%
96000174	C-106 GRAB	2 SAMPLE	S96T001559	0		TGA-03	SOLID	N/A	21.28		%
96000174	C-106 GRAB	3 DUP	S96T001559	0		TGA-03	SOLID	21.28	26.12	N/A	%
96000174	C-106 GRAB	4 SAMPLE	S96T001685	0		TGA-03	SOLID	N/A	32.54		%
96000174	C-106 GRAB	5 DUP	S96T001685	0		TGA-03	SOLID	32.54	31.29	N/A	%

Final page for worklist # 7512

See attached for signatures

Analyst Signature **Date** 4-15-96 BDV

Verified by Blandina Valenzuela

Analyst Signature **Date**

Data Entry Comments: S96T001559 produced a second weight loss step of 9.52% at approximately 325°C.
S96T001685 produced a second weight loss step of 8.245% at approximately 8.25%

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

LABCORE Data Entry Template for Worklist# 7512

Analyst: RJ McCown **Instrument:** TGA0 3 **Book #** 82NB-A

Method: LA-~~560-112~~ 514-114 Rev/Mod C-1 RJM 4/14/96

Worklist Comment: C-106 FOR TGA PLEASE RUN UNDER N2 RTS!

GROUP	PROJECT	S TYPE	SAMPLE#	R	A	-------TEST------	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD				TGA-01	SOLID	59.2	58.84	N/A	%
96000174	C-106 GRAB	2 SAMPLE	S96T001685	0		TGA-01	SOLID	N/A			%
96000174	C-106 GRAB	3 DUP	S96T001685	0		TGA-01	SOLID			N/A	%
96000174	C-106 GRAB	4 SAMPLE	S96T001559	0		TGA-01	SOLID	N/A			%
96000174	C-106 GRAB	5 DUP	S96T001559	0		TGA-01	SOLID			N/A	%

Final page for worklist # 7512

RJ McCown 4/14/96
Analyst Signature **Date**

Analyst Signature **Date**

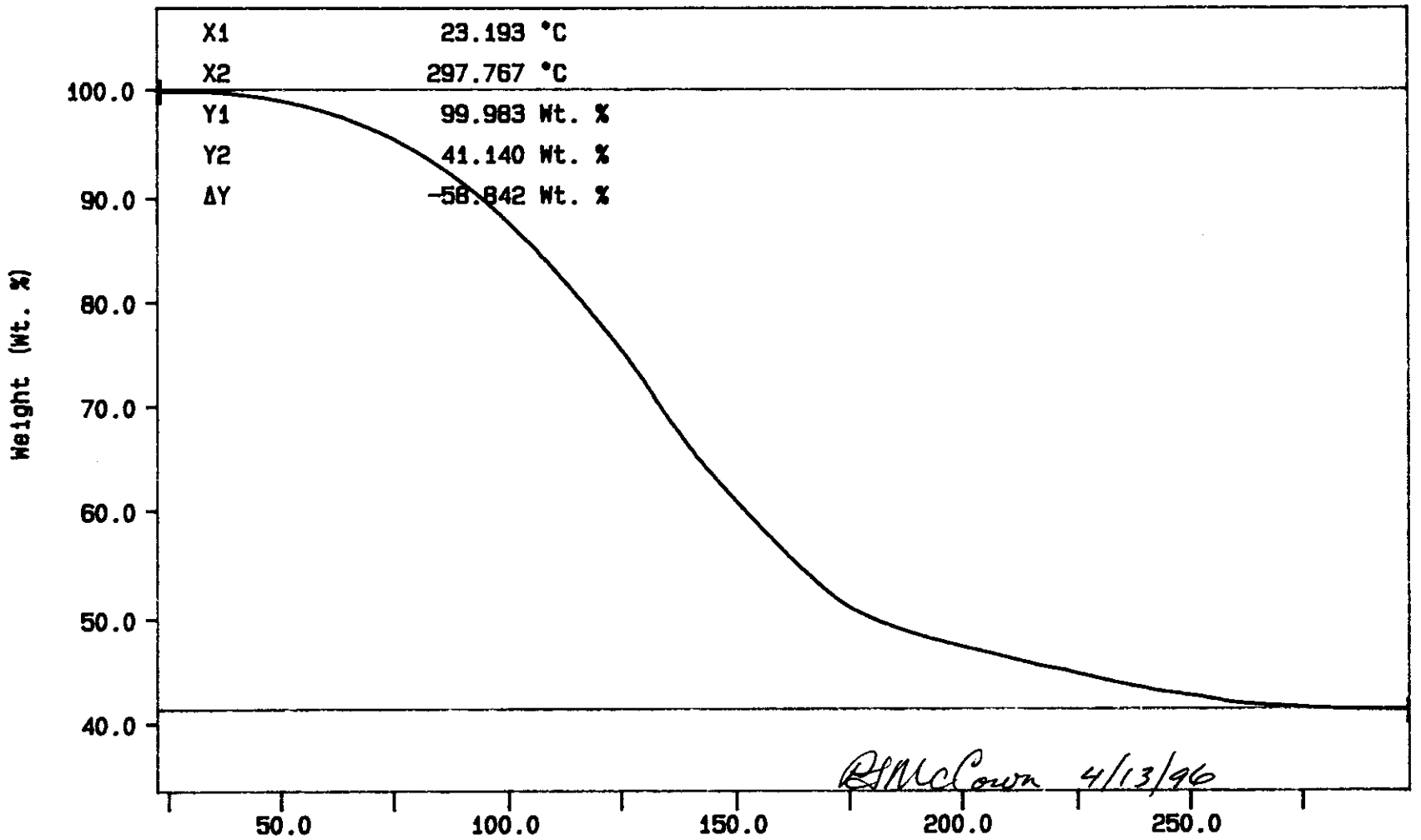
Other instrument was used 4/15/96 BOV

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

Curve 1: TGA
File info: TER041301 Sat Apr 13 20:10:46 1996
Sample Weight: 19.813 mg
TGA STD 82N8-A

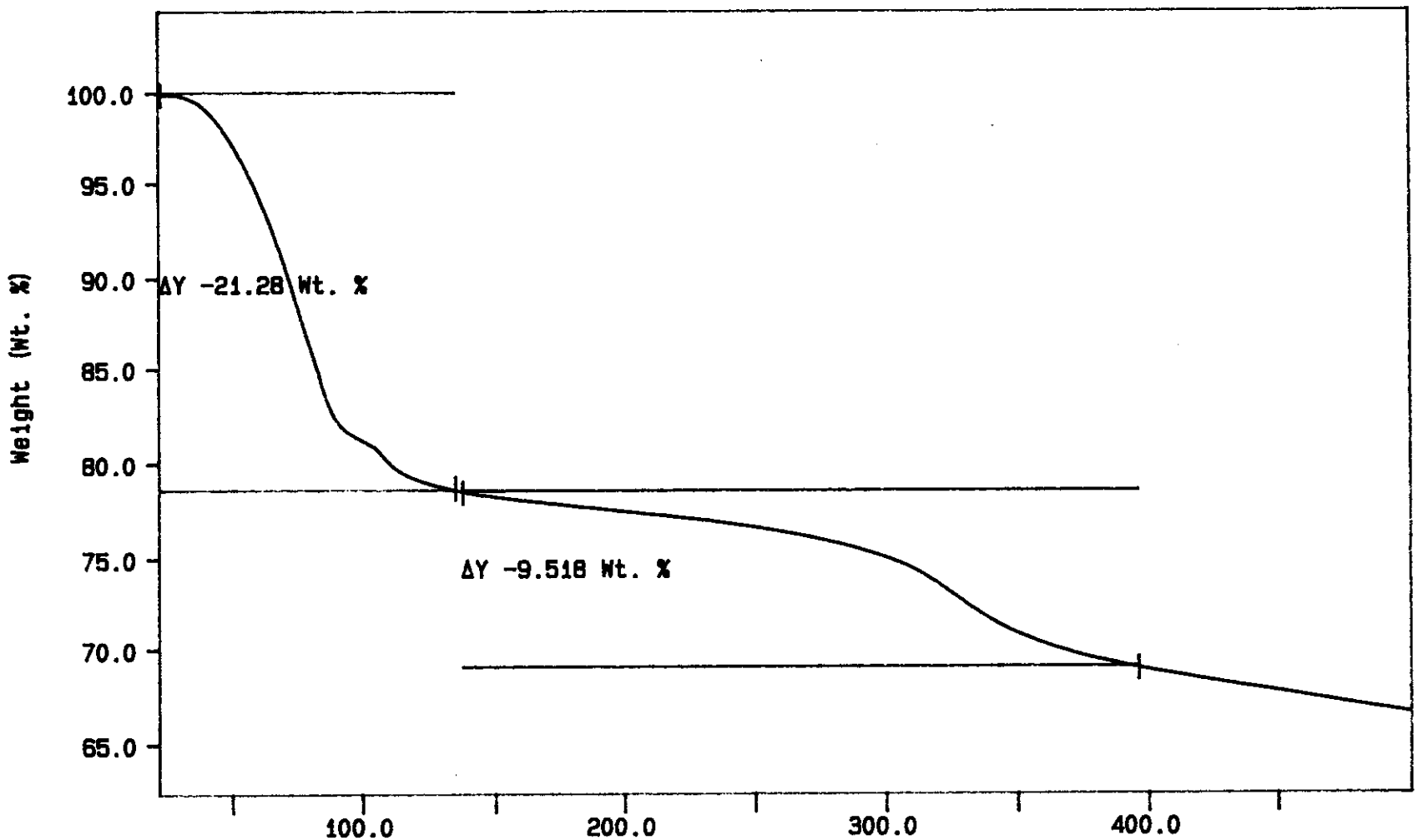
SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 335 TO 339.



N2 10C/MIN
TEMP1: 35.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 300.0 C

PJ MCCOWN
PERKIN-ELMER
7 Series Thermal Analysis System
Sat Apr 13 21:12:43 1996

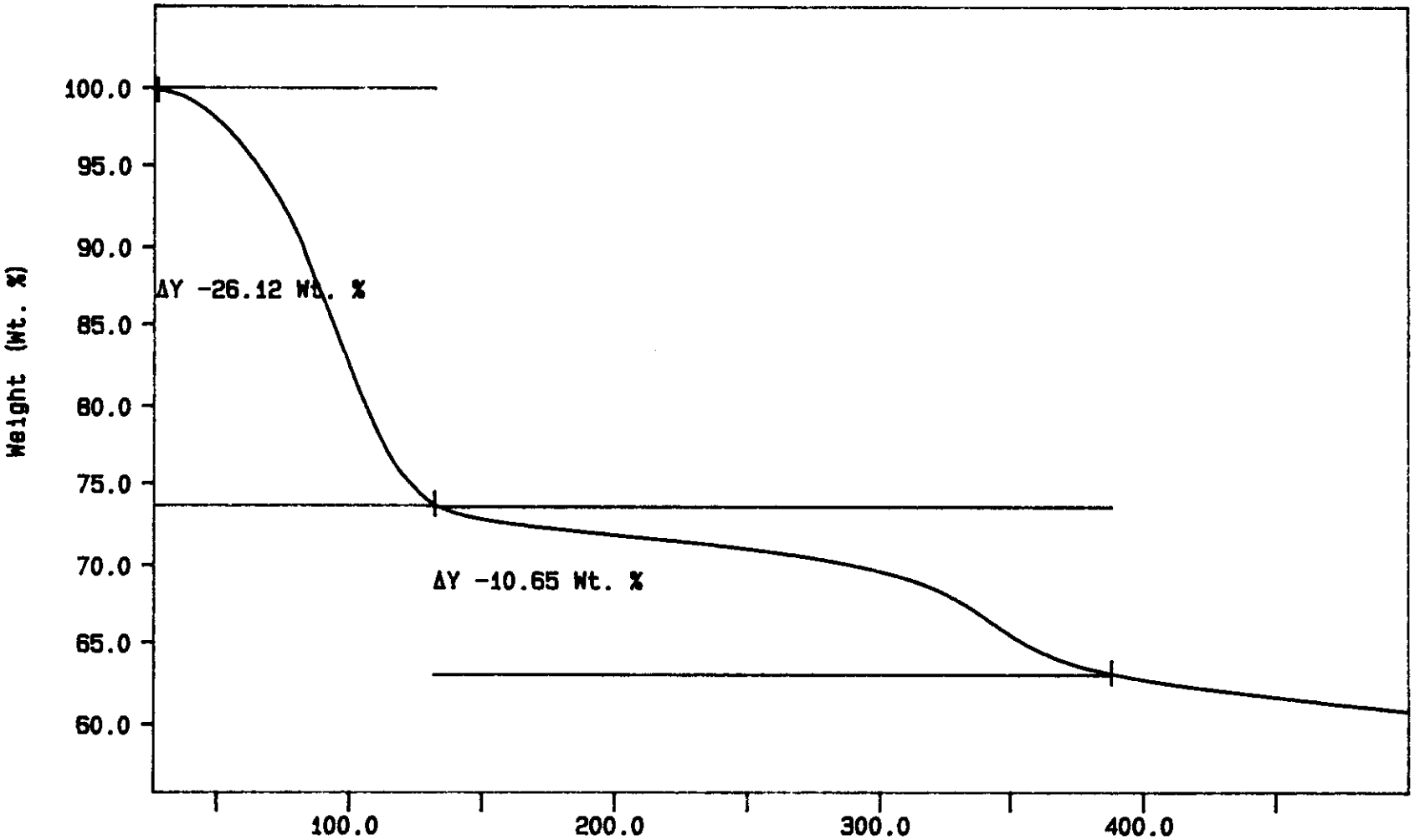
Curve 1: TGA
File info: SAM041401 Sun Apr 14 02:11:26 1996
Sample Weight: 4.578 mg
S96T001559 SAM



10C/MIN N2
TEMP1: 35.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 800.0 C

PJ MCCOWN
PERKIN-ELMER
7 Series Thermal Analysis System
Sun Apr 14 02:15:47 1996

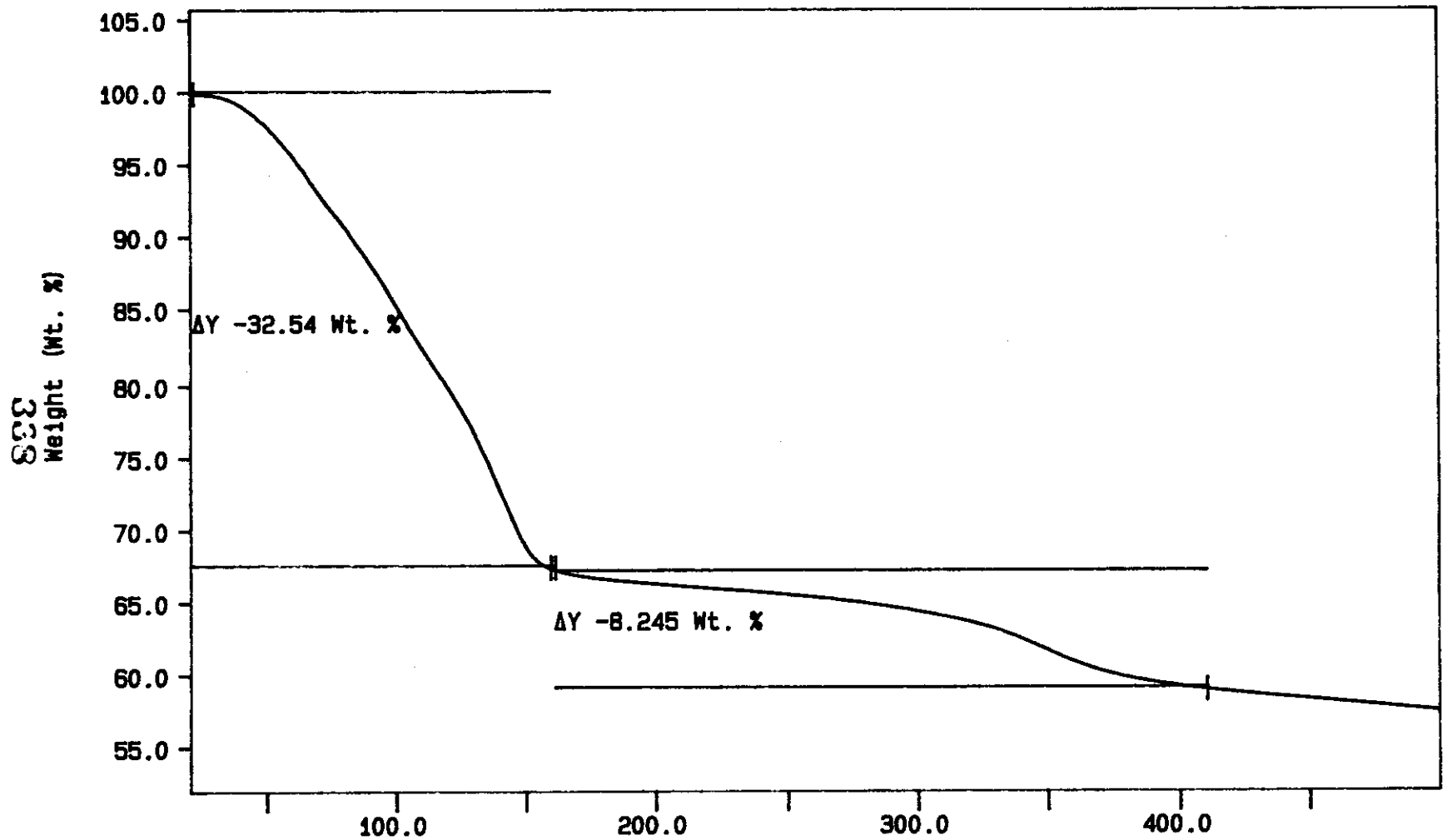
Curve 1: TGA
File info: SAM041402 Sun Apr 14 03:20:30 1996
Sample Weight: 10.603 mg
S96T001559 DUP



10C/MIN N2
TEMP1: 35.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 500.0 C

PJ MCCOWN
PERKIN-ELMER
7 Series Thermal Analysis System
Sun Apr 14 03:27:53 1996

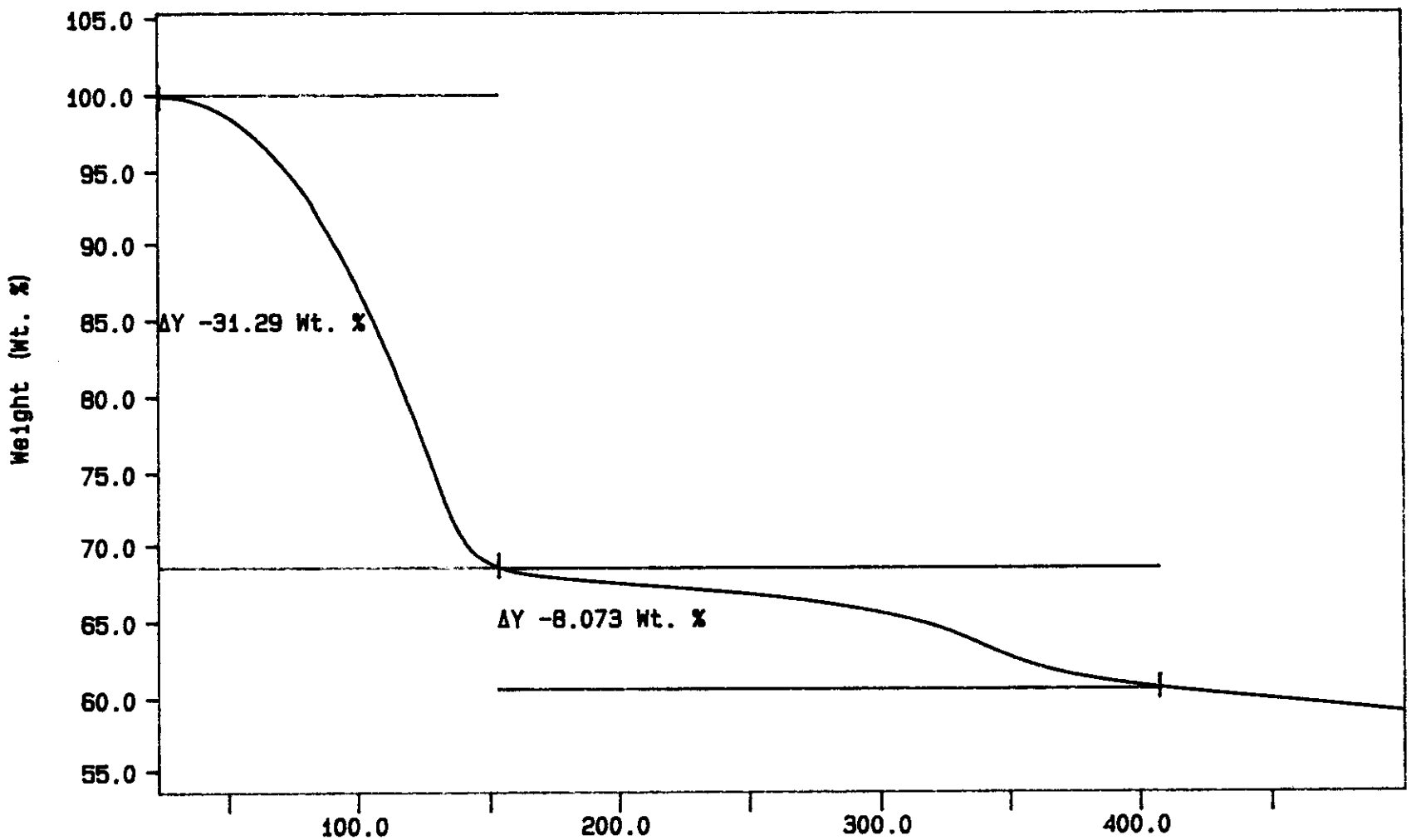
Curve 1: TGA
File info: SAM041301 Sat Apr 13 22:15:07 1996
Sample Weight: 14.892 mg
S96T001685 SAM



10C/MIN N2
TEMP1: 35.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 500.0 C

PJ MCCOWN
PERKIN-ELMER
7 Series Thermal Analysis System
Sat Apr 13 22:35:01 1996

Curve 1: TGA
File info: SAM041302 Sat Apr 13 23:30:39 1996
Sample Weight: 18.515 mg
S96T001685 DUP



10C/MIN N2
TEMP1: 35.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 600.0 C

PJ MCCOWN
PERKIN-ELMER
7 Series Thermal Analysis System
Sat Apr 13 23:41:35 1996

LABCORE Data Entry Template for Worklist# 7513

Analyst: RK **Instrument:** TGA0 1 **Book #** 8278-A

Method: LA-560-112 Rev/Mod B-1

Worklist Comment: C-106 FOR TGA PLEASE RUN UNDER N2 RTS!

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	STD				TGA-01	SOLID	59.2	58.86*	N/A	%
96000174	C-106 GRAB	2	SAMPLE	S96T001034	0		TGA-01	SOLID	N/A	31.29		%
96000174	C-106 GRAB	3	DUP	S96T001034	0		TGA-01	SOLID	31.29	30.91	N/A	%

Final page for worklist # 7513

Rob King 4/12/96
Analyst Signature **Date**

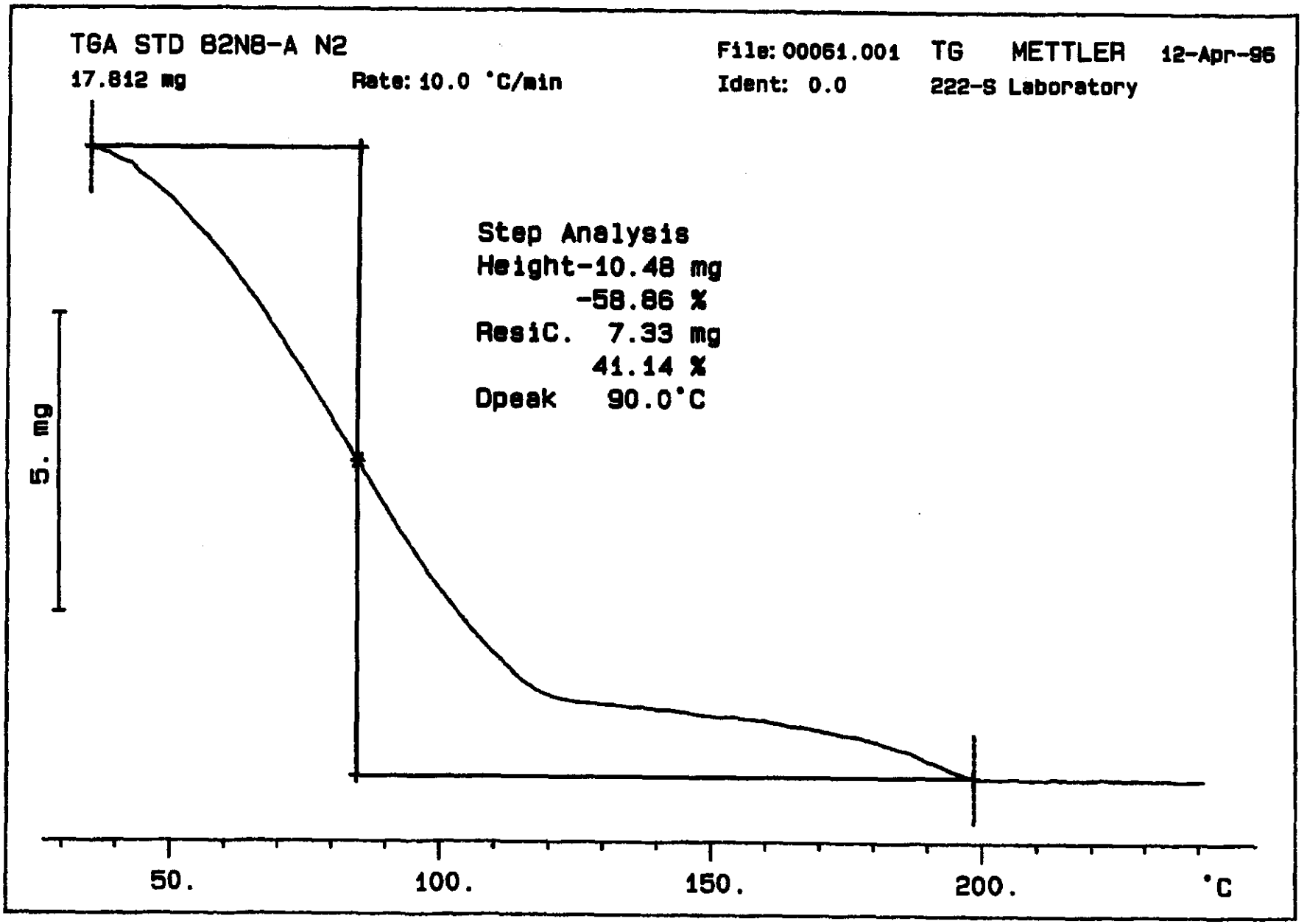
RS Jones 4-18-96
Analyst Signature **Date**

Verified by Blandina Valenzuela 4-22-96

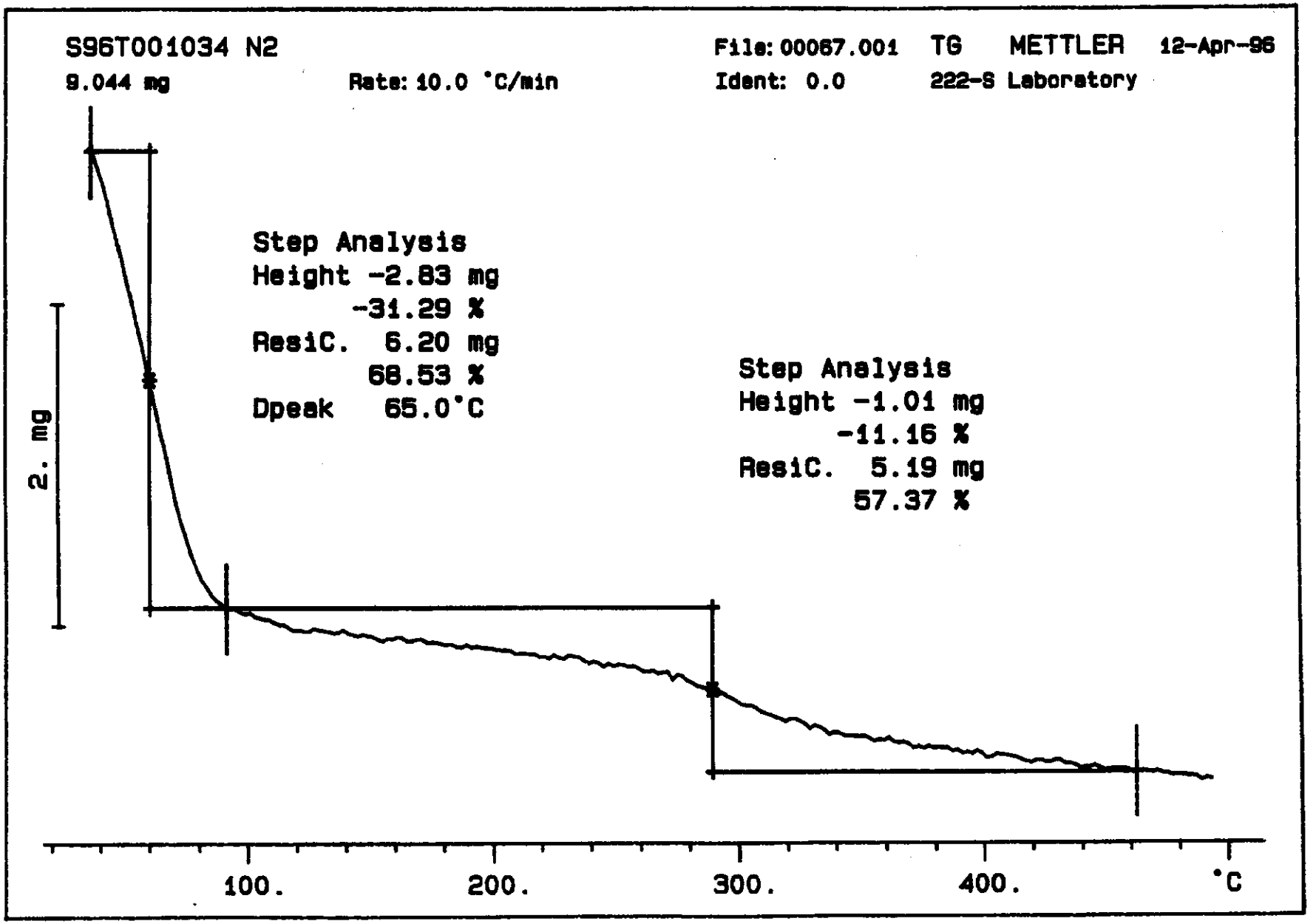
Data Entry Comments: Sample produced an additional weight loss steps ~~at~~ of 11.167.a approximately 280°C 4/16/96

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 341 TO 343.

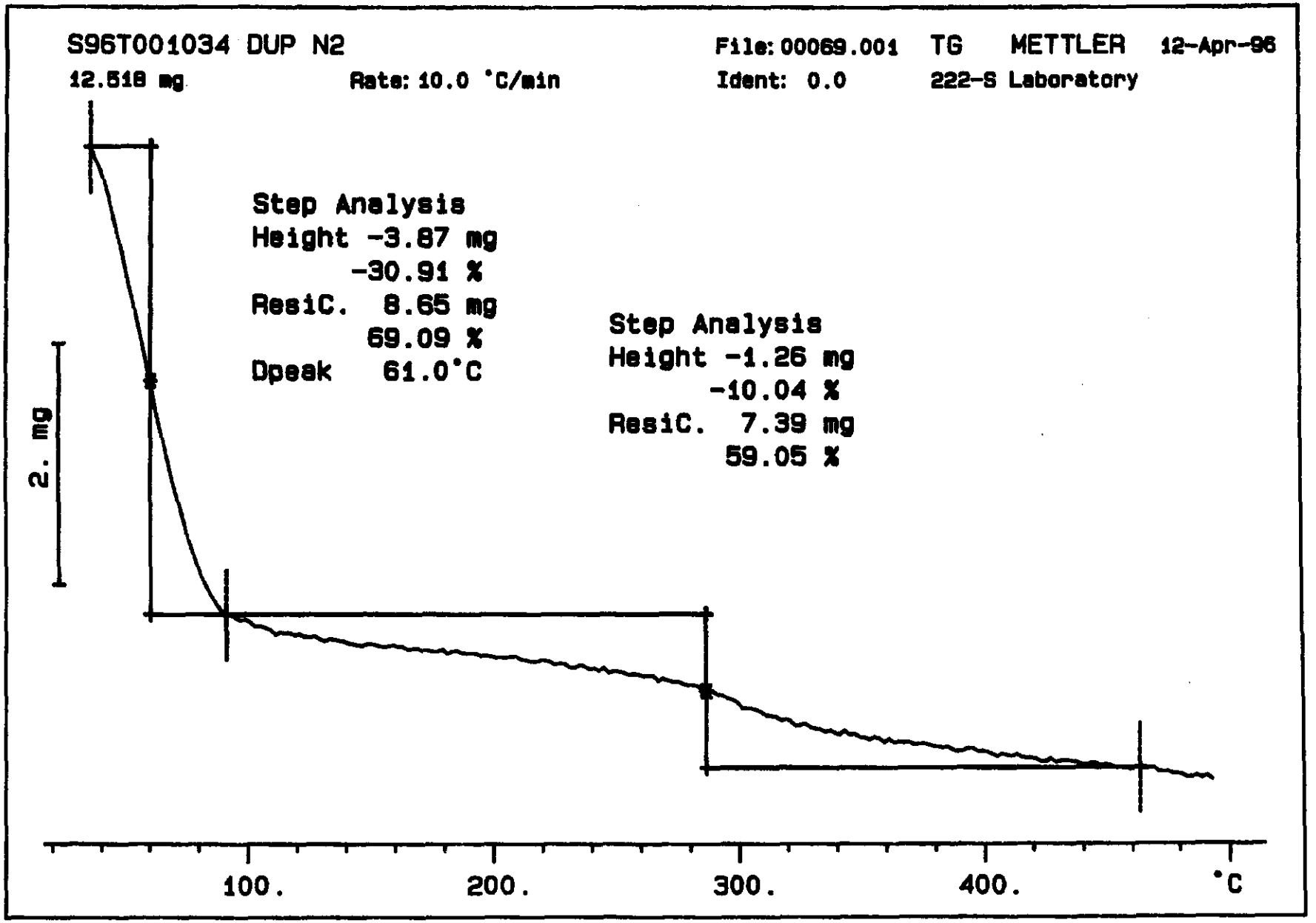


Rob King 4/12/96



Rob King 4/12/96

342



Rob Kim 4/12/96

worklistrpt Version 2.1 05/15/95
04/10/96 12:43

LABCORE Data Entry Template for Worklist# 7565

Analyst: EAL **Instrument:** TGA0 **Book #** 75NBA

Method: LA-560-112 Rev/Mod B·1

Worklist Comment: C-106 GRAB. Run undet nitrogen. new

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	STD				TGA-01	SOLID	59.2	60.57	N/A	%
96000174	C-106 GRAB	2	SAMPLE	S96T001676	0		TGA-01	SOLID	N/A	~~47.70~~ 40.05		% GMF 4/12/96
96000174	C-106 GRAB	3	DUP	S96T001676	0		TGA-01	SOLID	~~47.70~~ 40.95 GMF 4/12/96	~~46.67~~ 39.47	N/A	% GMF 4/12/96

Final page for worklist # 7565

A Lambel 04·10·96
Analyst Signature **Date**

Analyst Signature **Date**

There is a second weight loss steps of 7.64% + 7.09% in the dup.

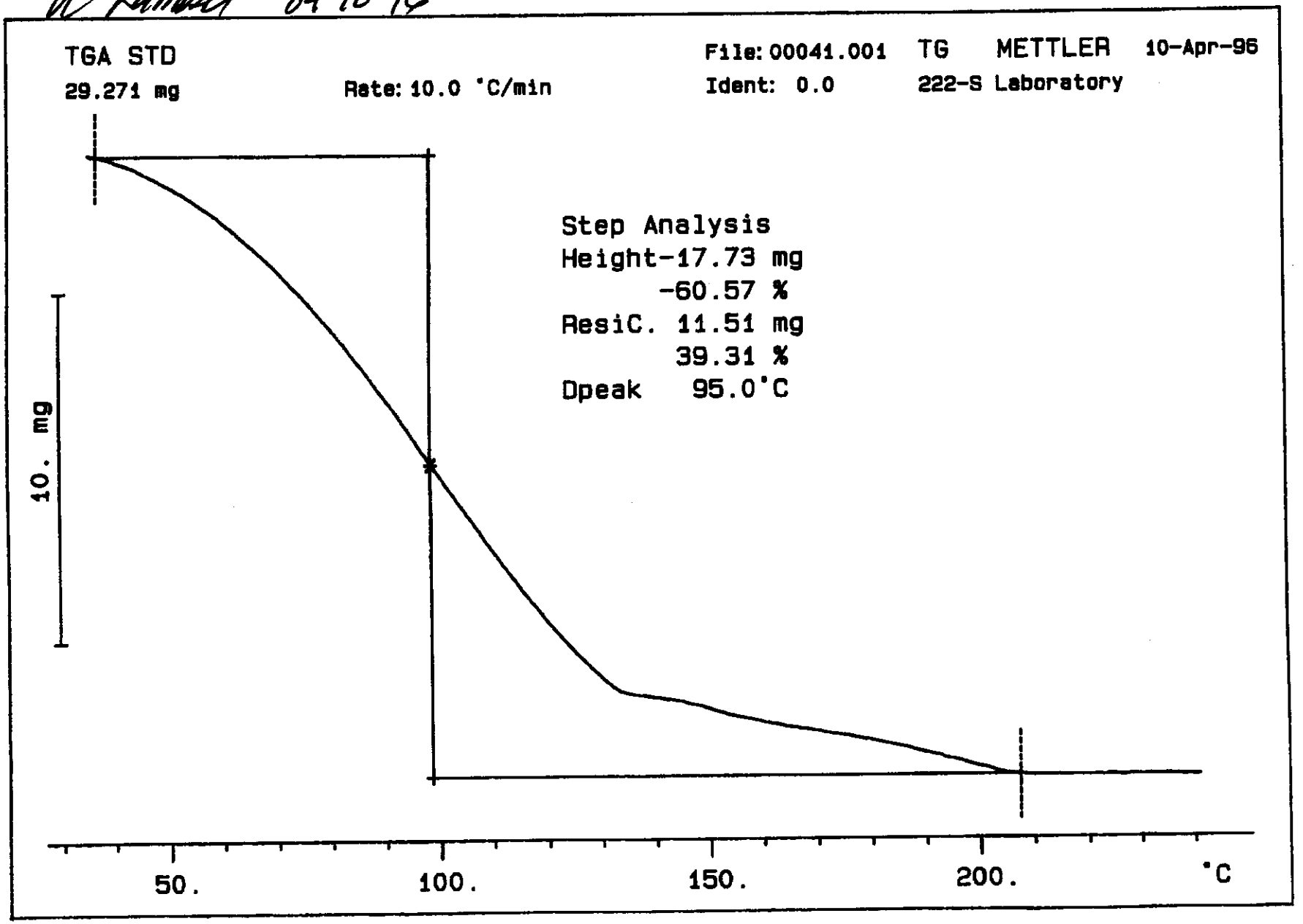
Entered + Reviewed 4/12/96 J M Leyer

Data Entry Comments:

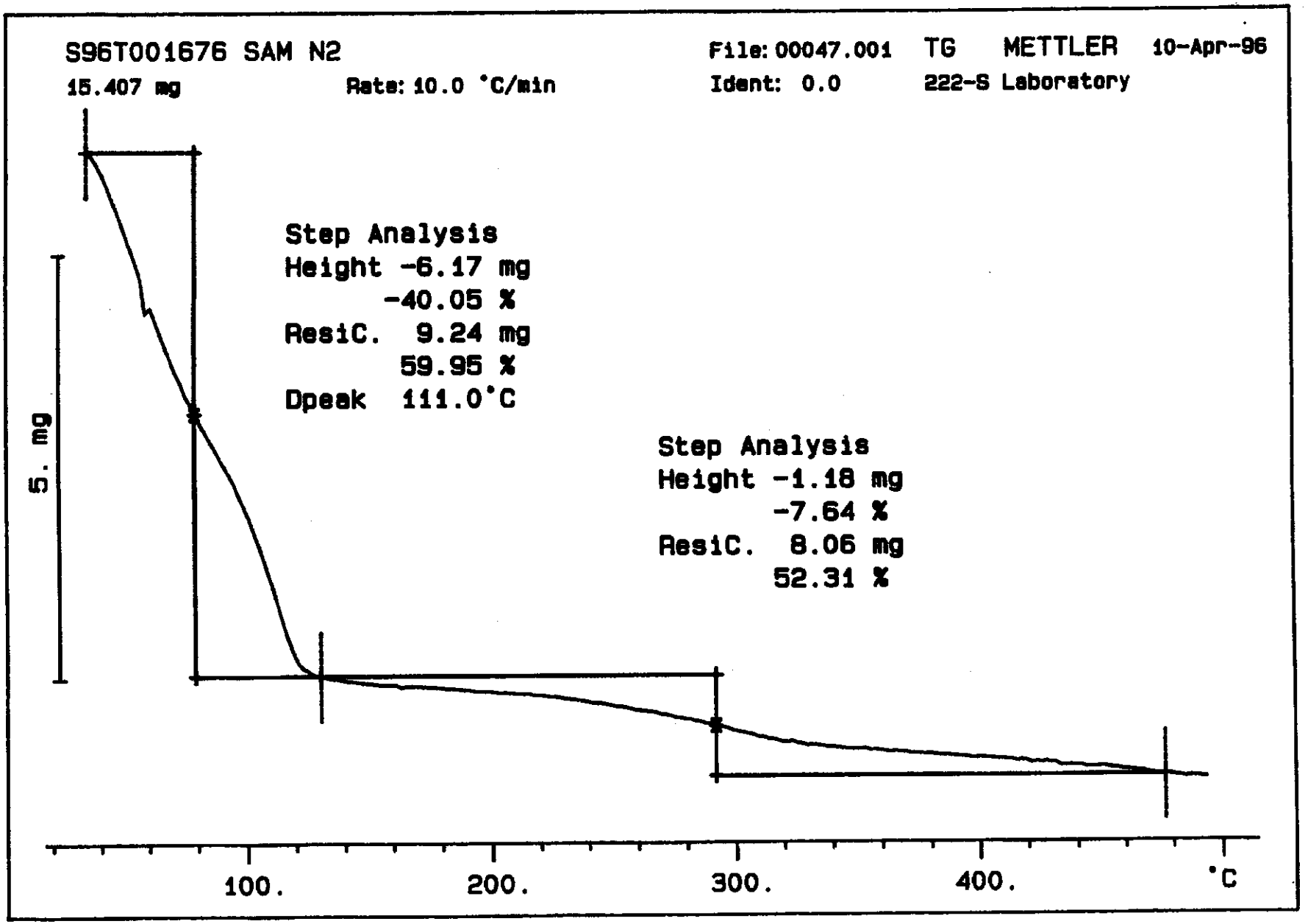
Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

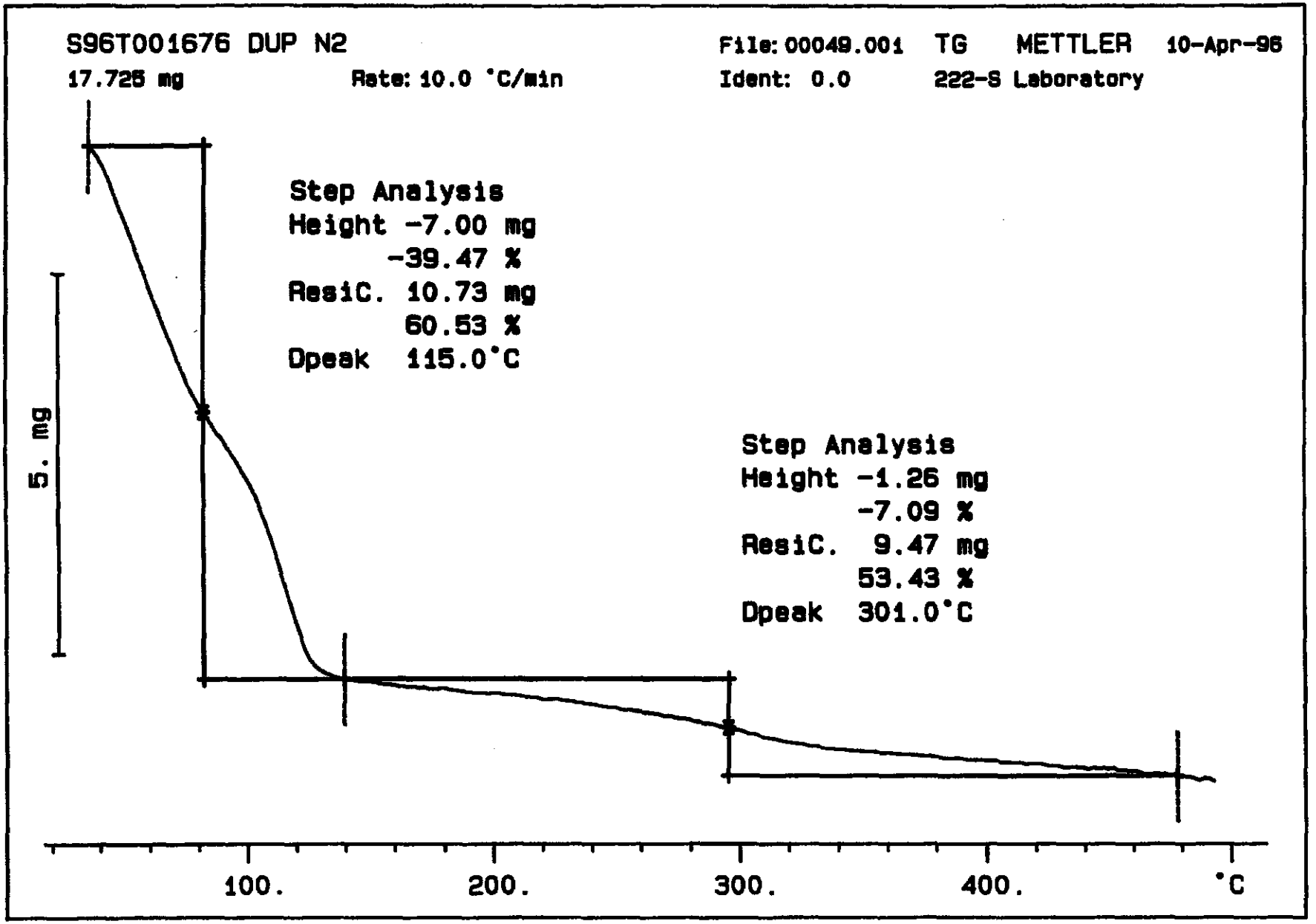
SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 345 TO 347.

G Lambel 04-10-96



04/16/96 14:36 ☎509 372 2929 WESTINGHOUSE →→→ MO-924 200W 057


S96T001676 SAM N2
15.407 mg
Rate: 10.0 °C/min
File: 00047.001
Ident: 0.0
TG
METTLER
10-Apr-96
222-S Laboratory
Step Analysis
Height -6.17 mg
-40.05 %
ResiC. 9.24 mg
59.95 %
Dpeak 111.0°C
Step Analysis
Height -1.18 mg
-7.64 %
ResiC. 8.06 mg
52.31 %
5. mg
100.
200.
300.
400.
°C


S96T001676 DUP N2
17.725 mg
Rate: 10.0 °C/min
File: 00049.001 TG METTLER 10-Apr-96
Ident: 0.0 222-S Laboratory
Step Analysis
Height -7.00 mg
-39.47 %
ResiC. 10.73 mg
60.53 %
Dpeak 115.0°C
Step Analysis
Height -1.26 mg
-7.09 %
ResiC. 9.47 mg
53.43 %
Dpeak 301.0°C
5. mg
100.
200.
300.
400.
°C

LABCORE Data Entry Template for Worklist# 7774

Analyst: SMF **Instrument:** TGA0 3 **Book #** 82N8A

Method: LA-514-114 Rev/Mod C-1

Worklist Comment: C-106. Run TGA under nitrogen. new

GROUP	PROJECT	S TYPE	SAMPLE#	R	A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD				TGA-03	SOLID	~~58.1~~ 59.2 5/8/96	58.42	N/A	%
96000082	C-106 GRAB	2 SAMPLE	S96T000542	0		TGA-03	SOLID	N/A	8.04		%
96000082	C-106 GRAB	3 DUP	S96T000542	0		TGA-03	SOLID	8.04	8.51	N/A	%
96000082	C-106 GRAB	4 SAMPLE	S96T000558	0		TGA-03	SOLID	N/A	11.71		%
96000082	C-106 GRAB	5 DUP	S96T000558	0		TGA-03	SOLID	11.71	14.0	N/A	%

Final page for worklist # 7774

See attached for signatures
Analyst Signature **Date** 5/8/96

Gary Hammond 5-8-96
Analyst Signature **Date**

Validated by SAnastos 5-10-96

S96T000542 produced a second weight loss step of 11.17%

Data Entry Comments: S96T000558 produced a second weight loss step of 14.862

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

LABCORE Data Entry Template for Worklist# 7774

Analyst: SMF **Instrument:** TGA0 _____ **Book #** 82N8A

Method: LA-560-112 Rev/Mod _____

Worklist Comment: C-106. Run TGA under nitrogen. new

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	-------TEST------	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	STD				TGA-01	SOLID			N/A	%
96000082	C-106 GRAB	2	SAMPLE	S96T000542	0		TGA-01	SOLID	N/A			%
96000082	C-106 GRAB	3	DUP	S96T000542	0		TGA-01	SOLID			N/A	%
96000082	C-106 GRAB	4	SAMPLE	S96T000558	0		TGA-01	SOLID	N/A			%
96000082	C-106 GRAB	5	DUP	S96T000558	0		TGA-01	SOLID			N/A	%

Final page for worklist # 7774

S M Fulton 4-29-96
Analyst Signature **Date**

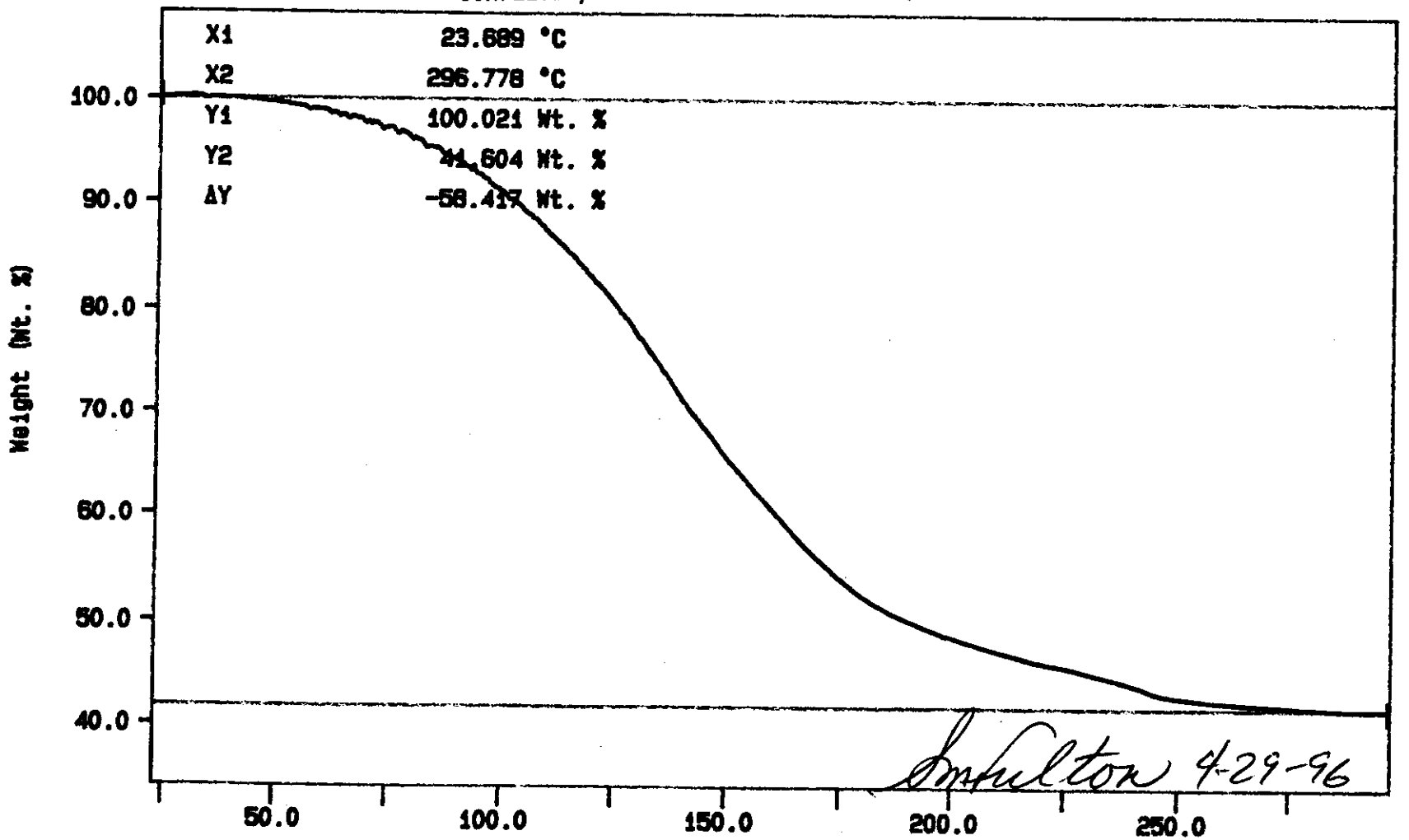
Analyst Signature **Date**

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

Curve 1: TGA
File info: TER042901 Mon Apr 29 10:36:22 1996
Sample Weight: 21.042 mg
TGA STD 82N8-A

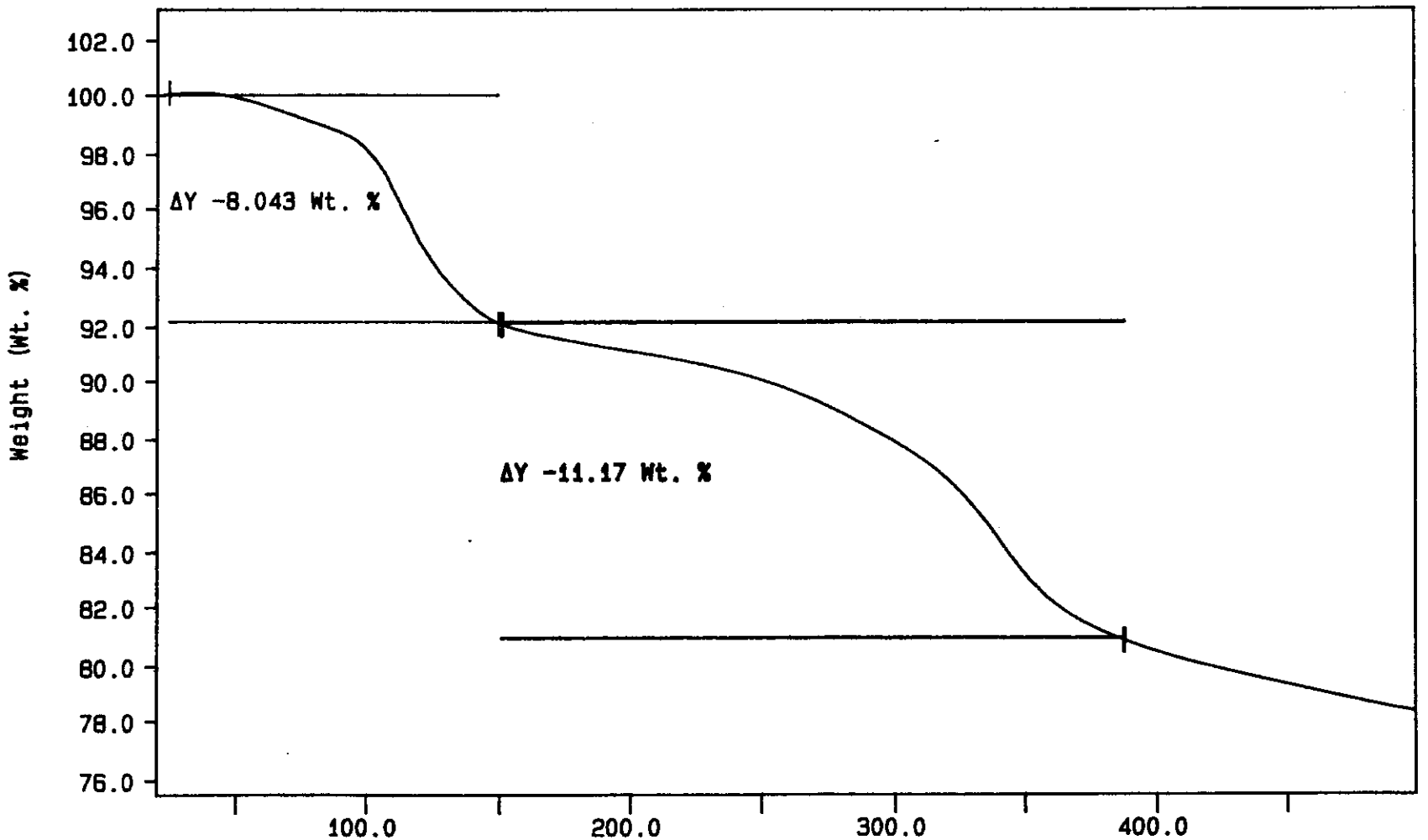
SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 350 TO 354.



