This document was too large to scan as a whole document, therefore it required breaking into smaller sections.

Document number: SD-WM-DP-145

Section 4 **of** 12

Title: REVISED 60 DAY SAFETY SCREENING + FERROCYANIDE RESULTS FOR TANK 241-BY-108 ROTARY SAMPLES CORE 98 + CORE 104

Date: 02/02/96 **Revision:** R001

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WHC-SD-WM-DP-145, REV. 1

PART II

WHC-SD-WM-DP-145, REV. 0

ANALYTICAL SERVICES

60-DAY SAFETY SCREENING AND FERROCYANIDE RESULTS FOR TANK 241-BY-108, ROTARY SAMPLES, CORE 98 AND CORE 104

Date Printed: OCTOBER 18, 1995

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NARRATIVE

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60-DAY SAFETY SCREEN RESULTS FOR TANK 241-BY-108 ROTARY SAMPLES, CORE 98 AND CORE 104

ANALYTICAL SUMMARY

Core samples from tank 241-BY-108 (BY-108) were received at the 222-S Laboratories and underwent safety screening analyses, consisting of differential scanning calorimetry (DSC), thermogravimetric analysis (TGA), and total alpha activity (*Tank 241-BY-108 Tank Characterization Plan* (TCP)[1]). Results of total organic carbon (TOC) and cyanide (CN) analyses are included for those samples which exceeded DSC action limit.

As required by the *Tank Safety Screening Data Quality Objective* (DQO) [2], a 95% confidence interval was calculated for the sample results exceeding an action limit. The precision requirements of the SAP were satisfied by comparing a one-sided 95% confidence interval of the mean for each sample to the action limit, rather than requiring a relative percent difference between sample and duplicate results of less than 10%. The DSC analysis at the 95% confidence level found the DSC results of three samples exceeded the maximum limit stated in the DQO (Table 4). Notifications by the Chemist and Project Coordinator were made as required.

Before samples were removed from BY-108, an industrial hygiene technician field tested the tank vapors. The technician purged the vapor probe sample tube for five minutes than field measured vapor stream contents using a combustible gas indicator (CGI) and an organic vapor meter (OVM). The technician verbally reported an LEL of 5.0%, an oxygen content of 20 R, and a total organic carbon content of 71.8 ppm using the OVM. Draeger tubes were not used to estimate the ammonia content.

When compared to the decision rules in the DQO, none of the data indicate that the tank should be considered "unsafe." The tank can be considered "safe" once it has been determined that no flammability concern exists in the tank vapor space.

SCOPE

This document serves as the 60-day report deliverable for the tank BY-108 core samples collected on July 27 through August 16, 1995 (Core 98, Segments 1-4 and Core 104 Segments 1-5). The 222-S Laboratories received, extruded, and analyzed each sample in accordance with the TCP. Included in this report are the primary safety screening results obtained from the analyses, and copies of all DSC and TGA raw data scans as requested in the SAP. Also included are the TOC and CN results for those samples that exceeded the DSC action limit. Any additional analyses conducted by the 222-S Laboratories on the BY-108 core samples will be included in a revision to this report. Partial BY-108 core segments from cores 97, 100 and 102 were received from BY-108 but were not analyzed as they duplicated segments of cores 98 and 104. Core 99, a core taken from the same riser as core 98, was sent to PNL's 325 Laboratory for analysis and the results of those analyses will be reported by PNL in a separate document.

SAMPLE RECEIPT, EXTRUSION, AND SUBSAMPLING

The subject core samples reported herein were taken from Tank BY-108. The two samples are identified as Core 98 and Core 104. These core segment samples were received at the 222-S Laboratory between July 28 and August 21, 1995 and extruded between August 1 and August 24, 1995. Table 1 provides the sampling and extrusion report for the two core samples. With the exception of segment 1, of both cores, the recovery was good and each segment was broken into quarter segments and homogenized. Segment 1, for both cores, was treated as a "whole" segment and homogenized. Additional extrusion results are presented in Table 2.

As shown in Table 1, there were some quarter segments missing upon extrusion, that is, there was a gap where that quarter segment would have been expected. Where drainable liquid was obtained, it is believed the liquid originally occupied this gap and accounts for the missing quarter segment. Subsamples for laboratory analyses and archiving were created per the tank TCP.

TABLE 1: SUMMARY DESCRIPTION OF AUGER SAMPLES

Core and Segment* Number	Riser	Sample Total Weight (Grams)	Sample Collection General Description
Core 98 Segment 1(W)	12A	366.8	Extruded approx. 5-6 inches of sample. Sample was wet. Texture of sample was crystalline and tended to "melt" on the sample tray. Sample was light brown to dirty white in color. Collected 170 ml of drainable liquid. Color of liquid was Yellow and opaque.
Core 98 Segment 2 (A),(C), (D)	12A	416.0	Collected 100 ml of drainable liquid, which was yellow brown in color and opaque. Extruded approx. 12 inches of sample. Facies present; Sample was divided into quarter segments. Sample texture ranged from a brown sludge to a material resembling a mixture of brown, beige and dirty white saltcake.
Core 98 Segment 3 (A),(C), (D)	12A	406.5	Collected 60 ml of drainable liquid, which was light brown in color and opaque. Extruded approx. 16.5 inches of sample. Facies present; Sample was divided into quarter segments. Sample texture ranged from a brown sludge to a material resembling a mixture of brown, beige and dirty white saltcake.

Core 98 Segment 4 (A),(B), (C),(D)	12A	490.0	No drainable liquid observed or collected. Extruded approx. 19.0 inches of sample; Sample retained its shape. Facies present; Sample was divided into quarter segments. Sample texture ranged from a brown sludge to a material resembling a mixture of brown sludge with white saltcake.
Core 104 Segment 1(W)	7	131.3	Extruded approx. 6-7 inches of sample. Sample was tan in color, dry, crystalline and granular in shape. No drainable liquids.
Core 104 Segment 2 (A),(B), (C)	7	383.5	No drainable liquid. Extruded approx. 19.0 inches of sample; Upper half segment retained its shape, lower half segment crumbled during extrusion. Facies present in upper quarter segment (crumbly saltcake to sludge). Sample was divided into three quarter segments. Sample texture ranged from a brown sludge to a material resembling a mixture of brown sludge with saltcake.
Core 104 Segment 3 (A),(C), (D)	7	288.8	No drainable liquid. Extruded approx. 17.0 inches of sample; Sample was wet, granular and did not retained its shape. Sample was divided into three quarter segments. Sample texture resembled a brown saltcake.
Core 104 Segment 4 (A),(C), (D)	7	318.3	No drainable liquid. Extruded approx. 18.0 inches of sample. Sample was wet, granular, crumbly and ranged from a yellow to brown crystalline saltcake. Sample was divided into three quarter segments.
Core 104 Segment 5 (A),(B), (C),(D)	7	422.7	No drainable liquid. Extruded approx. 18 inches of sample. Lower half retained its shape and was medium to dark brown, whereas the upper half was dark brown and partially retained its shape. Texture of material resembled a sludge. Sample was divided into four quarter segments.

* (x) represents the quarter segment where "W" represents a whole segment and "A", "B", "C" and "D" represent the quarter segment location with "A" the top of the segment and "D" the bottom of the segment.

ANALYTICAL RESULTS

Analytical results are presented in Table 2.

Differential Scanning Calorimetry (DSC)

DSC analyses were performed under a nitrogen atmosphere using procedure LA-514-113, Rev. B-1 or procedure LA-514-114, Rev. B-0. The results are shown in Table 3 and the raw data scans are attached. The samples were analyzed in duplicate. Any exotherms on the scans would be visible as a rise (Mettler) or a sink (Perkin Elmer) from the baseline established at the beginning and ending of the scan.

Three of the samples exhibited exotherms above the action limit or 481 j/g, therefore, the upper 95% confidence level values calculated for each sample and the results are presented in Table 2.

Thermogravimetric Analysis (TGA)

Weight percent water is calculated from weight loss by TGA. These analyses were performed under a nitrogen atmosphere using procedure LA-560-112, Rev. A-2 or LA-514-114, Rev B-0. The samples and their related "immediate" samples from the un-homogenized extrusions were analyzed in duplicate. "Immediate" samples are samples for TGA analysis that were immediately taken directly from the un-homogenized sample as it was extruded onto the extrusion tray. TGA as well as DSC analyses were performed on homogenized samples for each sample. The results are presented in Table 2, and the raw data scans are attached.

Alpha Total

Analyses for total alpha activity were performed. Samples were prepared by fusion using procedure LA-549-141, Rev. D-0, and analyses were performed using procedure LA-508-101, Rev. D-2. Two fusions were prepared per sample (for duplicate results). Since all of the results were well below the safety screening limit of 41 μCi/g, reruns to improve standard and spike recoveries or relative percent difference (RPD) were deemed unnecessary. The total alpha results are presented in Table 2.

Total Organic Carbon (TOC)

Three samples which had DSC results above the action limit were submitted for TOC analysis. Analyses were performed in duplicate according to procedure LA-342-100, Rev. C-0. The results are presented in Table 3. The RPD for sample S95T001977 exceeded the required ± 10% range. A "triplicate" analysis was performed with a TOC result of 1.39 ug/g which closely resembles the "duplicate" value.

Cyanide

Three samples which had DSC results above the action limit were submitted for cyanide analysis. Analyses were performed in duplicate according to procedure LA-695-102, Rev. D-0. The results are presented in Table 3.

Responsible Project Coordinator: J. H. Baldwin

REFERENCE

[1] J. H. Baldwin, "*Tank 241-BY-108 Tank Characterization Plan*, WHC-SD-WM-TP-275, Rev. 0D, Westinghouse Hanford Company, Richland, Washington, July 19, 1995.

[2] H. Babad, J. W. Hunt, and K. S. Redus, *Tank Safety Screening Data Quality Objective*, WHC-SD-WM-SP-004, Rev. 1, Westinghouse Hanford Company, Richland, Washington, April 27, 1995.

Table 4. 95% Upper Confidence Interval Limits for DSC (Units are in joules/g).

Sample Description	Sample Number	Differential Scanning Calorimetry (DSC) Dry Basis				TGA* Average
		Sample Result (J/g)	Dup. Result (J/g)	Average Result (J/g)	95 % UL	(%H20)
Quarter Segment B from Core 98 Segment 4	S95T001420	509.1	522.6	558.0	697.7	35.61
Rerun	S95T001420	481.3	409.5	445.4	672.0	35.61
Quarter Segment B from Core 104 Segment 5	S95T001976	593.5	522.6	558.0	781.8	36.66
Quarter Segment C from Core 104 Segment 5	S95T001977	548.7	507.9	528.3	657.1	35.50

TGA = Thermogravimetric Analysis
Quarter Segment B is approximately the second 5 inches of material of the segment. Quarter segment C is approximately the third 5 inches of material from the top of the segment.

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SAMPLE DATA SUMMARY

INTERIM

BY-108 Analytical Summary Cores 98 and 104
BY-108 (R)

Table 2

CORE NUMBER: 98
SEGMENT #: 1(DL)

SEGMENT PORTION: Drainable Liquid

Sample#	R	A#	Analyte	Unit	Action Limits Lower	Action Limits Upper	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T001373			% Water by TGA on Perkin Elmer	%	None	None	101.1	n/a	31.90	34.04	32.97	6.49	n/a	n/a	n/a
S95T001373			DSC Exotherm on Perkin Elmer	Joules/g	None	None	97.54	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S95T001373			DSC Exotherm Dry Calculated	Joules/g Dry	None	None	n/a	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a

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INTERIM

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INTERIM

BY-108 Analytical Summary Cores 98 and 104
BY-108 (R)

Table 2

CORE NUMBER: 98
SEGMENT #: 1(W)

SEGMENT PORTION: Immediate Sampling (to check moisture loss)

Sample#	R	A#	Analyte	Unit	Action Limits Lower	Action Limits Upper	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T001389			% Water by TGA using Mettler	%	None	None	101.1	n/a	37.72	36.28	37.00	3.89	n/a	n/a	n/a

W Whole Segment: W Whole Segment

Sample#	R	A#	Analyte	Unit	Action Limits Lower	Action Limits Upper	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T001390			% Water by TGA on Perkin Elmer	%	None	None	96.42	n/a	21.85	19.76	20.80	10.0	n/a	n/a	n/a
S95T001390			DSC Exotherm on Perkin Elmer	Joules/g	-1.0e+03	480.0	100.1	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S95T001390			DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+03	480.0	n/a	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S95T001391	F		Alpha of Digested Solid	uCi/g	None	None	108.2	1.34e-03	2.22e-03	3.71e-03	2.97e-03	50.3	76.70	2.90e-03	90.8

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INTERIM

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INTERIM

BY-108 Analytical Summary Cores 98 and 104
BY-108 (R)

Table 2

CORE NUMBER: 98
SEGMENT #: 2(A)

SEGMENT PORTION: A Top Quarter of Segment

Sample#	R	A#	Analyte	Unit	Action Limits Lower	Action Limits Upper	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T001404			% Water by TGA on Perkin Elmer	%	None	None	100.8	n/a	14.64	14.87	14.75	1.56	n/a	n/a	n/a
S95T001404			DSC Exotherm on Perkin Elmer	Joules/g	-1.0e+03	480.0	95.68	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S95T001404			DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+03	480.0	n/a	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S95T001405		F	Alpha of Digested Solid	uCi/g	None	None	94.98	<2.26e-03	2.38e-03	1.86e-03	2.12e-03	24.5	81.30	3.75e-03	117.5

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INTERIM

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WHC-SD-WM-DP-145, REV. 1

INTERIM

BY-108 Analytical Summary Cores 98 and 104
BY-108 (R)
Table 2

CORE NUMBER: 98
SEGMENT #: 2(C)

SEGMENT PORTION: C Third Quarter of Segment

Sample#	R	A#	Analyte	Unit	Action Limits Lower	Action Limits Upper	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T001399			% Water by TGA using Mettler	%	None	None	100.7	n/a	43.90	39.74	41.82	9.95	n/a	n/a	n/a
S95T001399			DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+03	480.0	n/a	n/a	91.10	85.60	88.35	6.23	n/a	n/a	n/a
S95T001399			DSC Exotherm using Mettler	Joules/g	-1.0e+03	480.0	93.15	n/a	53.00	49.80	51.40	6.23	n/a	n/a	n/a
S95T001400		F	Alpha of Digested Solid	uCi/g	None	None	94.98	<2.26e-03	< 2.63e+3	3.98e-03	n/a	n/a	82.80	3.92e-03	358.8

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INTERIM

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WHC-SD-WM-DP-145, REV. 1

INTERIM

BY-108 Analytical Summary Cores 98 and 104
BY-108 (R)
Table 2

CORE NUMBER: 98
SEGMENT #: 2(D)

SEGMENT PORTION: D Bottom Quarter of Segment

Sample#	R	A#	Analyte	Unit	Action Limits Lower	Action Limits Upper	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T001393			% Water by TGA using Mettler	%	None	None	98.84	n/a	38.92	36.38	37.65	6.75	n/a	n/a	n/a
S95T001396			% Water by TGA on Perkin Elmer	%	None	None	100.8	n/a	8.560	9.360	8.960	8.93	n/a	n/a	n/a
S95T001396			% Water by TGA using Mettler	%	None	None	101.7	n/a	40.98	44.12	42.55	7.38	n/a	n/a	n/a
S95T001396			DSC Exotherm on Perkin Elmer	Joules/g	-1.0e+03	480.0	98.81	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S95T001396			DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+03	480.0	n/a	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S95T001398	F		Alpha of Digested Solid	uCi/g	None	None	108.2	1.34e-03	2.67e-02	2.82e-02	2.75e-02	5.46	87.40	6.96e-03	39.6

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The TGA - Water by Perkin Elmer represents weight loss at the first inflection point.

The TGA - Water by Mettler - represents total weight loss.

INTERIM

INTERIM

BY-108 Analytical Summary Cores 98 and 104
BY-108 (R)

Table 2

CORE NUMBER: 98
SEGMENT #: 2(DL)

SEGMENT PORTION: Drainable Liquid

Sample#	R	A#	Analyte	Unit	Action Limits Lower	Action Limits Upper	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T001427			% Water by TGA on Perkin Elmer	%	None	None	101.1	n/a	27.11	25.03	26.07	7.98	n/a	n/a	n/a
S95T001427			DSC Exotherm on Perkin Elmer	Joules/g	None	None	98.45	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S95T001427			DSC Exotherm Dry Calculated	Joules/g Dry	None	None	n/a	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a

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INTERIM

INTERIM

BY-108 Analytical Summary Cores 98 and 104
BY-108 (R)
Table 2

CORE NUMBER: 98
SEGMENT #: 3(A)

SEGMENT PORTION: Immediate Sampling (to check moisture loss)

Sample#	R	A#	Analyte	Unit	Action Limits Lower	Action Limits Upper	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T001380			% Water by TGA on Perkin Elmer	%	None	None	101.1	n/a	15.74	15.92	15.83	1.01	n/a	n/a	n/a

A Top Quarter of Segment: A Top Quarter of Segment

Sample#	R	A#	Analyte	Unit	Action Limits Lower	Action Limits Upper	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T001431			% Water by TGA using Mettler	%	None	None	101.3	n/a	43.77	44.47	44.12	1.59	n/a	n/a	n/a
S95T001431			DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+03	480.0	n/a	n/a	323.2	323.0	323.1	0.06	n/a	n/a	n/a
S95T001431			DSC Exotherm using Mettler	Joules/g	-1.0e+03	480.0	106.5	n/a	180.6	180.5	180.6	0.06	n/a	n/a	n/a
S95T001480	F		Alpha of Digested Solid	uCi/g	None	None	103.2	<2.74e-03	7.63e-03	3.93e-03	5.78e-03	64.0	n/a	6.85e-03	85.5

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INTERIM

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INTERIM

BY-108 Analytical Summary Cores 98 and 104
BY-108 (R)

Table 2

CORE NUMBER: 98
SEGMENT #: 3(C)

SEGMENT PORTION: Immediate Sampling (to check moisture loss)

Sample#	R	A#	Analyte	Unit	Action Limits Lower	Action Limits Upper	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T001381			% Water by TGA on Perkin Elmer	%	None	None	101.1	n/a	15.18	16.82	16.00	0.10	n/a	n/a	n/a

C Third Quarter of Segment: C Third Quarter of Segment

Sample#	R	A#	Analyte	Unit	Action Limits Lower	Action Limits Upper	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T001432			% Water by TGA using Mettler	%	None	None	100.9	n/a	41.31	38.53	39.92	6.96	n/a	n/a	n/a
S95T001432			DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+03	480.0	n/a	n/a	114.3	116.8	115.5	2.16	n/a	n/a	n/a
S95T001432			DSC Exotherm using Mettler	Joules/g	-1.0e+03	480.0	105.1	n/a	68.70	70.20	69.45	2.16	n/a	n/a	n/a
S95T001481	F		Alpha of Digested Solid	uCi/g	None	None	103.2	<2.74e-03	< 4.66e-3	<5.93e-3	n/a	n/a	n/a	7.32e-03	500.0

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INTERIM

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WHC-SD-WM-DP-145, REV. 1
WHC-SD-WM-DP-145, REV. 0

INTERIM

BY-108 Analytical Summary Cores 98 and 104
BY-108 (R)

Table 2

CORE NUMBER: 98
SEGMENT #: 3(D)

SEGMENT PORTION: Immediate Sampling (to check moisture loss)

Sample#	R	A#	Analyte	Unit	Action Limits Lower	Action Limits Upper	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T001382			% Water by TGA using Mettler	%	None	None	100.8	n/a	39.16	39.44	39.30	0.71	n/a	n/a	n/a

D Bottom Quarter of Segment: D Bottom Quarter of Segment

Sample#	R	A#	Analyte	Unit	Action Limits Lower	Action Limits Upper	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T001433			% Water by TGA using Mettler	%	None	None	101.8	n/a	34.52	38.56	36.54	11.1	n/a	n/a	n/a
S95T001433			DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+03	480.0	n/a	n/a	235.7	226.1	230.9	4.16	n/a	n/a	n/a
S95T001433			DSC Exotherm using Mettler	Joules/g	-1.0e+03	480.0	106.9	n/a	149.6	143.5	146.6	4.16	n/a	n/a	n/a
S95T001482	F		Alpha of Digested Solid	uCi/g	None	None	100.0	<2.24e-02	< 2.06e-2	<1.73e-2	n/a	n/a	96.90	2.50e-02	245.9

=> Limit violated
=> Selected Limit

INTERIM

INTERIM

BY-108 Analytical Summary Cores 98 and 104
BY-108 (R)

Table 2

CORE NUMBER: 98
SEGMENT #: 3(DL)

SEGMENT PORTION: Drainable Liquid

Sample#	R	A#	Analyte	Unit	Action Limits Lower	Action Limits Upper	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T001430			% Water by TGA using Mettler	%	None	None	101.4	n/a	38.58	39.47	39.02	2.28	n/a	n/a	n/a
S95T001430			DSC Exotherm Dry Calculated	Joules/g Dry	None	None	n/a	n/a	121.7	114.2	118.0	6.36	n/a	n/a	n/a
S95T001430			DSC Exotherm using Mettler	Joules/g	None	None	95.96	n/a	74.20	69.60	71.90	6.40	n/a	n/a	n/a

=> Limit violated
=> Selected Limit

INTERIM

2-21

INTERIM

BY-108 Analytical Summary Cores 98 and 104
BY-108 (R)

Table 2

CORE NUMBER: 98
SEGMENT #: 4(A)

SEGMENT PORTION: Immediate Sampling (to check moisture loss)

Sample#	R	A#	Analyte	Unit	Action Limits Lower	Action Limits Upper	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T001407			% Water by TGA on Perkin Elmer	%	None	None	96.40	n/a	16.31	17.58	16.95	7.49	n/a	n/a	n/a

A Top Quarter of Segment: A Top Quarter of Segment

Sample#	R	A#	Analyte	Unit	Action Limits Lower	Action Limits Upper	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T001419			% Water by TGA using Mettler	%	None	None	97.31	n/a	28.88	36.23	32.55	22.6	n/a	n/a	n/a
S95T001419	1		% Water by TGA using Mettler	%	None	None	101.2	n/a	36.64	36.69	36.66	0.14	n/a	n/a	n/a
S95T001419			DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+03	480.0	n/a	n/a	295.1	390.8	343.0	27.9	n/a	n/a	n/a
S95T001419	1		DSC Exotherm using Mettler	Joules/g	-1.0e+03	480.0	101.6	n/a	199.0	263.6	231.3	27.9	n/a	n/a	n/a
S95T001419			DSC Exotherm using Mettler	Joules/g	-1.0e+03	480.0	97.01	n/a	292.9	162.2	227.5	57.4	n/a	n/a	n/a
S95T001423		F	Alpha of Digested Solid	uCi/g	None	None	107.9	<5.29e-03	< 1.45e-2	<7.36e-3	n/a	n/a	91.20	1.30e-02	500.0

=> Limit violated
=> Selected Limit

INTERIM

2-22

WHC-SD-WM-DP-145, REV. 0

WHC-SD-WM-DP-145, REV. 1

INTERIM

BY-108 Analytical Summary Cores 98 and 104
BY-108 (R)
Table 2

CORE NUMBER: 98
SEGMENT #: 4(B)

SEGMENT PORTION: Immediate Sampling (to check moisture loss)

Sample#	R	A#	Analyte	Unit	Action Limits Lower	Action Limits Upper	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T001408			% Water by TGA using Mettler	%	None	None	101.3	n/a	37.28	36.03	36.66	3.41	n/a	n/a	n/a

B Second Quarter of Segment: B Second Quarter of Segment

Sample#	R	A#	Analyte	Unit	Action Limits Lower	Action Limits Upper	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T001420			% Water by TGA using Mettler	%	None	None	97.31	n/a	35.41	35.81	35.61	1.12	n/a	n/a	n/a
S95T001420 1			DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+03	480.0	n/a	n/a	481.3	409.5	445.4	16.1	n/a	n/a	n/a
S95T001420			DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+03	480.0	n/a	n/a	509.1	438.1	473.6	15.0	n/a	n/a	n/a
S95T001420 1			DSC Exotherm using Mettler	Joules/g	-1.0e+03	480.0	101.6	n/a	309.9	263.7	286.8	16.1	n/a	n/a	n/a
S95T001420			DSC Exotherm using Mettler	Joules/g	-1.0e+03	480.0	97.01	n/a	327.8	282.1	305.0	15.0	n/a	n/a	n/a
S95T001424	F		Alpha of Digested Solid	uCi/g	None	None	107.9	<5.29e-03	< 7.47e-3	6.10e-02	n/a	n/a	92.20	1.06e-02	234.9

=> Limit violated
=> Selected Limit

INTERIM

2-23

WHC-SD-WM-DP-145, REV. 1

WHC-SD-WM-DP-145, REV. 0

INTERIM

BY-108 Analytical Summary Cores 98 and 104
BY-108 (R)
Table 2

CORE NUMBER: 98
SEGMENT #: 4(C)

SEGMENT PORTION: Immediate Sampling (to check moisture loss)

Sample#	R	A#	Analyte	Unit	Action Limits Lower	Action Limits Upper	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T001409			% Water by TGA using Mettler	%	None	None	101.3	n/a	37.47	37.91	37.69	1.17	n/a	n/a	n/a

C Third Quarter of Segment: C Third Quarter of Segment

Sample#	R	A#	Analyte	Unit	Action Limits Lower	Action Limits Upper	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T001421			% Water by TGA using Mettler	%	None	None	101.5	n/a	38.31	39.82	39.06	3.87	n/a	n/a	n/a
S95T001421			DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+03	480.0	n/a	n/a	221.9	226.4	224.2	2.01	n/a	n/a	n/a
S95T001421			DSC Exotherm using Mettler	Joules/g	-1.0e+03	480.0	102.3	n/a	135.4	138.2	136.8	2.05	n/a	n/a	n/a
S95T001425		F	Alpha of Digested Solid	uCi/g	None	None	99.28	<4.22e-02	2.41e-01	3.13e-01	2.77e-01	26.0	111.2	9.66e-02	37.6

=> Limit violated
=> Selected Limit

INTERIM

2-24

WHC-SD-WM-DP-145, REV. 1
WHC-SD-WM-DP-145, REV. 0

INTERIM

BY-108 Analytical Summary Cores 98 and 104
BY-108 (R)
Table 2

CORE NUMBER: 98
SEGMENT #: 4(D)

SEGMENT PORTION: Immediate Sampling (to check moisture loss)

Sample#	R	A#	Analyte	Unit	Action Limits Lower	Action Limits Upper	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T001410			% Water by TGA on Perkin Elmer	%	None	None	100.6	n/a	19.95	20.93	20.44	4.79	n/a	n/a	n/a
S95T001410			% Water by TGA using Mettler	%	None	None	101.7	n/a	35.32	39.45	37.39	11.0	n/a	n/a	n/a

D Bottom Quarter of Segment: D Bottom Quarter of Segment

Sample#	R	A#	Analyte	Unit	Action Limits Lower	Action Limits Upper	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T001422			% Water by TGA using Mettler	%	None	None	101.5	n/a	36.49	36.40	36.45	0.25	n/a	n/a	n/a
S95T001422			DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+03	480.0	n/a	n/a	98.51	107.6	103.1	8.82	n/a	n/a	n/a
S95T001422			DSC Exotherm using Mettler	Joules/g	-1.0e+03	480.0	102.3	n/a	62.60	68.40	65.50	8.85	n/a	n/a	n/a
S95T001426		F	Alpha of Digested Solid	uCi/g	None	None	91.22	<9.64e-02	3.52e-01	3.68e-01	3.60e-01	4.44	97.80	2.44e-01	56.8

=> Limit violated
=> Selected Limit

The TGA - Water by Perkin-Elmer represents weight loss at the first inflection point.

The TGA - Water by Mettler - represents total weight loss.

INTERIM

INTERIM

BY-108 Analytical Summary Cores 98 and 104
BY-108 (R)

Table 2

CORE NUMBER: 104
SEGMENT #: 1(W)

SEGMENT PORTION: Immediate Sampling (to check moisture loss)

Sample#	R	A#	Analyte	Unit	Action Limits Lower	Action Limits Upper	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T001586			% Water by TGA on Perkin Elmer	%	None	None	100.4	n/a	15.74	15.02	15.38	4.68	n/a	n/a	n/a

W Whole Segment: W Whole Segment

Sample#	R	A#	Analyte	Unit	Action Limits Lower	Action Limits Upper	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T001925			% Water by TGA on Perkin Elmer	%	None	None	101.7	n/a	24.90	23.78	24.34	4.60	n/a	n/a	n/a
S95T001925			DSC Exotherm on Perkin Elmer	Joules/g	-1.0e+03	480.0	97.79	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S95T001925			DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+03	480.0	n/a	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S95T002001	F		Alpha of Digested Solid	uCi/g	None	None	125.4	<4.59e-04	<6.35E-04	<1.51E-3	n/a	n/a	4.78e-03	7.44e-04	1.96E+02

=> Limit violated
=> Selected Limit

INTERIM

2-26

WHC-SD-WM-DP-145, REV. 1

WHC-SD-WM-DP-145, REV. 0

INTERIM

BY-108 Analytical Summary Cores 98 and 104
BY-108 (R)

Table 2

CORE NUMBER: 104
SEGMENT #: 2(A)

SEGMENT PORTION: Immediate Sampling (to check moisture loss)

Sample#	R	A#	Analyte	Unit	Action Limits Lower	Action Limits Upper	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T001587			% Water by TGA on Perkin Elmer	%	None	None	100.4	n/a	10.41	12.77	11.59	20.4	n/a	n/a	n/a

A Top Quarter of Segment: A Top Quarter of Segment

Sample#	R	A#	Analyte	Unit	Action Limits Lower	Action Limits Upper	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T001966			% Water by TGA using Mettler	%	None	None	101.3	n/a	20.84	19.25	20.05	7.93	n/a	n/a	n/a
S95T001966			DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+03	480.0	n/a	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S95T001966			DSC Exotherm using Mettler	Joules/g	-1.0e+03	480.0	106.9	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S95T002002	F		Alpha of Digested Solid	uCi/g	None	None	125.4	<4.59e-04	3.66e-03	3.18e-03	3.42e-03	14.0	7.48e-02	6.88e-04	2.78E+01

=> Limit violated
=> Selected Limit

INTERIM

2-27

WHC-SD-WM-DP-145, REV. 1

WHC-SD-WM-DP-145, REV. 0

INTERIM

BY-108 Analytical Summary Cores 98 and 104
BY-108 (R)

Table 2

CORE NUMBER: 104
SEGMENT #: 2(B)

SEGMENT PORTION: Immediate Sampling (to check moisture loss)

Sample#	R	A#	Analyte	Unit	Action Limits Lower	Action Limits Upper	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T001588			% Water by TGA using Mettler	%	None	None	101.2	n/a	29.88	30.68	30.28	2.64	n/a	n/a	n/a

B Second Quarter of Segment: B Second Quarter of Segment

Sample#	R	A#	Analyte	Unit	Action Limits Lower	Action Limits Upper	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T001967			% Water by TGA using Mettler	%	None	None	101.2	n/a	33.54	29.90	31.72	11.5	n/a	n/a	n/a
S95T001967			DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+03	480.0	n/a	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S95T001967			DSC Exotherm using Mettler	Joules/g	-1.0e+03	480.0	106.9	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S95T002003		F	Alpha of Digested Solid	uCi/g	None	None	107.4	<2.79e-03	4.74e-03	5.12e-03	4.93e-03	7.71	93.30	3.80e-03	1.30E+02

=> Limit violated
=> Selected Limit

INTERIM

2-28

WHC-SD-WM-DP-145, REV. 1

WHC-SD-WM-DP-145, REV. 0

INTERIM

BY-108 Analytical Summary Cores 98 and 104
BY-108 (R)

Table 2

CORE NUMBER: 104
SEGMENT #: 2(C)

SEGMENT PORTION: Immediate Sampling (to check moisture loss)

Sample#	R	A#	Analyte	Unit	Action Limits Lower	Action Limits Upper	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T001589			% Water by TGA using Mettler	%	None	None	101.2	n/a	22.95	23.67	23.31	3.09	n/a	n/a	n/a

C Third Quarter of Segment: C Third Quarter of Segment

Sample#	R	A#	Analyte	Unit	Action Limits Lower	Action Limits Upper	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T001968			% Water by TGA on Perkin Elmer	%	None	None	101.3	n/a	15.40	9.880	12.64	43.7	n/a	n/a	n/a
S95T001968			DSC Exotherm on Perkin Elmer	Joules/g	-1.0e+03	480.0	99.26	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S95T001968			DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+03	480.0	n/a	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S95T002004		F	Alpha of Digested Solid	uCi/g	None	None	107.4	<2.79e-03	6.20e-03	6.17e-03	6.18e-03	0.49	91.74	3.83e-03	5.99E+01

=> Limit violated
=> Selected Limit

INTERIM

INTERIM

BY-108 Analytical Summary Cores 98 and 104
BY-108 (R)

Table 2

CORE NUMBER: 104
SEGMENT #: 3(A)

SEGMENT PORTION: Immediate Sampling (to check moisture loss)

Sample#	R	A#	Analyte	Unit	Action Limits Lower	Action Limits Upper	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T001861			% Water by TGA using Mettler	%	None	None	101.4	n/a	41.30	41.77	41.53	1.13	n/a	n/a	n/a

A Top Quarter of Segment: A Top Quarter of Segment

Sample#	R	A#	Analyte	Unit	Action Limits Lower	Action Limits Upper	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T001969			% Water by TGA on Perkin Elmer	%	None	None	101.2	n/a	7.150	7.790	7.470	8.57	n/a	n/a	n/a
S95T001969			DSC Exotherm on Perkin Elmer	Joules/g	-1.0e+03	480.0	99.16	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S95T001969			DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+03	480.0	n/a	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S95T002005	F		Alpha of Digested Solid	uCi/g	None	None	104.7	<2.95e-03	<3.30E-03	1.83e-03	n/a	n/a	103.1	4.28e-03	1.87E+02

=> Limit violated
=> Selected Limit

INTERIM

INTERIM

BY-108 Analytical Summary Cores 98 and 104
BY-108 (R)

Table 2

CORE NUMBER: 104
SEGMENT #: 3(C)

SEGMENT PORTION: Immediate Sampling (to check moisture loss)

Sample#	R	A#	Analyte	Unit	Action Limits Lower	Action Limits Upper	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T001862			% Water by TGA using Mettler	%	None	None	101.4	n/a	26.93	25.93	26.43	3.78	n/a	n/a	n/a

C Third Quarter of Segment: C Third Quarter of Segment

Sample#	R	A#	Analyte	Unit	Action Limits Lower	Action Limits Upper	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T001970			% Water by TGA using Mettler	%	None	None	97.07	n/a	11.12	7.680	9.400	36.6	n/a	n/a	n/a
S95T001970			DSC Exotherm on Perkin Elmer	Joules/g	-1.0e+03	480.0	99.79	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S95T001970			DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+03	480.0	n/a	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S95T002006		F	Alpha of Digested Solid	uCi/g	None	None	110.1	6.54e-03	4.05e-03	<4.69E-3	n/a	n/a	91.74	9.66e-03	1.40E+02

=> Limit violated
=> Selected Limit

INTERIM

2-31

WHC-SD-WM-DP-145, REV. 1

WHC-SD-WM-DP-145, REV. 0

INTERIM

BY-108 Analytical Summary Cores 98 and 104
BY-108 (R)
Table 2

CORE NUMBER: 104
SEGMENT #: 3(D)

SEGMENT PORTION: Immediate Sampling (to check moisture loss)

Sample#	R	A#	Analyte	Unit	Action Limits Lower	Action Limits Upper	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T001863			% Water by TGA on Perkin Elmer	%	None	None	101.7	n/a	22.20	15.60	18.90	34.9	n/a	n/a	n/a
S95T001863			% Water by TGA using Mettler	%	None	None	n/a	n/a	32.06	n/a	n/a	n/a	n/a	n/a	n/a

D Bottom Quarter of Segment: D Bottom Quarter of Segment

Sample#	R	A#	Analyte	Unit	Action Limits Lower	Action Limits Upper	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T001971			% Water by TGA using Mettler	%	None	None	97.07	n/a	8.070	7.820	7.945	3.15	n/a	n/a	n/a
S95T001971			DSC Exotherm on Perkin Elmer	Joules/g	-1.0e+03	480.0	99.79	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S95T001971			DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+03	480.0	n/a	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S95T002007		F	Alpha of Digested Solid	uCi/g	None	None	110.1	6.54e-03	1.86e-02	1.82e-02	1.84e-02	2.17	90.18	1.01e-02	5.90E+01

=> Limit violated
=> Selected Limit

The TGA - Water by Perkin-Elmer represents weight loss at the first inflection point.

The TGA - Water by Mettler - represents total weight loss.

INTERIM

INTERIM

BY-108 Analytical Summary Cores 98 and 104
BY-108 (R)

Table 2

CORE NUMBER: 104
SEGMENT #: 4(A)

SEGMENT PORTION: Immediate Sampling (to check moisture loss)

Sample#	R	A#	Analyte	Unit	Action Limits Lower	Action Limits Upper	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T001904			% Water by TGA on Perkin Elmer	%	None	None	100.3	n/a	32.34	34.59	33.47	6.72	n/a	n/a	n/a

A Top Quarter of Segment: A Top Quarter of Segment

Sample#	R	A#	Analyte	Unit	Action Limits Lower	Action Limits Upper	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T001972			% Water by TGA using Mettler	%	None	None	100.7	n/a	31.01	33.09	32.05	6.49	n/a	n/a	n/a
S95T001972			DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+03	480.0	n/a	n/a	60.93	0.00e+00	30.46	200	n/a	n/a	n/a
S95T001972			DSC Exotherm using Mettler	Joules/g	-1.0e+03	480.0	105.1	n/a	41.40	0.00e+00	20.70	200	n/a	n/a	n/a
S95T002008		F	Alpha of Digested Solid	uCi/g	None	None	123.1	<1.91e-03	2.14e-03	<2.83E-3	n/a	n/a	78.57	3.85e-03	1.13E+02

=> Limit violated
=> Selected Limit

INTERIM

2-33

WHC-SD-WM-DP-145, REV. 1

WHC-SD-WM-DP-145, REV. 0

INTERIM

BY-108 Analytical Summary Cores 98 and 104
BY-108 (R)

CORE NUMBER: 104
SEGMENT #: 4(C)

Table 2

SEGMENT PORTION: Immediate Sampling (to check moisture loss)

Sample#	R	A#	Analyte	Unit	Action Limits Lower	Action Limits Upper	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T001905			% Water by TGA using Mettler	%	None	None	100.8	n/a	43.26	45.28	44.27	4.56	n/a	n/a	n/a

C Third Quarter of Segment: C Third Quarter of Segment

Sample#	R	A#	Analyte	Unit	Action Limits Lower	Action Limits Upper	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T001973			% Water by TGA using Mettler	%	None	None	100.7	n/a	41.10	41.13	41.12	0.07	n/a	n/a	n/a
S95T001973			DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+03	480.0	n/a	n/a	180.2	194.5	187.3	7.63	n/a	n/a	n/a
S95T001973			DSC Exotherm using Mettler	Joules/g	-1.0e+03	480.0	105.1	n/a	106.1	114.5	110.3	7.62	n/a	n/a	n/a
S95T002009		F	Alpha of Digested Solid	uCi/g	None	None	123.1	<1.91e-03	<4.66E-03	<3.50E-3	n/a	n/a	100.0	7.55e-03	5.00E+02

=> Limit violated
=> Selected Limit

INTERIM

2-34

WHC-SD-WM-DP-145, REV. 1

WHC-SD-WM-DP-145, REV. 0

INTERIM

BY-108 Analytical Summary Cores 98 and 104
BY-108 (R)

Table 2

CORE NUMBER: 104
SEGMENT #: 4(D)

SEGMENT PORTION: Immediate Sampling (to check moisture loss)

Sample#	R	A#	Analyte	Unit	Action Limits Lower	Action Limits Upper	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T001906			% Water by TGA using Mettler	%	None	None	100.8	n/a	36.22	33.78	35.00	6.97	n/a	n/a	n/a

D Bottom Quarter of Segment: D Bottom Quarter of Segment

Sample#	R	A#	Analyte	Unit	Action Limits Lower	Action Limits Upper	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T001974			% Water by TGA on Perkin Elmer	%	None	None	101.1	n/a	9.770	8.800	9.285	10.4	n/a	n/a	n/a
S95T001974			DSC Exotherm on Perkin Elmer	Joules/g	-1.0e+03	480.0	99.86	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S95T001974			DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+03	480.0	n/a	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S95T002010		F	Alpha of Digested Solid	uCi/g	None	None	115.4	5.50e-04	7.44e-04	<9.72E-4	n/a	n/a	91.96	9.16e-04	1.10E+02

=> Limit violated
=> Selected Limit

INTERIM

2-35

WHC-SD-WM-DP-145, REV. 1
WHC-SD-WM-DP-145, REV. 0

INTERIM

BY-108 Analytical Summary Cores 98 and 104
BY-108 (R)
Table 2

CORE NUMBER: 104
SEGMENT #: 5(A)

SEGMENT PORTION: Immediate Sampling (to check moisture loss)

Sample#	R	A#	Analyte	Unit	Action Limits Lower	Action Limits Upper	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T001915			% Water by TGA on Perkin Elmer	%	None	None	101.7	n/a	12.81	13.13	12.97	2.47	n/a	n/a	n/a

A Top Quarter of Segment: A Top Quarter of Segment

Sample#	R	A#	Analyte	Unit	Action Limits Lower	Action Limits Upper	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T001975			% Water by TGA on Perkin Elmer	%	None	None	101.1	n/a	9.370	8.980	9.175	4.25	n/a	n/a	n/a
S95T001975			DSC Exotherm on Perkin Elmer	Joules/g	-1.0e+03	480.0	99.86	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S95T001975			DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+03	480.0	n/a	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S95T002011		F	Alpha of Digested Solid	uCi/g	None	None	115.4	5.50e-04	1.77e-02	1.08e-02	1.43e-02	48.4	69.20	9.11e-04	1.22E+01

=> Limit violated
=> Selected Limit

INTERIM

2-36

WHC-SD-WM-DP-145, REV. 1
WHC-SD-WM-DP-145, REV. 0

INTERIM

BY-108 Analytical Summary Cores 98 and 104
BY-108 (R)

Table 2

CORE NUMBER: 104
SEGMENT #: 5(B)

SEGMENT PORTION: Immediate Sampling (to check moisture loss)

Sample#	R	A#	Analyte	Unit	Action Limits Lower	Action Limits Upper	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T001916	1		% Water by TGA using Mettler	%	None	None	n/a	n/a	36.23	n/a	n/a	n/a	n/a	n/a	n/a
S95T001916			% Water by TGA using Mettler	%	None	None	100.7	n/a	35.23	37.56	36.39	15.3	n/a	n/a	n/a

B Second Quarter of Segment: B Second Quarter of Segment

Sample#	R	A#	Analyte	Unit	Action Limits Lower	Action Limits Upper	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T001976			% Water by TGA using Mettler	%	None	None	101.1	n/a	37.69	35.62	36.66	5.65	n/a	n/a	n/a
S95T001976			DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+03	480.0	n/a	n/a	593.5	552.6	573.0	7.14	n/a	n/a	n/a
S95T001976			DSC Exotherm using Mettler	Joules/g	-1.0e+03	480.0	93.50	n/a	375.9	350.0	362.9	7.14	n/a	n/a	n/a
S95T002012		F	Alpha of Digested Solid	uCi/g	None	None	95.95	<7.63e-02	1.79e-01	1.81e-01	1.80e-01	1.11	100.0	1.03e-01	5.18E+01

=> Limit violated
=> Selected Limit

INTERIM

8-37

WHC-SD-WM-DP-145, REV. 0

WHC-SD-WM-DP-145, REV. 1

INTERIM

BY-108 Analytical Summary Cores 98 and 104
BY-108 (R)

CORE NUMBER: 104
SEGMENT #: 5(C)

Table 2

SEGMENT PORTION: Immediate Sampling (to check moisture loss)

Sample#	R	A#	Analyte	Unit	Action Limits Lower	Action Limits Upper	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T001917	1		% Water by TGA using Mettler	%	None	None	n/a	n/a		n/a	n/a	n/a	n/a	n/a	n/a
S95T001917			% Water by TGA using Mettler	%	None	None	100.7	n/a	33.04	26.36	29.70	22.5	n/a	n/a	n/a

C Third Quarter of Segment: C Third Quarter of Segment

Sample#	R	A#	Analyte	Unit	Action Limits Lower	Action Limits Upper	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T001977			% Water by TGA using Mettler	%	None	None	101.1	n/a	35.50	35.50	35.50	0.00	n/a	n/a	n/a
S95T001977			DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+03	480.0	n/a	n/a	548.7	507.9	528.3	7.72	n/a	n/a	n/a
S95T001977			DSC Exotherm using Mettler	Joules/g	-1.0e+03	480.0	93.50	n/a	353.9	327.6	340.8	7.72	n/a	n/a	n/a
S95T002013		F	Alpha of Digested Solid	uCi/g	None	None	95.95	<7.63e-02	2.66e-01	3.06e-01	2.86e-01	14.0	96.88	9.82e-02	3.55E+01

=> Limit violated
=> Selected Limit

INTERIM

INTERIM

BY-108 Analytical Summary Cores 98 and 104
BY-108 (R)

Table 2

CORE NUMBER: 104
SEGMENT #: 5(D)

SEGMENT PORTION: Immediate Sampling (to check moisture loss)

Sample#	R	A#	Analyte	Unit	Action Limits Lower	Action Limits Upper	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T001918			% Water by TGA using Mettler	%	None	None	100.4	n/a	29.31	35.21	32.26	18.3	n/a	n/a	n/a

D Bottom Quarter of Segment: D Bottom Quarter of Segment

Sample#	R	A#	Analyte	Unit	Action Limits Lower	Action Limits Upper	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T001978			% Water by TGA on Perkin Elmer	%	None	None	100.3	n/a	7.080	7.490	7.285	5.63	n/a	n/a	n/a
S95T001978			DSC Exotherm on Perkin Elmer	Joules/g	-1.0e+03	480.0	100.7	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S95T001978			DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+03	480.0	n/a	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S95T002014	F		Alpha of Digested Solid	uCi/g	None	None	124.3	<9.89e-02	3.90e-01	3.74e-01	3.82e-01	4.19	138.8	1.82e-01	4.41E+01

=> Limit violated
=> Selected Limit

INTERIM

BY-108 Analytical Summary Cores 98 and 104
BY-108 (R)

Table 3

CORE NUMBER: 98
SEGMENT #: 4(B)TOC & CN

SEGMENT PORTION: B Second Quarter of Segment

Sample#	R	A#	Analyte	Unit	Action Limits Lower	Action Limits Upper	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T001420			TOC by Persulfate/Coulometry	ug/g	-1.0e+03	3.0e+04	99.67	21.50	2.09e+04	2.07e+04	2.08e+04	0.96	n/a	40.00	n/a
S95T001420			Cyanide by Microdist. & Spec.	ug/g	-1.0e+03	3.9e+04	109.5	1.35e-01	2.01e+03	1.72e+03	1.86e+03	16.5	108.8	182.0	n/a

=> Limit violated
=> Selected Limit

2-40

WHC-SD-WM-DP-145, REV. 1

WHC SD-WM-DP-145, REV. 0

BY-108 Analytical Summary Cores 98 and 104
BY-108 (R)

Table 3

CORE NUMBER: 104
SEGMENT #: 5(B)TOC & CN

SEGMENT PORTION: B Second Quarter of Segment

Sample#	R	A#	Analyte	Unit	Action Limits Lower	Action Limits Upper	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T001976			TOC by Persulfate/Coulometry	ug/g	-1.0e+03	3.0e+04	90.67	25.80	1.72e+04	1.34e+04	1.53e+04	24.8	86.80	40.00	n/a
S95T001976			Cyanide by Microdist. & Spec.	ug/g	-1.0e+03	3.9e+04	107.3	1.29e-01	99.90	94.70	97.30	5.34	116.9	5.420	n/a

=> Limit violated
=> Selected Limit

BY-108 Analytical Summary Cores 98 and 104
BY-108 (R)

Table 3

CORE NUMBER: 104
SEGMENT #: 5(C)TOC & CN

SEGMENT PORTION: C Third Quarter of Segment

Sample#	R	A#	Analyte	Unit	Action Limits Lower	Action Limits Upper	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T001977			TOC by Persulfate/Coulometry	ug/g	-1.0e+03	3.0e+04	90.67	25.80	1.36e+04	1.32e+04	1.34e+04	2.99	n/a	40.00	n/a
S95T001977			Cyanide by Microdist. & Spec.	ug/g	-1.0e+03	3.9e+04	109.2	1.08e-01	125.0	117.0	121.0	6.61	81.50	3.010	n/a

=> Limit violated
=> Selected Limit

2-42

WHC-SD-WM-DP-145, REV. 1

WHC SD WM-DP-145, REV. 0

INORGANIC ANALYSES

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LABCORE Data Entry Template for Worklist# 2702

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

Method: LA-514-113 Rev/Mod —

Worklist Comment: Dry DSC for BY-108. bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R	A	-------TEST------	MATRIX	ACTUAL	FOUND	DL	UNIT
95000118	BY-108 (R)	1 SAMPLE	S95T001976	0		DSC-02	SOLID	N/A	593.5		Joules/g Dry
95000118	BY-108 (R)	2 DUP	S95T001976	0		DSC-02	SOLID	593.5	552.6	N/A	Joules/g Dry
95000118	BY-108 (R)	3 SAMPLE	S95T001977	0		DSC-02	SOLID	N/A	548.7		Joules/g Dry
95000118	BY-108 (R)	4 DUP	S95T001977	0		DSC-02	SOLID	548.7	507.9	N/A	Joules/g Dry

Data entered + verified by

Final page for worklist # 2702

Blandina Valenzuela

Analyst Signature **Date** 10-2-95

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# 2867

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

Method: LA-514-113 Rev/Mod —

Worklist Comment: Calculated dry DSC for BY-108. bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R	A	-------TEST------	MATRIX	ACTUAL	FOUND	DL	UNIT
95000118	BY-108 (R)	1 SAMPLE	S95T001925	0		DSC-02	SOLID	N/A	Ø		Joules/g Dry
95000118	BY-108 (R)	2 DUP	S95T001925	0		DSC-02	SOLID	Ø	Ø	N/A	Joules/g Dry
95000104	BY-108 (R)	3 SAMPLE	S95T001431	0		DSC-02	SOLID	N/A	323.2		Joules/g Dry
95000104	BY-108 (R)	4 DUP	S95T001431	0		DSC-02	SOLID	323.2	323.0	N/A	Joules/g Dry
95000104	BY-108 (R)	5 SAMPLE	S95T001432	0		DSC-02	SOLID	N/A	114.3		Joules/g Dry
95000104	BY-108 (R)	6 DUP	S95T001432	0		DSC-02	SOLID	114.3	116.8	N/A	Joules/g Dry
95000104	BY-108 (R)	7 SAMPLE	S95T001433	0		DSC-02	SOLID	N/A	235.7		Joules/g Dry
95000104	BY-108 (R)	8 DUP	S95T001433	0		DSC-02	SOLID	235.7	226.1	N/A	Joules/g Dry
95000104	BY-108 (R)	9 SAMPLE	S95T001421	0		DSC-02	SOLID	N/A	221.9		Joules/g Dry
95000104	BY-108 (R)	10 DUP	S95T001421	0		DSC-02	SOLID	221.9	226.4	N/A	Joules/g Dry
95000104	BY-108 (R)	11 SAMPLE	S95T001422	0		DSC-02	SOLID	N/A	98.51		Joules/g Dry
95000104	BY-108 (R)	12 DUP	S95T001422	0		DSC-02	SOLID	98.51	107.6	N/A	Joules/g Dry
95000104	BY-108 (R)	13 SAMPLE	S95T001390	0		DSC-02	SOLID	N/A	Ø		Joules/g Dry
95000104	BY-108 (R)	14 DUP	S95T001390	0		DSC-02	SOLID	Ø	Ø	N/A	Joules/g Dry
95000104	BY-108 (R)	15 SAMPLE	S95T001396	0		DSC-02	SOLID	N/A	Ø		Joules/g Dry
95000104	BY-108 (R)	16 DUP	S95T001396	0		DSC-02	SOLID	Ø	Ø	N/A	Joules/g Dry
95000104	BY-108 (R)	17 SAMPLE	S95T001399	0		DSC-02	SOLID	N/A	91.10		Joules/g Dry
95000104	BY-108 (R)	18 DUP	S95T001399	0		DSC-02	SOLID	91.10	85.60	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# 2867

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

Final page for worklist # 2867

Blandina Valenzuela 10-12-95

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# 2868

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

Method: LA-514-113 Rev/Mod —

Worklist Comment: Calculated dry DSC for BY-108. bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R	A	-------TEST------	MATRIX	ACTUAL	FOUND	DL	UNIT
95000104	BY-108 (R)	1 SAMPLE	S95T001404	0		DSC-02	SOLID	N/A	Ø		Joules/g Dry
95000104	BY-108 (R)	2 DUP	S95T001404	0		DSC-02	SOLID	Ø	Ø	N/A	Joules/g Dry
95000118	BY-108 (R)	3 SAMPLE	S95T001966	0		DSC-02	SOLID	N/A	Ø		Joules/g Dry
95000118	BY-108 (R)	4 DUP	S95T001966	0		DSC-02	SOLID	Ø	Ø	N/A	Joules/g Dry
95000118	BY-108 (R)	5 SAMPLE	S95T001967	0		DSC-02	SOLID	N/A	Ø		Joules/g Dry
95000118	BY-108 (R)	6 DUP	S95T001967	0		DSC-02	SOLID	Ø	Ø	N/A	Joules/g Dry
95000118	BY-108 (R)	7 SAMPLE	S95T001968	0		DSC-02	SOLID	N/A	Ø		Joules/g Dry
95000118	BY-108 (R)	8 DUP	S95T001968	0		DSC-02	SOLID	Ø	Ø	N/A	Joules/g Dry
95000118	BY-108 (R)	9 SAMPLE	S95T001969	0		DSC-02	SOLID	N/A	Ø		Joules/g Dry
95000118	BY-108 (R)	10 DUP	S95T001969	0		DSC-02	SOLID	Ø	Ø	N/A	Joules/g Dry
95000118	BY-108 (R)	11 SAMPLE	S95T001970	0		DSC-02	SOLID	N/A	Ø		Joules/g Dry
95000118	BY-108 (R)	12 DUP	S95T001970	0		DSC-02	SOLID	Ø	Ø	N/A	Joules/g Dry
95000118	BY-108 (R)	13 SAMPLE	S95T001971	0		DSC-02	SOLID	N/A	Ø		Joules/g Dry
95000118	BY-108 (R)	14 DUP	S95T001971	0		DSC-02	SOLID	Ø	Ø	N/A	Joules/g Dry
95000118	BY-108 (R)	15 SAMPLE	S95T001972	0		DSC-02	SOLID	N/A	60.93		Joules/g Dry
95000118	BY-108 (R)	16 DUP	S95T001972	0		DSC-02	SOLID	60.93	Ø	N/A	Joules/g Dry
95000118	BY-108 (R)	17 TRIPL	S95T001972	0		DSC-02	SOLID	60.93	59.60	N/A	Joules/g Dry
95000118	BY-108 (R)	18 SAMPLE	S95T001973	0		DSC-02	SOLID	N/A	180.2		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# 2868

GROUP	PROJECT	S TYPE	SAMPLE#	R	A	-------TEST------	MATRIX	ACTUAL	FOUND	DL	UNIT
95000118	BY-108 (R)	19 DUP	S95T001973	0		DSC-02	SOLID	180.2	194.5	N/A	Joules/g Dry

Final page for worklist # 2868

Blandina Valenzuela 10-12-95
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# 2869

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

Method: LA-514-113 Rev/Mod —

Worklist Comment: Calculated dry DSC for BY-108. bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R	A	-------TEST------	MATRIX	ACTUAL	FOUND	DL	UNIT
95000118	BY-108 (R)	1 SAMPLE	S95T001974	0		DSC-02	SOLID	N/A	Ø		Joules/g Dry
95000118	BY-108 (R)	2 DUP	S95T001974	0		DSC-02	SOLID	Ø	Ø	N/A	Joules/g Dry
95000118	BY-108 (R)	3 SAMPLE	S95T001975	0		DSC-02	SOLID	N/A	Ø		Joules/g Dry
95000118	BY-108 (R)	4 DUP	S95T001975	0		DSC-02	SOLID	Ø	Ø	N/A	Joules/g Dry
95000118	BY-108 (R)	5 SAMPLE	S95T001978	0		DSC-02	SOLID	N/A	Ø		Joules/g Dry
95000118	BY-108 (R)	6 DUP	S95T001978	0		DSC-02	SOLID	Ø	Ø	N/A	Joules/g Dry

Final page for worklist # 2869

Blandina Valenzuela 10-12-95
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# 2870

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

Method: LA-514-113 Rev/Mod —

Worklist Comment: Calculated dry DSC for BY-108. bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R	A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
95000101	BY-108 (R)	1 SAMPLE	S95T001365	0		DSC-02	LIQUID	N/A	Ø		Joules/g Dry
95000101	BY-108 (R)	2 DUP	S95T001365	0		DSC-02	LIQUID	Ø	Ø	N/A	Joules/g Dry
95000104	BY-108 (R)	3 SAMPLE	S95T001427	0		DSC-02	LIQUID	N/A	Ø		Joules/g Dry
95000104	BY-108 (R)	4 DUP	S95T001427	0		DSC-02	LIQUID	Ø	Ø	N/A	Joules/g Dry
95000104	BY-108 (R)	5 SAMPLE	S95T001430	0		DSC-02	LIQUID	N/A	121.7		Joules/g Dry
95000104	BY-108 (R)	6 DUP	S95T001430	0		DSC-02	LIQUID	121.7	114.2	N/A	Joules/g Dry
95000104	BY-108 (R)	7 SAMPLE	S95T001373	0		DSC-02	LIQUID	N/A	Ø		Joules/g Dry
95000104	BY-108 (R)	8 DUP	S95T001373	0		DSC-02	LIQUID	Ø	Ø	N/A	Joules/g Dry

Final page for worklist # 2870

Blandina Valenzuela 10-12-95
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# 2001

Analyst: JdS **Instrument:** DSC0 1 **Book #** 12N14A

Method: LA-514-113 Rev/Mod ~~B-0~~ B-1 10-16-95 BDV

Worklist Comment: Please run BY-108 DSCs under N2. bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R	A	-------TEST------	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD				DSC-01	SOLID	28.45	27.6	N/A	Joules/g
95000104	BY-108 (R)	2 SAMPLE	S95T001419	0		DSC-01	SOLID	N/A	292.9		Joules/g
95000104	BY-108 (R)	3 DUP	S95T001419	0		DSC-01	SOLID	292.9	162.2	N/A	Joules/g
95000104	BY-108 (R)	4 SAMPLE	S95T001420	0		DSC-01	SOLID	N/A	327.8		Joules/g
95000104	BY-108 (R)	5 DUP	S95T001420	0		DSC-01	SOLID	327.8	282.1	N/A	Joules/g

Final page for worklist # 2001

[signature] 8-16-95
Analyst Signature **Date**

[signature] 8-22-95
Analyst Signature **Date**

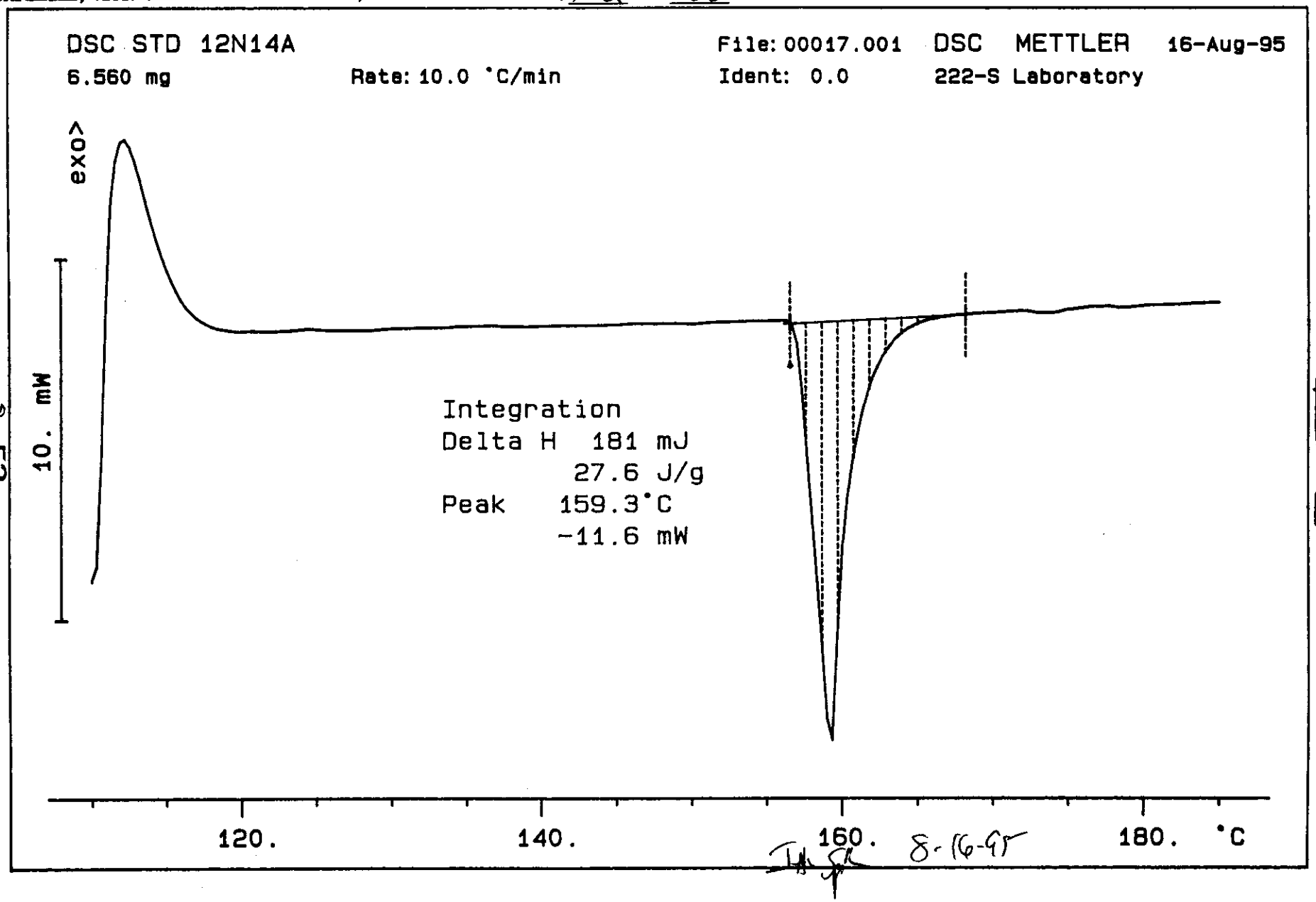
S95T001419 produced an endothermic region at 125.3°C with a delta H of 801.7 J/g. Because of high RPDs the samples will be rerun.

Data Entry Comments: S95T001420 produced an endothermic region at 130.4°C with a delta H of 822.1 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.

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 252 TO 256.

BEST AVAILABLE COPY



8-16-95

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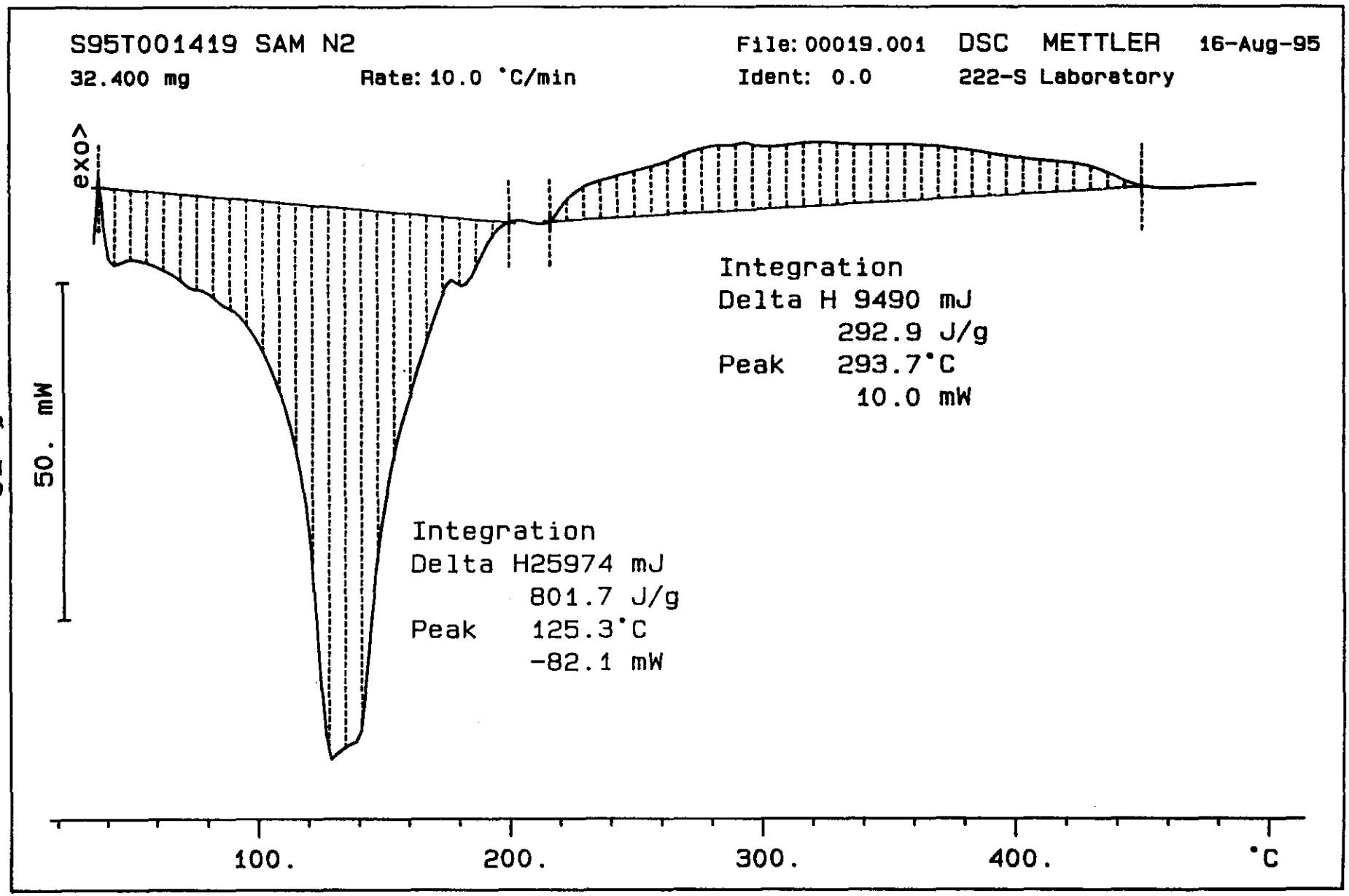

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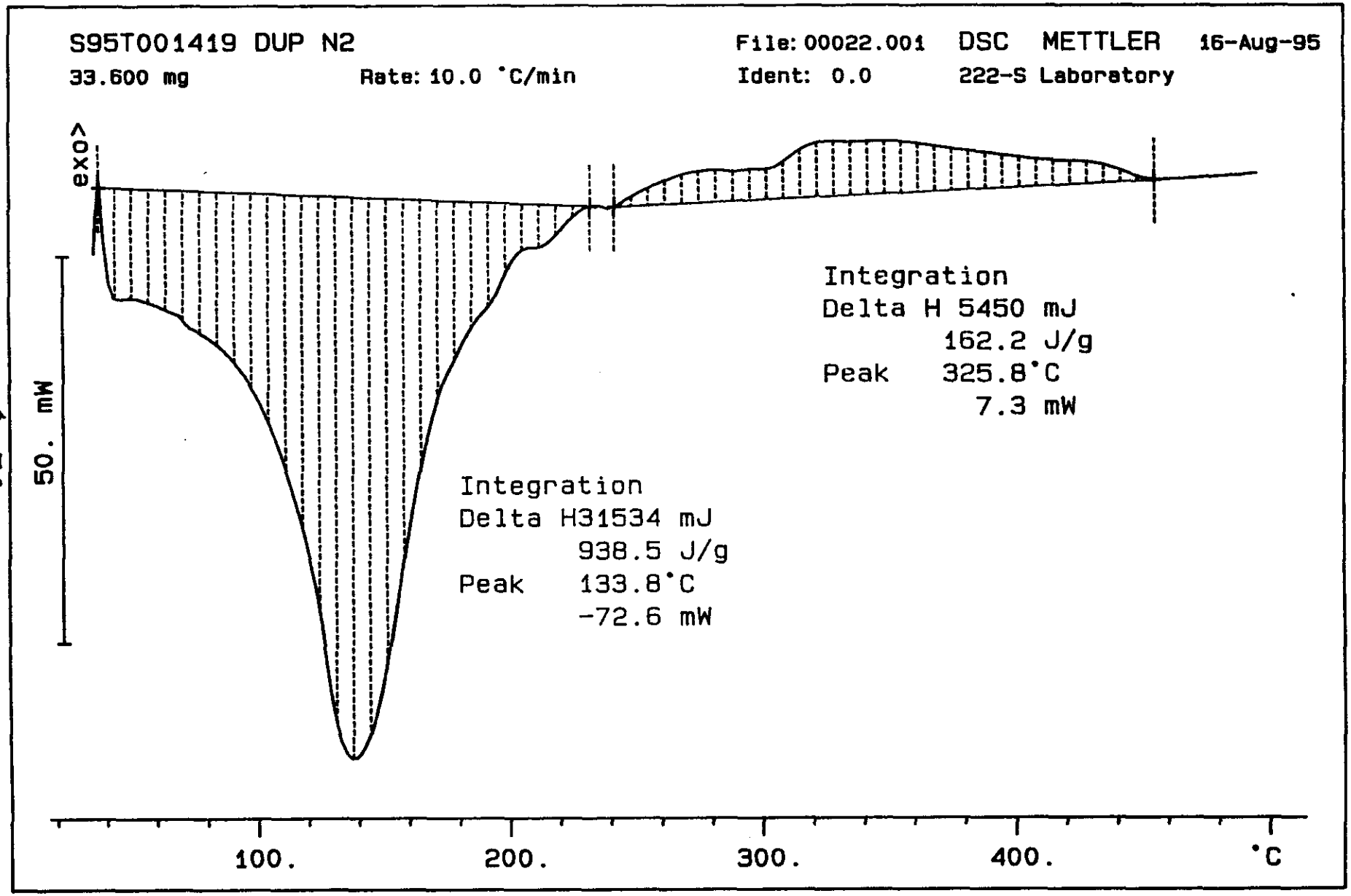

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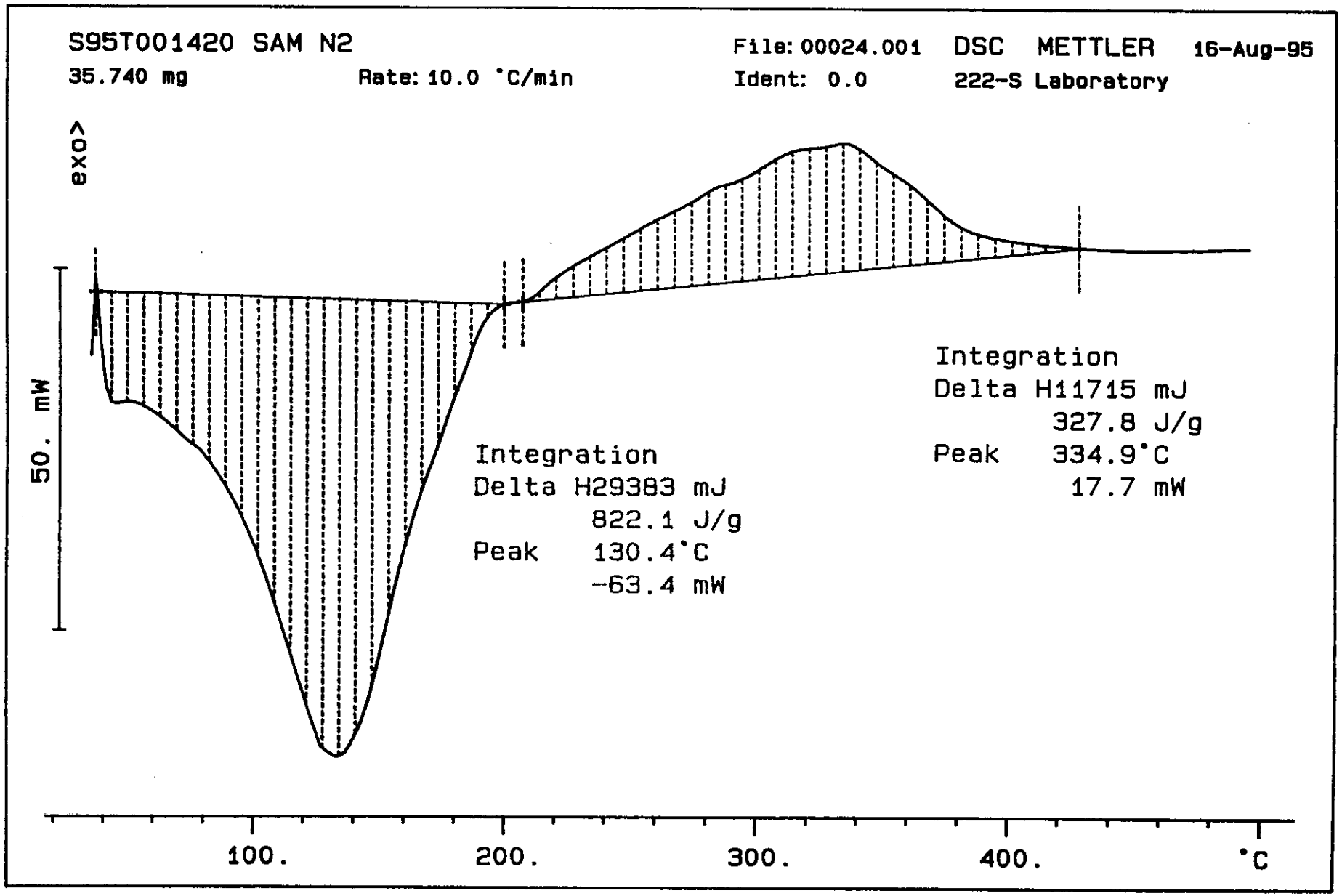

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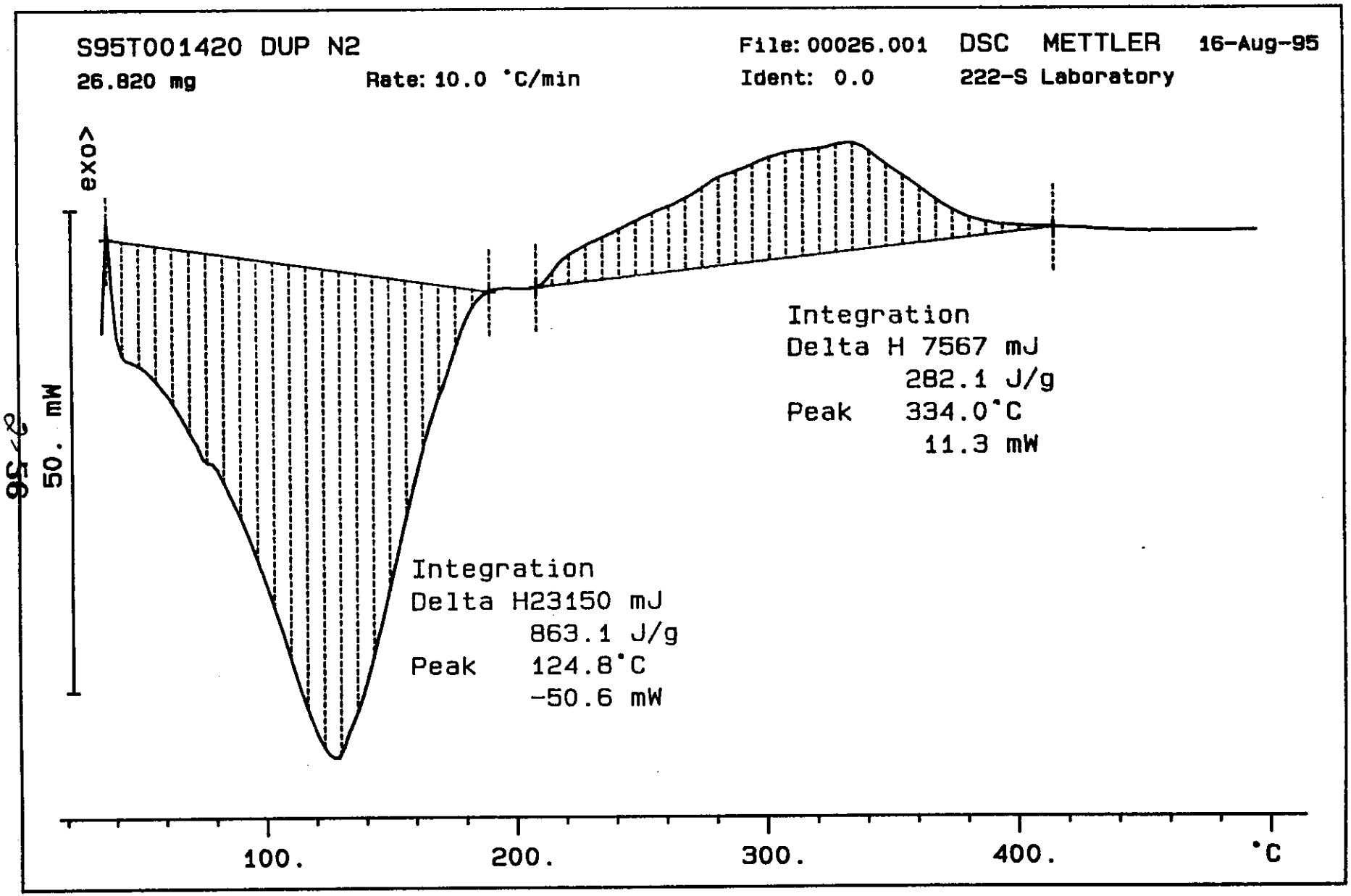


LABCORE Data Entry Template for Worklist# 2025

Analyst: RJ McCown **Instrument:** DSC0 1 **Book #** 12N14A

Method: LA-514-113 Rev/Mod C-0

Worklist Comment: Please run BY-108 DSCs under N2. bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R	A	-------TEST------	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD				DSC-01	SOLID	28.45	28.9	N/A	Joules/g
95000104	BY-108 (R)	2 SAMPLE	S95T001419	1		DSC-01	SOLID	N/A	199.0		Joules/g
95000104	BY-108 (R)	3 DUP	S95T001419	1		DSC-01	SOLID	199.0	263.6	N/A	Joules/g
95000104	BY-108 (R)	4 SAMPLE	S95T001420	1		DSC-01	SOLID	N/A	309.9		Joules/g
95000104	BY-108 (R)	5 DUP	S95T001420	1		DSC-01	SOLID	309.9	263.7	N/A	Joules/g

Final page for worklist # 2025

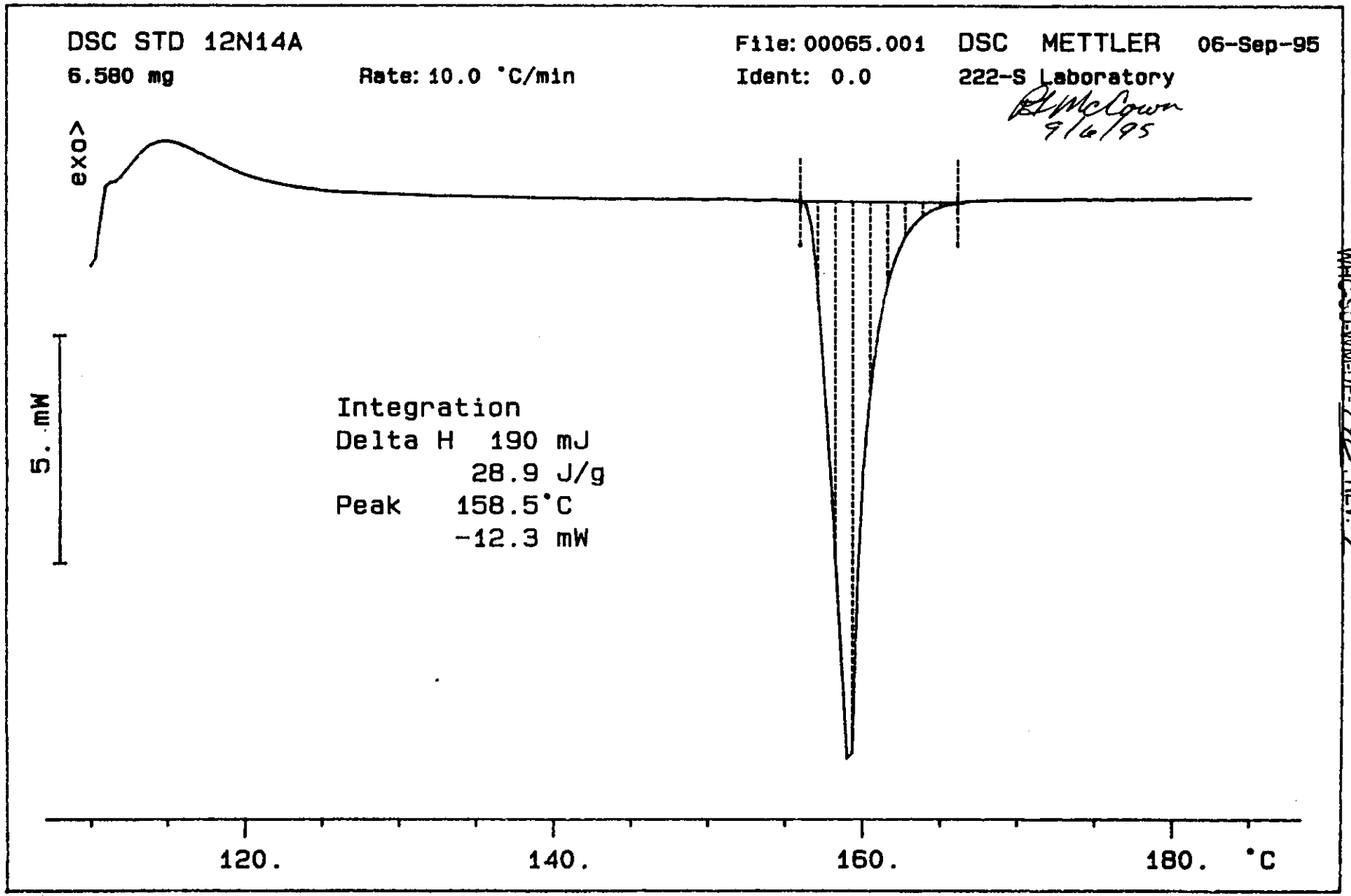
RJ McCown 9/6/95
Analyst Signature Date

[illegible] 9/7/95
Analyst Signature Date

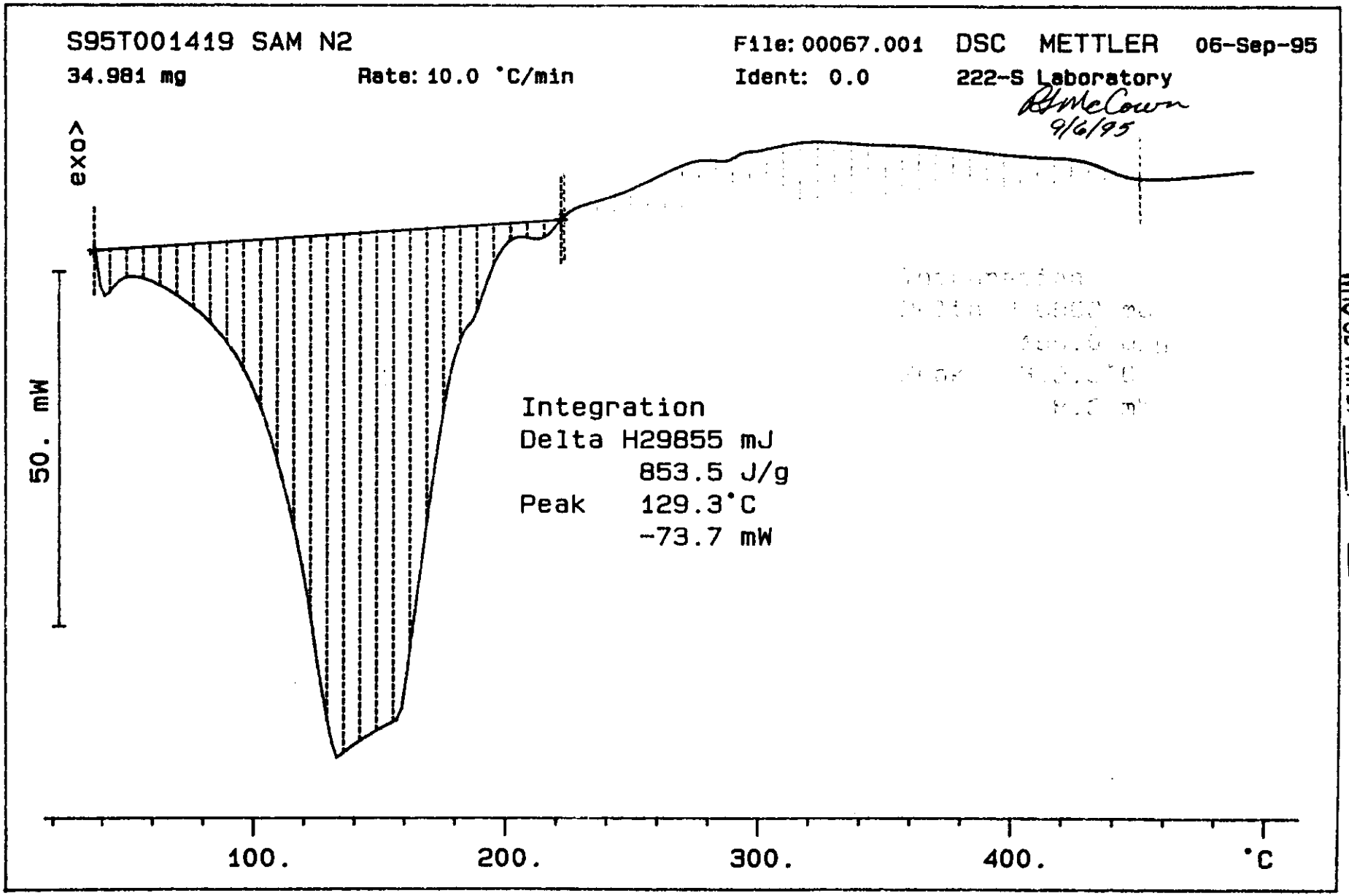
Verified 9/7/95 J. M. Fry

Data Entry Comments:
S95T001419 sample has an endotherm of 853.5 J/g at 129°C; duplicate has 770.5 J/g at 126°C. JMF
S95T001420 sample has an endotherm of 712.2 J/g at 127°C; duplicate has 823.9 J/g at 119°C. JMF

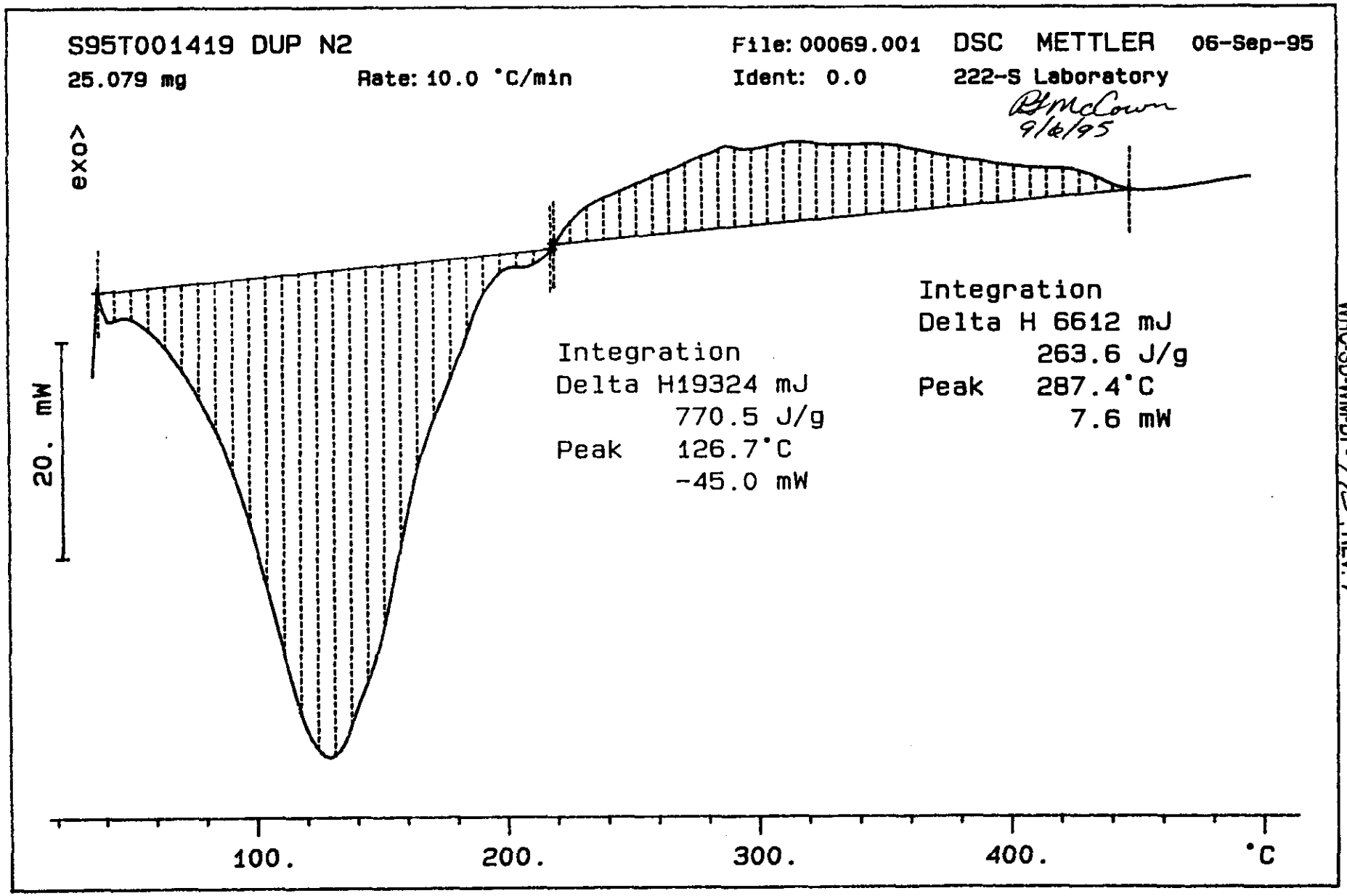
Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.


DSC STD 12N14A
6.580 mg
Rate: 10.0 °C/min
File: 00065.001
Ident: 0.0
DSC METTLER
06-Sep-95
222-S Laboratory
9/6/95
exo>
5. mW
Integration
Delta H 190 mJ
28.9 J/g
Peak 158.5°C
-12.3 mW
120.
140.
160.
180.
°C

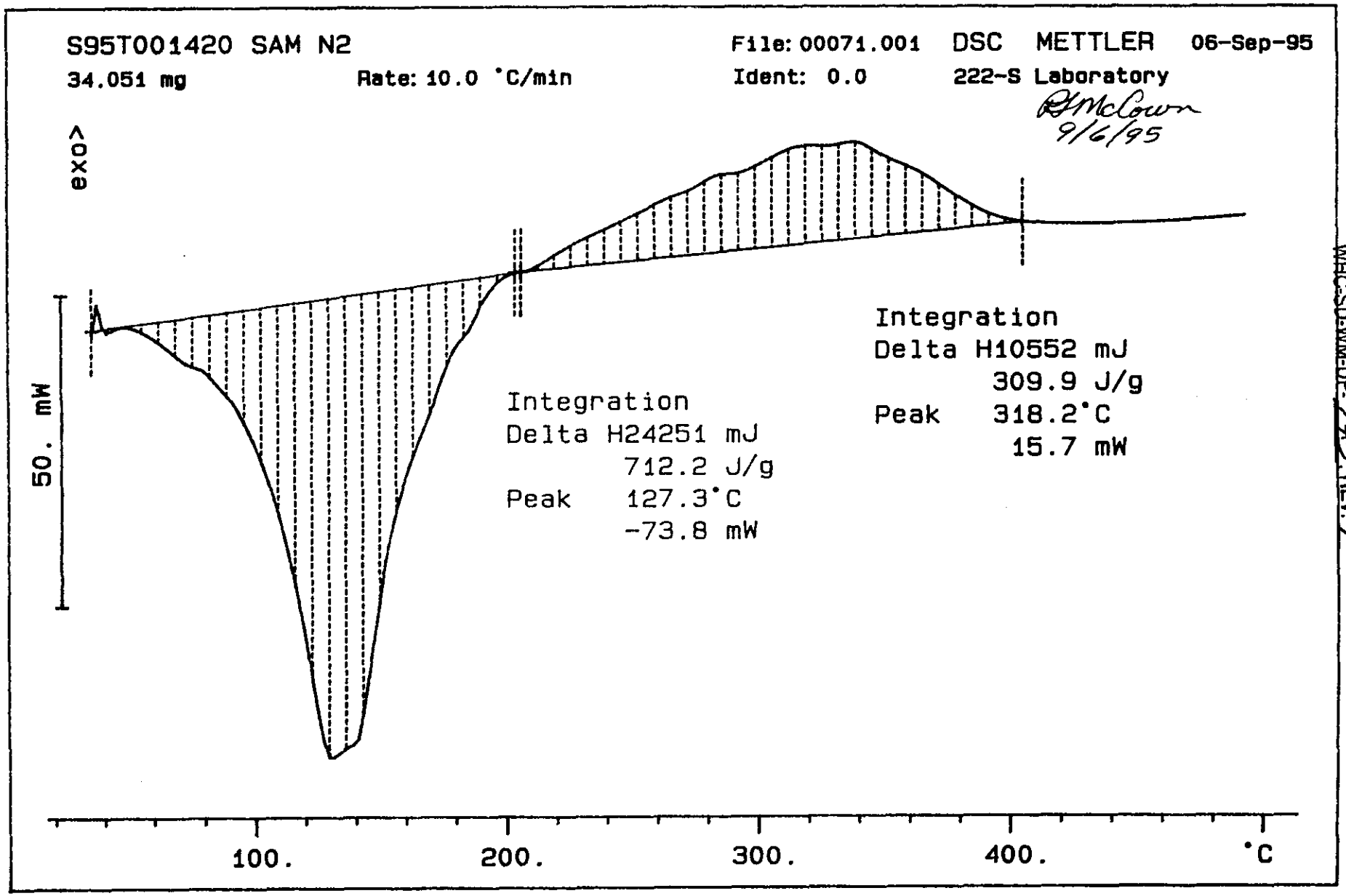
BEST AVAILABLE COPY



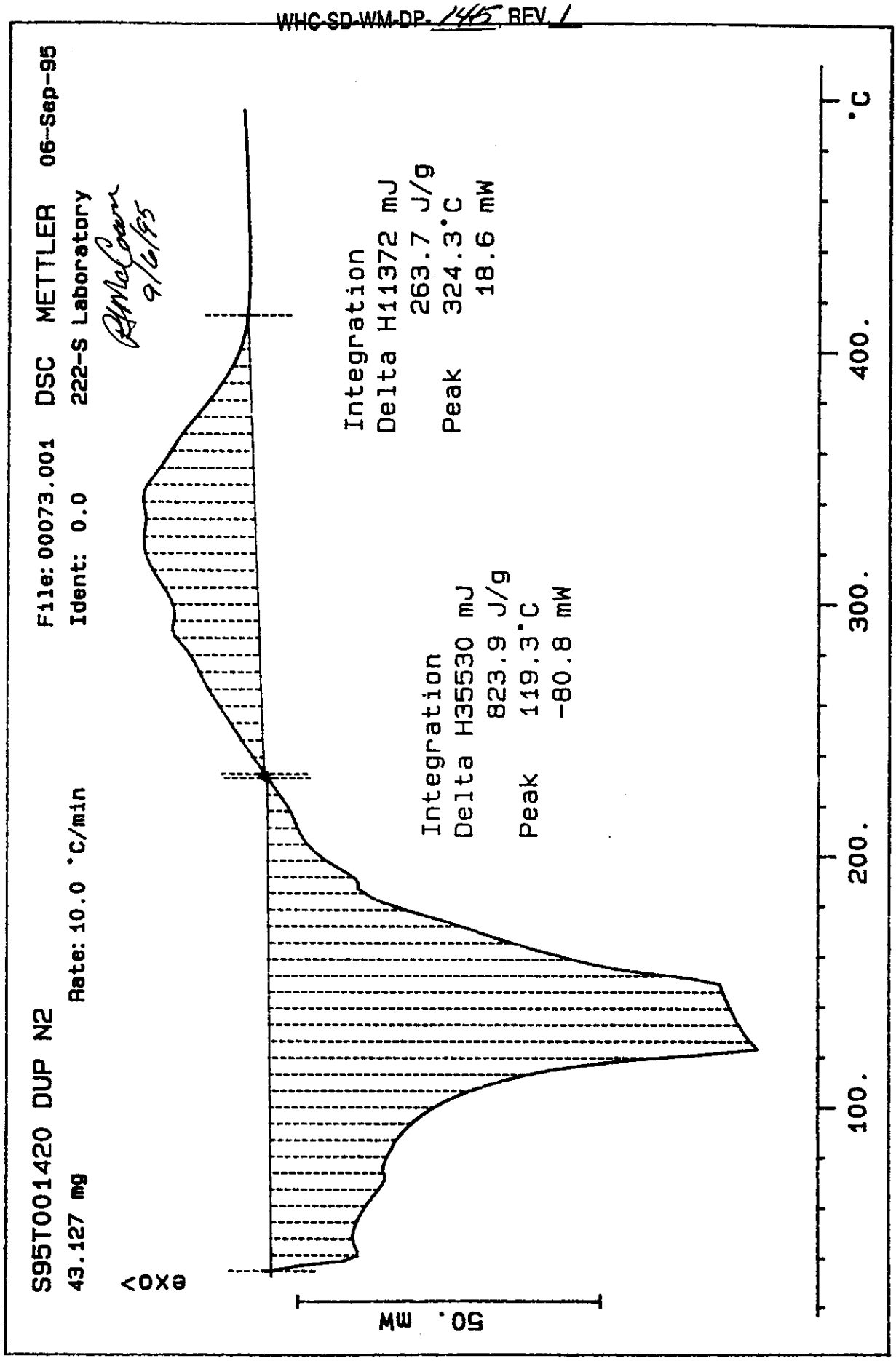
WHC-SD-WM-DP-145, REV. 1



WHC-SD-WM-DP-145, REV. 1



WHC-SD-WM-DP-145, REV. 1


S95T001420 DUP N2
43.127 mg
Rate: 10.0 °C/min
File: 00073.001 DSC METTLER 06-Sep-95
Ident: 0.0 222-S Laboratory
Integration
Delta H11372 mJ
263.7 J/g
Peak 324.3°C
18.6 mW
Integration
Delta H35530 mJ
823.9 J/g
Peak 119.3°C
-80.8 mW
exo>
50. mW
100.
200.
300.
400.
°C

LABCORE Data Entry Template for Worklist# 2026

Analyst: JDS **Instrument:** DSC0 3 **Book #** 12N14-A

Method: LA-514-114 Rev/Mod B-0

Worklist Comment: Please run BY-108 DSCs under N2. bdv

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	STD				DSC-03	SOLID	~~28.49~~ 5 BDV 8-24-95	28.49	N/A	Joules/g
95000104	BY-108 (R)	2	SAMPLE	S95T001390	0		DSC-03	SOLID	N/A	Ø		Joules/g
95000104	BY-108 (R)	3	DUP	S95T001390	0		DSC-03	SOLID	Ø	Ø	N/A	Joules/g
		4	STD				DSC-03	SOLID	~~28.46~~ 28.45 8-24-95 BDV	28.11	N/A	Joules/g
95000104	BY-108 (R)	5	SAMPLE	S95T001396	0		DSC-03	SOLID	N/A	Ø		Joules/g
95000104	BY-108 (R)	6	DUP	S95T001396	0		DSC-03	SOLID	Ø	Ø	N/A	Joules/g

Final page for worklist # 2026

See attached for signatures
Analyst Signature Date 8-24-95

Analyst Signature Date

Verified by Blandina Valenzuela 8-28-95

S95T001390 produced three endothermic regions at 119.6°C with a delta H of 610.5 J/g; second at 187.4°C with a delta H of 89.2 J/g and third at 276.1°C with a delta H of 134.6 J/g.

Data Entry Comments: S95T001396 produced one large ~~exotherms~~ endotherm at 146.66°C with a delta H of 1049.0 J/g

DH 8-24-95 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# 2026

Analyst: Jds **Instrument:** DSC0 _____ **Book #** 12NNA

Method: LA-514-113 Rev/Mod B-0

Worklist Comment: Please run BY-108 DSCs under N2. bdv

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	-------TEST------	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	STD				DSC-01	SOLID			N/A	Joules/g
95000104	BY-108 (R)	2	SAMPLE	S95T001390	0		DSC-01	SOLID	N/A			Joules/g
95000104	BY-108 (R)	3	DUP	S95T001390	0		DSC-01	SOLID			N/A	Joules/g
95000104	BY-108 (R)	4	SAMPLE	S95T001396	0		DSC-01	SOLID	N/A			Joules/g
95000104	BY-108 (R)	5	DUP	S95T001396	0		DSC-01	SOLID			N/A	Joules/g

Final page for worklist # 2026

Jds 8-23-95
Analyst Signature Date

Analyst Signature Date

Other instrument was used
8-24-95
BDV

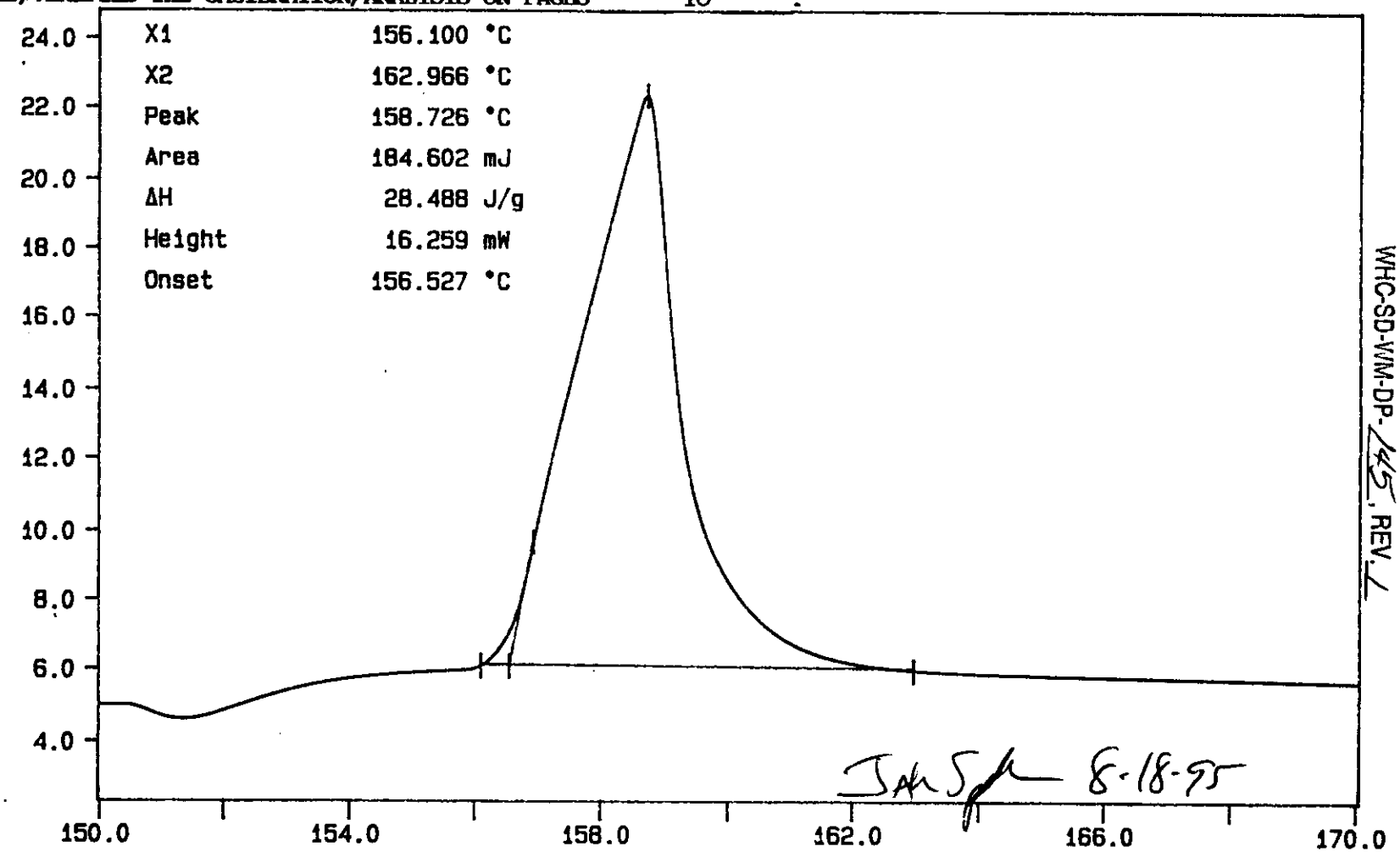
Data Entry Comments:

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: IND081801 Fri Aug 18 09:28:07 1995
Sample Weight: 6.480 mg
12N14A Indium at 10C/min

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

BEST AVAILABLE COPY



JAN 8-18-95

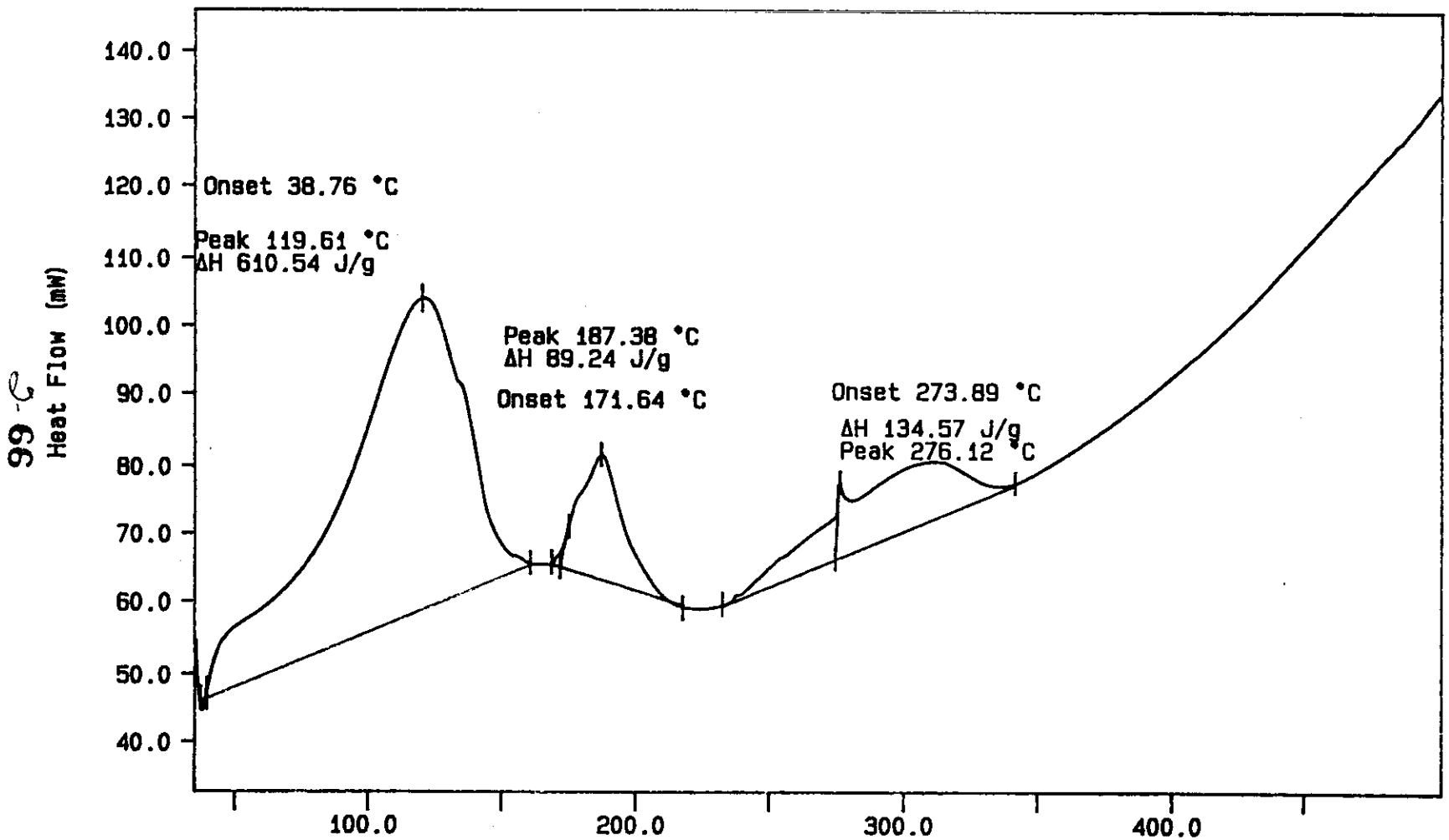
N2, EXOTHERM DOWN
TEMP1: 150.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 170.0 C

JD SPELLMAN
PERKIN ELMER
222-S Lab
Fri Aug 18 09:29:31 1995

WHC-SD-WM-DP-145, REV. 1

Curve 1: DSC
File info: SAM081802 Fri Aug 18 12:08:21 1995
Sample Weight: 23.670 mg
S95T001390 SAM N2

BEST AVAILABLE COPY



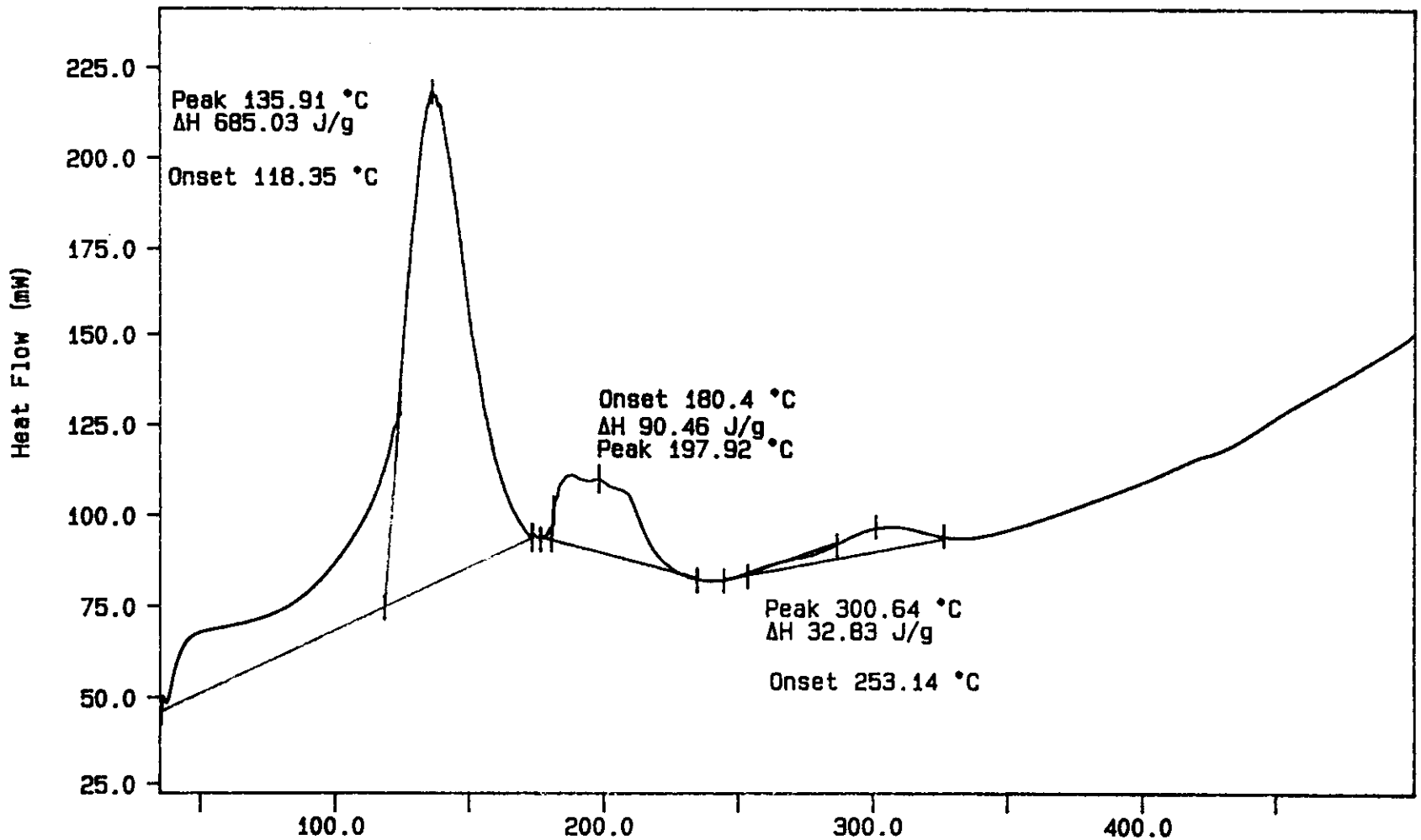
exotherm down, N2 purge gas
TEMP1: 35.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 500.0 C

JD SPELLMAN
PERKIN ELMER
222-S Lab
Fri Aug 18 12:52:03 1995

WHC-SD-WM-DP-145, REV. 1

Curve 1: DSC
File info: SAM081803 Fri Aug 18 13:58:49 1995
Sample Weight: 44.260 mg
S95T001390 DUP

BEST AVAILABLE COPY



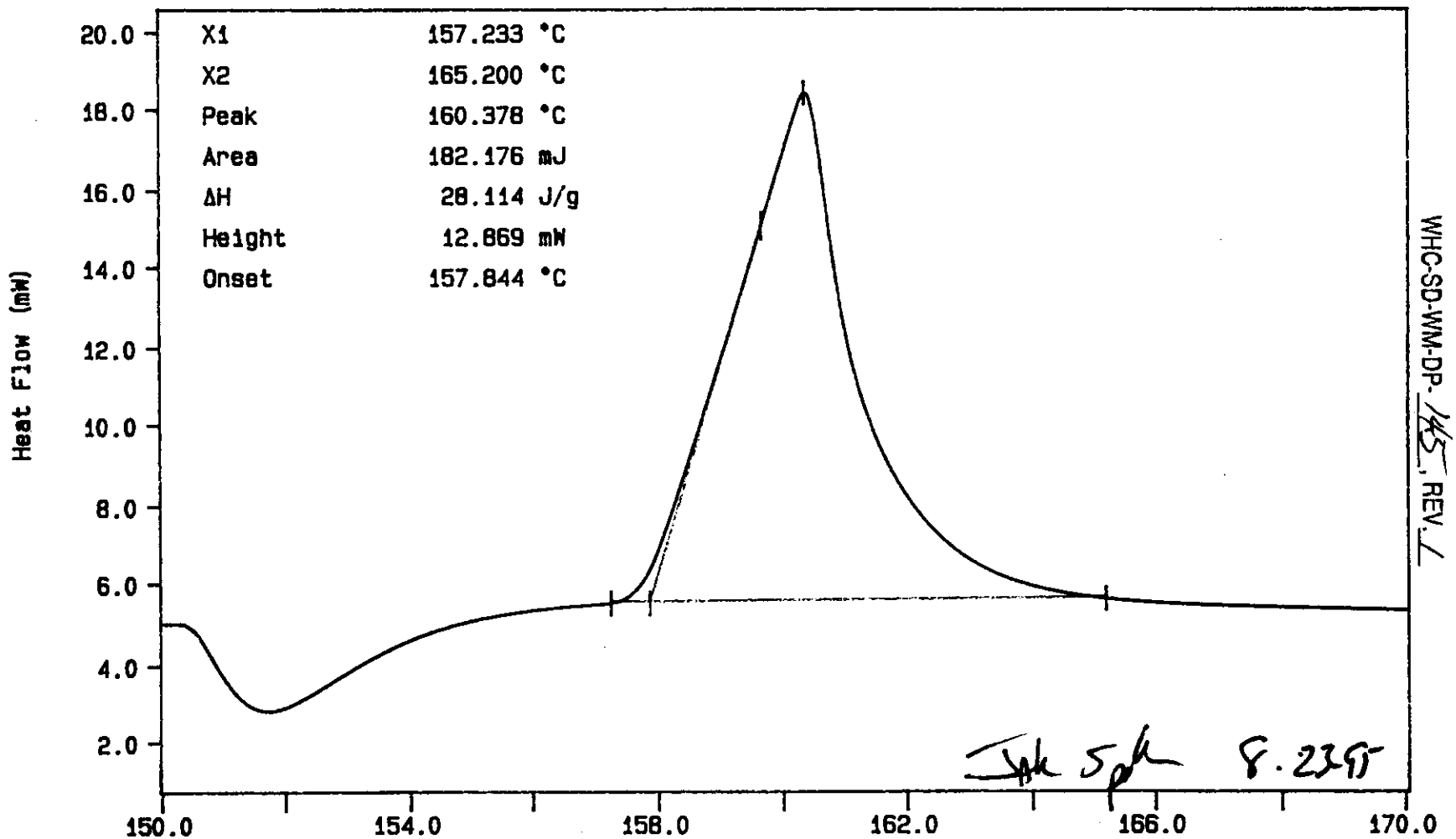
exotherm down, N2 purge gas
TEMP1: 35.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 500.0 C

JD SPELLMAN
PERKIN ELMER
222-S Lab
Fri Aug 18 14:02:07 1995

WHC-SD-WM-DP-145, REV. 1

Curve 1: DSC
File info: IND082301 Wed Aug 23 09:07:10 1995
Sample Weight: 6.480 mg
12N14A Indium at 10C/min

BEST AVAILABLE COPY



N2, EXOTHERM DOWN
TEMP1: 150.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 170.0 C

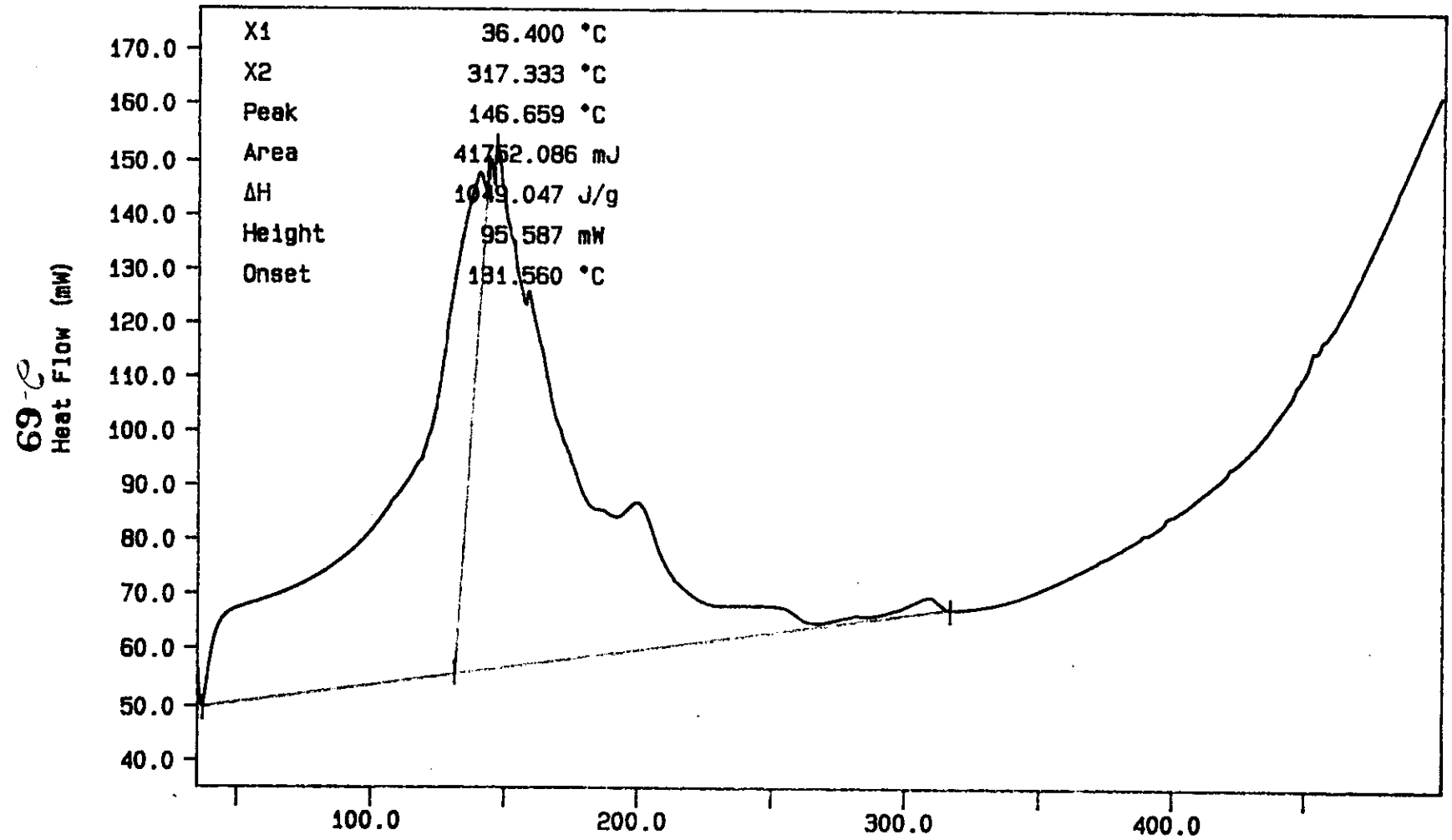
JD SPELLMAN
PERKIN ELMER
222-S Lab
Wed Aug 23 10:56:59 1995

WHC-SD-WM-DP-145, REV. 1

3-68

Curve 1: DSC
File info: SAM082301 Wed Aug 23 12:41:39 1995
Sample Weight: 39.800 mg
S95T001396 SAM

BEST AVAILABLE COPY



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

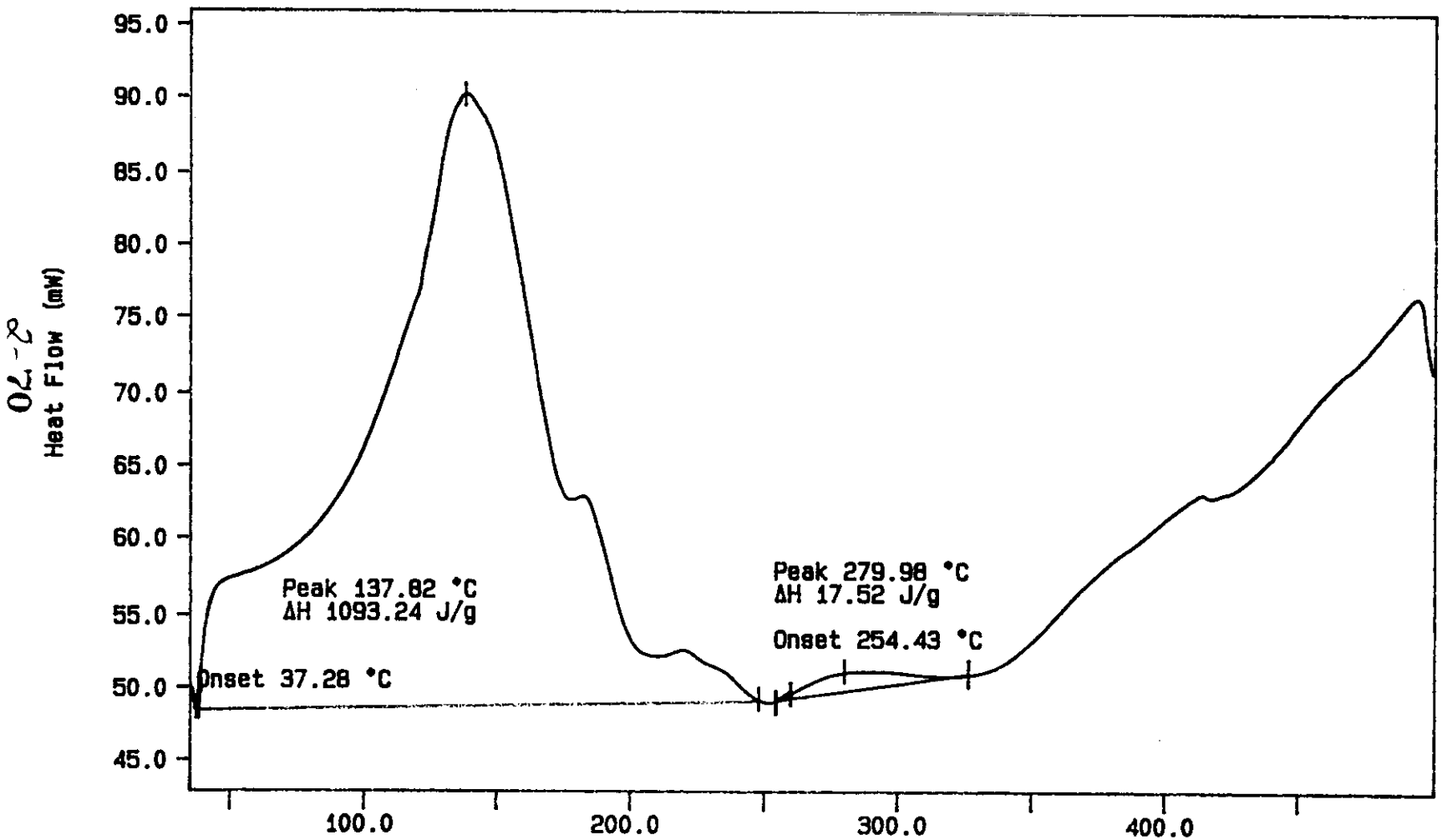
JD SPELLMAN
PERKIN ELMER
222-S Lab
Wed Aug 23 13:43:14 1995

WHC-SD-WM-DP-145, REV. 1

69-2

Curve 1: DSC
File info: SAM082302 Wed Aug 23 14:35:05 1995
Sample Weight: 17.900 mg
S95T001396 SAM

BEST AVAILABLE COPY



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

JD SPELLMAN
PERKIN ELMER
222-S Lab
Wed Aug 23 14:48:15 1995

LABCORE Data Entry Template for Worklist# 2027

Analyst: JDS **Instrument:** DSC0 1 **Book #** 12N14A

Method: LA-514-113 Rev/Mod B-1
LA-514-114 Rev/Mod B-0 BDV
Worklist Comment: Please run BY-108 DSCs under N2. bdv

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	STD				DSC-01	SOLID	28.45	26.5	N/A	Joules/g
95000104	BY-108 (R)	2	SAMPLE	S95T001399	0		DSC-01	SOLID	N/A	53.0		Joules/g
95000104	BY-108 (R)	3	DUP	S95T001399	0		DSC-01	SOLID	53.0	49.8	N/A	Joules/g
		4	STD				DSC-03	SOLID	28.45	27.22	N/A	Joules/g
95000104	BY-108 (R)	5	SAMPLE	S95T001404	0		DSC-03	SOLID	N/A	Ø		Joules/g
95000104	BY-108 (R)	6	DUP	S95T001404	0		DSC-03	SOLID	Ø	Ø	N/A	Joules/g

Final page for worklist # 2027

See attached for signatures
Analyst Signature Date 8-31-95

Verified by Blandina Valenzuela BDV 8-31-95

Analyst Signature Date 8-31-95

S95T001399 produced one endothermic region at 133.5°C with a delta H of 1265.7 J/g.

