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

Document number: SD-WM-DP-074

Section 1 **of** 8

Title: 216 Day Final Report for Tank 241-SY-103 Push Mode Core 62

Date: 08-11-95 **Revision:** A000

Originator: A D Rice
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ANALYTICAL SERVICES

RESULTS FOR TANK 241-SY-103, PUSH MODE, CORE 62

Date: APRIL 20, 1995

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NARRATIVE

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From: Program Support
Phone: 373-5878 T6-06
Date: November 4, 1994
Subject: 45 DAY SAFETY SCREEN RESULTS FOR TANK 241-SY-103, CORE 62

9457549

To: D. R. Bratzel S7-31

cc: J. G. Kristofzski T6-06
JGK File/LB

References:

(1) WHC-SD-WM-TP-197, REV. 0, "Tank 241-SY-103 Tank Characterization Plan", Westinghouse Hanford Company, Richland, WA 99352, dated 7/28/94.

(2) Internal Memo 7E720-94-127, "Clarifications to Tank 241-SY-103 Tank Characterization Plan, Westinghouse Hanford Company, Richland, WA. 99352, dated 8/15/94.

(3) Internal Memo 7E720-94-128, "Format I Reporting Requirement", Westinghouse Hanford Company, Richland, WA. 99352, dated 8/15/94.

Summary

One core sample from tank SY-103, core 62, which was composed of fifteen (15) segments, was received by the 222-S laboratories. This core sample underwent Safety Screening Analysis (DSC, TGA, and Alpha Total) in accordance with references (1) (2) and (3) above. TGA results for segment 7 (S94T000056) and segment 8 (S94T000057) were below the 17% limit. These samples did not contain a significant exotherm by DSC. The lower half of segments 13 (S94T000091) and 14 (S94T000092) exceeded the DSC limit of 523 joules/g (dry).

Sample Receipt and Extrusion

Core 62 Segment 1

Segment 1 was sampled on 8/19/94, received at the 222-S laboratory on 8/22, and extruded 8/24. Segment 1 contained approximately 262 mls of drainable liquid, and 22 grams of solid sample. The liquid was turbid and medium brown in color, with an estimated density of 1.52 g/ml. No organic layer was observed. The solids resembled dirty ice crystals, much like "snow cone" ice. The sampler efficiency was calculated at 91% recovery. A small quantity of liner liquid (<5mls) was present, but was not collected.

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Core 62 Segment 2
Segment 2 was sampled on 8/19/94, received at the 222-S laboratory on 8/22, and extruded 8/24. Segment 2 contained approximately 272 mls of drainable liquid, and 9.6 grams of solid sample. The liquid was turbid and medium brown in color, with an estimated density of 1.50 g/ml. No organic layer was observed. The solids resembled dirty ice crystals, much like "snow cone" ice. The sampler efficiency was calculated at 91% recovery. A small quantity of liner liquid (<5mls) was present, but was not collected.

Core 62 Segment 3
Segment 3 was sampled on 8/23/94, received at the 222-S laboratory on 8/25, and extruded 8/26. When the valve was first opened, no liquid sample appeared. Apparently a plug of solid had formed. When the extrusion began, this solid plug was pushed onto the sample tray, followed rapidly by the drainable liquid. Some liquid was lost out the back of the sample tray, and much of the solid was carried into the drainable liquid jar with the liquid. Approximately 262 (+/- 10) mls of drainable liquid was present in the sampler. The amount of solids collected from the sampling tray was 5.8 grams. The liquid was turbid and medium brown in color, with an estimated density of 1.52 g/ml. No organic layer was observed. The solids resembled dirty ice crystals, much like "snow cone" ice. The sampler efficiency was calculated at 91% recovery. A small quantity of liner liquid (<5mls) was present, but was not collected.

Core 62 Segment 4
Segment 4 was sampled on 8/23/94, received at the 222-S laboratory on 8/25, and extruded 8/26. Segment 4 contained approximately 295 mls of drainable liquid, and 33 grams of solid sample. The liquid was turbid and brown in color, slightly lighter brown than previous samples, with an estimated density of 1.34 g/ml. No organic layer was observed. The solids resembled dirty ice crystals, much like "snow cone" ice. The sampler efficiency was calculated at 100% recovery. A small quantity of liner liquid (<5mls) was present, but was not collected.

Core 62 Segment 5
Segment 5 was sampled on 9/8/94, received at the 222-S laboratory on 9/9, and extruded 9/12. Segment 5 contained approximately 270 mls of drainable liquid, and 36 grams of solid sample. The liquid was turbid and medium brown in color, with an estimated density of 1.48 g/ml. No organic layer was observed. The solids resembled dirty ice crystals, much like "snow cone" ice. The sampler efficiency was calculated at 95% recovery. A small quantity of liner liquid (<5mls) was present, but was not collected.

Core 62 Segment 6
Segment 6 was sampled on 9/13/94, received at the 222-S laboratory on 9/15, and extruded 9/16. Segment 6 contained approximately 260 mls of drainable liquid, and 34 grams of solid sample. The liquid was turbid and medium brown in color, with an estimated density of 1.48 g/ml. No organic layer was observed. The solids resembled dirty ice crystals, much like "snow

cone" ice. The sampler efficiency was calculated at 92% recovery. About 10 mls of liner liquid was collected.

Core 62 Segment 7
Segment 7 was sampled on 9/13/94, received at the 222-S laboratory on 9/15, and extruded 9/16. Segment 7 contained approximately 262 mls of drainable liquid, and 22 grams of solid sample. The liquid was turbid and medium brown in color, with an estimated density of 1.53 g/ml. No organic layer was observed. The solids resembled dirty ice crystals, much like "snow cone" ice. The sampler efficiency was calculated at 88% recovery. About 7mls of liner liquid was collected.

Core 62 Segment 8
Segment 8 was sampled on 9/13/94, received at the 222-S laboratory on 9/15, and extruded 9/19. Segment 8 contained approximately 295 mls of drainable liquid, and 22 grams of solid sample. The liquid was turbid and medium brown in color, with an estimated density of 1.47 g/ml. No organic layer was observed. The solids were composed of the usual "snow cone" ice, and a gelatin like phase. The sampler efficiency was calculated at 98% recovery. About 10mls of liner liquid was collected.

Core 62 Segment 9
Segment 9 was sampled on 9/13/94, received at the 222-S laboratory on 9/15, and extruded 9/19. Segment 9 contained approximately 35 mls of dark brown and opaque drainable liquid, with an estimated density of 1.64 g/ml. No organic layer was observed. About 369 grams of solids were collected. The solid sample did not retain its shape following extrusion, but spread slowly across the sample tray. The dark brown solids appeared homogeneous, with the consistency of thin, wet mud. The sampler efficiency was calculated at 92% recovery. A small quantity of liner liquid (<5mls) was present, but was not collected.

Core 62 Segment 10
Segment 10 was sampled on 9/13/94, received at the 222-S laboratory on 9/15, and extruded 9/20. Segment 10 contained no drainable liquid. The total weight of solid material collected was 381 grams. The lower half segment was dark brown and retained the shape of the sampler following extrusion. The upper half was more wet and did not retain its shape, with the upper quarter being similar in appearance to segment 9. The sampler recovery was estimated at 85%. A small quantity of liner liquid (<5mls) was present, but was not collected.

Core 62 Segment 11
Segment 11 was sampled on 9/16/94, received at the 222-S laboratory on 9/19/94, and extruded 9/21. Segment 11 contained no drainable liquid. The total weight of solid material collected was 431 grams. Segment 11 was slightly different in color than the previous segment, having a grey verses a red cast to the otherwise homogeneous brown color. This change occurred gradually, without a layering effect. The sample retained its shape

following extrusion, and was slightly pitted at the surface. The sampler recovery was estimated at 95%. About 10mls of liner liquid was collected.

Core 62 Segment 12
Segment 12 was sampled on 9/16/94, received at the 222-S laboratory on 9/19, and extruded 9/22. Segment 12 contained no drainable liquid. The total weight of solid material collected was 382 grams. Segment 12 was grey brown in color, soft and damp in texture, much like segment 11. The sample retained its shape following extrusion, and was slightly pitted at the surface. The sampler recovery was estimated at 95%. About 10mls of liner liquid was collected.

Core 62 Segment 13
Segment 13 was sampled on 9/16/94, received at the 222-S laboratory on 9/19, and extruded 9/23. Segment 13 contained no drainable liquid. The total weight of solid material collected was 429 grams. Segment 13 was grey brown in color, soft and damp in texture, much like segments 11 and 12. The upper half of segment 13 was more damp than the lower half. The sample retained its shape following extrusion, and was slightly pitted at the surface. The sampler recovery was estimated at 95%. About 34mls of liner liquid was collected.

Core 62 Segment 14
Segment 14 was sampled on 9/19/94, received at the 222-S laboratory on 9/21, and extruded 9/23. Segment 14 contained no drainable liquid. The total weight of solid material collected was 352 grams. About 10 inches of solids were extruded, followed by a 4 inch air gap, then 4 to 5 inches of solids. Segment 14 was grey brown in color, soft and damp in texture, and was slightly pitted at the surface. The sampler recovery was estimated at 80%. A small quantity of liner liquid (<5mls) was present, but was not collected.

Core 62 Segment 15
Segment 15 was sampled on 9/19/94, received at the 222-S laboratory on 9/21, and extruded 9/26. Segment 15 was composed primarily of drainable liquid, approximately 125 mls of which were collected. The density of the liquid is estimated at 1.31 g/ml. When the sampler valve was opened, an estimated 20 mls of liquid sprayed onto the hot cell wall. The amount of solids was difficult to determine due to the runny texture. Ten (10) grams were collected. Sample recovery was estimated at 52%. About 49 grams of liner liquid was collected.

Analytical Results

TGA (Moisture)
The weight percent water by Thermogravimetric Analysis (TGA) was performed utilizing procedure LA-560-112. Two samples were analyzed below the TCP notification limit of 17% water. A reanalysis, due to RPD, of segment 7

(S94T000056) gave a result of 15.3%. Notification was made on 11/3/94. Segment 8 (S94T000057) was analyzed at 13.67% water, and a reanalysis confirmed this at 15.27% water. Notification was made on 10/25/94. Neither of these samples contained a significant exotherm by DSC.

Notification was made on 9/23/94 of four samples which had results below the 17% limit. Review of these samples (S94T00004, 11, 20, 28) in light of the body of work indicated that the initial notification was based on an overly conservative interpretation of the data. The results were reintegrated, and all the samples were then above the 17% limit. The reintegrated results appear in this report.

Relatively few problems were encountered with the sludge and drainable liquid samples. Significant difficulty was encountered analyzing the "snow cone" ice solids. These samples were observed at extrusion as crystalline in appearance. At analysis these solids were often reported as a heavy, sticky syrup. The following samples were reanalyzed due to large RPD: segment 2 (S94T000011), segment 4 (S94T000028), segment 7 (S94T000056), and segment 8 (S94T000057). The reanalyses are identified on each table by an integer in the "R" column, which follows the Sample# column. A "1" in this column denotes the first rerun analysis. In most cases, the rerun analysis only substantiated the apparent nonhomogeneous nature of the samples. Four samples, segment 3 (S94T000020), segment 5 (S94T000036), segment 6 (S94T000055), and the upper half of segment 14 (S94T000089), also exceeded the 10% precision criteria, but by a much smaller amount. These samples were not rerun due to the high dose rate of the samples, and the low probability of improving the results; which is a factor of the small amount of sample used (10-20mg) and the homogeneity problems mentioned above. All samples met the TCP accuracy criteria of 10%.

DSC

Differential thermal analyses were performed using procedure LA-514-113, and a Mettler Model 20 Differential Scanning Calorimeter (DSC). Two samples were analyzed above the safety screen notification limit of 523 joules/g. The results for the lower half of segment 13 (S94T000091) were 619 joules/g (sample) and 641 joules/g (duplicate). The lower half of segment 14 (S94T000092) sample result was 531 joules/g.

Once again, the sludge and liquid samples were relatively well behaved for the DSC analysis. The "snow cone" solids presented many challenges. One of the first samples analyzed (S94T000004) appeared to have a significant exotherm at higher temperatures. The sample was analyzed again to 600° C to quantify the apparent exotherm. Upon examination it was determined that the sample had contaminated the DSC sensor, causing a severe baseline shift in the higher temperature region. The sensor was replaced, and to extend the life of the sensor, future samples were analyzed to 450° C maximum. In some cases, due to contamination of the sensor, a baseline subtraction routine was used to integrate the data (S94T000004, 28, 92, 105, 106). Two

samples were inadvertently run in air instead of nitrogen (S94T000085, 105), but this did not appear to have a negative effect on the analyses. The duplicates were run in nitrogen.

No limit was specified in the TCP for the DSC precision. The majority of results did not exceed 20% RPD. Segment 11, lower half (S94T000071) was reanalyzed due to a high RPD. The reanalysis indicated a homogeneity problem. All results met the TCP accuracy criteria of 10%.

Alpha Total

The Alpha Total analyses were performed using procedure LA-508-101. The highest alpha result recorded for core 62 was 1.65 uCi/g. This result was for the lower half of segment 14 (S94T000097). This is well below the notification limit of 41 uCi/g. The majority of alpha results for core 62 were below the detection limit. This is due to the very high beta to alpha activity ratio in these samples. Large dilutions are necessary to reduce the beta activity on the sample mount to acceptable levels. The "less than" values reported are significantly below the notification limit.

Two standard results (segments 2 and 4) slightly exceeded the TCP specified accuracy limit of 10%. The laboratory internal quality control limits, which are performance based, were not exceeded, so a rerun was not requested. The TCP specified precision limit was exceeded for a number of results (segments 9, 10, and 14). This is again due to the large dilution factor, which reduces the alpha activity present on the sample mount to very low levels. The counting statistics in this case are poor, so attaining the required precision becomes very difficult. No reruns were requested. Spike recoveries ranged from 92-119%, which met the laboratory internal quality control limits. The TCP does not specify spike limits. Spike analyses were required by the TCP for each matrix. Results have been provided for each sample.

The data tables provided in this package were created using the LABCORE computer system. The production of these tables has been automated, and attempts were made to reproduce as closely as possible the format used in previous safety screen reports. Any suggestions for improving the format and usefulness of these tables would be appreciated.

Sincerely,

Andrew Rice,
Project Coordinator

Attachment 1.Summary Data Tables
2.Analyses for DSC/TGA

WHC-SD-WM-DP-074, REV. 0

SAMPLE DATA SUMMARY

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45 DAY SAFETY SCREEN REPORT FOR TANK 241-SY-103 CORE 62

SY-103

CORE NUMBER: 62

SEGMENT #: 1

SEGMENT PORTION: Drainable Liquid

Sample#	R	A#	Analyte	Unit	Action Limits Lower	Action Limits Upper	Standard/%	Prep Blk	Result	Duplicate	Average	RPD/%	Spk Rec/%	Det Limit	Count Err/%
S94T000008			% Water by TGA using Mettler	%	17.000	n/a	98.26	n/a	49.45	48.18	48.81	2.60	n/a	0.010	n/a
S94T000008			DSC Exotherm using Mettler	Joules/g	n/a	523.000	97.70	n/a	135.6	210.6	173.1	43.3	n/a	0.000	n/a

SEGMENT PORTION: L Lower Half of Segment

Sample#	R	A#	Analyte	Unit	Action Limits Lower	Action Limits Upper	Standard/%	Prep Blk	Result	Duplicate	Average	RPD/%	Spk Rec/%	Det Limit	Count Err/%
S94T000004			% Water by TGA using Mettler	%	17.000	n/a	100.2	n/a	40.92	37.44	39.18	8.88	n/a	0.010	n/a
S94T000004			DSC Exotherm Dry Calculated	Joules/g Dry	n/a	523.000	n/a	n/a	174.8	211.6	193.2	19.0	n/a	0.001	n/a
S94T000004			DSC Exotherm using Mettler	Joules/g	n/a	523.000	102.3	n/a	103.3	132.4	117.8	24.7	n/a	0.000	n/a
S94T000005	F		Alpha of Digested Solid	uCi/g	n/a	41.000	110.2	<2.29e-01	< 2.29e-1	<2.29E-1	n/a	n/a	108.2	0.548	500

=> Limit violated

=> Selected Limit

45 DAY SAFETY SCREEN REPORT FOR TANK 241-SY-103 CORE 62
SY-103

CORE NUMBER: 62
SEGMENT #: 2

SEGMENT PORTION: Drainable Liquid

Sample#	R	A#	Analyte	Unit	Action Limits Lower	Action Limits Upper	Standard/%	Prep Blk	Result	Duplicate	Average	RPD/%	Spk Rec/%	Det Limit	Count Err/%
S94T000015			% Water by TGA using Mettler	%	17.000	n/a	98.26	n/a	48.27	49.22	48.74	1.95	n/a	0.010	n/a
S94T000015			DSC Exotherm using Mettler	Joules/g	n/a	523.000	97.70	n/a	166.7	245.1	205.9	38.1	n/a	0.000	n/a

SEGMENT PORTION: L Lower Half of Segment

Sample#	R	A#	Analyte	Unit	Action Limits Lower	Action Limits Upper	Standard/%	Prep Blk	Result	Duplicate	Average	RPD/%	Spk Rec/%	Det Limit	Count Err/%
S94T000011			% Water by TGA using Mettler	%	17.000	n/a	99.10	n/a	22.45	33.45	27.95	39.4	n/a	0.010	n/a
S94T000011	1		% Water by TGA using Mettler	%	17.000	n/a	99.70	n/a	47.01	n/a	n/a	n/a	n/a	0.010	n/a
S94T000011			DSC Exotherm Dry Calculated	Joules/g Dry	n/a	523.000	n/a	n/a	0	0	0.000	n/a	n/a	0.000	n/a
S94T000011			DSC Exotherm using Mettler	Joules/g	n/a	523.000	95.90	n/a	No Exo	no exo	n/a	n/a	n/a	0.000	n/a
S94T000012	F		Alpha of Digested Solid	uCi/g	n/a	41.000	110.2	<2.29e-01	< 1.26e-1	<1.48E-1	n/a	n/a	109.9	0.300	253.0

=> Limit violated
=> Selected Limit

45 DAY SAFETY SCREEN REPORT FOR TANK 241-SY-103 CORE 62
SY-103

CORE NUMBER: 62
SEGMENT #: 3

SEGMENT PORTION: Drainable Liquid

Sample#	R	A#	Analyte	Unit	Action Limits Lower	Action Limits Upper	Standard/%	Prep Blk	Result	Duplicate	Average	RPD/%	Spk Rec/%	Det Limit	Count	Err/%
S94T000025			% Water by TGA using Mettler	%	17.000	n/a	99.22	n/a	47.41	47.83	47.62	0.88	n/a	0.010		n/a
S94T000025	1		DSC Exotherm using Mettler	Joules/g	n/a	523.000	102.6	n/a	190.5	133.9	162.2	34.9	n/a	0.000		n/a

SEGMENT PORTION: L Lower Half of Segment

Sample#	R	A#	Analyte	Unit	Action Limits Lower	Action Limits Upper	Standard/%	Prep Blk	Result	Duplicate	Average	RPD/%	Spk Rec/%	Det Limit	Count	Err/%
S94T000020			% Water by TGA using Mettler	%	17.000	n/a	99.90	n/a	21.22	17.81	19.52	17.5	n/a	0.010		n/a
S94T000020			DSC Exotherm Dry Calculated	Joules/g Dry	n/a	523.000	n/a	n/a	37.1	69.0	53.05	60.1	n/a	0.000		n/a
S94T000020			DSC Exotherm using Mettler	Joules/g	n/a	523.000	94.90	n/a	29.2	56.7	42.95	64.0	n/a	0.000		n/a
S94T000021	F		Alpha of Digested Solid	uCi/g	n/a	41.000	102.9	<1.25e-01	< 1.03e-1	<1.03e-1	n/a	n/a	114.3	0.254		138.6

=> Limit violated
=> Selected Limit

11

45 DAY SAFETY SCREEN REPORT FOR TANK 241-SY-103 CORE 62

SY-103

CORE NUMBER: 62

SEGMENT #: 4

SEGMENT PORTION: Drainable Liquid

Sample#	R	A#	Analyte	Unit	Action Limits Lower	Action Limits Upper	Standard/%	Prep Blk	Result	Duplicate	Average	RPD/%	Spk Rec/%	Det Limit	Count Err/%
S94T000032			% Water by TGA using Mettler	%	17.000	n/a	99.22	n/a	48.51	48.54	48.52	0.06	n/a	0.010	n/a
S94T000032	1		DSC Exotherm using Mettler	Joules/g	n/a	523.000	105.1	n/a	195.6	203.8	199.7	4.11	n/a	0.000	n/a

SEGMENT PORTION: L Lower Half of Segment

Sample#	R	A#	Analyte	Unit	Action Limits Lower	Action Limits Upper	Standard/%	Prep Blk	Result	Duplicate	Average	RPD/%	Spk Rec/%	Det Limit	Count Err/%
S94T000028			% Water by TGA using Mettler	%	17.000	n/a	99.41	n/a	35.51	23.00	29.25	42.8	n/a	0.010	n/a
S94T000028	1		% Water by TGA using Mettler	%	17.000	n/a	99.70	n/a	47.21	n/a	n/a	n/a	n/a	0.010	n/a
S94T000028			DSC Exotherm Dry Calculated	Joules/g Dry	n/a	523.000	n/a	n/a	70.77	93.5	82.14	27.7	n/a	0.010	n/a
S94T000028			DSC Exotherm using Mettler	Joules/g	n/a	523.000	94.90	n/a	41.5	72.0	56.75	53.7	n/a	0.000	n/a
S94T000029		F	Alpha of Digested Solid	uCi/g	n/a	41.000	112.0	<1.25e-01	< 2.10e-1	<1.02e-1	n/a	n/a	119.0	0.252	309.9

=> Limit violated

=> Selected Limit

12

45 DAY SAFETY SCREEN REPORT FOR TANK 241-SY-103 CORE 62
SY-103

CORE NUMBER: 62
SEGMENT #: 5

SEGMENT PORTION: Drainable Liquid

Sample#	R	A#	Analyte	Unit	Action Limits Lower	Action Limits Upper	Standard/%	Prep Blk	Result	Duplicate	Average	RPD/%	Spk Rec/%	Det Limit	Count Err/%
S94T000040			% Water by TGA using Mettler	%	17.000	n/a	101.1	n/a	48.72	47.97	48.34	1.55	n/a	0.010	n/a
S94T000040			DSC Exotherm using Mettler	Joules/g	n/a	523.000	100.9	n/a	251.8	180.4	216.1	33.0	n/a	0.000	n/a

SEGMENT PORTION: L Lower Half of Segment

Sample#	R	A#	Analyte	Unit	Action Limits Lower	Action Limits Upper	Standard/%	Prep Blk	Result	Duplicate	Average	RPD/%	Spk Rec/%	Det Limit	Count Err/%
S94T000036			% Water by TGA using Mettler	%	17.000	n/a	98.80	n/a	20.78	18.60	19.69	11.1	n/a	0.010	n/a
S94T000036			DSC Exotherm Dry Calculated	Joules/g Dry	n/a	523.000	n/a	n/a	46.8	0	23.40	200	n/a	0.000	n/a
S94T000036			DSC Exotherm using Mettler	Joules/g	n/a	523.000	95.30	n/a	37.1	noexo	n/a	n/a	n/a	0.000	n/a
S94T000037	F		Alpha of Digested Solid	uCi/g	n/a	41.000	92.14	<5.61e-01	< 2.57e-1	<2.59e-1	n/a	n/a	96.30	0.615	500