N2 10C/MIN
TEMP1: 35.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 300.0 C

PJ MCCOWN
PERKIN-ELMER
7 Series Thermal Analysis System
Mon Apr 29 10:52:24 1996

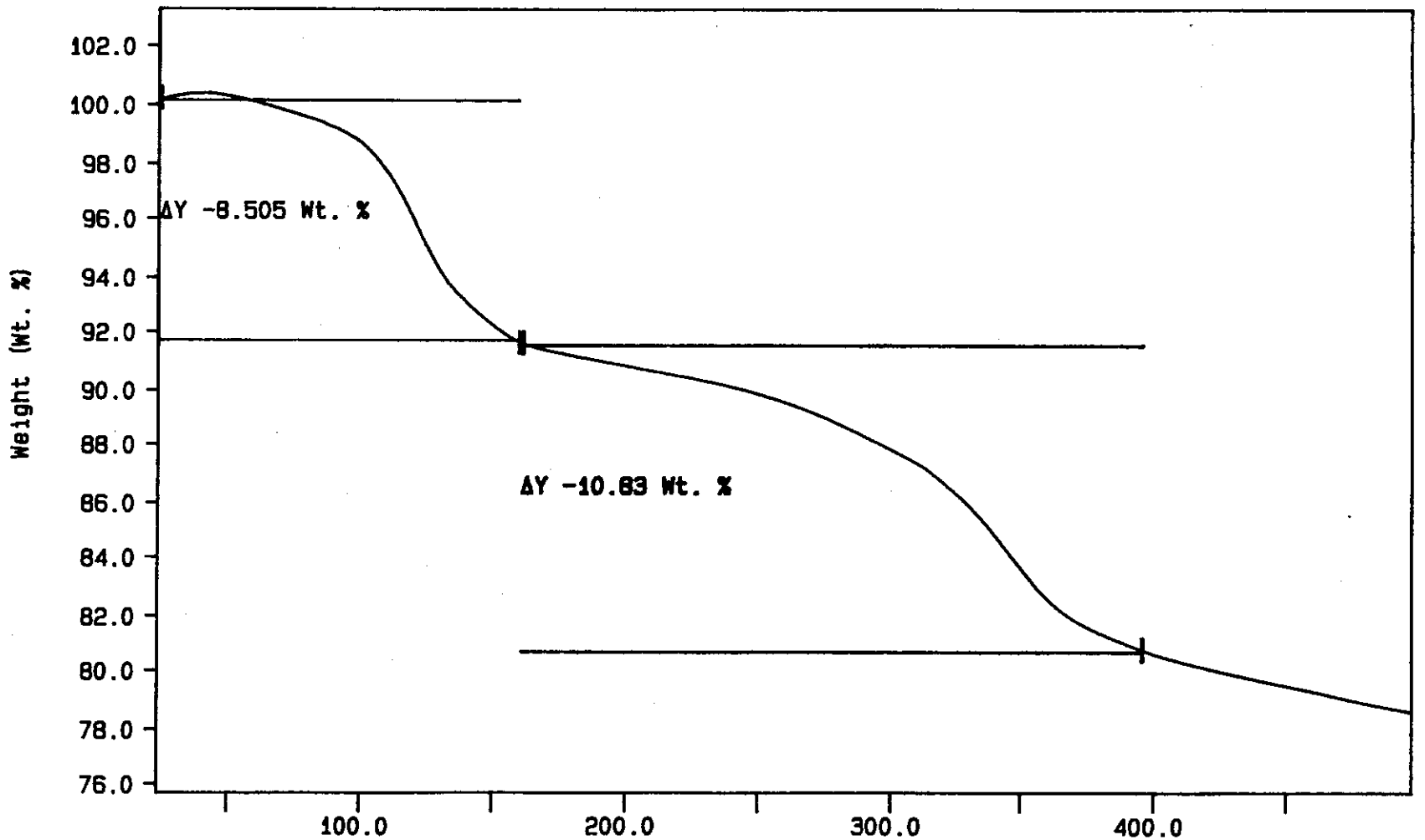
Curve 1: TGA
File info: SAM042901 Mon Apr 29 19:21:16 1996
Sample Weight: 9.976 mg
S96T000542



10C/MIN N2
TEMP1: 35.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 500.0 C

SM FULTON
PERKIN-ELMER
7 Series Thermal Analysis System
Mon Apr 29 20:58:01 1996

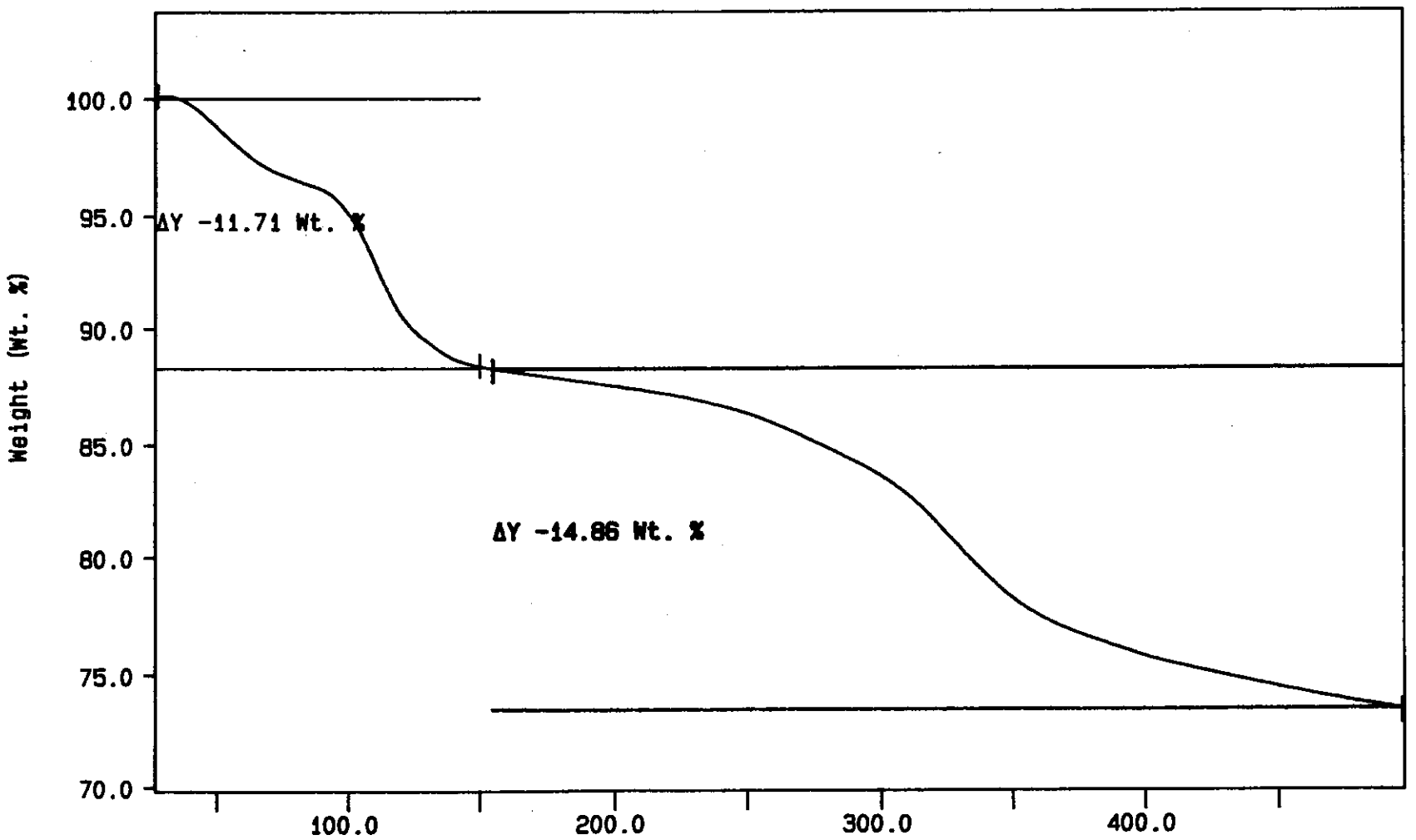
Curve 1: TGA
File info: SAM042902 Mon Apr 29 21:25:18 1996
Sample Weight: 17.229 mg
S96T000542 DUP



10C/MIN N2
TEMP1: 35.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 500.0 C

SM FULTON
PERKIN-ELMER
7 Series Thermal Analysis System
Mon Apr 29 21:36:41 1996

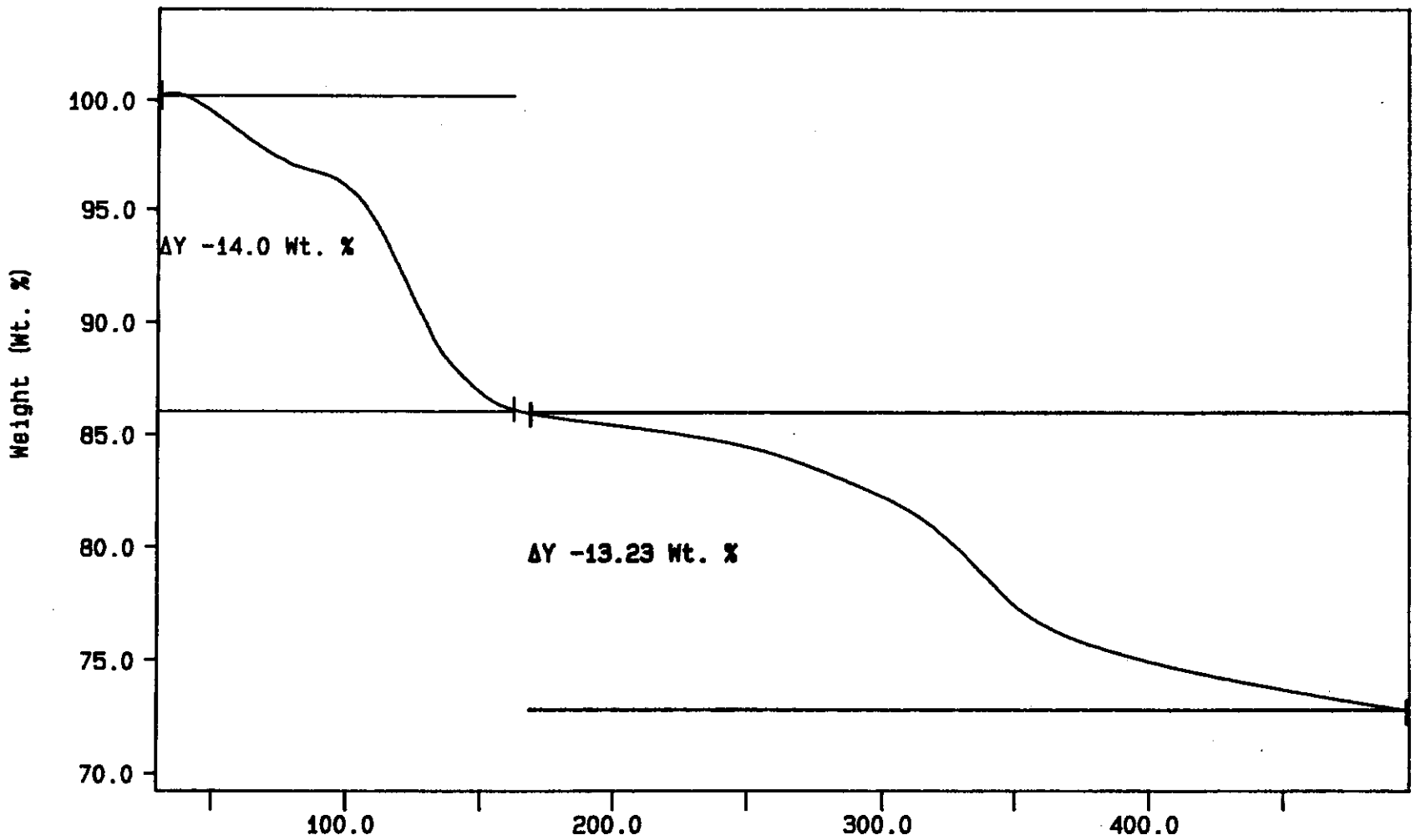
Curve 1: TGA
File info: SAM042903 Mon Apr 29 22:35:09 1996
Sample Weight: 4.952 mg
S96T000558



10C/MIN N2
TEMP1: 35.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 500.0 C

SM FULTON
PERKIN-ELMER
7 Series Thermal Analysis System
Mon Apr 29 22:37:29 1996

Curve 1: TGA
File info: SAM042904 Tue Apr 30 01:26:21 1996
Sample Weight: 7.824 mg
S96T000558 DUP



10C/MIN N2
TEMP1: 35.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 500.0 C

SM FULTON
PERKIN-ELMER
7 Series Thermal Analysis System
Tue Apr 30 01:29:49 1996

LABCORE Data Entry Template for Worklist# 7775

Analyst: RNK **Instrument:** TGA0 3 **Book #** 82N8A

Method: LA-514-114 Rev/Mod C-1

Worklist Comment: C-106. Run TGA under nitrogen. new

GROUP	PROJECT	S TYPE	SAMPLE#	R	A	-------TEST------	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD				TGA-03	SOLID	59.2	58.70*	N/A	%
96000174	C-106 GRAB	2 SAMPLE	S96T001030	0		TGA-03	SOLID	N/A	9.24		%
96000174	C-106 GRAB	3 DUP	S96T001030	0		TGA-03	SOLID	9.24	9.48	N/A	%

Final page for worklist # 7775

See attached for signatures
Analyst Signature **Date** 5/8/96

Heather Anastos 5-15-96
Analyst Signature **Date**

Validated by H Anastos 5-15-96

Data Entry Comments: Sample produced two additional weight loss one of 6.61% and 3.80%

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

LABCORE Data Entry Template for Worklist# 7775

Analyst: NK **Instrument:** TGA0 _____ **Book #** 8288-A

Method: LA-560-112 Rev/Mod C-1

Worklist Comment: C-106. Run TGA under nitrogen. new

GROUP	PROJECT	S TYPE	SAMPLE#	R	A	-------TEST------	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD				TGA-01	SOLID			N/A	%
96000174	C-106 GRAB	2 SAMPLE	S96T001030	0		TGA-01	SOLID	N/A			%
96000174	C-106 GRAB	3 DUP	S96T001030	0		TGA-01	SOLID			N/A	%

Final page for worklist # 7775

Rob King 5/4/96
Analyst Signature **Date**

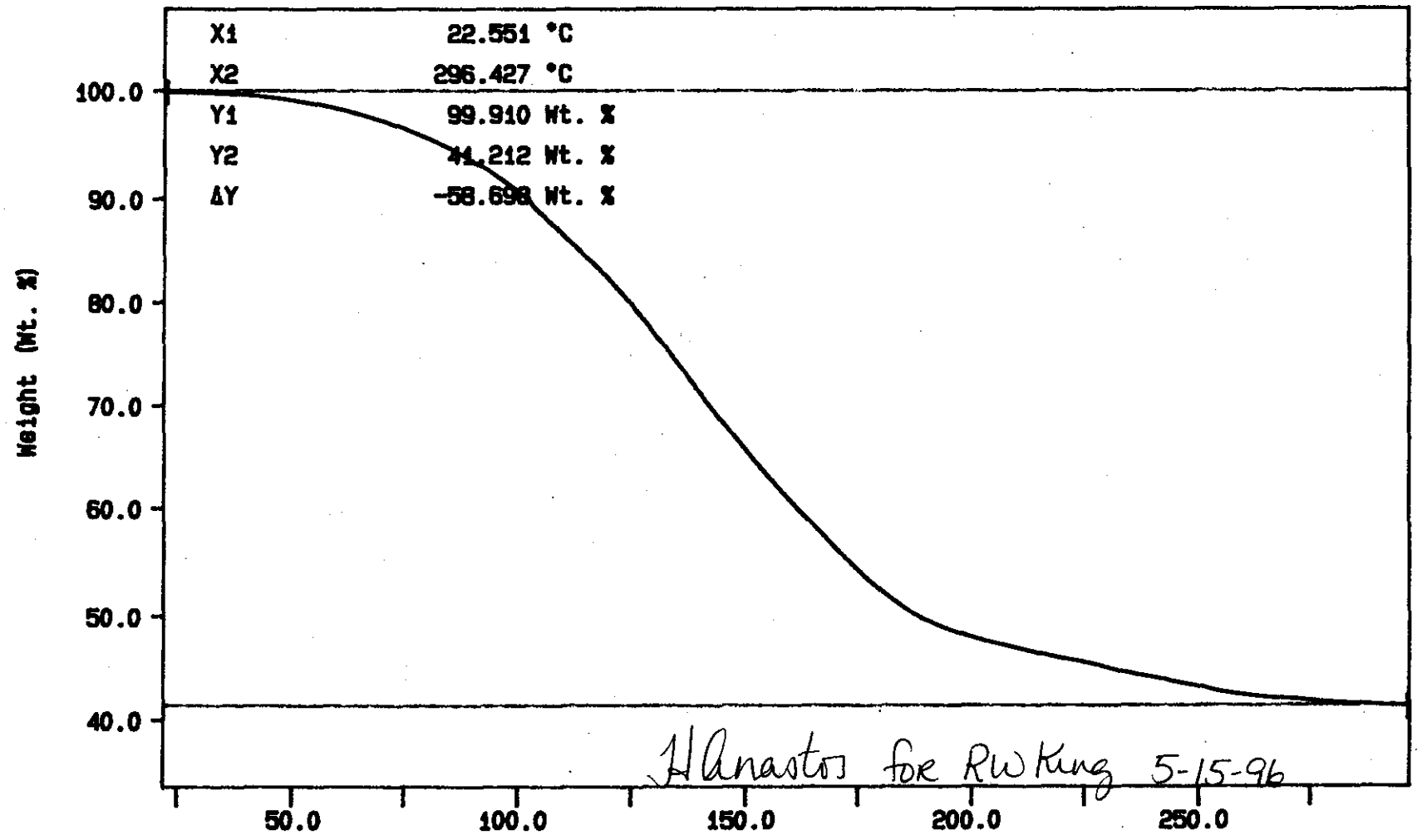
Analyst Signature **Date**

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

Curve 1: TGA
File info: TER050403 Sat May 4 21:07:13 1996
Sample Weight: 23.139 mg
TGA STD 82N8-A

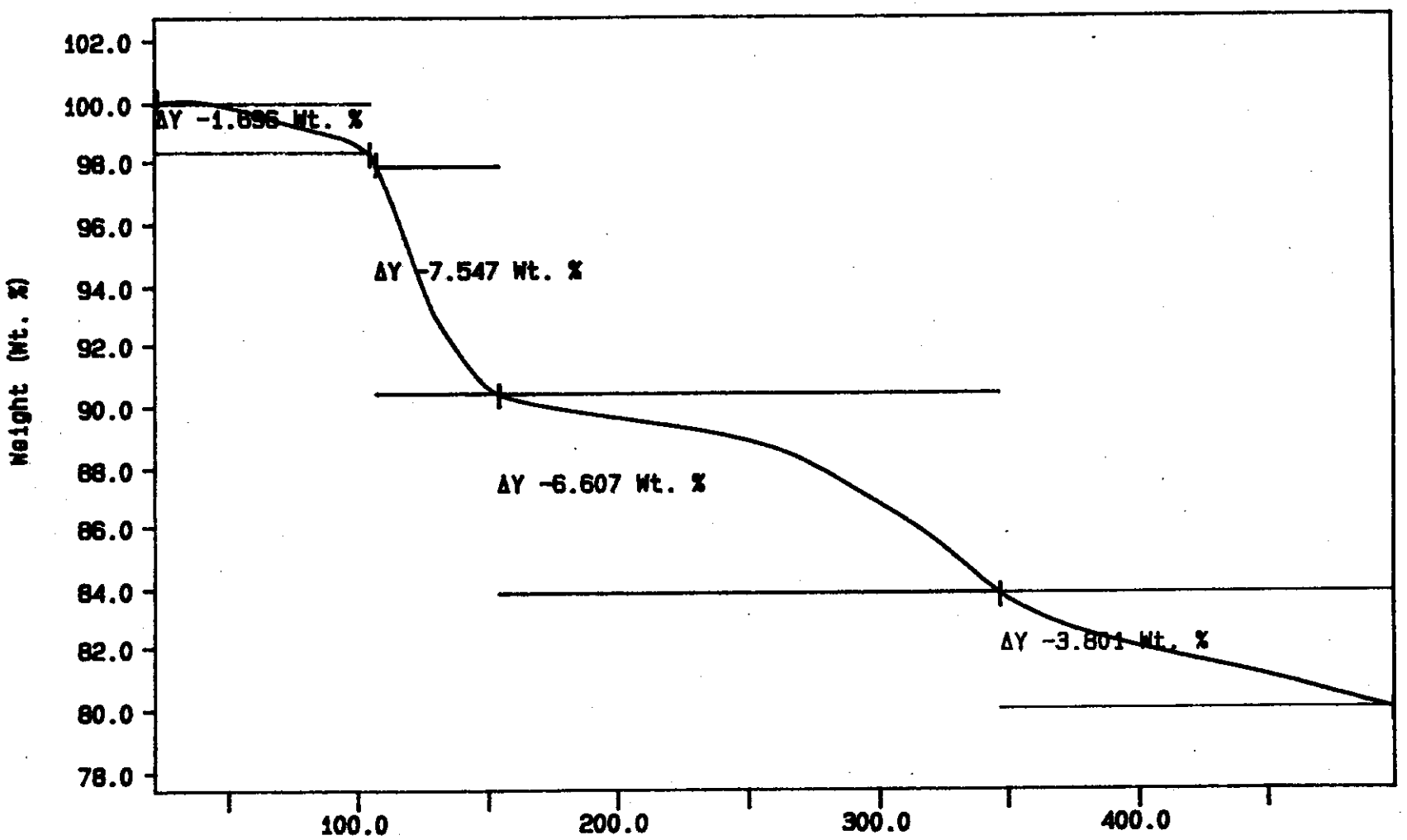
SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 357 TO 359.



N2 10C/MIN
TEMP1: 35.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 300.0 C

RW KING
PERKIN-ELMER
7 Series Thermal Analysis System
Sat May 4 21:09:19 1996

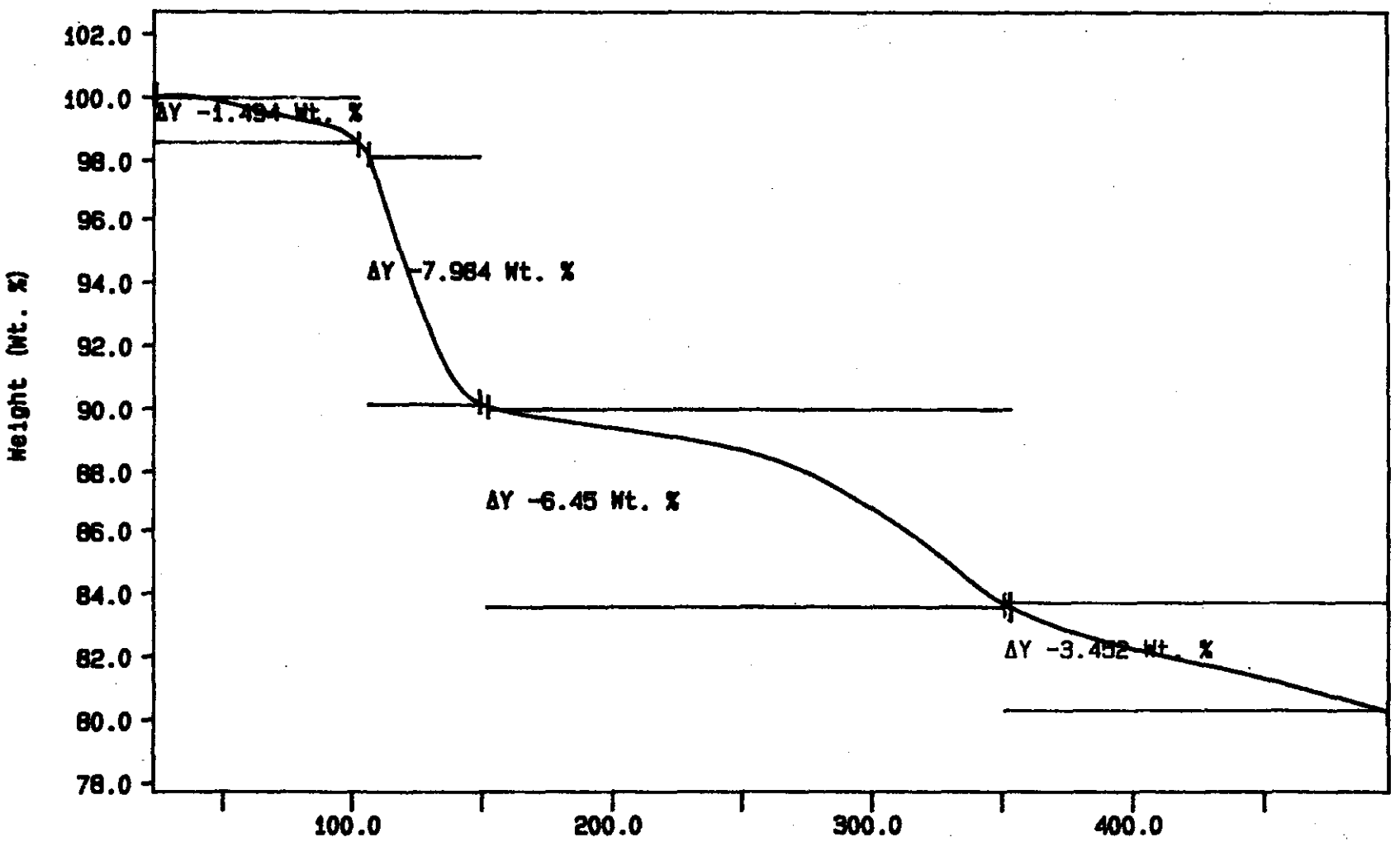
Curve 1: TGA
File info: SAM050405 Sat May 4 22:20:26 1996
Sample Weight: 10.246 mg
S96T001030



10C/MIN N2
TEMP1: 35.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 500.0 C

RW KING
PERKIN-ELMER
7 Series Thermal Analysis System
Sat May 4 22:25:37 1996

Curve 1: TGA
File info: SAM050406 Sat May 4 23:32:24 1996
Sample Weight: 6.666 mg
S96T001030 DUP



10C/MIN N2
TEMP1: 35.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 600.0 C

RW KING
PERKIN-ELMER
7 Series Thermal Analysis System
Sun May 5 00:43:51 1996

LABCORE Data Entry Template for Worklist# 7907

Analyst: RK **Instrument:** TGA0 1 **Book #** 8278-A

Method: LA-560-112 Rev/Mod B-1

Worklist Comment: C-106 for tga please run under N2 RTS!

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	STD				TGA-01	SOLID	59.2	59.16*	N/A	%
96000082	C-106 GRAB	2	SAMPLE	S96T002021	0		TGA-01	SOLID	N/A	59.60		%
96000082	C-106 GRAB	3	DUP	S96T002021	0		TGA-01	SOLID	59.60	46.16	N/A	%
96000174	C-106 GRAB	4	SAMPLE	S96T001674	0		TGA-01	SOLID	N/A	9.63		%
96000174	C-106 GRAB	5	DUP	S96T001674	0		TGA-01	SOLID	9.63	8.43	N/A	%

Final page for worklist # 7907

Nob Kim 5/5/96
Analyst Signature **Date**

[signature] 5-8-96
Analyst Signature **Date**

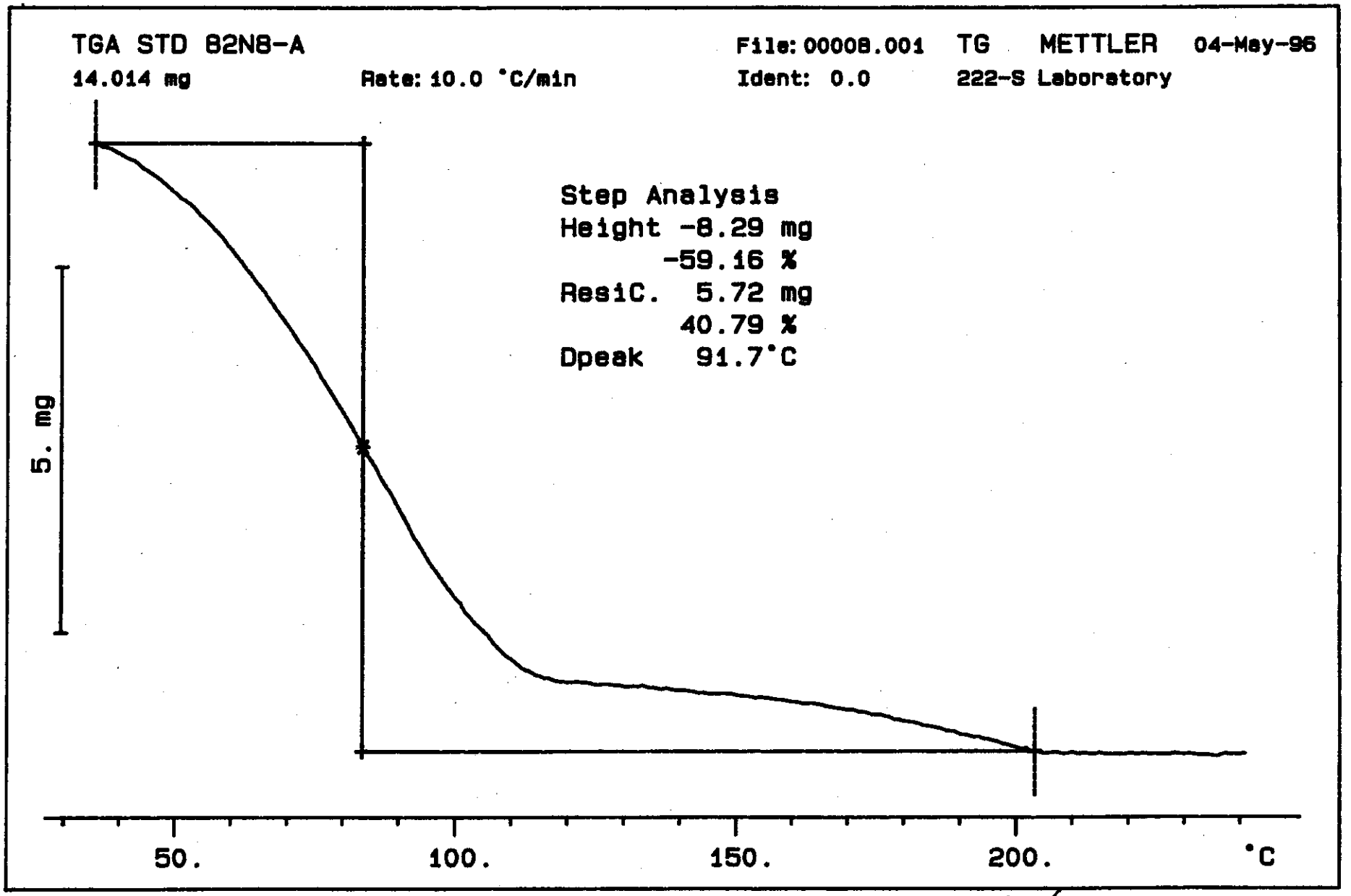
Validated by H Anastos 5-8-96

S96T002021 produced a second weight loss step of 10.86% however the chemist questioned whether it was due to % moisture.

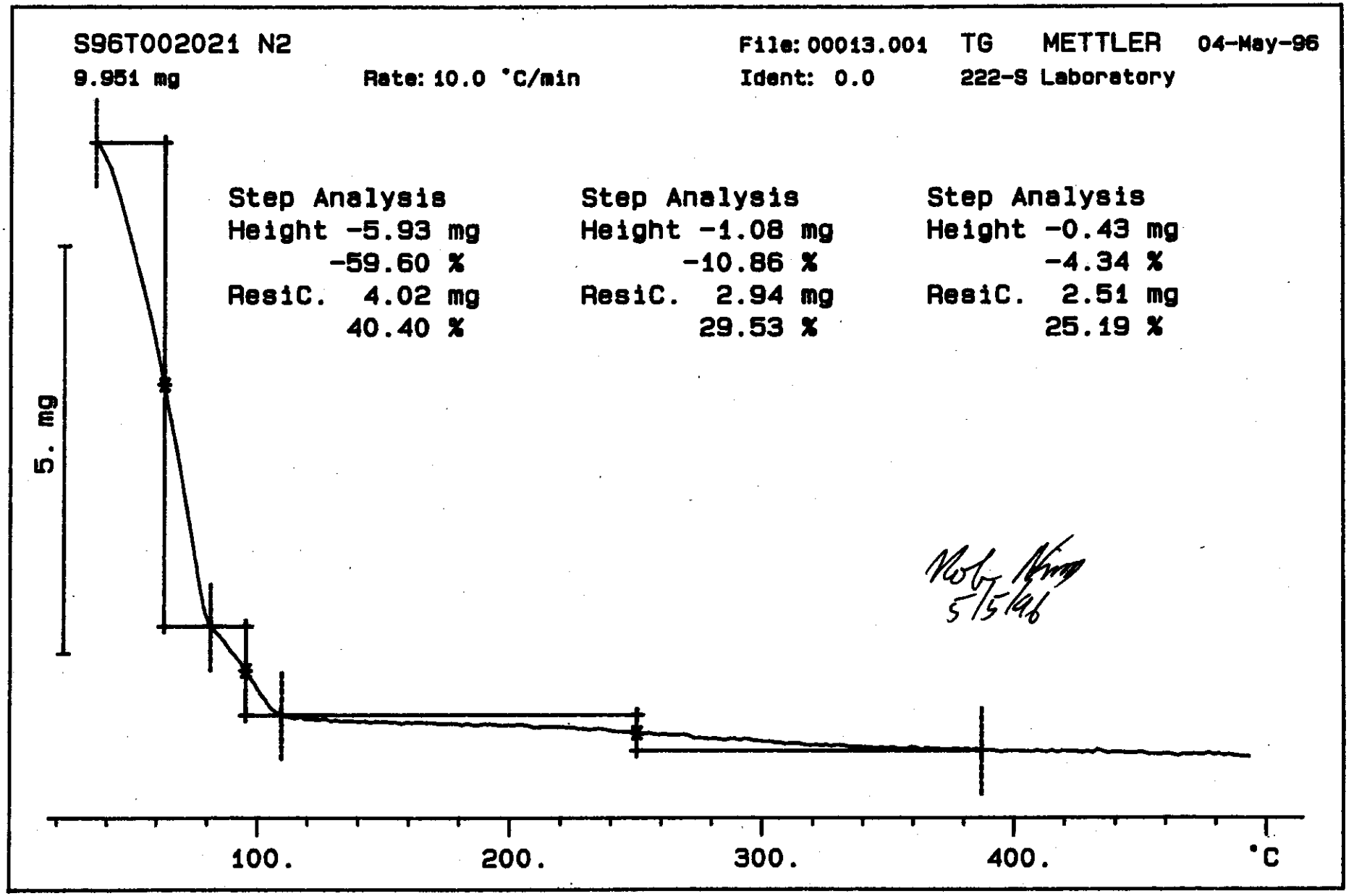
Data Entry Comments: S96T001674 produced a second and a third weight loss steps totaling 14.29%. The vibrations on the thermogram is due to vibrations of the lab. 5/7/96

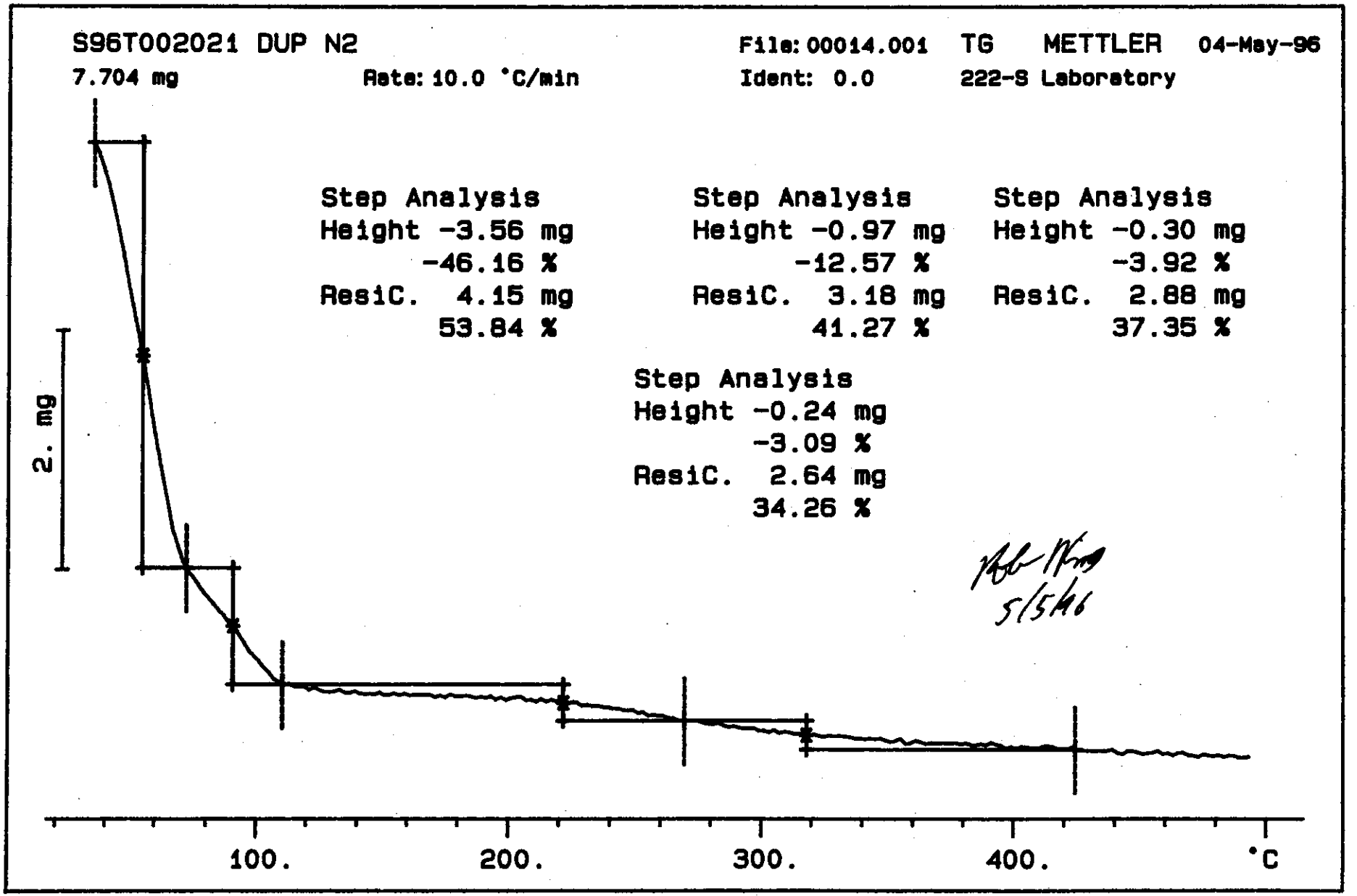
Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

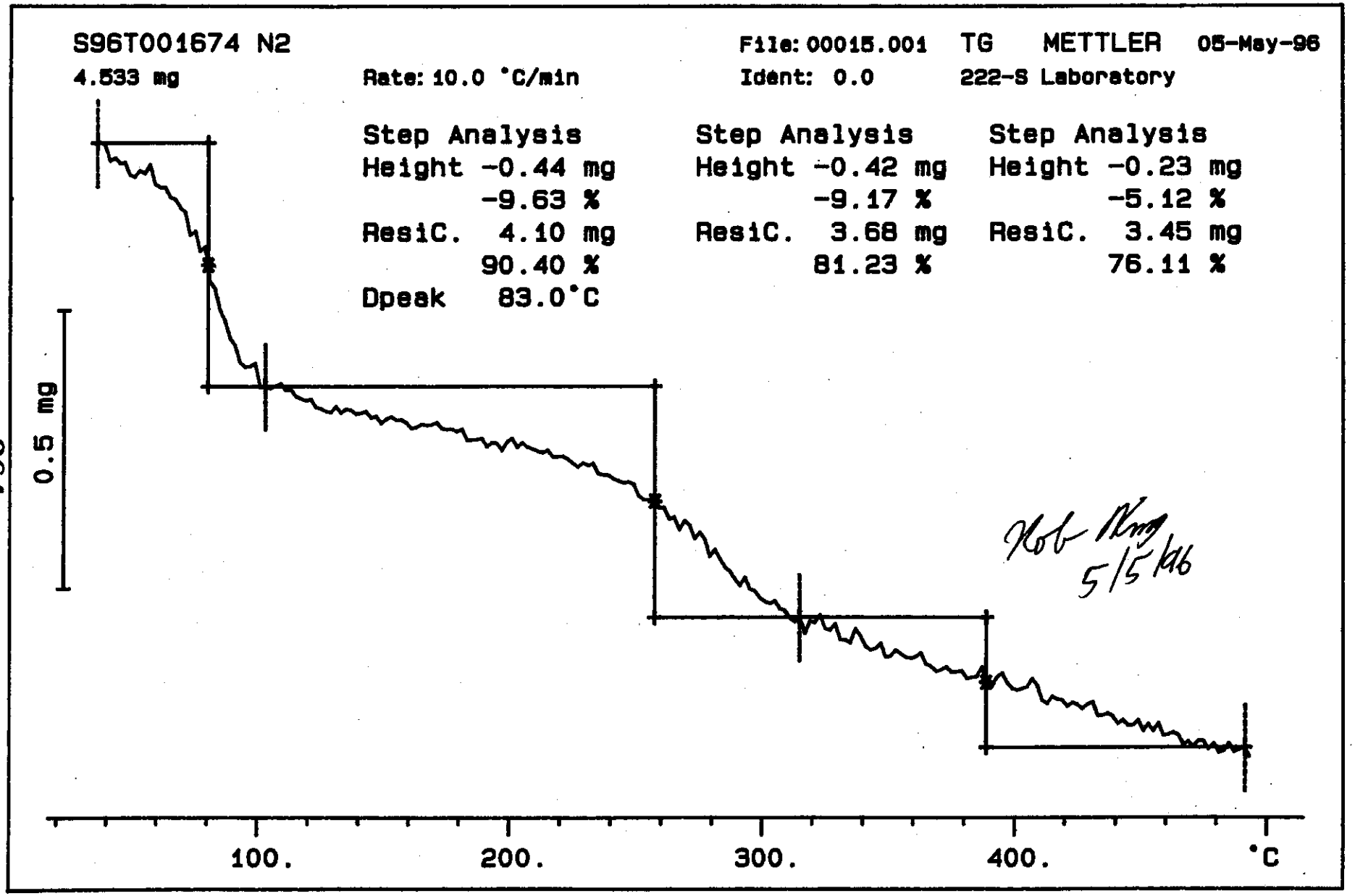
SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 361 TO 365.

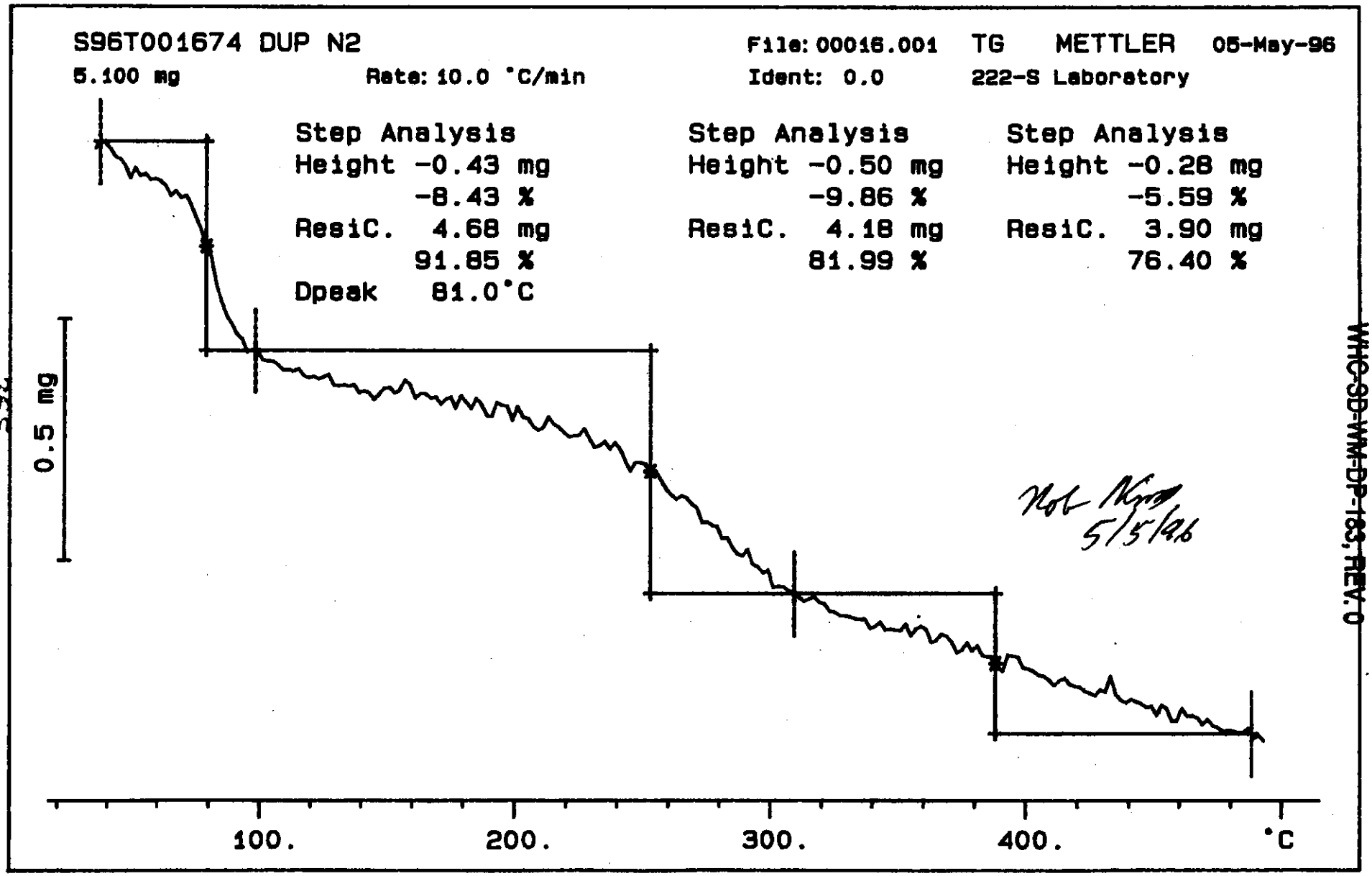


Rob King 5/5/96


S96T002021 N2
9.951 mg
Rate: 10.0 °C/min
File: 00013.001
Ident: 0.0
TG
METTLER
04-May-96
222-S Laboratory
Step Analysis
Height -5.93 mg
-59.60 %
ResiC. 4.02 mg
40.40 %
Step Analysis
Height -1.08 mg
-10.86 %
ResiC. 2.94 mg
29.53 %
Step Analysis
Height -0.43 mg
-4.34 %
ResiC. 2.51 mg
25.19 %
5 mg
100.
200.
300.
400.
°C
5/5/96


S96T002021 DUP N2
7.704 mg
Rate: 10.0 °C/min
File: 00014.001
TG METTLER 04-May-96
Ident: 0.0
222-S Laboratory
Step Analysis
Height -3.56 mg
-46.16 %
ResiC. 4.15 mg
53.84 %
Step Analysis
Height -0.97 mg
-12.57 %
ResiC. 3.18 mg
41.27 %
Step Analysis
Height -0.30 mg
-3.92 %
ResiC. 2.88 mg
37.35 %
Step Analysis
Height -0.24 mg
-3.09 %
ResiC. 2.64 mg
34.26 %
2. mg
100.
200.
300.
400.
°C
5/5/96


S96T001674 N2
4.533 mg
Rate: 10.0 °C/min
File: 00015.001
Ident: 0.0
TG
METTLER
05-May-96
222-S Laboratory
Step Analysis
Height -0.44 mg
-9.63 %
ResiC. 4.10 mg
90.40 %
Dpeak 83.0°C
Step Analysis
Height -0.42 mg
-9.17 %
ResiC. 3.68 mg
81.23 %
Step Analysis
Height -0.23 mg
-5.12 %
ResiC. 3.45 mg
76.11 %
0.5 mg
100.
200.
300.
400.
°C
5/15/96



365

WHC-SD-WM-DP-183, REV.0

LABCORE Data Entry Template for Worklist# 7909

Analyst: RDM **Instrument:** TGA0 1 **Book #** 82N8A

Method: LA-560-112 Rev/Mod B-1

Worklist Comment: C-106 for tga-01 please run under N2 RTS!

GROUP	PROJECT	S TYPE	SAMPLE#	R	A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD				TGA-01	SOLID	59.2	58.7	N/A	%
96000082	C-106 GRAB	2 SAMPLE	S96T002042	0		TGA-01	SOLID	N/A	60.45		%
96000082	C-106 GRAB	3 DUP	S96T002042	0		TGA-01	SOLID	60.45	60.55	N/A	%

Final page for worklist # 7909

RDMeyer 4/20/96 — Analyst Signature, Date

Gary Johnson 4-29-96 — Analyst Signature, Date

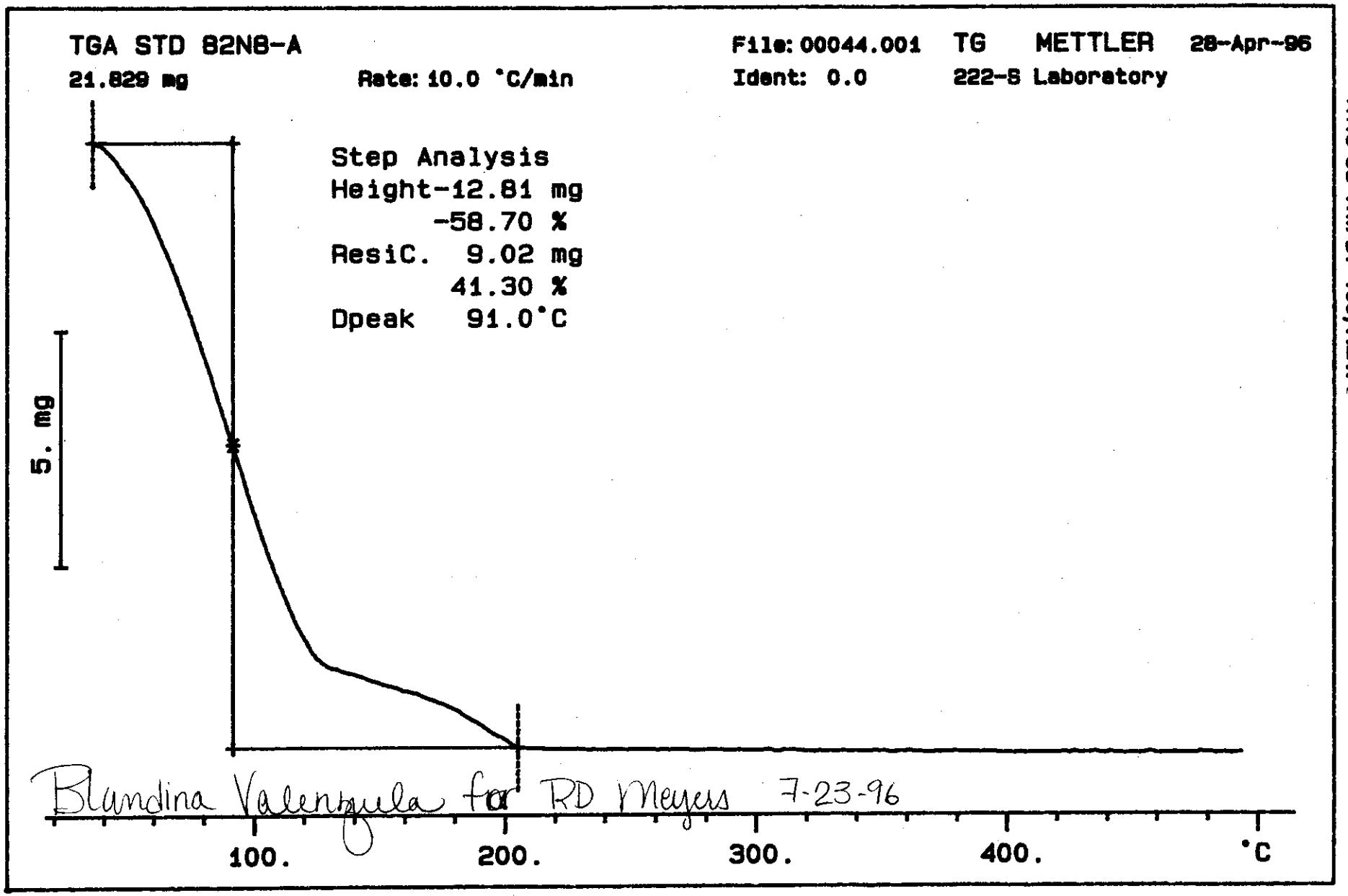
Verified by Blandina Valenzuela 4/30/96
Sample produced a second weight loss step of 5.27%

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

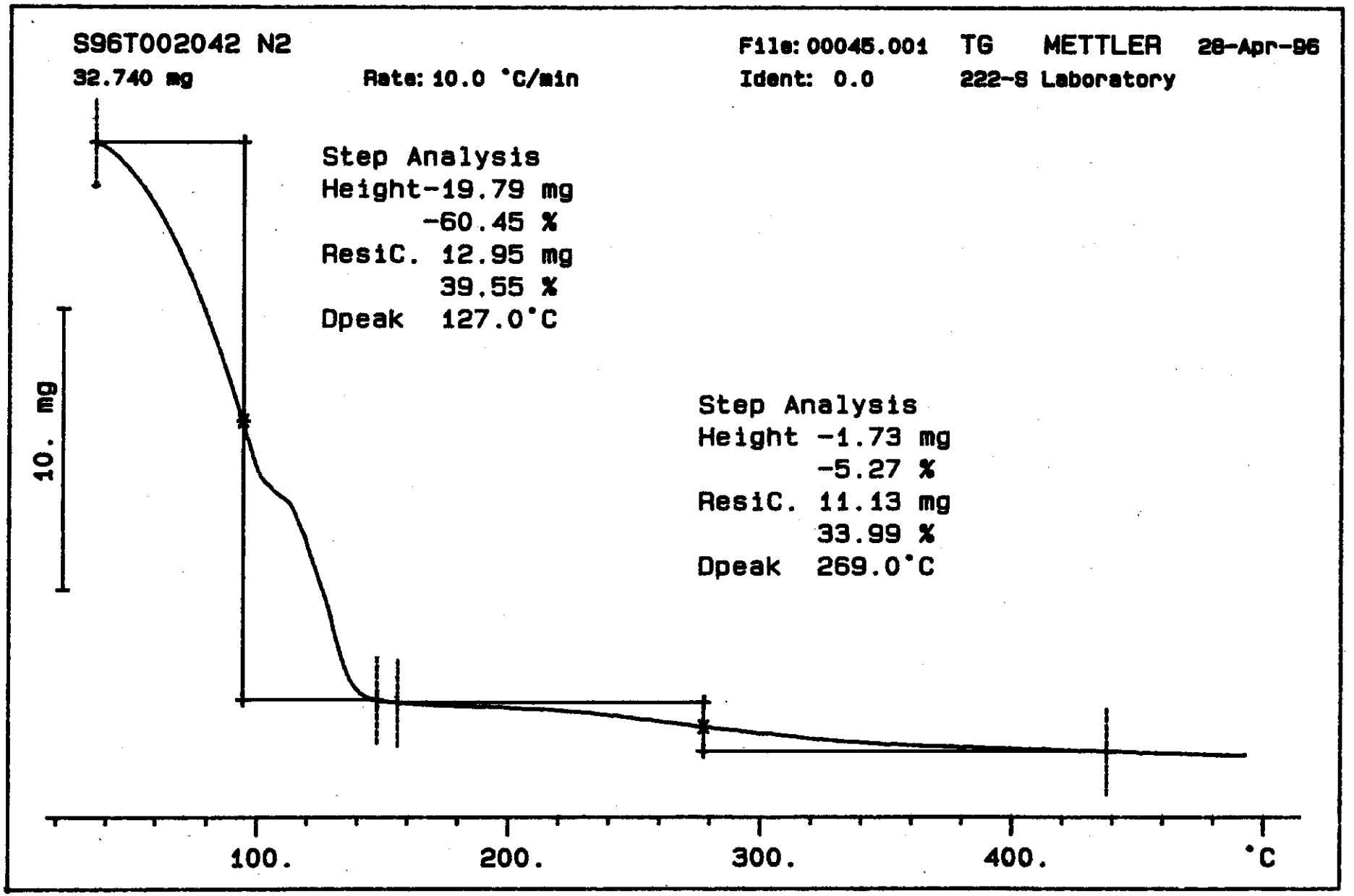
96-04-29-12:12/001-023 =-/ =-

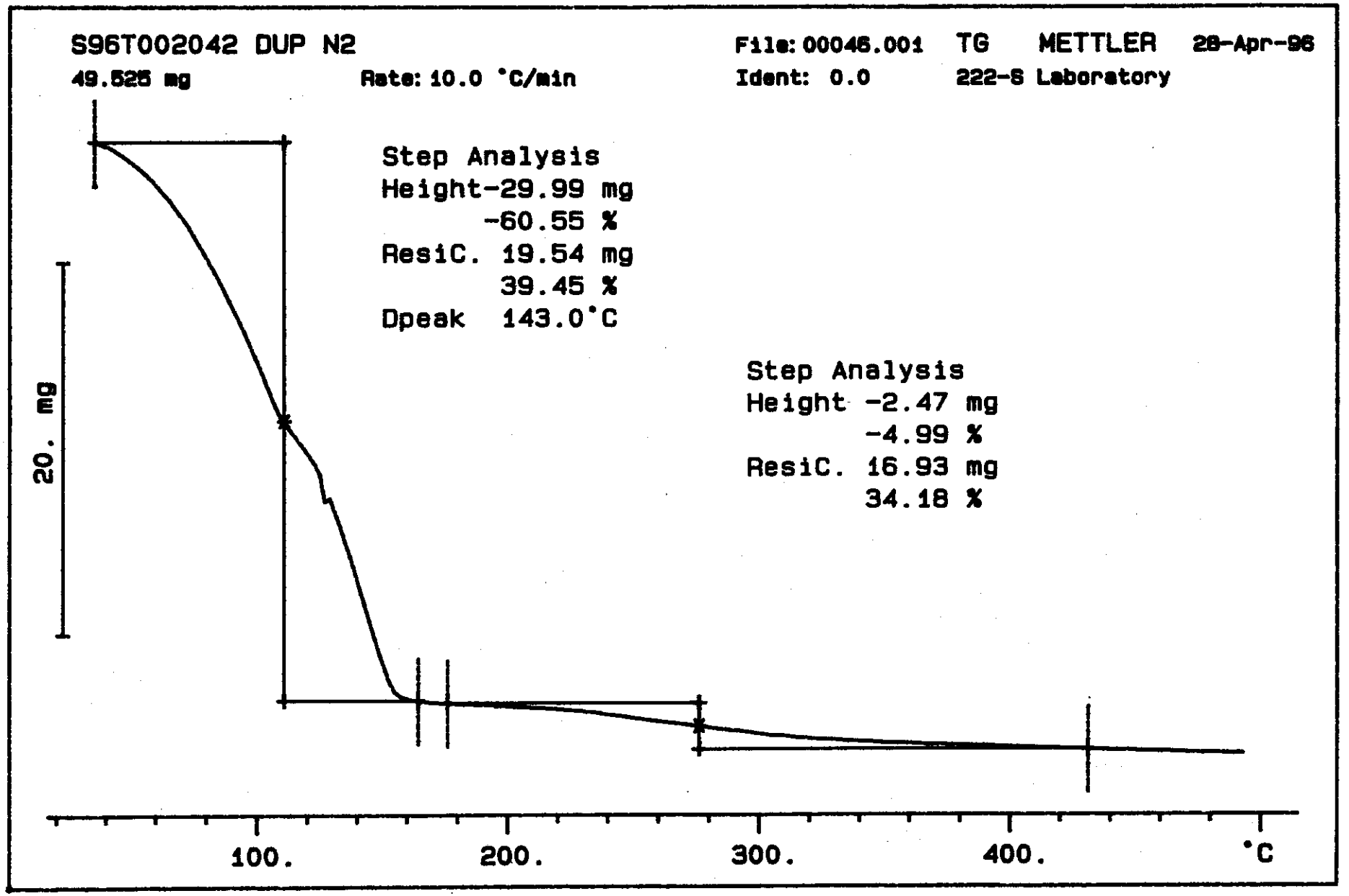
SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 367 TO 369.



Blandina Valenzuela for RD Meyers 7-23-96

/96-04-29-12:12/001-024


S96T002042 N2
32.740 mg
Rate: 10.0 °C/min
File: 00045.001
TG
METTLER
28-Apr-96
Ident: 0.0
222-S Laboratory
Step Analysis
Height -19.79 mg
-60.45 %
ResiC. 12.95 mg
39.55 %
Dpeak 127.0°C
Step Analysis
Height -1.73 mg
-5.27 %
ResiC. 11.13 mg
33.99 %
Dpeak 269.0°C
10. mg
100.
200.
300.
400.
°C


S96T002042 DUP N2
49.525 mg
Rate: 10.0 °C/min
File: 00046.001
TG
METTLER
28-Apr-96
Ident: 0.0
222-S Laboratory
Step Analysis
Height -29.99 mg
-60.55 %
ResiC. 19.54 mg
39.45 %
Dpeak 143.0°C
Step Analysis
Height -2.47 mg
-4.99 %
ResiC. 16.93 mg
34.18 %
20. mg
100.
200.
300.
400.
°C

LABCORE Data Entry Template for Worklist# 8124

Analyst: RK **Instrument:** TGA0 1 **Book #** 8278-A

Method: LA-560-112 Rev/Mod B-1

Worklist Comment: C-106 Grab. Run under Nitrogen. new

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	STD				TGA-01	LIQUID	59.2	59.24*	N/A	%
96000082	C-106 GRAB	2	SAMPLE	S96T001544	0		TGA-01	LIQUID	N/A	58.94		%
96000082	C-106 GRAB	3	DUP	S96T001544	0		TGA-01	LIQUID	58.94	57.09	N/A	%

Final page for worklist # 8124

Rob Kim 5/6/96
Analyst Signature **Date**

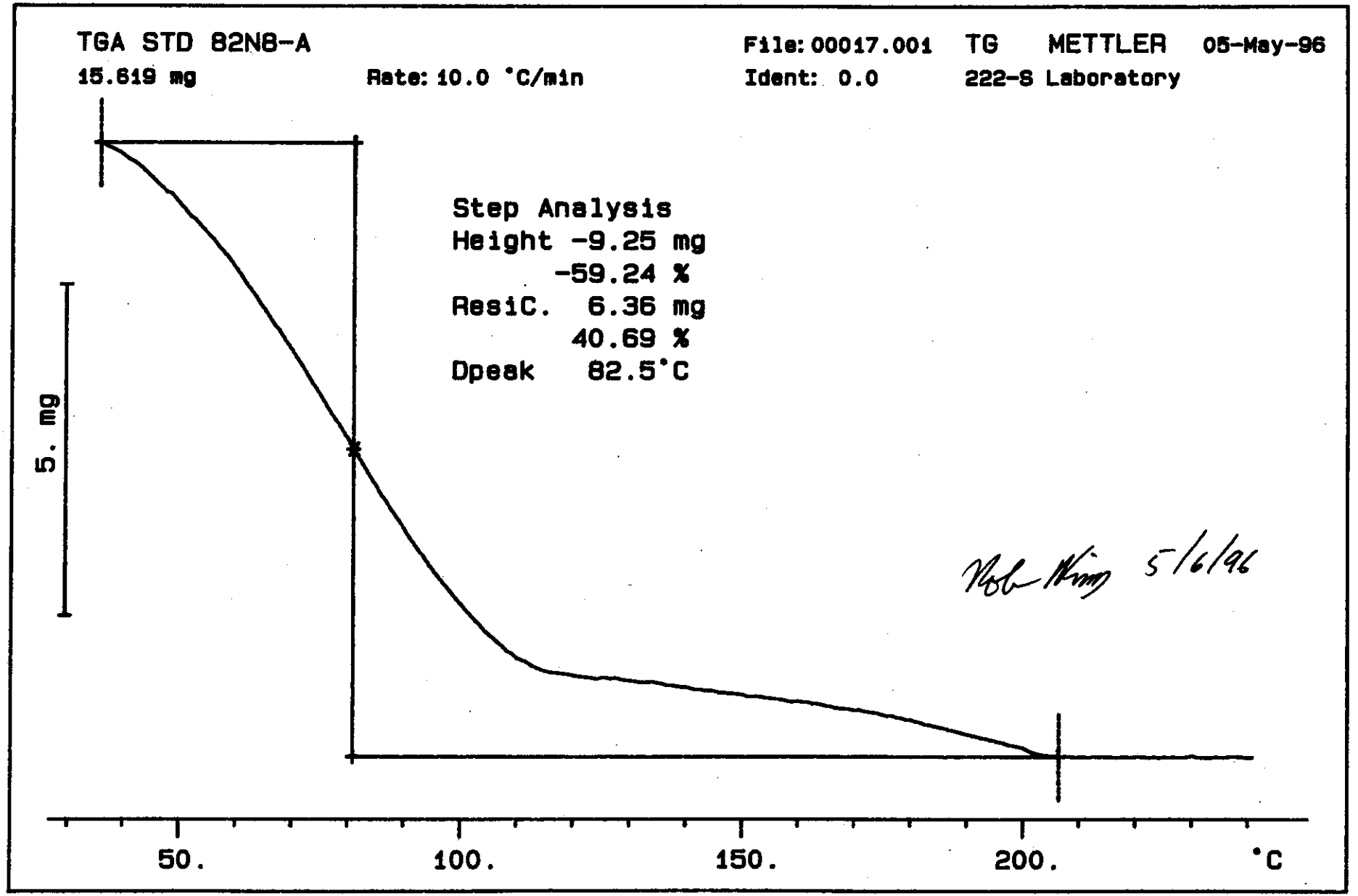
Gary Hammett 5-7-96
Analyst Signature **Date**

Validated by HAnestis 5.8.96

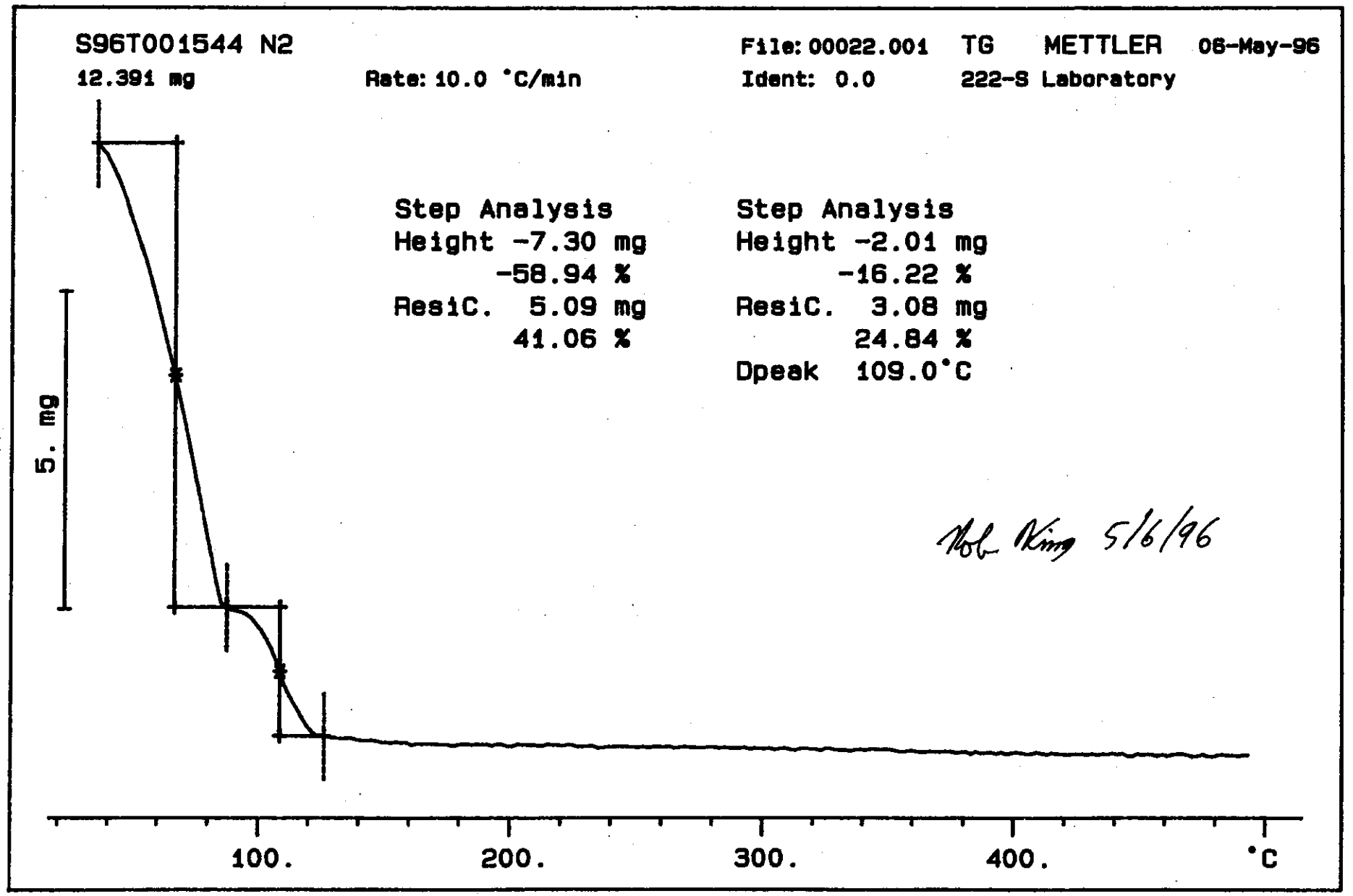
Data Entry Comments: The sample produced a second weight loss step of 16.22%, however due to how the past samples performed the chemist did not take it into account with % moisture.