Data Entry Comments: S95T001404 produced ~~the~~ two endothermic region one at 134.36°C with a delta H of 823.3 J/g and second at 279.9°C with a delta H of 14.5 J/g. 8-31-95 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# 2027

Analyst: JDS **Instrument:** DSC0 _____ **Book #** 12N/4A

Method: LA-514-113 Rev/Mod _____

Worklist Comment: Please run BY-108 DSCs under N2. bdv

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	-------TEST------	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	STD				DSC-01	SOLID			N/A	Joules/g
95000104	BY-108 (R)	2	SAMPLE	S95T001399	0		DSC-01	SOLID	N/A			Joules/g
95000104	BY-108 (R)	3	DUP	S95T001399	0		DSC-01	SOLID			N/A	Joules/g
95000104	BY-108 (R)	4	SAMPLE	S95T001404	0		DSC-01	SOLID	N/A			Joules/g
95000104	BY-108 (R)	5	DUP	S95T001404	0		DSC-01	SOLID			N/A	Joules/g

Final page for worklist # 2027

JDS 8.29.95

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

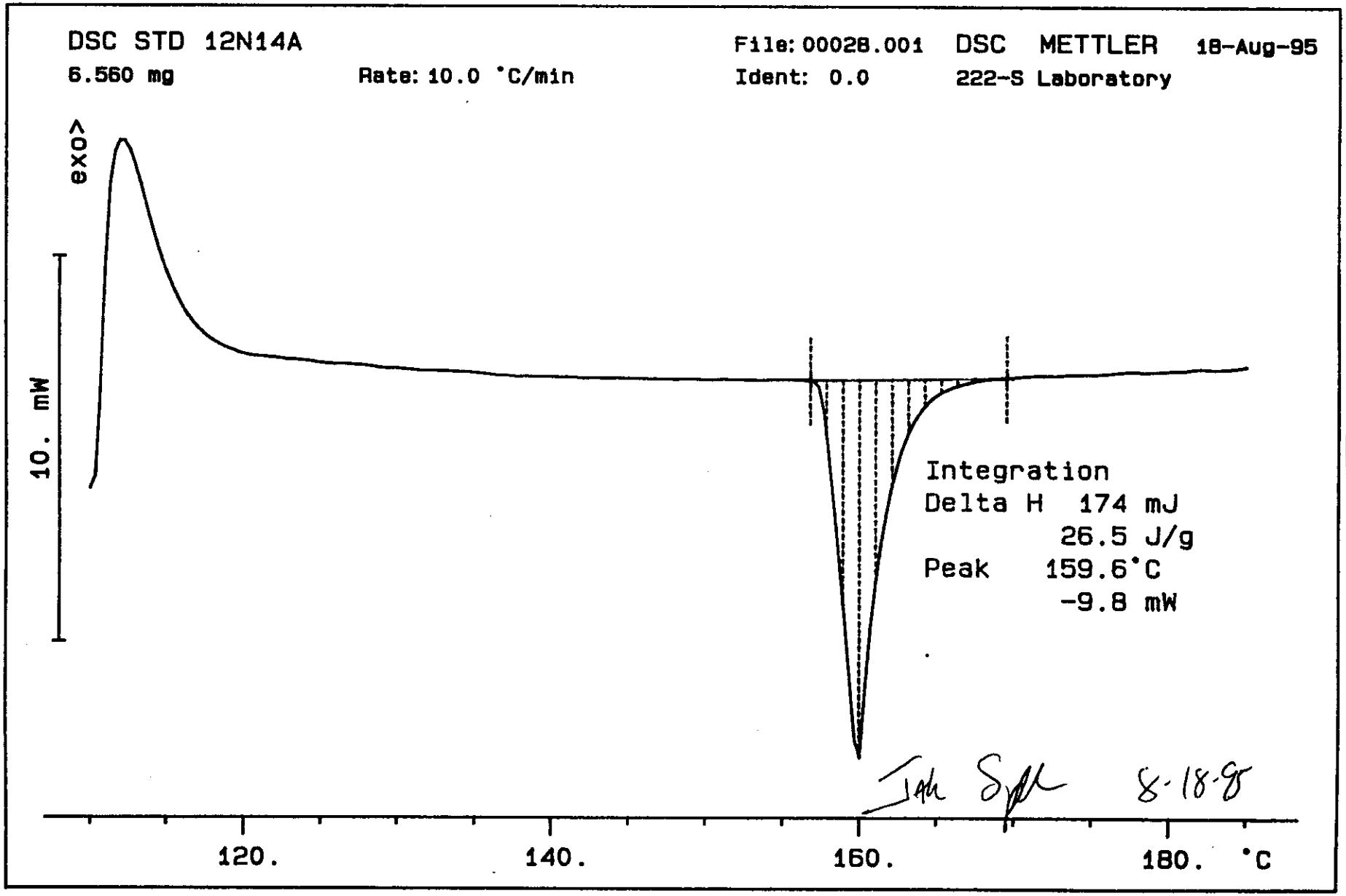
Other instrument was used.
8-31-95
BDV

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.

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 273 TO 278.

BEST AVAILABLE COPY



Jah Sph 8-18-95

WHC-SD-WM-DP-145, REV. 1

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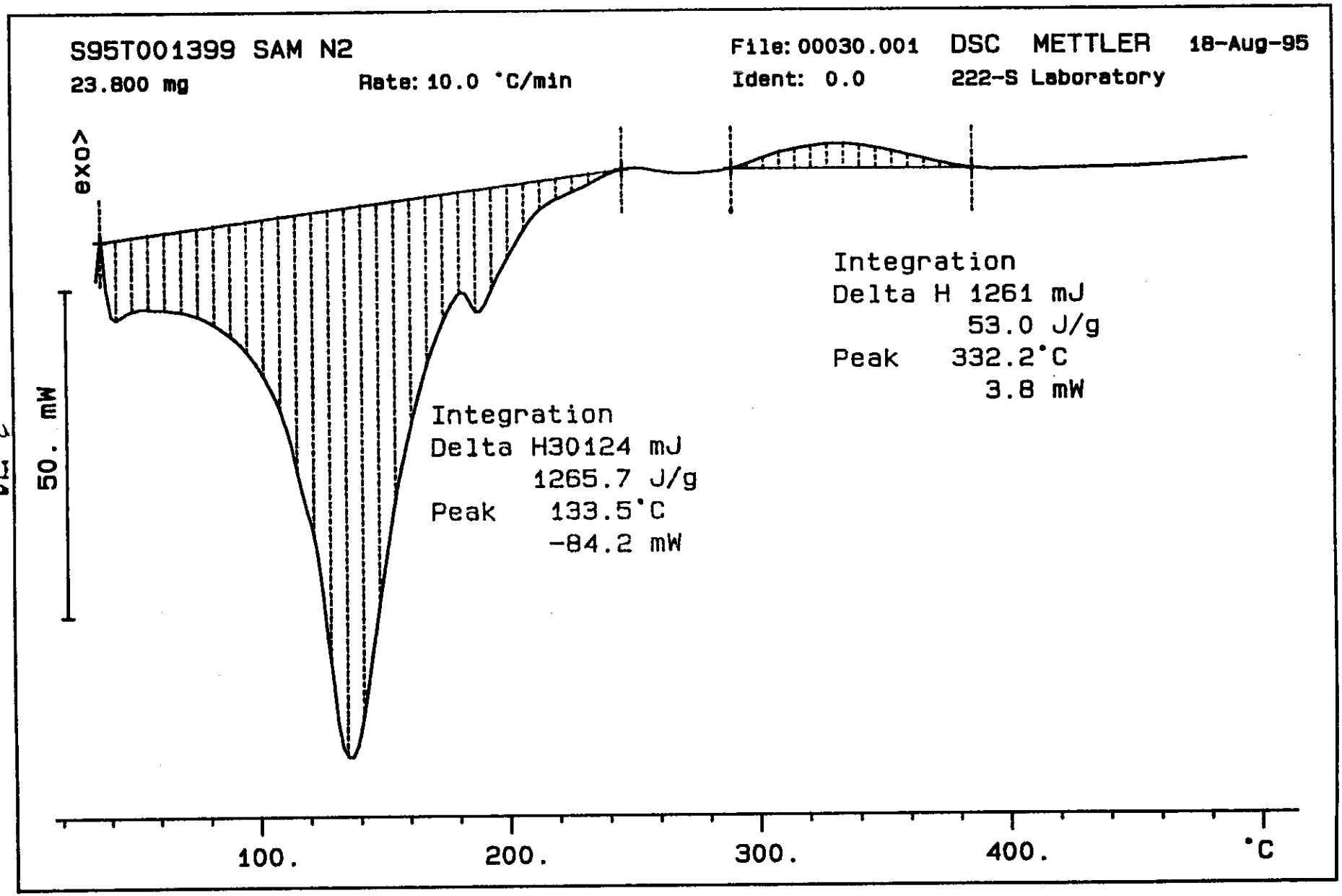

2-74

WHC-SD-WM-DP-145, REV. 1

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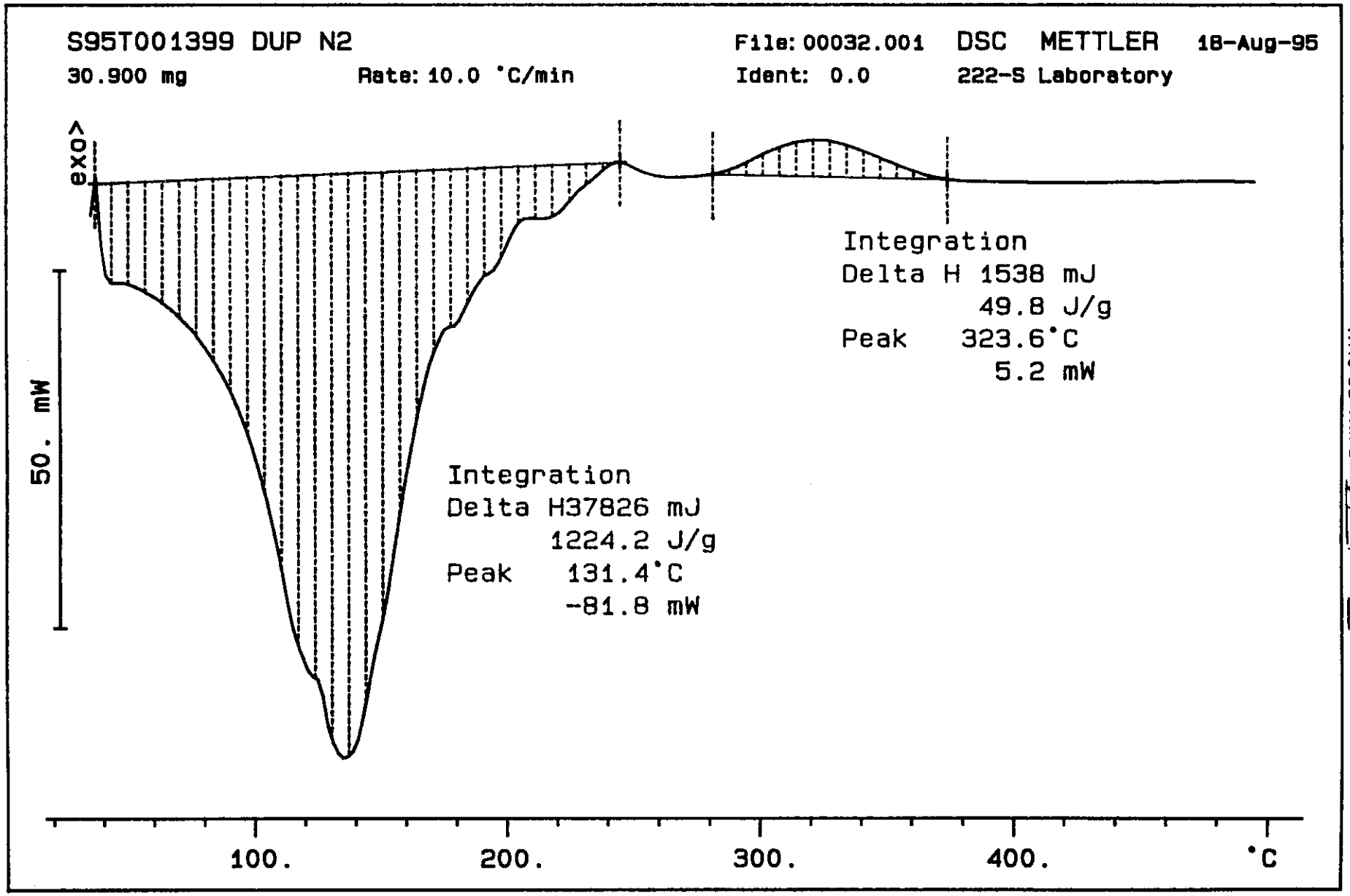
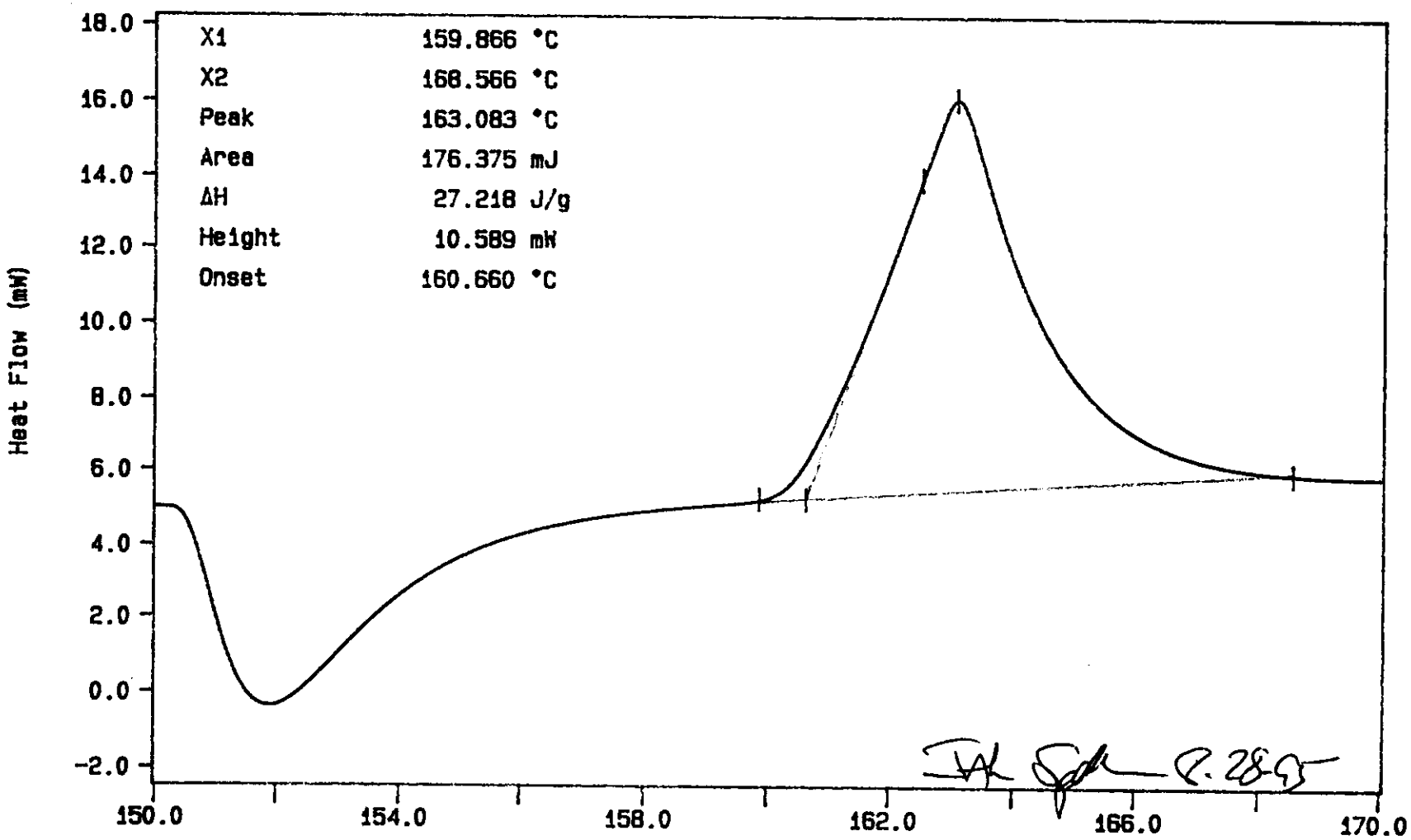


WHC-SD-WM-DP-145, REV. 1

Curve 1: DSC
File info: IND082801 Mon Aug 28 11:14:02 1995
Sample Weight: 6.480 mg
12N14A Indium at 10C/min

BEST AVAILABLE COPY



N2, EXOTHERM DOWN
TEMP1: 190.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 170.0 C

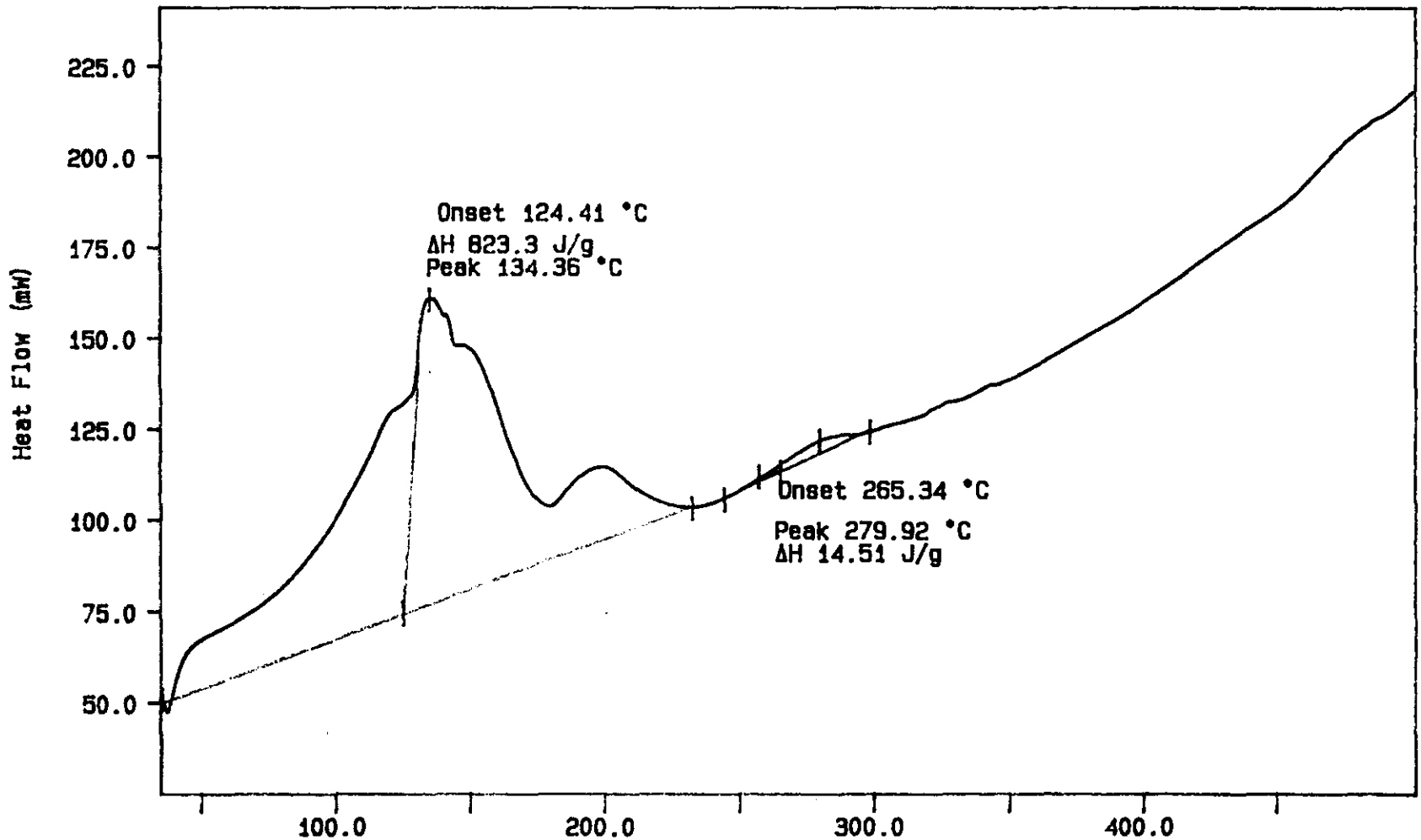
JD SPELLMAN
PERKIN ELMER
222-S Lab
Mon Aug 28 11:14:53 1995

WHC-SD-WM-DP-145, REV. 1

2-76

Curve 1: DSC
File info: qsav2 Mon Aug 28 14:04:18 1995
Sample Weight: 42.390 mg
S95T001404 SAM

BEST AVAILABLE COPY



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

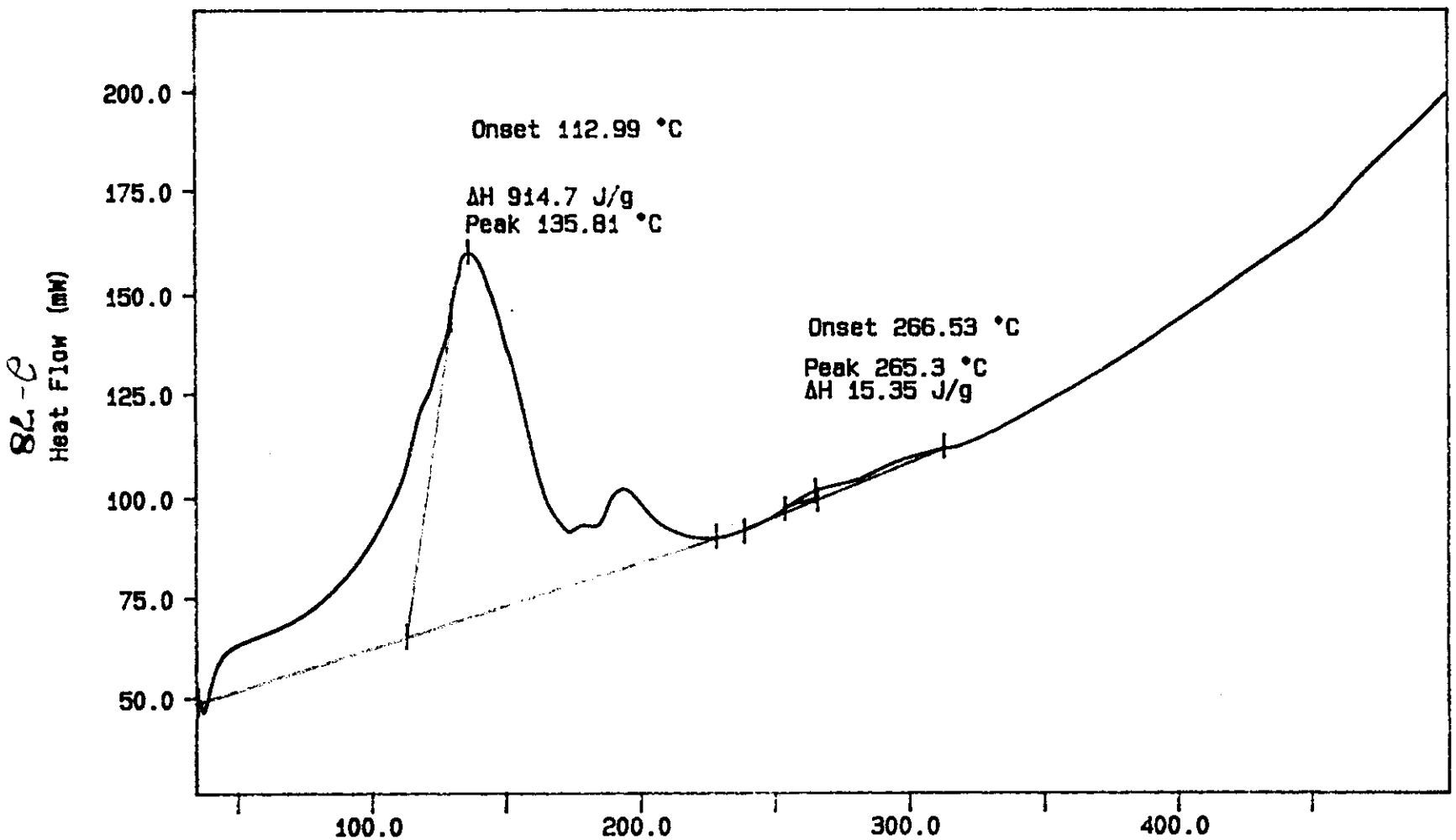
JD SPELLMAN
PERKIN ELMER
222-S Lab
Mon Aug 28 14:06:48 1995

WHC-SD-WM-DP-145, REV. 1

I-77

Curve 1: DSC
File info: SAM082802 Mon Aug 28 15:14:22 1995
Sample Weight: 34.400 mg
S95T001404 DUP

BEST AVAILABLE COPY



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

JD SPELLMAN
PERKIN ELMER
222-S Lab
Mon Aug 28 15:18:02 1995

WHC-SD-WM-DP-145, REV. 1

82-78

LABCORE Data Entry Template for Worklist# 2032

Analyst: JDS **Instrument:** DSC0 3 **Book #** 12N14-A

Method: LA-514-114 Rev/Mod B-0

Worklist Comment: Please run BY-108 ~~TGA~~ DSC under N2. bdv 8-31-95 BDV

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	STD				DSC-03	LIQUID	28.45	27.75	N/A	Joules/g
95000104	BY-108 (R)	2	SAMPLE	S95T001373	0		DSC-03	LIQUID	N/A	Ø		Joules/g
95000104	BY-108 (R)	3	DUP	S95T001373	0		DSC-03	LIQUID	Ø	Ø	N/A	Joules/g

Final page for worklist # 2032

See attached for signatures
Analyst Signature Date 8-31-95

Analyst Signature Date 8-31-95

Verified by Blandina Valenzuela BDV 8-31-95

Data Entry Comments: Sample produced one endothermic region at 140.9°C with a delta H of 1376.1 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.

LABCORE Data Entry Template for Worklist# 2032

Analyst: Jds **Instrument:** DSC0 _____ **Book #** 12N14A

Method: LA-514-113 Rev/Mod B-0

Worklist Comment: Please run BY-108 ~~TGA~~s under N2. bdv
DSC 8/19/95

GROUP	PROJECT	S TYPE	SAMPLE#	R	A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD				DSC-01	LIQUID			N/A	Joules/g
95000104	BY-108 (R)	2 SAMPLE	S95T001373	0		DSC-01	LIQUID	N/A			Joules/g
95000104	BY-108 (R)	3 DUP	S95T001373	0		DSC-01	LIQUID			N/A	Joules/g

Final page for worklist # 2032

Analyst Signature Date 8-29-95

Analyst Signature Date

Other instrument was used
8-31-95
BDV

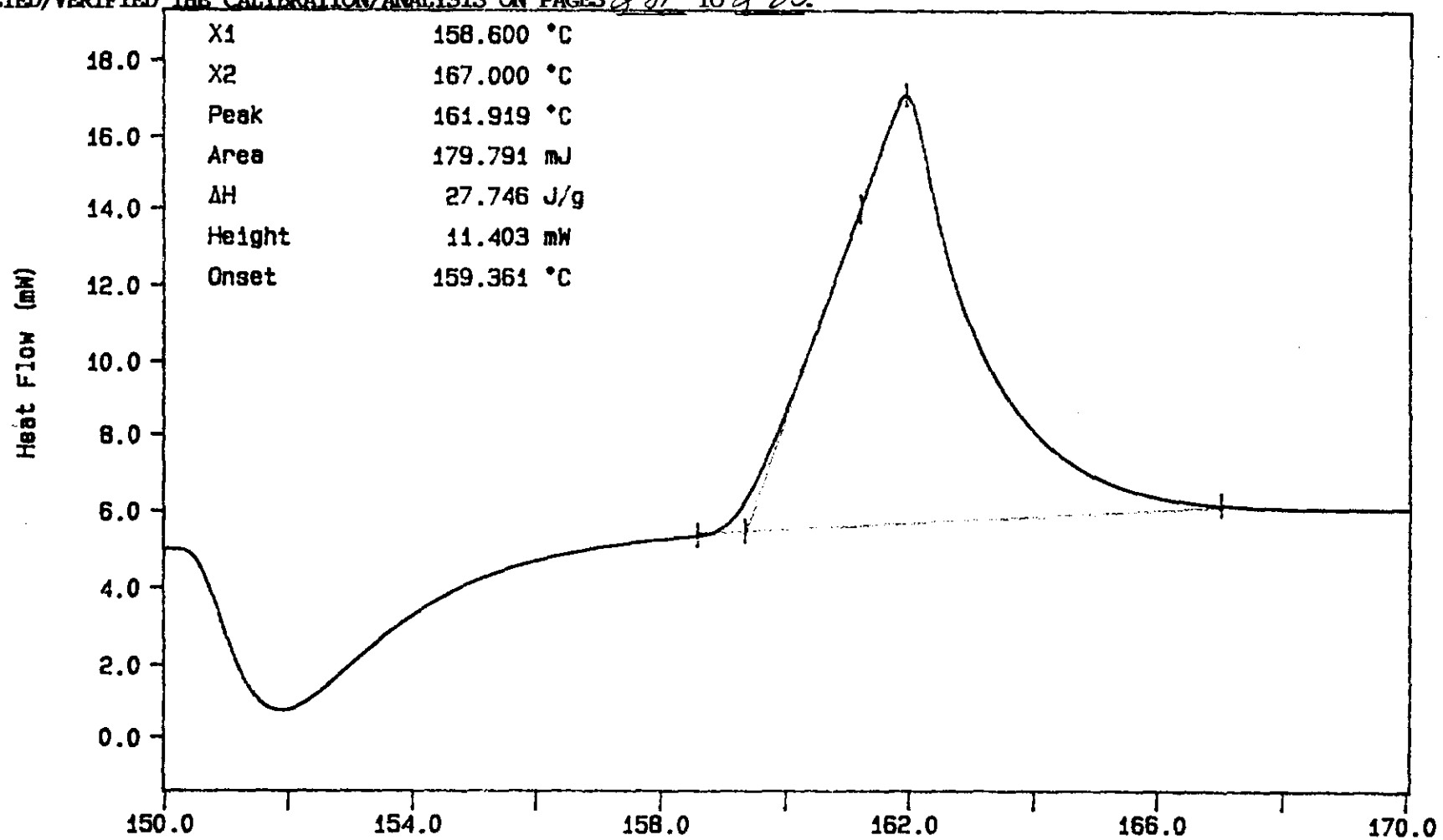
Data Entry Comments:

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: ind082901 Tue Aug 29 08:04:09 1995
Sample Weight: 6.480 mg
12N14A Indium at 10C/min

BEST AVAILABLE COPY

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 2-81 TO 2-83.

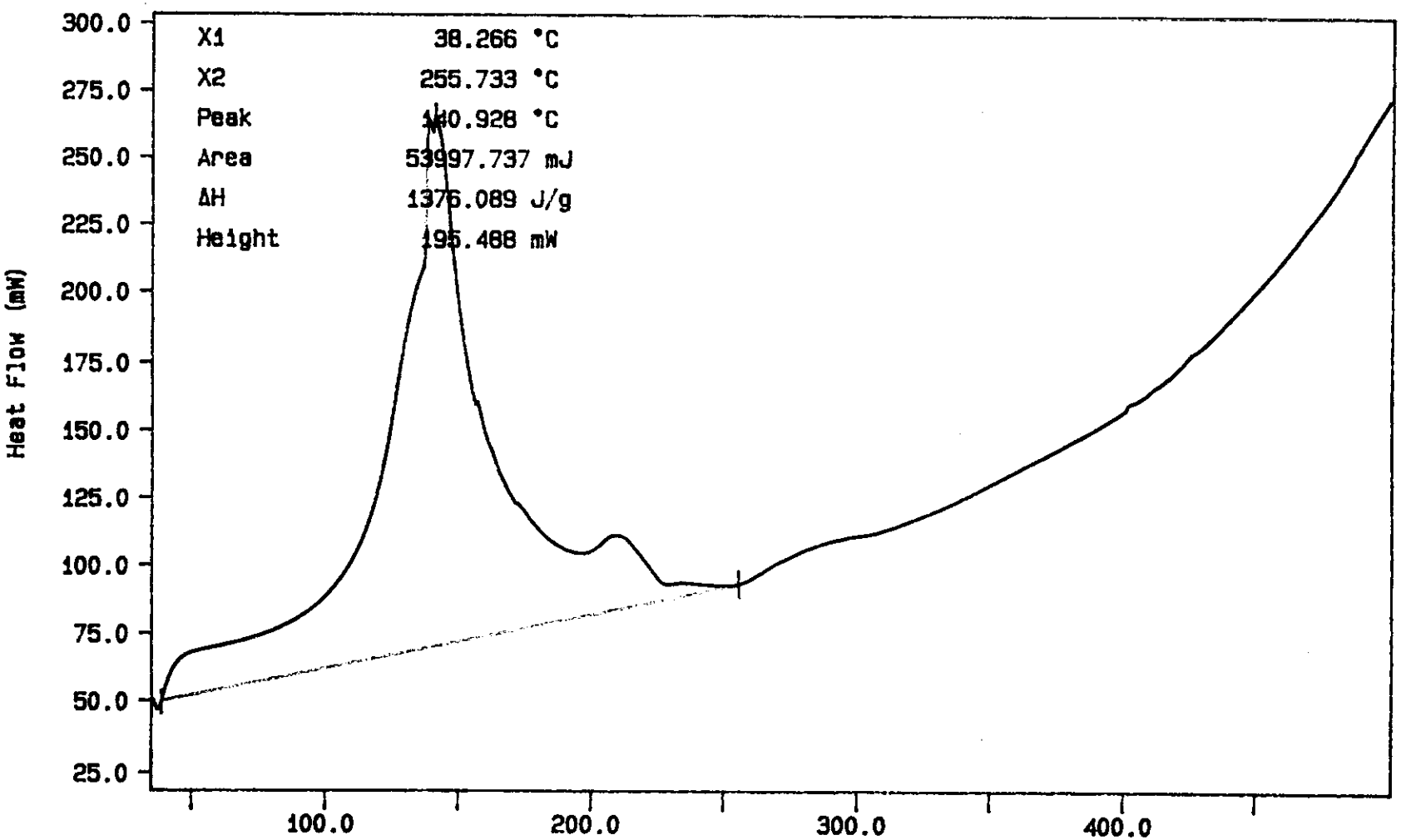


N2, EXOTHERM DOWN
TEMP1: 150.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 170.0 C

JD SPELLMAN
PERKIN ELMER
222-S Lab
Tue Aug 29 14:25:32 1995

Curve 1: DSC
File info: SAM082903 Tue Aug 29 14:00:56 1995
Sample Weight: 39.240 mg
S95T001373 SAM

BEST AVAILABLE COPY



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

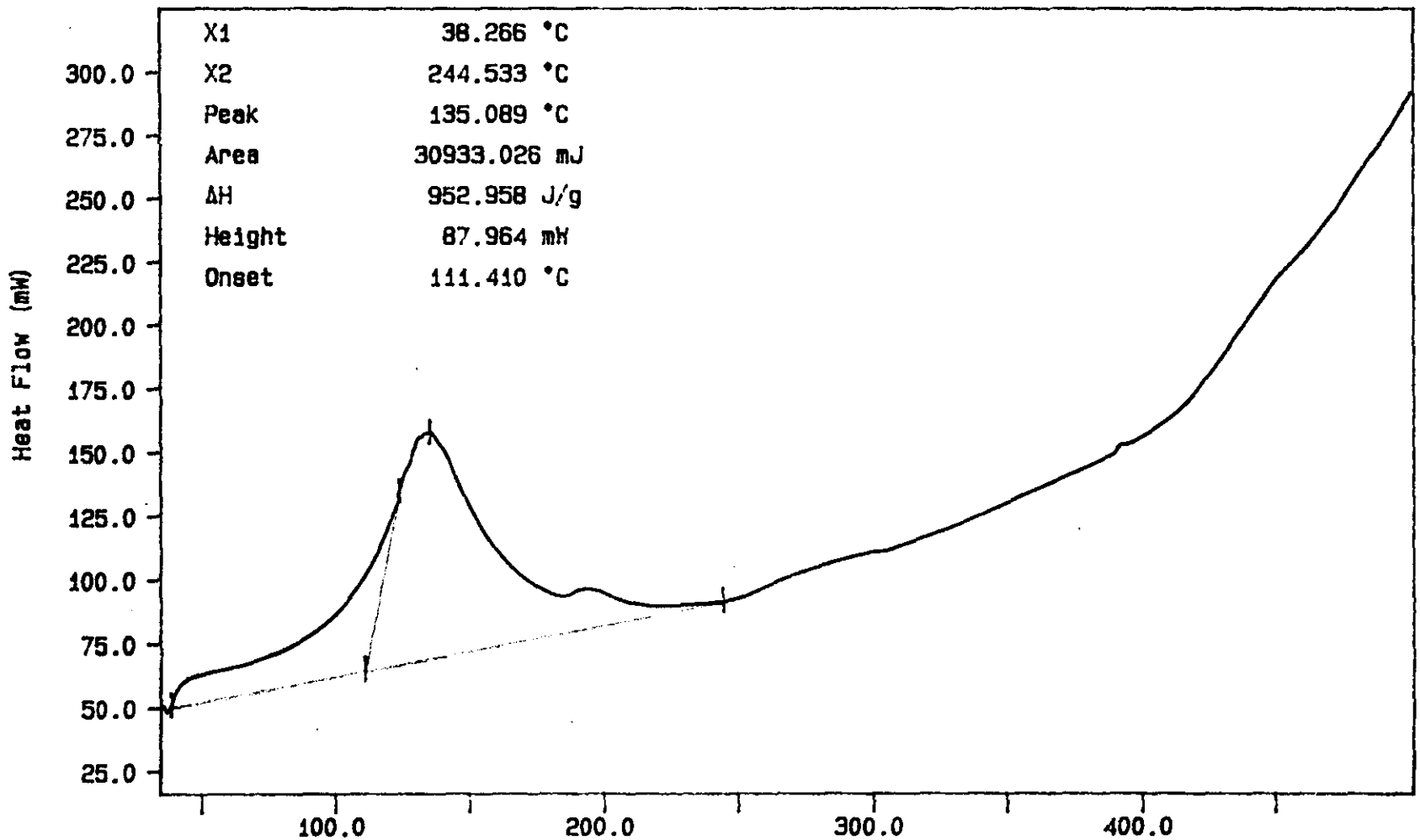
JD SPELLMAN
PERKIN ELMER
222-S Lab
Tue Aug 29 14:07:09 1995

WHC-SD-WM-DP-165, REV. 1

2-82

Curve 1: DSC
File info: SAM082904 Tue Aug 29 15:10:34 1995
Sample Weight: 32.460 mg
S95T001373 SAM

BEST AVAILABLE COPY



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

JD SPELLMAN
PERKIN ELMER
222-S Lab
Tue Aug 29 15:14:56 1995

WHC-SD-WM-DP-145, REV. 1

LABCORE Data Entry Template for Worklist# 2038

Analyst: JDS **Instrument:** DSC0 3 **Book #** 12N14A

Method: LA-514-114 Rev/Mod B-0

Worklist Comment: Please run BY-108 DSCs under N2. bdv

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	-------TEST------	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	STD				DSC-03	LIQUID	28.45	28.01	N/A	Joules/g
95000104	BY-108 (R)	2	SAMPLE	S95T001427	0		DSC-03	LIQUID	N/A	Ø		Joules/g
95000104	BY-108 (R)	3	DUP	S95T001427	0		DSC-03	LIQUID	Ø	Ø	N/A	Joules/g

Final page for worklist # 2038

See attached for signatures
Analyst Signature Date 8-31-95

Verified by Blandina Valenzuela BDV 8-31-95

[signature] 8-31-95
Analyst Signature Date

Data Entry Comments: Sample produced one endothermic region at 123.8°C with a delta H of 1770.2 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# 2038

Analyst: Jds **Instrument:** DSC0 _____ **Book #** 12N14A

Method: LA-514-113 Rev/Mod B-0

Worklist Comment: Please run BY-108 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
95000104	BY-108 (R)	2	SAMPLE	S95T001427	0		DSC-01	LIQUID	N/A			Joules/g
95000104	BY-108 (R)	3	DUP	S95T001427	0		DSC-01	LIQUID			N/A	Joules/g

Final page for worklist # 2038

JAK 8-29-95
Analyst Signature **Date**

Analyst Signature **Date**

Other instrument was used.
8-31-95
BDV

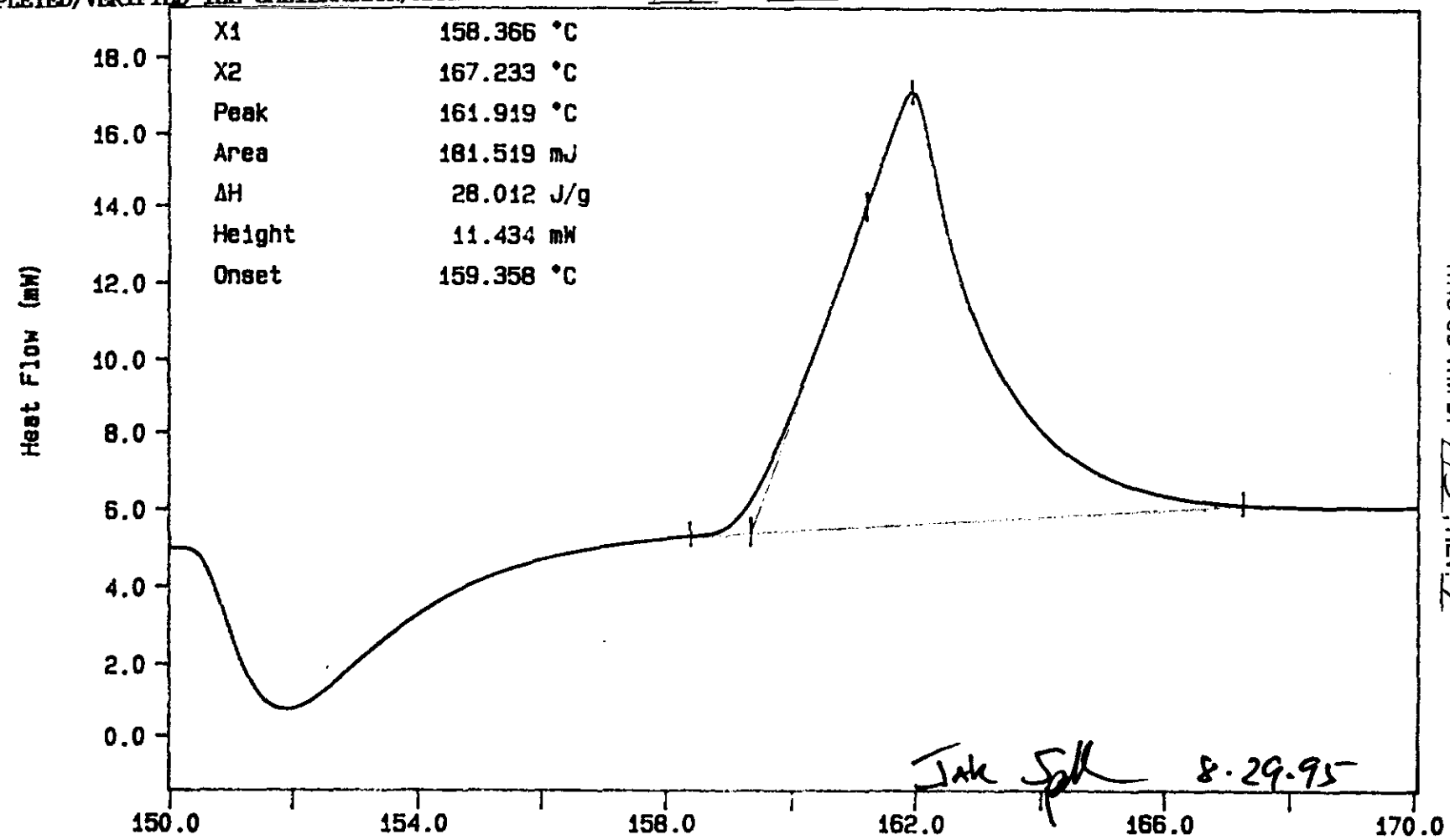
Data Entry Comments:

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: ind082901 Tue Aug 29 08:04:09 1995
Sample Weight: 6.480 mg
12N14A Indium at 10C/min

BEST AVAILABLE COPY

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 2-86 TO 2-88.



N2, EXOTHERM DOWN
TEMP1: 150.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 170.0 C

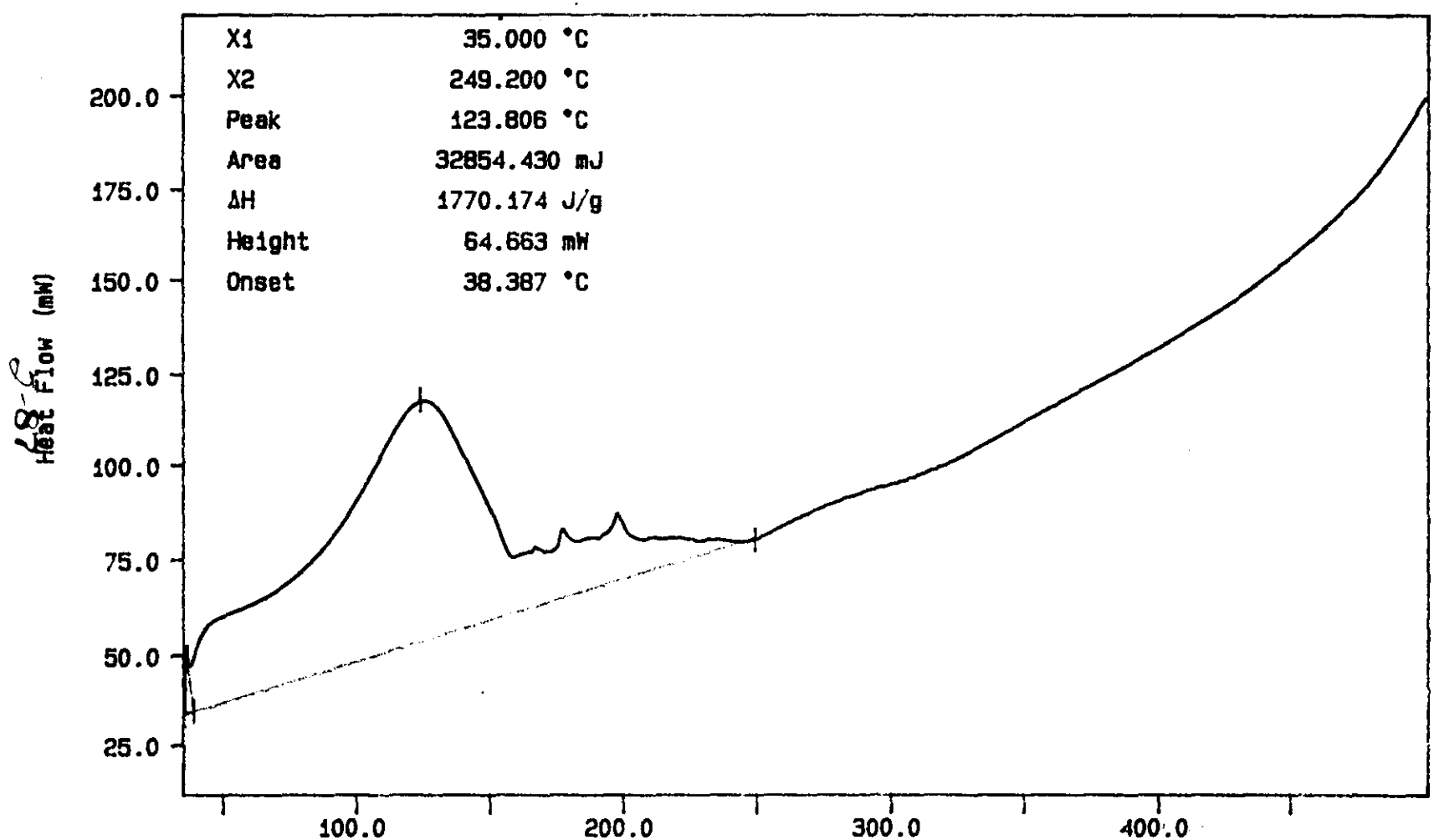
JD SPELLMAN
PERKIN ELMER
222-S Lab
Tue Aug 29 08:12:14 1995

2-86

WHC-CD-WM-DP-145, REV. 1

Curve 1: DSC
File info: SAM082901 Tue Aug 29 09:09:07 1995
Sample Weight: 18.560 mg
S95T001427 SAM

BEST AVAILABLE COPY



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

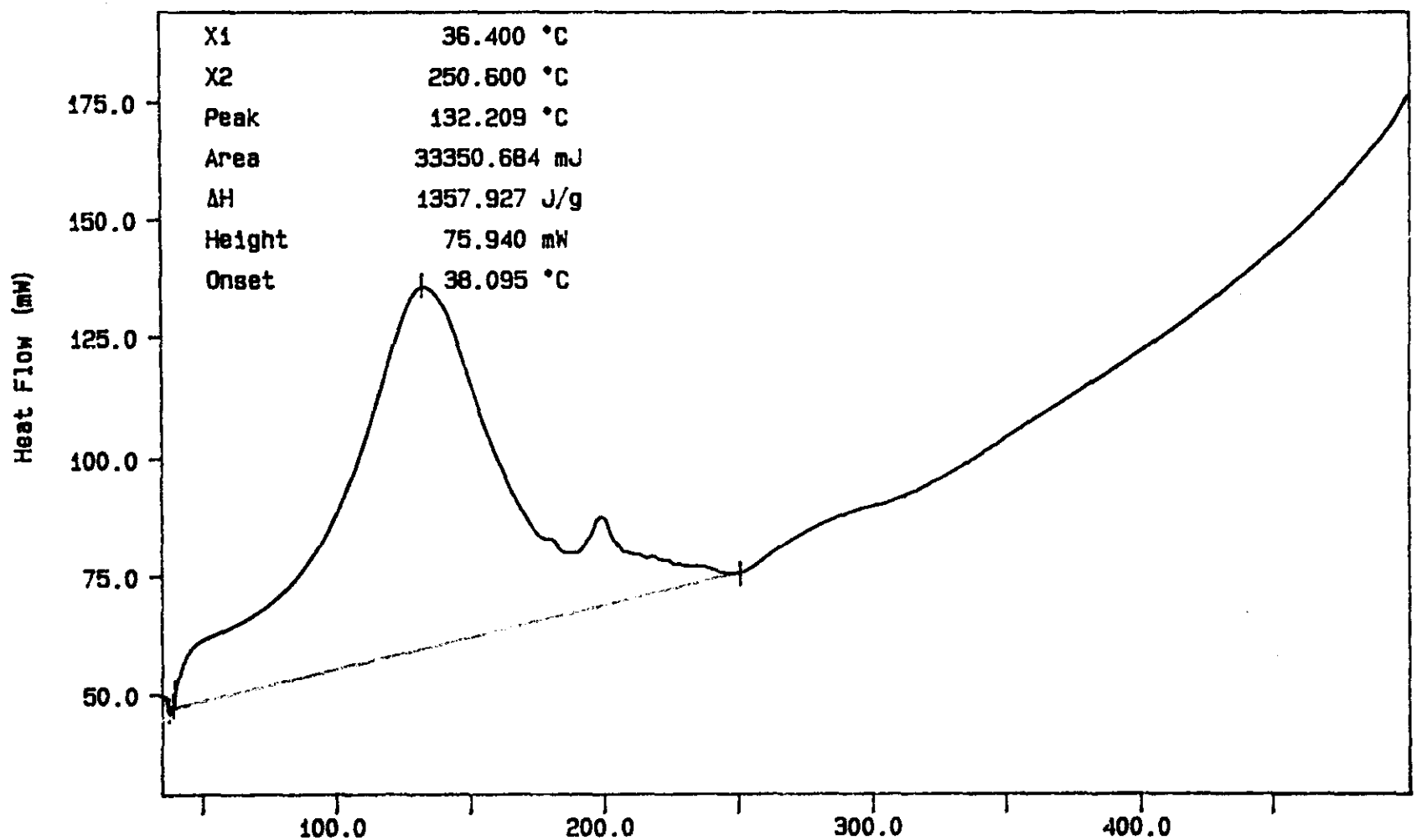
JD SPELLMAN
PERKIN ELMER
222-S Lab
Tue Aug 29 09:13:54 1995

WHC-SD-WM-DP-145, REV 1

68-87

Curve 1: DSC
File info: SAM082902 Tue Aug 29 10:06:53 1995
Sample Weight: 24.560 mg
S95T001427 ~~GAM~~ Dup

BEST AVAILABLE COPY



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

JD SPELLMAN
PERKIN ELMER
222-S Lab
Tue Aug 29 10:59:20 1995

WHC-SD-WM-DP-145, REV. 1

LABCORE Data Entry Template for Worklist# 2112

Analyst: SMF **Instrument:** DSC0 1 **Book #** 12N14A

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

Worklist Comment: Please run BY-108 samples under N2. bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-------TEST------	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-01	SOLID	28.45	29.1	N/A	Joules/g
95000104	BY-108 (R)	2 SAMPLE	S95T001421	0	DSC-01	SOLID	N/A	~~80.2~~ 135.4 8-30-95 BDV		Joules/g
95000104	BY-108 (R)	3 DUP	S95T001421	0	DSC-01	SOLID 8-30-95 BDV	~~80.2~~ 135.4	~~102.4~~ 138.2 8-30-95 BDV	N/A	Joules/g
95000104	BY-108 (R)	4 SAMPLE	S95T001422	0	DSC-01	SOLID	N/A	62.6		Joules/g
95000104	BY-108 (R)	5 DUP	S95T001422	0	DSC-01	SOLID	62.6	68.4	N/A	Joules/g

Final page for worklist # 2112

Susie M. Fulton 8-29-95
Analyst Signature Date

[signature] 8-30-95
Analyst Signature Date

Verified by Blandina Valenzuela
8-31-95

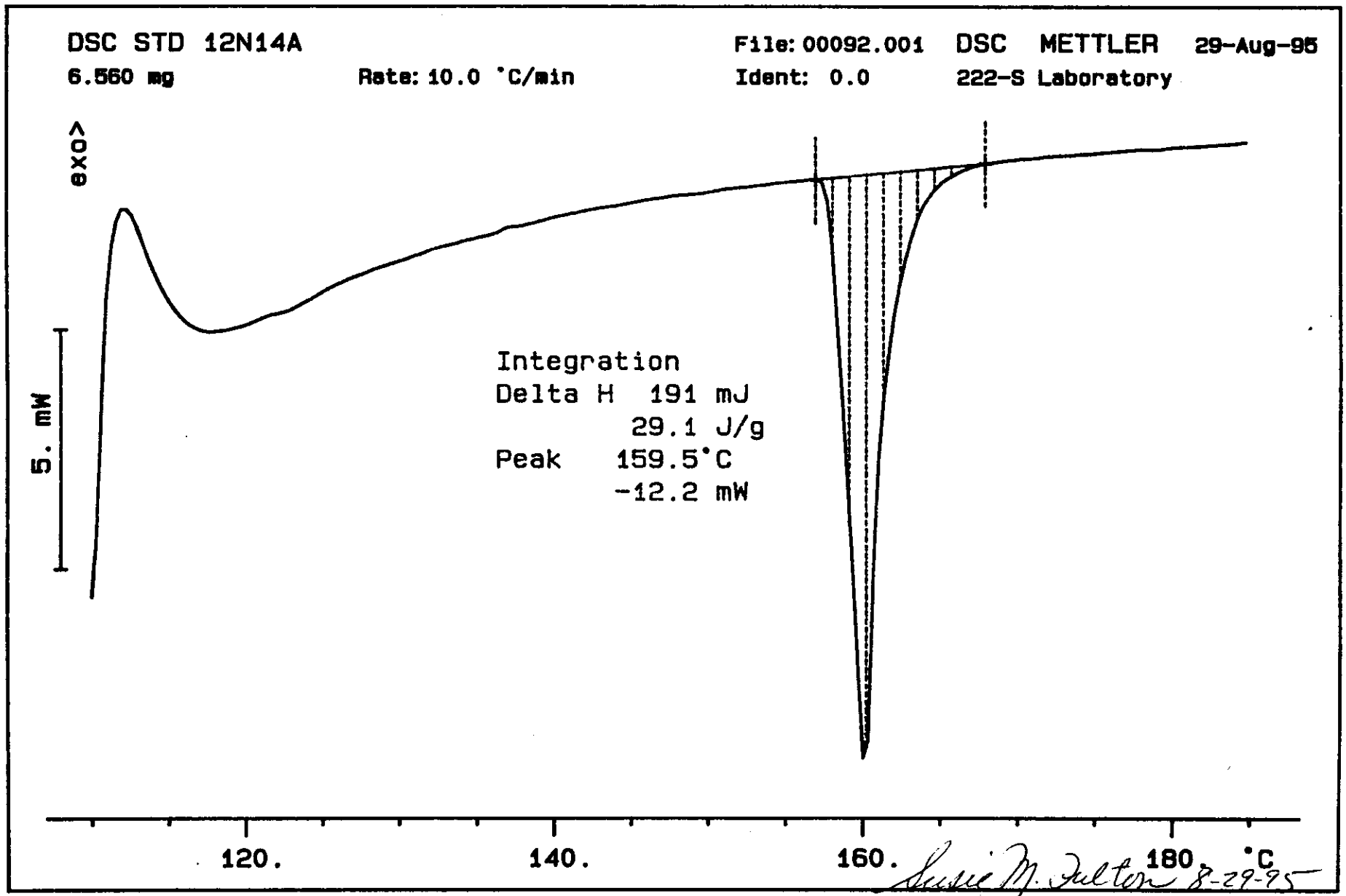
S95T001421 sample produced one large endotherm at 119.3°C with a delta H of 8/30/95 BDV ~~658.1~~ 589.6 J/g. The duplicate exotherm result is the sum of two exotherms.

Data Entry Comments: S95T001422 sample produced one large endotherm at 129.6°C with a delta 798.9 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.

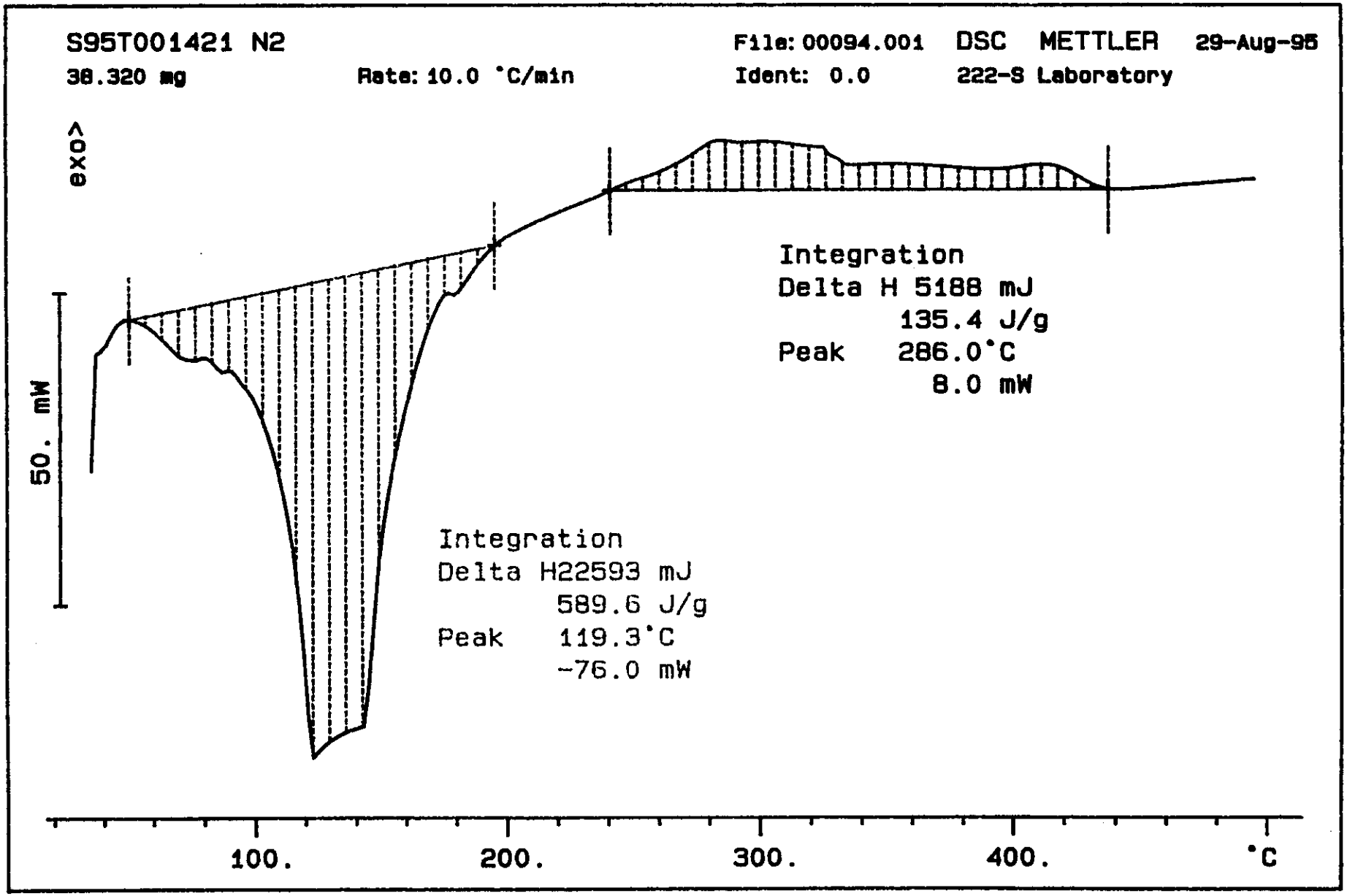
SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 2-90 TO 2-94.

BEST AVAILABLE COPY



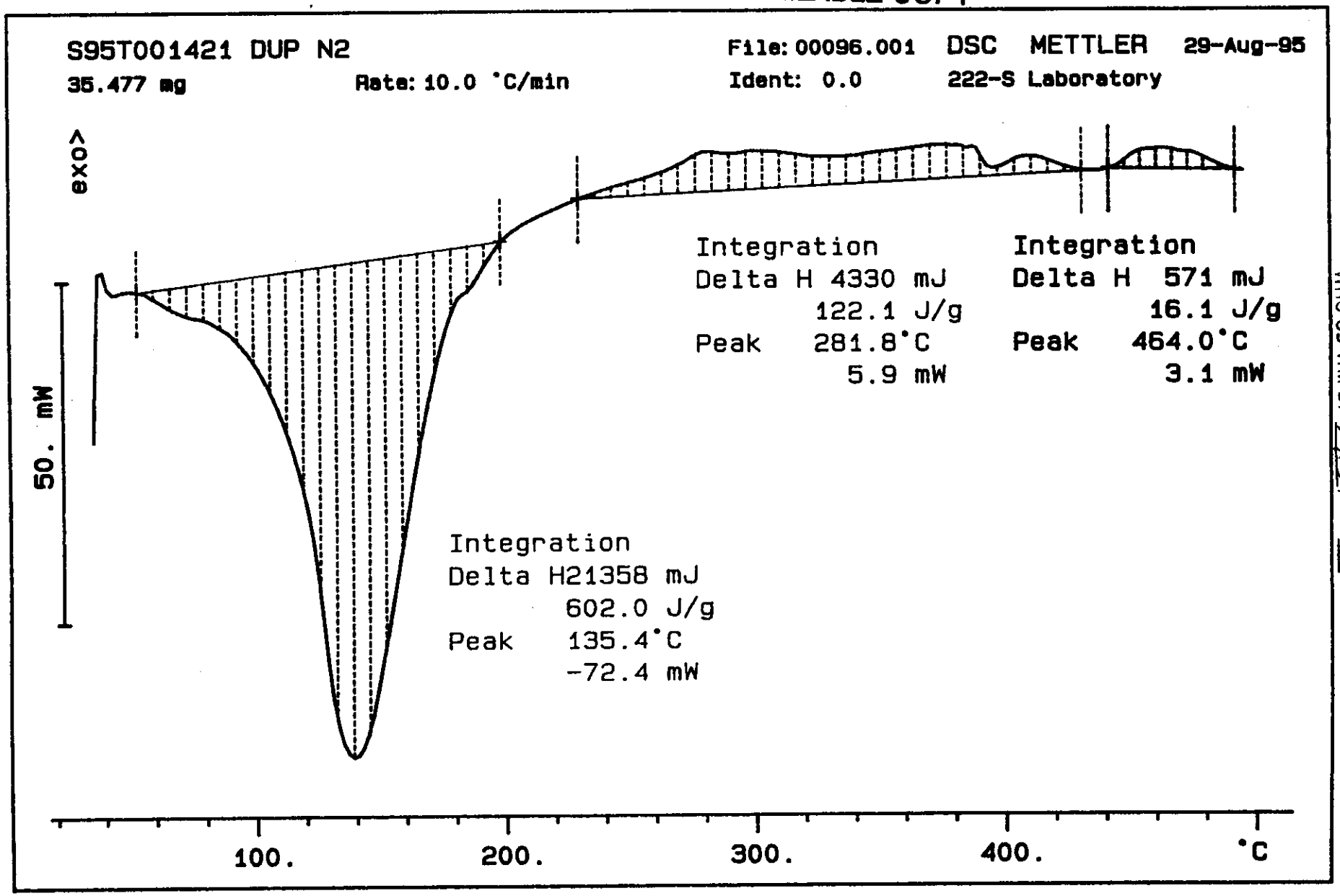
Susie M. Fulton 8-29-95

BEST AVAILABLE COPY



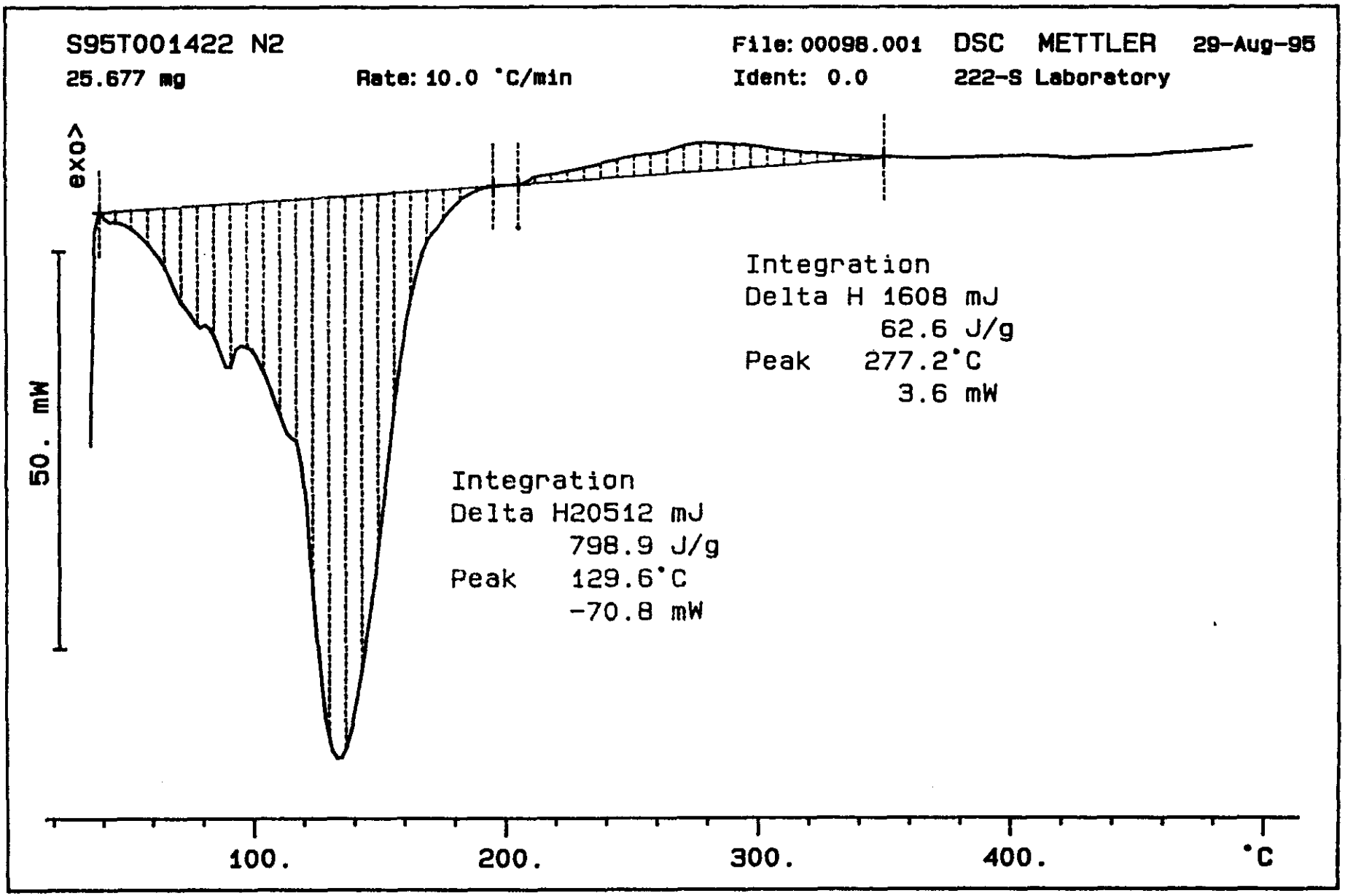
WHC-SD-WM-DP-145, REV. 1

BEST AVAILABLE COPY



WHC-CD-VM-DP-145, REV. 1

BEST AVAILABLE COPY



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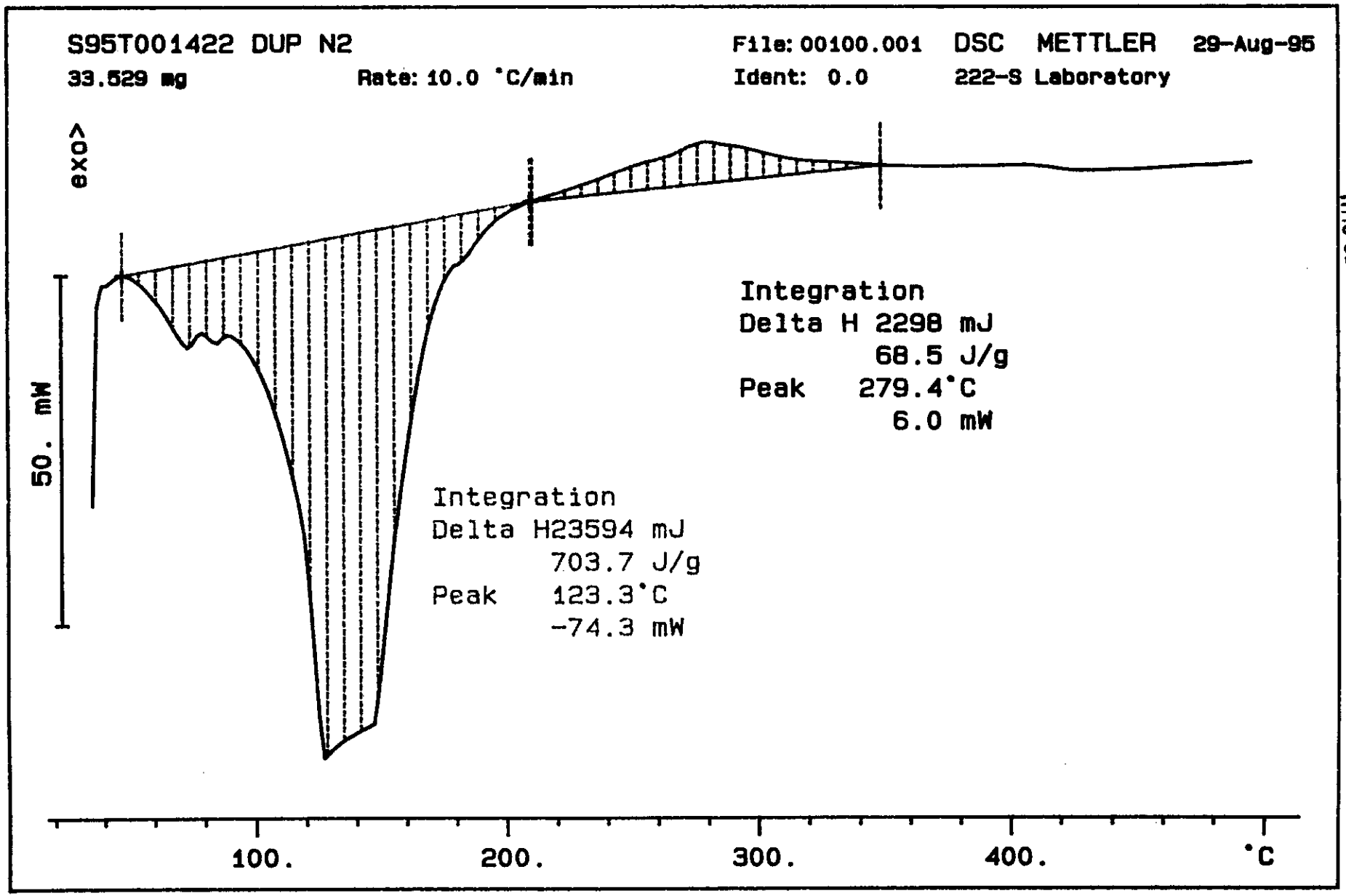


WHC-CD-WM-DP-145, REV. 1

worklistrpt Version 2.1 05/15/95
08/29/95 07:10

LABCORE Data Entry Template for Worklist# 2114

Analyst: JDS **Instrument:** DSC0 1 **Book #** 124144

Method: LA-514-113 Rev/Mod C-0

Worklist Comment: Please run BY-108 DSCs under N2. bdv

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	STD				DSC-01	SOLID			N/A	Joules/g
95000104	BY-108 (R)	2	SAMPLE	S95T001431	0		DSC-01	SOLID	N/A			Joules/g
95000104	BY-108 (R)	3	DUP	S95T001431	0		DSC-01	SOLID			N/A	Joules/g
95000104	BY-108 (R)	4	SAMPLE	S95T001432	0		DSC-01	SOLID	N/A			Joules/g
95000104	BY-108 (R)	5	DUP	S95T001432	0		DSC-01	SOLID			N/A	Joules/g

Final page for worklist # 2114

JDS 9-5-95

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# 2114

Analyst: JDS **Instrument:** DSC0 1 **Book #** 12N14A

Method: LA-514-113 Rev/Mod C-0

Worklist Comment: Please run BY-108 DSCs under N2. bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-------TEST------	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-01	SOLID	28.45	30.3	N/A	Joules/g
95000104	BY-108 (R)	2 SAMPLE	S95T001431	0	DSC-01	SOLID	N/A	180.6		Joules/g
95000104	BY-108 (R)	3 DUP	S95T001431	0	DSC-01	SOLID	180.6	180.5	N/A	Joules/g
		4 STD			DSC-01	SOLID	28.45	29.9	N/A	Joules/g
95000104	BY-108 (R)	5 SAMPLE	S95T001432	0	DSC-01	SOLID	N/A	68.7		Joules/g
95000104	BY-108 (R)	6 DUP	S95T001432	0	DSC-01	SOLID	68.7	70.2	N/A	Joules/g

Final page for worklist # 2114

See Attached for Signatures

Analyst Signature **Date**

Entered + Verified 9/15/95 James Fye

Analyst Signature **Date**

S95T001431 produced a large endothermic region at 123.3°C with a delta H of 976.5 J/g

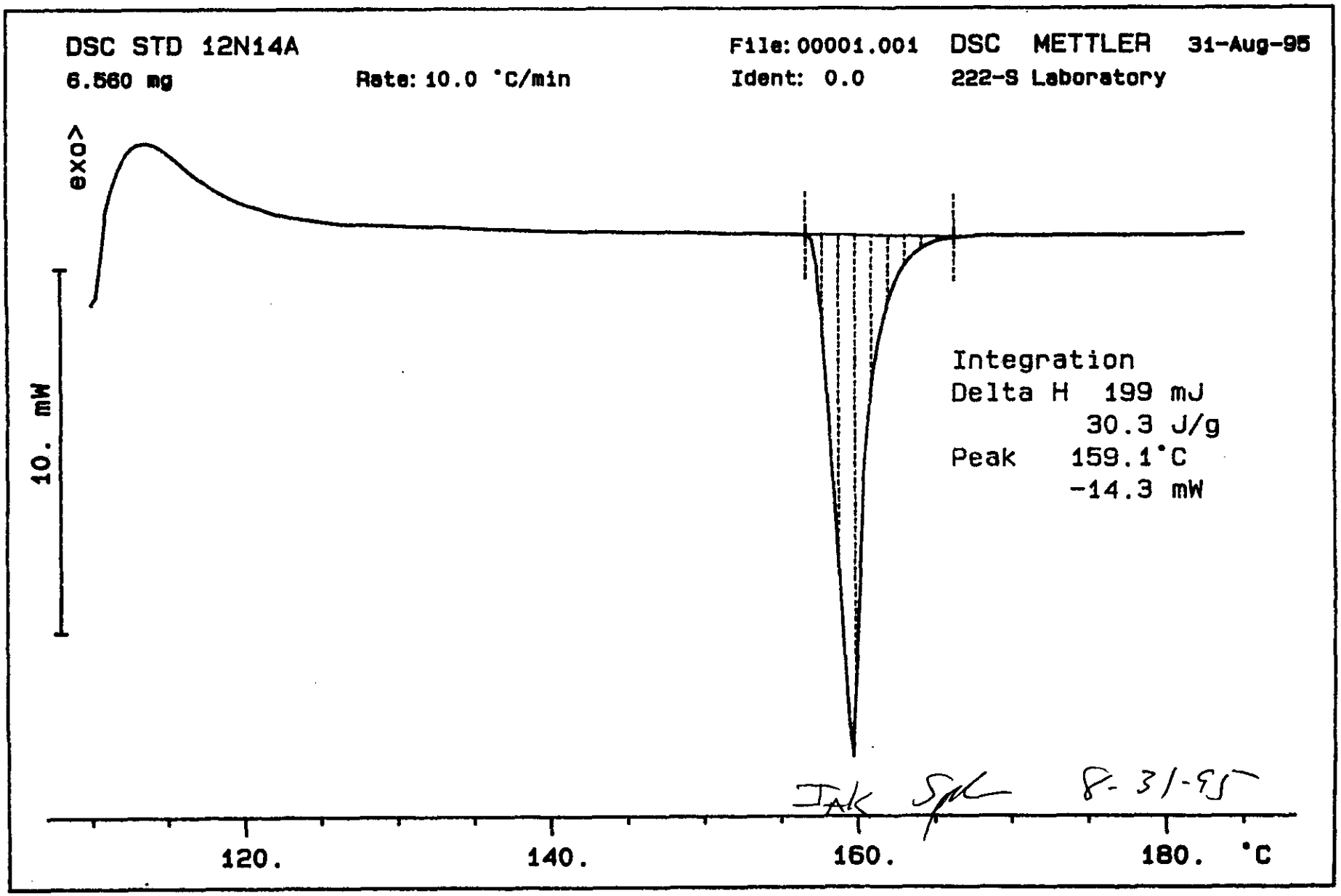
Data Entry Comments: S95T001432 produced a large endothermic region at 119.3°C with a delta H of 943.3 J/g.

JMF 9/06/95

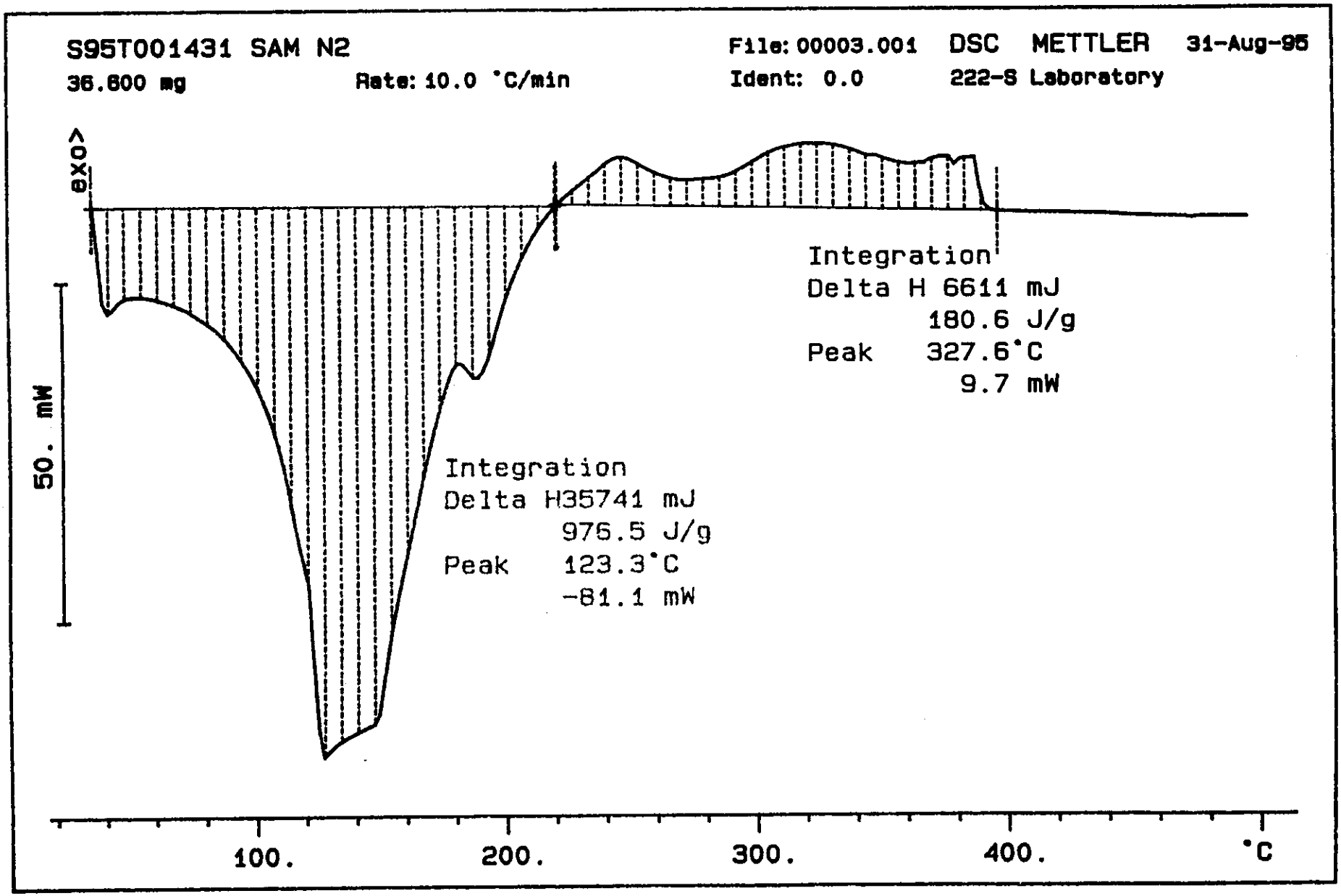
Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 2-97 TO 2-102.

BEST AVAILABLE COPY



BEST AVAILABLE COPY



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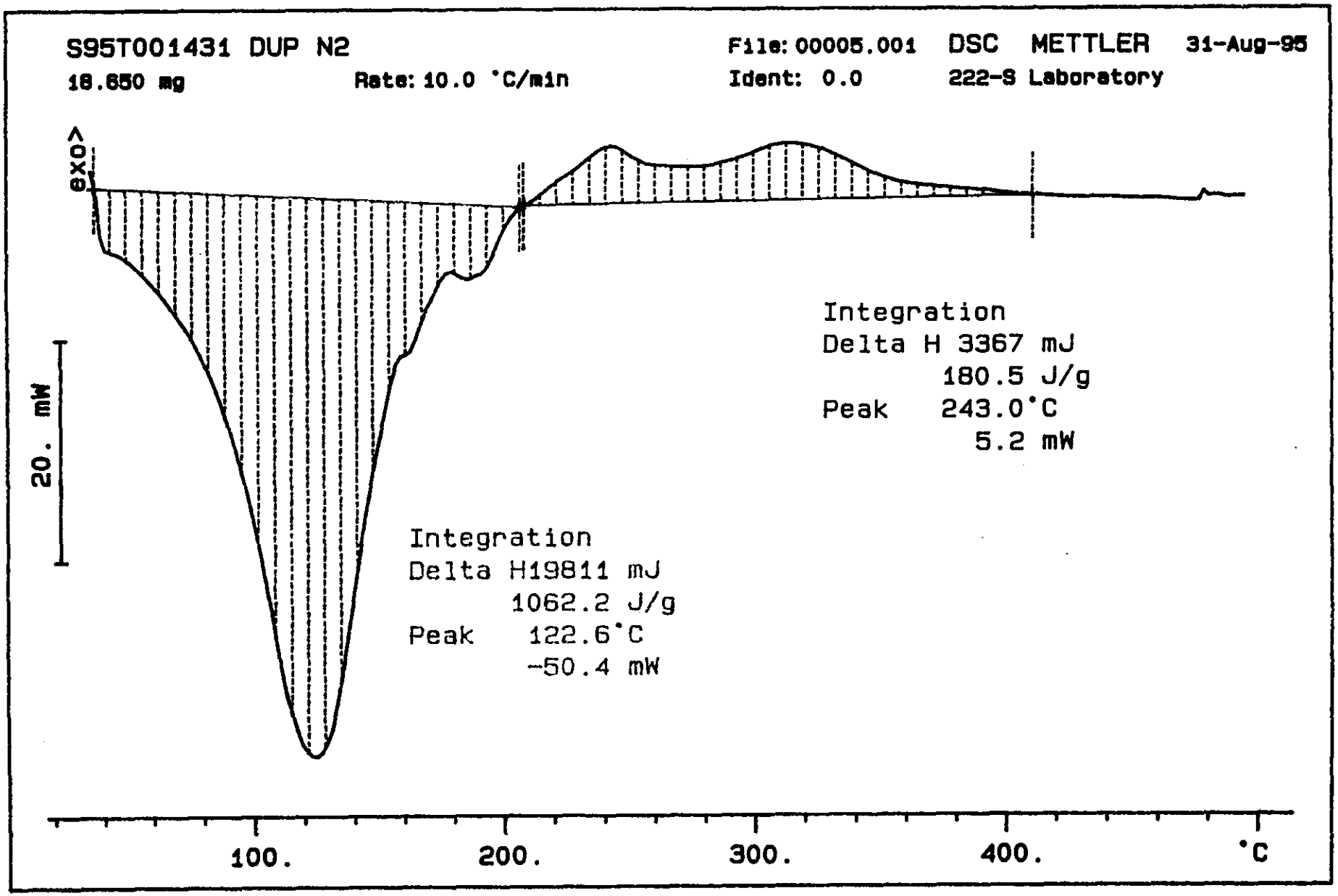

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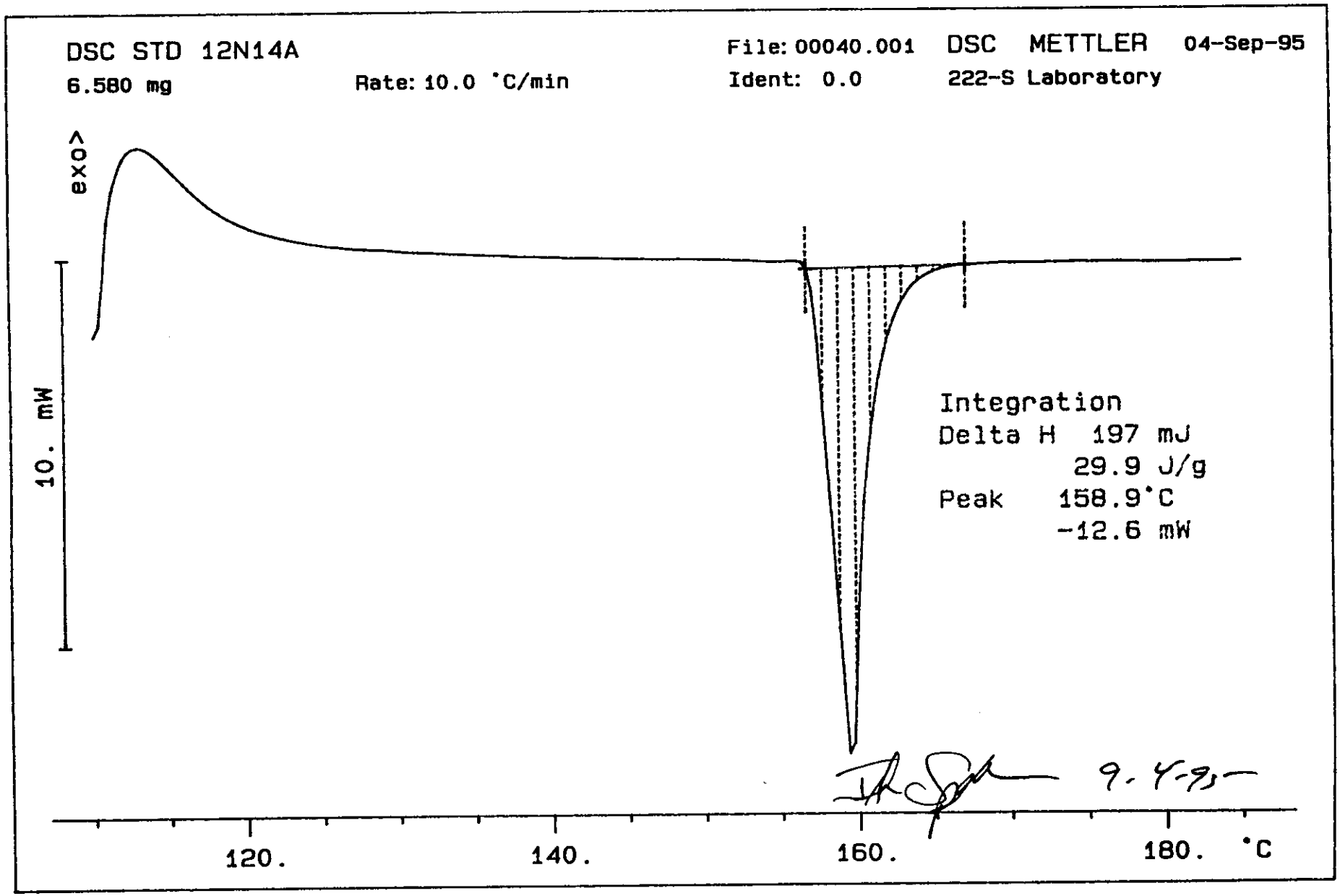

2-100

WHC-SD-WM-DP-145, REV. 1

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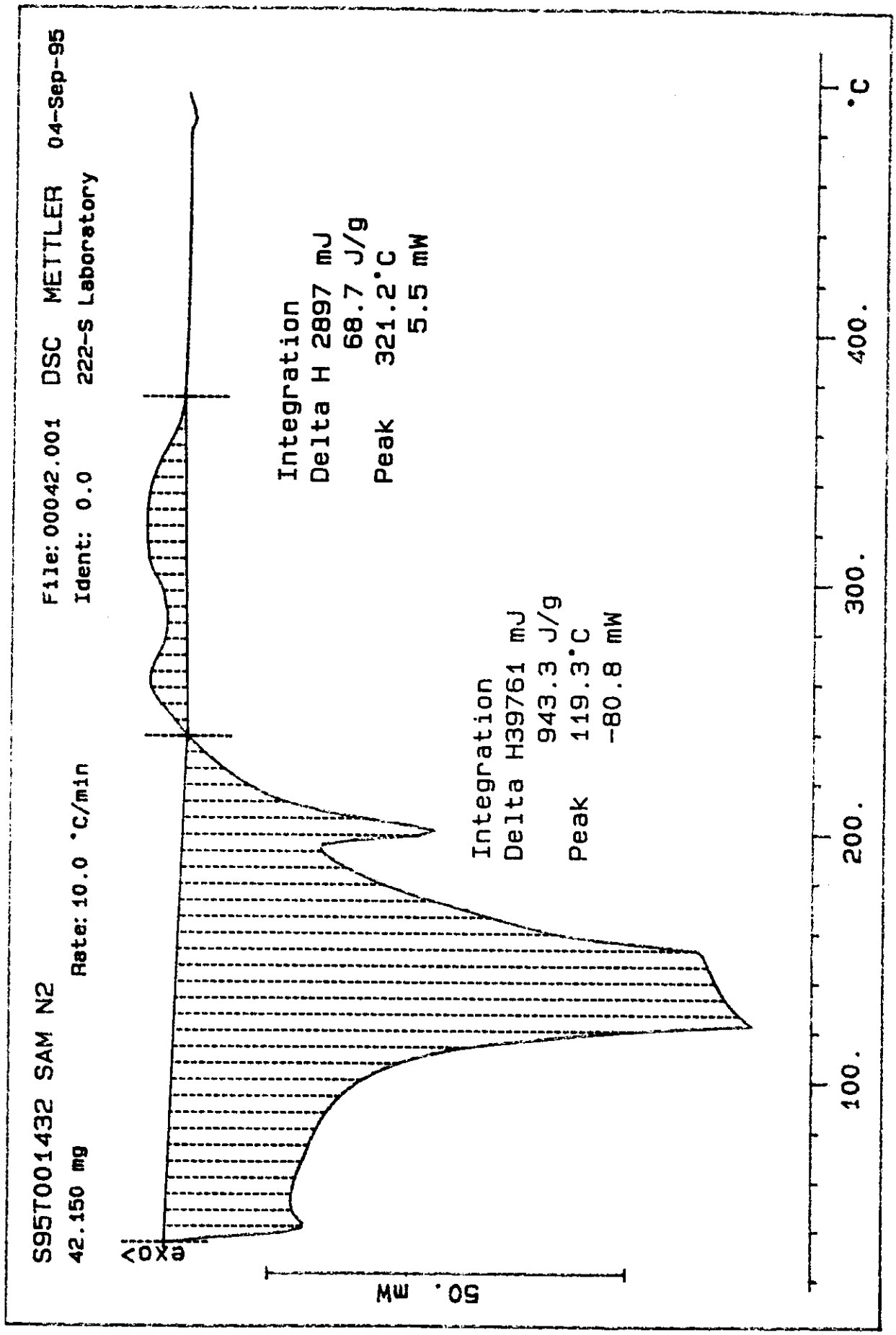

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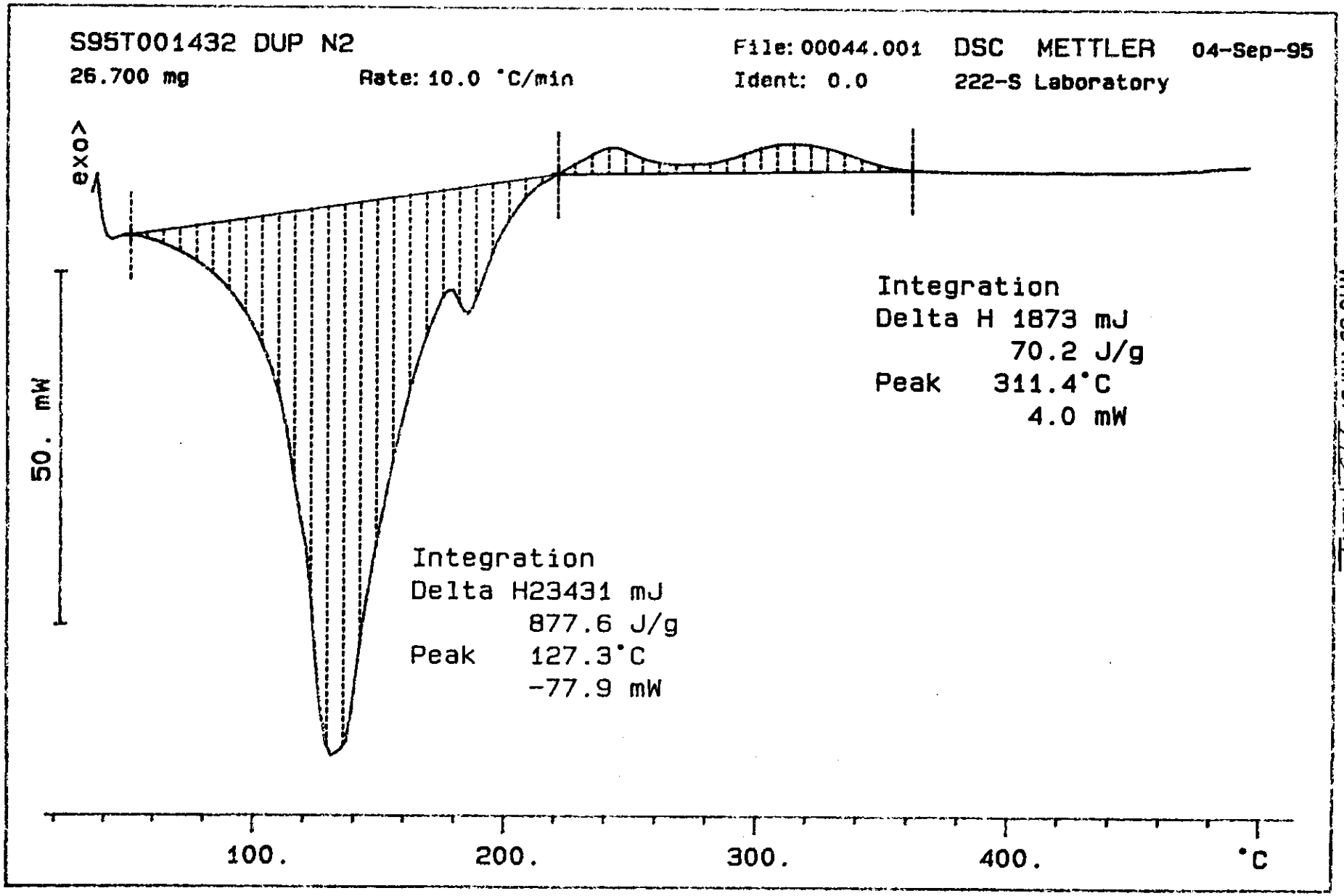


LABCORE Data Entry Template for Worklist# 2115

Analyst: Jds **Instrument:** DSC0 1 **Book #** 12N14A

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

Worklist Comment: Please run BY-108 DSCs under N2. bdv

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	-------TEST------	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	STD				DSC-01	SOLID	28.45	30.4	N/A	Joules/g
95000104	BY-108 (R)	2	SAMPLE	S95T001433	0		DSC-01	SOLID	N/A	149.6		Joules/g
95000104	BY-108 (R)	3	DUP	S95T001433	0		DSC-01	SOLID	149.6	143.5	N/A	Joules/g

Final page for worklist # 2115

[signature] ~~8-13~~ 8-30-95
Analyst Signature Date

[signature] 8/30/95
Analyst Signature Date

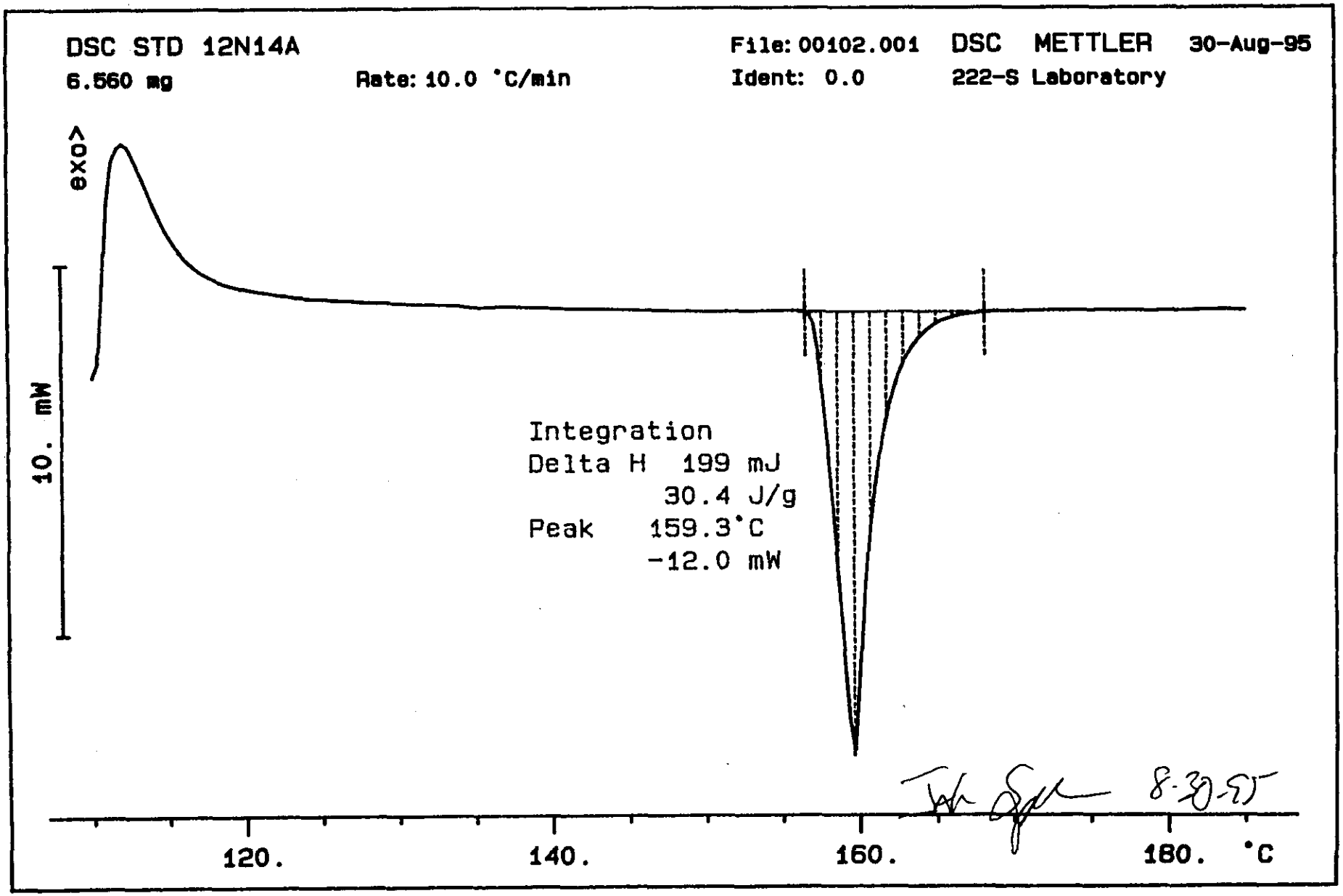
Verified by Blandina Valenzuela
8-31-95

Data Entry Comments: Sample produced one endothermic region at 131.1°C with a delta H of 972.5°C. J/g
8/31/95 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.

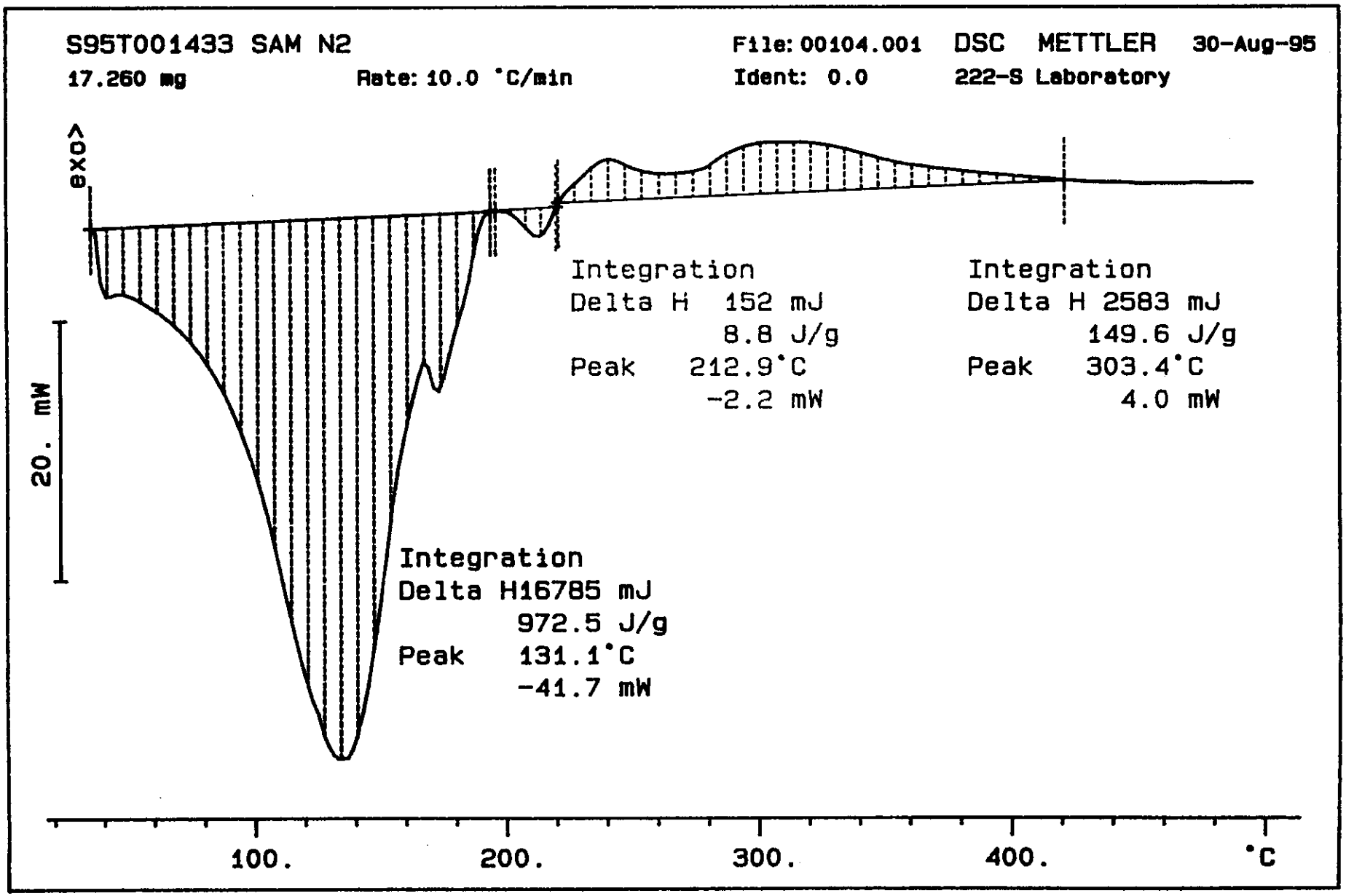
SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 2-104 TO 2-106.

BEST AVAILABLE COPY

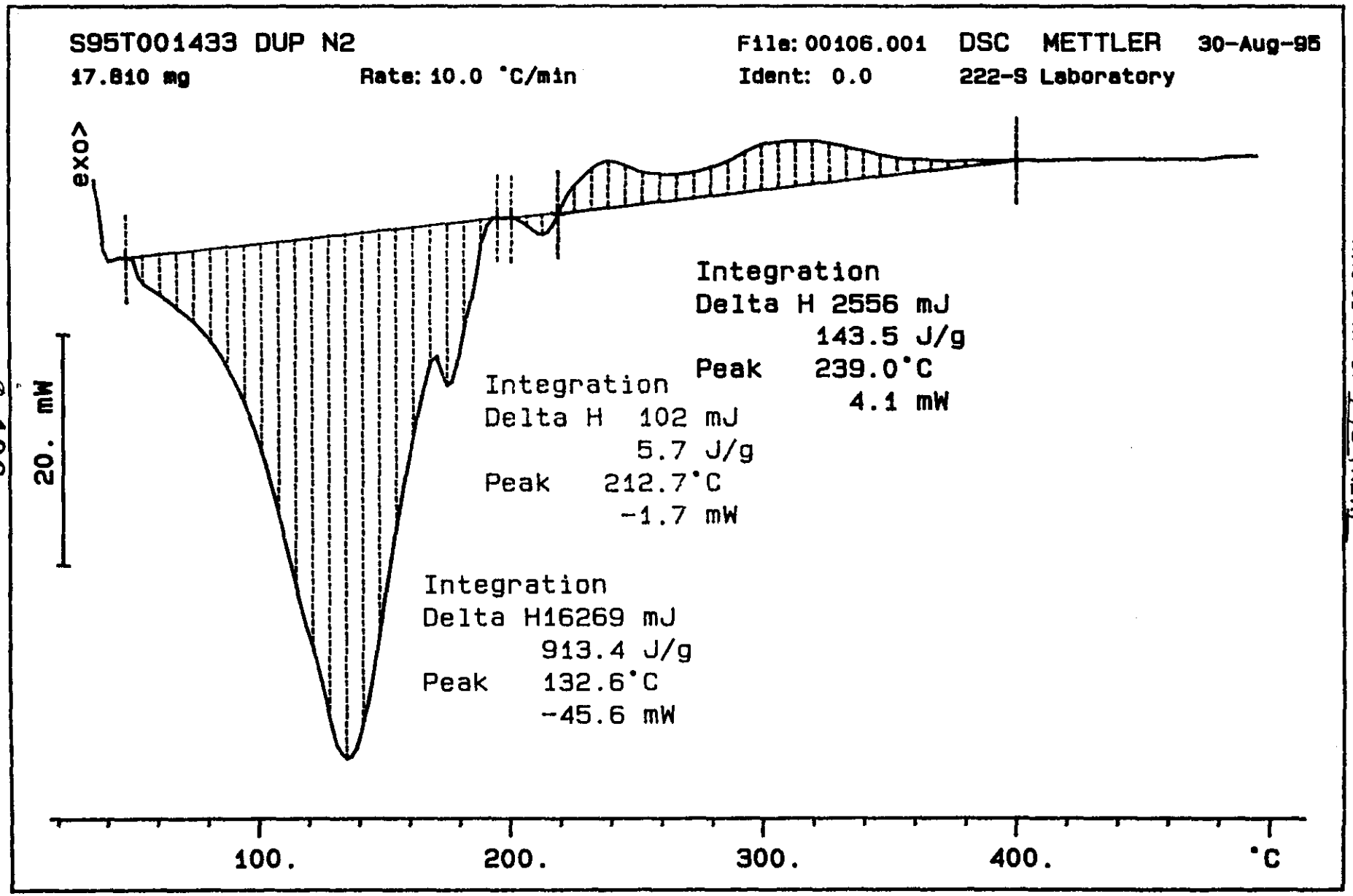


8-30-95

BEST AVAILABLE COPY



BEST AVAILABLE COPY



2-106

WHC-SD-WM-DP-145, REV. 1

LABCORE Data Entry Template for Worklist# 2142

Analyst: JDS **Instrument:** DSC0 1 **Book #** 12N14A

Method: LA-514-113 Rev/Mod C-0

Worklist Comment: Please run BY-108 DSCs under N2. bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R	A	-------TEST------	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD				DSC-01	LIQUID	28.45	~~27.3~~ 28.1	9-12-95 BDV N/A	Joules/g
95000101	BY-108 (R)	2 SAMPLE	S95T001365	0		DSC-01	LIQUID	N/A	Ø		Joules/g
95000101	BY-108 (R)	3 DUP	S95T001365	0		DSC-01	LIQUID	Ø	Ø	N/A	Joules/g
		4 STD				DSC-01	LIQUID	28.45	27.3	N/A	Joules/g
95000104	BY-108 (R)	5 SAMPLE	S95T001430	0		DSC-01	LIQUID	N/A	74.2		Joules/g
95000104	BY-108 (R)	6 DUP	S95T001430	0		DSC-01	LIQUID	74.2	69.6	N/A	Joules/g

Final page for worklist # 2142

See attached for signatures
Analyst Signature **Date** 9-12-95 BDV

Verified 9/13/95. J M. Fuge

[signature] 9-13-95
Analyst Signature **Date**

S95T001365 produced one endotherm at 99.3°C with a delta H of 1295.1 J/g.

Data Entry Comments: S95T001430 produced one endotherm at 127.3°C with a delta H of 1366.0 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.

LABCORE Data Entry Template for Worklist# 2142

Analyst: Sds **Instrument:** DSC0 **Book #** 12N14A

Method: LA-514-113 Rev/Mod C-0

Worklist Comment: Please run BY-108 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
95000101	BY-108 (R)	2 SAMPLE	S95T001365	0		DSC-01	LIQUID	N/A			Joules/g
95000101	BY-108 (R)	3 DUP	S95T001365	0		DSC-01	LIQUID			N/A	Joules/g
95000104	BY-108 (R)	4 SAMPLE	S95T001430	0		DSC-01	LIQUID	N/A			Joules/g
95000104	BY-108 (R)	5 DUP	S95T001430	0		DSC-01	LIQUID			N/A	Joules/g

Final page for worklist # 2142

Analyst Signature 9-8-95 Date

Analyst Signature Date

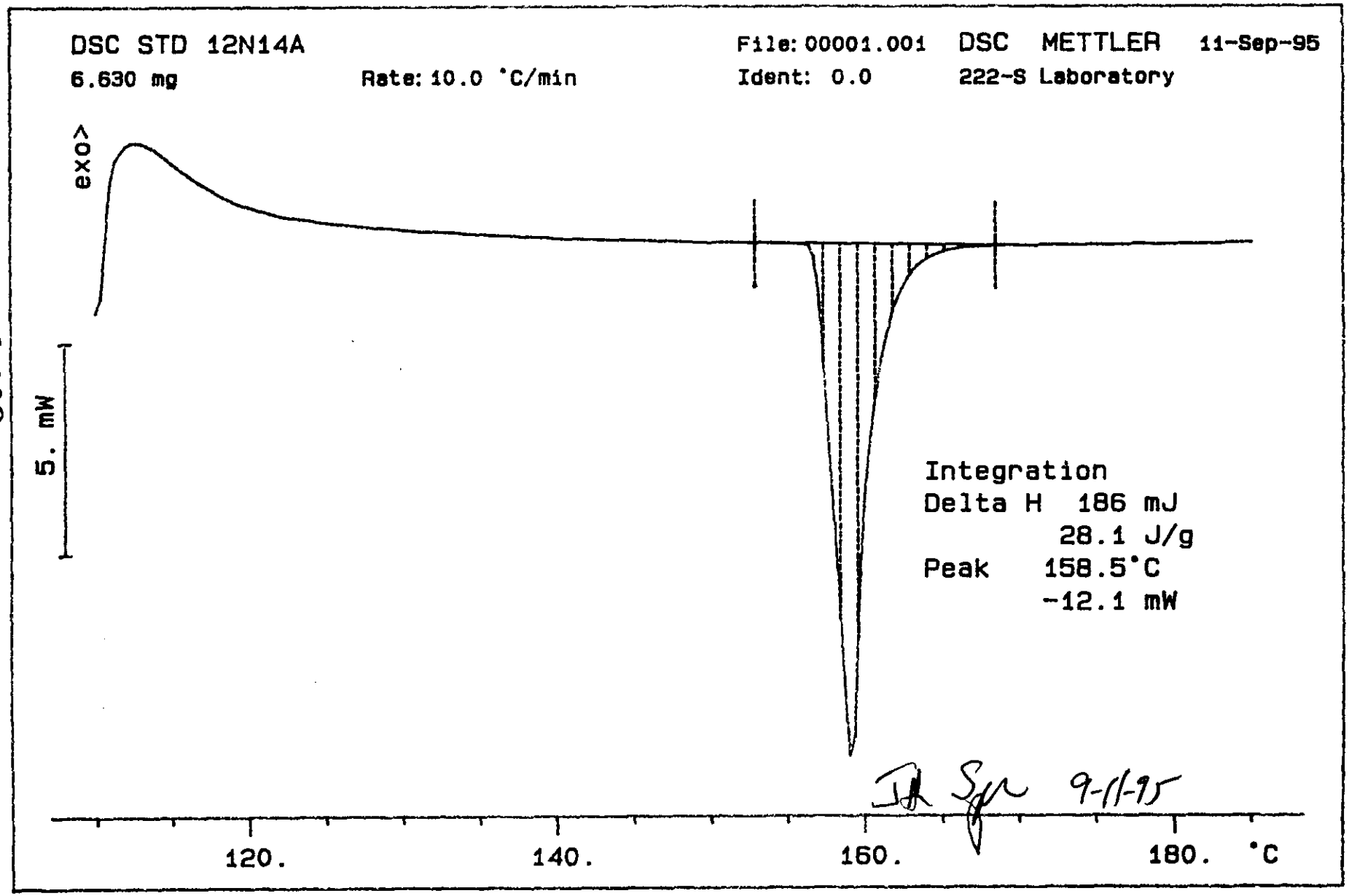
Data Entry Comments: ~~Sample S95T001365 has not been released from the Hot Cells yet.~~ SS 9-8-95

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.

J-108

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 2-109 TO 2-114.

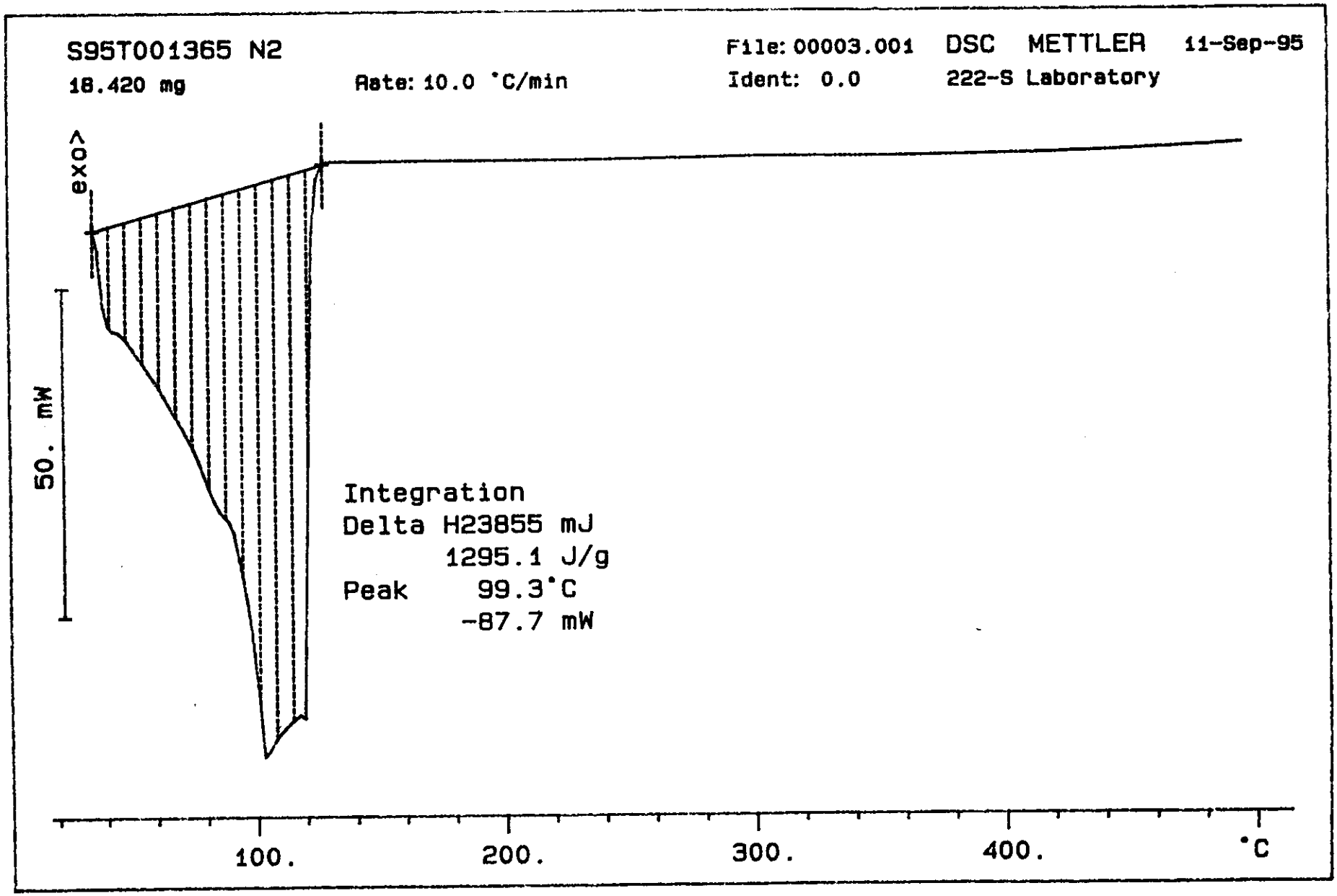
BEST AVAILABLE COPY



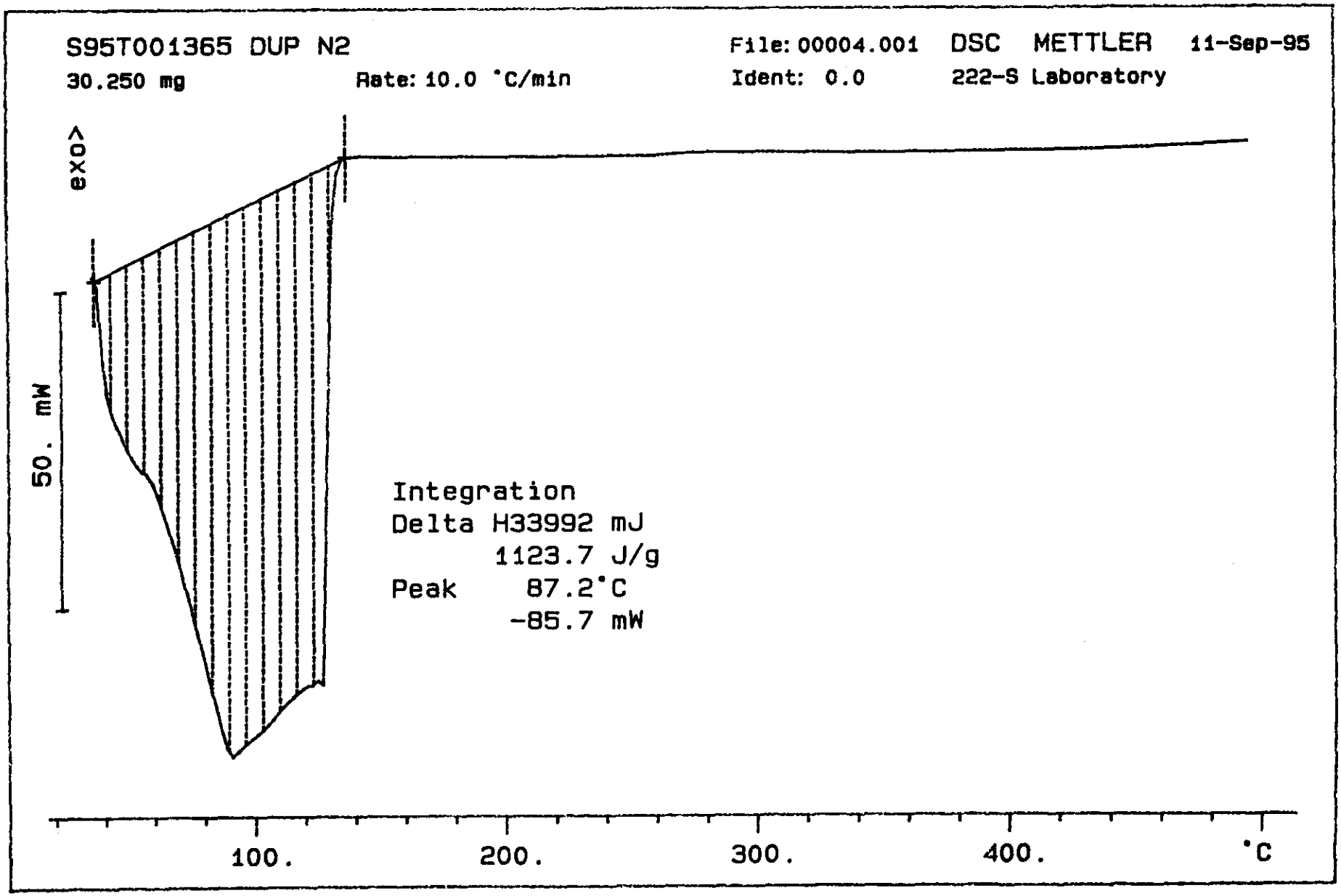
JA Sgr 9-11-95

WHC-SD-WM-DP-145, REV. 1

BEST AVAILABLE COPY

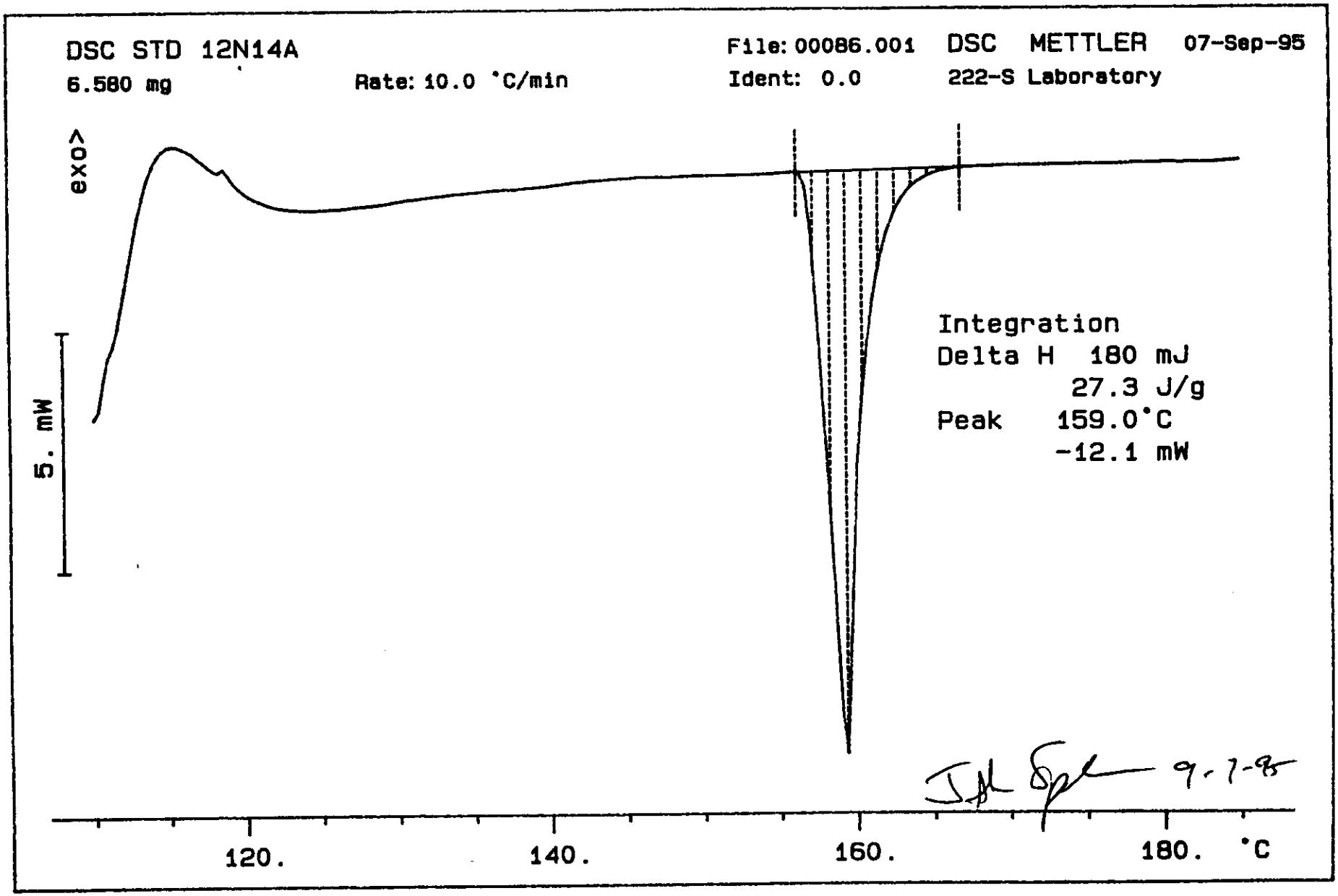


BEST AVAILABLE COPY



WHC-SD-WM-DP-145, REV. 1

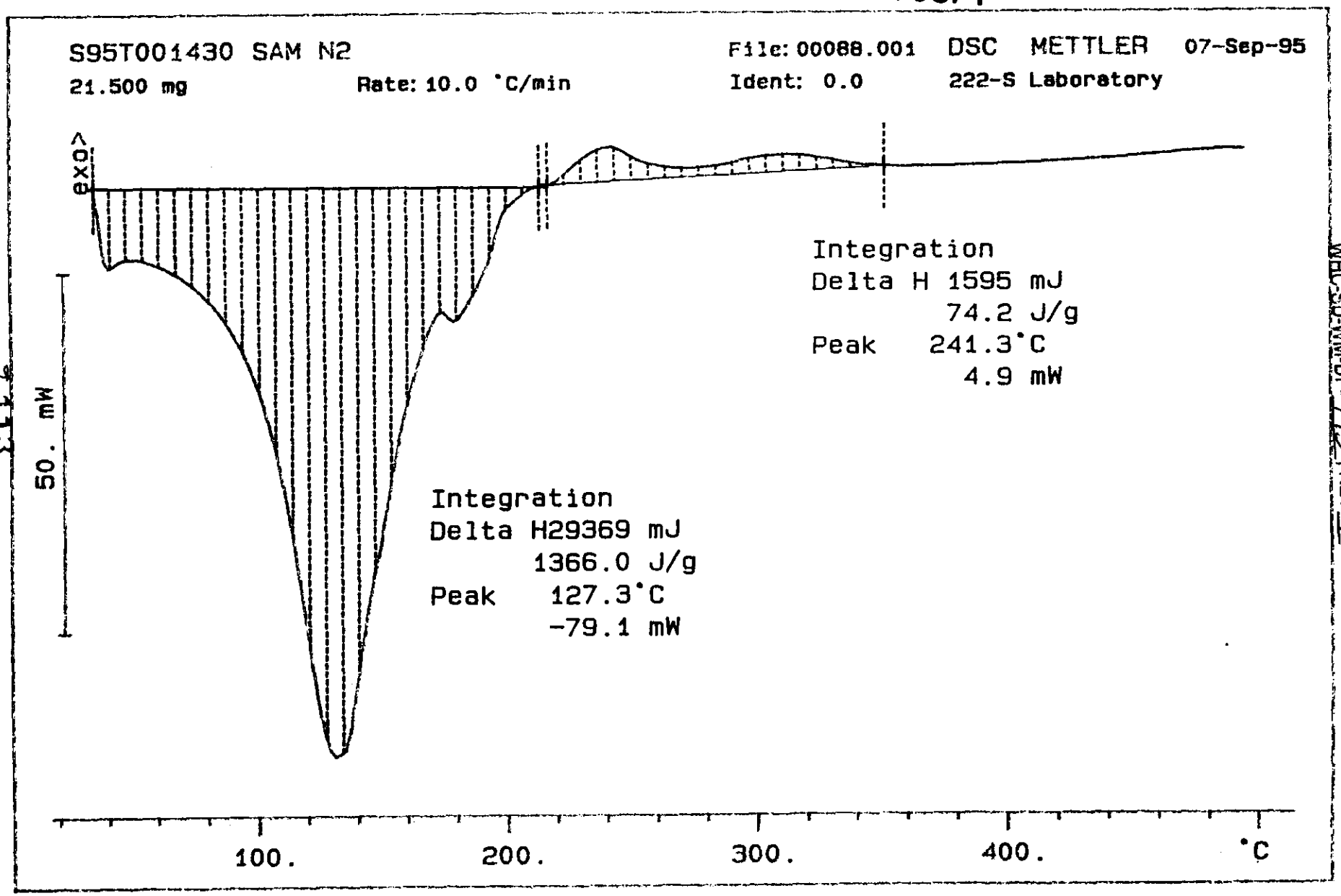
BEST AVAILABLE COPY



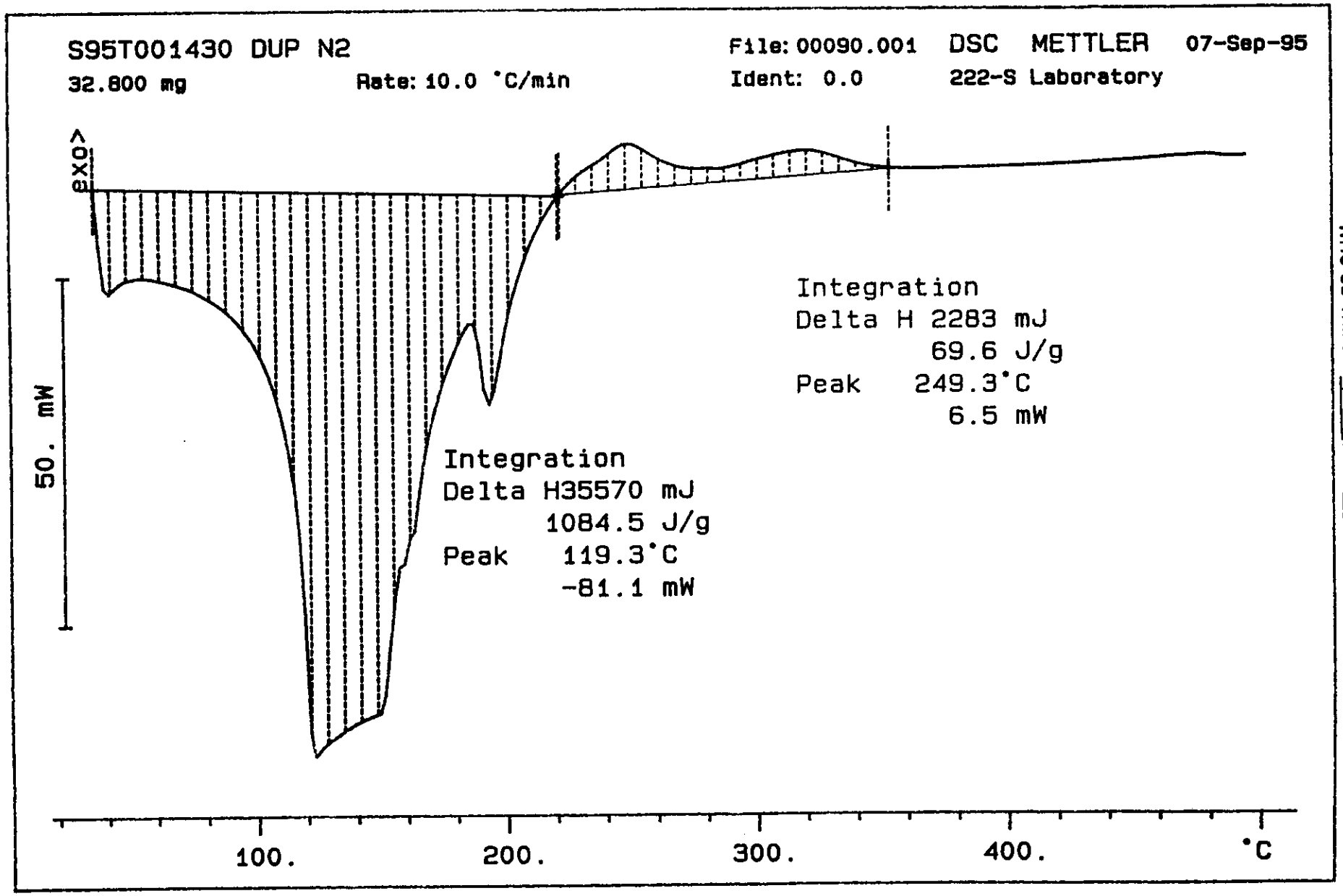
WHC-SD-WM-DP-145, REV. 1

2-112

BEST AVAILABLE COPY



BEST AVAILABLE COPY



LABCORE Data Entry Template for Worklist# 2273

Analyst: SMF **Instrument:** DSC01 3 9-11-95 BDV **Book #** 12N14A

Method: LA-514-114 Rev/Mod C-0

Worklist Comment: BY-108 DSC, please run under N2. JMF

GROUP	PROJECT	S TYPE	SAMPLE#	R	A	-------TEST------	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD				DSC-03	SOLID	28.45	27.82	N/A	Joules/g
95000118	BY-108 (R)	2 SAMPLE	S95T001925	0		DSC-03	SOLID	N/A	Ø		Joules/g
95000118	BY-108 (R)	3 DUP	S95T001925	0		DSC-03	SOLID	Ø	Ø	N/A	Joules/g

Final page for worklist # 2273

See attached for signatures

Analyst Signature **Date** 9-11-95 BDV

[illegible] 9-14-95

Analyst Signature **Date**

Verified 9/14/95. Jan M. Leye

Data Entry Comments: Sample produced three endothermic regions; one at 122.2°C with a delta H of 648.4 J/g, second at 284.2°C with a delta H of 7.2 J/g, and third at 319.7°C with a delta H of 65.2 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# 2273

Analyst: SMF **Instrument:** DSC01 **Book #** 12N14A

Method: ~~LA 514-113 Rev/Mod~~ LA-514-114 1C-0
SMF 9-8-95

Worklist Comment: BY-108 DSC, please run under N2. JMF

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	STD				DSC-01	SOLID			N/A	Joules/g
95000118	BY-108 (R)	2	SAMPLE	S95T001925	0		DSC-01	SOLID	N/A			Joules/g
95000118	BY-108 (R)	3	DUP	S95T001925	0		DSC-01	SOLID			N/A	Joules/g

Final page for worklist # 2273

SMFulton 9-8-95
Analyst Signature **Date**

Analyst Signature **Date**

Other instruments were used
9-11-95
BDV

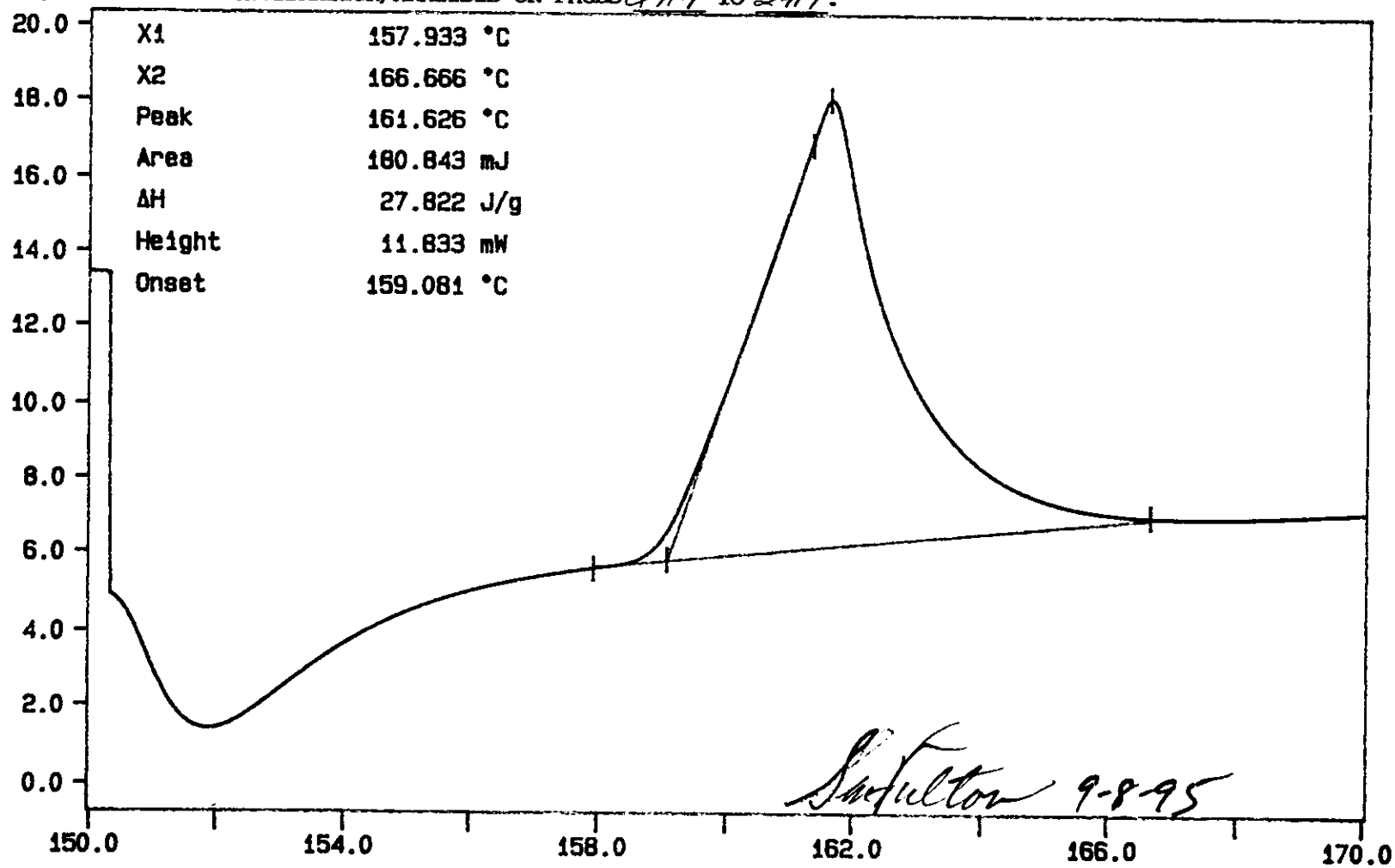
Data Entry Comments:

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: IND090801 Fri Sep 8 00:23:54 1995
Sample Weight: 6.500 mg
12N14A Indium at 10C/min

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 2117 TO 2119.