=> Limit violated
=> Selected Limit

13

45 DAY SAFETY SCREEN REPORT FOR TANK 241-SY-103 CORE 62
SY-103

CORE NUMBER: 62
SEGMENT #: 6

SEGMENT PORTION: Drainable Liquid

Sample#	R	A#	Analyte	Unit	Action Limits Lower	Action Limits Upper	Standard/%	Prep Blk	Result	Duplicate	Average	RPD/%	Spk Rec/%	Det Limit	Count	Err/%
S94T000105			% Water by TGA using Mettler	%	17.000	n/a	99.10	n/a	49.10	49.34	49.22	0.49	n/a	0.010		n/a
S94T000105			DSC Exotherm using Mettler	Joules/g	n/a	523.000	100.5	n/a	170.0	145.5	157.8	15.5	n/a	0.000		n/a

SEGMENT PORTION: L Lower Half of Segment

Sample#	R	A#	Analyte	Unit	Action Limits Lower	Action Limits Upper	Standard/%	Prep Blk	Result	Duplicate	Average	RPD/%	Spk Rec/%	Det Limit	Count	Err/%
S94T000055			% Water by TGA using Mettler	%	17.000	n/a	99.20	n/a	31.74	27.41	29.57	14.6	n/a	0.010		n/a
S94T000055			DSC Exotherm Dry Calculated	Joules/g Dry	n/a	523.000	n/a	n/a	324.9	227.3	276.1	35.4	n/a	0.100		n/a
S94T000055			DSC Exotherm using Mettler	Joules/g	n/a	523.000	104.4	n/a	221.8	165.0	193.4	29.4	n/a	0.000		n/a
S94T000064	F		Alpha of Digested Solid	uCi/g	n/a	41.000	92.14	<5.61e-01	< 3.80e-1	<2.50e-1	n/a	n/a	92.90	0.602		500

=> Limit violated
=> Selected Limit

14

45 DAY SAFETY SCREEN REPORT FOR TANK 241-SY-103 CORE 62
SY-103

CORE NUMBER: 62
SEGMENT #: 7

SEGMENT PORTION: Drainable Liquid

Sample#	R	A#	Analyte	Unit	Action Limits Lower	Action Limits Upper	Standard/%	Prep Blk	Result	Duplicate	Average	RPD/%	Spk Rec/%	Det Limit	Count Err/%
S94T000106			% Water by TGA using Mettler	%	17.000	n/a	99.10	n/a	48.89	50.69	49.79	3.62	n/a	0.010	n/a
S94T000106			DSC Exotherm using Mettler	Joules/g	n/a	523.000	100.5	n/a	153.9	133.2	143.6	14.4	n/a	0.000	n/a

SEGMENT PORTION: L Lower Half of Segment

Sample#	R	A#	Analyte	Unit	Action Limits Lower	Action Limits Upper	Standard/%	Prep Blk	Result	Duplicate	Average	RPD/%	Spk Rec/%	Det Limit	Count Err/%
S94T000056	1		% Water by TGA using Mettler	%	17.000	n/a	99.70	n/a	15.3	n/a	n/a	n/a	n/a	0.010	n/a
S94T000056			% Water by TGA using Mettler	%	17.000	n/a	98.20	n/a	48.31	17.18	32.74	95.1	n/a	0.010	n/a
S94T000056			DSC Exotherm Dry Calculated	Joules/g Dry	n/a	523.000	n/a	n/a	250.9	197.5	224.2	23.8	n/a	0.010	n/a
S94T000056			DSC Exotherm using Mettler	Joules/g	n/a	523.000	105.0	n/a	129.7	163.6	146.7	23.1	n/a	0.000	n/a
S94T000065	F		Alpha of Digested Solid	uCi/g	n/a	41.000	94.76	<1.97e-01	< 1.97e-1	<1.95e-1	n/a	n/a	96.80	0.470	183.3

=> Limit violated
=> Selected Limit

15

45 DAY SAFETY SCREEN REPORT FOR TANK 241-SY-103 CORE 62
SY-103

CORE NUMBER: 62
SEGMENT #: 8

SEGMENT PORTION: Drainable Liquid

Sample#	R	A#	Analyte	Unit	Action Limits Lower	Action Limits Upper	Standard/%	Prep Blk	Result	Duplicate	Average	RPD/%	Spk Rec/%	Det Limit	Count Err/%
S94T000107			% Water by TGA using Mettler	%	17.000	n/a	99.70	n/a	49.03	48.75	48.89	0.57	n/a	0.010	n/a
S94T000107			DSC Exotherm using Mettler	Joules/g	n/a	523.000	104.7	n/a	214.2	239.2	226.7	11.0	n/a	0.000	n/a

SEGMENT PORTION: L Lower Half of Segment

Sample#	R	A#	Analyte	Unit	Action Limits Lower	Action Limits Upper	Standard/%	Prep Blk	Result	Duplicate	Average	RPD/%	Spk Rec/%	Det Limit	Count Err/%
S94T000057	1		% Water by TGA using Mettler	%	17.000	n/a	99.20	n/a	15.27	n/a	n/a	n/a	n/a	0.010	n/a
S94T000057			% Water by TGA using Mettler	%	17.000	n/a	98.20	n/a	13.67	17.84	15.76	26.5	n/a	0.010	n/a
S94T000057			DSC Exotherm Dry Calculated	Joules/g Dry	n/a	523.000	n/a	n/a	0	0	0.000	n/a	n/a	0.100	n/a
S94T000057			DSC Exotherm using Mettler	Joules/g	n/a	523.000	105.0	n/a	no exos	no exo	n/a	n/a	n/a	0.000	n/a
S94T000066	F		Alpha of Digested Solid	uCi/g	n/a	41.000	94.76	<1.97e-01	< 1.38e-1	<1.38e-1	n/a	n/a	92.40	0.329	500

=> Limit violated
=> Selected Limit

45 DAY SAFETY SCREEN REPORT FOR TANK 241-SY-103 CORE 62
SY-103

CORE NUMBER: 62
SEGMENT #: 9

SEGMENT PORTION: Drainable Liquid

Sample#	R	A#	Analyte	Unit	Action Limits Lower	Action Limits Upper	Standard/%	Prep Blk	Result	Duplicate	Average	RPD/%	Spk Rec/%	Det Limit	Count Err/%
S94T000108			% Water by TGA using Mettler	%	17.000	n/a	99.70	n/a	48.70	48.95	48.83	0.51	n/a	0.010	n/a
S94T000108			DSC Exotherm using Mettler	Joules/g	n/a	523.000	104.7	n/a	287.6	285.1	286.4	0.87	n/a	0.000	n/a

SEGMENT PORTION: L Lower Half of Segment

Sample#	R	A#	Analyte	Unit	Action Limits Lower	Action Limits Upper	Standard/%	Prep Blk	Result	Duplicate	Average	RPD/%	Spk Rec/%	Det Limit	Count Err/%
S94T000058			% Water by TGA using Mettler	%	17.000	n/a	99.20	n/a	46.03	44.64	45.34	3.07	n/a	0.010	n/a
S94T000058			DSC Exotherm Dry Calculated	Joules/g Dry	n/a	523.000	n/a	n/a	321.5	316.3	318.9	1.63	n/a	0.100	n/a
S94T000058			DSC Exotherm using Mettler	Joules/g	n/a	523.000	104.7	n/a	173.5	175.1	174.3	0.92	n/a	0.000	n/a
S94T000067	F		Alpha of Digested Solid	uCi/g	n/a	41.000	91.61	<2.12e-01	8.71e-1	5.89e-1	7.30e-01	38.6	99.10	0.428	53.3

=> Limit violated
=> Selected Limit

17

45 DAY SAFETY SCREEN REPORT FOR TANK 241-SY-103 CORE 62

SY-103

CORE NUMBER: 62

SEGMENT #: 10

SEGMENT PORTION: L Lower Half of Segment

Sample#	R	A#	Analyte	Unit	Action Limits Lower	Action Limits Upper	Standard/%	Prep Blk	Result	Duplicate	Average	RPD/%	Spk Rec/%	Det Limit	Count Err/%
S94T000070			% Water by TGA using Mettler	%	17.000	n/a	99.70	n/a	40.80	40.04	40.42	1.88	n/a	0.010	n/a
S94T000070			DSC Exotherm Dry Calculated	Joules/g Dry	n/a	523.000	n/a	n/a	291.9	244.3	268.1	17.8	n/a	0.100	n/a
S94T000070			DSC Exotherm using Mettler	Joules/g	n/a	523.000	103.3	n/a	172.8	146.5	159.7	16.5	n/a	0.000	n/a
S94T000068	F		Alpha of Digested Solid	uCi/g	n/a	41.000	91.61	<2.12e-01	9.79e-1	7.97e-1	8.88e-01	20.5	97.00	0.407	53.3

SEGMENT PORTION: U Upper Half of Segment

Sample#	R	A#	Analyte	Unit	Action Limits Lower	Action Limits Upper	Standard/%	Prep Blk	Result	Duplicate	Average	RPD/%	Spk Rec/%	Det Limit	Count Err/%
S94T000063			% Water by TGA using Mettler	%	17.000	n/a	98.50	n/a	44.33	43.10	43.72	2.81	n/a	0.010	n/a
S94T000063			DSC Exotherm Dry Calculated	Joules/g Dry	n/a	523.000	n/a	n/a	363.9	352.2	358.1	3.27	n/a	0.100	n/a
S94T000063			DSC Exotherm using Mettler	Joules/g	n/a	523.000	99.47	n/a	202.6	200.4	201.5	1.09	n/a	0.000	n/a
S94T000069	F		Alpha of Digested Solid	uCi/g	n/a	41.000	91.61	<1.69e-01	3.77e-1	7.50e-1	5.64e-01	66.2	93.40	0.452	84.3

=> Limit violated

=> Selected Limit

45 DAY SAFETY SCREEN REPORT FOR TANK 241-SY-103 CORE 62
SY-103

CORE NUMBER: 62
SEGMENT #: 11

SEGMENT PORTION: L Lower Half of Segment

Sample#	R	A#	Analyte	Unit	Action Limits Lower	Action Limits Upper	Standard/%	Prep Blk	Result	Duplicate	Average	RPD/%	Spk Rec/%	Det Limit	Count Err/%
S94T000071			% Water by TGA using Mettler	%	17.000	n/a	99.70	n/a	39.17	37.52	38.34	4.30	n/a	0.010	n/a
S94T000071			DSC Exotherm Dry Calculated	Joules/g Dry	n/a	523.000	n/a	n/a	150.7	342.0	246.3	77.7	n/a	0.100	n/a
S94T000071			DSC Exotherm using Mettler	Joules/g	n/a	523.000	104.4	n/a	91.7	213.7	152.7	79.9	n/a	0.000	n/a
S94T000071	1		DSC Exotherm using Mettler	Joules/g	n/a	523.000	104.4	n/a	21.2	n/a	n/a	n/a	n/a	0.000	n/a
S94T000094		F	Alpha of Digested Solid	uCi/g	n/a	41.000	91.61	<1.69e-01	8.87e-1	9.26e-1	9.07e-01	4.30	96.20	0.355	43.7

SEGMENT PORTION: U Upper Half of Segment

Sample#	R	A#	Analyte	Unit	Action Limits Lower	Action Limits Upper	Standard/%	Prep Blk	Result	Duplicate	Average	RPD/%	Spk Rec/%	Det Limit	Count Err/%
S94T000072			% Water by TGA using Mettler	%	17.000	n/a	97.60	n/a	46.45	45.04	45.74	3.08	n/a	0.010	n/a
S94T000072			DSC Exotherm Dry Calculated	Joules/g Dry	n/a	523.000	n/a	n/a	424.3	412.8	418.6	2.75	n/a	0.100	n/a
S94T000072			DSC Exotherm using Mettler	Joules/g	n/a	523.000	103.3	n/a	227.2	226.9	227.1	0.13	n/a	0.000	n/a
S94T000119		F	Alpha of Digested Solid	uCi/g	n/a	41.000	93.50	<2.51e-01	0.824	8.03e-1	8.14e-01	2.58	101.6	0.587	60.4

=> Limit violated
=> Selected Limit

45 DAY SAFETY SCREEN REPORT FOR TANK 241-SY-103 CORE 62

SY-103

CORE NUMBER: 62
SEGMENT #: 12

SEGMENT PORTION: L Lower Half of Segment

Sample#	R	A#	Analyte	Unit	Action Limits Lower	Action Limits Upper	Standard/%	Prep Blk	Result	Duplicate	Average	RPD/%	Spk Rec/%	Det Limit	Count Err/%
S94T000090			% Water by TGA using Mettler	%	17.000	n/a	97.60	n/a	43.04	41.86	42.45	2.78	n/a	0.010	n/a
S94T000090			DSC Exotherm Dry Calculated	Joules/g Dry	n/a	523.000	n/a	n/a	358.0	340.6	349.3	4.98	n/a	0.100	n/a
S94T000090			DSC Exotherm using Mettler	Joules/g	n/a	523.000	103.3	n/a	203.9	198.0	200.9	2.94	n/a	0.000	n/a
S94T000095	F		Alpha of Digested Solid	uCi/g	n/a	41.000	97.19	<3.90e-01	< 7.81e-1	<7.53e-1	n/a	n/a	119.9	0.867	143.7

SEGMENT PORTION: U Upper Half of Segment

Sample#	R	A#	Analyte	Unit	Action Limits Lower	Action Limits Upper	Standard/%	Prep Blk	Result	Duplicate	Average	RPD/%	Spk Rec/%	Det Limit	Count Err/%
S94T000085			% Water by TGA using Mettler	%	17.000	n/a	100.1	n/a	40.03	42.95	41.49	7.04	n/a	0.010	n/a
S94T000085			DSC Exotherm Dry Calculated	Joules/g Dry	n/a	523.000	n/a	n/a	207.1	179.1	193.1	14.5	n/a	0.000	n/a
S94T000085			DSC Exotherm using Mettler	Joules/g	n/a	523.000	101.2	n/a	124.2	102.2	113.2	19.4	n/a	0.000	n/a
S94T000120	F		Alpha of Digested Solid	uCi/g	n/a	41.000	93.50	<2.51e-01	1.00e+0	9.68e-1	9.84e-01	3.25	100.3	0.593	50.5

=> Limit violated
=> Selected Limit

45 DAY SAFETY SCREEN REPORT FOR TANK 241-SY-103 CORE 62
SY-103

CORE NUMBER: 62
SEGMENT #: 13

SEGMENT PORTION: L Lower Half of Segment

Sample#	R	A#	Analyte	Unit	Action Limits Lower	Action Limits Upper	Standard/%	Prep Blk	Result	Duplicate	Average	RPD/%	Spk Rec/%	Det Limit	Count Err/%
S94T000091			% Water by TGA using Mettler	%	17.000	n/a	98.50	n/a	41.2	39.23	40.22	4.90	n/a	0.010	n/a
S94T000091			DSC Exotherm Dry Calculated	Joules/g Dry	n/a	523.000	n/a	n/a	619.4	641.4	630.4	3.49	n/a	0.100	n/a
S94T000091			DSC Exotherm using Mettler	Joules/g	n/a	523.000	102.3	n/a	364.2	389.8	377.0	6.79	n/a	0.000	n/a
S94T000096	F		Alpha of Digested Solid	uCi/g	n/a	41.000	97.19	<3.90e-01	< 7.27e-1	9.13e-1	n/a	n/a	117.8	0.806	143.7

SEGMENT PORTION: U Upper Half of Segment

Sample#	R	A#	Analyte	Unit	Action Limits Lower	Action Limits Upper	Standard/%	Prep Blk	Result	Duplicate	Average	RPD/%	Spk Rec/%	Det Limit	Count Err/%
S94T000088			% Water by TGA using Mettler	%	17.000	n/a	99.00	n/a	39.77	39.85	39.81	0.20	n/a	0.010	n/a
S94T000088			DSC Exotherm Dry Calculated	Joules/g Dry	n/a	523.000	n/a	n/a	298.4	352.6	325.5	16.7	n/a	0.100	n/a
S94T000088			DSC Exotherm using Mettler	Joules/g	n/a	523.000	104.7	n/a	179.7	212.1	195.9	16.5	n/a	0.000	n/a
S94T000121	F		Alpha of Digested Solid	uCi/g	n/a	41.000	93.50	<3.71e-01	1.08e+0	1.18e+0	1.13e+00	8.85	98.60	0.757	67.6

=> Limit violated
=> Selected Limit

45 DAY SAFETY SCREEN REPORT FOR TANK 241-SY-103 CORE 62
SY-103

CORE NUMBER: 62
SEGMENT #: 14

SEGMENT PORTION: L Lower Half of Segment

Sample#	R	A#	Analyte	Unit	Action Limits Lower	Action Limits Upper	Standard/%	Prep Blk	Result	Duplicate	Average	RPD/%	Spk Rec/%	Det Limit	Count Err/%
S94T000092			% Water by TGA using Mettler	%	17.000	n/a	98.50	n/a	40.59	41.61	41.10	2.48	n/a	0.010	n/a
S94T000092			DSC Exotherm Dry Calculated	Joules/g Dry	n/a	523.000	n/a	n/a	396.6	531.4	464.0	29.1	n/a	0.100	n/a
S94T000092			DSC Exotherm using Mettler	Joules/g	n/a	523.000	102.3	n/a	235.6	310.3	272.9	27.4	n/a	0.000	n/a
S94T000097	F		Alpha of Digested Solid	uCi/g	n/a	41.000	94.76	<3.18e-01	1.43e+0	1.65e+0	1.54e+00	14.3	99.30	0.567	36.1

SEGMENT PORTION: U Upper Half of Segment

Sample#	R	A#	Analyte	Unit	Action Limits Lower	Action Limits Upper	Standard/%	Prep Blk	Result	Duplicate	Average	RPD/%	Spk Rec/%	Det Limit	Count Err/%
S94T000089			% Water by TGA using Mettler	%	17.000	n/a	99.00	n/a	40.84	36.77	38.80	10.5	n/a	0.010	n/a
S94T000089			DSC Exotherm Dry Calculated	Joules/g Dry	n/a	523.000	n/a	n/a	254.7	234.4	244.6	8.30	n/a	0.100	n/a
S94T000089			DSC Exotherm using Mettler	Joules/g	n/a	523.000	104.7	n/a	150.7	148.2	149.4	1.67	n/a	0.000	n/a
S94T000122	F		Alpha of Digested Solid	uCi/g	n/a	41.000	93.50	<3.71e-01	9.89e-1	9.93e-1	9.91e-01	0.40	103.8	0.692	54.9

=> Limit violated
=> Selected Limit

45 DAY SAFETY SCREEN REPORT FOR TANK 241-SY-103 CORE 62
SY-103

CORE NUMBER: 62
SEGMENT #: 15

SEGMENT PORTION: Drainable Liquid

Sample#	R	A#	Analyte	Unit	Action Limits Lower	Action Limits Upper	Standard/%	Prep Blk	Result	Duplicate	Average	RPD/%	Spk Rec/%	Det Limit	Count Err/%
S94T000104			% Water by TGA using Mettler	%	17.000	n/a	101.1	n/a	74.74	75.39	75.06	0.87	n/a	0.010	n/a
S94T000104			DSC Exotherm using Mettler	Joules/g	n/a	523.000	100.9	n/a	155.9	205.3	180.6	27.4	n/a	0.000	n/a

SEGMENT PORTION: L Lower Half of Segment

Sample#	R	A#	Analyte	Unit	Action Limits Lower	Action Limits Upper	Standard/%	Prep Blk	Result	Duplicate	Average	RPD/%	Spk Rec/%	Det Limit	Count Err/%
S94T000093			% Water by TGA using Mettler	%	17.000	n/a	100.1	n/a	68.87	68.64	68.75	0.34	n/a	0.010	n/a
S94T000093			DSC Exotherm Dry Calculated	Joules/g Dry	n/a	523.000	n/a	n/a	0	0	0.000	n/a	n/a	0.000	n/a
S94T000093			DSC Exotherm using Mettler	Joules/g	n/a	523.000	102.6	n/a	0	0	0.000	n/a	n/a	0.000	n/a
S94T000098	F		Alpha of Digested Solid	uCi/g	n/a	41.000	94.76	<3.18e-01	5.09e-1	<4.88e-1	n/a	n/a	97.10	0.608	89.5

=> Limit violated
=> Selected Limit

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DIFFERENTIAL SCANNING CALORIMETRY

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QA 3B

LABCORE Data Entry Template for Worklist# 3

Analyst: KLV **Instrument:** DSC01 **Method:** LA-514-113

Worklist Comment: Please run these under Nitrogen, notify A. Rice of exotherms

Seg	Type	Sample#	Rep	Al	Test	Matrix	Actual	Found	DL	Unit
1	STD				DSC-01	SOLID	100	102.3	N/A	Joule
2	SAMPLE	S94T000004		0	DSC-01	SOLID	N/A	103.3		Joule
3	DUP	S94T000004			DSC-01	SOLID	103.3	132.4	N/A	Joule
4	STD				DSC-01	SOLID	100	95.96	N/A	Joule
5	SAMPLE	S94T000011		0	DSC-01	SOLID	N/A	No Exo		Joule
6	DUP	S94T000011			DSC-01	SOLID	No Exo	No Exo	N/A	Joule

Final page for worklist # 3

WHC-SD-WM-DP-074, REV. 0

Analyst Signature

9-28-94
Date

Data Entry Comments:
Sample S94T000004 has a small exotherm at 247°C. The sample caused damage to the sensor which made results above 300°C unreproducible. Sample S94T000011 was run on a new sensor. J. M. L.

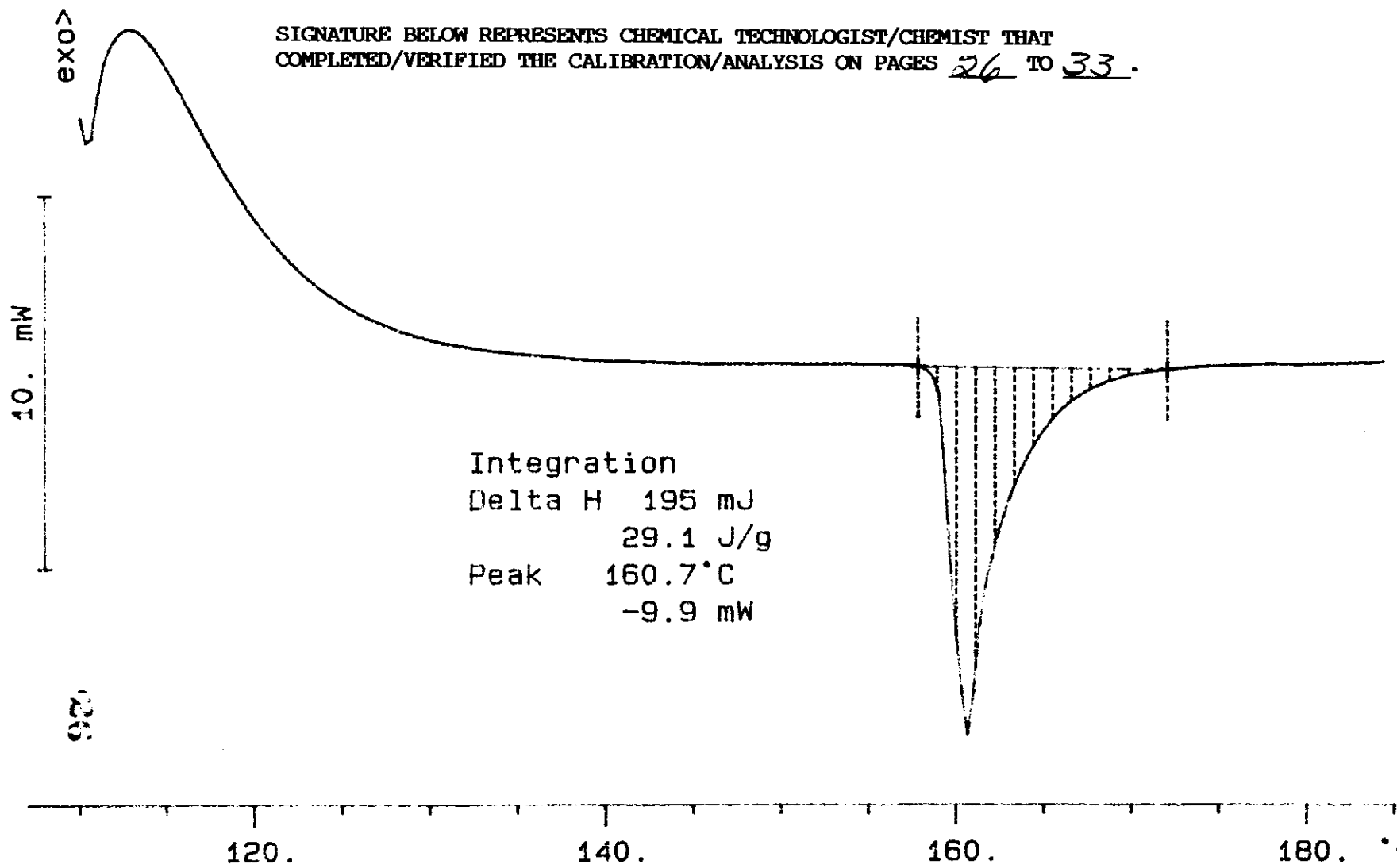
Units shown for QC (SPK) may not reflect the actual units.