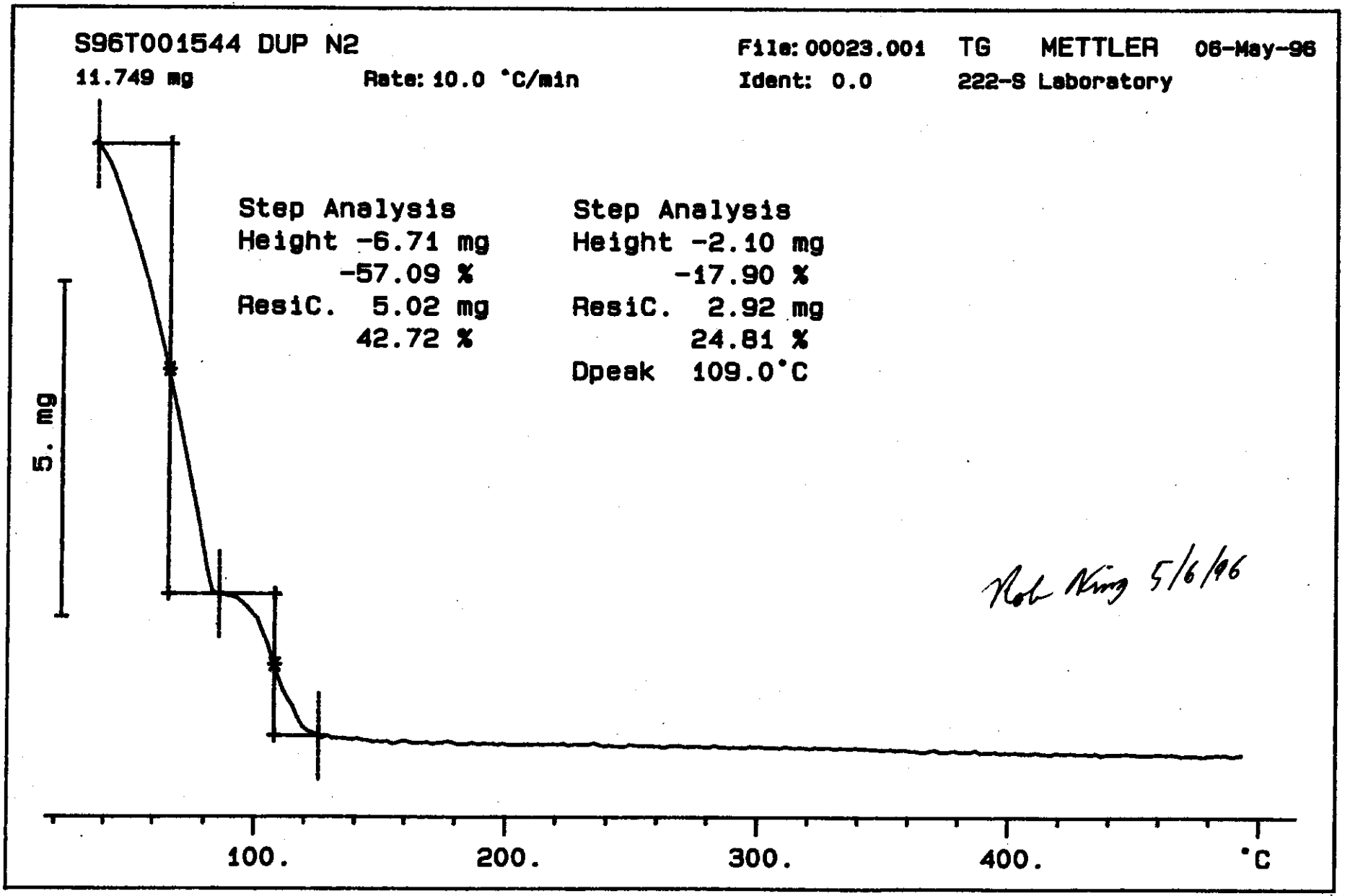
Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 371 TO 373.



Rob Wing 5/6/96


S96T001544 N2
12.391 mg
Rate: 10.0 °C/min
File: 00022.001 TG METTLER 06-May-96
Ident: 0.0 222-S Laboratory
Step Analysis
Height -7.30 mg
-58.94 %
ResiC. 5.09 mg
41.06 %
Step Analysis
Height -2.01 mg
-16.22 %
ResiC. 3.08 mg
24.84 %
Dpeak 109.0°C
5. mg
100.
200.
300.
400.
°C
Rob King 5/6/96


S96T001544 DUP N2
11.749 mg
Rate: 10.0 °C/min
File: 00023.001
TG METTLER 06-May-96
Ident: 0.0
222-S Laboratory
Step Analysis
Height -6.71 mg
-57.09 %
ResiC. 5.02 mg
42.72 %
Step Analysis
Height -2.10 mg
-17.90 %
ResiC. 2.92 mg
24.81 %
Dpeak 109.0°C
6w %
100.
200.
300.
400.
°C
Rob King 5/6/96

LABCORE Data Entry Template for Worklist# 8142

Analyst: ADP **Instrument:** TGA0 1 **Book #** 82N8A

Method: LA-560-112 Rev/Mod B-1

Worklist Comment: C-106 Grab. Run under nitrogen. new

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	STD				TGA-01	SOLID	~~58.3~~ 59.2	58.67 *	N/A	%
96000082	C-106 GRAB	2	SAMPLE	S96T001526	0		TGA-01	SOLID	N/A	3.54		%
96000082	C-106 GRAB	3	DUP	S96T001526	0		TGA-01	SOLID	3.54	2.82	N/A	%

Final page for worklist # 8142

Anthony Punturi 5-6-96
Analyst Signature **Date**

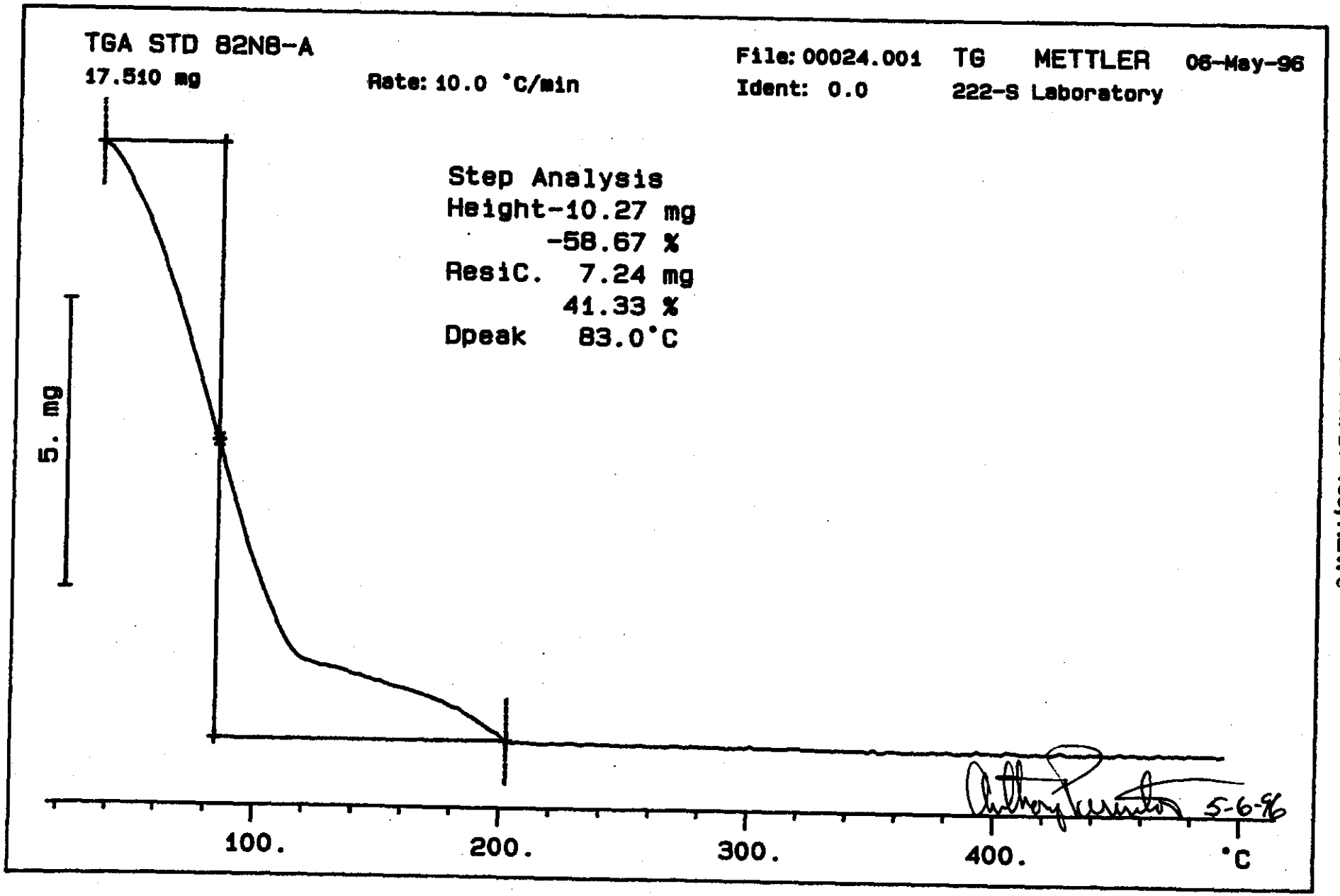
Gary Hammond 5-7-96
Analyst Signature **Date**

Validated by HAnastas 5.8.96

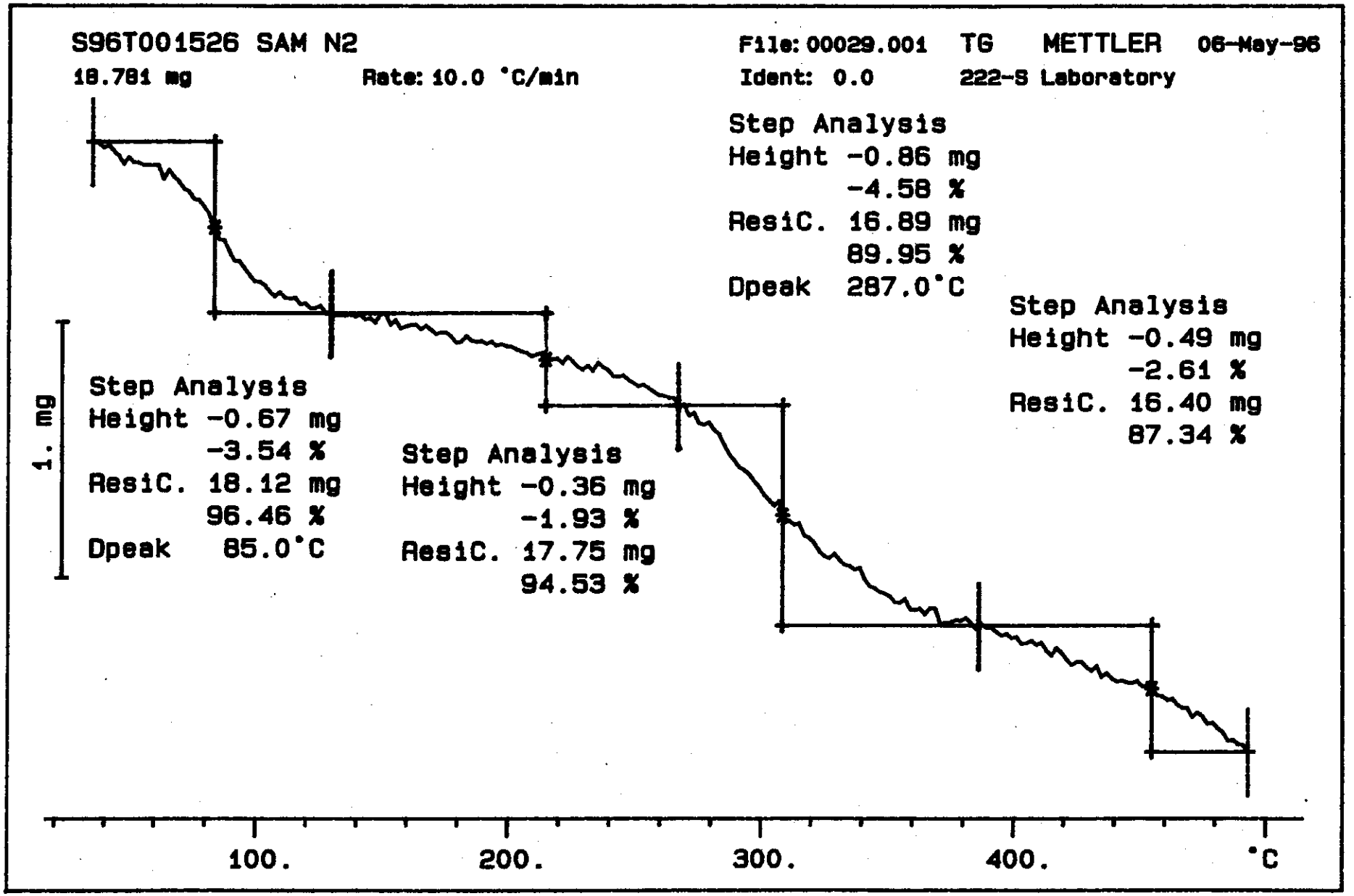
Data Entry Comments: S96T001526 produced 3 additional weight loss steps totalling 9.24%. The sample continued to lose weight steadily throughout the run. 5/7/96 BMY

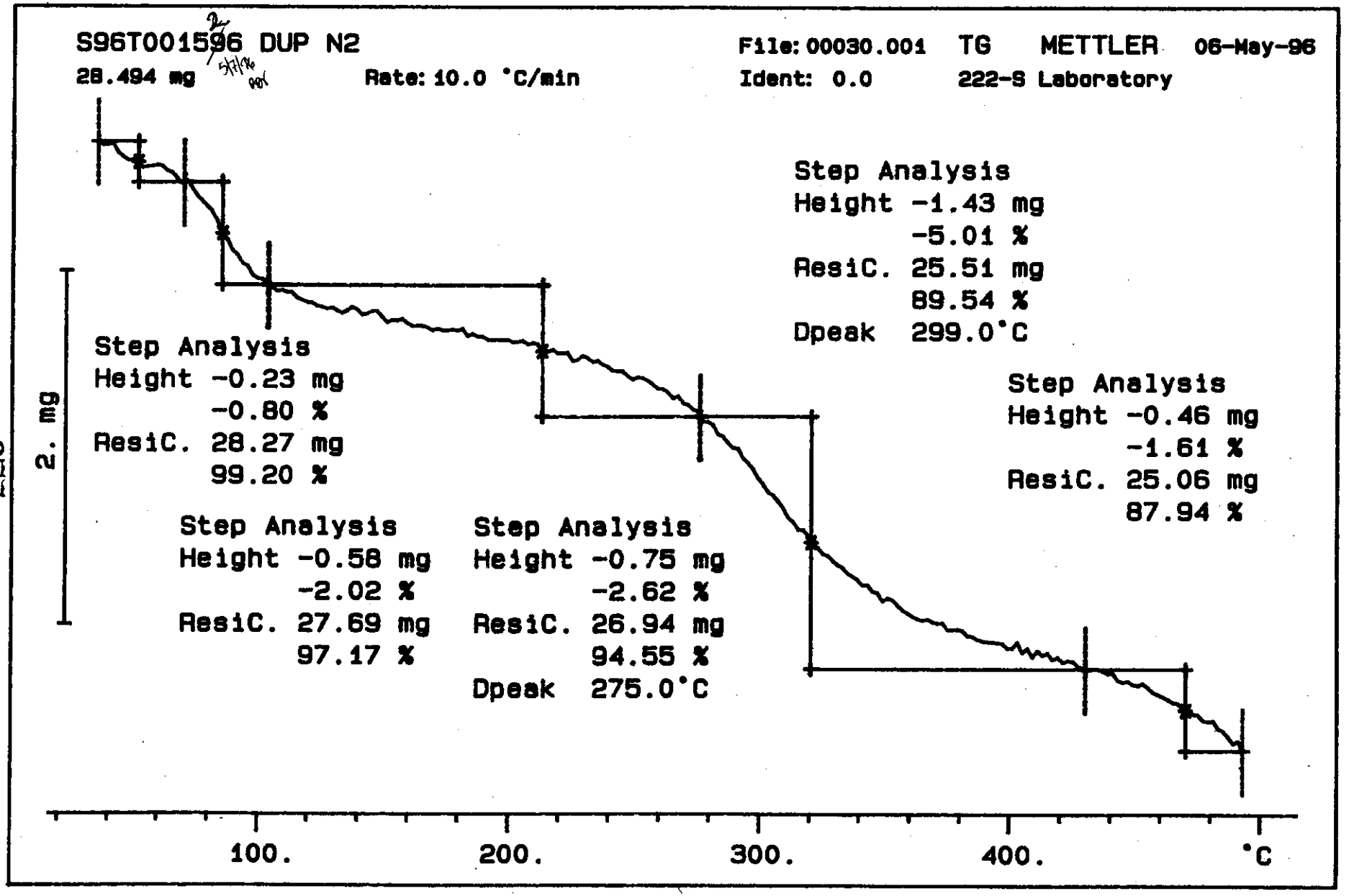
Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 375 TO 377.



Anthony Fuentes 5-6-96


S96T001526 SAM N2
18.781 mg
Rate: 10.0 °C/min
File: 00029.001 TG METTLER 06-May-96
Ident: 0.0 222-S Laboratory
Step Analysis
Height -0.86 mg
-4.58 %
ResiC. 16.89 mg
89.95 %
Dpeak 287.0°C
Step Analysis
Height -0.49 mg
-2.61 %
ResiC. 16.40 mg
87.34 %
Step Analysis
Height -0.67 mg
-3.54 %
ResiC. 18.12 mg
96.46 %
Dpeak 85.0°C
Step Analysis
Height -0.36 mg
-1.93 %
ResiC. 17.75 mg
94.53 %
1. mg
100.
200.
300.
400.
°C


S96T001596 DUP N2
28.494 mg
Rate: 10.0 °C/min
File: 00030.001 TG METTLER 06-May-96
Ident: 0.0 222-S Laboratory
Step Analysis
Height -1.43 mg
-5.01 %
ResiC. 25.51 mg
89.54 %
Dpeak 299.0°C
Step Analysis
Height -0.23 mg
-0.80 %
ResiC. 28.27 mg
99.20 %
Step Analysis
Height -0.46 mg
-1.61 %
ResiC. 25.06 mg
87.94 %
Step Analysis
Height -0.58 mg
-2.02 %
ResiC. 27.69 mg
97.17 %
Step Analysis
Height -0.75 mg
-2.62 %
ResiC. 26.94 mg
94.55 %
Dpeak 275.0°C
2. mg
100.
200.
300.
400.
°C

LABCORE Data Entry Template for Worklist# 8143

Analyst: RDM/ADP **Instrument:** TGA0 3 **Book #** 82N8A

Method: LA-514-114 Rev/Mod C-1

Worklist Comment: C-106 Grab. Run under nitrogen. new

GROUP	PROJECT	S TYPE	SAMPLE#	R	A	-------TEST------	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD				TGA-03	SOLID	59.2	58.75	N/A	%
96000082	C-106 GRAB	2 SAMPLE	S96T001530	0		TGA-03	SOLID	N/A	32.71		%
96000082	C-106 GRAB	3 DUP	S96T001530	0		TGA-03	SOLID	32.71	34.32	N/A	%
96000082	C-106 GRAB	4 SAMPLE	S96T001537	0		TGA-03	SOLID	N/A	22.14		%
96000082	C-106 GRAB	5 DUP	S96T001537	0		TGA-03	SOLID	22.14	26.07	N/A	%

Final page for worklist # 8143

See attached for signatures
Analyst Signature **Date** 5-7-96

R [illegible] 5-17-96
Analyst Signature **Date**

Verified by Blandina Valenzuela + Validated 5-20-96

Data Entry Comments: S96T001530 produced a second weight loss step of 9.19% at approximately 350°C.
S96T001537 produced an additional weight loss step of 9.26% at approx 350°C.

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

LABCORE Data Entry Template for Worklist# 8143

Analyst: [illegible] / AKP **Instrument:** TGA0 _____ **Book #** 82NBA

Method: LA-560-112 Rev/Mod C-1

Worklist Comment: C-106 Grab. Run under nitrogen. new

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	-------TEST------	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	STD				TGA-01	SOLID			N/A	%
96000082	C-106 GRAB	2	SAMPLE	S96T001530	0		TGA-01	SOLID	N/A			%
96000082	C-106 GRAB	3	DUP	S96T001530	0		TGA-01	SOLID			N/A	%
96000082	C-106 GRAB	4	SAMPLE	S96T001537	0		TGA-01	SOLID	N/A			%
96000082	C-106 GRAB	5	DUP	S96T001537	0		TGA-01	SOLID			N/A	%

Final page for worklist # 8143

[illegible] _____
Analyst Signature **Date**

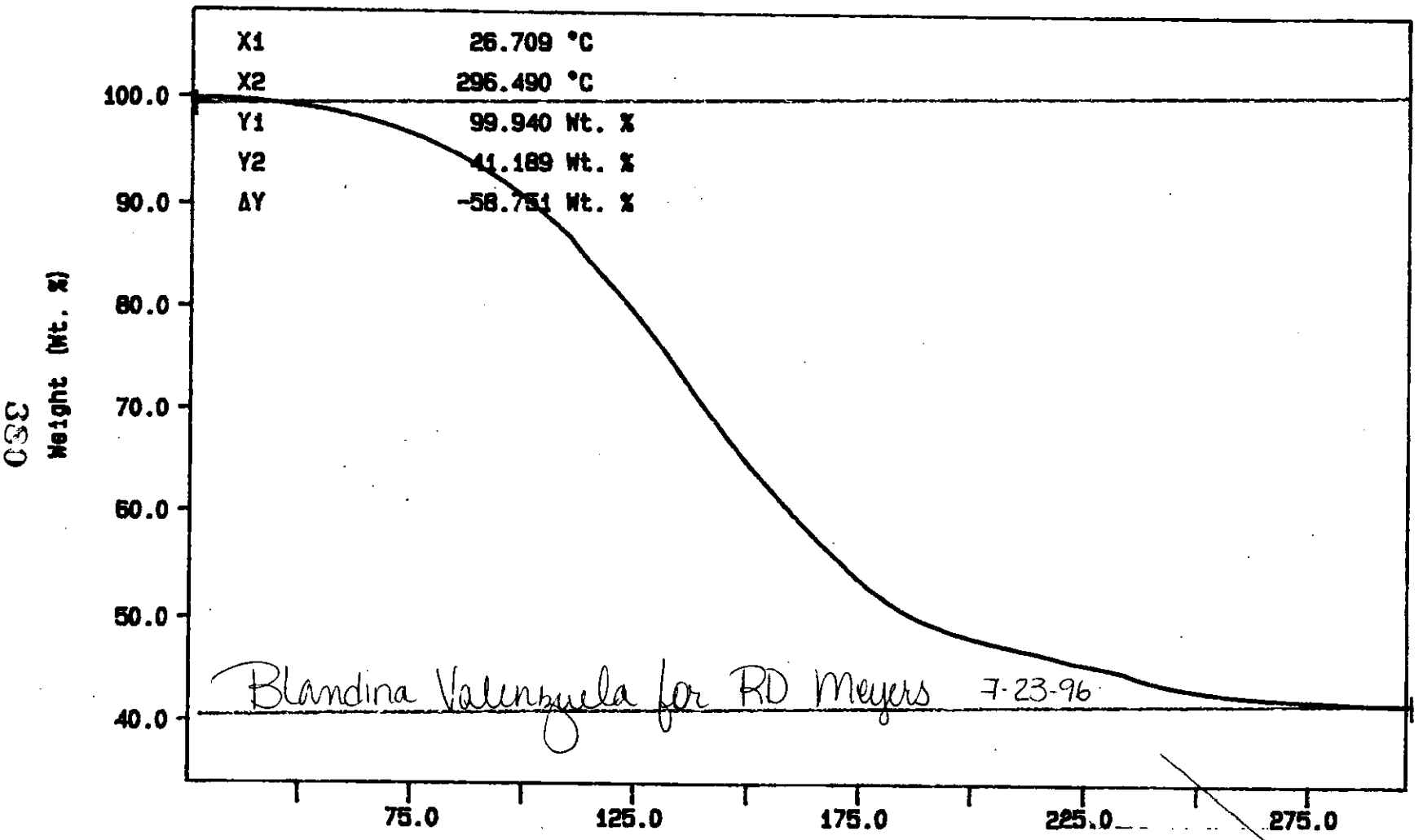
[illegible] 050696
Analyst Signature **Date**

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

Curve 1: TGA
File info: ter050601 Mon May 6 06:17:22 1996
Sample Weight: 21.206 mg
TGA STD B2N8-A

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 380 TO 384.

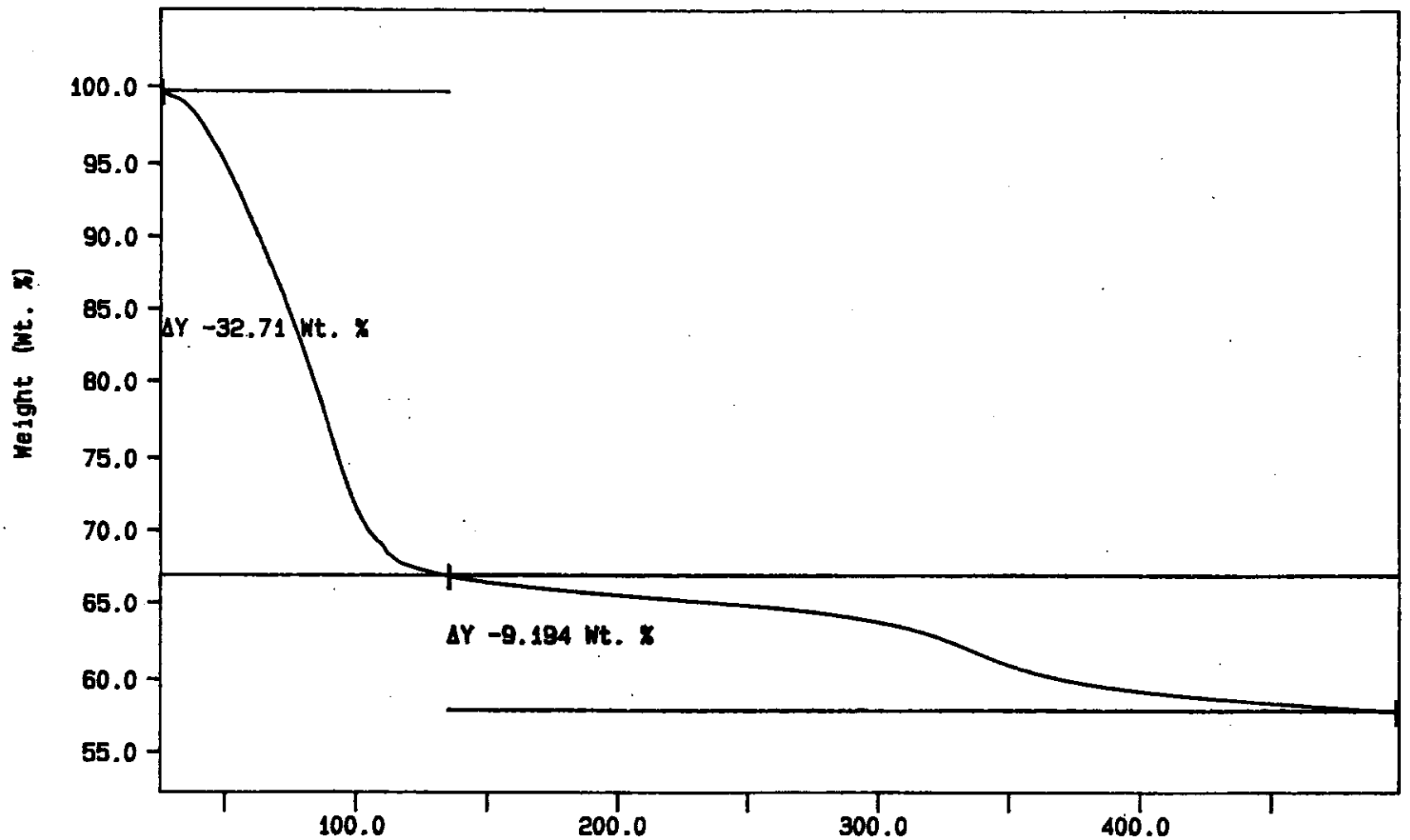


Blandina Valenzuela for RD Meyers 7-23-96

N2 10C/MIN
TEMP1: 25.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 300.0 C

rd meyers
PERKIN-ELMER
7 Series Thermal Analysis System
Mon May 6 06:34:08 1996

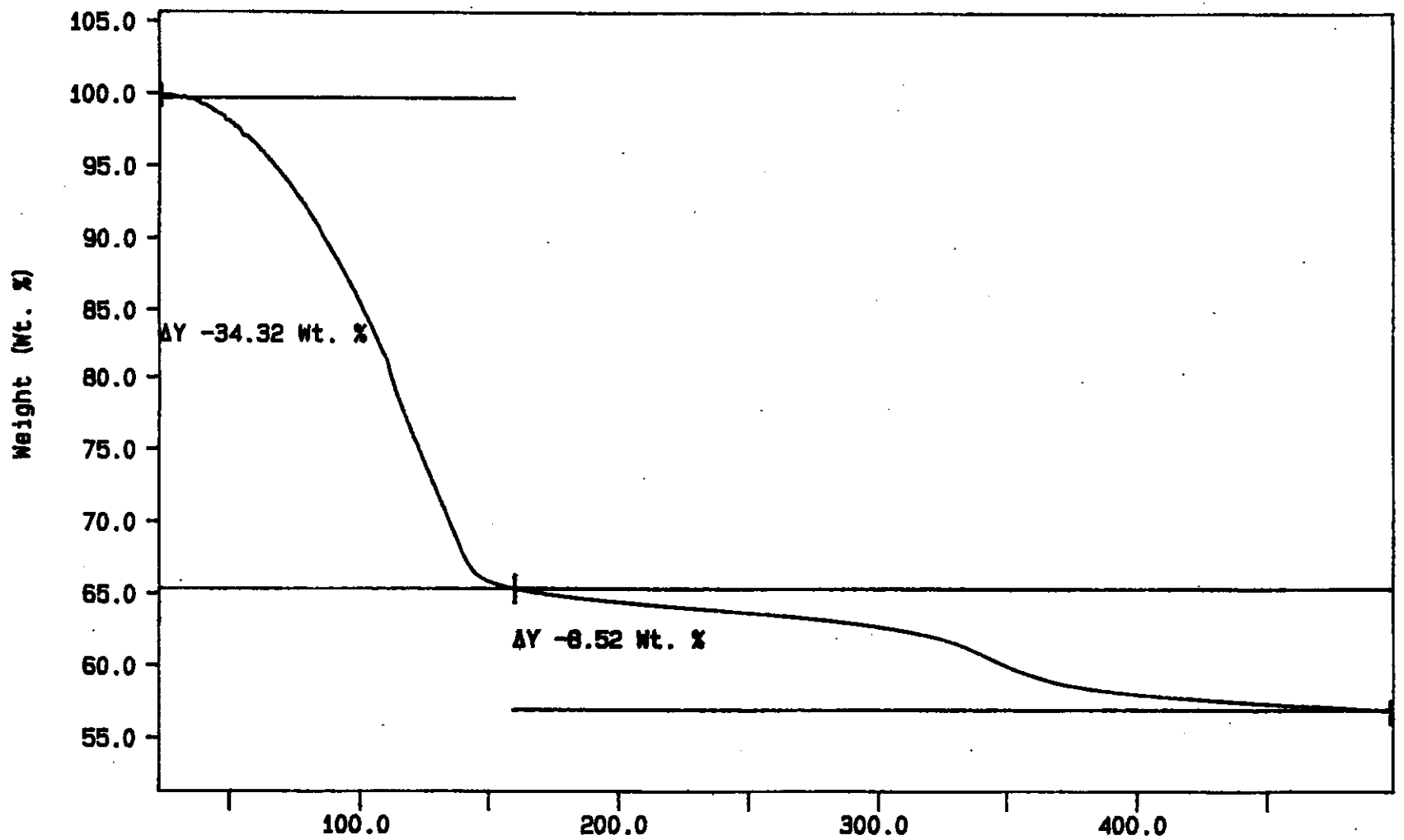
Curve 1: TGA
File info: SAM050601 Mon May 6 08:38:51 1996
Sample Weight: 9.493 mg
S96T001530



10C/MIN N2
TEMP1: 35.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 500.0 C

RD MEYERS
PERKIN-ELMER
7 Series Thermal Analysis System
Tue May 7 14:43:52 1996

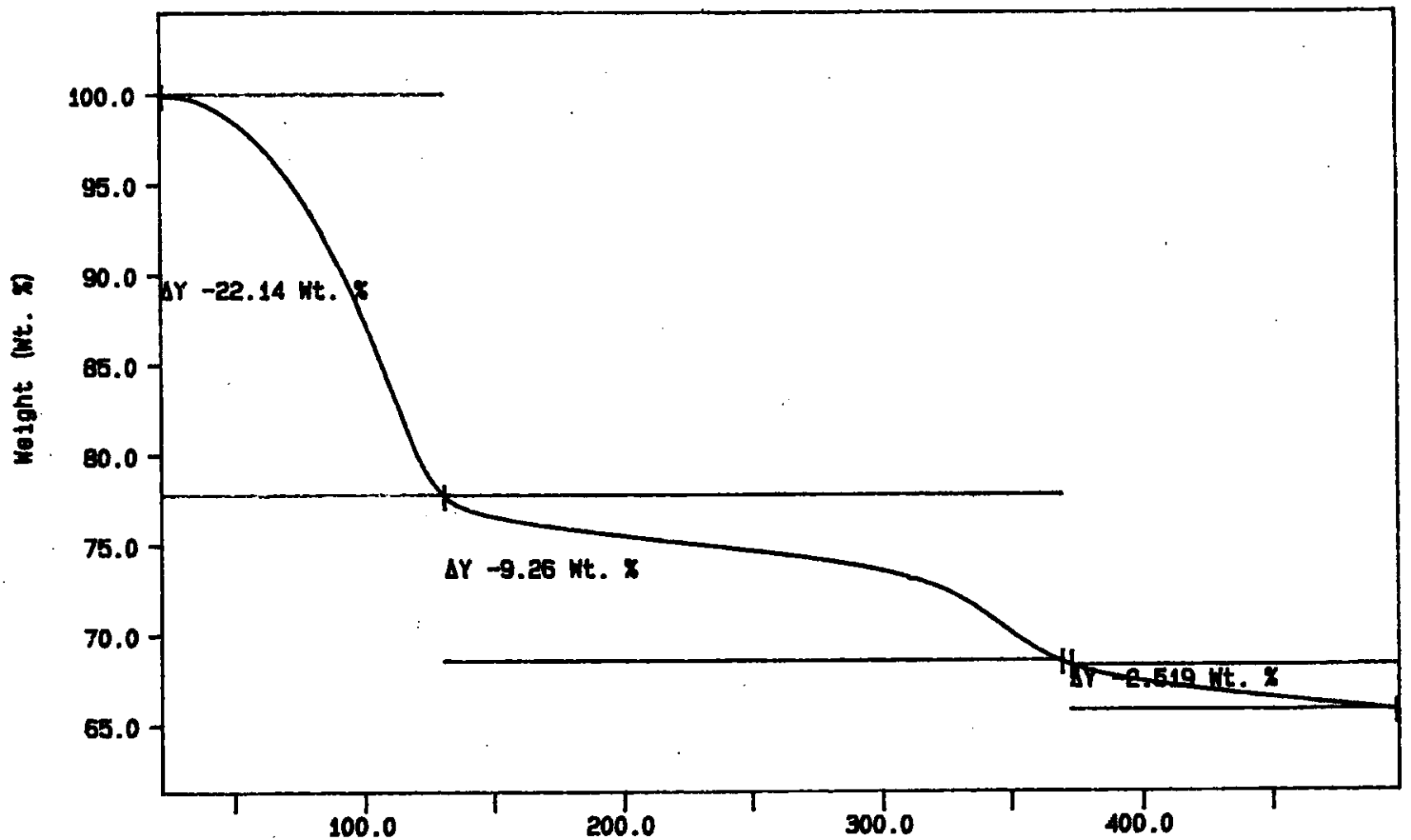
Curve 1: TGA
File info: SAM050602 Mon May 6 10:31:20 1996
Sample Weight: 20.913 mg
S96T001530DUP



10C/MIN N2
TEMP1: 35.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 600.0 C

RD MEYERS
PERKIN-ELMER
7 Series Thermal Analysis System
Tue May 7 14:49:29 1996

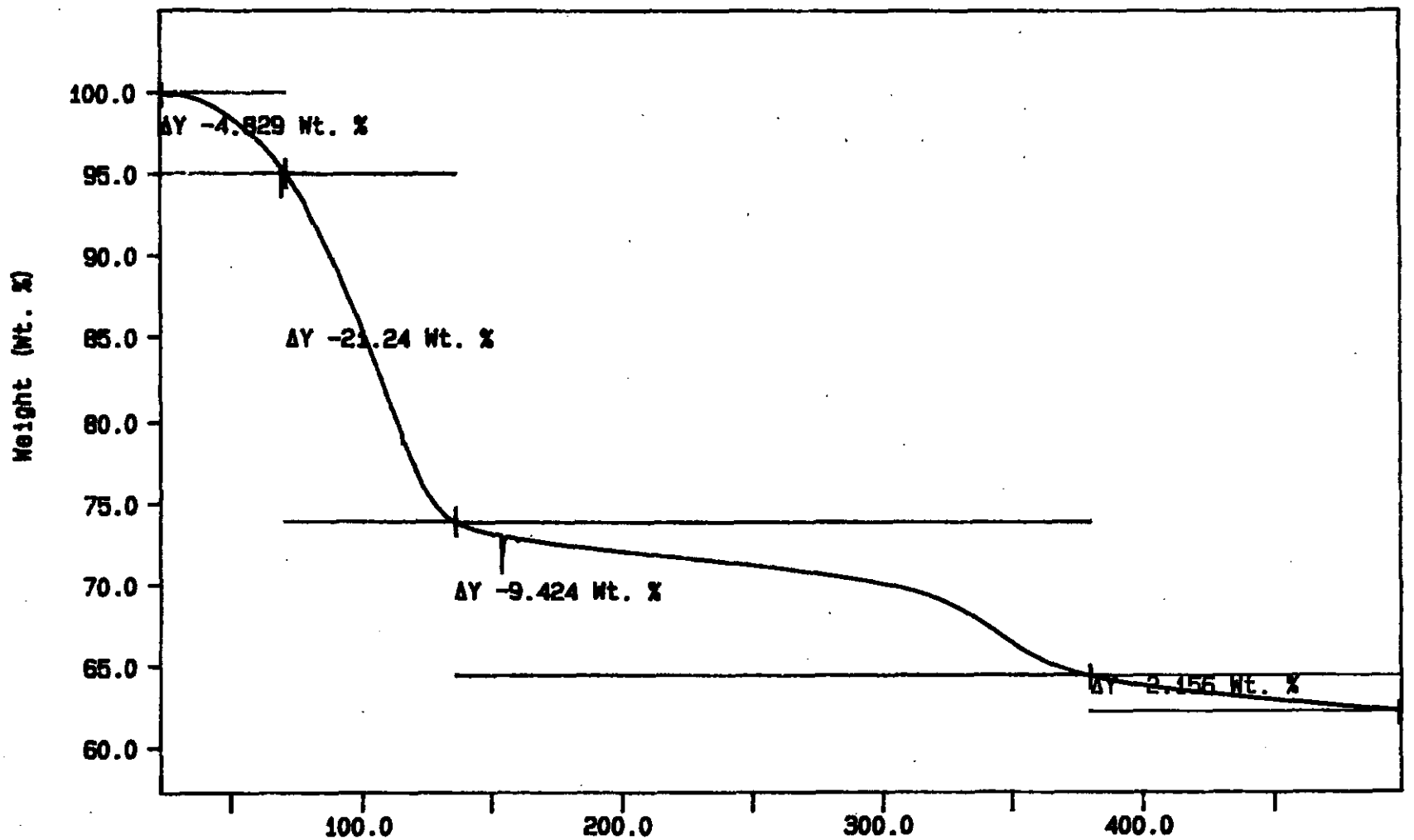
Curve 1: TGA
File info: SAM050605 Mon May 6 21:39:52 1996
Sample Weight: 14.464 mg
S96T001537 SAM



10C/MIN N2
TEMP1: 25.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 600.0 C

AD PURINTON
PERKIN-ELMER
7 Series Thermal Analysis System
Mon May 6 21:50:17 1996

Curve 1: TGA
File info: SAM050606 Mon May 6 23:03:44 1996
Sample Weight: 14.308 mg
S96T001537 DUP



10C/MIN N2
TEMP1: 35.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 600.0 C

AD PURINTON
PERKIN-ELMER
7 Series Thermal Analysis System
Tue May 7 00:17:52 1996

LABCORE Data Entry Template for Worklist# 8149

Analyst: KK **Instrument:** TGA0 1 **Book #** 8248-A

Method: LA-560-112 Rev/Mod B.1

Worklist Comment: C-106. Run under nitrogen. new

GROUP	PROJECT	S TYPE	SAMPLE#	R	A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD				TGA-01	LIQUID	59.2	59.32*	N/A	%
96000082	C-106 GRAB	2 SAMPLE	S96T000563	0		TGA-01	LIQUID	N/A	61.32		%
96000082	C-106 GRAB	3 DUP	S96T000563	0		TGA-01	LIQUID	61.32	59.37	N/A	%

Final page for worklist # 8149

Rob King 5/4/96
Analyst Signature **Date**

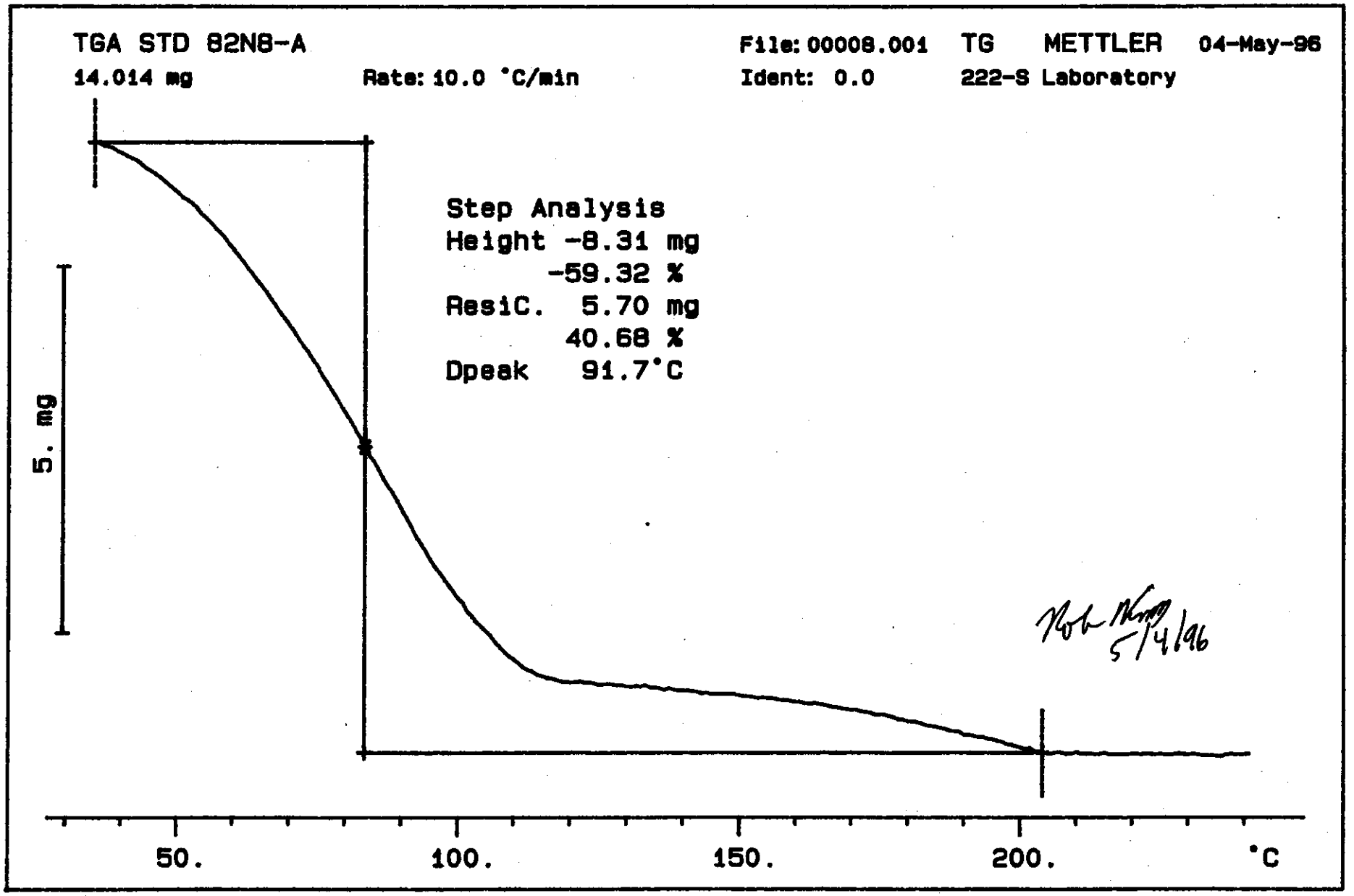
[illegible] 5-8-96
Analyst Signature **Date**

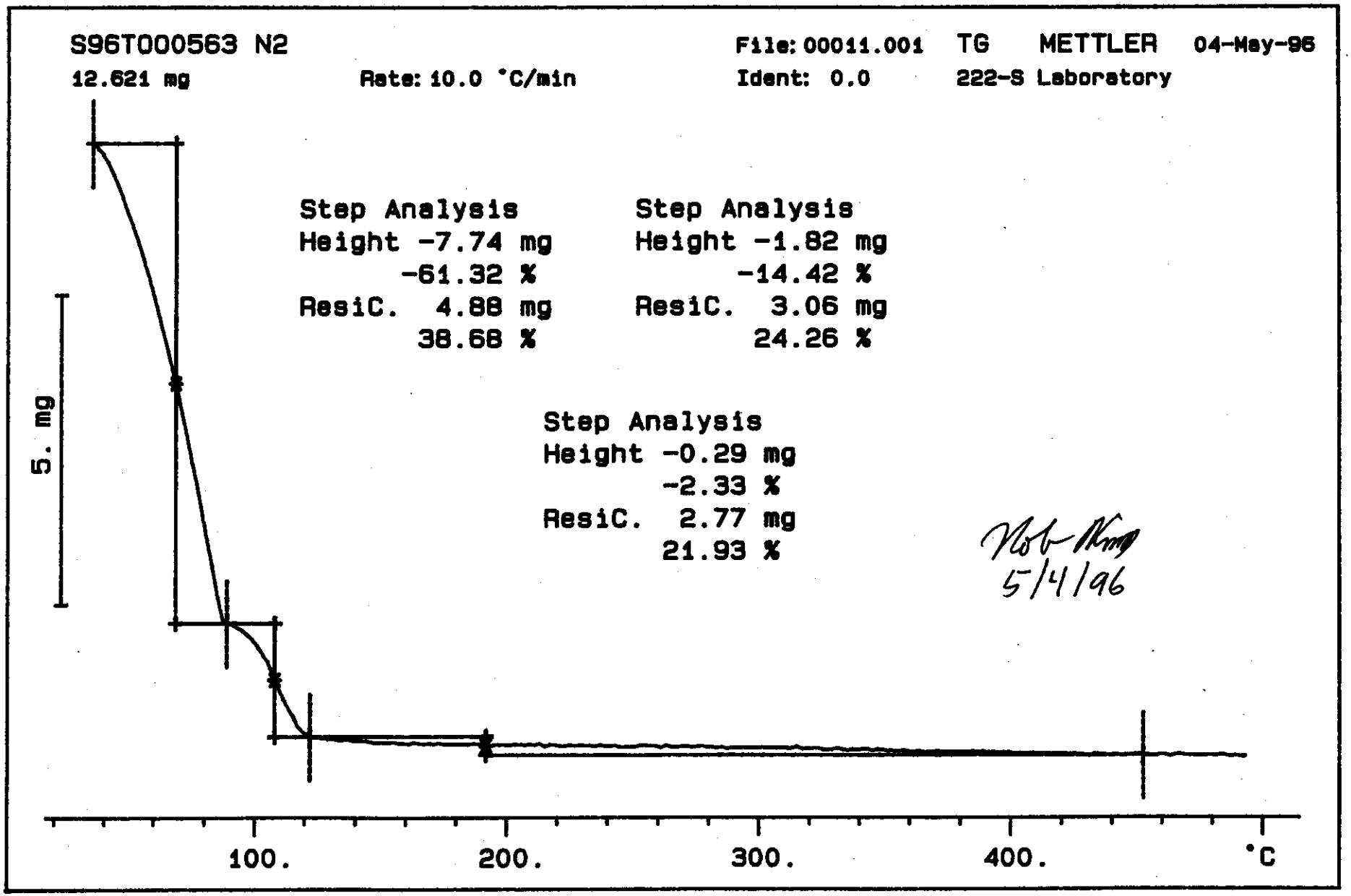
Validated by H Anastos 5-8-96

Data Entry Comments: The sample produced a second weight loss step after the first, however the chemist questioned whether the 14.42% was attributed to % moisture.

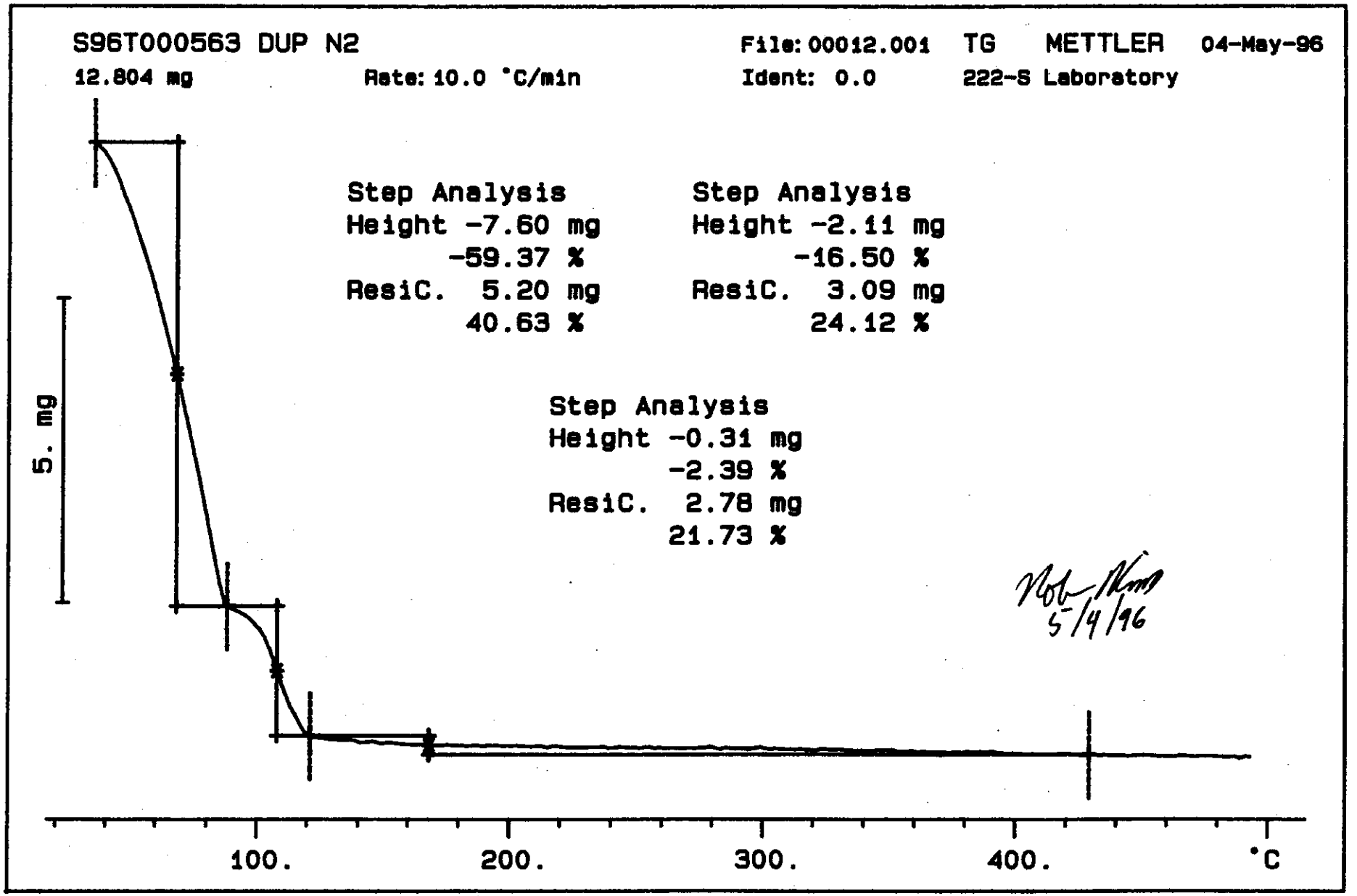
Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 386 TO 388.





Rob Kemp
5/4/96


S96T000563 DUP N2
12.804 mg
Rate: 10.0 °C/min
File: 00012.001
Ident: 0.0
TG
METTLER
04-May-96
222-S Laboratory
Step Analysis
Height -7.60 mg
-59.37 %
ResiC. 5.20 mg
40.63 %
Step Analysis
Height -2.11 mg
-16.50 %
ResiC. 3.09 mg
24.12 %
Step Analysis
Height -0.31 mg
-2.39 %
ResiC. 2.78 mg
21.73 %
5. mg
100.
200.
300.
400.
°C
5/4/96

worklistrpt Version 2.1 05/15/95
05/03/96 11:37

LABCORE Data Entry Template for Worklist# 8220

Analyst: RDM **Instrument:** TGA0 3 **Book #** 82N8A

Method: LA-514-114 Rev/Mod C-1

Worklist Comment: C-106. Run under nitrogen. new

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-------TEST------	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-03	LIQUID	59.2	58.77	* N/A	%
96000174	C-106 GRAB	2 SAMPLE	S96T001681	0	TGA-03	LIQUID	N/A	48.47		%
96000174	C-106 GRAB	3 DUP	S96T001681	0	TGA-03	LIQUID	48.47	44.37	N/A	%

Final page for worklist # 8220

See Attached for Signatures
Analyst Signature **Date**

[signature] 5-4-96
Analyst Signature **Date**

Verified by HAnastos 5-7-96
Sample also showed a second weight loss step of 28.20%.

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

LABCORE Data Entry Template for Worklist# 8220

Analyst: RDB **Instrument:** TGA0 **Book #** 82NBA

Method: LA-560-112 Rev/Mod C-1

Worklist Comment: C-106. Run under nitrogen. new

GROUP	PROJECT	S TYPE	SAMPLE#	R	A	-------TEST------	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD				TGA-01	LIQUID			N/A	%
96000174	C-106 GRAB	2 SAMPLE	S96T001681	0		TGA-01	LIQUID	N/A			%
96000174	C-106 GRAB	3 DUP	S96T001681	0		TGA-01	LIQUID			N/A	%

Final page for worklist # 8220

RDBryan 5/2/96
Analyst Signature **Date**

Analyst Signature **Date**

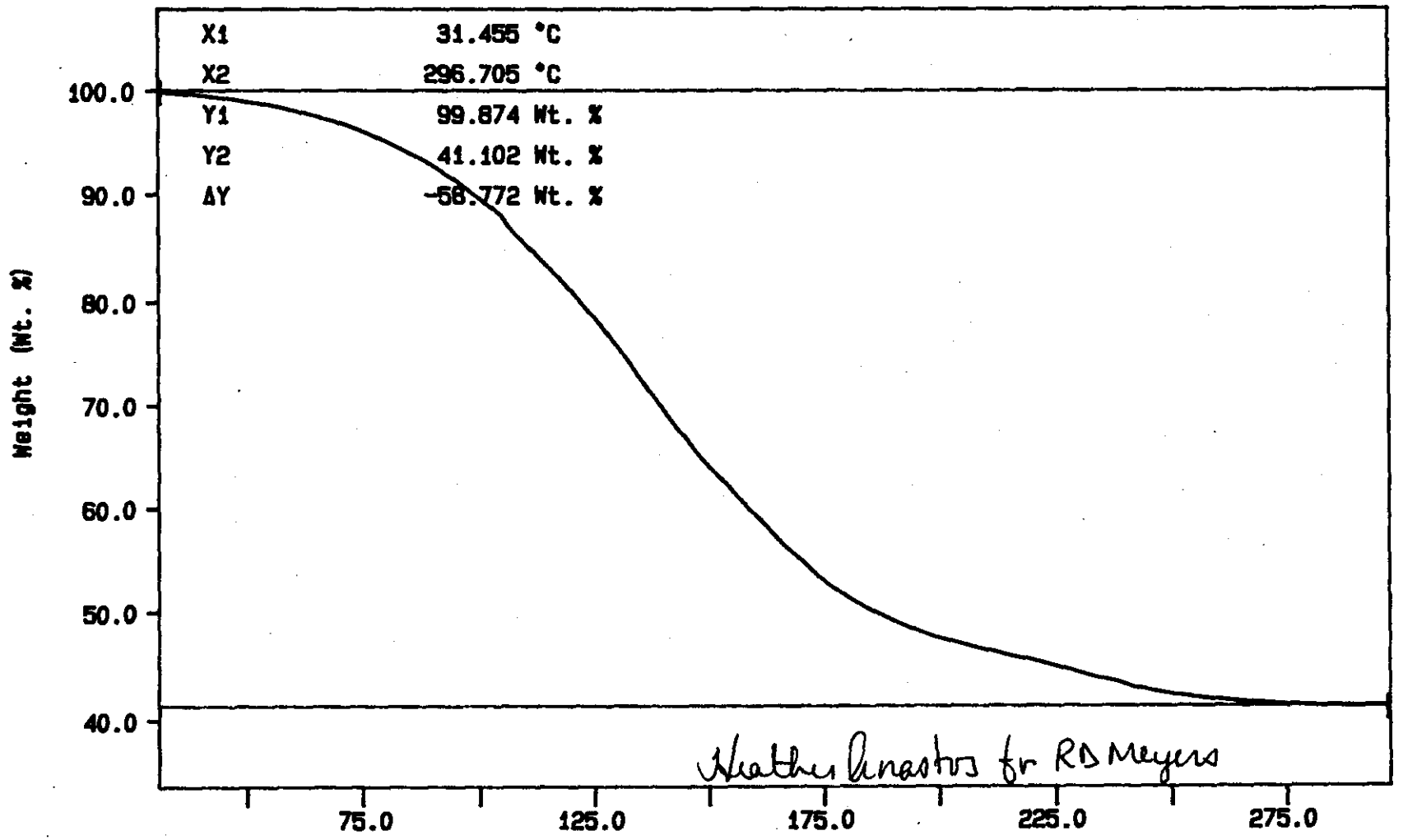
Other Instrument was used.