BEST AVAILABLE COPY



N2, EXOTHERM DOWN
TEMP1: 150.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 170.0 C

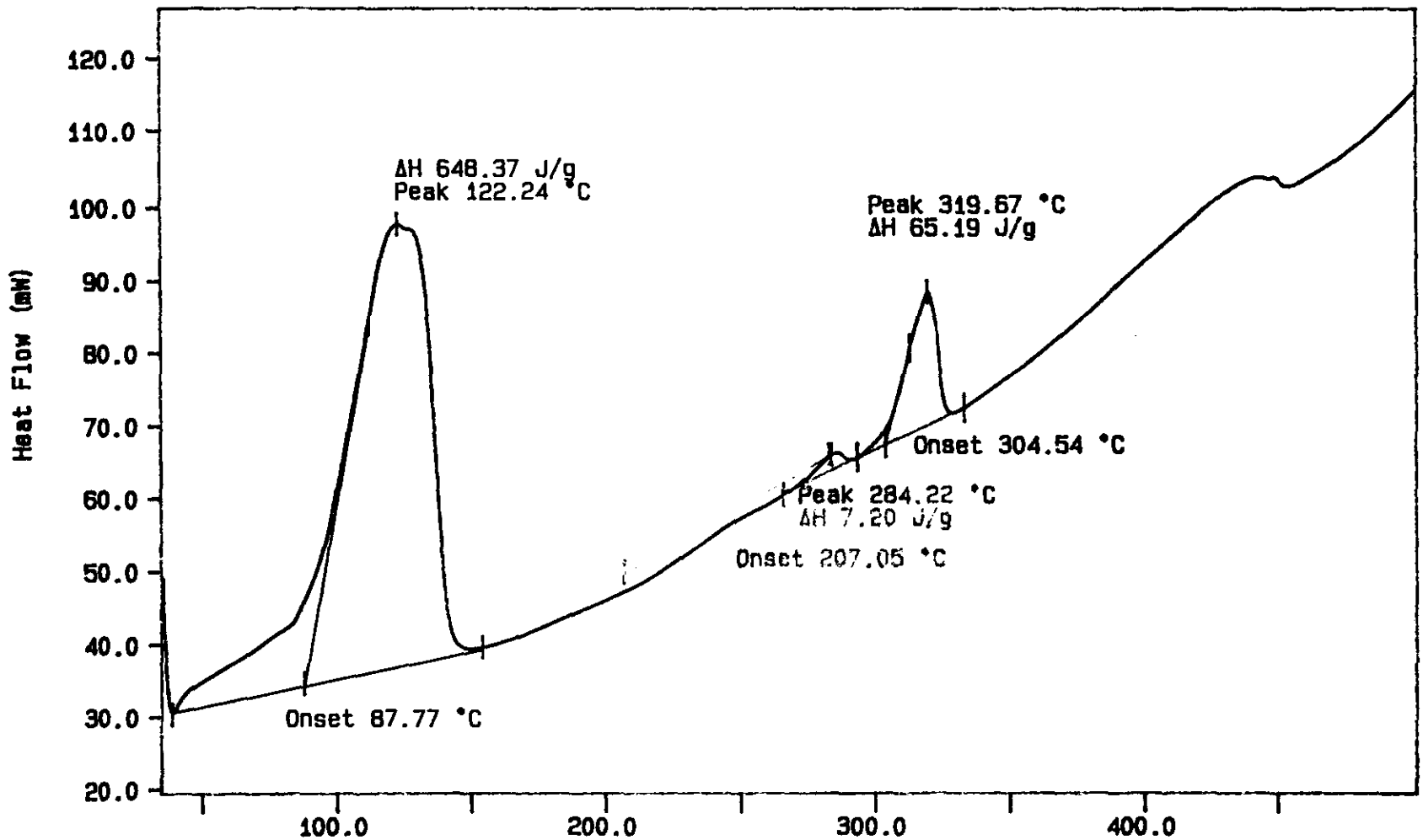
SM FULTON
PERKIN ELMER
222-S Lab
Fri Sep 8 03:28:32 1995

2-117

WHC-SD-WM-DP-145, REV. 1

Curve 1: DSC
File info: SAM090802 Fri Sep 8 04:03:19 1995
Sample Weight: 21.690 mg
S95T001925 at 10C/min

BEST AVAILABLE COPY



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

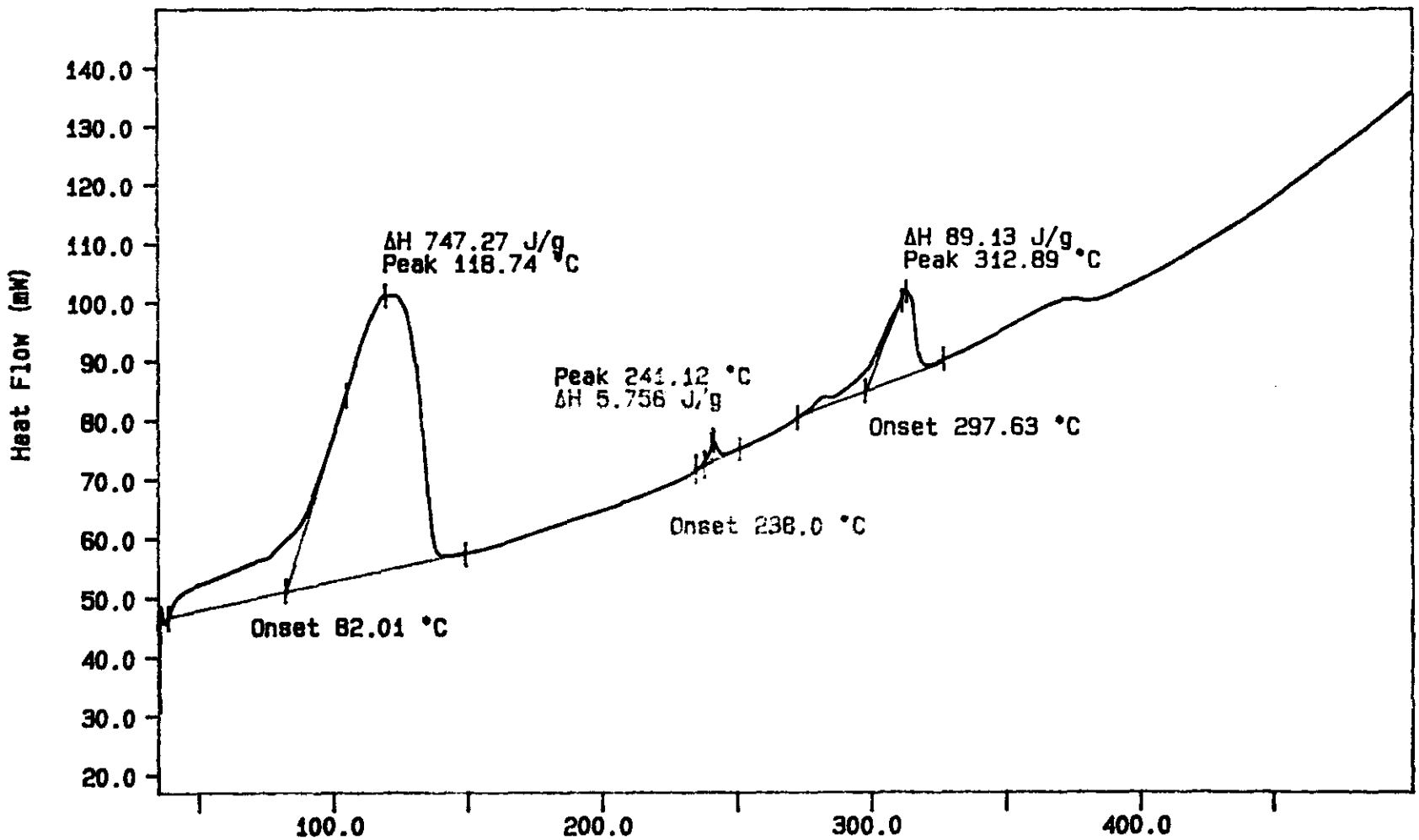
SM FULTON
PERKIN ELMER
222-S Lab
Fri Sep 8 05:25:06 1995

2-118

WHC-SD-WM-DP-145, REV 1

Curve 1: DSC
File info: SAM0908003 Fri Sep 8 06:19:42 1995
Sample Weight: 14.760 mg
S95T001925 DUP at 10C/min

BEST AVAILABLE COPY



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
222-S Lab
Fri Sep 8 06:32:16 1995

2-119

WHC-SD-WM-DP-145, REV. 1

LABCORE Data Entry Template for Worklist# 2317

Analyst: RG **Instrument:** DSC0 1 **Book #** 12N14A

Method: LA-514-113 Rev/Mod C-0

Worklist Comment: Please run BY-108 DSCs under N2. bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R	A	-------TEST------	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD				DSC-01	SOLID	28.45	30.4	N/A	Joules/g
95000118	BY-108 (R)	2 SAMPLE	S95T001966	0		DSC-01	SOLID	N/A	Ø		Joules/g
95000118	BY-108 (R)	3 DUP	S95T001966	0		DSC-01	SOLID	Ø	Ø	N/A	Joules/g
95000118	BY-108 (R)	4 SAMPLE	S95T001967	0		DSC-01	SOLID	N/A	Ø		Joules/g
95000118	BY-108 (R)	5 DUP	S95T001967	0		DSC-01	SOLID	Ø	Ø	N/A	Joules/g

Final page for worklist # 2317

Rae Ann Green 9-29-95
Analyst Signature Date

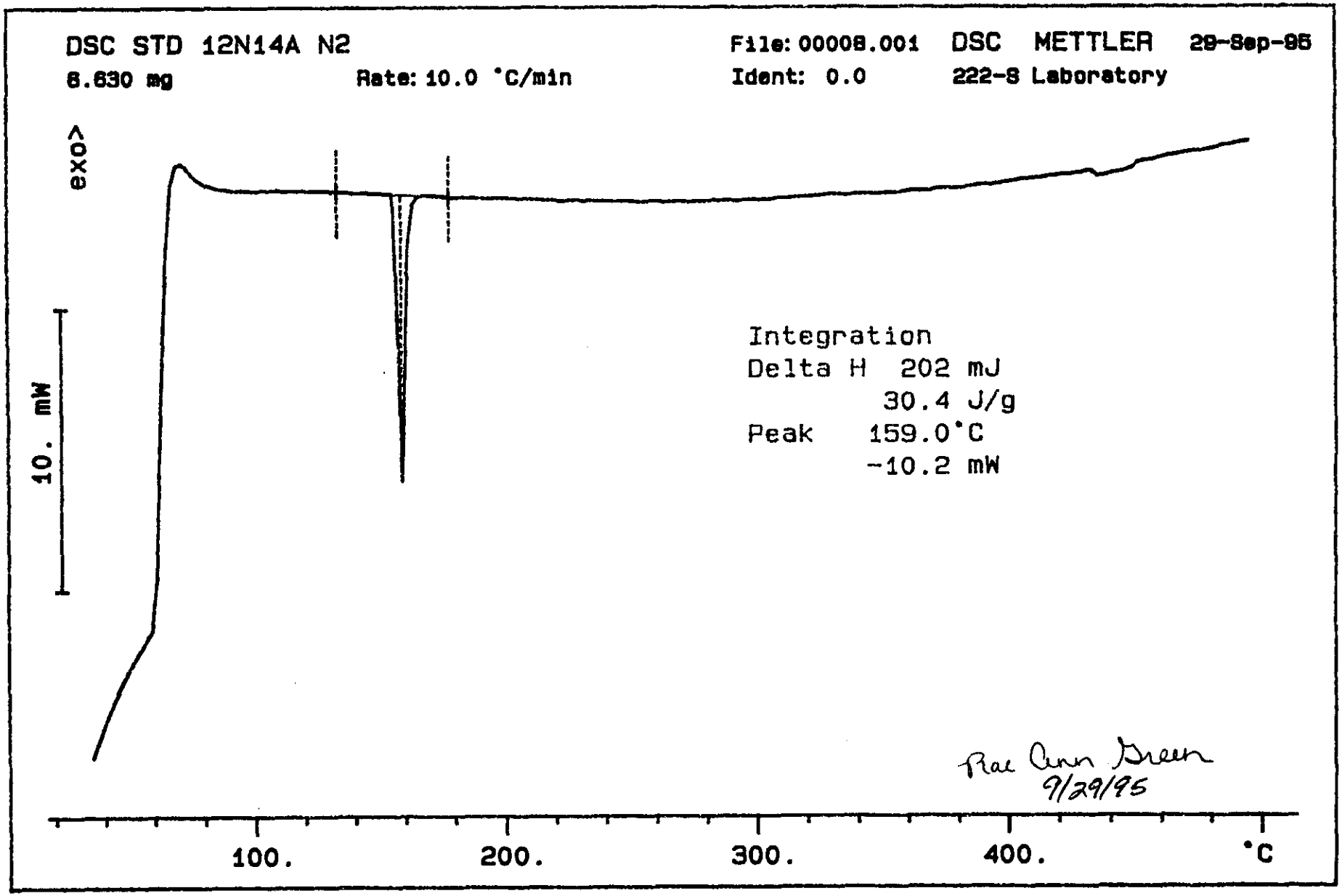
Gary Hummitt 10-5-95
Analyst Signature Date

Verified by Blandina Valenzuela 10-5-95

Data Entry Comments: S95T001966 produced two endotherms, one at 135.9°C with a delta H of 470.5 J/g and second at 274°C with a delta H of 44.2 J/g. S95T001967 produced two endotherms, one at ~~8~~ 108.0°C with a delta H of 596.0 J/g and second at 308.8°C with a delta H of 62.7 J/g. 10-2-95 BDV

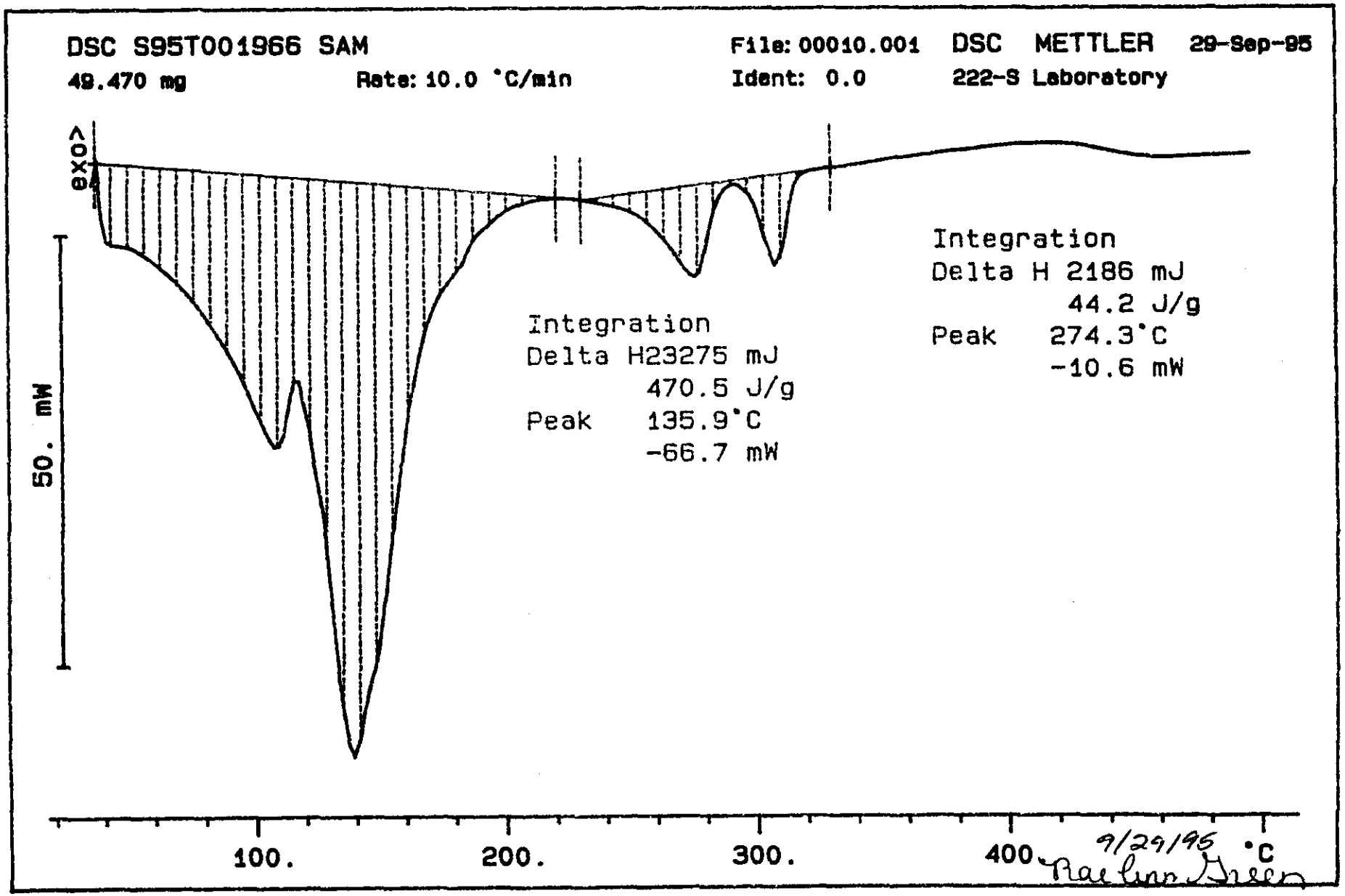
Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

BEST AVAILABLE COPY



WHC-SD-WM-DP-145, REV. 1

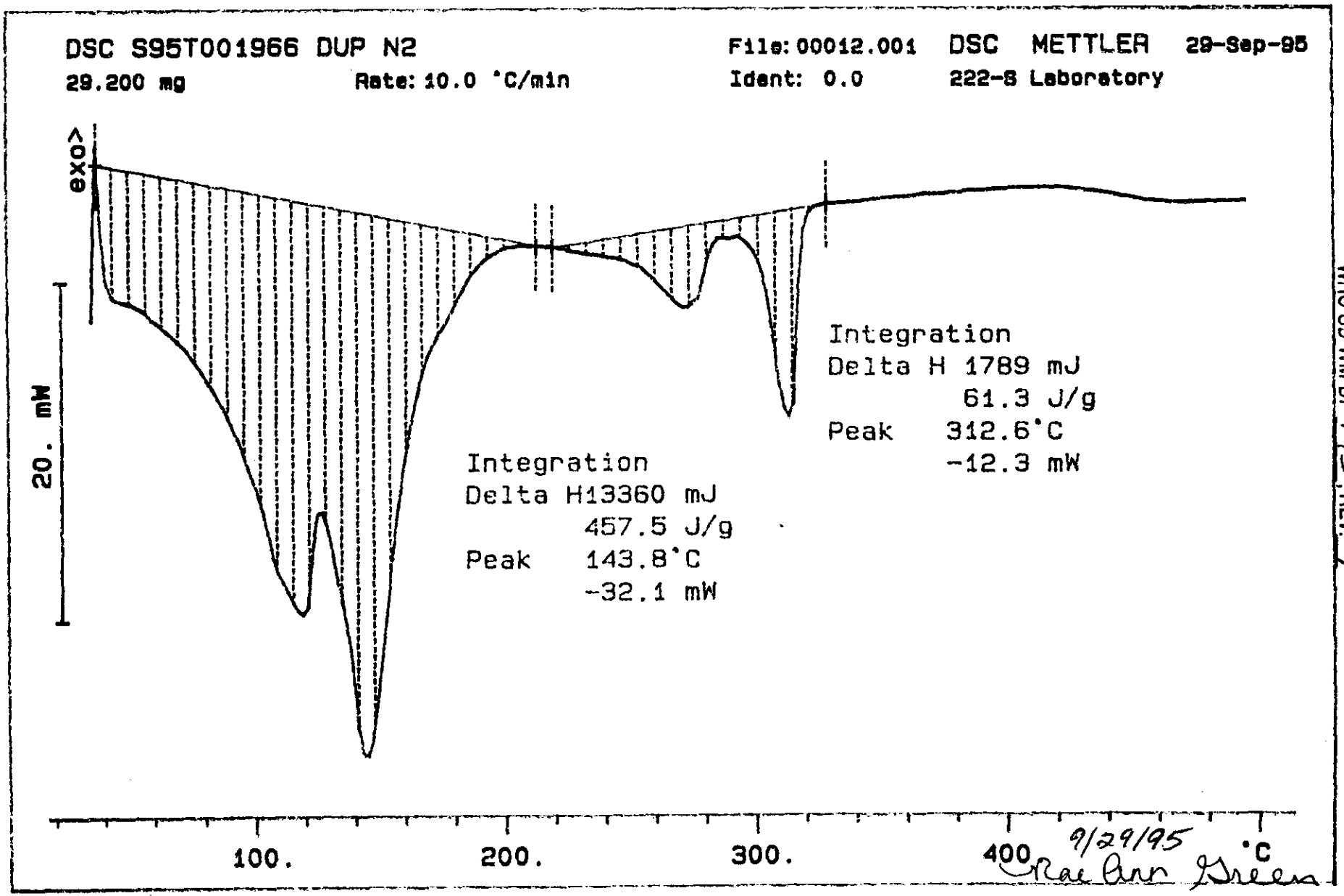
BEST AVAILABLE COPY



2-122

WHC-SD-WM-DP-145, REV. 1

BEST AVAILABLE COPY

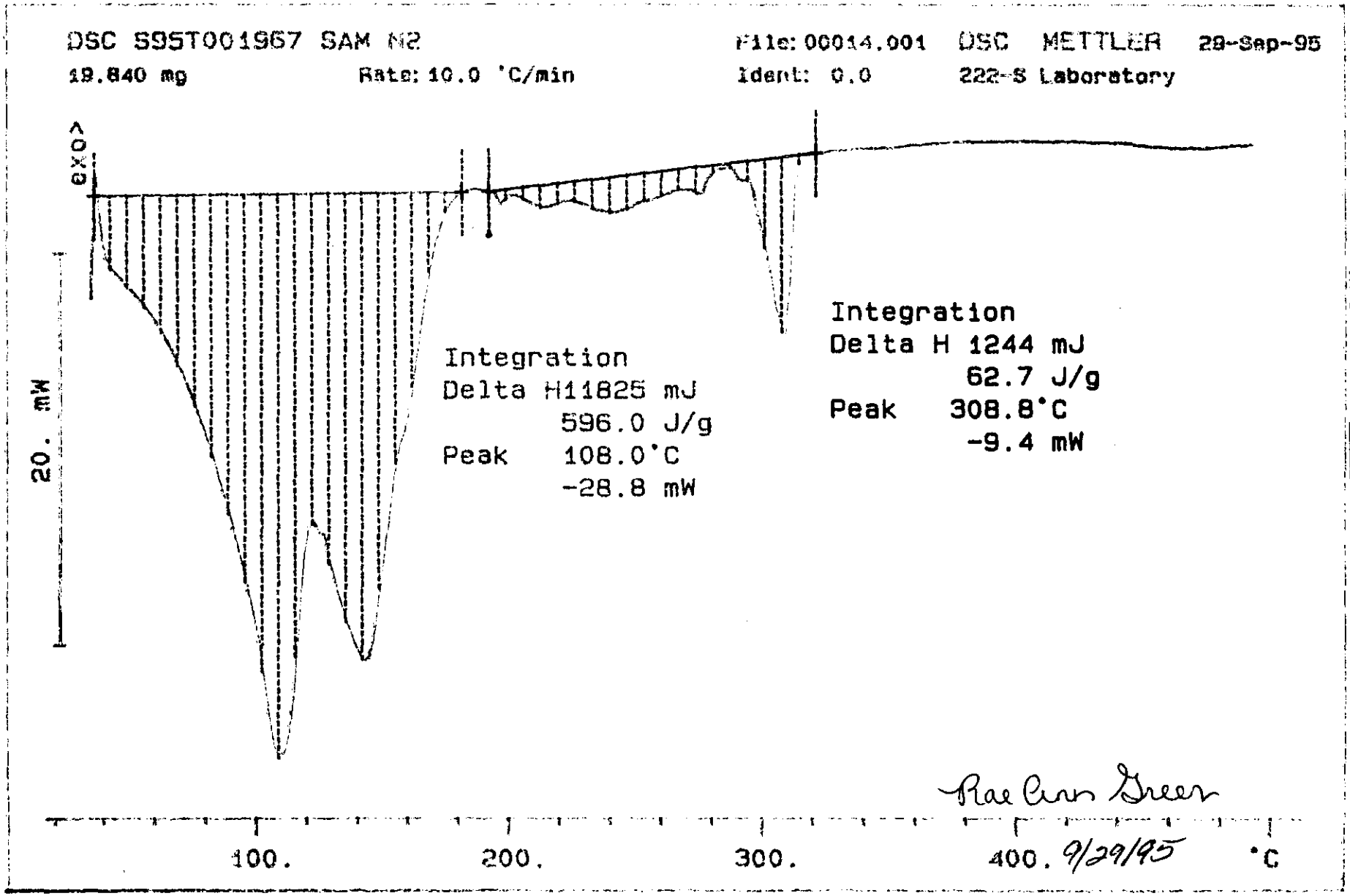


9/29/95
Rae Ann Green

WHC-CD-WM-DP-145, REV. 1

2-123

BEST AVAILABLE COPY



Rae Ann Green 9/29/95

WHC-SD-WM-DP-145, REV. 1

BEST AVAILABLE COPY

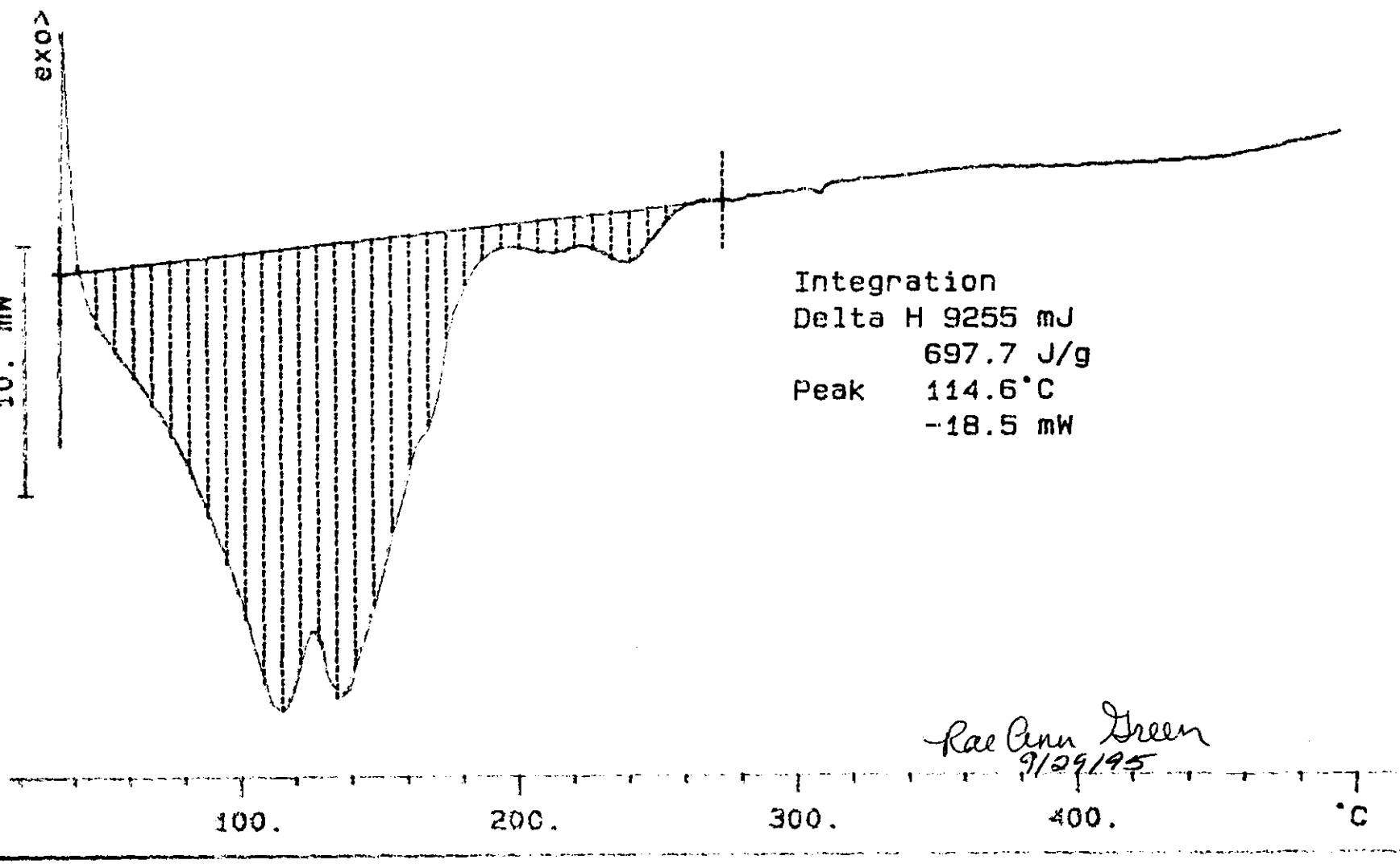
DSC S95T001967 DUP N2

13.264 mg

Rate: 10.0 °C/min

File: 00015.001 DSC METTLER 29-Sep-95

Ident: 0.0 222-S Laboratory



Rae Ann Green
9/29/95

WHC-SD-WM-DP-145, REV. 1

2-125

LABCORE Data Entry Template for Worklist# 2318

Analyst: PJM **Instrument:** DSC0 3 **Book #** 12N14A

Method: LA-514-114 Rev/Mod C-0

Worklist Comment: Please run BY-108 DSCs under N2. bdv

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	STD				DSC-03	SOLID	28.45	28.24	N/A	Joules/g
95000118	BY-108 (R)	2	SAMPLE	S95T001968	0		DSC-03	SOLID	N/A	Ø		Joules/g
95000118	BY-108 (R)	3	DUP	S95T001968	0		DSC-03	SOLID	Ø	Ø	N/A	Joules/g
		4	STD				DSC-03	SOLID	28.45	28.21	N/A	Joules/g
95000118	BY-108 (R)	5	SAMPLE	S95T001969	0		DSC-03	SOLID	N/A	Ø		Joules/g
95000118	BY-108 (R)	6	DUP	S95T001969	0		DSC-03	SOLID	Ø	Ø	N/A	Joules/g

Final page for worklist # 2318

See attached for signatures
Analyst Signature Date

[signature] 10-5-95
Analyst Signature Date

Verified by Blandina Valenzuela (10-5-95)

S95T001968 produced two endotherms: one at 110.54°C with a delta H of 741.5 J/g and second at 219.3°C with a delta H 15.1 J/g.

Data Entry Comments: S95T001969 produced one endotherm at 134.8°C with a delta H of 812.2 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# 2318

Analyst: RJ McCown **Instrument:** DSC0 **Book #** 12N14A

Method: LA-514-~~115~~ 114 Rev/Mod C-0 RJM 9/30/95

Worklist Comment: Please run BY-108 DSCs under N2. bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R	A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD				DSC-01	SOLID			N/A	Joules/g
95000118	BY-108 (R)	2 SAMPLE	S95T001968	0		DSC-01	SOLID	N/A			Joules/g
95000118	BY-108 (R)	3 DUP	S95T001968	0		DSC-01	SOLID			N/A	Joules/g
95000118	BY-108 (R)	4 SAMPLE	S95T001969	0		DSC-01	SOLID	N/A			Joules/g
95000118	BY-108 (R)	5 DUP	S95T001969	0		DSC-01	SOLID			N/A	Joules/g

Final page for worklist # 2318

RJ McCown 9/30/95
Analyst Signature Date

Analyst Signature Date

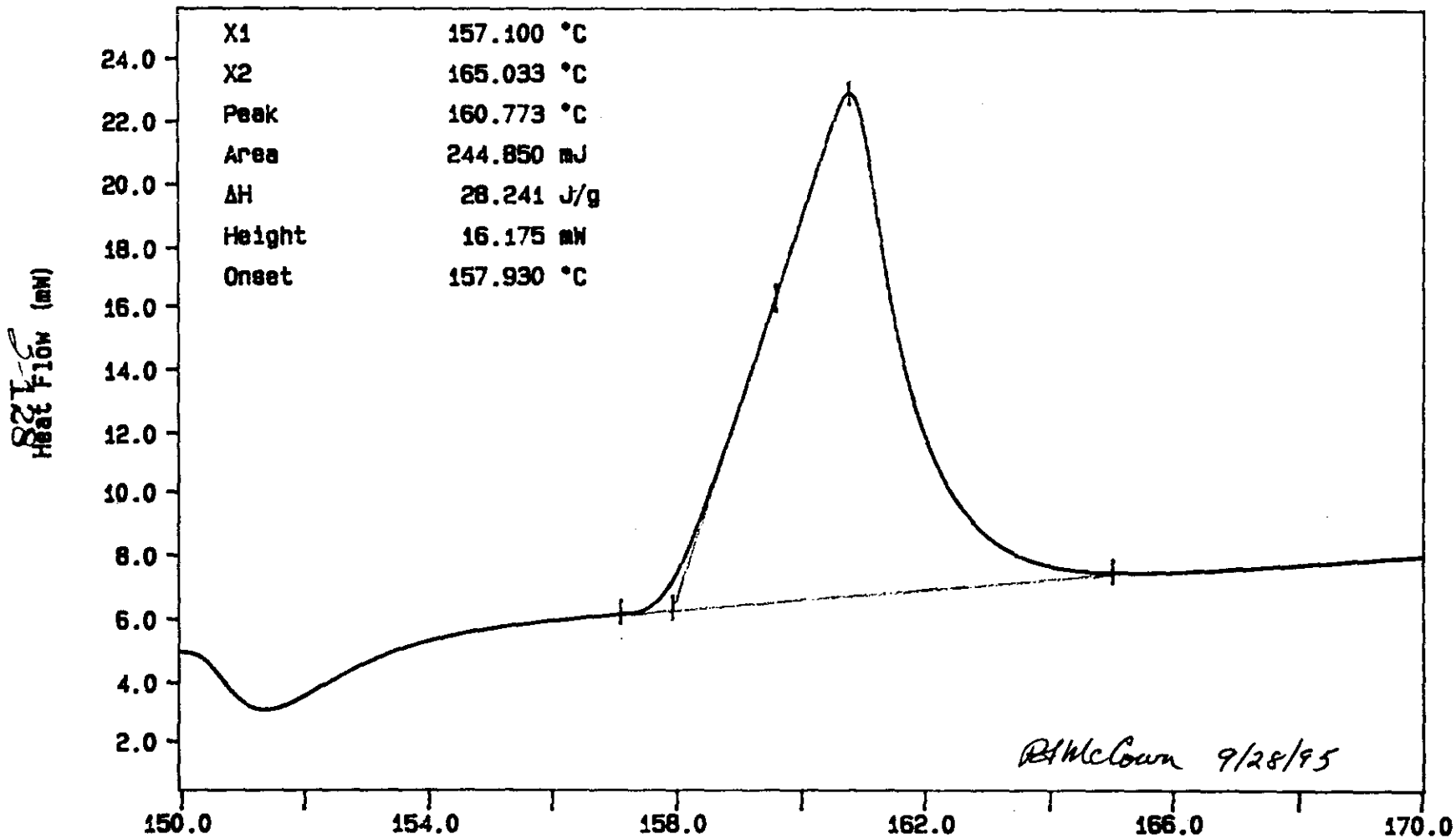
Other instrument was used.
10-5-95
BDV

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: IND092802 Thu Sep 28 16:37:00 1995
Sample Weight: 8.670 mg
12N14A Indium at 10C/min

BEST AVAILABLE COPY



N2, EXOTHERM DOWN
TEMP1: 150.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 170.0 C

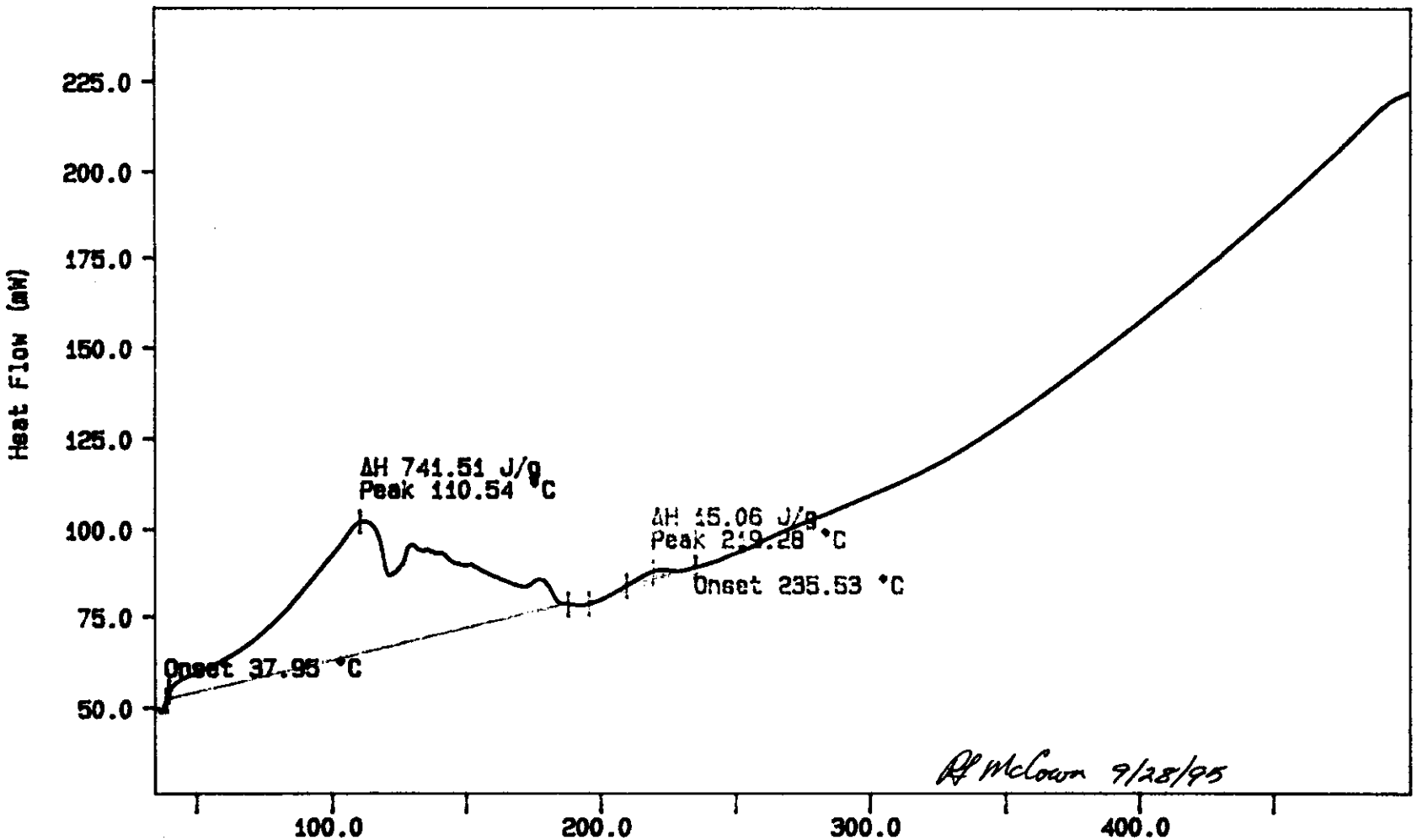
PJ MCCOWN
PERKIN ELMER
222-S Lab
Thu Sep 28 16:42:20 1995

WHC-SD-WM-DP-145, REV. 1

3128

Curve 1: DSC
File info: SAM092808 Thu Sep 28 19:40:00 1995
Sample Weight: 19.760 mg
~~595T001831~~ RLM
595T001968 9/28/95

BEST AVAILABLE COPY



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

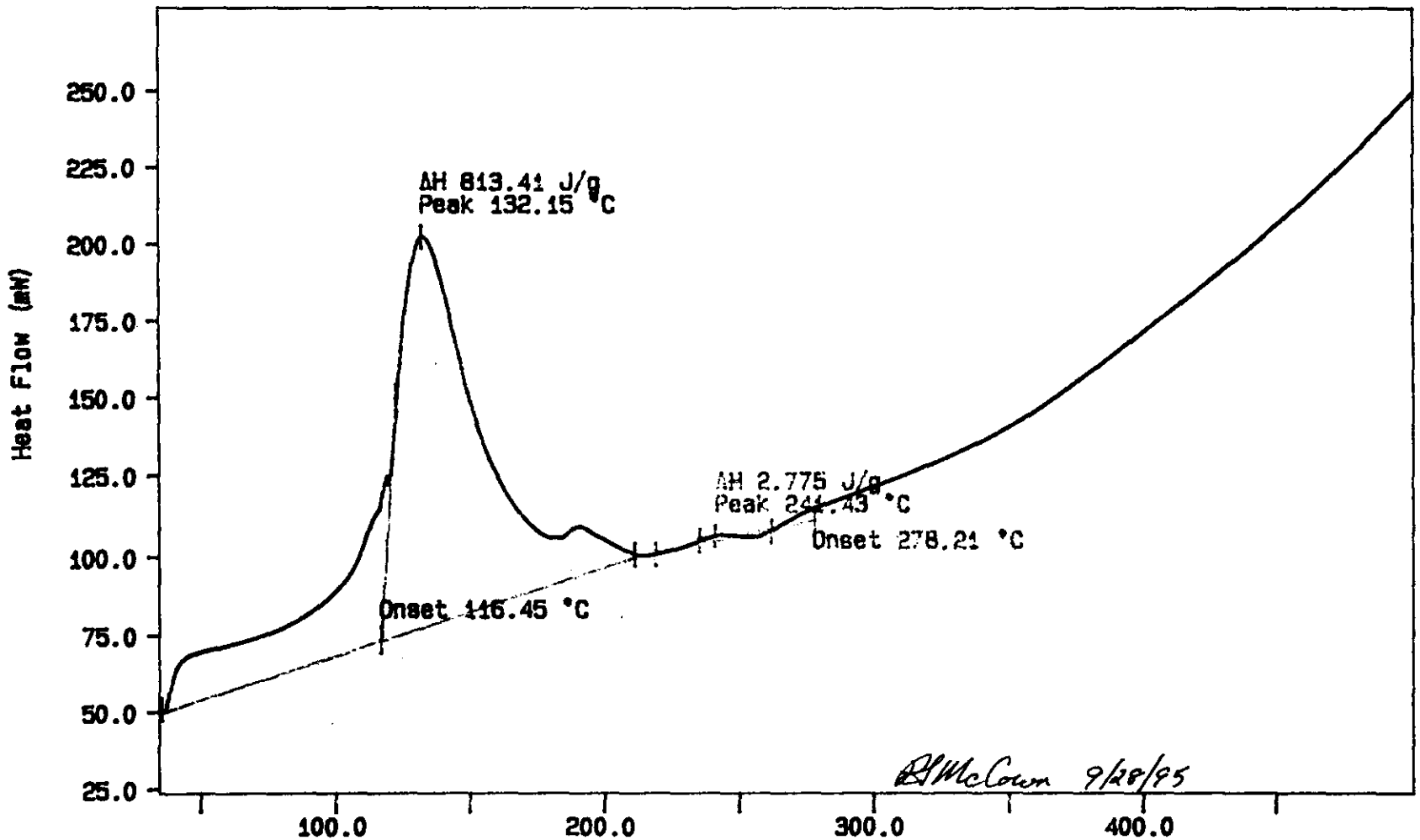
PJ MCCOWN
PERKIN ELMER
222-S Lab
Thu Sep 28 19:56:09 1995

2-129

WHC-CD-WM-DP-145, REV. 1

Curve 1: DSC
File info: SAM092809 Thu Sep 28 21:04:33 1995
Sample Weight: 43.400 mg
~~S95T001831 DUP~~ RLM 9/28/95
S95T001968 DUP

BEST AVAILABLE COPY



exotherm down, N2 purge gas
TEMP1: 35.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 400.0 C

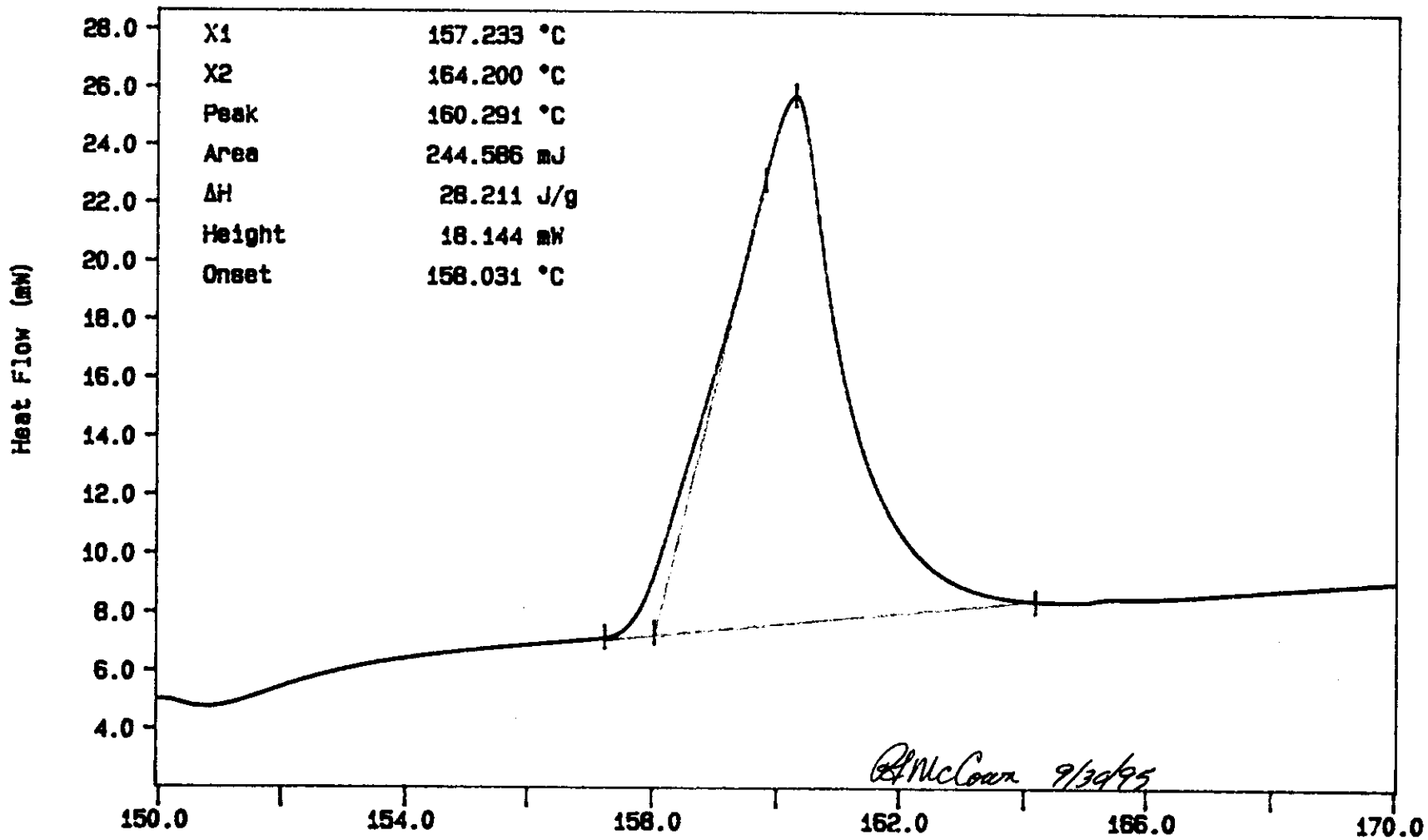
PJ MCCOWN
PERKIN ELMER
222-S Lab
Thu Sep 28 21:38:09 1995

B-130

WHC-SD-WM-DP-145, REV 1

Curve 1: DSC
File info: IND093001 Sat Sep 30 18:05:39 1995
Sample Weight: 8.670 mg
12N14A Indium at 10C/min

BEST AVAILABLE COPY

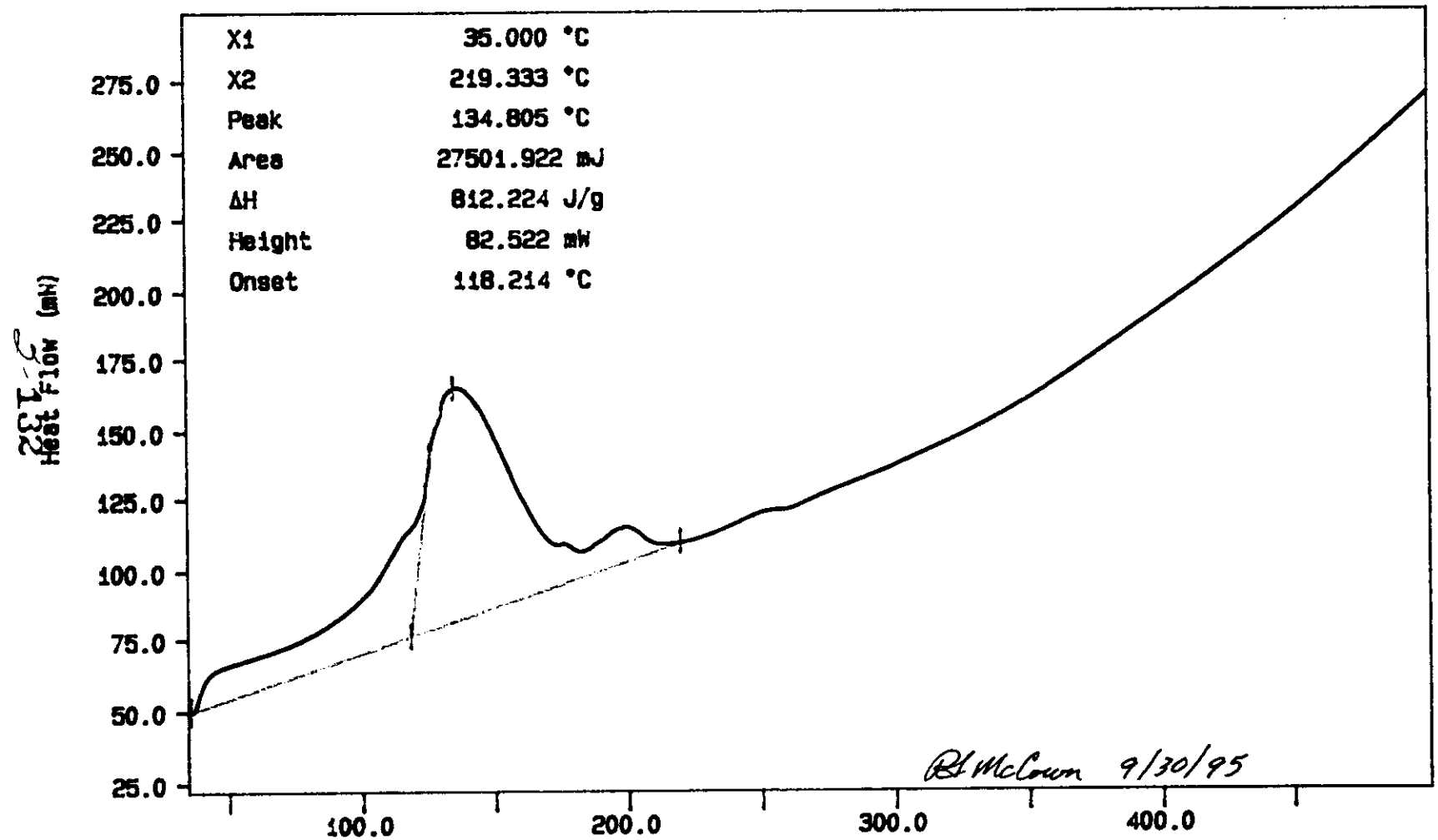


N2, EXOTHERM DOWN
TEMP1: 180.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 170.0 C

PJ MCCOWN
PERKIN ELMER
222-S Lab
Sat Sep 30 18:17:43 1995

Curve 1: DSC
File info: SAM093001 Sat Sep 30 19:29:16 1995
Sample Weight: 33.860 mg
S95T001969 SAM

BEST AVAILABLE COPY



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

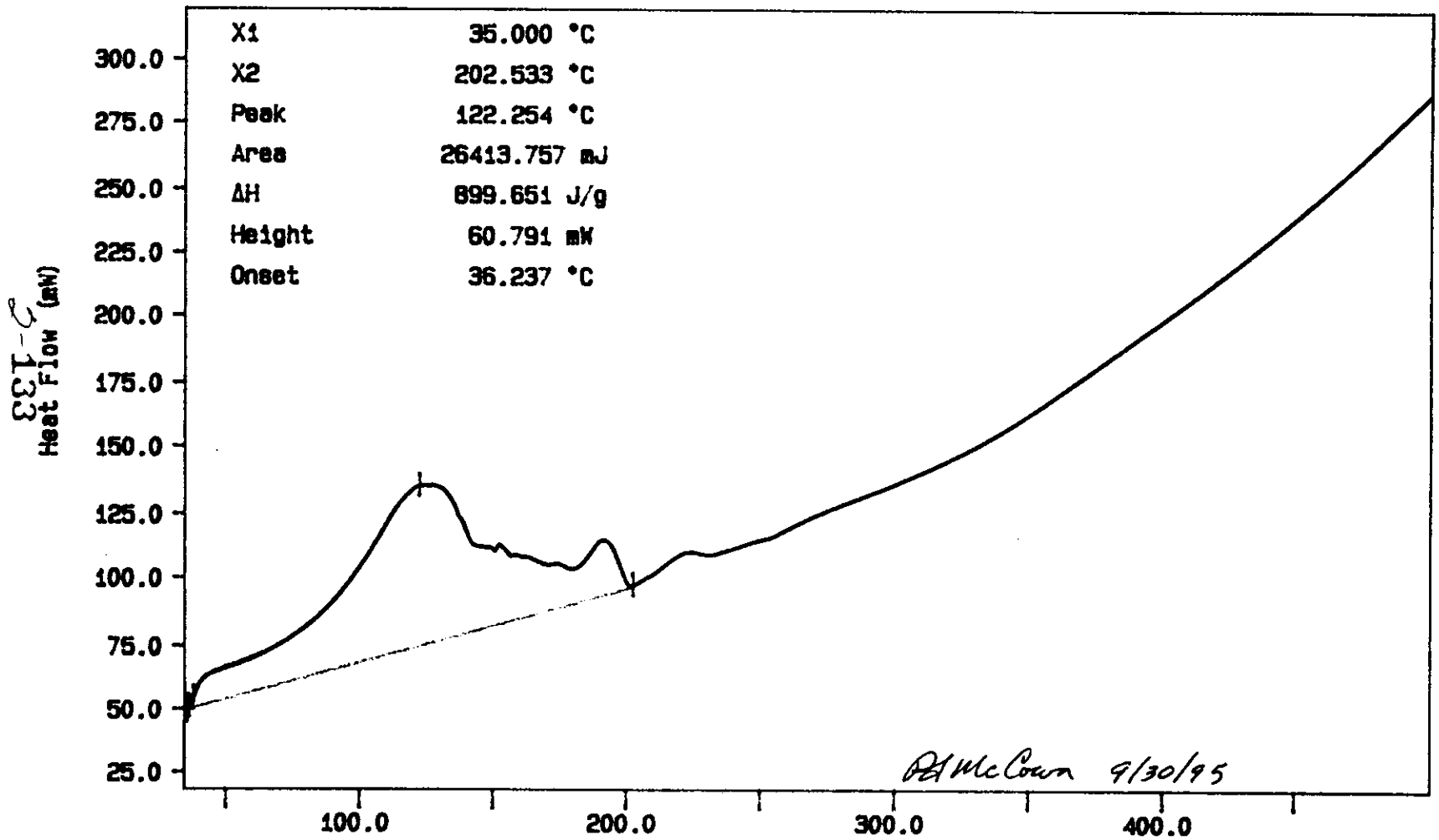
PJ MCCOWN
PERKIN ELMER
222-S Lab
Sat Sep 30 19:55:44 1995

WHC-SD-WM-DP-145, REV. 1

5-132

Curve 1: DSC
File info: SAM093002 Sat Sep 30 20:51:36 1995
Sample Weight: 29.360 mg
S95T001969 DUP

BEST AVAILABLE COPY



exotherm down, N2 purge gas
TEMP1: 35.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 400.0 C

PJ MCCOWN
PERKIN ELMER
222-S Lab
Sat Sep 30 22:26:05 1995

2-133

WHC-SD-WM-DP-145, REV. 1

LABCORE Data Entry Template for Worklist# 2320

Analyst: ADP **Instrument:** DSC0 3 **Book #** 12 N14A

Method: LA-514-114 Rev/Mod C-0

Worklist Comment: Please run BY-108 DSCs under N2. bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R	A	-------TEST------	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD				DSC-03	SOLID	28.45	28.39	N/A	Joules/g
95000118	BY-108 (R)	2 SAMPLE	S95T001970	0		DSC-03	SOLID	N/A	Ø		Joules/g
95000118	BY-108 (R)	3 DUP	S95T001970	0		DSC-03	SOLID	Ø	Ø	N/A	Joules/g
95000118	BY-108 (R)	4 SAMPLE	S95T001971	0		DSC-03	SOLID	N/A	Ø		Joules/g
95000118	BY-108 (R)	5 DUP	S95T001971	0		DSC-03	SOLID	Ø	Ø	N/A	Joules/g

Final page for worklist # 2320

See attached for signatures
Analyst Signature Date

Gary Hammett 10-5-95
Analyst Signature Date

Verified by Blandina Valenzuela 10-5-95

Data Entry Comments: S95T001970 produced one endotherm at 102.7°C with a delta H 473.2 J/g. S95T001971 produced one endotherm at 133.3°C with a delta H of 611.4 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# 2320

Analyst: ADP **Instrument:** DSC0 _____ **Book #** 12N14A

Method: LA-514-113 Rev/Mod CO

Worklist Comment: Please run BY-108 DSCs under N2. bdv

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	-------TEST------	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	STD				DSC-01	SOLID			N/A	Joules/g
95000118	BY-108 (R)	2	SAMPLE	S95T001970	0		DSC-01	SOLID	N/A			Joules/g
95000118	BY-108 (R)	3	DUP	S95T001970	0		DSC-01	SOLID			N/A	Joules/g
95000118	BY-108 (R)	4	SAMPLE	S95T001971	0		DSC-01	SOLID	N/A			Joules/g
95000118	BY-108 (R)	5	DUP	S95T001971	0		DSC-01	SOLID			N/A	Joules/g

Final page for worklist # 2320

Anthony Punto 9-29-95
Analyst Signature **Date**

Analyst Signature **Date**

Other instrument was used.
10-5-95
BDV

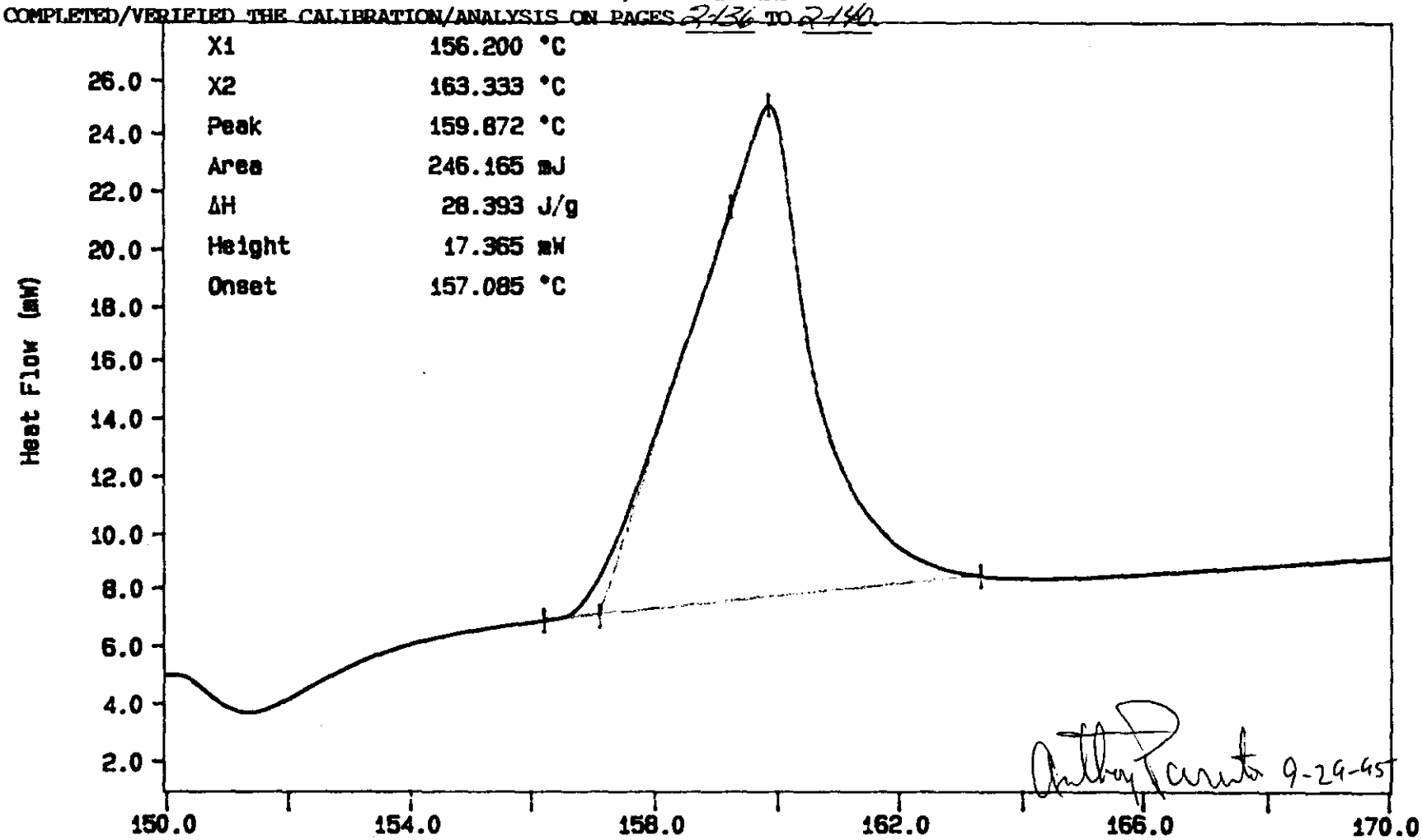
Data Entry Comments:

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: IND092902 Fri Sep 29 01:32:29 1995
Sample Weight: 8.670 mg
12N14A Indium at 10C/min

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 2-136 TO 2-140

BEST AVAILABLE COPY



Anthony Parinto 9-29-95

N2, EXOTHERM DOWN
TEMP1: 150.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 170.0 C

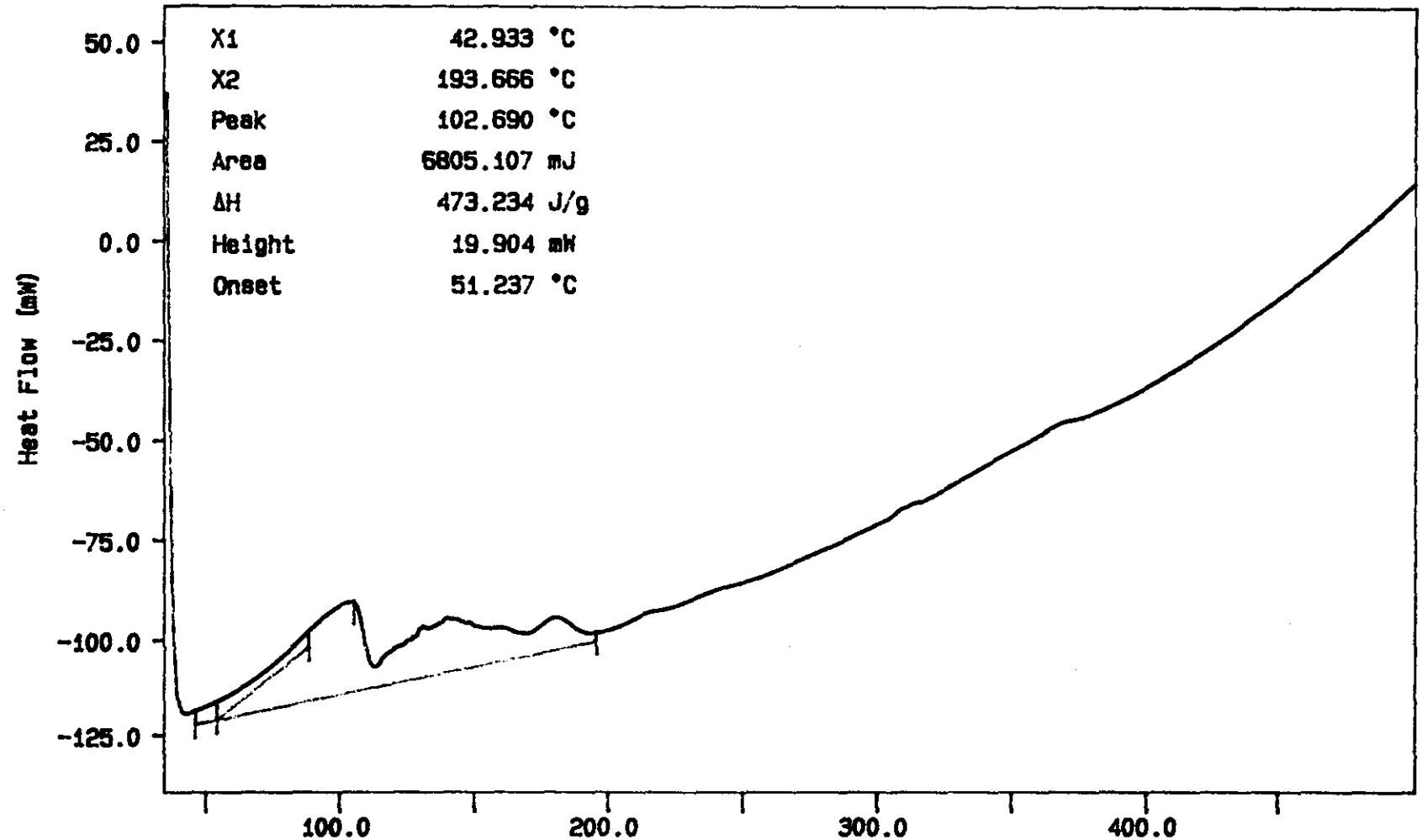
AD PURINTON
PERKIN ELMER
222-S Lab
Fri Sep 29 01:38:14 1995

WHC-SD-WM-DP-145, REV. 1

2-136

Curve 1: DSC
File info: SAM092901 Fri Sep 29 02:35:58 1995
Sample Weight: 14.380 mg
S95T001970

BEST AVAILABLE COPY



exotherm down, N2 purge gas

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

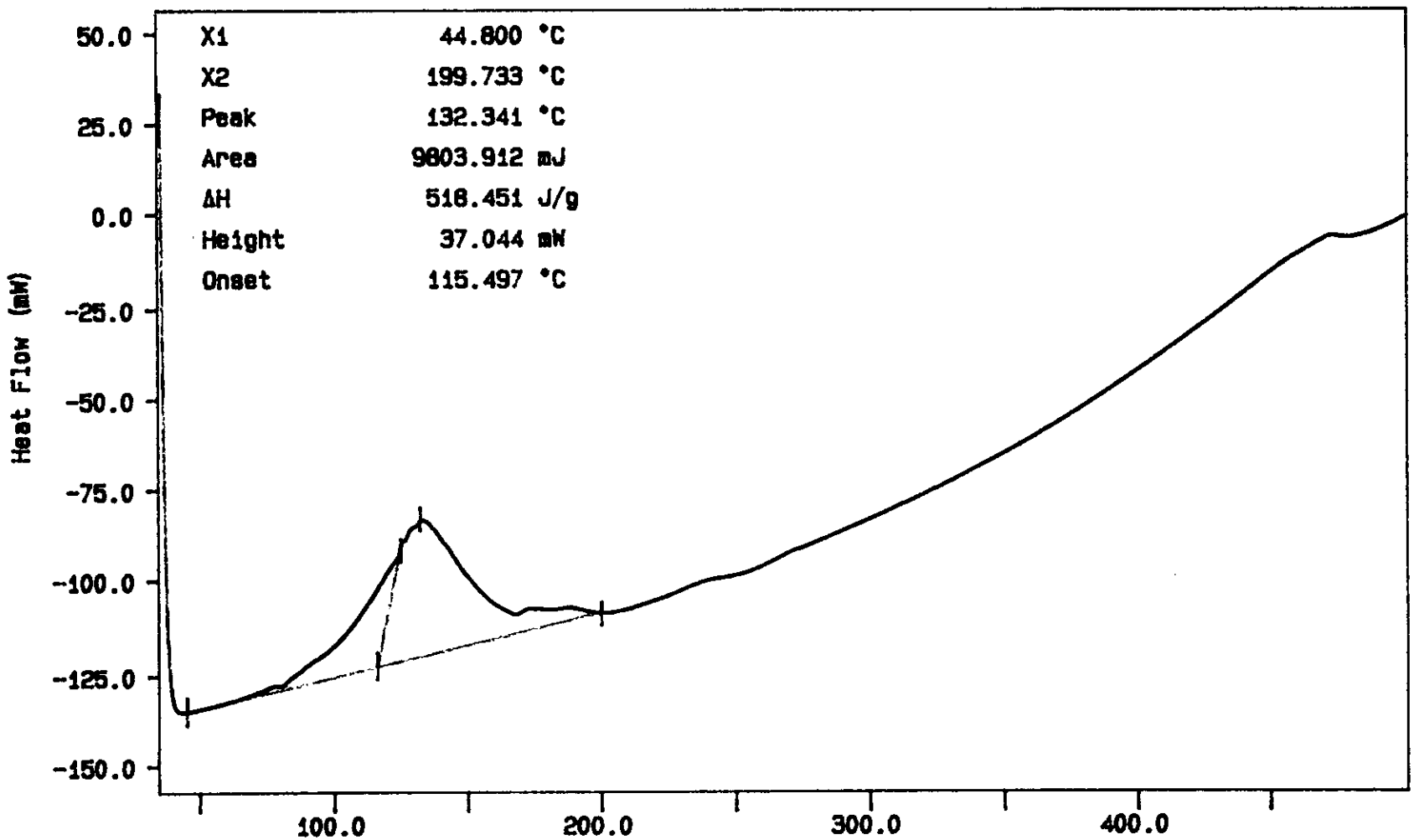
AD PURINTON
PERKIN ELMER
222-S Lab
Fri Sep 29 02:37:10 1995

WHC-CD-WM-DP-145, REV. 1

8-137

Curve 1: DSC
File info: SAM092902 Fri Sep 29 03:28:30 1995
Sample Weight: 18.910 mg
S95T001970 DUP

BEST AVAILABLE COPY



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

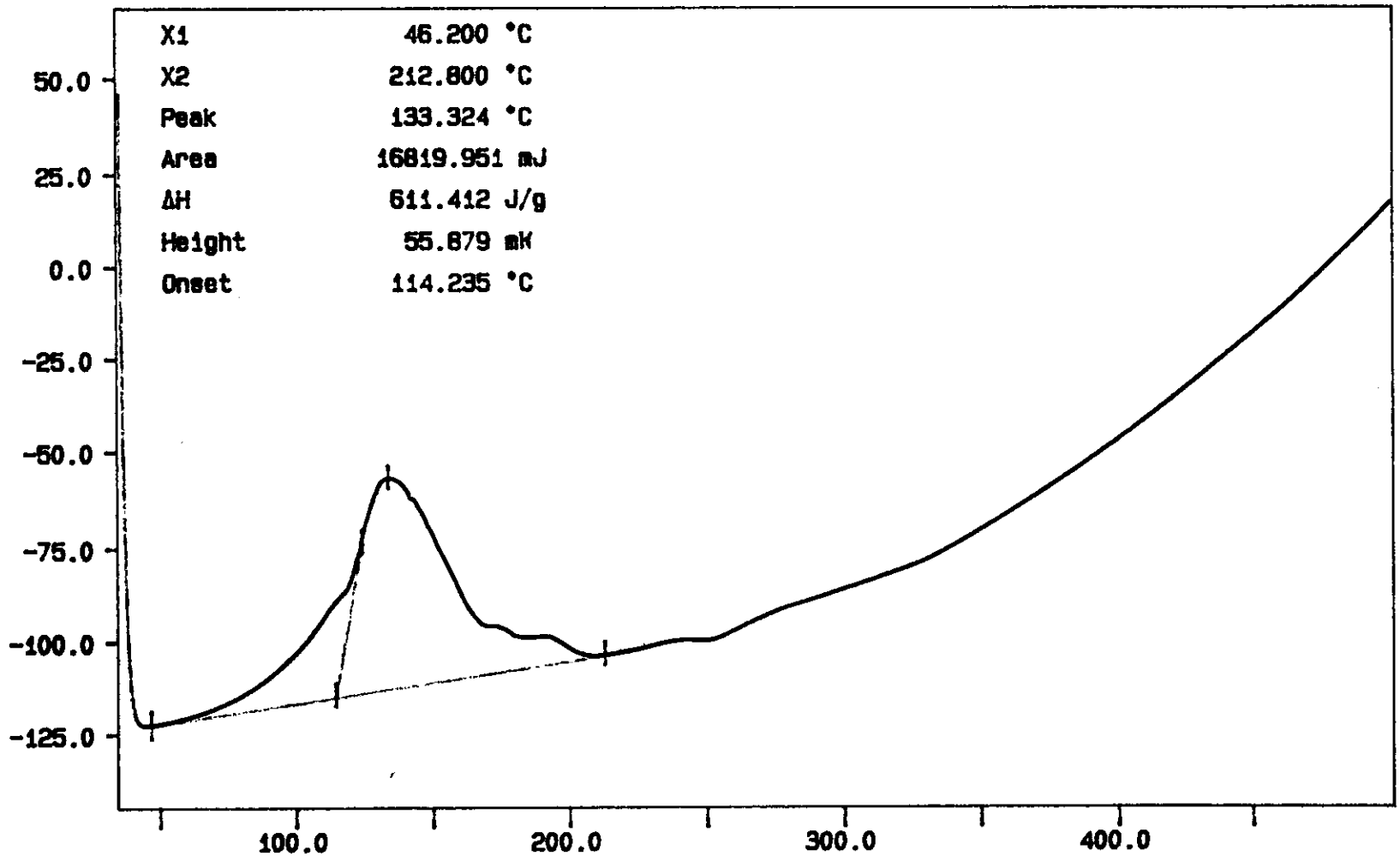
AD PURINTON
PERKIN ELMER
222-S Lab
Fri Sep 29 03:34:58 1995

WHC-SD-WM-DP-145, REV. 1

2-138

Curve 1: DSC
File info: SAM092903 Fri Sep 29 04:29:04 1995
Sample Weight: 27.510 mg
S95T001971 SAM

BEST AVAILABLE COPY



exotherm down, N2 purge gas
TEMP1: 35.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 400.0 C

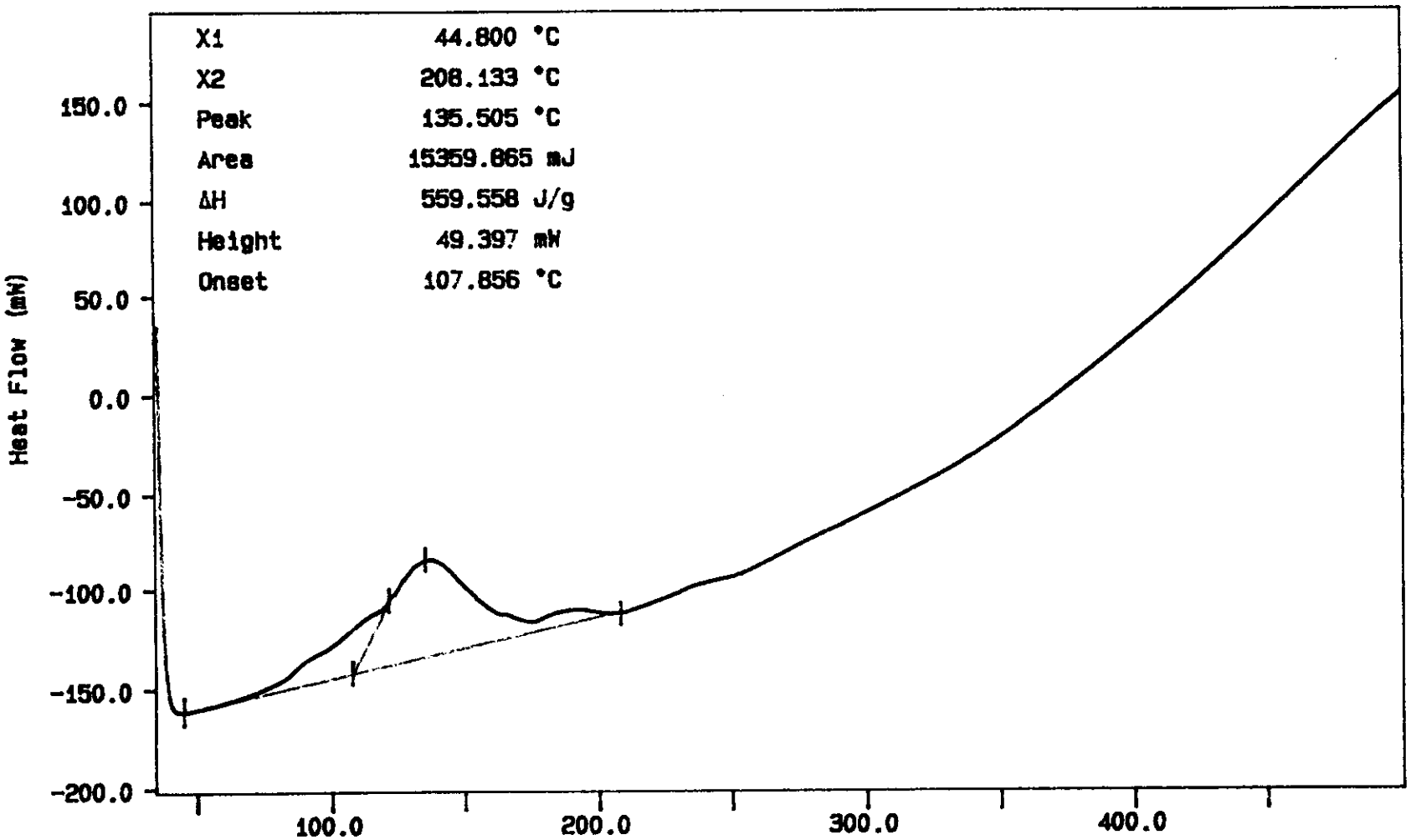
AD PURINTON
PERKIN ELMER
222-S Lab
Fri Sep 29 04:30:16 1995

WHC-SD-WM-DP-146, REV. 1

2-139

Curve 1: DSC
File info: SAM092904 Fri Sep 29 05:23:04 1995
Sample Weight: 27.450 mg
S95T001971 DUP

BEST AVAILABLE COPY



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
222-S Lab
Fri Sep 29 05:28:46 1995

WHC-SD-WM-DP-145, REV. 1

2-140

LABCORE Data Entry Template for Worklist# 2321

Analyst: DCD **Instrument:** DSC0 1 **Book #** 12N14A

Method: LA-514-113 Rev/Mod C-0

Worklist Comment: Please run BY-108 DSCs under N2. bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R	A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD				DSC-01	SOLID	28.45	29.9	N/A	Joules/g
95000118	BY-108 (R)	2 SAMPLE	S95T001972	0		DSC-01	SOLID	N/A	41.4		Joules/g
95000118	BY-108 (R)	3 DUP	S95T001972	0		DSC-01	SOLID	41.4	Ø	N/A	Joules/g
95000118	BY-108 (R)	4 TRIPL	S95T001972	0		DSC-01	SOLID	~~40.5~~ 41.4 10-3-95 BDV	40.5	N/A	Joules/g
95000118	BY-108 (R)	5 SAMPLE	S95T001973	0		DSC-01	SOLID	N/A	106.1		Joules/g
95000118	BY-108 (R)	6 DUP	S95T001973	0		DSC-01	SOLID	106.1	114.5	N/A	Joules/g

Final page for worklist # 2321

See attached for signatures
Analyst Signature Date 10-2-95 BDV

Analyst Signature Date

Verified by Blandina Valenzuela 10-4-95

Data Entry Comments: S95T001972 produced one endotherm at 131.9°C with a delta H of 945.6 J/g. The sample was run in triplicate due ~~to~~ to high RPD's, the sample and triplicate results were close.
S95T001973 produced one endotherm at 108.3°C with a delta H of 972.8 J/g, this endothermic peak has two distinct peaks within it.

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# 2321

Analyst: DCD **Instrument:** DSC0 _____ **Book #** 12 N14 A

Method: LA-514-113 Rev/Mod C-0

Worklist Comment: Please run BY-108 DSCs under N2. bdv

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	-------TEST------	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	STD				DSC-01	SOLID			N/A	Joules/g
95000118	BY-108 (R)	2	SAMPLE	S95T001972	0		DSC-01	SOLID	N/A			Joules/g
95000118	BY-108 (R)	3	DUP	S95T001972	0		DSC-01	SOLID			N/A	Joules/g
95000118	BY-108 (R)	4	SAMPLE	S95T001973	0		DSC-01	SOLID	N/A			Joules/g
95000118	BY-108 (R)	5	DUP	S95T001973	0		DSC-01	SOLID			N/A	Joules/g

Final page for worklist # 2321

David C. Dunham 10-1-95
Analyst Signature **Date**

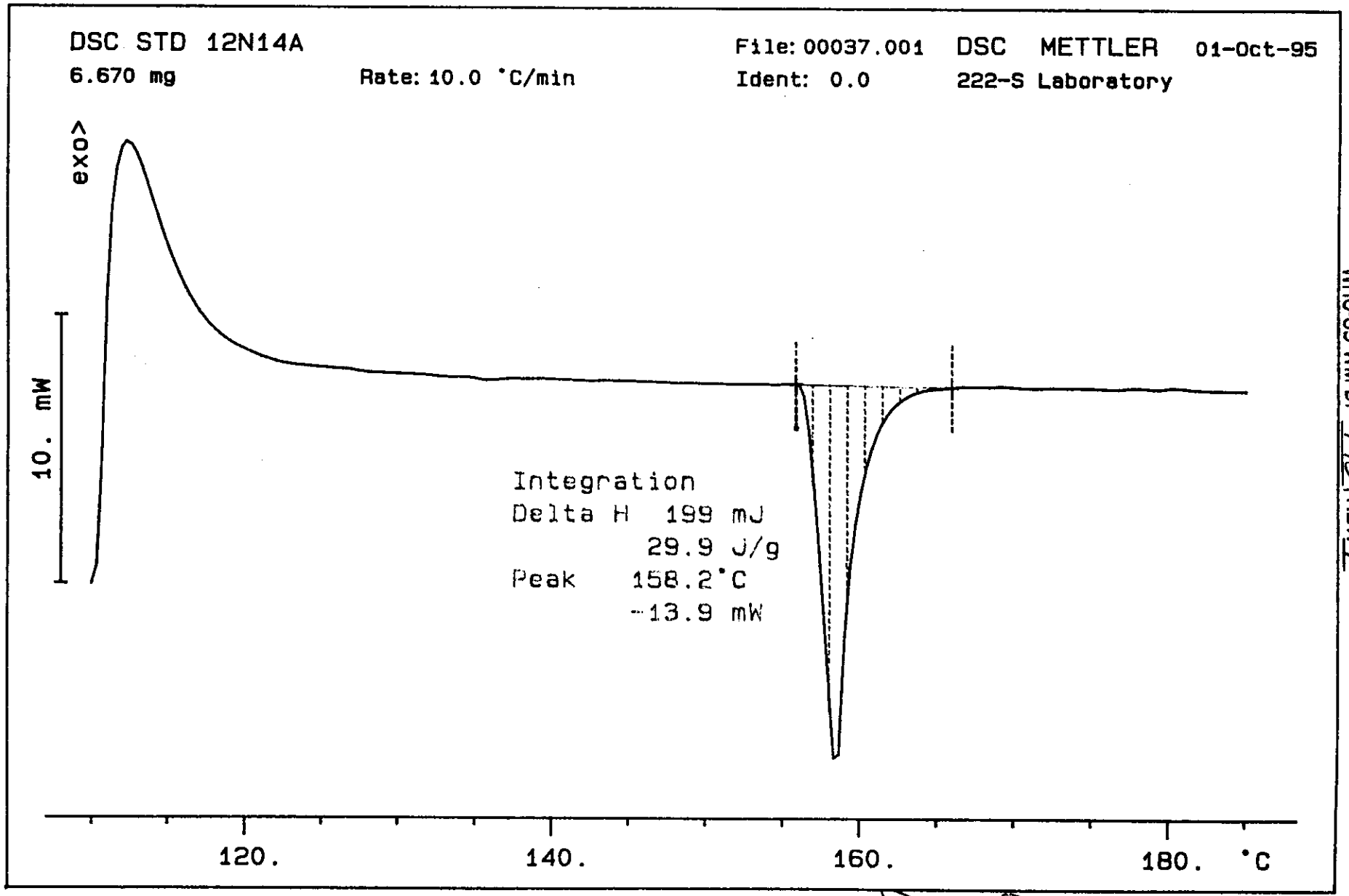
Analyst Signature **Date**

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.

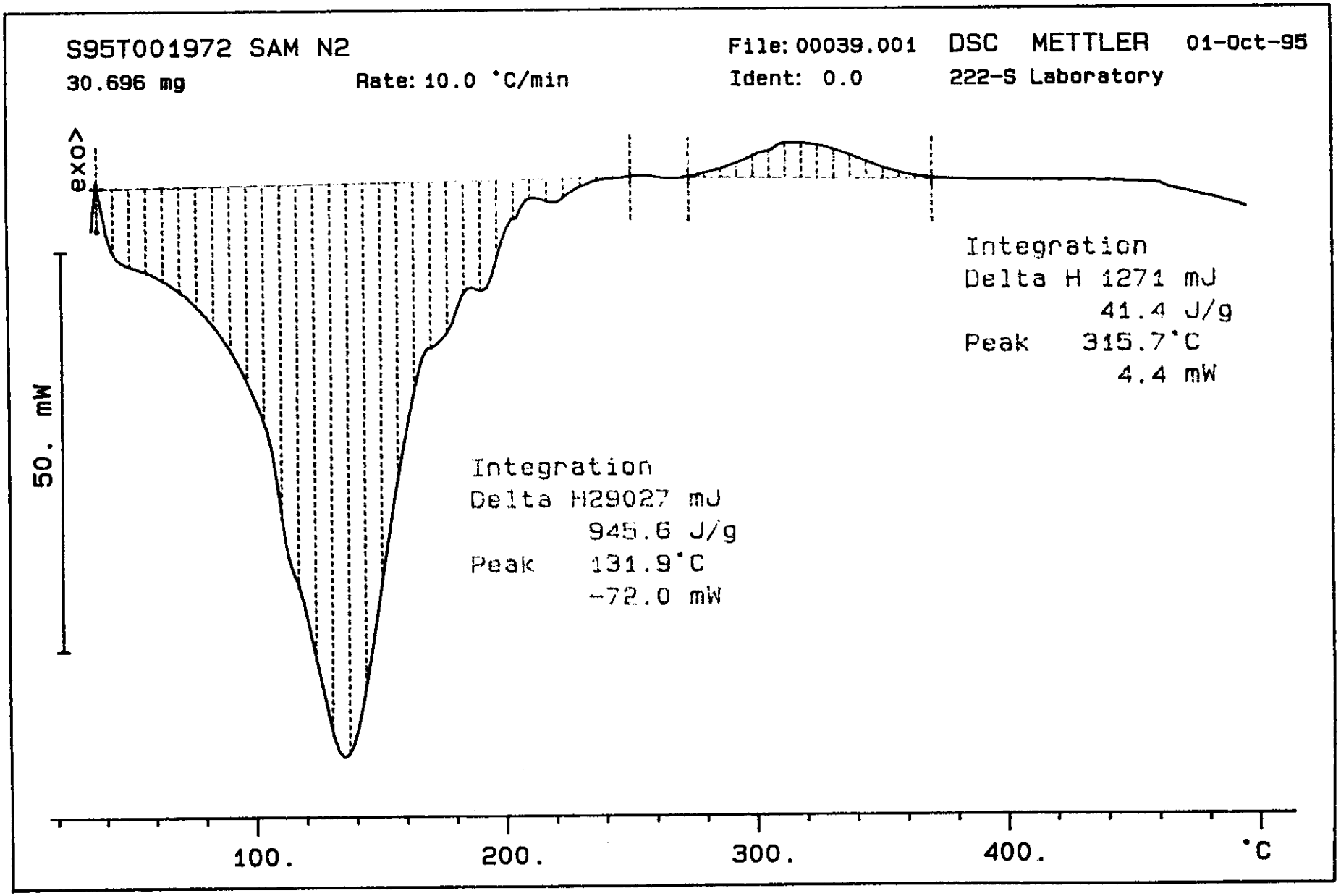
SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 2-143 TO 2-148.

BEST AVAILABLE COPY



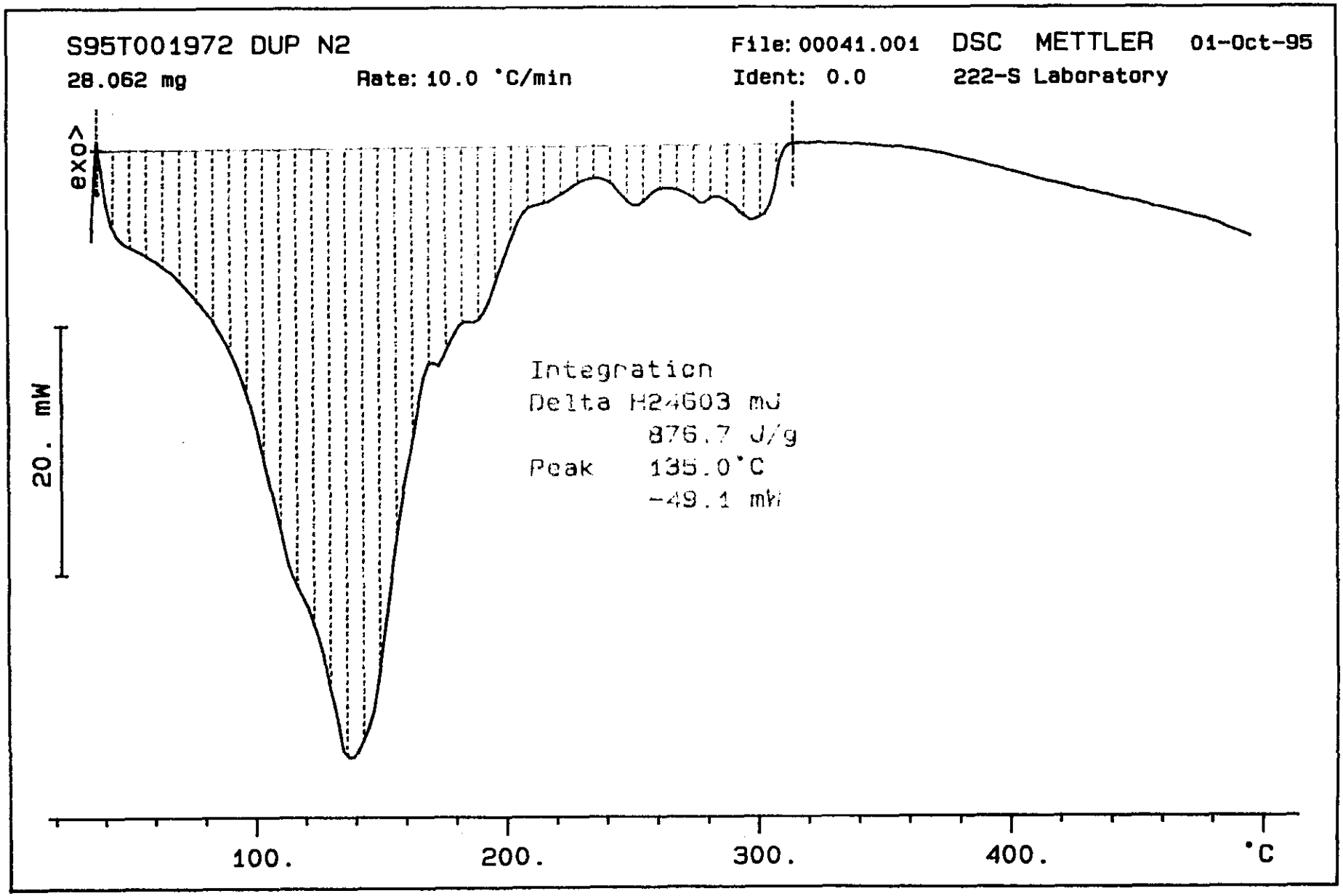
David C. Dunham 10-1 5

BEST AVAILABLE COPY

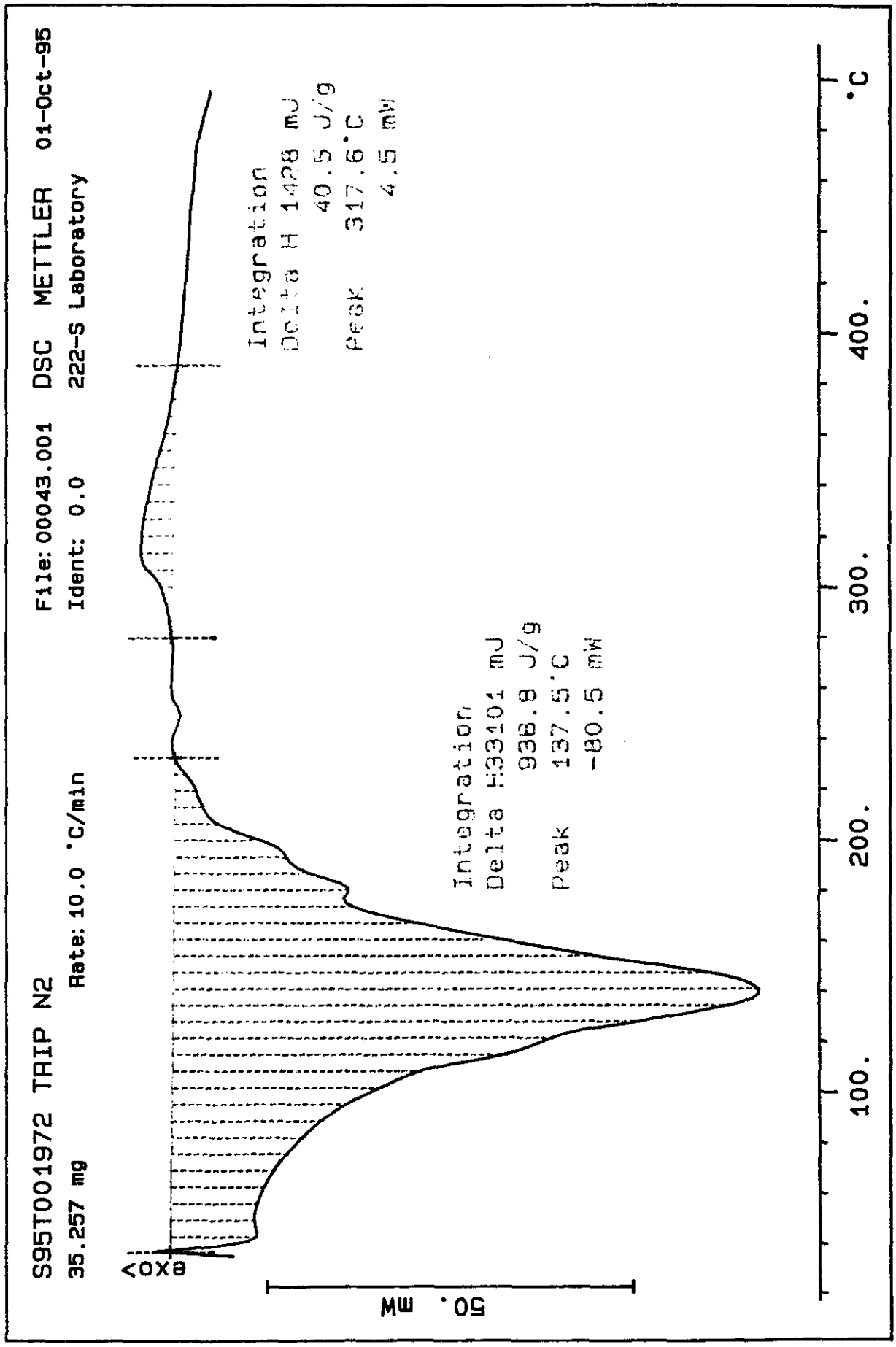


WHC-SD-WM-DP-145, REV. 1

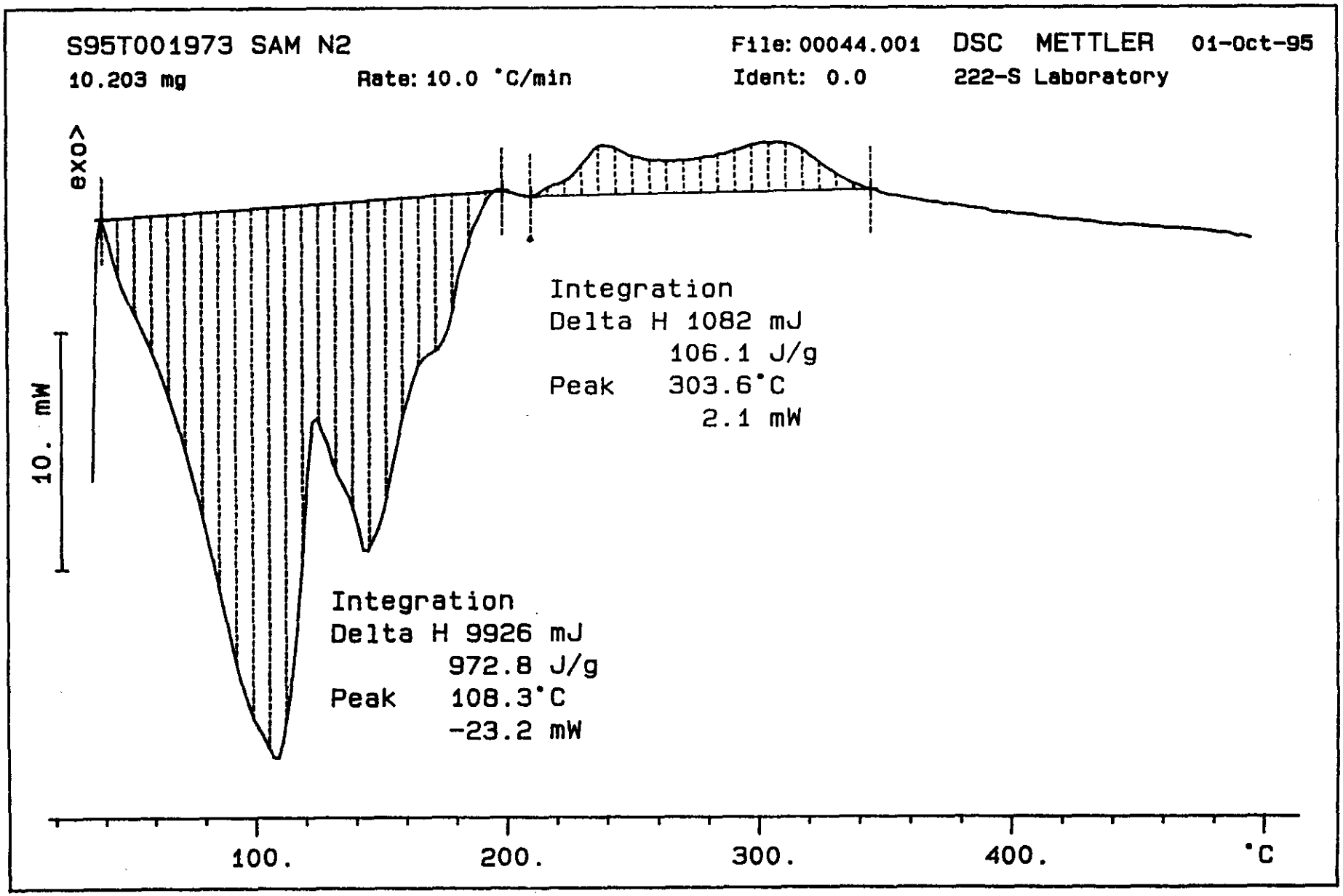
BEST AVAILABLE COPY



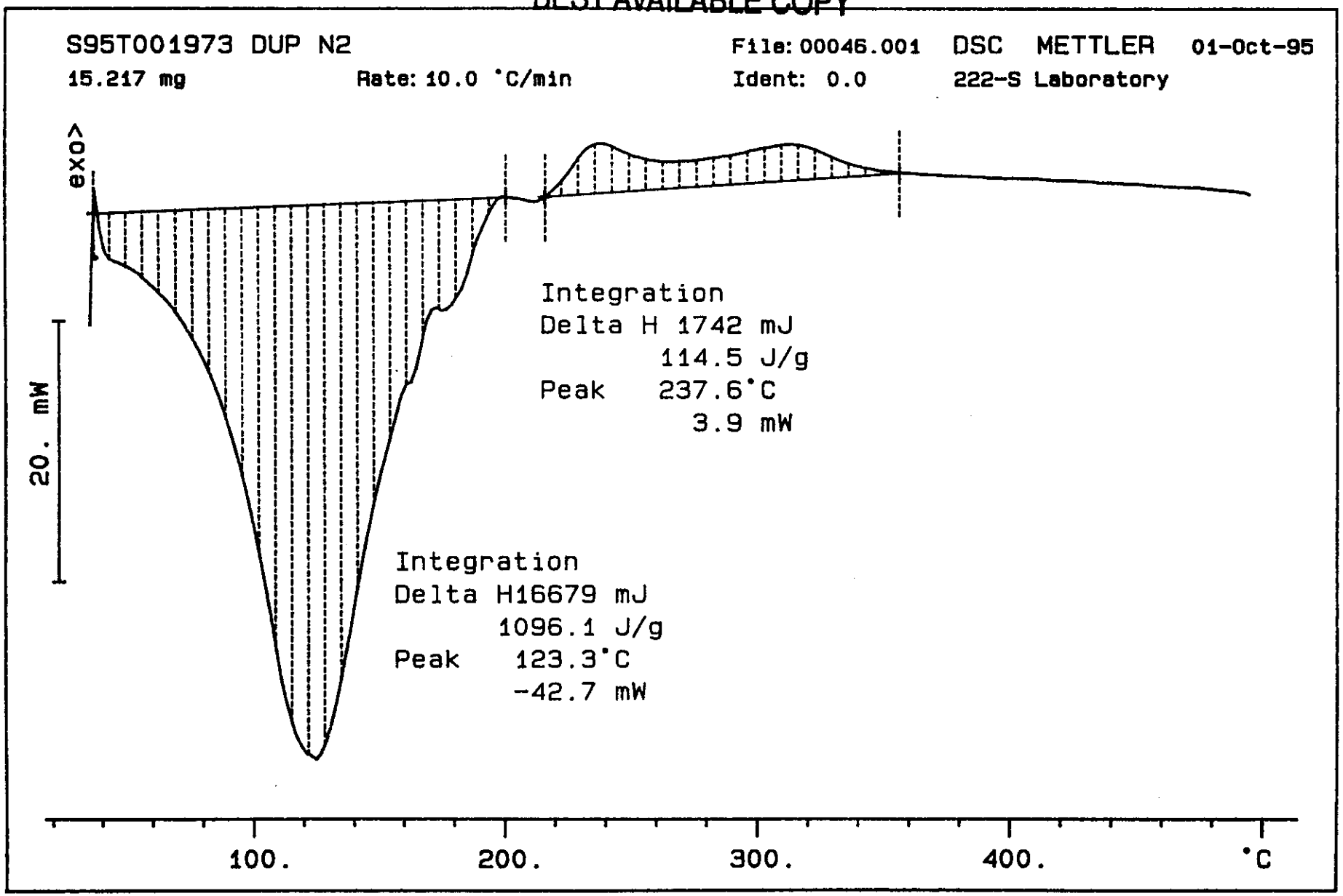
BEST AVAILABLE COPY



BEST AVAILABLE COPY



BEST AVAILABLE COPY



LABCORE Data Entry Template for Worklist# 2322

Analyst: PJM **Instrument:** DSC0 3 **Book #** 12N14A

Method: LA-514-114 Rev/Mod CO

Worklist Comment: Please run BY-108 DSCs under N2. bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-------TEST------	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-03	SOLID	28.45	28.41	N/A	Joules/g
95000118	BY-108 (R)	2 SAMPLE	S95T001974	0	DSC-03	SOLID	N/A	Ø		Joules/g
95000118	BY-108 (R)	3 DUP	S95T001974	0	DSC-03	SOLID	Ø	Ø	N/A	Joules/g
95000118	BY-108 (R)	4 SAMPLE	S95T001975	0	DSC-03	SOLID	N/A	Ø		Joules/g
95000118	BY-108 (R)	5 DUP	S95T001975	0	DSC-03	SOLID	Ø	Ø	N/A	Joules/g

Final page for worklist # 2322

See attached for signatures
Analyst Signature Date 10-1-95

[signature] 10-4-95
Analyst Signature Date

Verified by Blandina Valenzuela
10-5-95

S95T001974 produced one endotherm at 112.7°C with a delta H of 742.1°Ø J/g 10-4

Data Entry Comments: S95T001975 produced one endotherm at ~~112.7°C~~ 146.6°C 10-2-95 with a delta H of 718.5°Ø J/g
DH10495

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# 2322

Analyst: RJ McCown **Instrument:** DSC0 **Book #** 12N14A

Method: LA-514-~~113~~ 114 Rev/Mod C-0
RJM 10/1/95

Worklist Comment: Please run BY-108 DSCs under N2. bdv

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	STD				DSC-01	SOLID			N/A	Joules/g
95000118	BY-108 (R)	2	SAMPLE	S95T001974	0		DSC-01	SOLID	N/A			Joules/g
95000118	BY-108 (R)	3	DUP	S95T001974	0		DSC-01	SOLID			N/A	Joules/g
95000118	BY-108 (R)	4	SAMPLE	S95T001975	0		DSC-01	SOLID	N/A			Joules/g
95000118	BY-108 (R)	5	DUP	S95T001975	0		DSC-01	SOLID			N/A	Joules/g

Final page for worklist # 2322

RJ McCown 10/1/95
Analyst Signature **Date**

Analyst Signature **Date**

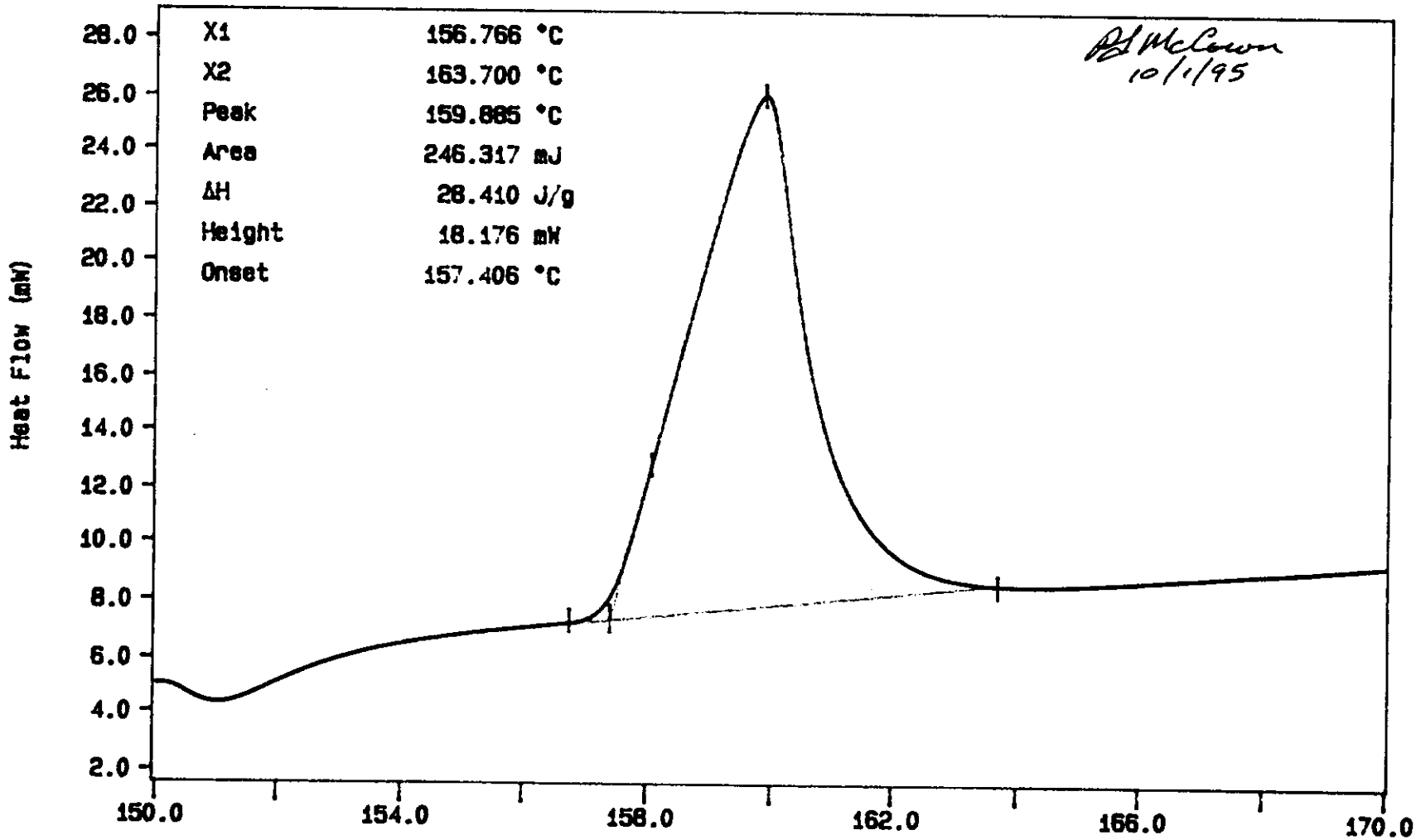
Other instrument
was used
10-5-95
RDV

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: IND100101 Sun Oct 1 00:07:50 1995
Sample Weight: 8.670 mg
12N14A Indium at 10C/min

BEST AVAILABLE COPY



PJ McCown
10/1/95

N2, EXOTHERM DOWN
TEMP1: 150.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 170.0 C

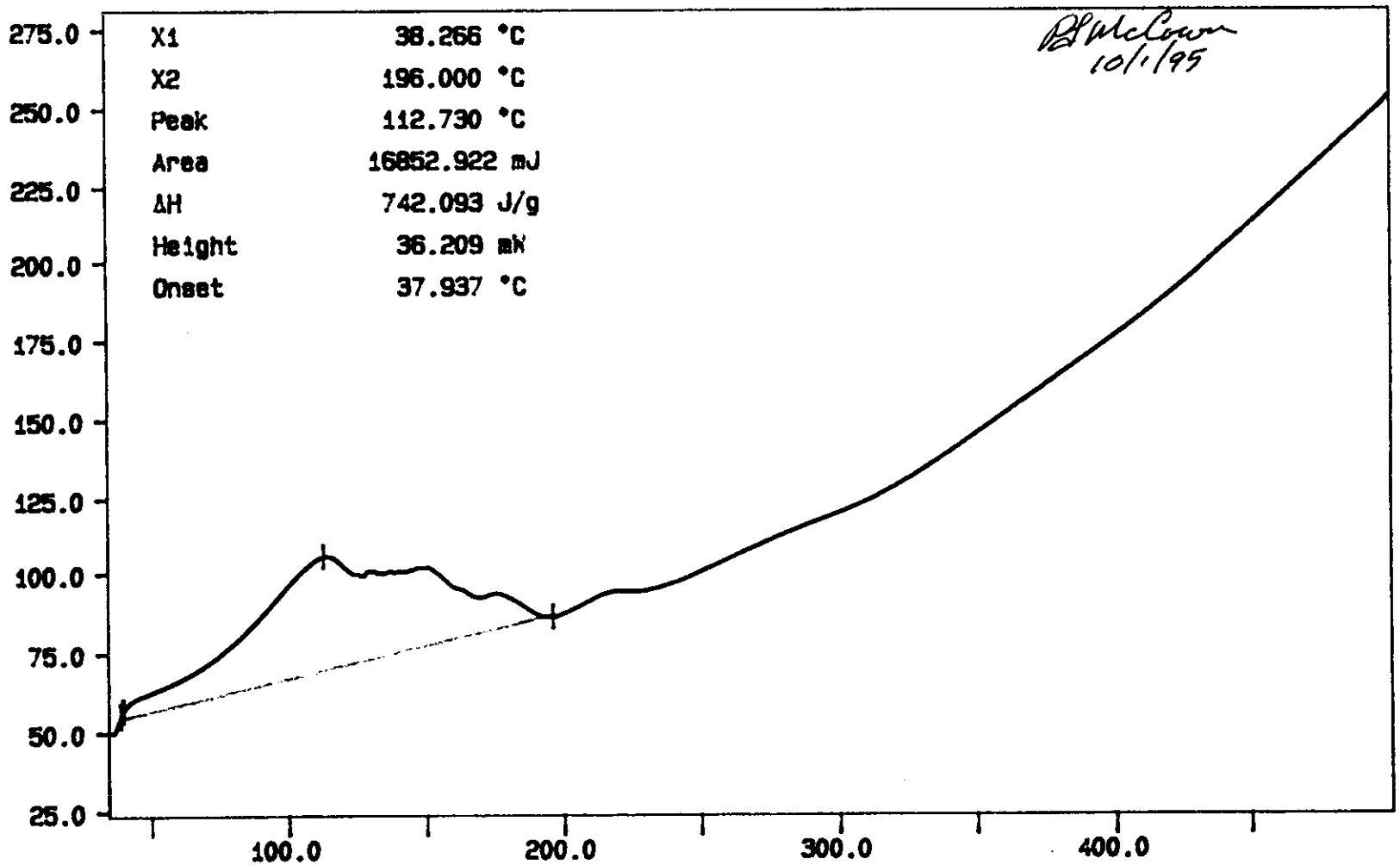
PJ MCCOWN
PERKIN ELMER
222-S Lab
Sun Oct 1 00:33:38 1995

WHC-CD-WM-DP-146, REV. 1

2-151

Curve 1: DSC
File info: SAM100103 Sun Oct 1 04:52:42 1995
Sample Weight: 22.710 mg
S95T001974 SAM

BEST AVAILABLE COPY



PJ McCown 10/1/95

exotherm down, N2 purge gas
TEMP1: 25.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 400.0 C

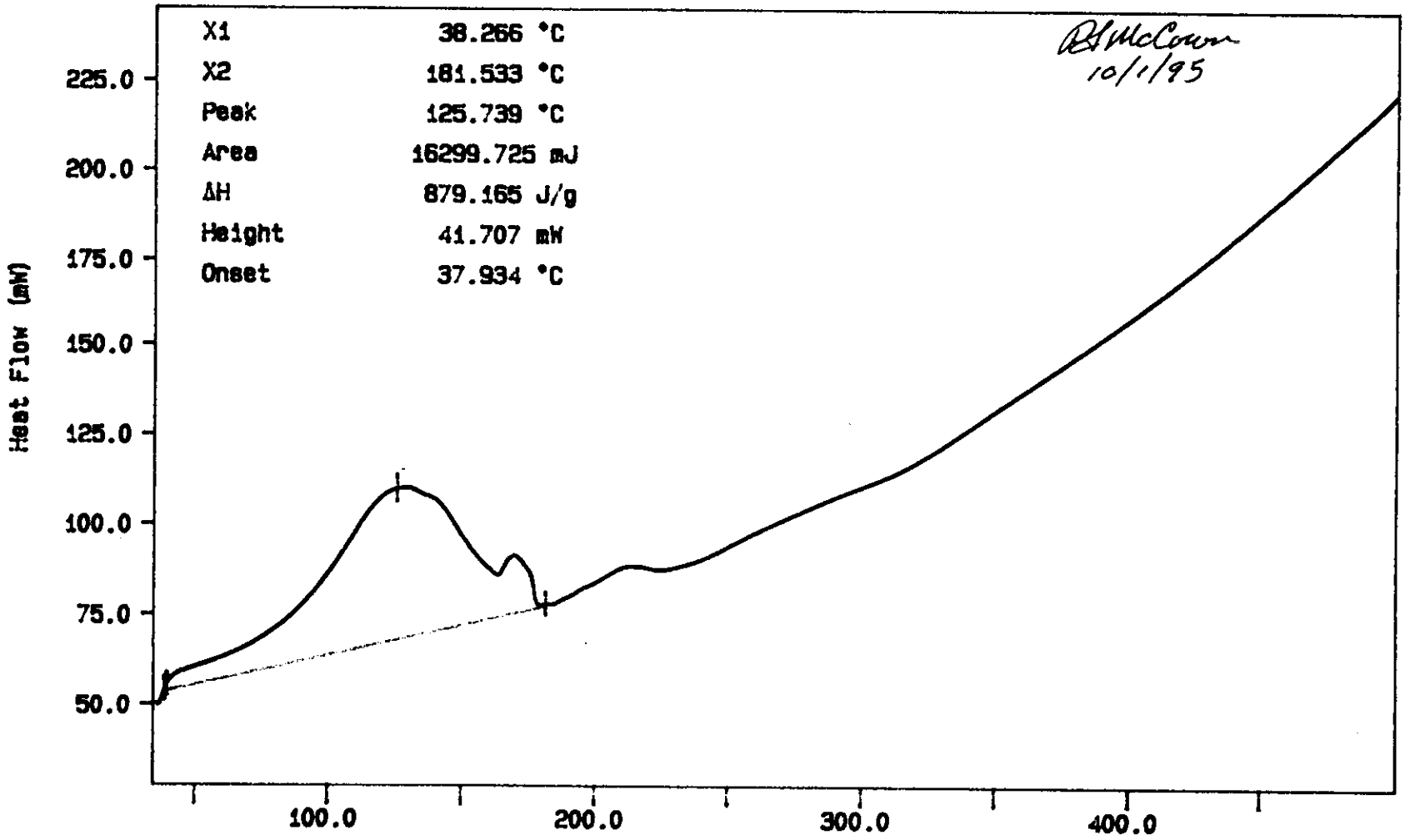
PJ MCCOWN
PERKIN ELMER
222-S Lab
Sun Oct 1 04:54:44 1995

WHC-SD-WM-DP-145, REV. 1

2-152

Curve 1: DSC
File info: SAM100104 Sun Oct 1 06:03:33 1995
Sample Weight: 18.540 mg
S95T001974 DUP

BEST AVAILABLE COPY



RJ McCown
10/1/95

exotherm down, N2 purge gas
TEMP1: 25.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 600.0 C

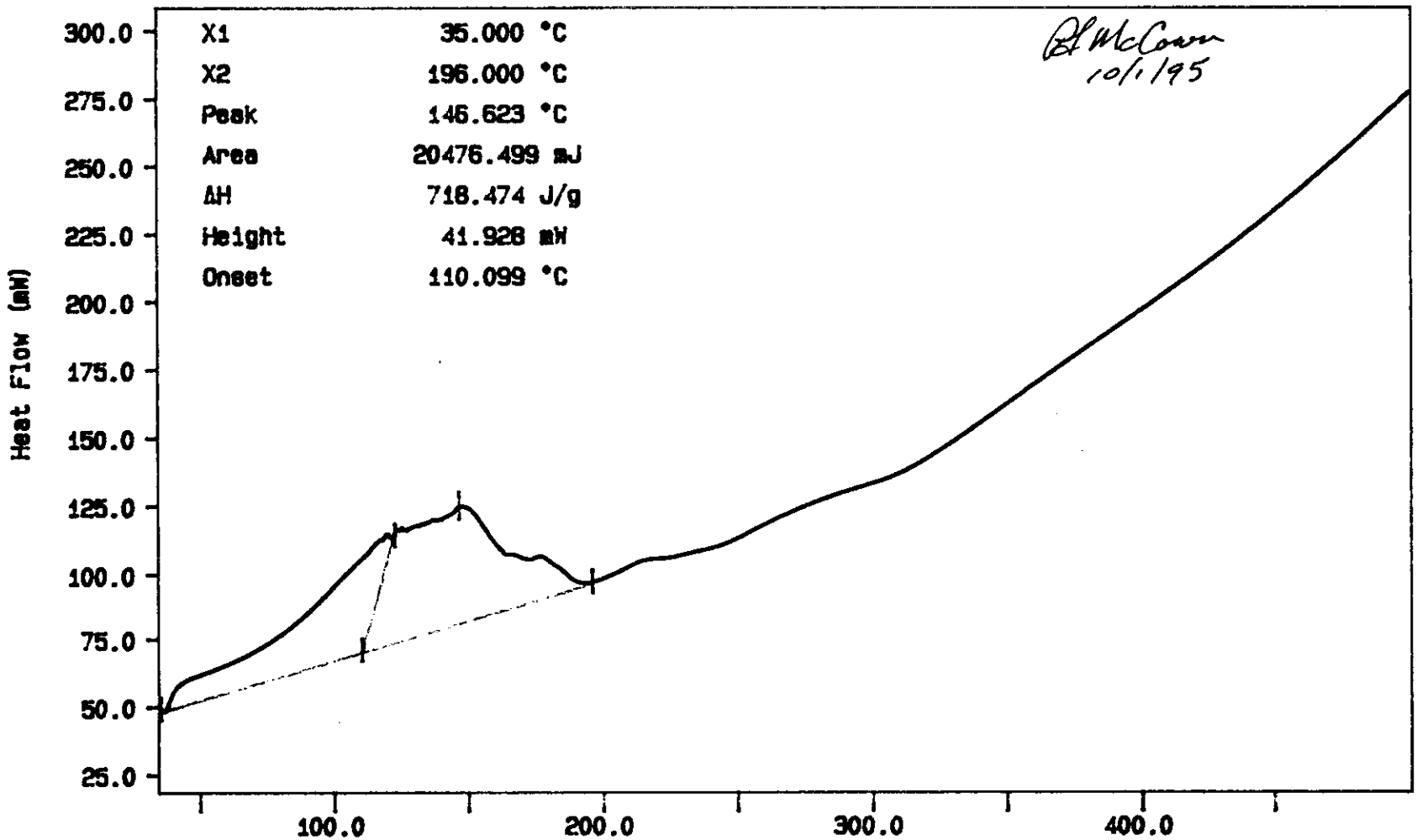
PJ MCCOWN
PERKIN ELMER
222-S Lab
Sun Oct 1 06:19:03 1995

WHC-CD-WM-DP-145, REV. 1

2-153

Curve 1: DSC
File info: SAM100101 Sun Oct 1 01:44:17 1995
Sample Weight: 28.500 mg
~~S95T001969~~ SAM
10/1/95 595T001975

BEST AVAILABLE COPY



exotherm down, N2 purge gas
TEMP1: 35.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 200.0 C

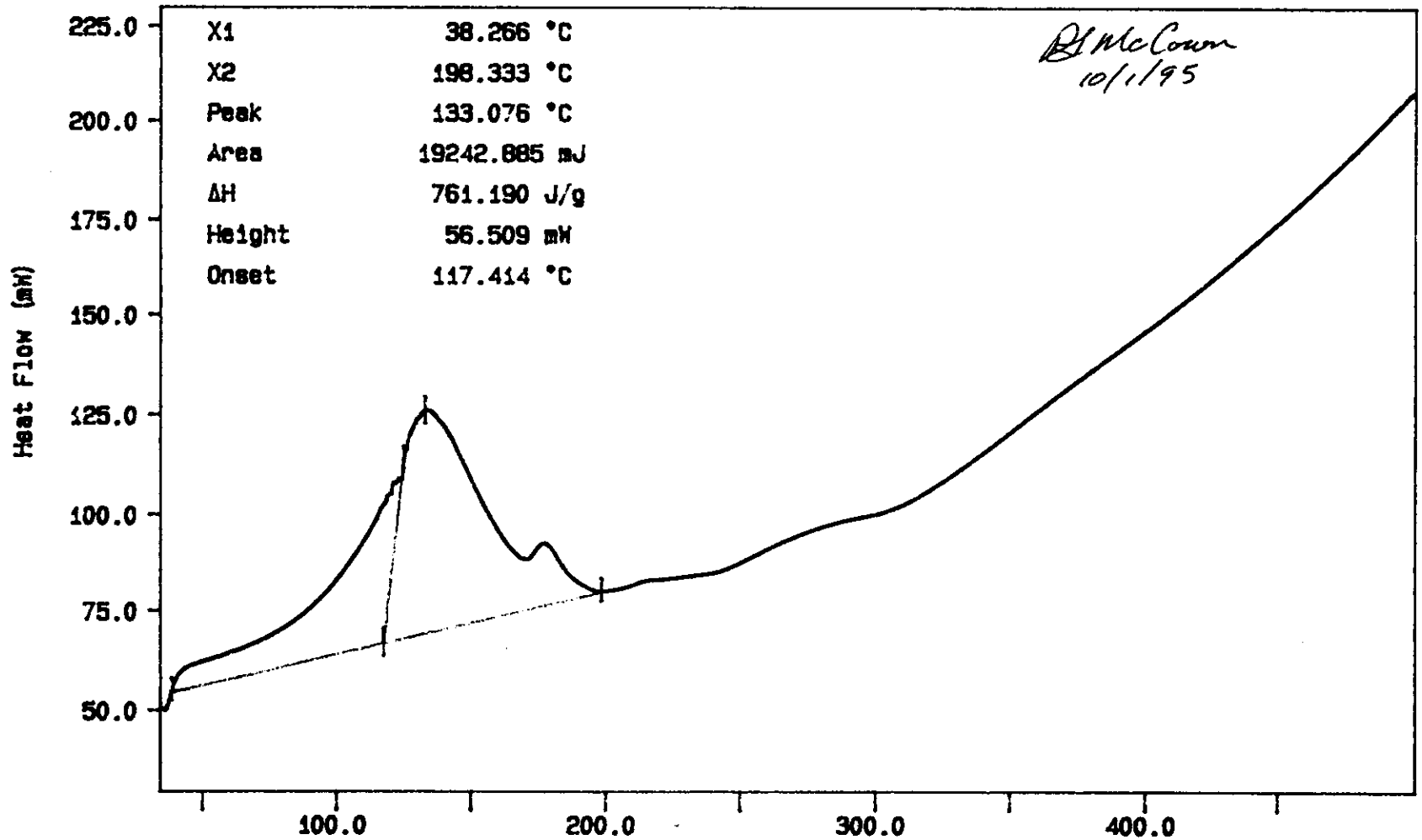
PJ MCCOWN
PERKIN ELMER
222-S Lab
Sun Oct 1 01:45:40 1995

WHC-SD-WM-DP-146, REV. 1

2-154

Curve 1: DSC
File info: SAM100102 Sun Oct 1 02:42:55 1995
Sample Weight: 25.280 mg
S95T001975 DUP

BEST AVAILABLE COPY



PJ McCown
10/1/95

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
222-S Lab
Sun Oct 1 03:38:00 1995

WHC-CD-WM-DP-145, REV. 1

2-155

LABCORE Data Entry Template for Worklist# 2323

Analyst: RJ McCown **Instrument:** DSC0 1 **Book #** 12N14A

Method: LA-514-113 Rev/Mod C-0

Worklist Comment: Please run BY-108 DSCs under N2. bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-------TEST------	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-01	SOLID	28.45	26.6	N/A	Joules/g
95000118	BY-108 (R)	2 SAMPLE	S95T001976	0	DSC-01	SOLID	N/A	375.9		Joules/g
95000118	BY-108 (R)	3 DUP	S95T001976	0	DSC-01	SOLID	375.9	350.0	N/A	Joules/g
95000118	BY-108 (R)	4 SAMPLE	S95T001977	0	DSC-01	SOLID	N/A	353.9		Joules/g
95000118	BY-108 (R)	5 DUP	S95T001977	0	DSC-01	SOLID	353.9	327.6	N/A	Joules/g

Final page for worklist # 2323

RJ McCown 10/1/95
Analyst Signature Date

Tom D. McGinnis 10/2/95
Analyst Signature Date

Verified by
Blandina Valenzuela 10-4-95

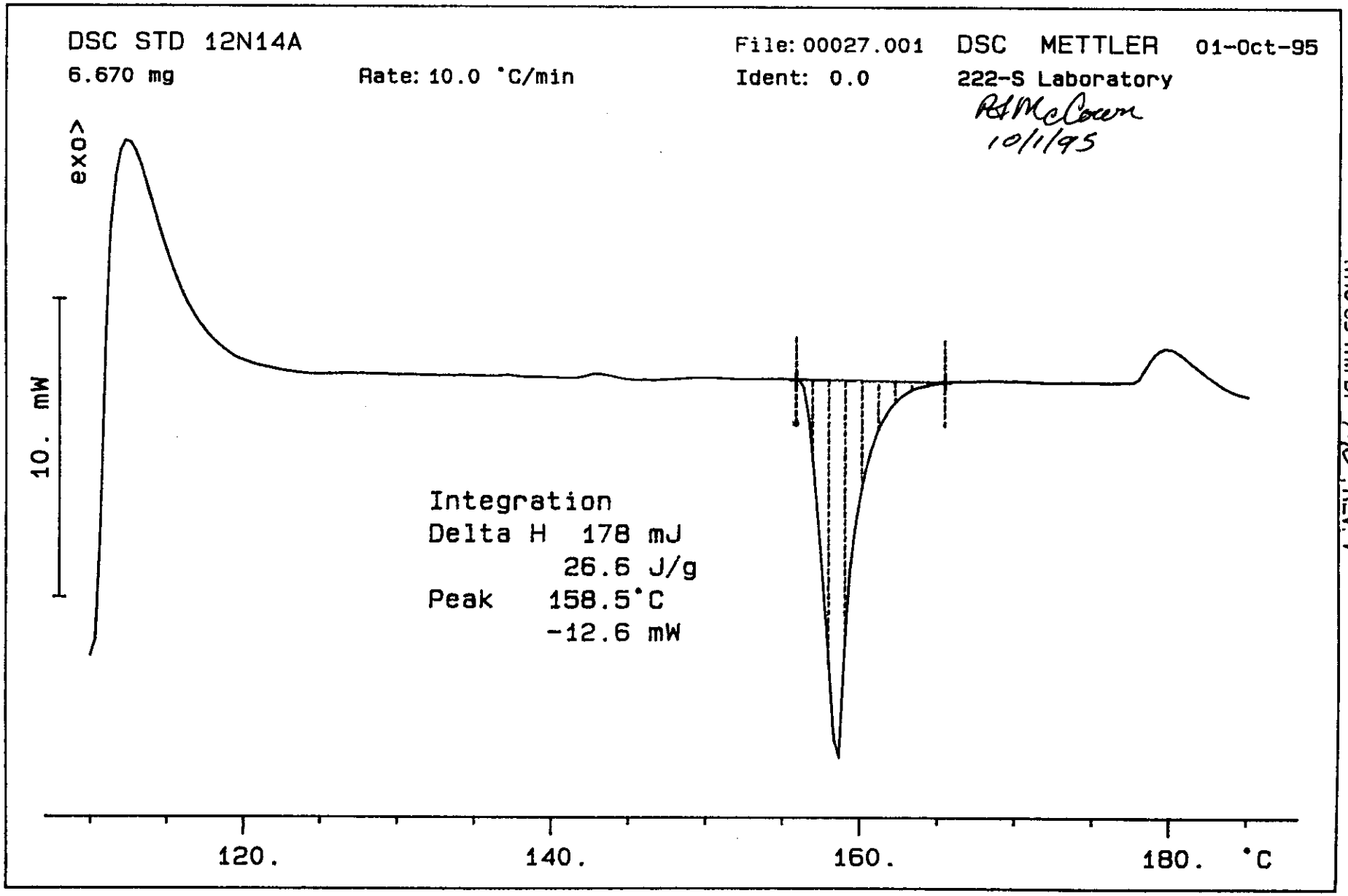
S95T001976 produced one endotherm at 118.2°C with a delta H of 888.8 J/g.