DSC STD
6.712 mg

Rate: 10.0 °C/min

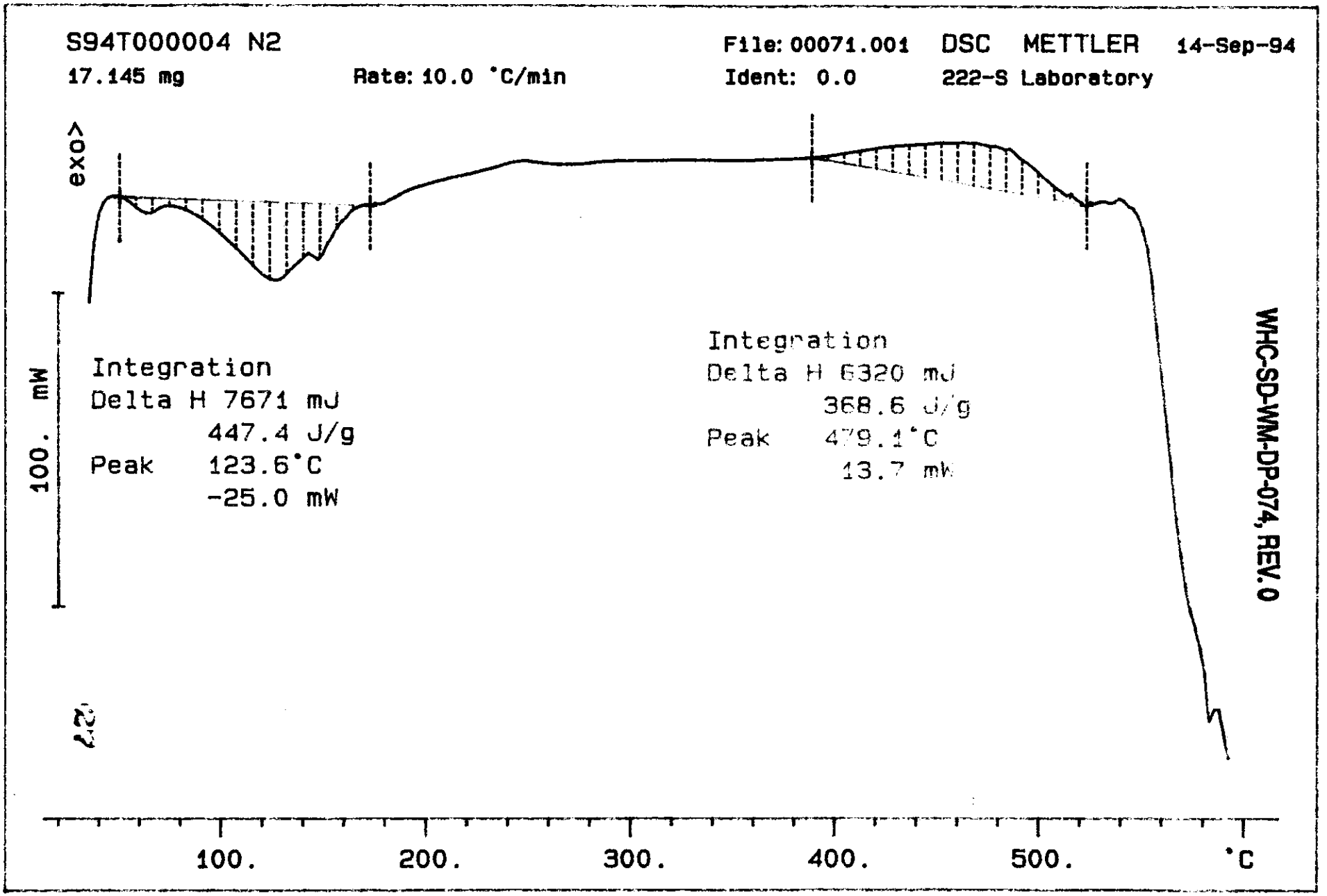
File: 00068.001 DSC METTLER 14-Sep-94
Ident: 0.0 222-S Laboratory

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 26 TO 33.



WHC-SD-WM-DP-074, REV.0

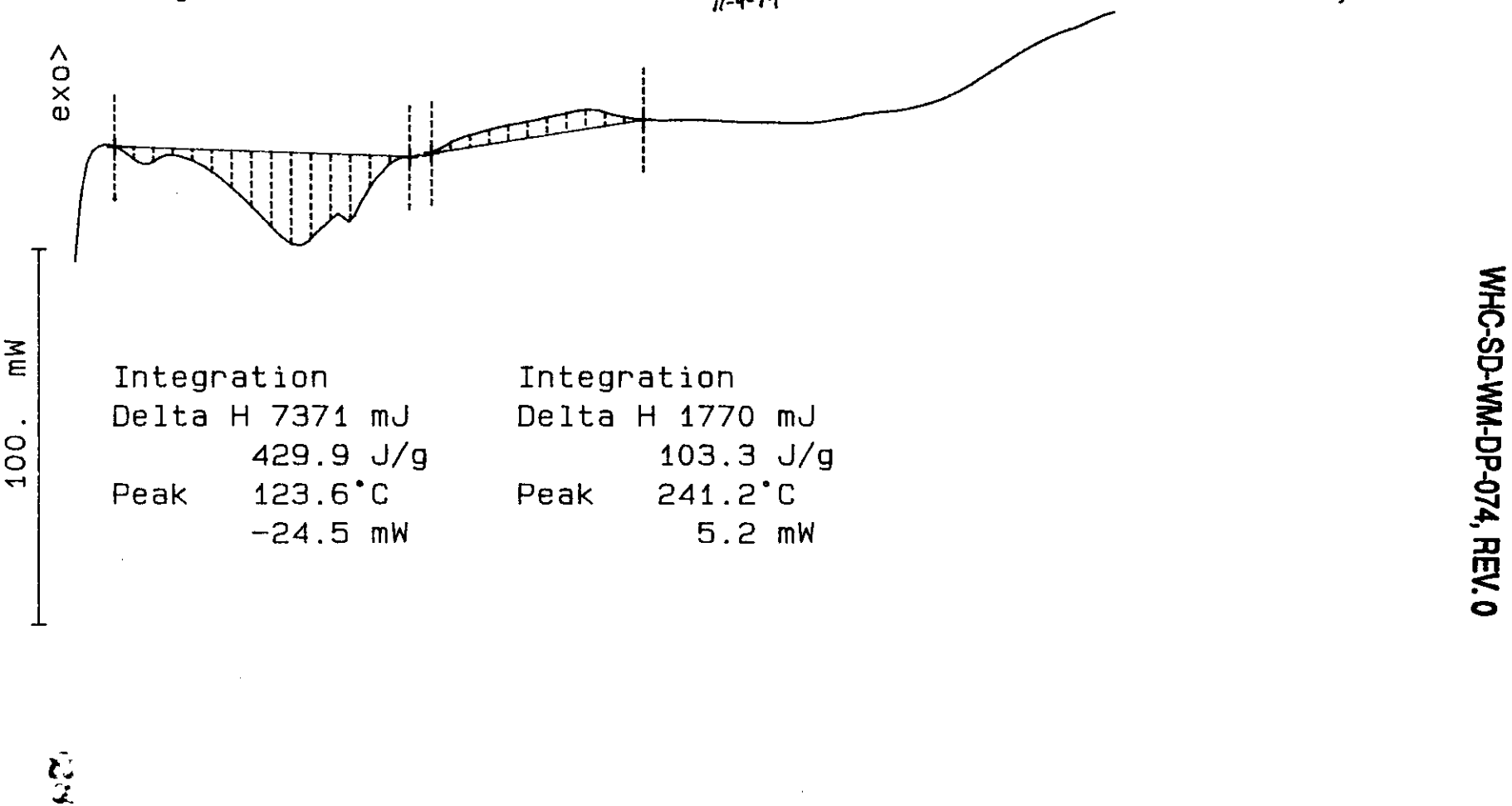
K Vogel 9/1/94



WHC-SD-WM-DP-074, REV.0

S94T000004 N2 Baseline Subtracted BW 11-4-94 File: 00071.001 DSC METTLER 14-Sep-94

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



WHC-SD-WM-DP-074, REV. 0

S94T000004 N2

15.407 mg

Rate: 10.0 °C/min

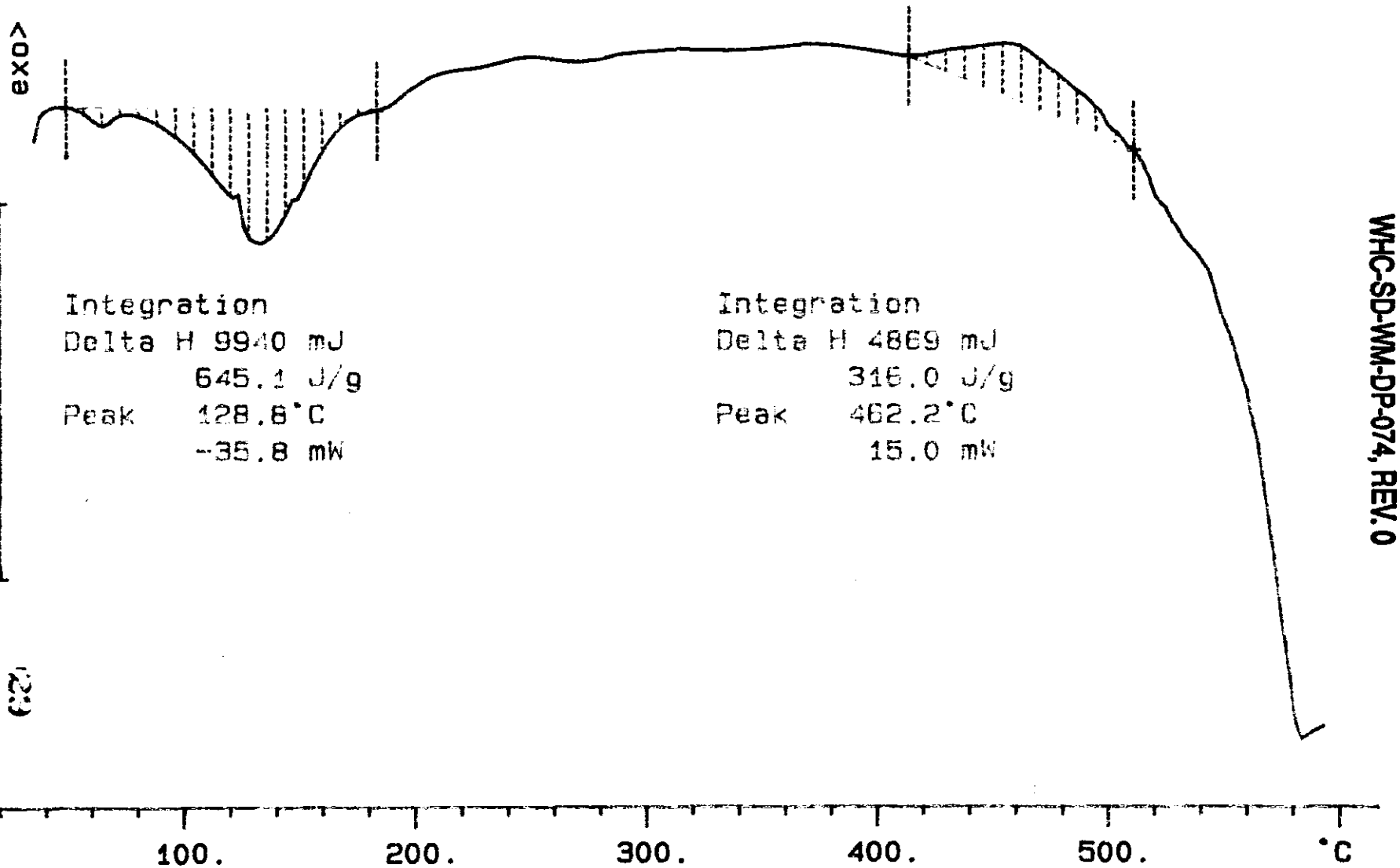
File: 00072.001

Ident: 0.0

DSC METTLER

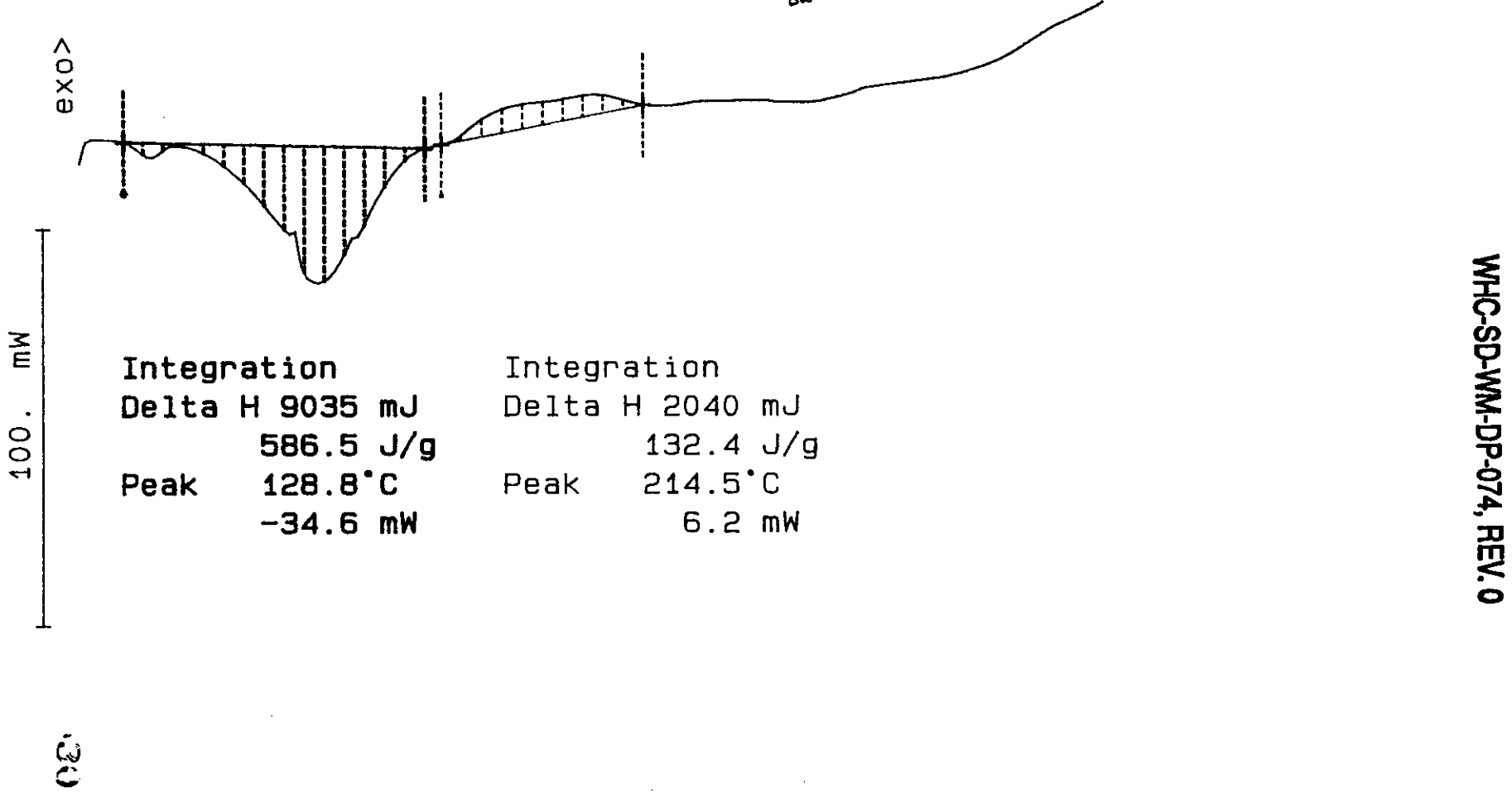
222-S Laboratory

14-Sep-94



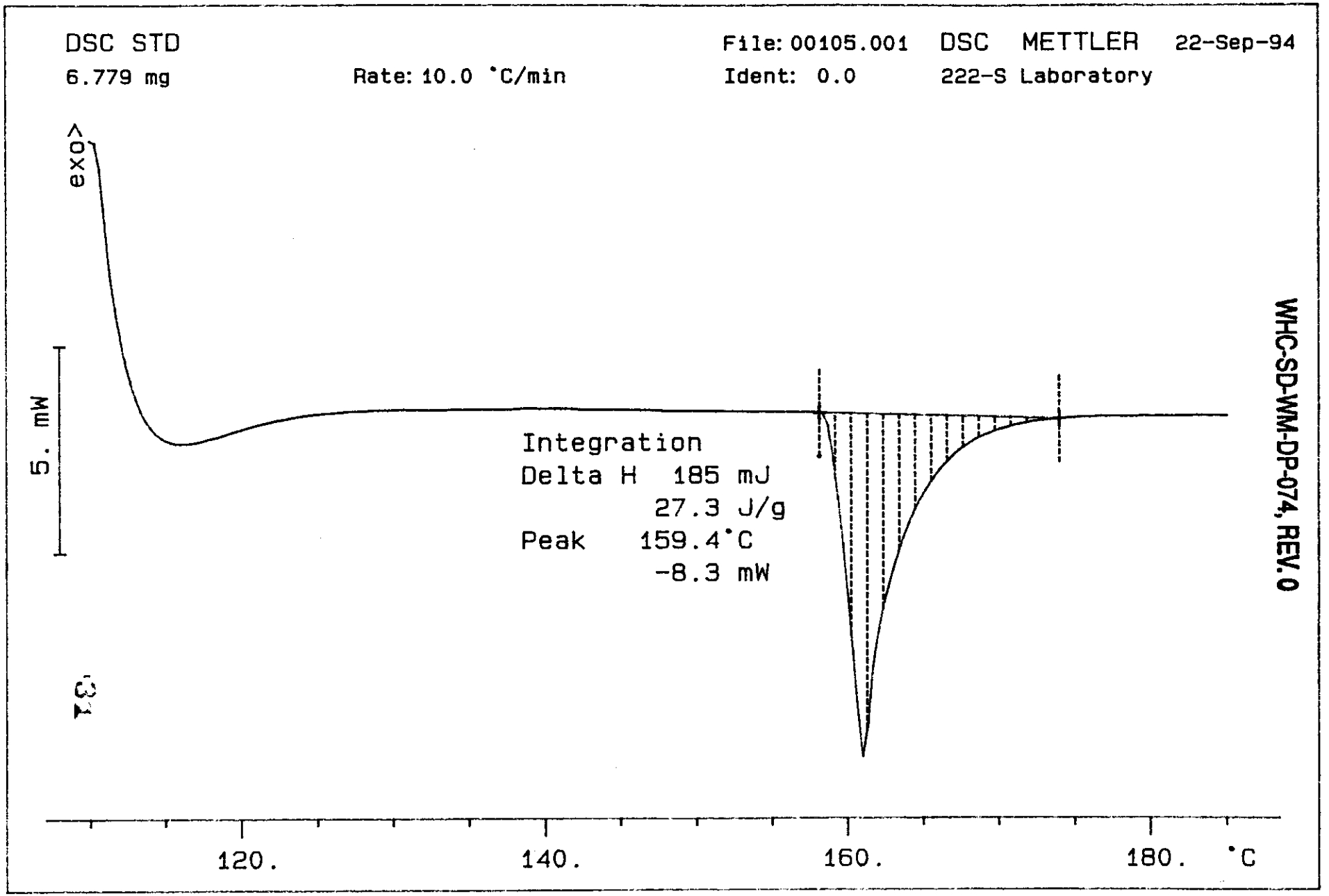
S94T000004 N2 Baseline Subtracted BW File: 00072.001 DSC METTLER 14-Sep-94

15.407 mg Rate: 10.0 °C/min 11-4-94 BW Ident: 0.0 222-S Laboratory



30

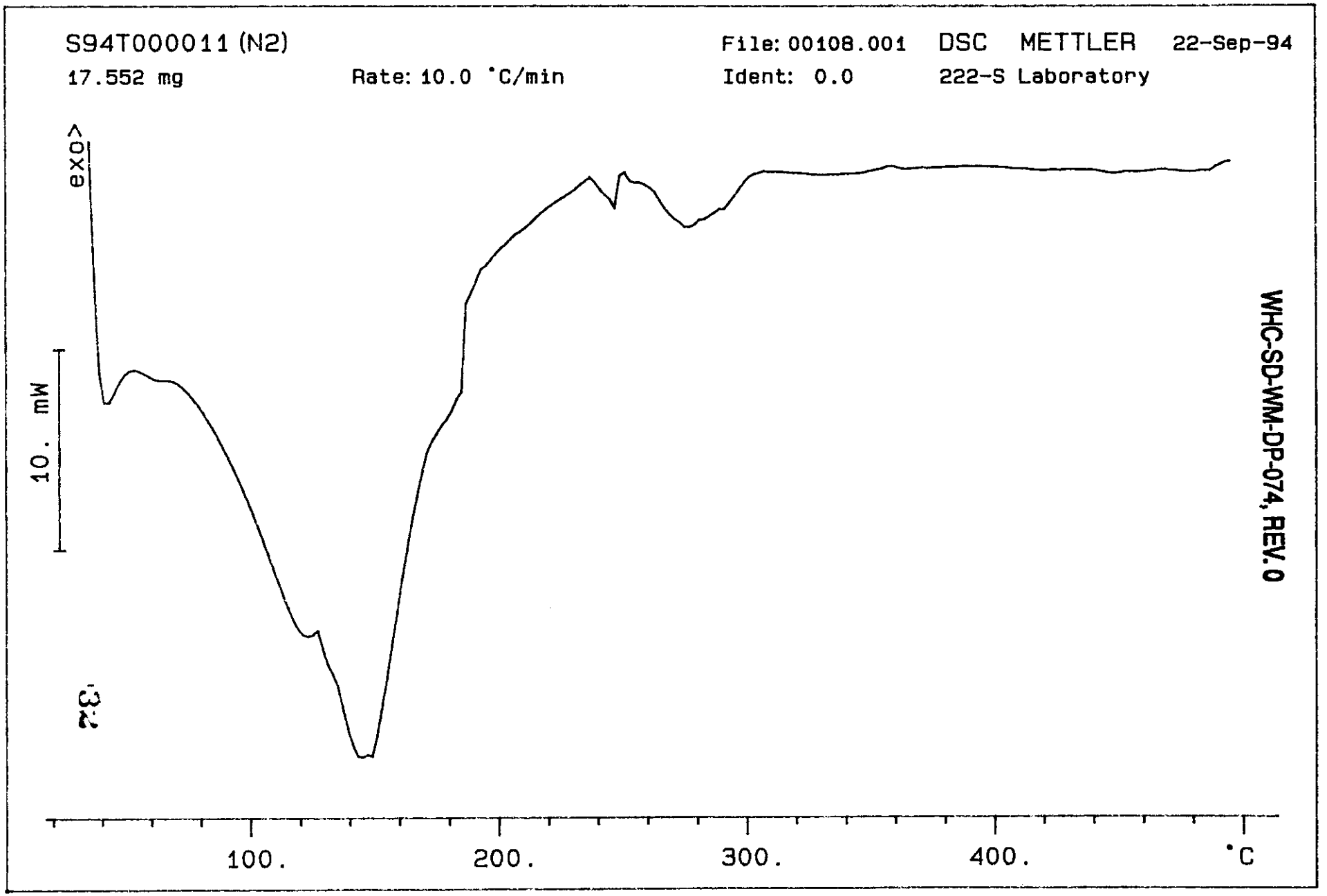
WHC-SD-WM-DP-074, REV. 0



WHC-SD-WM-DP-074, REV. 0

31

9-22-94


S94T000011 (N2)
17.552 mg
Rate: 10.0 °C/min
File: 00108.001
Ident: 0.0
DSC METTLER
222-S Laboratory
22-Sep-94
exo>
10. mW
100.
200.
300.
400.
°C