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

Curve 1: TGA
File info: TER050202 Thu May 2 06:30:07 1996
Sample Weight: 22.115 mg
TGA STD 82NB-A

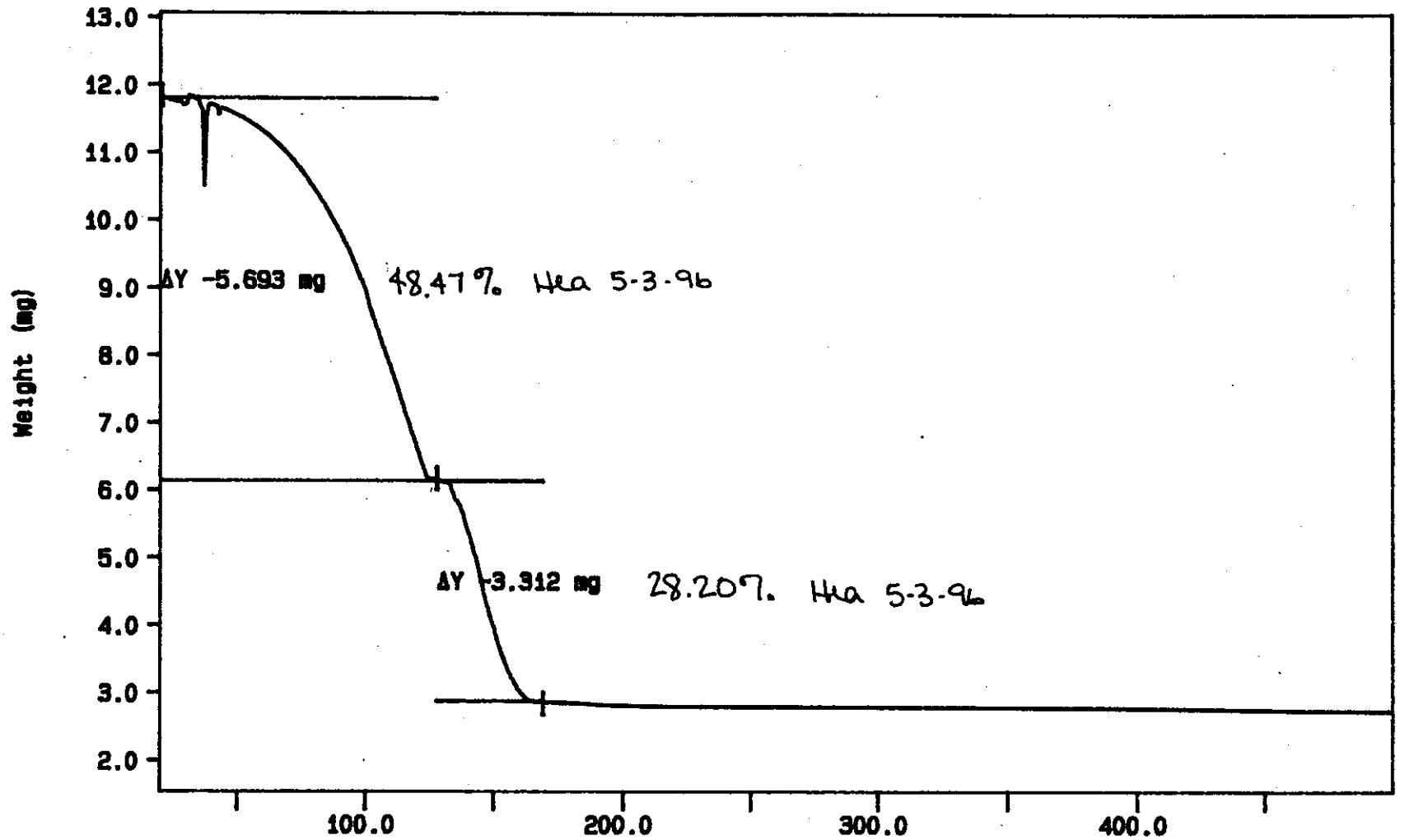
SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 391 TO 393.



N2 10C/MIN
TEMP1: 35.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 300.0 C

PJ MCCOWN
PERKIN-ELMER
7 Series Thermal Analysis System
Thu May 2 18:28:28 1996

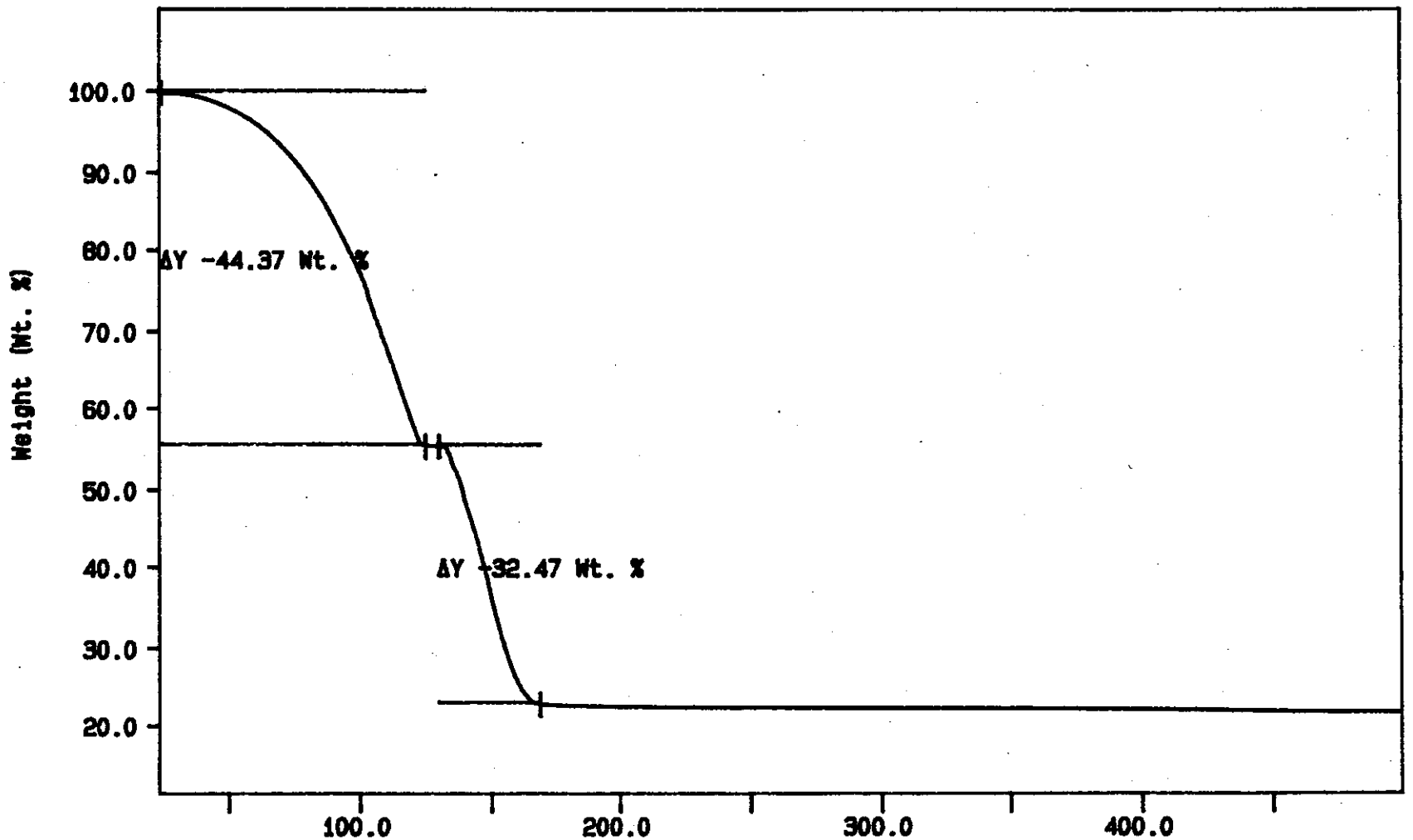
Curve 1: TGA
File info: SAM050206 Thu May 2 19:54:04 1996
Sample Weight: 11.746 mg
S96T001681



10C/MIN N2
TEMP1: 35.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 600.0 C

RD MEYERS
PERKIN-ELMER
7 Series Thermal Analysis System
Fri May 3 13:35:42 1996

Curve 1: TGA
File info: SAM050207 Thu May 2 22:28:56 1996
Sample Weight: 12.417 mg
S96T001681DUP



10C/MIN N2
TEMP1: 35.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 800.0 C

RD MEYERS
PERKIN-ELMER
7 Series Thermal Analysis System
Fri May 3 13:43:35 1996

LABCORE Data Entry Template for Worklist# 8322

Analyst: [illegible] **Instrument:** TGA0 1 **Book #** 8ZN9A

Method: LA-560-112 Rev/Mod B-1

Worklist Comment: C-106 Grab. Run under Nitrogen. new

GROUP	PROJECT	S TYPE	SAMPLE#	R	A	-------TEST------	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD				TGA-01	SOLID	59.2	58.79	N/A	%
96000082	C-106 GRAB	2 SAMPLE	S96T001527	0		TGA-01	SOLID	N/A	3.63		%
96000082	C-106 GRAB	3 DUP	S96T001527	0		TGA-01	SOLID	3.63	3.54	N/A	%
96000174	C-106 GRAB	4 SAMPLE	S96T002350	0		TGA-01	SOLID	N/A	65.05		%
96000174	C-106 GRAB	5 DUP	S96T002350	0		TGA-01	SOLID	65.05	63.26	N/A	%

Final page for worklist # 8322

[illegible] 5-6-96
Analyst Signature **Date**

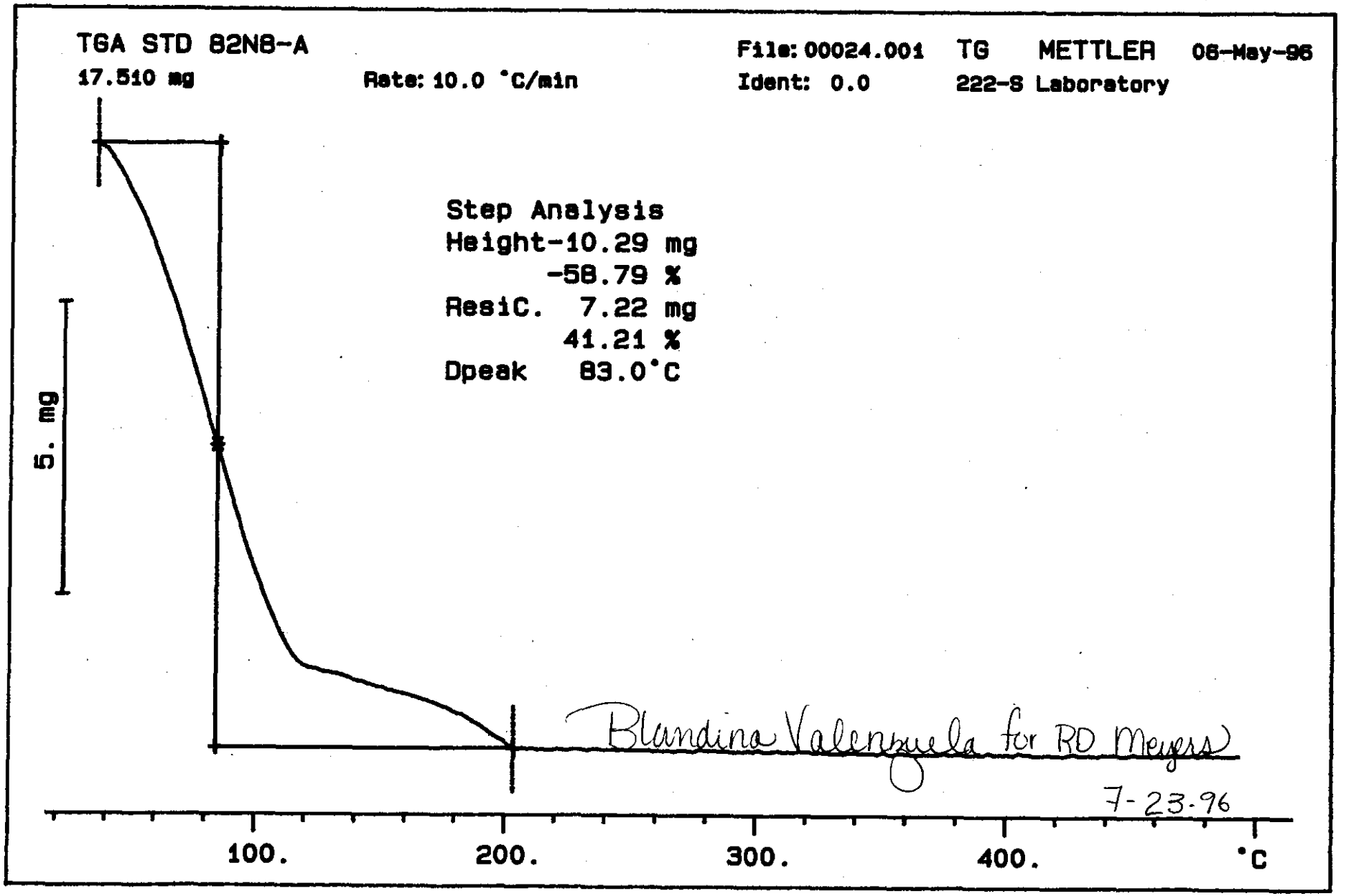
[illegible] 5-7-96
Analyst Signature **Date**

Validated by HAnestis 5.8.96

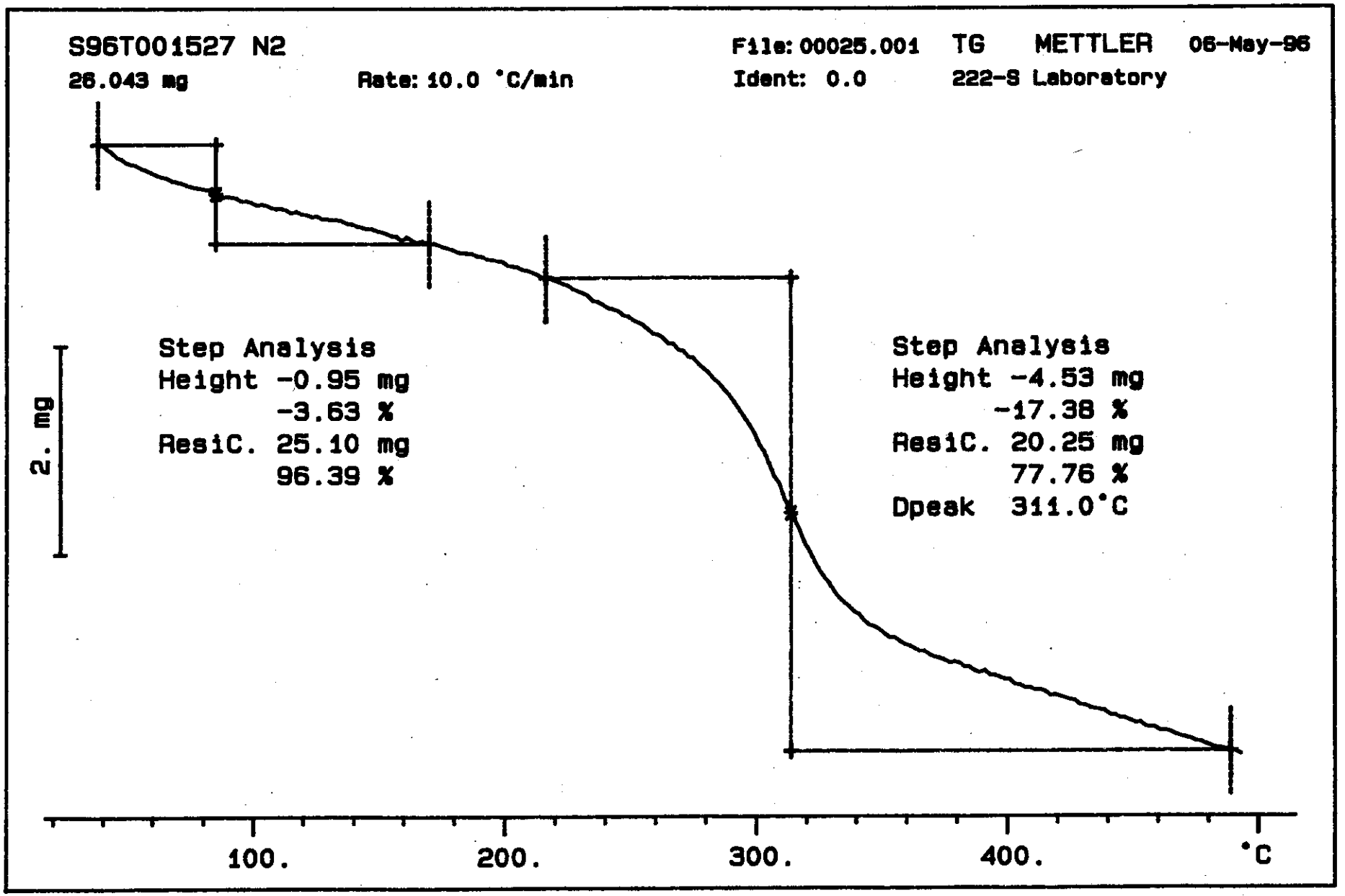
Data Entry Comments: S96T001527 produced a second weight loss step of 17.38%. The sample continued to lose weight steadily throughout the run.

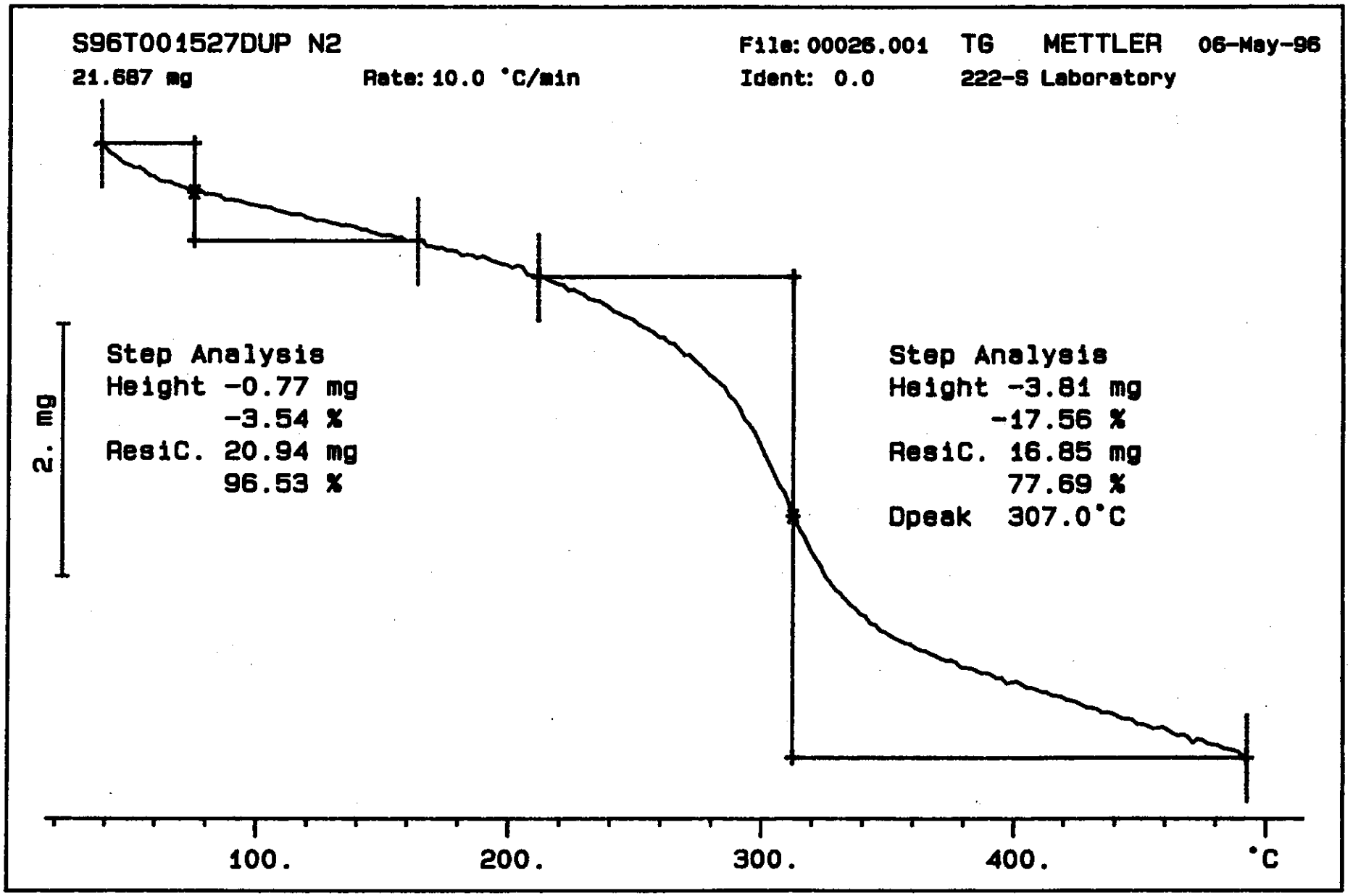
Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

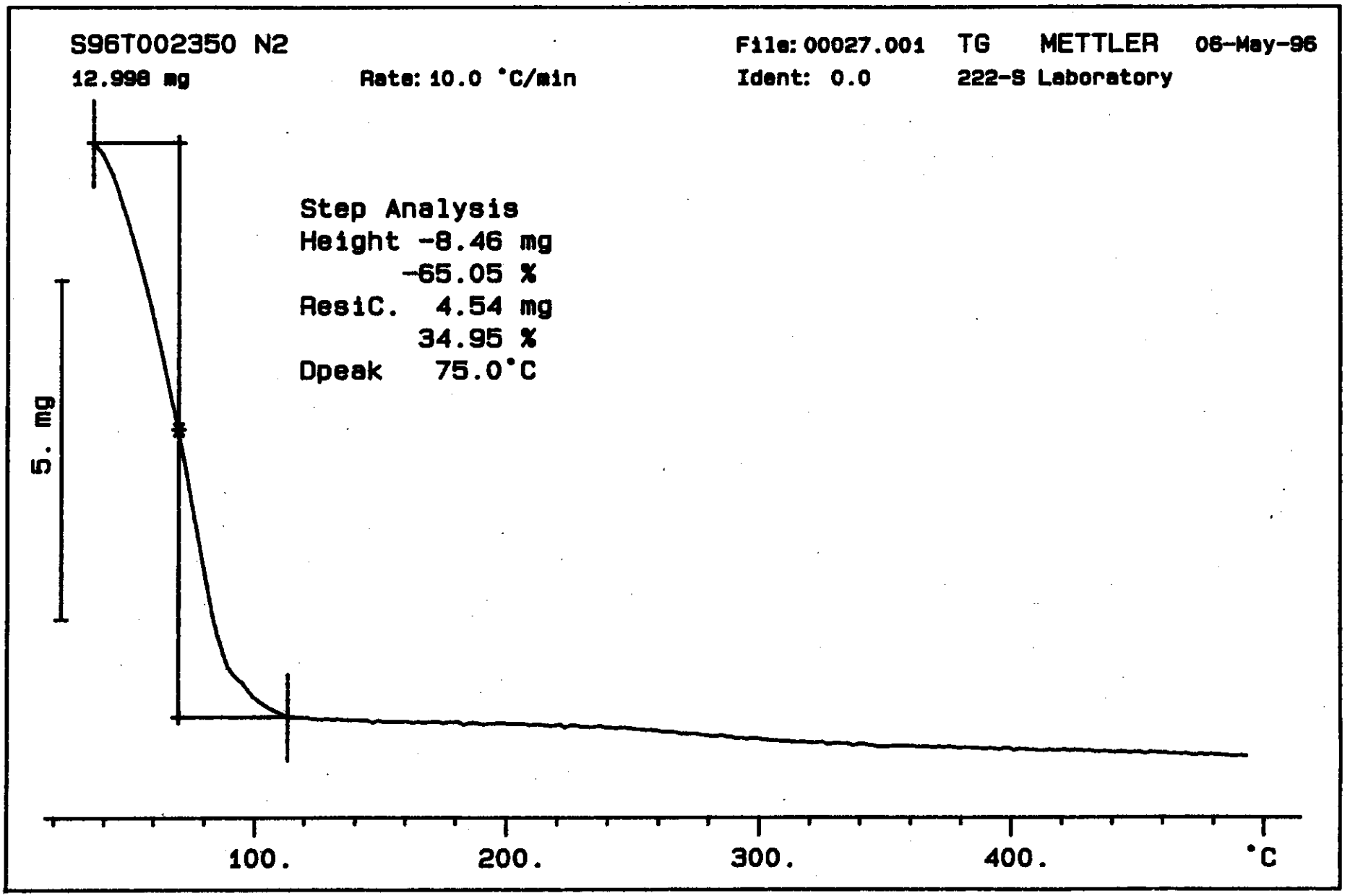
SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 393 TO 399.

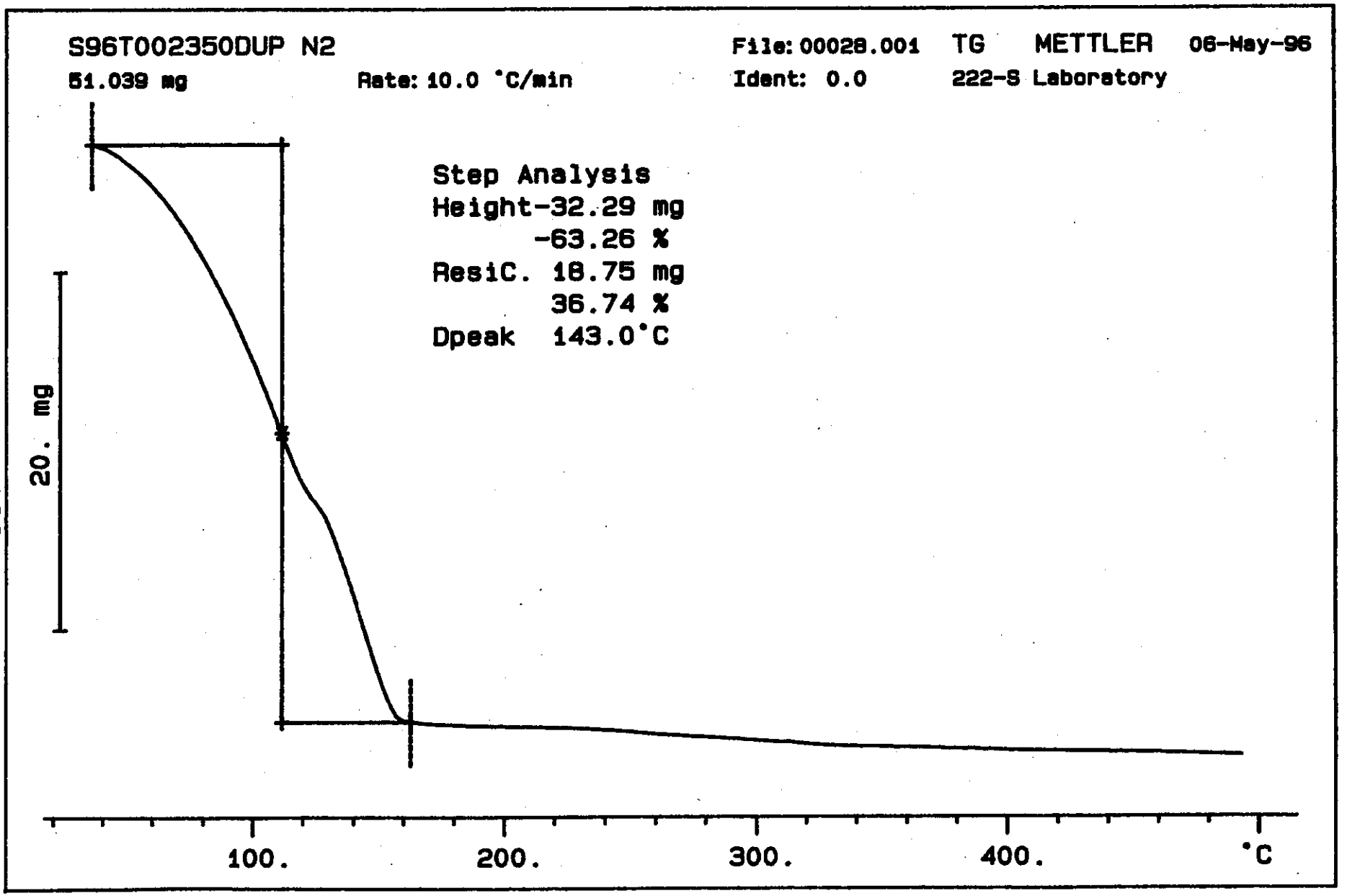


Blandina Valenzuela for RD Meyers
7-23-96


S96T001527 N2
26.043 mg
Rate: 10.0 °C/min
File: 00025.001
TG
METTLER
06-May-96
Ident: 0.0
222-S Laboratory
Step Analysis
Height -0.95 mg
-3.63 %
ResiC. 25.10 mg
96.39 %
Step Analysis
Height -4.53 mg
-17.38 %
ResiC. 20.25 mg
77.76 %
Dpeak 311.0°C
2. mg
100.
200.
300.
400.
°C


S96T001527DUP N2
21.687 mg
Rate: 10.0 °C/min
File: 00026.001
TG
METTLER
06-May-96
Ident: 0.0
222-S Laboratory
Step Analysis
Height -0.77 mg
-3.54 %
ResiC. 20.94 mg
96.53 %
Step Analysis
Height -3.81 mg
-17.56 %
ResiC. 16.85 mg
77.69 %
Dpeak 307.0°C
2. mg
100.
200.
300.
400.
°C


S96T002350 N2
12.998 mg
Rate: 10.0 °C/min
File: 00027.001
TG
METTLER
06-May-96
Ident: 0.0
222-S Laboratory
Step Analysis
Height -8.46 mg
-65.05 %
ResiC. 4.54 mg
34.95 %
Dpeak 75.0°C
Bw °C
100.
200.
300.
400.
°C


S96T002350DUP N2
51.039 mg
Rate: 10.0 °C/min
File: 00028.001
Ident: 0.0
TG
METTLER
06-May-96
222-S Laboratory
Step Analysis
Height -32.29 mg
-63.26 %
ResiC. 18.75 mg
36.74 %
Dpeak 143.0°C
20. mg
100.
200.
300.
400.
°C

LABCORE Data Entry Template for Worklist# 8324

Analyst: SMF **Instrument:** TGA0 3 **Book #** 82N8A

Method: LA-514-114 Rev/Mod C-1

Worklist Comment: C-106 Grab. Run under AIR. new

GROUP	PROJECT	S TYPE	SAMPLE#	R	A	-------TEST------	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD				TGA-03	SOLID	59.2	57.68 *	N/A	%
96000174	C-106 GRAB	2 SAMPLE	S96T002351	0		TGA-03	SOLID	N/A	56.03		%
96000174	C-106 GRAB	3 DUP	S96T002351	0		TGA-03	SOLID	56.03	54.56	N/A	%

Final page for worklist # 8324

See attached for signatures
Analyst Signature **Date** 5-3-96

[signature] 5-4-96
Analyst Signature **Date**

Verified by H Anastor 5-7-96

Data Entry Comments: Sample produced a second weight loss step of 2.49% at approximately 300°C. The sample result is the sum of two weight loss steps.

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

LABCORE Data Entry Template for Worklist# 8324

Analyst: SMF **Instrument:** TGA0 _____ **Book #** 82N8A

Method: LA-560-112 Rev/Mod _____

Worklist Comment: C-106 Grab. Run under AIR. new

GROUP	PROJECT	S TYPE	SAMPLE#	R	A	-------TEST------	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD				TGA-01	SOLID			N/A	%
96000174	C-106 GRAB	2 SAMPLE	S96T002351	0		TGA-01	SOLID	N/A			%
96000174	C-106 GRAB	3 DUP	S96T002351	0		TGA-01	SOLID			N/A	%

Final page for worklist # 8324

Susie M. Dulton 5-3-96

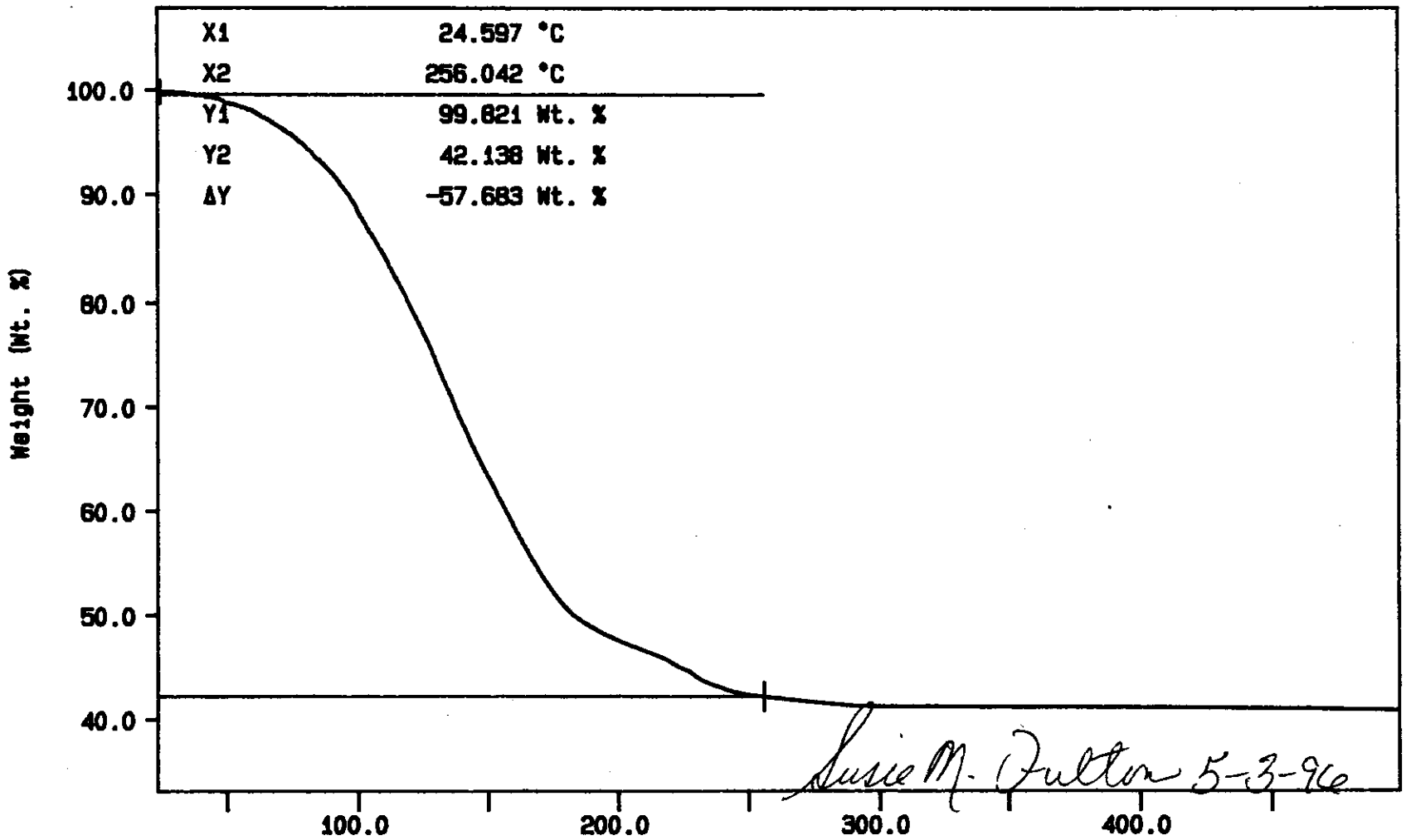
Analyst Signature **Date** **Analyst Signature** **Date**

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

Curve 1: TGA
File info: TER050301 Fri May 3 06:52:59 1996
Sample Weight: 20.907 mg
TGA STD B2N8-A

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 402 TO 404.

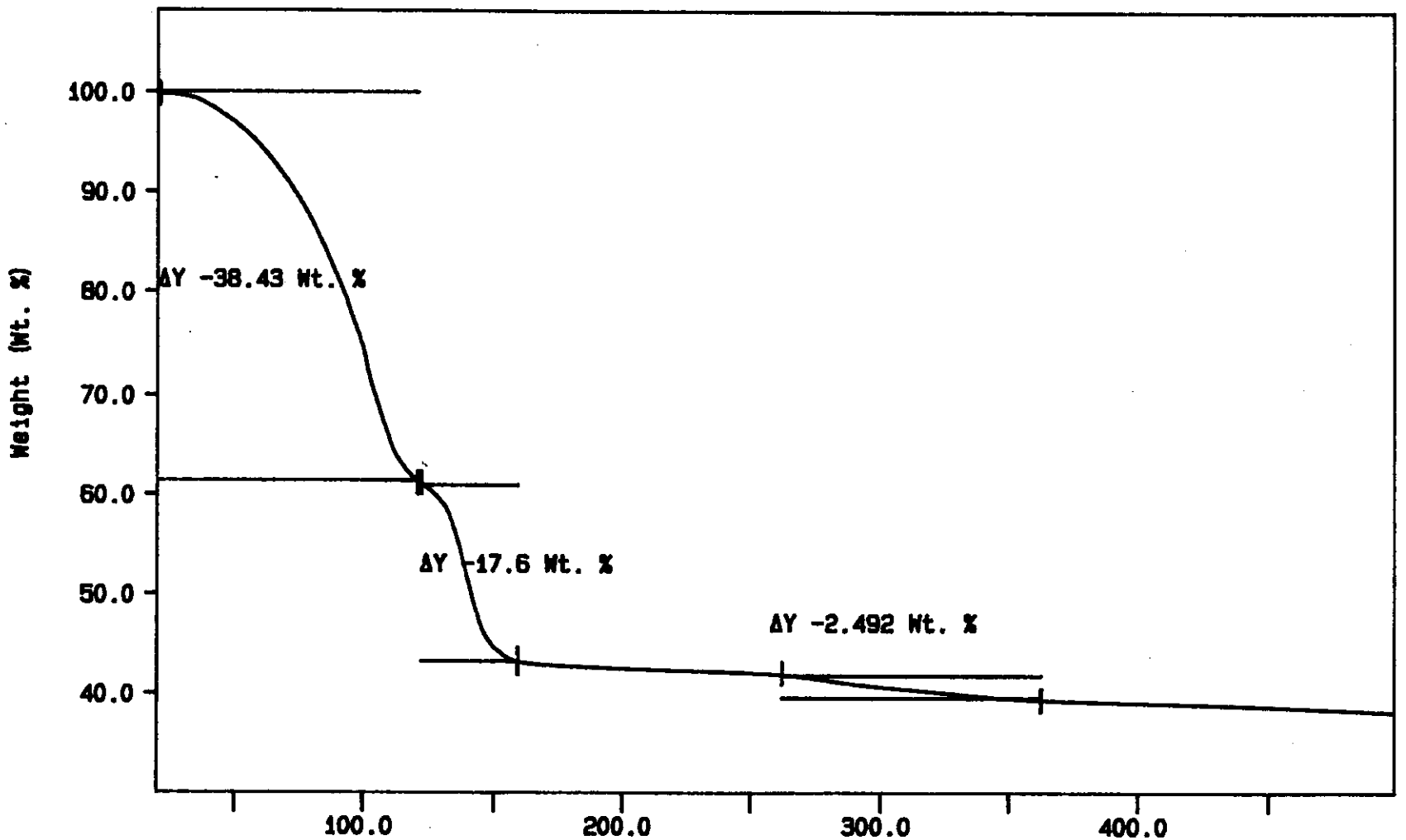


Susie M. Fulton 5-3-96

10C/MIN N2
TEMP1: 35.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 800.0 C

KR MONTEITH
PERKIN-ELMER
7 Series Thermal Analysis System
Fri May 3 08:38:54 1996

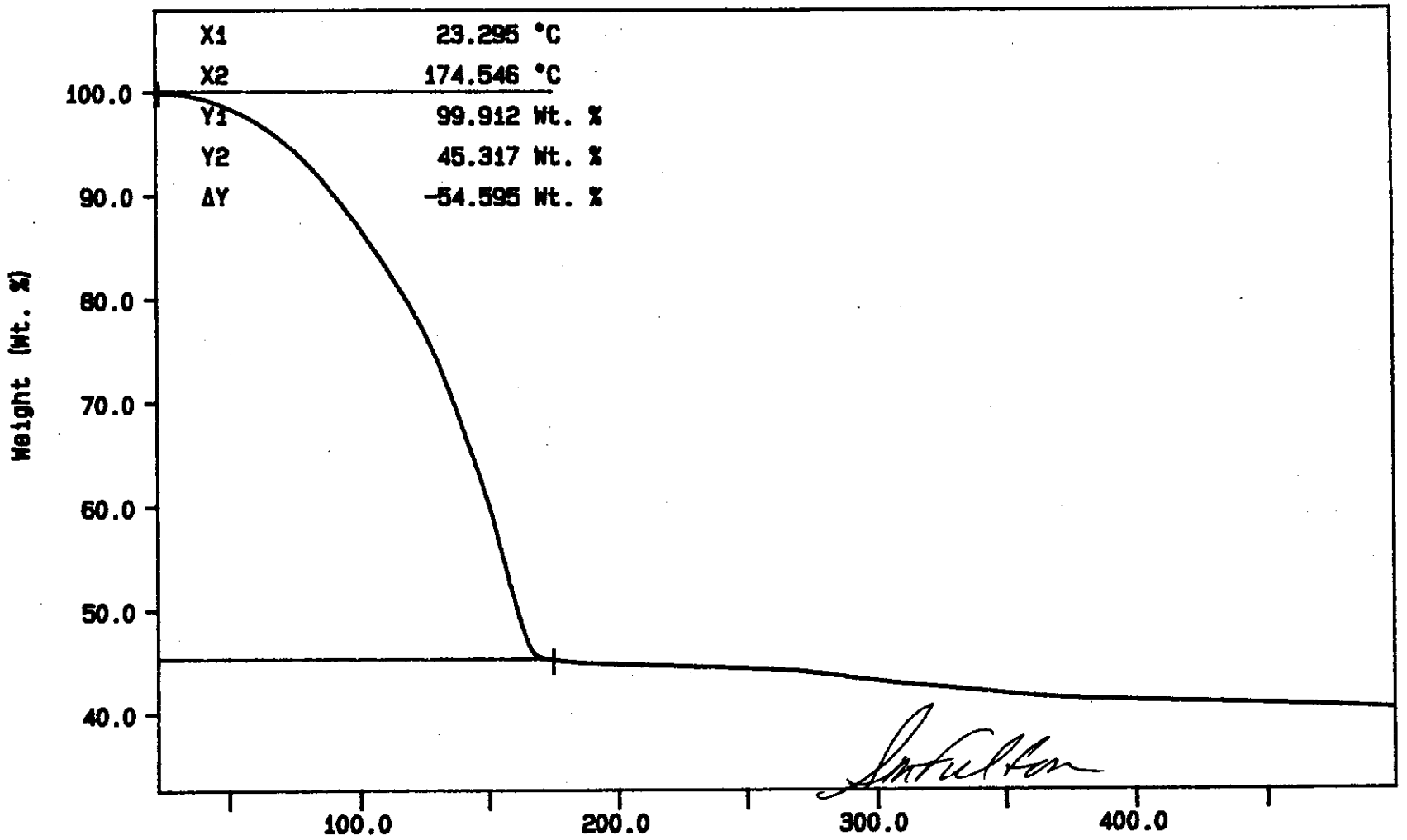
Curve 1: TGA
File info: SAM050303 Fri May 3 10:30:33 1996
Sample Weight: 11.149 mg
S96T002351



10C/MIN N2
TEMP1: 35.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 500.0 C

SM FULTON
PERKIN-ELMER
7 Series Thermal Analysis System
Fri May 3 10:47:02 1996

Curve 1: TGA
File info: SAM050304 Fri May 3 11:44:58 1996
Sample Weight: 22.422 mg
S96T002351 DUP



10C/MIN AIR
TEMP1: 25.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 500.0 C

SM FULTON
PERKIN-ELMER
7 Series Thermal Analysis System
Fri May 3 15:14:31 1996

LABCORE Data Entry Template for Worklist# 8333

Analyst: SMF **Instrument:** TGA0 1 **Book #** 82N8A

Method: LA-560-112 Rev/Mod B-1

Worklist Comment: Please run C-106 TGAs under AIR. bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R	A	-------TEST------	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD				TGA-01	SOLID	59.2	59.1	N/A	%
96000082	C-106 GRAB	2 SAMPLE	S96T002042	1		TGA-01	SOLID	N/A	56.10		%
96000082	C-106 GRAB	3 DUP	S96T002042	1		TGA-01	SOLID	56.10	54.50	N/A	%

Final page for worklist # 8333

Susie M. Fulton 5-3-96
Analyst Signature **Date**

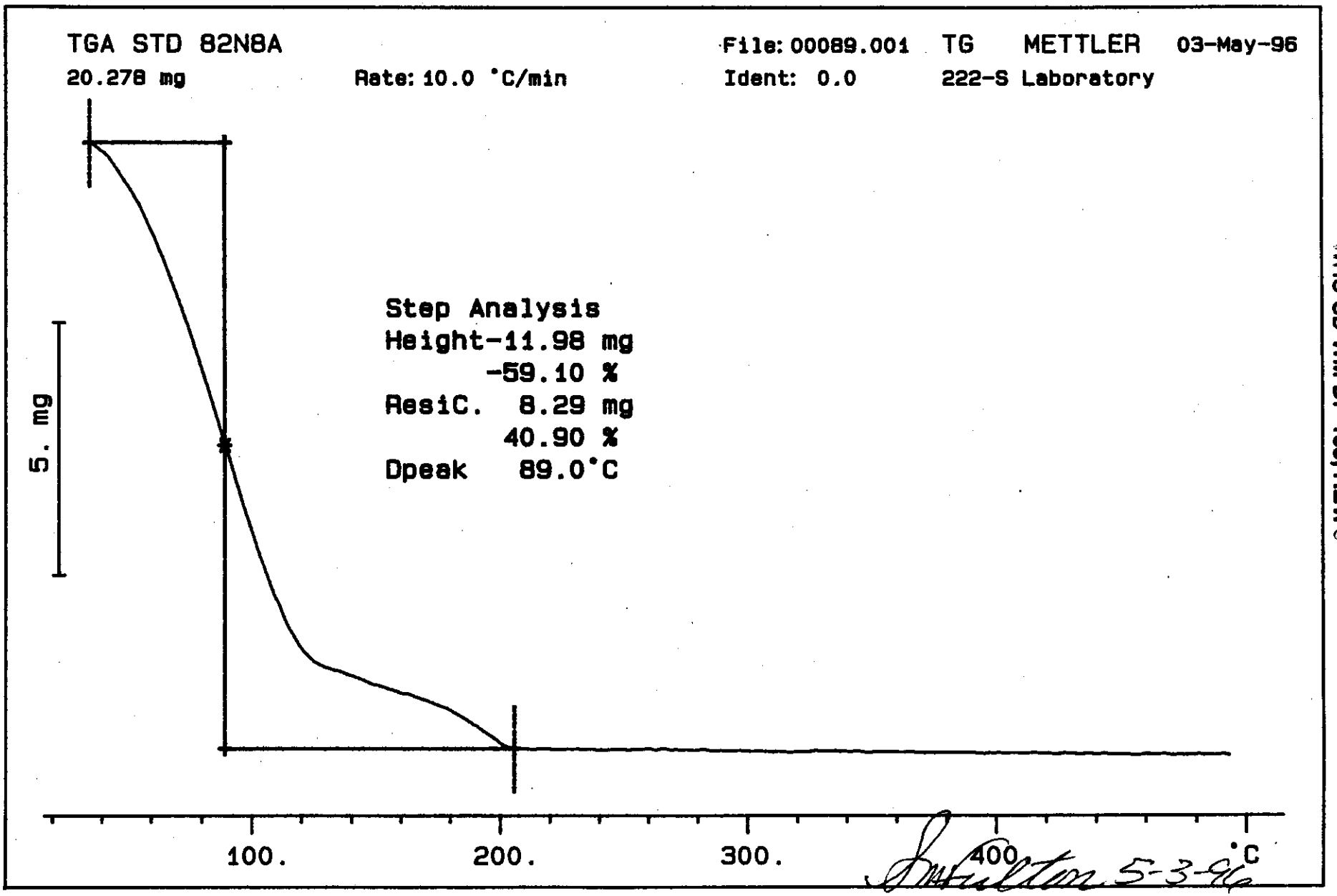
Gary Hammond 5-4-96
Analyst Signature **Date**

Verified by H Anastn 5-7-96

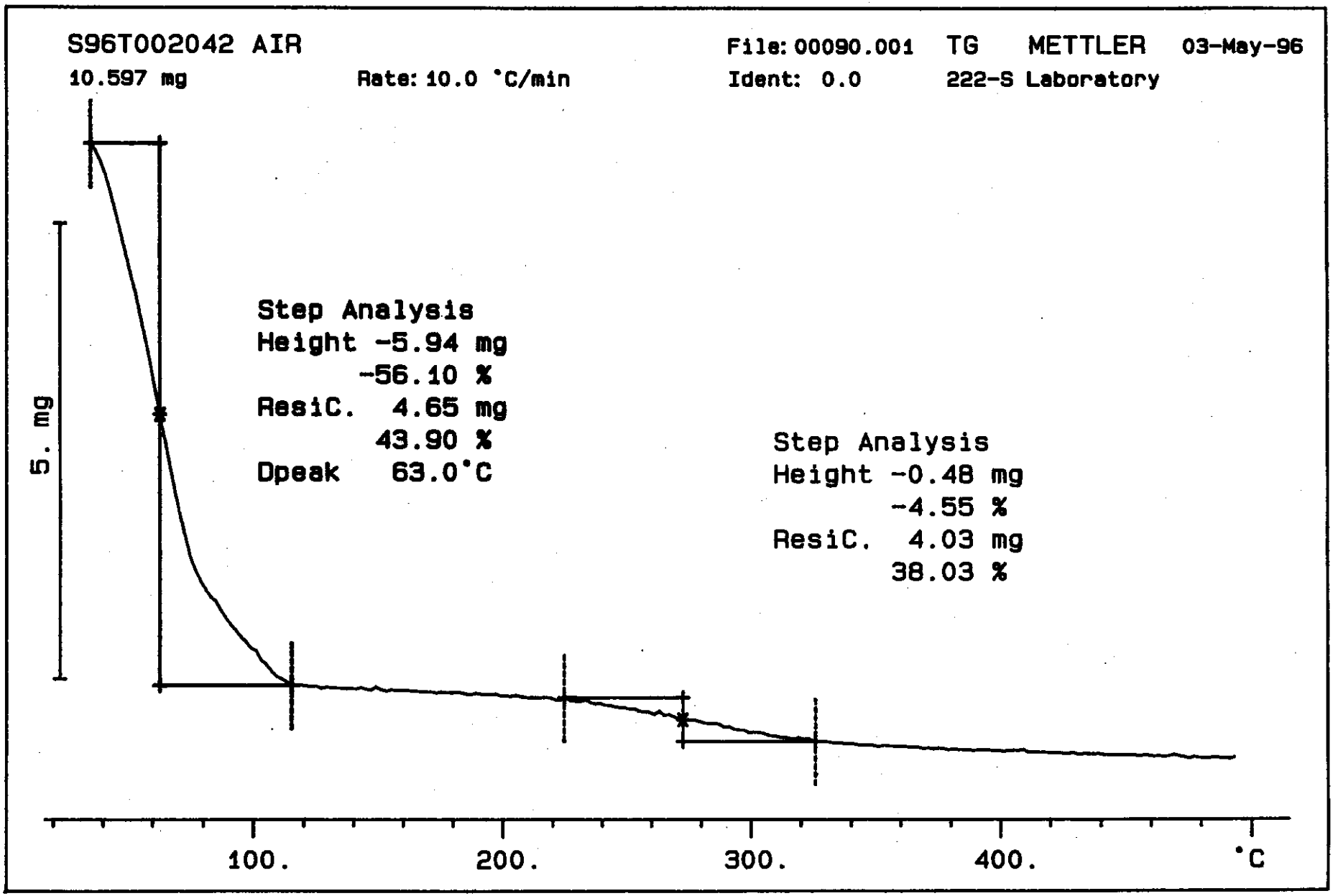
Data Entry Comments: Sample produced another weight loss step of 4.55% at approximately 280°C.

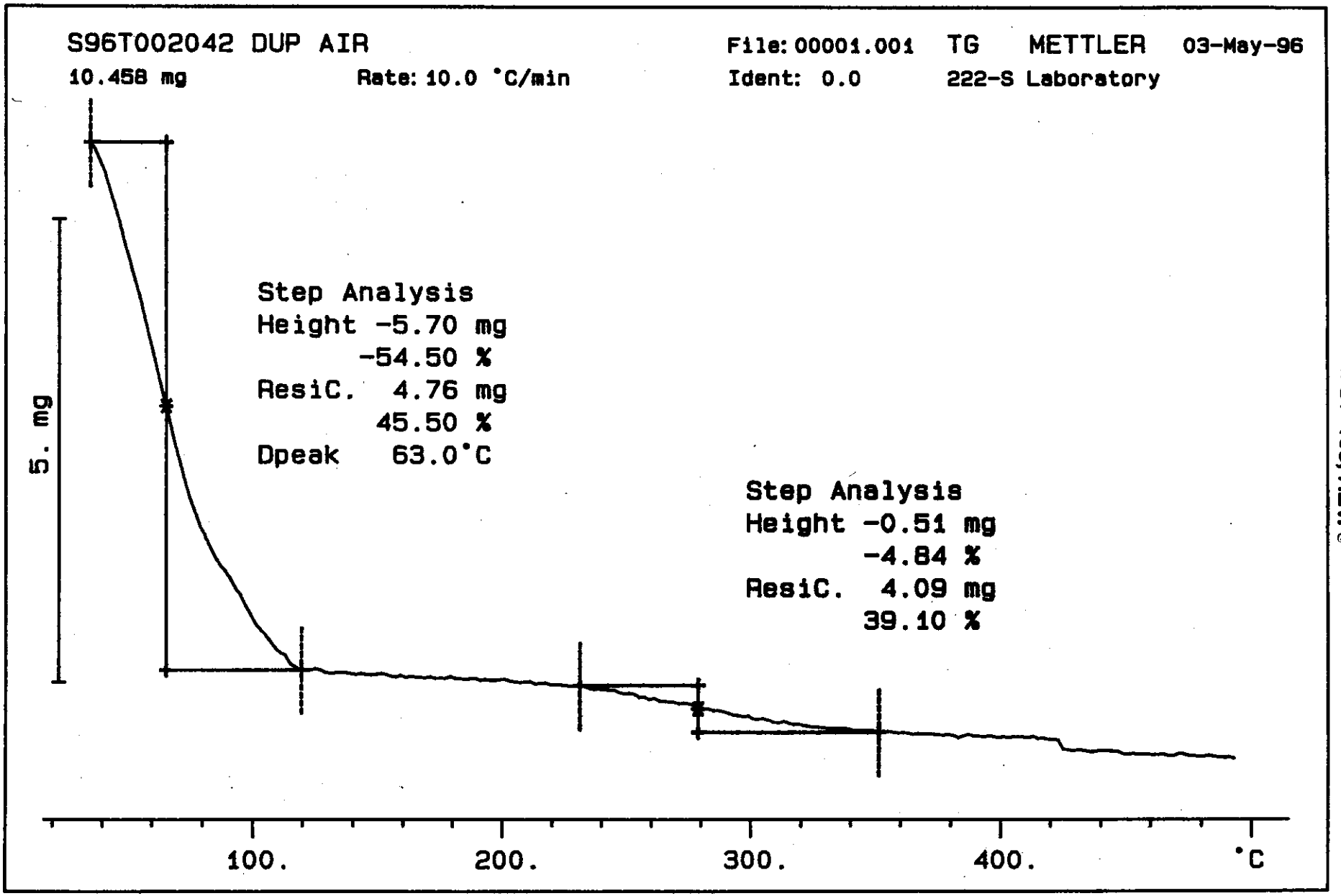
Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 406 TO 408.



S. Wilton 5-3-96


S96T002042 AIR
10.597 mg
Rate: 10.0 °C/min
File: 00090.001
TG METTLER 03-May-96
Ident: 0.0
222-S Laboratory
Step Analysis
Height -5.94 mg
-56.10 %
ResiC. 4.65 mg
43.90 %
Dpeak 63.0°C
Step Analysis
Height -0.48 mg
-4.55 %
ResiC. 4.03 mg
38.03 %
5. mg
100.
200.
300.
400.
°C


S96T002042 DUP AIR
10.458 mg
Rate: 10.0 °C/min
File: 00001.001
TG
METTLER
03-May-96
Ident: 0.0
222-S Laboratory
Step Analysis
Height -5.70 mg
-54.50 %
ResiC. 4.76 mg
45.50 %
Dpeak 63.0°C
Step Analysis
Height -0.51 mg
-4.84 %
ResiC. 4.09 mg
39.10 %
5. mg
100.
200.
300.
400.
°C

LABCORE Data Entry Template for Worklist# 8826

Analyst: RDM **Instrument:** TGA0 3 **Book #** 82N8A

Method: LA-514-114 Rev/Mod C-1

Worklist Comment: C-106 FOR TGA01 CONTACT BLONDIE PRIOR TO RUN RTS!

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	STD				TGA-03	LIQUID	59.2	57.94	N/A	%
96000638	C-106 GRAB	2	SAMPLE	S96T002766	0		TGA-03	LIQUID	N/A	96.24		%
96000638	C-106 GRAB	3	DUP	S96T002766	0		TGA-03	LIQUID	96.24	96.16	N/A	%
96000648	C-106 GRAB	4	SAMPLE	S96T002825	0		TGA-03	LIQUID	N/A	95.78		%
		5	STD				TGA-03	LIQUID	59.2	58.97	N/A	%
96000648	C-106 GRAB	6	DUP	S96T002825	0		TGA-03	LIQUID	95.78	90.16	N/A	%

Final page for worklist # 8826

See Attached for Signatures
Analyst Signature Date

RHHeth 5-21-96
Analyst Signature Date

Validated by HAnastos 5.22.96

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

LABCORE Data Entry Template for Worklist# 8826

Analyst: RMM **Instrument:** TGA0 3 **Book #** 02N8A

Method: LA-560-112 Rev/Mod C-1

Worklist Comment: C-106 FOR TGA01 CONTACT BLONDIE PRIOR TO RUN RTS!