Data Entry Comments: S95T001977 produced one endotherm at 134.0°C with a delta H of ~~3~~932.3 J/g 10-2-95 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.

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 2157 TO 2161.

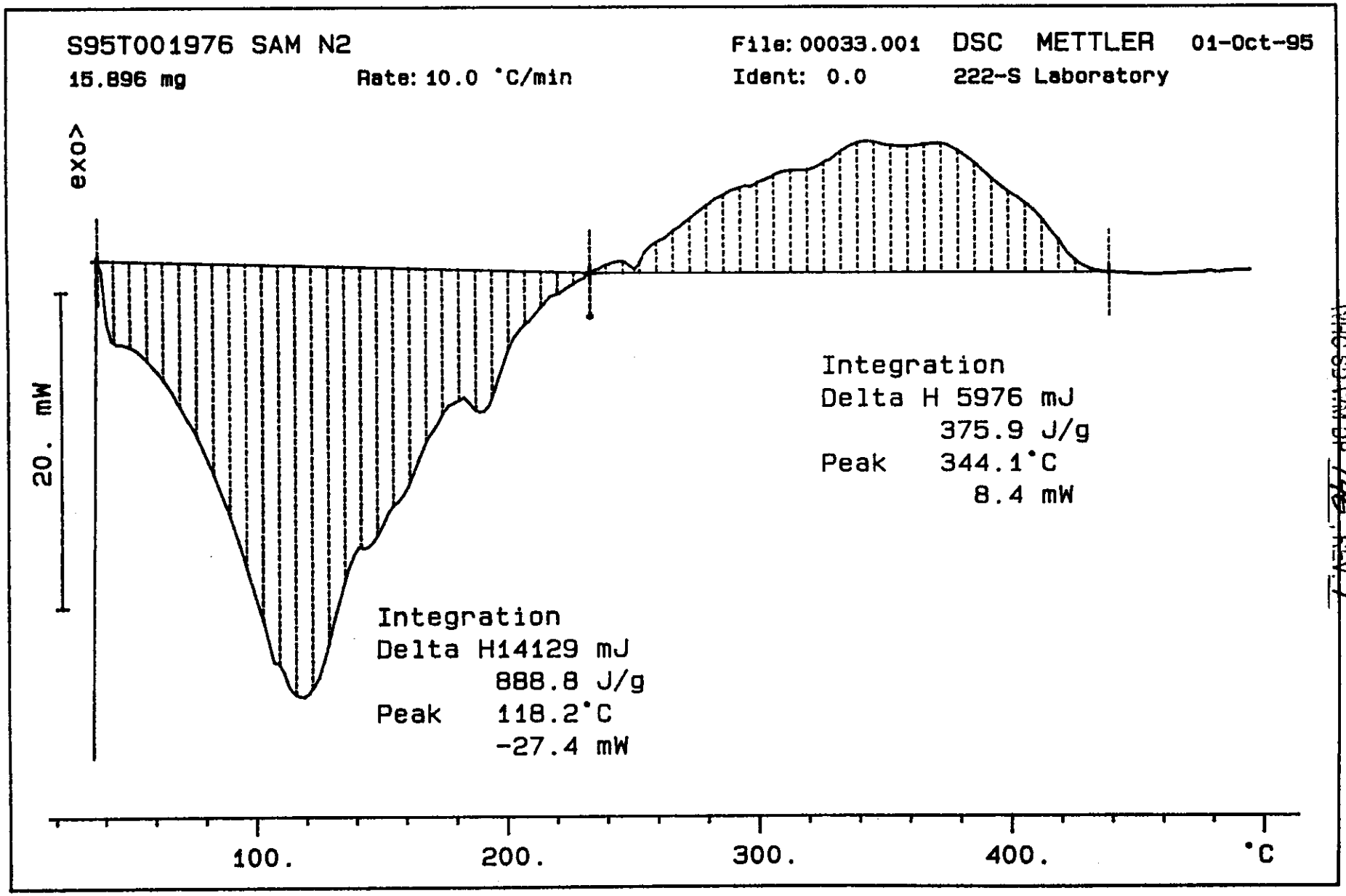
BEST AVAILABLE COPY



WHC-CD-WM-DP-145, REV. 1

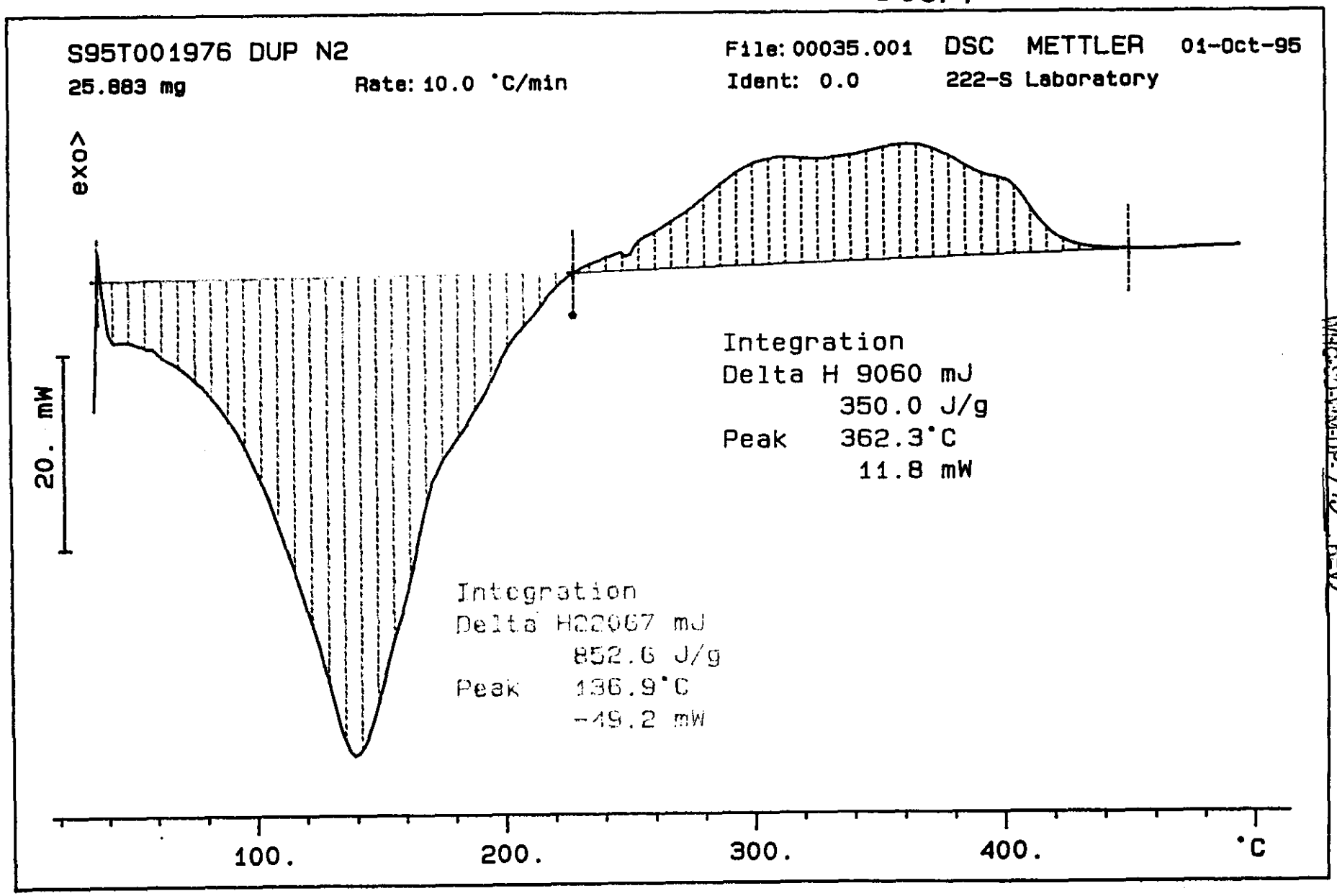
2157

BEST AVAILABLE COPY



WHC SD-WM-DP-146, REV. 1

BEST AVAILABLE COPY



WHC-CD-WM-DP-145 REV 1

BEST AVAILABLE COPY

S95T001977 SAM N2 10/1/95

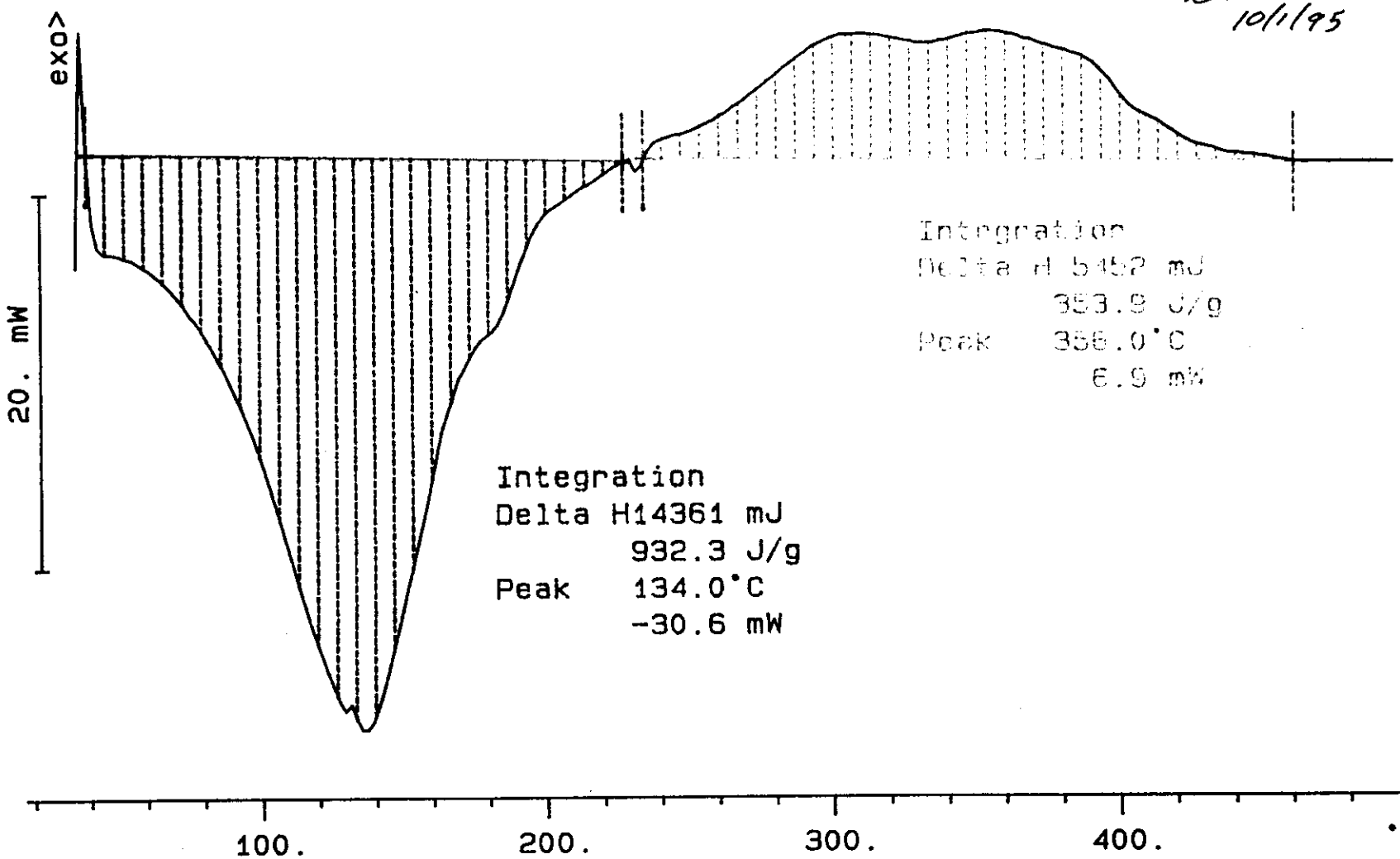
15.404 mg

Rate: 10.0 °C/min

File: 00029.001 DSC METTLER 01-Oct-95

Ident: 0.0 222-S Laboratory

RJ McCown 10/1/95



WHC-CD-WM-DP-145, REV. 1

2-160

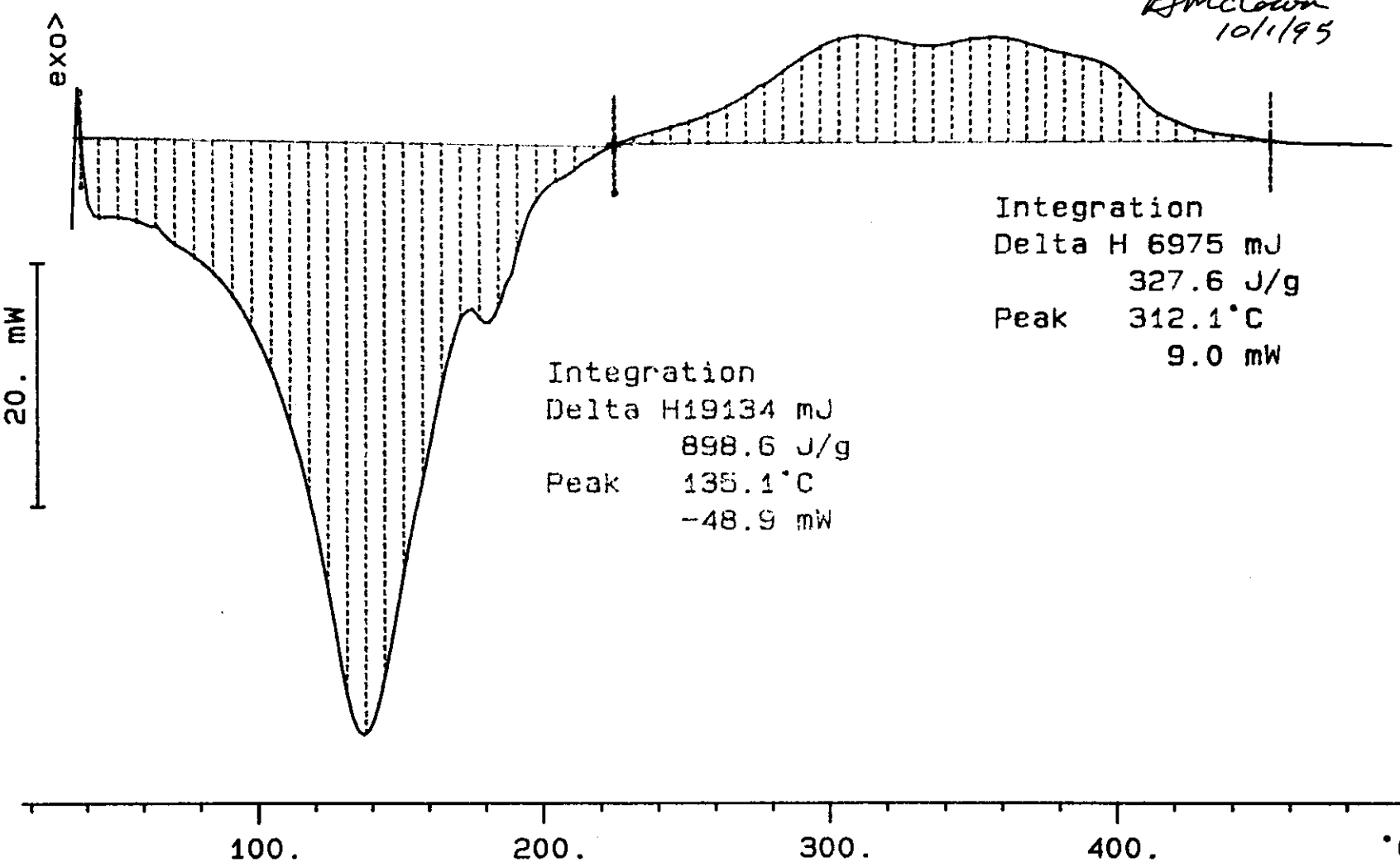
BEST AVAILABLE COPY

S95T001977 DUP N2 10/1/95

File: 00031.001 DSC METTLER 01-Oct-95

21.293 mg Rate: 10.0 °C/min Ident: 0.0 222-S Laboratory

RJ McCown 10/1/95



WHC-CD-WM-DP-145, REV. 1

LABCORE Data Entry Template for Worklist# 2324

Analyst: PJM **Instrument:** DSC0 3 **Book #** 12N14A

Method: LA-514-114 Rev/Mod C-0

Worklist Comment: Please run BY-108 DSCs under N2. bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R	A	-------TEST------	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD				DSC-03	SOLID	28.45	28.65	N/A	Joules/g
95000118	BY-108 (R)	2 SAMPLE	S95T001978	0		DSC-03	SOLID	N/A	Ø		Joules/g
95000118	BY-108 (R)	3 DUP	S95T001978	0		DSC-03	SOLID	Ø	Ø	N/A	Joules/g

Final page for worklist # 2324

See attached for signatures
Analyst Signature Date 10/1/95

Verified by Blandina Valenzuela 10-4-95

[signature] 10-04-95
Analyst Signature Date

Data Entry Comments: Sample produced one endotherm at 133.9°C with a delta H of 786.9 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.

LABCORE Data Entry Template for Worklist# 2324

Analyst: RJ McCown **Instrument:** DSC0 _____ **Book #** 12N14A

Method: LA-514-~~113~~ 114 Rev/Mod C-0
RJM 10/1/95

Worklist Comment: Please run BY-108 DSCs under N2. bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R	A	-------TEST------	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD				DSC-01	SOLID			N/A	Joules/g
95000118	BY-108 (R)	2 SAMPLE	S95T001978	0		DSC-01	SOLID	N/A			Joules/g
95000118	BY-108 (R)	3 DUP	S95T001978	0		DSC-01	SOLID			N/A	Joules/g

Final page for worklist # 2324

RJ McCown 10/1/95
Analyst Signature Date

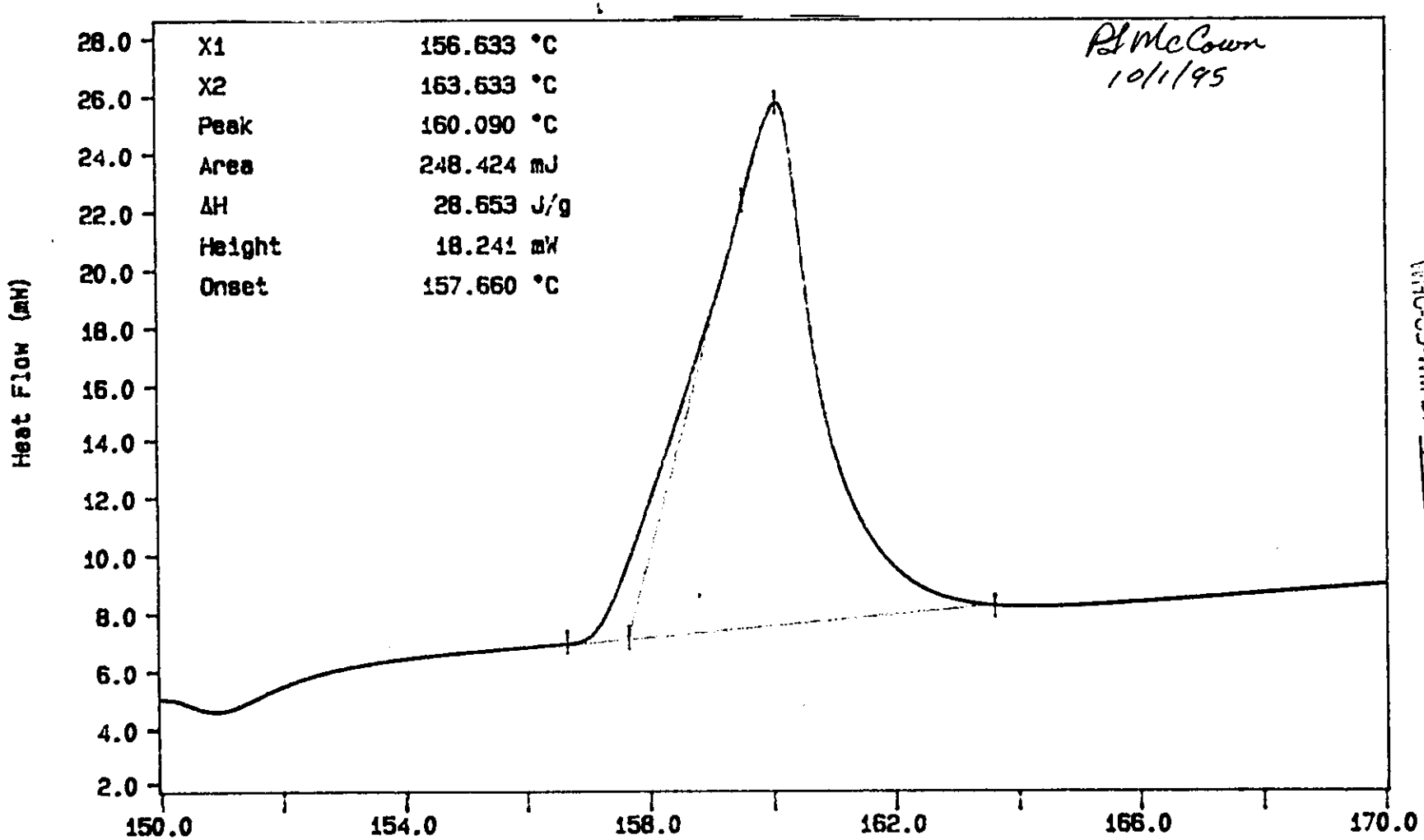
Analyst Signature Date

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: IND100102 Sun Oct 1 16:18:22 1995
Sample Weight: 8.670 mg
12N14A Indium at 10C/min

BEST AVAILABLE COPY



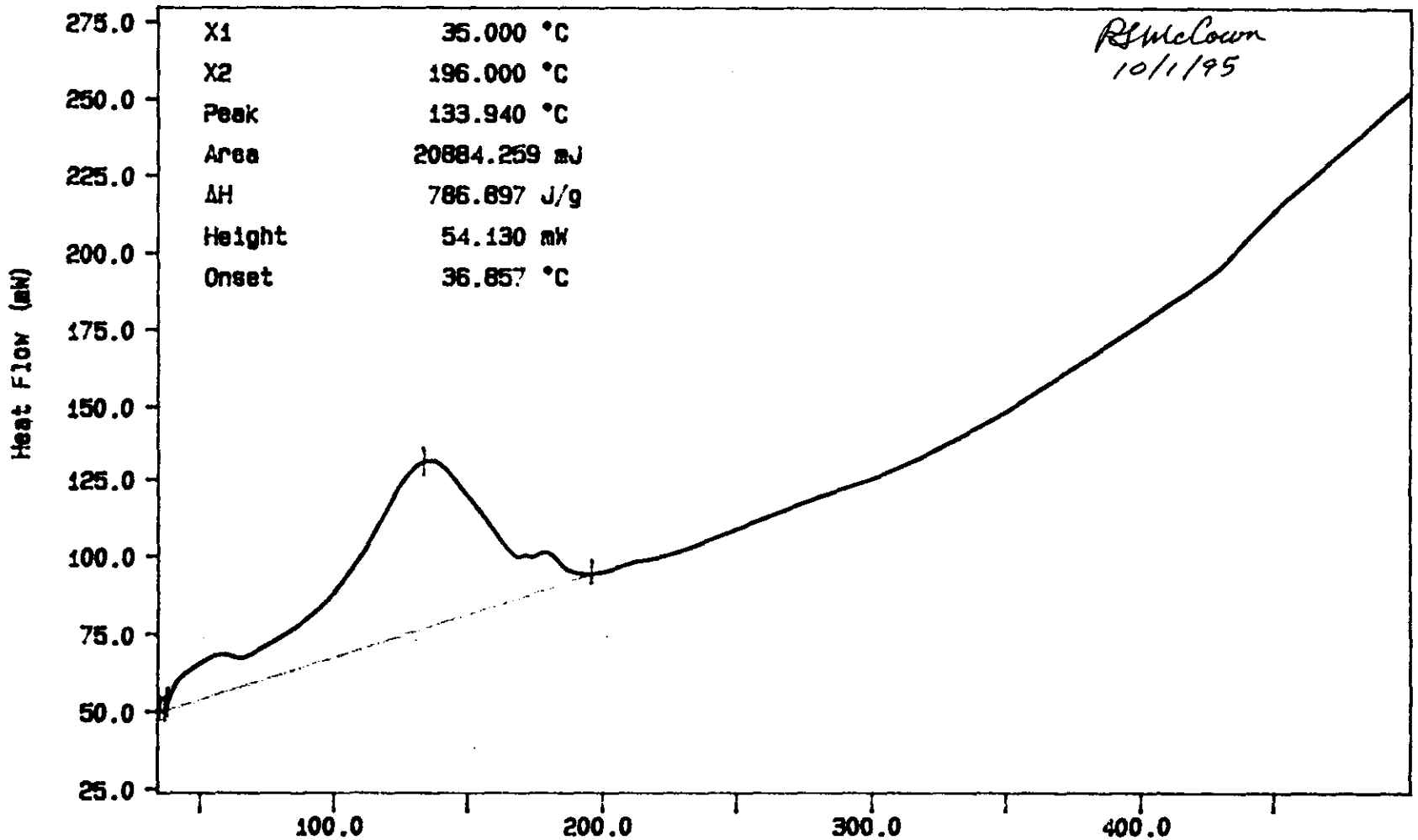
N2, EXOTHERM DOWN
TEMP1: 150.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 170.0 C

PJ MCCOWN
PERKIN ELMER
222-S Lab
Sun Oct 1 16:26:48 1995

WHC-SD-WM-DP-145, REV. 1

2-164

Curve 1: DSC
File info: SAM100105 Sun Oct 1 18:00:08 1995
Sample Weight: 26.540 mg
S95T001978 SAM



exotherm down, N2 purge gas
TEMP1: 35.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 400.0 C

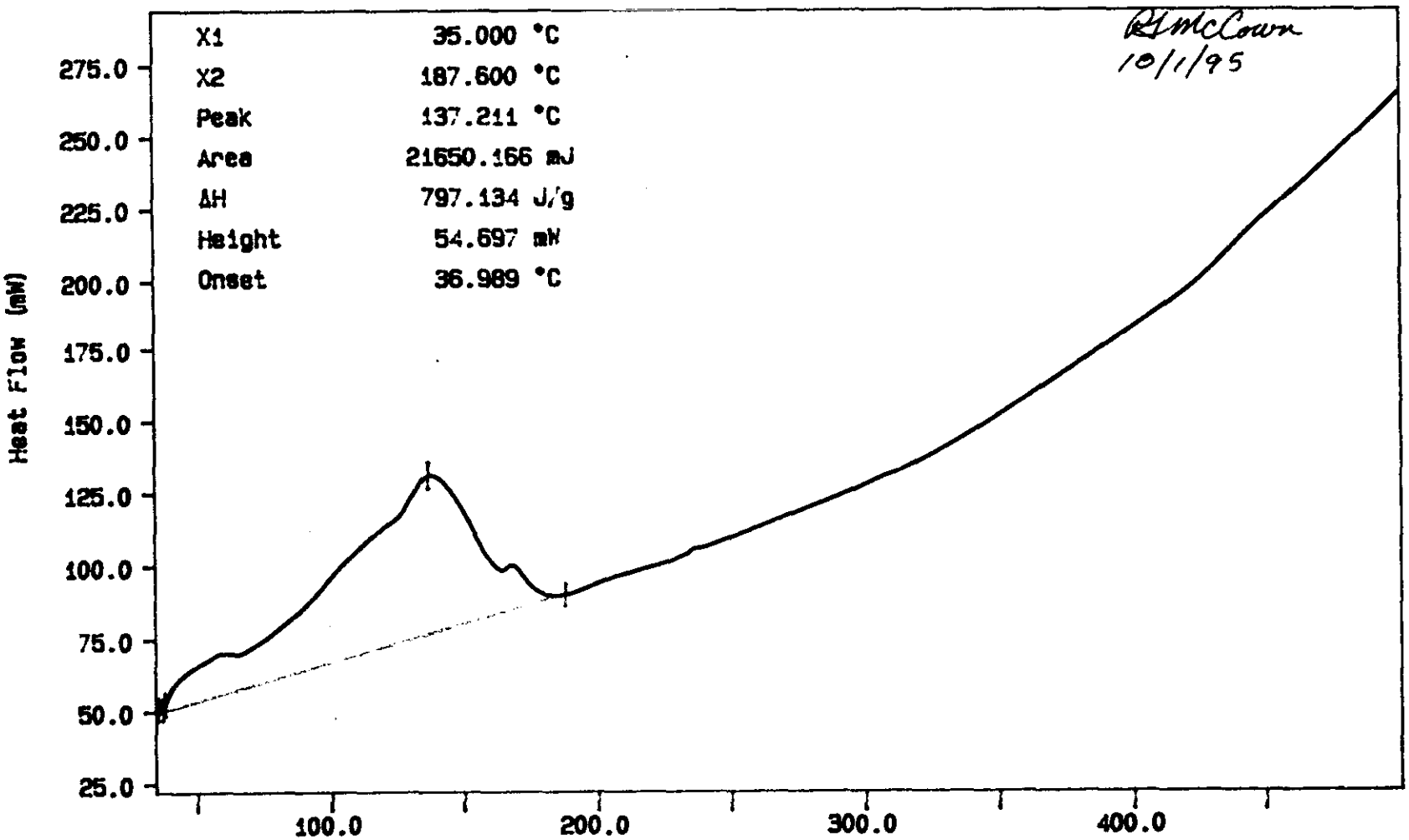
PJ MCCOWN
PERKIN ELMER
222-S Lab
Sun Oct 1 18:03:59 1995

WHC-SD-WM-DP-145, REV. 1

2-165

Curve 1: DSC
File info: SAM100106 Sun Oct 1 19:12:38 1995
Sample Weight: 27.160 mg
S95T001978 DUP

BEST AVAILABLE COPY



exotherm down, N2 purge gas
TEMP1: 30.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 400.0 C

PJ MCCOWN
PERKIN ELMER
222-S Lab
Sun Oct 1 19:57:44 1995

WHC-SD-WM-DP-145, REV. 1

2-166

LABCORE Data Entry Template for Worklist# 2002

Analyst: Jds **Instrument:** TGA0 1 **Book #** 65N84

Method: LA-560-112 Rev/Mod A.2

Worklist Comment: Please run BY-108 TGAs under N2. bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R	A	-------TEST------	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD				TGA-01	SOLID	59.74	58.13	N/A	%
95000104	BY-108 (R)	2 SAMPLE	S95T001419	0		TGA-01	SOLID	N/A	28.88		%
95000104	BY-108 (R)	3 DUP	S95T001419	0		TGA-01	SOLID	28.88	36.23	N/A	%
95000104	BY-108 (R)	4 SAMPLE	S95T001420	0		TGA-01	SOLID	N/A	35.41		%
95000104	BY-108 (R)	5 DUP	S95T001420	0		TGA-01	SOLID	35.41	35.81	N/A	%

Final page for worklist # 2002

Analyst Signature 8-16-95 Date

Analyst Signature 8-22-95 Date

Verified by Blandina Valenzuela 8-28-95

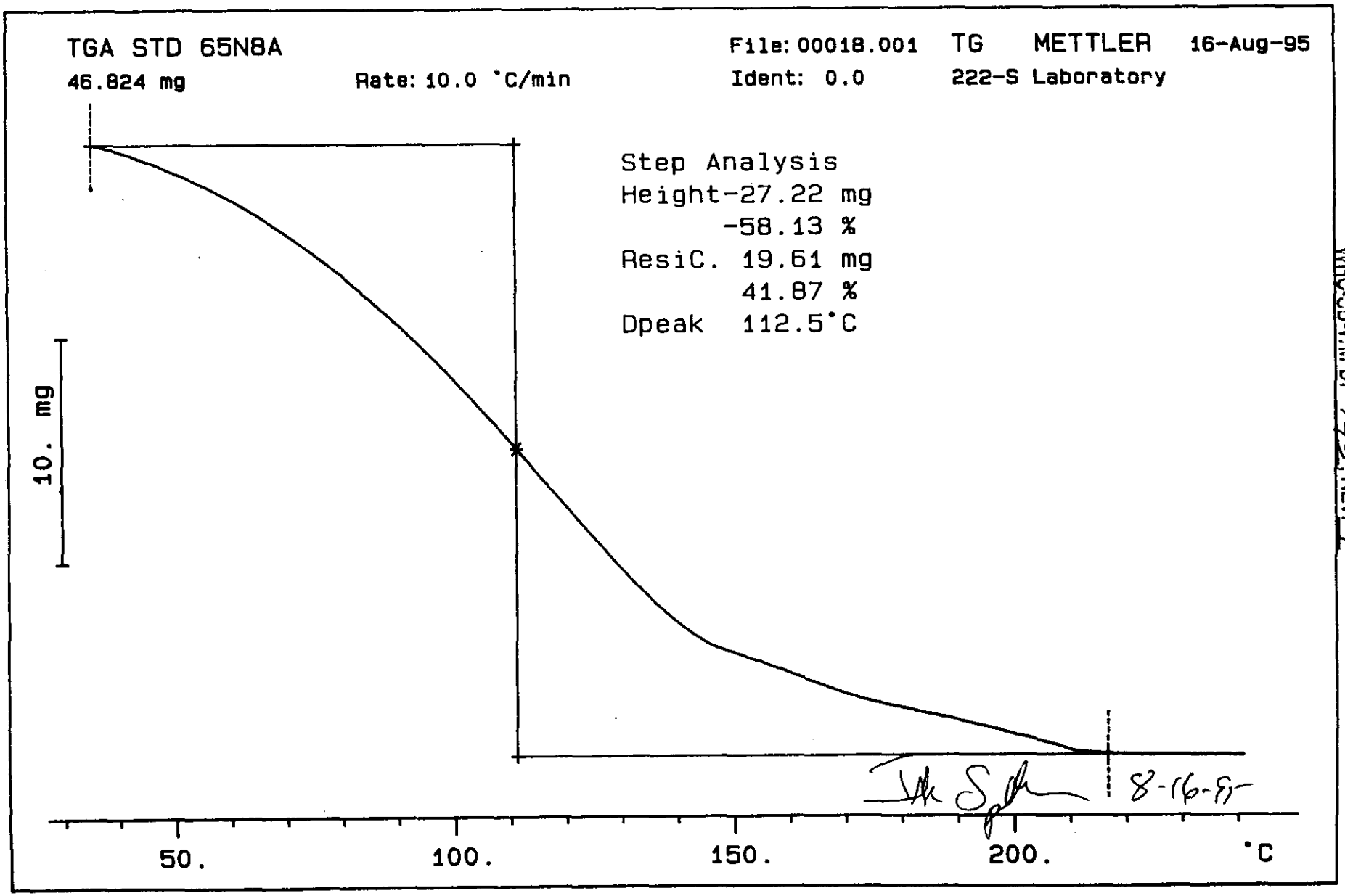
S95T001419 produced a second weight loss step ~~at~~ BDV 8-17-95 of 6.22% at approximately 335°C. Sample will be rerun due to high RPD's.

Data Entry Comments: S95T001420 produced a second weight loss step of 9.09% at approximately 320°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.

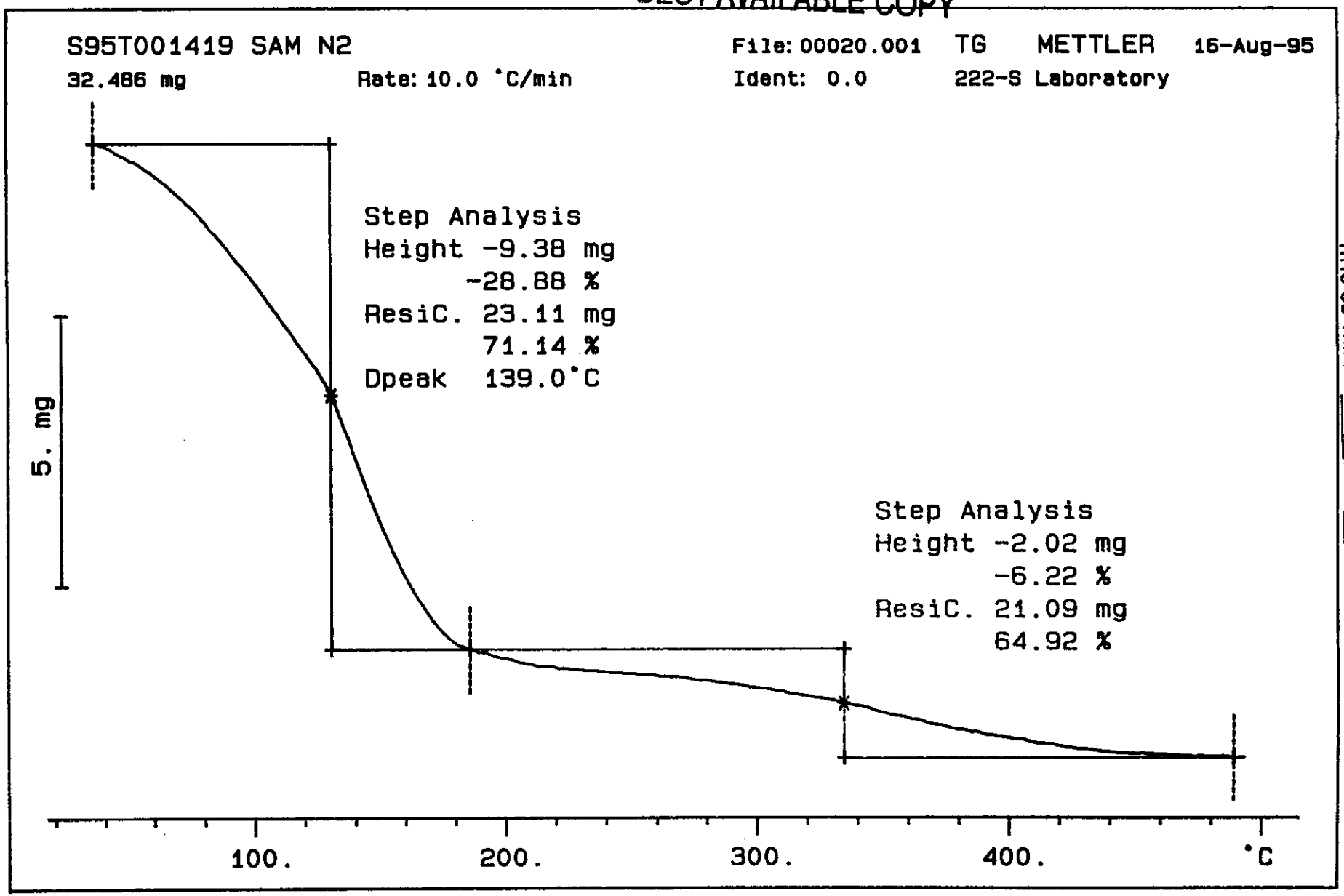
SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 2-168 TO 2-172.

BEST AVAILABLE COPY



WHC-SD-WM-DP-145, REV. 1

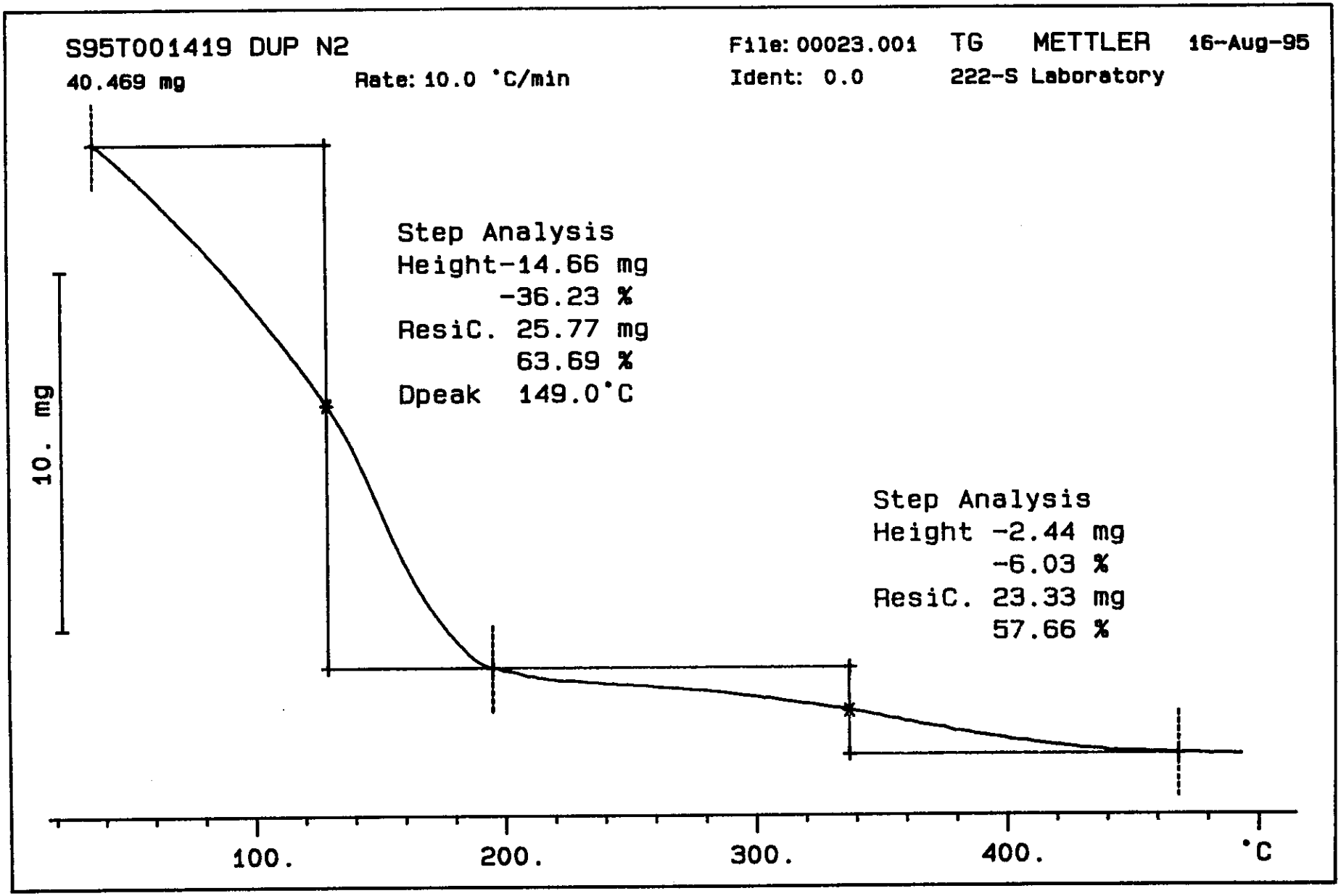
BEST AVAILABLE COPY



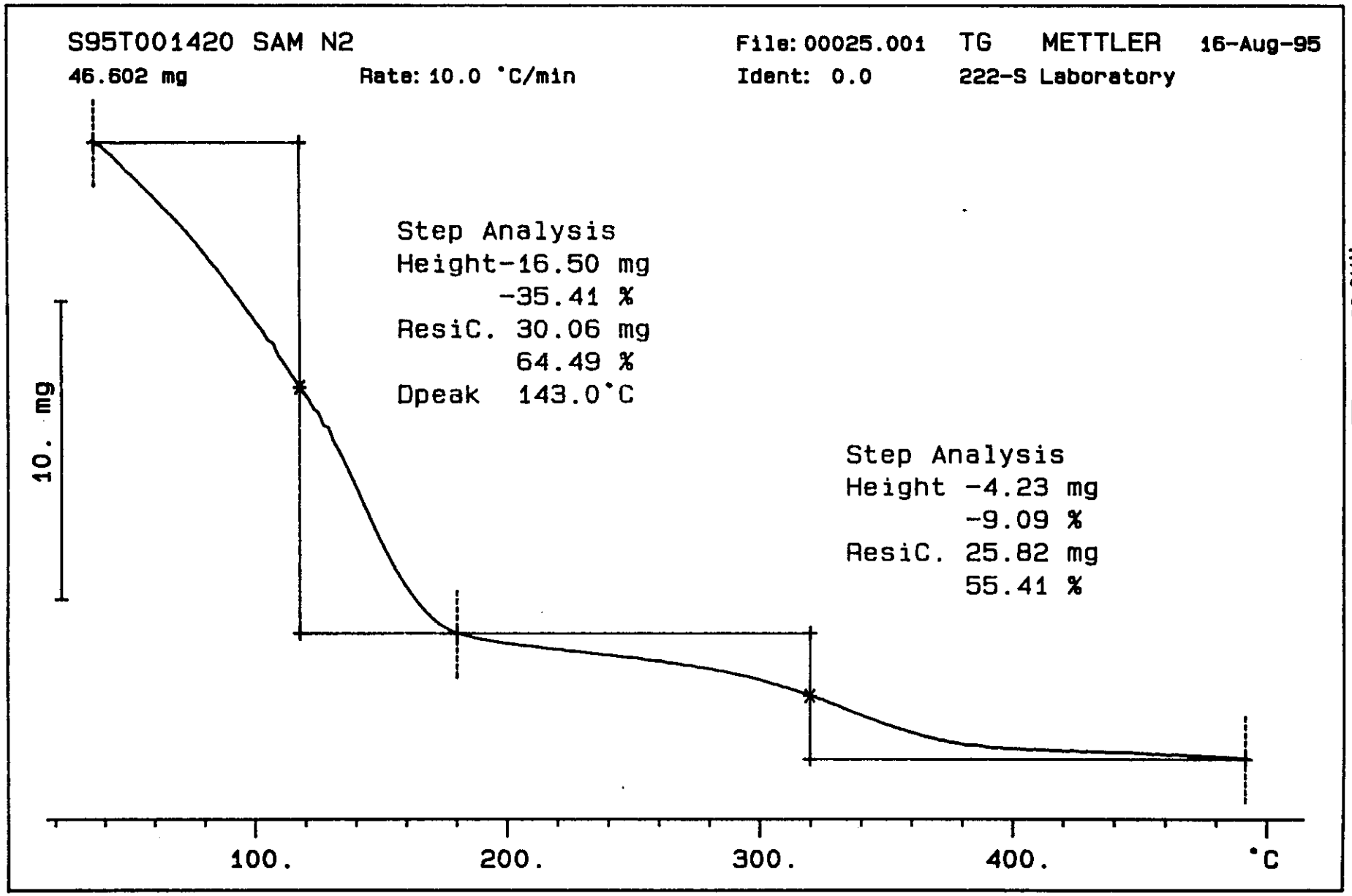
WHC-SD-WM-DP-145, REV. 1

2-169

BEST AVAILABLE COPY



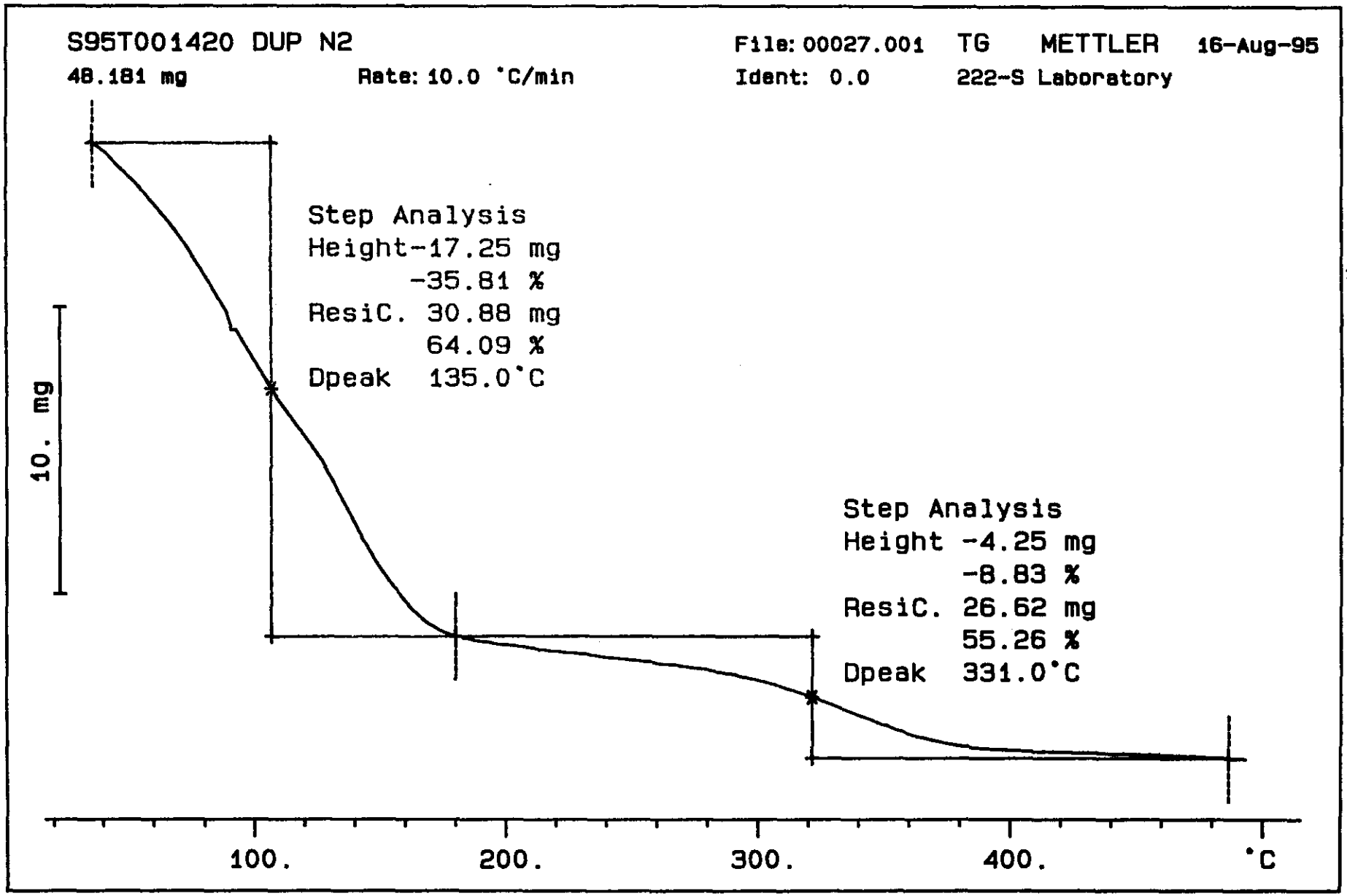
BEST AVAILABLE COPY



WHC-SD-WM-DP-145, REV. 1

3-171

BEST AVAILABLE COPY



WHC-SD-WM-DP-145, REV. 1

2172

LABCORE Data Entry Template for Worklist# 2028

Analyst: RDM **Instrument:** TGA0 **Book #** 65NB-A

Method: LA-560-112 Rev/Mod A-2

Worklist Comment: Please run BY-108 TGAs under N2. bdb

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-------TEST------	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-01	SOLID	59.74	60.44	N/A	%
95000104	BY-108 (R)	2 SAMPLE	S95T001419	1	TGA-01	SOLID	N/A	36.64		%
95000104	BY-108 (R)	3 DUP	S95T001419	1	TGA-01	SOLID	36.64	36.69	N/A	%

Final page for worklist # 2028

[signature] 8/22/95
Analyst Signature **Date**

[signature] 8-22-95
Analyst Signature **Date**

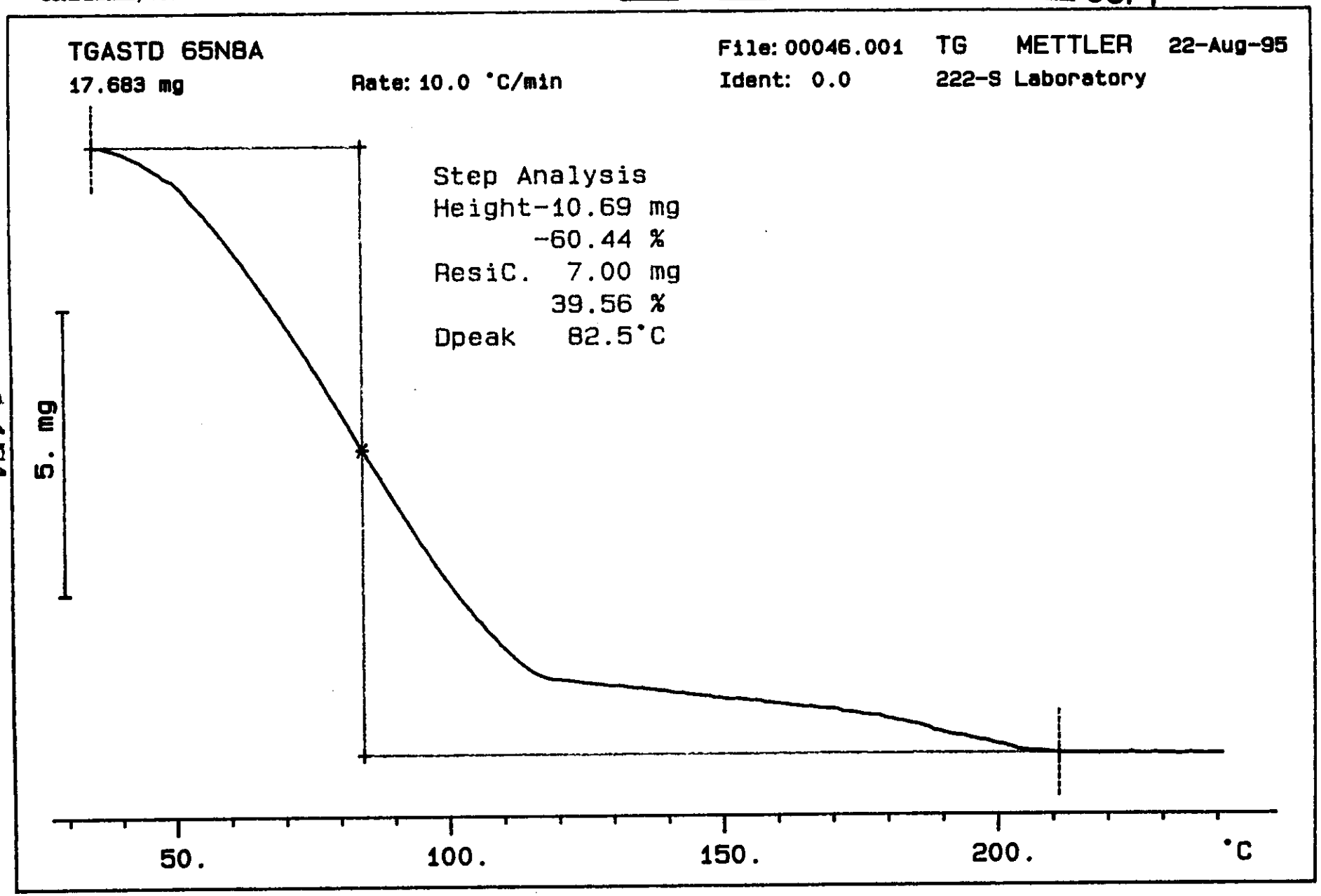
Verified by Blandina Valenzuela
8-28-95

Data Entry Comments: The sample and duplicate were run to an upper temp. limit of 250°C, since ~~we~~ 8-28-95 BDV we are concerned with the RPDS of the water weight loss the chemist did not run to upper temperature limit of 500°C due to ALARA concerns.

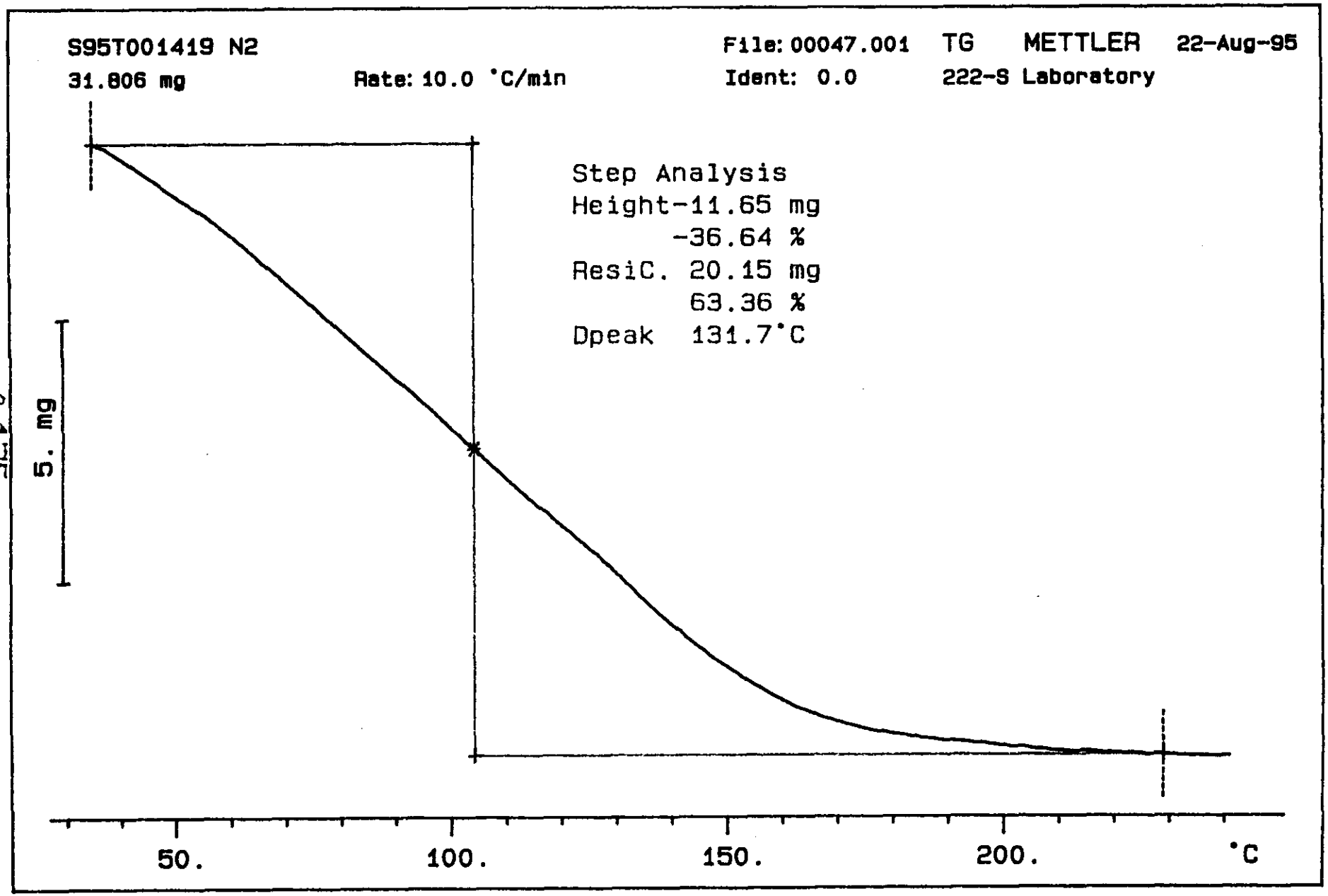
Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 2-174 TO 2-176.

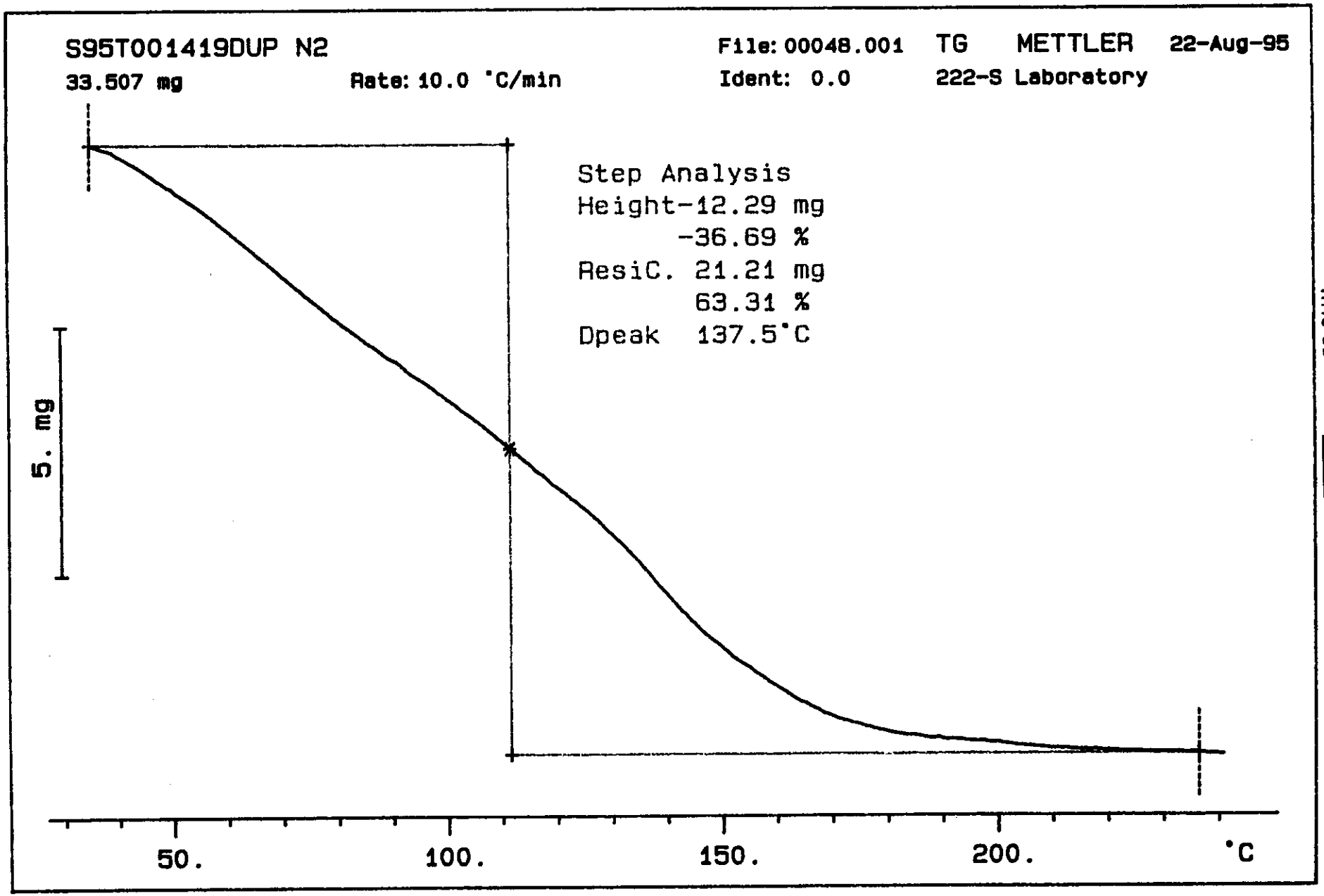
BEST AVAILABLE COPY



BEST AVAILABLE COPY



BEST AVAILABLE COPY



LABCORE Data Entry Template for Worklist# 2029

Analyst: SMF **Instrument:** TGA0 3 **Book #** 65N8-A

Method: LA-514-114 Rev/Mod B-0

Worklist Comment: Please run BY-108 TGAs under N2. bdv

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	STD				TGA-03	SOLID	59.74	60.41	N/A	%
95000104	BY-108 (R)	2	SAMPLE	S95T001380	0		TGA-03	SOLID	N/A	~~38.17~~ 15.74	gmF 9/5/95	%
95000104	BY-108 (R)	3	DUP	S95T001380	0		TGA-03	SOLID	gmF 9/5/95 ~~38.17~~ 15.74	~~39.61~~ 15.92	gmF 9/5/95 N/A	%
95000104	BY-108 (R)	4	SAMPLE	S95T001381	0		TGA-03	SOLID	N/A	~~42.35~~ 15.18	gmF 9/5/95	%
95000104	BY-108 (R)	5	DUP	S95T001381	0		TGA-03	SOLID	gmF 9/5/95 ~~42.35~~ 15.18	~~43.19~~ 16.82	gmF 9/5/95 N/A	%

Final page for worklist # 2029

See attached for signatures
Analyst Signature Date 8-21-95 BDV

Analyst Signature Date 8-23-95

Corrected & Verified 9/5/95 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.

LABCORE Data Entry Template for Worklist# 2029

Analyst: SMF **Instrument:** TGA0 _____ **Book #** 65N817

Method: LA-560-112 Rev/Mod B-0

Worklist Comment: Please run BY-108 TGAs under N2. bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R	A	-------TEST------	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD				TGA-01	SOLID			N/A	%
95000104	BY-108 (R)	2 SAMPLE	S95T001380	0		TGA-01	SOLID	N/A			%
95000104	BY-108 (R)	3 DUP	S95T001380	0		TGA-01	SOLID			N/A	%
95000104	BY-108 (R)	4 SAMPLE	S95T001381	0		TGA-01	SOLID	N/A			%
95000104	BY-108 (R)	5 DUP	S95T001381	0		TGA-01	SOLID			N/A	%

Final page for worklist # 2029

Susie M. Fulton 8-19-95
Analyst Signature Date

Analyst Signature Date

Other instrument was used.
8-21-95
BDV

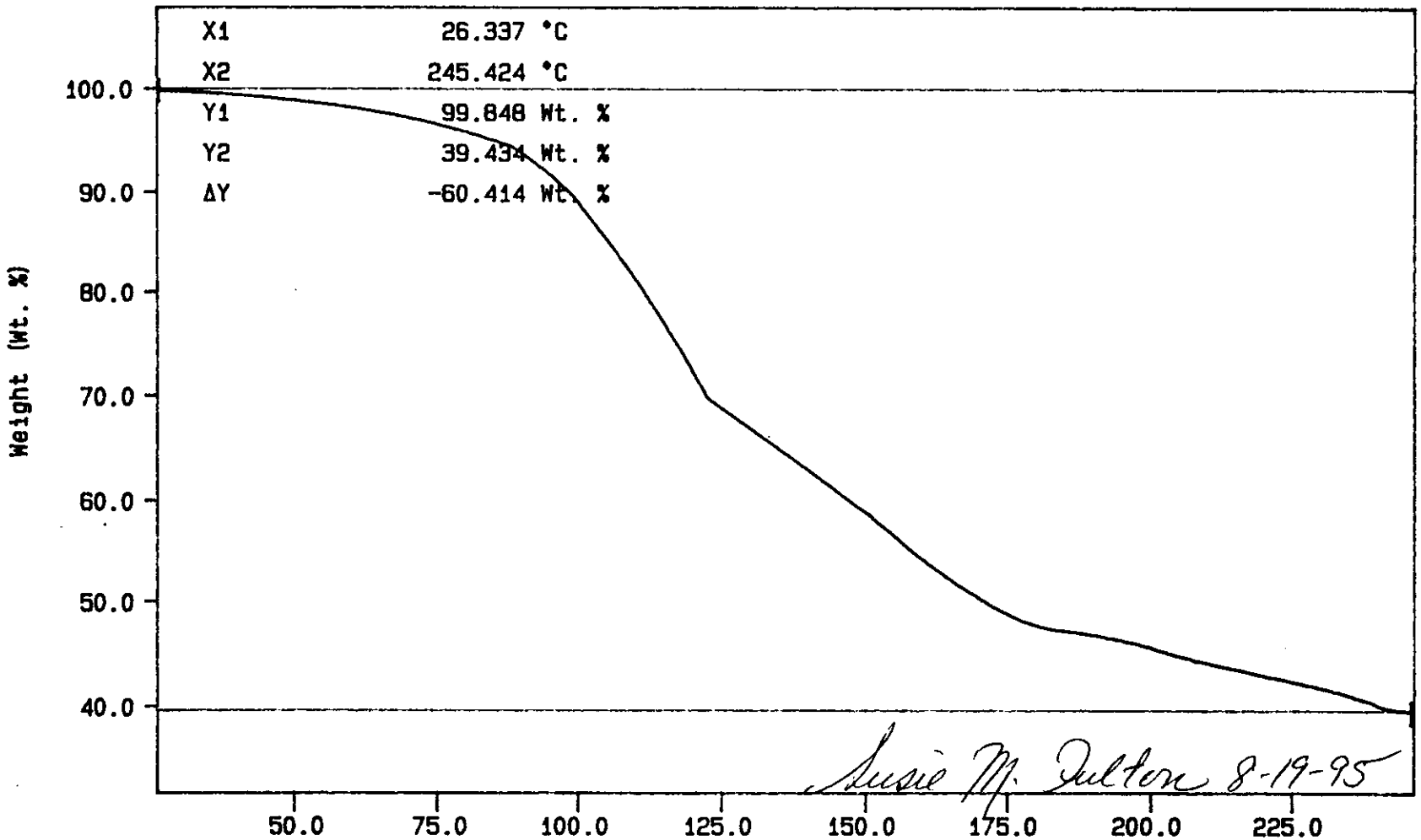
Data Entry Comments:

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: TGA
File info: TER081901 Sat Aug 19 08:57:31 1995
Sample Weight: 14.556 mg
65N8-A Terlig

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 2-179 TO 2-183.

BEST AVAILABLE COPY



Susie M. Fulton 8-19-95

N2
TEMP1: 35.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 250.0 C

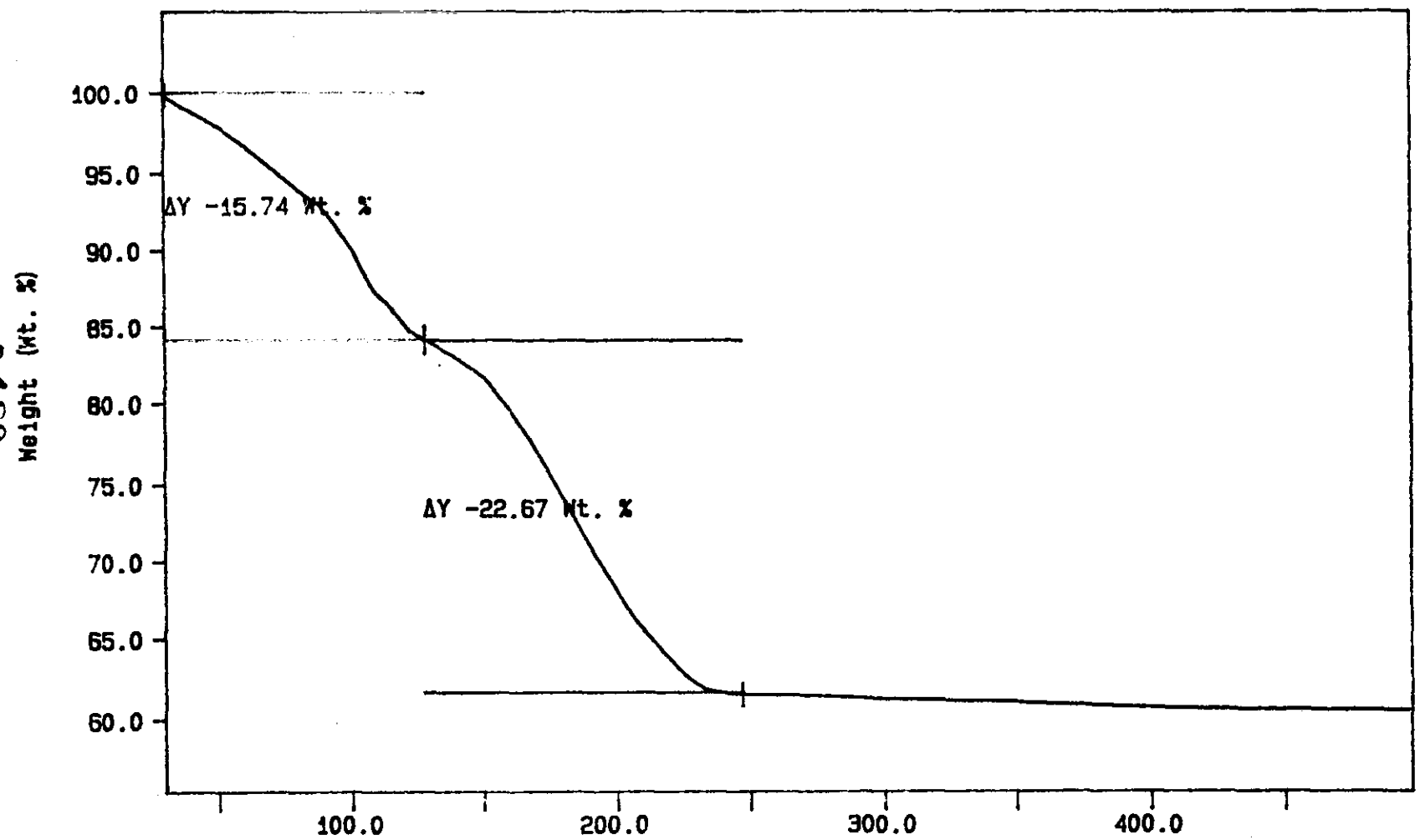
SM FULTON
PERKIN-ELMER
7 Series Thermal Analysis System
Sat Aug 19 09:01:03 1995

2-179

WHC-SD-WM-DP-145, REV. 1

Curve 1: TGA
File info: SAM081901 Sat Aug 19 11:10:26 1995
Sample Weight: 14.827 mg
S95T001380 10C/min

BEST AVAILABLE COPY



N2
TEMP1: 35.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 800.0 C

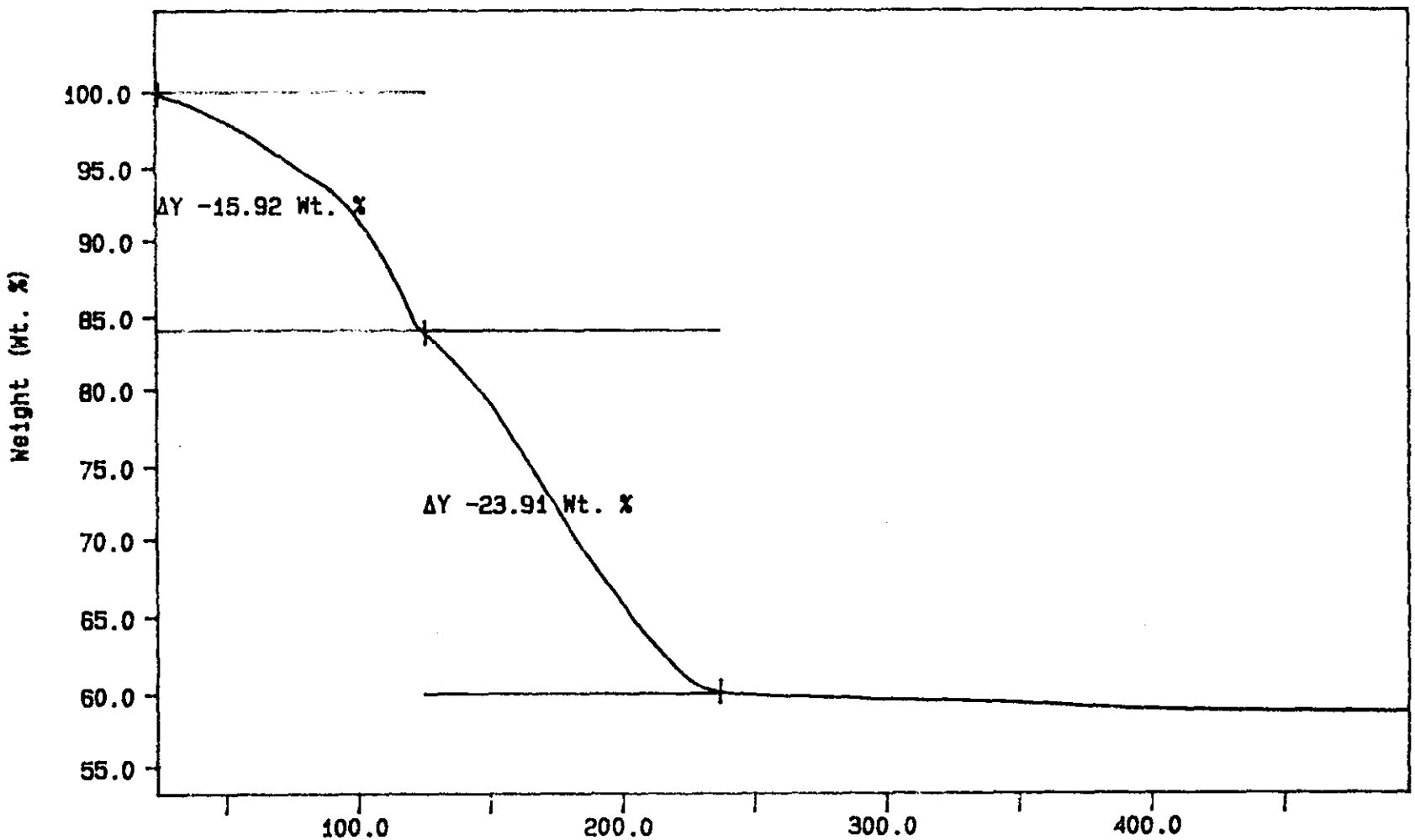
SM FULTON
PERKIN-ELMER
7 Series Thermal Analysis System
Wed Aug 30 10:26:52 1995

2-180

WHC-SD-WM-DP-145, REV. 1

Curve 1: TGA
File info: SAM081902 Sat Aug 19 12:24:43 1995
Sample Weight: 18.051 mg
S95T001380DUP 10C/min

BEST AVAILABLE COPY



N2
TEMP1: 30.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 500.0 C

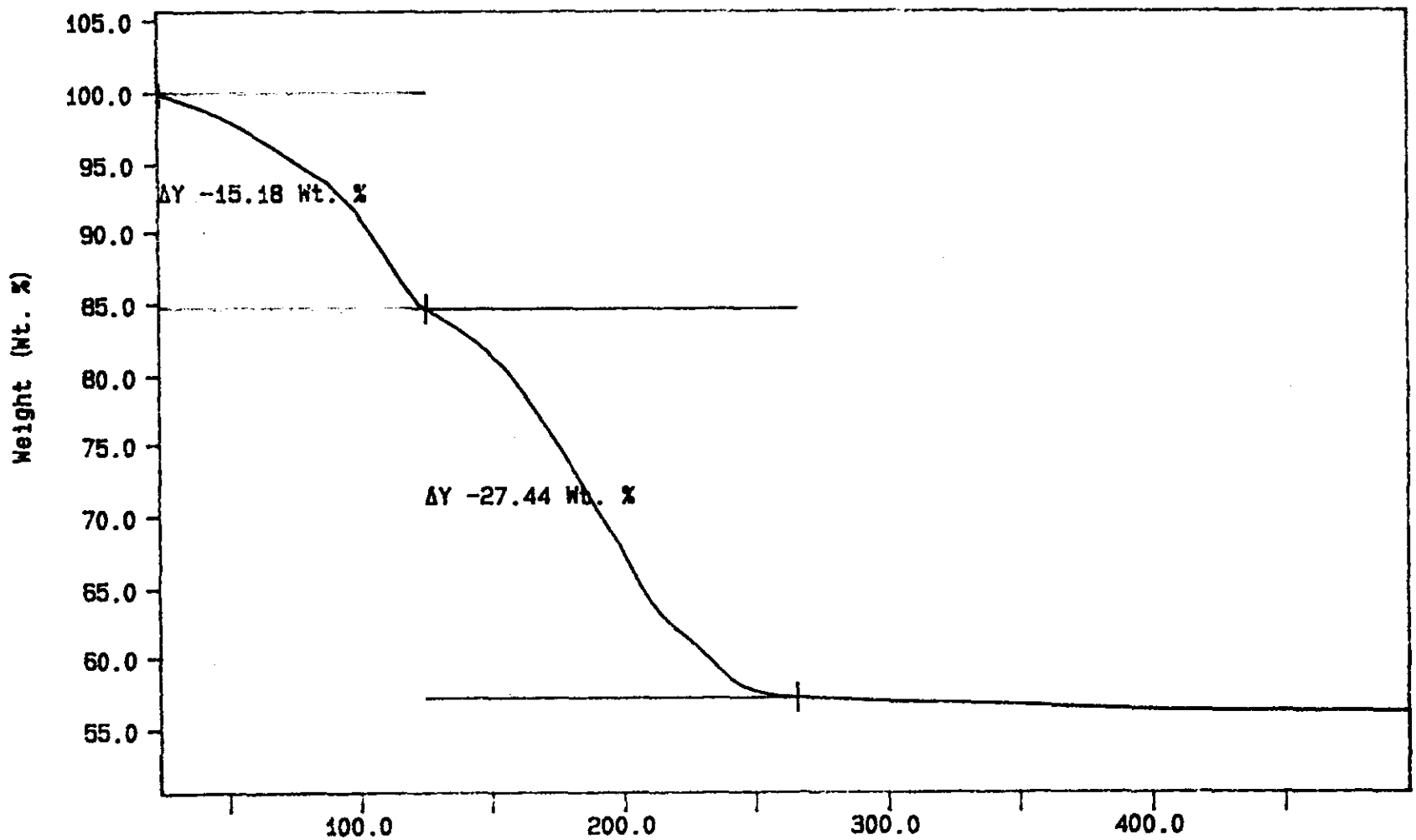
SM FULTON
PERKIN-ELMER
7 Series Thermal Analysis System
Wed Aug 30 10:39:16 1995

WHC-SD-WM-DP-146, REV. 1

2-181

Curve 1: TGA
File info: SAM081903 Sat Aug 19 14:10:05 1995
Sample Weight: 17.864 mg
S95T001381 10C/min

BEST AVAILABLE COPY



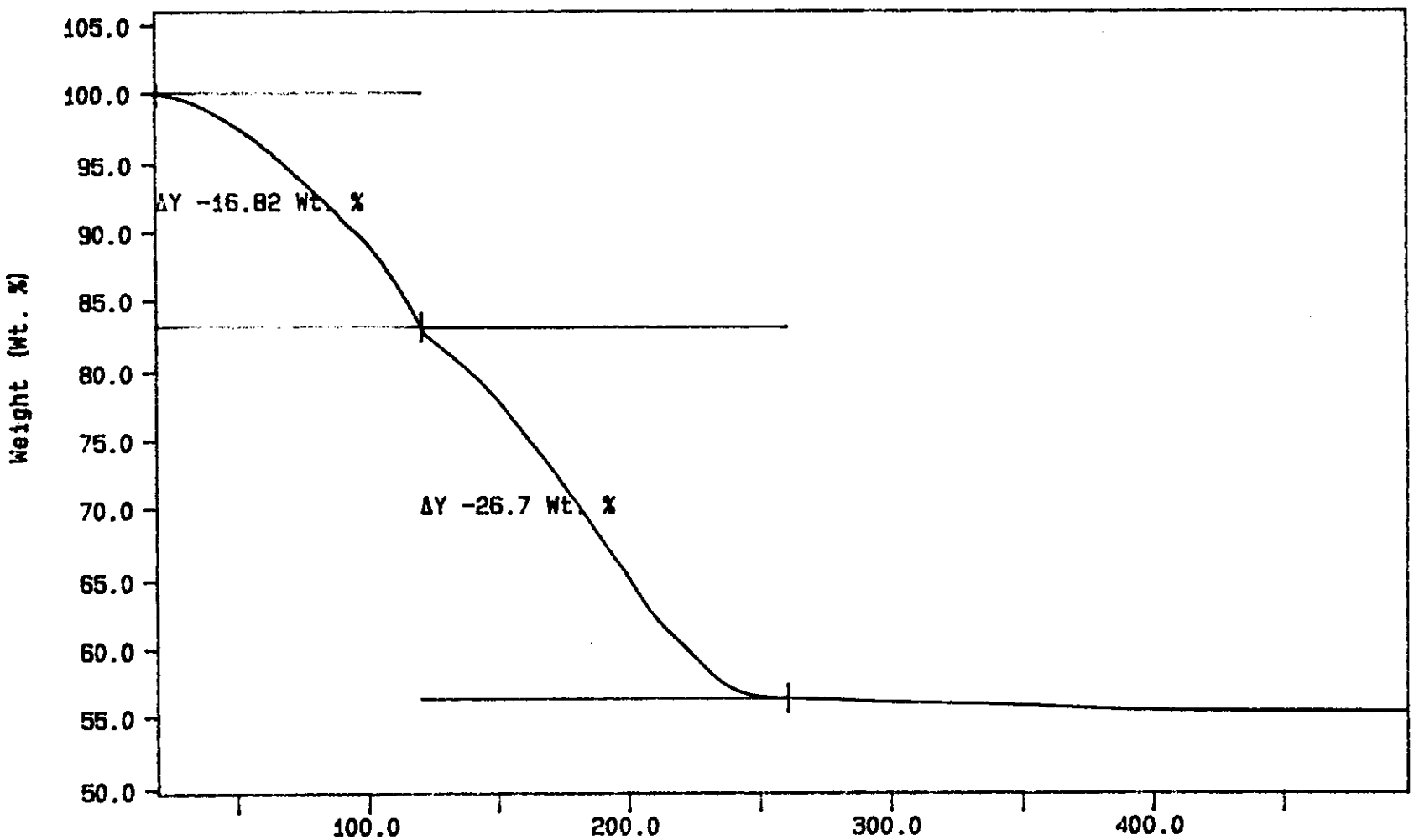
N2
TEMP1: 35.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 600.0 C

SM FULTON
PERKIN-ELMER
7 Series Thermal Analysis System
Wed Aug 30 13:43:26 1995

WHC-SD-WM-DP-145, REV 1

Curve 1: TGA
File info: SAM081904 Sat Aug 19 15:25:27 1995
Sample Weight: 15.711 mg
S95T001381DUP 10C/min

BEST AVAILABLE COPY



2-183

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
Wed Aug 30 13:50:07 1995

WHC-SD-WM-DP-145, REV. 1

LABCORE Data Entry Template for Worklist# 2030

Analyst: SMF **Instrument:** TGA0 1 **Book #** 65N8A

Method: LA-560-112 Rev/Mod A-2

Worklist Comment: Please run BY-108 TGAs under N2. bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R	A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD				TGA-01	SOLID	8-21-95 ~~60.~~ 59.74	60.23	N/A	%
95000104	BY-108 (R)	2 SAMPLE	S95T001382	0		TGA-01	SOLID	N/A	39.16		%
95000104	BY-108 (R)	3 DUP	S95T001382	0		TGA-01	SOLID	39.16	39.44	N/A	%

Final page for worklist # 2030

Susie M. Fulton 8/19/95
Analyst Signature Date

L S Jones 8-21-95
Analyst Signature Date

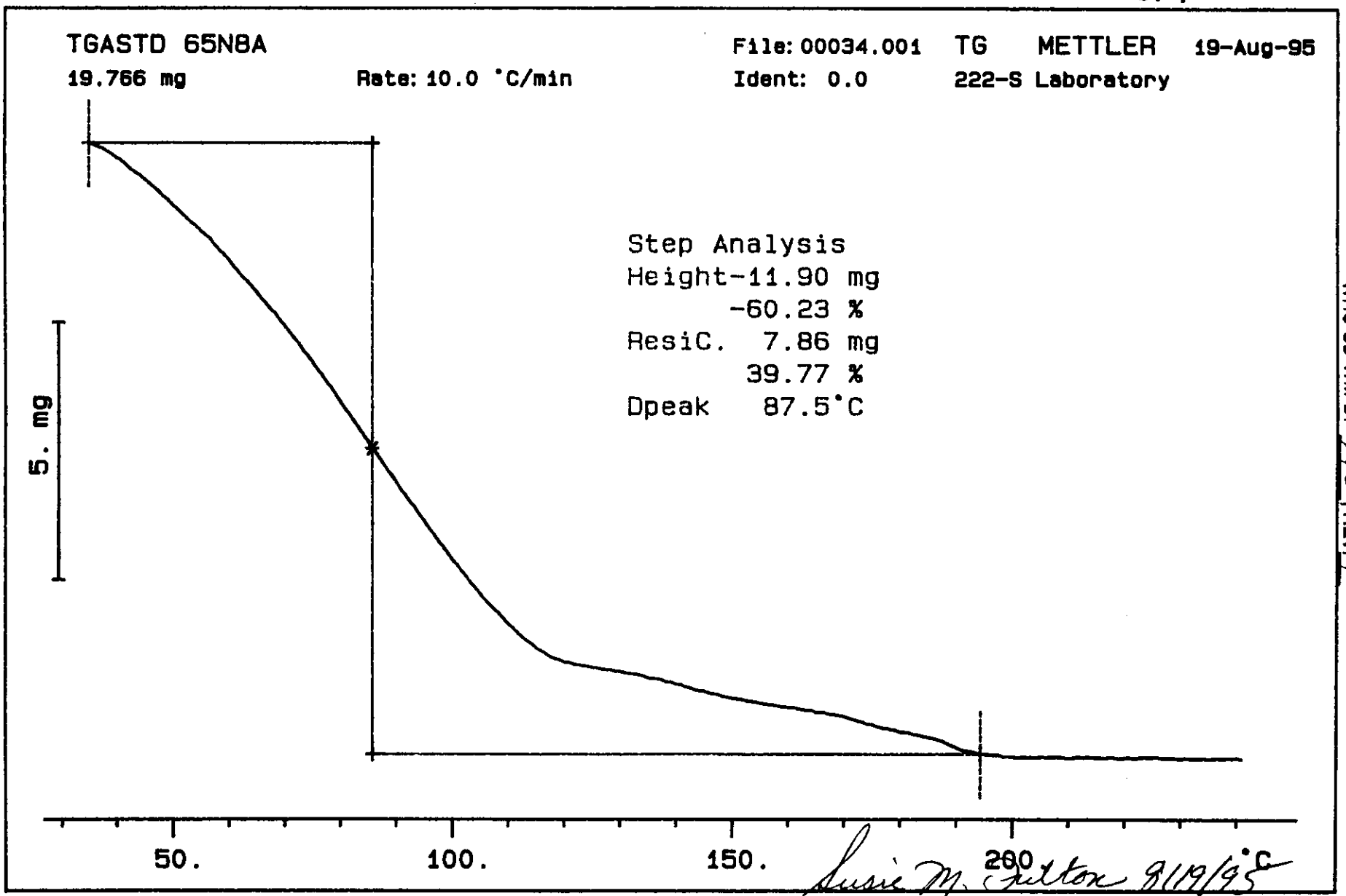
Verified by Blandina Valenzuela 8-21-95

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.

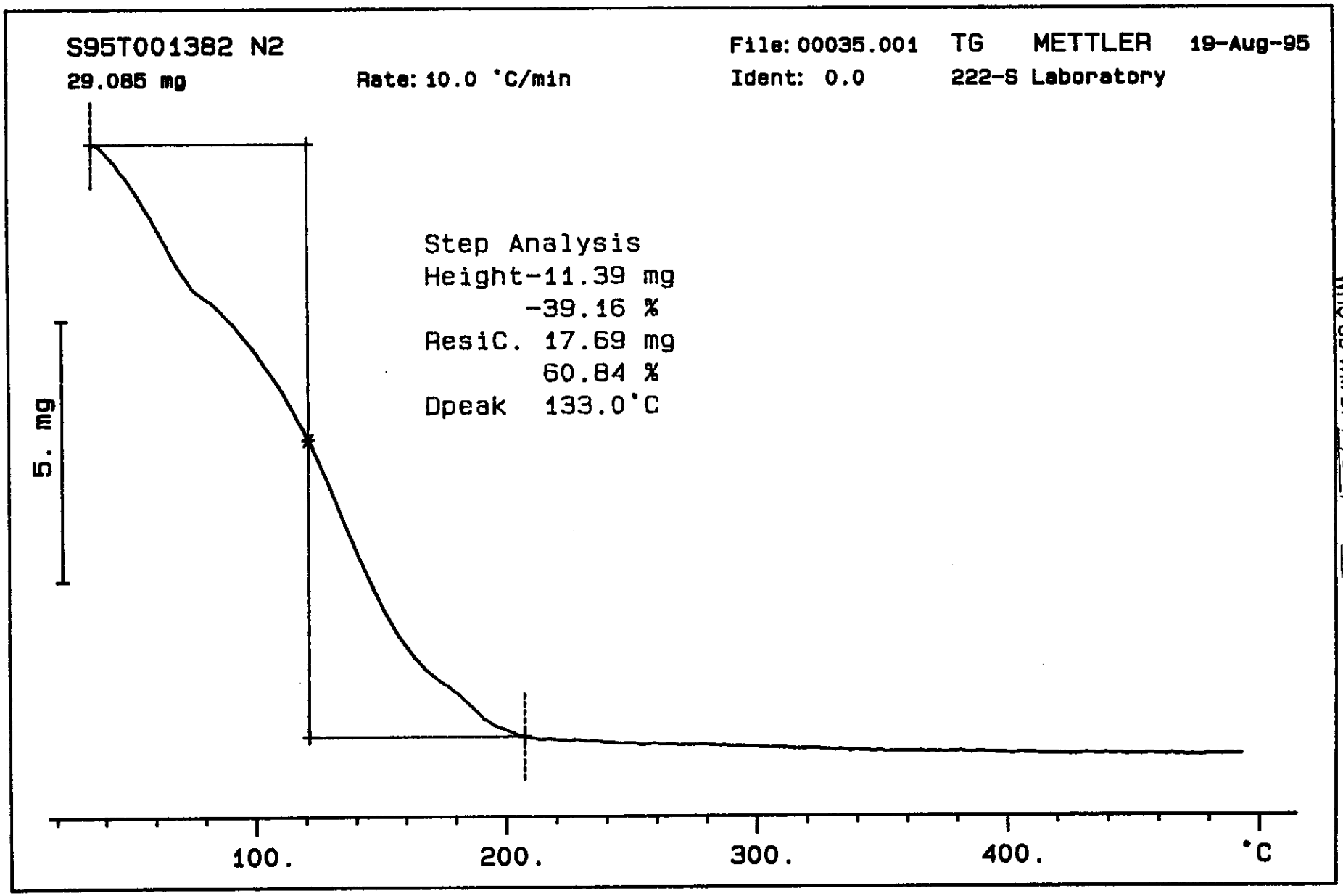
SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 2185 TO 2187.

BEST AVAILABLE COPY

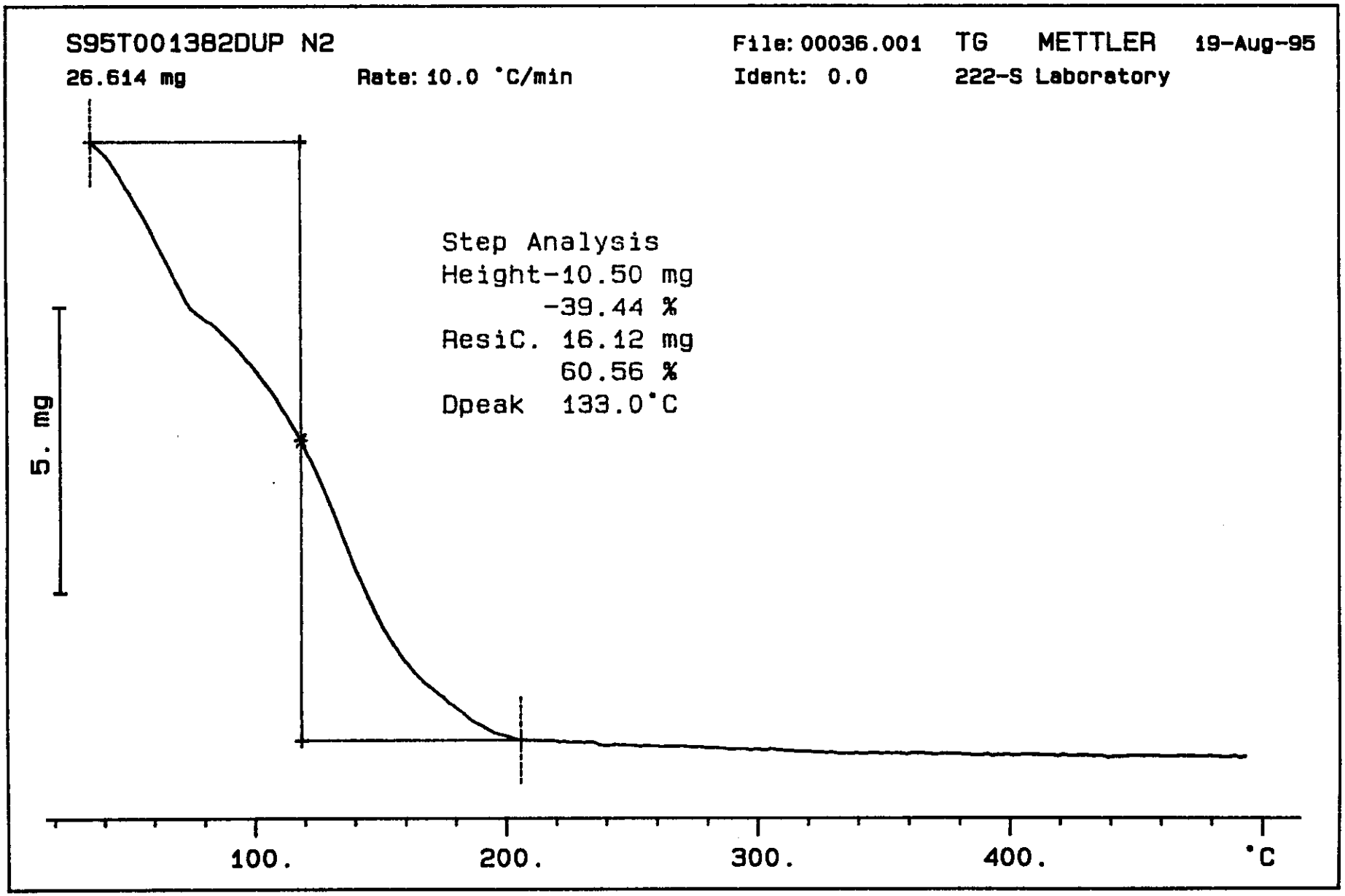


Susie M. Sutton 8/19/95

BEST AVAILABLE COPY



BEST AVAILABLE COPY



C-187

WHC-SD-WM-DP-145, REV. 1

LABCORE Data Entry Template for Worklist# 2033

Analyst: JDS **Instrument:** TGA0 3 **Book #** 65N8-A

Method: LA-514-114 Rev/Mod B-0

Worklist Comment: Please run BY-108 TGAs under N2. bdv

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	STD				TGA-03	SOLID	59.74	57.60	N/A	%
95000104	BY-108 (R)	2	SAMPLE	S95T001390	0		TGA-03	SOLID	N/A	21.85		%
95000104	BY-108 (R)	3	DUP	S95T001390	0		TGA-03	SOLID	21.85	19.76	N/A	%
		4	STD				TGA-03	SOLID	59.74	57.59	8-24-95 BDV N/A	%
95000104	BY-108 (R)	5	SAMPLE	S95T001407	0		TGA-03	SOLID	N/A	16.31		%
95000104	BY-108 (R)	6	DUP	S95T001407	0		TGA-03	SOLID	16.31	17.58	N/A	%

Final page for worklist # 2033

See attached for signatures
Analyst Signature Date 8-24-95

Verified by Blandina Valenzuela BDV 8-28-95

Analyst Signature Date 8-24-95

S95T001390 produced two additional weight loss steps of 16.77% and 13.45% before 250°C

Data Entry Comments: S95T001407 produced one additional weight loss step of 22.45% before 250°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# 2033

Analyst: JDS **Instrument:** TGA0 _____ **Book #** 65N8A

Method: LA-560-112 Rev/Mod B-0

Worklist Comment: Please run BY-108 TGAs under N2. bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R	A	-------TEST------	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD				TGA-01	SOLID			N/A	%
95000104	BY-108 (R)	2 SAMPLE	S95T001390	0		TGA-01	SOLID	N/A			%
95000104	BY-108 (R)	3 DUP	S95T001390	0		TGA-01	SOLID			N/A	%
95000104	BY-108 (R)	4 SAMPLE	S95T001407	0		TGA-01	SOLID	N/A			%
95000104	BY-108 (R)	5 DUP	S95T001407	0		TGA-01	SOLID			N/A	%

Final page for worklist # 2033

JDS 8-23-95

Analyst Signature Date

Analyst Signature Date

Other instrument was used 8-24-95 BDV

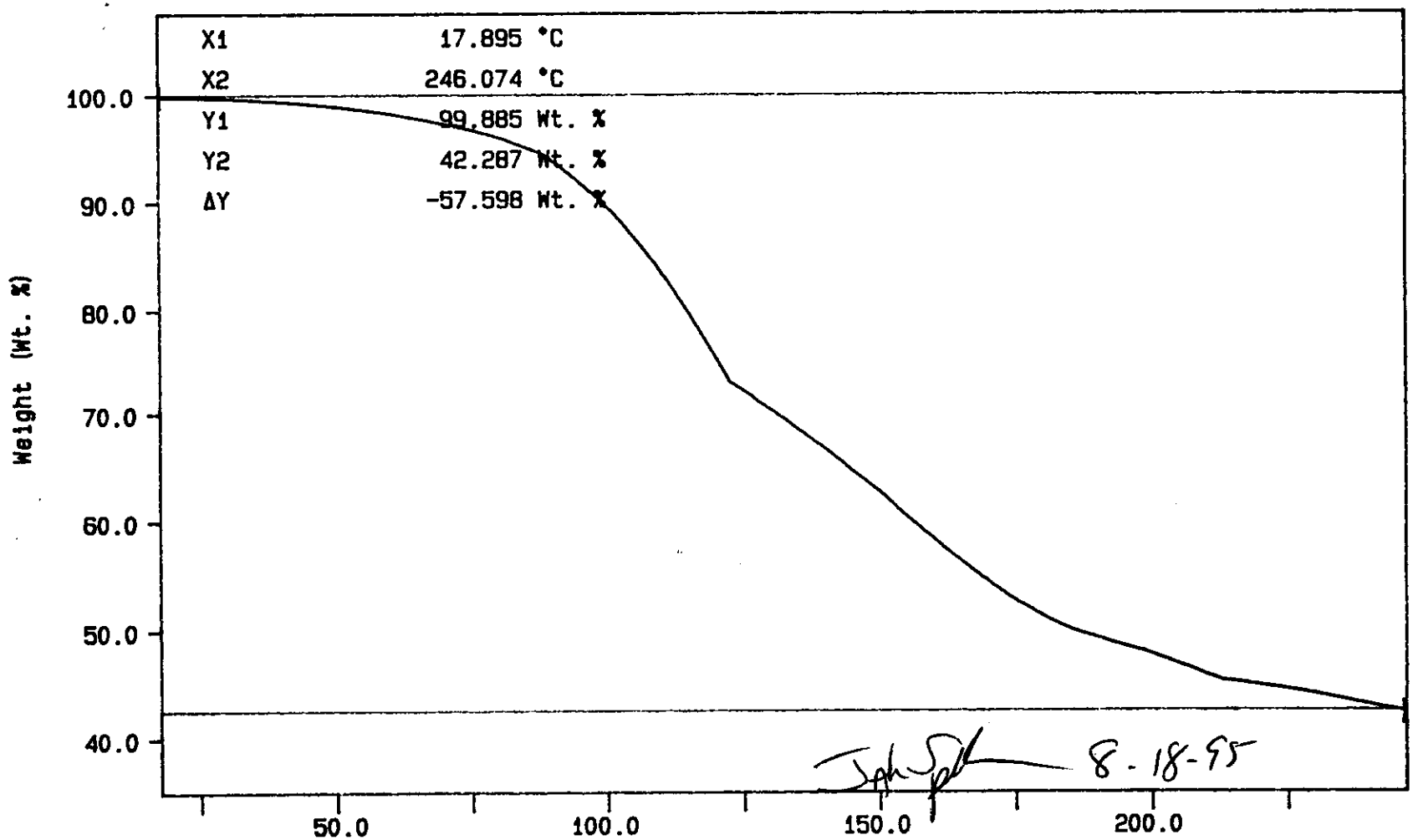
Data Entry Comments:

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: TGA
File info: TER081801 Fri Aug 18 09:43:05 1995
Sample Weight: 16.603 mg
65N8-A Tecliq

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 2-190 TO 2-195.