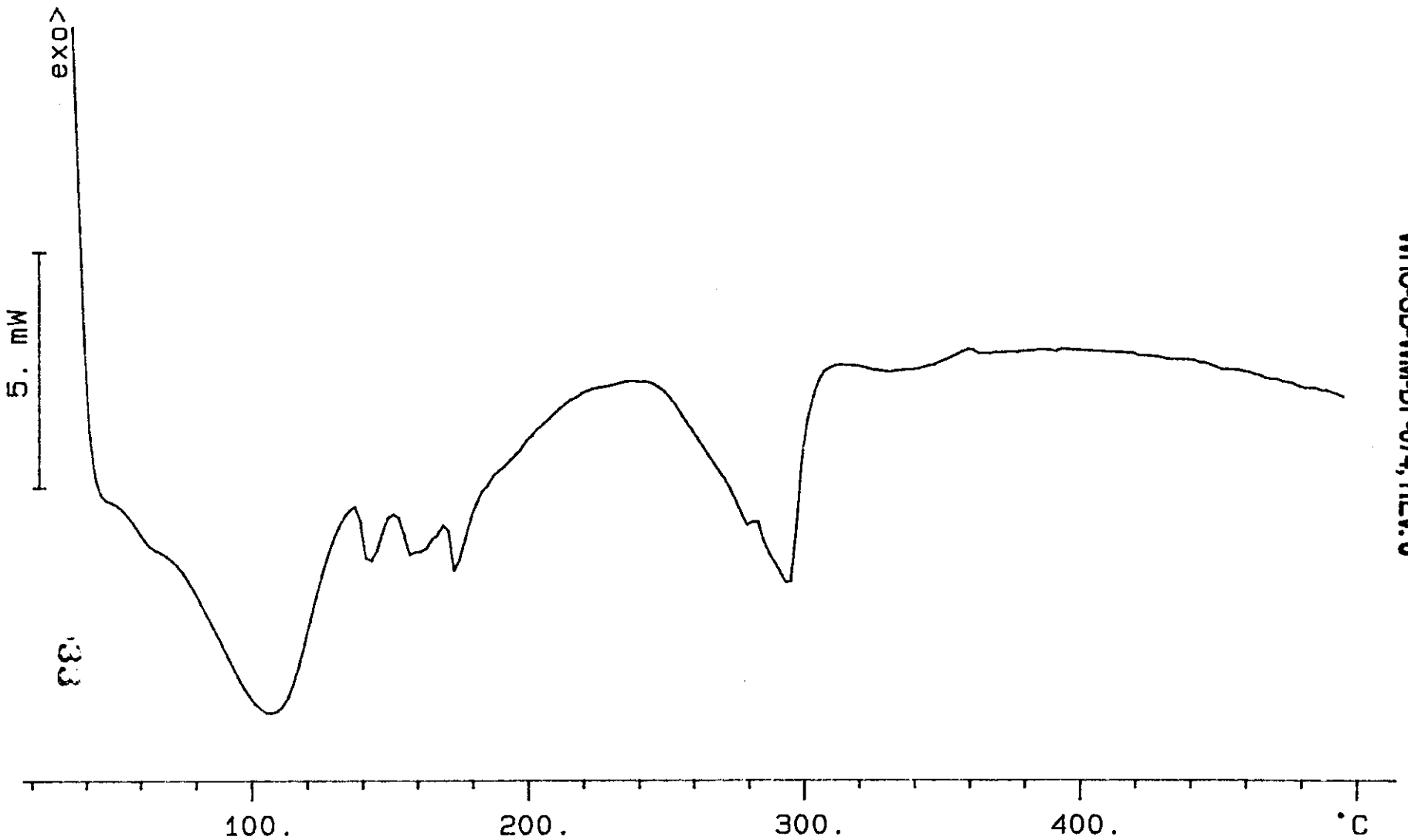
S94T000011 (N2) DUP

14.939 mg

Rate: 10.0 °C/min

File: 00109.001 DSC METTLER 22-Sep-94

Ident: 0.0 222-S Laboratory



33

WHC-SD-WM-DP-074, REV. 0

LABCORE Data Entry Template for Worklist# 17

12 UA 38

Analyst: _____ **Instrument:** DSC01 _____ **Method:** LA-514-113

Worklist Comment: Please run under N2, JMF Run only up to 450°C not 500°C JMF

Seg	Type	Sample#	Rep	Al	Test	Matrix	Actual	Found	DL	Unit
1	STD				DSC-01	LIQUID	2845	2778	N/A	Joule
2	SAMPLE	S94T000008	0		DSC-01	LIQUID	N/A	135.6 J/g	N/A	Joule
3	DUP	S94T000008			DSC-01	LIQUID	135.6 J/g		N/A	Joule
4	SAMPLE	S94T000015	0		DSC-01	LIQUID	N/A	166.7 J/g		Joule
5	DUP	S94T000015			DSC-01	LIQUID	166.7 J/g	245.1 J/g	N/A	Joule

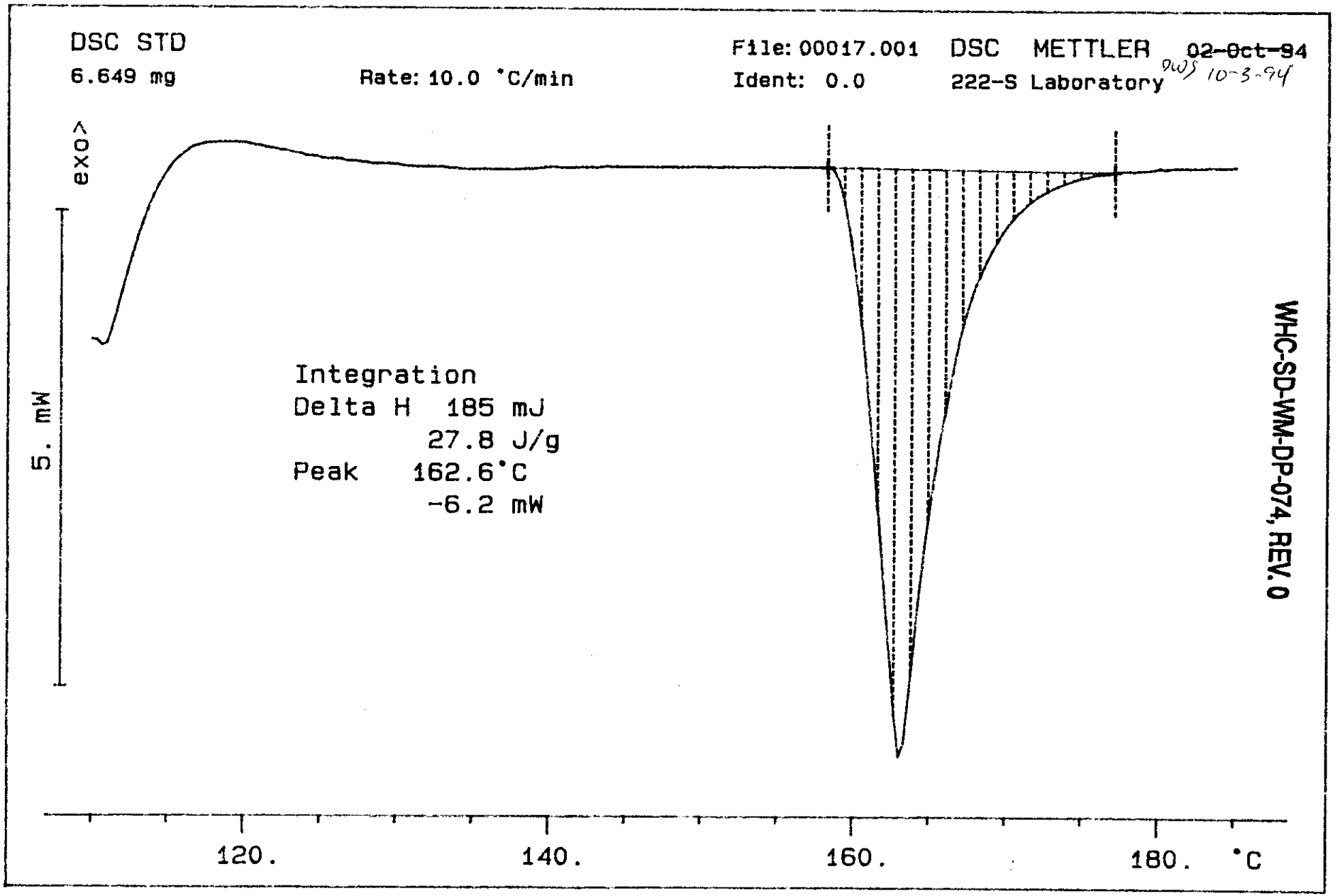
Final page for worklist # 17

Analyst Signature _____ **Date** 10-3-94

Data Entry Comments: Samples display erratic above 400°C. JMF We ran this to 450°C not 500°C because of damage done to a previous sensor from an earlier sample in the tank. It emitted a vaporous substance above 450°C that deposited on the sensor. JMF 10/4/94

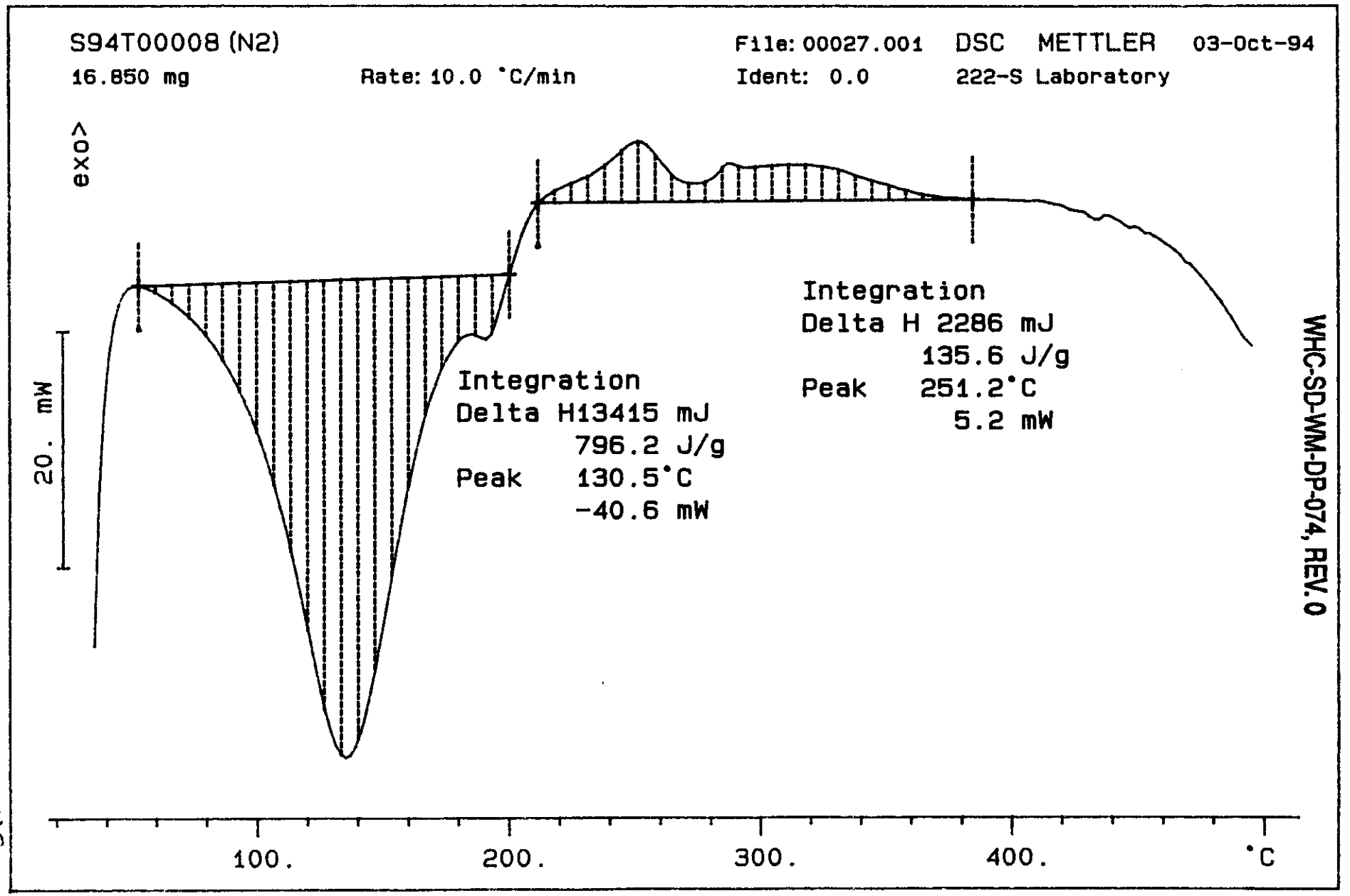
Units shown for QC (SPK) may not reflect the actual units.

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 35 TO 39.

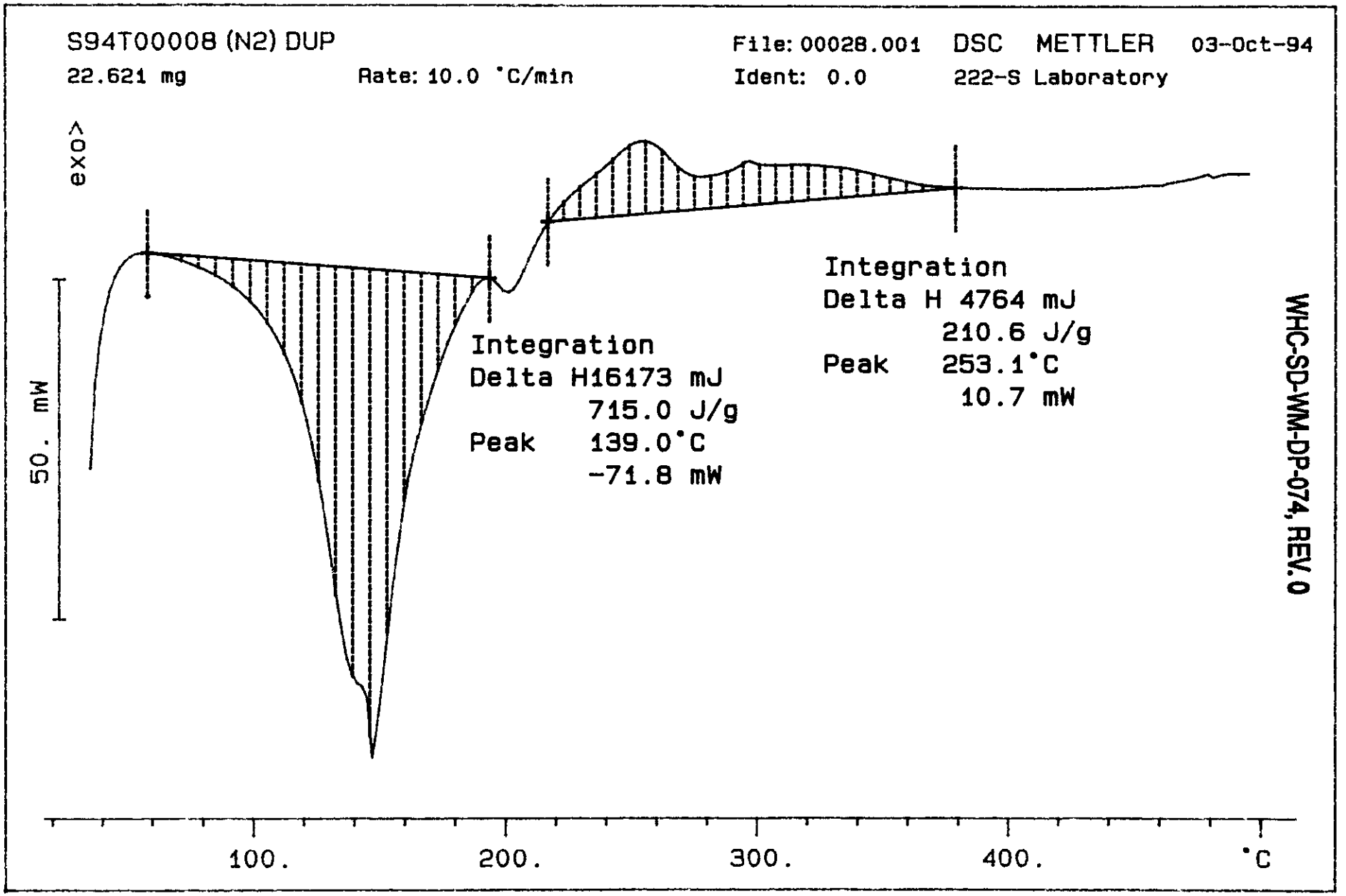


WHC-SD-WM-DP-074, REV. 0

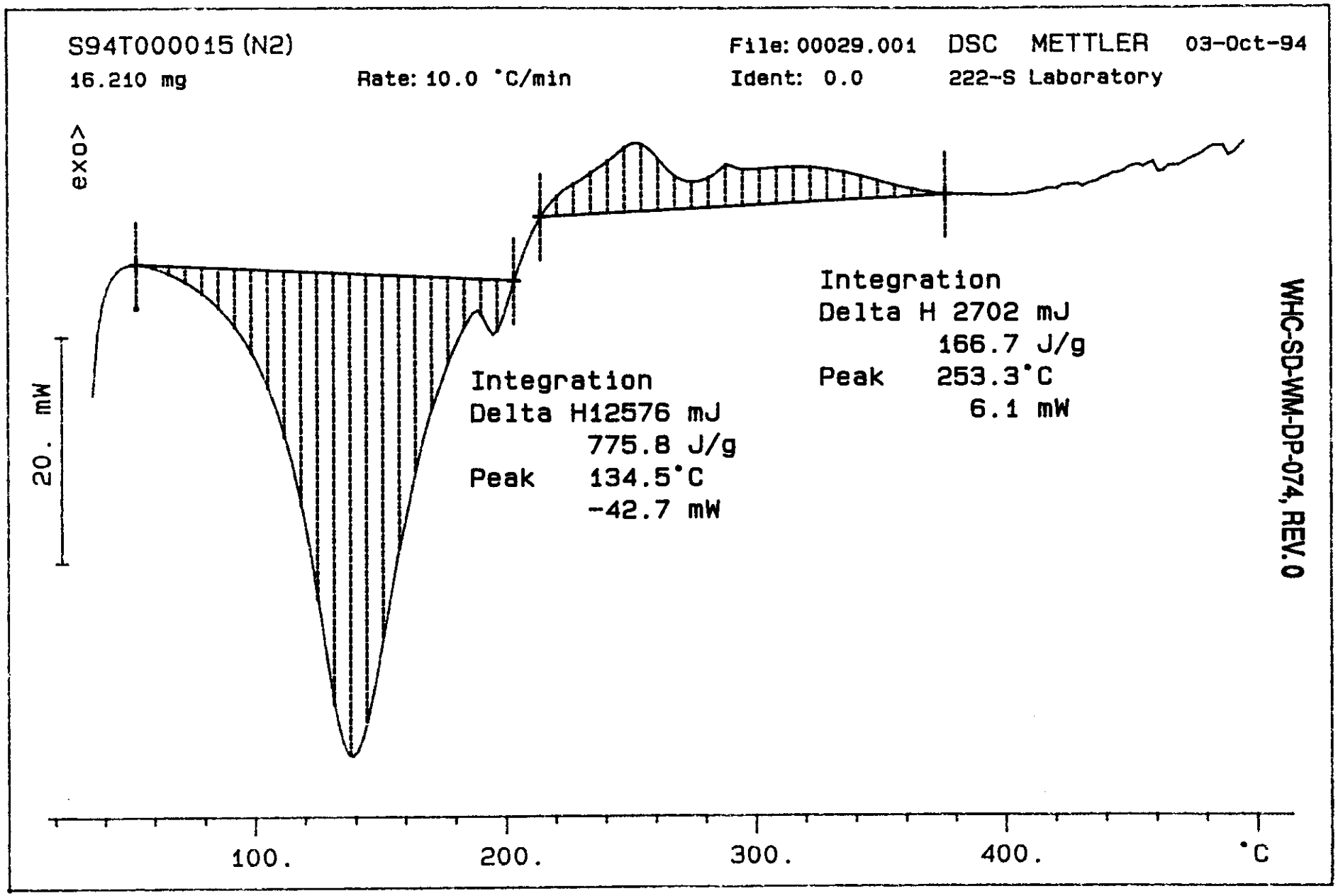
10-3-94



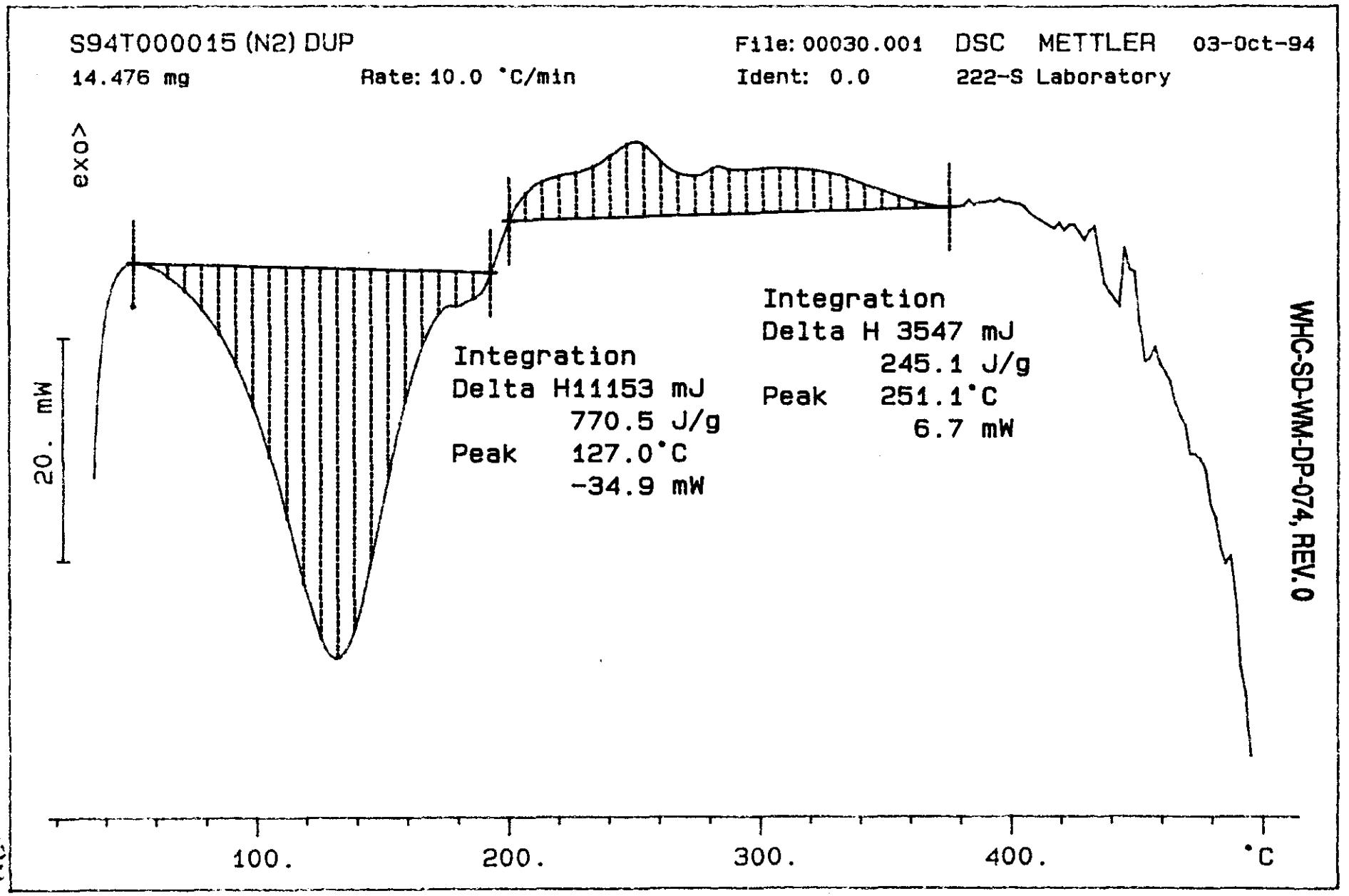
WHC-SD-WM-DP-074, REV. 0



WHC-SD-WM-DP-074, REV. 0



WHC-SD-WM-DP-074, REV. 0



WHC-SD-WM-DP-074, REV. 0

LABCORE Data Entry Template for Worklist# 13

Analyst: D.W. Smith **Instrument:** DSC01 _____ **Method:** LA-514-113

Worklist Comment: Please run these under nitrogen, JMF. **WHC-SD-WM-DP-074, REV. 0**

Seg	Type	Sample#	Rep	Al	Test	Matrix	Actual	Found	DL	Unit
1	STD				DSC-01	SOLID	100.0%	94.9%	N/A	Joule
2	SAMPLE	S94T000020	0		DSC-01	SOLID	N/A	See comment		Joule
3	DUP	S94T000020			DSC-01	SOLID	See comment		N/A	Joule
4	SAMPLE	S94T000028	0		DSC-01	SOLID	N/A	41.5 J/g		Joule
5	DUP	S94T000028			DSC-01	SOLID	41.5 J/g	72.0 J/g	N/A	Joule

Final page for worklist # 13

Analyst Signature

9-15-94
Date

Data Entry Comments:
The first time this sample (S94T000020) was run it appeared to have an exotherm of 29.2 J/g at 247°C and 545 J/g at 416°C on an upwards slopey baseline. The second time it was run the baseline appeared to shift at 300°C upwards then tail downward. There appears to be an exotherm of 56. J/g at 236°C. Inspect of the DSC cell the morning after these were run revealed that material from the sample had deposited on the sensor having adverse affects on the sensor and baseline. Jamie Fryer

Units shown for QC (SPK) may not reflect the actual units.