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	STD				TGA-01	LIQUID			N/A	%
96000638	C-106 GRAB	2	SAMPLE	S96T002766	0		TGA-01	LIQUID	N/A			%
96000638	C-106 GRAB	3	DUP	S96T002766	0		TGA-01	LIQUID			N/A	%
96000648	C-106 GRAB	4	SAMPLE STD	S96T002825	0		TGA-01	LIQUID	N/A			%
96000648	C-106 GRAB	5	DUP	S96T002825	0		TGA-01	LIQUID			N/A	%

Final page for worklist # 8826

RMMyn 5/17/96
Analyst Signature **Date**

Analyst Signature **Date**

SMFutler 5-18-96

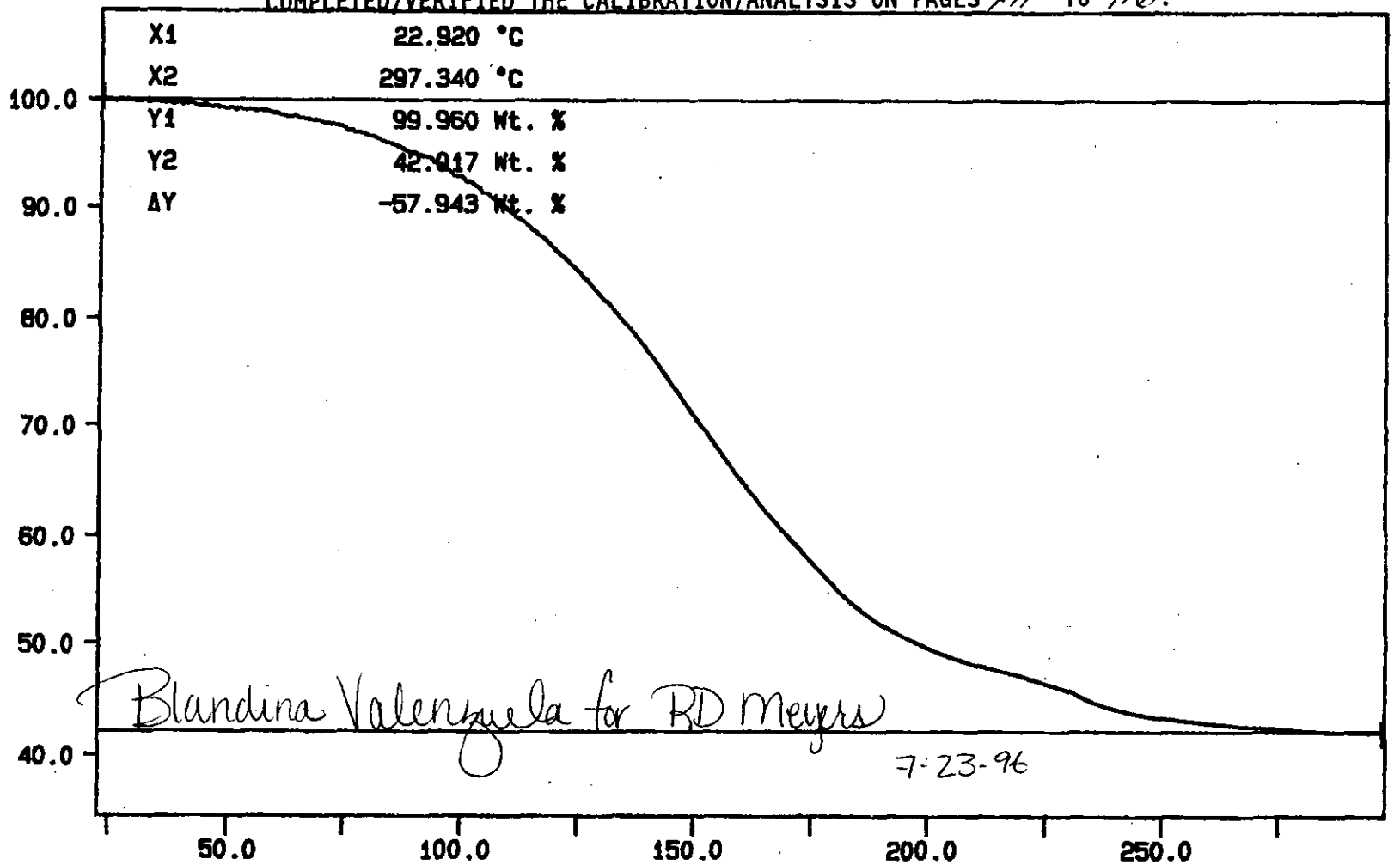
Other Instrument was used.

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

Curve 1: TGA
File info: ter051701 Fri May 17 18:39:59 1996
Sample Weight: 25.872 mg
TGA STD 82N8-A

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 411 TO 416.

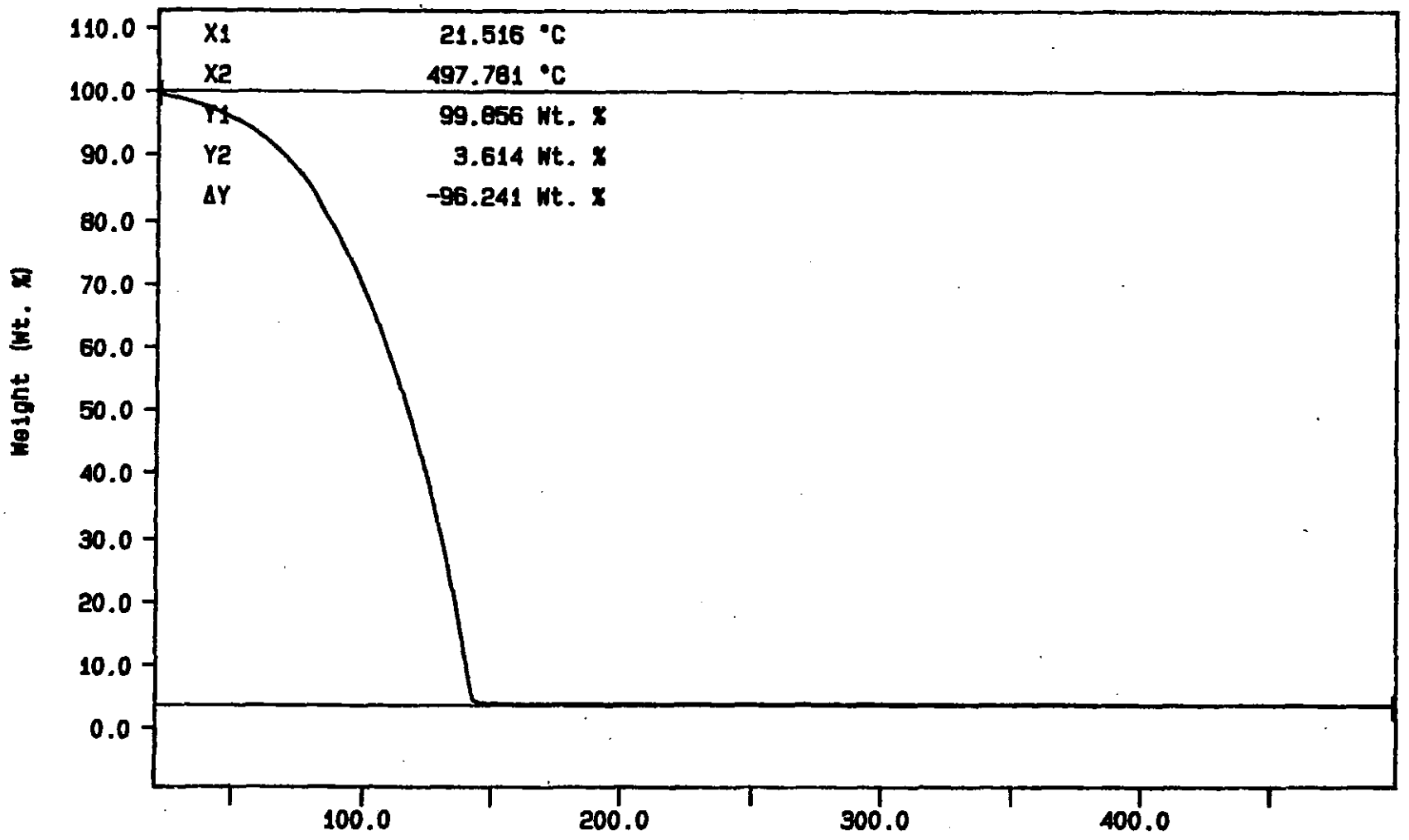


Blandina Valenzuela for RD Meyers
7-23-96

N2 10C/MIN
TEMP1: 35.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 300.0 C

rd meyers
PERKIN-ELMER
7 Series Thermal Analysis System
Fri May 17 18:43:52 1996

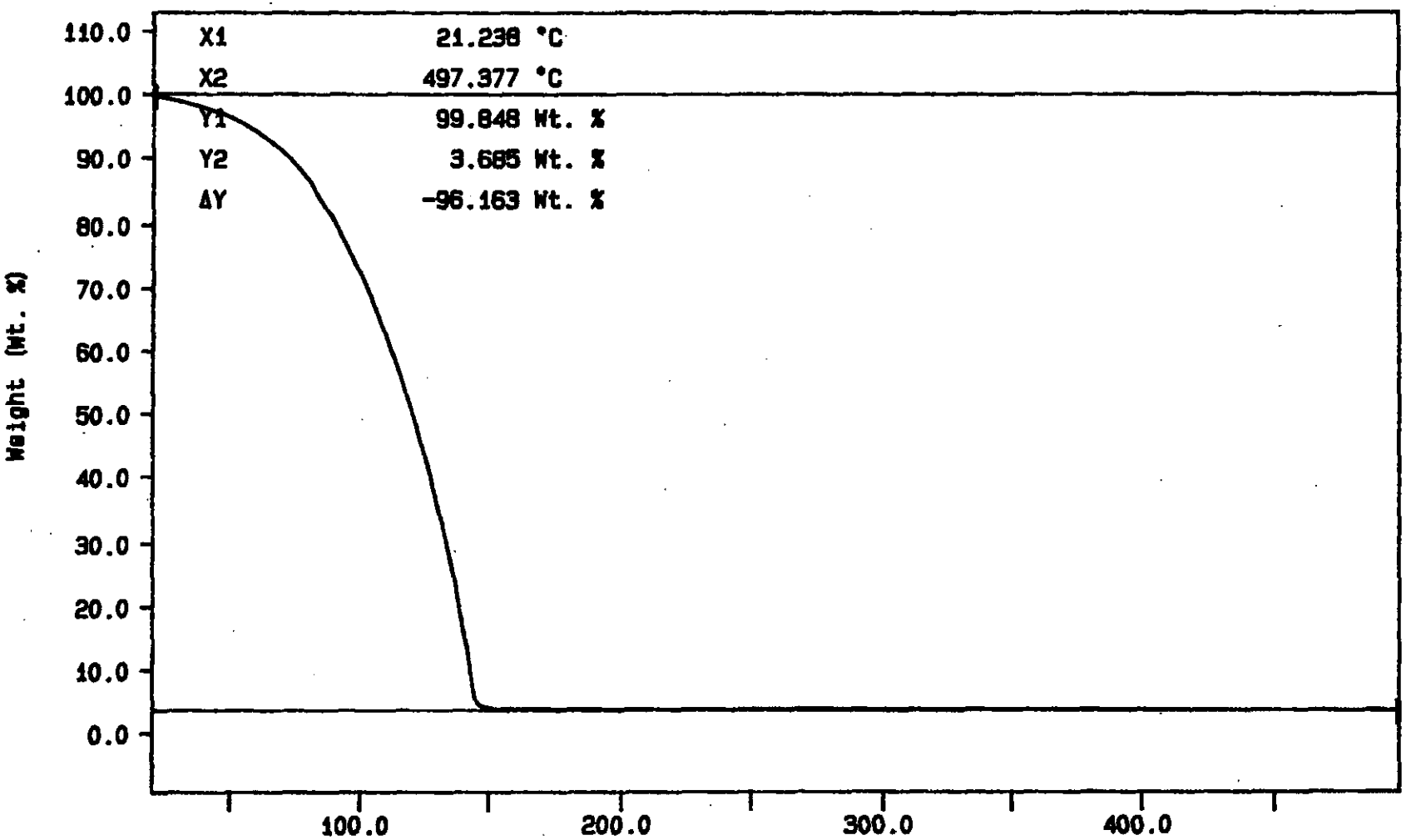
Curve 1: TGA
File info: SAM051701 Fri May 17 22:18:08 1996
Sample Weight: 11.651 mg
S96T002766



10C/MIN N2
TEMP1: 35.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 500.0 C

RD MEYERS
PERKIN-ELMER
7 Series Thermal Analysis System
Fri May 17 22:19:55 1996

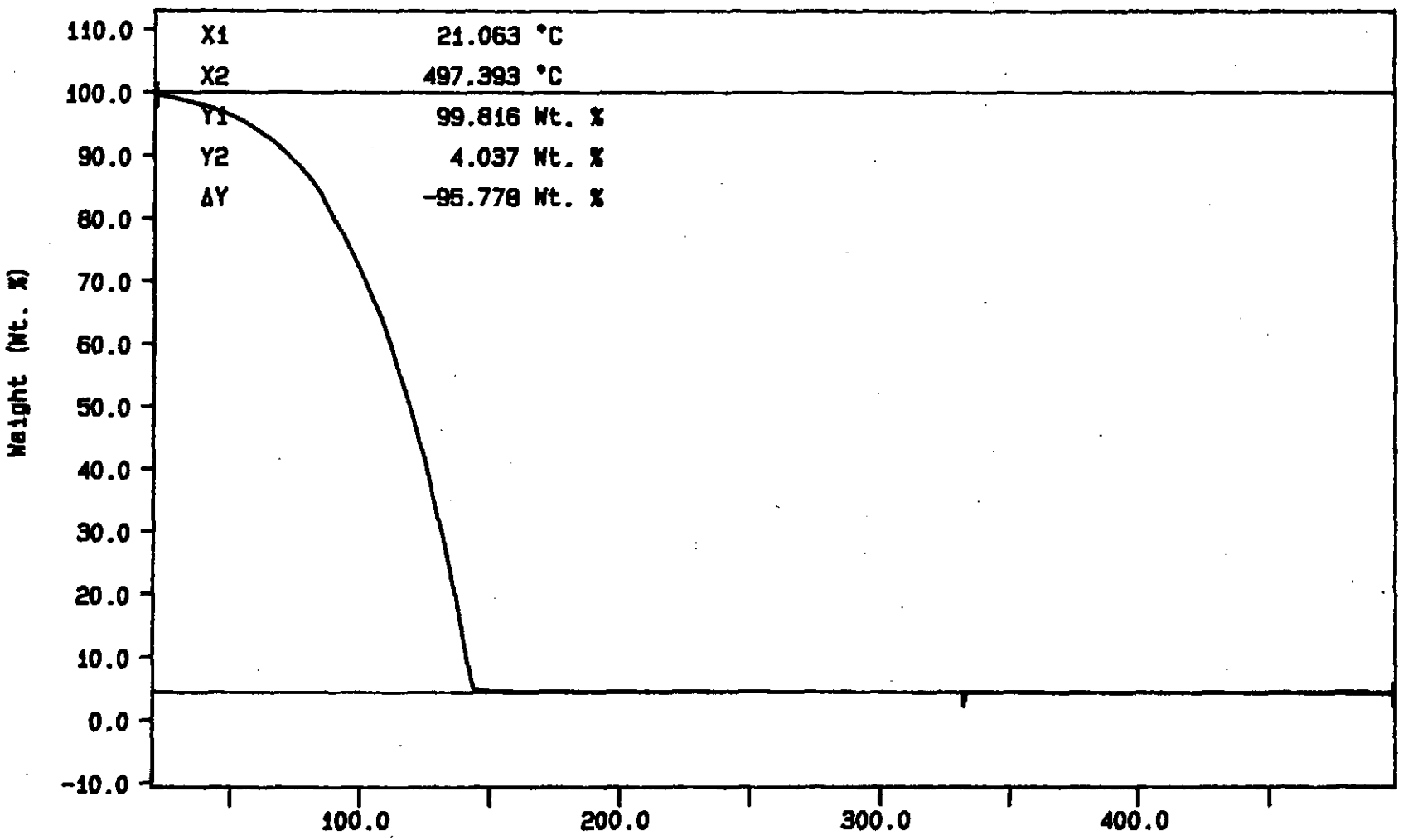
Curve 1: TGA
File info: SAM051801 Sat May 18 01:24:00 1996
Sample Weight: 12.140 mg
S96T002766DUP



10C/MIN N2
TEMP1: 30.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 600.0 C

RD MEYERS
PERKIN-ELMER
7 Series Thermal Analysis System
Sat May 18 03:19:32 1996

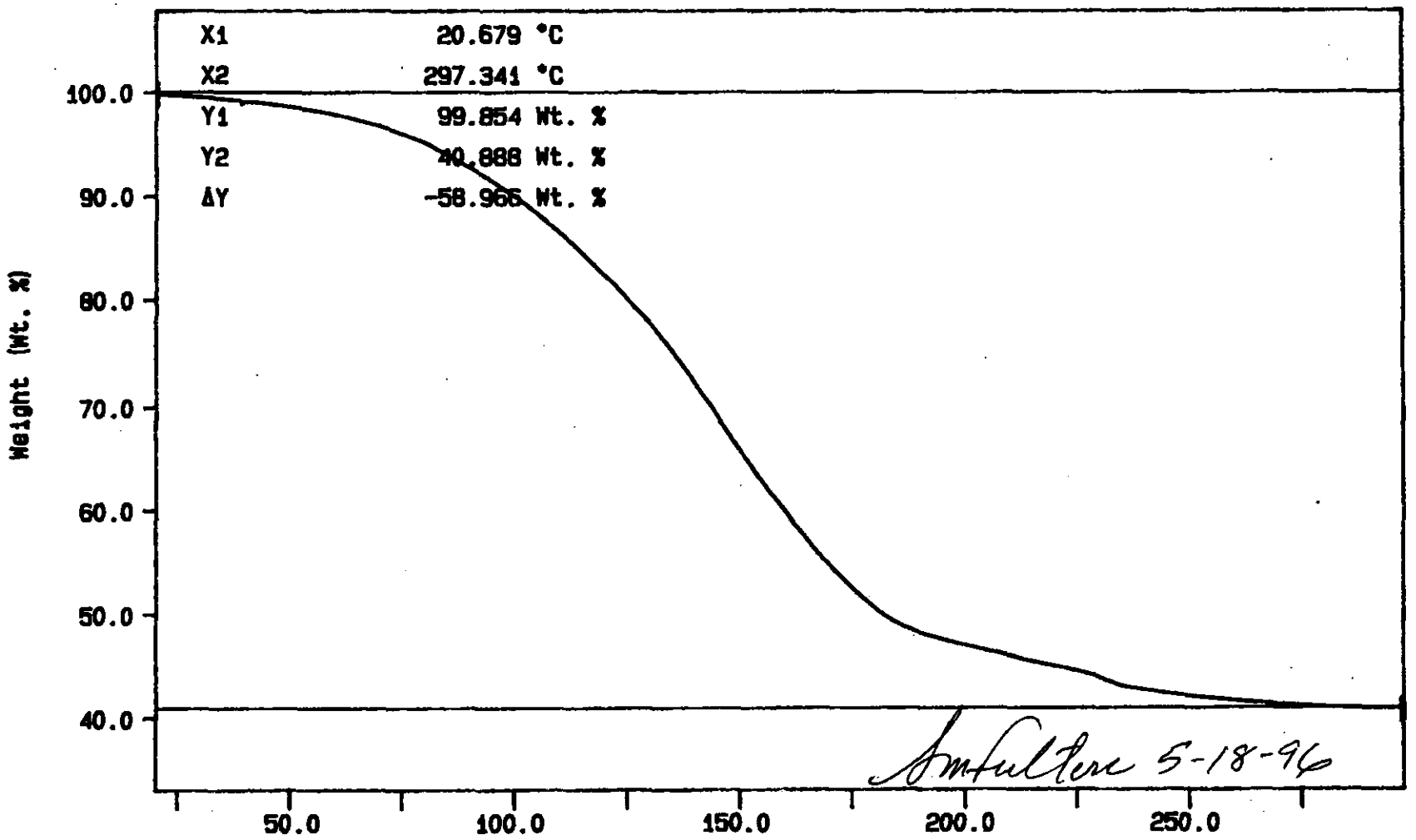
Curve 1: TGA
File info: SAM051802 Sat May 18 04:10:54 1996
Sample Weight: 11.487 mg
S96T002825



10C/MIN N2
TEMP1: 35.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 600.0 C

RD MEYERS
PERKIN-ELMER
7 Series Thermal Analysis System
Sat May 18 04:12:09 1996

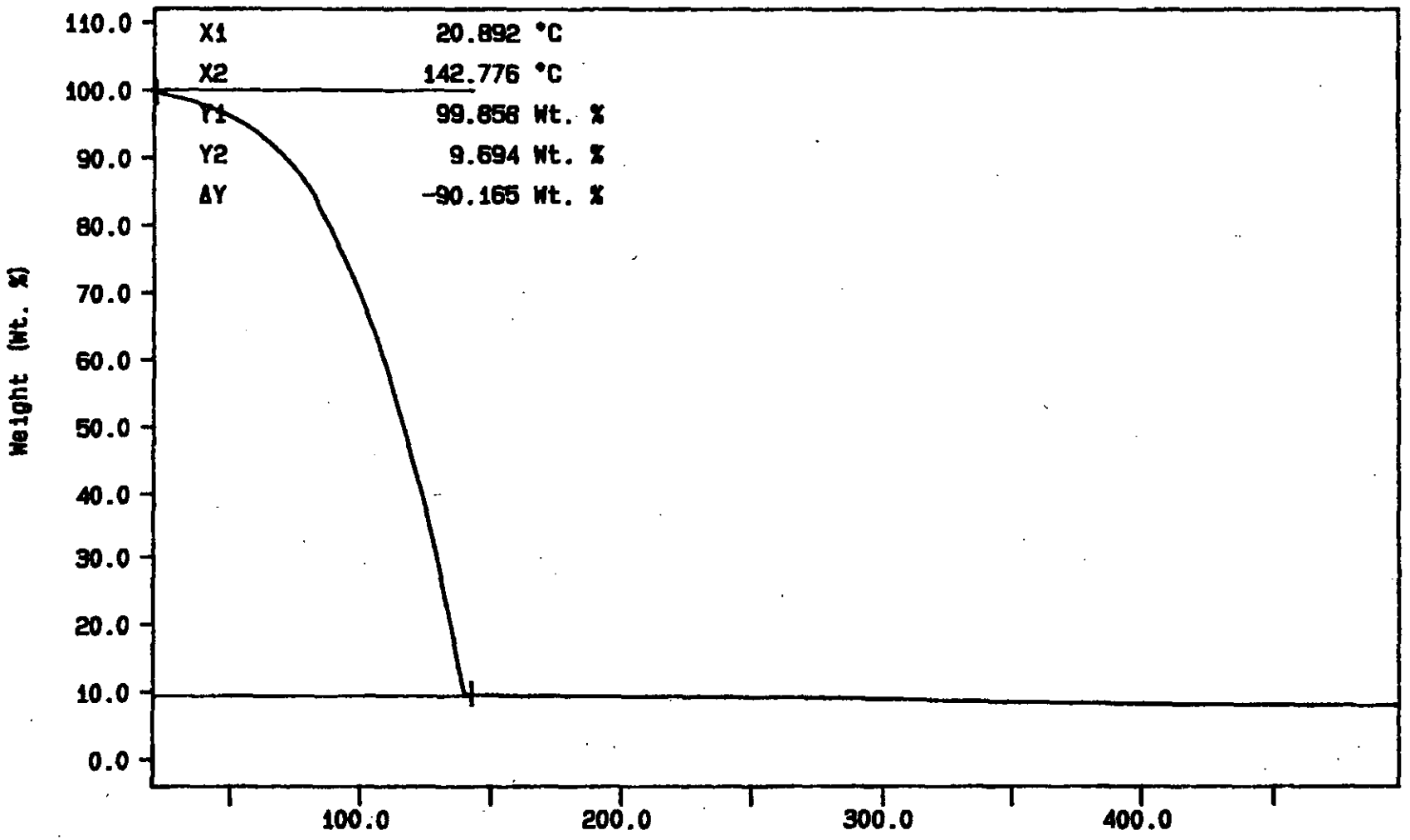
Curve 1: TGA
File info: TER051801 Sat May 18 05:46:09 1996
Sample Weight: 21.407 mg
TGA STD 82N8-A



N2 10C/MIN
TEMP1: 35.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 300.0 C

SM FULTON
PERKIN-ELMER
7 Series Thermal Analysis System
Sat May 18 06:43:24 1996

Curve 1: TGA
File info: SAM0561801 Sat May 18 07:29:33 1996
Sample Weight: 10.248 mg
S96T002825



10C/MIN N2
TEMP1: 35.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 600.0 C

SM FULTON
PERKIN-ELMER
7 Series Thermal Analysis System
Sat May 18 08:16:11 1996

LABCORE Data Entry Template for Worklist# 8836

Analyst: RCM **Instrument:** TGA0 1 **Book #** 92NBA

Method: LA-560-112 Rev/Mod B-1

Worklist Comment: C-106 FOR TGA-01 RUN UNDER N2 RTS!

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	STD				TGA-01	SOLID	59.2	61.38	N/A	%
96000648	C-106 GRAB	2	SAMPLE	S96T002827	0		TGA-01	SOLID	N/A	95.08		%
96000648	C-106 GRAB	3	DUP	S96T002827	0		TGA-01	SOLID	95.08	93.40	N/A	%

Final page for worklist # 8836

RCMyers 5/16/96
Analyst Signature **Date**

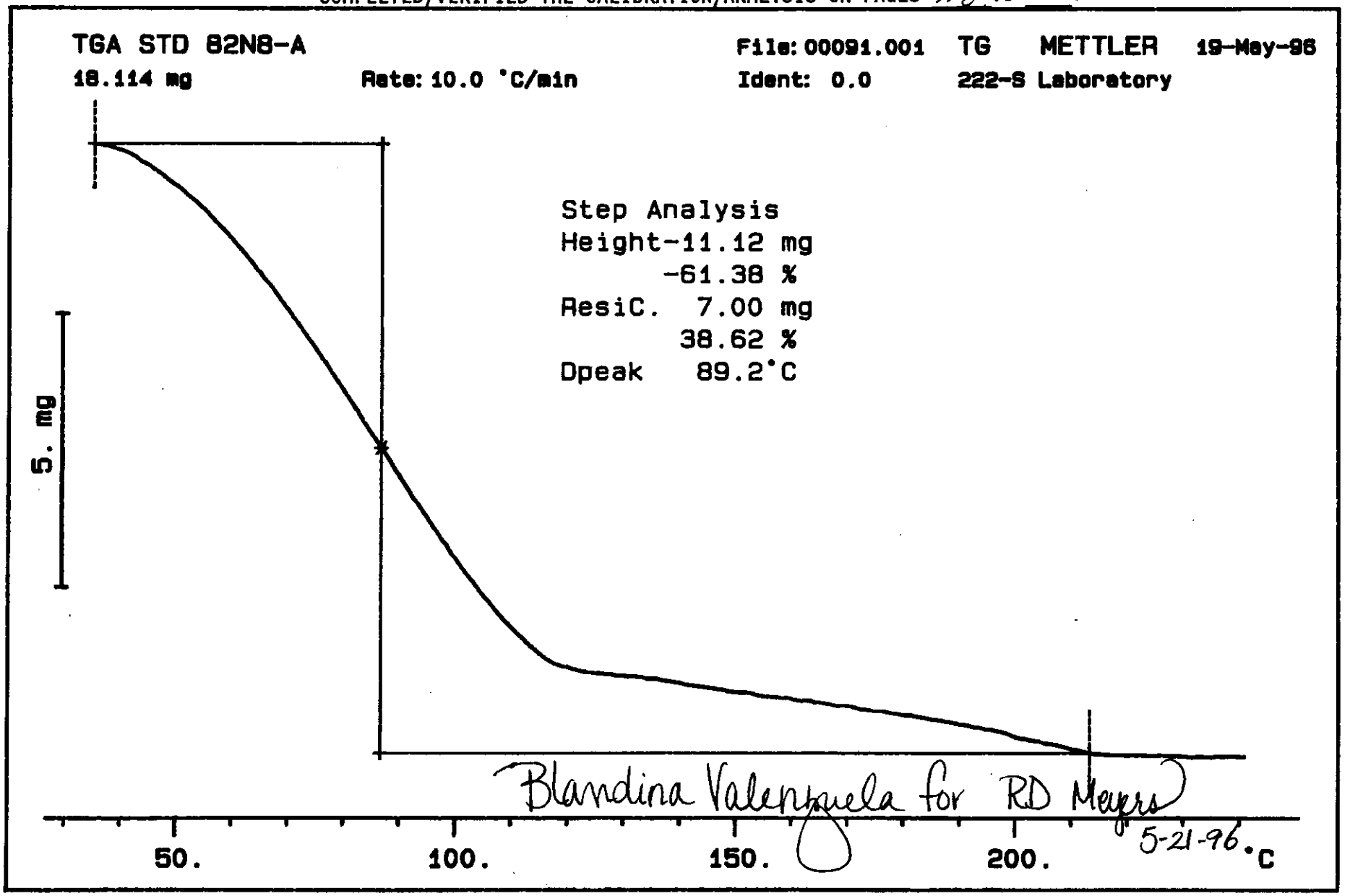
RE Wright 5/21/96
Analyst Signature **Date**

Validated by HAnastas 5.22.96

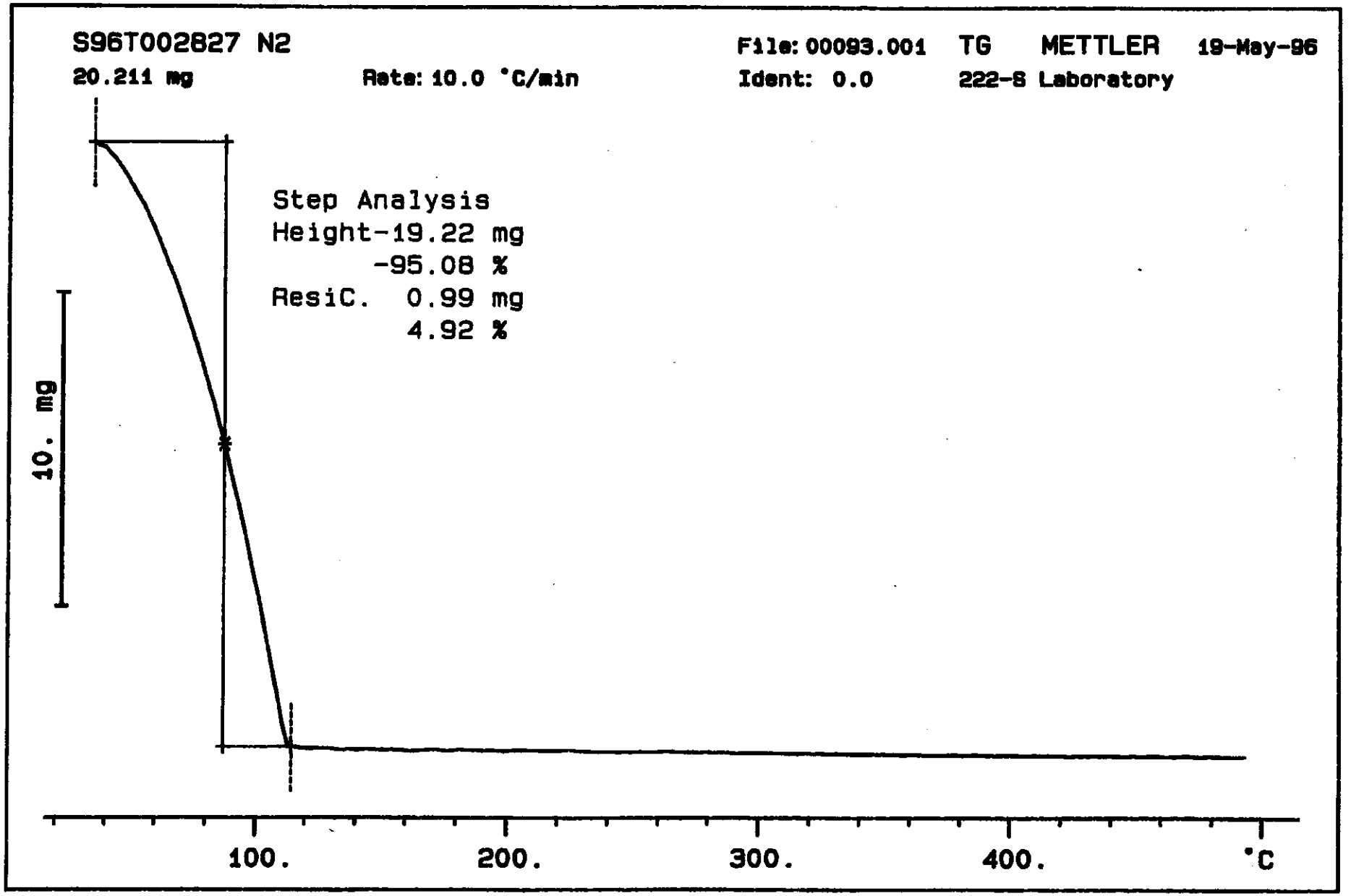
Data Entry Comments:

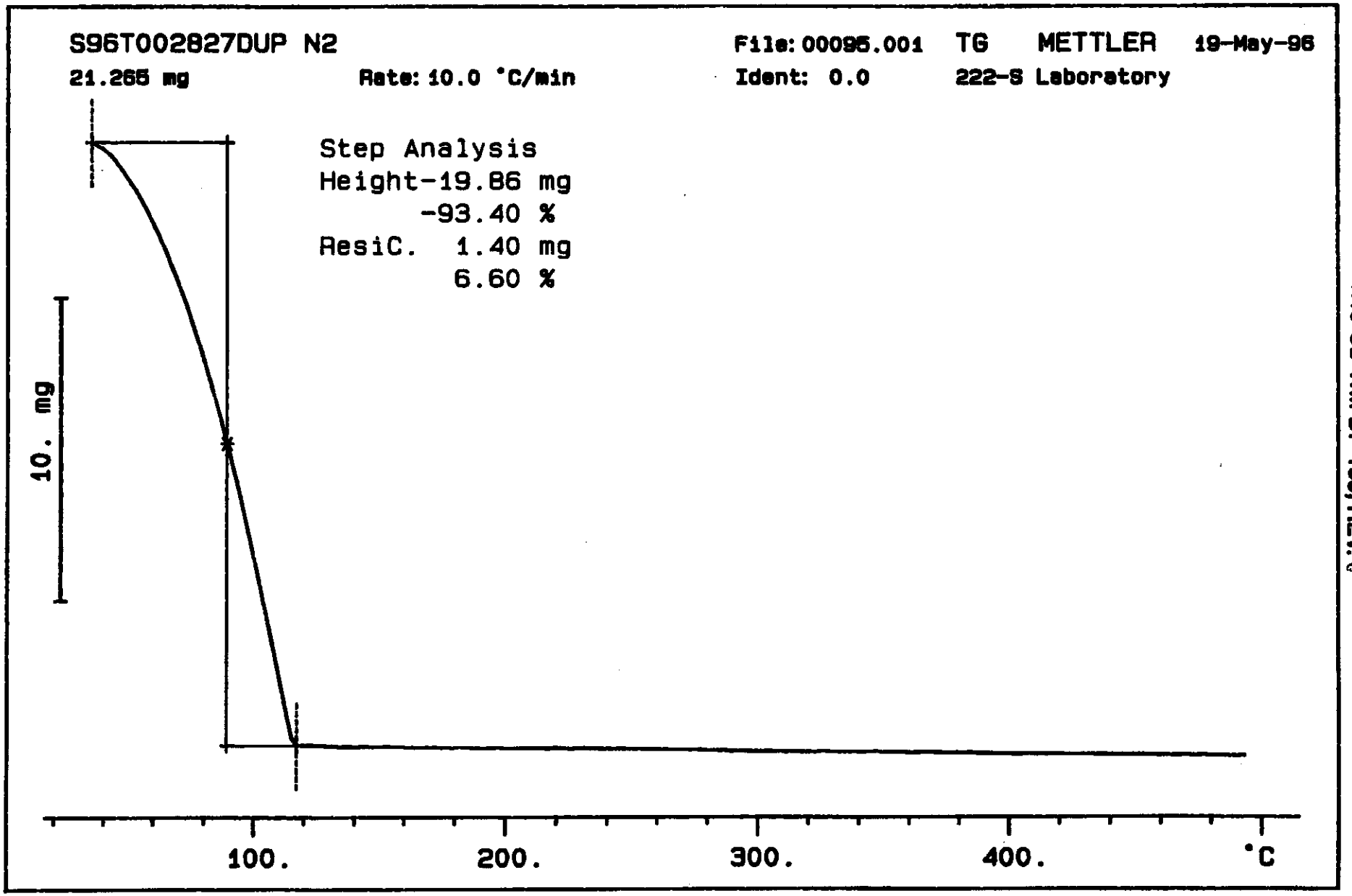
Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 418 TO 420.



Blandina Valenzuela for RD Meyers 5-21-96


S96T002827 N2
20.211 mg
Rate: 10.0 °C/min
File: 00093.001
TG
METTLER
19-May-96
Ident: 0.0
222-S Laboratory
Step Analysis
Height-19.22 mg
-95.08 %
ResiC. 0.99 mg
4.92 %
10. mg
100.
200.
300.
400.
°C


S96T002827DUP N2
21.265 mg
Rate: 10.0 °C/min
File: 00095.001
TG
METTLER
19-May-96
Ident: 0.0
222-S Laboratory
Step Analysis
Height-19.86 mg
-93.40 %
ResiC. 1.40 mg
6.60 %
10. mg
100.
200.
300.
400.
°C

LABCORE Data Entry Template for Worklist# 8909

Analyst: RDM **Instrument:** TGA0 1 **Book #** 82N8A

Method: LA-560-112 Rev/Mod B-1

Worklist Comment: C-106 TGA RUN UNDER N2. RCJ

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	STD				TGA-01	LIQUID	59.2	58.93	N/A	%
96000638	C-106 GRAB	2	SAMPLE	S96T002770	0		TGA-01	LIQUID	N/A	96.86		%
96000638	C-106 GRAB	3	DUP	S96T002770	0		TGA-01	LIQUID	96.86	97.03	N/A	%
96000648	C-106 GRAB	4	SAMPLE	S96T002829	0		TGA-01	LIQUID	N/A	95.69		%
		5	STD				TGA-01	LIQUID	~~58.95~~ 59.2	58.95	N/A	%
96000648	C-106 GRAB	6	DUP	S96T002829	0		TGA-01	LIQUID	95.69	96.02	N/A	%

Final page for worklist # 8909

See Attached for Signatures

Analyst Signature **Date** **Analyst Signature** **Date**

Validated by Hlinastos 5.22.96

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

LABCORE Data Entry Template for Worklist# 8909

Analyst: RDM **Instrument:** TGA0 1 **Book #** 82NBA

Method: LA-560-112 Rev/Mod B-1

Worklist Comment: C-106 TGA RUN UNDER N2. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R	A	-------TEST------	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD				TGA-01	LIQUID			N/A	%
96000638	C-106 GRAB	2 SAMPLE	S96T002770	0		TGA-01	LIQUID	N/A			%
96000638	C-106 GRAB	3 DUP	S96T002770	0		TGA-01	LIQUID			N/A	%
96000648	C-106 GRAB	4 SAMPLE	S96T002829	0		TGA-01	LIQUID	N/A			%
96000648	C-106 GRAB	5 DUP STD	S96T002829	0		TGA-01	LIQUID			N/A	%

Final page for worklist # 8909

RDMeyer 5/17/96
Analyst Signature **Date**

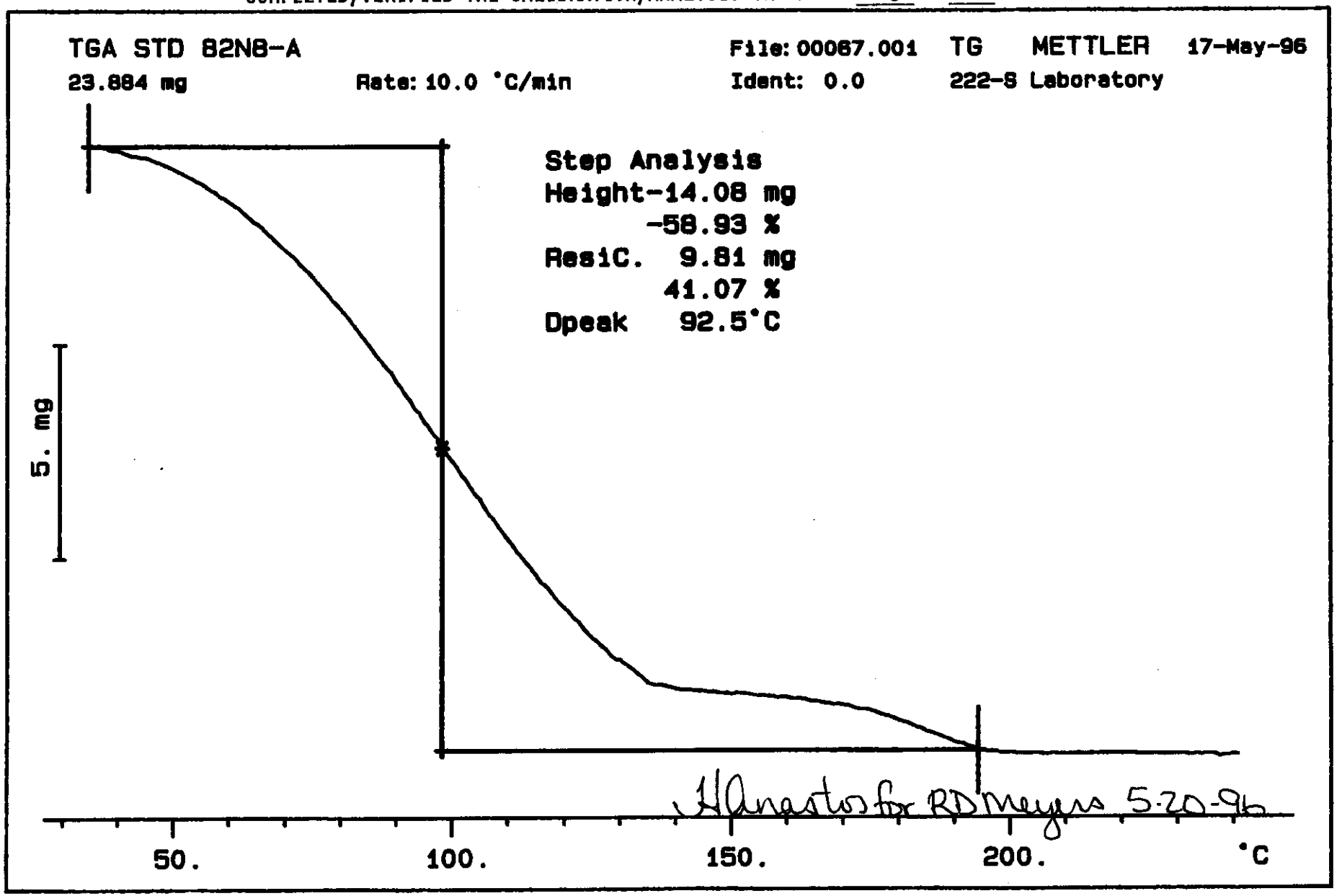
RCWright 5/21/96
Analyst Signature **Date**

SMfulton 5-18-96

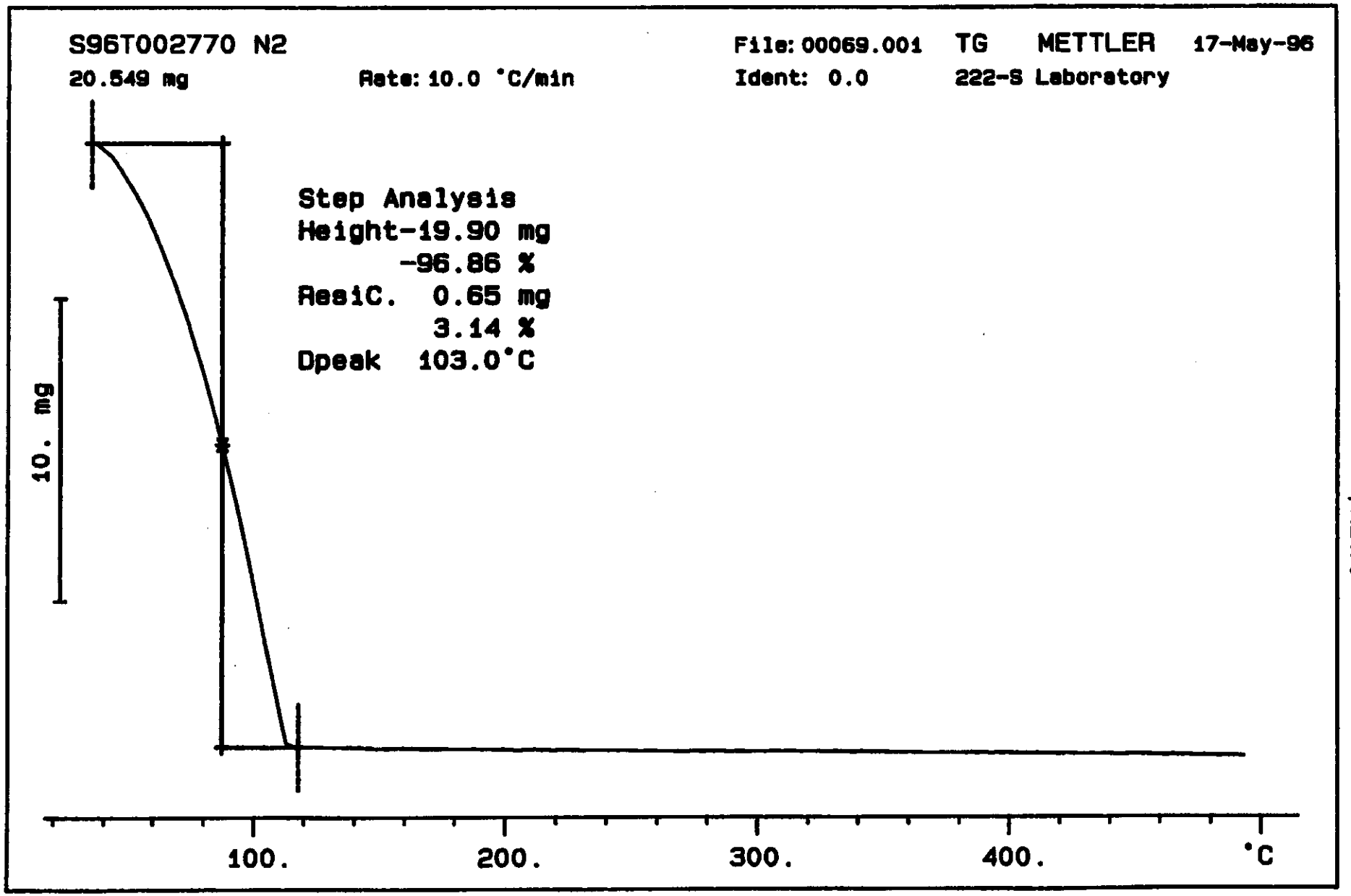
Data Entry Comments:

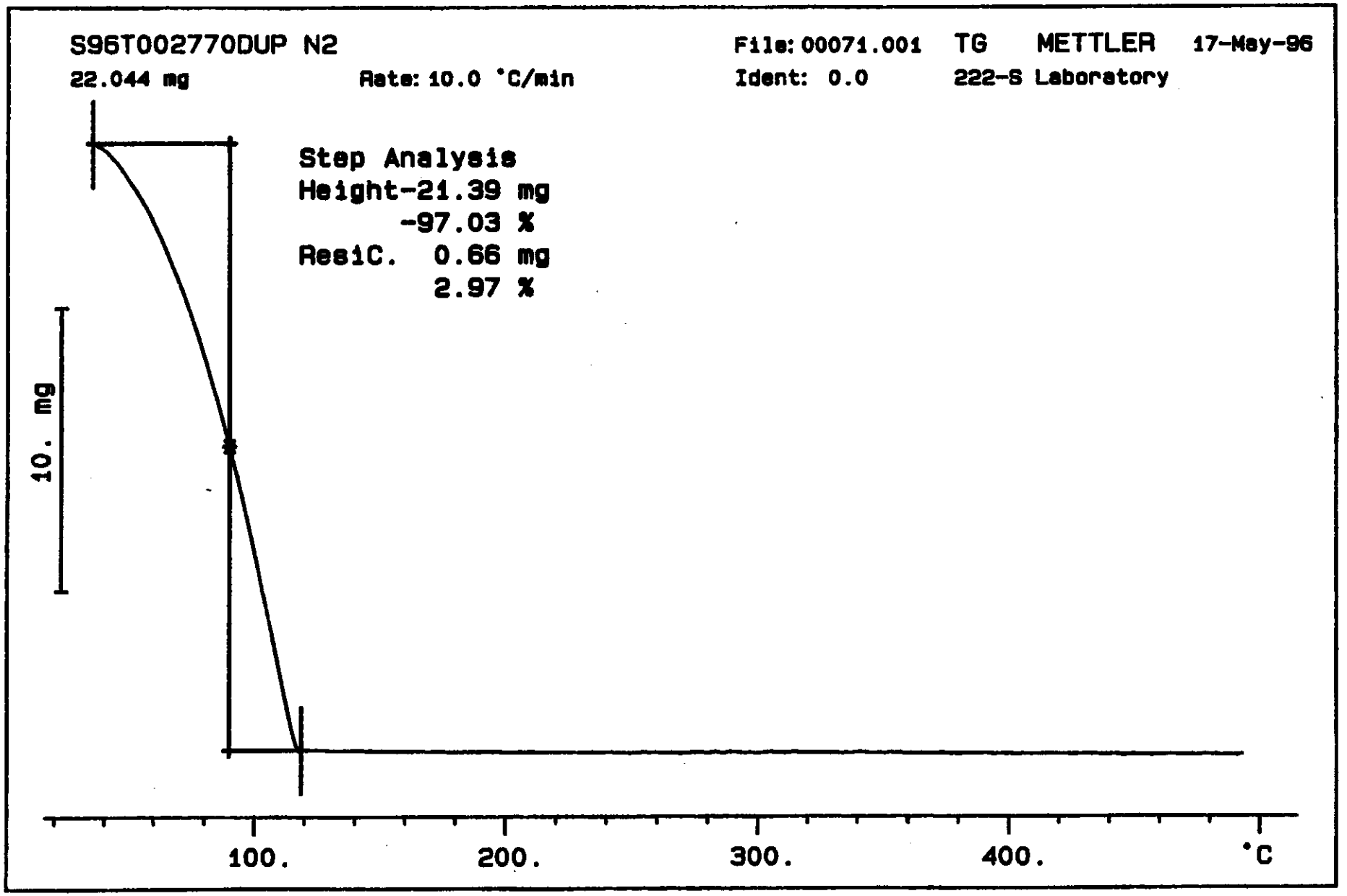
Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

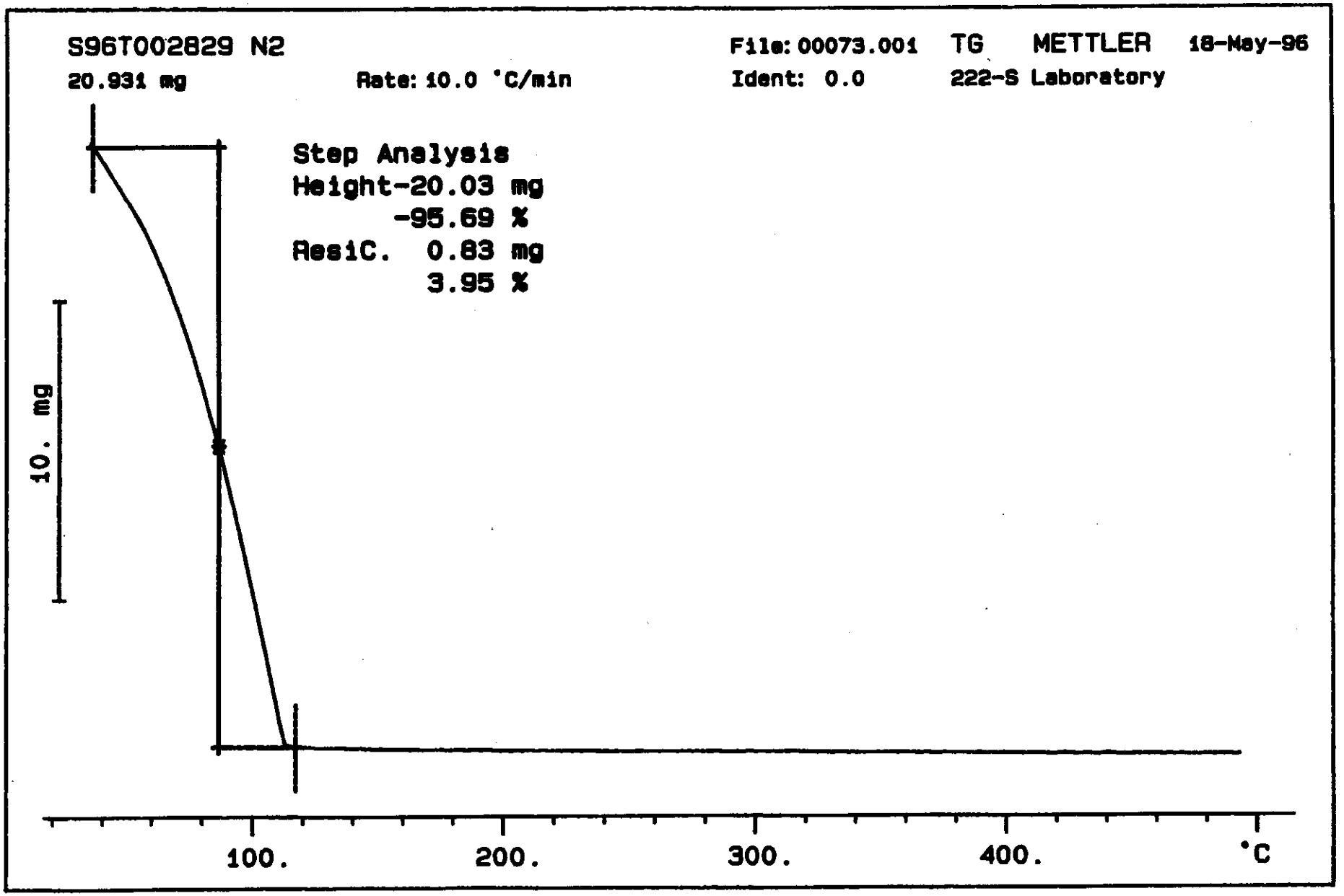
SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 423 TO 428.