BEST AVAILABLE COPY



N2
TEMP1: 35.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 250.0 C

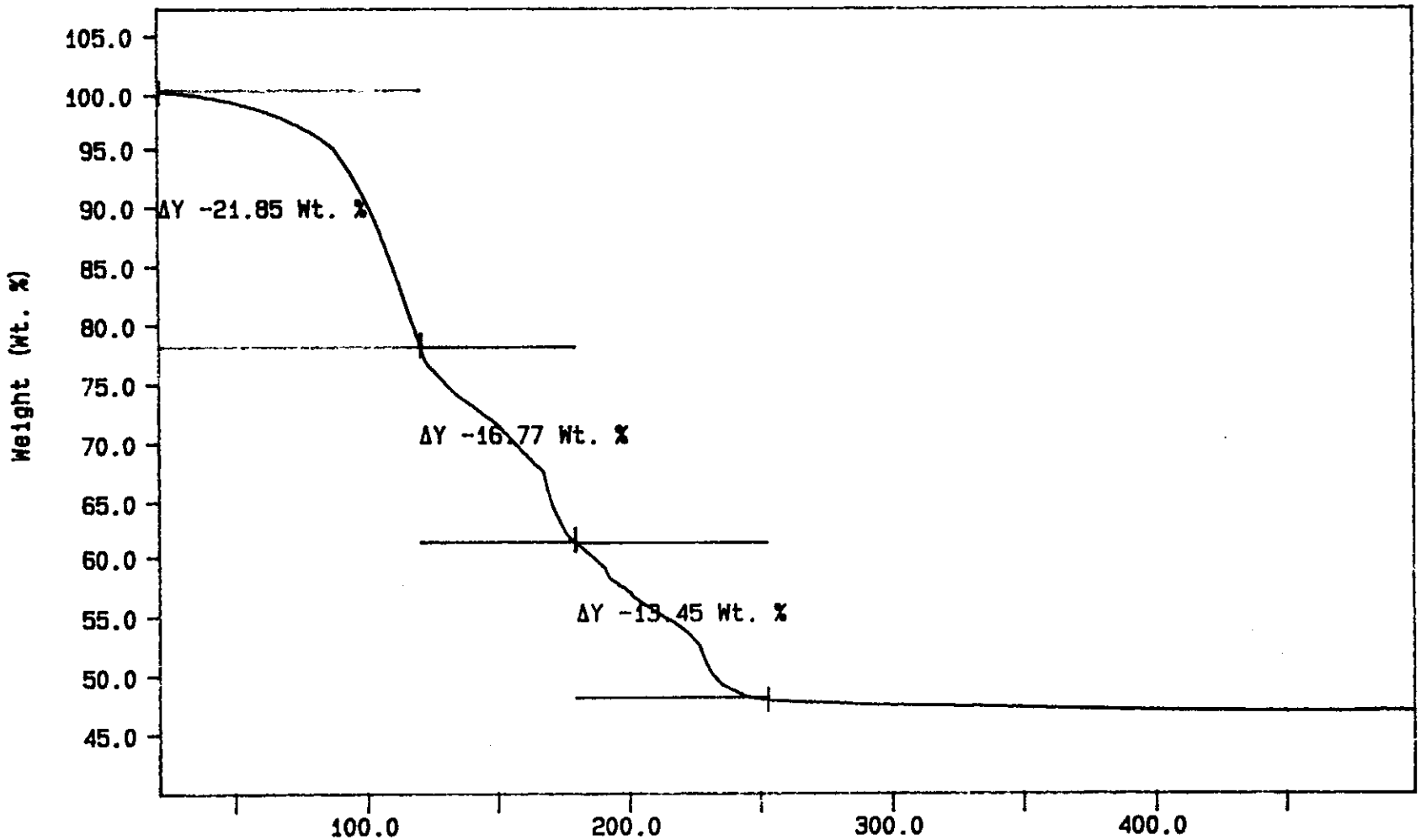
JD SPELLMAN
PERKIN-ELMER
7 Series Thermal Analysis System
Fri Aug 18 10:25:43 1995

2-190

WHC-SD-WM-DP-145, REV. 1

Curve 1: TGA
File info: SAM081801 Fri Aug 18 11:21:19 1995
Sample Weight: 15.720 mg
S95T001390 SAM N2

BEST AVAILABLE COPY



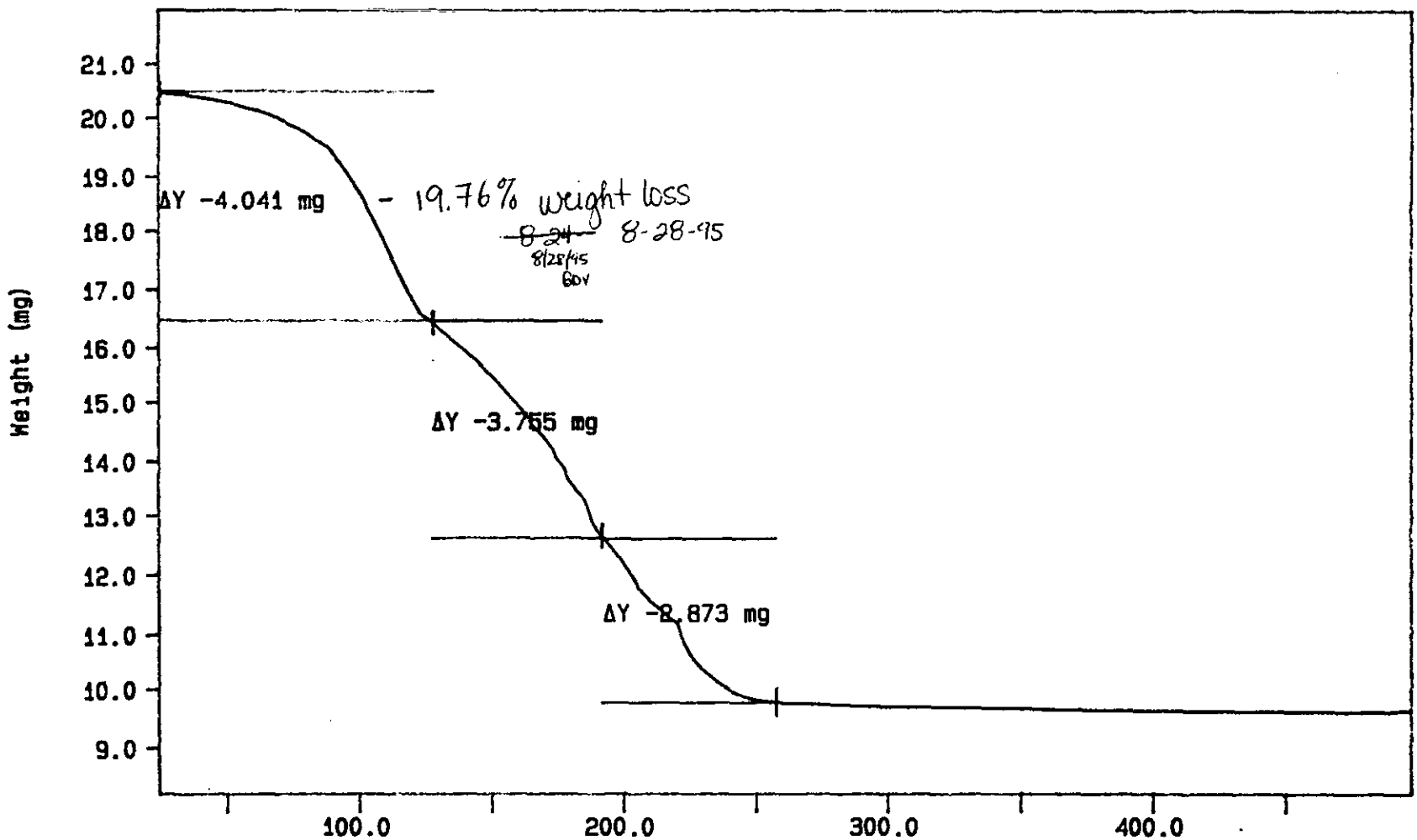
N2
TEMP1: 35.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 600.0 C

JD SPELLMAN
PERKIN-ELMER
7 Series Thermal Analysis System
Thu Aug 24 11:50:05 1995

WHC-SD-WM-DP-145, REV. 1

Curve 1: TGA
File info: SAM081802 Fri Aug 18 13:49:37 1995
Sample Weight: 20.453 mg
S95T001390 DUP

BEST AVAILABLE COPY



N2
TEMP1: 35.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 600.0 C

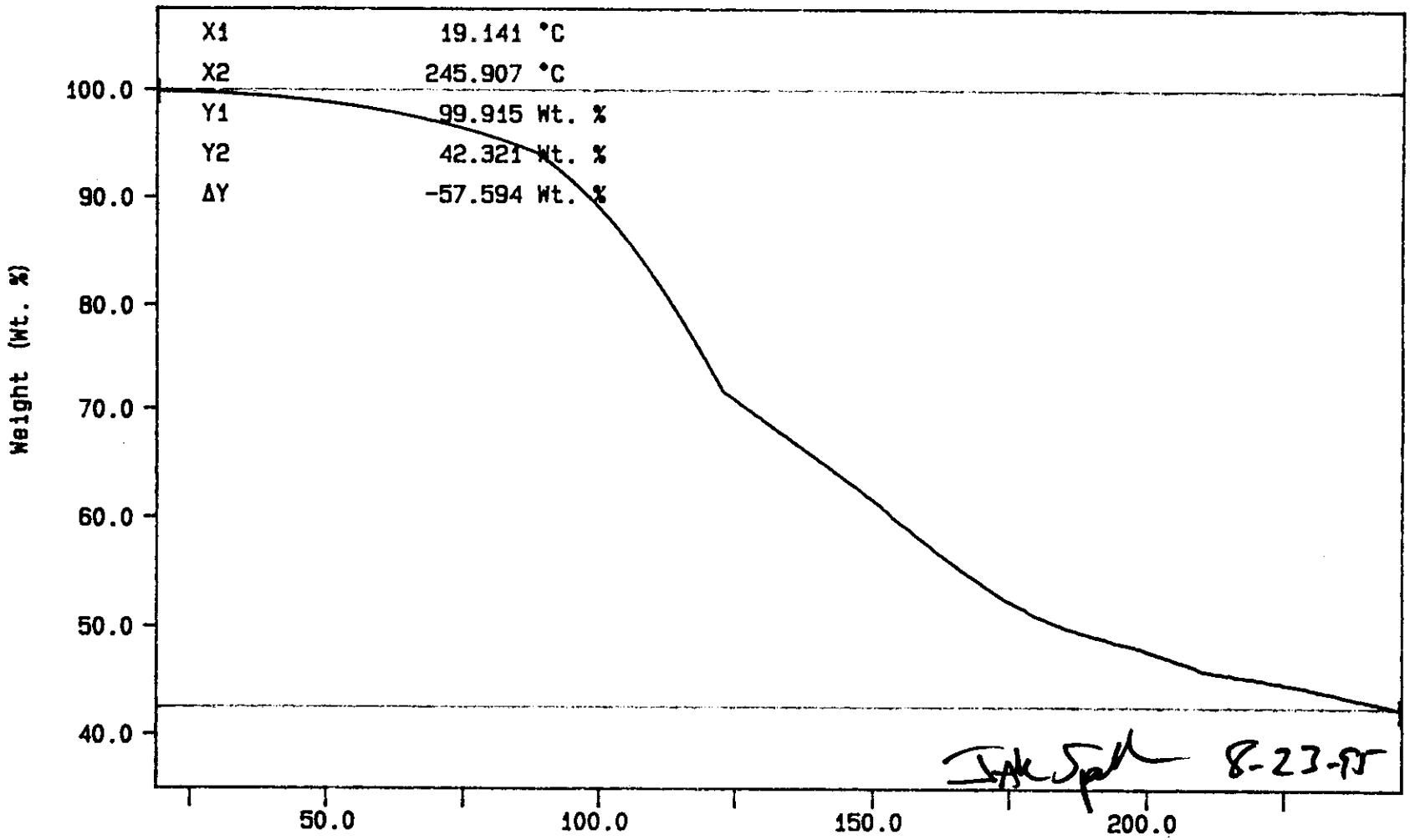
JD SPELLMAN
PERKIN-ELMER
7 Series Thermal Analysis System
Thu Aug 24 12:14:28 1995

WHC-SD-WM-DP-145, REV. 1

2-192

Curve 1: TGA TER082301
File info: ~~IND082301~~ Wed Aug 23 08:54:21 1995
Sample Weight: 17.856 mg
65N8-A Terliq

BEST AVAILABLE COPY



N2
TEMP1: 35.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 250.0 C

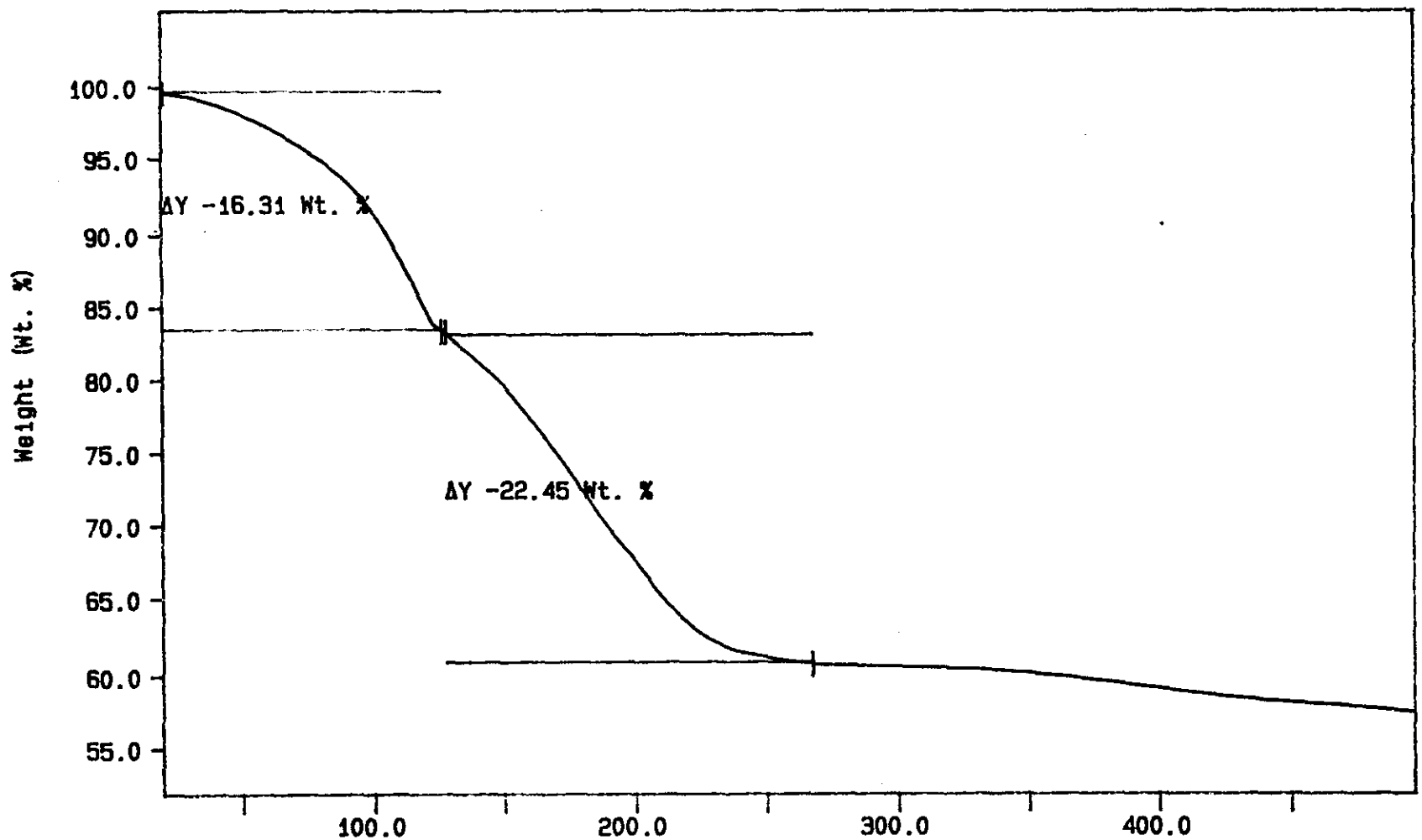
JD SPELLMAN
PERKIN-ELMER
7 Series Thermal Analysis System
Wed Aug 23 11:02:17 1995

WHC-SD-WM-DP-145, REV. 1

2-193

Curve 1: TGA
File info: SAM082301 Wed Aug 23 13:03:23 1995
Sample Weight: 19.261 mg
S95T001407 SAM

BEST AVAILABLE COPY



N2 10C/MIN
TEMP1: 30.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 500.0 C

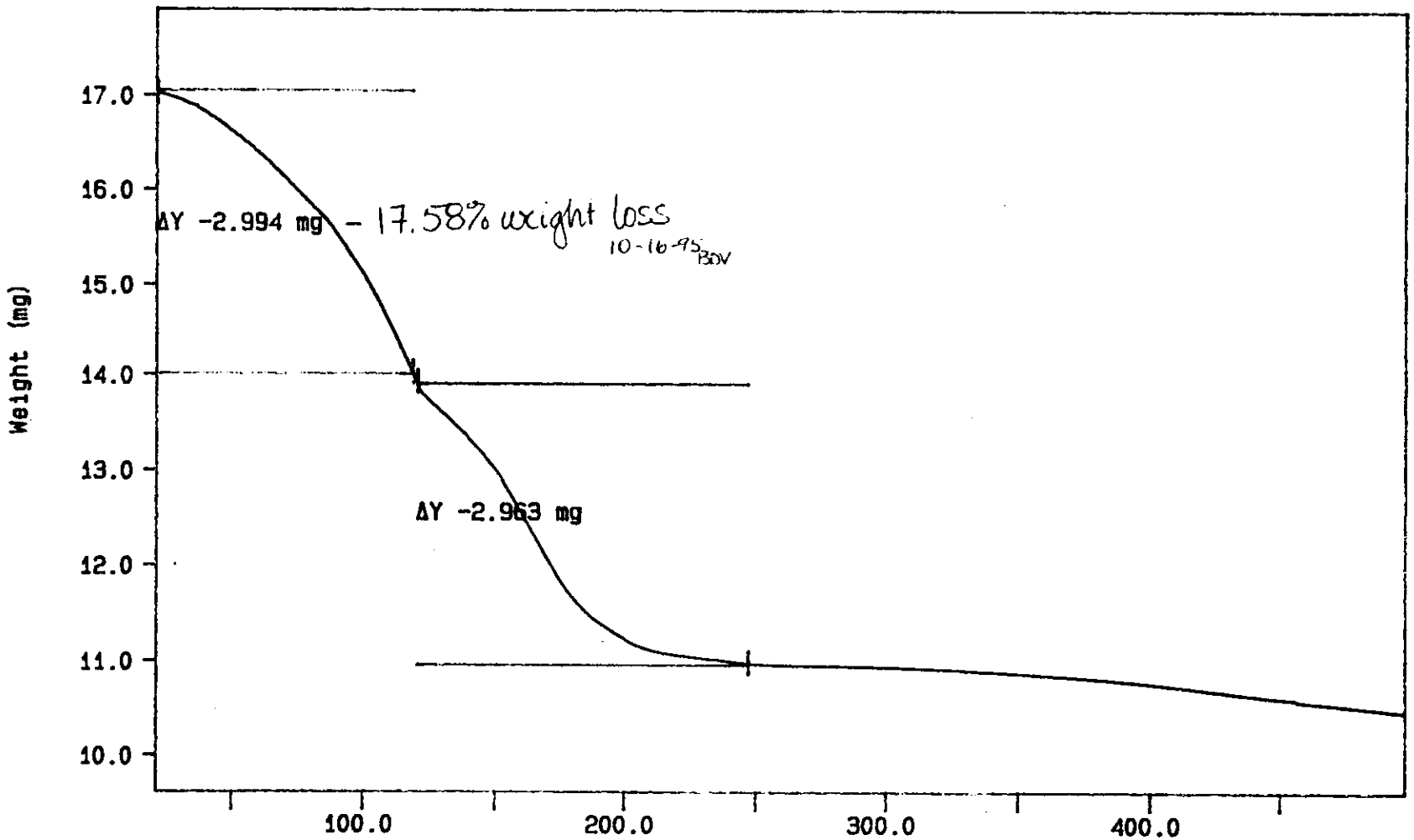
JD SPELLMAN
PERKIN-ELMER
7 Series Thermal Analysis System
Thu Aug 24 12:56:52 1995

WHC-SD-WM-DP-145, REV. 1

2-194

Curve 1: TGA
File info: SAM082302 Wed Aug 23 14:44:21 1995
Sample Weight: 17.046 mg
S95T001407 DUP

BEST AVAILABLE COPY



N2 10C/MIN
TEMP1: 35.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 500.0 C

JD SPELLMAN
PERKIN-ELMER
7 Series Thermal Analysis System
Thu Aug 24 12:51:51 1995

WHC-SD-WM-DP-145, REV. 1

LABCORE Data Entry Template for Worklist# 2034

Analyst: SMF **Instrument:** TGA0 1 **Book #** 65N8A

Method: LA-560-112 Rev/Mod A-2

Worklist Comment: Please run BY-108 TGAs under N2. bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-------TEST------	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-01	SOLID	59.74	60.51	N/A	%
95000104	BY-108 (R)	2 SAMPLE	S95T001408	0	TGA-01	SOLID	N/A	37.28	8-21-95 BDV	%
95000104	BY-108 (R)	3 DUP	S95T001408	0	TGA-01	SOLID	37.28	36.093	N/A	%
95000104	BY-108 (R)	4 SAMPLE	S95T001409	0	TGA-01	SOLID	N/A	37.47		%
95000104	BY-108 (R)	5 DUP	S95T001409	0	TGA-01	SOLID	37.47	37.91	N/A	%

Final page for worklist # 2034

Sm Fulton 8-20-95
Analyst Signature Date

Verified by for Blandina Valenzuela
8-21-95 BDV 8-21-95

[signature] 8-21-95
Analyst Signature Date

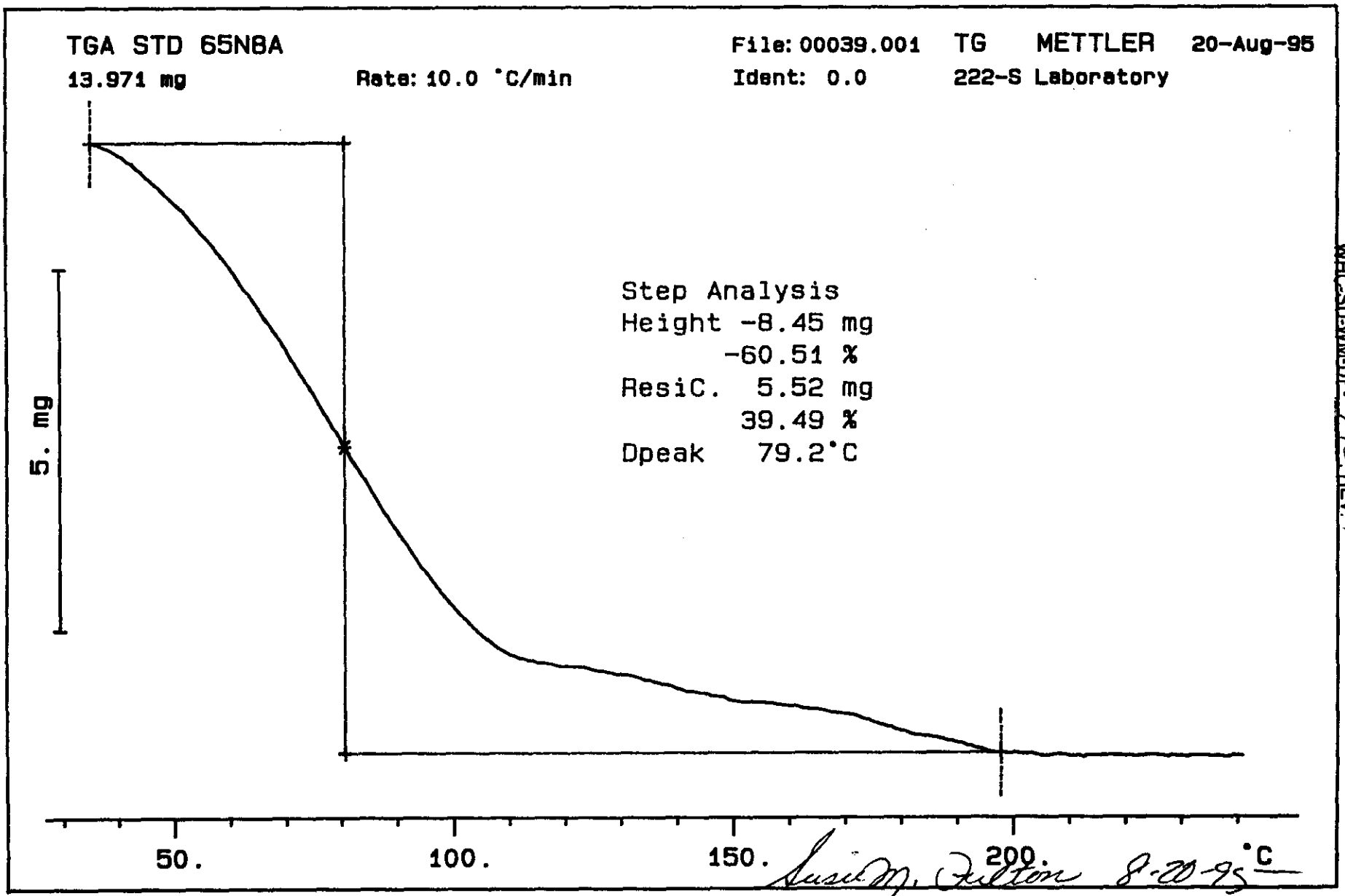
S95T001408 produced a second weight loss step of 5.26% at approximately 340°C

Data Entry Comments: ~~S95T001409 produced a~~ 8-20-95 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.

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 2-197 TO 2-201.

BEST AVAILABLE COPY

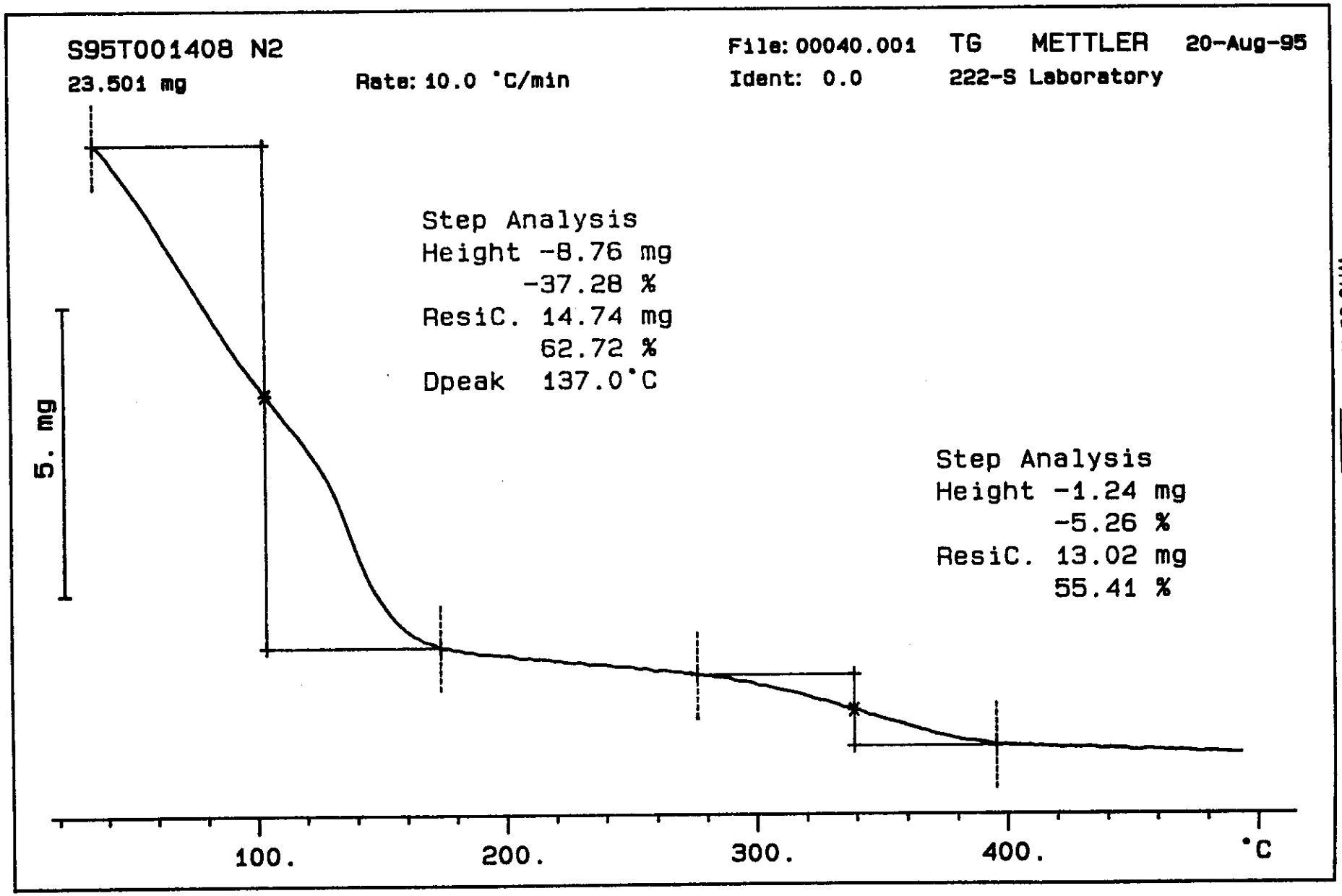


Susie M. Fulton 8-20-95

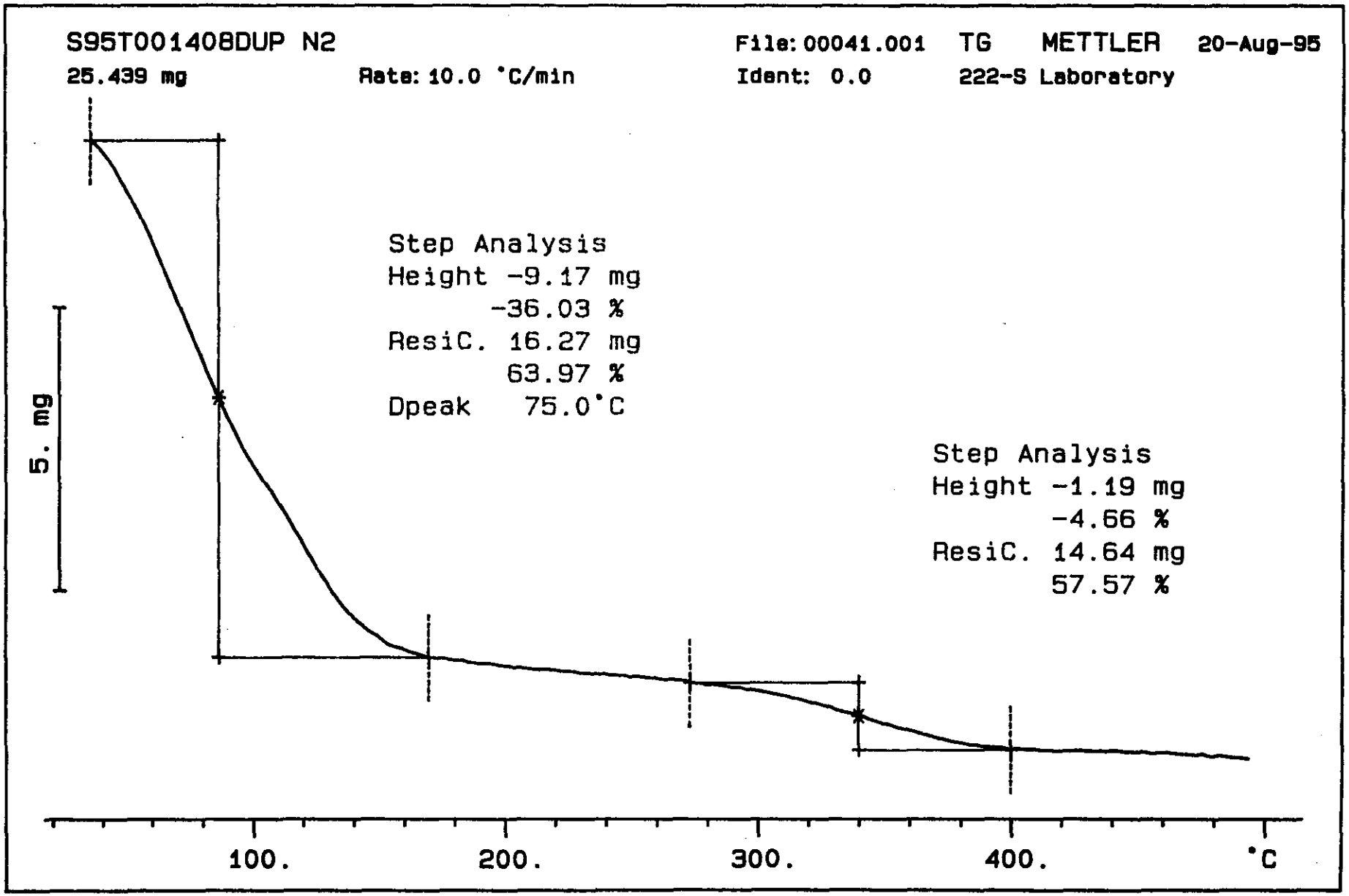
2-197

WHC-SD-WM-DP-145 REV. 1

BEST AVAILABLE COPY

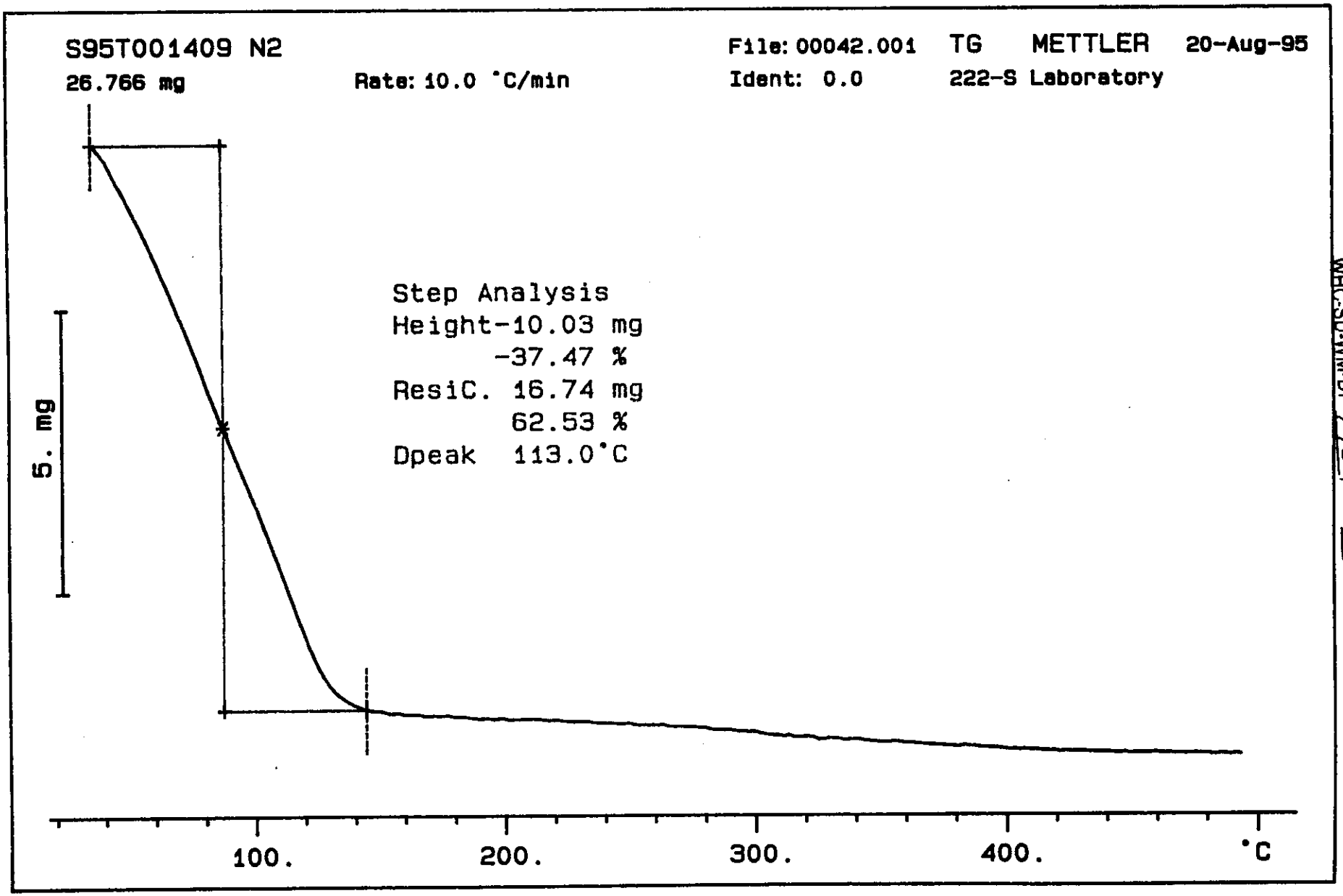


BEST AVAILABLE COPY



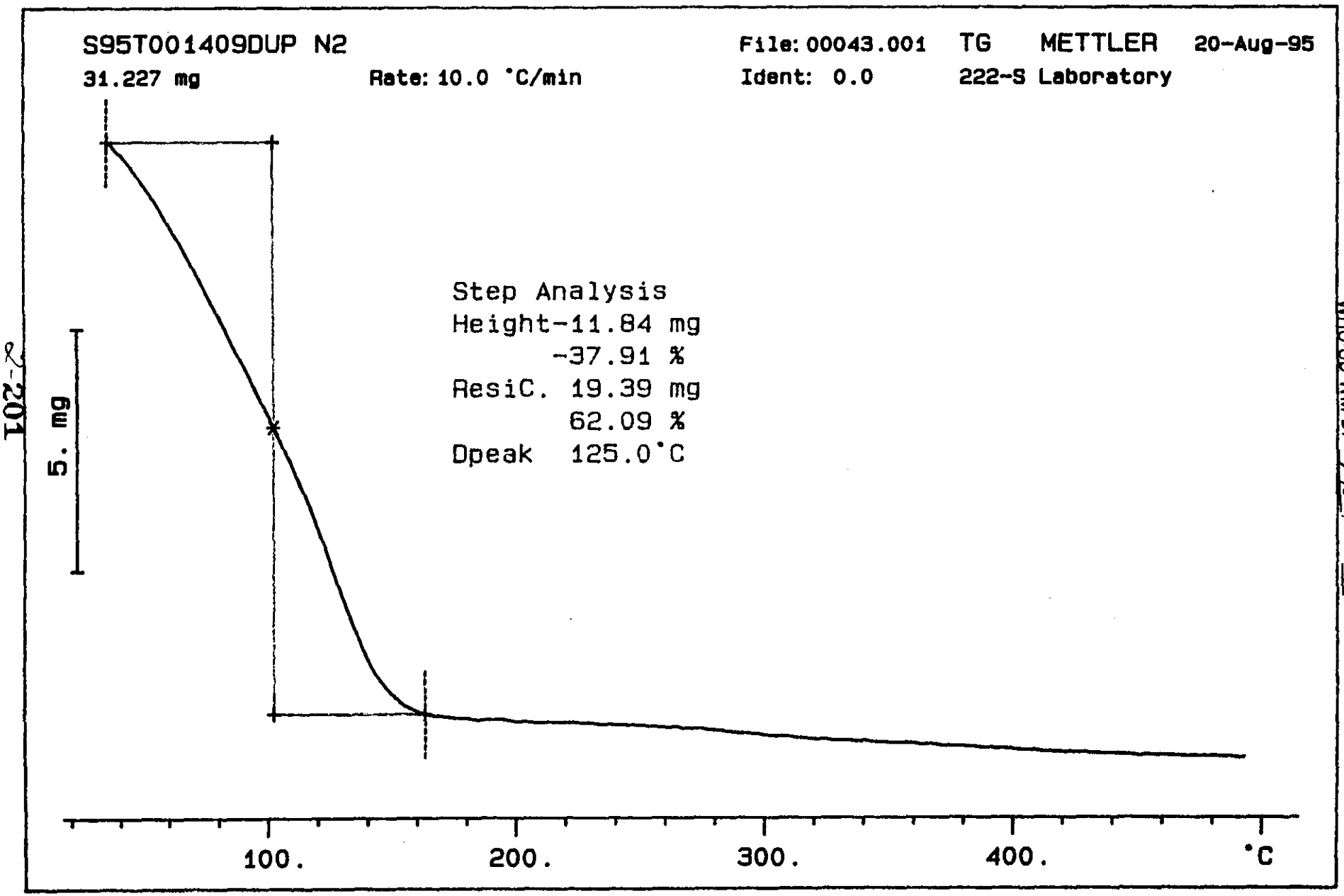
WHC-SD-WM-DP-145 REV. 1

BEST AVAILABLE COPY



WHC-SD-WM-DP-145, REV. 1

BEST AVAILABLE COPY



THE FOLLOWING ANALYSES ARE INCLUDED IN THE DATA PACKAGE BUT THE RESULTS HAVE NOT BEEN REPORTED IN THE FINAL SUMMARY REPORTS.

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LABCORE Data Entry Template for Worklist# 2035

Analyst: RDM **Instrument:** TGA0 A-2 RDM 8-23-95 **Book #** 65N8-A

Method: LA-560-112 Rev/Mod A-2

Worklist Comment: Please run BY-108 TGAs under N2. bdv

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	-------TEST------	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	STD				TGA-01	SOLID	59.74	60.73	N/A	%
95000104	BY-108 (R)	2	SAMPLE	S95T001410	0		TGA-01	SOLID	N/A	35.32		%
95000104	BY-108 (R)	3	DUP	S95T001410	0		TGA-01	SOLID	35.32	39.45	N/A	%
95000104	BY-108 (R)	4	SAMPLE	S95T001396	0		TGA-01	SOLID	N/A	40.98		%
95000104	BY-108 (R)	5	DUP	S95T001396	0		TGA-01	SOLID	40.98	44.12	N/A	%

Final page for worklist # 2035

RDMeyer 8/23/95
Analyst Signature **Date**

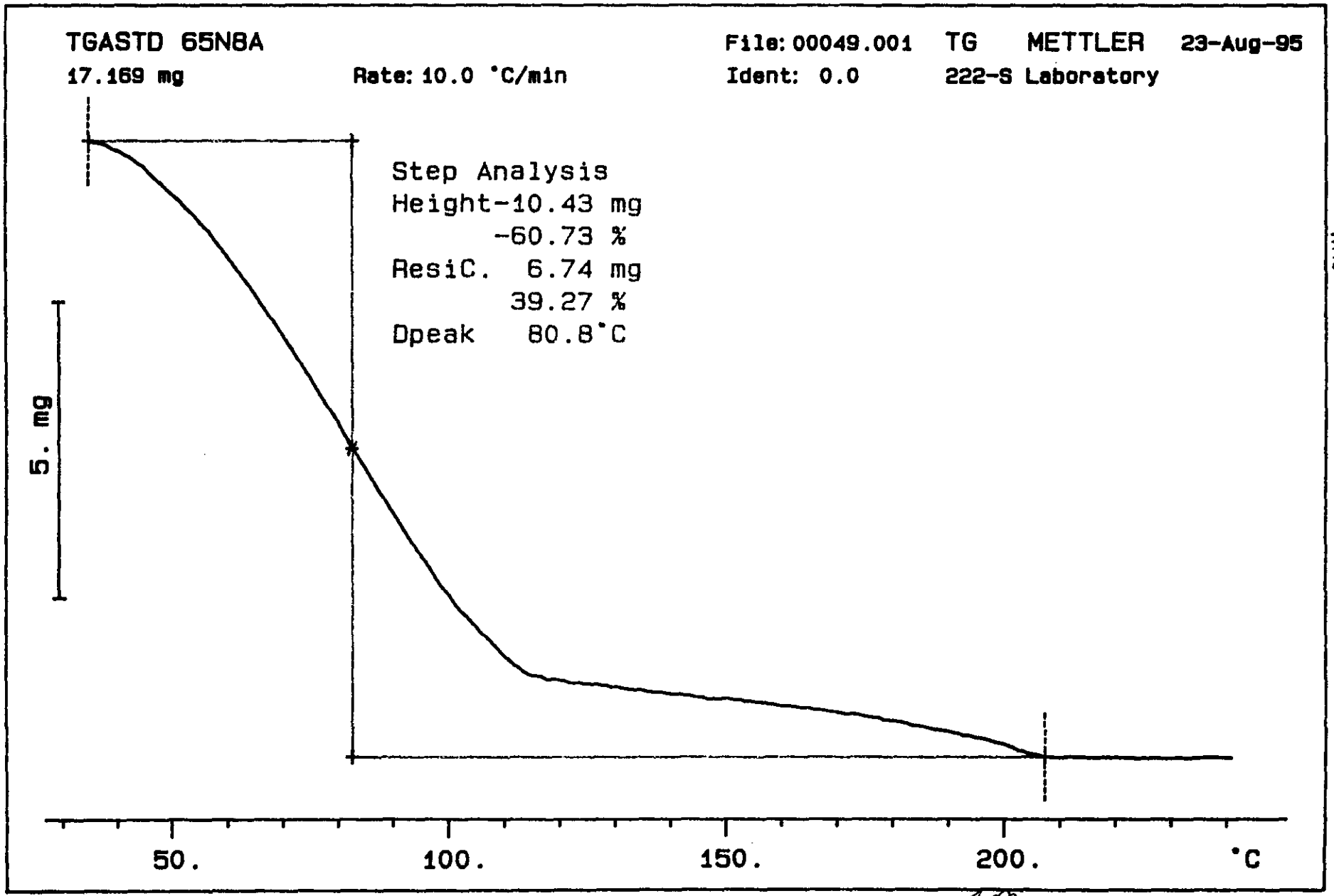
[illegible] 8-24-95
Analyst Signature **Date**

Verified & put out for review
Dave M. Faye
9/6/95

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.

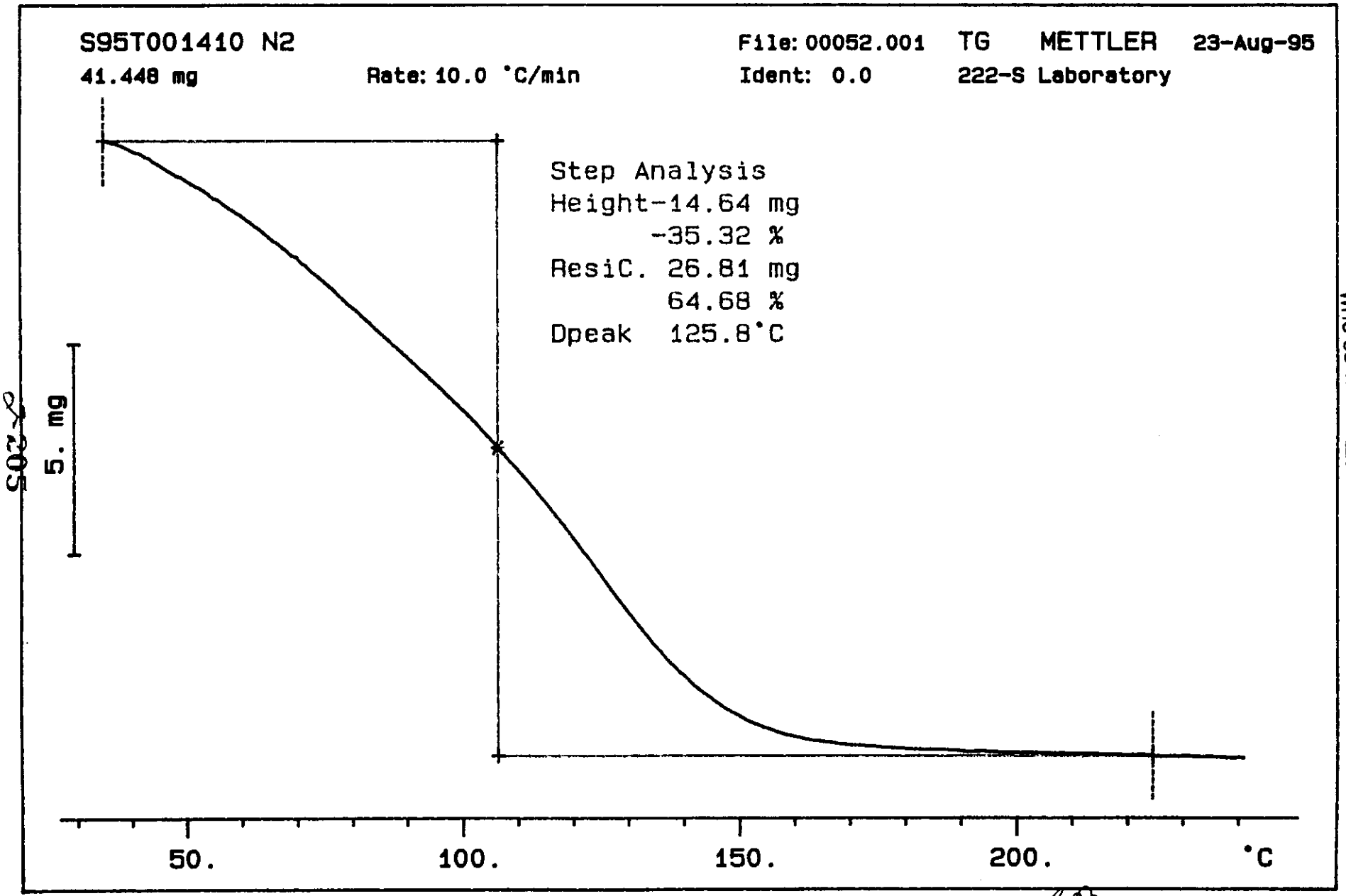
BEST AVAILABLE COPY



WHC-SD-WM-DP-165, REV. 1

2-204

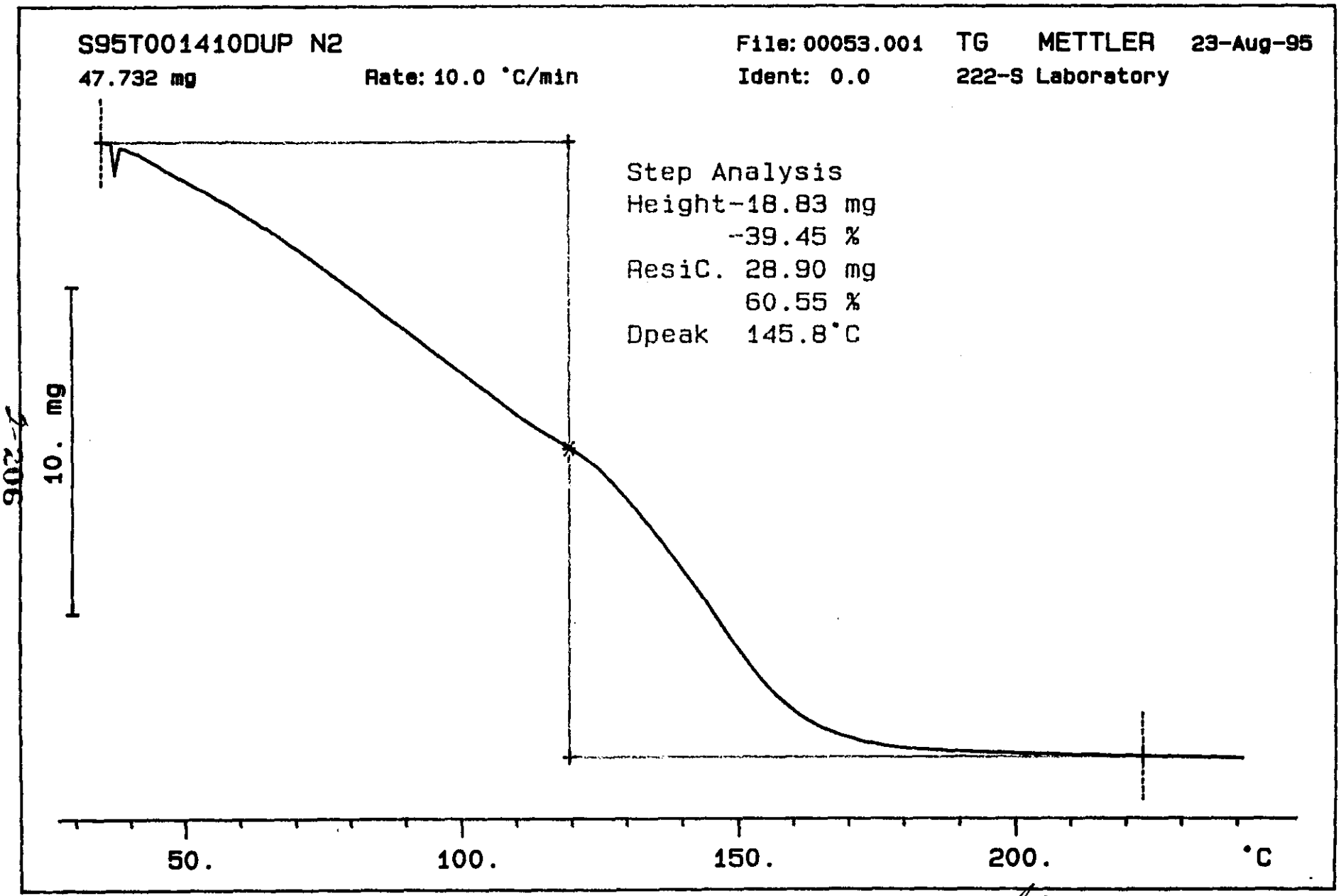
BEST AVAILABLE COPY



S02-205

WHC-SD-WM-DP-145, REV. 1

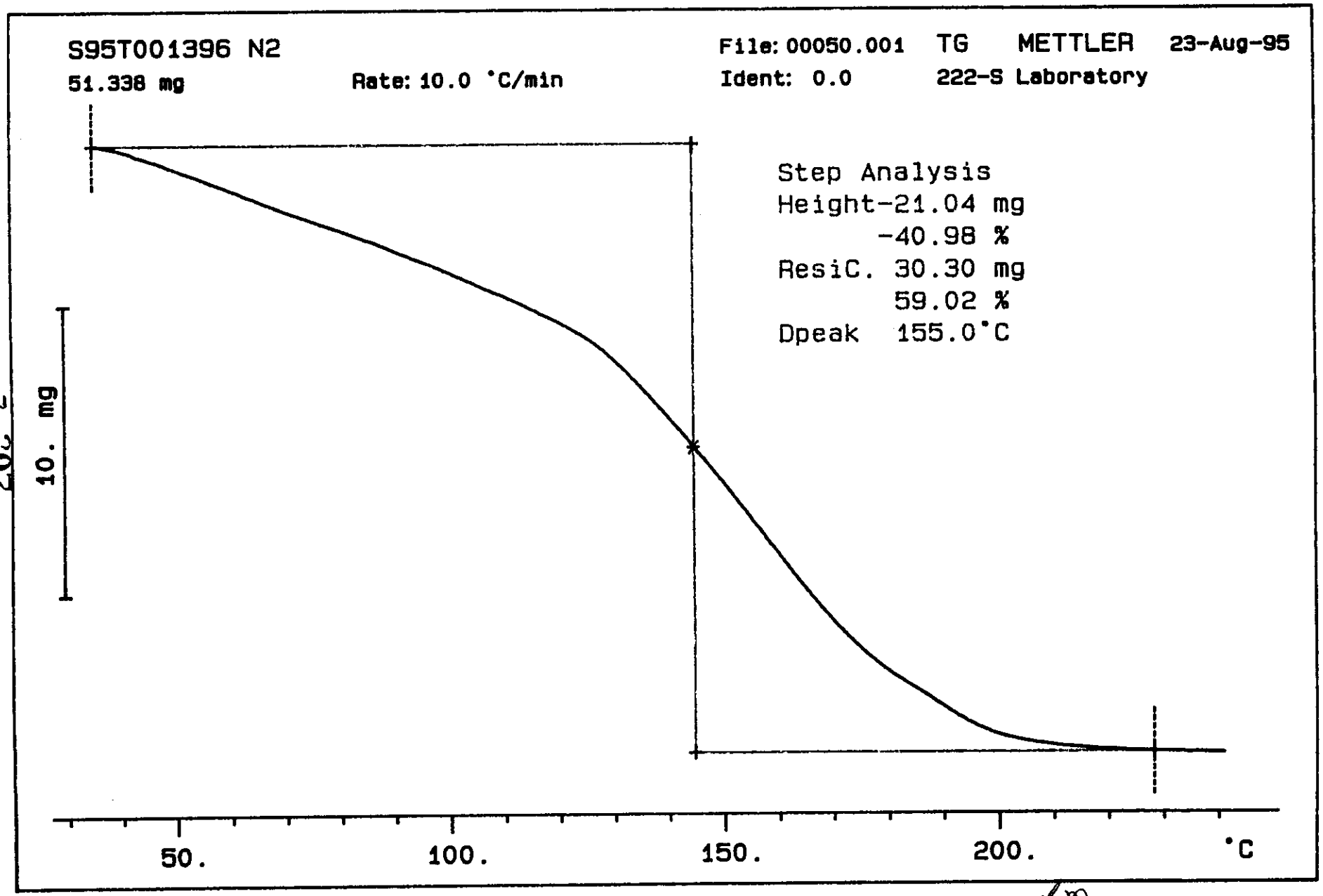
BEST AVAILABLE COPY



WHC-SD-WM-DP-145, REV. 1

F-206

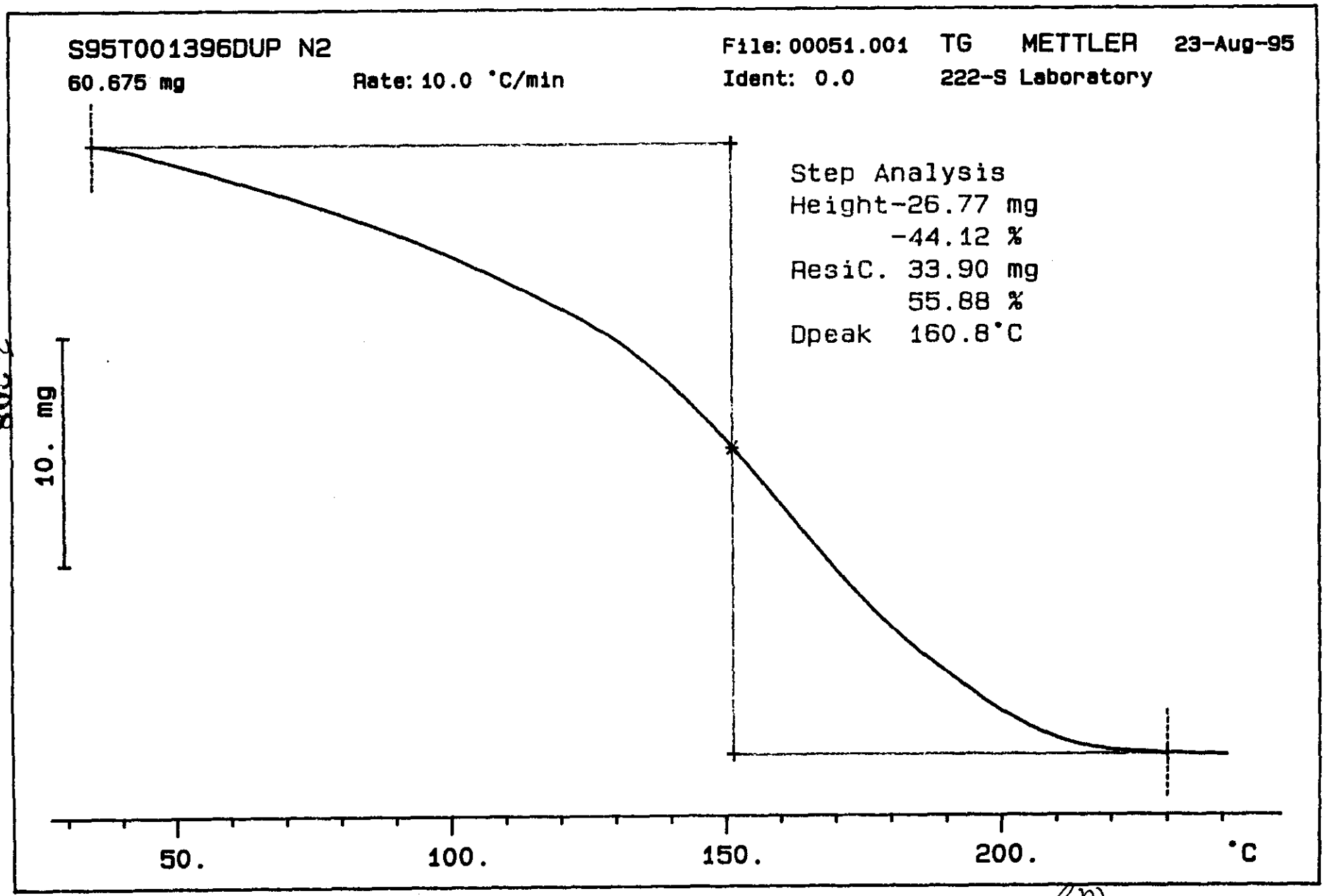
BEST AVAILABLE COPY



2-207

WHC-SD-WM-DP-145, REV. 1

BEST AVAILABLE COPY

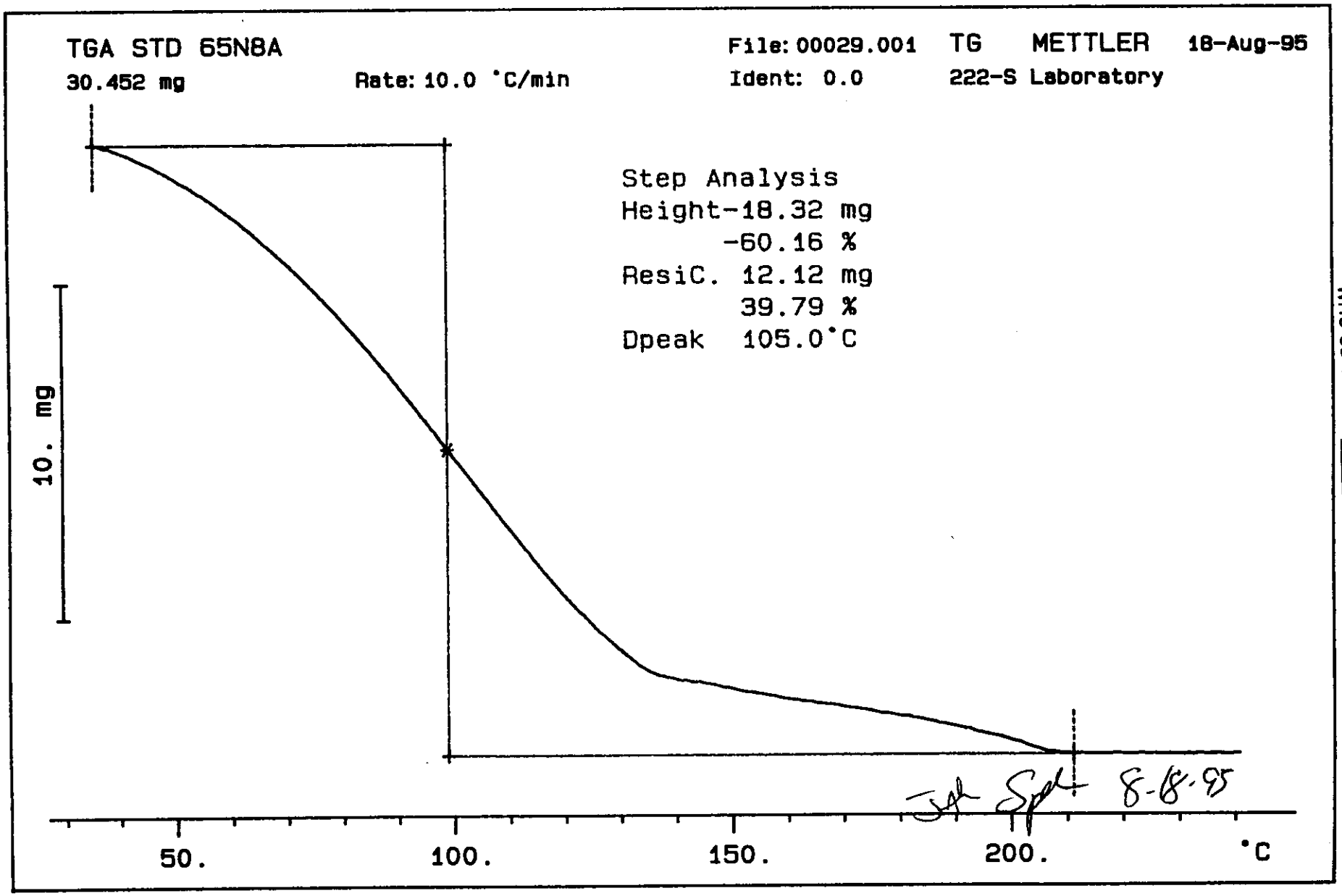


WHC-SD-WM-DP-145, REV. 1

7-208

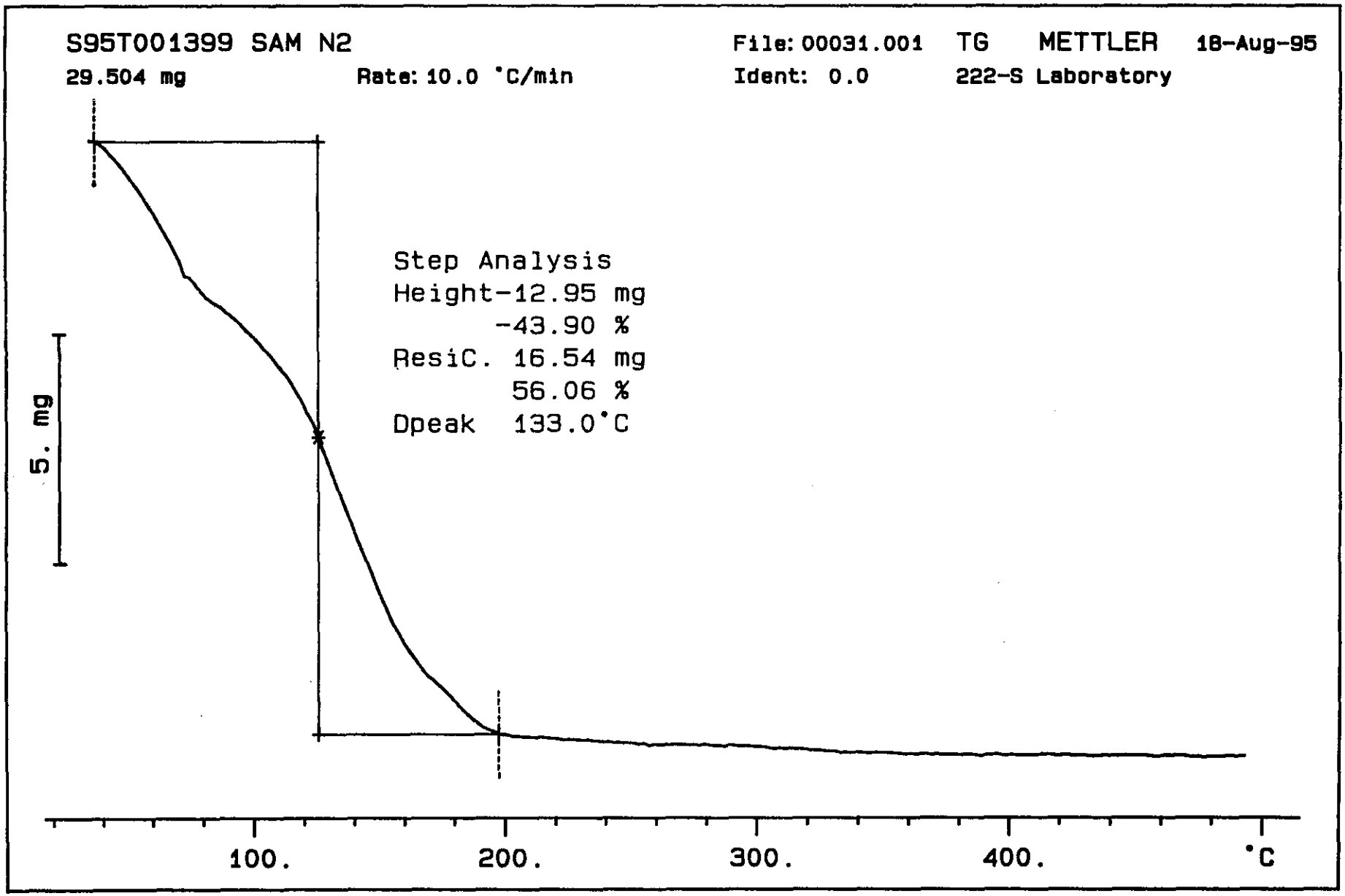
SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 2211 TO 2213.

BEST AVAILABLE COPY



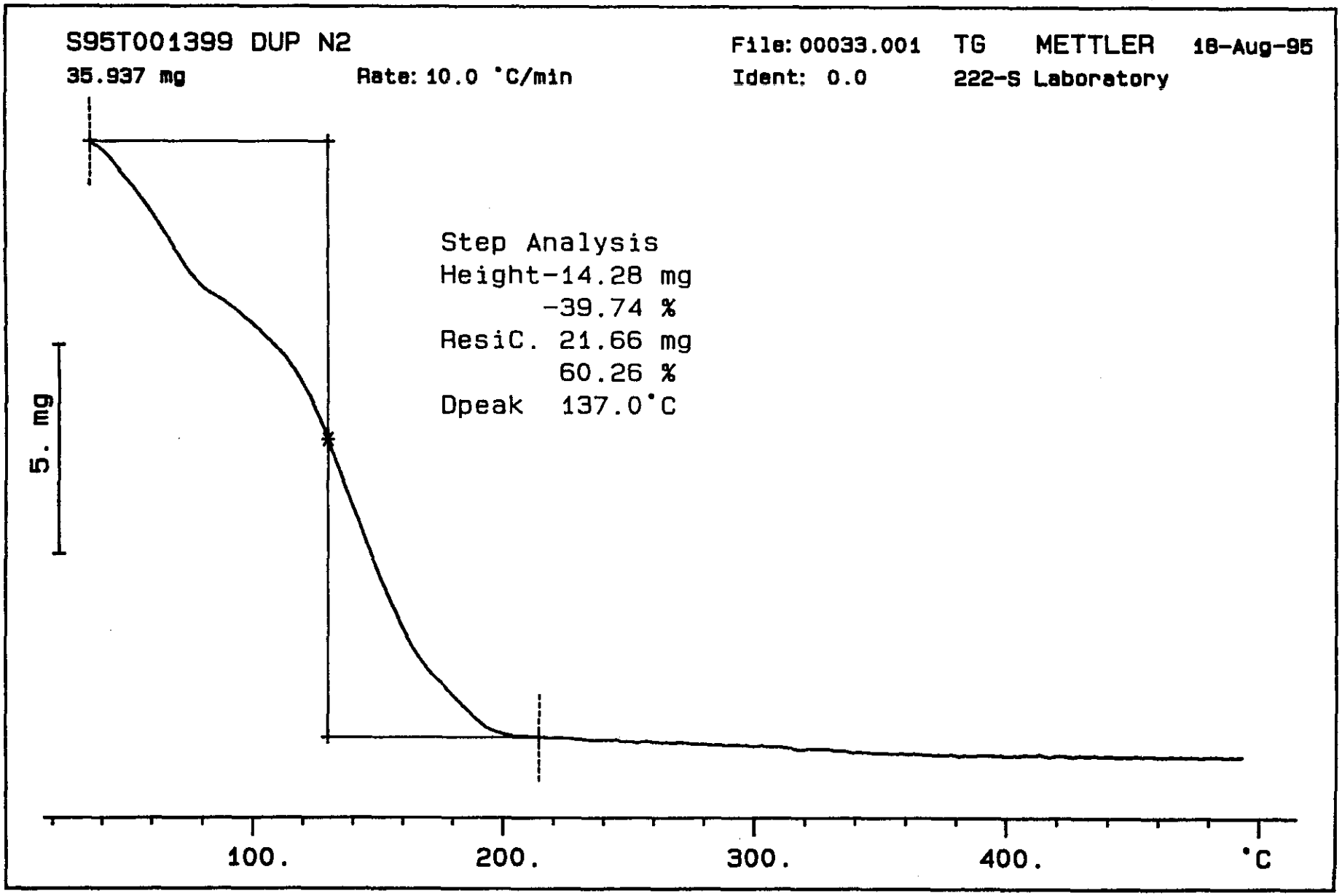
WHC-SD-WM-DP-145, REV. 1

BEST AVAILABLE COPY



WHC-SD-WM-DP-145, REV. 1

BEST AVAILABLE COPY



LABCORE Data Entry Template for Worklist# 2037

Analyst: JDS **Instrument:** TGA0 3 **Book #** 65N8A

Method: LA-514-114 Rev/Mod B-0

Worklist Comment: Please run BY-108 TGAs under N2. bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-------TEST------	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-03	LIQUID	59.74	60.39	N/A	%
95000104	BY-108 (R)	2 SAMPLE	S95T001373	0	TGA-03	LIQUID	N/A	31.9		%
95000104	BY-108 (R)	3 DUP	S95T001373	0	TGA-03	LIQUID	31.9	34.04	N/A	%
95000104	BY-108 (R)	4 SAMPLE	S95T001427	0	TGA-03	LIQUID	N/A	27.11		%
95000104	BY-108 (R)	5 DUP	S95T001427	0	TGA-03	LIQUID	27.11	25.03	N/A	%

Final page for worklist # 2037

See attached for signatures
Analyst Signature Date 8-31-95

Entered + verified Jann Lye 9/6/95

Analyst Signature Date

Data Entry Comments:
S95T001373 SAM has second wt loss step of 20.91% finishing by 250°C; DuP has 18.7%. S95T001427 SAM has a second step of 25.62% ending by 250°C; duplicate has 27.62%.

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# 2037

Analyst: SdS **Instrument:** TGA0 **Book #** 65N8A

Method: LA-560-112 Rev/Mod B-0

Worklist Comment: Please run BY-108 TGAs under N2. bdv

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	STD				TGA-01	LIQUID			N/A	%
95000104	BY-108 (R)	2	SAMPLE	S95T001427	0		TGA-01	LIQUID	N/A			%
95000104	BY-108 (R)	3	DUP	S95T001427	0		TGA-01	LIQUID			N/A	%
95000104	BY-108 (R)	4	SAMPLE	S95T001373	0		TGA-01	LIQUID	N/A			%
95000104	BY-108 (R)	5	DUP	S95T001373	0		TGA-01	LIQUID			N/A	%

Final page for worklist # 2037

SdS 8-29-95
Analyst Signature Date

Analyst Signature Date

Other instrument was used.
8-31-95
BDV

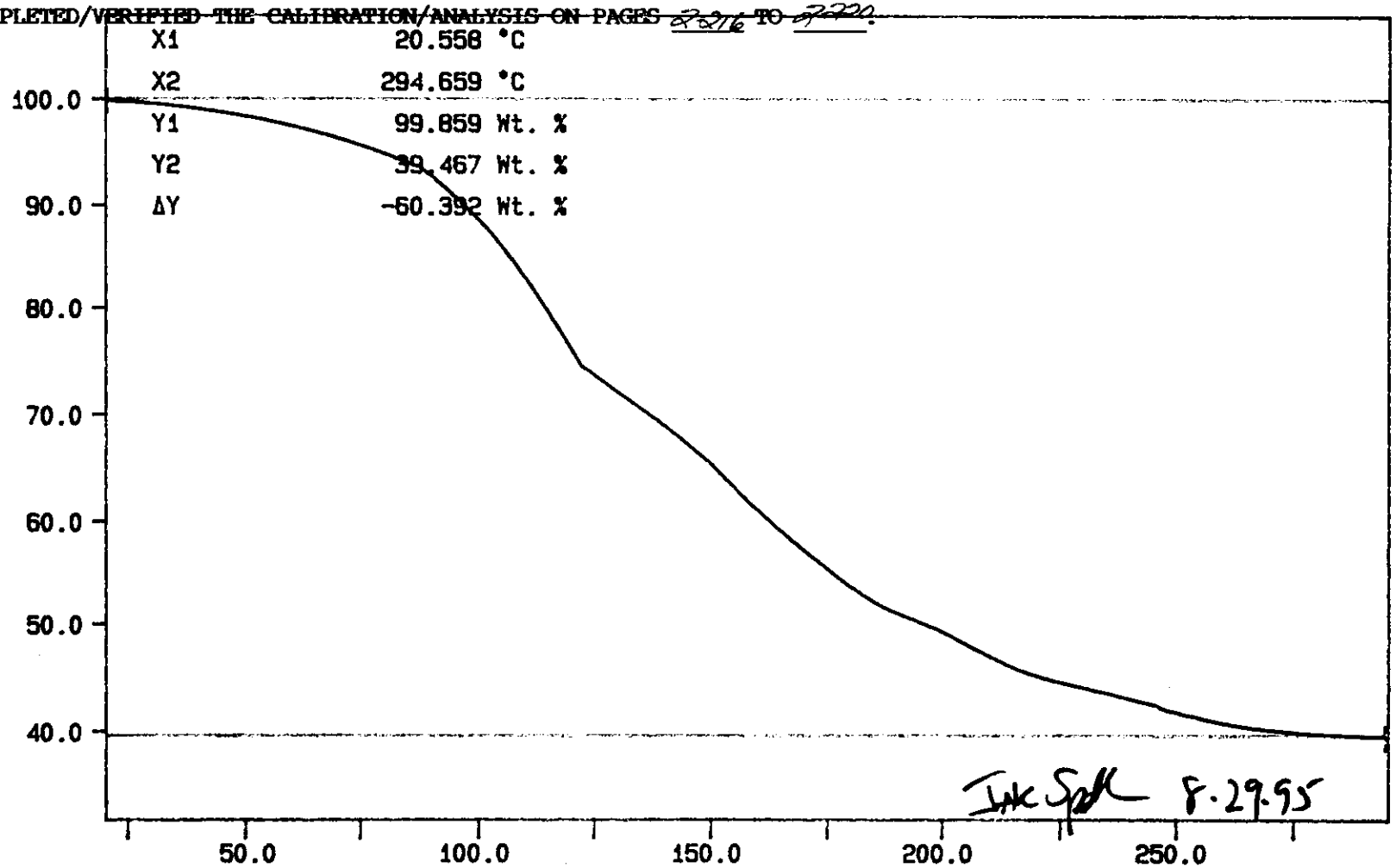
Data Entry Comments:

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: TGA
File info: ter082901 Tue Aug 29 08:24:03 1995
Sample Weight: 26.716 mg
65N8-A Terliq

BEST AVAILABLE COPY

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/~~VERIFIED THE CALIBRATION/ANALYSIS ON PAGES~~ 2-216 ~~TO~~ 2-220.



N2 10C/MIN
TEMP1: 35.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 300.0 C

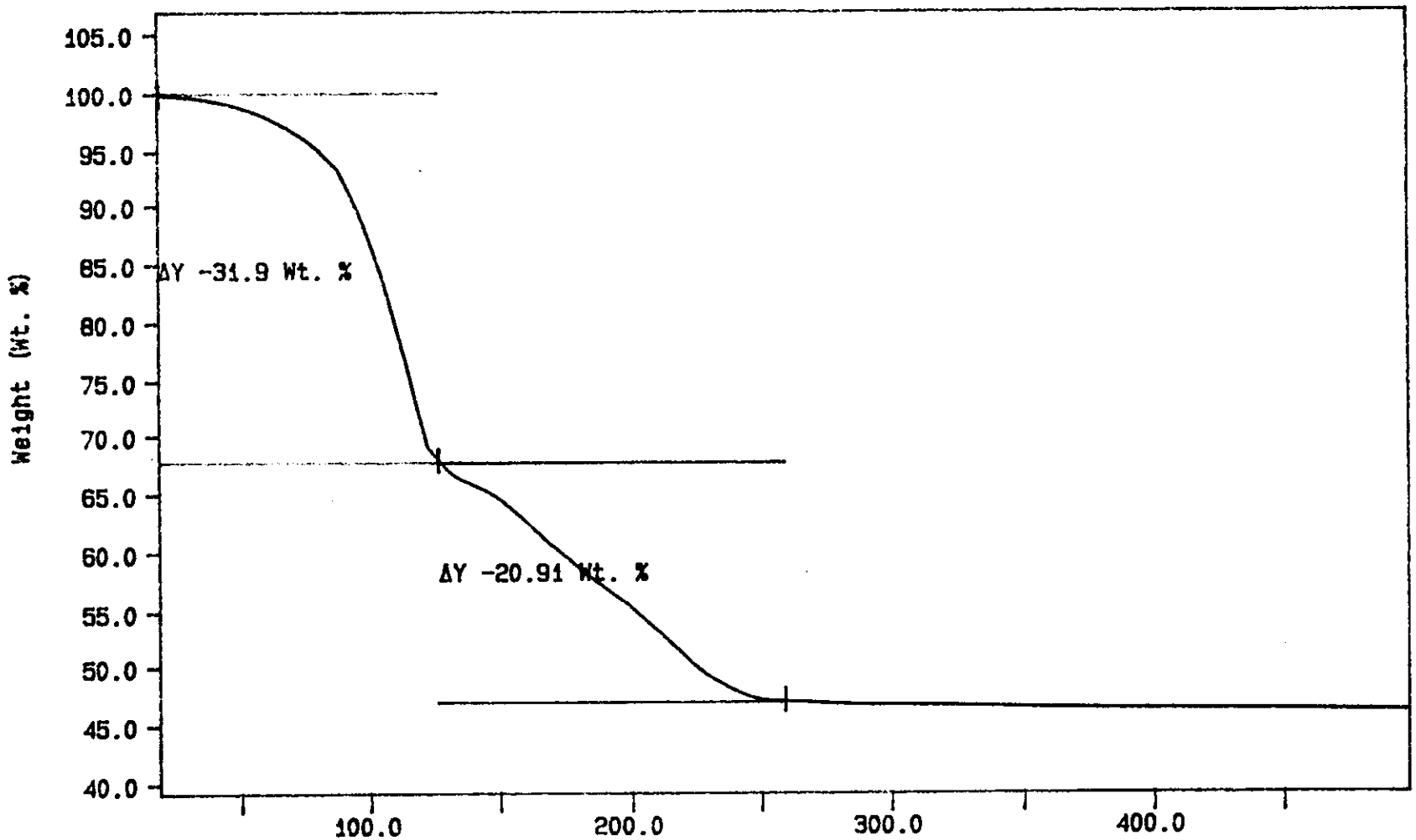
JD SPELLMAN
PERKIN-ELMER
7 Series Thermal Analysis System
Tue Aug 29 08:24:24 1995

2-216

WHC-SD-WM-DP-145, REV. 1

Curve 1: TGA
File info: SAM082903 Tue Aug 29 13:56:54 1995
Sample Weight: 12.024 mg
S95T001373 SAM

BEST AVAILABLE COPY



N2 10C/MIN
TEMP1: 35.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 800.0 C

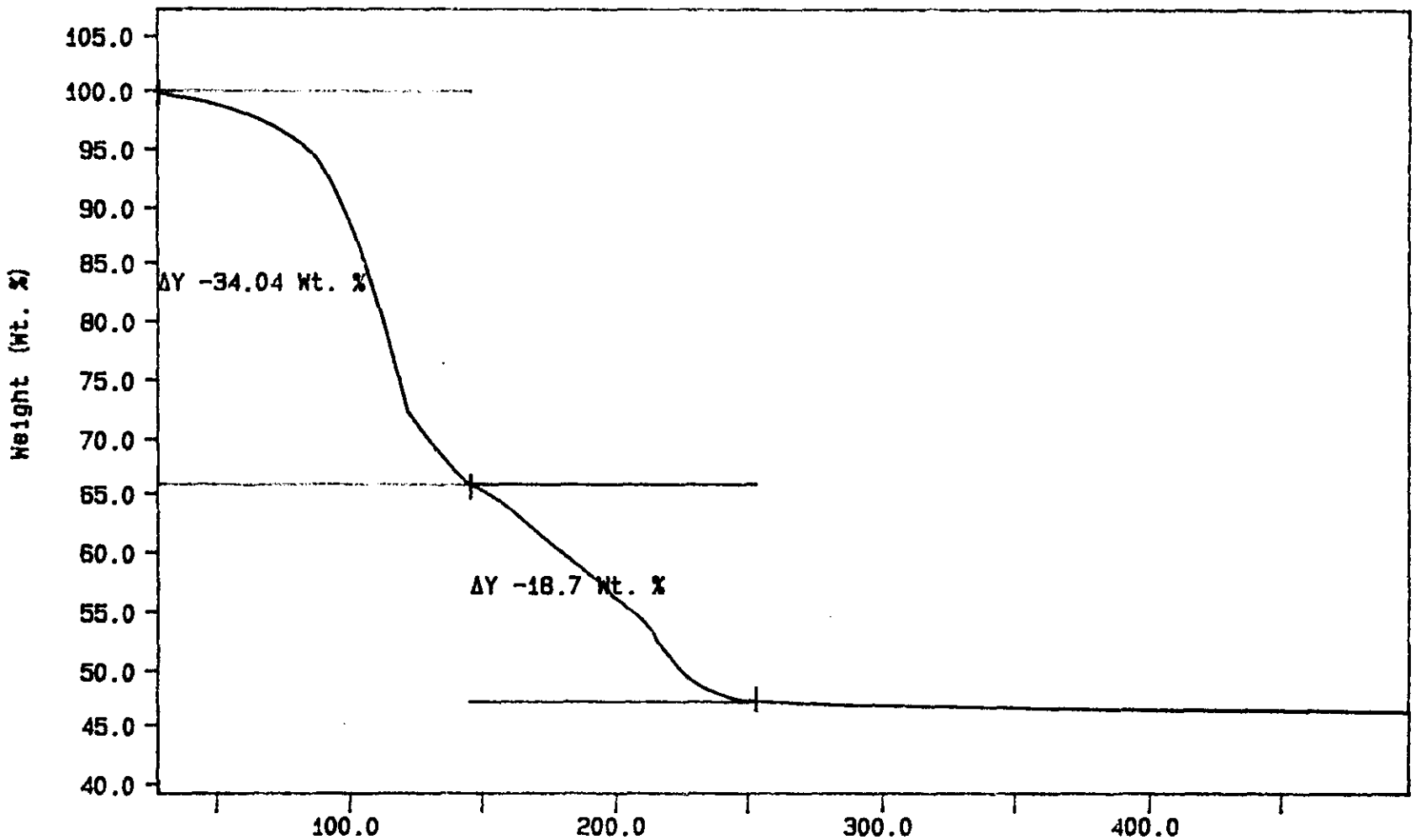
JD SPELLMAN
PERKIN-ELMER
7 Series Thermal Analysis System
Thu Aug 31 09:20:39 1995

WHC-SD-WM-DP-145, REV 1

2 of 217

Curve 1: TGA
File info: SAN082904 Tue Aug 29 15:05:31 1995
Sample Weight: 14.372 mg
S95T001373 DUP

BEST AVAILABLE COPY



N2 10C/MIN
TEMP1: 30.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 600.0 C

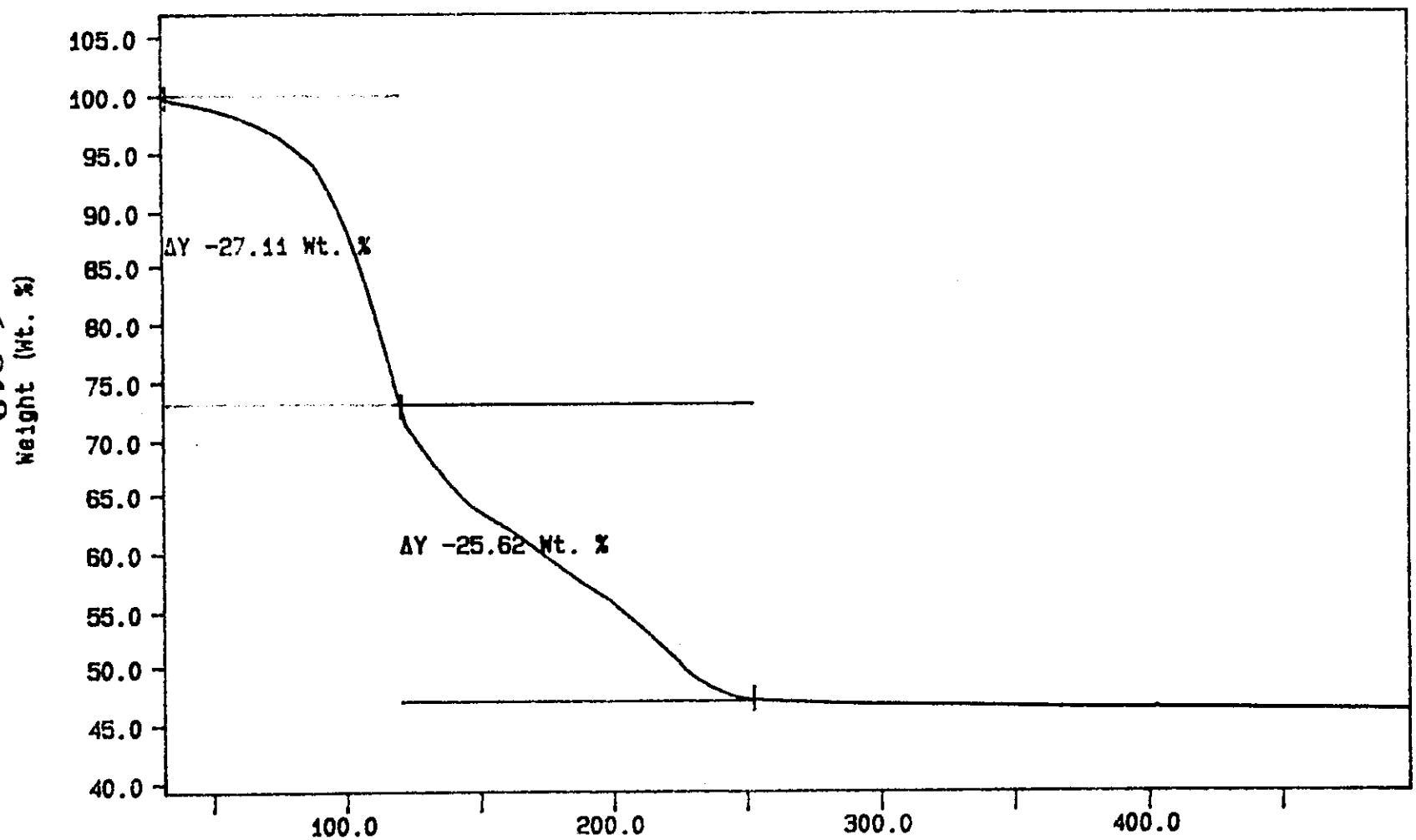
JD SPELLMAN
PERKIN-ELMER
7 Series Thermal Analysis System
Thu Aug 31 09:34:19 1995

2-218

WHC-SD-WM-DP-145, REV. 1

Curve 1: TGA
File info: SAM082901 Tue Aug 29 09:27:54 1995
Sample Weight: 12.247 mg
S95T001427 SAM

BEST AVAILABLE COPY



N2 10C/MIN
TEMP1: 35.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 500.0 C

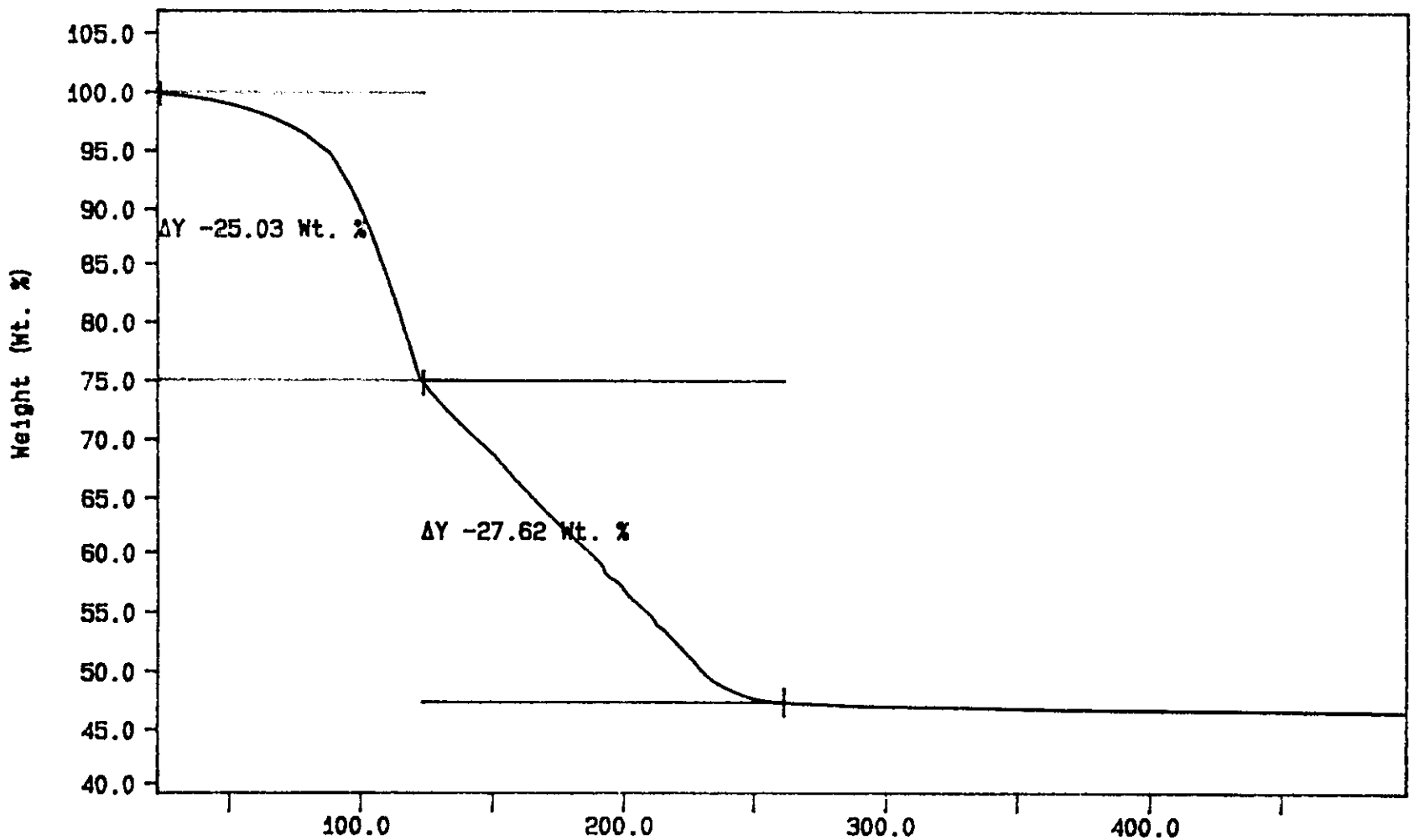
JD SPELLMAN
PERKIN-ELMER
7 Series Thermal Analysis System
Thu Aug 31 10:13:03 1995

WHC-SD-WM-DP-145, REV. 1

2-219

Curve 1: TGA
File info: SAM082902 Tue Aug 29 11:55:45 1995
Sample Weight: 15.783 mg
S95T001427 DUP

BEST AVAILABLE COPY



N2 10C/MIN
TEMP1: 35.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 500.0 C

JD SPELLMAN
PERKIN-ELMER
7 Series Thermal Analysis System
Thu Aug 31 10:00:03 1995

2-220

WHC-SD-WM-DP-145, REV. 1

LABCORE Data Entry Template for Worklist# 2155

Analyst: SMF **Instrument:** TGA0 8-30-95 BDV 3/1 **Book #** 65N8-A

Method: LA-560-112 Rev/Mod A-2

Worklist Comment: Please run BY-108 TGAs under N2. bdv

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	-------TEST------	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	STD				TGA-01	SOLID	59.74	60.65	N/A	%
95000104	BY-108 (R)	2	SAMPLE	S95T001421	0		TGA-01	SOLID	N/A	38.31		%
95000104	BY-108 (R)	3	DUP	S95T001421	0		TGA-01	SOLID	38.31	39.82	N/A	%
95000104	BY-108 (R)	4	SAMPLE	S95T001422	0		TGA-01	SOLID	N/A	36.49		%
95000104	BY-108 (R)	5	DUP	S95T001422	0		TGA-01	SOLID	36.49	36.40	N/A	%

Final page for worklist # 2155

Susie M. Dalton 8-29-95
Analyst Signature **Date**

Gary Hammond 8-30-95
Analyst Signature **Date**

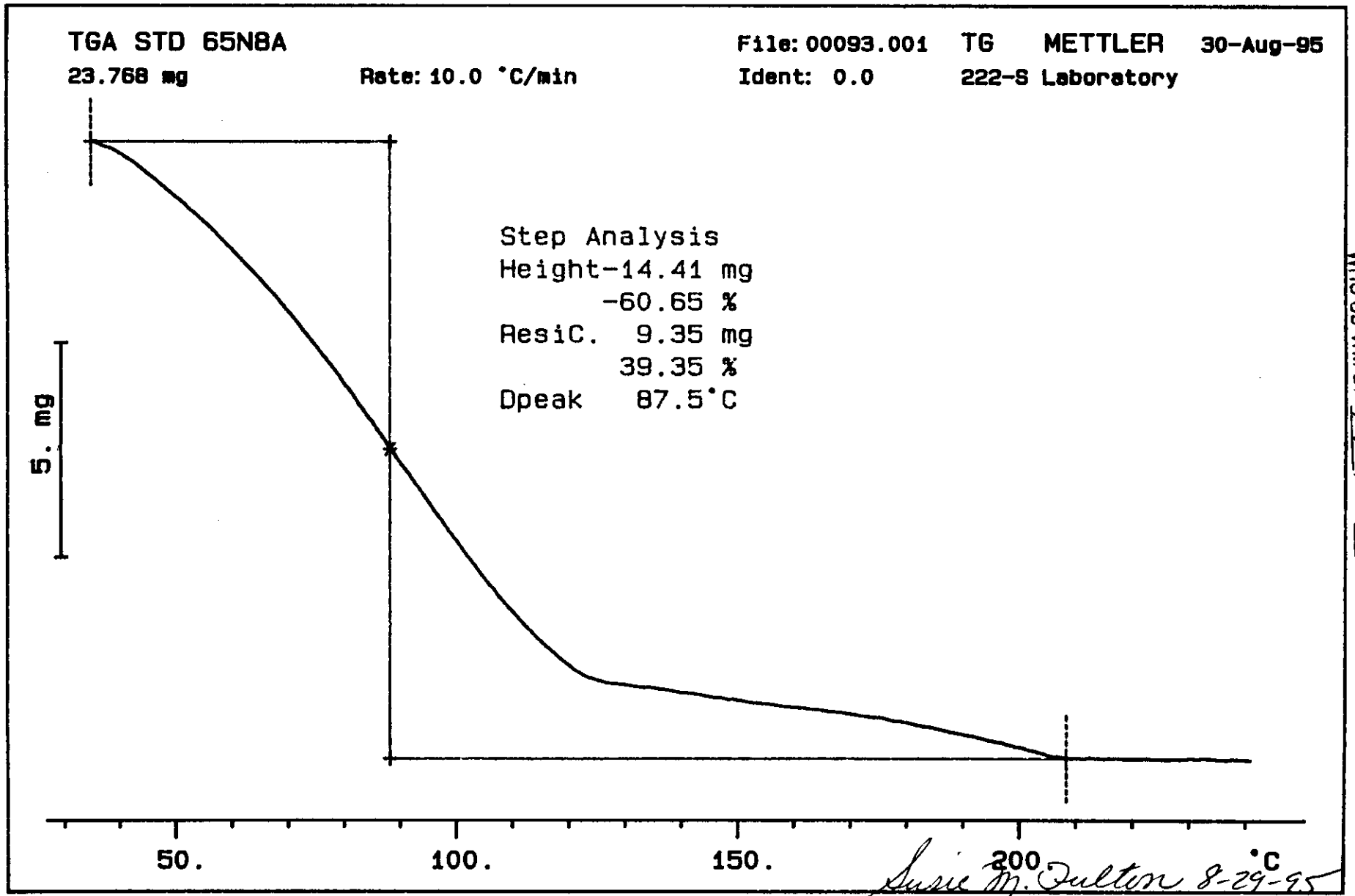
Verified by Blandina Valenzuela 8-31-95

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 2-222 TO 2-226.

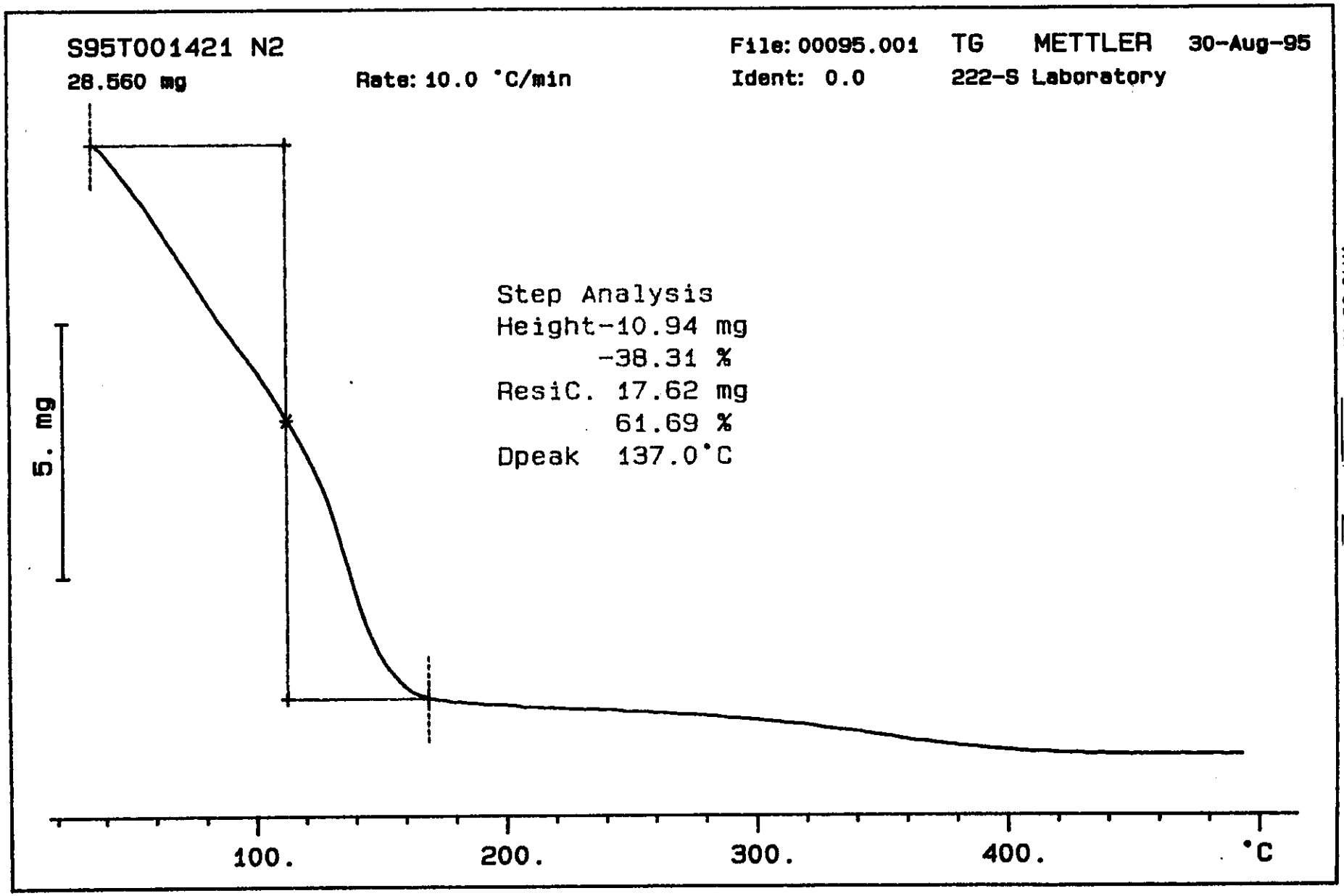
BEST AVAILABLE COPY



Susie M. Dulton 8-29-95

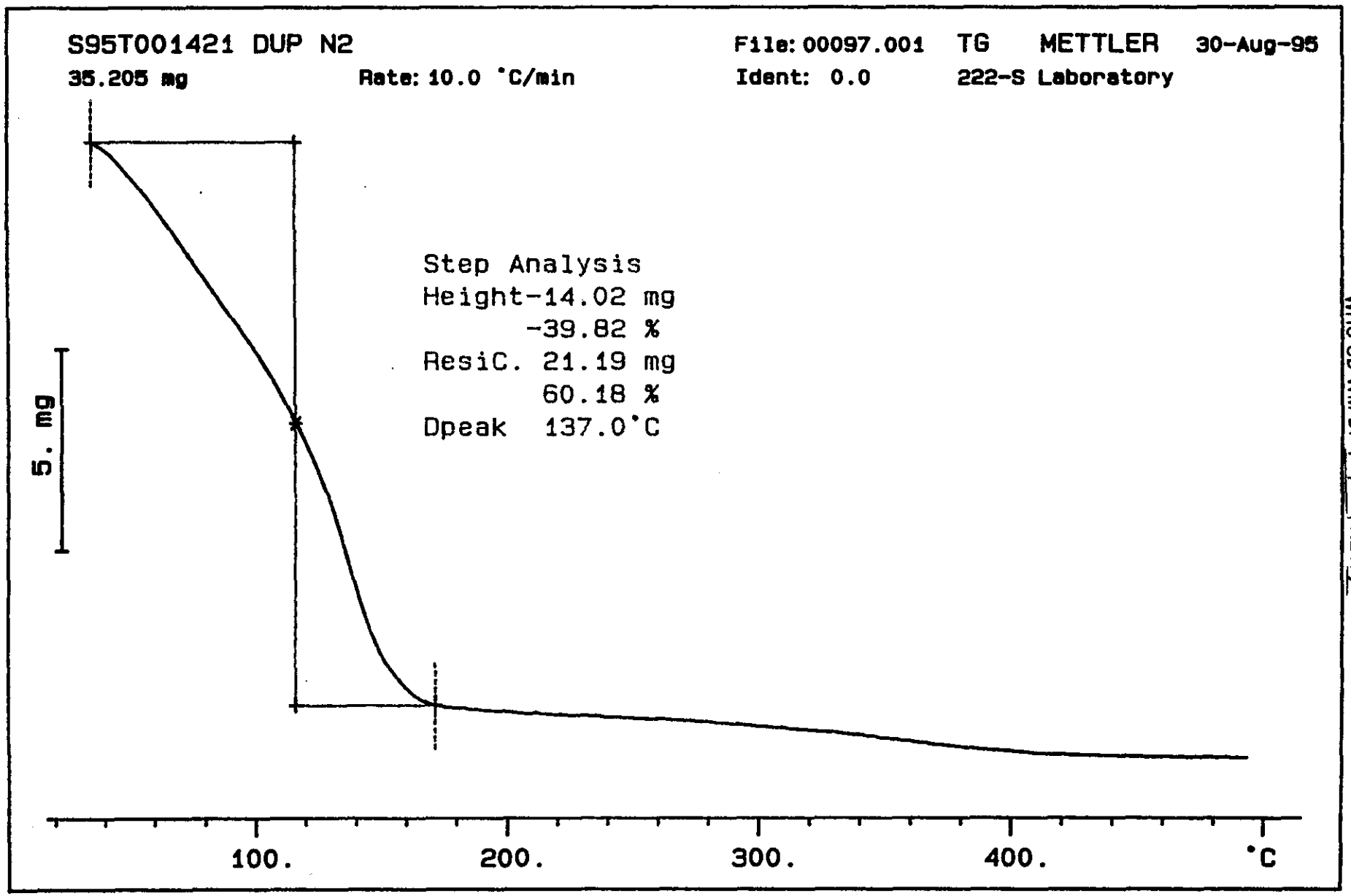
WHC-SD-WM-DP-145, REV. 1

BEST AVAILABLE COPY



WHC-SD-WM-DP-145, REV. 1

BEST AVAILABLE COPY



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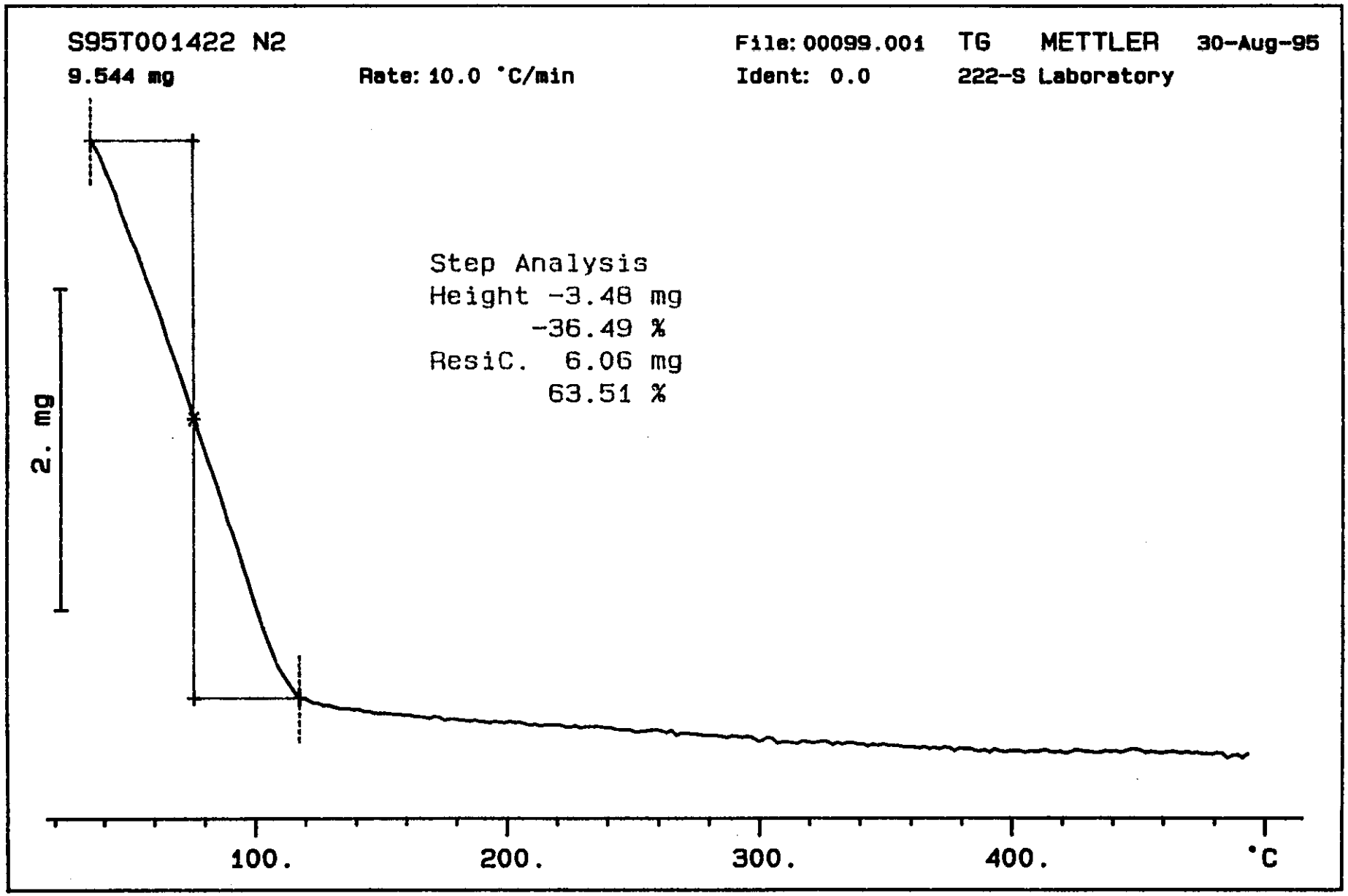

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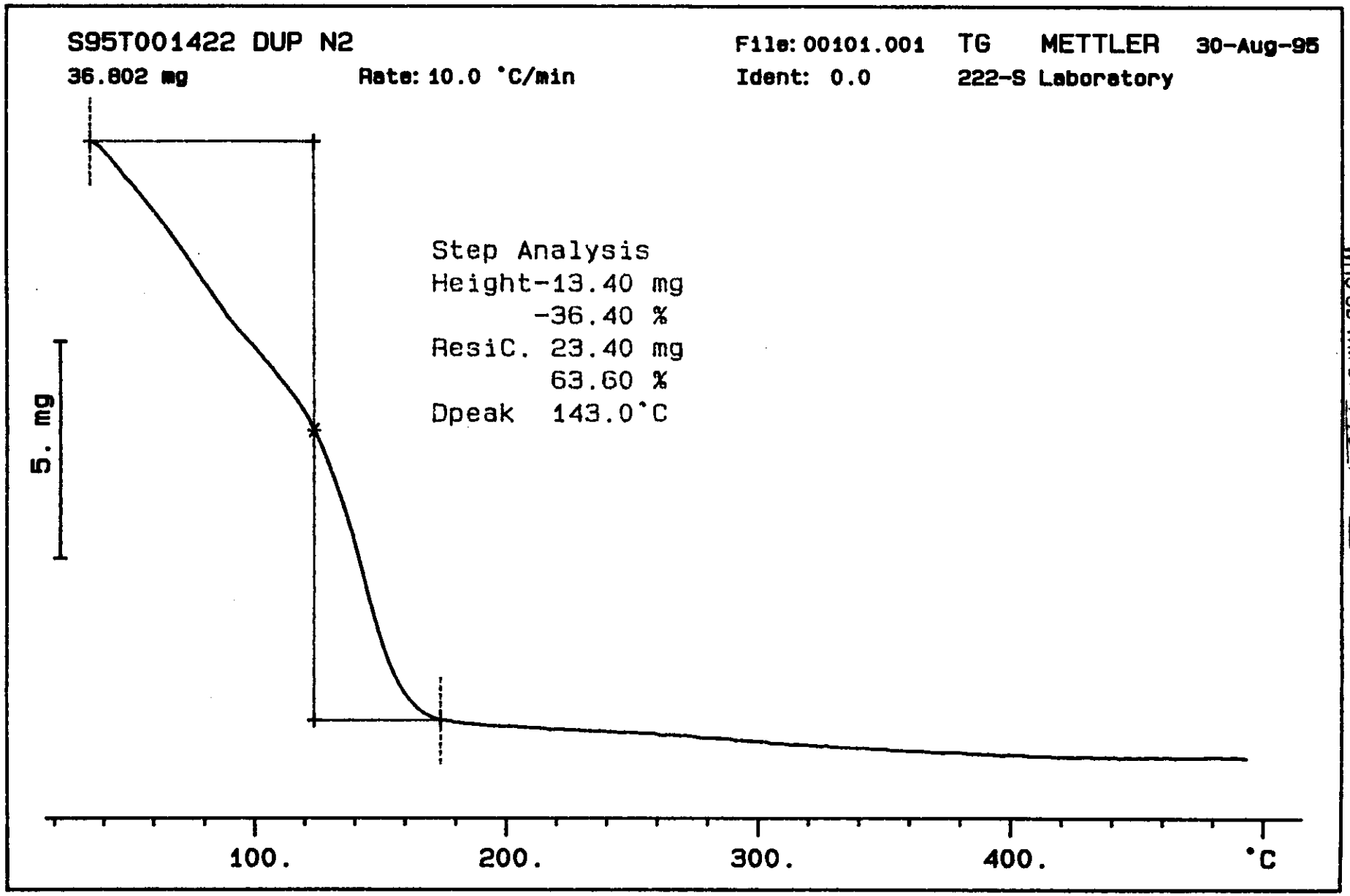


LABCORE Data Entry Template for Worklist# 2157

Analyst: Jds **Instrument:** TGA0 1 **Book #** 65N81

Method: LA-560-112 Rev/Mod A2

Worklist Comment: Please run BY-108 TGAs under N2. bdv

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	STD				TGA-01	SOLID	59.74	60.82	N/A	%
95000104	BY-108 (R)	2	SAMPLE	S95T001433	0		TGA-01	SOLID	N/A	34.52		%
95000104	BY-108 (R)	3	DUP	S95T001433	0		TGA-01	SOLID	34.52	38.56	N/A	%

Final page for worklist # 2157

Analyst Signature 8-30-95 Date

Analyst Signature 8-30-95 Date

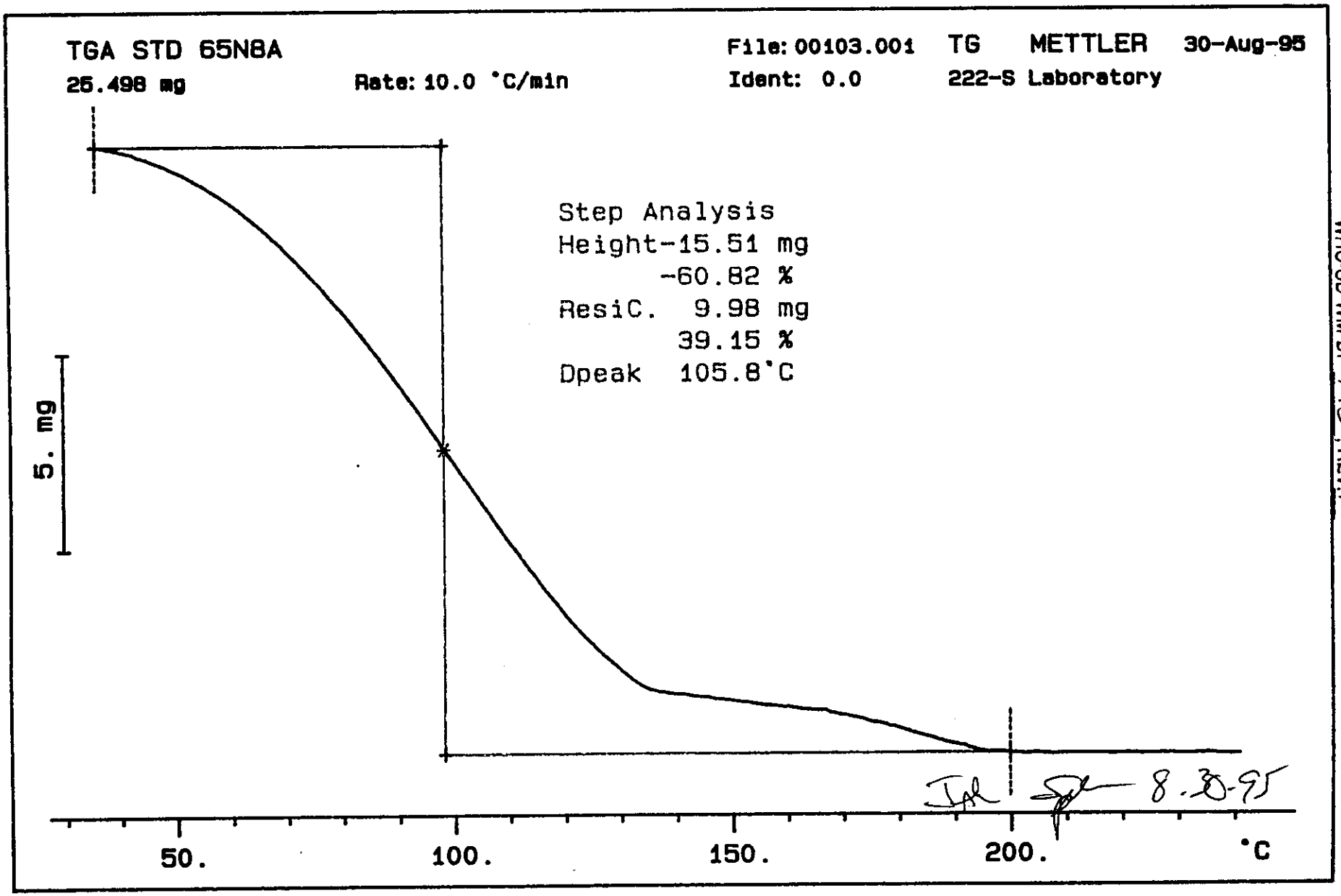
Verified by Blandina Valenzuela 8-31-95

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 2-228 TO 2-230.

BEST AVAILABLE COPY



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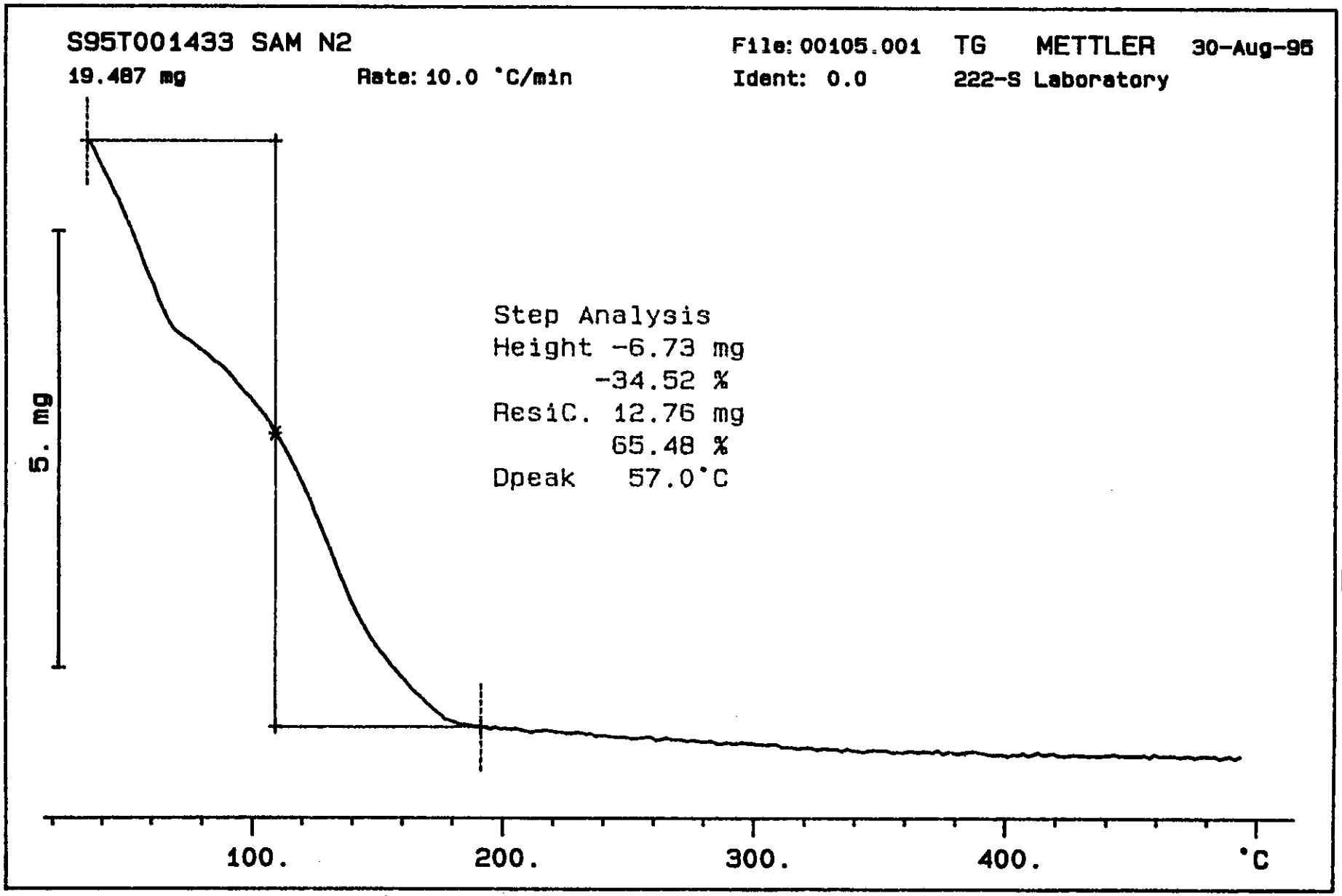

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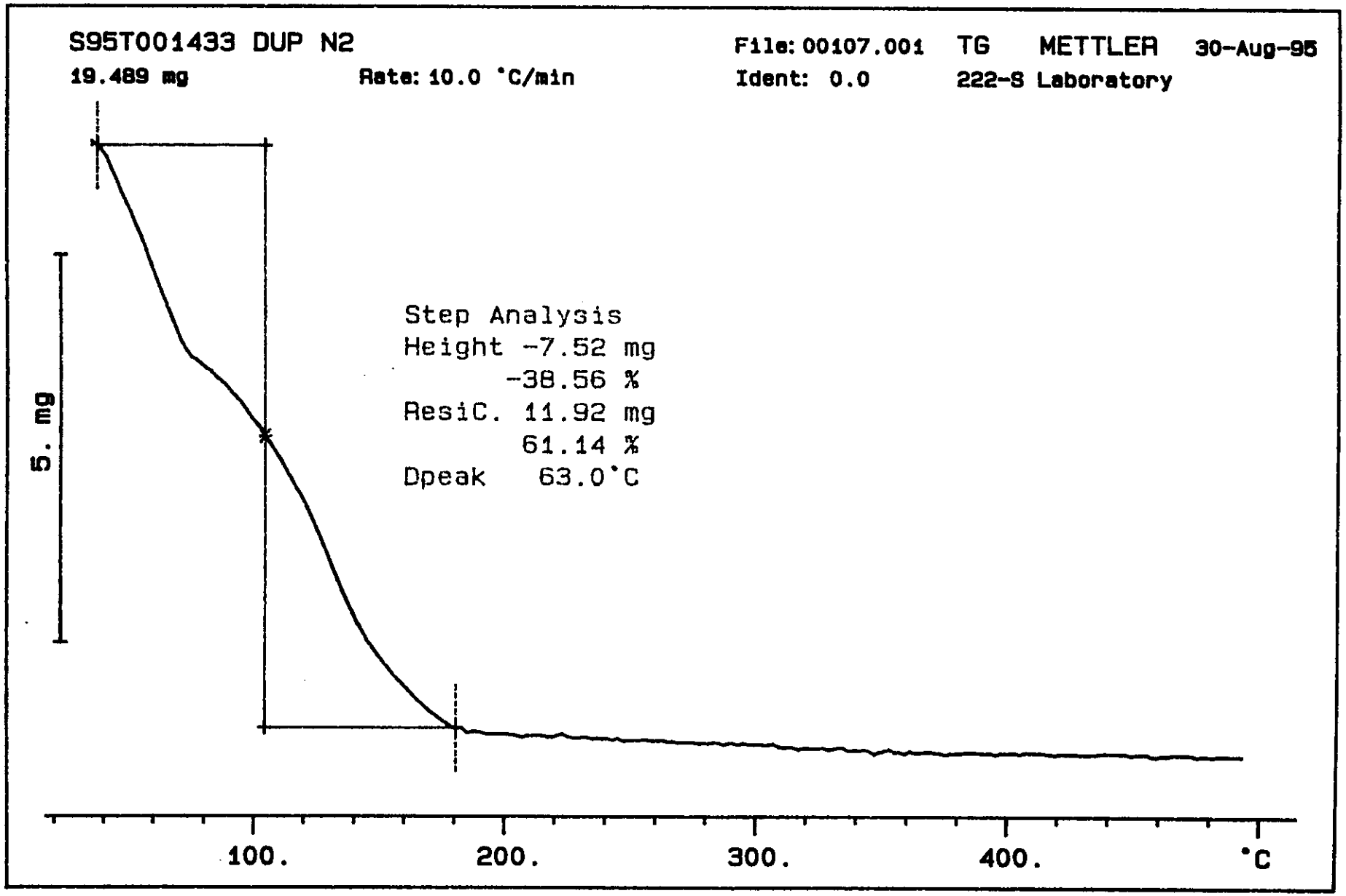


LABCORE Data Entry Template for Worklist# 2158

Analyst: JDS **Instrument:** TGA0 1 **Book #** 65N8A

Method: LA-560-112 Rev/Mod B-0

Worklist Comment: Please run BY-108 TGAs under N2. bdv

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	-------TEST------	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	STD				TGA-01	SOLID	59.74	60.37	N/A	%
95000104	BY-108 (R)	2	SAMPLE	S95T001389	0		TGA-01	SOLID	N/A	37.72		%
95000104	BY-108 (R)	3	DUP	S95T001389	0		TGA-01	SOLID	37.72	36.28	N/A	%
		4	STD				TGA-01	SOLID	59.~~05~~ 74 BW 9-11-95	59.05	N/A	%
95000104	BY-108 (R)	5	SAMPLE	S95T001393	0		TGA-01	SOLID	N/A	38.92		%
95000104	BY-108 (R)	6	DUP	S95T001393	0		TGA-01	SOLID	38.92	36.38	N/A	%

Final page for worklist # 2158

See attached
Analyst Signature Date

[signature] 9-14-95
Analyst Signature Date

Verified 9/14/95 Jean M. Leye

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# 2158

Analyst: JDS **Instrument:** TGA0 **Book #** 65 N84

Method: LA-560-112 Rev/Mod B-0

Worklist Comment: Please run BY-108 TGAs under N2. bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R	A	-------TEST------	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD				TGA-01	SOLID			N/A	%
95000104	BY-108 (R)	2 SAMPLE	S95T001389	0		TGA-01	SOLID	N/A			%
95000104	BY-108 (R)	3 DUP	S95T001389	0		TGA-01	SOLID			N/A	%
95000104	BY-108 (R)	4 SAMPLE	S95T001393	0		TGA-01	SOLID	N/A			%
95000104	BY-108 (R)	5 DUP	S95T001393	0		TGA-01	SOLID			N/A	%

Final page for worklist # 2158

JDS 9-8-95

Analyst Signature **Date**

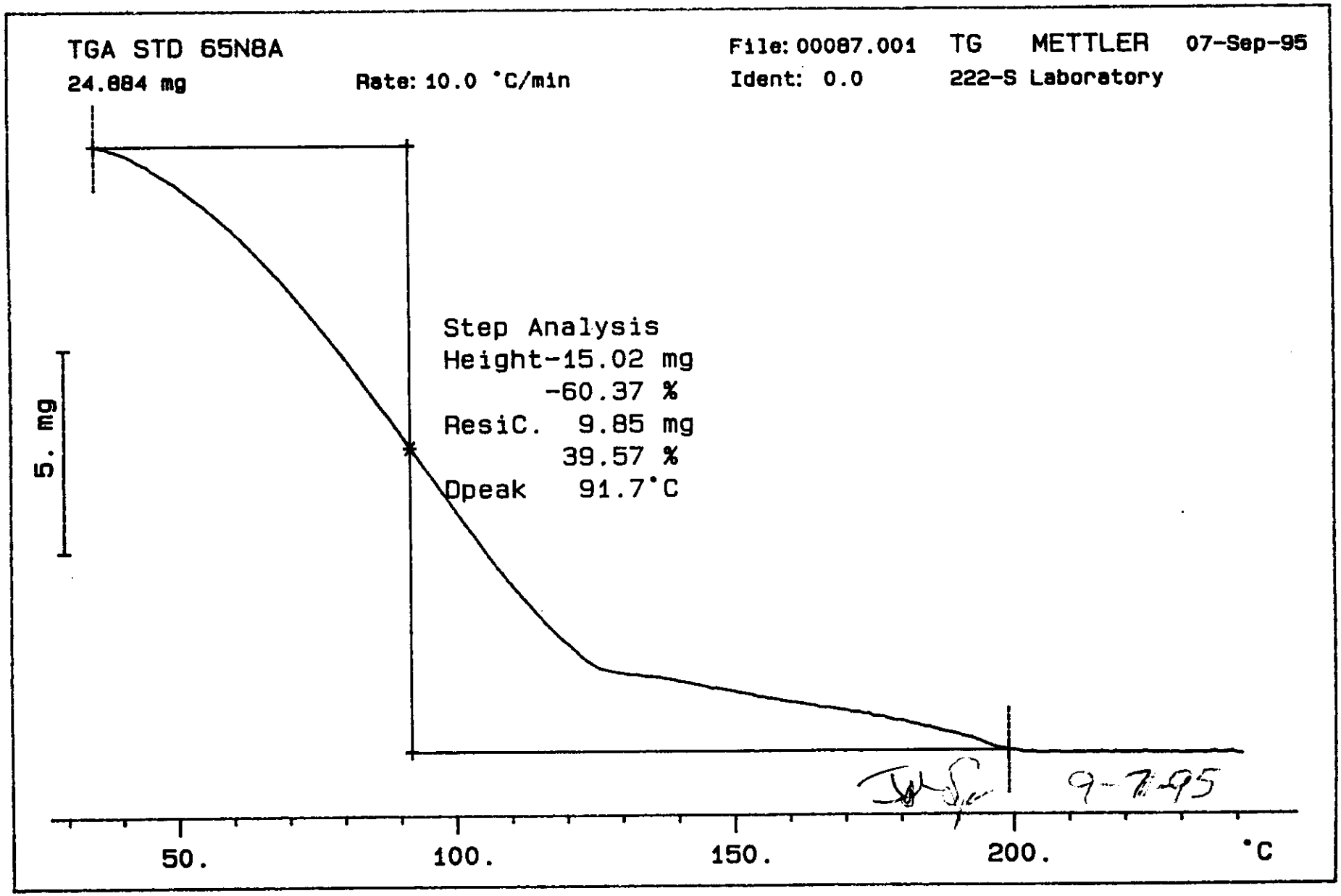
Analyst Signature **Date**

Data Entry Comments:

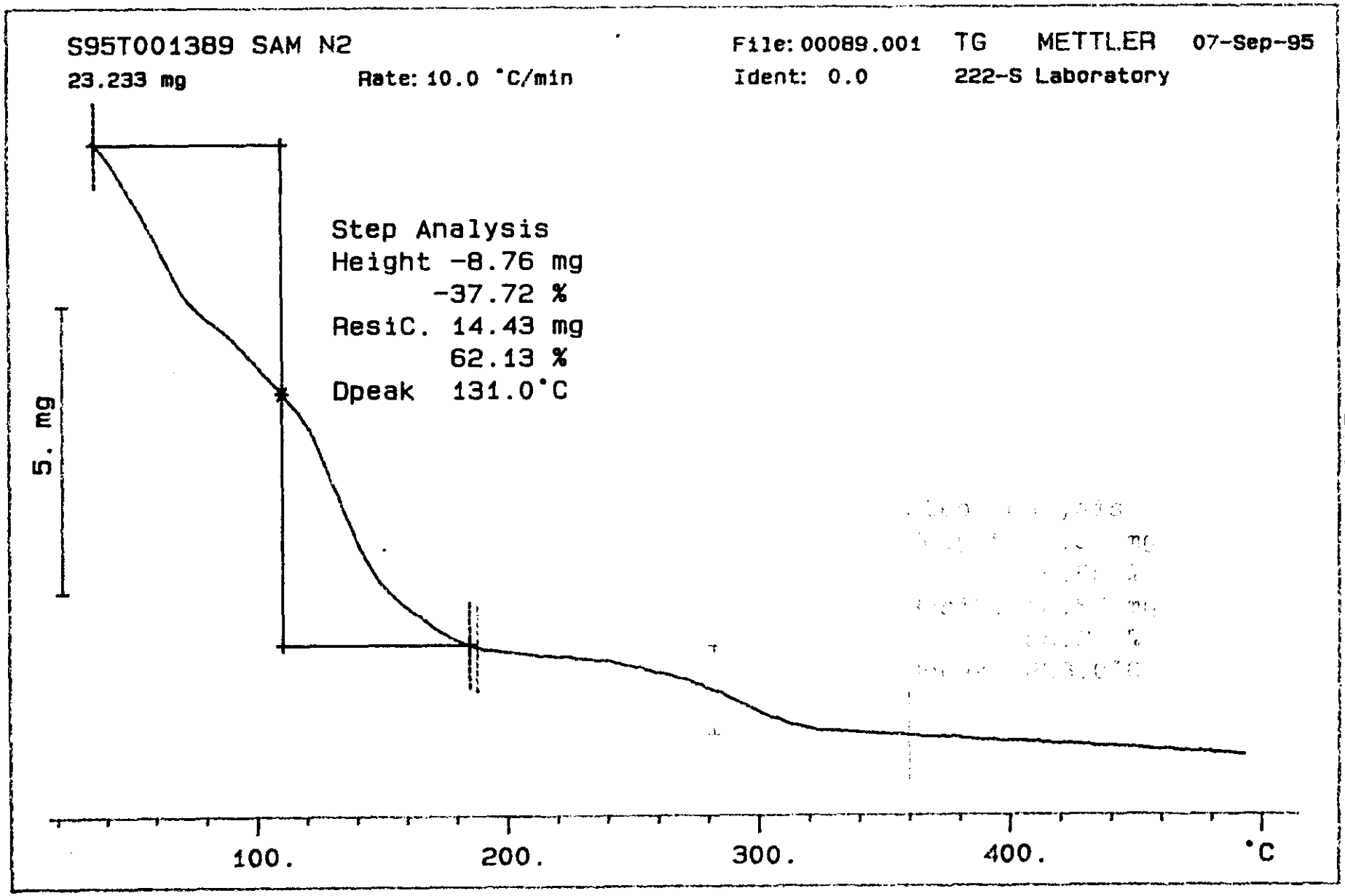
Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 2-233 TO 2-238.