DSC STD
6.712 mg

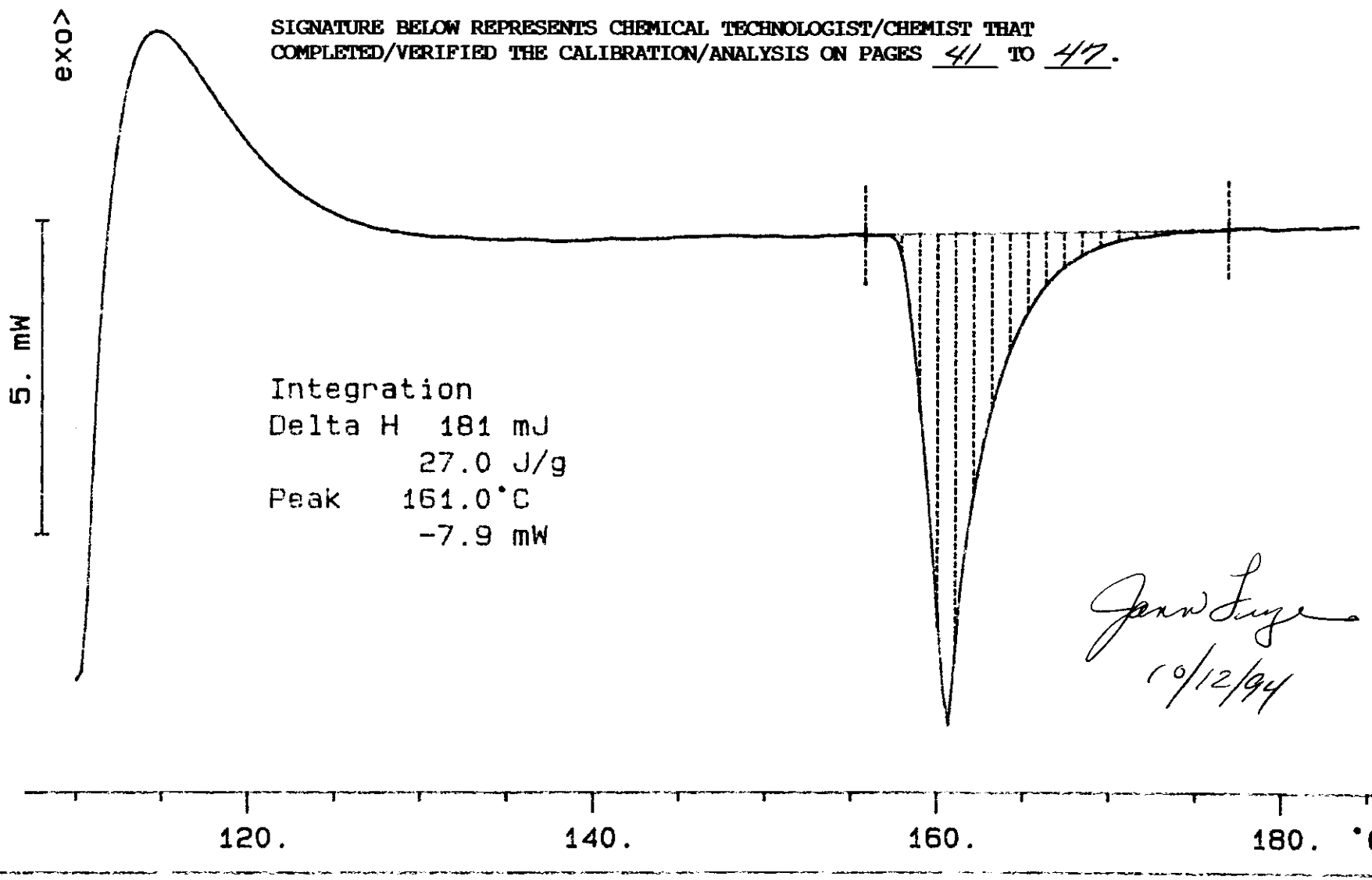
Rate: 10.0 °C/min

File: 00063.001
Ident: 0.0

DSC METTLER
222-S Laboratory

14-Sep-94

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 41 TO 47.



10/12/94

WHC-SD-WM-DP-074, REV. 0

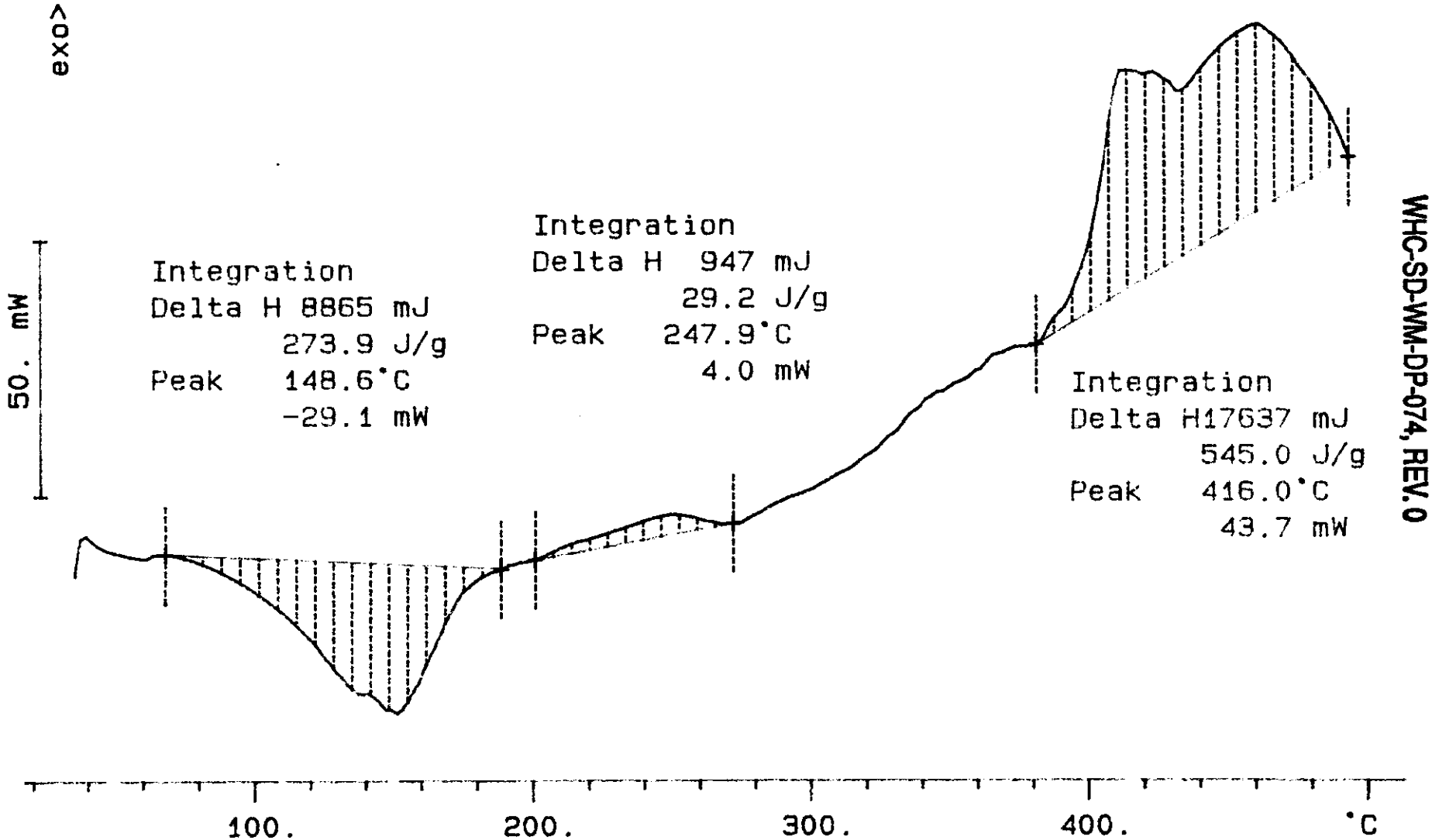
S94T00020 N2

32.363 mg

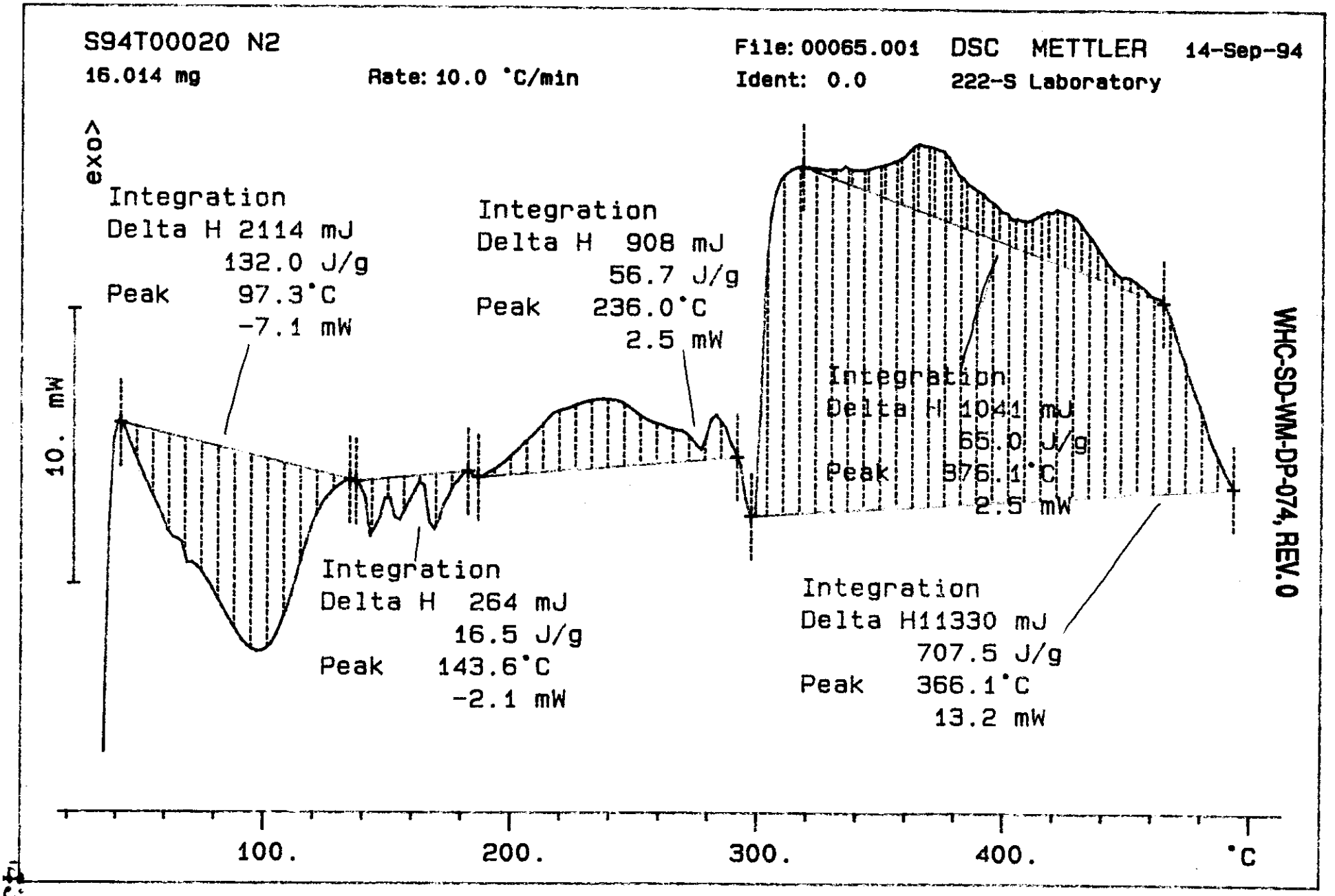
Rate: 10.0 °C/min

File: 00064.001 DSC METTLER 14-Sep-94

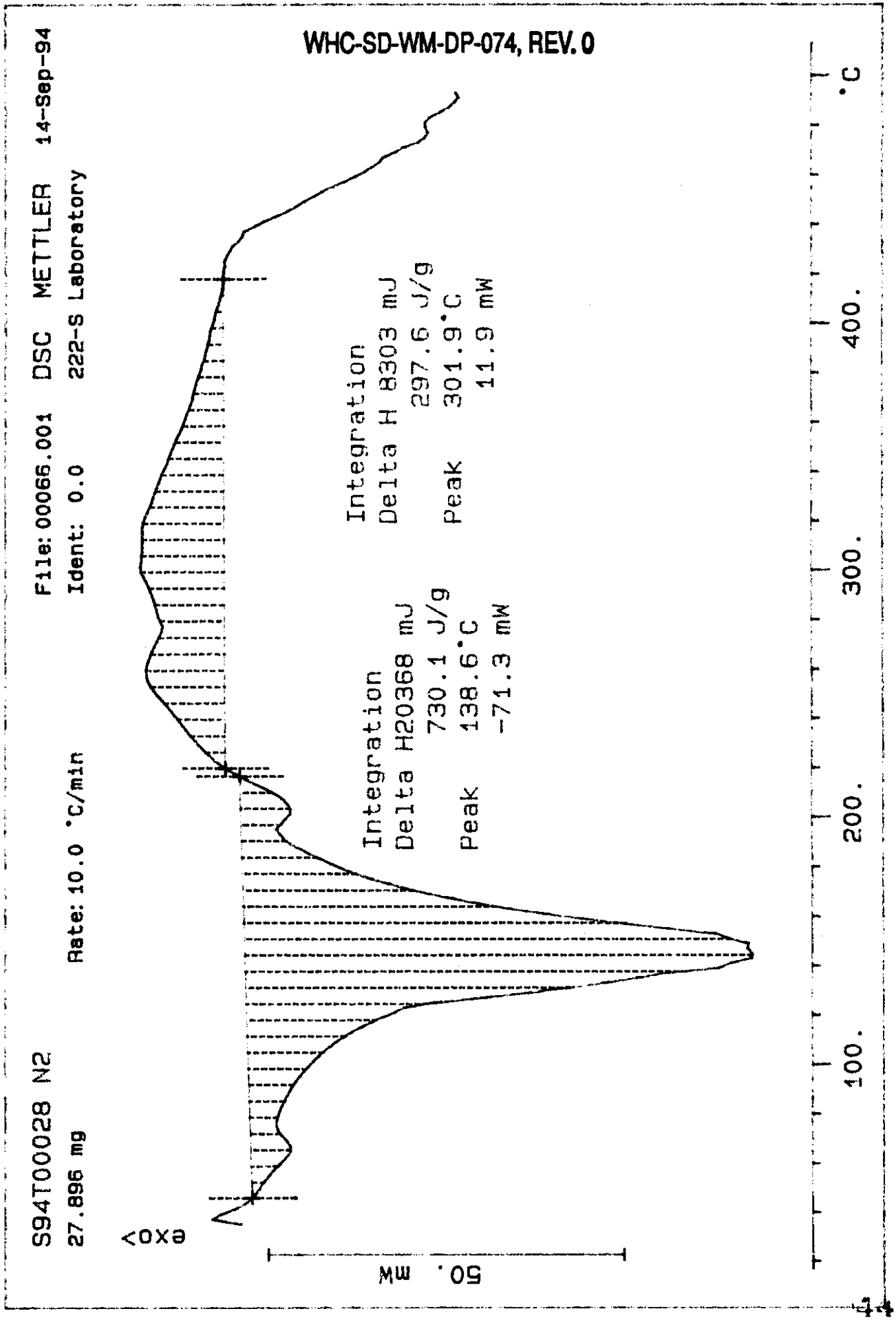
Ident: 0.0 222-S Laboratory

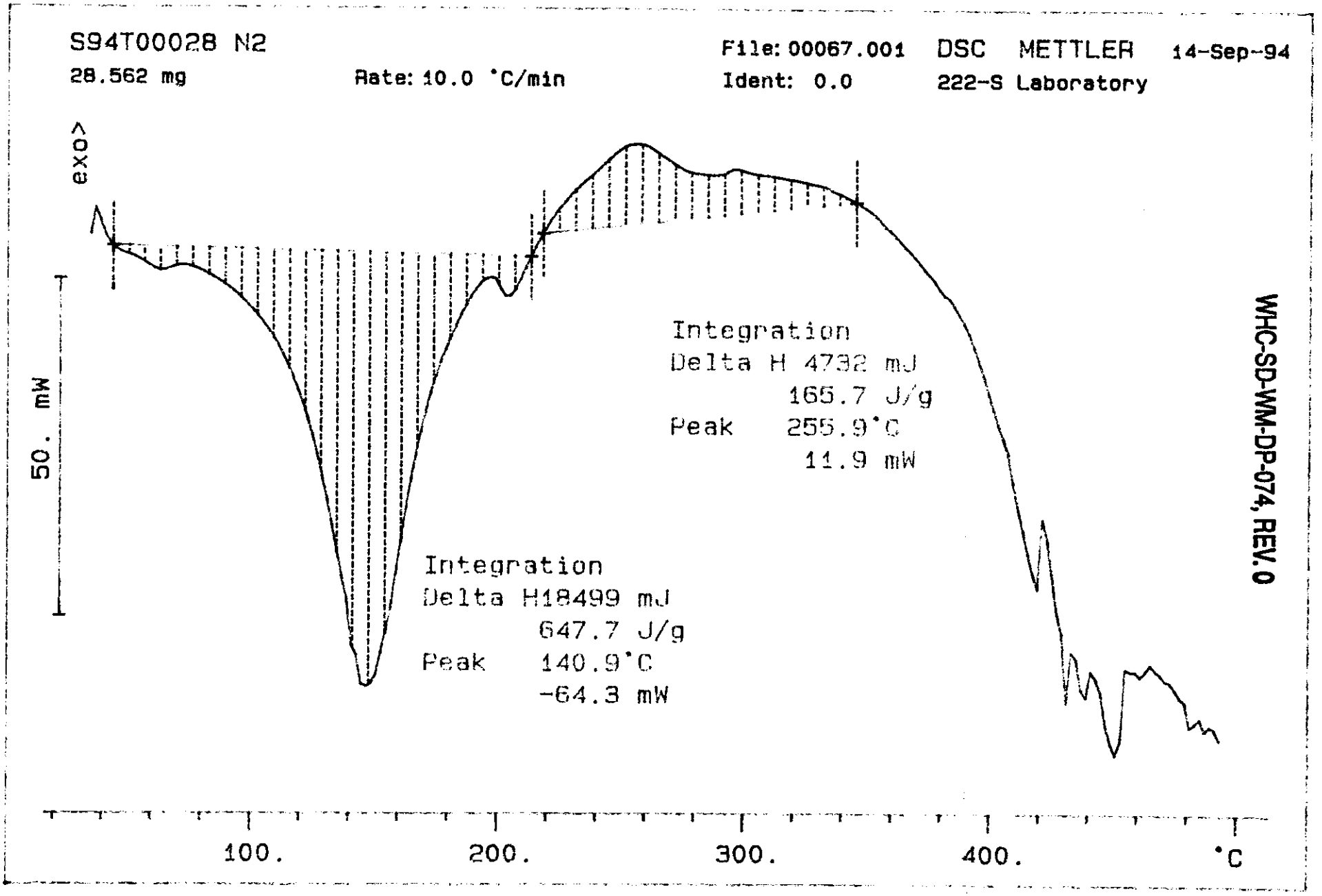


WHC-SD-WM-DP-074, REV. 0



WHC-SD-WM-DP-074, REV.0

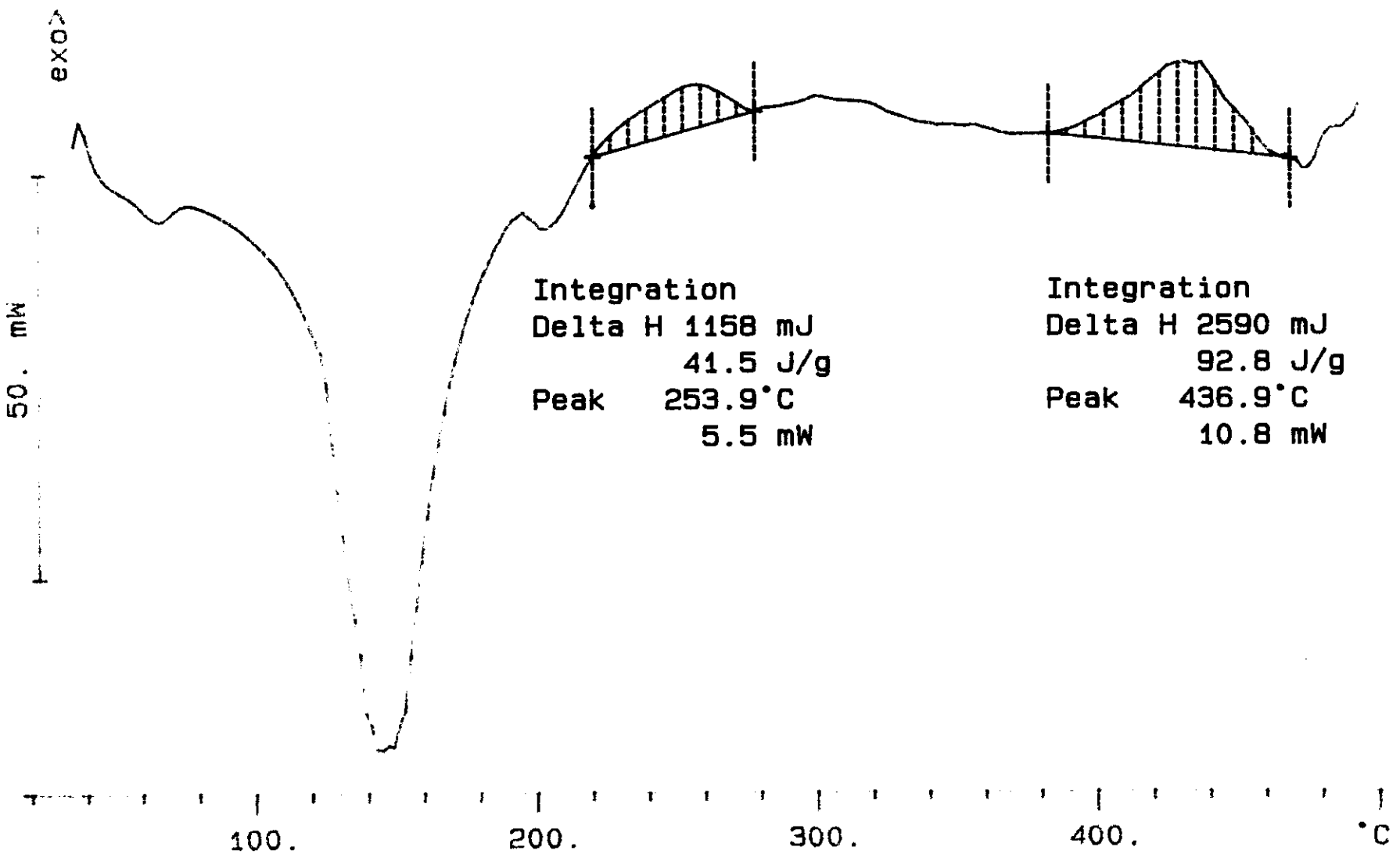

S94T00028 N2
27.896 mg
Rate: 10.0 °C/min
File: 00066.001
Ident: 0.0
DSC METTLER 14-Sep-94
222-S Laboratory
Integration
Delta H 8303 mJ
297.6 J/g
Peak 301.9°C
11.9 mW
Integration
Delta H20368 mJ
730.1 J/g
Peak 138.6°C
-71.3 mW
exo>
50. mW
100.
200.
300.
400.
°C