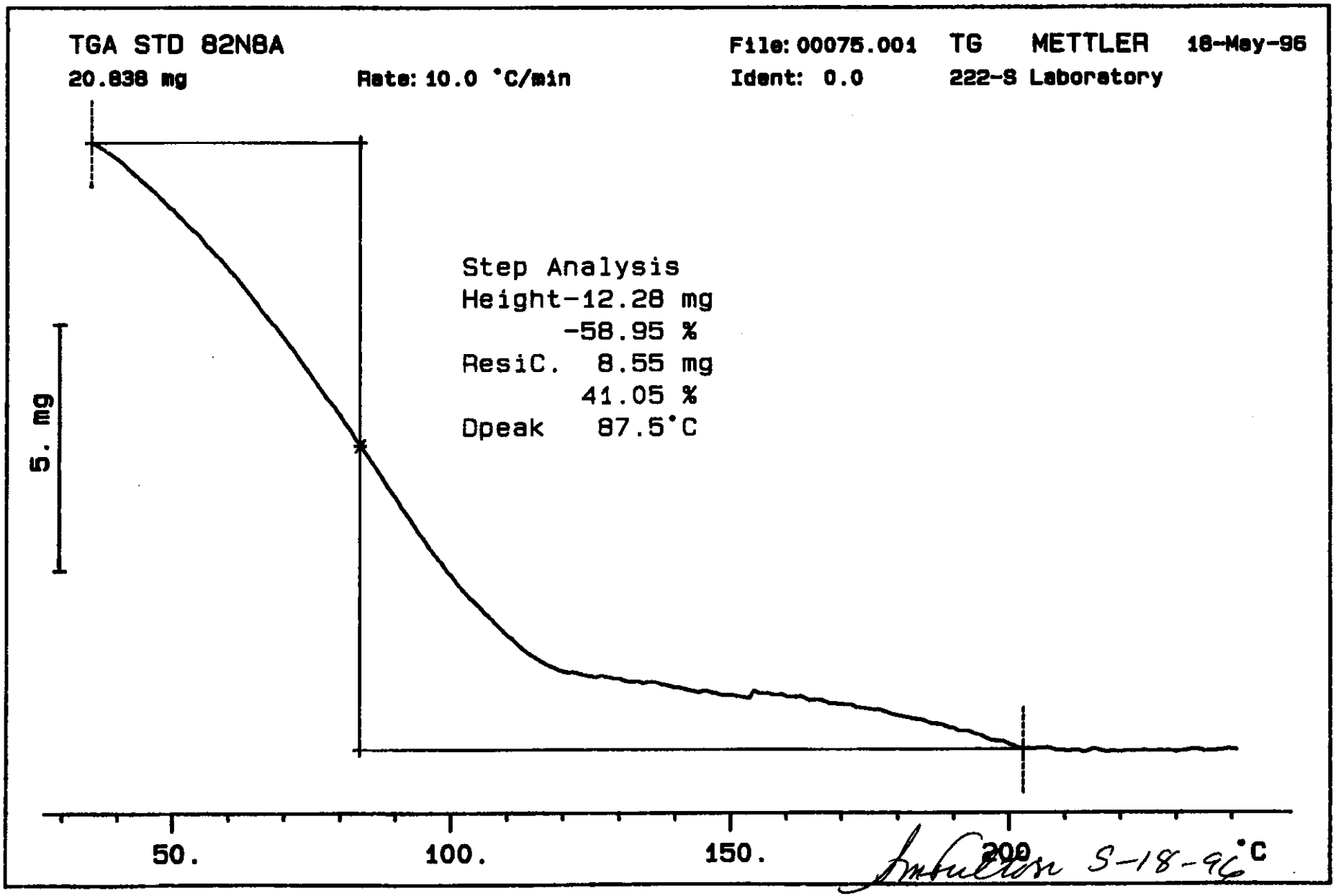


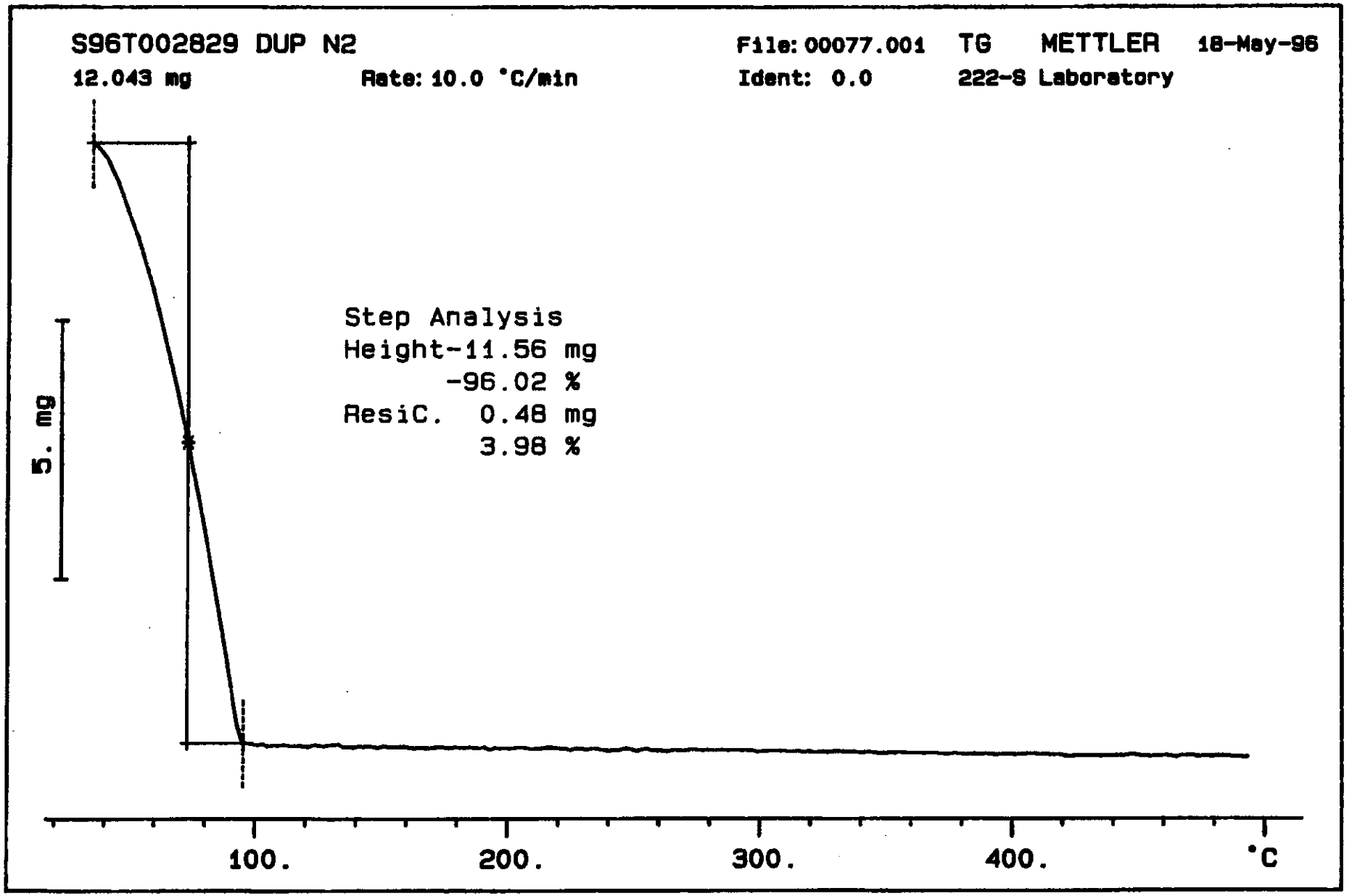
H Anastos for RD Meyers 5-20-96


S96T002770 N2
20.549 mg
Rate: 10.0 °C/min
File: 00069.001
TG METTLER
17-May-96
Ident: 0.0
222-S Laboratory
Step Analysis
Height-19.90 mg
-96.86 %
ResiC. 0.65 mg
3.14 %
Dpeak 103.0°C
6mg 10.01
100.
200.
300.
400.
°C


S96T002770DUP N2
22.044 mg
Rate: 10.0 °C/min
File: 00071.001
TG
METTLER
17-May-96
Ident: 0.0
222-S Laboratory
Step Analysis
Height-21.39 mg
-97.03 %
ResiC. 0.66 mg
2.97 %
10. mg
100.
200.
300.
400.
°C


S96T002829 N2
20.931 mg
Rate: 10.0 °C/min
File: 00073.001
TG METTLER
18-May-96
Ident: 0.0
222-S Laboratory
Step Analysis
Height-20.03 mg
-95.69 %
ResiC. 0.83 mg
3.95 %
10. mg
100.
200.
300.
400.
°C


TGA STD 82N8A
20.838 mg
Rate: 10.0 °C/min
File: 00075.001
Ident: 0.0
TG METTLER 18-May-96
222-S Laboratory
Step Analysis
Height-12.28 mg
-58.95 %
ResiC. 8.55 mg
41.05 %
Dpeak 87.5°C
5. mg
50.
100.
150.
200
°C
S-18-96


S96T002829 DUP N2
12.043 mg
Rate: 10.0 °C/min
File: 00077.001
TG
METTLER
18-May-96
Ident: 0.0
222-S Laboratory
Step Analysis
Height-11.56 mg
-96.02 %
ResiC. 0.48 mg
3.98 %
5. mg
100.
200.
300.
400.
°C

LABCORE Data Entry Template for Worklist# 8911

Analyst: SMF **Instrument:** TGA0 1 **Book #** 8ZN8/7

Method: LA-560-112 Rev/Mod B-1

Worklist Comment: C-106/AY-102 TGA RUN UNDER N2. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R	A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD				TGA-01	SOLID	59.2	58.93*	N/A	%
96000638	C-106 GRAB	2 SAMPLE	S96T002769	0		TGA-01	SOLID	N/A	73.78		%
96000638	C-106 GRAB	3 DUP	S96T002769	0		TGA-01	SOLID	73.78	76.28	N/A	%
96000638	C-106 GRAB	4 SAMPLE	S96T002772	0		TGA-01	SOLID	N/A	79.49		%
96000638	C-106 GRAB	5 DUP	S96T002772	0		TGA-01	SOLID	79.49	78.63	N/A	%

Final page for worklist # 8911

S Fulton 5-18-96
Analyst Signature Date

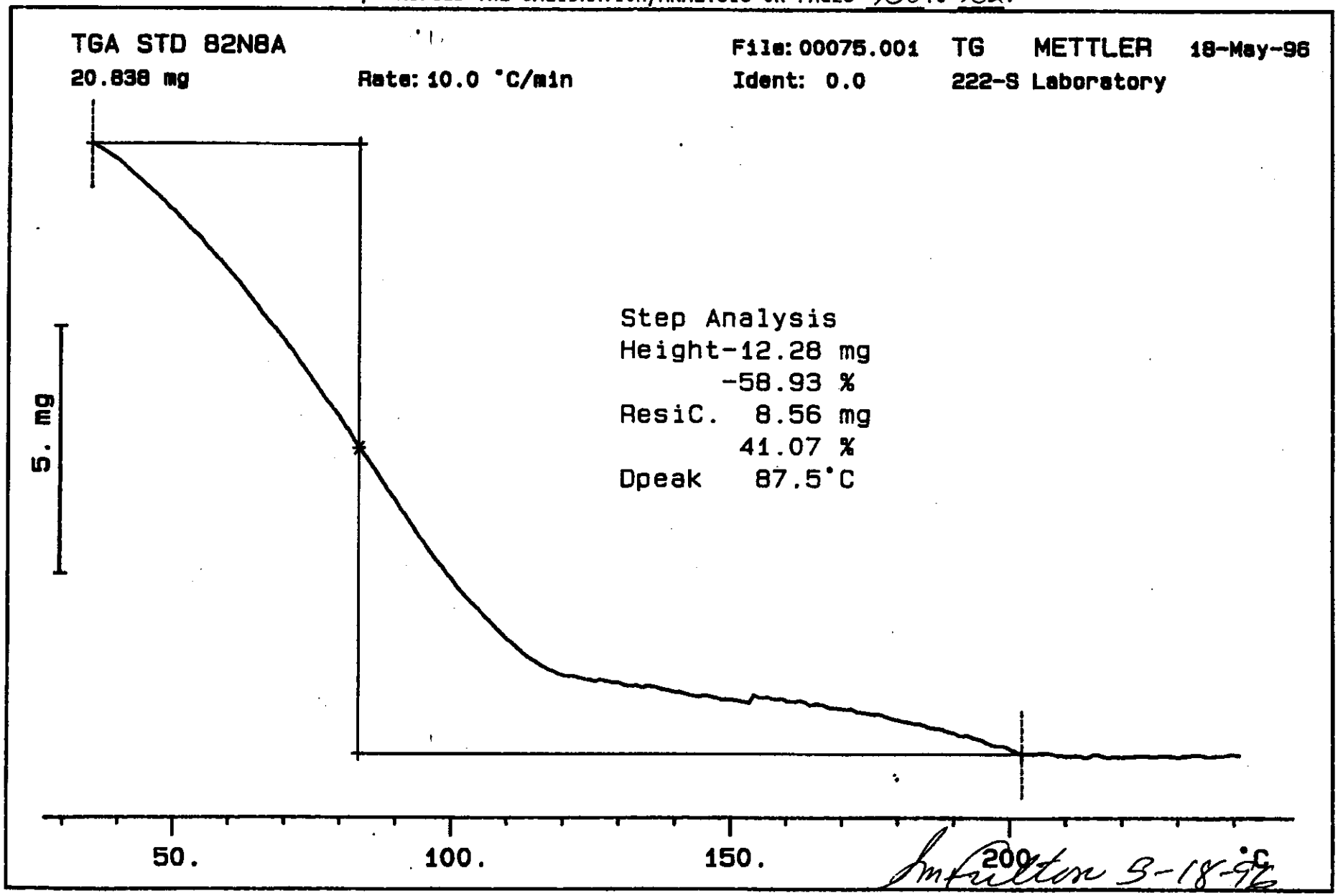
R Wright 5/21/96
Analyst Signature Date

Validated by H Anastas 5-22-96

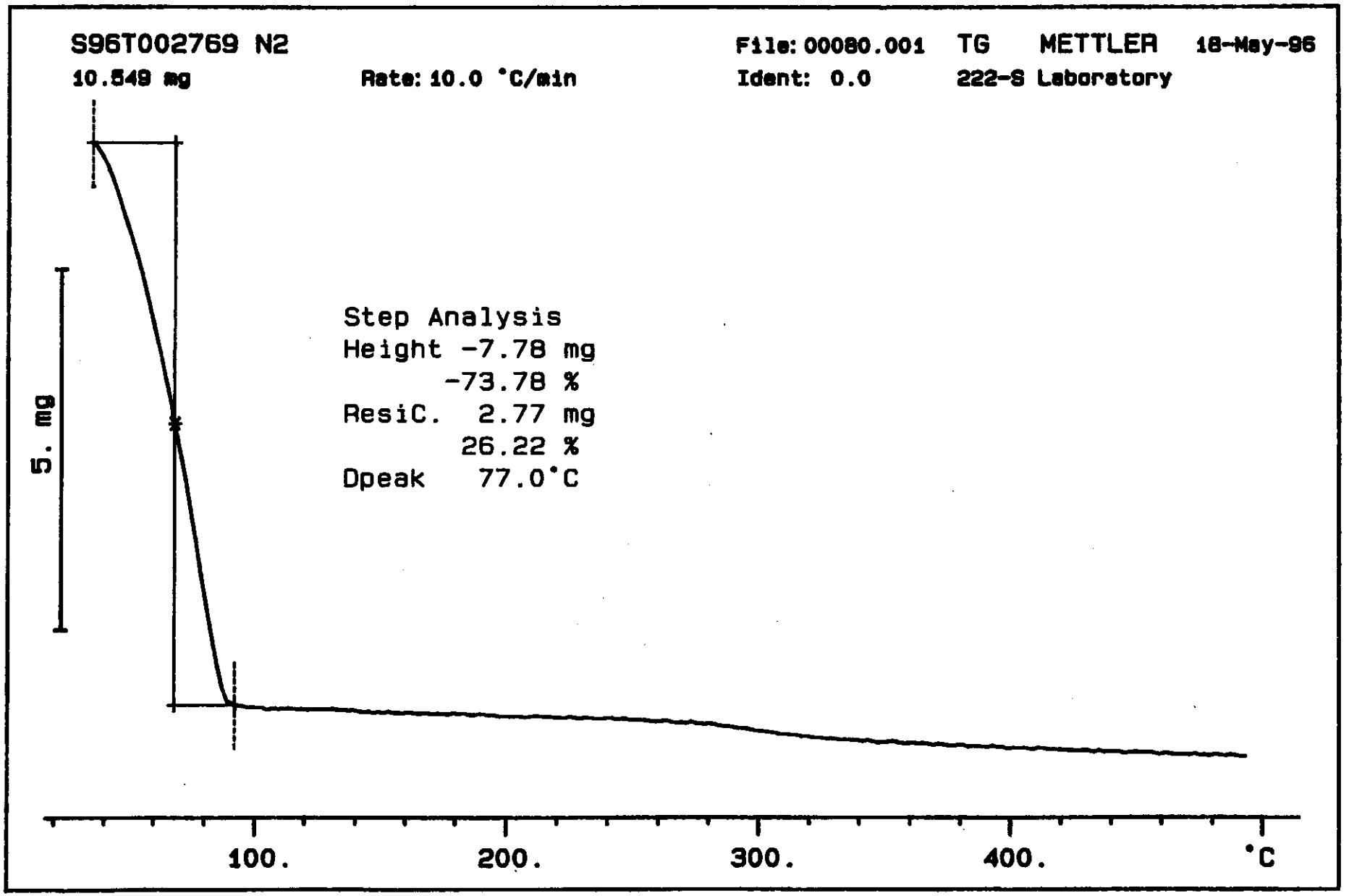
Data Entry Comments:

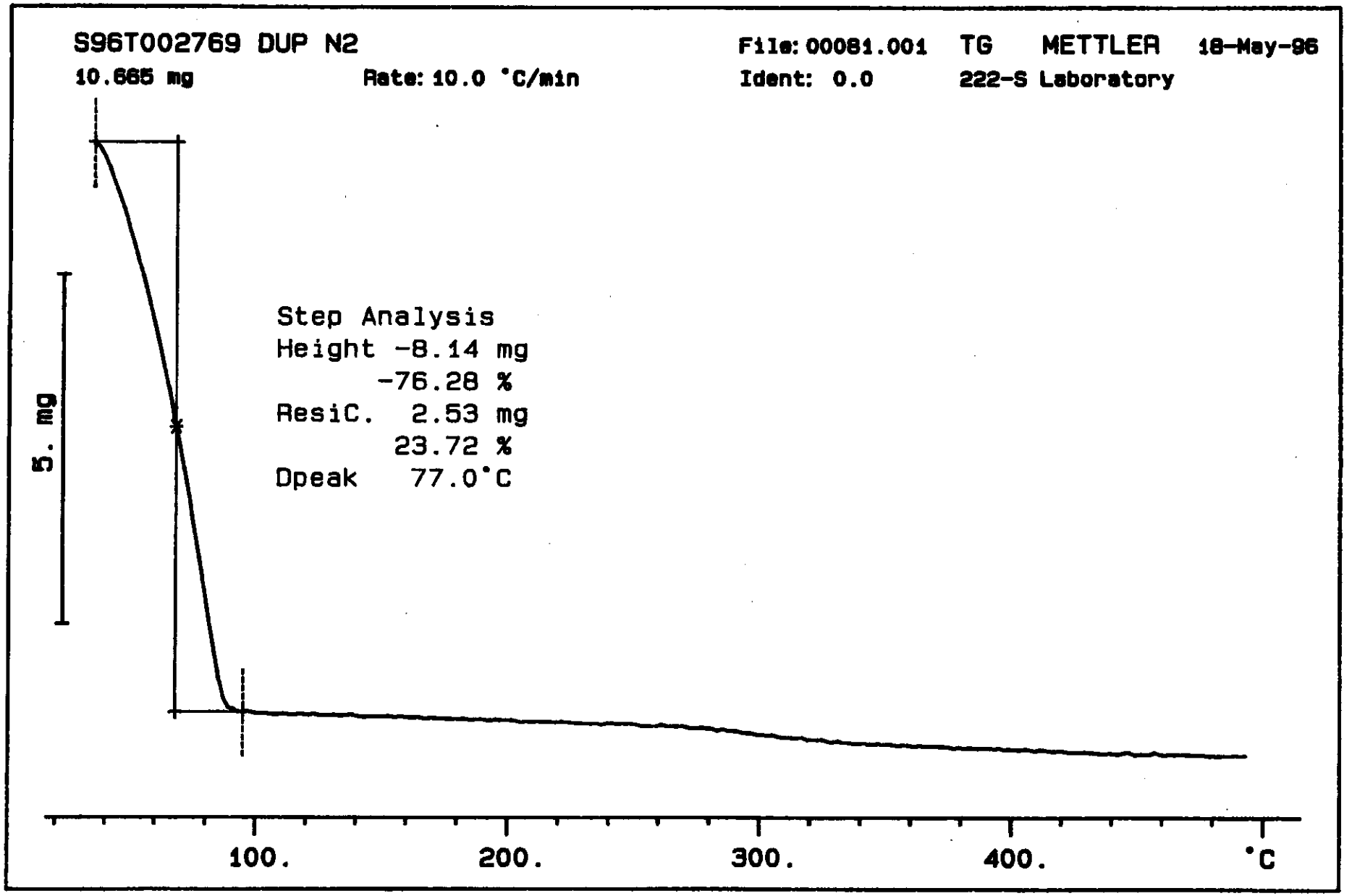
Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 430 TO 432.



JMFulton 5-18-96


S96T002769 N2
10.549 mg
Rate: 10.0 °C/min
File: 00080.001
TG
METTLER
18-May-96
Ident: 0.0
222-S Laboratory
Step Analysis
Height -7.78 mg
-73.78 %
ResiC. 2.77 mg
26.22 %
Dpeak 77.0°C
5. mg
100.
200.
300.
400.
°C


S96T002769 DUP N2
10.665 mg
Rate: 10.0 °C/min
File: 00081.001
TG
METTLER
18-May-96
Ident: 0.0
222-S Laboratory
Step Analysis
Height -8.14 mg
-76.28 %
ResiC. 2.53 mg
23.72 %
Dpeak 77.0°C
5 mg
100.
200.
300.
400.
°C

LABCORE Data Entry Template for Worklist# 8912

Analyst: SMF **Instrument:** TGA0 3 **Book #** 82N8A

Method: LA-514-114 Rev/Mod C-1

Worklist Comment: C-106\AY-102 TGA, RUN UNDER N2. RCJ

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	-------TEST------	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	STD				TGA-03	SOLID	59.2	58.97*	N/A	%
96000648	C-106 GRAB	2	SAMPLE	S96T002831	0		TGA-03	SOLID	N/A	83.85		%
96000648	C-106 GRAB	3	DUP	S96T002831	0		TGA-03	SOLID	83.85	85.53	N/A	%

Final page for worklist # 8912

See Attached for Signatures

Analyst Signature **Date** **Analyst Signature** **Date**

Validated by HAnastos 5.22.96

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

LABCORE Data Entry Template for Worklist# 8912

Analyst: SMF **Instrument:** TGA0 3 **Book #** 92N8A

Method: LA-560-112 Rev/Mod C-1

Worklist Comment: C-106\AY-102 TGA, RUN UNDER N2. RCJ

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	STD				TGA-01	SOLID			N/A	%
96000648	C-106 GRAB	2	SAMPLE	S96T002831	0		TGA-01	SOLID	N/A			%
96000648	C-106 GRAB	3	DUP	S96T002831	0		TGA-01	SOLID			N/A	%

Final page for worklist # 8912

S M Fuller 5-18-96
Analyst Signature Date

R E Wright 5/21/96
Analyst Signature Date

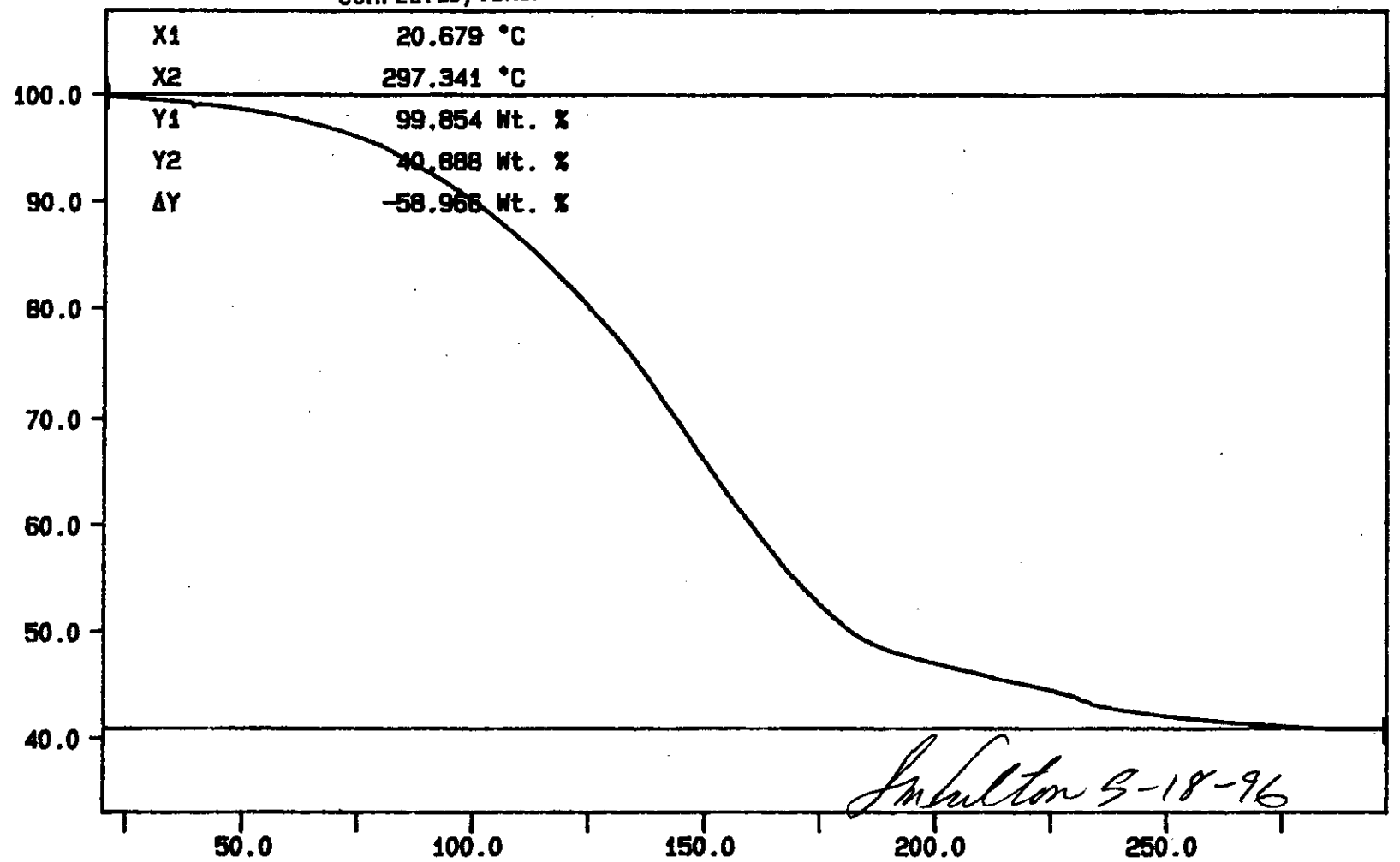
Other Instrument was used.

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

Curve 1: TGA
File info: TER051801 Sat May 18 05:46:09 1996
Sample Weight: 21.407 mg
TGA STD 82N8-A

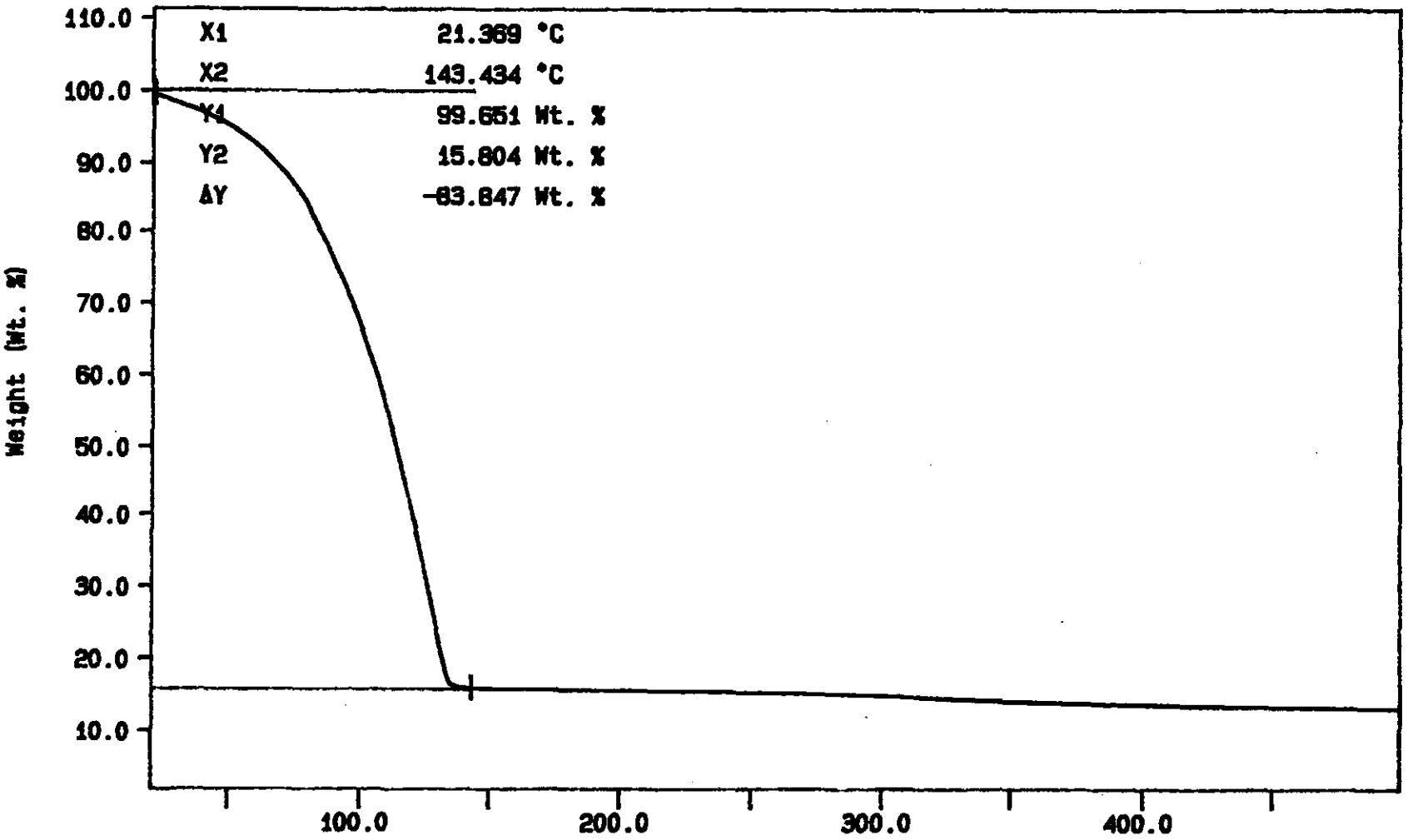
SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 435 TO 437.



N2 10C/MIN
TEMP1: 35.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 300.0 C

SM FULTON
PERKIN-ELMER
7 Series Thermal Analysis System
Sat May 18 05:53:55 1996

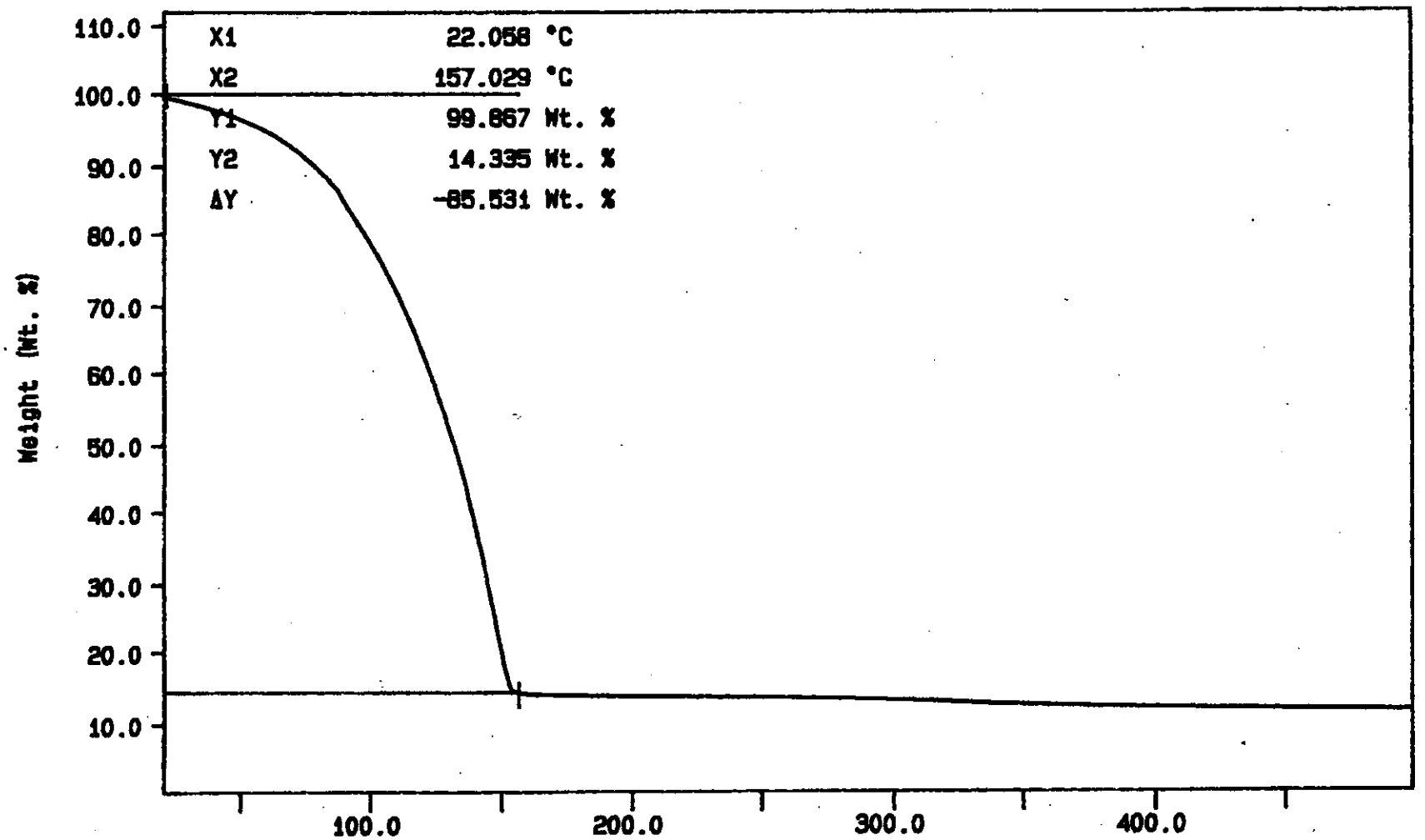
Curve 1: TGA
File info: SAM051803 Sat May 18 09:07:52 1996
Sample Weight: 9.533 mg
S96T002831



10C/MIN N2
TEMP1: 35.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 800.0 C

SM FULTON
PERKIN-ELMER
7 Series Thermal Analysis System
Tue May 21 07:15:36 1996

Curve 1: TGA
File info: SAM051804 Sat May 18 10:38:37 1996
Sample Weight: 16.792 mg
S96T002831 DUP



10C/MIN N2
TEMP1: 30.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 600.0 C

SM FULTON
PERKIN-ELMER
7 Series Thermal Analysis System
Sat May 18 14:59:37 1996

LABCORE Data Entry Template for Worklist# 6119

Analyst: KGN **Instrument:** BA001 _____ **Book #** 133216-A

Method: LA-510-112 Rev/Mod C-3

Worklist Comment: C-106 AND S-102 SPG. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R	A	-------TEST------	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD				SPG-01	LIQUID	1.398	1.382	N/A	Sp.G.
96000082	C-106 GRAB	2 SAMPLE	S96T000538	0		SPG-01	LIQUID	N/A	1.155	0.010	Sp.G.
96000082	C-106 GRAB	3 DUP	S96T000538	0		SPG-01	LIQUID	1.155	1.155	N/A	Sp.G.
96000030	S102	4 SAMPLE	S96T000634	0		SPG-01	LIQUID	N/A	1.369	0.010	Sp.G.
96000030	S102	5 DUP	S96T000634	0		SPG-01	LIQUID	1.369	1.464	N/A	Sp.G.
96000030	S102	6 SAMPLE	S96T000773	0		SPG-01	LIQUID	N/A	1.388	0.010	Sp.G.
96000030	S102	7 DUP	S96T000773	0		SPG-01	LIQUID	1.388	1.394	N/A	Sp.G.
96000030	S102	8 SAMPLE	S96T000838	0		SPG-01	LIQUID	N/A	.986	0.010	Sp.G.
96000030	S102	9 DUP	S96T000838	0		SPG-01	LIQUID	.986	.986	N/A	Sp.G.

Final page for worklist # 6119

[signature] 3-6-96
Analyst Signature **Date**

[signature] 3/13/96
Analyst Signature **Date**

Reviewed RW Schroeder 3/18/96

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

BEST AVAILABLE COPY

1.81790 g
2.02599 g } STD
1.86119 g
2.16802 g } STD

SPECIFIC GRAVITY : LA-510-112 (C-3)

Type		STANDARD	STANDARD
STANDARD	Gross Weight (W2)	2.0259	2.0682
Work List	Tare Weight (W1)	1.8179	1.8612
6119	Weight of Solution (W2-W1)	0.20807	0.20702
Test Code	Volume of Solution µL	150.1700	150.1700
SPG-01	Specific Gravity	1.3856	1.3786
Matrix	Specific Gravity (Average)	1.3821	
LIQUID			
Sample #			
133N16A			
Instrument Code	Gross Weight (W2) = Wt. of vial + cap + cotton + solution		
	Tare Weight (W1) = Wt. of vial + cap + cotton		
Analyst			
K. HIGBEE	Specific Gravity = [(W2-W1) * 1000 µL/mL] / [Vol. of Solution µL * 1.000 g/mL]		
Date			
03/12/96	v RESULT v		
Time	Specific Gravity Average =	1.382	

Data Entry by:	RTS	Date:	03/13/96
Approved by:	RW Schroeder	Date:	3/18/96

Form 510112L1 Rev. 1.1

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

BEST AVAILABLE COPY

1.85147 9

----- CALIBRATION -----
03 12/96 14:57:57
CAL BEGIN

SAH
S95T000
538

CAL END
2.02014 9

SPECIFIC GRAVITY : LA-510-112 (C-3)

		SAMPLE	REPLICATE
Type			
SAMPLE	Gross Weight (W2)	2.0249	
Work List	Tare Weight (W1)	1.8515	
6119	Weight of Solution (W2-W1)	0.17347	0
Test Code	Volume of Solution µL	150.1700	
SPG-01	Specific Gravity	1.1552	NA
Matrix			
LIQUID			
Sample #			
S95T000538			
Instrument Code	Gross Weight (W2) = Wt. of vial + cap + cotton + solution		
	Tare Weight (W1) = Wt. of vial + cap + cotton		
Analyst			
K. HIGBEE	Specific Gravity = [(W2-W1) * 1000 µL/mL] / [Vol. of Solution µL * 1.000 g/mL]		
Date			
03/12/96	v RESULT v		
Time	Specific Gravity =	1.155	

Data Entry by:	RTS	Date:	03/13/96
Approved by:	RW Schroeder	Date:	3/18/96

Form 510112L1 Rev. 1.1

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

BEST AVAILABLE COPY

1.00227 g
2.00577 g
DUP
S96T000
538

SPECIFIC GRAVITY : LA-510-112 (C-3)

Type		SAMPLE	REPLICATE
SAMPLE	Gross Weight (W2)	2.0358	
WorkList	Tare Weight (W1)	1.8623	
6119	Weight of Solution (W2-W1)	0.1735	0
Test Code	Volume of Solution µL	150.1700	
SPG-01	Specific Gravity	1.1554	NA
Matrix			
LIQUID			
Sample #			
S95T000538/DUP			
Instrument Code	Gross Weight (W2) = Wt. of vial + cap + cotton + solution		
	Tare Weight (W1) = Wt. of vial + cap + cotton		
Analyst			
K. HIGBEE	Specific Gravity = [(W2-W1) * 1000 µL/mL] / [Vol. of Solution µL * 1.000 g/mL]		
Date			
03/12/96	v RESULT v		
Time	Specific Gravity =	1.155	

Data Entry by:	RTS	Date:	03/13/96
Approved by:	RW Schroeder	Date:	3/18/96

Form 510112L1 Rev. 1.1

worklistrpt Version 2.1 05/15/95
03/08/96 14:26

LABCORE Data Entry Template for Worklist# 6362

Analyst: KGH **Instrument:** BA001 _____ **Book #** 133W16-A

Method: LA-510-112 Rev/Mod C-3

Worklist Comment: AN107 AND C106 SPG. RCJ

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	STD				SPG-01	LIQUID	1.398	1.376	N/A	Sp.G.
96000108	AN-107 GRAB	2	SAMPLE	S96T000747	0		SPG-01	LIQUID	N/A	1.367	0.010	Sp.G.
96000108	AN-107 GRAB	3	DUP	S96T000747	0		SPG-01	LIQUID	1.367	1.346	N/A	Sp.G.
96000174	C-106 GRAB	4	SAMPLE	S96T001023	0		SPG-01	LIQUID	N/A	1.173	0.010	Sp.G.
96000174	C-106 GRAB	5	DUP	S96T001023	0		SPG-01	LIQUID	1.173	~~1.247~~ 1.193	N/A	Sp.G.

RWS 3/18/96

Final page for worklist # 6362

Analyst Signature 3-11-96 Date

Analyst Signature 3/13/96 Date

Reviewed RW Schroeder 3/18/96

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

1.90939 g
2.11582 g } STD

1.87218 g
2.07894 g } STD

1.87245 g
2.04863 g } SAM 5467000103

1.89847 g
2.07770 g } DUP 5467000103

BEST AVAILABLE COPY

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

SPECIFIC GRAVITY : LA-510-112 (C-3)

Type		STANDARD	STANDARD
STANDARD	Gross Weight (W2)	2.1158	2.0789
Work List	Tare Weight (W1)	1.9094	1.8722
6362	Weight of Solution (W2-W1)	0.20643	0.20676
Test Code	Volume of Solution µL	150.1700	150.1700
SPG-01	Specific Gravity	1.3746	1.3768
Matrix	Specific Gravity (Average)	1.3757	
LIQUID			
Sample #			
133N16A			
Instrument Code	Gross Weight (W2) = Wt. of vial + cap + cotton + solution		
	Tare Weight (W1) = Wt. of vial + cap + cotton		
Analyst			
K. HIGBEE	Specific Gravity = [(W2-W1) * 1000 µL/mL] / [Vol. of Solution µL * 1.000 g/mL]		
Date			
03/11/96	v RESULT v		
Time	Specific Gravity Average =	1.376	

Data Entry by:	RTS	Date:	03/13/96
Approved by:	RW Schroeder	Date:	3/18/96

Form 510112L1 Rev. 1.1

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

SPECIFIC GRAVITY : LA-510-112 (C-3)

		SAMPLE	REPLICATE
SAMPLE	Gross Weight (W2)	2.0486	
	Tare Weight (W1)	1.8725	
6362	Weight of Solution (W2-W1)	0.17618	0
	Volume of Solution µL	150.1700	
SPG-01	Specific Gravity	1.1732	NA

LIQUID

S95T001023

Gross Weight (W2) = Wt. of vial + cap + cotton + solution

Tare Weight (W1) = Wt. of vial + cap + cotton

K. HIGBEE

Specific Gravity = [(W2-W1) * 1000 µL/mL] / [Vol. of Solution µL * 1.000 g/mL]

03/11/96

v RESULT v

Specific Gravity = 1.173

Data Entry by:	RTS	Date:	03/13/96
Approved by:	RW Schroeder	Date:	3/18/96

Form 510112L1 Rev. 1.1

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

SPECIFIC GRAVITY : LA-510-112 (C-3)

		Sample	REPLICATE
Sample	Gross Weight (W2)	2.0777	
	Tare Weight (W1)	1.8985	
6362	Weight of Solution (W2-W1)	0.1792	0
	Volume of Solution µL	150.1700	
SpG-01	Specific Gravity	1.1933	NA

LIQUID

S95T001023/ DUP

Gross Weight (W2) = Wt. of vial + cap + cotton + solution

Tare Weight (W1) = Wt. of vial + cap + cotton

K. Higbee

Specific Gravity = [(W2-W1) * 1000 µL/mL] / [Vol. of Solution µL * 1.000 g/mL]

03/11/96

v RESULT v

Specific Gravity =	1.193

Data Entry by:	RTS	Date:	03/18/96
Approved by:	RW Schroeder	Date:	3/18/96

Form 510112L1 Rev. 1.1

LABCORE Data Entry Template for Worklist# 7516

Analyst: RDM **Instrument:** BA001 **Book #** 133N16A

Method: LA-510-112 Rev/Mod C-3

Worklist Comment: C-106 FOR SPG RTS!

GROUP	PROJECT	S TYPE	SAMPLE#	R	A	-------TEST------	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD				SPG-01	LIQUID	N/A	N/A	N/A	Sp.G.
96000174	C-106 GRAB	2 SAMPLE	S96T001032	0		SPG-01	LIQUID	N/A	I.S.	N/A	Sp.G.
96000174	C-106 GRAB	3 DUP	S96T001032	0		SPG-01	LIQUID	I.S.	I.S.	N/A	Sp.G.

Final page for worklist # 7516

RDMyers 4/10/96
Analyst Signature **Date**

Frank Conlon 4/11/96
Analyst Signature **Date**

Reviewed RW Schroeder 4/12/96

Data Entry Comments: Insufficient sample

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

LABCORE Data Entry Template for Worklist# 7220

Analyst: ADP **Instrument:** BA001 _____ **Book #** 133N16-A

Method: LA-510-112 Rev/Mod C-3

Worklist Comment: SPG FOR C-106 & U-105

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	-------TEST------	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	STD				SPG-01	LIQUID	1.3976	1.413	N/A	Sp.G.
96000082	C-106 GRAB	2	SAMPLE	S96T000544	0		SPG-01	LIQUID	N/A	1.200	0.001	Sp.G.
96000082	C-106 GRAB	3	DUP	S96T000544	0		SPG-01	LIQUID	1.200	1.194	N/A	Sp.G.
96000082	C-106 GRAB	4	SAMPLE	S96T000559	0		SPG-01	LIQUID	N/A	1.156	0.001	Sp.G.
96000082	C-106 GRAB	5	DUP	S96T000559	0		SPG-01	LIQUID	1.156	1.150	N/A	Sp.G.
96000092	U-105 (R)	6	SAMPLE	S96T001018	0		SPG-01	LIQUID	N/A	0.977	0.001	Sp.G.
96000092	U-105 (R)	7	DUP	S96T001018	0		SPG-01	LIQUID	0.977	0.976	N/A	Sp.G.
96000143	U-105 (R)	8	SAMPLE	S96T001232	0		SPG-01	LIQUID	N/A	1.002	0.001	Sp.G.
96000143	U-105 (R)	9	DUP	S96T001232	0		SPG-01	LIQUID	1.002	1.000	N/A	Sp.G.
96000143	U-105 (R)	10	SAMPLE	S96T001234	0		SPG-01	LIQUID	N/A	0.991	0.001	Sp.G.
96000143	U-105 (R)	11	DUP	S96T001234	0		SPG-01	LIQUID	0.991	0.986	N/A	Sp.G.

Final page for worklist # 7220

Anthony Purinto 4-8-96
Analyst Signature **Date**

Linda Cowles 4/11/96
Analyst Signature **Date**

Reviewed RW Schroeder 4/11/96

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

SPECIFIC GRAVITY : LA-510-112 (C-3)

		STANDARD	STANDARD
STANDARD	Gross Weight (W2)	2.0364	1.9770
	Tare Weight (W1)	1.8950	1.8355
7220	Weight of Solution (W2-W1)	0.1414	0.1415
	Volume of Solution µL	100.1200	100.1200
SPG-01	Specific Gravity	1.4123	1.4133
	Specific Gravity (Average)	1.4128	
LIQUID			
STD			
	Gross Weight (W2) = Wt. of vial + cap + cotton + solution		
BA001	Tare Weight (W1) = Wt. of vial + cap + cotton		
AD PURINTON	Specific Gravity = [(W2-W1) * 1000 µL/mL] / [Vol. of Solution µL * 1.000 g/mL]		
04/08/96	v RESULT v		
	Specific Gravity Average =	1.413	
12:00 AM			

Data Entry by:	[signature]	Date:	04/10/96
Approved by:	[signature]	Date:	4/11/96

Form 510112L1 Rev. 1.1

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

SPECIFIC GRAVITY : LA-510-112 (C-3)

		SAMPLE	REPLICATE
SAMPLE	Gross Weight (W2)	1.9711	1.9644
	Tare Weight (W1)	1.8506	1.8446
7220	Weight of Solution (W2-W1)	0.1205	0.1198
	Volume of Solution µL	100.1200	100.1200
SPG-01	Specific Gravity	1.2036	1.1966
	Specific Gravity (Average)	1.2001	
LIQUID			
S96T000544			
	Gross Weight (W2) = Wt. of vial + cap + cotton + solution		
BA001	Tare Weight (W1) = Wt. of vial + cap + cotton		
AD PURINTON	Specific Gravity = [(W2-W1) * 1000 µL/mL] / [Vol. of Solution µL * 1.000 g/mL]		
04/08/96	v RESULT v		
	Specific Gravity Average =	1.200	
12:00 AM			

Data Entry by:		Date:	04/10/96
Approved by:	RW Schroeder	Date:	4/11/96

Form 510112L1 Rev. 1.1

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

SPECIFIC GRAVITY : LA-510-112 (C-3)

		DUPLICATE	REPLICATE
DUPLICATE	Gross Weight (W2)	2.0123	1.9796
	Tare Weight (W1)	1.8930	1.8599
7220	Weight of Solution (W2-W1)	0.1193	0.1197
	Volume of Solution µL	100.1200	100.1200
SPG-01	Specific Gravity	1.1916	1.1956
	Specific Gravity (Average)	1.1936	
LIQUID			
S96T000544 DUP			
	Gross Weight (W2) = Wt. of vial + cap + cotton + solution		
BA001	Tare Weight (W1) = Wt. of vial + cap + cotton		
AD PURINTON	Specific Gravity = [(W2-W1) * 1000 µL/mL] / [Vol. of Solution µL * 1.000 g/mL]		
04/08/96	v RESULT v		
	Specific Gravity Average =	1.194	
12:00 AM			

Data Entry by:	[signature]	Date:	04/10/96
Approved by:	Rick Schroeder	Date:	4/11/96

Form 510112L1 Rev. 1.1

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

SPECIFIC GRAVITY : LA-510-112 (C-3)

		SAMPLE	REPLICATE
SAMPLE	Gross Weight (W2)	1.9921	1.9596
	Tare Weight (W1)	1.8762	1.8440
7220	Weight of Solution (W2-W1)	0.1159	0.1156
	Volume of Solution µL	100.1200	100.1200
SPG-01	Specific Gravity	1.1576	1.1546
	Specific Gravity (Average)	1.1561	
LIQUID			
S96T000559			
	Gross Weight (W2) = Wt. of vial + cap + cotton + solution		
BA001	Tare Weight (W1) = Wt. of vial + cap + cotton		
AD PURINTON	Specific Gravity = [(W2-W1) * 1000 µL/mL] / [Vol. of Solution µL * 1.000 g/mL]		
04/08/96	v RESULT v		
	Specific Gravity Average =	1.156	
12:00 AM			

Data Entry by:	[signature]	Date:	04/10/96
Approved by:	RW Schroeder	Date:	4/11/96

Form 510112L1 Rev. 1.1

Page 1 of 1

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

SPECIFIC GRAVITY : LA-510-112 (C-3)

		DUPICATE	REPLICATE
DUPICATE	Gross Weight (W2)	1.9240	1.9425
	Tare Weight (W1)	1.8087	1.8275
7220	Weight of Solution (W2-W1)	0.1153	0.115
	Volume of Solution µL	100.1200	100.1200
SPG-01	Specific Gravity	1.1516	1.1486
	Specific Gravity (Average)	1.1501	
LIQUID			
S96T000559 DUP			
	Gross Weight (W2) = Wt. of vial + cap + cotton + solution		
BA001	Tare Weight (W1) = Wt. of vial + cap + cotton		
AD PURINTON	Specific Gravity = [(W2-W1) * 1000 µL/mL] / [Vol. of Solution µL * 1.000 g/mL]		
04/08/96	v RESULT v		
	Specific Gravity Average =	1.150	
12:00 AM			

Data Entry by:	[signature]	Date:	04/10/96
Approved by:	Ru Schroeder	Date:	4/11/96

Form 510112L1 Rev. 1.1

LABCORE Data Entry Template for Worklist# 7571

Analyst: ADP **Instrument:** BA001 **Book #** 133N16A

Method: LA-510-112 Rev/Mod C-3

Worklist Comment: C-106 SPG ~~SAMPLE DRY AND FLIGHTY, USE CAUTION~~. RCJ
RWS 4/15/96

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	STD				SPG-01	LIQUID	1.3976	1.427	N/A	Sp.G.
96000082	C-106 GRAB	2	SAMPLE	S96T000855	0	<50 mRad	SPG-01	LIQUID	N/A	.975	0.001	Sp.G.
96000082	C-106 GRAB	3	DUP	S96T000855	0		SPG-01	LIQUID	.975	.974	N/A	Sp.G.
96000174	C-106 GRAB	4	SAMPLE	S96T001675	0	175mRad	SPG-01	LIQUID	N/A	1.153	0.001	Sp.G.
96000174	C-106 GRAB	5	DUP	S96T001675	0		SPG-01	LIQUID	1.153	1.138	N/A	Sp.G.

Final page for worklist # 7571

Anthony Pierantoni 6-22-96
Analyst Signature **Date**

RHSchulz 4-23-96
Analyst Signature **Date**
13676

Reviewed RW Schroeder 4/23/96

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

SPECIFIC GRAVITY : LA-510-112 (C-3)

		STANDARD	STANDARD
Gross Weight (W2)		2.0601	2.0438
Tare Weight (W1)		1.9161	1.9021
Weight of Solution (W2-W1)		0.144	0.1417
Volume of Solution µL		100.1200	100.1200
Specific Gravity		1.4383	1.4153
Specific Gravity (Average)		1.4268	

Type:	STANDARD
Work List	7571
Test Code	SPG-01
Matrix	LIQUID
Sample #	133N16A
Instrument Code	BA001
Analyst	adp
Date	06/22/96
Time	

Gross Weight (W2) = Wt. of vial + cap + cotton + solution

Tare Weight (W1) = Wt. of vial + cap + cotton

Specific Gravity = [(W2-W1) * 1000 µL/mL] / [Vol. of Solution µL * 1.000 g/mL]

v RESULT v

Specific Gravity Average = 1.427

Data Entry by:	RJS	Date:	04/23/96
Approved by:	RW Schroeder	Date:	4/23/96

Form 510112L1 Rev. 1.1

Page 1 of 1

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

SPECIFIC GRAVITY : LA-510-112 (C-3)

Type		SAMPLE	REPLICATE
SAMPLE	Gross Weight (W2)	1.9562	
Work List	Tare Weight (W1)	1.8586	
7571	Weight of Solution (W2-W1)	0.0976	0
Test Code	Volume of Solution µL	100.1200	
SPG-01	Specific Gravity	0.9748	NA
Matrix			
LIQUID			
Sample #			
S96T000855			
Instrument Code	Gross Weight (W2) = Wt. of vial + cap + cotton + solution		
BA001	Tare Weight (W1) = Wt. of vial + cap + cotton		
Analyst			
adp	Specific Gravity = [(W2-W1) * 1000 µL/mL] / [Vol. of Solution µL * 1.000 g/mL]		
Date			
06/22/96	v RESULT v		
Time	Specific Gravity =	0.975	

Data Entry by:	KTS	Date:	04/23/96
Approved by:	RW Schroeder	Date:	4/23/96

Form 510112L1 Rev. 1.1

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

SPECIFIC GRAVITY : LA-510-112 (C-3)

Type		SAMPLE	REPLICATE
SAMPLE	Gross Weight (W2)	2.0163	
Work List	Tare Weight (W1)	1.9188	
7571	Weight of Solution (W2-W1)	0.0975	0
Test Code	Volume of Solution µL	100.1200	
SPG-01	Specific Gravity	0.9738	NA
Matrix			
LIQUID			
Sample #			
S96T000855/DUP			
Instrument Code	Gross Weight (W2) = Wt. of vial + cap + cotton + solution		
BA001	Tare Weight (W1) = Wt. of vial + cap + cotton		
Analyst			
adp	Specific Gravity = [(W2-W1) * 1000 µL/mL] / [Vol. of Solution µL * 1.000 g/mL]		
Date			
06/22/96	v RESULT v		
Time	Specific Gravity =	0.974	

Data Entry by:	RTS	Date:	04/23/96
Approved by:	Ra Schroeder	Date:	4/23/96

Form 510112L1 Rev. 1.1

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

SPECIFIC GRAVITY : LA-510-112 (C-3)

Type		SAMPLE	REPLICATE
SAMPLE	Gross Weight (W2)	1.4991	
Work List	Tare Weight (W1)	1.3837	
7571	Weight of Solution (W2-W1)	0.1154	0
Test Code	Volume of Solution µL	100.1200	
SPG-01	Specific Gravity	1.1526	NA
Matrix			
LIQUID			
Sample #			
S96T001675			
Instrument Code	Gross Weight (W2) = Wt. of vial + cap + cotton + solution		
BA001	Tare Weight (W1) = Wt. of vial + cap + cotton		
Analyst			
adp	Specific Gravity = [(W2-W1) * 1000 µL/mL] / [Vol. of Solution µL * 1.000 g/mL]		
Date			
06/22/96	v RESULT v		
Time	Specific Gravity =	1.153	

Data Entry by:	RTS	Date:	04/23/96
Approved by:	Ray Schroeder	Date:	4/23/96

Form 510112L1 Rev. 1.1

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

SPECIFIC GRAVITY : LA-510-112 (C-3)

		SAMPLE	REPLICATE
Type			
SAMPLE	Gross Weight (W2)	1.4973	
Weight List	Tare Weight (W1)	1.3834	
7571	Weight of Solution (W2-W1)	0.1139	0
Test Code	Volume of Solution µL	100.1200	
SPG-01	Specific Gravity	1.1376	NA
Matrix			
LIQUID			
Sample#			
S96T001675/DUP			
Instrument Code	Gross Weight (W2) = Wt. of vial + cap + cotton + solution		
BA001	Tare Weight (W1) = Wt. of vial + cap + cotton		
Analyst			
adp	Specific Gravity = [(W2-W1) * 1000 µL/mL] / [Vol. of Solution µL * 1.000 g/mL]		
Date			
06/22/96	v RESULT v		
Time	Specific Gravity =	1.138	

Data Entry by:	RTS	Date:	04/23/96
Approved by:	Ray Schroeder	Date:	4/23/96

Form 510112L1 Rev. 1.1

LABCORE Data Entry Template for Worklist# 8134

Analyst: ADP **Instrument:** BA001 **Book #** 133N16-A

Method: LA-510-112 Rev/Mod C-3

Worklist Comment: C-106 FOR SPG-01 RECORD SAMPLE AMOUNT LEFT RTS!

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-------TEST------	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			SPG-01	LIQUID	1.39755	1.366	N/A	Sp.G.
96000082	C-106 GRAB	2 SAMPLE	S96T001528	0	SPG-01	LIQUID	N/A	1.230	0.001	Sp.G.
96000082	C-106 GRAB	3 DUP	S96T001528	0	SPG-01	LIQUID	1.230	1.246	N/A	Sp.G.
96000174	C-106 GRAB	4 SAMPLE	S96T002024	0	SPG-01	LIQUID	N/A	1.195	0.001	Sp.G.
96000174	C-106 GRAB	5 DUP	S96T002024	0	SPG-01	LIQUID	1.195	1.195	N/A	Sp.G.
96000394	S-101	6 SAMPLE	S96T001886	0 D	SPG-01	LIQUID	N/A	1.342	0.001	Sp.G.
96000394	S-101	7 DUP	S96T001886	0 D	SPG-01	LIQUID	1.342	1.350	N/A	Sp.G.

Final page for worklist # 8134

Anthony Pierantoni 5-5-96
Analyst Signature **Date**

Gary Hammond 5-5-96
Analyst Signature **Date**

Approved RW Schroeder
5/7/96

Data Entry Comments: S96T001528 20mL Aprox. Left
S96T002024 10mL Left Aprox.
S96T001886 5mL left Aprox.

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

SPECIFIC GRAVITY : LA-510-112 (C-3)

		STANDARD	STANDARD
STANDARD	Gross Weight (W2)	2.0245	2.0303
	Tare Weight (W1)	1.8880	1.8932
8134	Weight of Solution (W2-W1)	0.1365	0.1371
	Volume of Solution µL	100.1200	100.1200
SPG-01	Specific Gravity	1.3634	1.3694
	Specific Gravity (Average)	1.3664	
LIQUID			
STD			
	Gross Weight (W2) = Wt. of vial + cap + cotton + solution		
BA001	Tare Weight (W1) = Wt. of vial + cap + cotton		
ADP	Specific Gravity = [(W2-W1) * 1000 µL/mL] / [Vol. of Solution µL * 1.000 g/mL]		
05/05/96	v RESULT v		
	Specific Gravity Average =	1.366	

Data Entry by:	[signature]	Date:	05/05/96
Approved by:	RW Schroeder	Date:	5/7/96

Form 510112L1 Rev. 1.1

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

SPECIFIC GRAVITY : LA-510-112 (C-3)

		SAMPLE	REPLICATE
SAMPLE	Gross Weight (W2)	1.9869	
	Tare Weight (W1)	1.8638	
8134	Weight of Solution (W2-W1)	0.1231	0
	Volume of Solution µL	100.1200	
SPG-01	Specific Gravity	1.2295	NA
LIQUID			
S96T001528			
	Gross Weight (W2) = Wt. of vial + cap + cotton + solution		
BA001	Tare Weight (W1) = Wt. of vial + cap + cotton		
ADP	Specific Gravity = [(W2-W1) * 1000 µL/mL] / [Vol. of Solution µL * 1.000 g/mL]		
05/05/96	v RESULT v		
	Specific Gravity =	1.230	

Data Entry by:	[signature]	Date:	05/05/96
Approved by:	RW Schroeder	Date:	5/7/96

Form 510112L1 Rev. 1.1

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

SPECIFIC GRAVITY : LA-510-112 (C-3)

		DUPLICATE	REPLICATE
DUPLICATE	Gross Weight (W2)	2.0036	
	Tare Weight (W1)	1.8789	
8134	Weight of Solution (W2-W1)	0.1247	0
	Volume of Solution µL	100.1200	
SPG-01	Specific Gravity	1.2455	NA
LIQUID			
S96T001528 DUP			
	Gross Weight (W2) = Wt. of vial + cap + cotton + solution		
BA001	Tare Weight (W1) = Wt. of vial + cap + cotton		
ADP	Specific Gravity = [(W2-W1) * 1000 µL/mL] / [Vol. of Solution µL * 1.000 g/mL]		
05/05/96	v RESULT v		
	Specific Gravity =	1.246	

Data Entry by:	[signature]	Date:	05/05/96
Approved by:	RW Schroeder	Date:	5/7/96

Form 510112L1 Rev. 1.1

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

SPECIFIC GRAVITY : LA-510-112 (C-3)

		SAMPLE	REPLICATE
SAMPLE	Gross Weight (W2)	2.0007	
	Tare Weight (W1)	1.8811	
8134	Weight of Solution (W2-W1)	0.1196	0
	Volume of Solution µL	100.1200	
SPG-01	Specific Gravity	1.1946	NA
LIQUID			
S96T002024			
	Gross Weight (W2) = Wt. of vial + cap + cotton + solution		
BA001	Tare Weight (W1) = Wt. of vial + cap + cotton		
ADP	Specific Gravity = [(W2-W1) * 1000 µL/mL] / [Vol. of Solution µL * 1.000 g/mL]		
05/05/96	v RESULT v		
	Specific Gravity =	1.195	

Data Entry by:	[signature]	Date:	05/05/96
Approved by:	RW Schroeder	Date:	5/7/96

Form 510112L1 Rev. 1.1

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

SPECIFIC GRAVITY : LA-510-112 (C-3)

		DUPLICATE	REPLICATE
DUPLICATE	Gross Weight (W2)	2.0014	
	Tare Weight (W1)	1.8818	
8134	Weight of Solution (W2-W1)	0.1196	0
	Volume of Solution µL	100.1200	
SPG-01	Specific Gravity	1.1946	NA
LIQUID			
S96T002024 DUP			
	Gross Weight (W2) = Wt. of vial + cap + cotton + solution		
BA001	Tare Weight (W1) = Wt. of vial + cap + cotton		
ADP	Specific Gravity = [(W2-W1) * 1000 µL/mL] / [Vol. of Solution µL * 1.000 g/mL]		
05/05/96	v RESULT v		
	Specific Gravity =	1.195	

Data Entry by: [signature] Date: 05/05/96

Approved by: RW Schroeder Date: 5/7/96

Form 510112L1 Rev. 1.1

LABCORE Data Entry Template for Worklist# 8917

Analyst: JLF **Instrument:** BA001 **Book #** 133N16A

Method: LA-510-112 Rev/Mod C-3

Worklist Comment: C-106 SPG. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R	A	-------TEST------	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD				SPG-01	LIQUID	1.39755	1.364	N/A	Sp.G.
96000638	C-106 GRAB	2 SAMPLE	S96T002771	0		SPG-01	LIQUID	N/A	1.002	0.01	Sp.G.
96000638	C-106 GRAB	3 DUP	S96T002771	0		SPG-01	LIQUID	1.002	.991	N/A	Sp.G.
96000648	C-106 GRAB	4 SAMPLE	S96T002830	0		SPG-01	LIQUID	N/A	.996	0.01	Sp.G.
96000648	C-106 GRAB	5 DUP	S96T002830	0		SPG-01	LIQUID	.996	.999	N/A	Sp.G.

Final page for worklist # 8917

Jessi Johnsby 5-19-96
Analyst Signature **Date**

[illegible] 5-19-96
Analyst Signature **Date**

Approved RW Schroeder 5/20/96

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

Std

X

.2056

.2042

SPECIFIC GRAVITY : LA-510-112 (C-3)

		STANDARD	STANDARD
Gross Weight (W2)		2.1309	2.0679
Tare Weight (W1)		1.9253	1.8637
Weight of Solution (W2-W1)		0.2056	0.2042
Volume of Solution µL		150.1700	150.1700
Specific Gravity		1.3691	1.3598
Specific Gravity (Average)		1.3645	

Type	STANDARD
Work List	8917
Test Code	SPG-01
Matrix	LIQUID
Sample #	133N16A
Instrument Code	BA001
Analyst	JLF
Date	05/19/96
Time	03:30 AM

Gross Weight (W2) = Wt. of vial + cap + cotton + solution

Tare Weight (W1) = Wt. of vial + cap + cotton

Specific Gravity = [(W2-W1) * 1000 µL/mL] / [Vol. of Solution µL * 1.000 g/mL]

v RESULT v

Specific Gravity Average = 1.364

Data Entry by:	RJ	Date:	05/19/96
Approved by:	RW Schroeder	Date:	5/20/96

Form 510112L1 Rev. 1.1

Page 1 of 1

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

S96T002771 SAM

.1487

.1523

SPECIFIC GRAVITY : LA-510-112 (C-3)

		SAMPLE	REPLICATE
Gross Weight (W2)		2.0176	2.0724
Tare Weight (W1)		1.8689	1.9201
Weight of Solution (W2-W1)		0.1487	0.1523
Volume of Solution µL		150.1700	150.1700
Specific Gravity		0.9902	1.0142
Specific Gravity (Average)		1.0022	

Type	SAMPLE
Work List	8917
Test Code	SPG-01
Matrix	LIQUID
Sample #	S96T002771
Instrument Code	BA001
Analyst	JLF
Date	05/19/96
Time	03:30 AM

Gross Weight (W2) = Wt. of vial + cap + cotton + solution
Tare Weight (W1) = Wt. of vial + cap + cotton

Specific Gravity = [(W2-W1) * 1000 µL/mL] / [Vol. of Solution µL * 1.000 g/mL]

v RESULT v

Specific Gravity Average = 1.002

Data Entry by:	[illegible]	Date:	05/19/96
Approved by:	DW Schroeder	Date:	5/20/96

Form 510112L1 Rev. 1.1

Page 1 of 1

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

S96T002771 DUP

.1480

.1495

SPECIFIC GRAVITY : LA-510-112 (C-3)

Type		DUPLICATE	REPLICATE
DUPLICATE	Gross Weight (W2)	2.0279	2.0625
Work List	Tare Weight (W1)	1.8799	1.9130
8917	Weight of Solution (W2-W1)	0.148	0.1495
Test Code	Volume of Solution µL	150.1700	150.1700
SPG-01	Specific Gravity	0.9855	0.9955
Matrix	Specific Gravity (Average)	0.9905	
LIQUID			
Sample #			
S96T002771			
Instrument Code	Gross Weight (W2) = Wt. of vial + cap + cotton + solution		
BA001	Tare Weight (W1) = Wt. of vial + cap + cotton		
Analyst			
JLF	Specific Gravity = [(W2-W1) * 1000 µL/mL] / [Vol. of Solution µL * 1.000 g/mL]		
Date			
05/19/96	v RESULT v		
Time	Specific Gravity Average =	0.991	
03:30 AM			

Data Entry by:	RJ	Date:	05/19/96
Approved by:	RW Schroeder	Date:	5/20/96

Form 510112L1 Rev. 1.1

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

S96T002830 SAM

.1497

.1495

SPECIFIC GRAVITY : LA-510-112 (C-3)

Type		SAMPLE	REPLICATE
SAMPLE	Gross Weight (W2)	2.0470	2.0334
Work List	Tare Weight (W1)	1.8973	1.8839
8917	Weight of Solution (W2-W1)	0.1497	0.1495
Test Code	Volume of Solution µL	150.1700	150.1700
SPG-01	Specific Gravity	0.9969	0.9955
Matrix	Specific Gravity (Average)	0.9962	
LIQUID			
Sample #			
S96T002830			
Instrument Code	Gross Weight (W2) = Wt. of vial + cap + cotton + solution		
BA001	Tare Weight (W1) = Wt. of vial + cap + cotton		
Analyst			
JLF	Specific Gravity = [(W2-W1) * 1000 µL/mL] / [Vol. of Solution µL * 1.000 g/mL]		
Date			
05/19/96	v RESULT v		
Time	Specific Gravity Average =	0.996	
03:30 AM			

Data Entry by:	[illegible]	Date:	05/19/96
Approved by:	R.W. Schneider	Date:	5/20/96

Form 510112L1 Rev. 1.1

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

S96T002830 DUP

.1497

.1502

SPECIFIC GRAVITY : LA-510-112 (C-3)

Type		DUPLICATE	REPLICATE
DUPLICATE	Gross Weight (W2)	2.0439	2.0397
WorkList	Tare Weight (W1)	1.8942	1.8895
8917	Weight of Solution (W2-W1)	0.1497	0.1502
Test Code	Volume of Solution µL	150.1700	150.1700
SPG-01	Specific Gravity	0.9969	1.0002
Matrix	Specific Gravity (Average)	0.9985	
LIQUID			
Sample #			
S96T002830			
Instrument Code	Gross Weight (W2) = Wt. of vial + cap + cotton + solution		
BA001	Tare Weight (W1) = Wt. of vial + cap + cotton		
Analyst			
JLF	Specific Gravity = [(W2-W1) * 1000 µL/mL] / [Vol. of Solution µL * 1.000 g/mL]		
Date			
05/19/96	v RESULT v		
Time	Specific Gravity Average =	0.999	
03:30 AM			

Data Entry by:		Date:	05/19/96
Approved by:	Rw Schroeder	Date:	5/20/96

Form 510112L1 Rev. 1.1

LABCORE Data Entry Template for Worklist# 8931

Analyst: ADP **Instrument:** BA001 _____ **Book #** 133N164

Method: LA-510-112 Rev/Mod C-3

Worklist Comment: C-106 SPG. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R	A	-------TEST------	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD				SPG-01	LIQUID	1.39755	1.414	N/A	Sp.G.
96000638	C-106 GRAB	2 SAMPLE	S96T002765	0		SPG-01	LIQUID	N/A	0.980	0.016	Sp.G.
96000638	C-106 GRAB	3 DUP	S96T002765	0		SPG-01	LIQUID	0.986	0.977	N/A	Sp.G.
96000638	C-106 GRAB	4 SAMPLE	S96T002768	0		SPG-01	LIQUID	N/A	1.005	0.010	Sp.G.
96000638	C-106 GRAB	5 DUP	S96T002768	0		SPG-01	LIQUID	1.005	0.997	N/A	Sp.G.
96000648	C-106 GRAB	6 SAMPLE	S96T002826	0		SPG-01	LIQUID	N/A	0.988	0.010	Sp.G.
96000648	C-106 GRAB	7 DUP	S96T002826	0		SPG-01	LIQUID	0.988	0.972	N/A	Sp.G.
96000648	C-106 GRAB	8 SAMPLE	S96T002833	0		SPG-01	LIQUID	N/A	0.976	0.010	Sp.G.
96000648	C-106 GRAB	9 DUP	S96T002833	0		SPG-01	LIQUID	0.976	0.987	N/A	Sp.G.