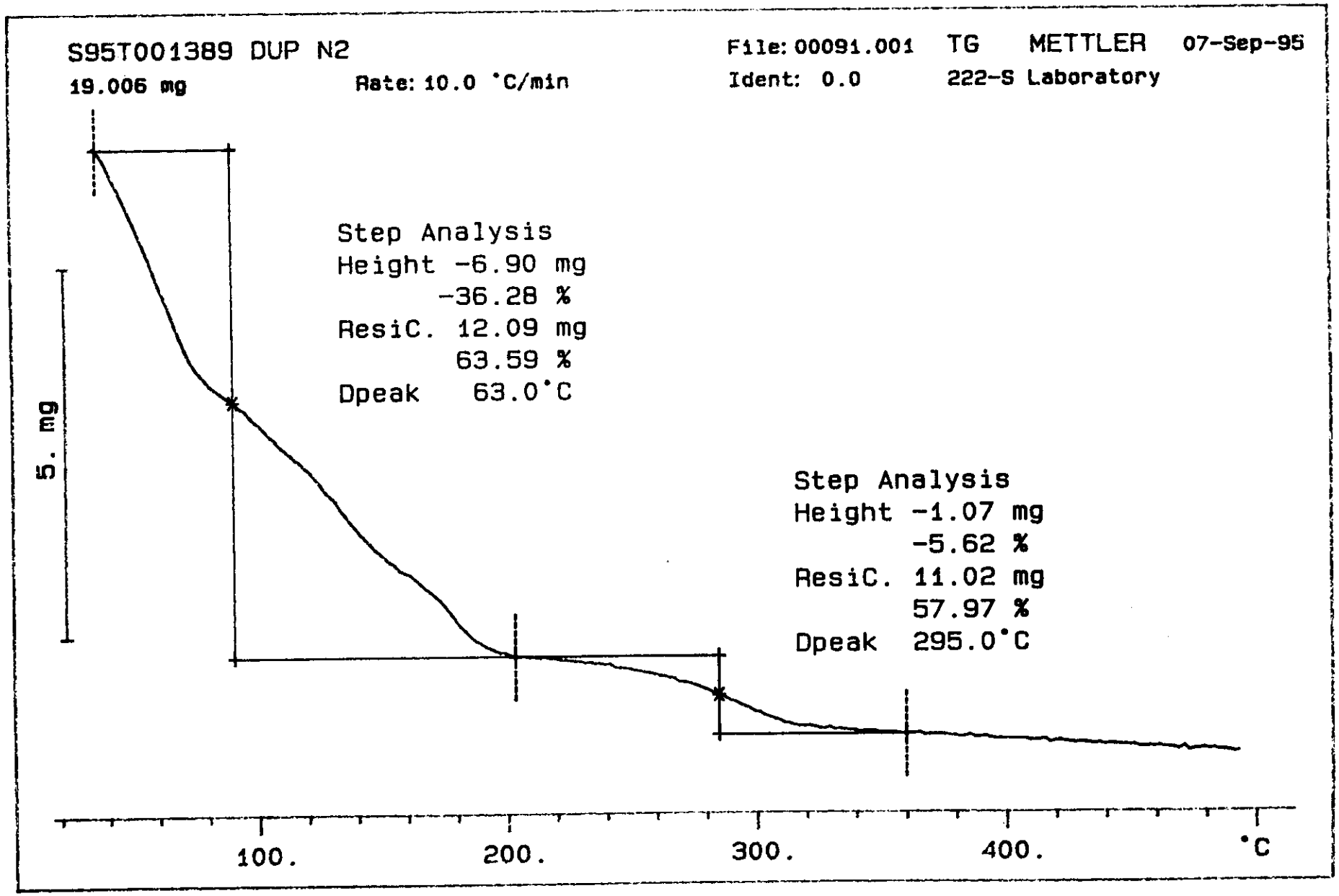
BEST AVAILABLE COPY



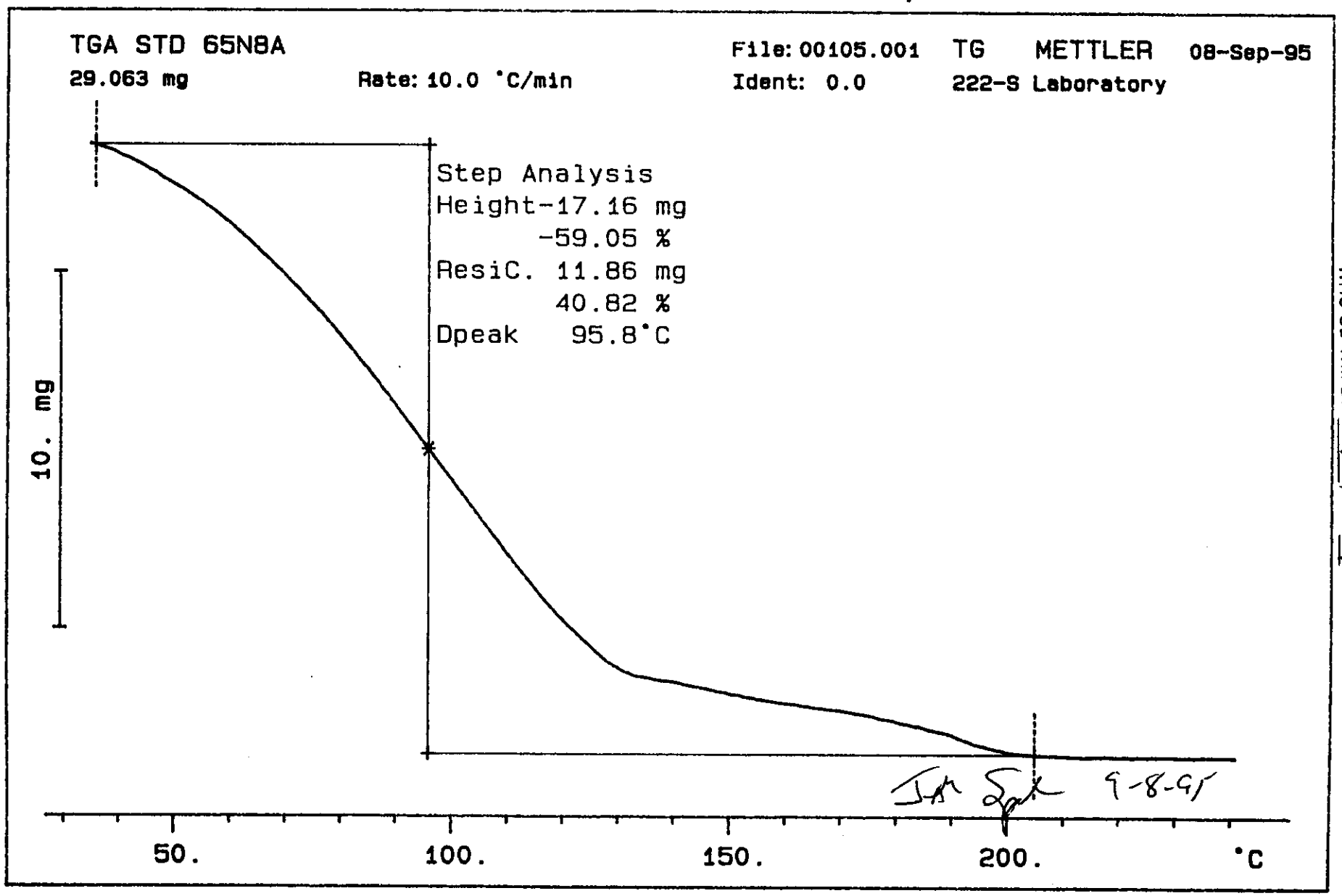
BEST AVAILABLE COPY



BEST AVAILABLE COPY



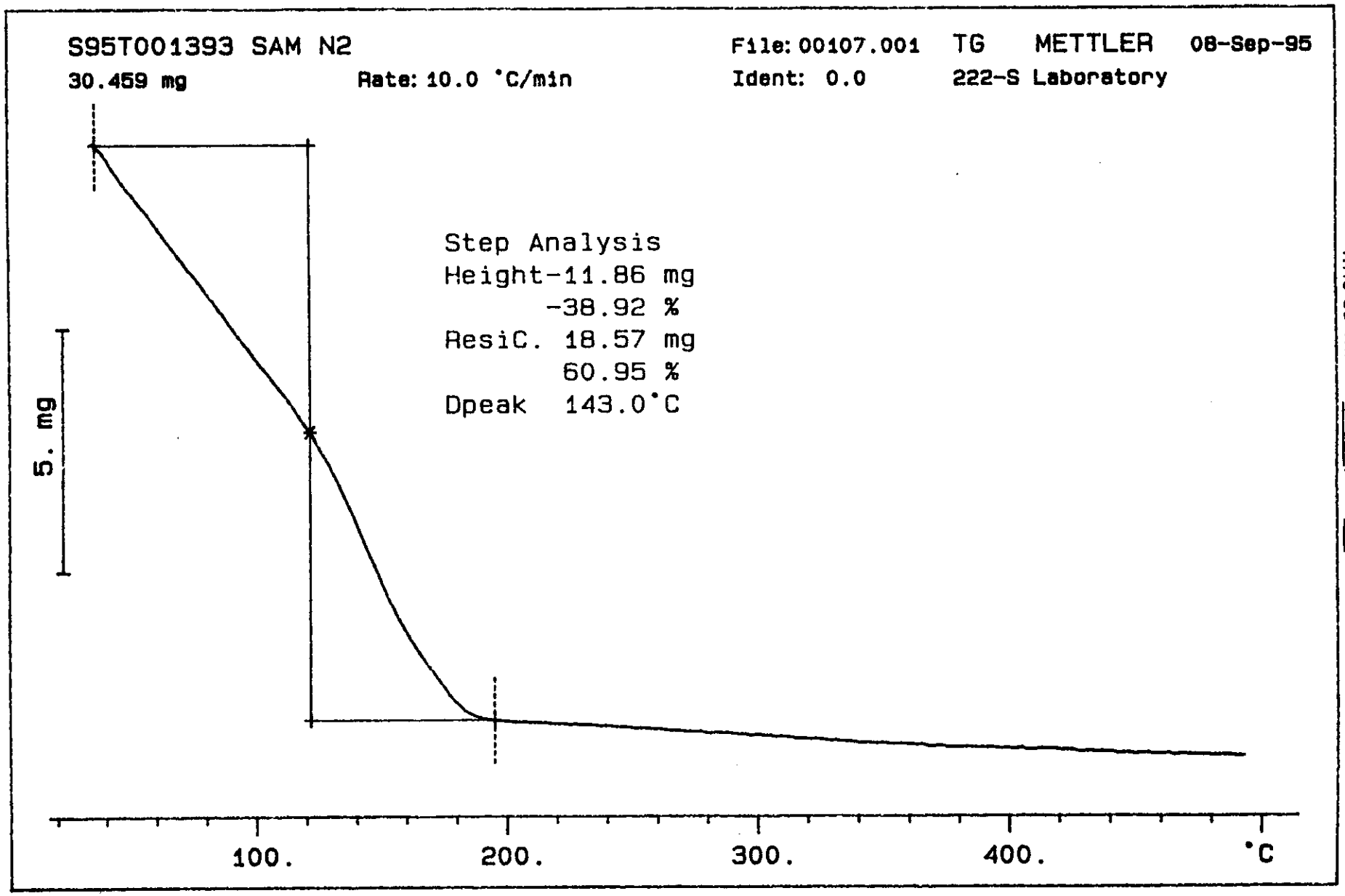
BEST AVAILABLE COPY



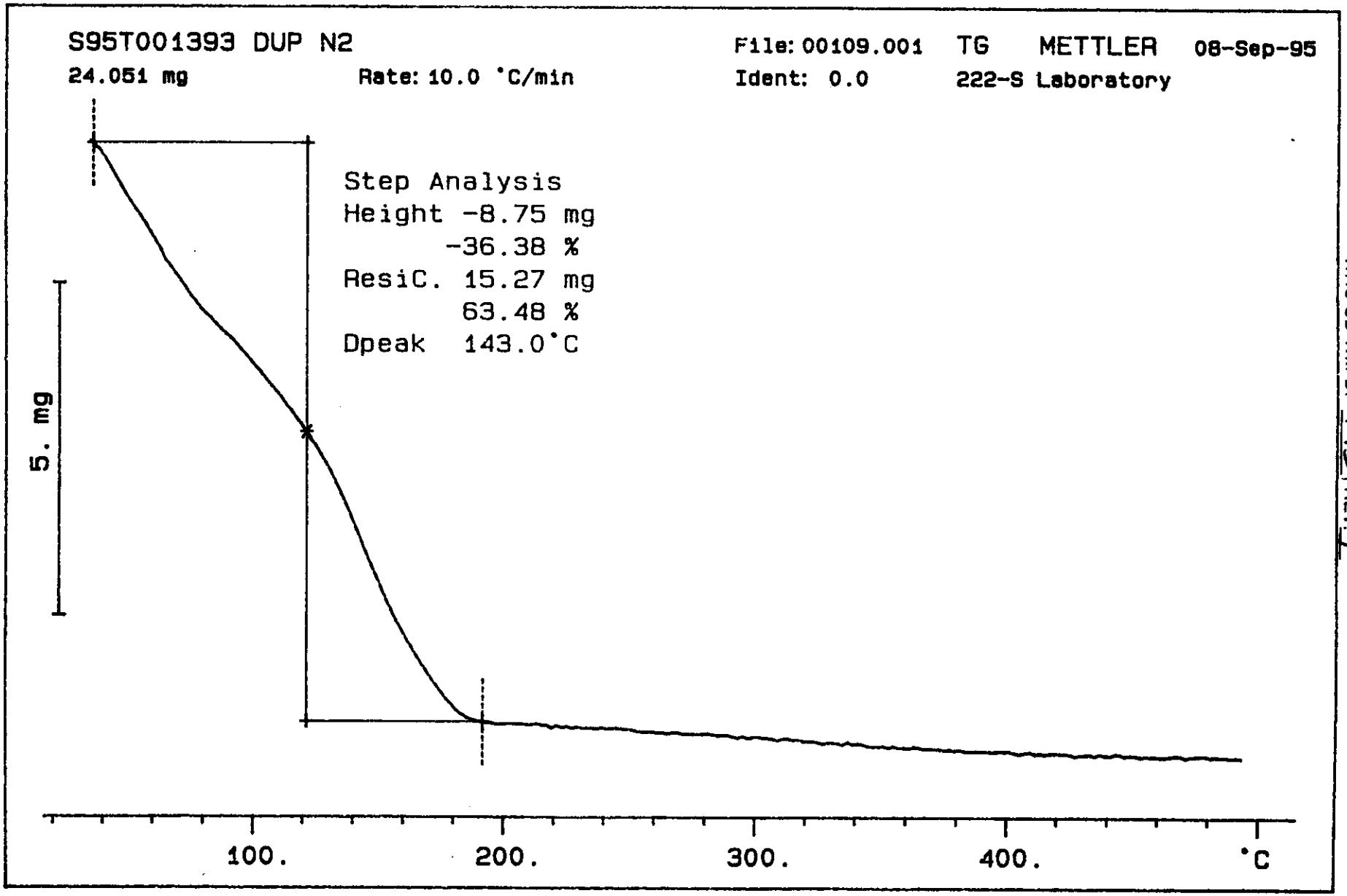
WHC-SD-WM-DP-145, REV. 1

2-236

BEST AVAILABLE COPY



BEST AVAILABLE COPY



LABCORE Data Entry Template for Worklist# 2159

Analyst: JDS **Instrument:** TGA0 1 **Book #** 65N8A

Method: LA-560-112 Rev/Mod B-0

Worklist Comment: Please run BY-108 TGAs under N2. bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R	A	-------TEST------	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD				TGA-01	SOLID	59.74	60.28	N/A	%
95000104	BY-108 (R)	2 SAMPLE	S95T001432	0		TGA-01	SOLID	N/A	41.31		%
95000104	BY-108 (R)	3 DUP	S95T001432	0		TGA-01	SOLID	41.31	38.53	N/A	%

Final page for worklist # 2159

See Attached for Signature
Analyst Signature **Date** GMF 9/7/95
Verified by Blandina Valenzuela 9-28-95

[signature] 9-26-95
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# 2159

Analyst: JLS **Instrument:** TGA0 1 **Book #** 65N8A

Method: LA-560-112 Rev/Mod B-0

Worklist Comment: Please run BY-108 TGAs under N2. bdv

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	-------TEST------	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	STD				TGA-01	SOLID	59.74	60.28	N/A	%
95000104	BY-108 (R)	2	SAMPLE	S95T001432	0		TGA-01	SOLID	N/A			%
95000104	BY-108 (R)	3	DUP	S95T001432	0		TGA-01	SOLID			N/A	%
95000104	BY-108 (R)	4	SAMPLE	S95T001431	0		TGA-01	SOLID	N/A			%
95000104	BY-108 (R)	5	DUP	S95T001431	0		TGA-01	SOLID			N/A	%

Final page for worklist # 2159

JLS 9-5-95

Analyst Signature **Date**

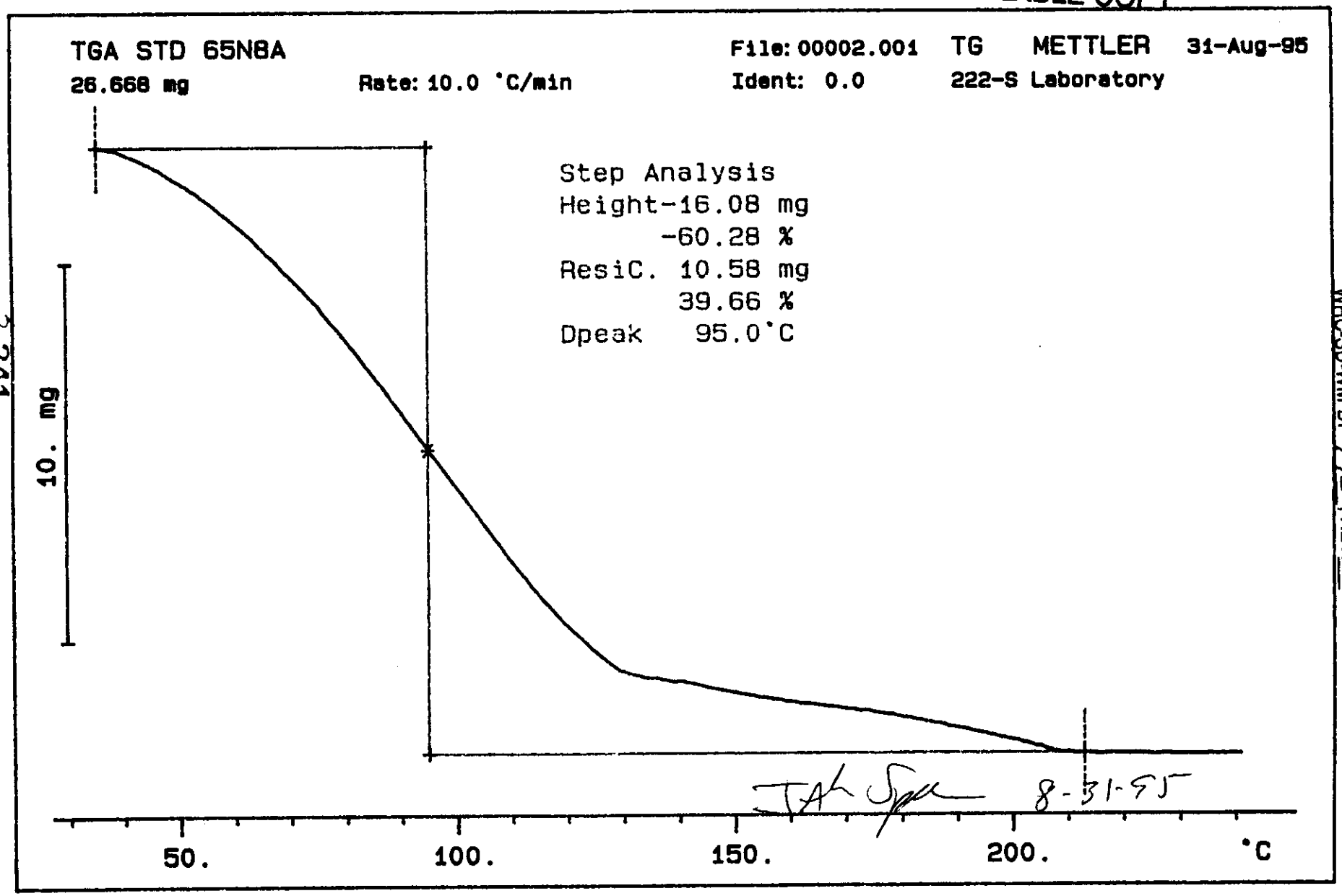
Analyst Signature **Date**

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 2241 TO 2243.

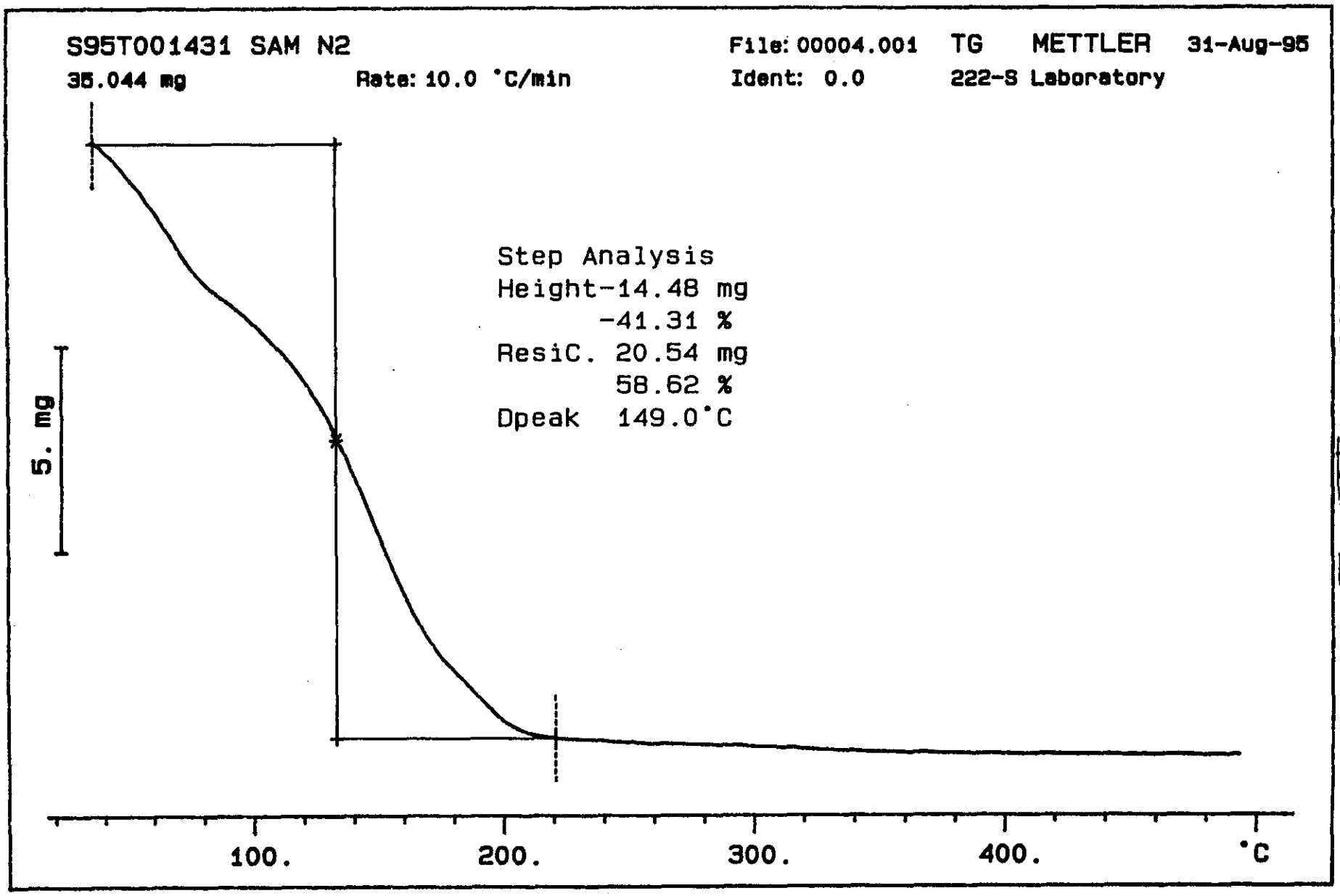
BEST AVAILABLE COPY



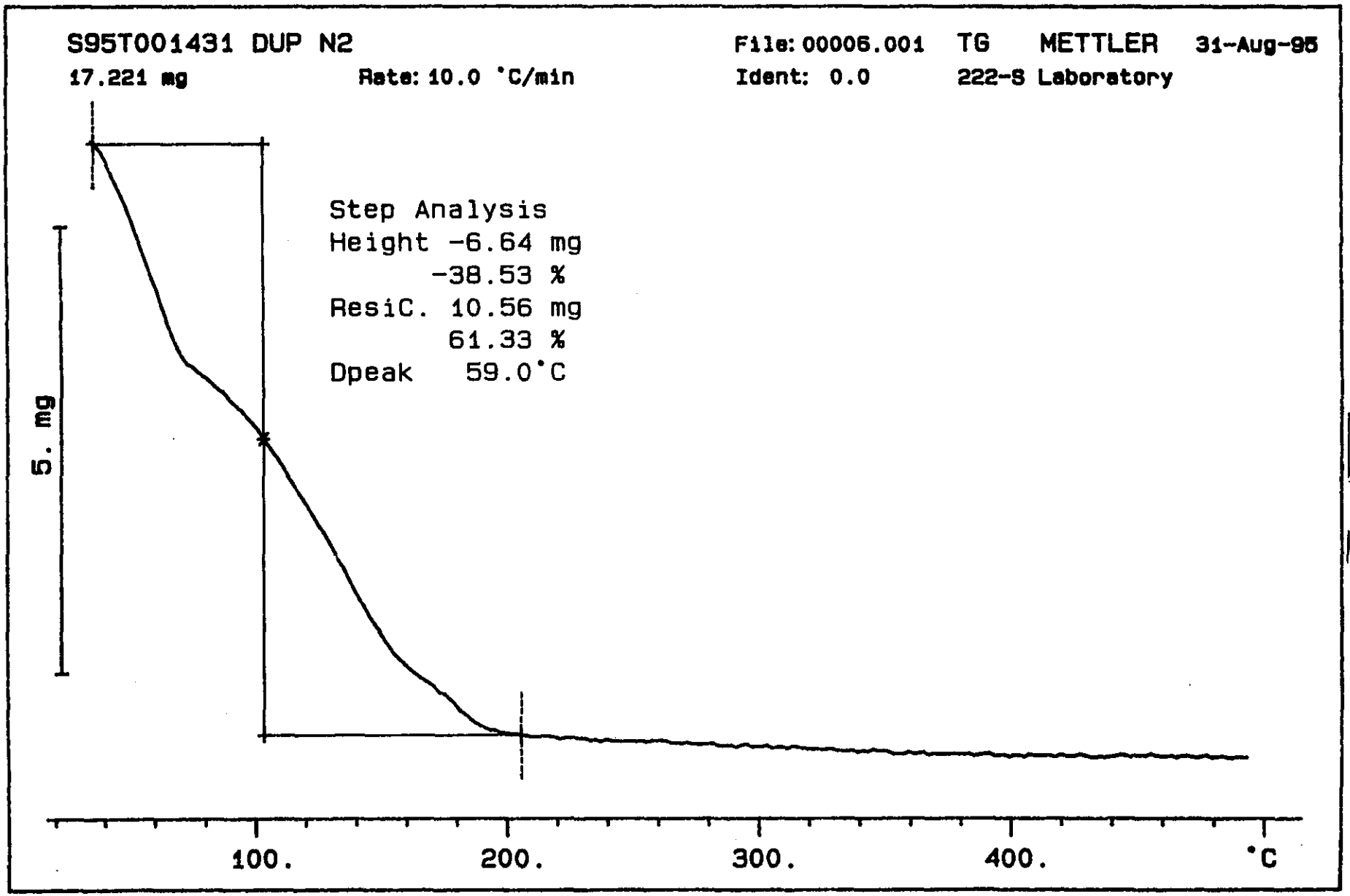
2-241

WHC-SD-WM-DP-145, REV. 1

BEST AVAILABLE COPY



BEST AVAILABLE COPY



LABCORE Data Entry Template for Worklist# 2160

Analyst: SMF **Instrument:** TGA0 3 **Book #** 65N8-A

Method: LA-514-114 Rev/Mod B-0

Worklist Comment: Please run BY-108 TGAs under N2. bdv

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	STD				TGA-03	SOLID	59.74	60.00	N/A	%
95000118	BY-108 (R)	2	SAMPLE	S95T001586	0		TGA-03	SOLID	N/A	15.74		%
95000118	BY-108 (R)	3	DUP	S95T001586	0		TGA-03	SOLID	15.74	15.02	N/A	%
95000118	BY-108 (R)	4	SAMPLE	S95T001587	0		TGA-03	SOLID	N/A	10.41		%
95000118	BY-108 (R)	5	DUP	S95T001587	0		TGA-03	SOLID	10.41	12.77	N/A	%
95000118	BY-108 (R)	6	TRIPL	S95T001587	0		TGA-03	SOLID	10.41	13.00	N/A	%

Final page for worklist # 2160

See attached for signatures
Analyst Signature Date 8-31-95

Verified by Blandina Valenzuela BDV 8-31-95

[signature] 8-31-95
Analyst Signature Date

Data Entry Comments: S95T001587 produced a second weight loss step of 25.41% at approximately 175°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# 2160

Analyst: SMF **Instrument:** TGA0 **Book #** 65N8-A

Method: ~~LA-560-112 Rev/Mod~~ LA-514-1141/B0
SMF 8-30-95

Worklist Comment: Please run BY-108 TGAs under N2. bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R	A	-------TEST------	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD				TGA-01	SOLID			N/A	%
95000118	BY-108 (R)	2 SAMPLE	S95T001586	0		TGA-01	SOLID	N/A			%
95000118	BY-108 (R)	3 DUP	S95T001586	0		TGA-01	SOLID			N/A	%
95000118	BY-108 (R)	4 SAMPLE	S95T001587	0		TGA-01	SOLID	N/A			%
95000118	BY-108 (R)	5 DUP	S95T001587	0		TGA-01	SOLID			N/A	%

Final page for worklist # 2160

S. Fulton 8-30-95
Analyst Signature **Date**

Analyst Signature **Date**

Other instrument was used
8-31-95
BDV

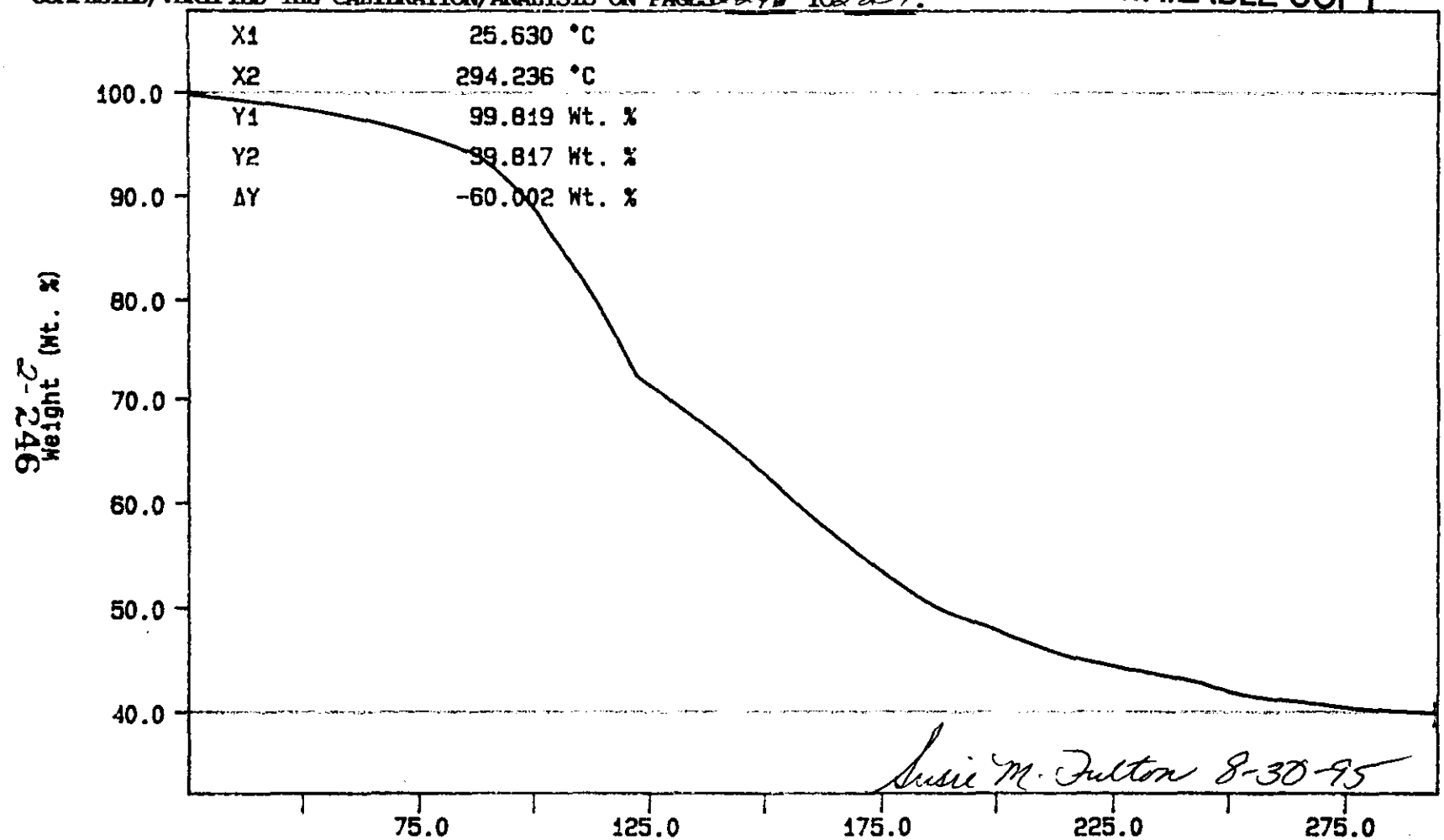
Data Entry Comments:

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: TGA
File info: TER083001 Wed Aug 30 16:42:54 1995
Sample Weight: 20.662 mg
65N8-A Terliq

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 2-246 TO 2-251.

BEST AVAILABLE COPY



Susie M. Fulton 8-30-95

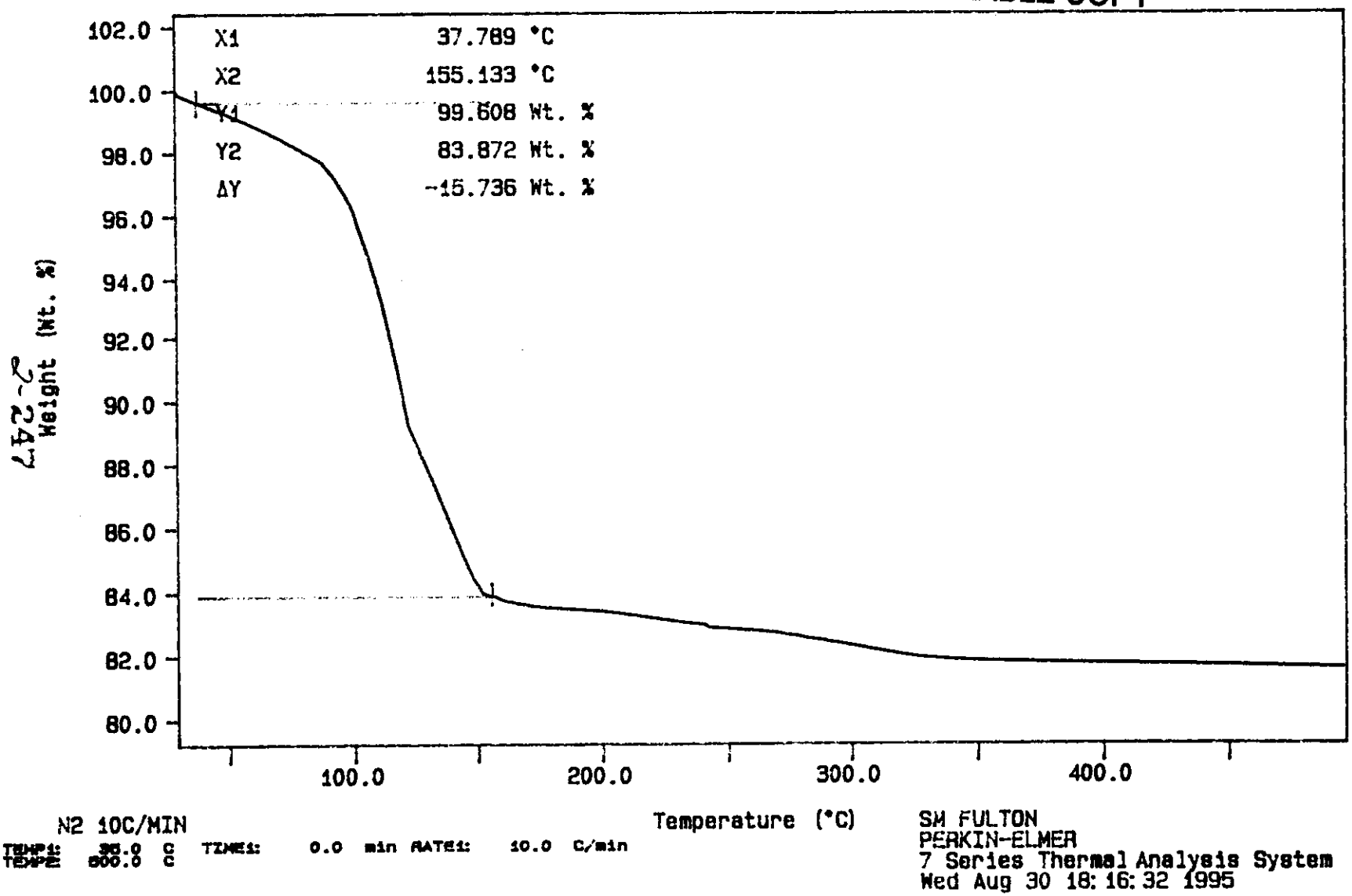
N2 10C/MIN
TEMP1: 35.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 300.0 C

SM FULTON
PERKIN-ELMER
7 Series Thermal Analysis System
Wed Aug 30 16:46:35 1995

WHC-SD-WM-DP-145, REV. 1

Curve 1: TGA
File info: SAM083001 Wed Aug 30 17:46:11 1995
Sample Weight: 21.617 mg
S95T001586

BEST AVAILABLE COPY



N2 10C/MIN
TEMP1: 30.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 500.0 C

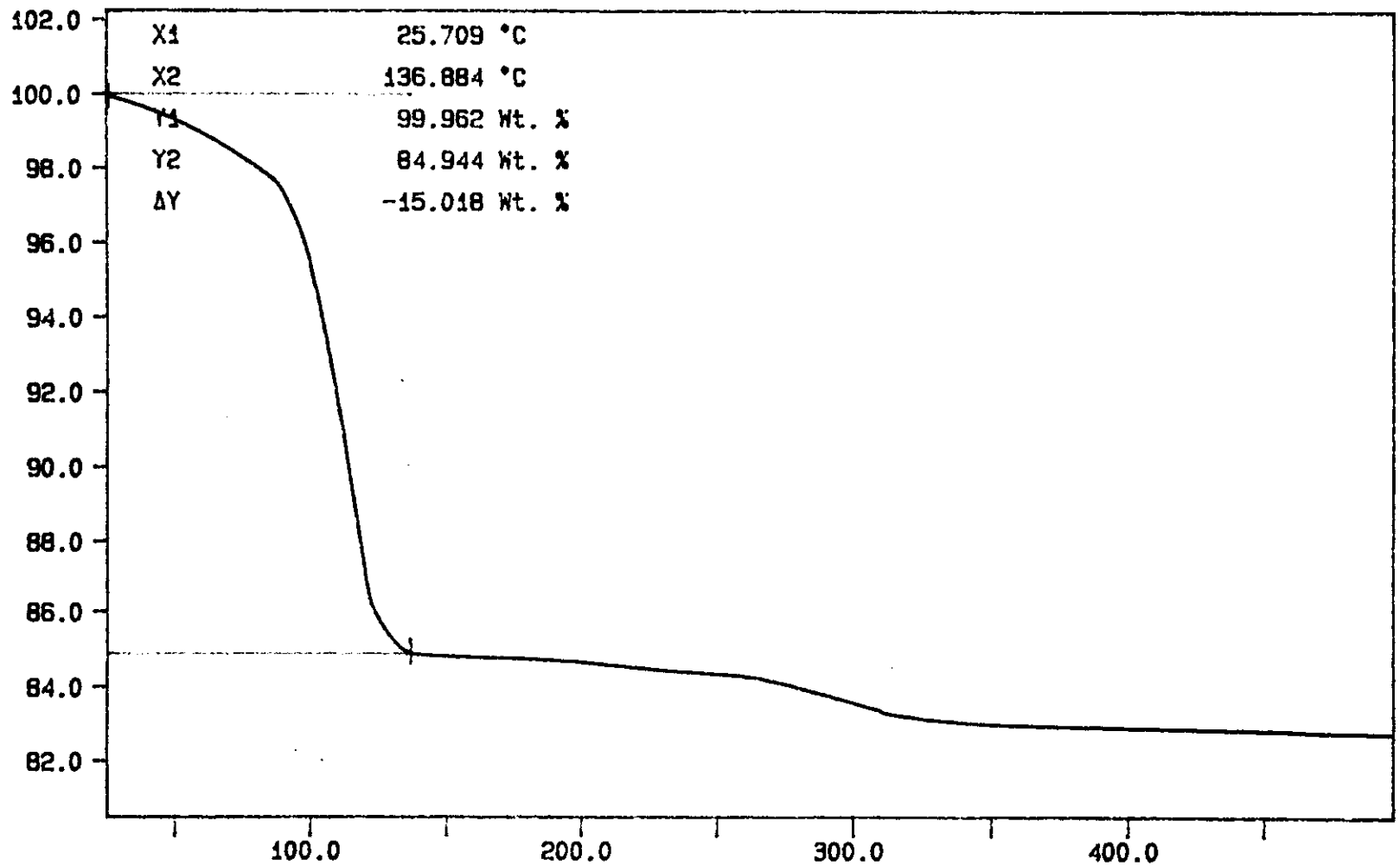
SM FULTON
PERKIN-ELMER
7 Series Thermal Analysis System
Wed Aug 30 18:16:32 1995

2-2247

WHC-SD-WM-DP-145, REV. 1

Curve 1: TGA
File info: SAM083002 Wed Aug 30 19:09:47 1995
Sample Weight: 16.559 mg
S95T001586 DUP

BEST AVAILABLE COPY



N2 10C/MIN
TEMP1: 35.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 500.0 C

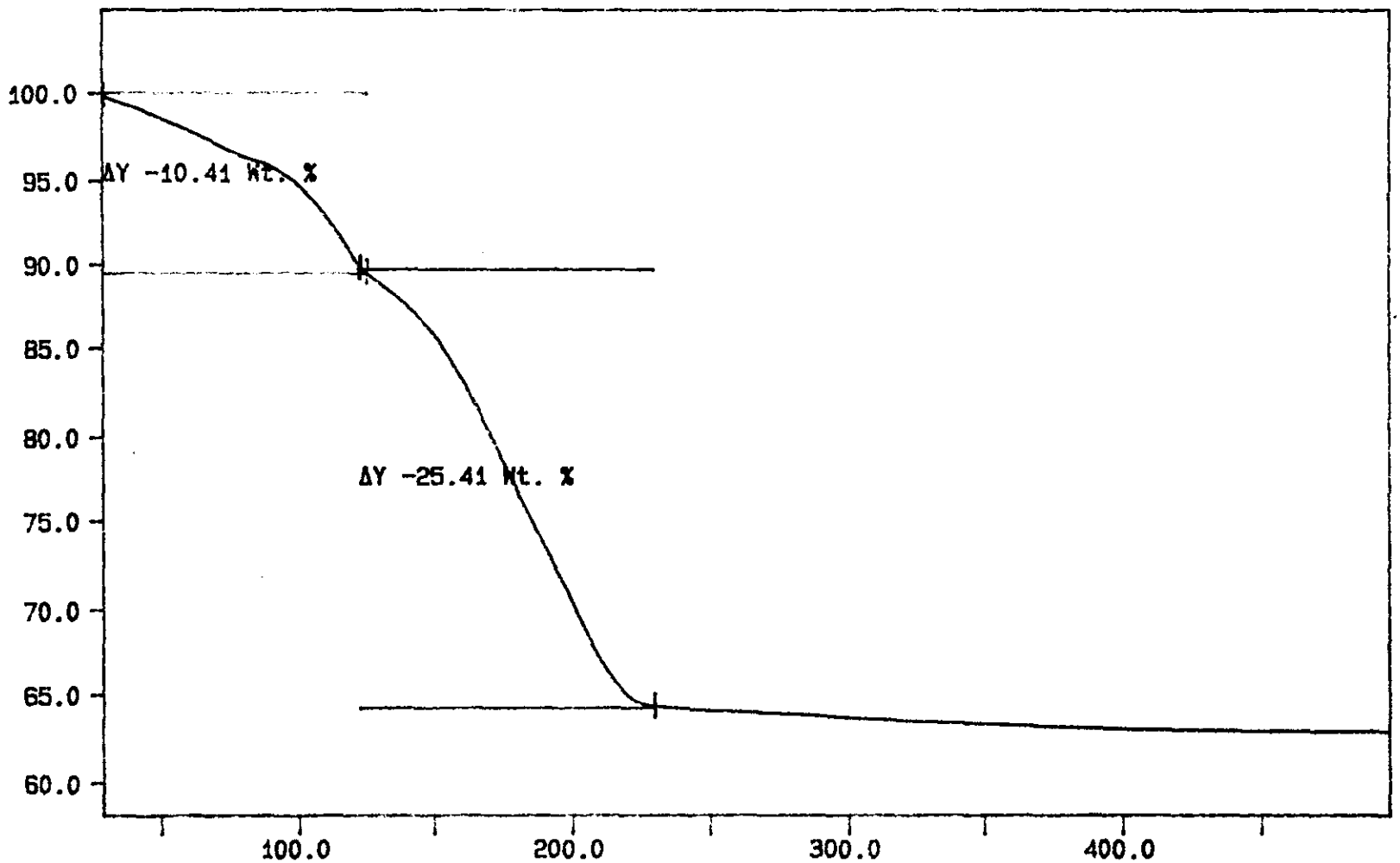
SM FULTON
PERKIN-ELMER
7 Series Thermal Analysis System
Wed Aug 30 19:22:54 1995

2-248

WHC-SD-WM-DP-145, REV. 1

Curve 1: TGA
File info: SAM083003 Wed Aug 30 20:18:32 1995
Sample Weight: 29.059 mg
S95T001587

BEST AVAILABLE COPY



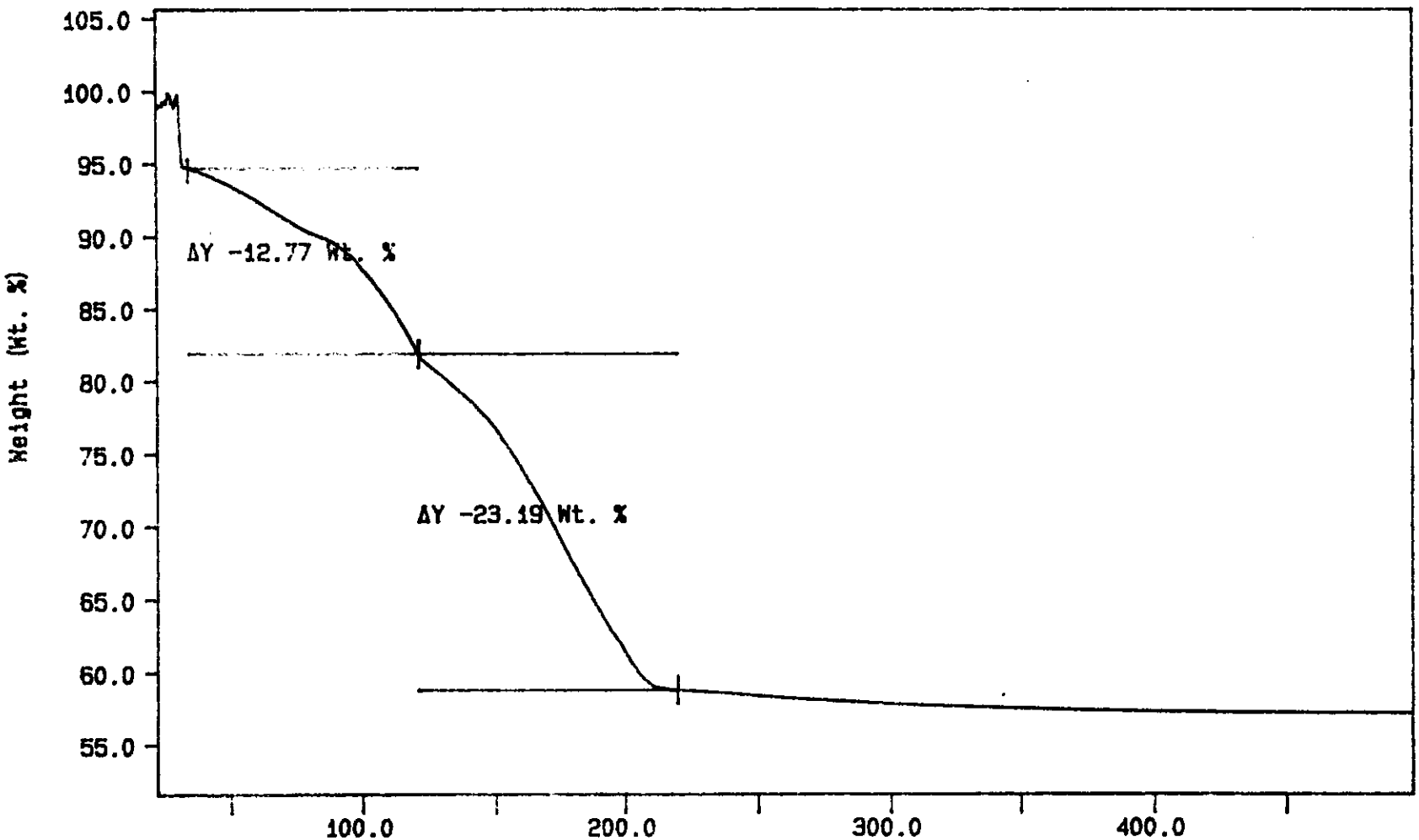
N2 10C/MIN
TEMP1: 35.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 800.0 C

SM FULTON
PERKIN-ELMER
7 Series Thermal Analysis System
Thu Aug 31 10:42:08 1995

WHC-SD-WM-DP-145, REV. 1

Curve 1: TGA
File info: SAM083004 Wed Aug 30 22:10:07 1995
Sample Weight: 20.160 mg
S95T001587 DUP

BEST AVAILABLE COPY



N2 10C/MIN
TEMP1: 35.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 500.0 C

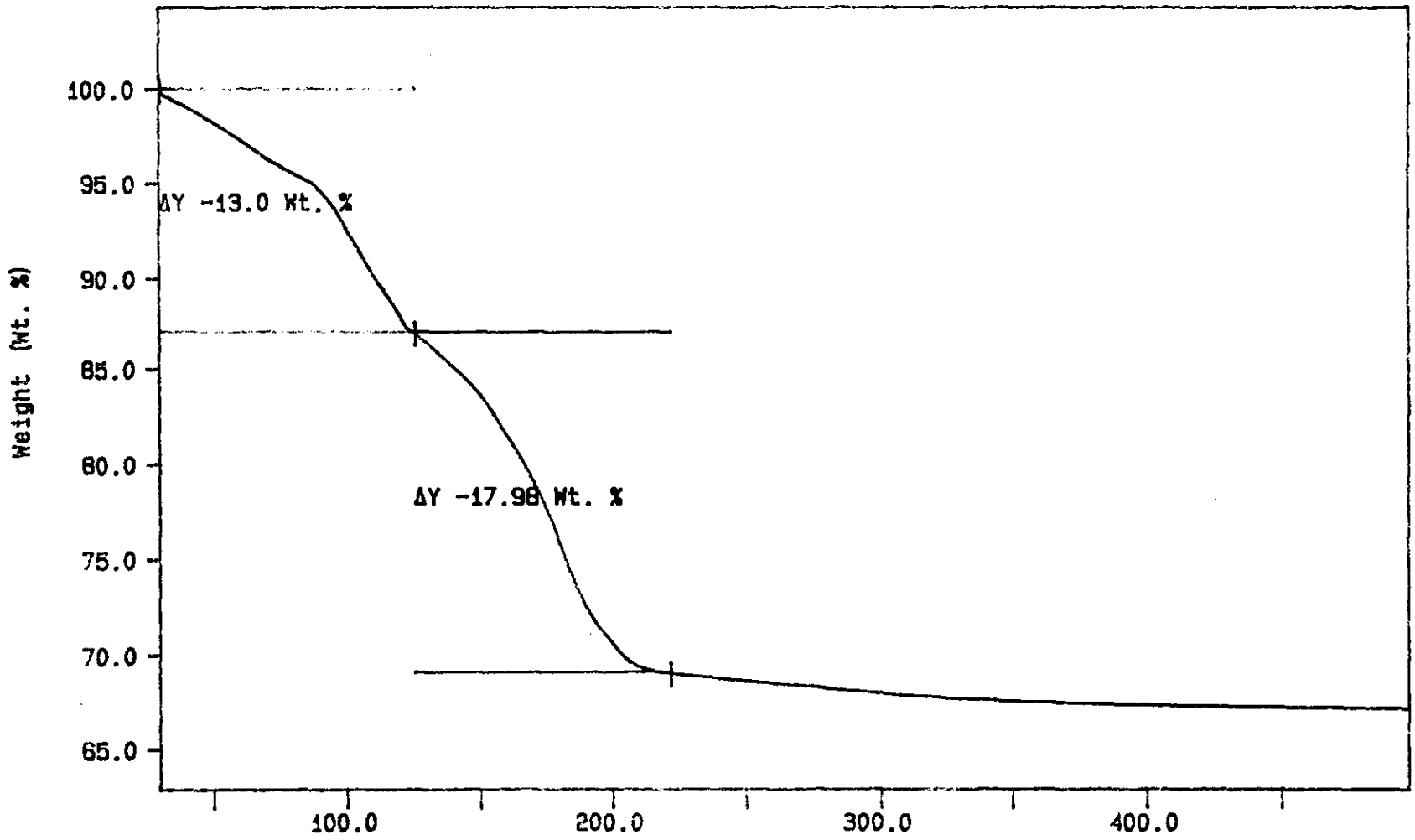
SM FULTON
PERKIN-ELMER
7 Series Thermal Analysis System
Thu Aug 31 10:56:08 1995

2-250

WHC-SD-WM-DP-145, REV. 1

Curve 1: TGA
File info: SAM083005 Wed Aug 30 23:16:10 1995
Sample Weight: 18.168 mg
S95T001587 TRIP

BEST AVAILABLE COPY



N2 10C/MIN
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 Aug 31 11:01:42 1995

LABCORE Data Entry Template for Worklist# 2161

Analyst: SMF **Instrument:** TGA0 1 **Book #** 65N8-A

Method: LA-560-112 Rev/Mod A-2

Worklist Comment: Please run BY-108 TGAs under N2. bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-------TEST------	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-01	SOLID	59.74	60.47	N/A	%
95000118	BY-108 (R)	2 SAMPLE	S95T001588	0	TGA-01	SOLID	N/A	29.88		%
95000118	BY-108 (R)	3 DUP	S95T001588	0	TGA-01	SOLID	29.88	30.68	N/A	%
95000118	BY-108 (R)	4 SAMPLE	S95T001589	0	TGA-01	SOLID	N/A	22.95		%
95000118	BY-108 (R)	5 DUP	S95T001589	0	TGA-01	SOLID	22.95	23.67	N/A	%

Final page for worklist # 2161

Susie M. Fulton 8-30-95
Analyst Signature **Date**

[signature] 8-31-95
Analyst Signature **Date**

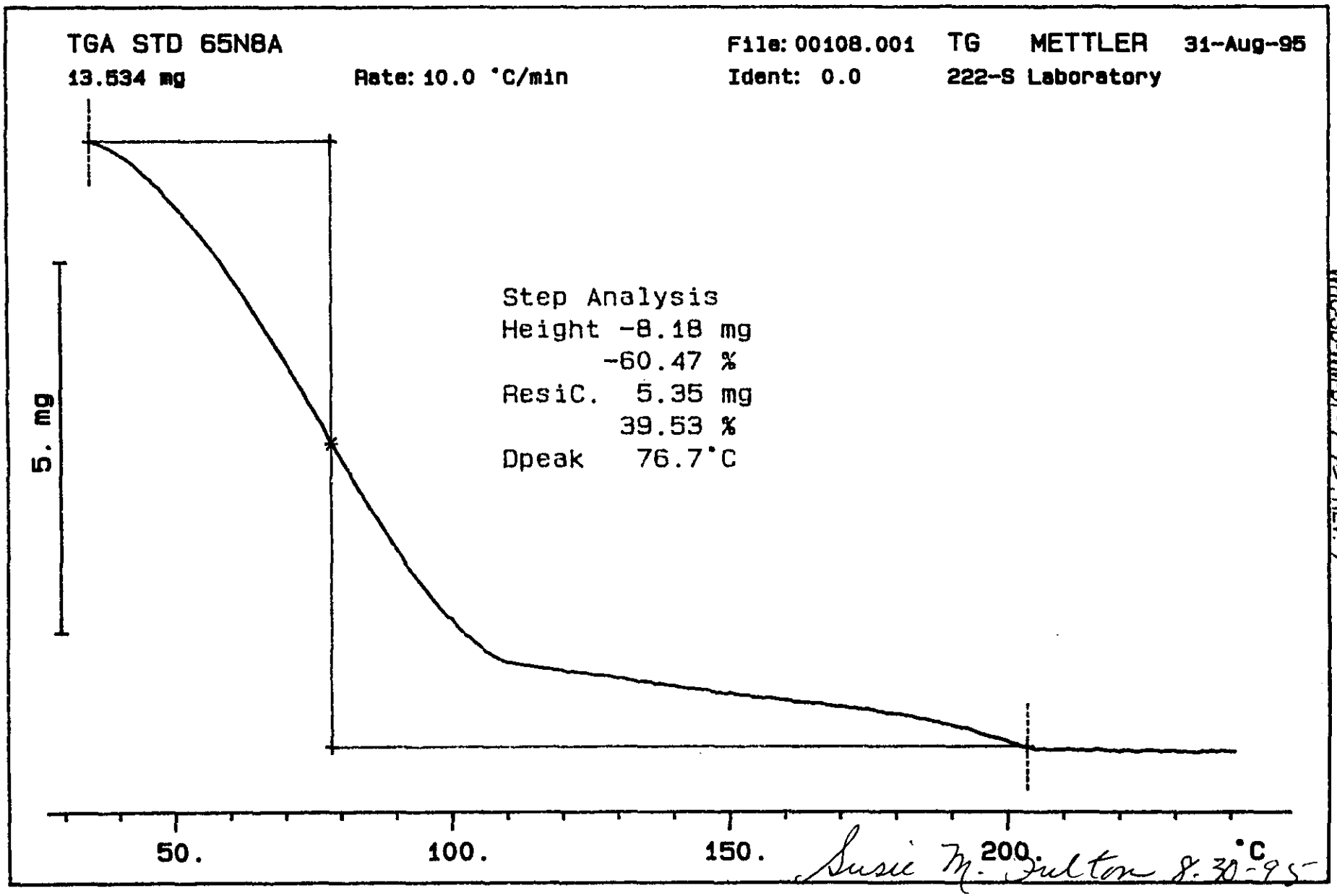
Verified ~~8/1~~
9/1/95 J. M. Luye

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 2253 TO 2257.

BEST AVAILABLE COPY

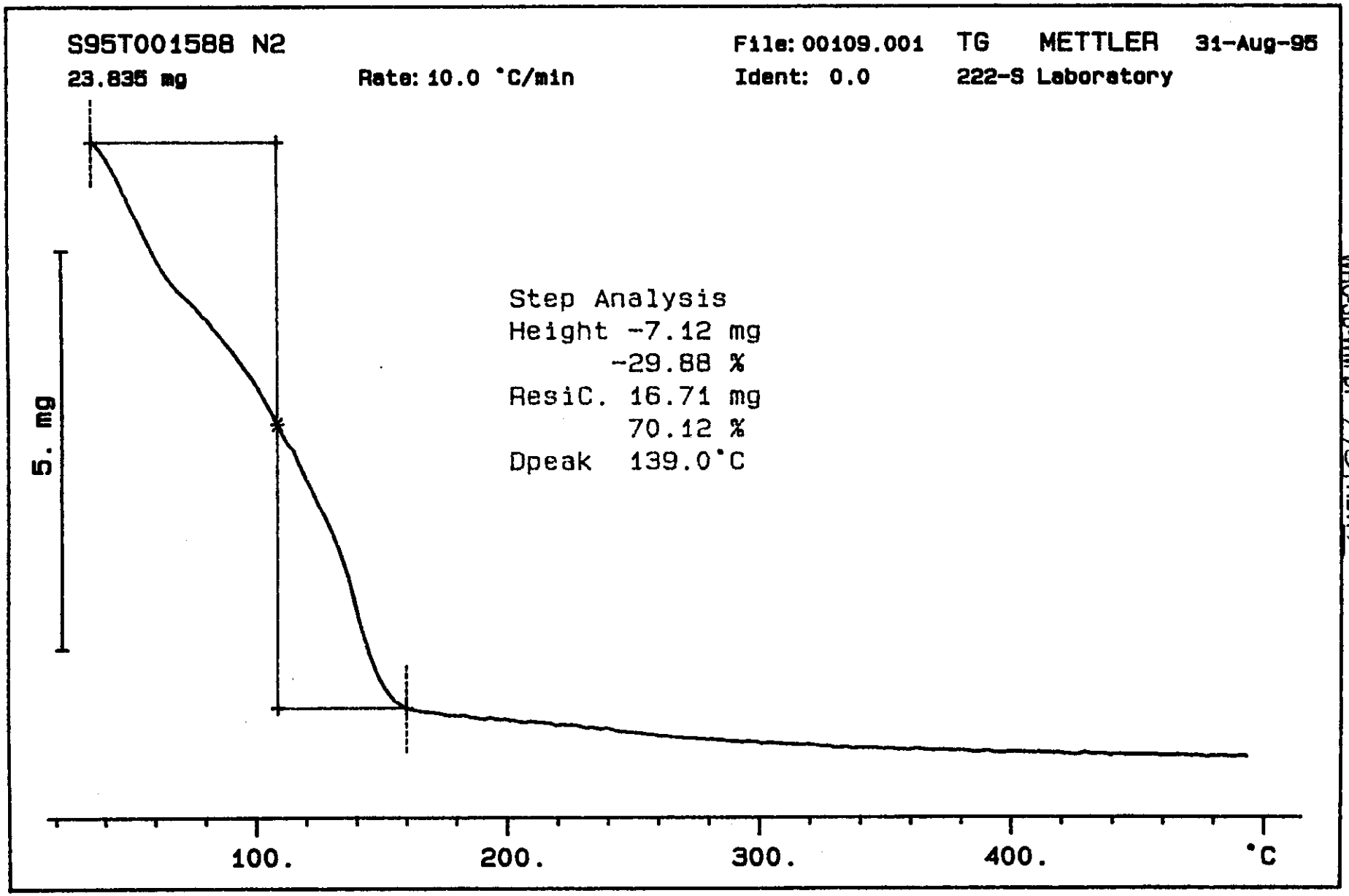


Susie M. Fulton 8-30-95

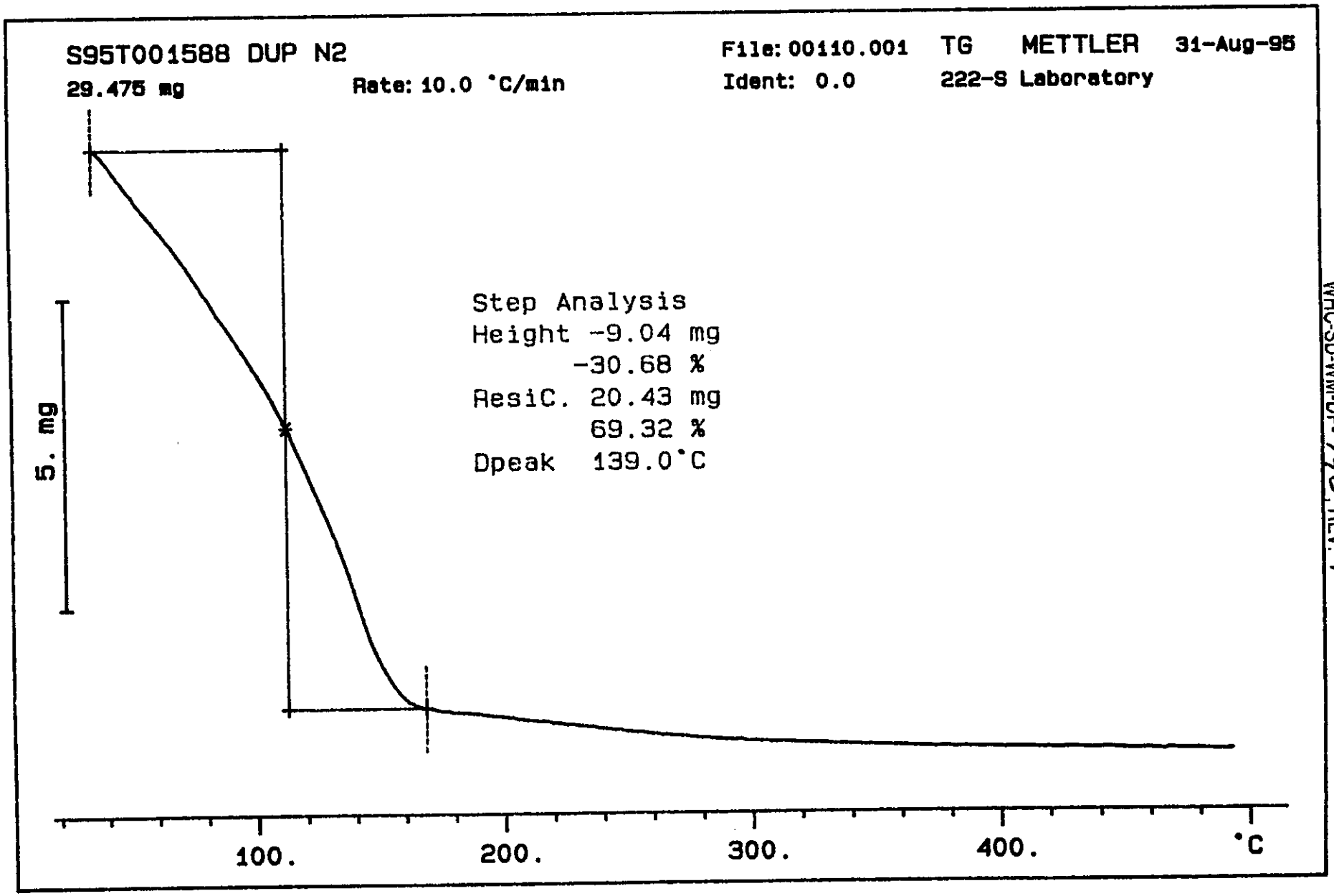
2-253

WHC-SD-WM-DP-145, REV. 1

BEST AVAILABLE COPY



BEST AVAILABLE COPY



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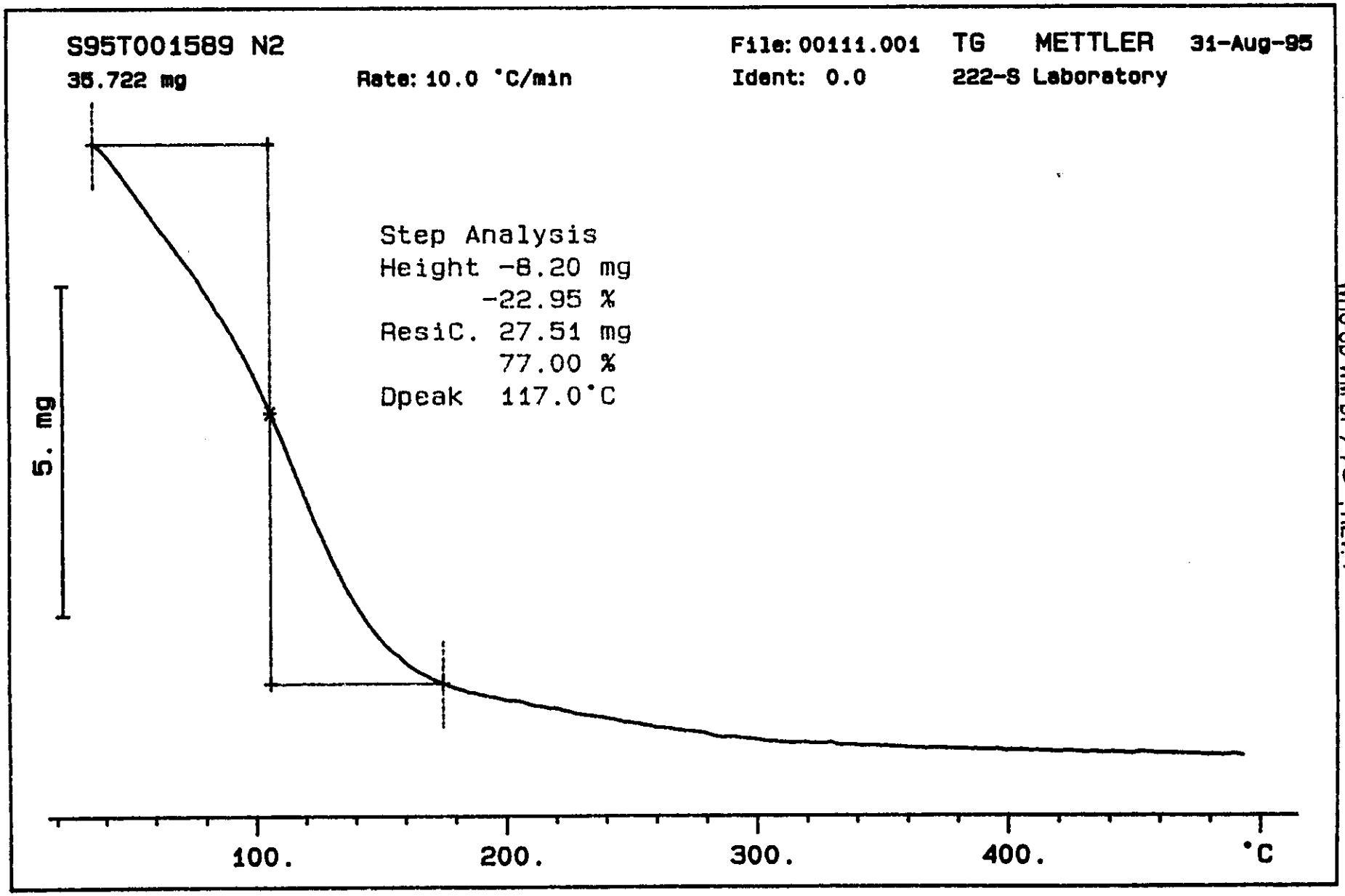

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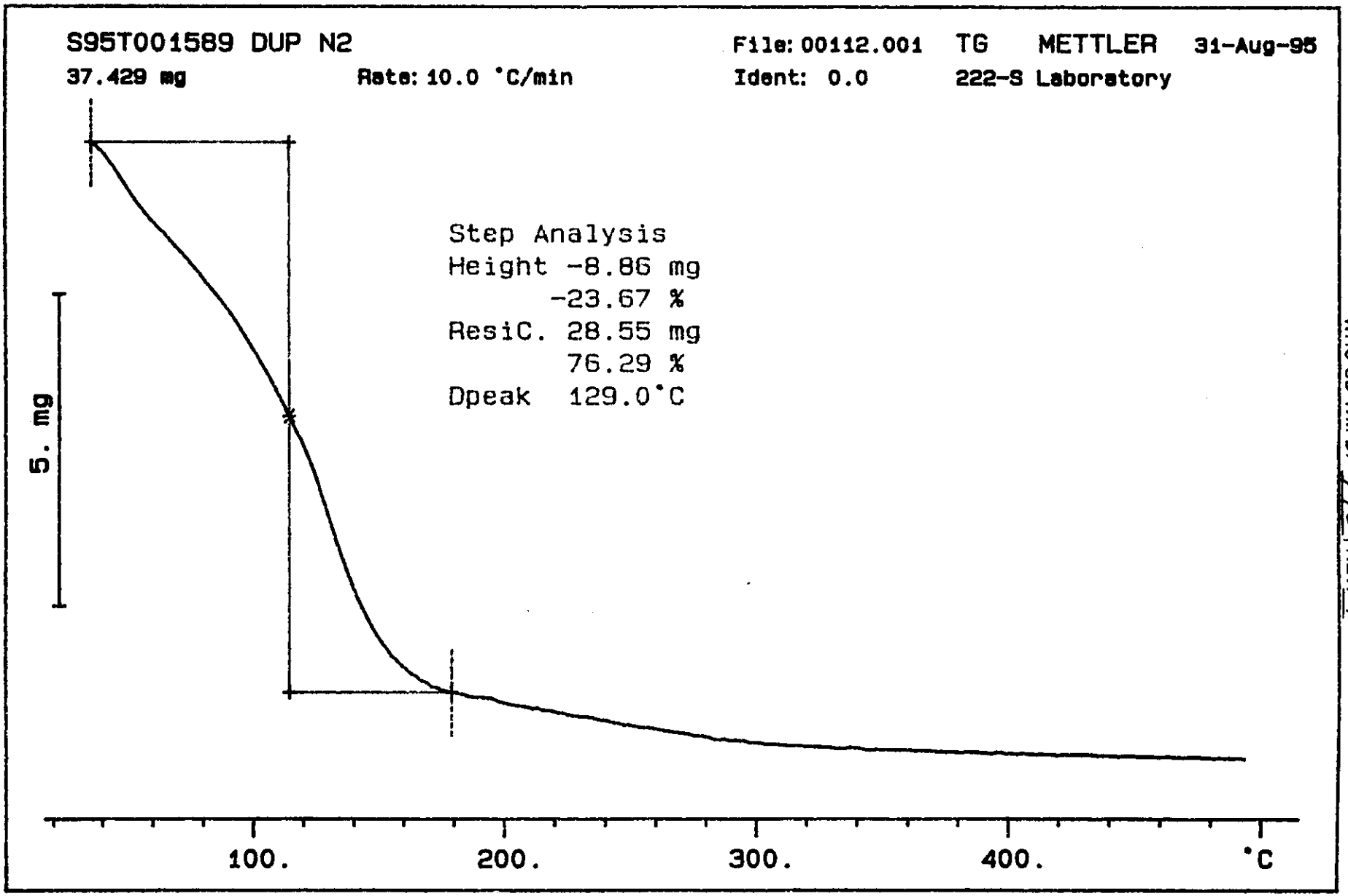

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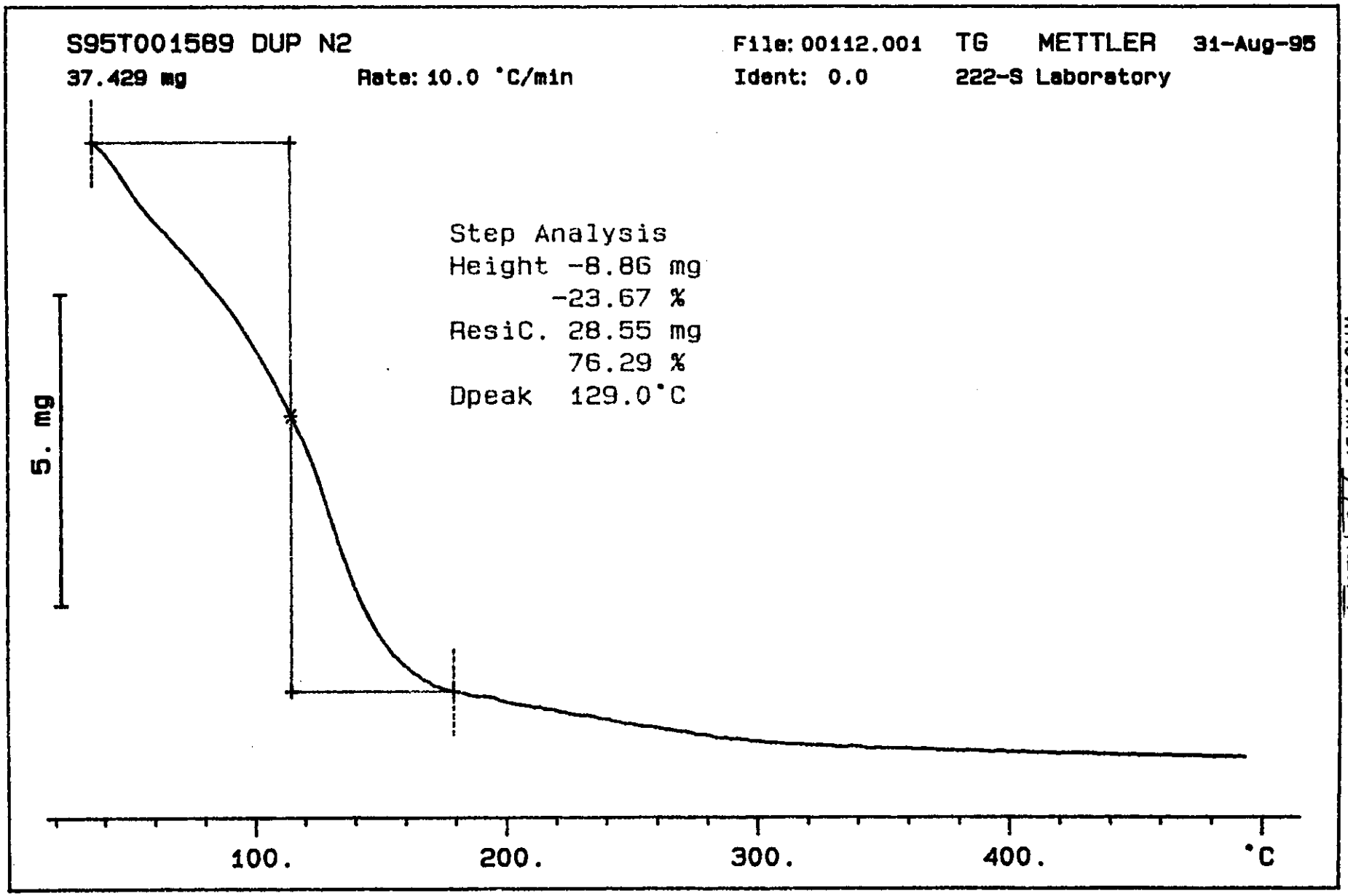


LABCORE Data Entry Template for Worklist# 2200

Analyst: RDM **Instrument:** TGA0 1 **Book #** 65NB-A

Method: LA-560-112 Rev/Mod B-0

Worklist Comment: Please run BY-108 TGAs under N2. bdv

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	STD				TGA-01	LIQUID	59.74	60.60	N/A	%
95000101	BY-108 (R)	2	SAMPLE	S95T001365	0		TGA-01	LIQUID	N/A	100.0		%
95000101	BY-108 (R)	3	DUP	S95T001365	0		TGA-01	LIQUID	100.0	100.0	N/A	%
95000104	BY-108 (R)	4	SAMPLE	S95T001430	0		TGA-01	LIQUID	N/A	38.58		%
95000104	BY-108 (R)	5	DUP	S95T001430	0		TGA-01	LIQUID	38.58	39.47	N/A	%

Final page for worklist # 2200

RDMyn 9/20/95
Analyst Signature **Date**

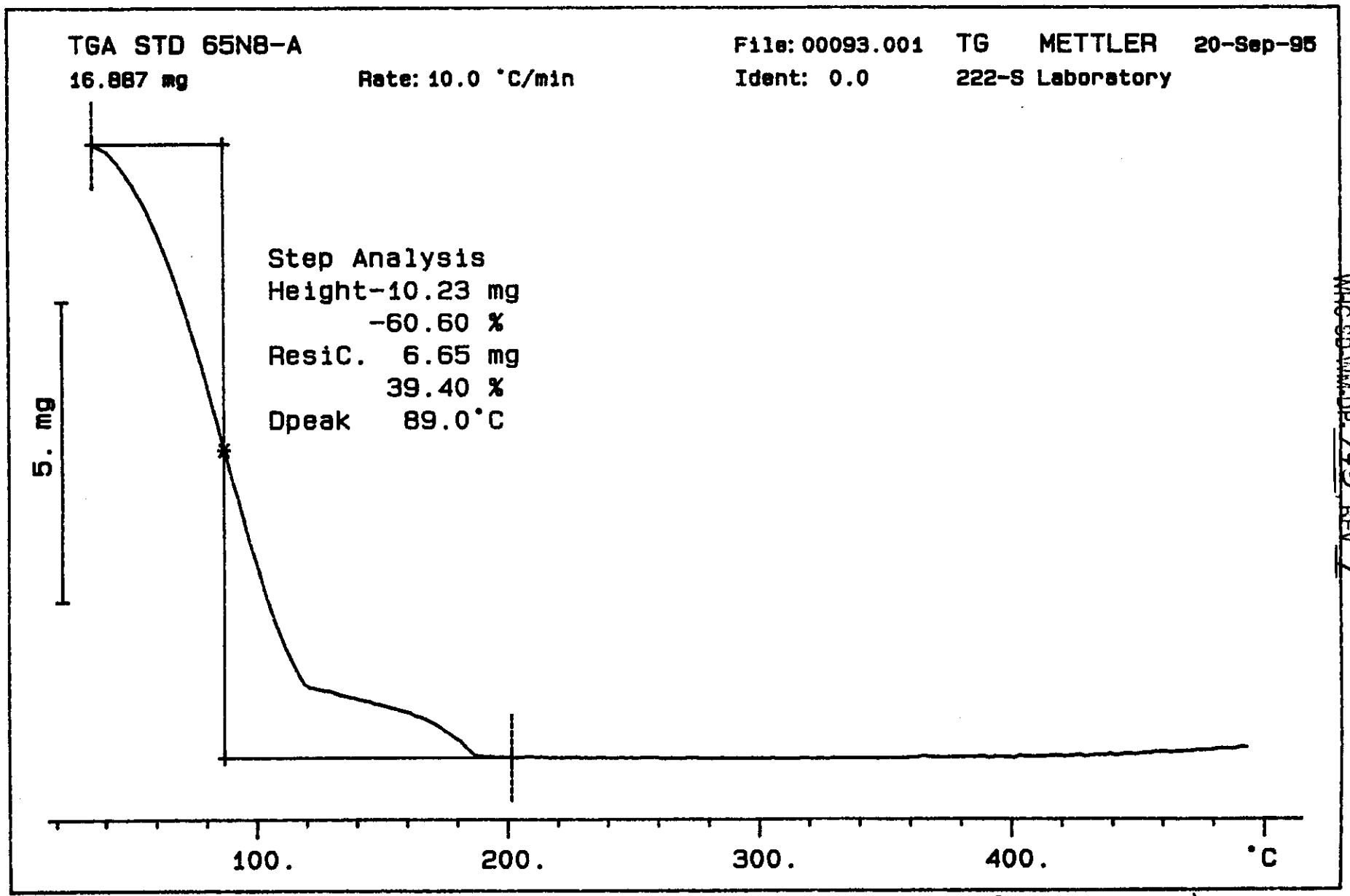
[illegible] 9-20-95
Analyst Signature **Date**

9-21-95 BDV
Verified by Blandina Valenzuela 9-21-95

Data Entry Comments: S95T001430 produced a second weight loss step of 13.66% at approximately 143°C.

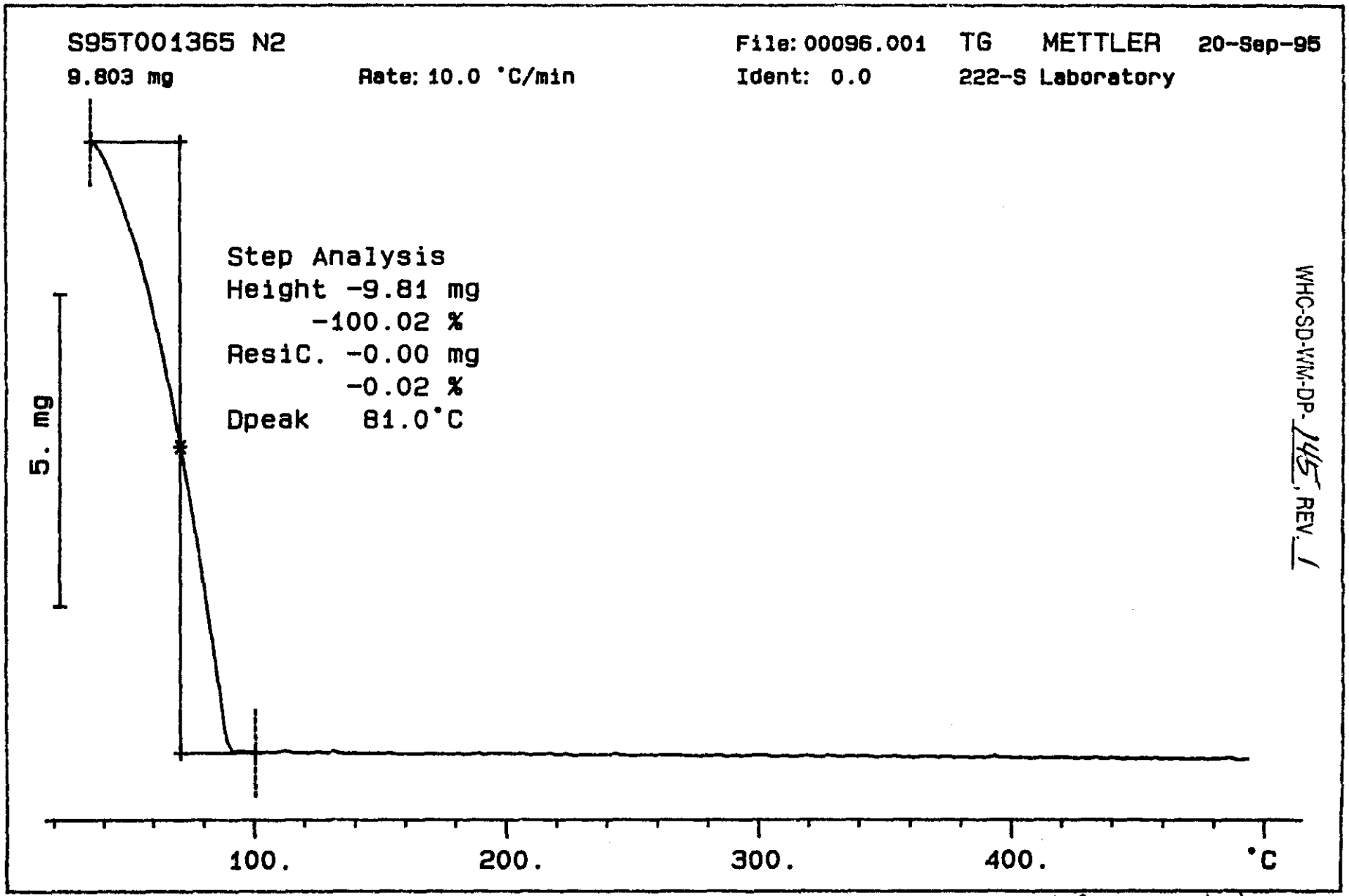
Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 2-259 TO 2-263.



WHC SD-WM-DP-145 REV 1

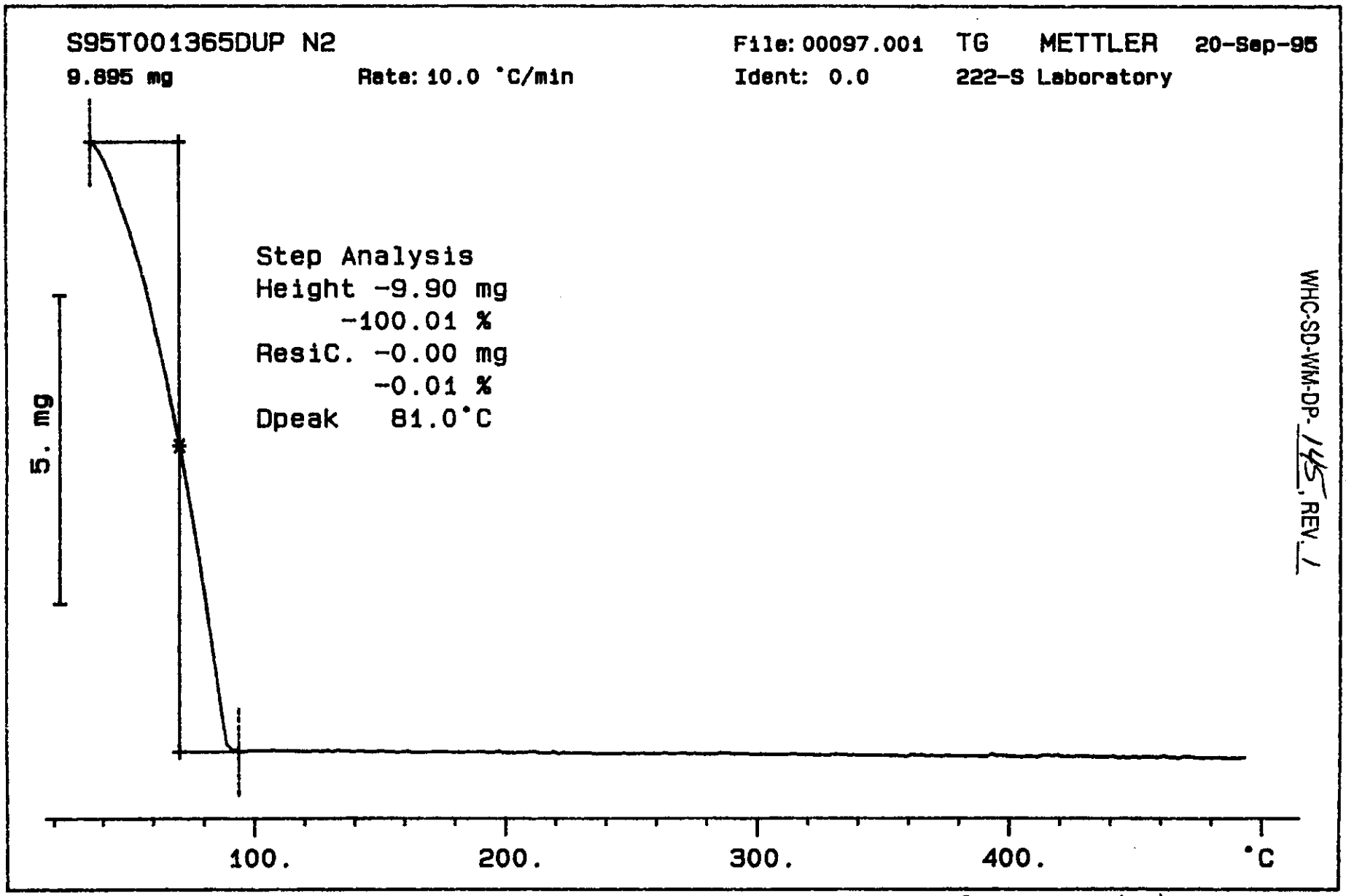
R [illegible] 9/20/95



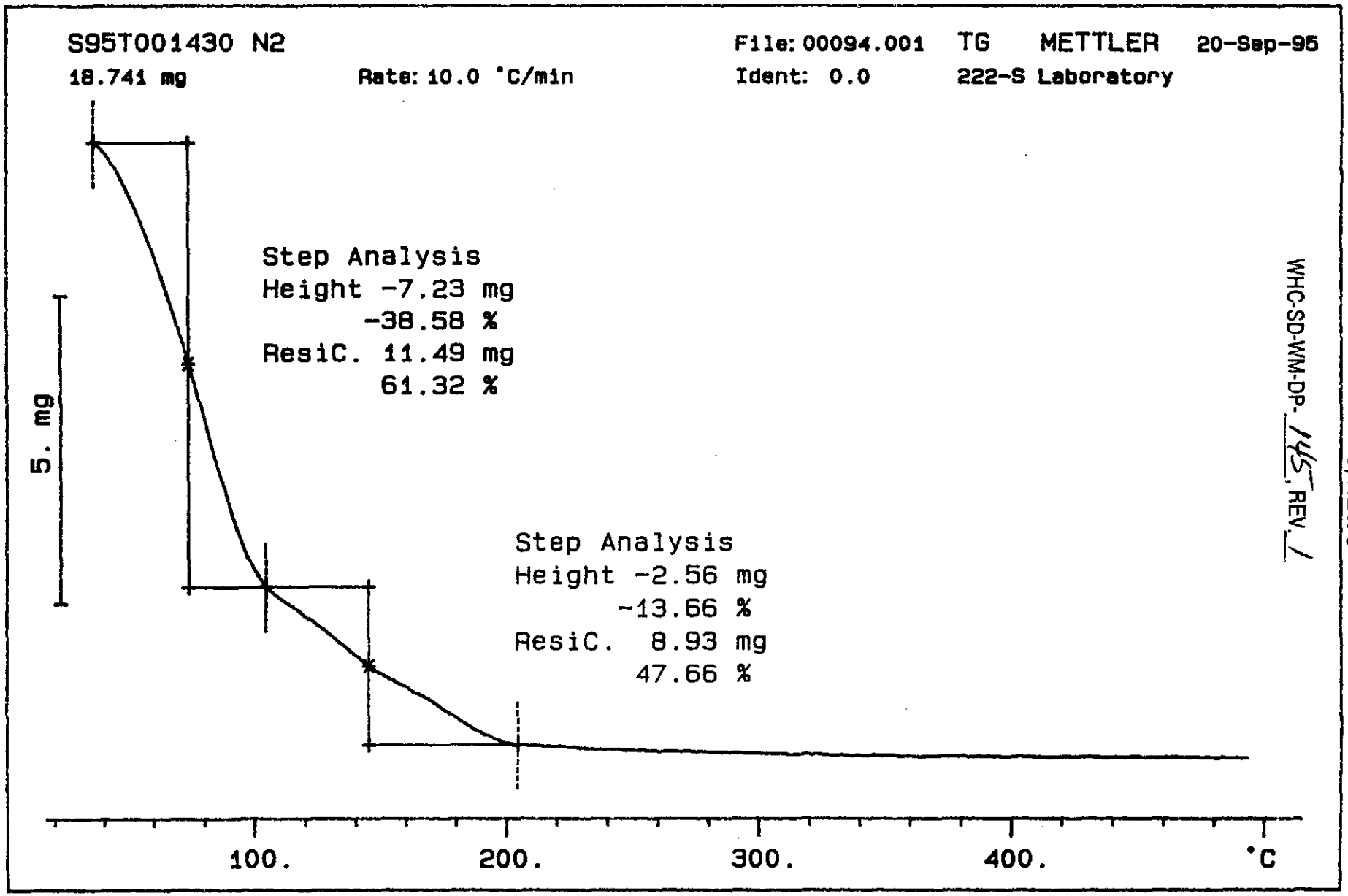
WHC-SD-WM-DP-145, REV. 1

WHC-SD-WM-DP-145, REV. 0

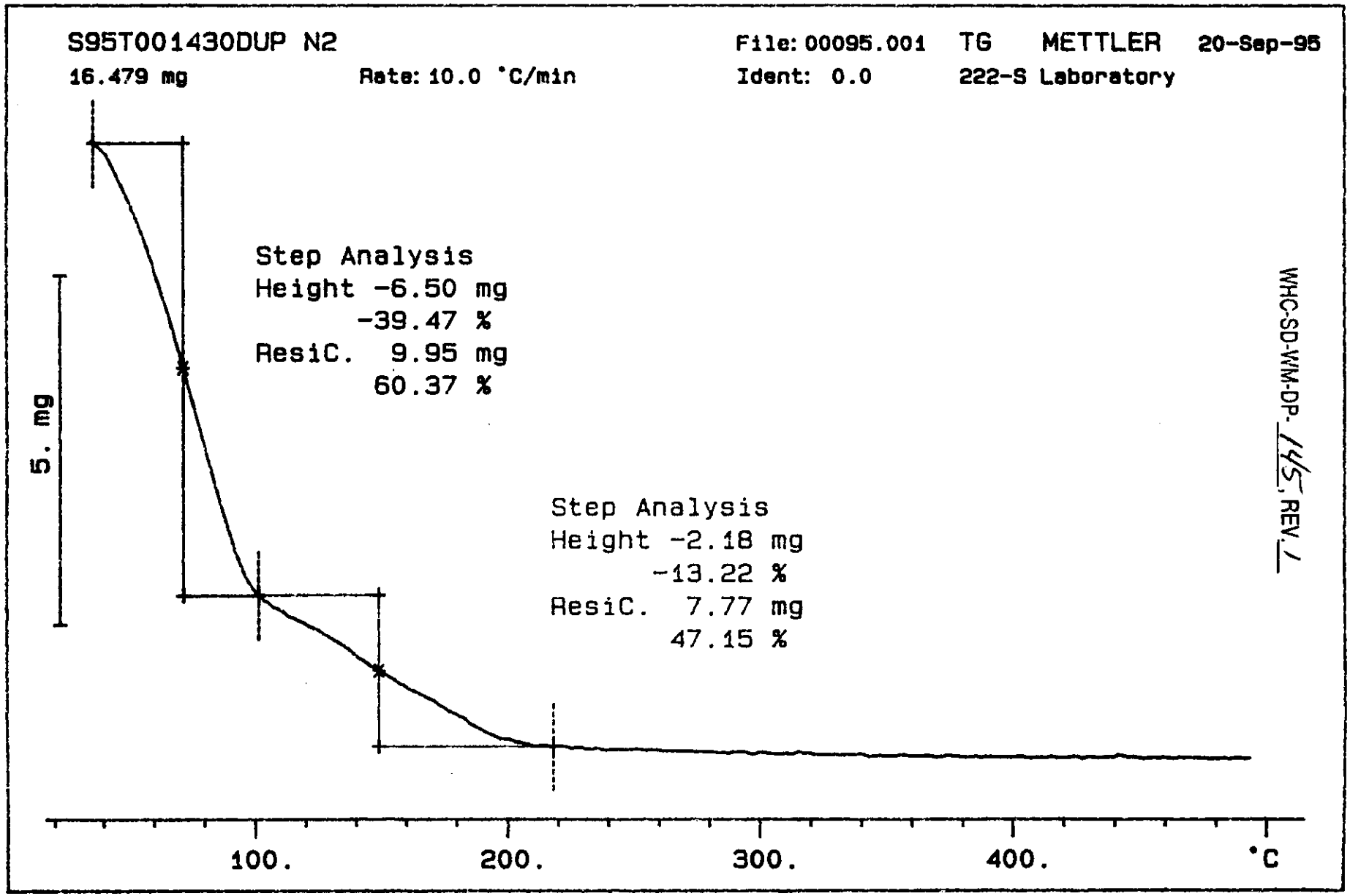
9/20/..



WHC-SD-WM-DP-145, REV. 1


S95T001430 N2
18.741 mg
Rate: 10.0 °C/min
File: 00094.001
TG
METTLER
20-Sep-95
Ident: 0.0
222-S Laboratory
Step Analysis
Height -7.23 mg
-38.58 %
ResiC. 11.49 mg
61.32 %
Step Analysis
Height -2.56 mg
-13.66 %
ResiC. 8.93 mg
47.66 %
5. mg
100.
200.
300.
400.
°C

WHC-SD-WM-DP-145, REV. 1



LABCORE Data Entry Template for Worklist# 2251

Analyst: JDS **Instrument:** DSC01 DSC03 **Book #** 65N9A

Method: LA-514-114 Rev/Mod B-0

Worklist Comment: BY-108 TGA. JMF

GROUP	PROJECT	S TYPE	SAMPLE#	R	A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD				TGA-03	SOLID	59.74	60.228	N/A	%
95000104	BY-108 (R)	2 SAMPLE	S95T001404	0		TGA-03	SOLID	N/A	14.64		%
95000104	BY-108 (R)	3 DUP	S95T001404	0		TGA-03	SOLID	14.64	14.87	N/A	%

Final page for worklist # 2251

8-28-95

Analyst Signature Date

Analyst Signature Date

Entered + verified J.M. Fuge 9/6/95

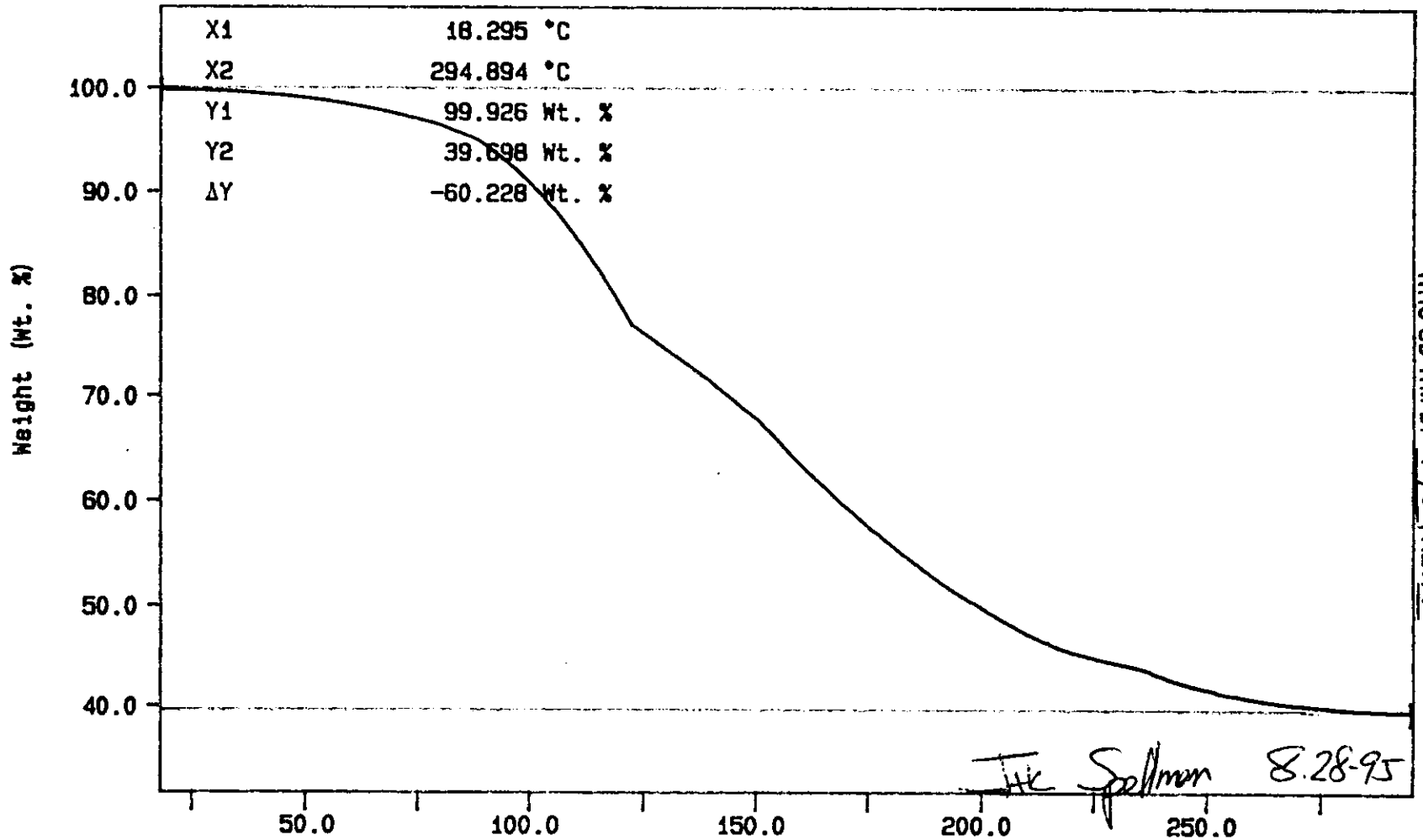
Data Entry Comments: Sample has second weight loss step of 28.38%; duplicate has 25.91% both finishing by about 250°C. JMFuge

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: TER082801 Mon Aug 28 11:34:25 1995
Sample Weight: 26.486 mg
65N8-A Terliq

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 2-265 TO 2-267.

BEST AVAILABLE COPY

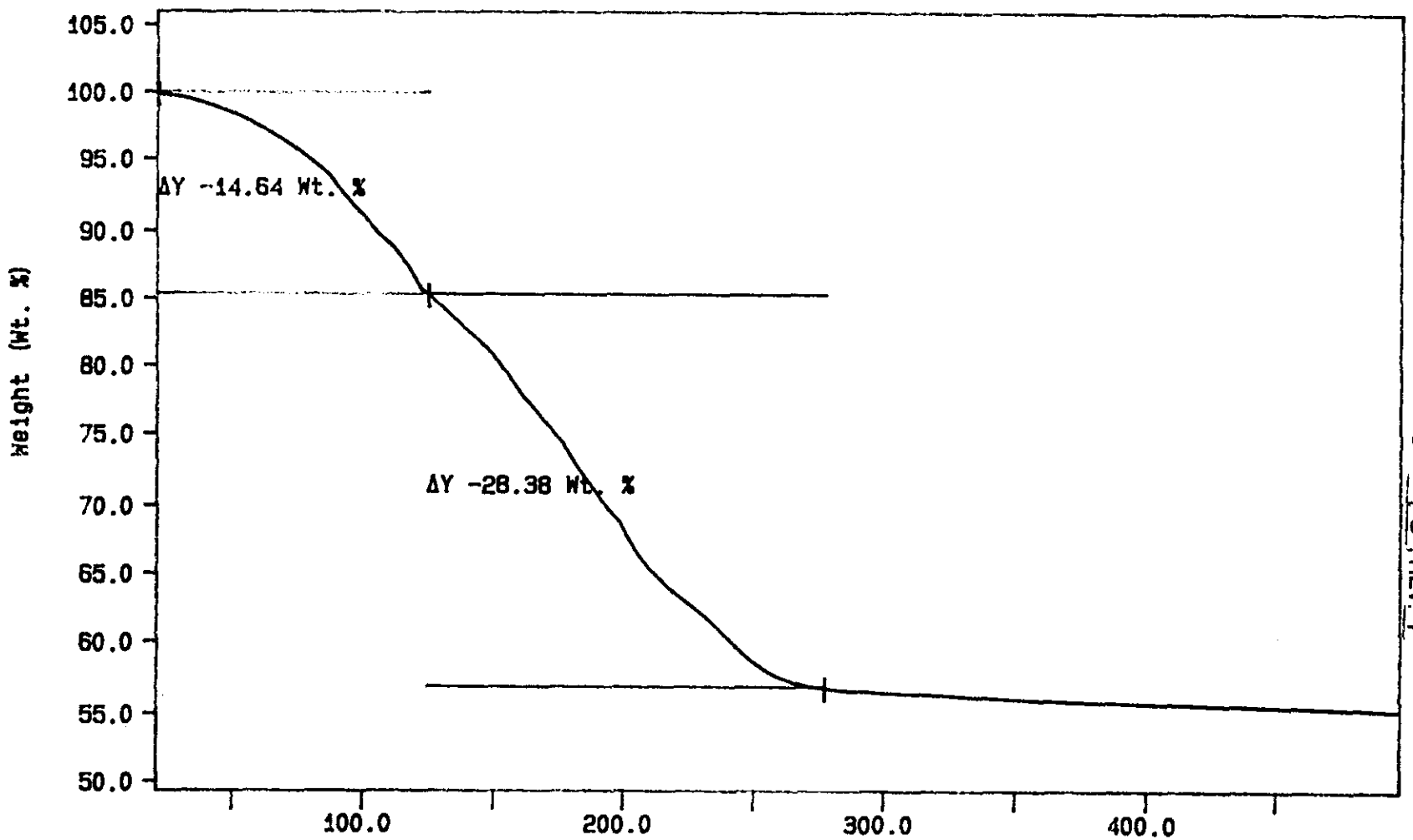


N2 10C/MIN
TEMP1: 30.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 300.0 C

JD SPELLMAN
PERKIN-ELMER
7 Series Thermal Analysis System
Mon Aug 28 11:40:09 1995

Curve 1: TGA
File info: SAM082801 Mon Aug 28 13:53:23 1995
Sample Weight: 25.609 mg
S95T001404 SAM

BEST AVAILABLE COPY



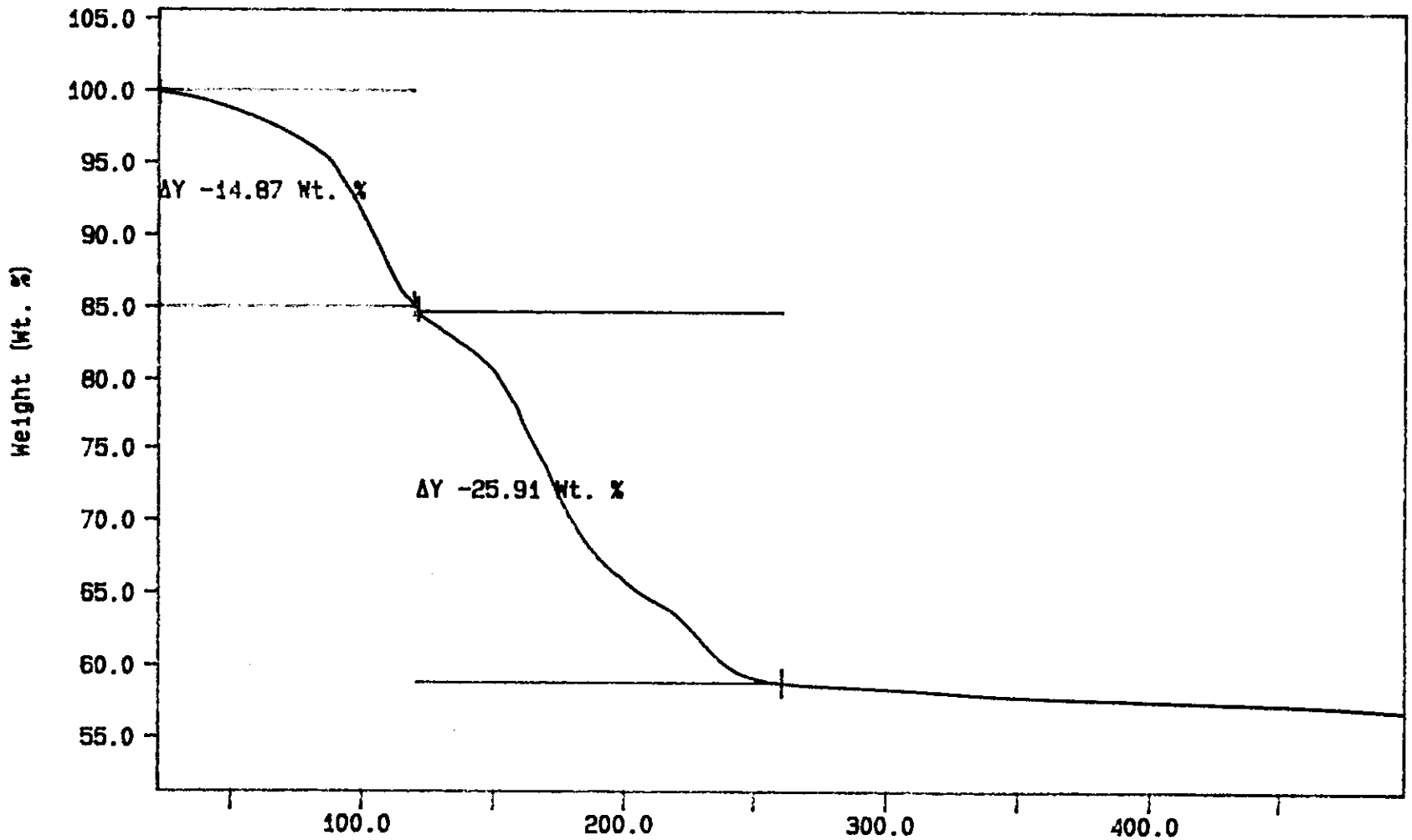
N2 10C/MIN
TEMP1: 35.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 500.0 C

JD SPELLMAN
PERKIN-ELMER
7 Series Thermal Analysis System
Thu Aug 31 09:08:00 1995

WHC-SD-WM-DP-145, REV. 1

Curve 1: TGA
File info: SAM082802 Mon Aug 28 15:09:45 1995
Sample Weight: 18.061 mg
S95T001404 DUP

BEST AVAILABLE COPY



N2 10C/MIN
TEMP1: 35.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 500.0 C

JD SPELLMAN
PERKIN-ELMER
7 Series Thermal Analysis System
Thu Aug 31 09:14:14 1995

2-267

WHC-SD-WM-DP-145, REV. 1

LABCORE Data Entry Template for Worklist# 2252

Analyst: JDS **Instrument:** TGA0~~1~~ 3 9-11-95 **Book #** 65N8A

Method: LA-514-114 Rev/Mod C-0

Worklist Comment: BY-108 rerun tga.JMF

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	STD				TGA-03	SOLID	59.74	60.24	N/A	%
95000104	BY-108 (R)	2	SAMPLE	S95T001396	0		TGA-03	SOLID	N/A	8.56		%
95000104	BY-108 (R)	3	DUP	S95T001396	0		TGA-03	SOLID	8.56	9.36	N/A	%
		4	STD				TGA-03	SOLID	59.74	60.09	N/A	%
95000104	BY-108 (R)	5	SAMPLE	S95T001410	0		TGA-03	SOLID	N/A	19.95		%
95000104	BY-108 (R)	6	DUP	S95T001410	0		TGA-03	SOLID	19.95	20.93	N/A	%

Final page for worklist # 2252

See attached for signatures
Analyst Signature Date 9-11-95

Verified 9/14/95 JMFuge

Analyst Signature Date 9-13-95

S95T001396 produced a second weight loss step of 25.08% at approximately 175°C.

Data Entry Comments: S95T001410 produced a second weight loss step of 13.7% at approximately 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# 2252

Analyst: Jds **Instrument:** TGA01 _____ **Book #** 65N8A

Method: LA-560-112 Rev/Mod C-0

Worklist Comment: BY-108 rerun tga.JMF

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	-------TEST------	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	STD				TGA-01	SOLID			N/A	%
95000104	BY-108 (R)	2	SAMPLE	S95T001396	1		TGA-01	SOLID	N/A			%
95000104	BY-108 (R)	3	DUP	S95T001396	1		TGA-01	SOLID			N/A	%
95000104	BY-108 (R)	4	SAMPLE	S95T001410	1		TGA-01	SOLID	N/A			%
95000104	BY-108 (R)	5	DUP	S95T001410	1		TGA-01	SOLID			N/A	%

Final page for worklist # 2252

JMS 9-9-95

Analyst Signature Date

Analyst Signature Date

Other instrument was used.
9-11-95
BDV

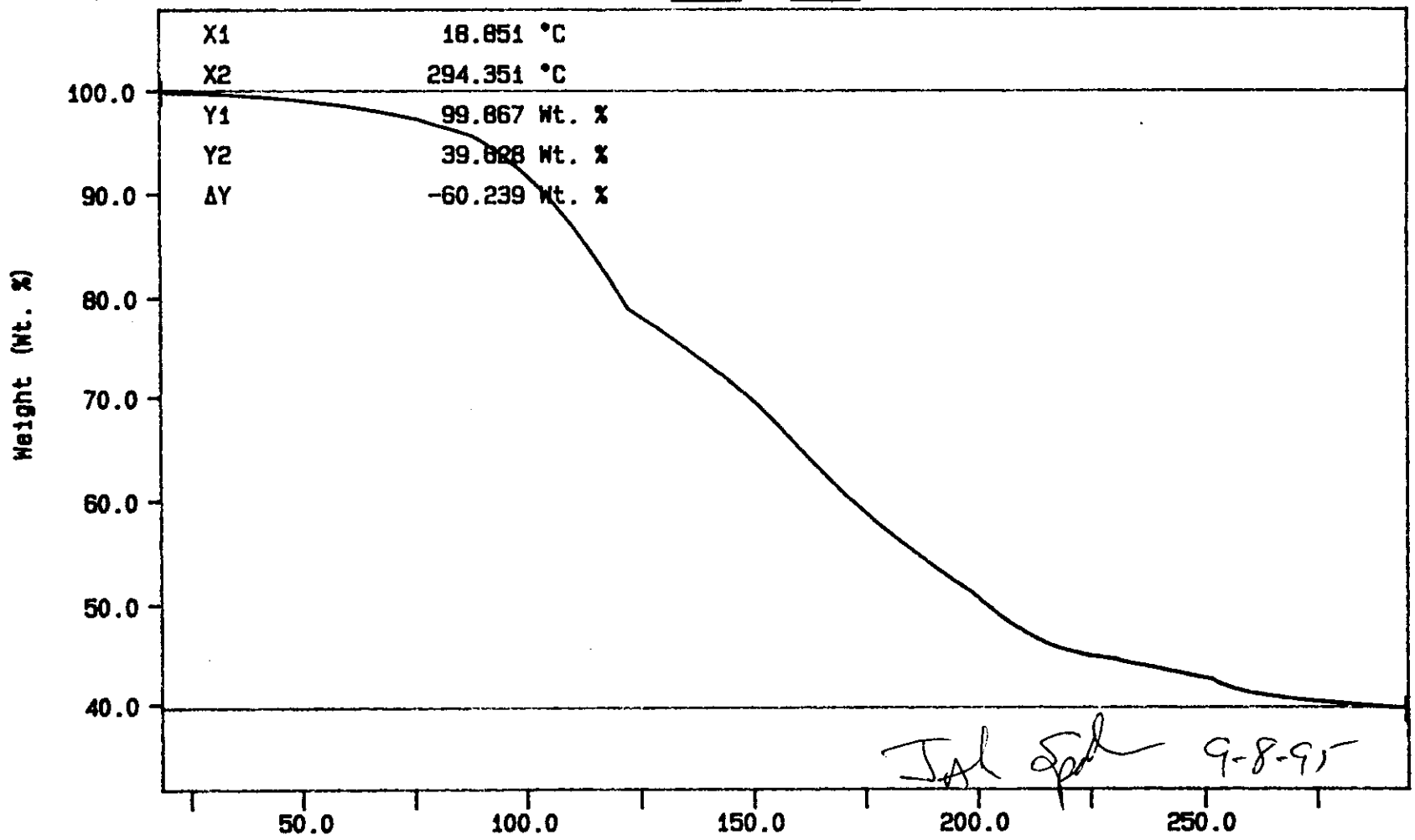
Data Entry Comments:

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: TGA
File info: TER090802 Fri Sep 8 08:42:53 1995
Sample Weight: 25.202 mg
65N8-A Terliq

BEST AVAILABLE COPY

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 2-270 TO 2-276.