WHC-SD-WM-DP-074, REV. 0

S94T00028 N2 *Blank subtracted* File: 00066.001 DSC METTLER 14-Sep-94

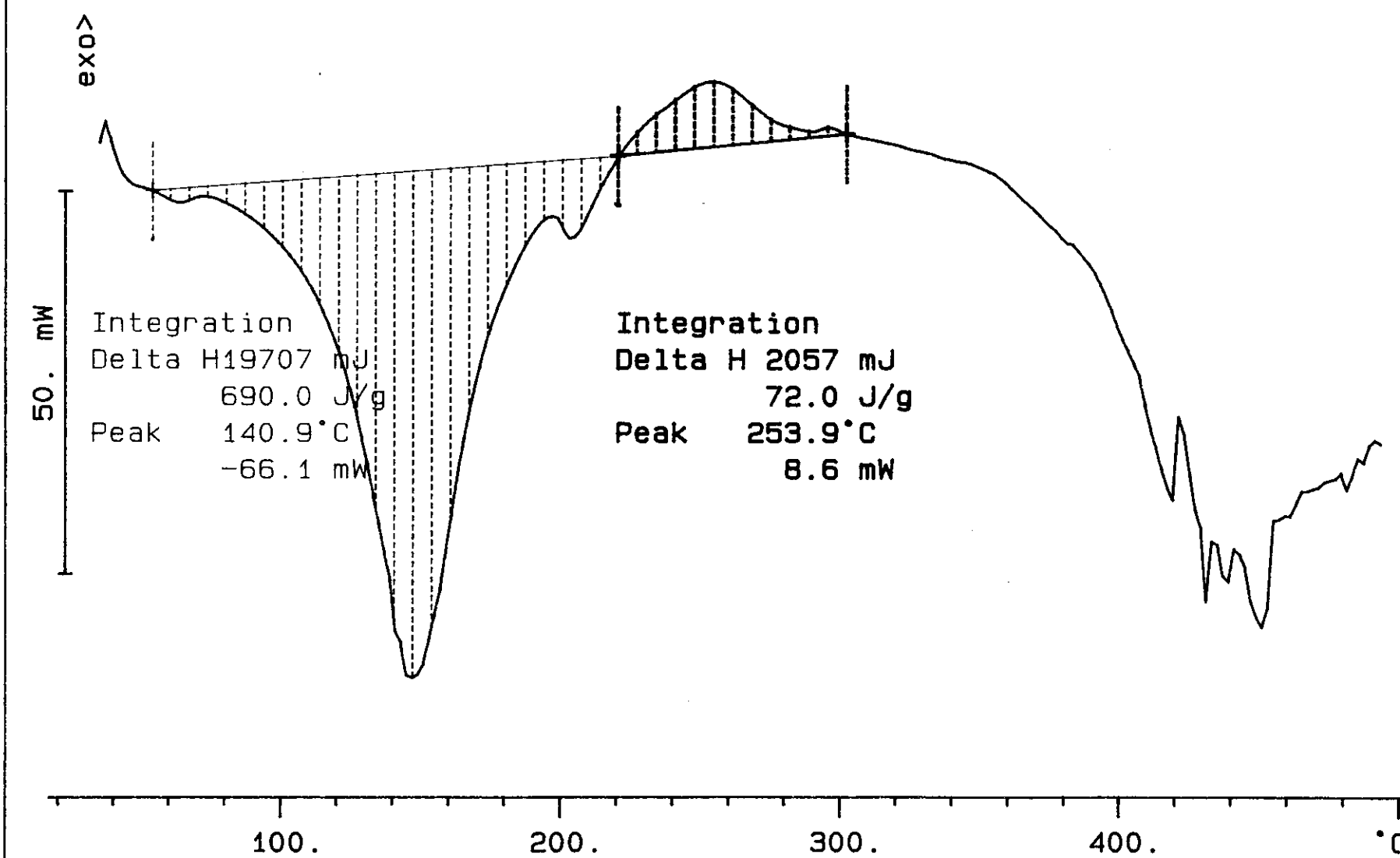
27.896 mg Rate: 10.0 °C/min Ident: 0.0 222-S Laboratory



WHC-SD-WM-DP-074, REV. 0

S94T00028 N2 Background Subtracted File: 00067.001 DSC METTLER 14-Sep-94

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



WHC-SD-WM-DP-074, REV. 0

LABCORE Data Entry Template for Worklist# 12

Analyst: DWS **Instrument:** DSC01 **Method:** LA-514-113

Worklist Comment: Please run these under nitrogen, JMF. **WHC-SD-WM-DP-074, REV. 0**

Seg	Type	Sample#	Rep	Al	Test	Matrix	Actual	Found	DL	Unit
1	STD				DSC-01	LIQUID	28.45	28.0	98.4% Rec N/A	Joule
2	SAMPLE	S94T000025	0		DSC-01	LIQUID	N/A	See Comment		Joule
3	DUP	S94T000025			DSC-01	LIQUID	S. Comment	133.5	N/A	Joule
4	STD				DSC-01	LIQUID	28.45	29.9	105.0% N/A	Joule
5	SAMPLE	S94T000032	0		DSC-01	LIQUID	N/A	195.6		Joule
6	DUP	S94T000032			DSC-01	LIQUID	195.6	See comment	N/A	Joule

Final page for worklist # 12

Analyst Signature **Date**

Data Entry Comments: See attached Sheet for Signatures & comments. JMF 10/25/91

Units shown for QC (SPK) may not reflect the actual units.

LABCORE Data Entry Template for Worklist# 12

Analyst: _____ **Instrument:** DSC01 _____ **Method:** LA-514-113

Worklist Comment: Please run these under nitrogen, JMF. Run only up to 450°C not 500°C JMF

Seg	Type	Sample#	Rep	Al	Test	Matrix	Actual	Found	DL	Unit
1	STD				DSC-01	LIQUID	28.45	28.0 98.4% Rec	N/A	Joule
2	SAMPLE	S94T000025	0		DSC-01	LIQUID	N/A	see comment		Joule
3	DUP	S94T000025			DSC-01	LIQUID	28.45	29.9 105.0%		Joule
4	SAMPLE	S94T000032	0		DSC-01	LIQUID	N/A	195.6 at 251.6°C		Joule
5	DUP	S94T000032			DSC-01	LIQUID	195.6	see comment	N/A	Joule

Final page for worklist # 12

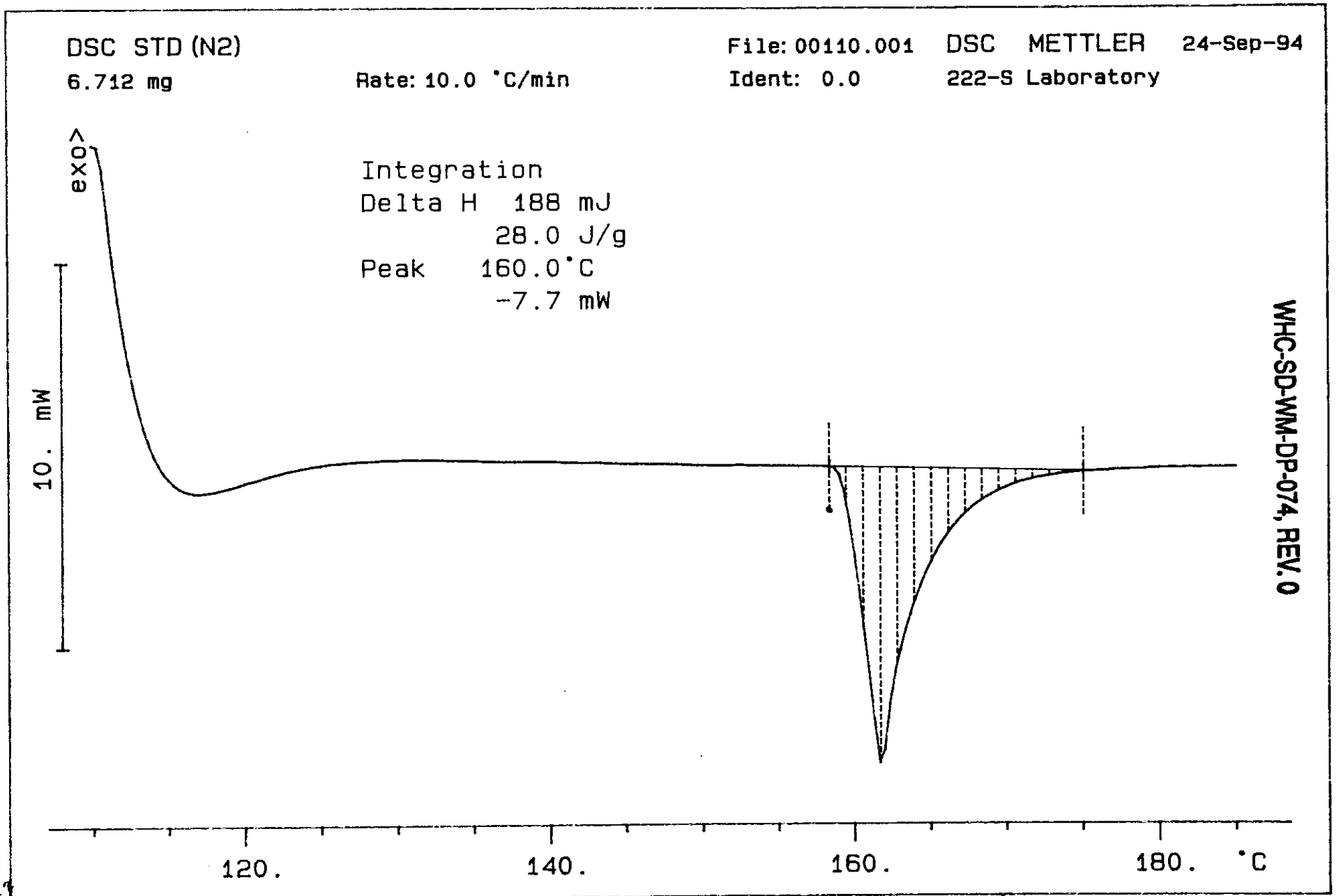
WHC-SD-WM-DP-074, REV. 0

Analyst Signature 9.30.94 **Date**

Data Entry Comments:
S94T000025 - The sample was run, but not integrated and file has been damaged. Will be re-run at end of 45 day screen. S94T000032 Dup. was integrated incorrectly and file is not retrievable. Both scans look qualitatively like their duplicates.

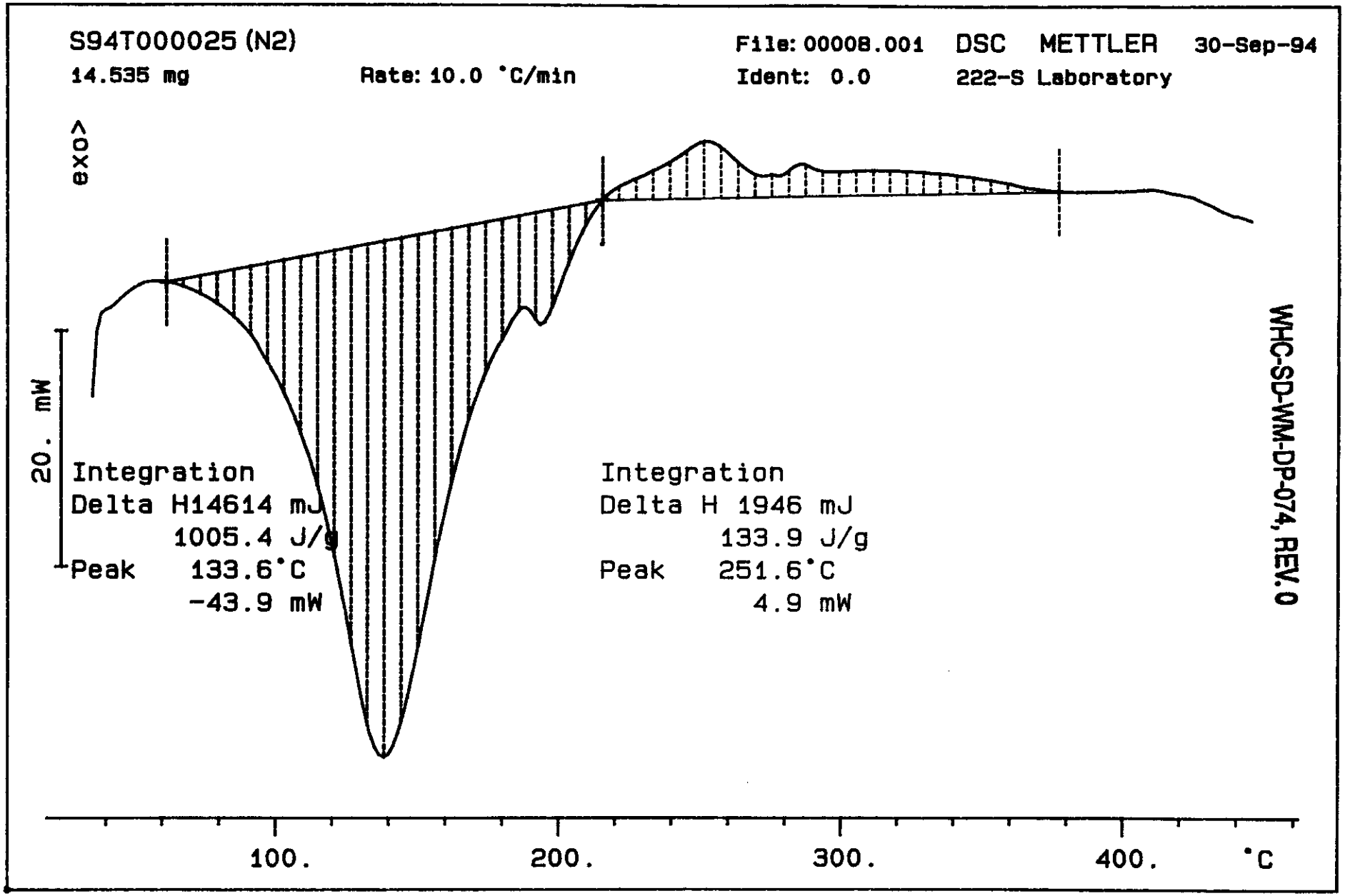
Units shown for QC (SPK) may not reflect the actual units.

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 50 TO 53.

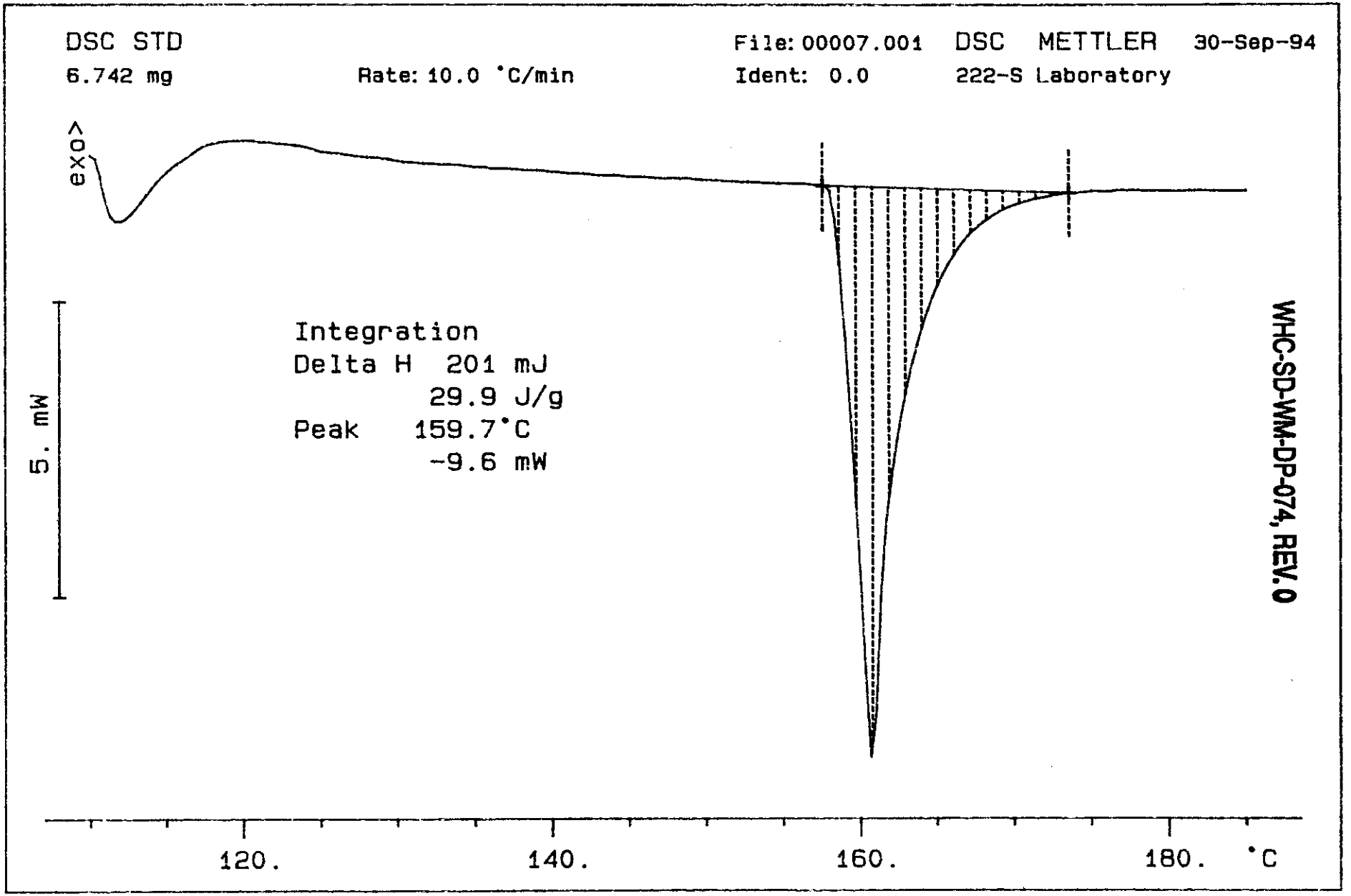


WHC-SD-WM-DP-074, REV. 0

David W Smith 26/94



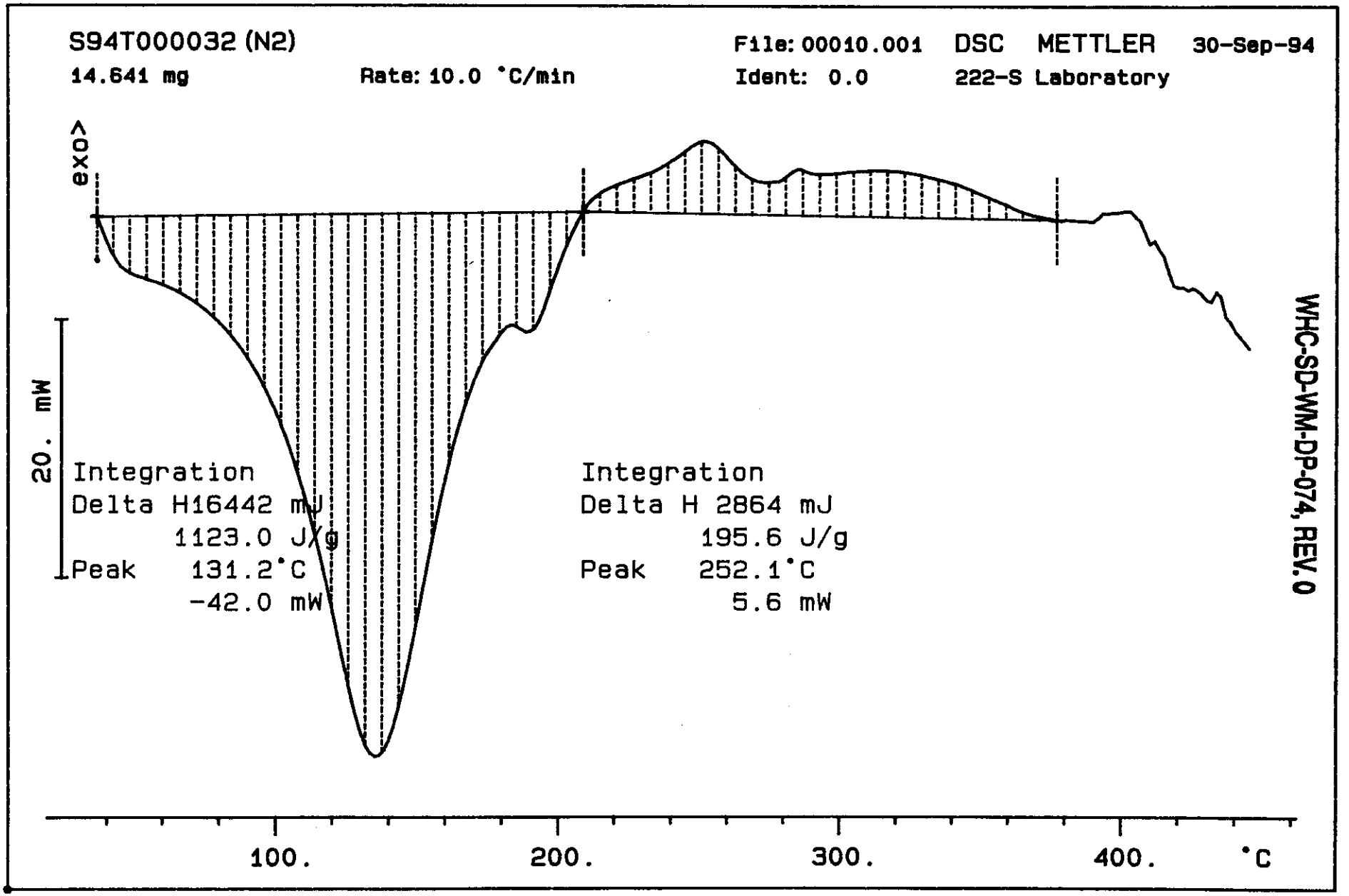
WHC-SD-WM-DP-074, REV.0



WHC-SD-WM-DP-074, REV. 0

52

9-30-94



WHC-SD-WM-DP-074, REV. 0

LABCORE Data Entry Template for Worklist# 103

Analyst: JMF 10/24/94 ~~JKS~~ RDM **Instrument:** DSC01 _____ **Method:** LA-514-113

Worklist Comment: Run under N2 to 450C. JMF

WHC-SD-WM-DP-074, REV. 0

Seg	Type	Sample#	Rep	Al	Test	Matrix	Actual	Found	DL	Unit
1	STD				DSC-01	LIQUID	28.45	29.2	102.6% N/A	Joule
2	SAMPLE	S94T000025	1		DSC-01	LIQUID	N/A	190.5		Joule
3	SAMPLE	S94T000032	1		DSC-01	LIQUID	N/A	203.8		Joule

Final page for worklist # 103

J.M. Fuge for Rob Meyers

Analyst Signature R D Meyers rdm

Date 10/24/94

Data entered + posted 10/24/94 JMF

Data Entry Comments: S94T000025 has endotherm at 129.5°C of 1205.1 J/g

S94T000032 has endotherm of 1109.5 J/g at 133.5°C

Units shown for QC (SPK) may not reflect the actual units.