Final page for worklist # 8931

Anthony Pacurto 05 20 96
Analyst Signature **Date**

Gary [illegible] 5-20-96
Analyst Signature **Date**

Approved RW Schroeder 5/21/96

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

SPECIFIC GRAVITY : LA-510-112 (C-3)

		STANDARD	STANDARD
STANDARD	Gross Weight (W2)	2.0692	1.9744
	Tare Weight (W1)	1.9262	1.8342
8931	Weight of Solution (W2-W1)	0.143	0.1402
	Volume of Solution µL	100.1200	100.1200
SPG-01	Specific Gravity	1.4283	1.4003
	Specific Gravity (Average)	1.4143	
LIQUID			
STD			
	Gross Weight (W2) = Wt. of vial + cap + cotton + solution		
BA001	Tare Weight (W1) = Wt. of vial + cap + cotton		
ADP	Specific Gravity = [(W2-W1) * 1000 µL/mL] / [Vol. of Solution µL * 1.000 g/mL]		
05/20/96	v RESULT v		
	Specific Gravity Average =	1.414	
11:00 AM			

Data Entry by:	[signature]	Date:	05/20/96
Approved by:	RW Schroeder	Date:	5/21/96

Form 510112L1 Rev. 1.1

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

SPECIFIC GRAVITY : LA-510-112 (C-3)

Type		SAMPLE	REPLICATE
SAMPLE	Gross Weight (W2)	2.0207	
Work List	Tare Weight (W1)	1.9226	
8931	Weight of Solution (W2-W1)	0.0981	0
Test Code	Volume of Solution µL	100.1200	
SPG-01	Specific Gravity	0.9798	NA
Matrix			
LIQUID			
Sample #			
S95T002765			
Instrument Code	Gross Weight (W2) = Wt. of vial + cap + cotton + solution		
BA001	Tare Weight (W1) = Wt. of vial + cap + cotton		
Analyst			
ADP	Specific Gravity = [(W2-W1) * 1000 µL/mL] / [Vol. of Solution µL * 1.000 g/mL]		
Date			
05/20/96	v RESULT v		
Time	Specific Gravity =	0.980	
11:00 AM			

Data Entry by:	[signature]	Date:	05/20/96
Approved by:	[signature]	Date:	5/21/96

Form 510112L1 Rev. 1.1

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

SPECIFIC GRAVITY : LA-510-112 (C-3)

Type		DUPLICATE	REPLICATE
DUPLICATE	Gross Weight (W2)	2.0033	
Work List	Tare Weight (W1)	1.9055	
8931	Weight of Solution (W2-W1)	0.0978	0
Test Code	Volume of Solution µL	100.1200	
SPG-01	Specific Gravity	0.9768	NA
Matrix			
LIQUID			
Sample #			
S95T002765 DUP			
Instrument Code	Gross Weight (W2) = Wt. of vial + cap + cotton + solution		
BA001	Tare Weight (W1) = Wt. of vial + cap + cotton		
Analyst			
ADP	Specific Gravity = [(W2-W1) * 1000 µL/mL] / [Vol. of Solution µL * 1.000 g/mL]		
Date			
05/20/96	v RESULT v		
Time	Specific Gravity =	0.977	
11:00 AM			

Data Entry by:	Gary Hammond	Date:	05/20/96
Approved by:	Dal Schroeder	Date:	5/21/96

Form 510112L1 Rev. 1.1

Page 1 of 1

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

SPECIFIC GRAVITY : LA-510-112 (C-3)

Type		SAMPLE	REPLICATE
SAMPLE	Gross Weight (W2)	1.9992	
Work List	Tare Weight (W1)	1.8986	
8931	Weight of Solution (W2-W1)	0.1006	0
Test Code	Volume of Solution µL	100.1200	
SPG-01	Specific Gravity	1.0048	NA
Matrix			
LIQUID			
Sample#			
S95T002768			
Instrument Code	Gross Weight (W2) = Wt. of vial + cap + cotton + solution		
BA001	Tare Weight (W1) = Wt. of vial + cap + cotton		
Analyst			
ADP	Specific Gravity = [(W2-W1) * 1000 µL/mL] / [Vol. of Solution µL * 1.000 g/mL]		
Date			
05/20/96	v RESULT v		
Time	Specific Gravity =	1.005	
11:00 AM			

Data Entry by:	[signature]	Date:	05/20/96
Approved by:	RW Schroeder	Date:	5/21/96

Form 510112L1 Rev. 1.1

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

SPECIFIC GRAVITY : LA-510-112 (C-3)

		DUPLICATE	REPLICATE
Gross Weight (W2)		1.9957	
Tare Weight (W1)		1.8959	
Weight of Solution (W2-W1)		0.0998	0
Volume of Solution µL		100.1200	
Specific Gravity		0.9968	NA

Type	DUPLICATE
Work List	8931
Test Code	SPG-01
Matrix	LIQUID
Sample #	S95T002768 DUP
Instrument Code	BA001
Analyst	ADP
Date	05/20/96
Time	11:00 AM

Gross Weight (W2) = Wt. of vial + cap + cotton + solution

Tare Weight (W1) = Wt. of vial + cap + cotton

Specific Gravity = [(W2-W1) * 1000 µL/mL] / [Vol. of Solution µL * 1.000 g/mL]

v RESULT v

Specific Gravity = 0.997

Data Entry by:	[signature]	Date:	05/20/96
Approved by:	[signature]	Date:	5/21/96

Form 510112L1 Rev. 1.1

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

SPECIFIC GRAVITY : LA-510-112 (C-3)

Type		SAMPLE	REPLICATE
SAMPLE	Gross Weight (W2)	1.9514	
Work List	Tare Weight (W1)	1.8525	
8931	Weight of Solution (W2-W1)	0.0989	0
Test Code	Volume of Solution µL	100.1200	
SPG-01	Specific Gravity	0.9878	NA
Matrix			
LIQUID			
Sample #			
S95T002826			
Instrument Code	Gross Weight (W2) = Wt. of vial + cap + cotton + solution		
BA001	Tare Weight (W1) = Wt. of vial + cap + cotton		
Analyst			
ADP	Specific Gravity = [(W2-W1) * 1000 µL/mL] / [Vol. of Solution µL * 1.000 g/mL]		
Date			
05/20/96	v RESULT v		
Time	Specific Gravity =	0.988	
11:00 AM			

Data Entry by:	[signature]	Date:	05/20/96
Approved by:	RW Schroeder	Date:	5/21/96

Form 510112L1 Rev. 1.1

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

SPECIFIC GRAVITY : LA-510-112 (C-3)

		DUPLICATE	REPLICATE
Type			
DUPLICATE	Gross Weight (W2)	1.9659	
Worklist	Tare Weight (W1)	1.8686	
8931	Weight of Solution (W2-W1)	0.0973	0
Method Code	Volume of Solution µL	100.1200	
SPG-01	Specific Gravity	0.9718	NA
Matrix			
LIQUID			
Samples			
S95T002826 DUP			
Instrument Code	Gross Weight (W2) = Wt. of vial + cap + cotton + solution		
BA001	Tare Weight (W1) = Wt. of vial + cap + cotton		
Analyst			
ADP	Specific Gravity = [(W2-W1) * 1000 µL/mL] / [Vol. of Solution µL * 1.000 g/mL]		
Date			
05/20/96	v RESULT v		
Time	Specific Gravity =	0.972	
11:00 AM			

Data Entry by:	[signature]	Date:	05/20/96
Approved by:	Ru Schroeder	Date:	5/21/96

Form 510112L1 Rev. 1.1

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

SPECIFIC GRAVITY : LA-510-112 (C-3)

Type		SAMPLE	REPLICATE
SAMPLE	Gross Weight (W2)	2.0046	
Work List	Tare Weight (W1)	1.9069	
8931	Weight of Solution (W2-W1)	0.0977	0
Test Code	Volume of Solution µL	100.1200	
SPG-01	Specific Gravity	0.9758	NA
Matrix			
LIQUID			
Sample #			
S95T002833			
Instrument Code	Gross Weight (W2) = Wt. of vial + cap + cotton + solution		
BA001	Tare Weight (W1) = Wt. of vial + cap + cotton		
Analyst			
ADP	Specific Gravity = [(W2-W1) * 1000 µL/mL] / [Vol. of Solution µL * 1.000 g/mL]		
Date			
05/20/96	v RESULT v		
Time	Specific Gravity =	0.976	
11:00 AM			

Data Entry by:	[signature]	Date:	05/20/96
Approved by:	RW Schroeder	Date:	5/21/96

Form 510112L1 Rev. 1.1

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

SPECIFIC GRAVITY : LA-510-112 (C-3)

		DUPLICATE	REPLICATE
Type			
DUPLICATE	Gross Weight (W2)	1.9670	
Work List	Tare Weight (W1)	1.8682	
8931	Weight of Solution (W2-W1)	0.0988	0
Test Code	Volume of Solution µL	100.1200	
SPG-01	Specific Gravity	0.9868	NA
Matrix			
LIQUID			
Sample #			
S95T002833 DUP			
Instrument Code	Gross Weight (W2) = Wt. of vial + cap + cotton + solution		
BA001	Tare Weight (W1) = Wt. of vial + cap + cotton		
Analyst			
ADP	Specific Gravity = [(W2-W1) * 1000 µL/mL] / [Vol. of Solution µL * 1.000 g/mL]		
Date			
05/20/96	v RESULT v		
Time	Specific Gravity =	0.987	
11:00 AM			

Data Entry by:		Date:	05/20/96
Approved by:	RW Schroeder	Date:	5/21/96

Form 510112L1 Rev. 1.1

THE FOLLOWING ANALYSES WERE RERUN AND INCLUDED IN THE DATA PACKAGE, BUT THE RESULTS HAVE NOT BEEN REPORTED IN THE FINAL SUMMARY REPORTS.

LABCORE Data Entry Template for Worklist# 6890

Analyst: ADP **Instrument:** BA001 _____ **Book #** 133N16-A

Method: LA-510-112 Rev/Mod C-3

Worklist Comment: C-106 FB SPG RUN IN DUPLICATE NOT REPLICATE. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R	A	-------TEST------	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD				SPG-01	LIQUID	1.3976	1.423	N/A	Sp.G.
96000082	C-106 GRAB	2 SAMPLE	S96T000855	0		SPG-01	LIQUID	N/A	0.987	0.001	Sp.G.
96000082	C-106 GRAB	3 DUP	S96T000855	0		SPG-01	LIQUID	0.987	0.987	N/A	Sp.G.

Final page for worklist # 6890

Anthony Purnitor 4-8-96
Analyst Signature **Date**

[illegible] 4-10-96
Analyst Signature **Date**

Reviewed & Rejected
Rw Schwedu 4/10/96

DATA NOT USED IN PACKAGE

Data Entry Comments: High STD Recovery 101.8174. Limits 94.86 → 101.8. DH

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

SPECIFIC GRAVITY : LA-510-112 (C-3)

		STANDARD	STANDARD
STANDARD	Gross Weight (W2)	2.0121	1.9799
	Tare Weight (W1)	1.8697	1.8374
6890	Weight of Solution (W2-W1)	0.1424	0.1425
	Volume of Solution µL	100.1200	100.1200
SPG-01	Specific Gravity	1.4223	1.4233
	Specific Gravity (Average)	1.4228	
LIQUID			
STD			
	Gross Weight (W2) = Wt. of vial + cap + cotton + solution		
BA001	Tare Weight (W1) = Wt. of vial + cap + cotton		
AD PURINTON	Specific Gravity = [(W2-W1) * 1000 µL/mL] / [Vol. of Solution µL * 1.000 g/mL]		
04/08/96	v RESULT v		
	Specific Gravity Average =	1.423	
10:22 PM			

DATA NOT USED IN PACKAGE

Data Entry by:	[signature]	Date:	04/10/96
Approved by:	[signature]	Date:	4/10/96

Form 510112L1 Rev. 1.1

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

SPECIFIC GRAVITY : LA-510-112 (C-3)

		SAMPLE	REPLICATE
SAMPLE	Gross Weight (W2)	1.9693	1.9290
	Tare Weight (W1)	1.8706	1.8300
6890	Weight of Solution (W2-W1)	0.0987	0.099
	Volume of Solution µL	100.1200	100.1200
SPG-01	Specific Gravity	0.9858	0.9888
	Specific Gravity (Average)	0.9873	
LIQUID			
S96T000855			
	Gross Weight (W2) = Wt. of vial + cap + cotton + solution		
BA001	Tare Weight (W1) = Wt. of vial + cap + cotton		
AD PURINTON	Specific Gravity = [(W2-W1) * 1000 µL/mL] / [Vol. of Solution µL * 1.000 g/mL]		
04/08/96	v RESULT v		
	Specific Gravity Average =	0.987	
10:22 PM			

DATA NOT USED IN PACKAGE

Data Entry by:	[signature]	Date:	04/10/96
Approved by:	RW Schroeder	Date:	4/10/96

Form 510112L1 Rev. 1.1

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

SPECIFIC GRAVITY : LA-510-112 (C-3)

		DUPLICATE	REPLICATE
DUPLICATE	Gross Weight (W2)	1.9602	2.0034
	Tare Weight (W1)	1.8617	1.9043
6890	Weight of Solution (W2-W1)	0.0985	0.0991
	Volume of Solution µL	100.1200	100.1200
SPG-01	Specific Gravity	0.9838	0.9898
	Specific Gravity (Average)	0.9868	
LIQUID			
S96T000855 DUP			
	Gross Weight (W2) = Wt. of vial + cap + cotton + solution		
BA001	Tare Weight (W1) = Wt. of vial + cap + cotton		
AD PURINTON	Specific Gravity = [(W2-W1) * 1000 µL/mL] / [Vol. of Solution µL * 1.000 g/mL]		
04/08/96	v RESULT v		
	Specific Gravity Average =	0.987	
10:22 PM			

DATA NOT USED IN PACKAGE

Data Entry by:	[signature]	Date:	04/10/96
Approved by:	[signature]	Date:	4/10/96

Form 510112L1 Rev. 1.1

LABCORE Data Entry Template for Worklist# 6117

Analyst: SMF **Instrument:** BA001 _____ **Book #** 75N817

Method: LA-564-101 Rev/Mod F/1

Worklist Comment: C-106 % WATER

GROUP	PROJECT	S TYPE	SAMPLE#	R	A	-------TEST------	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD				WATER-01	LIQUID	59.2	60.4	N/A	%
96000082	C-106 GRAB	2 SAMPLE	S96T000538	0		WATER-01	LIQUID	N/A	81.4		%
96000082	C-106 GRAB	3 DUP	S96T000538	0		WATER-01	LIQUID	81.4	81.4	N/A	%

Final page for worklist # 6117

Susie M. Dulton 3-14-96 0245
Analyst Signature **Date**

[illegible] 3/14/96
Analyst Signature **Date**

Data Entry Comments:

in oven at 0230/3-13-96
out at ~~1030~~ 2230/3-13-96 (± 4 hr) SMF 3-13-96

Approved by H Anastor 3-18-96

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

% WATER : LA-564-101 (F-1)

		STANDARD	REPLICATE
	Tare Weight (W1) grams	13.6796	13.8653
STANDARD	Gross Weight (W2) grams	15.0217	15.2045
	First Residue Weight (W3) grams	14.2149	14.3999
6117	Second Residue Weight (W4) grams	14.2118	14.3960
	Percent Difference	0.0219	0.0269
WATER-01	QC Check	Pass	Pass
	Percent Weight Loss	60.35	60.37
LIQUID			
75N8A			

(If it is necessary to do a 3rd heating then substitute the last weight measured for W4 and the second to last weight measured for W3 in the calculations above.)

Sample = W2 - W1	= Gross Weight - Tare Weight
Weight = W2 - W4	= Gross Weight - Residue Weight
Percent Difference	= Absolute Value of [(W3-W4)/W4]*100.00
QC Check "Pass" if % Difference	= < +/- 0.1500%
Percent Water Weight Loss	= [(W2-W4)/(W2-W1)]*100 = % H2O
Percent Water (Average)	= [(% H2O for A) + (% H2O for B)] / 2

S.M. FULTON

03/14/96

RESULT

% H2O (Average) =	60.4

Data Entry by:	RTS	Date:	03/14/96
Approved by:	HAnastis	Date:	3-18-96

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

% WATER : LA-564-101 (F-1)

		BLANK	REPLICATE
	Tare Weight (W1) grams	13.6744	
BLANK	Gross Weight (W2) grams	13.6746	
	First Residue Weight (W3) grams	13.6743	
6117	Second Residue Weight (W4) grams	13.6743	
	Percent Difference	0.0005	N/A
WATER-01	QC Check	Pass	N/A
	Percent Weight Loss	124.00	N/A
LIQUID			
BLNK			
	Sample = W2 - W1	= Gross Weight - Tare Weight	
	Weight = W2 - W4	= Gross Weight - Residue Weight	
S.M. FULTON	Percent Difference	= Absolute Value of [(W3-W4)/W4]*100.00	
	QC Check "Pass" if % Difference	= < +/- 0.1500%	
03/14/96	Percent Water Weight Loss	= [(W2-W4)/(W2-W1)]*100 = % H2O	
	Percent Water (Average)	= [(% H2O for A) + (% H2O for B)] / 2	

(If it is necessary to do a 3rd heating then substitute the last weight measured for W4 and the second to last weight measured for W3 in the calculations above.)

RESULT

% H2O =	124.0

Data Entry by:	RTS	Date:	03/14/96
Approved by:	H Anastas	Date:	3-18-96

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

% WATER : LA-564-101 (F-1)

		SAMPLE	REPLICATE
	Tare Weight (W1) grams	13.7289	
SAMPLE	Gross Weight (W2) grams	14.9020	
	First Residue Weight (W3) grams	13.9475	
6117	Second Residue Weight (W4) grams	13.9473	
	Percent Difference	0.0013	N/A
WATER-01	QC Check	Pass	N/A
	Percent Weight Loss	81.39	N/A
LIQUID			
S96T000538			

(If it is necessary to do a 3rd heating then substitute the last weight measured for W4 and the second to last weight measured for W3 in the calculations above.)

S.M. FULTON

03/14/96

Sample = W2 - W1	= Gross Weight - Tare Weight
Weight = W2 - W4	= Gross Weight - Residue Weight
Percent Difference	= Absolute Value of [(W3-W4)/W4]*100.00
QC Check "Pass" if % Difference	= < +/- 0.1500%
Percent Water Weight Loss	= [(W2-W4)/(W2-W1)]*100 = % H2O
Percent Water (Average)	= [(% H2O for A) + (% H2O for B)] / 2

RESULT

% H2O =	81.4

Data Entry by:	RTS	Date:	03/14/96
Approved by:	J. Anastn	Date:	3-18-96

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

% WATER : LA-564-101 (F-1)

		SAMPLE	REPLICATE
	Tare Weight (W1) grams	15.2069	
SAMPLE	Gross Weight (W2) grams	16.3801	
	First Residue Weight (W3) grams	15.4256	
6117	Second Residue Weight (W4) grams	15.4254	
	Percent Difference	0.0012	N/A
WATER-01	QC Check	Pass	N/A
	Percent Weight Loss	81.37	N/A
LIQUID			
S96T000538/DUP			
S.M. FULTON			
03/14/96			

(If it is necessary to do a 3rd heating then substitute the last weight measured for W4 and the second to last weight measured for W3 in the calculations above.)

Sample = W2 - W1	= Gross Weight - Tare Weight
Weight = W2 - W4	= Gross Weight - Residue Weight
Percent Difference	= Absolute Value of [(W3-W4)/W4]*100.00
QC Check "Pass" if % Difference	= < +/- 0.1500%
Percent Water Weight Loss	= [(W2-W4)/(W2-W1)]*100 = % H2O
Percent Water (Average)	= [(% H2O for A) + (% H2O for B)] / 2

RESULT

% H2O =	81.4

Data Entry by:	RTS	Date:	03/14/96
Approved by:	H Lancaster	Date:	3-18-96

LABCORE Data Entry Template for Worklist# 6363

Analyst: SMF **Instrument:** BA001 **Book #** 75N8A

Method: LA-564-101 Rev/Mod F-1

Worklist Comment: C106 %H2O DO NOT RUN IN REPLICATE. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R	A	-------TEST------	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD				WATER-01	LIQUID	59.2	60.5	N/A	%
96000174	C-106 GRAB	2 SAMPLE	S96T001023	0		WATER-01	LIQUID	N/A	79.0 ~~99.8~~		%
96000174	C-106 GRAB	3 DUP	S96T001023	0		WATER-01	LIQUID	79.0	79.0	N/A	%

Final page for worklist # 6363

Susie M. Dutton 3-14-96 0245
Analyst Signature **Date**

[illegible] 3/14/96
Analyst Signature **Date**

Data Entry Comments:

Approved by HAnaster 3-18-96

in oven @ 0230/3-13-96

out @ ~~1030~~ 2230/3-13-96 (± 4hr)

SMF 3-13-96

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

% WATER : LA-564-101 (F-1)

		STANDARD	REPLICATE
	Tare Weight (W1) grams	13.7366	13.8848
STANDARD	Gross Weight (W2) grams	15.0866	15.2302
	First Residue Weight (W3) grams	14.2734	14.4193
6363	Second Residue Weight (W4) grams	14.2705	14.4168
	Percent Difference	0.0203	0.0171
WATER-01	QC Check	Pass	Pass
	Percent Weight Loss	60.45	60.45
LIQUID			
75N8A			

(If it is necessary to do a 3rd heating then substitute the last weight measured for W4 and the second to last weight measured for W3 in the calculations above.)

Sample = W2 - W1	= Gross Weight - Tare Weight
Weight = W2 - W4	= Gross Weight - Residue Weight
Percent Difference	= Absolute Value of [(W3-W4)/W4]*100.00
QC Check "Pass" if % Difference	= < +/- 0.1500%
Percent Water Weight Loss	= [(W2-W4)/(W2-W1)]*100 = % H2O
Percent Water (Average)	= [(% H2O for A) + (% H2O for B)] / 2

S.M. FULTON

03/14/96

RESULT

% H2O (Average) =	60.5

Data Entry by:	RTS	Date:	03/14/96
Approved by:	H Anastas	Date:	3-18-96

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

% WATER : LA-564-101 (F-1)

		BLANK	REPLICATE
	Tare Weight (W1) grams	13.6744	
BLANK	Gross Weight (W2) grams	13.6446	
	First Residue Weight (W3) grams	13.6743	
6363	Second Residue Weight (W4) grams	13.6743	
	Percent Difference	0.0005	N/A
WATER-01	QC Check	Pass	N/A
	Percent Weight Loss	99.80	N/A
LIQUID			
BLNK			
	Sample = W2 - W1	= Gross Weight - Tare Weight	
	Weight = W2 - W4	= Gross Weight - Residue Weight	
S.M. FULTON	Percent Difference	= Absolute Value of [(W3-W4)/W4]*100.00	
	QC Check "Pass" if % Difference	= < +/- 0.1500%	
03/14/96	Percent Water Weight Loss	= [(W2-W4)/(W2-W1)]*100 = % H2O	
	Percent Water (Average)	= [(% H2O for A) + (% H2O for B)] / 2	

(If it is necessary to do a 3rd heating then substitute the last weight measured for W4 and the second to last weight measured for W3 in the calculations above.)

RESULT

% H2O =	99.8

Data Entry by:	RTS	Date:	03/14/96
Approved by:	H Anastos	Date:	3-18-96

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

% WATER : LA-564-101 (F-1)

		SAMPLE	REPLICATE
	Tare Weight (W1) grams	13.7336	
SAMPLE	Gross Weight (W2) grams	14.9484	
	First Residue Weight (W3) grams	13.9886	
6363	Second Residue Weight (W4) grams	13.9884	
	Percent Difference	0.0010	N/A
WATER-01	QC Check	Pass	N/A
	Percent Weight Loss	79.03	N/A
LIQUID			
S96T001023			

(If it is necessary to do a 3rd heating then substitute the last weight measured for W4 and the second to last weight measured for W3 in the calculations above.)

Sample = W2 - W1	= Gross Weight - Tare Weight
Weight = W2 - W4	= Gross Weight - Residue Weight
Percent Difference	= Absolute Value of [(W3-W4)/W4]*100.00
QC Check "Pass" if % Difference	= < +/- 0.1500%
Percent Water Weight Loss	= [(W2-W4)/(W2-W1)]*100 = % H2O
Percent Water (Average)	= [(% H2O for A) + (% H2O for B)] / 2

S.M. FULTON

03/14/96

RESULT

% H2O = 79.0

Data Entry by:	RTS	Date:	03/14/96
Approved by:	H Chastain	Date:	3-18-96

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

% WATER : LA-564-101 (F-1)

		SAMPLE	REPLICATE
	Tare Weight (W1) grams	13.7928	
SAMPLE	Gross Weight (W2) grams	15.0084	
	First Residue Weight (W3) grams	14.0482	
6363	Second Residue Weight (W4) grams	14.0480	
	Percent Difference	0.0014	N/A
WATER-01	QC Check	Pass	N/A
	Percent Weight Loss	79.01	N/A
LIQUID			
S96T001023/DUP			
S.M. FULTON			
03/14/96			

(If it is necessary to do a 3rd heating then substitute the last weight measured for W4 and the second to last weight measured for W3 in the calculations above.)

Sample = W2 - W1	= Gross Weight - Tare Weight
Weight = W2 - W4	= Gross Weight - Residue Weight
Percent Difference	= Absolute Value of [(W3-W4)/W4]*100.00
QC Check "Pass" if % Difference	= < +/- 0.1500%
Percent Water Weight Loss	= [(W2-W4)/(W2-W1)]*100 = % H2O
Percent Water (Average)	= [(% H2O for A) + (% H2O for B)] / 2

RESULT

% H2O =	79.0

Data Entry by:	RTS	Date:	03/14/96
Approved by:	H Anastn	Date:	3-18-96

LABCORE Data Entry Template for Worklist# 6891

Analyst: ADP/JDS **Instrument:** BA001 _____ **Book #** 82N8A

Method: LA-564-101 Rev/Mod F-1

Worklist Comment: C-106 FB RUN IN DUPLICATE NOT REPLICATE. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R	A	-------TEST------	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD				WATER-01	LIQUID	59.2	58.5	N/A	%
96000082	C-106 GRAB	2 SAMPLE	S96T000855	0		WATER-01	LIQUID	N/A	100	0.01	%
96000082	C-106 GRAB	3 DUP	S96T000855	0		WATER-01	LIQUID	100	100	N/A	%

Final page for worklist # 6891

Analyst Signature: [signature] Date: 4-18-96

Analyst Signature: [signature] Date: 4/24/96

[signature] 4-19-96

Reviewed RW Schroeder 4/24/96

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

% WATER : LA-564-101 (F-1)

		STANDARD	REPLICATE
Type	Tare Weight (W1) grams	13.5551	
STANDARD	Gross Weight (W2) grams	14.8982	
Work List	First Residue Weight (W3) grams	14.1139	
6891	Second Residue Weight (W4) grams	14.1122	
Test Code	Percent Difference	0.0120	N/A
WATER-01	QC Check	Pass	N/A
Matrix	Percent Weight Loss	58.52	N/A
LIQUID			
Sample			
82N8A			
Instrument			
BA001			
Analyst			
ADPVJDS			
Date			
04/18/96			
Time			

(If it is necessary to do a 3rd heating then substitute the last weight measured for W4 and the second to last weight measured for W3 in the calculations above.)

Sample = W2 - W1	= Gross Weight - Tare Weight
Weight = W2 - W4	= Gross Weight - Residue Weight
Percent Difference	= Absolute Value of [(W3-W4)/W4]*100.00
QC Check "Pass" if % Difference	= < +/- 0.1500%
Percent Water Weight Loss	= [(W2-W4)/(W2-W1)]*100 = % H2O
Percent Water (Average)	= [(% H2O for A) + (% H2O for B)] / 2

RESULT

% H2O =	58.5

Data Entry by:	[signature]	Date:	04/20/96
Approved by:	RW Schwerdt	Date:	4/24/96

Form 564101L1 Rev. 1.2

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

% WATER : LA-564-101 (F-1)

		SAMPLE	REPLICATE
Type	Tare Weight (W1) grams	13.5168	
SAMPLE	Gross Weight (W2) grams	14.5196	
Work List	First Residue Weight (W3) grams	13.5169	
6891	Second Residue Weight (W4) grams	13.5168	
Co	Percent Difference	0.0007	N/A
WATER-01	QC Check	Pass	N/A
atr	Percent Weight Loss	100.00	N/A
LIQUID			
mple			
S96T00855			
ment			
BA001			
nalys			
ADP\JDS			
Date			
04/18/96			
Time			

(If it is necessary to do a 3rd heating then substitute the last weight measured for W4 and the second to last weight measured for W3 in the calculations above.)

Sample = W2 - W1	= Gross Weight - Tare Weight
Weight = W2 - W4	= Gross Weight - Residue Weight
Percent Difference	= Absolute Value of [(W3-W4)/W4]*100.00
QC Check "Pass" if % Difference	= < +/- 0.1500%
Percent Water Weight Loss	= [(W2-W4)/(W2-W1)]*100 = % H2O
Percent Water (Average)	= [(% H2O for A) + (% H2O for B)] / 2

RESULT

% H2O =	100.0

Data Entry by:	[signature]	Date:	04/20/96
Approved by:	RW Schroeder	Date:	4/24/96

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

% WATER : LA-564-101 (F-1)

		SAMPLE	REPLICATE
ype	Tare Weight (W1) grams	13.4551	
DUPLICATE	Gross Weight (W2) grams	14.4510	
rk	First Residue Weight (W3) grams	13.4555	
6891	Second Residue Weight (W4) grams	13.4554	
t Co	Percent Difference	0.0007	N/A
WATER-01	QC Check	Pass	N/A
atri	Percent Weight Loss	99.97	N/A
LIQUID			
mple			
S96T00855DUP			
ment			
BA001			
nalys			
ADPWDS			
Date			
04/18/96			
Time			

(If it is necessary to do a 3rd heating then substitute the last weight measured for W4 and the second to last weight measured for W3 in the calculations above.)

Sample = W2 - W1	= Gross Weight - Tare Weight
Weight = W2 - W4	= Gross Weight - Residue Weight
Percent Difference	= Absolute Value of [(W3-W4)/W4]*100.00
QC Check "Pass" if % Difference	= < +/- 0.1500%
Percent Water Weight Loss	= [(W2-W4)/(W2-W1)]*100 = % H2O
Percent Water (Average)	= [(% H2O for A) + (% H2O for B)] / 2

RESULT

% H2O =	100.0

Data Entry by:	[signature]	Date:	04/20/96
Approved by:	RW Schroeder	Date:	4/24/96

LABCORE Data Entry Template for Worklist# 7263

Analyst: ADP/JCS **Instrument:** BA001 _____ **Book #** 82N8A

Method: LA-564-101 Rev/Mod F-1

Worklist Comment: C-106 %H2O RUN IN DUPLICATE. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R	A	-------TEST------	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD				WATER-01	LIQUID	59.2	58.4	N/A	%
96000082	C-106 GRAB	2 SAMPLE	S96T000544	0		WATER-01	LIQUID	N/A	78.8	0.01	%
96000082	C-106 GRAB	3 DUP	S96T000544	0		WATER-01	LIQUID	78.8	78.8	N/A	%
96000082	C-106 GRAB	4 SAMPLE	S96T000559	0		WATER-01	LIQUID	N/A	79.3	0.01	%
96000082	C-106 GRAB	5 DUP	S96T000559	0		WATER-01	LIQUID	79.3	79.3	N/A	%

Final page for worklist # 7263

Author Purnutor 4-18-96
Analyst Signature **Date**

JDH Sp 4-20-96

RE Wright 4/24/96
Analyst Signature **Date**

Reviewed RW Schroeder 4/24/96

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

% WATER : LA-564-101 (F-1)

		STANDARD	REPLICATE
ype	Tare Weight (W1) grams	13.4935	
STANDARD	Gross Weight (W2) grams	14.8379	
Work	First Residue Weight (W3) grams	14.0561	
7263	Second Residue Weight (W4) grams	14.0532	
	Percent Difference	0.0206	N/A
WATER-01	QC Check	Pass	N/A
at	Percent Weight Loss	58.37	N/A
LIQUID			
mp			
82N8A			
nen			
BA001			
naly			
ADP\JDS			
Date			
04/20/96			
ime			

(If it is necessary to do a 3rd heating then substitute the last weight measured for W4 and the second to last weight measured for W3 in the calculations above.)

Sample = W2 - W1	= Gross Weight - Tare Weight
Weight = W2 - W4	= Gross Weight - Residue Weight
Percent Difference	= Absolute Value of [(W3-W4)/W4]*100.00
QC Check "Pass" if % Difference	= < +/- 0.1500%
Percent Water Weight Loss	= [(W2-W4)/(W2-W1)]*100 = % H2O
Percent Water (Average)	= [(% H2O for A) + (% H2O for B)] / 2

RESULT

% H2O =	58.4

Data Entry by:	[signature]	Date:	04/20/96
Approved by:	[signature]	Date:	6/11/96

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

% WATER : LA-564-101 (F-1)

		SAMPLE	REPLICATE
ype	Tare Weight (W1) grams	13.4957	
SAMPLE	Gross Weight (W2) grams	14.6940	
Work	First Residue Weight (W3) grams	13.7500	
7263	Second Residue Weight (W4) grams	13.7501	
	Percent Difference	0.0007	N/A
WATER-01	QC Check	Pass	N/A
	Percent Weight Loss	78.77	N/A
LIQUID			
mpl			
S96T000544			
men			
BA001			
naly			
ADP\JDS			
Date			
04/20/96			
ime			

(If it is necessary to do a 3rd heating then substitute the last weight measured for W4 and the second to last weight measured for W3 in the calculations above.)

Sample = W2 - W1	= Gross Weight - Tare Weight
Weight = W2 - W4	= Gross Weight - Residue Weight
Percent Difference	= Absolute Value of [(W3-W4)/W4]*100.00
QC Check "Pass" if % Difference	= < +/- 0.1500%
Percent Water Weight Loss	= [(W2-W4)/(W2-W1)]*100 = % H2O
Percent Water (Average)	= [(% H2O for A) + (% H2O for B)] / 2

RESULT

% H2O =	78.8

Data Entry by:	[signature]	Date:	04/20/96
Approved by:	[signature]	Date:	6/11/96

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

% WATER : LA-564-101 (F-1)

		SAMPLE	REPLICATE
Yp	Tare Weight (W1) grams	13.5617	
DUPLICATE	Gross Weight (W2) grams	14.7444	
rk	First Residue Weight (W3) grams	13.8129	
7263	Second Residue Weight (W4) grams	13.8127	
	Percent Difference	0.0014	N/A
WATER-01	QC Check	Pass	N/A
st	Percent Weight Loss	78.78	N/A
LIQUID			
mpl			
S96T000544DUP			
men			
BA001			
nalys			
ADPWJDS			
Date			
04/20/96			
im			

(If it is necessary to do a 3rd heating then substitute the last weight measured for W4 and the second to last weight measured for W3 in the calculations above.)

Sample = W2 - W1	= Gross Weight - Tare Weight
Weight = W2 - W4	= Gross Weight - Residue Weight
Percent Difference	= Absolute Value of [(W3-W4)/W4]*100.00
QC Check "Pass" if % Difference	= < +/- 0.1500%
Percent Water Weight Loss	= [(W2-W4)/(W2-W1)]*100 = % H2O
Percent Water (Average)	= [(% H2O for A) + (% H2O for B)] / 2

RESULT

% H2O =	78.8

Data Entry by:	[signature]	Date:	04/20/96
Approved by:	RW Schneider	Date:	6/11/96

Form 564101L1 Rev. 1.2

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

% WATER : LA-564-101 (F-1)

		SAMPLE	REPLICATE
[redacted]	Tare Weight (W1) grams	13.4129	
SAMPLE	Gross Weight (W2) grams	14.6038	
[redacted]	First Residue Weight (W3) grams	13.6592	
7263	Second Residue Weight (W4) grams	13.6592	
[redacted]	Percent Difference	0.0000	N/A
WATER-01	QC Check	Pass	N/A
[redacted]	Percent Weight Loss	79.32	N/A
LIQUID			
[redacted]			
S96T000559			
[redacted]			
BA001			
[redacted]			
ADPVJDS			
[redacted]			
04/20/96			
[redacted]			

(If it is necessary to do a 3rd heating then substitute the last weight measured for W4 and the second to last weight measured for W3 in the calculations above.)

Sample = W2 - W1	= Gross Weight - Tare Weight
Weight = W2 - W4	= Gross Weight - Residue Weight
Percent Difference	= Absolute Value of [(W3-W4)/W4]*100.00
QC Check "Pass" if % Difference	= < +/- 0.1500%
Percent Water Weight Loss	= [(W2-W4)/(W2-W1)]*100 = % H2O
Percent Water (Average)	= [(% H2O for A) + (% H2O for B)] / 2

RESULT

% H2O =	79.3

Data Entry by:	[signature]	Date:	04/20/96
Approved by:	RW Schroeder	Date:	6/11/96

Form 564101L1 Rev. 1.2

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

% WATER : LA-564-101 (F-1)

		SAMPLE	REPLICATE
Type	Tare Weight (W1) grams	13.4492	
DUPLICATE	Gross Weight (W2) grams	14.6104	
Ticket	First Residue Weight (W3) grams	13.6896	
7263	Second Residue Weight (W4) grams	13.6895	
Code	Percent Difference	0.0007	N/A
WATER-01	QC Check	Pass	N/A
Matrix	Percent Weight Loss	79.31	N/A
LIQUID			
Sample			
S96T000559DUP			
Segment			
BA001			
Analysis			
ADPWJDS			
Date			
04/20/96			
Time			

(If it is necessary to do a 3rd heating then substitute the last weight measured for W4 and the second to last weight measured for W3 in the calculations above.)

Sample = W2 - W1	= Gross Weight - Tare Weight
Weight = W2 - W4	= Gross Weight - Residue Weight
Percent Difference	= Absolute Value of [(W3-W4)/W4]*100.00
QC Check "Pass" if % Difference	= < +/- 0.1500%
Percent Water Weight Loss	= [(W2-W4)/(W2-W1)]*100 = % H2O
Percent Water (Average)	= [(% H2O for A) + (% H2O for B)] / 2

RESULT

% H2O = 79.3

Data Entry by:	[signature]	Date:	04/20/96
Approved by:	RW Schroeder	Date:	6/11/96

Form 564101L1 Rev. 1.2

LABCORE Data Entry Template for Worklist# 7420

Analyst: AP **Instrument:** BA001 **Book #** 82N87A

Method: LA-564-101 Rev/Mod F-1

Worklist Comment: C-106 %H20 SAMPLE DRY & FLIGHTY,HIGH ALPHA USE CAUTION. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R	A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD				WATER-01	SOLID	59.2	~~41.9~~ 58.1 NW 4/24/96	N/A	%
96000082	C-106 GRAB	2 SAMPLE	S96T000542	0		WATER-01	SOLID	N/A	~~90.2~~ 9.8 NW 4/24/96		%
96000082	C-106 GRAB	3 DUP	S96T000542	0		WATER-01	SOLID	~~90.2~~ 9.8 NW 4/24/96	~~90.0~~ 10.00 NW 4/24/96	N/A	%
96000082	C-106 GRAB	4 SAMPLE	S96T000553	0		WATER-01	SOLID	N/A	~~81.1~~ 18.89 NW 4/24/96		%
96000082	C-106 GRAB	5 DUP	S96T000553	0		WATER-01	SOLID	~~81.1~~ 18.89 NW 4/24/96	~~80.8~~ 19.2 NW 4/24/96	N/A	%
96000082	C-106 GRAB	6 SAMPLE	S96T000558	0		WATER-01	SOLID	N/A	~~83.0~~ 17.03 NW 4/24/96		%
96000082	C-106 GRAB	7 DUP	S96T000558	0		WATER-01	SOLID	~~83.0~~ 17.03 NW 4/24/96	~~82.8~~ 17.2 NW 4/24/96	N/A	%
96000082	C-106 GRAB	8 SAMPLE	S96T000569	0		WATER-01	SOLID	N/A	~~73.7~~ 26.3 NW 4/24/96		%
96000082	C-106 GRAB	9 DUP	S96T000569	0		WATER-01	SOLID	~~73.7~~ 26.3 NW 4/24/96	~~72.7~~ 27.3 4/24/96 NW	N/A	%

Final page for worklist # 7420

Anthony Pirrotta 4-24-96
Analyst Signature **Date**

Started 1400 4-24-96 out 1300 4-25-96

Reviewed RW Schroeder 4/26/96
Analyst Signature **Date**

RWS 4/26/96

Data Entry Comments: ~~LCS Failure~~ Report # 13852

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

% WATER : LA-564-101 (F-1)

		STANDARD	REPLICATE
Type	Tare Weight (W1) grams	13.3869	
STANDARD	Gross Weight (W2) grams	14.7507	
Worksheet	First Residue Weight (W3) grams	13.9611	
7420	Second Residue Weight (W4) grams	13.9584	
	Percent Difference	0.0193	N/A
WATER-01	QC Check	Pass	N/A
Matrix	Percent Weight Loss	58.10	N/A
SOLID			
Sample			
82N8A			
Instrument Code			
	Sample = W2 - W1	= Gross Weight - Tare Weight	
Analyst	Weight = W2 - W4	= Gross Weight - Residue Weight	
A. PURINTON	Percent Difference	= Absolute Value of [(W3-W4)/W4]*100.00	
Date	QC Check "Pass" if % Difference	= < +/- 0.1500%	
04/26/96	Percent Water Weight Loss	= [(W2-W4)/(W2-W1)]*100 = % H2O	
Time	Percent Water (Average)	= [(% H2O for A) + (% H2O for B)] / 2	

(If it is necessary to do a 3rd heating then substitute the last weight measured for W4 and the second to last weight measured for W3 in the calculations above.)

RESULT

% H2O =	58.1

Data Entry by:	NE Wright	Date:	04/26/96
Approved by:	RW Schroeder	Date:	4/26/96

Form 564101L1 Rev. 1.2

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

% WATER : LA-564-101 (F-1)

		SAMPLE	REPLICATE
	Tare Weight (W1) grams	13.9684	
SAMPLE	Gross Weight (W2) grams	14.0226	
	First Residue Weight (W3) grams	14.0175	
7420	Second Residue Weight (W4) grams	14.0173	
	Percent Difference	0.0014	N/A
WATER-01	QC Check	Pass	N/A
	Percent Weight Loss	9.78	N/A
SOLID			
S96T000542			

(If it is necessary to do a 3rd heating then substitute the last weight measured for W4 and the second to last weight measured for W3 in the calculations above.)

Sample = W2 - W1	= Gross Weight - Tare Weight
Weight = W2 - W4	= Gross Weight - Residue Weight
Percent Difference	= Absolute Value of [(W3-W4)/W4]*100.00
QC Check "Pass" if % Difference	= < +/- 0.1500%
Percent Water Weight Loss	= [(W2-W4)/(W2-W1)]*100 = % H2O
Percent Water (Average)	= [(% H2O for A) + (% H2O for B)] / 2

A. PURINTON

04/26/96

RESULT

% H2O = 9.8

Data Entry by: NE Wright Date: 04/26/96

Approved by: RW Schroeder Date: 4/26/96

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

% WATER : LA-564-101 (F-1)

		SAMPLE	REPLICATE
	Tare Weight (W1) grams	13.5377	
DUPLICATE	Gross Weight (W2) grams	13.5949	
	First Residue Weight (W3) grams	13.5895	
7420	Second Residue Weight (W4) grams	13.5892	
	Percent Difference	0.0022	N/A
WATER-01	QC Check	Pass	N/A
	Percent Weight Loss	9.97	N/A
SOLID			
S96T000542			

(If it is necessary to do a 3rd heating then substitute the last weight measured for W4 and the second to last weight measured for W3 in the calculations above.)

A. PURINTON

04/26/96

Sample = W2 - W1	= Gross Weight - Tare Weight
Weight = W2 - W4	= Gross Weight - Residue Weight
Percent Difference	= Absolute Value of [(W3-W4)/W4]*100.00
QC Check "Pass" if % Difference	= < +/- 0.1500%
Percent Water Weight Loss	= [(W2-W4)/(W2-W1)]*100 = % H2O
Percent Water (Average)	= [(% H2O for A) + (% H2O for B)] / 2

RESULT

% H2O = 10.0

Data Entry by: TE Wright Date: 04/26/96

Approved by: RW Schroeder Date: 4/26/96

Form 564101L1 Rev. 1.2

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

% WATER : LA-564-101 (F-1)

		SAMPLE	REPLICATE
	Tare Weight (W1) grams	13.9563	
SAMPLE	Gross Weight (W2) grams	14.0394	
	First Residue Weight (W3) grams	14.0874	
7420	Second Residue Weight (W4) grams	14.0237	
	Percent Difference	0.4542	N/A
WATER-01	QC Check	Fail	N/A
	Percent Weight Loss	18.89	ERR
SOLID			
S96T000553			
A. PURINTON			
04/26/96			

(If it is necessary to do a 3rd heating then substitute the last weight measured for W4 and the second to last weight measured for W3 in the calculations above.)

Sample = W2 - W1	= Gross Weight - Tare Weight
Weight = W2 - W4	= Gross Weight - Residue Weight
Percent Difference	= Absolute Value of [(W3-W4)/W4]*100.00
QC Check "Pass" if % Difference	= < +/- 0.1500%
Percent Water Weight Loss	= [(W2-W4)/(W2-W1)]*100 = % H2O
Percent Water (Average)	= [(% H2O for A) + (% H2O for B)] / 2

RESULT

% H2O = *** QC Check Failure ***

Data Entry by:	[illegible]	Date:	04/26/96
Approved by:	RW Schroeder	Date:	4/26/96

Form 564101L1 Rev. 1.2

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

% WATER : LA-564-101 (F-1)

		SAMPLE	REPLICATE
	Tare Weight (W1) grams	13.9916	
DUPLICATE	Gross Weight (W2) grams	14.1098	
	First Residue Weight (W3) grams	14.0874	
7420	Second Residue Weight (W4) grams	14.0871	
	Percent Difference	0.0021	N/A
WATER-01	QC Check	Pass	N/A
	Percent Weight Loss	19.20	ERR
SOLID			
S96T000553			
	Sample = W2 - W1	= Gross Weight - Tare Weight	
	Weight = W2 - W4	= Gross Weight - Residue Weight	
A. PURINTON	Percent Difference	= Absolute Value of [(W3-W4)/W4]*100.00	
	QC Check "Pass" if % Difference	= < +/- 0.1500%	
04/26/96	Percent Water Weight Loss	= [(W2-W4)/(W2-W1)]*100 = % H2O	
	Percent Water (Average)	= [(% H2O for A) + (% H2O for B)] / 2	

(If it is necessary to do a 3rd heating then substitute the last weight measured for W4 and the second to last weight measured for W3 in the calculations above.)

RESULT

% H2O =	19.2

Data Entry by:	NE Wright	Date:	04/26/96
Approved by:	RW Schroeder	Date:	4/26/96

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

% WATER : LA-564-101 (F-1)

		SAMPLE	REPLICATE
	Tare Weight (W1) grams	13.9370	
SAMPLE	Gross Weight (W2) grams	14.0110	
	First Residue Weight (W3) grams	13.9988	
7420	Second Residue Weight (W4) grams	13.9984	
	Percent Difference	0.0029	N/A
WATER-01	QC Check	Pass	N/A
	Percent Weight Loss	17.03	ERR
SOLID			
S96T000558			

(If it is necessary to do a 3rd heating then substitute the last weight measured for W4 and the second to last weight measured for W3 in the calculations above.)

A. PURINTON

04/26/96

Sample = W2 - W1	= Gross Weight - Tare Weight
Weight = W2 - W4	= Gross Weight - Residue Weight
Percent Difference	= Absolute Value of [(W3-W4)/W4]*100.00
QC Check "Pass" if % Difference	= < +/- 0.1500%
Percent Water Weight Loss	= [(W2-W4)/(W2-W1)]*100 = % H2O
Percent Water (Average)	= [(% H2O for A) + (% H2O for B)] / 2

RESULT

% H2O = 17.0

Data Entry by: TE Wright Date: 04/26/96

Approved by: RW Schroeder Date: 4/26/96

Form 564101L1 Rev. 1.2

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

% WATER : LA-564-101 (F-1)

		SAMPLE	REPLICATE
	Tare Weight (W1) grams	13.3870	
DUPLICATE	Gross Weight (W2) grams	13.4695	
	First Residue Weight (W3) grams	13.4557	
7420	Second Residue Weight (W4) grams	13.4553	
	Percent Difference	0.0030	N/A
WATER-01	QC Check	Pass	N/A
	Percent Weight Loss	17.21	ERR
SOLID	(If it is necessary to do a 3rd heating then substitute the last weight measured for W4 and the second to last weight measured for W3 in the calculations above.)		
S96T000558			
	Sample = W2 - W1	= Gross Weight - Tare Weight	
	Weight = W2 - W4	= Gross Weight - Residue Weight	
A. PURINTON	Percent Difference	= Absolute Value of [(W3-W4)/W4]*100.00	
	QC Check "Pass" if % Difference	= < +/- 0.1500%	
04/26/96	Percent Water Weight Loss	= [(W2-W4)/(W2-W1)]*100 = % H2O	
	Percent Water (Average)	= [(% H2O for A) + (% H2O for B)] / 2	

RESULT

% H2O =	17.2

Data Entry by:	RE Wright	Date:	04/26/96
Approved by:	RW Schroeder	Date:	4/26/96

Form 564101L1 Rev. 1.2

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

% WATER : LA-564-101 (F-1)

		SAMPLE	REPLICATE
	Tare Weight (W1) grams	13.3773	
SAMPLE	Gross Weight (W2) grams	13.5056	
	First Residue Weight (W3) grams	13.4723	
7420	Second Residue Weight (W4) grams	13.4719	
	Percent Difference	0.0030	N/A
WATER-01	QC Check	Pass	N/A
	Percent Weight Loss	26.27	ERR
SOLID			
S96T000569			
	Sample = W2 - W1	= Gross Weight - Tare Weight	
	Weight = W2 - W4	= Gross Weight - Residue Weight	
A. PURINTON	Percent Difference	= Absolute Value of [(W3-W4)/W4]*100.00	
	QC Check "Pass" if % Difference	= < +/- 0.1500%	
04/26/96	Percent Water Weight Loss	= [(W2-W4)/(W2-W1)]*100 = % H2O	
	Percent Water (Average)	= [(% H2O for A) + (% H2O for B)] / 2	

(If it is necessary to do a 3rd heating then substitute the last weight measured for W4 and the second to last weight measured for W3 in the calculations above.)

RESULT

% H2O =	26.3

Data Entry by:	TE Wright	Date:	04/26/96
Approved by:	RW Schroeder	Date:	4/26/96

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

% WATER : LA-564-101 (F-1)

		SAMPLE	REPLICATE
	Tare Weight (W1) grams	13.9084	
DUPLICATE	Gross Weight (W2) grams	13.9955	
	First Residue Weight (W3) grams	13.9722	
7420	Second Residue Weight (W4) grams	13.9717	
	Percent Difference	0.0036	N/A
WATER-01	QC Check	Pass	N/A
	Percent Weight Loss	27.32	ERR
SOLID			
S96T000569			
A. PURINTON			
04/26/96			

(If it is necessary to do a 3rd heating then substitute the last weight measured for W4 and the second to last weight measured for W3 in the calculations above.)

Sample = W2 - W1	= Gross Weight - Tare Weight
Weight = W2 - W4	= Gross Weight - Residue Weight
Percent Difference	= Absolute Value of [(W3-W4)/W4]*100.00
QC Check "Pass" if % Difference	= < +/- 0.1500%
Percent Water Weight Loss	= [(W2-W4)/(W2-W1)]*100 = % H2O
Percent Water (Average)	= [(% H2O for A) + (% H2O for B)] / 2

RESULT

% H2O =	27.3

Data Entry by:	TE Wright	Date:	04/26/96
Approved by:	RW Schroeder	Date:	4/26/96

LABCORE Data Entry Template for Worklist# 7519

Analyst: ADB **Instrument:** BA001 _____ **Book #** 82N8A

Method: LA-564-101 Rev/Mod F-1

Worklist Comment: C-106 FOR %WATER RTS!

GROUP	PROJECT	S TYPE	SAMPLE#	R	A	-------TEST------	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD				WATER-01	SOLID	59.2	58.4	N/A	%
96000174	C-106 GRAB	2 SAMPLE	S96T001561	0		WATER-01	SOLID	N/A	25.9	0.01	%
96000174	C-106 GRAB	3 DUP	S96T001561	0		WATER-01	SOLID	25.9	26.7	N/A	%

Final page for worklist # 7519

Anthony Pumarta 4-22-96
Analyst Signature **Date**

RABeck
Analyst Signature **Date**

Reviewed RW Schroeder 4/26/96

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

% WATER : LA-564-101 (F-1)

		STANDARD	REPLICATE
	Tare Weight (W1) grams	13.5067	
STANDARD	Gross Weight (W2) grams	14.8828	
	First Residue Weight (W3) grams	14.0792	
7519	Second Residue Weight (W4) grams	14.0785	
	Percent Difference	0.0050	N/A
WATER-01	QC Check	Pass	N/A
	Percent Weight Loss	58.45	N/A
SOLID			
STANDARD			
BA001			
adp			
04/22/96			

(If it is necessary to do a 3rd heating then substitute the last weight measured for W4 and the second to last weight measured for W3 in the calculations above.)

Sample = W2 - W1	= Gross Weight - Tare Weight
Weight = W2 - W4	= Gross Weight - Residue Weight
Percent Difference	= Absolute Value of [(W3-W4)/W4]*100.00
QC Check "Pass" if % Difference	= < +/- 0.1500%
Percent Water Weight Loss	= [(W2-W4)/(W2-W1)]*100 = % H2O
Percent Water (Average)	= [(% H2O for A) + (% H2O for B)] / 2

RESULT

% H2O =	58.4

Data Entry by:	RTS	Date:	04/25/96
Approved by:	RW Schroeder	Date:	

Form 564101L1 Rev. 1.2

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

% WATER : LA-564-101 (F-1)

		SAMPLE	REPLICATE
	Tare Weight (W1) grams	13.4059	
SAMPLE	Gross Weight (W2) grams	13.4913	
	First Residue Weight (W3) grams	13.4692	
7519	Second Residue Weight (W4) grams	13.4692	
	Percent Difference	0.0000	N/A
WATER-01	QC Check	Pass	N/A
	Percent Weight Loss	25.88	N/A
SOLID			
S96T001561			
BA001			
adp			
04/22/96			

(If it is necessary to do a 3rd heating then substitute the last weight measured for W4 and the second to last weight measured for W3 in the calculations above.)

Sample = W2 - W1	= Gross Weight - Tare Weight
Weight = W2 - W4	= Gross Weight - Residue Weight
Percent Difference	= Absolute Value of [(W3-W4)/W4]*100.00
QC Check "Pass" if % Difference	= < +/- 0.1500%
Percent Water Weight Loss	= [(W2-W4)/(W2-W1)]*100 = % H2O
Percent Water (Average)	= [(% H2O for A) + (% H2O for B)] / 2

RESULT

% H2O =	25.9

Data Entry by:	RTS	Date:	04/25/96
Approved by:	RW Schroeder	Date:	4/26/96

Form 564101L1 Rev. 1.2

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

% WATER : LA-564-101 (F-1)

		SAMPLE	REPLICATE
[redacted]	Tare Weight (W1) grams	13.4052	
SAMPLE	Gross Weight (W2) grams	13.4982	
[redacted]	First Residue Weight (W3) grams	13.4735	
7519	Second Residue Weight (W4) grams	13.4734	
[redacted]	Percent Difference	0.0007	N/A
WATER-01	QC Check	Pass	N/A
[redacted]	Percent Weight Loss	26.67	N/A
SOLID			
[redacted]			
S96T001561/DUP			
[redacted]			
BA001			
[redacted]			
adp			
[redacted]			
04/22/96			
[redacted]			

(If it is necessary to do a 3rd heating then substitute the last weight measured for W4 and the second to last weight measured for W3 in the calculations above.)

Sample = W2 - W1	= Gross Weight - Tare Weight
Weight = W2 - W4	= Gross Weight - Residue Weight
Percent Difference	= Absolute Value of [(W3-W4)/W4]*100.00
QC Check "Pass" if % Difference	= < +/- 0.1500%
Percent Water Weight Loss	= [(W2-W4)/(W2-W1)]*100 = % H2O
Percent Water (Average)	= [(% H2O for A) + (% H2O for B)] / 2

RESULT

% H2O =	26.7

Data Entry by:	RTS	Date:	04/25/96
Approved by:	RW Schroeder	Date:	4/26/96

worklistrpt Version 2.1 05/15/95
04/25/96 08:18

LABCORE Data Entry Template for Worklist# 7572

Analyst: ADP **Instrument:** BA001 _____ **Book #** 82N8A

Method: LA-564-101 Rev/Mod F-1

Worklist Comment: C-106 %H2O

GROUP	PROJECT	S TYPE	SAMPLE#	R	A	-------TEST------	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD				WATER-01	LIQUID	59.2	58.5	N/A	%
96000174	C-106 GRAB	2 SAMPLE	S96T001675	0		WATER-01	LIQUID	N/A	78.2	0.01	%
96000174	C-106 GRAB	3 DUP	S96T001675	0		WATER-01	LIQUID	78.2	78.3	N/A	%

Final page for worklist # 7572

Anthony Pinuto 4-22-96
Analyst Signature **Date**

R Stitt 4-25-96
Analyst Signature **Date**

Reviewed RW Schroeder 4/26/96

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

% WATER : LA-564-101 (F-1)

		STANDARD	REPLICATE
	Tare Weight (W1) grams	13.4435	
STANDARD	Gross Weight (W2) grams	14.7925	
	First Residue Weight (W3) grams	14.0023	
7572	Second Residue Weight (W4) grams	14.0028	
	Percent Difference	0.0036	N/A
WATER-01	QC Check	Pass	N/A
	Percent Weight Loss	58.54	N/A
LIQUID			
BLNK			
BA001			
adp			
04/22/96			

(If it is necessary to do a 3rd heating then substitute the last weight measured for W4 and the second to last weight measured for W3 in the calculations above.)