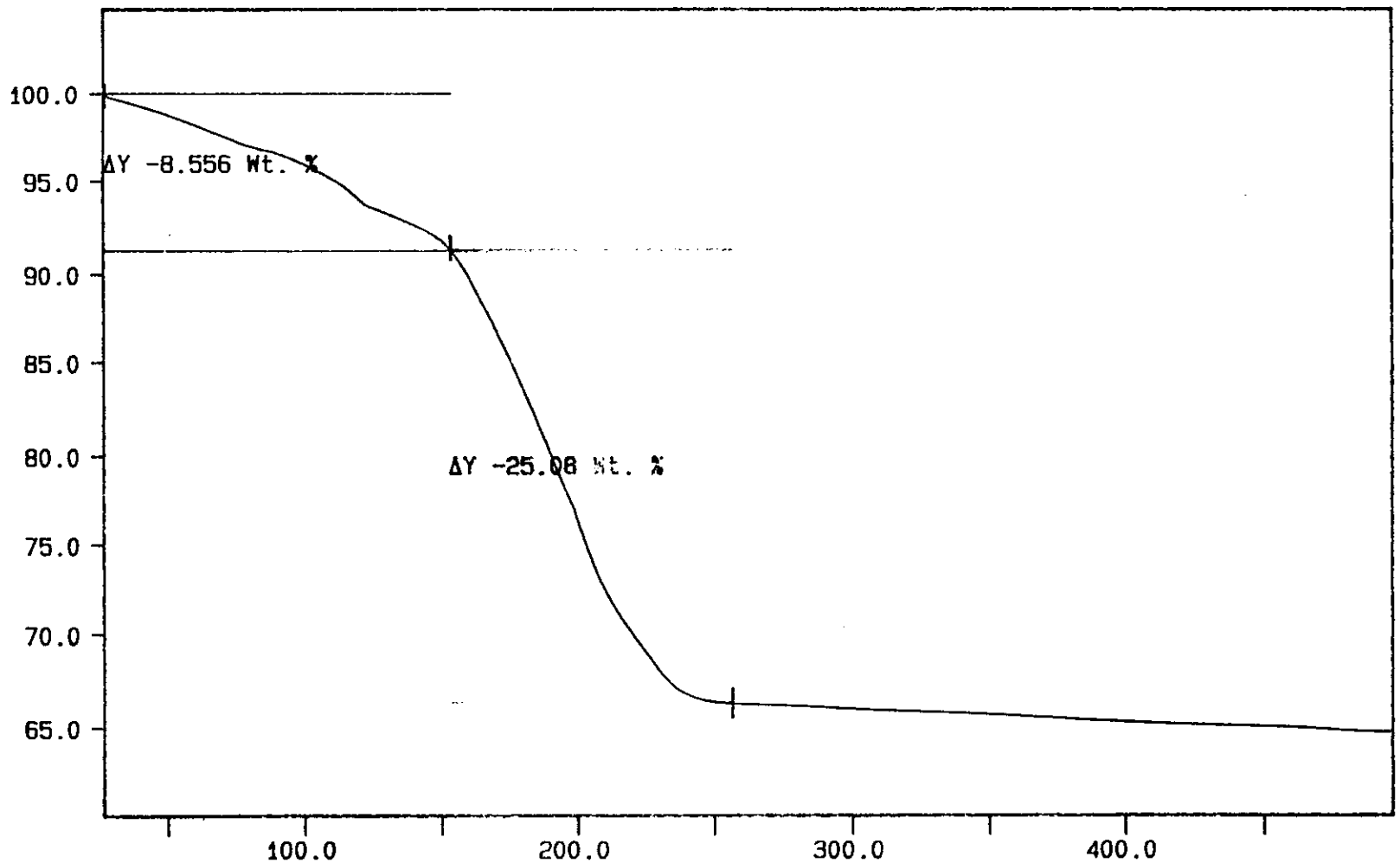
N2 10C/MIN
TEMP1: 35.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 300.0 C

JD SPELLMAN
PERKIN-ELMER
7 Series Thermal Analysis System
Fri Sep 8 08:48:57 1995

WHC-SD-WM-DP-145, REV. 1

Curve 1: TGA
File info: SAM090803 Fri Sep 8 09:51:48 1995
Sample Weight: 26.305 mg
S95T001396 SAM AT 10C/MIN

BEST AVAILABLE COPY

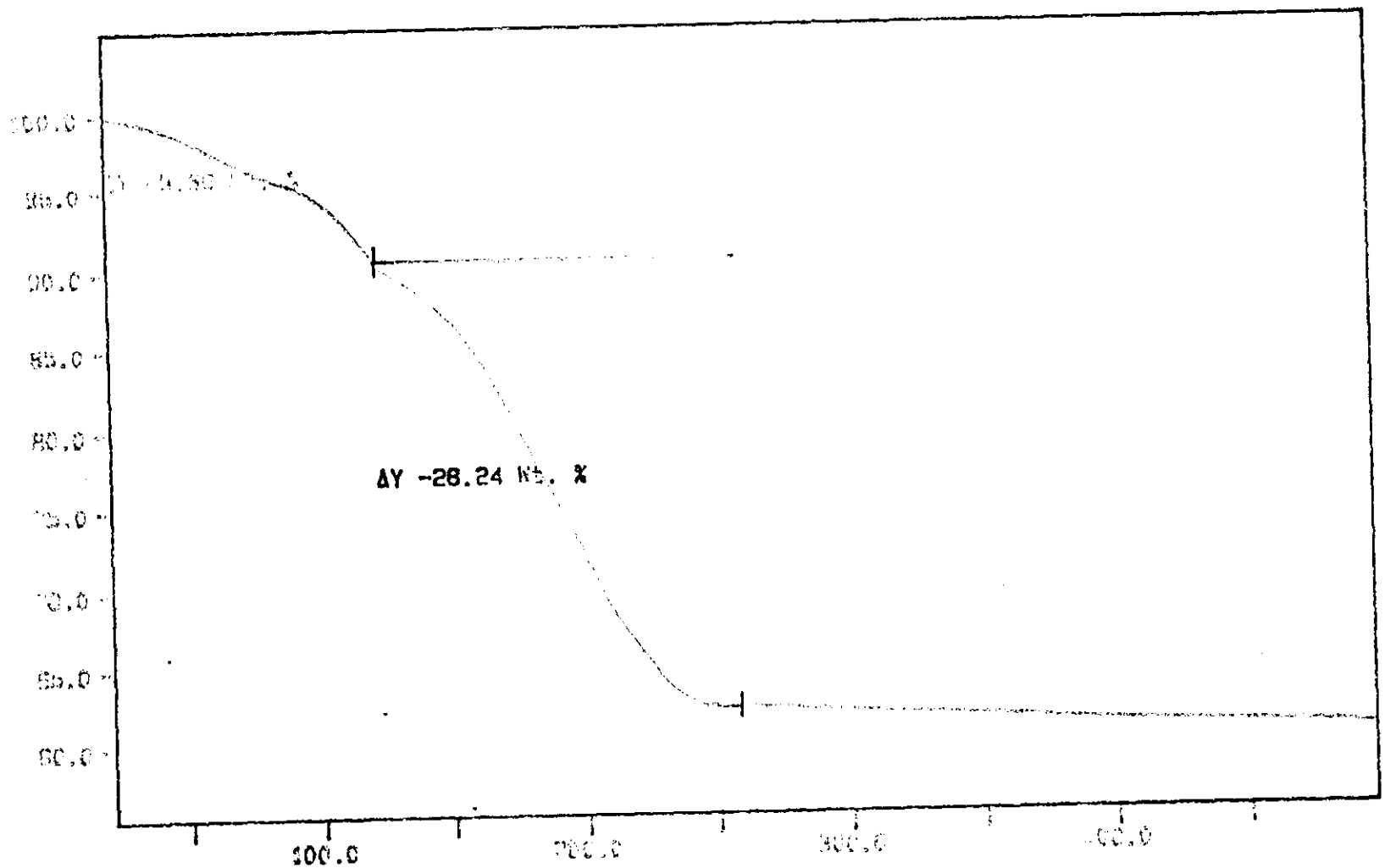


N2
TEMP1: 35.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 500.0 C

JD SPELLMAN
PERKIN-ELMER
7 Series Thermal Analysis System
Mon Sep 11 13:35:39 1995

WHC-SD-WM-DP-145, REV. 1

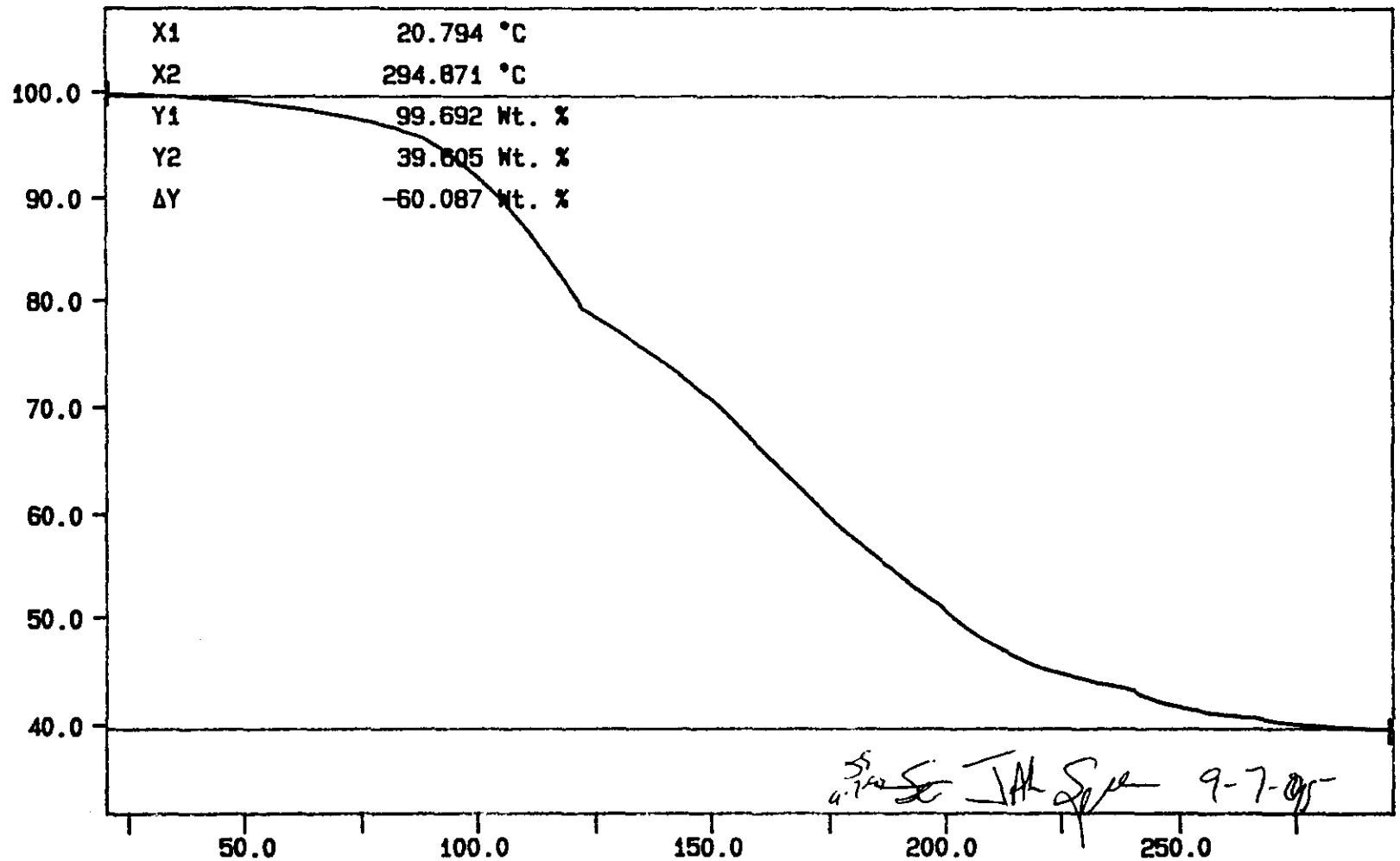
BEST AVAILABLE COPY



Mon Sep 11 13:41:29 1995

Curve 1: TGA
File info: TER090702 Thu Sep 7 08:34:36 1995
Sample Weight: 27.355 mg
65N8-A Terliq

BEST AVAILABLE COPY



N2 10C/MIN
TEMP1: 30.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 300.0 C

JD SPELLMAN
PERKIN-ELMER
7 Series Thermal Analysis System
Thu Sep 7 08:52:30 1995

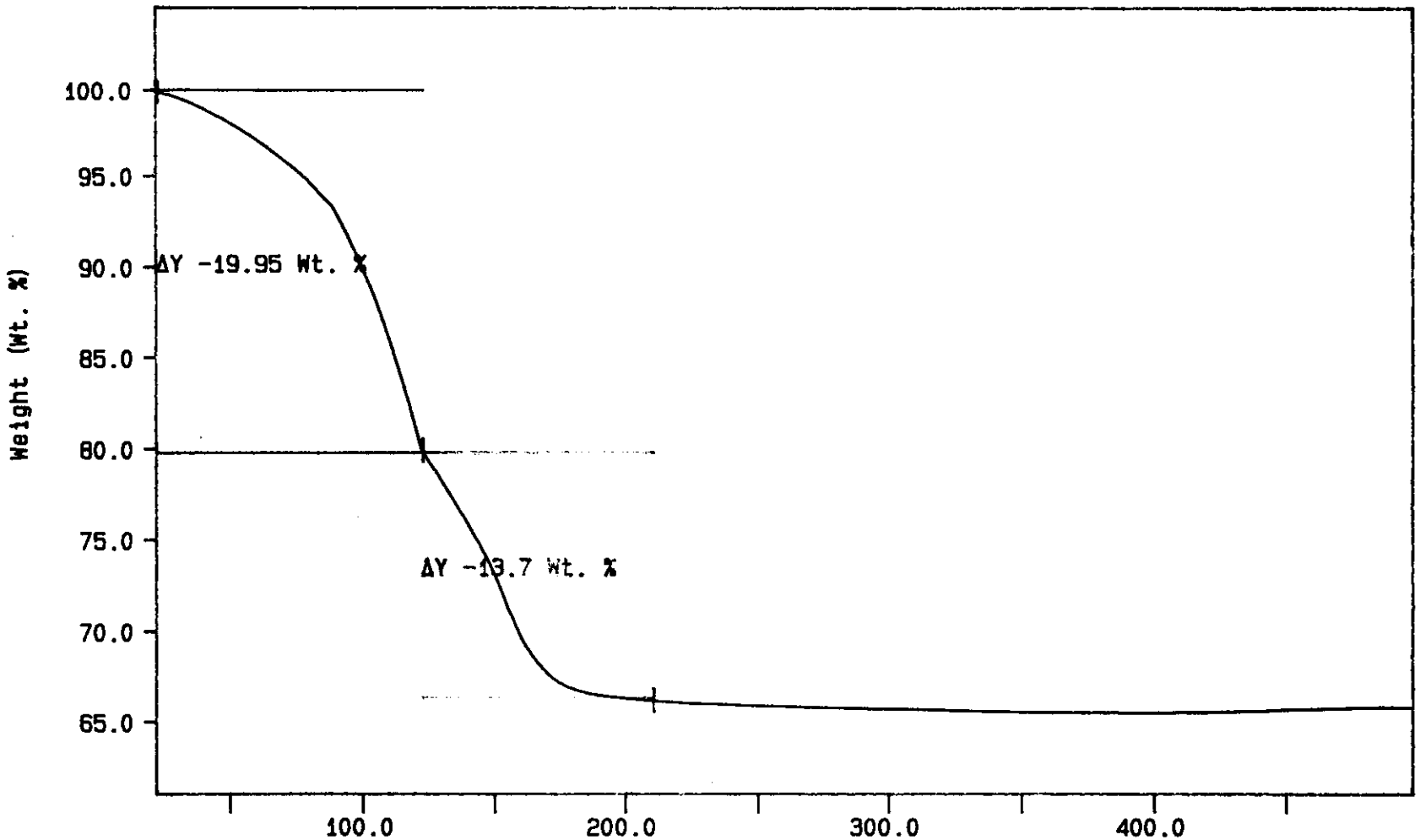
9-7-95

WHC-SD-WM-DP-145, REV. 1

2-273

Curve 1: TGA
File info: SAM090703 Thu Sep 7 10:19:48 1995
Sample Weight: 15.276 mg
S95T001~~791 DUP~~ at 10C/min
9-11-95 BAV
1410 SAM

BEST AVAILABLE COPY



N2
TEMP1: 35.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 500.0 C

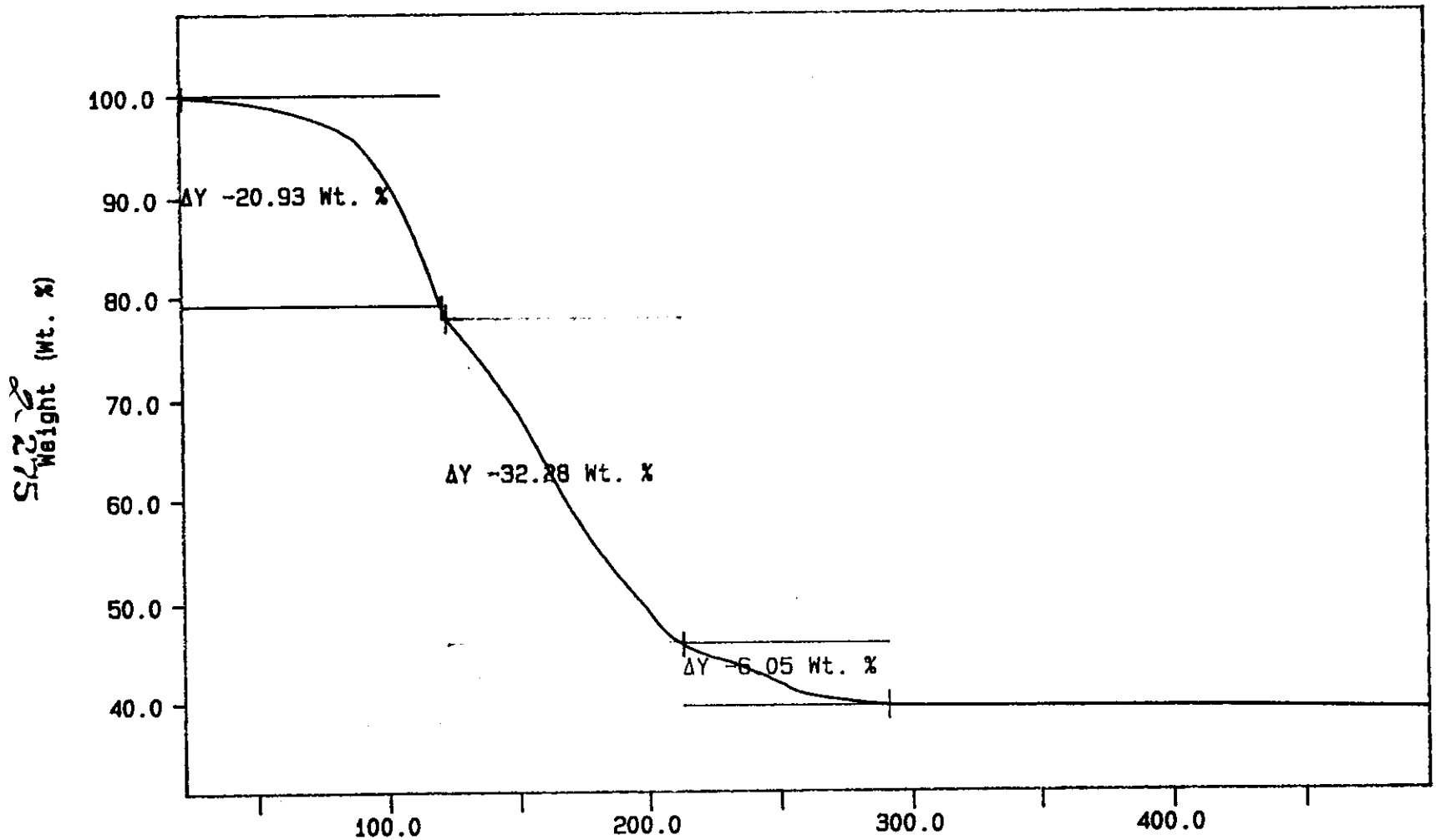
JD SPELLMAN
PERKIN-ELMER
7 Series Thermal Analysis System
Mon Sep 11 13:47:31 1995

WHC-SD-WM-DP-145, REV. 1

2-274

Curve 1: TGA
File info: SAM090704 Thu Sep 7 12:07:13 1995
Sample Weight: 22.855 mg
S95T001410 DUP AT 10C/MIN

BEST AVAILABLE COPY



N2
TEMP1: 35.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 500.0 C

JD SPELLMAN
PERKIN-ELMER
7 Series Thermal Analysis System
Mon Sep 11 13:52:51 1995

WHC-SD-WM-DP-145, REV. 1

2275

LABCORE Data Entry Template for Worklist# 2269

Analyst: JDS **Instrument:** TGA01 1 **Book #** 65N8A

Method: LA-560-112 Rev/Mod B-0

Worklist Comment: BY-108 TGA.JMF

GROUP	PROJECT	S TYPE	SAMPLE#	R	A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD				TGA-01	SOLID	59.74	60.52	N/A	%
95000104	BY-108 (R)	2 SAMPLE	S95T001431	0		TGA-01	SOLID	N/A	43.77		%
95000104	BY-108 (R)	3 DUP	S95T001431	0		TGA-01	SOLID	43.77	44.47	N/A	%

Final page for worklist # 2269

Analyst Signature Date 9-4-95

Analyst Signature Date 9-13-95

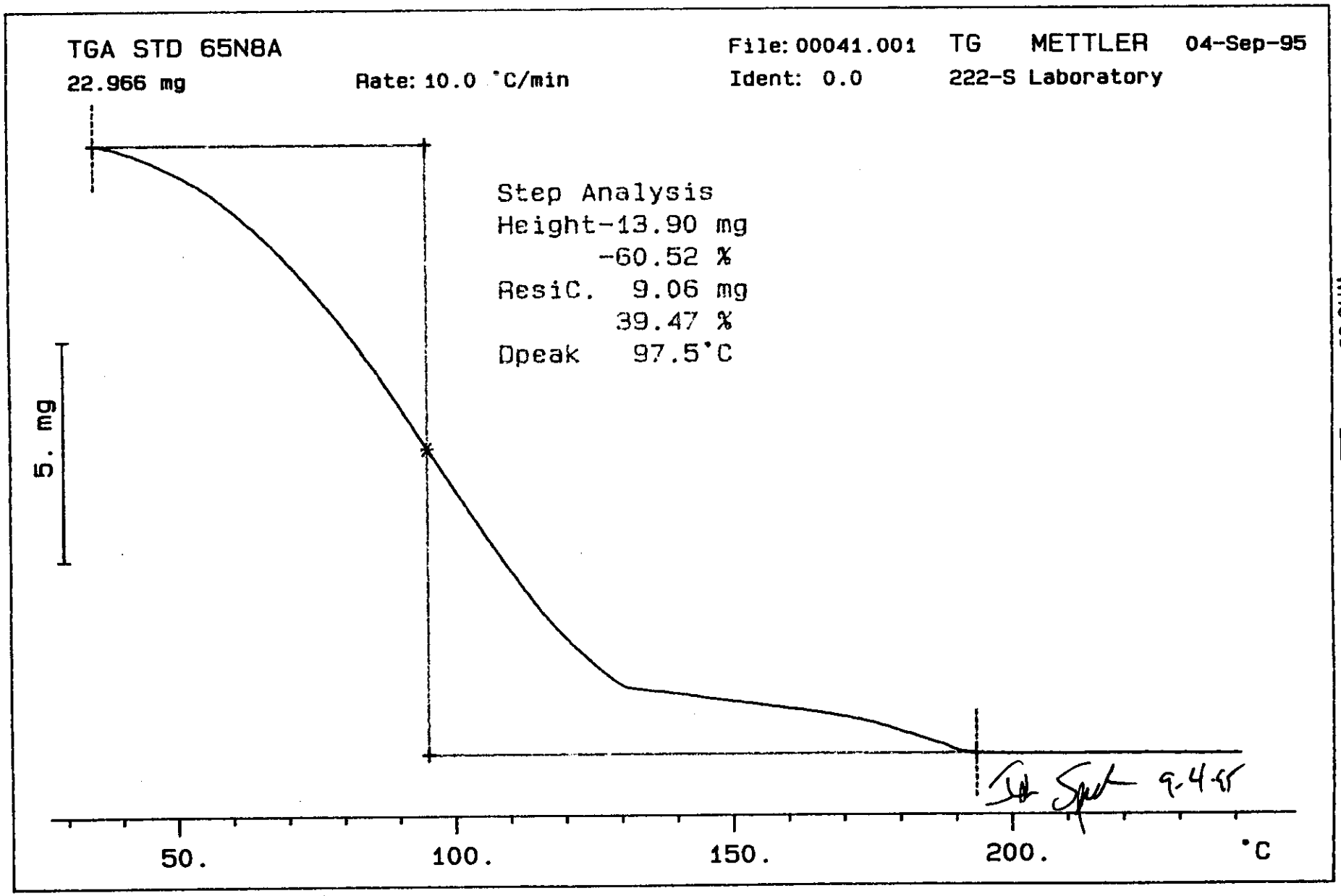
Verified 9/14/95

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 2-277 TO 2-279.

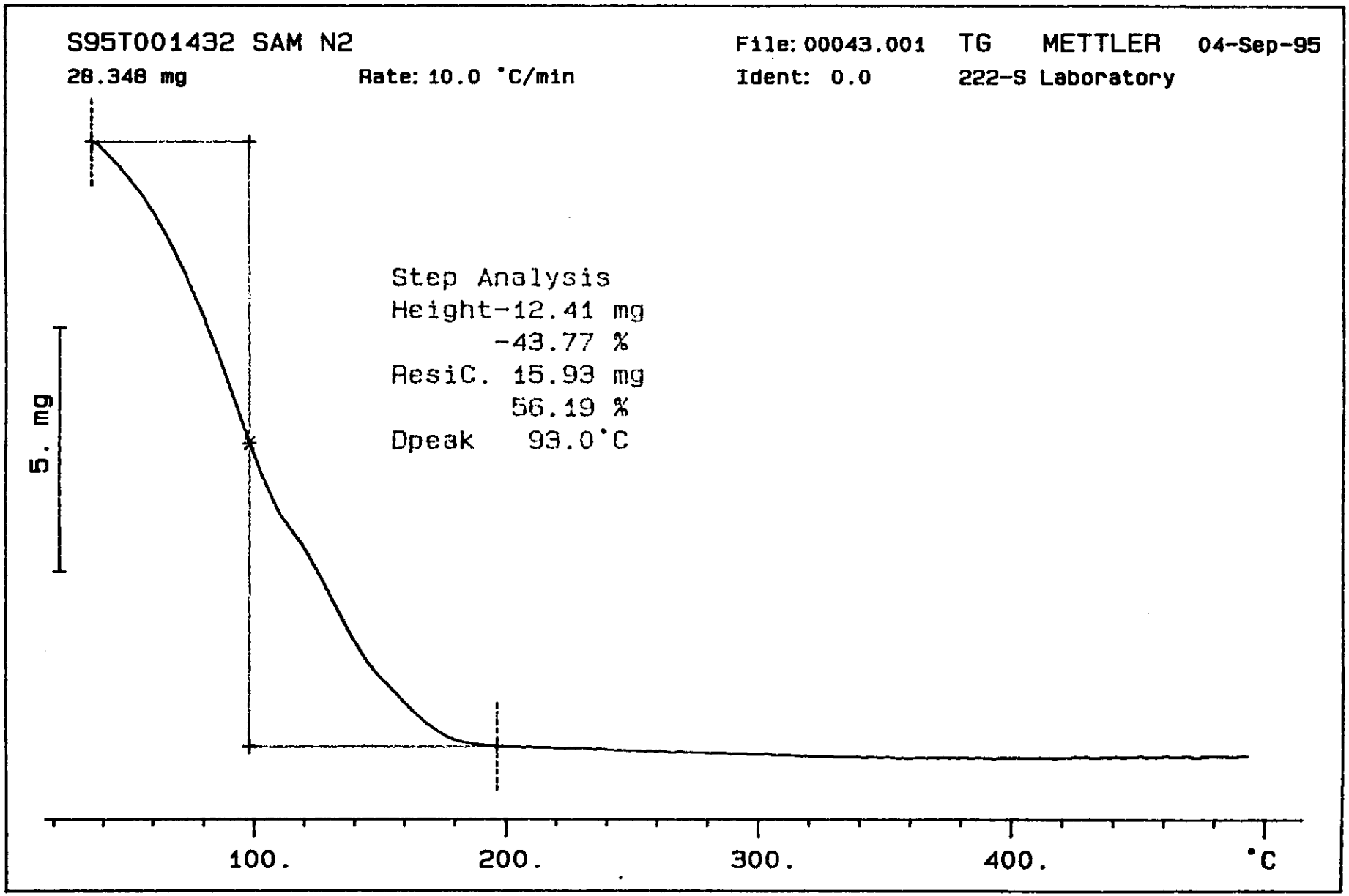
BEST AVAILABLE COPY



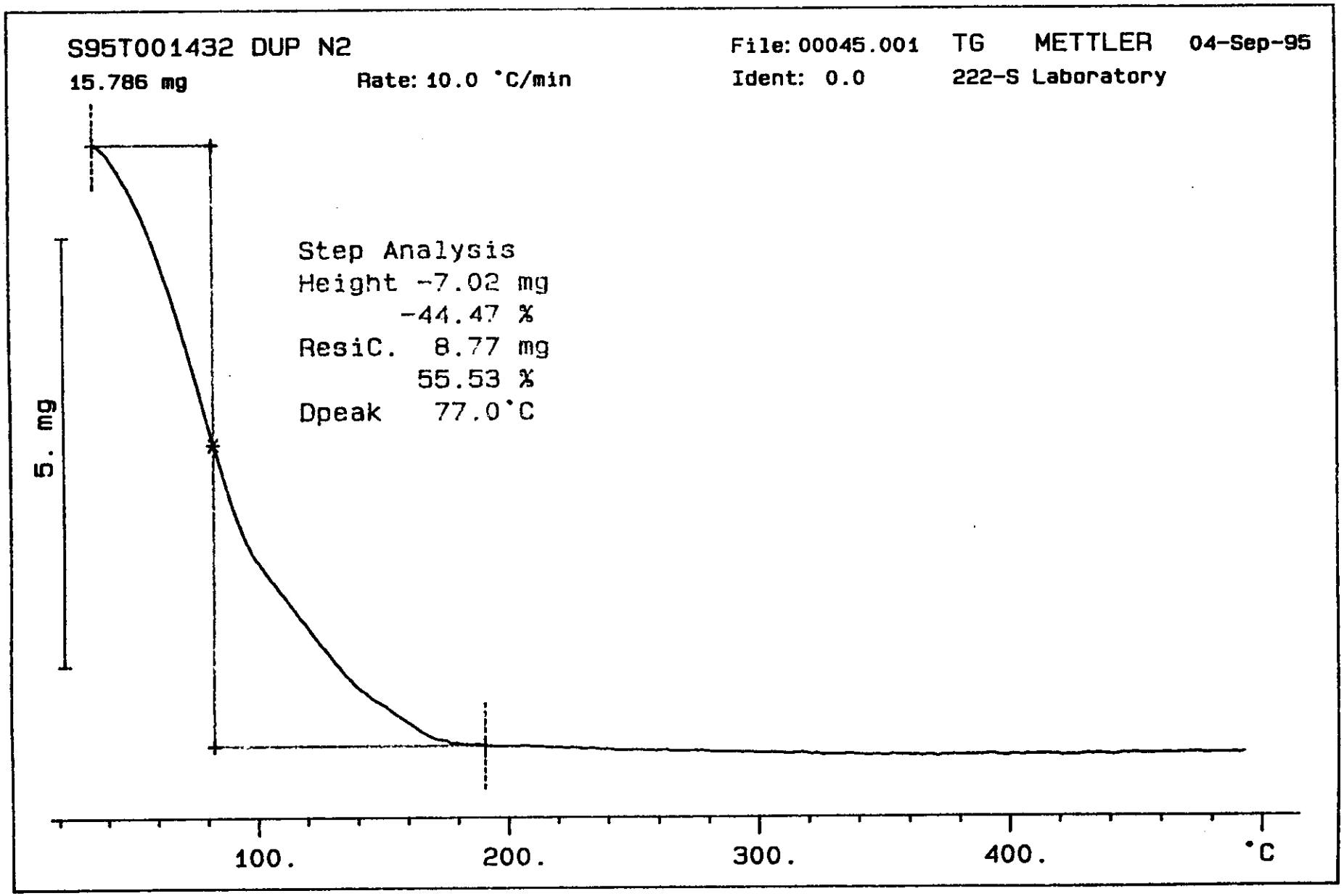
2-277

WHC-SD-WM-DP-145, REV. 1

BEST AVAILABLE COPY



BEST AVAILABLE COPY



2-279

WHC-SD-WM-DP-145, REV. 1

WHC-SD-WM-DP-145, REV. 1

LABCORE Data Entry Template for Worklist# 2276

Analyst: SMF **Instrument:** TGA0~~1~~ 3 **Book #** 65N8A

Method: LA-514-114 Rev/Mod C-0 9-11-95 BDV

Worklist Comment: BY-108 TGA, please run under N2. JMF

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-------TEST------	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-03	SOLID	59.74	60.76	N/A	%
95000118	BY-108 (R)	2 SAMPLE	S95T001925	0	TGA-03	SOLID	N/A	24.90		%
95000118	BY-108 (R)	3 DUP	S95T001925	0	TGA-03	SOLID	24.90	23.78	N/A	%

Final page for worklist # 2276

See attached for signatures
Analyst Signature Date 9-11-95

[signature] 9-14-95
Analyst Signature Date

Verified 9/14/95 Jann 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.

Q-280

LABCORE Data Entry Template for Worklist# 2276

Analyst: SMF **Instrument:** TGA01 **Book #** 65N8A

Method: ~~LA 560-112 Rev/Mod~~ SMF 9-8-95 LA-514-114/CO

Worklist Comment: BY-108 TGA, please run under N2. JMF

GROUP	PROJECT	S TYPE	SAMPLE#	R	A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD				TGA-01	SOLID			N/A	%
95000118	BY-108 (R)	2 SAMPLE	S95T001925	0		TGA-01	SOLID	N/A			%
95000118	BY-108 (R)	3 DUP	S95T001925	0		TGA-01	SOLID			N/A	%

Final page for worklist # 2276

SMFulton 9-8-95

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

Other instrument was used.
9-11-95
BDV

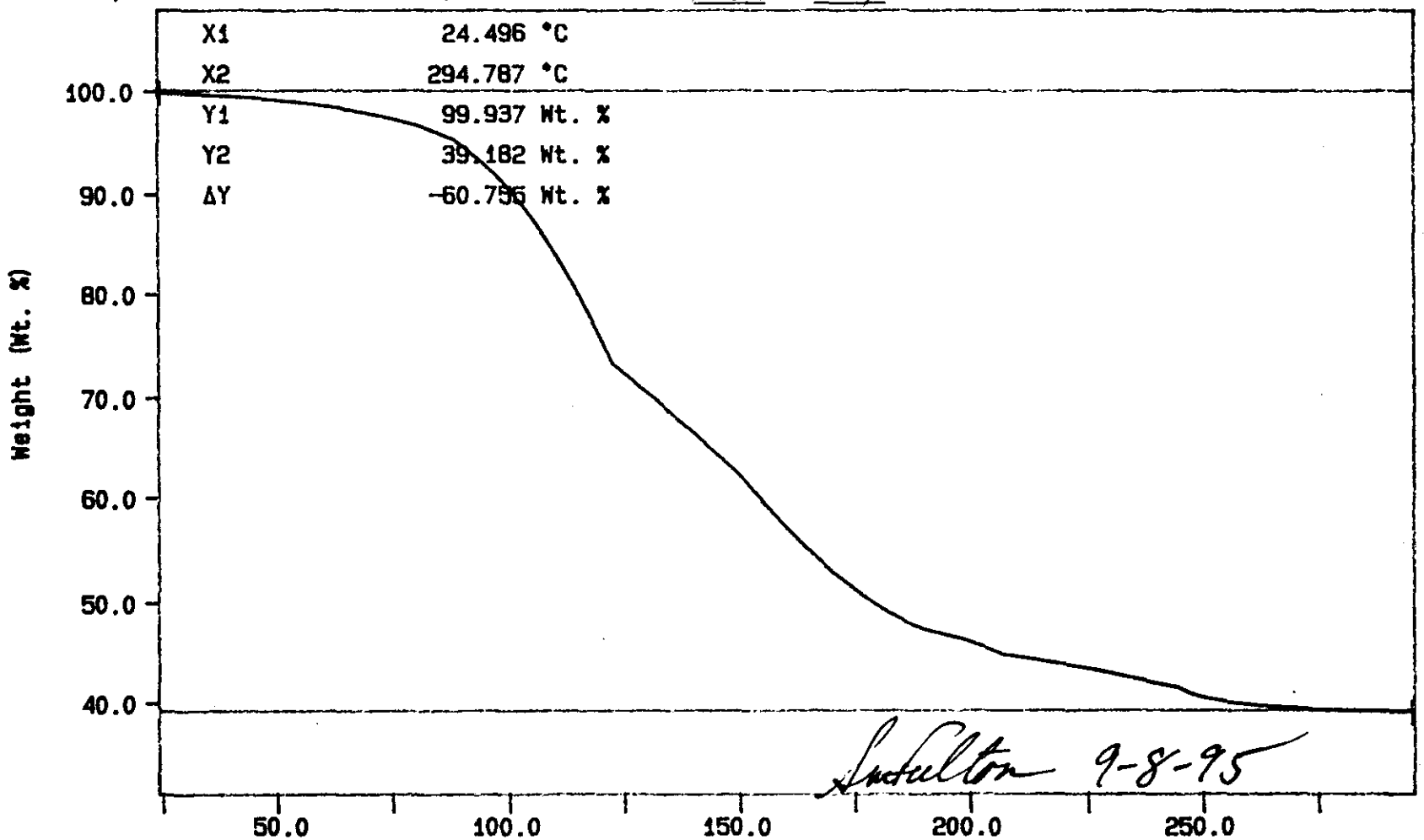
Data Entry Comments:

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: TGA
File info: TER090801 Fri Sep 8 00:45:23 1995
Sample Weight: 16.699 mg
65N8-A Terliq

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 2-282 TO 2-284.

BEST AVAILABLE COPY



N2 10C/MIN
TEMP1: 35.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 300.0 C

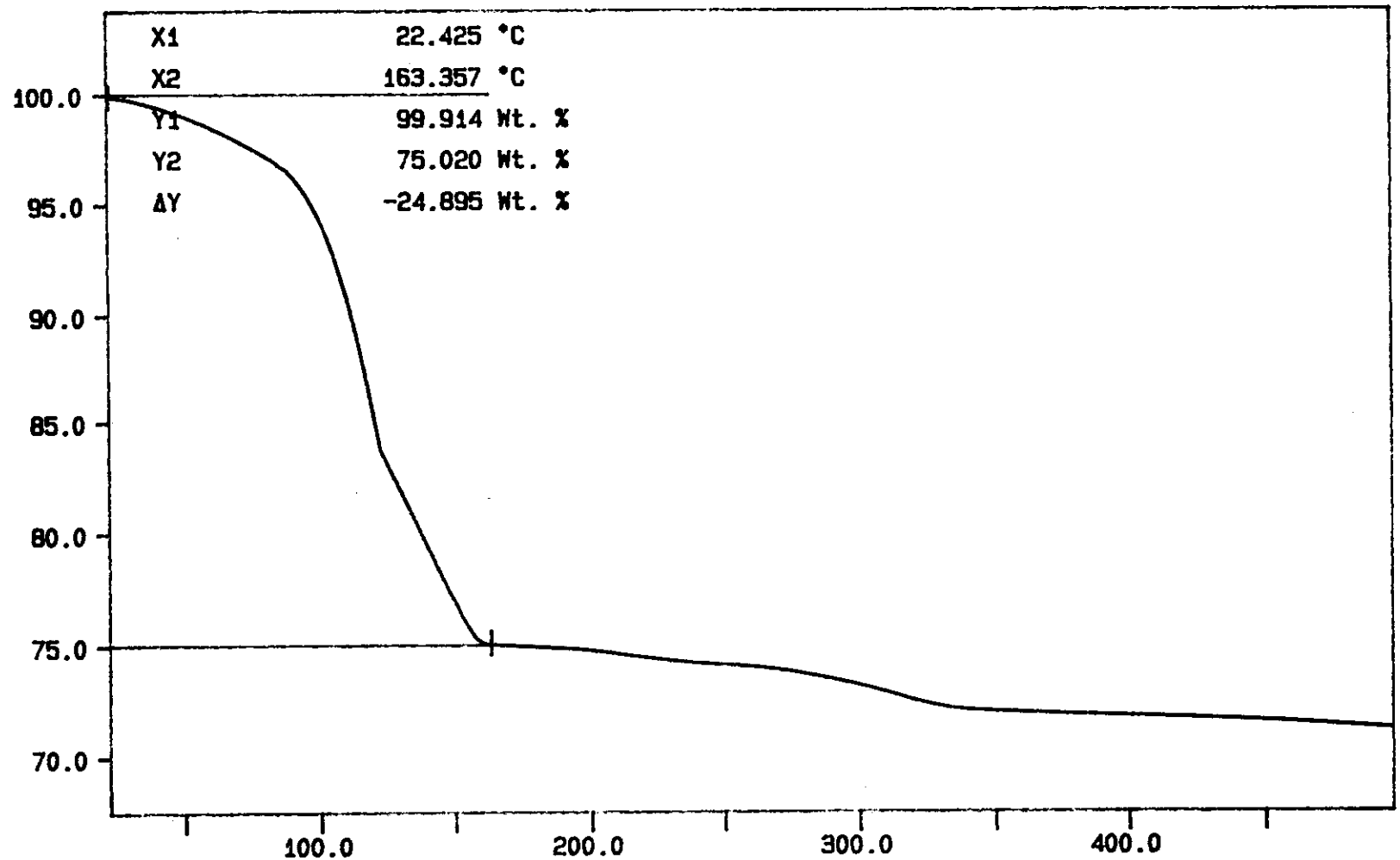
SM FULTON
PERKIN-ELMER
7 Series Thermal Analysis System
Fri Sep 8 02:04:38 1995

2-282

WHC-SD-WM-DP-165, REV 1

Curve 1: TGA
File info: SAM090801 Fri Sep 8 04:07:31 1995
Sample Weight: 17.787 mg
S95T001925 at 10C/min

BEST AVAILABLE COPY



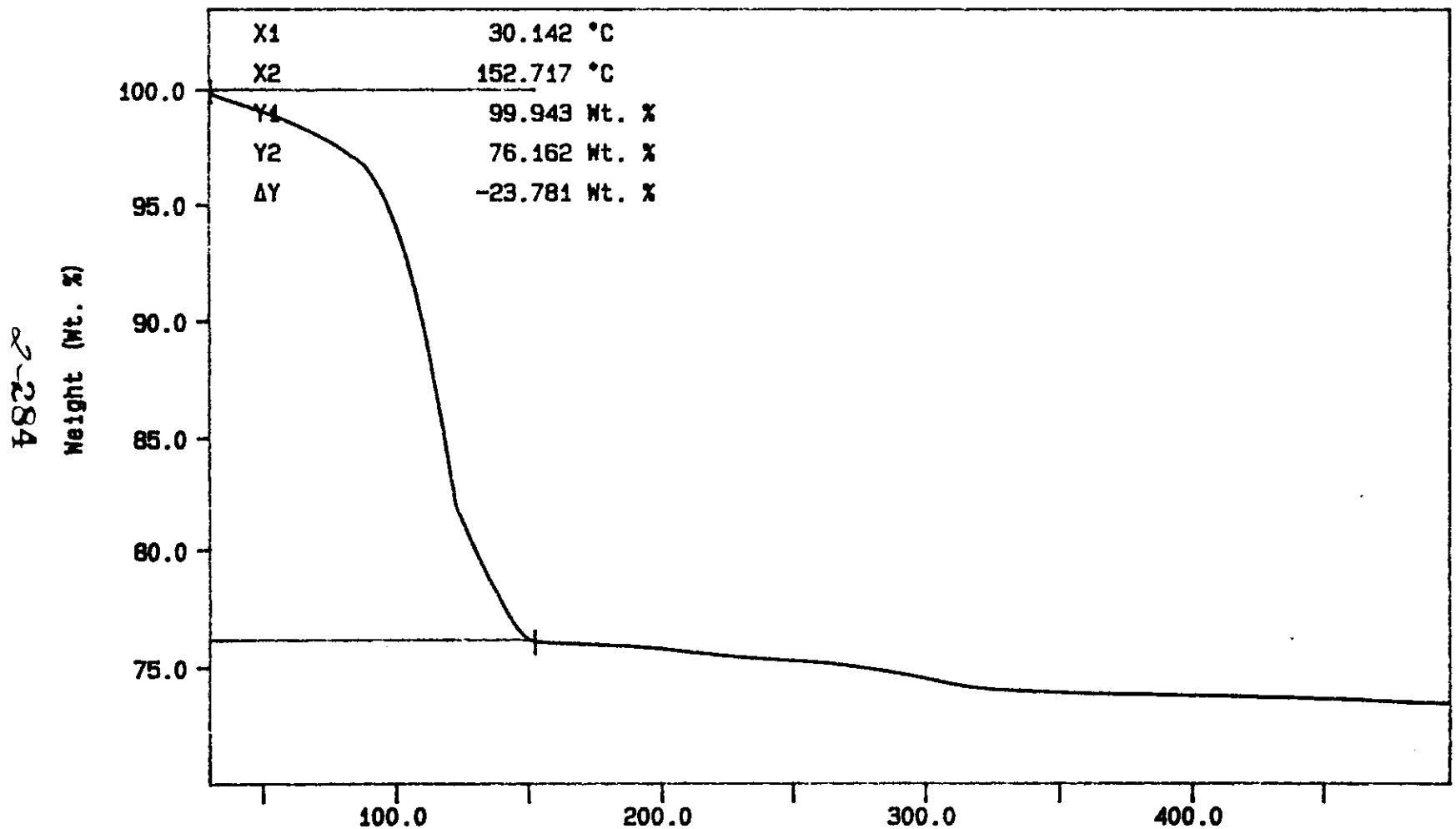
N2
TEMP1: 35.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 600.0 C

SM FULTON
PERKIN-ELMER
7 Series Thermal Analysis System
Fri Sep 8 05:13:14 1995

WHC-SD-WM-DP-145, REV. 1

2-283

Curve 1: TGA
File info: SAM090802 Fri Sep 8 06:22:09 1995
Sample Weight: 14.494 mg
S95T001925 DUP at 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
Fri Sep 8 06:27:00 1995

2-284

WHC-SD-WM-DP-145, REV 1

LABCORE Data Entry Template for Worklist# 2418

Analyst: PJM **Instrument:** TGA0 3 **Book #** 65N8A

Method: LA-514-114 Rev/Mod C-0

Worklist Comment: Please run BY-108 TGAs under N2. bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R	A	-------TEST------	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD				TGA-03	SOLID	59.74	60.54	N/A	%
95000118	BY-108 (R)	2 SAMPLE	S95T001968	0		TGA-03	SOLID	N/A	15.4		%
95000118	BY-108 (R)	3 DUP	S95T001968	0		TGA-03	SOLID	15.4	9.88	N/A	%
		4 STD				TGA-03	SOLID	59.74	60.44	N/A	%
95000118	BY-108 (R)	5 SAMPLE	S95T001969	0		TGA-03	SOLID	N/A	7.15		%
95000118	BY-108 (R)	6 DUP	S95T001969	0		TGA-03	SOLID	7.15	7.79	N/A	%

Final page for worklist # 2418

See attached for signatures
Analyst Signature **Date** 9-30-95

Analyst Signature **Date**

Verified by Blandina Valenzuela 10-4-95

S95T001968 produced a second weight loss step of 20.67% at approximately 185°C

Data Entry Comments: S95T001969 produced a second weight loss step of 32.48% at approximately 180°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.

WHC-SD-WM-DP-145 REV 1

LABCORE Data Entry Template for Worklist# 2418

Analyst: RJ McCown **Instrument:** TGA0 _____ **Book #** 65N8-A

Method: LA ~~560 112~~ 514-114 Rev/Mod C-0
Rev 9/30/95

Worklist Comment: Please run BY-108 TGAs under N2. bdv

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	STD				TGA-01	SOLID			N/A	%
95000118	BY-108 (R)	2	SAMPLE	S95T001968	0		TGA-01	SOLID	N/A			%
95000118	BY-108 (R)	3	DUP	S95T001968	0		TGA-01	SOLID			N/A	%
95000118	BY-108 (R)	4	SAMPLE	S95T001969	0		TGA-01	SOLID	N/A			%
95000118	BY-108 (R)	5	DUP	S95T001969	0		TGA-01	SOLID			N/A	%

Final page for worklist # 2418

RJ McCown 9/30/95
Analyst Signature **Date**

Analyst Signature **Date**

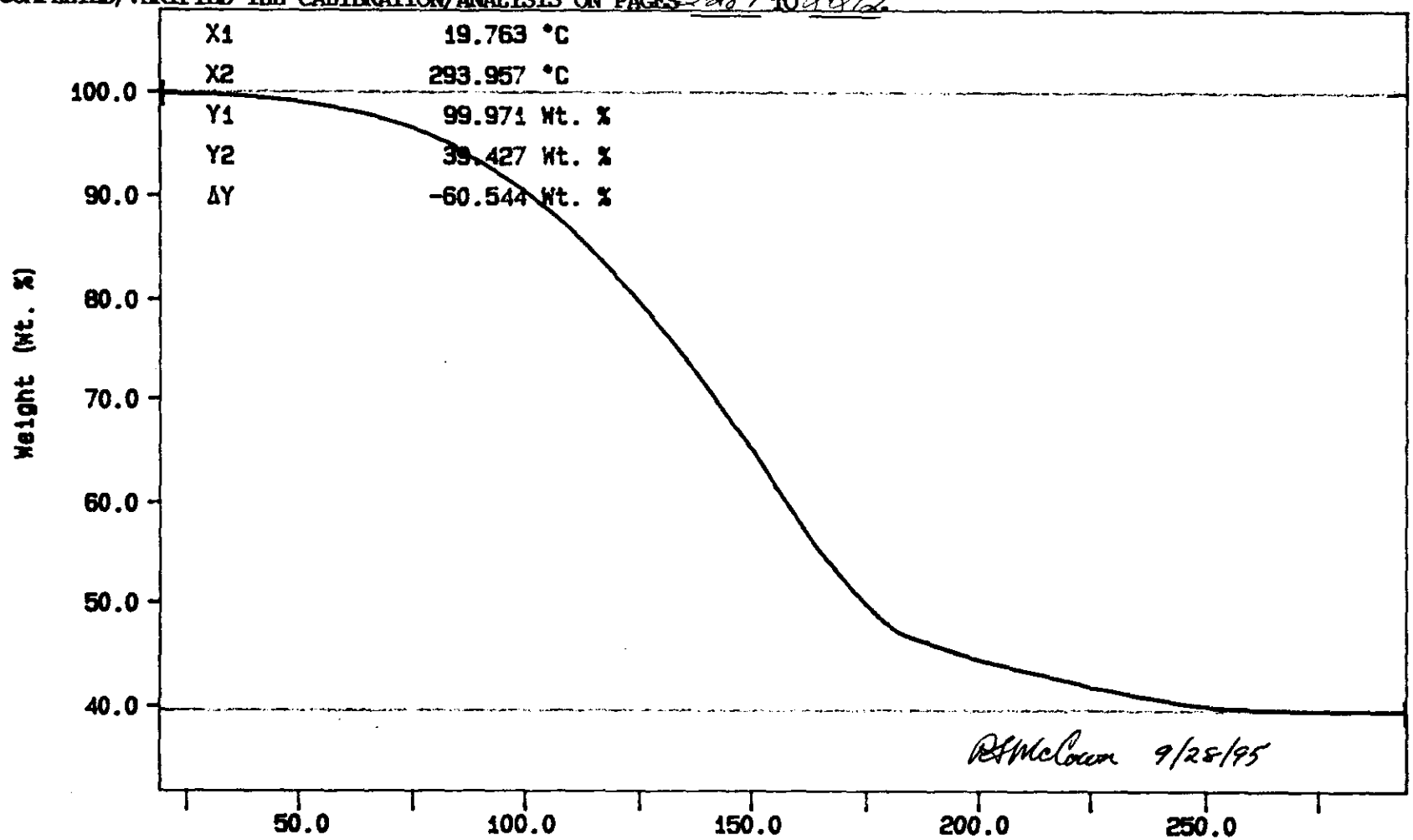
Data Entry Comments:

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: TER092802 Thu Sep 28 16:56:52 1995
Sample Weight: 17.614 mg
65N8-A Terliq

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 2287 TO 2292

BEST AVAILABLE COPY



N2 10C/MIN
TEMP1: 35.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 300.0 C

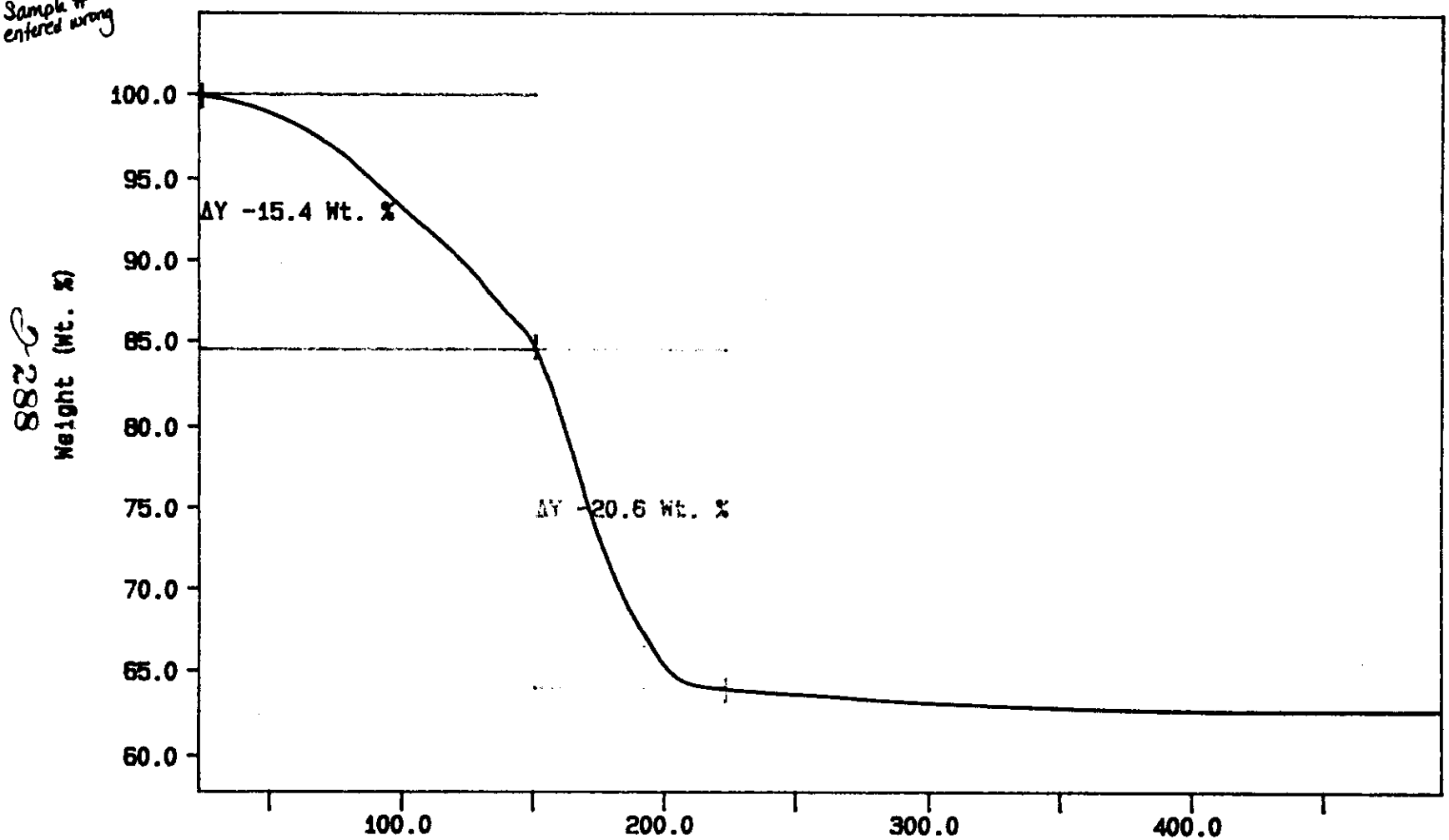
PJ MCCOWN
PERKIN-ELMER
7 Series Thermal Analysis System
Thu Sep 28 17:28:38 1995

2287

WHC-SD-WM-DP-145, REV. 1

Curve 1: TGA
File info: SAM092803 Thu Sep 28 19:49:14 1995
Sample Weight: 23.983 mg
S95T001891 1968
10-2-95
BDV
Sample # entered wrong

BEST AVAILABLE COPY



N2
TEMP1: 35.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 600.0 C

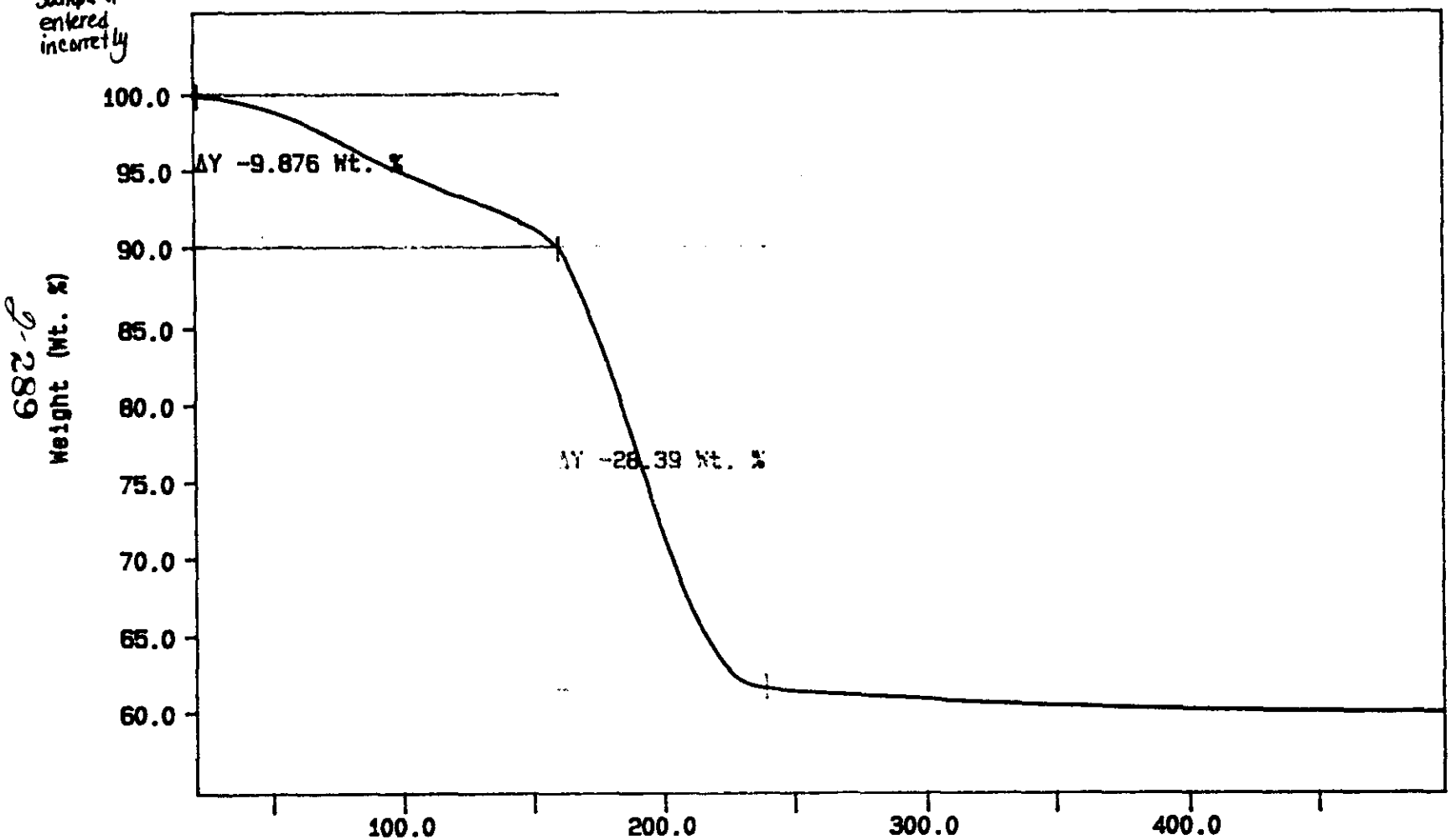
PJ MCCOWN
PERKIN-ELMER
7 Series Thermal Analysis System
Tue Oct 3 15:15:08 1995

WHC-CD-WM-DP-145, REV 1

2288

Curve 1: TGA
File info: SAM092804 Thu Sep 28 21:20:07 1995
Sample Weight: 29.920 mg
10-2-95 BDV
S95T001~~831~~ DUP
1968
Sample # entered incorrectly

BEST AVAILABLE COPY



N2
TEMP1: 30.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 600.0 C

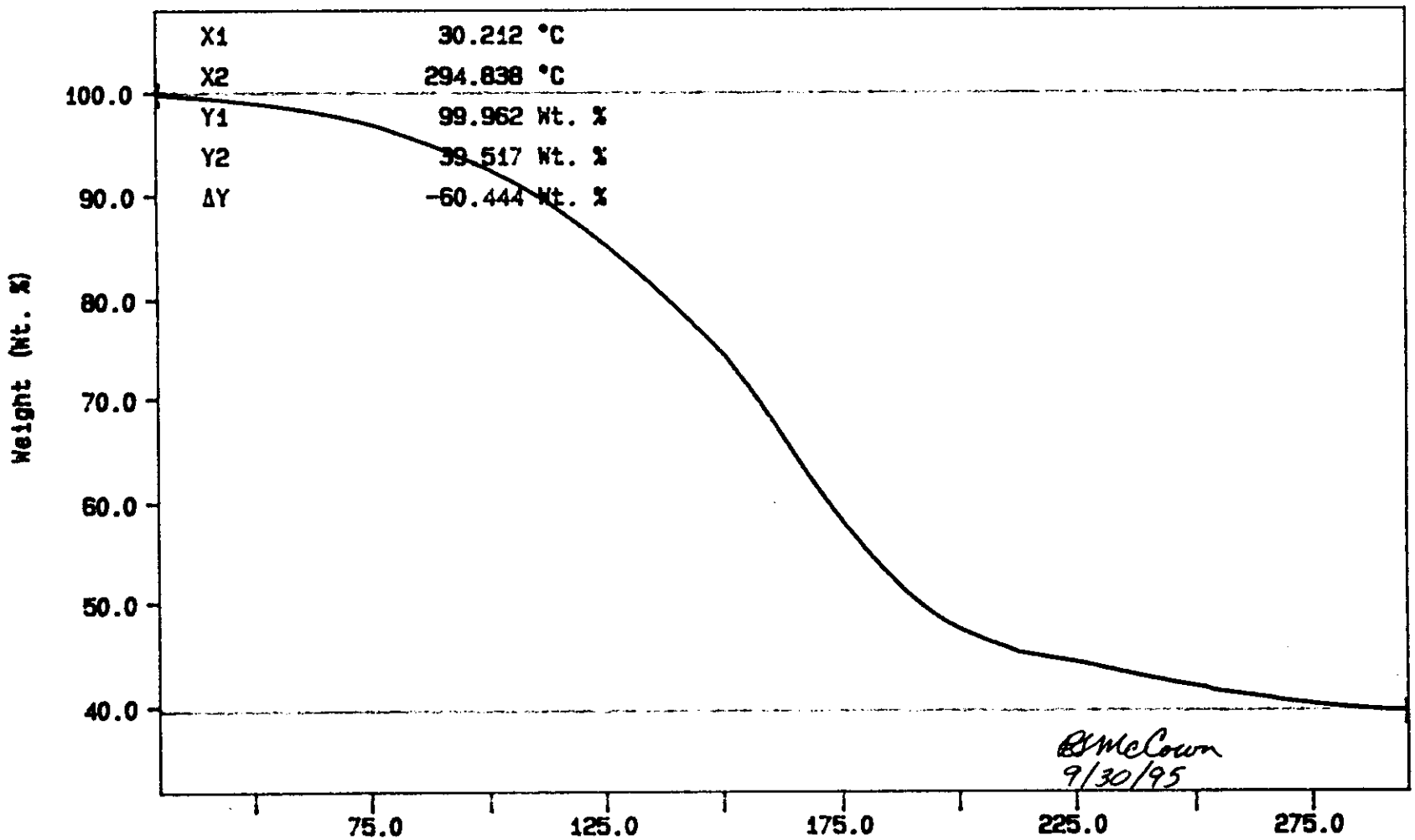
PJ MCCOWN
PERKIN-ELMER
7 Series Thermal Analysis System
Tue Oct 3 15:20:15 1995

WHC-SD-WM-DP-145, REV 1

6-289

Curve 1: TGA
File info: TER093001 Sat Sep 30 18:26:00 1995
Sample Weight: 20.754 mg
65N8-A Terliq

BEST AVAILABLE COPY



N2 10C/MIN
TEMP1: 30.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 300.0 C

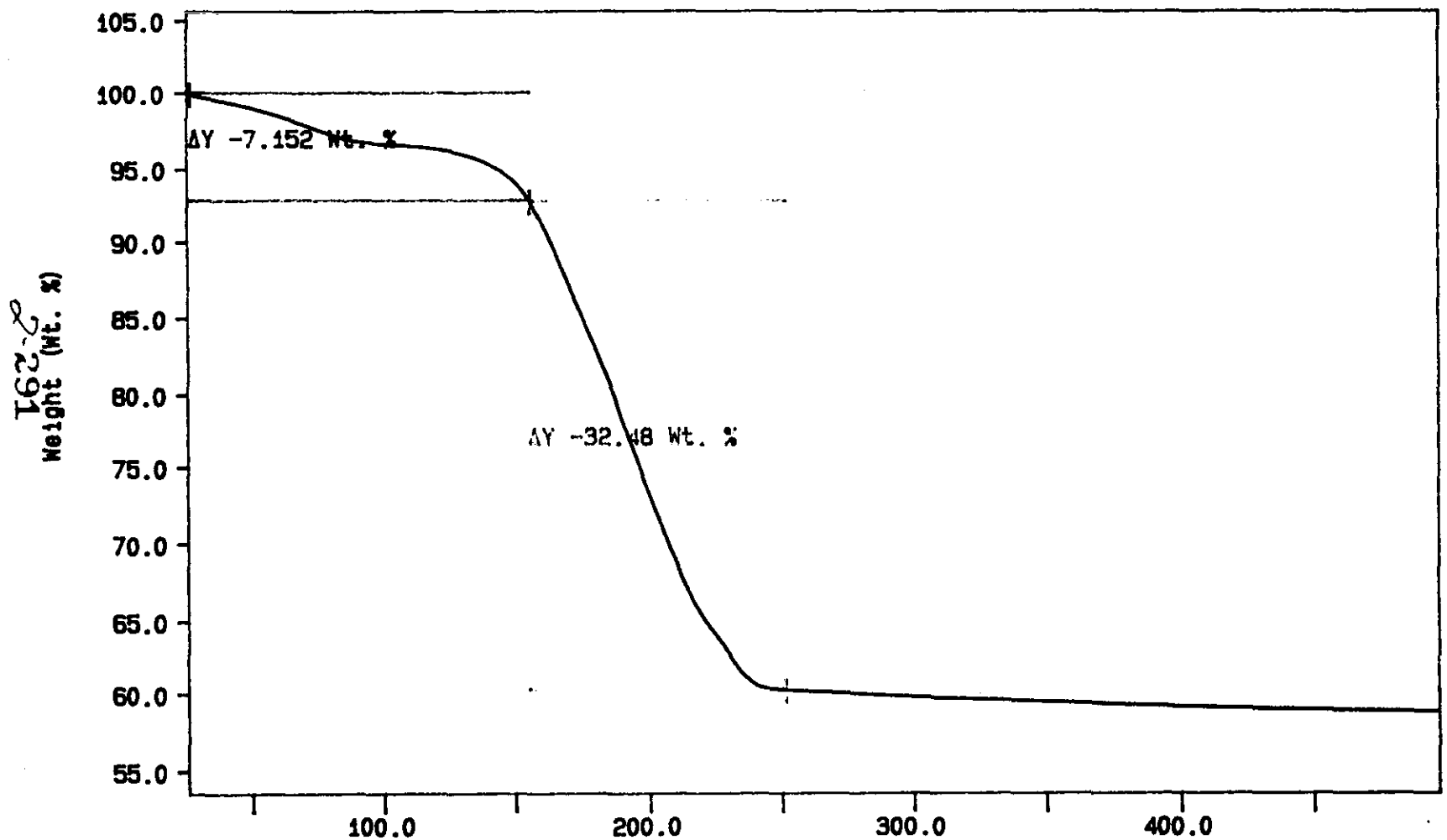
PJ MCCOWN
PERKIN-ELMER
7 Series Thermal Analysis System
Sat Sep 30 18:28:05 1995

2-290

WHC-SD-WM-DP-145, REV. 1

Curve 1: TGA
File info: SAM093001 Sat Sep 30 19:33:09 1995
Sample Weight: 25.996 mg
S95T001969 SAM

BEST AVAILABLE COPY



N2
TEMP1: 30.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 600.0 C

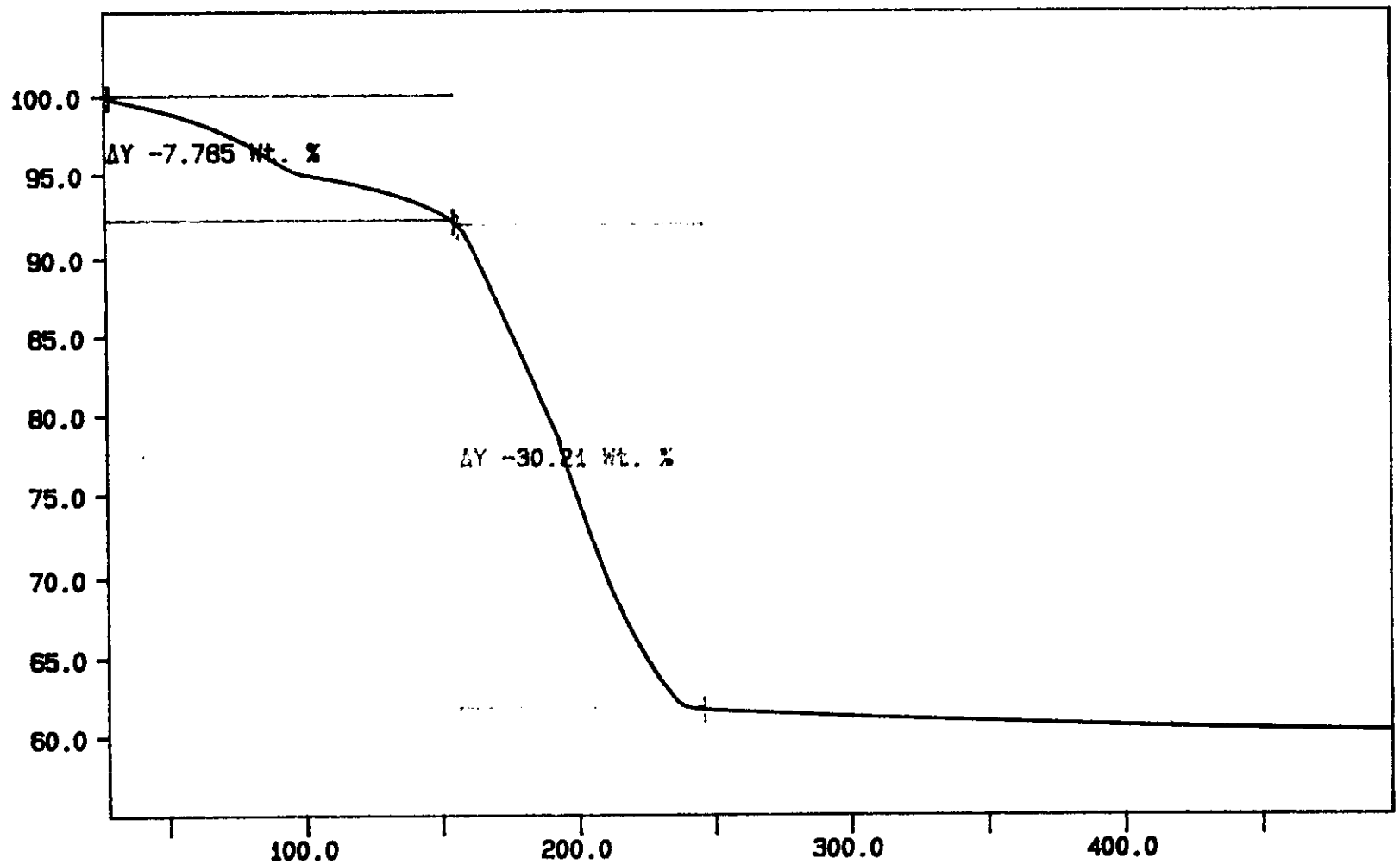
PJ MCCOWN
PERKIN-ELMER
7 Series Thermal Analysis System
Tue Oct 3 15:02:01 1995

WHC-SD-WM-DP-145, REV. 1

2-291

Curve 1: TGA
File info: SAM093002 Sat Sep 30 20:55:47 1995
Sample Weight: 21.756 mg
S95T001969 DUP

BEST AVAILABLE COPY



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
Tue Oct 3 15:07:33 1995

2-292

WHC-SD-WM-DP-145, REV. 1

LABCORE Data Entry Template for Worklist# 2419

Analyst: ADP **Instrument:** TGA0 1 **Book #** 65N8A

Method: LA-560-112 Rev/Mod BO

Worklist Comment: Please run BY-108 TGAs under N2. bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R	A	-------TEST------	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD				TGA-01	SOLID	59.74	57.99	N/A	%
95000118	BY-108 (R)	2 SAMPLE	S95T001970	0		TGA-01	SOLID	N/A	11.12		%
95000118	BY-108 (R)	3 DUP	S95T001970	0		TGA-01	SOLID	11.12	7.68	N/A	%
95000118	BY-108 (R)	4 SAMPLE	S95T001971	0		TGA-01	SOLID	N/A	8.07		%
95000118	BY-108 (R)	5 DUP	S95T001971	0		TGA-01	SOLID	8.07	7.82	N/A	%

Final page for worklist # 2419

Analyst Signature 9-29-95 Date

Analyst Signature 10-11-95 Date

Verified by Blandina Valenzuela 10-11-95

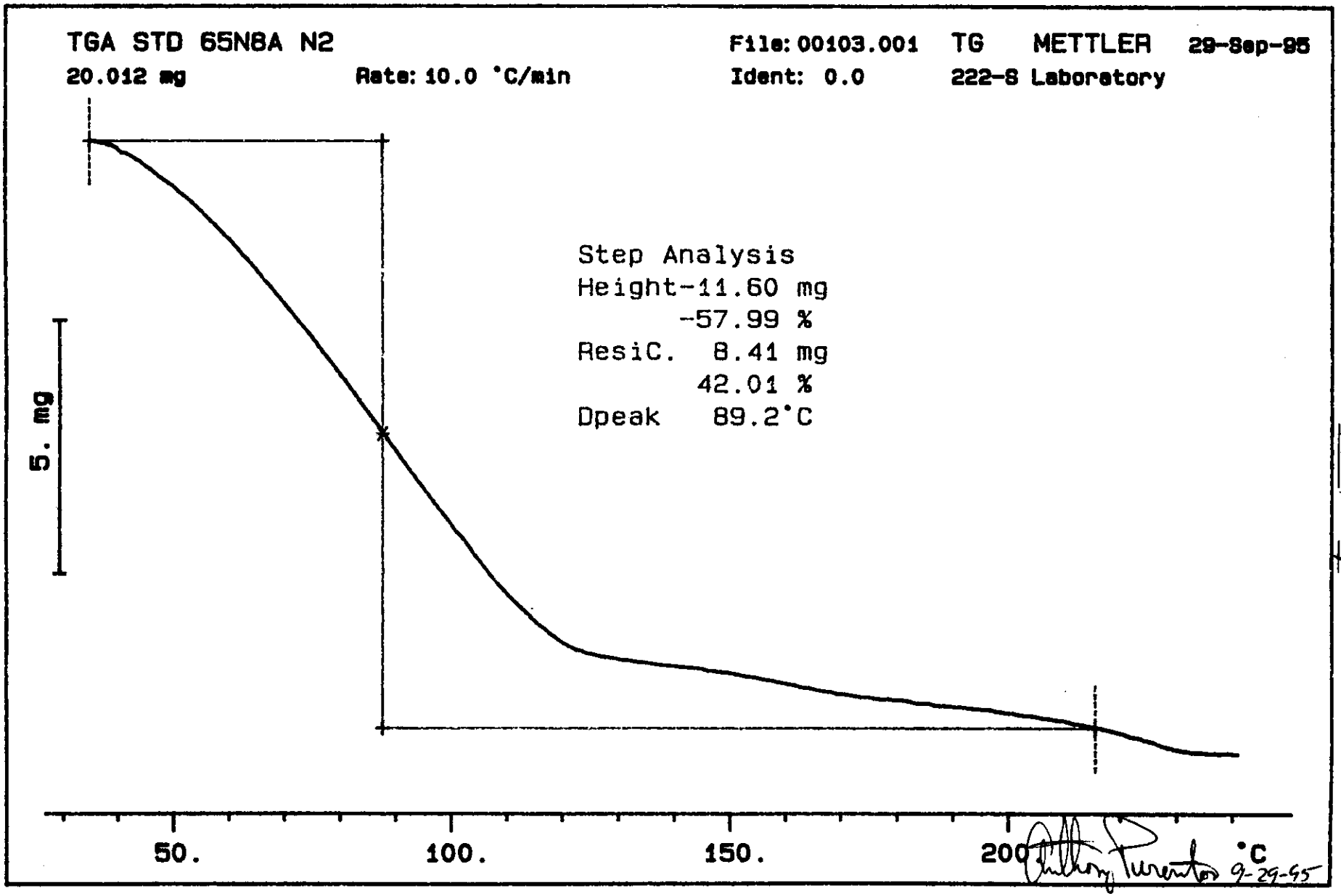
S95T001970 produced a second weight loss step of 23.68% at approximately ~~14~~ 150°C 10/5/95

Data Entry Comments: S95T001971 produced a second weight loss step of 29.22% at approximately 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.

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 2-294 TO 2-298.

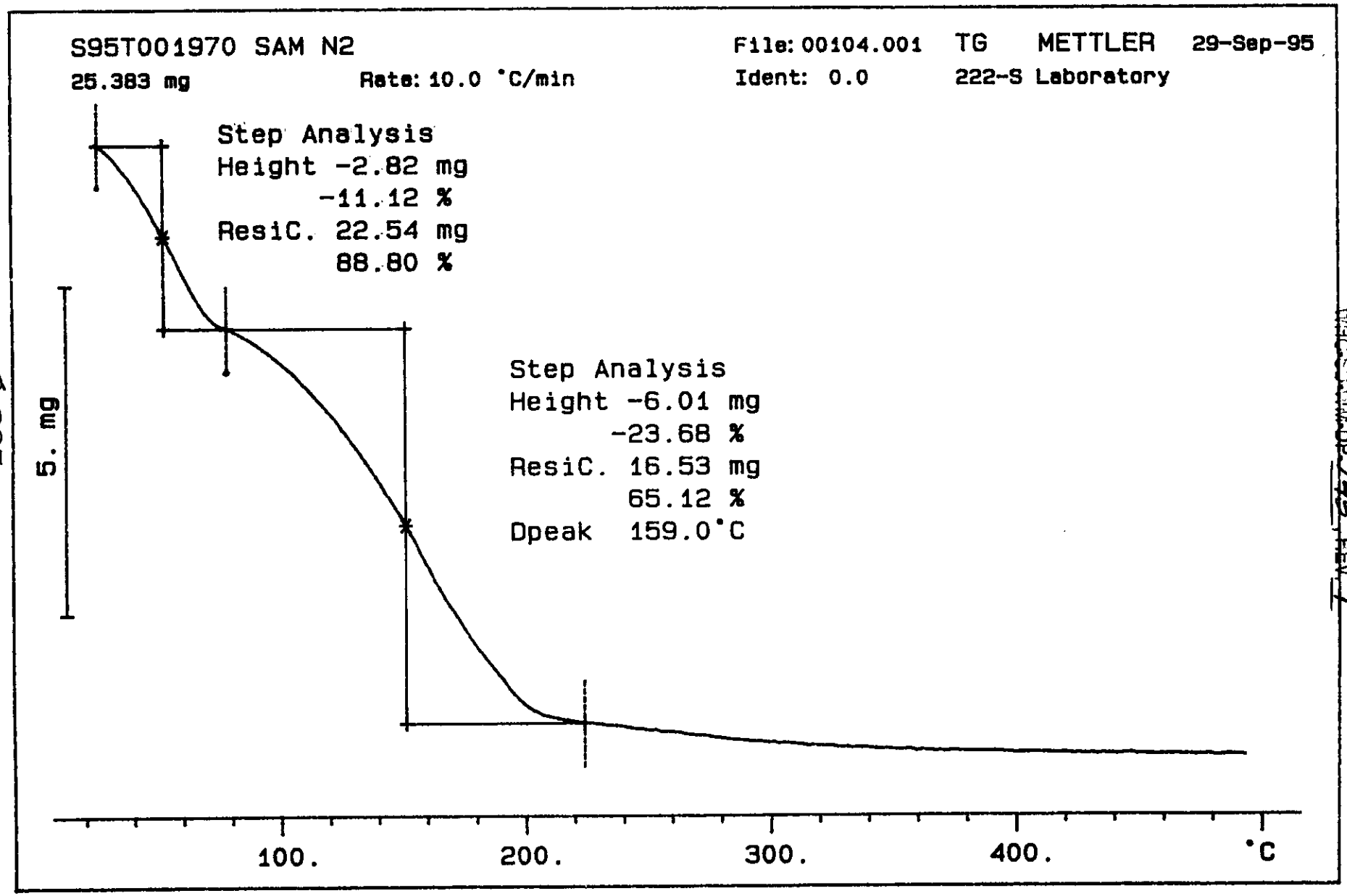
BEST AVAILABLE COPY



Anthony Turentos 9-29-95

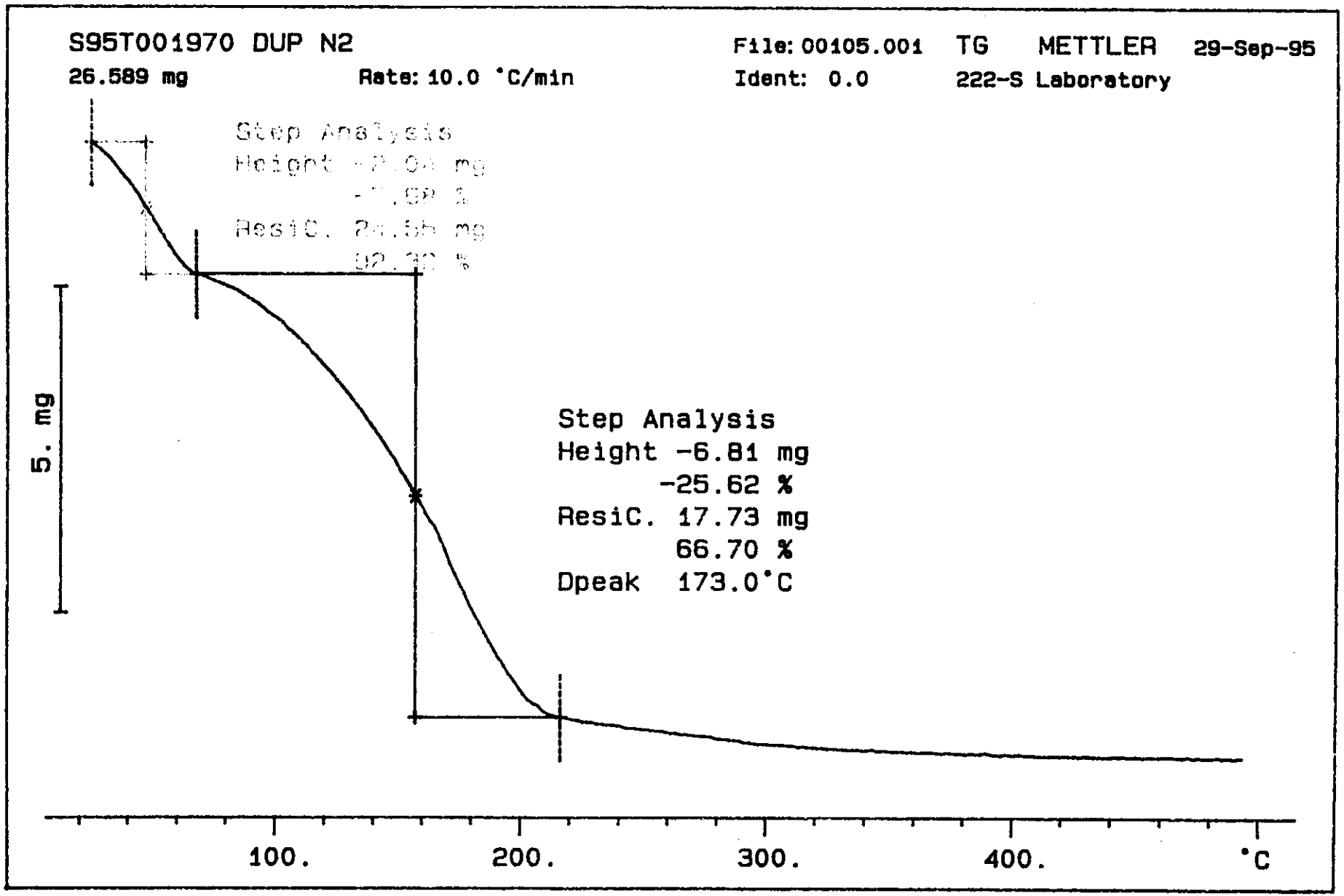
WHC-SD-WM-DP-146, REV. 1

BEST AVAILABLE COPY

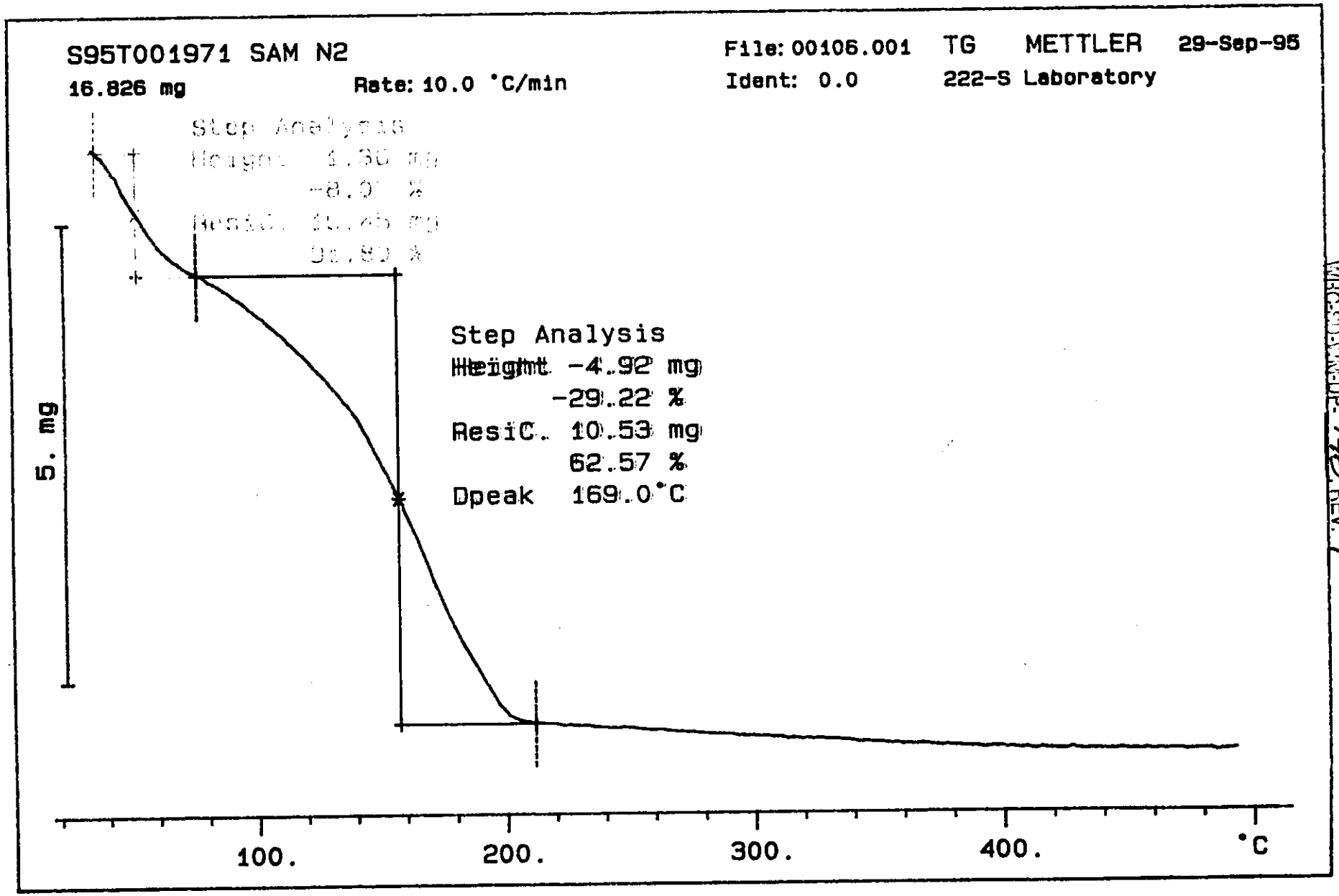


WHC-SD-WM-DP-145 REV 1

BEST AVAILABLE COPY



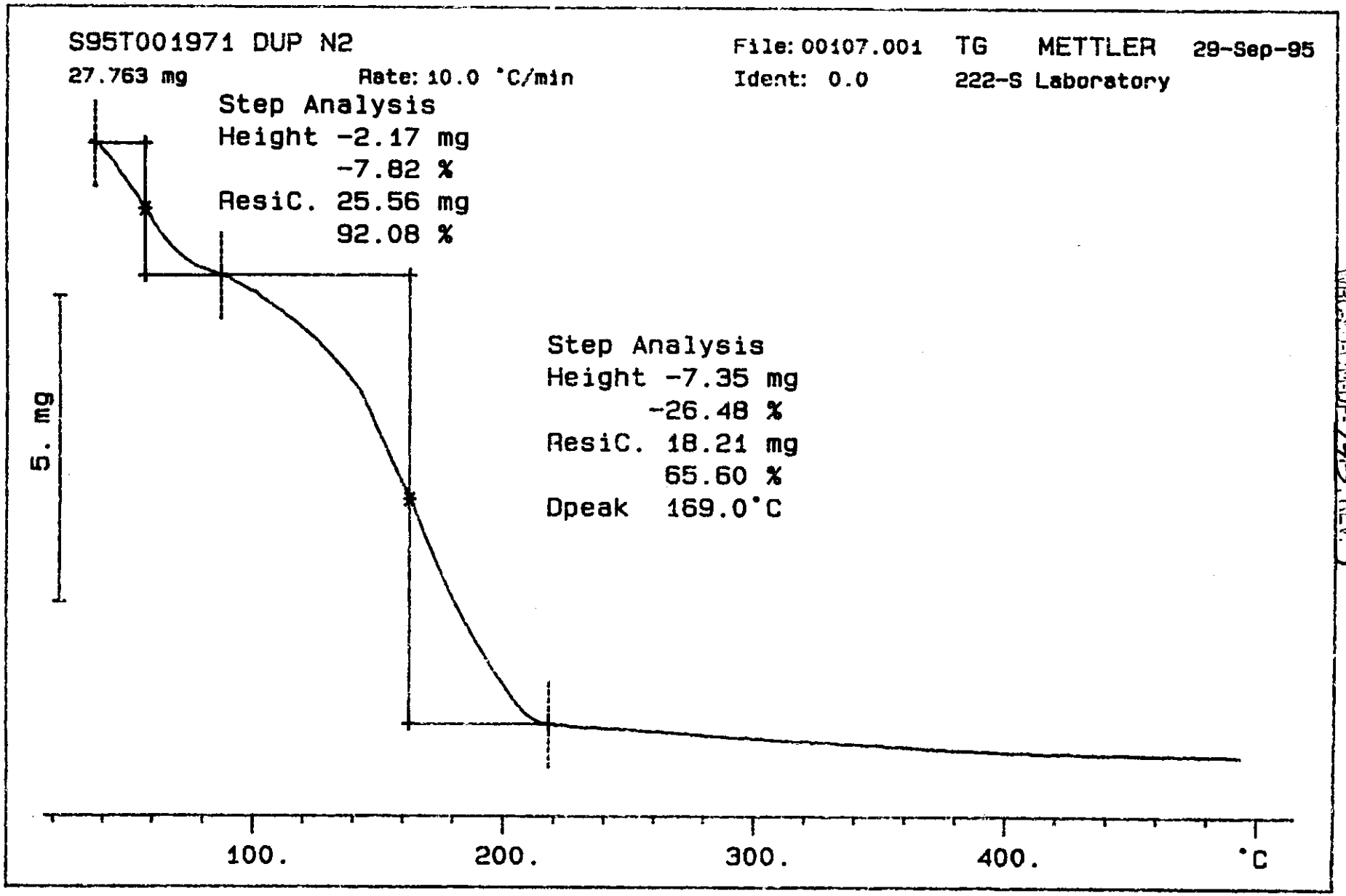
BEST AVAILABLE COPY



2-297

WHC-SD-WM-DP-145, REV. 1

BEST AVAILABLE COPY



WHC-SD-WM-DP-145 REV. 1

2-298

LABCORE Data Entry Template for Worklist# 2420

Analyst: DCD **Instrument:** TGA0 1 **Book #** 65N8-A

Method: LA-560-112 Rev/Mod B-0

Worklist Comment: Please run BY-108 TGAs under N2. bdv

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	STD				TGA-01	SOLID	59.74	60.14	N/A	%
95000118	BY-108 (R)	2	SAMPLE	S95T001972	0		TGA-01	SOLID	N/A	31.01		%
95000118	BY-108 (R)	3	DUP	S95T001972	0		TGA-01	SOLID	31.01	33.09	N/A	%
95000118	BY-108 (R)	4	SAMPLE	S95T001973	0		TGA-01	SOLID	N/A	41.10		%
95000118	BY-108 (R)	5	DUP	S95T001973	0		TGA-01	SOLID	41.10	41.13	N/A	%

Final page for worklist # 2420

David C. Dunbar 10-1-95
Analyst Signature **Date**

[illegible] 10/02/95
Analyst Signature **Date**

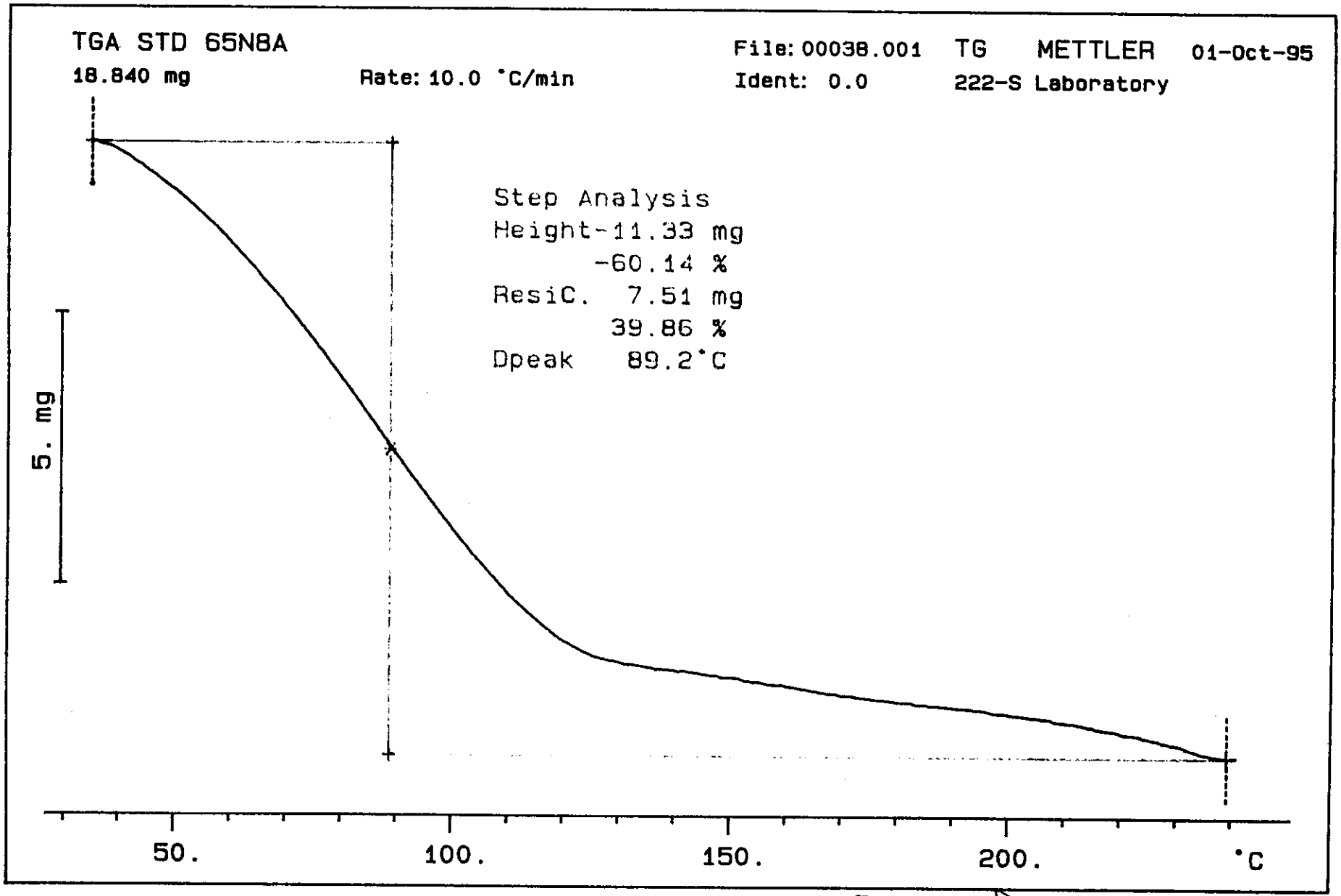
Verified by Blandina Valenzuela 10-4-95

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 2-300 TO 2-304

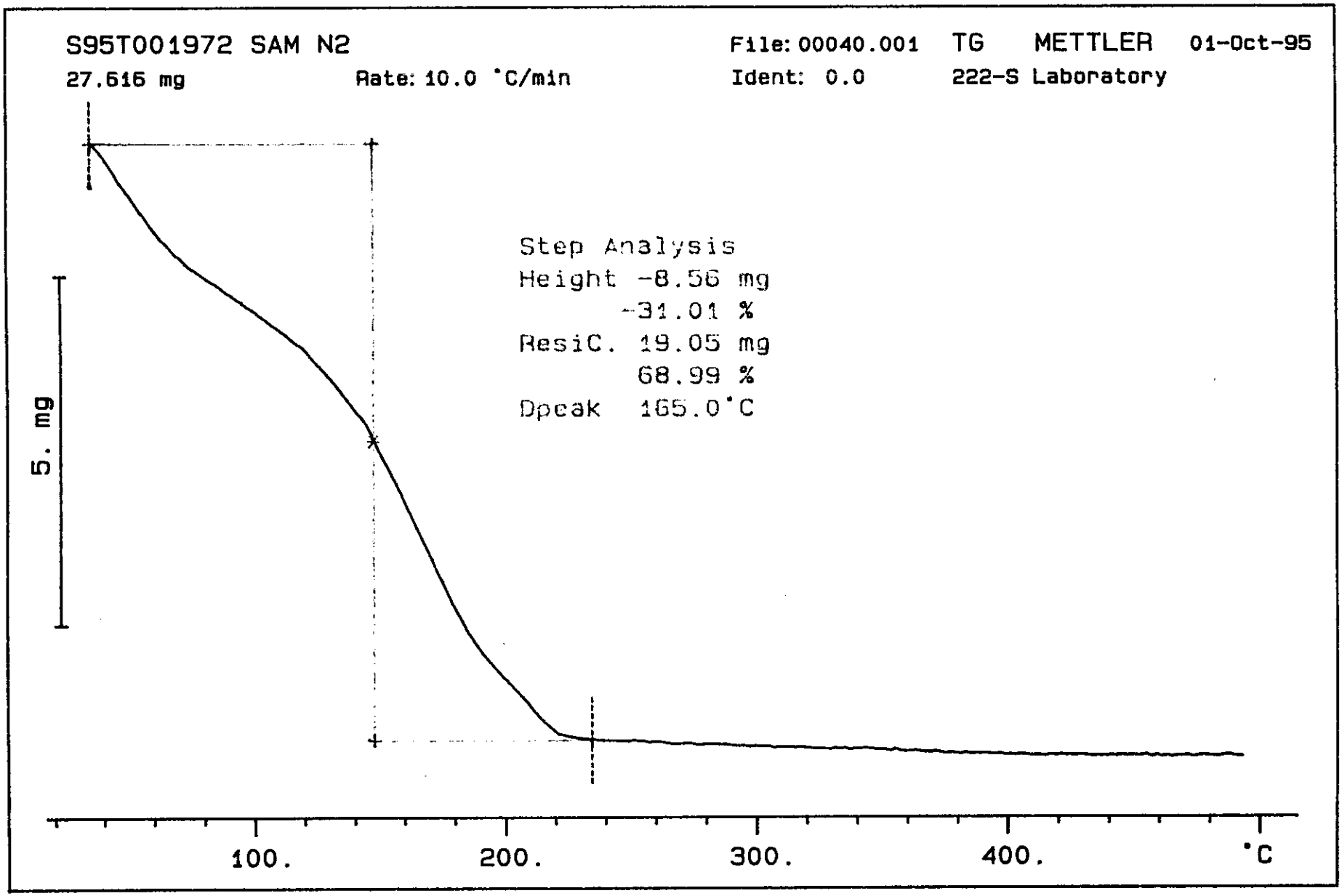
BEST AVAILABLE COPY



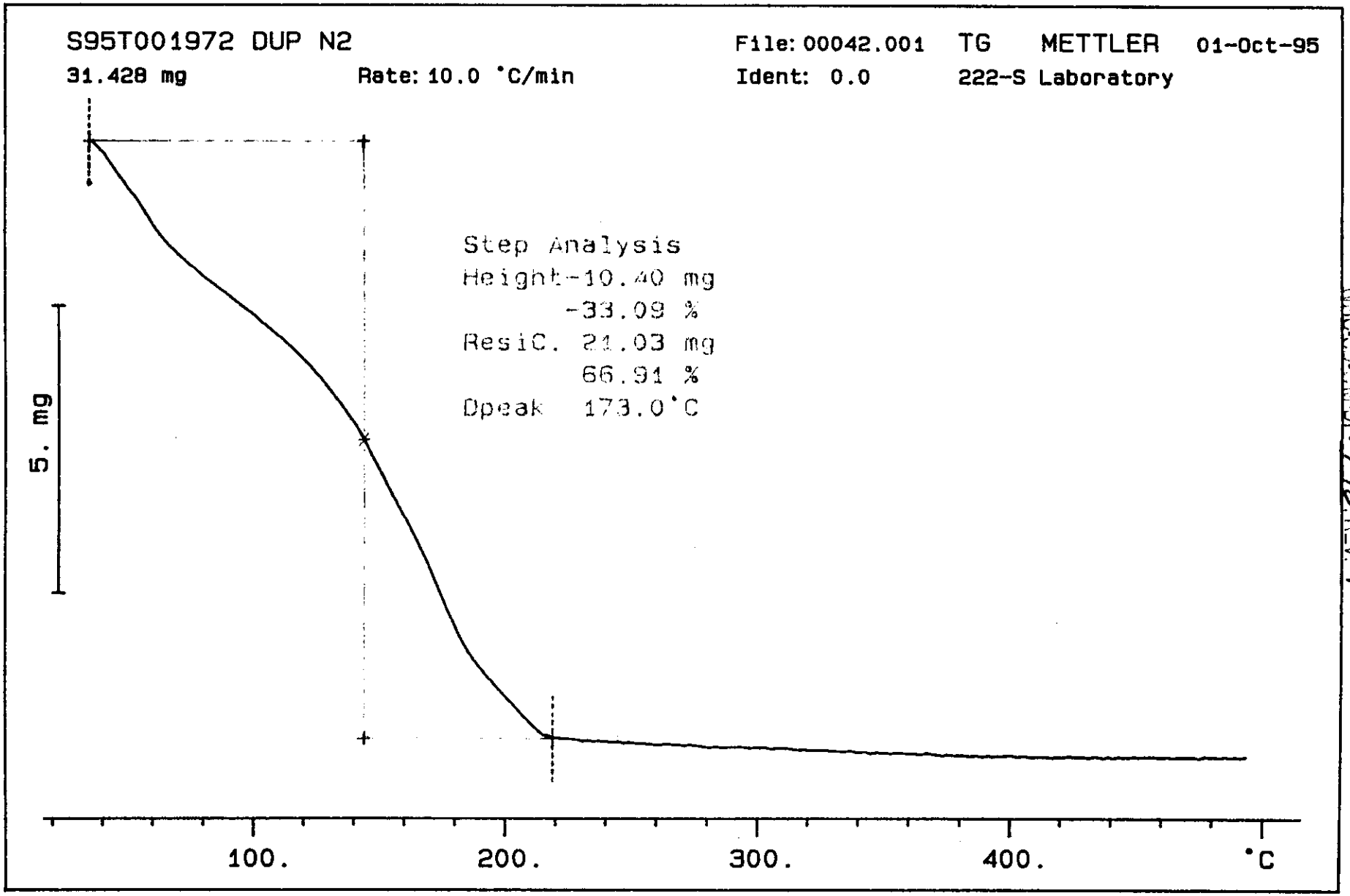
David C Dunham 10-95

WHC-SD-WM-DP-145, REV. 1

BEST AVAILABLE COPY



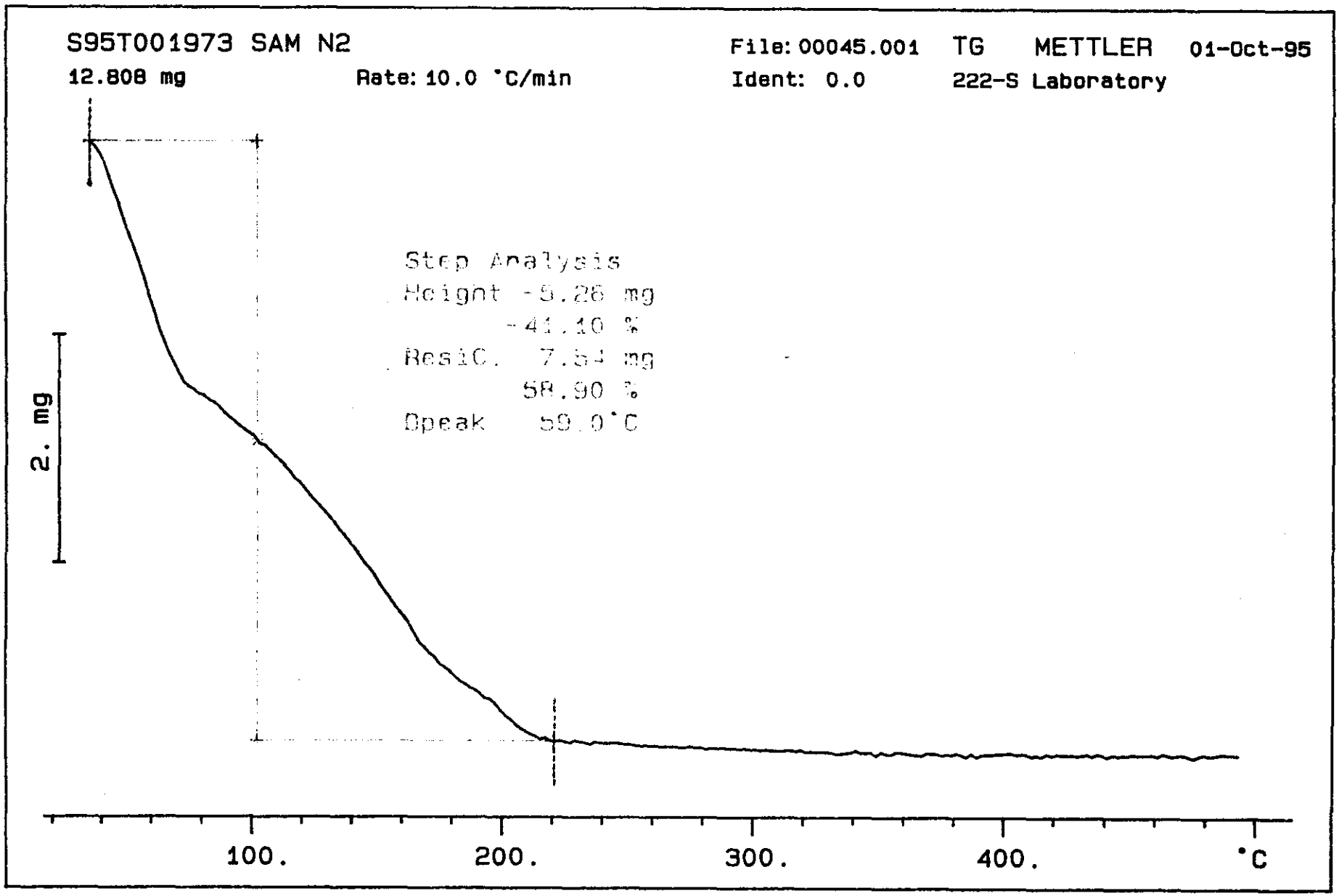
BEST AVAILABLE COPY



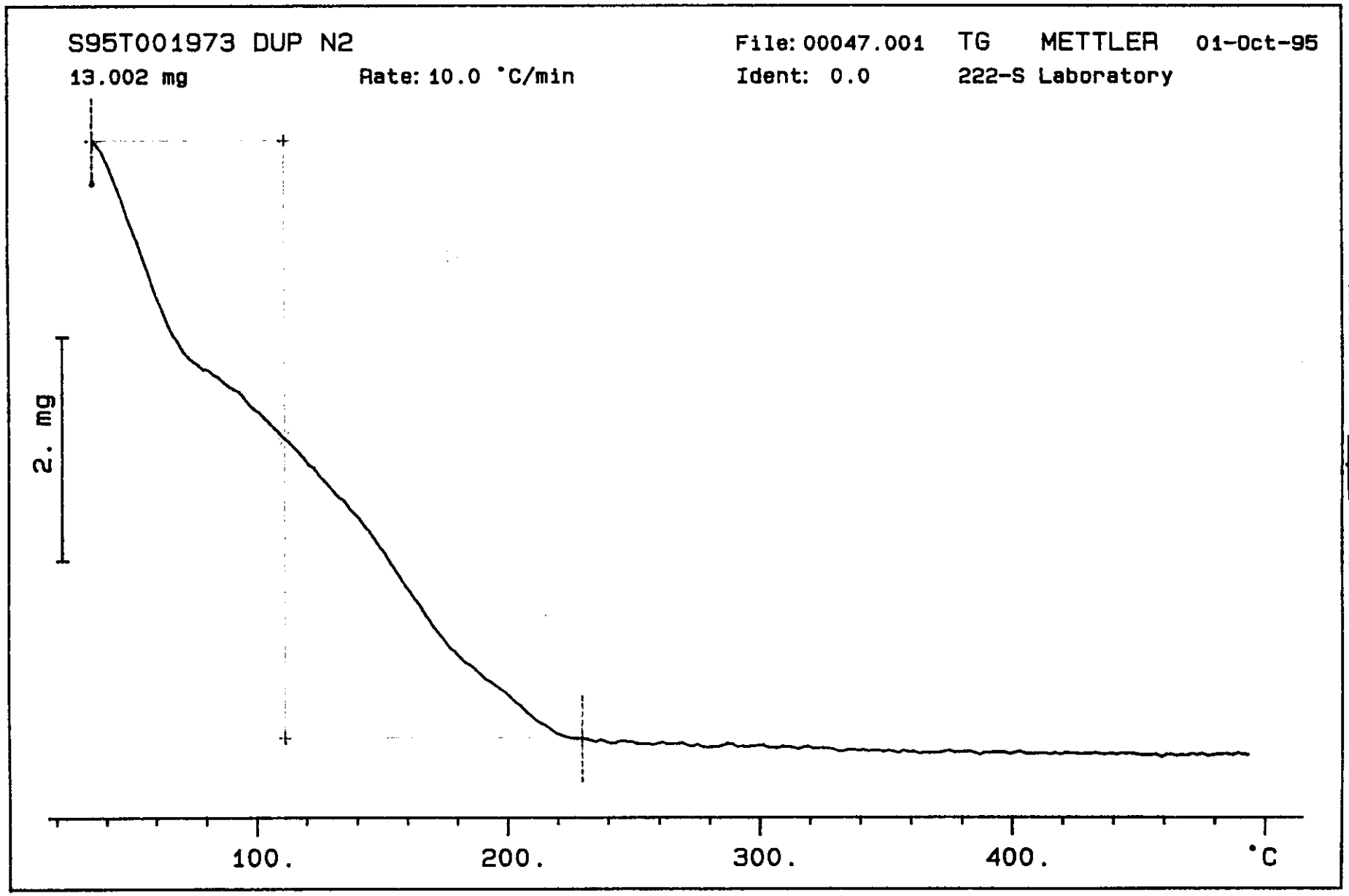
WHC-CD-WM-DP-145 REV. 1

2-302

BEST AVAILABLE COPY



BEST AVAILABLE COPY



WHC-CD-WM-DP-145, REV. 1

LABCORE Data Entry Template for Worklist# 2421

Analyst: PJM **Instrument:** TGA0 3 **Book #** 65N8A

Method: LA-514-114 Rev/Mod C-0

Worklist Comment: Please run BY-108 TGAs under N2. bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R	A	-------TEST------	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD				TGA-03	SOLID	59.74	60.37	N/A	%
95000118	BY-108 (R)	2 SAMPLE	S95T001974	0		TGA-03	SOLID	N/A	9.77		%
95000118	BY-108 (R)	3 DUP	S95T001974	0		TGA-03	SOLID	9.77	8.80	N/A	%
95000118	BY-108 (R)	4 SAMPLE	S95T001975	0		TGA-03	SOLID	N/A	9.37		%
95000118	BY-108 (R)	5 DUP	S95T001975	0		TGA-03	SOLID	9.37	8.98	N/A	%

Final page for worklist # 2421

See attached for signatures
Analyst Signature Date

[signature] 10-5-95
Analyst Signature Date

Verified by Blandina Valenzuela 10-5-95

S95T001974 produced an additional weight loss step of 31.08 wt % at approximately 190°C.

Data Entry Comments: S95T001975 produced an additional weight loss step of 26.84 weight % at approximately 190°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# 2421

Analyst: BJ McCown **Instrument:** TGA0 _____ **Book #** 6508A

Method: LA-~~560-112~~ 514-114 Rev/Mod C-0
Rev 10/1/95

Worklist Comment: Please run BY-108 TGAs under N2. bdv

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	STD				TGA-01	SOLID			N/A	%
95000118	BY-108 (R)	2	SAMPLE	S95T001974	0		TGA-01	SOLID	N/A			%
95000118	BY-108 (R)	3	DUP	S95T001974	0		TGA-01	SOLID			N/A	%
95000118	BY-108 (R)	4	SAMPLE	S95T001975	0		TGA-01	SOLID	N/A			%
95000118	BY-108 (R)	5	DUP	S95T001975	0		TGA-01	SOLID			N/A	%

Final page for worklist # 2421

BJ McCown 10/1/95
Analyst Signature **Date**

Analyst Signature **Date**

Other instrument
was used
10-5-95
BDV

Data Entry Comments:

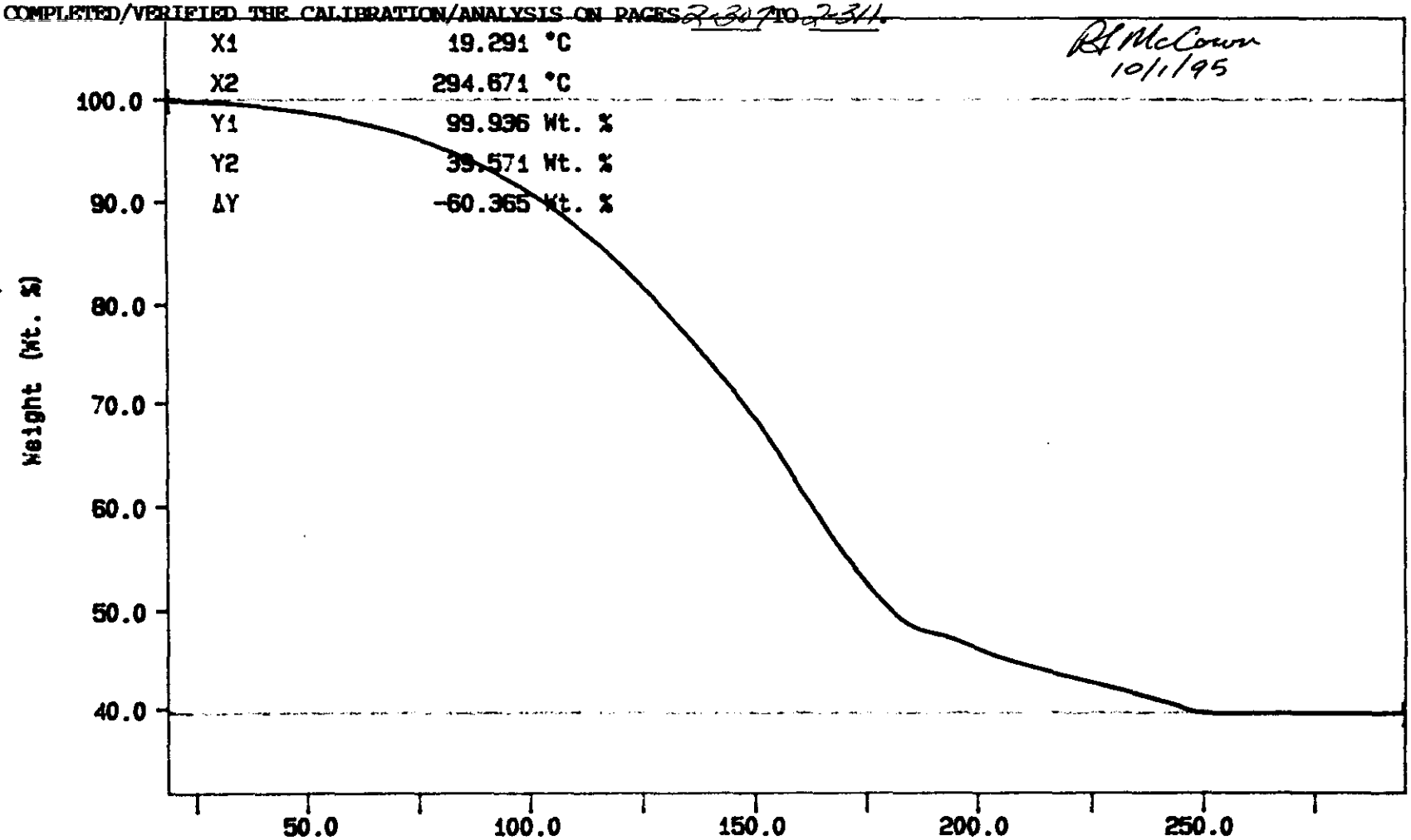
Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

Curve 1: TGA
File info: TER100101 Sun Oct 1 00:35:12 1995
Sample Weight: 14.638 mg
65N8-A Terliq

BEST AVAILABLE COPY

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 2-307 TO 2-311.

RJ McCown
10/1/95

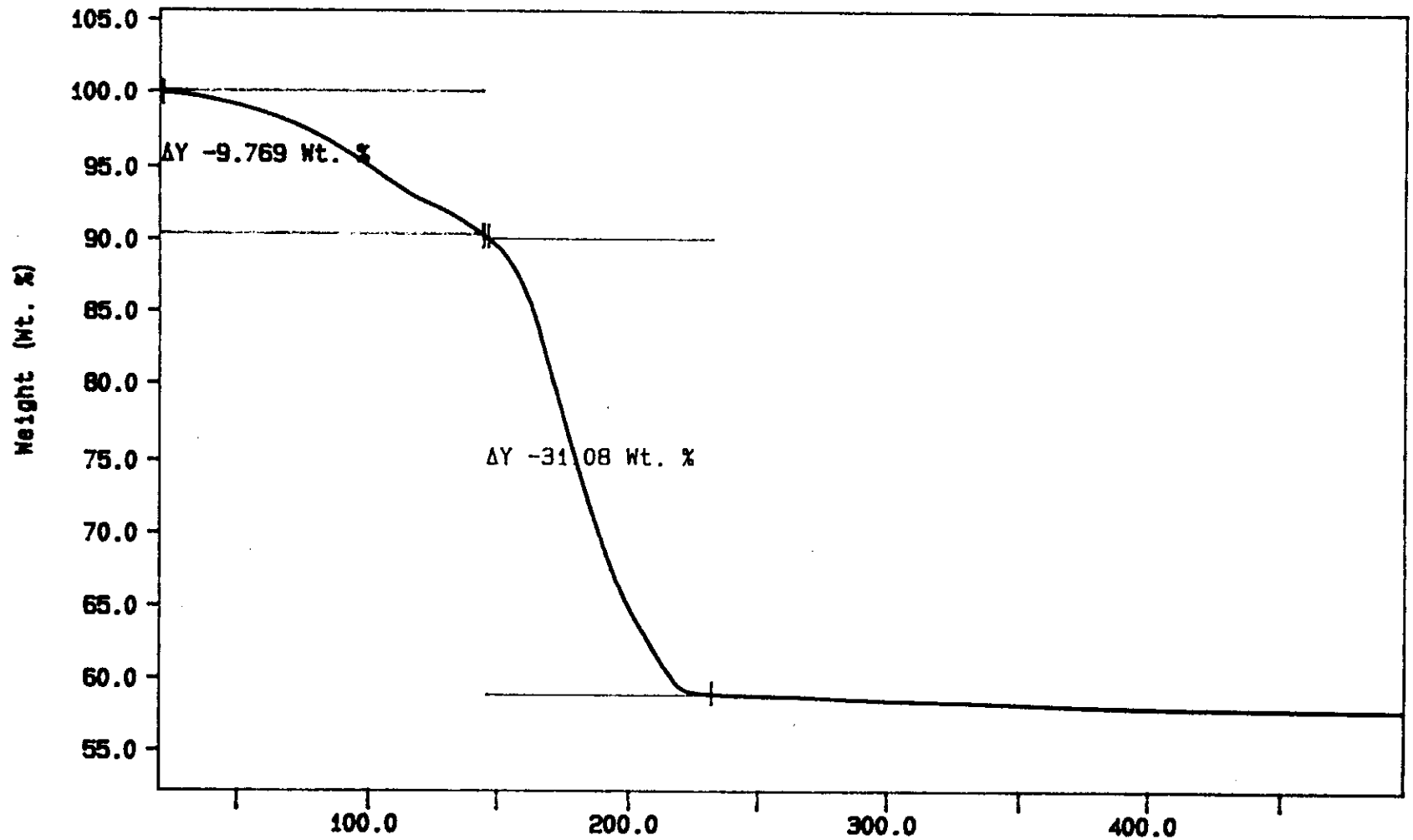


N2 10C/MIN
TEMP1: 30.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 300.0 C

PJ MCCOWN
PERKIN-ELMER
7 Series Thermal Analysis System
Sun Oct 1 00:43:03 1995

Curve 1: TGA
File info: SAM100103 Sun Oct 1 04:56:20 1995
Sample Weight: 19.263 mg
S95T001974 SAM

BEST AVAILABLE COPY



N2
TEMP1: 35.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 600.0 C

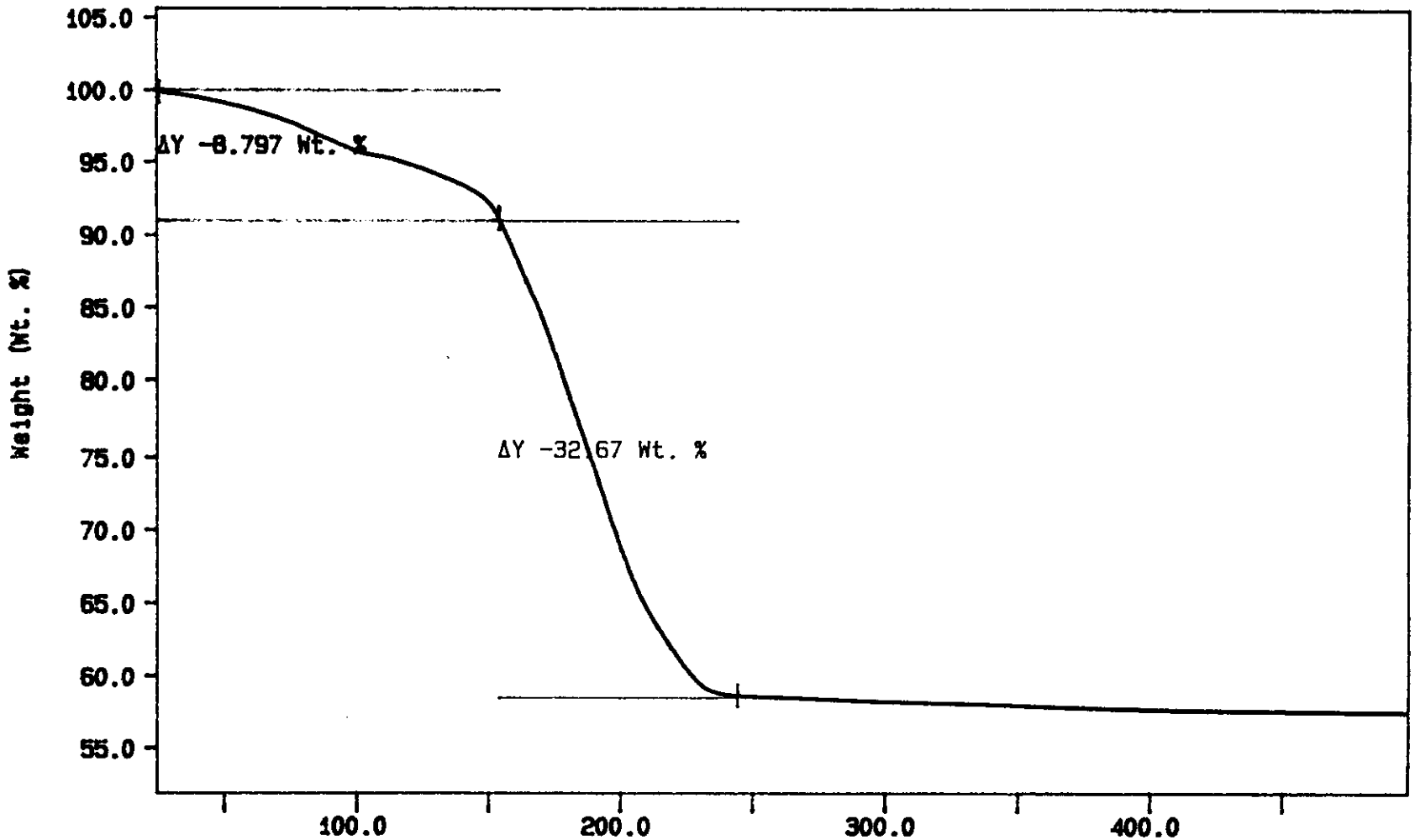
PJ MCCOWN
PERKIN-ELMER
7 Series Thermal Analysis System
Wed Oct 4 10:06:14 1995

WHC-CD-WM-DP-145, REV 1

2-308

Curve 1: TGA
File info: SAM100104 Sun Oct 1 06:08:22 1995
Sample Weight: 24.140 mg
S95T001974 DUP

BEST AVAILABLE COPY



N2
TEMP1: 35.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 800.0 C

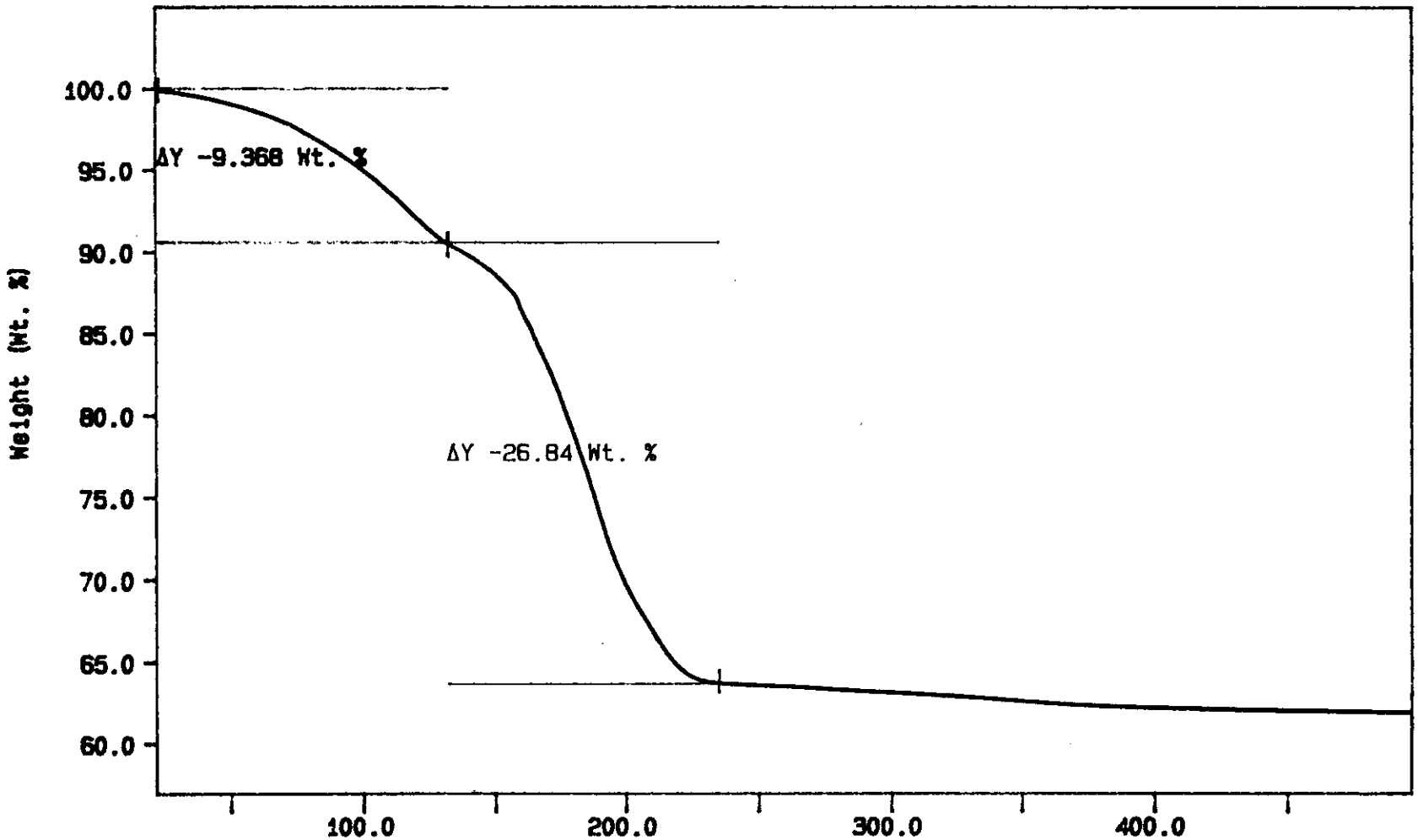
PJ MCCOWN
PERKIN-ELMER
7 Series Thermal Analysis System
Wed Oct 4 10:23:51 1995

WHC-SD-WM-DP-145, REV. 1

2-309

Curve 1: TGA
File info: SAM100101 Sun Oct 1 01:47:33 1995
Sample Weight: 21.038 mg
S95T001975 SAM

BEST AVAILABLE COPY



N2
TEMP1: 35.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 600.0 C

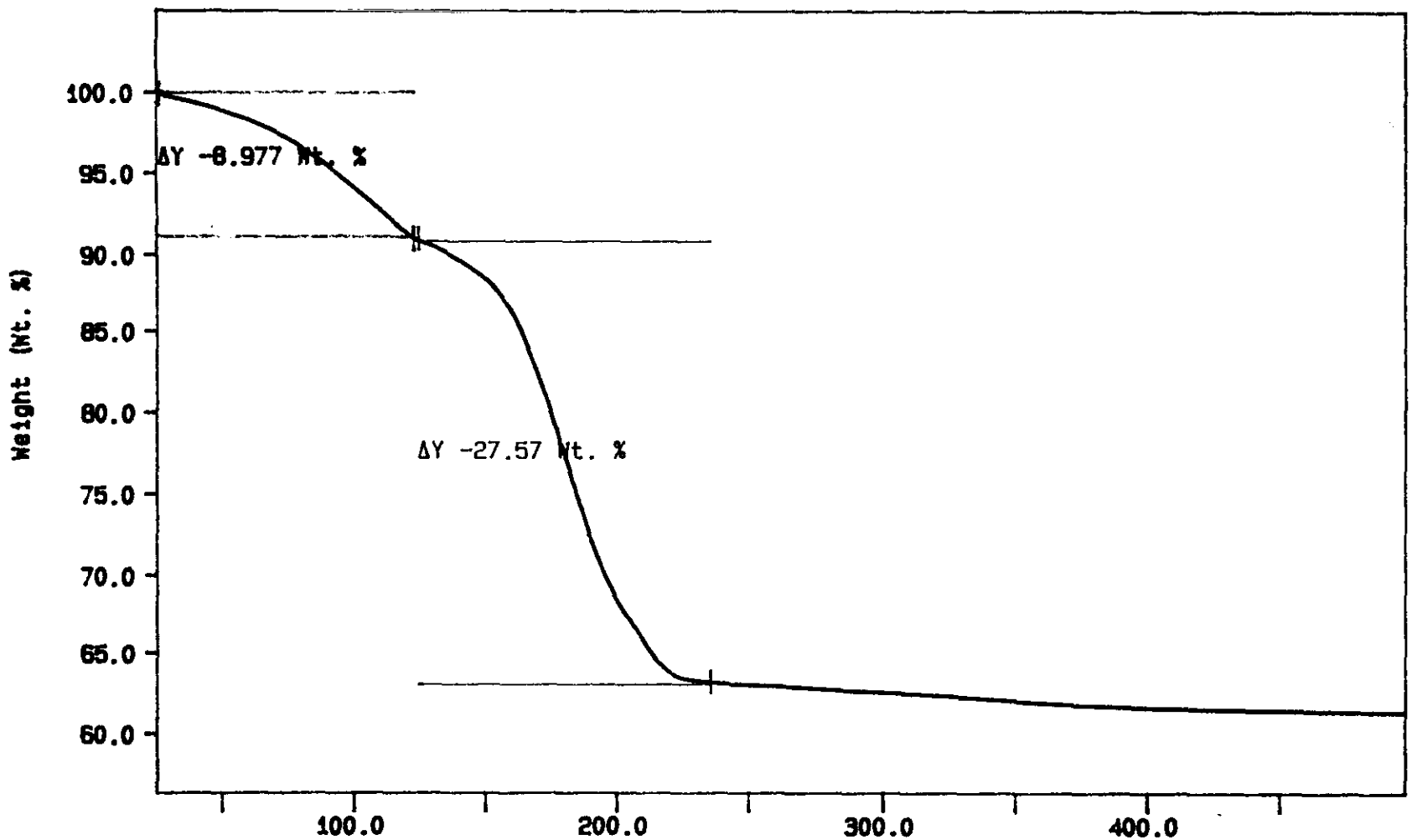
PJ MCCOWN
PERKIN-ELMER
7 Series Thermal Analysis System
Wed Oct 4 10:29:10 1995

2-310

WHC-CD-WM-DP-145, REV. 1

Curve 1: TGA
File info: SAM100102 Sun Oct 1 02:58:28 1995
Sample Weight: 17.844 mg
S95T001975 DUP

BEST AVAILABLE COPY



N2
TEMP1: 25.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 600.0 C

PJ MCCOWN
PERKIN-ELMER
7 Series Thermal Analysis System
Wed Oct 4 10:34:36 1995

2-311

WHC-SD-WM-DP-145, REV. 1

LABCORE Data Entry Template for Worklist# 2422

Analyst: RMcCown **Instrument:** TGA0 1 **Book #** 65N8A

Method: LA-560-112 Rev/Mod B-0

Worklist Comment: Please run BY-108 TGAs under N2. bdv

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	STD				TGA-01	SOLID	59.74	60.38	N/A	%
95000118	BY-108 (R)	2	SAMPLE	S95T001976	0		TGA-01	SOLID	N/A	37.69		%
95000118	BY-108 (R)	3	DUP	S95T001976	0		TGA-01	SOLID	37.69	35.62	N/A	%
95000118	BY-108 (R)	4	SAMPLE	S95T001977	0		TGA-01	SOLID	N/A	35.50		%
95000118	BY-108 (R)	5	DUP	S95T001977	0		TGA-01	SOLID	35.50	35.50	N/A	%

Final page for worklist # 2422

RMcCown 10/1/95
Analyst Signature Date

JA [illegible] 10/2/95
Analyst Signature Date

Verified by Blandina Valenzuela 10-4-95

Data Entry Comments: S95T001976 produced a second weight loss step of 4.58% at approximately 400°C.
S95T001977 produced a second weight loss step of 5.37% at approximately 390°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.