DSC STD
6.565 mg

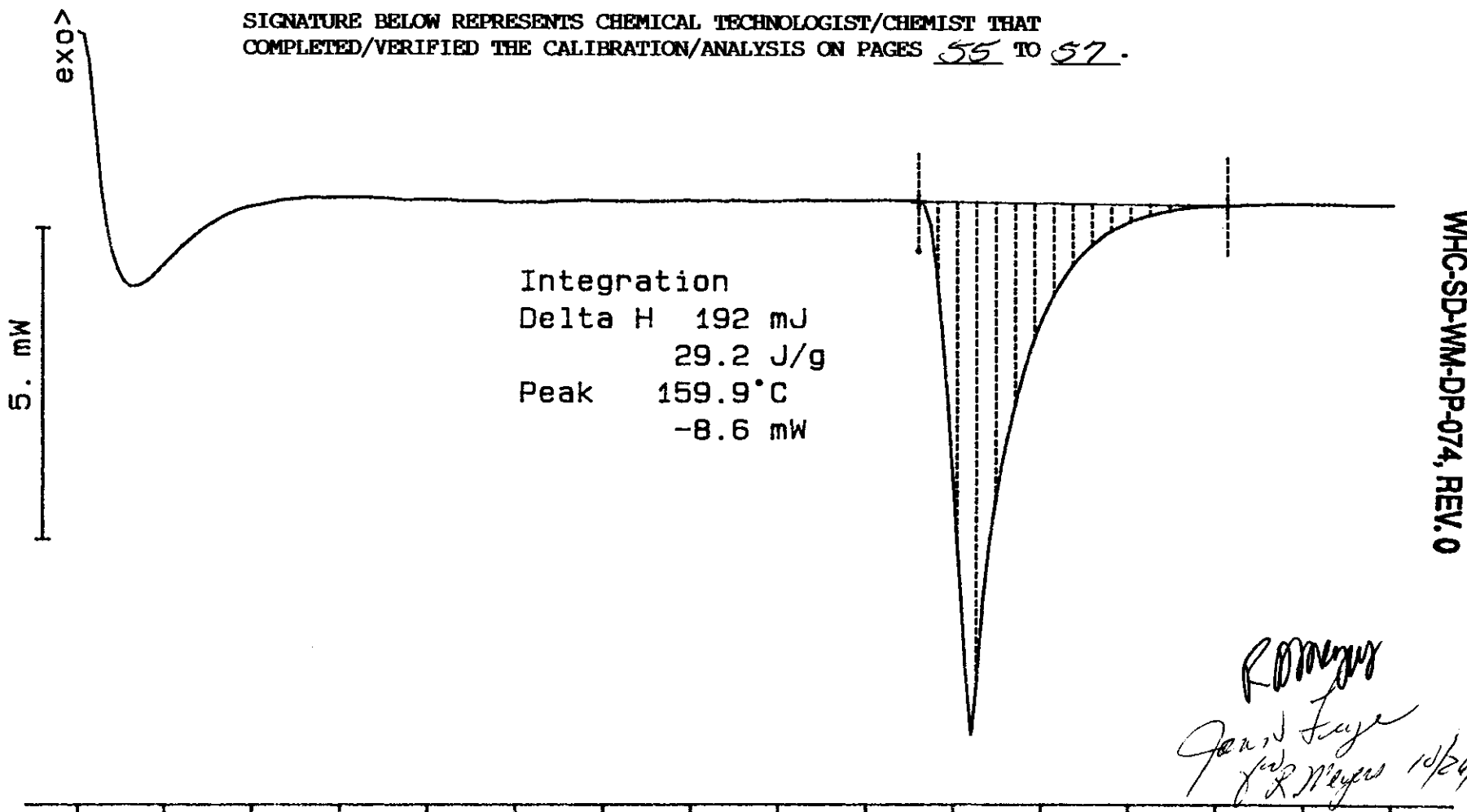
Rate: 10.0 °C/min

File: 00123.001
Ident: 0.0

DSC METTLER
222-S Laboratory

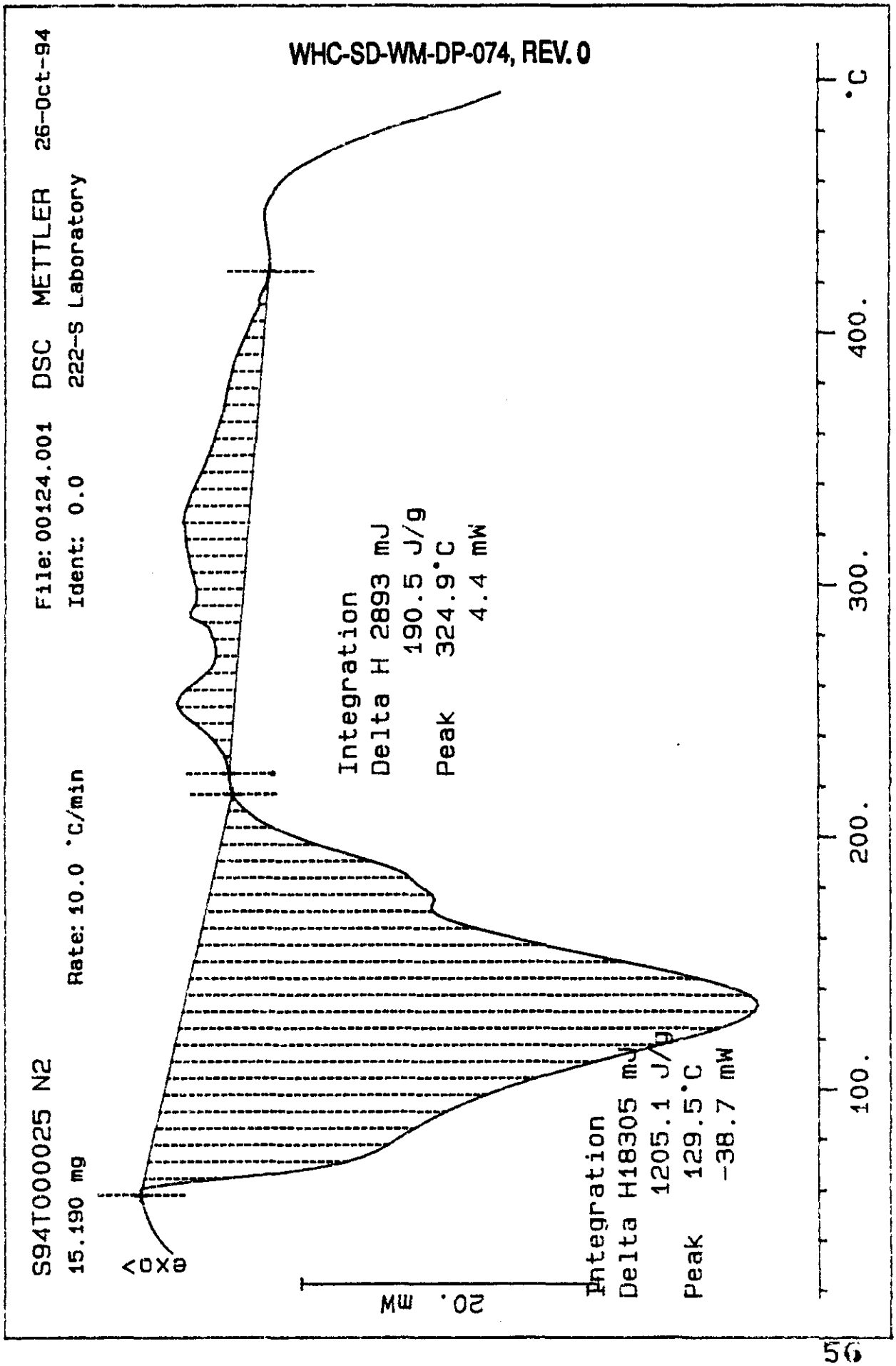
26-Oct-94

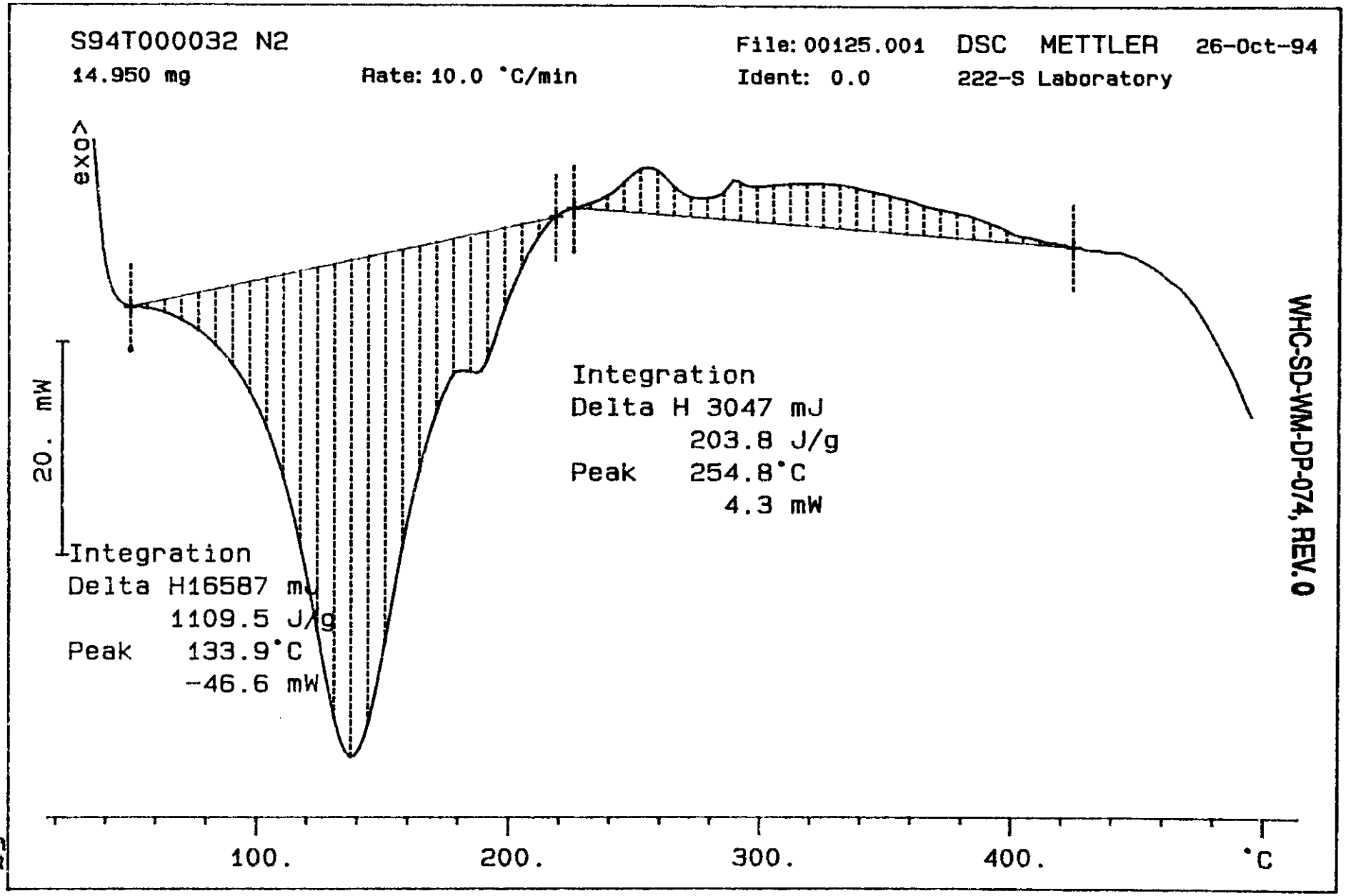
SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 55 TO 57.



WHC-SD-WM-DP-074, REV. 0

R D Meyer
Jerry Fryer for R Meyer 10/24/94


S94T000025 N2
15.190 mg
Rate: 10.0 °C/min
File: 00124.001 DSC METTLER 26-Oct-94
Ident: 0.0 222-S Laboratory
Integration
Delta H 2893 mJ
190.5 J/g
Peak 324.9°C
4.4 mW
Integration
Delta H18305 mJ
1205.1 J/g
Peak 129.5°C
-38.7 mW
exo>
20. mW
100.
200.
300.
400.
°C



WHC-SD-WM-DP-074, REV.0

LABCORE Data Entry Template for Worklist# 45

Analyst: KLV **Instrument:** DSC01 _____ **Method:** LA-514-113

Worklist Comment: Please run under N2 Run up to 450 °C. JMF

Seg	Type	Sample#	Rep	Al	Test	Matrix	Actual	Found	DL	Unit
1	STD				DSC-01	SOLID	28.45	27.1	95.3 % Rec N/A	Joule
2	SAMPLE	S94T000036	0		DSC-01	SOLID	N/A	37.1 J/g + 4.2 J/g		Joule
3	DUP	S94T000036	0		DSC-01	SOLID	37.1 J/g	NO EXO	N/A	Joule
4	Std SAMPLE	S94T000055	0		DSC-01	SOLID	28.45 N/A	29.7 J/g 221.8 J/g	104.4% Rec.	Joule
5	DUP	S94T000055	0		DSC-01	SOLID	221.8 J/g	165.0 J/g	N/A	Joule

Final page for worklist # 45

Analyst Signature

2ND. 10-27-94

~~10-4-94~~ 10-4-94

Date

WHC-SD-WM-DP-074, REV. 0

58

Data entered & posted 10/5/94 JMF. Reviewed 10/26/94 JMF.

Data Entry Comments:

S94T000036 Had two exotherms 37.1 J/g at 459.2 C, and 4.2 J/g at 476.9 °C. It has two endotherms of 555.7 J/g at 146.9 °C and 59.8 J/g at 288.2 °C. The duplicate has 3 endotherms 306.8 J/g at 121.7 °C, 57.4 J/g at 276.9 °C, 92.2 J/g at 430.8. The sample was crystal filled and syrupy.

Units shown for QC (SPK) may not reflect the actual units.

S94T000055 Has an endotherm of 921.1 J/g at 136.0 °C in the sample, and 553.9 J/g at 133.2 °C in the duplicate. The exotherms are at 249.5 °C in the [illegible]

LABCORE Data Entry Template for Worklist# 45

Analyst: _____ **Instrument:** DSC01 _____ **Method:** LA-514-113

Worklist Comment: Please run under N2,to 450C JMF.

WHC-SD-WM-DP-074, REV. 0

Seg	Type	Sample#	Rep	Al	Test	Matrix	Actual	Found	DL	Unit
1	STD				DSC-01	SOLID			N/A	Joule
2	SAMPLE	S94T000036	0		DSC-01	SOLID	N/A			Joule
3	DUP	S94T000036	0		DSC-01	SOLID			N/A	Joule
4	STD				DSC-01	SOLID			N/A	Joule
5	SAMPLE	S94T000055	0		DSC-01	SOLID	N/A			Joule
6	DUP	S94T000055	0		DSC-01	SOLID			N/A	Joule

Final page for worklist # 45

Analyst Signature _____ **Date** _____

Data Entry Comments: See attached worklist

Units shown for QC (SPK) may not reflect the actual units.

LABCORE Completed Worklist Report for Worklist# 45

Analyst: klv **Instrument:** DSC01

Worklist Comment: Please run under N2,to 450C JMF. WHC-SD-WM-DP-074, REV. 0

Seq	Type	Sample#	Rep	Al	Test	Matrix	Actual	Found	DL	Unit
1	STD				DSC-01	SOLID	100	95.3	95.30	Joules
2	SAMPLE	S94T000036	0		DSC-01	SOLID	N/A	37.1	0.000	Joule
3	DUP	S94T000036	0		DSC-01	SOLID	37.1	noexo		Joules
4	STD				DSC-01	SOLID	100	104.4	104.40	Joules
5	SAMPLE	S94T000055	0		DSC-01	SOLID	N/A	221.8	0.000	Joule
6	DUP	S94T000055	0		DSC-01	SOLID	221.8	165.0	29.37	Joules

Comments Section:

Comments for sample# S94T000036 **and test** DSC-01 .

S94T000036 had two exotherms 37.1J/g at 459.2Cand 4.2J/g at 476.9C It has two endotherms of 555.7J/g at 140.9C and 59.8J /g at 288.2C. The Dup has 3 endotherms, 506.8J/g at 121.7C, 57.4J/g at 276.9C, 92.2J/g at 430.8C.
S94T000055 has an endotherm of 921.1 J/g at 136.0C in the sa mple and 553.9J/g at 133.2C in the Dup/ The exotherms are at 249.5C in the sample and 252.6C in the Dup.

Final page for worklist # 45

Analyst Signature **Date**

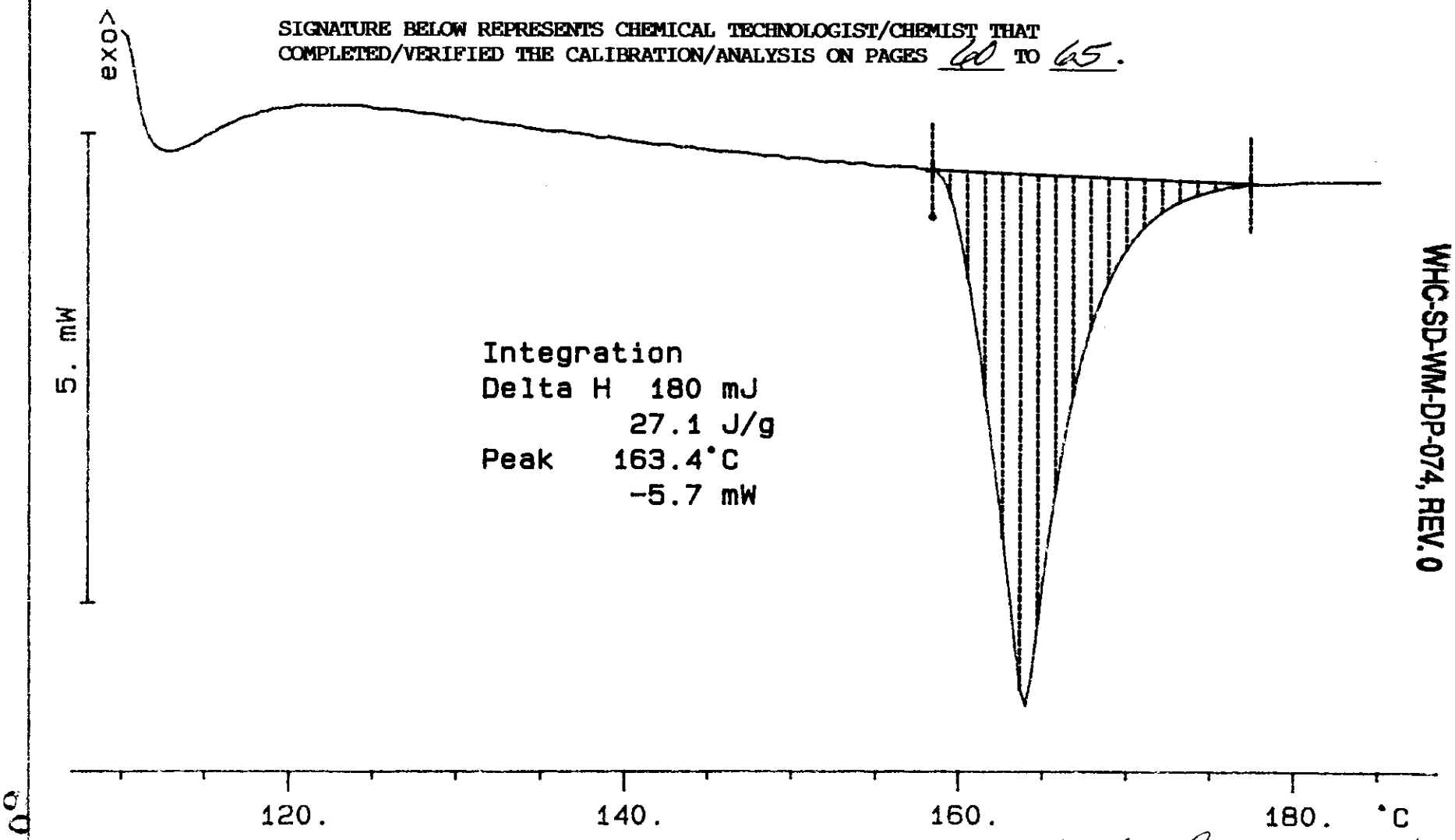
Units shown for QC (SPK) may not reflect the actual units.