Sample = W2 - W1	= Gross Weight - Tare Weight
Weight = W2 - W4	= Gross Weight - Residue Weight
Percent Difference	= Absolute Value of [(W3-W4)/W4]*100.00
QC Check "Pass" if % Difference	= < +/- 0.1500%
Percent Water Weight Loss	= [(W2-W4)/(W2-W1)]*100 = % H2O
Percent Water (Average)	= [(% H2O for A) + (% H2O for B)] / 2

RESULT

% H2O =	58.5

Data Entry by:	RTS	Date:	04/25/96
Approved by:	RW Schroeder	Date:	4/26/96

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

% WATER : LA-564-101 (F-1)

		SAMPLE	REPLICATE
[redacted]	Tare Weight (W1) grams	13.4322	
SAMPLE	Gross Weight (W2) grams	13.5436	
[redacted]	First Residue Weight (W3) grams	13.4558	
7572	Second Residue Weight (W4) grams	13.4564	
[redacted]	Percent Difference	0.0045	N/A
WATER-01	QC Check	Pass	N/A
[redacted]	Percent Weight Loss	78.28	N/A
LIQUID			
[redacted]			
S96T001675			
[redacted]			
BA001			
[redacted]			
adp			
[redacted]			
04/22/96			
[redacted]			

(If it is necessary to do a 3rd heating then substitute the last weight measured for W4 and the second to last weight measured for W3 in the calculations above.)

Sample = W2 - W1	= Gross Weight - Tare Weight
Weight = W2 - W4	= Gross Weight - Residue Weight
Percent Difference	= Absolute Value of [(W3-W4)/W4]*100.00
QC Check "Pass" if % Difference	= < +/- 0.1500%
Percent Water Weight Loss	= [(W2-W4)/(W2-W1)]*100 = % H2O
Percent Water (Average)	= [(% H2O for A) + (% H2O for B)] / 2

RESULT

% H2O =	78.3

Data Entry by:	RTS	Date:	04/25/96
Approved by:	RW Schroeder	Date:	4/26/96

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

% WATER : LA-564-101 (F-1)

		SAMPLE	REPLICATE
	Tare Weight (W1) grams	13.4066	
SAMPLE	Gross Weight (W2) grams	13.5190	
	First Residue Weight (W3) grams	13.4307	
7572	Second Residue Weight (W4) grams	13.4311	
	Percent Difference	0.0030	N/A
WATER-01	QC Check	Pass	N/A
	Percent Weight Loss	78.20	N/A
LIQUID			
S96T001675/DUP			
BA001			
adp			
04/22/96			

(If it is necessary to do a 3rd heating then substitute the last weight measured for W4 and the second to last weight measured for W3 in the calculations above.)

Sample = W2 - W1	= Gross Weight - Tare Weight
Weight = W2 - W4	= Gross Weight - Residue Weight
Percent Difference	= Absolute Value of [(W3-W4)/W4]*100.00
QC Check "Pass" if % Difference	= < +/- 0.1500%
Percent Water Weight Loss	= [(W2-W4)/(W2-W1)]*100 = % H2O
Percent Water (Average)	= [(% H2O for A) + (% H2O for B)] / 2

RESULT

% H2O =	78.2

Data Entry by:	RTS	Date:	04/25/96
Approved by:	RW Schroeder	Date:	4/26/96

Form 564101L1 Rev. 1.2

LABCORE Data Entry Template for Worklist# 7573

Analyst: DPB / JAS **Instrument:** BA001 _____ **Book #** 82N8-A

Method: LA-564-101 Rev/Mod F-1

Worklist Comment: C-106 %H2O CAUTION,SAMPLE IS DRY AND FLIGHTY. RCJ

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	-------TEST------	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	STD				WATER-01	SOLID	59.2	58.6	N/A	%
96000174	C-106 GRAB	2	SAMPLE	S96T001030	0		WATER-01	SOLID	N/A	19.3	0.01	%
96000174	C-106 GRAB	3	DUP	S96T001030	0		WATER-01	SOLID	19.3	22.4	N/A	%
96000174	C-106 GRAB	4	SAMPLE	S96T001687	0		WATER-01	SOLID	N/A	34.1	0.01	%
96000174	C-106 GRAB	5	DUP	S96T001687	0		WATER-01	SOLID	34.1	34.1	N/A	%

Final page for worklist # 7573

SEE ATTACHED FOR SIGNATURE
Analyst Signature **Date**
RS Jones 4-20-96

Reviewed RW Schneider 4/24/96
Analyst Signature **Date**

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

LABCORE Data Entry Template for Worklist# 7573

Analyst: DPB/JDS **Instrument:** BA001 _____ **Book #** 82N8-A

Method: LA-564-101 Rev/Mod F-1

Worklist Comment: C-106 %H2O CAUTION,SAMPLE IS DRY AND FLIGHTY. RCJ

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	BLNK				WATER-01	SOLID			N/A	%
		2	STD				WATER-01	SOLID			N/A	%
96000174	C-106 GRAB	3	SAMPLE	S96T001030	0		WATER-01	SOLID	N/A			%
96000174	C-106 GRAB	4	DUP	S96T001030	0		WATER-01	SOLID			N/A	%
96000174	C-106 GRAB	5	SAMPLE	S96T001687	0		WATER-01	SOLID	N/A			%
96000174	C-106 GRAB	6	DUP	S96T001687	0		WATER-01	SOLID			N/A	%

Final page for worklist # 7573

Daniel P. Bromley 4/18/96
Analyst Signature **Date**

Analyst Signature **Date**

JAK Spl 4/19/96

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

% WATER : LA-564-101 (F-1)

		STANDARD	REPLICATE
Type	Tare Weight (W1) grams	15.0698	
STANDARD	Gross Weight (W2) grams	16.4228	
Work	First Residue Weight (W3) grams	15.6302	
7573	Second Residue Weight (W4) grams	15.6299	
	Percent Difference	0.0019	N/A
WATER-01	QC Check	Pass	N/A
Matr	Percent Weight Loss	58.60	N/A
SOLID			
Sample			
82B8A			
Instrument			
BA001			
Analys			
DPB/JDS			
Date			
04/18/96			
Time			

(If it is necessary to do a 3rd heating then substitute the last weight measured for W4 and the second to last weight measured for W3 in the calculations above.)

Sample = W2 - W1	= Gross Weight - Tare Weight
Weight = W2 - W4	= Gross Weight - Residue Weight
Percent Difference	= Absolute Value of [(W3-W4)/W4]*100.00
QC Check "Pass" if % Difference	= < +/- 0.1500%
Percent Water Weight Loss	= [(W2-W4)/(W2-W1)]*100 = % H2O
Percent Water (Average)	= [(% H2O for A) + (% H2O for B)] / 2

RESULT

% H2O =	58.6

Data Entry by:	[signature]	Date:	04/20/96
Approved by:	RW Schroeder	Date:	4/24/96

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

% WATER : LA-564-101 (F-1)

		SAMPLE	REPLICATE
Type	Tare Weight (W1) grams	15.1275	
SAMPLE	Gross Weight (W2) grams	15.1555	
Work List	First Residue Weight (W3) grams	15.1502	
7573	Second Residue Weight (W4) grams	15.1501	
Test Code	Percent Difference	0.0007	N/A
WATER-01	QC Check	Pass	N/A
Matrix	Percent Weight Loss	19.29	N/A
SOLID			
Sample			
S96T001030			
Instrument			
BA001			
Analyst			
DPB/JDS			
Date			
04/18/96			
Time			

(If it is necessary to do a 3rd heating then substitute the last weight measured for W4 and the second to last weight measured for W3 in the calculations above.)

Sample = W2 - W1	= Gross Weight - Tare Weight
Weight = W2 - W4	= Gross Weight - Residue Weight
Percent Difference	= Absolute Value of [(W3-W4)/W4]*100.00
QC Check "Pass" if % Difference	= < +/- 0.1500%
Percent Water Weight Loss	= [(W2-W4)/(W2-W1)]*100 = % H2O
Percent Water (Average)	= [(% H2O for A) + (% H2O for B)] / 2

RESULT

% H2O =	19.3

Data Entry by:	[illegible]	Date:	04/20/96
Approved by:	RW Schroeder	Date:	4/24/96

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

% WATER : LA-564-101 (F-1)

		SAMPLE	REPLICATE
Type	Tare Weight (W1) grams	15.1485	
DUPLICATE	Gross Weight (W2) grams	15.1779	
Worklist	First Residue Weight (W3) grams	15.1712	
7573	Second Residue Weight (W4) grams	15.1713	
Test Code	Percent Difference	0.0007	N/A
WATER-01	QC Check	Pass	N/A
Matrix	Percent Weight Loss	22.45	N/A
SOLID			
Sample			
S96T001030DUP			
Instrument			
BA001			
Analyst			
DPB/JDS			
Date			
04/18/96			
Time			

(If it is necessary to do a 3rd heating then substitute the last weight measured for W4 and the second to last weight measured for W3 in the calculations above.)

Sample = W2 - W1	= Gross Weight - Tare Weight
Weight = W2 - W4	= Gross Weight - Residue Weight
Percent Difference	= Absolute Value of [(W3-W4)/W4]*100.00
QC Check "Pass" if % Difference	= < +/- 0.1500%
Percent Water Weight Loss	= [(W2-W4)/(W2-W1)]*100 = % H2O
Percent Water (Average)	= [(% H2O for A) + (% H2O for B)] / 2

RESULT

% H2O = 22.4

Data Entry by:	[signature]	Date:	04/20/96
Approved by:	[signature]	Date:	4/24/96

Form 564101L1 Rev. 1.2

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

% WATER : LA-564-101 (F-1)

		SAMPLE	REPLICATE
Type	Tare Weight (W1) grams	15.1395	
SAMPLE	Gross Weight (W2) grams	15.2160	
Work Li	First Residue Weight (W3) grams	15.1898	
7573	Second Residue Weight (W4) grams	15.1899	
st co	Percent Difference	0.0007	N/A
WATER-01	QC Check	Pass	N/A
Matrix	Percent Weight Loss	34.12	N/A
SOLID			
Sample			
S96T001687			
trument			
BA001			
Analys			
DPB/JDS			
Date			
04/18/96			
Time			

(If it is necessary to do a 3rd heating then substitute the last weight measured for W4 and the second to last weight measured for W3 in the calculations above.)

Sample = W2 - W1	= Gross Weight - Tare Weight
Weight = W2 - W4	= Gross Weight - Residue Weight
Percent Difference	= Absolute Value of [(W3-W4)/W4]*100.00
QC Check "Pass" if % Difference	= < +/- 0.1500%
Percent Water Weight Loss	= [(W2-W4)/(W2-W1)]*100 = % H2O
Percent Water (Average)	= [(% H2O for A) + (% H2O for B)] / 2

RESULT

% H2O =	34.1

Data Entry by:	[illegible]	Date:	04/20/96
Approved by:	R.W. Schroeder	Date:	4/24/96

Form 564101L1 Rev. 1.2

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

% WATER : LA-564-101 (F-1)

		SAMPLE	REPLICATE
Type	Tare Weight (W1) grams	15.1078	
DUPLICATE	Gross Weight (W2) grams	15.2086	
Work	First Residue Weight (W3) grams	15.1742	
7573	Second Residue Weight (W4) grams	15.1742	
Test Code	Percent Difference	0.0000	N/A
WATER-01	QC Check	Pass	N/A
Matrix	Percent Weight Loss	34.13	N/A
SOLID			
Sample			
S96T001687DUP			
Instrument			
BA001			
Analyst			
DPB/JDS			
Date			
04/18/96			
Time			

(If it is necessary to do a 3rd heating then substitute the last weight measured for W4 and the second to last weight measured for W3 in the calculations above.)

Sample = W2 - W1	= Gross Weight - Tare Weight
Weight = W2 - W4	= Gross Weight - Residue Weight
Percent Difference	= Absolute Value of [(W3-W4)/W4]*100.00
QC Check "Pass" if % Difference	= < +/- 0.1500%
Percent Water Weight Loss	= [(W2-W4)/(W2-W1)]*100 = % H2O
Percent Water (Average)	= [(% H2O for A) + (% H2O for B)] / 2

RESULT

% H2O =	34.1

Data Entry by:	[illegible]	Date:	04/20/96
Approved by:	RW Schroeder	Date:	4/24/96

LABCORE Data Entry Template for Worklist# 7913

Analyst: ADP **Instrument:** BA001 **Book #** ~~133N16A~~ 82N8A RTS

Method: LA-564-101 Rev/Mod F-1

Worklist Comment: C-106 for %water RTS!

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	STD				WATER-01	SOLID	59.2	59.7	N/A	%
96000174	C-106 GRAB	2	SAMPLE	S96T001674	0		WATER-01	SOLID	N/A	12.4	0.01	%
96000174	C-106 GRAB	3	DUP	S96T001674	0		WATER-01	SOLID	12.4	10.9	N/A	%

Final page for worklist # 7913

Anthony Purnell
Analyst Signature Date

RHHd 4-25-96
Analyst Signature Date

Reviewed RW Schroeder 4/26/96

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

% WATER : LA-564-101 (F-1)

		STANDARD	REPLICATE
	Tare Weight (W1) grams	13.3796	
STANDARD	Gross Weight (W2) grams	14.7828	
	First Residue Weight (W3) grams	13.9468	
7913	Second Residue Weight (W4) grams	13.9449	
	Percent Difference	0.0136	N/A
WATER-01	QC Check	Pass	N/A
	Percent Weight Loss	59.71	N/A
SOLID			
STANDARD			
BA001			
adp			
04/22/96			

(If it is necessary to do a 3rd heating then substitute the last weight measured for W4 and the second to last weight measured for W3 in the calculations above.)

Sample = W2 - W1	= Gross Weight - Tare Weight
Weight = W2 - W4	= Gross Weight - Residue Weight
Percent Difference	= Absolute Value of [(W3-W4)/W4]*100.00
QC Check "Pass" if % Difference	= < +/- 0.1500%
Percent Water Weight Loss	= [(W2-W4)/(W2-W1)]*100 = % H2O
Percent Water (Average)	= [(% H2O for A) + (% H2O for B)] / 2

RESULT

% H2O =	59.7

Data Entry by:	RTS	Date:	04/25/96
Approved by:	RW Schroeder	Date:	4/26/96

Form 564101L1 Rev. 1.2

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

% WATER : LA-564-101 (F-1)

		SAMPLE	REPLICATE
	Tare Weight (W1) grams	13.4646	
SAMPLE	Gross Weight (W2) grams	13.4895	
	First Residue Weight (W3) grams	13.4866	
7913	Second Residue Weight (W4) grams	13.4864	
	Percent Difference	0.0015	N/A
WATER-01	QC Check	Pass	N/A
	Percent Weight Loss	12.45	N/A
SOLID			
S96T001674			
BA001			
adp			
04/22/96			

(If it is necessary to do a 3rd heating then substitute the last weight measured for W4 and the second to last weight measured for W3 in the calculations above.)

Sample = W2 - W1	= Gross Weight - Tare Weight
Weight = W2 - W4	= Gross Weight - Residue Weight
Percent Difference	= Absolute Value of [(W3-W4)/W4]*100.00
QC Check "Pass" if % Difference	= < +/- 0.1500%
Percent Water Weight Loss	= [(W2-W4)/(W2-W1)]*100 = % H2O
Percent Water (Average)	= [(% H2O for A) + (% H2O for B)] / 2

RESULT

% H2O =	12.4

Data Entry by:	RTS	Date:	04/25/96
Approved by:	RW Schroeder	Date:	4/26/96

Form 564101L1 Rev. 1.2

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

% WATER : LA-564-101 (F-1)

		SAMPLE	REPLICATE
	Tare Weight (W1) grams	13.4502	
SAMPLE	Gross Weight (W2) grams	13.4822	
	First Residue Weight (W3) grams	13.4790	
7913	Second Residue Weight (W4) grams	13.4787	
	Percent Difference	0.0022	N/A
WATER-01	QC Check	Pass	N/A
	Percent Weight Loss	10.94	N/A
SOLID			
S96T001674/DUP			
BA001	Sample = W2 - W1	= Gross Weight - Tare Weight	
	Weight = W2 - W4	= Gross Weight - Residue Weight	
adp	Percent Difference	= Absolute Value of [(W3-W4)/W4]*100.00	
	QC Check "Pass" if % Difference	= < +/- 0.1500%	
04/22/96	Percent Water Weight Loss	= [(W2-W4)/(W2-W1)]*100 = % H2O	
	Percent Water (Average)	= [(% H2O for A) + (% H2O for B)] / 2	

(If it is necessary to do a 3rd heating then substitute the last weight measured for W4 and the second to last weight measured for W3 in the calculations above.)

RESULT

% H2O =	10.9

Data Entry by:	RTS	Date:	04/25/96
Approved by:	RW Schroeder	Date:	4/26/96

Form 564101L1 Rev. 1.2

worklistrpt Version 2.1 05/15/95
04/29/96 13:54

LABCORE Data Entry Template for Worklist# 8135

Analyst: RDM **Instrument:** BA001 **Book #** 82NBA

Method: LA-564-101 Rev/Mod F-1

Worklist Comment: C-106 FOR WATER-01 RTS!

GROUP	PROJECT	S TYPE	SAMPLE#	R	A	-------TEST------	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD				WATER-01	SOLID	59.2el	58.8	N/A	%
96000082	C-106 GRAB	2 SAMPLE	S96T001539	0		WATER-01	SOLID	N/A	27.1 / 23.1	0.1	%
96000082	C-106 GRAB	3 DUP	S96T001539	0		WATER-01	SOLID	27.1	~~32.5~~ 5-5-96	N/A	%

Final page for worklist # 8135

RDMeyer 5/2/96
Analyst Signature **Date**

5-13-96
Analyst Signature **Date**

approved RW Schroeder 5/13/96

Data Entry Comments: In Oven 2030 5/2/96

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

% WATER : LA-564-101 (F-1)

		STANDARD	REPLICATE
	Tare Weight (W1) grams	13.9652	
STANDARD	Gross Weight (W2) grams	15.2880	
	First Residue Weight (W3) grams	14.5147	
8135	Second Residue Weight (W4) grams	14.5106	
	Percent Difference	0.0283	N/A
WATER-01	QC Check	Pass	N/A
	Percent Weight Loss	58.77	N/A
LIQUID			
STD			
BA001			
RD MEYERS			
05/02/96			

(If it is necessary to do a 3rd heating then substitute the last weight measured for W4 and the second to last weight measured for W3 in the calculations above.)

Sample = W2 - W1	= Gross Weight - Tare Weight
Weight = W2 - W4	= Gross Weight - Residue Weight
Percent Difference	= Absolute Value of [(W3-W4)/W4]*100.00
QC Check "Pass" if % Difference	= < +/- 0.1500%
Percent Water Weight Loss	= [(W2-W4)/(W2-W1)]*100 = % H2O
Percent Water (Average)	= [(% H2O for A) + (% H2O for B)] / 2

RESULT

% H2O = 58.8

Data Entry by: Gary Hammes Date: 05/05/96

Approved by: Rhi Schroeder Date: 6/11/96

Form 564101L1 Rev. 1.2

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

% WATER : LA-564-101 (F-1)

		SAMPLE	REPLICATE
	Tare Weight (W1) grams	13.9746	
SAMPLE	Gross Weight (W2) grams	13.9949	
	First Residue Weight (W3) grams	13.9892	
8135	Second Residue Weight (W4) grams	13.9894	
	Percent Difference	0.0014	N/A
WATER-01	QC Check	Pass	N/A
	Percent Weight Loss	27.09	N/A
SOLID			
S96T001539			
BA001			
RD MEYERS			
05/02/96			

(If it is necessary to do a 3rd heating then substitute the last weight measured for W4 and the second to last weight measured for W3 in the calculations above.)

Sample = W2 - W1	= Gross Weight - Tare Weight
Weight = W2 - W4	= Gross Weight - Residue Weight
Percent Difference	= Absolute Value of [(W3-W4)/W4]*100.00
QC Check "Pass" if % Difference	= < +/- 0.1500%
Percent Water Weight Loss	= [(W2-W4)/(W2-W1)]*100 = % H2O
Percent Water (Average)	= [(% H2O for A) + (% H2O for B)] / 2

RESULT

% H2O = 27.1

Data Entry by: [signature] Date: 05/05/96

Approved by: [signature] Date: 6/17/96

Form 564101L1 Rev. 1.2

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

% WATER : LA-564-101 (F-1)

		SAMPLE	REPLICATE
	Tare Weight (W1) grams	13.9284	
DUPLICATE	Gross Weight (W2) grams	13.9635	
	First Residue Weight (W3) grams	13.9554	
8135	Second Residue Weight (W4) grams	13.9554	
	Percent Difference	0.0000	N/A
WATER-01	QC Check	Pass	N/A
	Percent Weight Loss	23.08	N/A
SOLID			
S96T001539 DUP			
BA001			
RD MEYERS			
05/02/96			

(If it is necessary to do a 3rd heating then substitute the last weight measured for W4 and the second to last weight measured for W3 in the calculations above.)

Sample = W2 - W1	= Gross Weight - Tare Weight
Weight = W2 - W4	= Gross Weight - Residue Weight
Percent Difference	= Absolute Value of [(W3-W4)/W4]*100.00
QC Check "Pass" if % Difference	= < +/- 0.1500%
Percent Water Weight Loss	= [(W2-W4)/(W2-W1)]*100 = % H2O
Percent Water (Average)	= [(% H2O for A) + (% H2O for B)] / 2

RESULT

% H2O = 23.1

Data Entry by: [signature] Date: 05/05/96

Approved by: [signature] Date: 6/11/96

Form 564101L1 Rev. 1.2

LABCORE Data Entry Template for Worklist# 8136

Analyst: RJM **Instrument:** BA001 **Book #** 87484

Method: LA-564-101 Rev/Mod F-1

Worklist Comment: C-106 FOR WATER-01 RTS!

RUSH

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-------TEST------	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			WATER-01	LIQUID	59.2	58.1	N/A	%
96000082	C-106 GRAB	2 SAMPLE	S96T001528	0	WATER-01	LIQUID	N/A	76.7	0.1	%
96000082	C-106 GRAB	3 DUP	S96T001528	0	WATER-01	LIQUID	76.7	76.8	N/A	%

Final page for worklist # 8136

RJ McCann 5-22-96
Analyst Signature **Date**

5-22-96
Analyst Signature **Date**

Approved RW Schwab 5/22/96

Placed in oven 0500 5/22/96

	STD-2	S96T001528	S96T001528 DUP
W1	13.55383	13.52030	13.63471
W2	14.92385	14.75245	14.87360
W3	14.1327	13.8087	13.9236
W4	14.1276	13.8076	13.9226

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

% WATER : LA-564-101 (F-1)

		STD	REPLICATE
Type	Tare Weight (W1) grams	13.5538	
STD	Gross Weight (W2) grams	14.9239	
Work Order	First Residue Weight (W3) grams	14.1327	
8163	Second Residue Weight (W4) grams	14.1276	
Matrix	Percent Difference	0.0361	N/A
Water-01	QC Check	Pass	N/A
Matrix	Percent Weight Loss	58.12	N/A
Liquid			
Sample			
82N8A			
Instrument Code			
BA001			
Analyst			
PJ McCown			
Date			
05/22/96			
Time			

(If it is necessary to do a 3rd heating then substitute the last weight measured for W4 and the second to last weight measured for W3 in the calculations above.)

Sample = W2 - W1	= Gross Weight - Tare Weight
Weight = W2 - W4	= Gross Weight - Residue Weight
Percent Difference	= Absolute Value of [(W3-W4)/W4]*100.00
QC Check "Pass" if % Difference	= < +/- 0.1500%
Percent Water Weight Loss	= [(W2-W4)/(W2-W1)]*100 = % H2O
Percent Water (Average)	= [(% H2O for A) + (% H2O for B)] / 2

RESULT

% H2O =	58.1

Data Entry by:	RWS	Date:	05/22/96
Approved by:	RW Schneider	Date:	5/22/96

Form 564101L1 Rev. 1.2

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

% WATER : LA-564-101 (F-1)

		Sample	REPLICATE
	Tare Weight (W1) grams	13.5203	
Sample	Gross Weight (W2) grams	14.7525	
	First Residue Weight (W3) grams	13.8087	
8163	Second Residue Weight (W4) grams	13.8076	
	Percent Difference	0.0080	N/A
Water-01	QC Check	Pass	N/A
	Percent Weight Loss	76.68	N/A
Liquid			
S96T001528			
BA001			
PJ McCown			
05/22/96			

(If it is necessary to do a 3rd heating then substitute the last weight measured for W4 and the second to last weight measured for W3 in the calculations above.)

Sample = W2 - W1	= Gross Weight - Tare Weight
Weight = W2 - W4	= Gross Weight - Residue Weight
Percent Difference	= Absolute Value of [(W3-W4)/W4]*100.00
QC Check "Pass" if % Difference	= < +/- 0.1500%
Percent Water Weight Loss	= [(W2-W4)/(W2-W1)]*100 = % H2O
Percent Water (Average)	= [(% H2O for A) + (% H2O for B)] / 2

RESULT

% H2O =	76.7

Data Entry by:	RWS	Date:	05/22/96
Approved by:	RW Schneider	Date:	5/22/96

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

% WATER : LA-564-101 (F-1)

		SAMPLE	REPLICATE
[redacted]	Tare Weight (W1) grams	13.6347	
Duplicate	Gross Weight (W2) grams	14.8736	
[redacted]	First Residue Weight (W3) grams	13.9236	
8163	Second Residue Weight (W4) grams	13.9226	
[redacted]	Percent Difference	0.0072	N/A
Water-01	QC Check	Pass	N/A
[redacted]	Percent Weight Loss	76.76	N/A
Liquid			
[redacted]			
S96T001528			
[redacted]			
BA001	Sample = W2 - W1	= Gross Weight - Tare Weight	
[redacted]	Weight = W2 - W4	= Gross Weight - Residue Weight	
PJ McCown	Percent Difference	= Absolute Value of [(W3-W4)/W4]*100.00	
[redacted]	QC Check "Pass" if % Difference	= < +/- 0.1500%	
05/22/96	Percent Water Weight Loss	= [(W2-W4)/(W2-W1)]*100 = % H2O	
[redacted]	Percent Water (Average)	= [(% H2O for A) + (% H2O for B)] / 2	

(If it is necessary to do a 3rd heating then substitute the last weight measured for W4 and the second to last weight measured for W3 in the calculations above.)

RESULT

% H2O =	76.8

Data Entry by:	RWS	Date:	05/22/96
Approved by:	RW Schroeder	Date:	5/22/96

Form 564101L1 Rev. 1.2

LABCORE Data Entry Template for Worklist# 8392

Analyst: RLM **Instrument:** BA001 **Book #** 82N8A

Method: LA-564-101 Rev/Mod F-1

RUSH

Worklist Comment: C-106. Water-01. new

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-------TEST------	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			WATER-01	SOLID	59.2	58.6	N/A	%
96000082	C-106 GRAB	2 SAMPLE	S96T001527	0	WATER-01	SOLID	N/A	5.9	0.1	%
96000082	C-106 GRAB	3 DUP	S96T001527	0	WATER-01	SOLID	5.9	5.6	N/A	%

Final page for worklist # 8392

RLMcCown 5-22-96
Analyst Signature **Date**

[illegible] 5-22-96
Analyst Signature **Date**

Approved RW Schwab 5/22/96

Placed in oven 0500 5/22/96

	STD-1	S96T001527	S96T001527 DUP
W1	13.12194	13.51960	13.42827
W2	14.48385	13.60209	13.54395
W3	13.6905	13.5988	13.5392
W4	13.6863	13.5972	13.5375

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

% WATER : LA-564-101 (F-1)

		STD	REPLICATE
	Tare Weight (W1) grams	13.1219	
STD	Gross Weight (W2) grams	14.4839	
	First Residue Weight (W3) grams	13.6905	
8163	Second Residue Weight (W4) grams	13.6863	
	Percent Difference	0.0307	N/A
Water-01	QC Check	Pass	N/A
	Percent Weight Loss	58.56	N/A

Solid

82N8A

BA001

PJ McCown

05/22/96

(If it is necessary to do a 3rd heating then substitute the last weight measured for W4 and the second to last weight measured for W3 in the calculations above.)

Sample = W2 - W1	= Gross Weight - Tare Weight
Weight = W2 - W4	= Gross Weight - Residue Weight
Percent Difference	= Absolute Value of [(W3-W4)/W4]*100.00
QC Check "Pass" if % Difference	= < +/- 0.1500%
Percent Water Weight Loss	= [(W2-W4)/(W2-W1)]*100 = % H2O
Percent Water (Average)	= [(% H2O for A) + (% H2O for B)] / 2

RESULT

% H2O =	58.6

Data Entry by:	RWS	Date:	05/22/96
Approved by:	RW Schroeder	Date:	5/22/96

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

% WATER : LA-564-101 (F-1)

		Sample	REPLICATE
	Tare Weight (W1) grams	13.5196	
Sample	Gross Weight (W2) grams	13.6021	
	First Residue Weight (W3) grams	13.5988	
8163	Second Residue Weight (W4) grams	13.5972	
	Percent Difference	0.0118	N/A
Water-01	QC Check	Pass	N/A
	Percent Weight Loss	5.94	N/A
Solid			
S96T001527			
BA001	Sample = W2 - W1	= Gross Weight - Tare Weight	
	Weight = W2 - W4	= Gross Weight - Residue Weight	
PJ McCown	Percent Difference	= Absolute Value of [(W3-W4)/W4]*100.00	
	QC Check "Pass" if % Difference	= < +/- 0.1500%	
05/22/96	Percent Water Weight Loss	= [(W2-W4)/(W2-W1)]*100 = % H2O	
	Percent Water (Average)	= [(% H2O for A) + (% H2O for B)] / 2	

(If it is necessary to do a 3rd heating then substitute the last weight measured for W4 and the second to last weight measured for W3 in the calculations above.)

RESULT

% H2O =	5.9

Data Entry by:	RWS	Date:	05/22/96
Approved by:	RW Schroeder	Date:	5/22/96

Form 564101L1 Rev. 1.2

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

% WATER : LA-564-101 (F-1)

		SAMPLE	REPLICATE
	Tare Weight (W1) grams	13.4283	
Duplicate	Gross Weight (W2) grams	13.5440	
	First Residue Weight (W3) grams	13.5392	
8163	Second Residue Weight (W4) grams	13.5375	
	Percent Difference	0.0126	N/A
Water-01	QC Check	Pass	N/A
	Percent Weight Loss	5.58	N/A

Solid

S96T001527

BA001

PJ McCown

05/22/96

(If it is necessary to do a 3rd heating then substitute the last weight measured for W4 and the second to last weight measured for W3 in the calculations above.)

Sample = W2 - W1	= Gross Weight - Tare Weight
Weight = W2 - W4	= Gross Weight - Residue Weight
Percent Difference	= Absolute Value of [(W3-W4)/W4]*100.00
QC Check "Pass" if % Difference	= < +/- 0.1500%
Percent Water Weight Loss	= [(W2-W4)/(W2-W1)]*100 = % H2O
Percent Water (Average)	= [(% H2O for A) + (% H2O for B)] / 2

RESULT

% H2O =	5.6

Data Entry by:	RWS	Date:	05/22/96
Approved by:	Dan Schroeder	Date:	5/22/96

Form 564101L1 Rev. 1.2

LABCORE Data Entry Template for Worklist# 6572

Analyst: R.G **Instrument:** PH01 _____ **Book #** 144N16-A

Method: LA-212-106 Rev/Mod A-0

Worklist Comment: pH C-106 reruns

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	-------TEST------	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	STDPH				PH-01	LIQUID	7.00	7.00	N/A	pH
96000082	C-106 GRAB	2	SAMPLE	S96T000538	0		PH-01	LIQUID	N/A	10.095		pH
96000082	C-106 GRAB	3	DUP	S96T000538	0		PH-01	LIQUID	10.095	10.081	N/A	pH
96000174	C-106 GRAB	4	SAMPLE	S96T001023	0		PH-01	LIQUID	N/A	10.241		pH
96000174	C-106 GRAB	5	DUP	S96T001023	0		PH-01	LIQUID	10.241	10.235	N/A	pH

Final page for worklist # 6572

Rae Ann Green 3-18-96
Analyst Signature **Date**

D Hanchar 3-19-96
Analyst Signature **Date**

approved by H Anastor 3-19-96

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

LABCORE Data Entry Template for Worklist# 6872

Analyst: JLF **Instrument:** PH01 **Book #** 144N16E

Method: LA-212-106 Rev/Mod A-0

Worklist Comment: C-106 FB PH. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R	A	-------TEST------	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STDPH				PH-01	LIQUID	9.18	9.136	N/A	pH
96000082	C-106 GRAB	2 SAMPLE	S96T000855	0		PH-01	LIQUID	N/A	8.282	0.01	pH
96000082	C-106 GRAB	3 DUP	S96T000855	0		PH-01	LIQUID	8.282	8.239	N/A	pH

Final page for worklist # 6872

Jessy L Jusby 4-9-96
Analyst Signature **Date**

Linda Conlin 4/10/96
Analyst Signature **Date**

Reviewed RW Schwab 4/10/96

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

LABCORE Data Entry Template for Worklist# 7414

Analyst: ABS **Instrument:** PH01 **Book #** 144N/6-D

Method: LA-212-106 Rev/Mod A-0 RUSH

Worklist Comment: C-106 PH SAMPLE IS DRY AND FLIGHTY,HIGH ALPHA USE CAUTION RJ

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	STDPH				PH-01	LIQUID	8.00	8.04	N/A	pH
96000082	C-106 GRAB	2	SAMPLE	S96T000554	0		PH-02	SOLID	N/A	10.40	0.01	pH
96000082	C-106 GRAB	3	DUP	S96T000554	0		PH-02	SOLID	10.40	10.50	N/A	pH
96000082	C-106 GRAB	4	SAMPLE	S96T000570	0		PH-02	SOLID	N/A	10.56	0.01	pH
96000082	C-106 GRAB	5	DUP	S96T000570	0		PH-02	SOLID	10.58	10.54	N/A	pH

Final page for worklist # 7414

ABSmith 5-21-96
Analyst Signature Date

DHonaker 5-21-96
Analyst Signature Date

Approved RW Schroeder
5/22/96

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

LABCORE Data Entry Template for Worklist# 7506

Analyst: dgg **Instrument:** PH01 **Book #** 144N16E

Method: LA-212-106 Rev/Mod A-0

Worklist Comment: C-106 FOR PH RTS!

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	-------TEST------	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	STDPH				PH-01	LIQUID	9.18	9.13	N/A	pH
96000174	C-106 GRAB	2	SAMPLE	S96T001562	0		PH-02	SOLID	N/A	10.67	0.01	pH
96000174	C-106 GRAB	3	DUP	S96T001562	0		PH-02	SOLID	10.67	10.62	N/A	pH

Final page for worklist # 7506

D S Suffern 4-12-96
Analyst Signature **Date**

[illegible] 4-15-96
Analyst Signature **Date**

Reviewed RW Schnolder 4/15/96

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

LABCORE Data Entry Template for Worklist# 7566

Analyst: dgg **Instrument:** PH01 _____ **Book #** 144N16-E

Method: LA-212-106 Rev/Mod A-0

Worklist Comment: C-106 SOLID PH SAMPLE DRY AND FLIGHTY. RCJ

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	STDPH				PH-01	LIQUID	9.18	9.13	N/A	pH
96000174	C-106 GRAB	2	SAMPLE	S96T001688	0		PH-02	SOLID	N/A	10.42	0.01	pH

Final page for worklist # 7566

D J Griffin 4-12-96
Analyst Signature **Date**

R L Stark 4-15-96
Analyst Signature **Date**

Reviewed RWSchroeder 4/15/96

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

LABCORE Data Entry Template for Worklist# 8127

Analyst: JDS **Instrument:** PH01 _____ **Book #** 144N16 D

Method: LA-212-106 Rev/Mod A-0

Worklist Comment: C-106 FOR PH(RECORD AMOUNT OF SAMPLE LEFT) RTS!

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT	
		1	STDPH				PH-01	LIQUID	8.00	7.98	N/A	pH	
96000082	C-106 GRAB	2	SAMPLE	S96T000544	0		PH-01	LIQUID	N/A	10.09	0.01	pH	4 ml
96000082	C-106 GRAB	3	SAMPLE	S96T001544	0		PH-01	LIQUID	N/A	10.10	0.01	pH	3 ml
96000174	C-106 GRAB	4	SAMPLE	S96T002024	0		PH-01	LIQUID	N/A	10.15	0.01	pH	6 ml
96000174	C-106 GRAB	5	SAMPLE	S96T002025	0		PH-01	LIQUID	N/A	10.09	0.01	pH	8 ml

Final page for worklist # 8127

[signature] 5-3-96
Analyst Signature **Date**

[signature] 5-3-96
Analyst Signature **Date**

Approved RW Schroeder 5/7/96

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

LABCORE Data Entry Template for Worklist# 8133

Analyst: DSB **Instrument:** PH01 _____ **Book #** 144N16-D

Method: LA-212-~~106~~ 105 Rev/Mod A-0

Worklist Comment: C-106 FOR PH RTS!

GROUP	PROJECT	S TYPE	SAMPLE#	R	A	-------TEST------	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STDPH				PH-01	LIQUID	8.00	7.99	N/A	pH
96000082	C-106 GRAB	2 SAMPLE	S96T001540	0		PH-02	SOLID	N/A	10.21	0.01	pH
96000082	C-106 GRAB	3 DUP	S96T001540	0		PH-02	SOLID	10.21	10.18	N/A	pH

Final page for worklist # 8133

DB Griffin 5-5-96
Analyst Signature **Date**

[illegible] 5-5-96
Analyst Signature **Date**

Approved RW Schroeder 5/7/96

Note: Method should be LA-212-105 A-0, this is a solid sample.

Data Entry Comments: Solid

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

LABCORE Data Entry Template for Worklist# 8825

Analyst: DBB **Instrument:** PH01 _____ **Book #** DBB 133 144N16-D

Method: LA-212-106 Rev/Mod A-0

Worklist Comment: C-106 GRAB ~~CONTACT ROB SCHROEDER FOR SAMPLE 2766&2825~~ HAL 5/19/96 RTS!

GROUP	PROJECT	S TYPE	SAMPLE#	R	A	-------TEST------	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STDPH				PH-01	LIQUID	8.00	8.02	N/A	pH
96000638	C-106 GRAB	2 SAMPLE	S96T002765	0		PH-01	LIQUID	N/A	11.16	0.01	pH
96000638	C-106 GRAB	3 SAMPLE	S96T002766	0		PH-01	LIQUID	N/A	11.22	0.01	pH
96000638	C-106 GRAB	4 SAMPLE	S96T002768	0		PH-01	LIQUID	N/A	11.10	0.01	pH
96000648	C-106 GRAB	5 SAMPLE	S96T002825	0		PH-01	LIQUID	N/A	11.12	0.01	pH
96000648	C-106 GRAB	6 SAMPLE	S96T002826	0		PH-01	LIQUID	N/A	11.50	0.01	pH
96000648	C-106 GRAB	7 SAMPLE	S96T002833	0		PH-01	LIQUID	N/A	12.52	0.01	pH

Final page for worklist # 8825

D.B. Buffum 5-20-96
Analyst Signature **Date**

Gary Hommel 5-20-96
Analyst Signature **Date**

Approved RW Schroeder 5/21/96

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

LABCORE Data Entry Template for Worklist# 8913

Analyst: KAN **Instrument:** PH01 _____ **Book #** KKK1107

Method: LA-212-106 Rev/Mod A-0

Worklist Comment: C-106\AY-102 PH. RCJ

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	STDPH				PH-01	LIQUID	8.00	8.00	N/A	pH
96000422	U-107	2	SAMPLE	S96T001866	0		PH-01	LIQUID	N/A	12.67	0.01	pH
96000422	U-107	3	DUP	S96T001866	0		PH-01	LIQUID	12.67	12.69	N/A	pH
96000638	C-106 GRAB	4	SAMPLE	S96T002770	0		PH-01	LIQUID	N/A	11.71	0.01	pH
96000638	C-106 GRAB	5	DUP	S96T002770	0		PH-01	LIQUID	11.71	11.69	N/A	pH
									11.81 → KAN 5-19-96			
96000638	C-106 GRAB	6	SAMPLE	S96T002771	0		PH-01	LIQUID	N/A	~~11.71~~	0.01	pH
									11.79 → KAN 5-19-96			
96000638	C-106 GRAB	7	DUP	S96T002771	0		PH-01	LIQUID	11.81	~~11.69~~	N/A	pH
96000648	C-106 GRAB	8	SAMPLE	S96T002829	0		PH-01	LIQUID	N/A	11.80	0.01	pH
96000648	C-106 GRAB	9	DUP	S96T002829	0		PH-01	LIQUID	11.80	11.79	N/A	pH
96000648	C-106 GRAB	10	SAMPLE	S96T002830	0		PH-01	LIQUID	N/A	11.91	0.01	pH
96000648	C-106 GRAB	11	DUP	S96T002830	0		PH-01	LIQUID	11.91	11.90	N/A	pH

Final page for worklist # 8913

Analyst Signature Date 5-19-96

Analyst Signature Date 5-19-96

Approved RW Schwedt 5/20/96

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

THE FOLLOWING ANALYSES WERE RERUN AND INCLUDED IN THE DATA PACKAGE, BUT THE RESULTS HAVE NOT BEEN REPORTED IN THE FINAL SUMMARY REPORTS.

worklistrpt Version 2.1 05/15/95
03/08/96 07:51

LABCORE Data Entry Template for Worklist# 6314

Analyst: ADP **Instrument:** PH01 >7 **Book #** 144N16-A

Method: LA-212-106 Rev/Mod A 0

Worklist Comment: C-106 PH. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R	A	-------TEST------	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STDPH				PH-01	LIQUID	7.00	7.02	N/A	pH
96000174	C-106 GRAB	2 SAMPLE	S96T001023	0		PH-01	LIQUID	N/A	10.23	N/A	pH

Final page for worklist # 6314

Anthony Purnto 3-9-96
Analyst Signature **Date**

[illegible] 3/10/96
Analyst Signature **Date**

Reviewed RW Schroeder 3/11/96

DATA NOT USED IN PACKAGE

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

THE FOLLOWING ANALYSES WERE RERUN AND INCLUDED IN THE DATA PACKAGE, BUT THE RESULTS HAVE NOT BEEN REPORTED IN THE FINAL SUMMARY REPORTS.

worklistrpt Version 2.1 05/15/95
03/07/96 16:38

LABCORE Data Entry Template for Worklist# 6207

Analyst: ADP **Instrument:** PH01 >7 **Book #** 144N16-A

Method: LA-212-106 Rev/Mod A-D

Worklist Comment: C-106 PH. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R	A	-------TEST------	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STDPH				PH-01	LIQUID	7.00	6.97	N/A	pH
96000082	C-106 GRAB	2 SAMPLE	S96T000538	0		PH-01	LIQUID	N/A	10.03	0.01	pH

Final page for worklist # 6207

Analyst Signature Date 3-11-96

Analyst Signature Date 3/11/96

Reviewed RW Schroeder 3/12/96

DATA NOT USED IN PACKAGE

Data Entry Comments: I used 144N16A The >GreaterThan 7 Standard
Standard Value 7.00

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

LABCORE Data Entry Template for Worklist# 6205

Analyst: JLS2 **Instrument:** NH301 _____ **Book #** 145N16C

Method: LA-631-001 Rev/Mod B2

Worklist Comment: C-106 NH3-01. (use 1mL sample size- 0.100mL spike)

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	BLNK				NH3-01	LIQUID	1	3.1	N/A	ug/mL
		2	STD				NH3-01	LIQUID	412	399.4	N/A	ug/mL
96000174	C-106 GRAB	3	SAMPLE	S96T001023	0		NH3-01	LIQUID	N/A	~~3.88~~ <5 NKA 3-20-96	5	ug/mL
96000174	C-106 GRAB	4	DUP	S96T001023	0		NH3-01	LIQUID	<5	<5	N/A	ug/mL
96000174	C-106 GRAB	5	SPK	S96T001023	0		NH3-01	LIQUID	100	99	N/A	ug/mL
96000082	C-106 GRAB	6	SAMPLE	S96T000538	0		NH3-01	LIQUID	N/A	<5	5	ug/mL
96000082	C-106 GRAB	7	DUP	S96T000538	0		NH3-01	LIQUID	<5	<5	N/A	ug/mL

Final page for worklist # 6205

See attached for signature
Analyst Signature **Date**

RHBlack 3/20/96
Analyst Signature **Date**

Reviewed RW Schneider 3/21/96

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

LABCORE Data Entry Template for Worklist# 6205

Analyst: JLS2 **Instrument:** NH301 _____ **Book #** 145N16-C

Method: LA-631-001 Rev/Mod B-2

Worklist Comment: C-106 NH3-01. (use 1mL sample size- 0.100mL spike)

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	BLNK				NH3-01	LIQUID	1	~~.124~~ 3.1	N/A HLa 3-20-96	ug/mL
		2	STD				NH3-01	LIQUID	4.12e2	~~16.1~~	N/A HLa 3-20-96	ug/mL
96000174	C-106 GRAB	3	SAMPLE	S96T001023	0		NH3-01	LIQUID	N/A	~~.279~~ 6.98	5 HLa 3.20-96	ug/mL
96000174	C-106 GRAB	4	DUP	S96T001023	0		NH3-01	LIQUID	~~.279~~ 6.98 HLa 3-20	~~.276~~ 6.90	N/A HLa 3.20.96	ug/mL
96000174	C-106 GRAB	5	SPK	S96T001023	0		NH3-01	LIQUID	100	99	N/A	ug/mL
96000082	C-106 GRAB	6	SAMPLE	S96T000538	0		NH3-01	LIQUID	N/A	~~.286~~ 7.40	5 HLa 3.20.96	ug/mL
96000082	C-106 GRAB	7	DUP	S96T000538	0		NH3-01	LIQUID	~~.296~~ 7.40 HLa 3.20.96	~~.281~~ 7.02	N/A HLa 3.20.96	ug/mL

Final page for worklist # 6205

Jacque Steele 3/18/96
Analyst Signature **Date**

Analyst Signature **Date**

Data Entry Comments: Needed for signature

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

DOUBLE KNOWN ADDITION SELECTED
AT 09:17, 03-19-96

SAMPLE VOL= 25.000 AT 09:20, 03-19-96
ENTERED

EMF= 48.1 mV AT 09:21, 03-19-96

EMF= 48.4 mV AT 09:22, 03-19-96

EMF= 48.5 mV AT 09:23, 03-19-96

EMF= 48.5 mV AT 09:23, 03-19-96
ENTERED

STD CONCN= 1000 AT 09:21, 03-19-96
ENTERED

STD VOL= .25000 AT 09:24, 03-19-96
ENTERED

EMF= 36.7 mV AT 09:24, 03-19-96

EMF= 36.4 mV AT 09:25, 03-19-96

EMF= 36.5 mV AT 09:25, 03-19-96
ENTERED

STD VOL= 2.5000 AT 09:25, 03-19-96
ENTERED

EMF=-6.8 mV AT 09:27, 03-19-96

EMF= 1.1 mV AT 09:27, 03-19-96

EMF=-1.1 mV AT 09:28, 03-19-96
ENTERED

NH3 SLOPE=-58.5 mV/DEC
AT 09:28, 03-19-96

NH3 CONCN= $(16.1 - 0.124) \times 25 = \frac{399.4}{412} \times 100 = 96.9\%$

STD
145N116-C
1.0ml → 25ml

BEST AVAILABLE COPY

SAMPLE VOL= 25.000 AT 09:01, 03-19-96
ENTERED

EMF= 169.9 mV AT 09:08, 03-19-96

EMF= 169.9 mV AT 09:08, 03-19-96

EMF= 169.2 mV AT 09:09, 03-19-96

EMF= 169.2 mV AT 09:09, 03-19-96
ENTERED

STD CONCN= 1000 AT 09:09, 03-19-96
ENTERED

STD VOL= .25000 AT 09:10, 03-19-96
ENTERED

EMF= 58.5 mV AT 09:11, 03-19-96

EMF= 58.5 mV AT 09:12, 03-19-96

EMF= 58.6 mV AT 09:13, 03-19-96

EMF= 58.6 mV AT 09:13, 03-19-96
ENTERED

STD VOL= 2.5000 AT 09:14, 03-19-96
ENTERED

EMF= 0.8 mV AT 09:15, 03-19-96

EMF= 0.8 mV AT 09:16, 03-19-96

EMF= 0.9 mV AT 09:16, 03-19-96

EMF= 0.9 mV AT 09:17, 03-19-96
ENTERED

1:NH3 SLOPE=-58.0 mV/DEC
AT 09:17, 03-19-96

1:NH3 CONCN= .124

Blank
25ml

BEST AVAILABLE COPY

S96T001023

1.0ml → 25ml

DOUBLE KNOWN ADDITION SELECTED
AT 10:14, 03-19-96

SAMPLE VOL= 25.000 AT 10:14, 03-19-96
ENTERED

EMF= 153.4 mV AT 10:20, 03-19-96

EMF= 153.8 mV AT 10:21, 03-19-96

EMF= 154.3 mV AT 10:21, 03-19-96

EMF= 154.5 mV AT 10:22, 03-19-96

EMF= 154.8 mV AT 10:22, 03-19-96

EMF= 155.1 mV AT 10:23, 03-19-96

EMF= 155.3 mV AT 10:23, 03-19-96

EMF= 155.7 mV AT 10:24, 03-19-96

EMF= 155.9 mV AT 10:24, 03-19-96

EMF= 155.9 mV AT 10:24, 03-19-96
ENTERED

STD CONCN= 1000 AT 10:25, 03-19-96
ENTERED

STD VOL= .05[illegible] AT 10:25, 03-19-96
ENTERED

EMF= 66.0 mV AT 10:26, 03-19-96

EMF= 65.9 mV AT 10:27, 03-19-96

EMF= 65.9 mV AT 10:27, [illegible]
ENTERED

STD VOL= 2.5000 AT 10:28, 03-19-96
ENTERED

EMF= 8.6 mV AT 10:29, 03-19-96

EMF= 8.5 mV AT 10:30, 03-19-96

EMF= 8.5 mV AT 10:30, 03-19-96

EMF= 8.6 mV AT 10:31, 03-19-96

EMF= 8.7 mV AT 10:31, 03-19-96
ENTERED

1:NH3 SLOPE=-57.7 mV/DEC
AT 10:31, 03-19-96

1:NH3 CONCN= .279 -0.124 x25= ~~6.98~~ 3.875 HLA 3.20-96

565

BEST AVAILABLE COPY

S96T001023
dup

1.0ml → 25 m

AT 10:31, 03-19-96

SAMPLE VOL= 25.000 AT 10:33, 03-19-96
ENTERED

EMF= 154.2 mV AT 10:38, 03-19-96

EMF= 154.6 mV AT 10:39, 03-19-96

EMF= 156.8 mV AT 10:40, 03-19-96

EMF= 157.5 mV AT 10:40, 03-19-96

EMF= 157.8 mV AT 10:41, 03-19-96

EMF= 157.9 mV AT 10:41, 03-19-96
ENTERED

STD CONCN= 1000 AT 10:41, 03-19-96
ENTERED

STD VOL= .25000 AT 10:41, 03-19-96
ENTERED

EMF= 67.3 mV AT 10:43, 03-19-96

EMF= 67.2 mV AT 10:43, 03-19-96

EMF= 67.2 mV AT 10:44, 03-19-96

EMF= 67.2 mV AT 10:44, 03-19-96
ENTERED

STD VOL= 2.5000 AT 10:44, 03-19-96
ENTERED

EMF= 10.0 mV AT 10:46, 03-19-96

EMF= 9.7 mV AT 10:46, 03-19-96

EMF= 9.8 mV AT 10:47, 03-19-96

EMF= 9.9 mV AT 10:47, 03-19-96
ENTERED

1:NH3 SLOPE=-57.9 mV/DEC
AT 10:47, 03-19-96

1:NH3 CONCN= .276 (0.124) x 25 = ~~6.90~~ 3.80 NLA 3-20-96

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S96T001023
Spike

1.0ml + .100ml
145N16-C
→ 25ml

```
  PLE UNKNOWN ADDITION SELECTED
 T 10:49, 03-19-96

 .PLE VOL= 25.000 AT 10:49, 03-19-96
ENTERED

EMF= 109.2 mV AT 10:52, 03-19-96

EMF= 109.5 mV AT 10:53, 03-19-96

EMF= 109.7 mV AT 10:53, 03-19-96

EMF= 110.3 mV AT 10:55, 03-19-96

   = 110.7 mV AT 10:56, 03-19-96

   110.8 mV AT 10:03, 03-19-96

   110.9 mV AT 10:57, 03-19-96

EMF= 111.0 mV AT 10:57, 03-19-96
 ENTERED

 TI CONCN= 1000 AT 10:57, 03-19-96
ENTERED

ETI VOL= .25000 AT 10:57, 03-19-96
ENTERED

EMF= 64.9 mV AT 10:59, 03-19-96

EMF= 64.8 mV AT 11:00, 03-19-96

EMF= 64.9 mV AT 11:00, 03-19-96

EMF= 65.0 mV AT 11:00, 03-19-96
ENTERED

ETI VOL= 2.5000 AT 11:01, 03-19-96
ENTERED

EMF= 10.8 mV AT 11:02, 03-19-96

EMF= 10.7 mV AT 11:03, 03-19-96

EMF= 10.8 mV AT 11:03, 03-19-96

EMF= 10.8 mV AT 11:03, 03-19-96
ENTERED

NO3 SLOPE=-58.2 mV/DEC
 T 11:04, 03-19-96

AB CONCN= (1.91 - 0.279) x 250 = 407.8/412 = 98.97%
```

BEST AVAILABLE COPY

SAMPLE KNOWN ADDITION SELECTED
AT 09:40, 03-19-96

SAMPLE VOL= 25.000 AT 09:40, 03-19-96
ENTERED

EMF= 149.6 mV AT 09:46, 03-19-96

EMF= 150.1 mV AT 09:46, 03-19-96

EMF= 150.7 mV AT 09:47, 03-19-96

EMF= 151.0 mV AT 09:47, 03-19-96

EMF= 151.3 mV AT 09:47, 03-19-96

EMF= 151.5 mV AT 09:48, 03-19-96
ENTERED

STD CONCN= 1000 AT 09:48, 03-19-96
ENTERED

STD VOL= .25000 AT 09:48, 03-19-96
ENTERED

EMF= 62.1 mV AT 09:1[illegible], 03-19-96

EMF= 61.0 mV AT 09:50, 03-19-96

EMF= 62.1 mV AT 09:51, 03-19-96

EMF= 62.2 mV AT 09:51, 03-19-96

EMF= 62.2 mV AT 09:52, 03-19-96

EMF= 62.6 mV AT 09:53, 03-19-96
ENTERED

STD VOL= 2.5000 AT 09:53, 03-19-96
ENTERED

EMF= 5.7 mV AT 09:54, 03-19-96

EMF= 5.3 mV AT 09:55, 03-19-96

EMF= 5.4 mV AT 09:55, 03-19-96

EMF= 5.4 mV AT 09:56, 03-19-96
ENTERED

NH3 SLOPE=-57.8 mV/DEC
AT 09:56, 03-19-96

NH3 CONCN= .296 ~~0.124~~ HKA 3-20-96 X 25 = ~~7.40~~ 4.3 HKA 3-20-96
0.124

596T000538

1.0ml → 250ml

BEST AVAILABLE COPY

S9LET00053 8 dup
1.0ml → 25ml

[illegible] KNOWN ADDITION STANDARD
[illegible]:57, 03-19-96

[illegible]PLE VOL= 25.000 AT 09:57, 03-19-96
[illegible]ERED

[illegible] 160.9 mV AT 1[illegible], 03-19-[illegible]

[illegible] = 151.0 mV AT 10:04, 03-19-96

[illegible] 152.4 mV AT 10:04, 03-19-96

[illegible]= 152.6 mV AT 10:05, 03-19-96

[illegible]= 152.9 mV AT 10:05, 03-19-96

[illegible]= 153.2 mV AT 10:06, 03-19-96

[illegible]= 153.2 mV AT 10:06, 03-19-96
[illegible]TERED

[illegible] =

[illegible]

[illegible] = 64.2 mV AT 10:08, 03-19-96

[illegible]= 64.0 mV AT 10:08, 03-19-96

[illegible]= 64.0 mV AT 10:09, 03-19-96

[illegible]= 64.0 mV AT 10:09, 03-19-96
[illegible]TERED

[illegible] VOL= 2.5000 AT 10:09, 03-19-96
[illegible]TERED

[illegible]= 8.0 mV AT 10:11, 03-19-96

[illegible] 7.1 mV AT 10:11, 03-19-96

[illegible] 7.2 mV AT 10:12, 03-19-96

[illegible]= 7.3 mV AT 10:12, 03-19-96

[illegible]= 7.3 mV AT 10:13, 03-19-96

[illegible]= 7.4 mV AT 10:13, 03-19-96
[illegible]TERED

[illegible]NH3 SLOPE=-57.2 mV/DEC
AT 10:13, 03-19-96

[illegible]NH3 CONCN= .281-0.124 x 25 = ~~7.02~~ 3.925 KLA 3.20.96

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```
LE KNOWN ADDITION SELECTED
11:05, 03-19-96

LE VOL= 25.000 AT 11:05, 03-19-96
ERED

57.7 mV AT 11:06, 03-19-96

58.0 mV AT 11:07, 03-19-96

58.1 mV AT 11:08, 03-19-96

58.4 mV AT 11:08, 03-19-96
ERED

CONCN= 1000 AT 11:08, 03-19-96
ERED

VOL= .25000 AT 11:08, 03-19-96
ERED

46.6 mV AT 11:09, 03-19-96

46.5 mV AT 11:10, 03-19-96

46.4 mV AT 11:10, 03-19-96

46.4 mV AT 11:10, 03-19-96
ERED

VOL= 2.5000 AT 11:11, 03-19-96
ERED

9.1 mV AT 11:12, 03-19-96

9.1 mV AT 11:14, 03-19-96

9.1 mV AT 11:14, 03-19-96
ERED

SLOPE=-57.7 mV/DEC
11:14, 03-19-96

CONCN= 15.9 - 0.124 x25 = 394.4/412 x100 = 95.7%
```

STD

1.0ml 145Nilo-C → 25ml

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worklistrpt Version 2.1 05/15/95
03/22/96 10:15

LABCORE Data Entry Template for Worklist# 6871

Analyst: SRM **Instrument:** NH301 **Book #** 145N16-A D RWS 4/22/96

Method: LA-631-001 Rev/Mod B-2

Worklist Comment: C-106 FB AMMONIA. RCJ

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	BLNK				NH3-01	LIQUID	1	5.75e-2	N/A	ug/mL
		2	STD				NH3-01	LIQUID	4.11e2	4.39e2	N/A	ug/mL
96000082	C-106 GRAB	3	SAMPLE	S96T000855	0		NH3-01	LIQUID	N/A	<5.00	5.00	ug/mL
96000082	C-106 GRAB	4	DUP	S96T000855	0		NH3-01	LIQUID	<5.00	<5.00	N/A	ug/mL
96000082	C-106 GRAB	5	SPK	S96T000855	0		NH3-01	LIQUID	100	103.8	N/A	ug/mL
		6	STD				NH3-01	LIQUID	4.11e2	~~107.9~~ 4.436e2	N/A	ug/mL

RHS 4/23/96

Final page for worklist # 6871

SMoulia 4/16/96
Analyst Signature **Date**

RHS 4-23-96
Analyst Signature **Date**

Reviewed RW Schroeder 4/23/96

Data Entry Comments: 1mL → 25mL

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

W.L.# 6871

BLANK

1 25mL

DOUBLE KNOWN ADDITION SELECTED
AT 03:01, 01-26-00

SAMPLE VOL= 25.000 AT 03:01, 01-26-00
ENTERED

EMF= 28.2 mV AT 03:04, 01-26-00

EMF= 28.6 mV AT 03:04, 01-26-00

EMF= 28.9 mV AT 03:04, 01-26-00

EMF= 29.0 mV AT 03:05, 01-26-00

EMF= 28.9 mV AT 03:05, 01-26-00
ENTERED

STD CONCN= 1000 AT 03:05, 01-26-00
ENTERED

STD VOL= .25000 AT 03:06, 01-26-00
ENTERED

EMF=-102.2 mV AT 03:06, 01-26-00

EMF=-102.3 mV AT 03:07, 01-26-00

EMF=-102.3 mV AT 03:07, 01-26-00

EMF=-102.3 mV AT 03:07, 01-26-00
ENTERED

STD VOL= 2.5000 AT 03:08, 01-26-00
ENTERED

EMF=-160.8 mV AT 03:08, 01-26-00

EMF=-160.9 mV AT 03:09, 01-26-00

EMF=-160.8 mV AT 03:09, 01-26-00

EMF=-160.8 mV AT 03:10, 01-26-00
ENTERED

1:NH3 SLOPE=-58.6 mV/DEC
AT 03:10, 01-26-00

Sonja Davis 4-16-96

1:NH3 CONCN= .0575 x D.F.1 = 0.0575

DOUBLE KNOWN ADDITION SELECTED
AT 03:10, 01-26-00

W.L. # 6871

STANDARD
145N16-A

1mL → 25mL

SAMPLE VOL= 25.000 AT 03:24, 01-26-00
ENTERED

EMF=-116.0 mV AT 03:24, 01-26-00

EMF=-115.8 mV AT 03:24, 01-26-00

EMF=-115.6 mV AT 03:25, 01-26-00

EMF=-115.3 mV AT 03:26, 01-26-00

EMF=-115.2 mV AT 03:26, 01-26-00
ENTERED

STD CONCN= 1000 AT 03:26, 01-26-00
ENTERED

STD VOL= .25000 AT 03:26, 01-26-00
ENTERED

EMF=-126.8 mV AT 03:27, 01-26-00

EMF=-126.7 mV AT 03:27, 01-26-00

EMF=-126.7 mV AT 03:28, 01-26-00
ENTERED

STD VOL= 2.5000 AT 03:28, 01-26-00
ENTERED

EMF=-164.4 mV AT 03:29, 01-26-00

EMF=-164.3 mV AT 03:30, 01-26-00

EMF=-164.3 mV AT 03:30, 01-26-00
ENTERED

1:NH3 SLOPE=-60.3 mV/DEC
AT 03:30, 01-26-00

1:NH3 CONCN= 17.6 – 0.0575 x 25 D.F. = 438.6/411 x100 = 106.7%