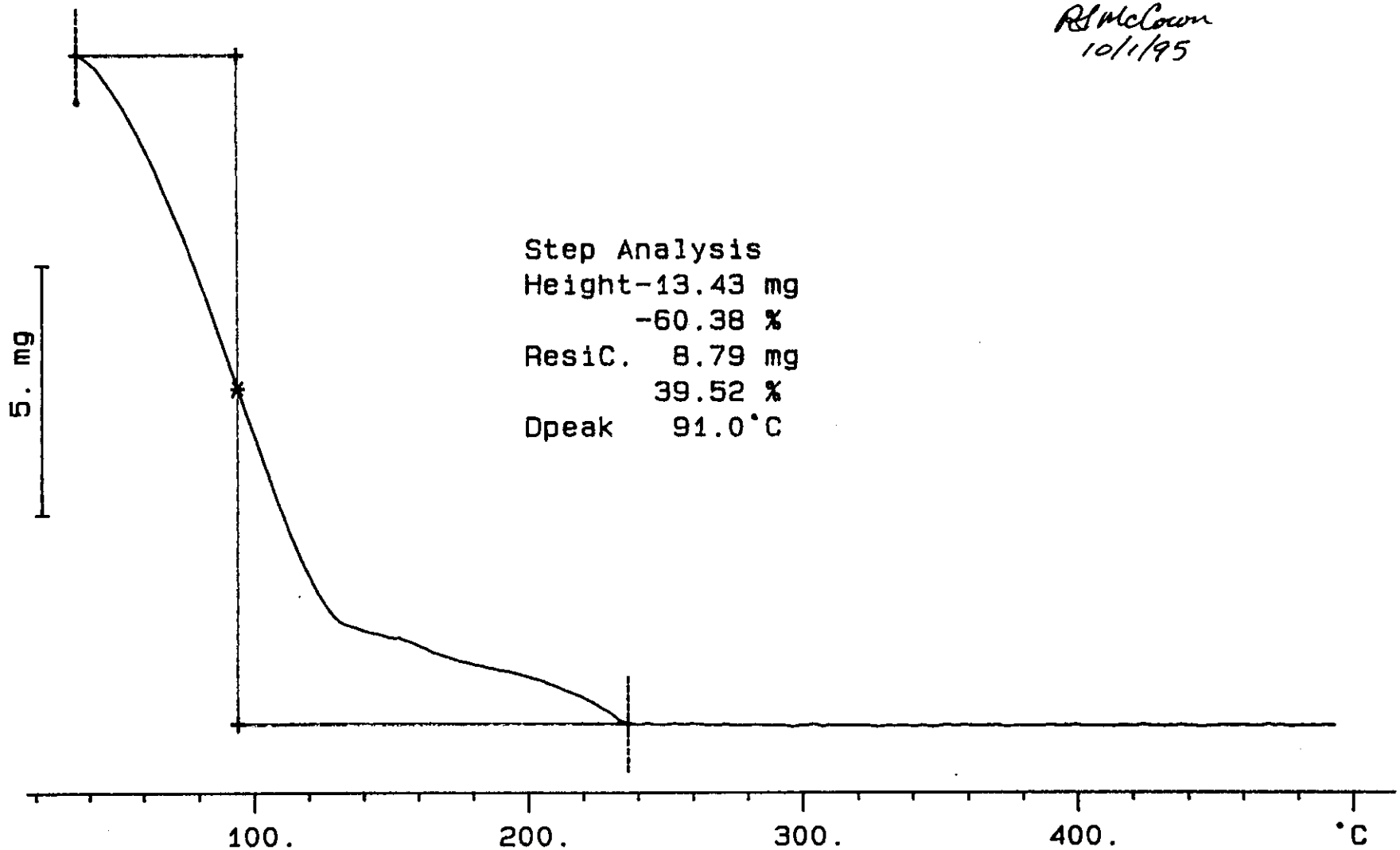
BEST AVAILABLE COPY

TGA STD 65N8A
22.239 mg

Rate: 10.0 °C/min

File: 00028.001 TG METTLER 01-Oct-95
Ident: 0.0 222-S Laboratory

RJ McCown
10/1/95



Step Analysis
Height -13.43 mg
-60.38 %
ResiC. 8.79 mg
39.52 %
Dpeak 91.0°C

WHC-SD-WM-DP-145, REV. 1

2-313

BEST AVAILABLE COPY

S95T001976 SAM N2

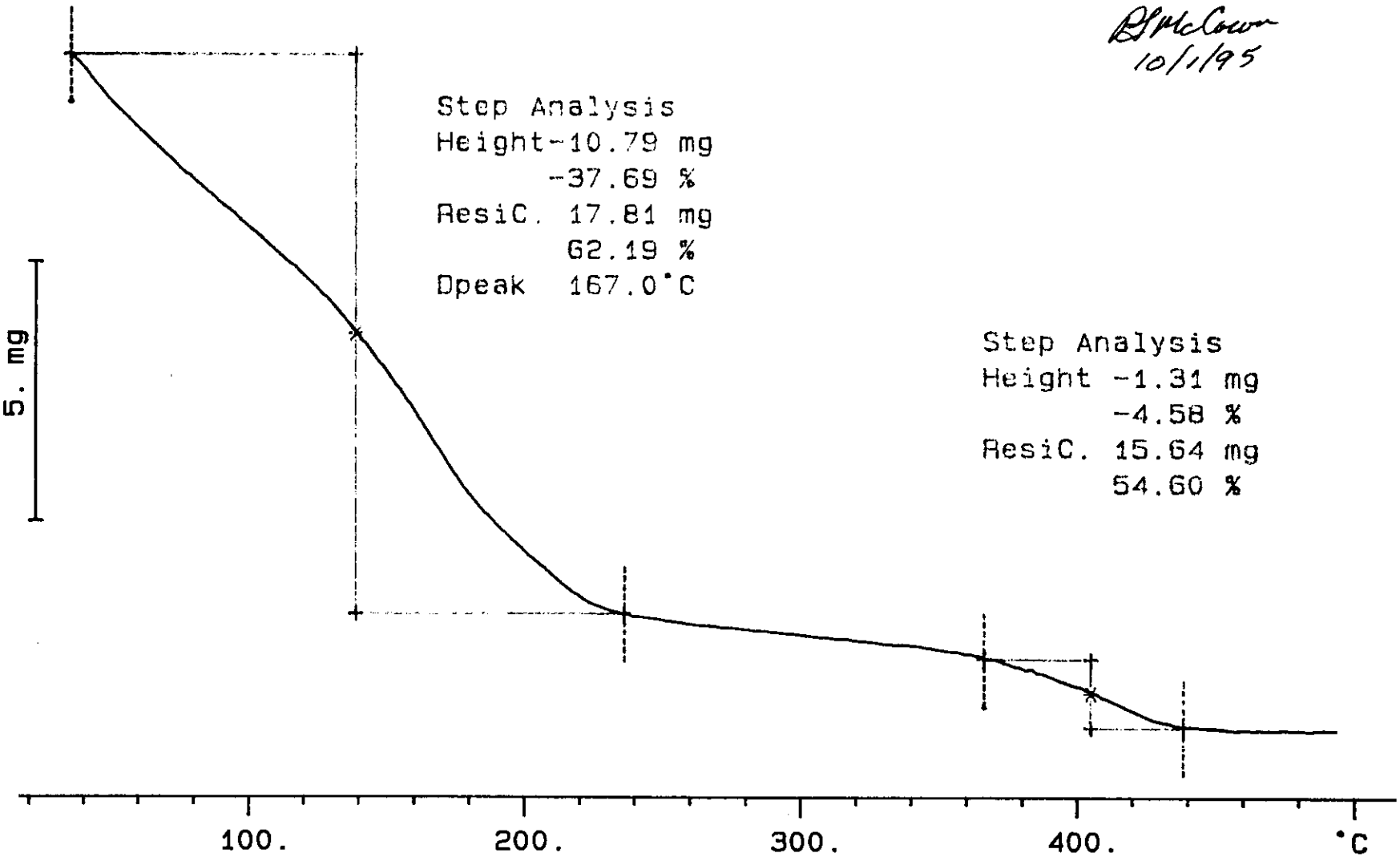
28.645 mg

Rate: 10.0 °C/min

File: 00034.001 TG METTLER 01-Oct-95

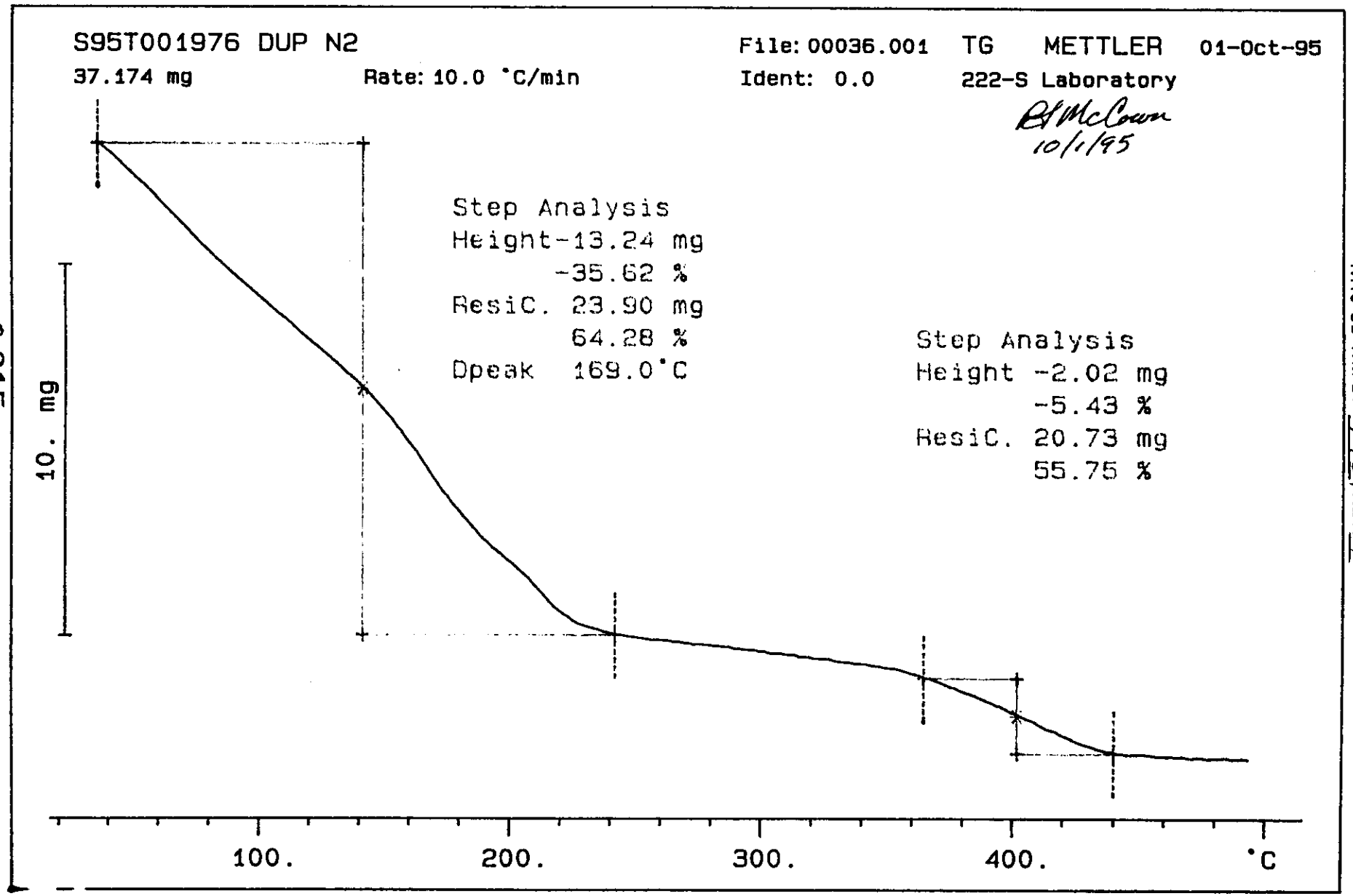
Ident: 0.0 222-S Laboratory

D McCown
10/1/95



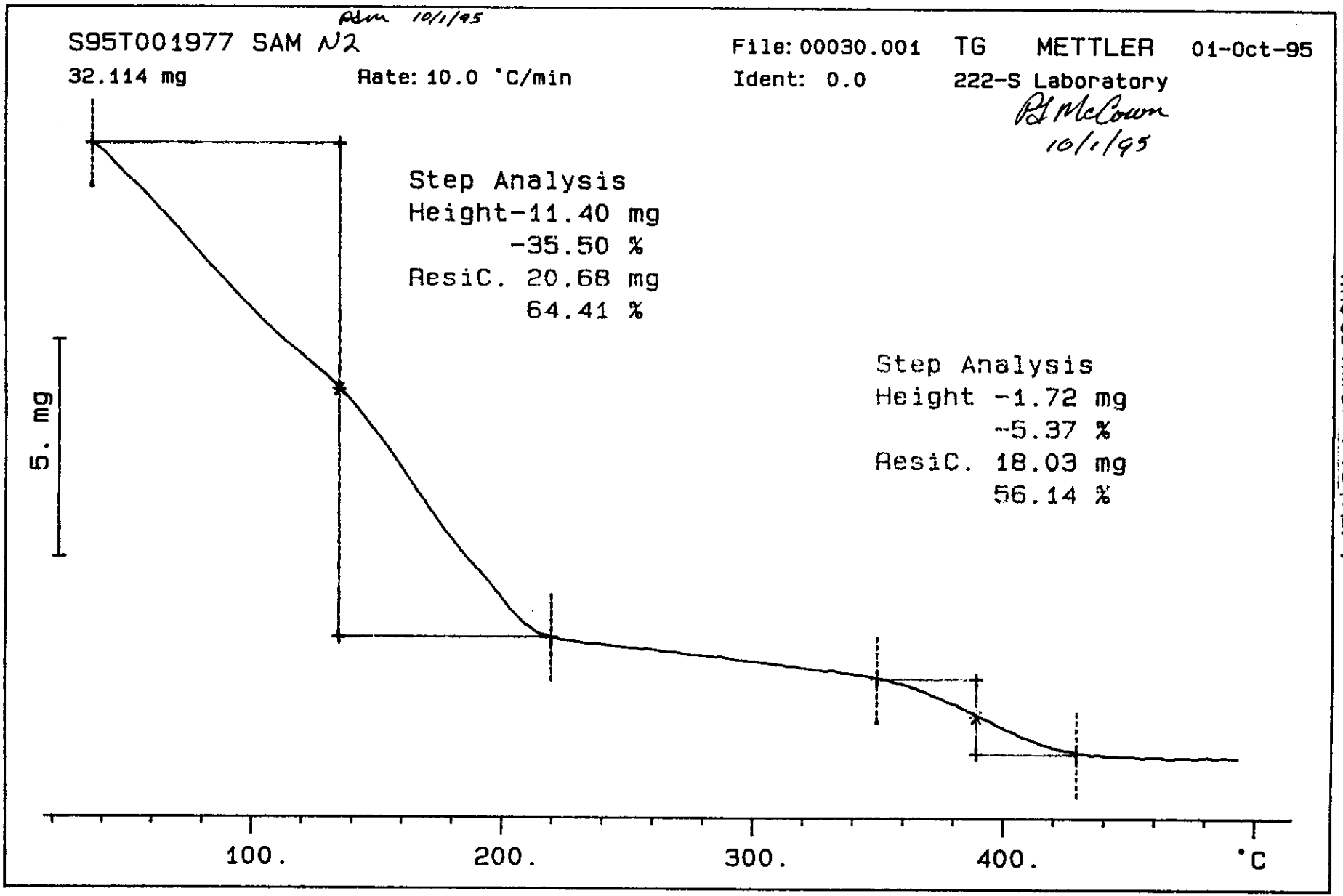
WHC-SD-WM DP-145, REV. 1

BEST AVAILABLE COPY



WHC-SD-WM-DP-145, REV. 1

BEST AVAILABLE COPY



BEST AVAILABLE COPY

S95T001977 DUP N2 RJM 10/1/95

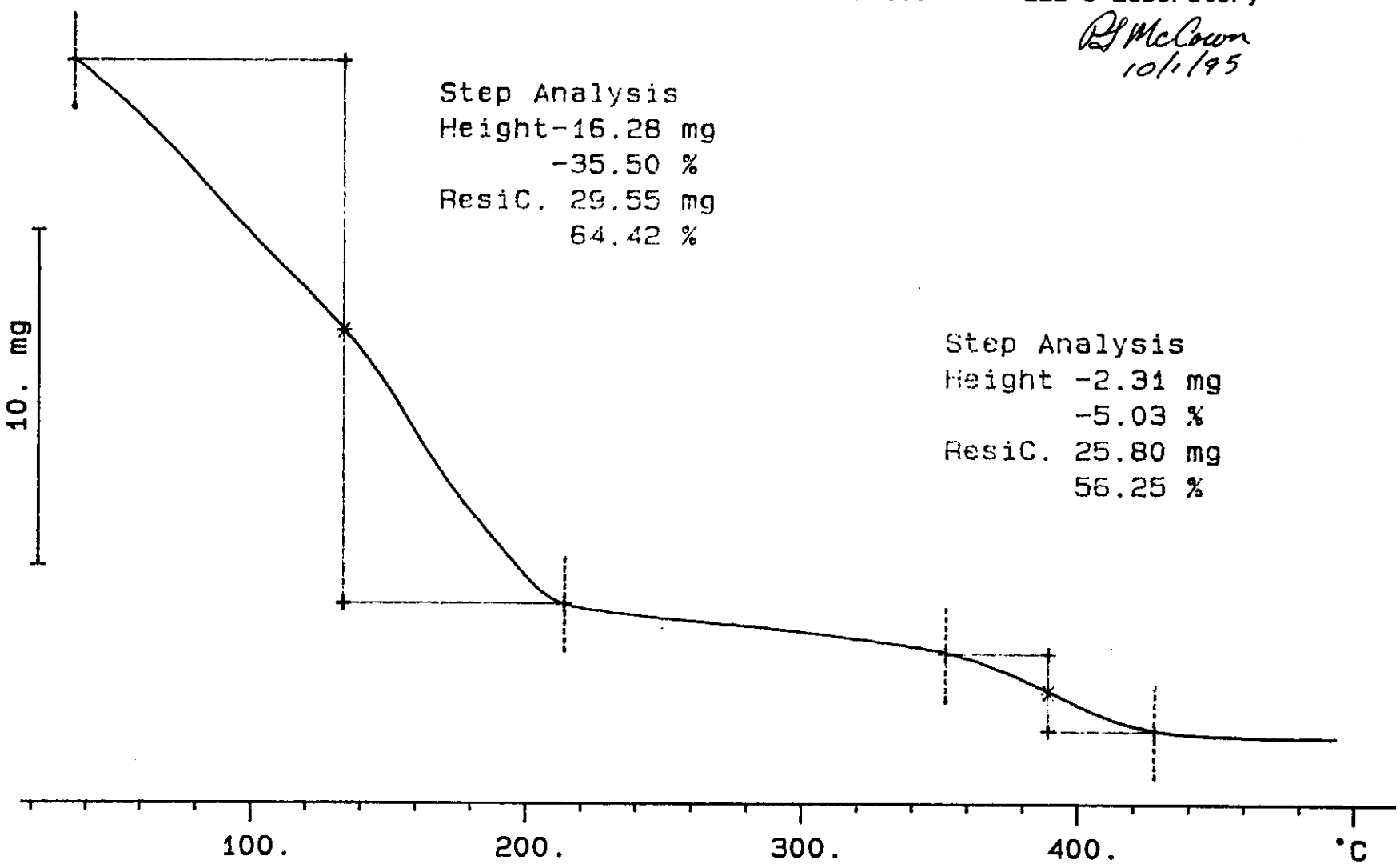
45.867 mg

Rate: 10.0 °C/min

File: 00032.001 TG METTLER 01-Oct-95

Ident: 0.0 222-S Laboratory

RJ McCown 10/1/95



2-317

WHC-SD-WM-DP-145, REV. 1

LABCORE Data Entry Template for Worklist# 2424

Analyst: RJ McCown **Instrument:** TGA0 1 **Book #** 65N8A

Method: LA-560-112 Rev/Mod B-0

Worklist Comment: Please run BY-108 TGAs under N2. bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R	A	-------TEST------	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD				TGA-01	SOLID	59.74	60.20	N/A	%
95000118	BY-108 (R)	2 SAMPLE	S95T001905	0		TGA-01	SOLID	N/A	43.26		%
95000118	BY-108 (R)	3 DUP	S95T001905	0		TGA-01	SOLID	43.26	45.28	N/A	%
95000118	BY-108 (R)	4 SAMPLE	S95T001906	0		TGA-01	SOLID	N/A	36.22		%
95000118	BY-108 (R)	5 DUP	S95T001906	0		TGA-01	SOLID	~~32.2~~ 36.22	~~33.22~~ 33.78	N/A	%

10-2-95 BW

Final page for worklist # 2424

RJ McCown 10/1/95
Analyst Signature Date

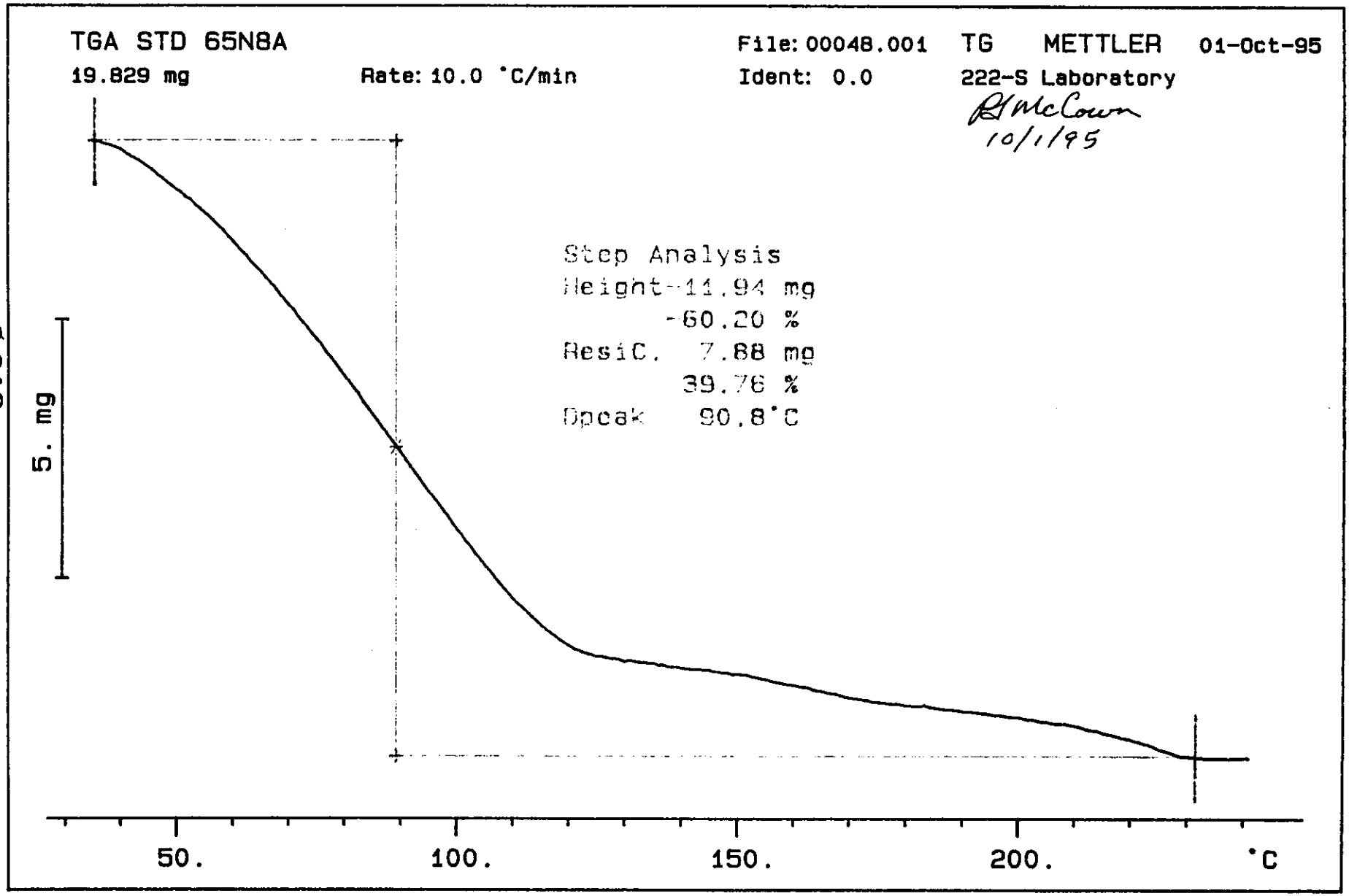
Analyst Signature Date

Verified by Blandina Valenzuela 10-4-95

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.

BEST AVAILABLE COPY



WHC-SD-WM-DP-145 REV. 1

2-319

BEST AVAILABLE COPY

S95T001905 SAM N2

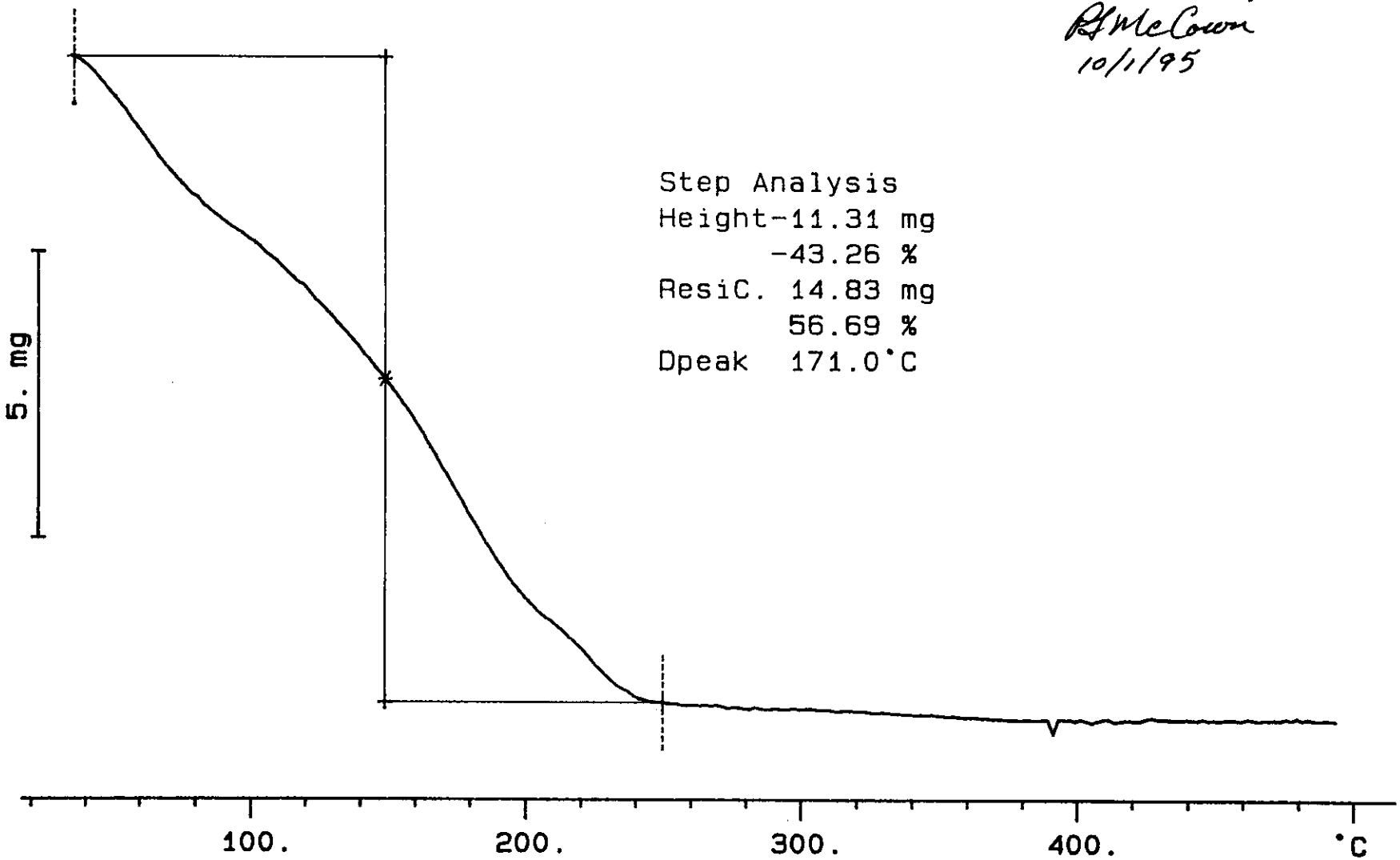
26.156 mg

Rate: 10.0 °C/min

File: 00049.001 TG METTLER 01-Oct-95

Ident: 0.0 222-S Laboratory

R J McCown
10/1/95



2-320

WHC-SD-WM-DP-145, REV. 1

BEST AVAILABLE COPY

S95T001905 DUP N2

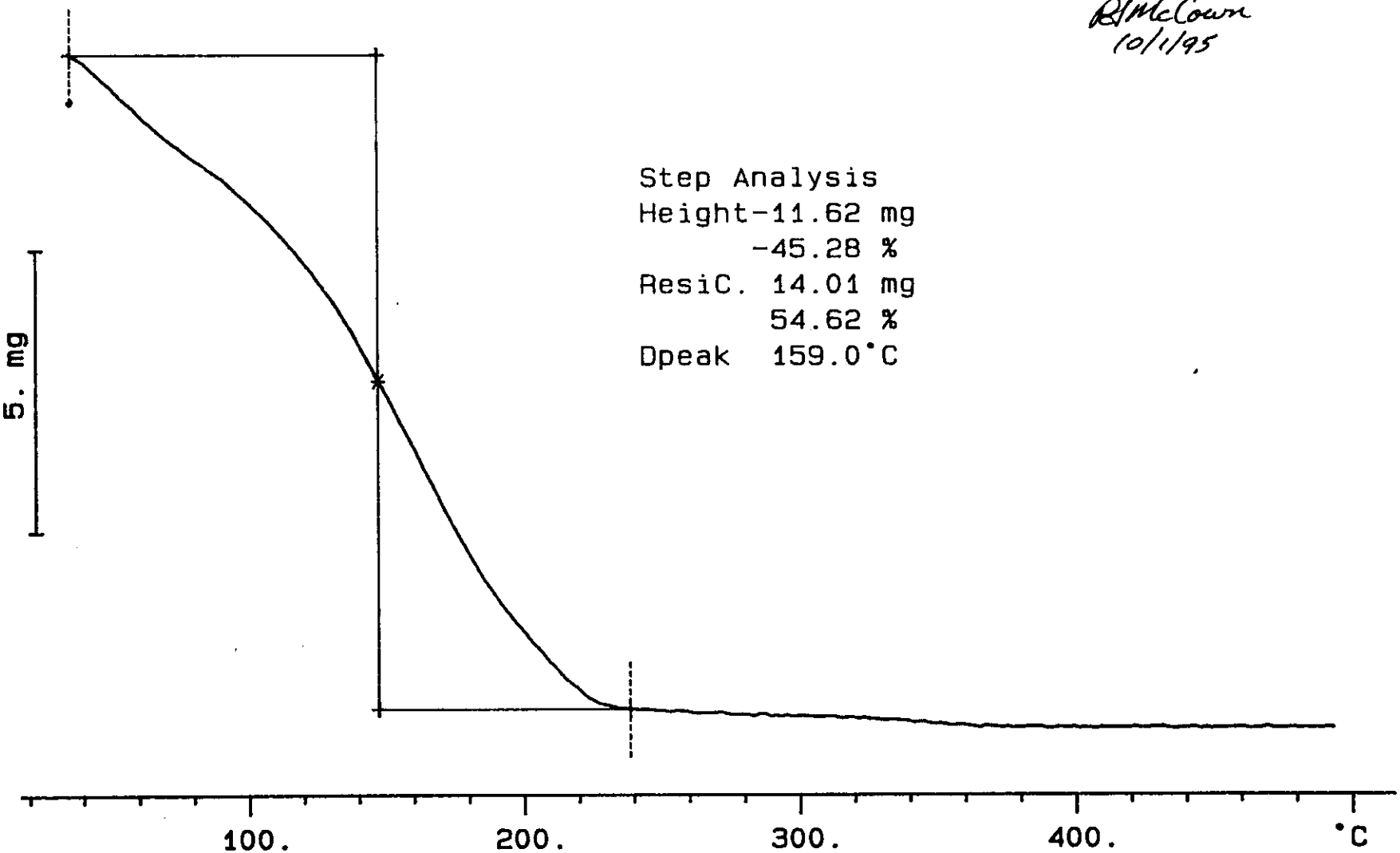
25.652 mg

Rate: 10.0 °C/min

File: 00050.001 TG METTLER 01-Oct-95

Ident: 0.0 222-S Laboratory

RJ McCown
10/1/95



WHC-SD-WM-DP-145, REV. 1

2-321

BEST AVAILABLE COPY

S95T001906 SAM N2

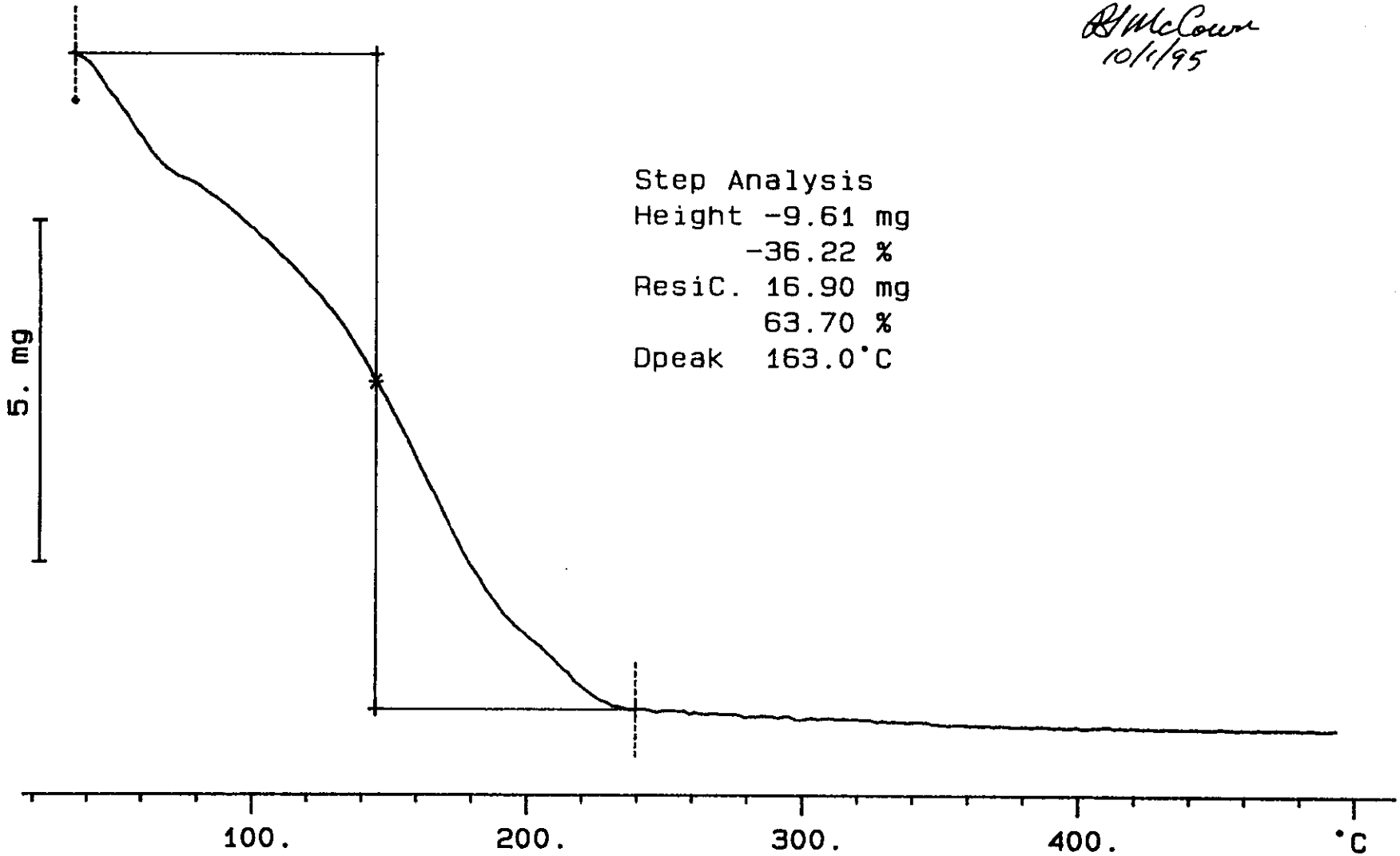
26.528 mg

Rate: 10.0 °C/min

File: 00051.001 TG METTLER 01-Oct-95

Ident: 0.0 222-S Laboratory

B McCown 10/1/95



Step Analysis
Height -9.61 mg
-36.22 %
ResiC. 16.90 mg
63.70 %
Dpeak 163.0°C

2-322

WHC-SD-WM-DP-145, REV. 1

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S95T001906 DUP N2

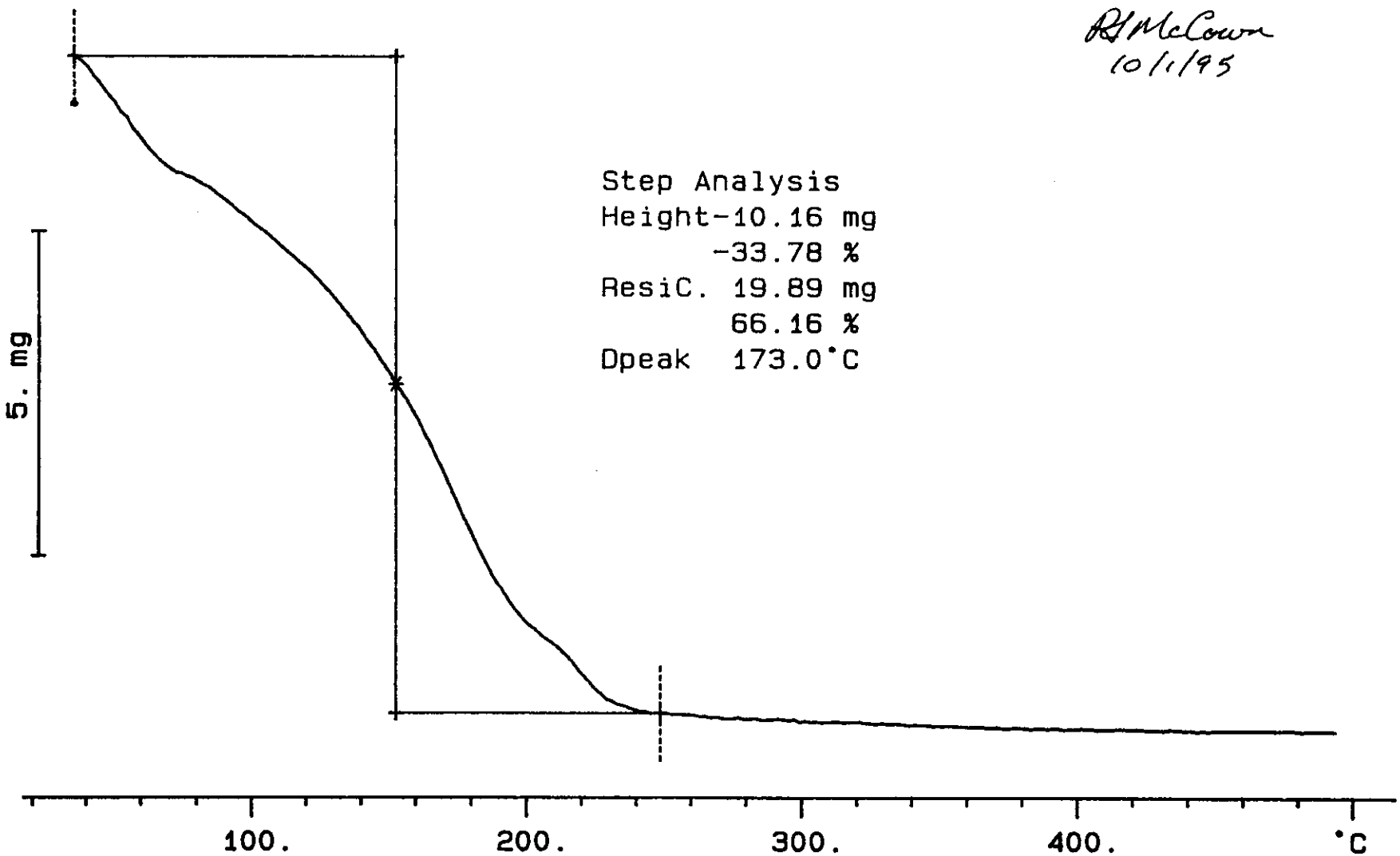
30.065 mg

Rate: 10.0 °C/min

File: 00052.001 TG METTLER 01-Oct-95

Ident: 0.0 222-S Laboratory

RJ McCown
10/1/95



2-323

WHC-SD-WM-DP-145, REV. 1

LABCORE Data Entry Template for Worklist# 2425

Analyst: SMF **Instrument:** TGA0 1 **Book #** 65N8A

Method: LA-560-112 Rev/Mod B-D

Worklist Comment: Please run BY-108 TGAs under N2. bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R	A	-------TEST------	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD				TGA-01	SOLID	59.74	60.58	N/A	%
95000118	BY-108 (R)	2 SAMPLE	S95T001861	0		TGA-01	SOLID	N/A	41.30		%
95000118	BY-108 (R)	3 DUP	S95T001861	0		TGA-01	SOLID	41.30	41.77	N/A	%
95000118	BY-108 (R)	4 SAMPLE	S95T001862	0		TGA-01	SOLID	N/A	26.93		%
95000118	BY-108 (R)	5 DUP	S95T001862	0		TGA-01	SOLID	26.93	25.93	N/A	%

Final page for worklist # 2425

Susie M. Fulton 9-24-95
Analyst Signature **Date**
2330

[illegible] 9-25-95
Analyst Signature **Date**

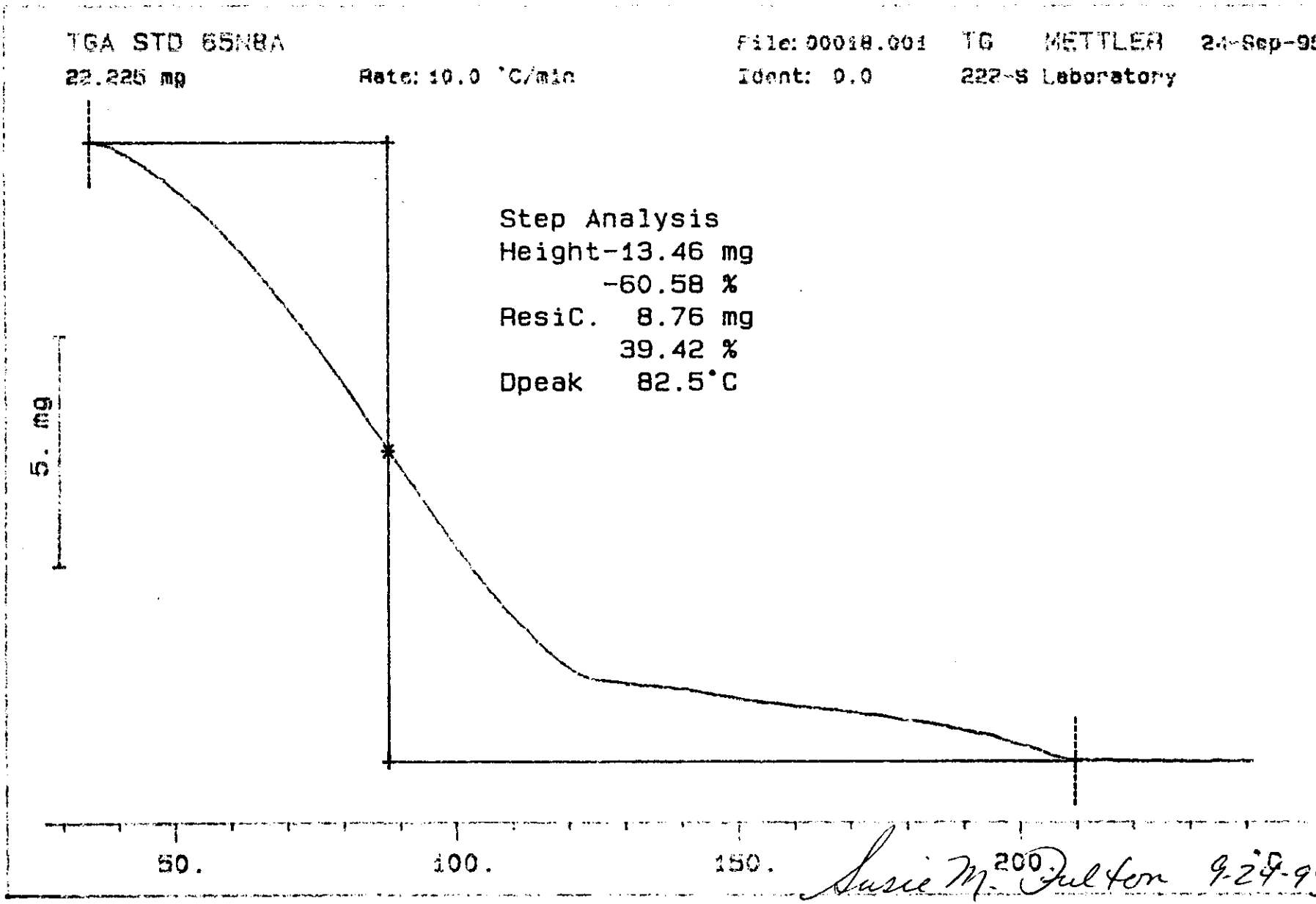
Verified by Blandina Valenzuela (9-26-95)

Data Entry Comments:

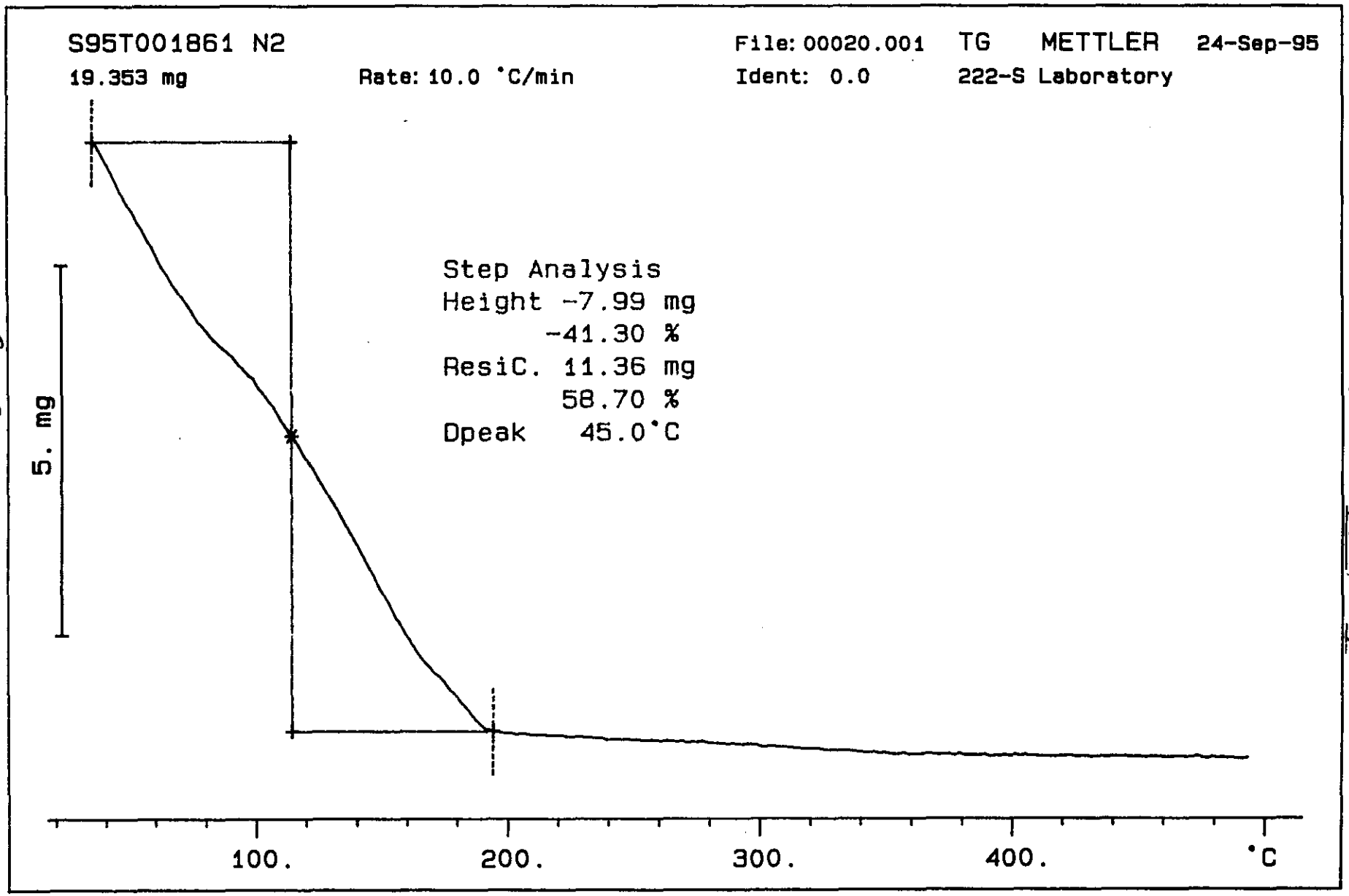
Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

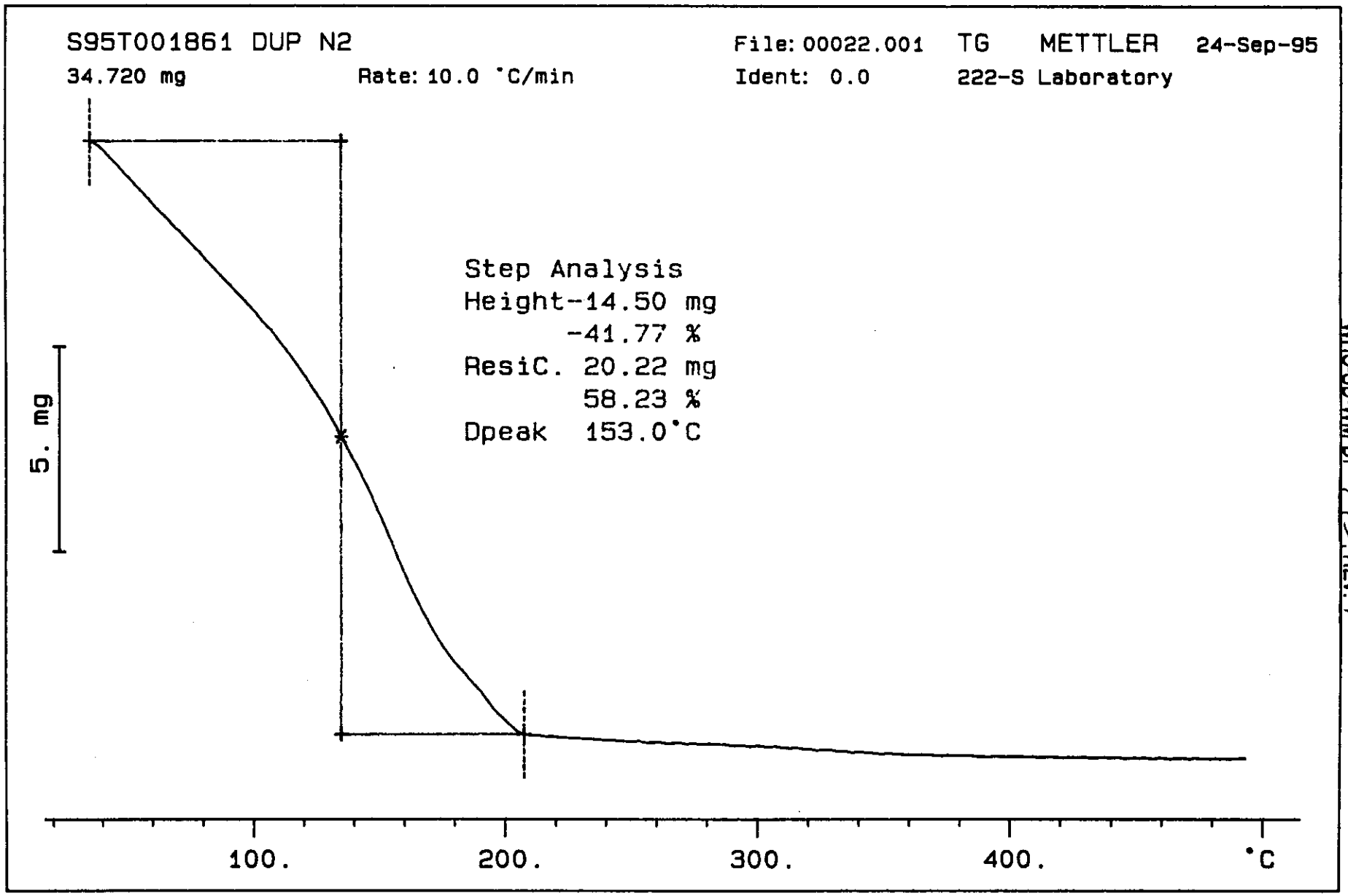
SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 2-325 TO 2-329.

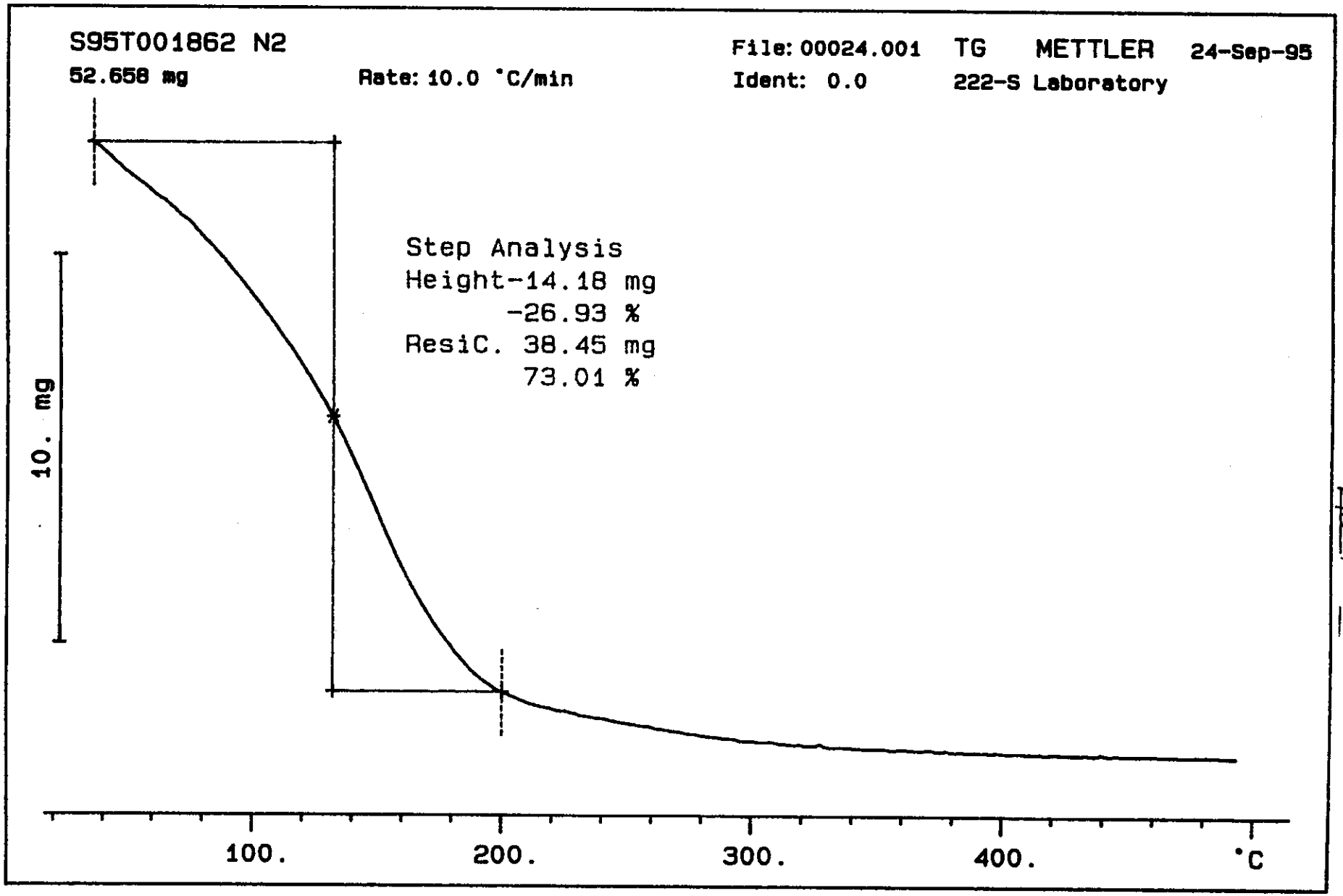
BEST AVAILABLE COPY

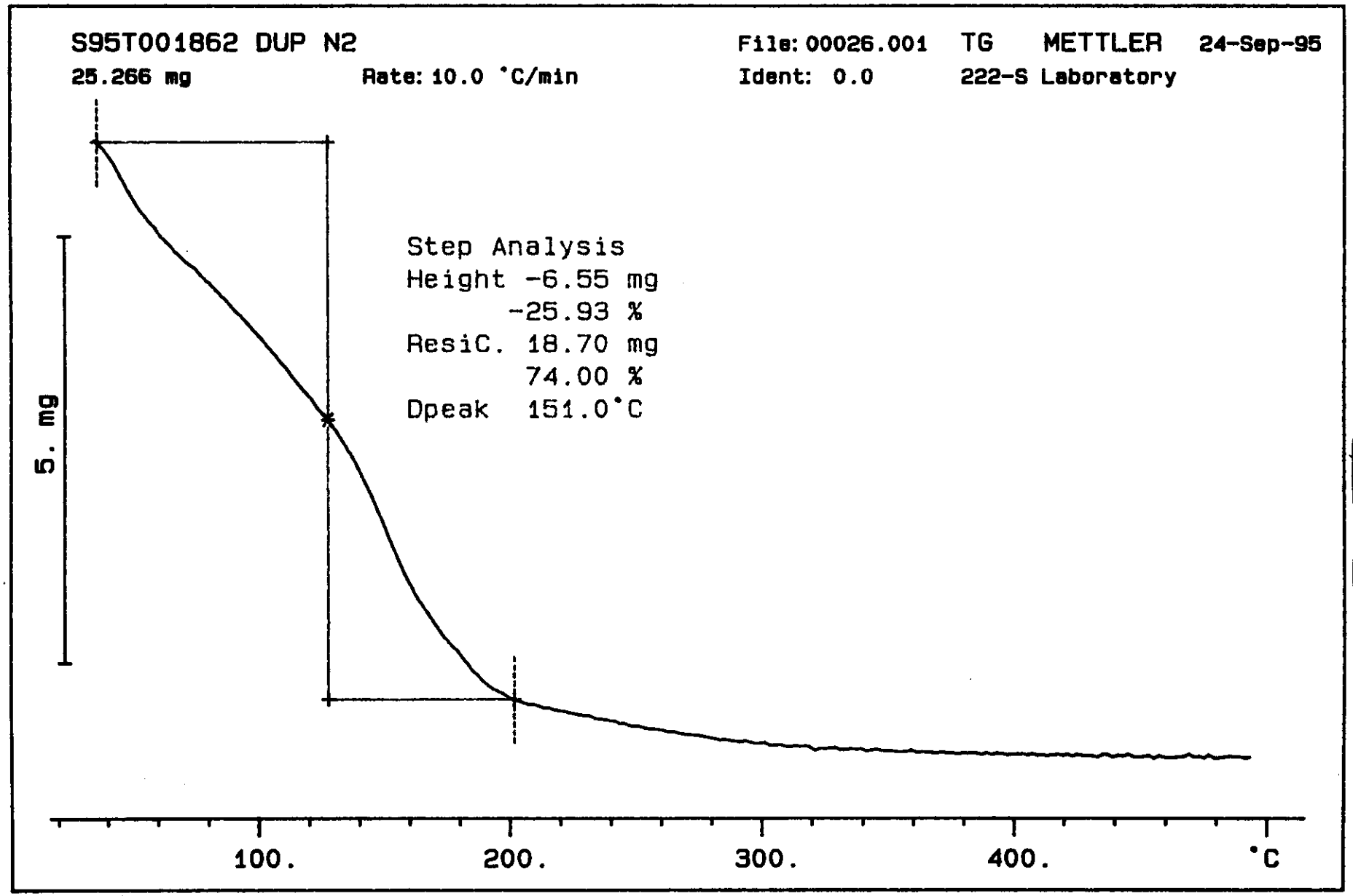


Susie M. Fulton 9-29-95


S95T001861 N2
19.353 mg
Rate: 10.0 °C/min
File: 00020.001
TG METTLER 24-Sep-95
Ident: 0.0
222-S Laboratory
Step Analysis
Height -7.99 mg
-41.30 %
ResiC. 11.36 mg
58.70 %
Dpeak 45.0°C
5. mg
100.
200.
300.
400.
°C


S95T001861 DUP N2
34.720 mg
Rate: 10.0 °C/min
File: 00022.001
Ident: 0.0
TG
METTLER
24-Sep-95
222-S Laboratory
Step Analysis
Height -14.50 mg
-41.77 %
ResiC. 20.22 mg
58.23 %
Dpeak 153.0°C
5. mg
100.
200.
300.
400.
°C


S95T001862 N2
52.658 mg
Rate: 10.0 °C/min
File: 00024.001
TG
METTLER
24-Sep-95
Ident: 0.0
222-S Laboratory
Step Analysis
Height-14.18 mg
-26.93 %
ResiC. 38.45 mg
73.01 %
10. mg
100.
200.
300.
400.
°C


S95T001862 DUP N2
25.266 mg
Rate: 10.0 °C/min
File: 00026.001
TG
METTLER
24-Sep-95
Ident: 0.0
222-S Laboratory
Step Analysis
Height -6.55 mg
-25.93 %
ResiC. 18.70 mg
74.00 %
Dpeak 151.0°C
5. mg
100.
200.
300.
400.
°C

LABCORE Data Entry Template for Worklist# 2426

Analyst: SMF **Instrument:** TGA0 3 **Book #** 65N8A

Method: LA-514-114 Rev/Mod C-0

Worklist Comment: Please run BY-108 TGAs under N2. bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R	A	-------TEST------	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD				TGA-03	SOLID	59.74	60.78	N/A	%
95000118	BY-108 (R)	2 SAMPLE	S95T001863	0		TGA-03	SOLID	N/A	22.2		%
95000118	BY-108 (R)	3 DUP	S95T001863	0		TGA-03	SOLID	22.2	15.6	N/A	%
95000118	BY-108 (R)	4 SAMPLE	S95T001915	0		TGA-03	SOLID	N/A 12.81	~~13.13~~ 12.81	9-25-95 BDV	%
95000118	BY-108 (R)	5 DUP	S95T001915	0		TGA-03	SOLID	~~13.13~~ 13.13	~~12.81~~	9-25-95 N/A BDV	%

Final page for worklist # 2426

See attached for signatures
Analyst Signature **Date** 9-25-95 BDV

Analyst Signature **Date** 9-25-95

Verified by Blandina Valenzuela 9-26-95

S95T001863 produced one ~~two~~ 9-25-95 BDV other weight loss step of 18.09% at approximately 160°C

Data Entry Comments: S95T001915 produced one other weight loss step of 21.35% at approximately 160°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# 2426

Analyst: SMF **Instrument:** TGA0 _____ **Book #** ~~65N80~~ 9-25-95 BDV

Method: ~~LA-560-112 Rev/Mod~~ LA-514-114/CO SMF 9-24-95

Worklist Comment: Please run BY-108 TGAs under N2. bdv

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	-------TEST------	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	STD				TGA-01	SOLID			N/A	%
95000118	BY-108 (R)	2	SAMPLE	S95T001863	0		TGA-01	SOLID	N/A			%
95000118	BY-108 (R)	3	DUP	S95T001863	0		TGA-01	SOLID			N/A	%
95000118	BY-108 (R)	4	SAMPLE	S95T001915	0		TGA-01	SOLID	N/A			%
95000118	BY-108 (R)	5	DUP	S95T001915	0		TGA-01	SOLID			N/A	%

Final page for worklist # 2426

Susie M. Fulton 9-24-95
Analyst Signature **Date** 2330

Analyst Signature **Date**

Other instrument was used.
9-25-95
BDV

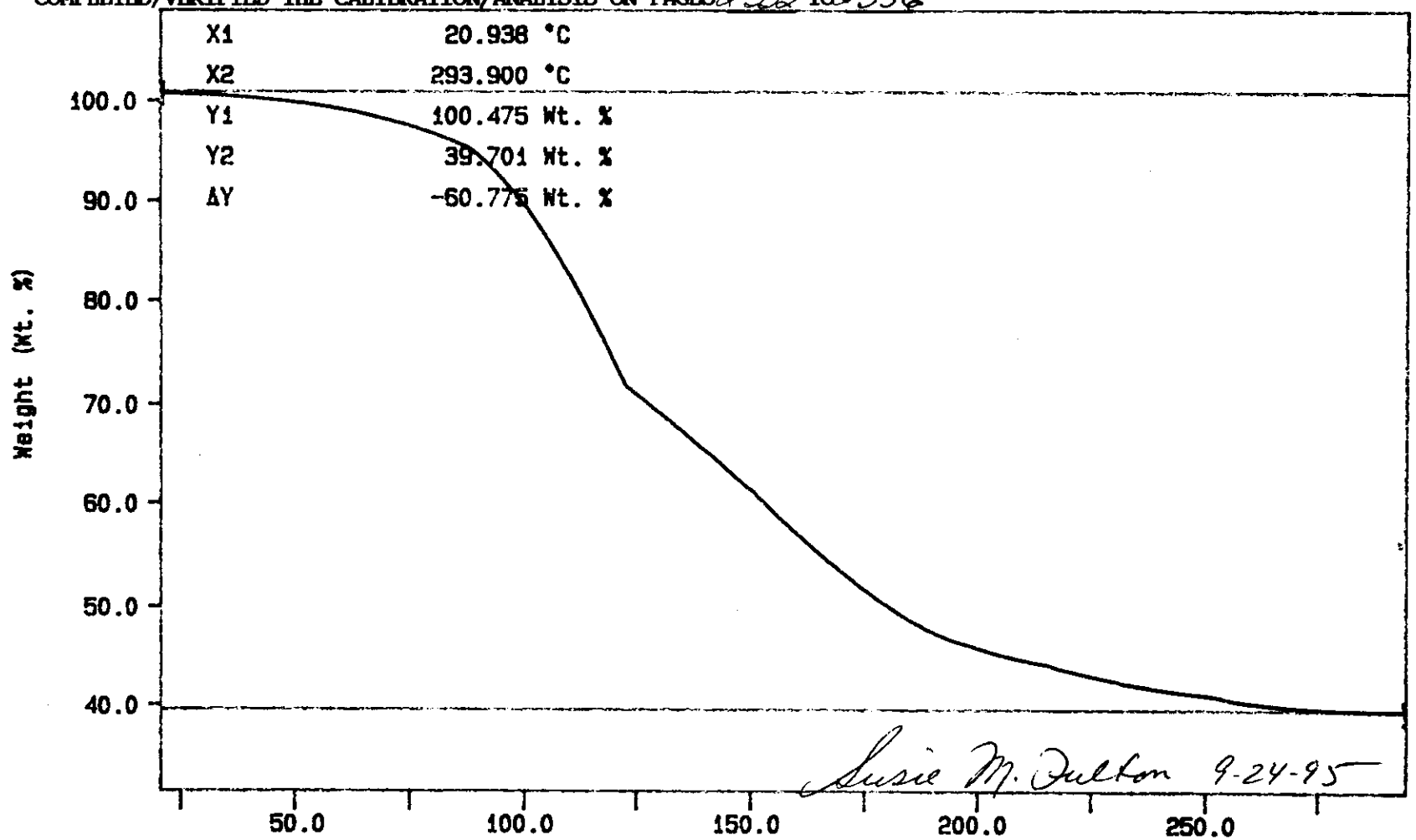
Data Entry Comments:

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: TGA
File info: TER092401 Sun Sep 24 16:19:30 1995
Sample Weight: 25.017 mg
65N8-A Terliq

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 2-332 TO 2-336

BEST AVAILABLE COPY



Susie M. Fulton 9-24-95

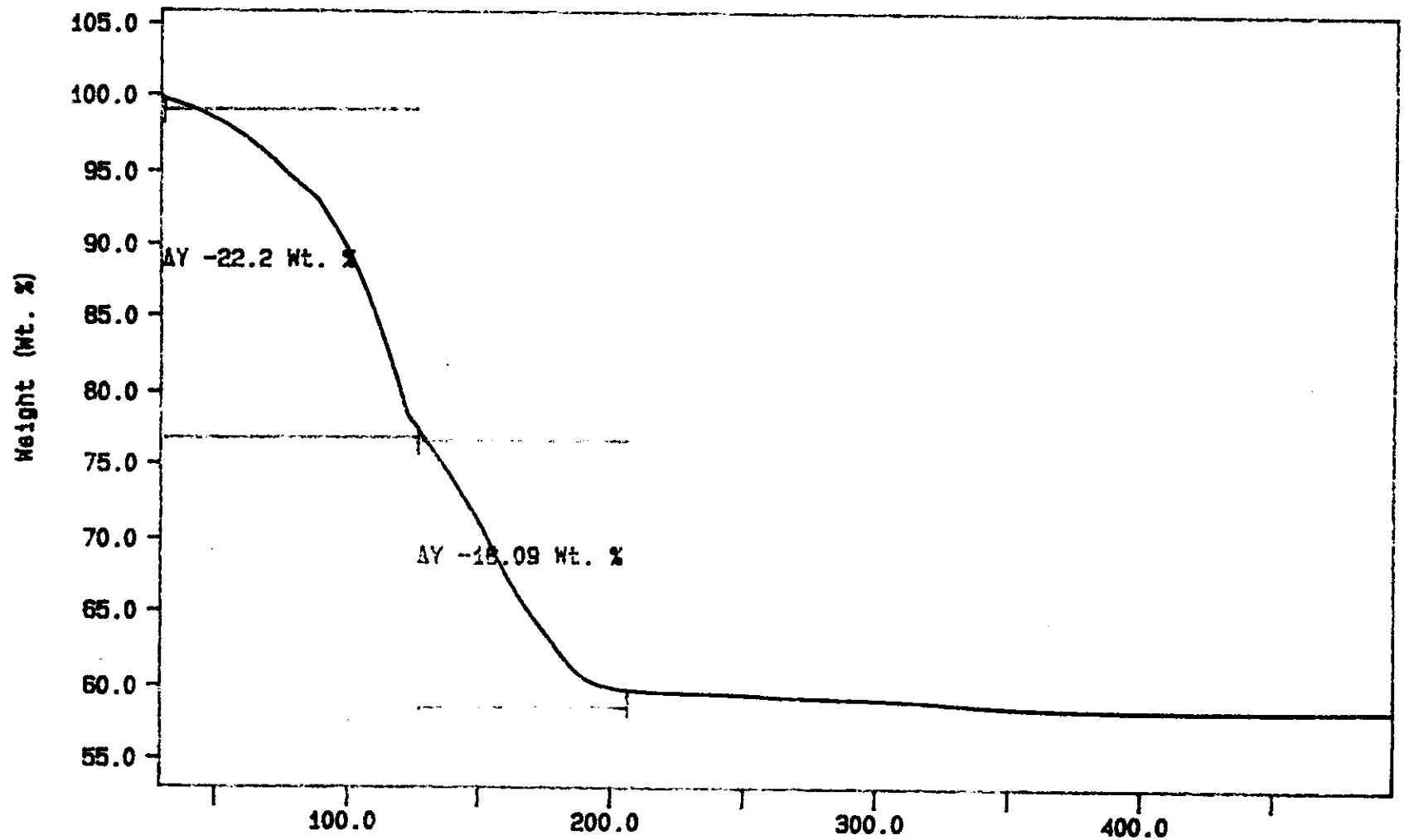
2-332

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 Sep 24 16:21:10 1995

WHC-SD-WM-DP-145, REV. 1

Curve 1: TGA
File info: SAM092401 Sun Sep 24 17:21:55 1995
Sample Weight: 15.861 mg
S95T001863, at 10C/min



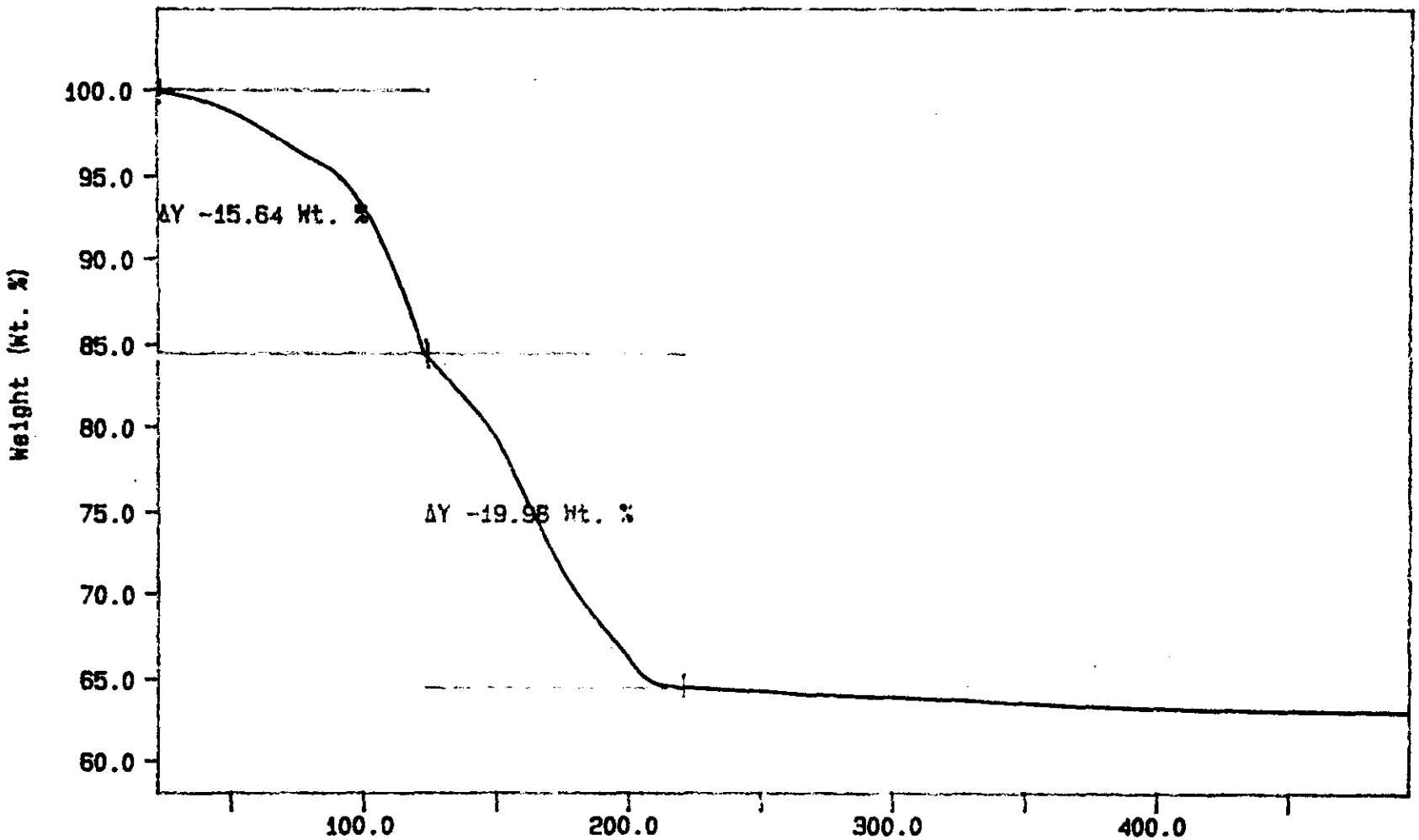
N2

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 Sep 25 09:58:40 1995

WHC-SD-WM-DP-145, REV. 1

Curve 1: TGA
File info: SAM092402 Sun Sep 24 18:49:01 1995
Sample Weight: 21.728 mg
S95T001863 DUP, at 10C/min



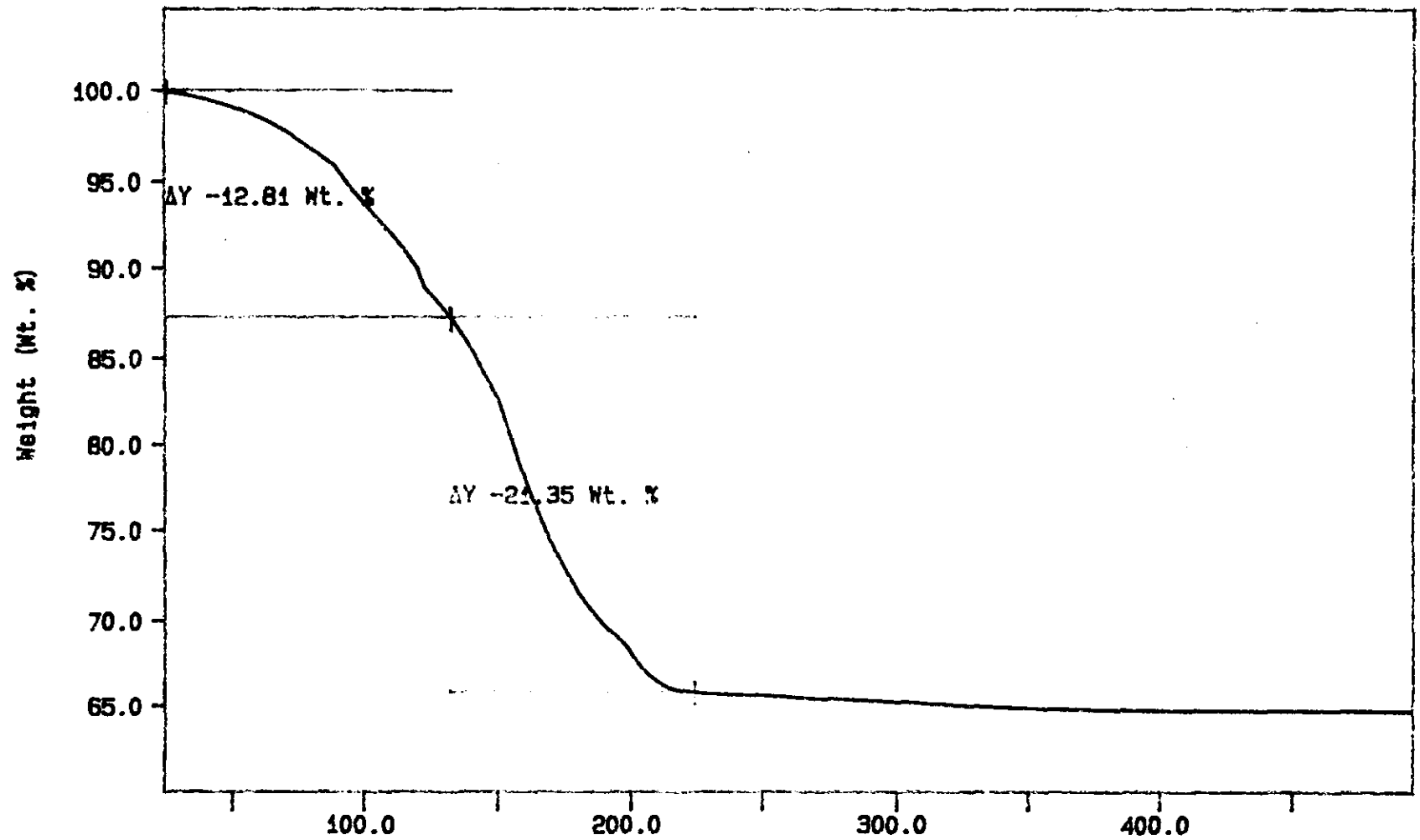
N2
TEMP1: 35.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 600.0 C

SM FULTON
PERKIN-ELMER
7 Series Thermal Analysis System
Mon Sep 25 10:03:44 1995

WHC-SD-WM-DP-165 REV. 1

P-334

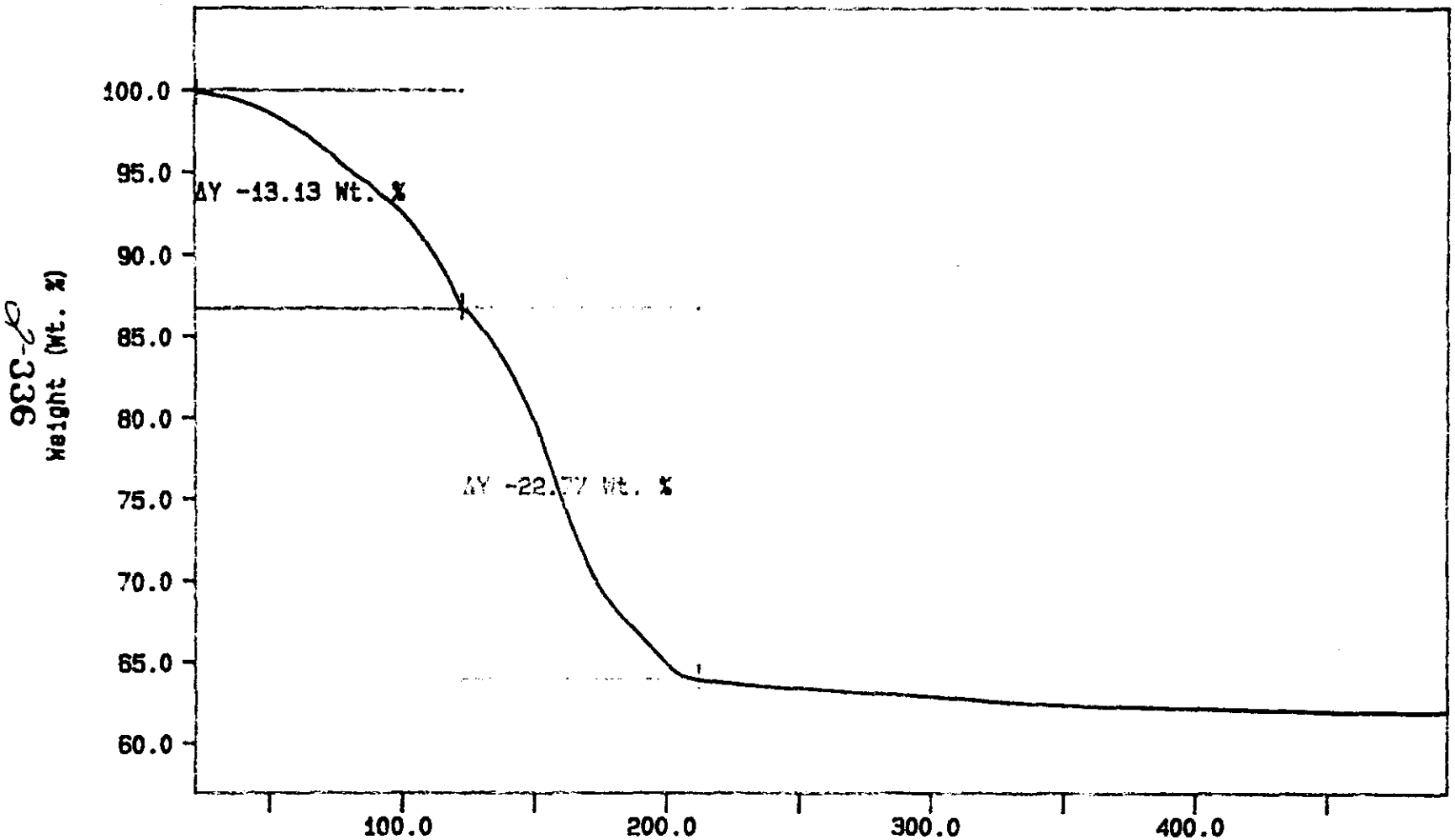
Curve 1: TGA
File info: SAM092403 Sun Sep 24 19:59:28 1995
Sample Weight: 27.899 mg
S95T001915, at 10C/min



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
Mon Sep 25 09:42:45 1995

Curve 1: TGA
File info: SAM092404 Sun Sep 24 21:45:20 1995
Sample Weight: 19.110 mg
S95T001915 DUP. at 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
Mon Sep 25 09:48:53 1995

LABCORE Data Entry Template for Worklist# 2428

Analyst: ADP **Instrument:** TGA0 1 **Book #** 65N8A

Method: LA-560-112 Rev/Mod B0

Worklist Comment: Please run BY-108 TGAs under N2. bdv

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	-------TEST------	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	STD				TGA-01	SOLID	59.74	59.98	N/A	%
95000118	BY-108 (R)	2	SAMPLE	S95T001918	0		TGA-01	SOLID	N/A	29.31		%
95000118	BY-108 (R)	3	DUP	S95T001918	0		TGA-01	SOLID	29.31	35.21	N/A	%

Final page for worklist # 2428

[signature] 9-19-95
Analyst Signature **Date**

[signature] 9-20-95
Analyst Signature **Date**

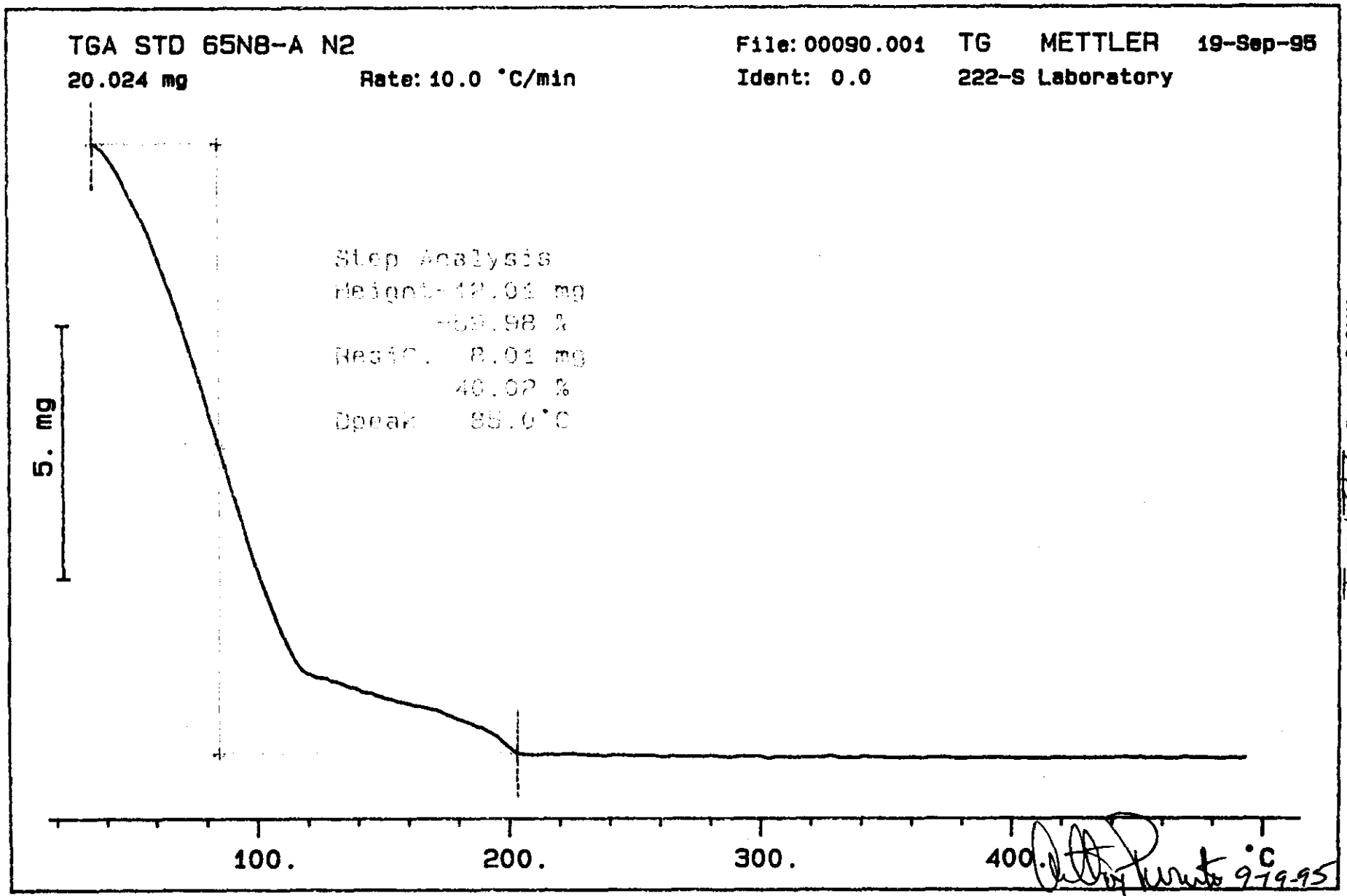
Verified by Blandina Valenzuela 9-21-95

Data Entry Comments: [signature] 9/20/95 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.

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 2-339 TO 2-340.

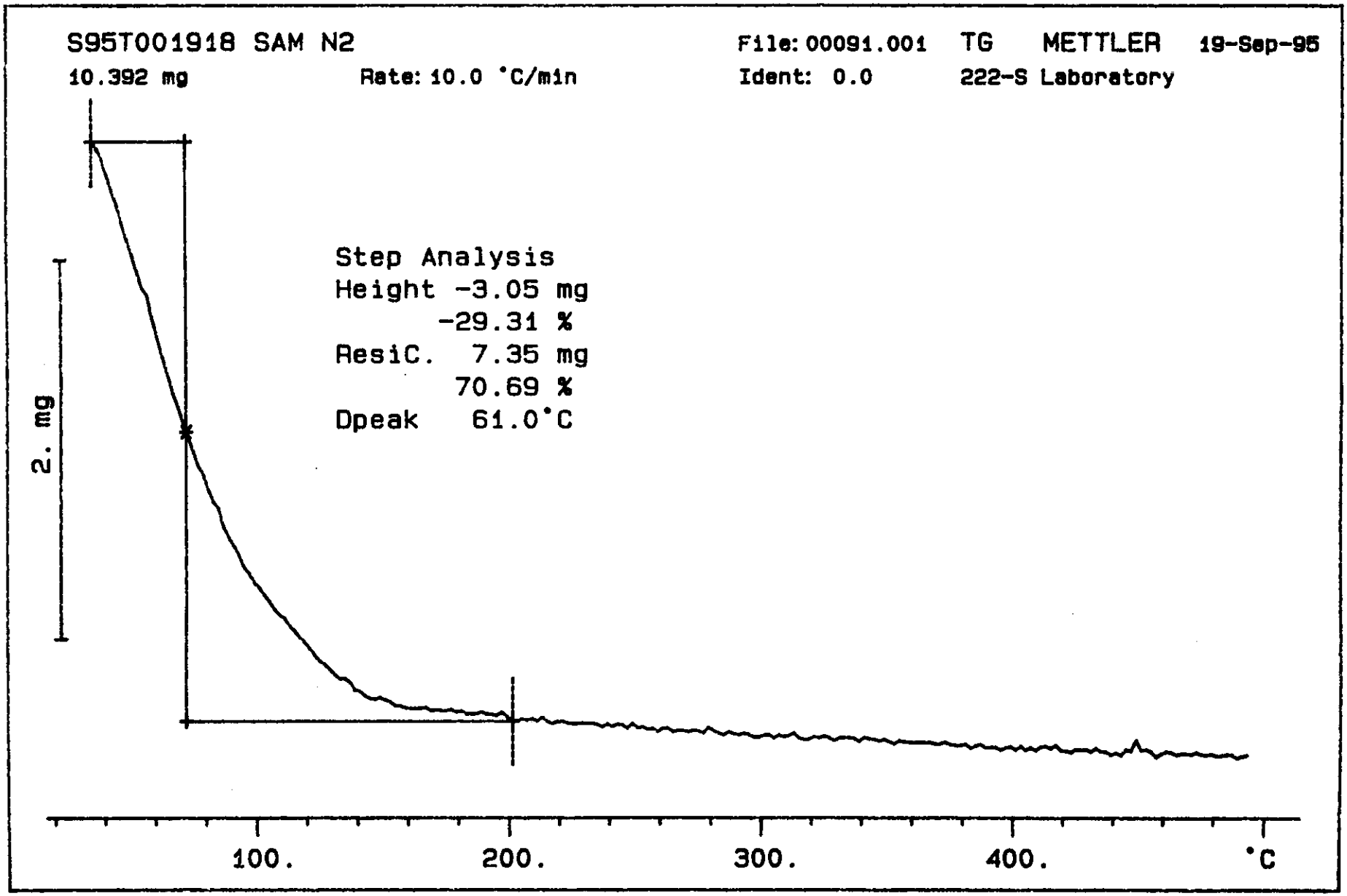
BEST AVAILABLE COPY

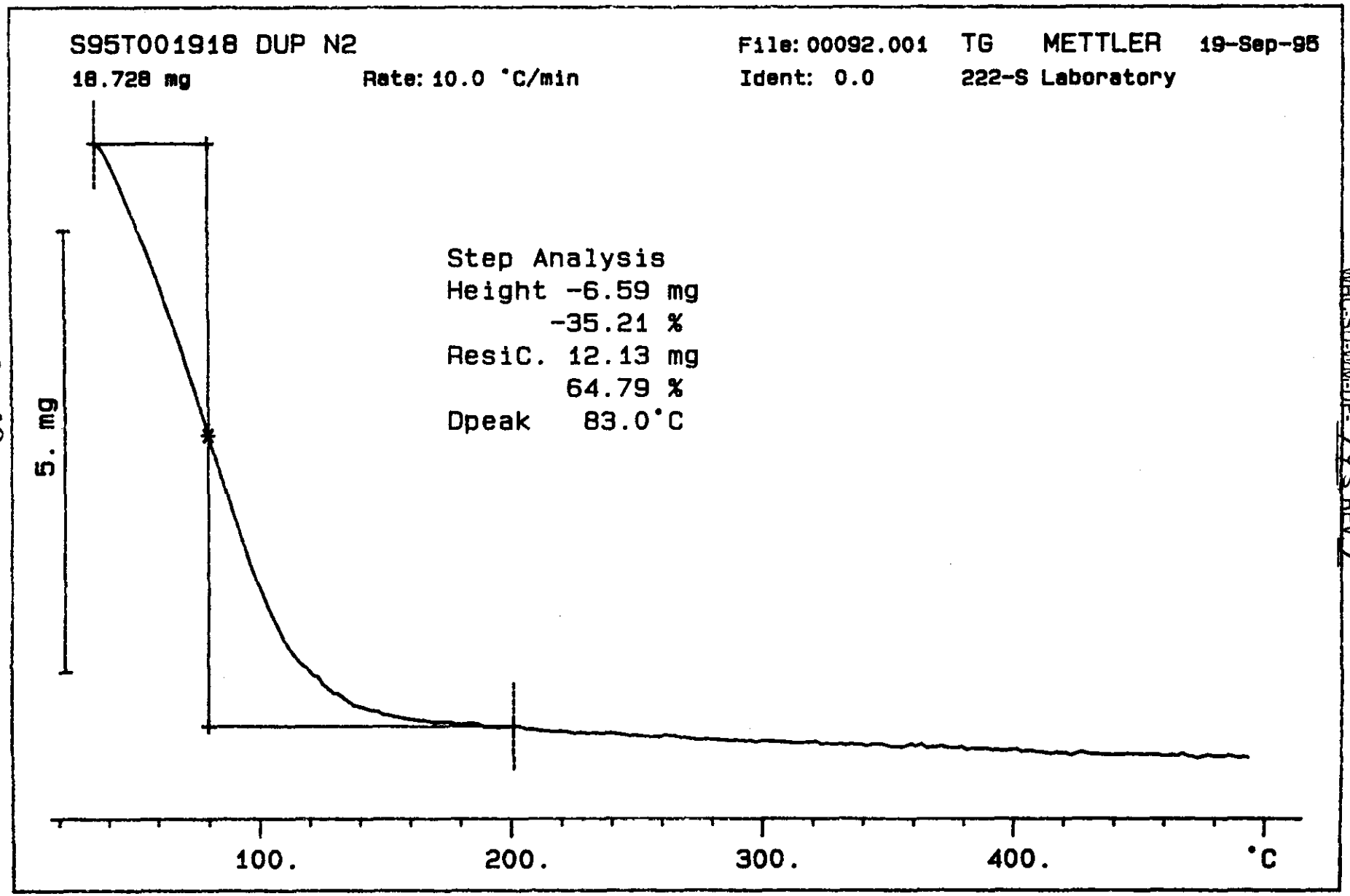


9-19-95

2-338

WHC-SD-WM-DP-145, REV. 1


S95T001918 SAM N2
10.392 mg
Rate: 10.0 °C/min
File: 00091.001
Ident: 0.0
TG
METTLER
19-Sep-95
222-S Laboratory
Step Analysis
Height -3.05 mg
-29.31 %
ResiC. 7.35 mg
70.69 %
Dpeak 61.0°C
2. mg
100.
200.
300.
400.
°C


S95T001918 DUP N2
18.728 mg
Rate: 10.0 °C/min
File: 00092.001
TG METTLER 19-Sep-95
Ident: 0.0
222-S Laboratory
Step Analysis
Height -6.59 mg
-35.21 %
ResiC. 12.13 mg
64.79 %
Dpeak 83.0°C
5. mg
100.
200.
300.
400.
°C

LABCORE Data Entry Template for Worklist# 2615

Analyst: RDM **Instrument:** TGA0 1 **Book #** 65N8-A

Method: LA-560-112 Rev/Mod B-0

Worklist Comment: Please run BY-108 TGAs under N2. bdv

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	-------TEST------	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	STD				TGA-01	SOLID	59.74	60.53	N/A	%
95000118	BY-108 (R)	2	SAMPLE	S95T001863	0		TGA-01	SOLID	N/A	32.06		%
95000118	BY-108 (R)	3	DUP	S95T001863	0		TGA-01	SOLID	32.06	35.91	N/A	%
95000118	BY-108 (R)	4	SAMPLE	S95T001916	1		TGA-01	SOLID	N/A	36.23		%
95000118	BY-108 (R)	5	DUP	S95T001916	1		TGA-01	SOLID	36.23	27.02	N/A	%

Final page for worklist # 2615

10/7/95
Analyst Signature **Date**

10-10-95
Analyst Signature **Date**

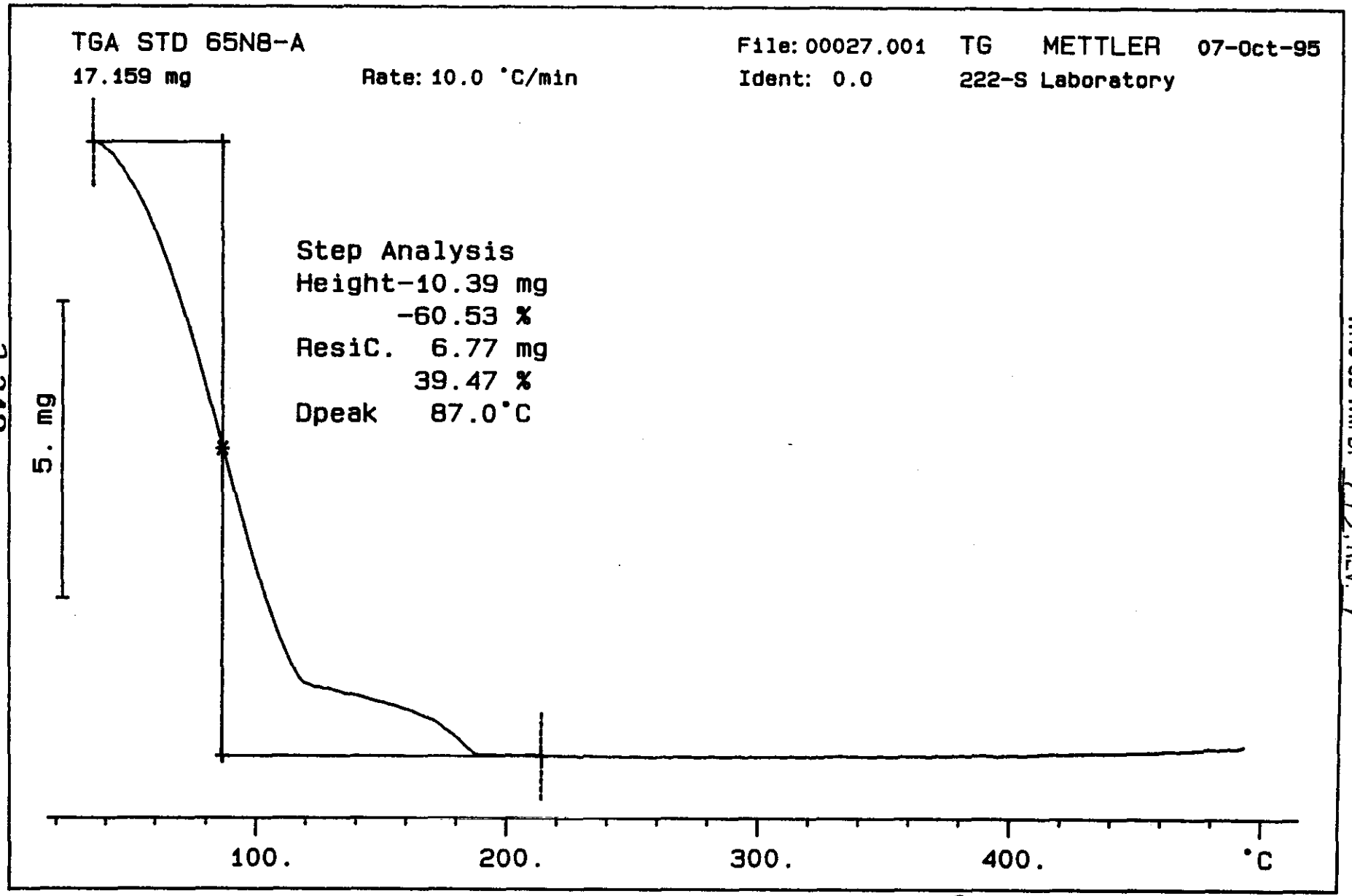
Verified by Blandina Valenzuela 10-11-95

Data Entry Comments: S95T001916 produced a second weight loss of 7.81% at 380°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 2-342 TO 2-346.

BEST AVAILABLE COPY

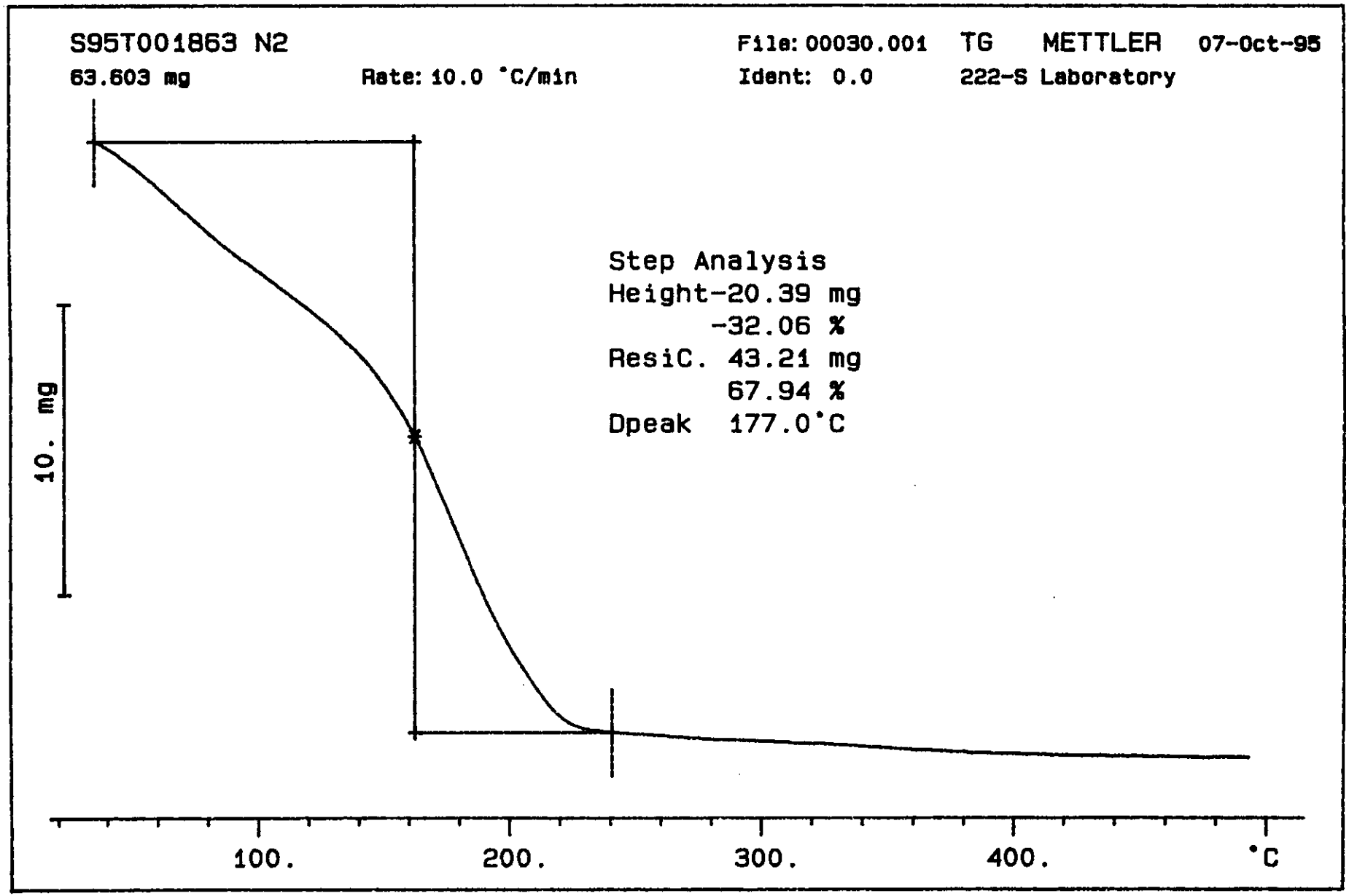


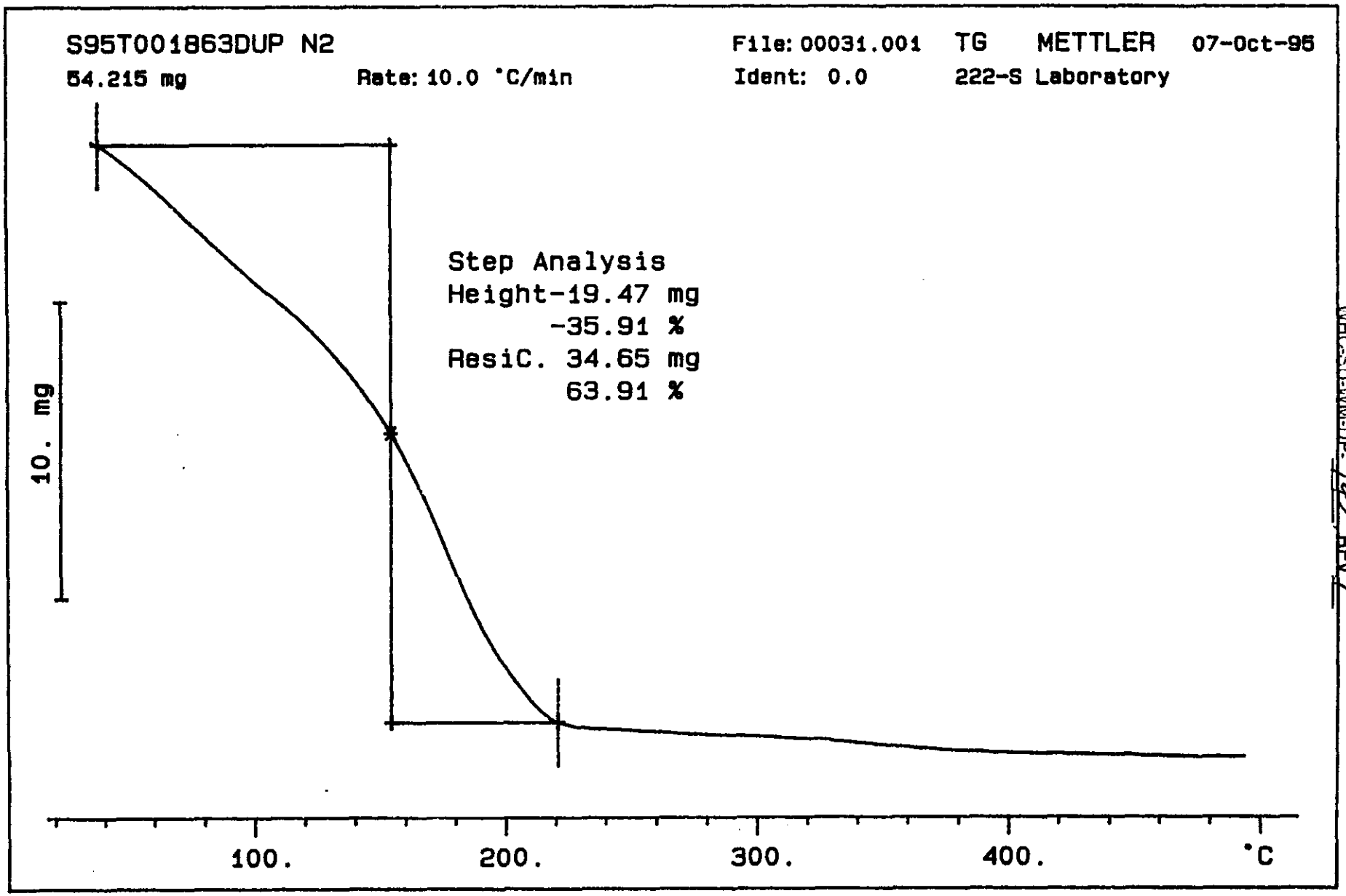
2-342

WHC-SD-WM-DP-145, REV. 1

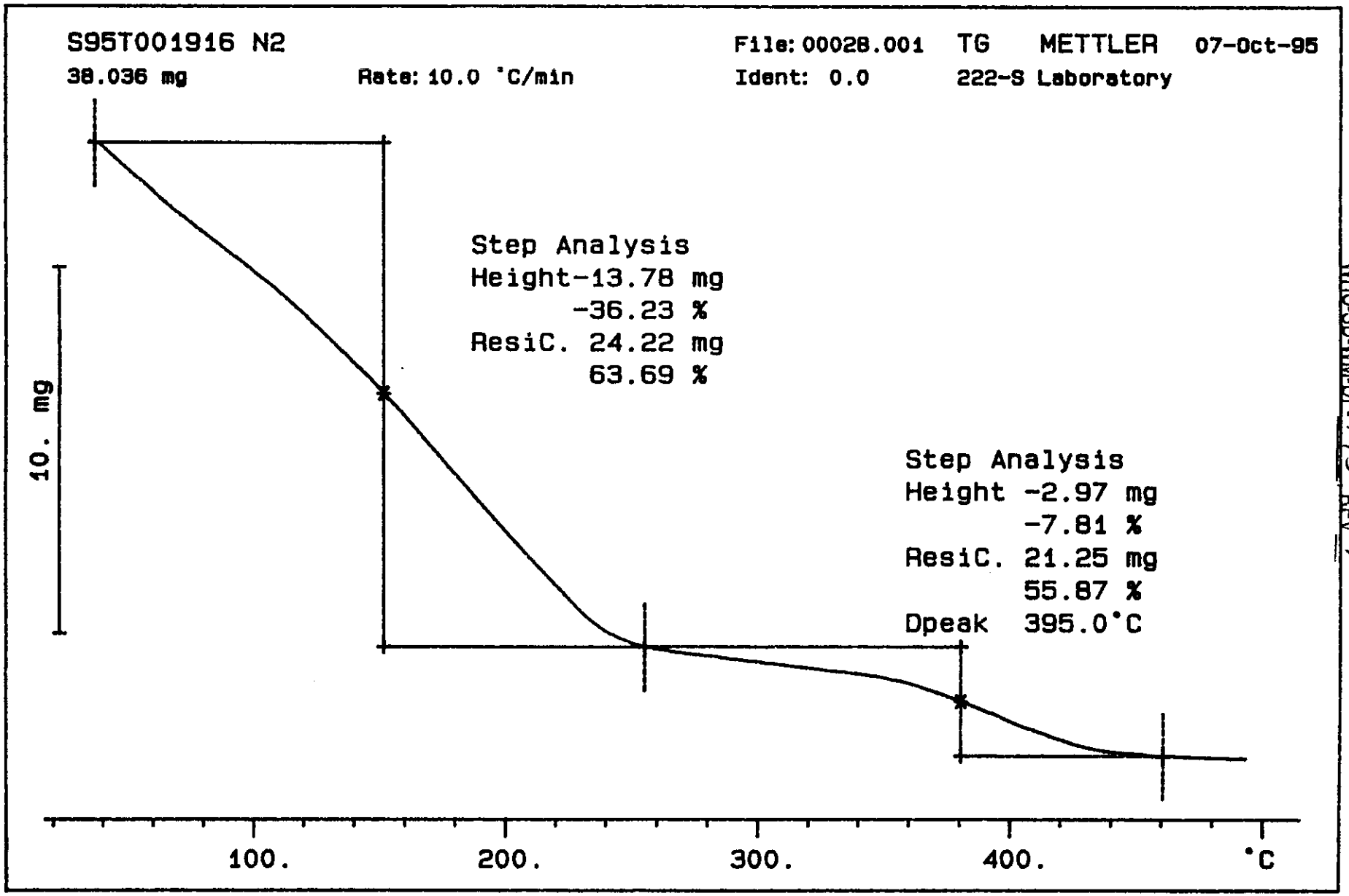
RMAnn 10/7/95

BEST AVAILABLE COPY



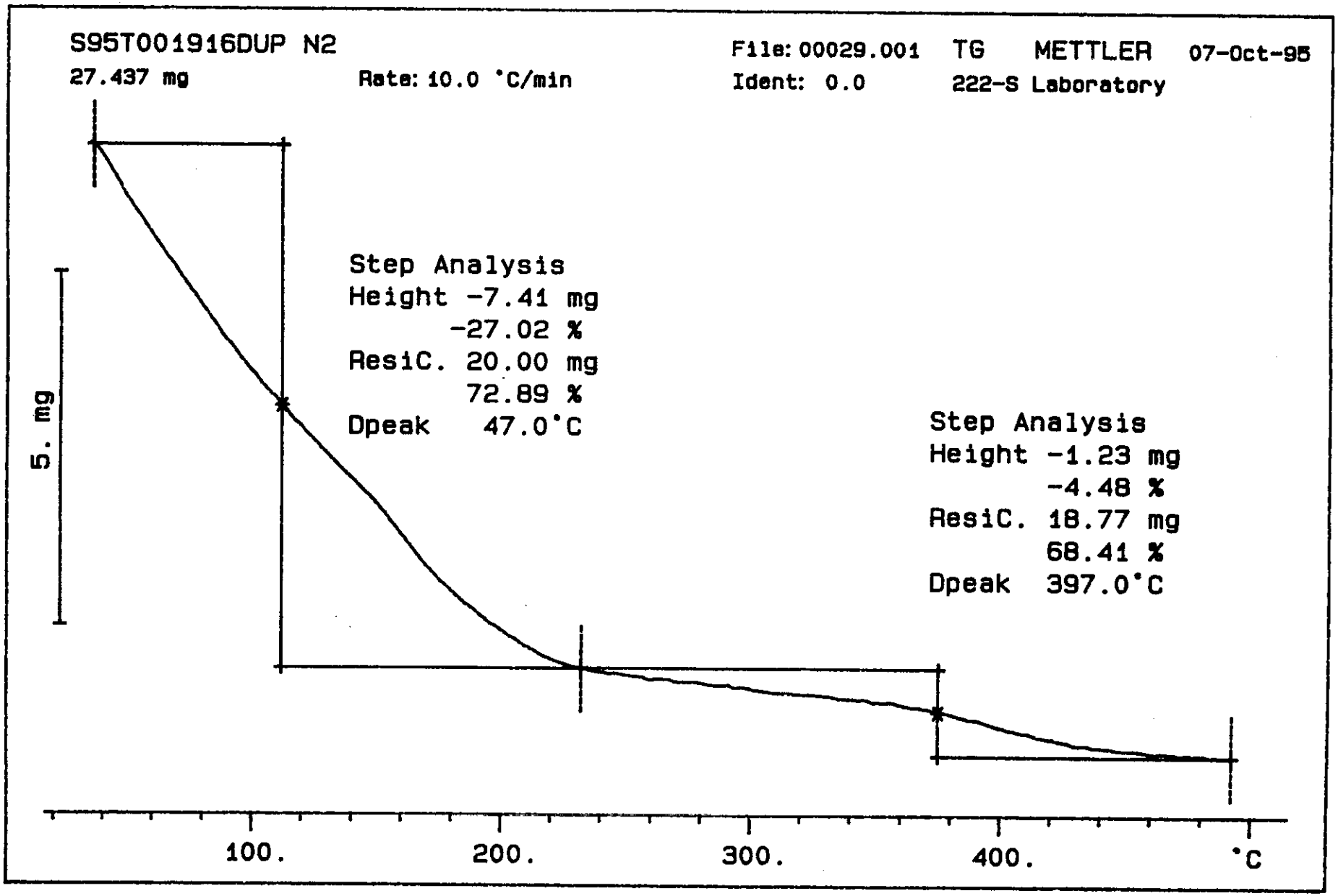

S95T001863DUP N2
54.215 mg
Rate: 10.0 °C/min
File: 00031.001
TG METTLER 07-Oct-95
Ident: 0.0
222-S Laboratory
Step Analysis
Height-19.47 mg
-35.91 %
ResiC. 34.65 mg
63.91 %
10. mg
100.
200.
300.
400.
°C

BEST AVAILABLE COPY



WHC-SD-WM-DP-145 REV 1

BEST AVAILABLE COPY



LABCORE Data Entry Template for Worklist# 2685

Analyst: KPM **Instrument:** TGA0 1 **Book #** ~~65N-BA~~ 65NB-A 9/30/95

Method: LA-560-112 Rev/Mod B-0

Worklist Comment: Please run BY-108 TGAs under N2. gjh

GROUP	PROJECT	S TYPE	SAMPLE#	R	A	-------TEST------	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD				TGA-01	SOLID	59.74	60.49	N/A	%
95000118	BY-108 (R)	2 SAMPLE	S95T001966	0		TGA-01	SOLID	N/A	20.84		%
95000118	BY-108 (R)	3 DUP	S95T001966	0		TGA-01	SOLID	20.84	19.25	N/A	%

Final page for worklist # 2685

KPMeyer 9/30/95
Analyst Signature **Date**

B McCown 9/30/95
Analyst Signature **Date**

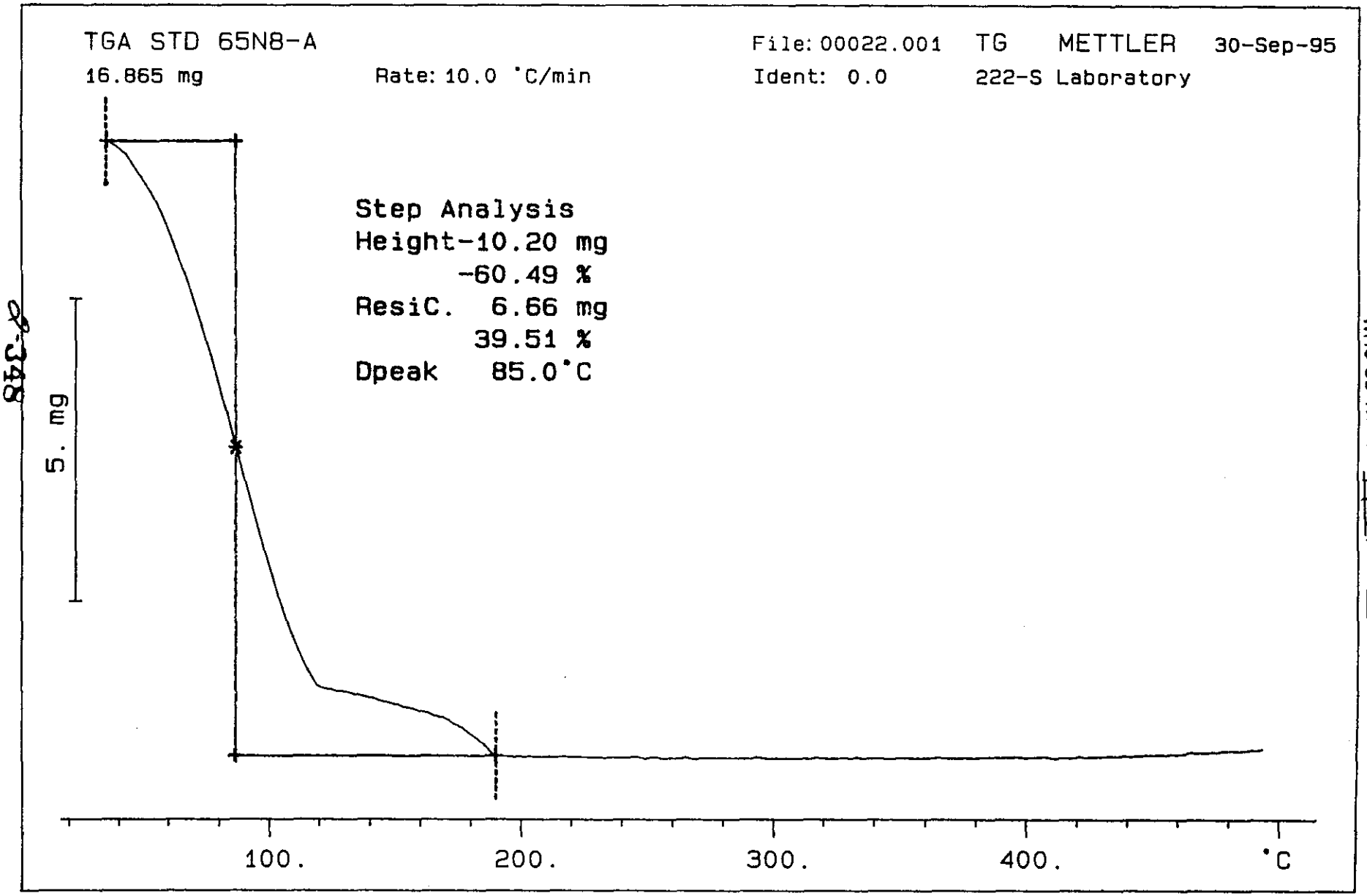
Verified by Blandina Valenzuela 10-4-95

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 2-348 TO 2-350.

BEST AVAILABLE COPY

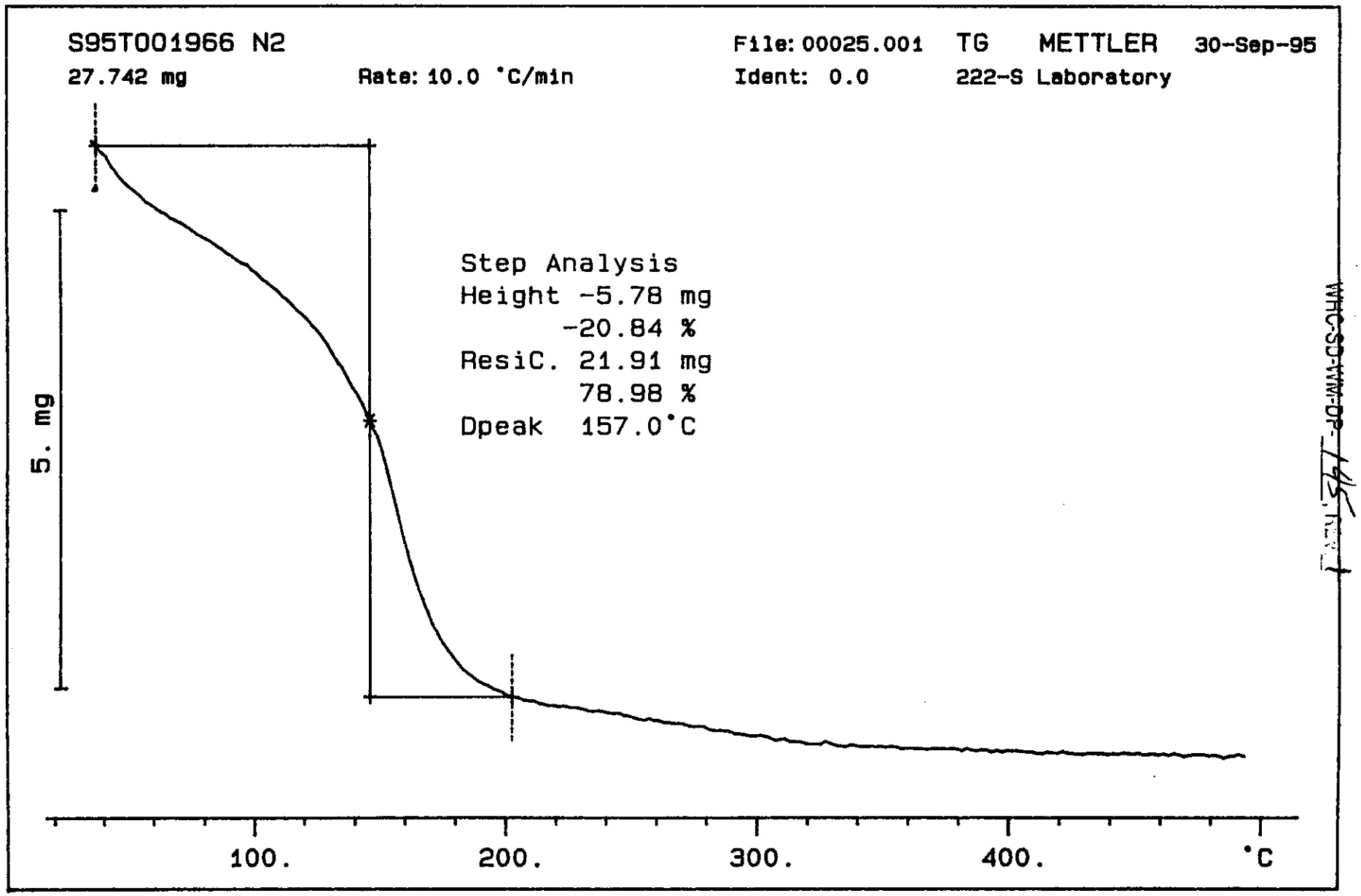


2-348

WHC-SD-WM-DP-145, REV. 1

R Wagner 9/30/95

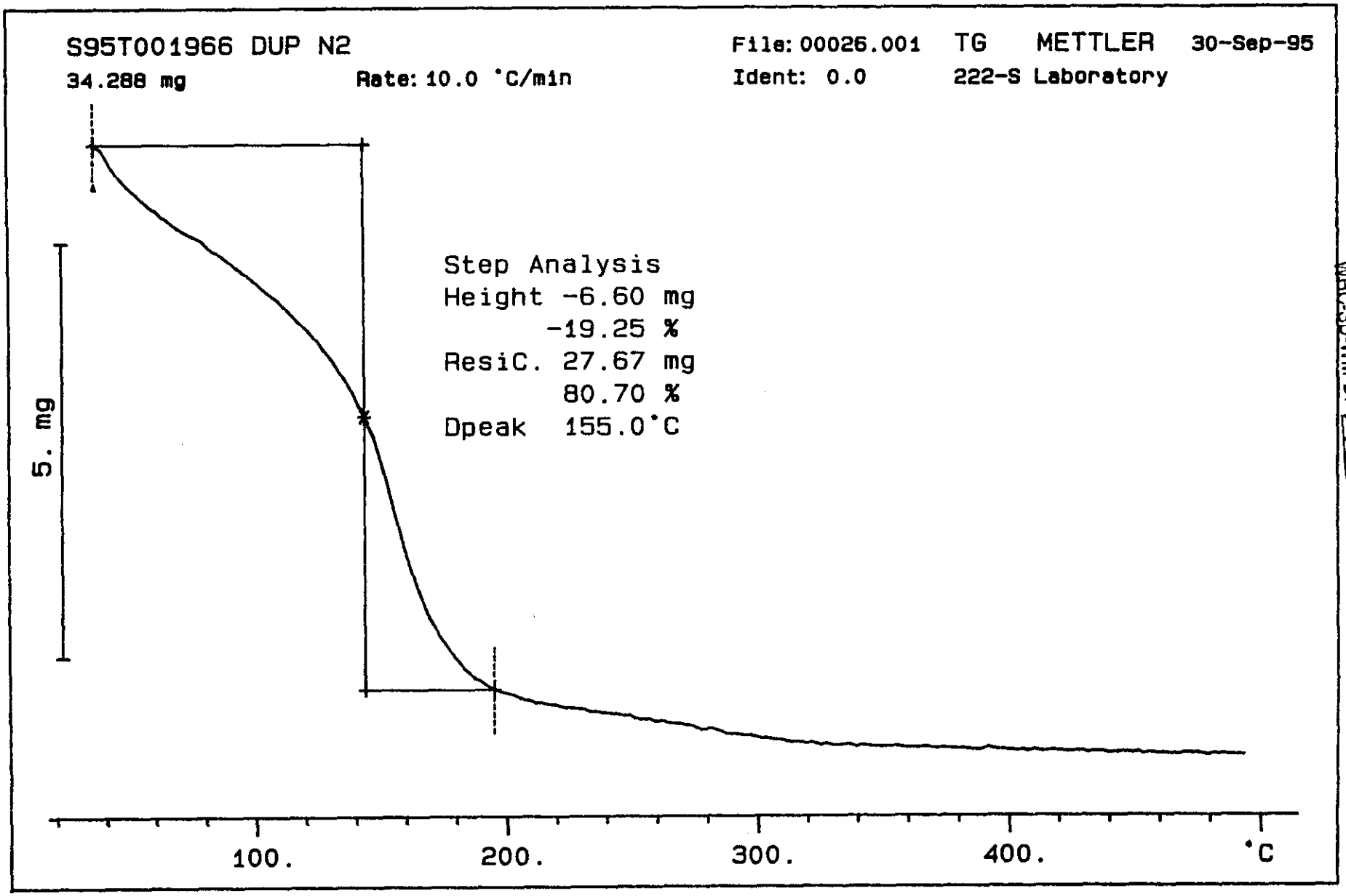
BEST AVAILABLE COPY



WHC-SD-WM-DP-145, Rev. 1

2-349

BEST AVAILABLE COPY



2-350

WHC-SD-WM-DP-145, REV. 1