DSC STD
6.649 mg
Rate: 10.0 °C/min

File: 00035.001
Ident: 0.0

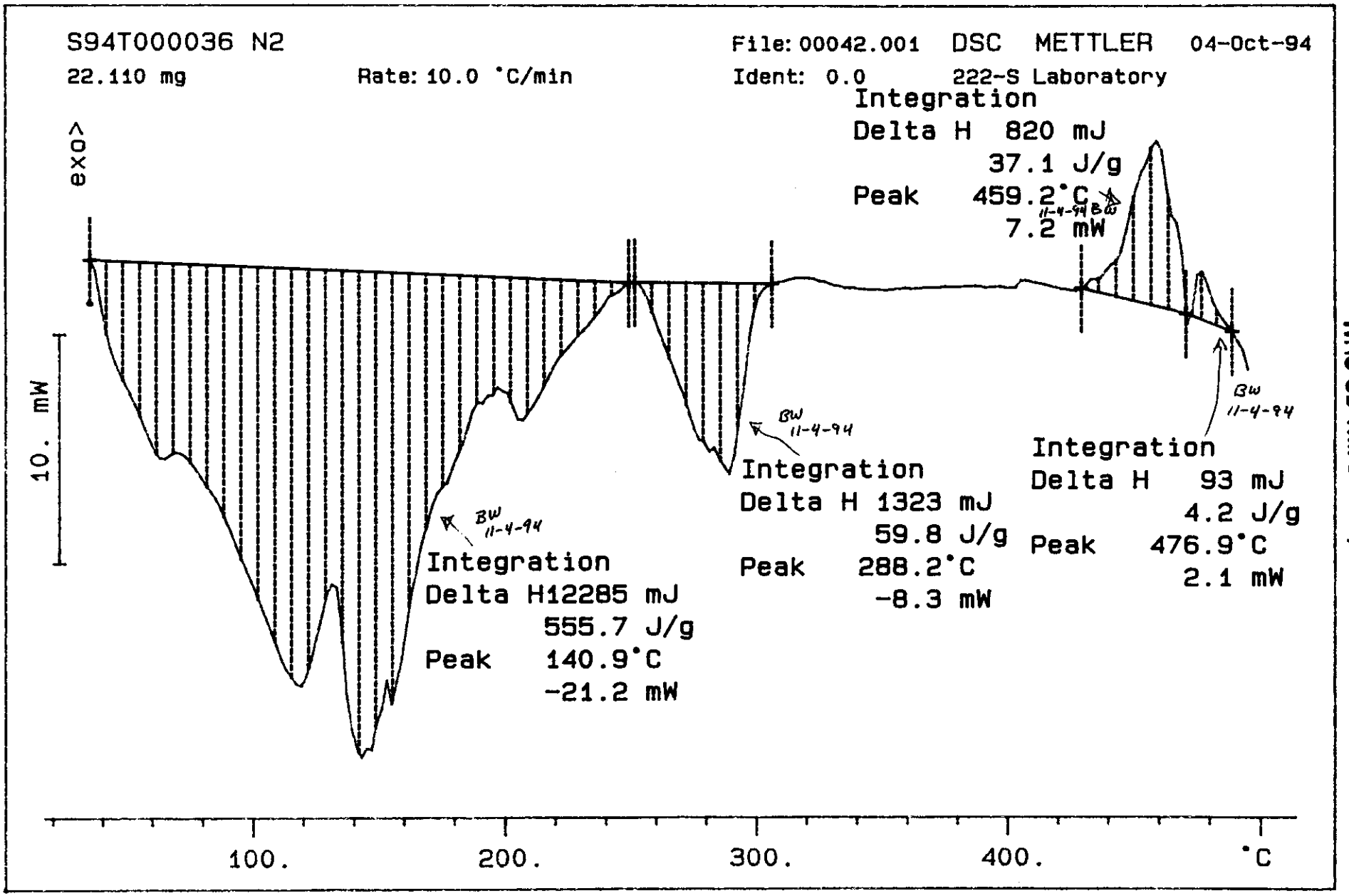
DSC METTLER 03-Oct-94
222-S Laboratory

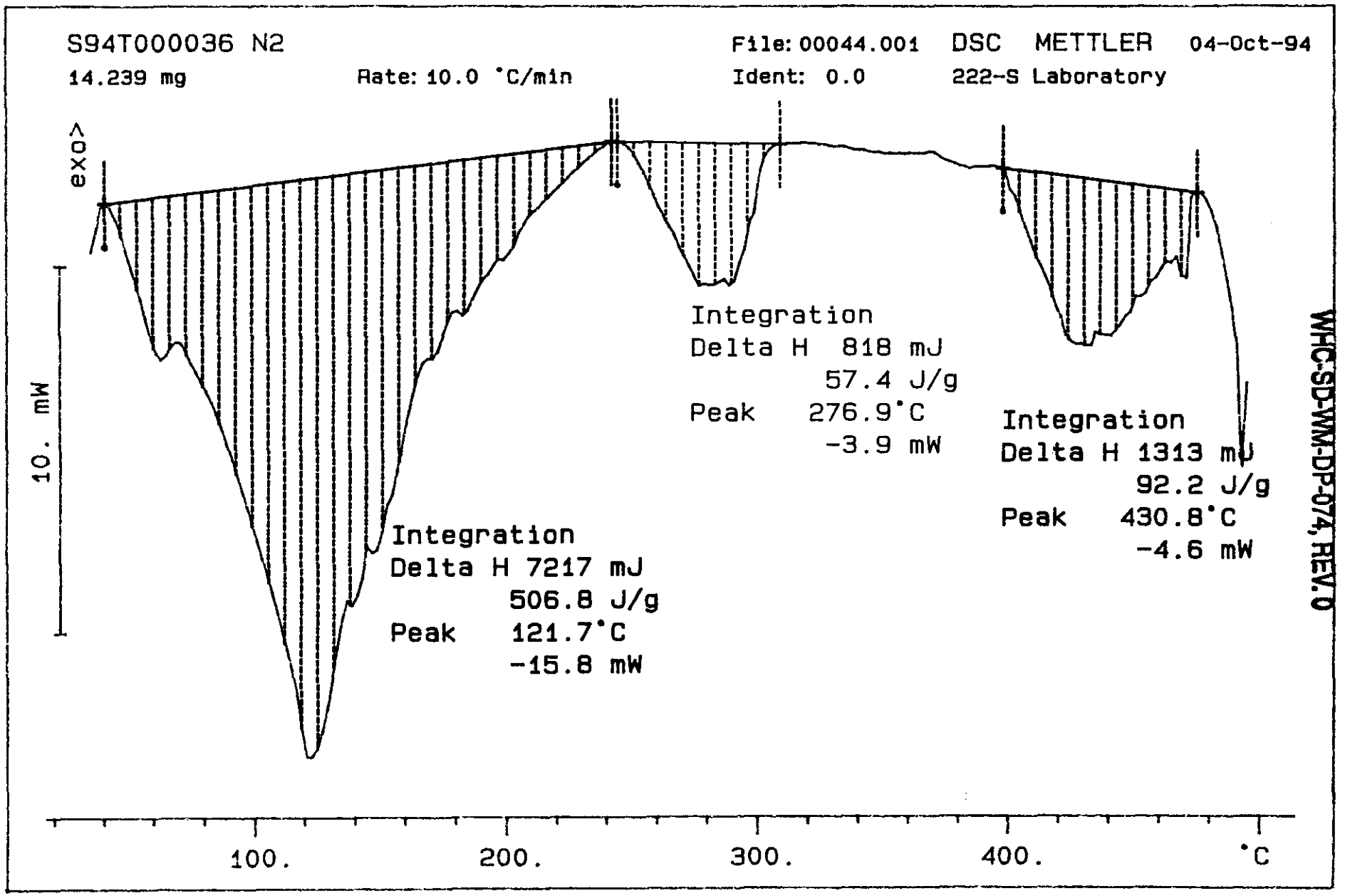
SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 60 TO 65.



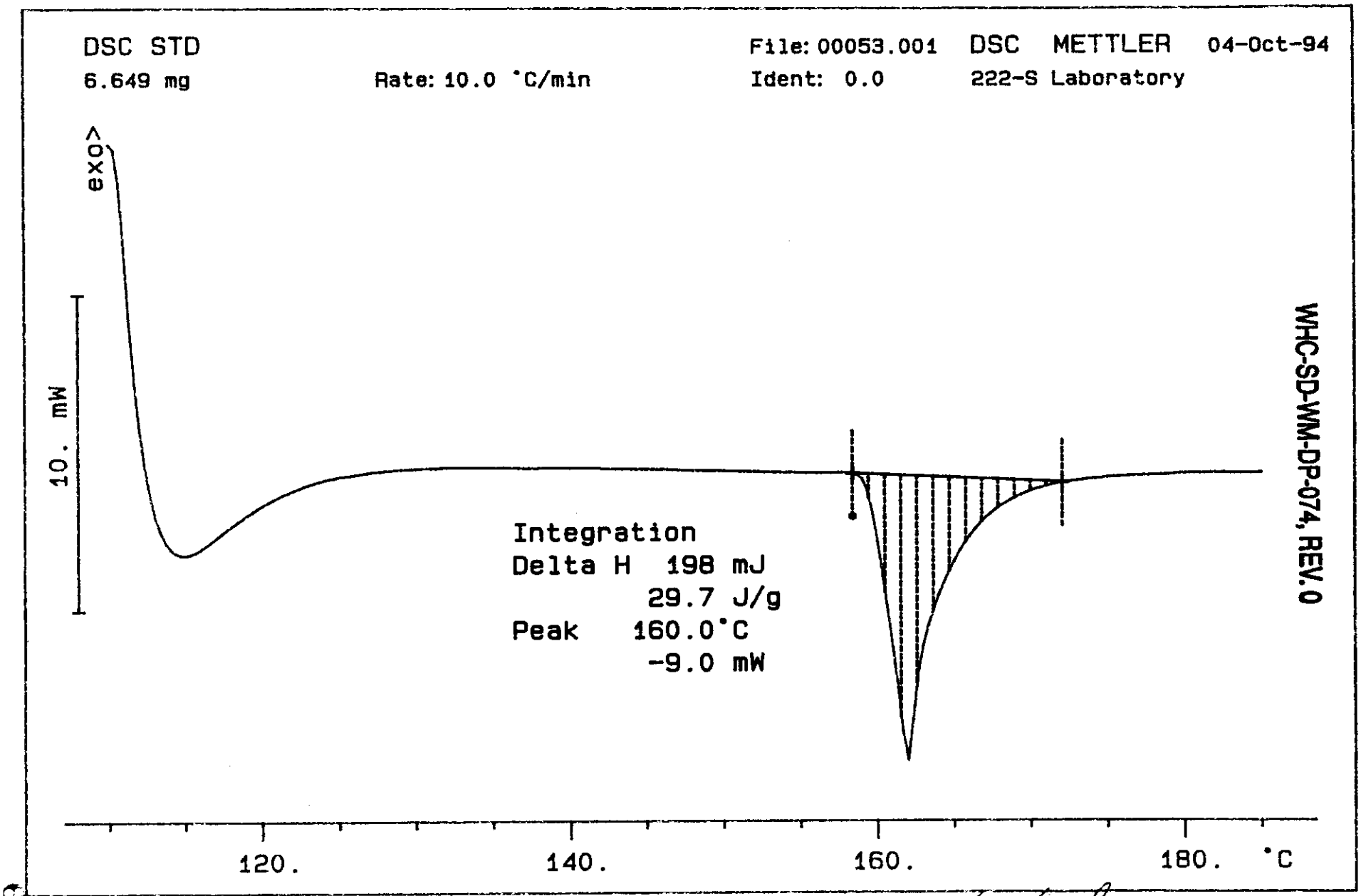
WHC-SD-WM-DP-074, REV. 0

10-4-94


S94T000036 N2
22.110 mg
Rate: 10.0 °C/min
File: 00042.001 DSC METTLER 04-Oct-94
Ident: 0.0 222-S Laboratory
exo>
10. mW
Integration
Delta H 820 mJ
37.1 J/g
Peak 459.2°C
7.2 mW
BW 11-4-94
Integration
Delta H 1323 mJ
59.8 J/g
Peak 288.2°C
-8.3 mW
BW 11-4-94
Integration
Delta H 93 mJ
4.2 J/g
Peak 476.9°C
2.1 mW
BW 11-4-94
Integration
Delta H12285 mJ
555.7 J/g
Peak 140.9°C
-21.2 mW
BW 11-4-94
100.
200.
300.
400.
°C

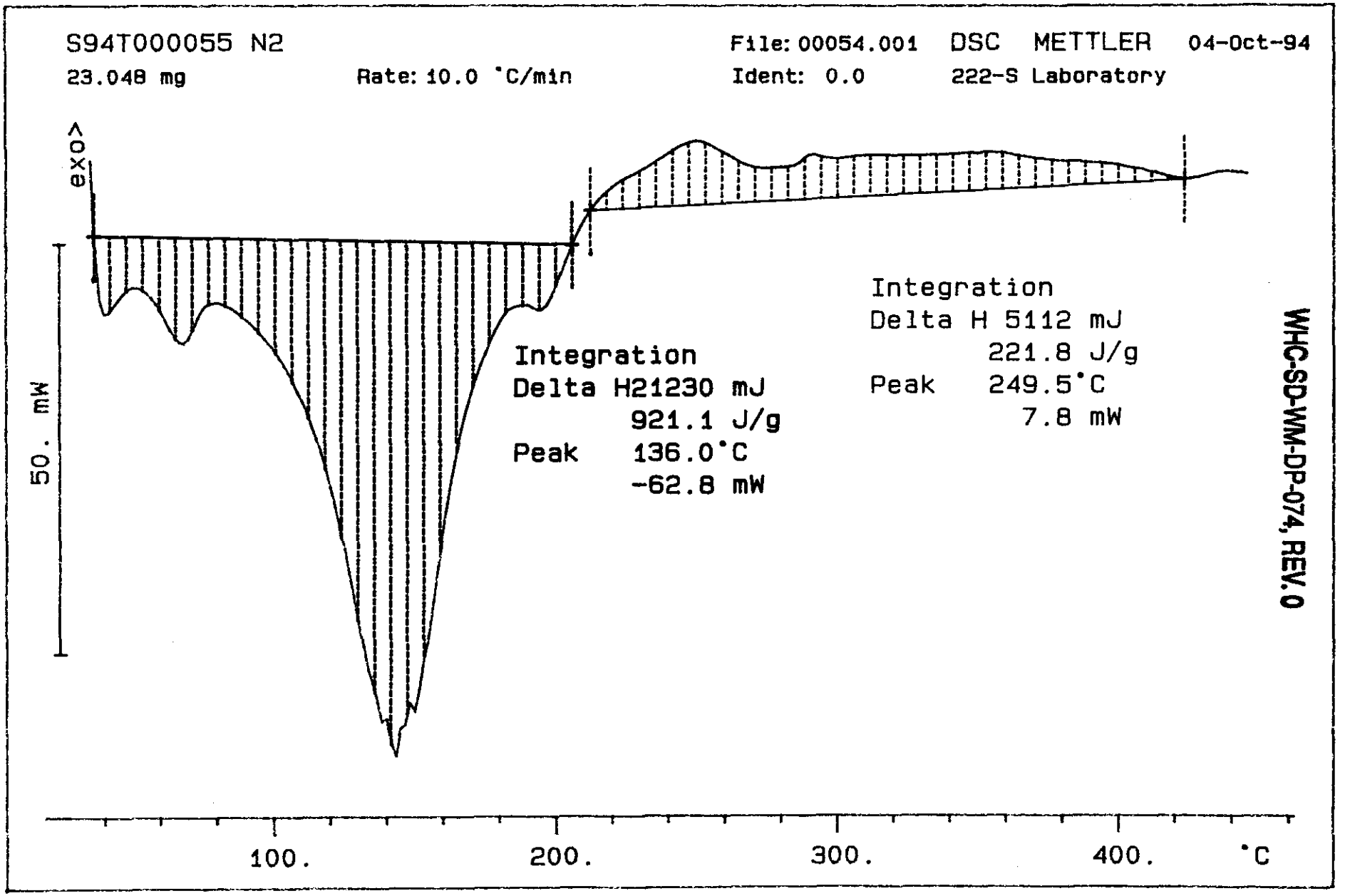


WHC-SD-WM-DP-074, REV.0

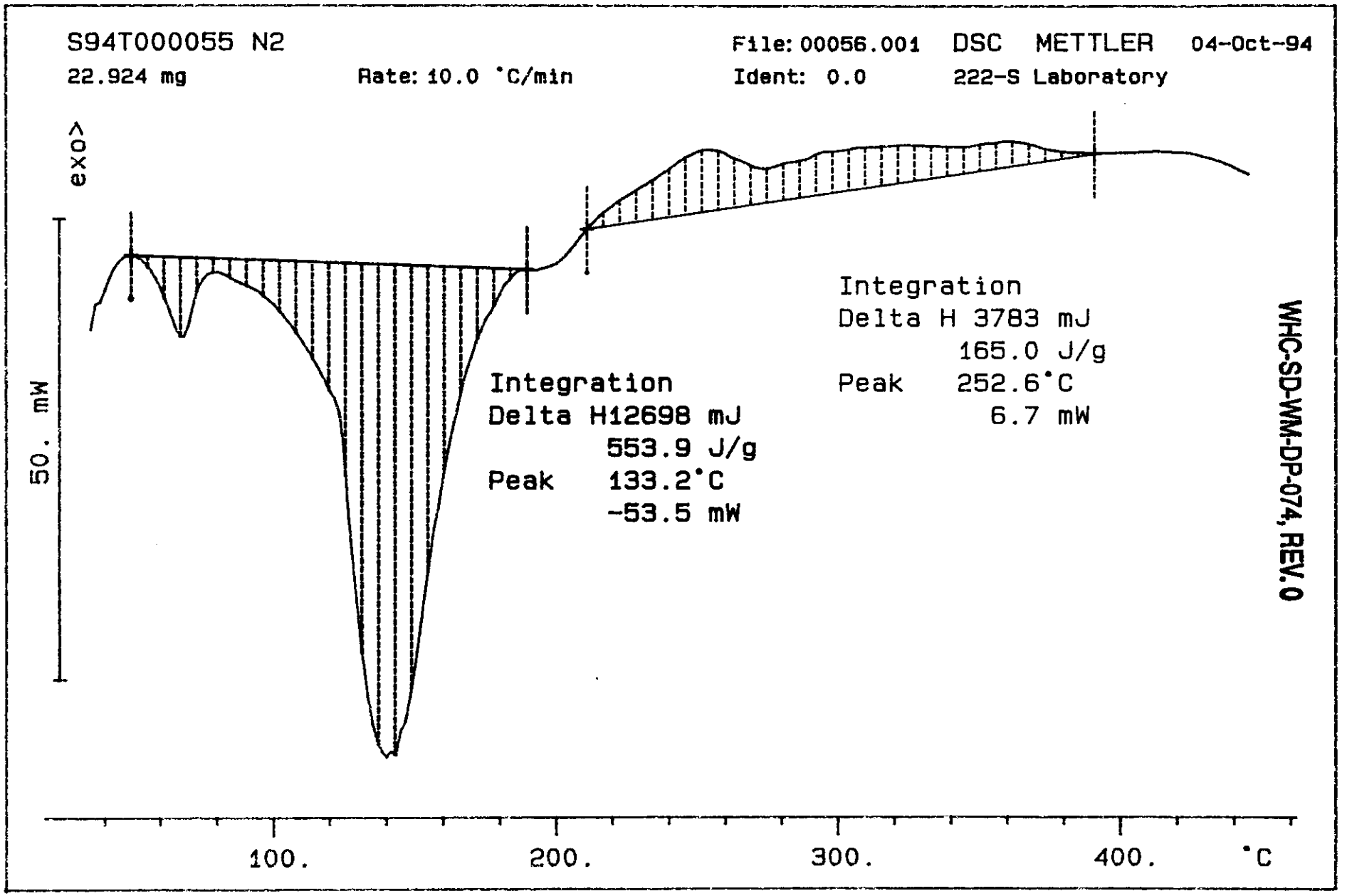


WHC-SD-WM-DP-074, REV.0

10-5-94



WHC-SD-WM-DP-074, REV. 0



WHC-SD-WM-DP-074, REV. 0

LABCORE Data Entry Template for Worklist# 46

Analyst: DWS **Instrument:** DSC01 **Method:** LA-514-113

Worklist Comment: Please run under N2 JMF Run up to 450°C. JMF

Seg	Type	Sample#	Rep	Al	Test	Matrix	Actual	Found	DL	Unit
1	STD				DSC-01	SOLID	28.45 ~~29.9~~ 10/17/94 JMF	29.9	105.0% N/A	Joule
2	SAMPLE	S94T000056	0		DSC-01	SOLID	N/A	129.7		Joule
3	DUP	S94T000056	0		DSC-01	SOLID	129.7	163.6	N/A	Joule
	STD				DSC-01		28.45	29.8	104.7%	
4	SAMPLE	S94T000057	0		DSC-01	SOLID	N/A	No exos		Joule
5	DUP	S94T000057	0		DSC-01	SOLID	no exos	no exos	N/A	Joule

Final page for worklist # 46

Analyst Signature **Date** 10-12-94

WHC-SD-WM-DP-074, REV. 0

Data Entry Comments:

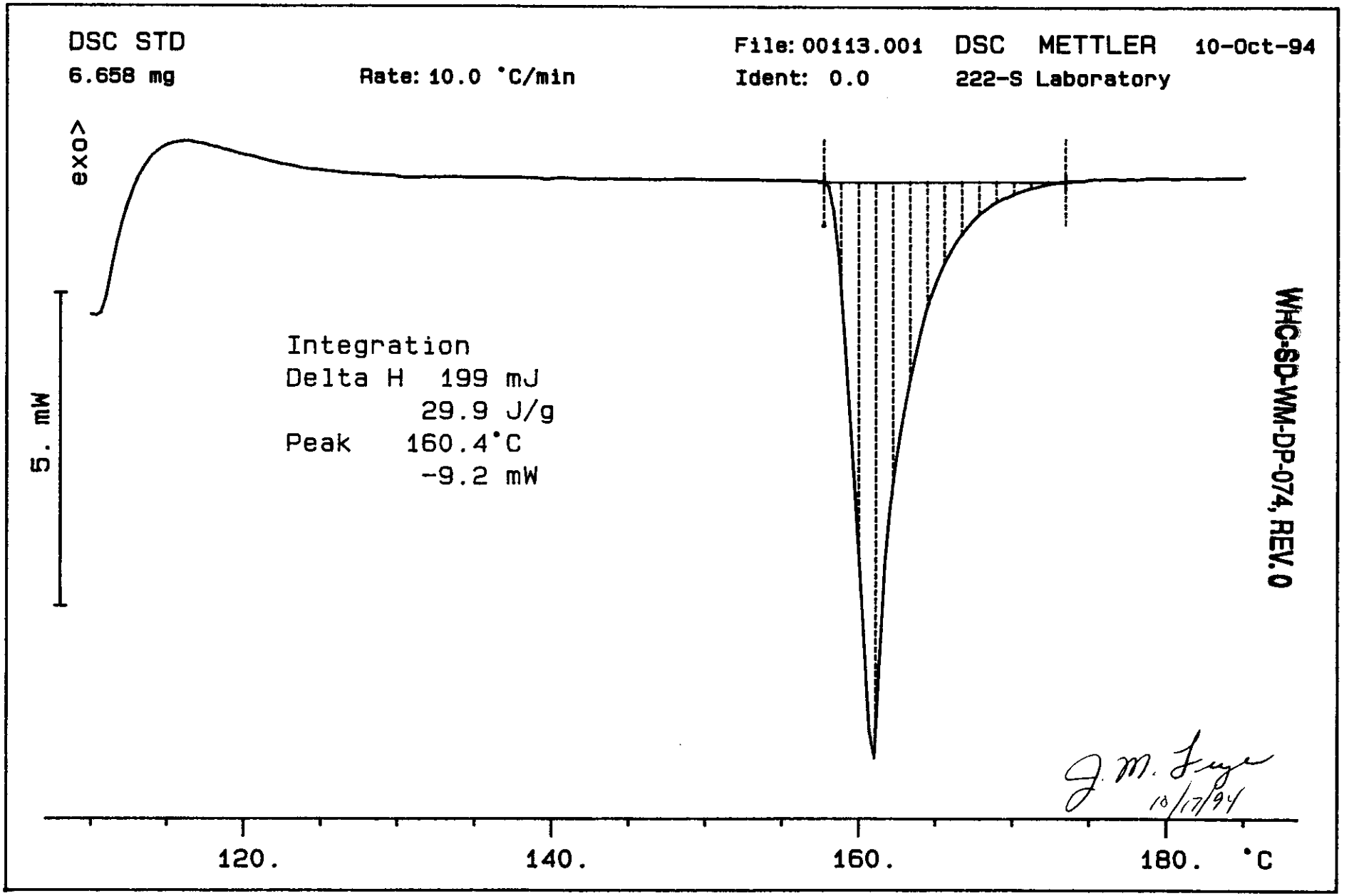
Sample S94T000056 has endotherms at 131°C of 892.1 J/g in sample and 925.6 J/g in duplicate. Sample S94T000057 has an endotherm at 144°C of 398.1 J/g in sample & 202.3 J/g duplicate. There was a second endotherm at 277°C of 30.3 J/g sample & 64.8 J/g duplicate

Units shown for QC (SPK) may not reflect the actual units.

Entered & posted 10/17/94. JMF

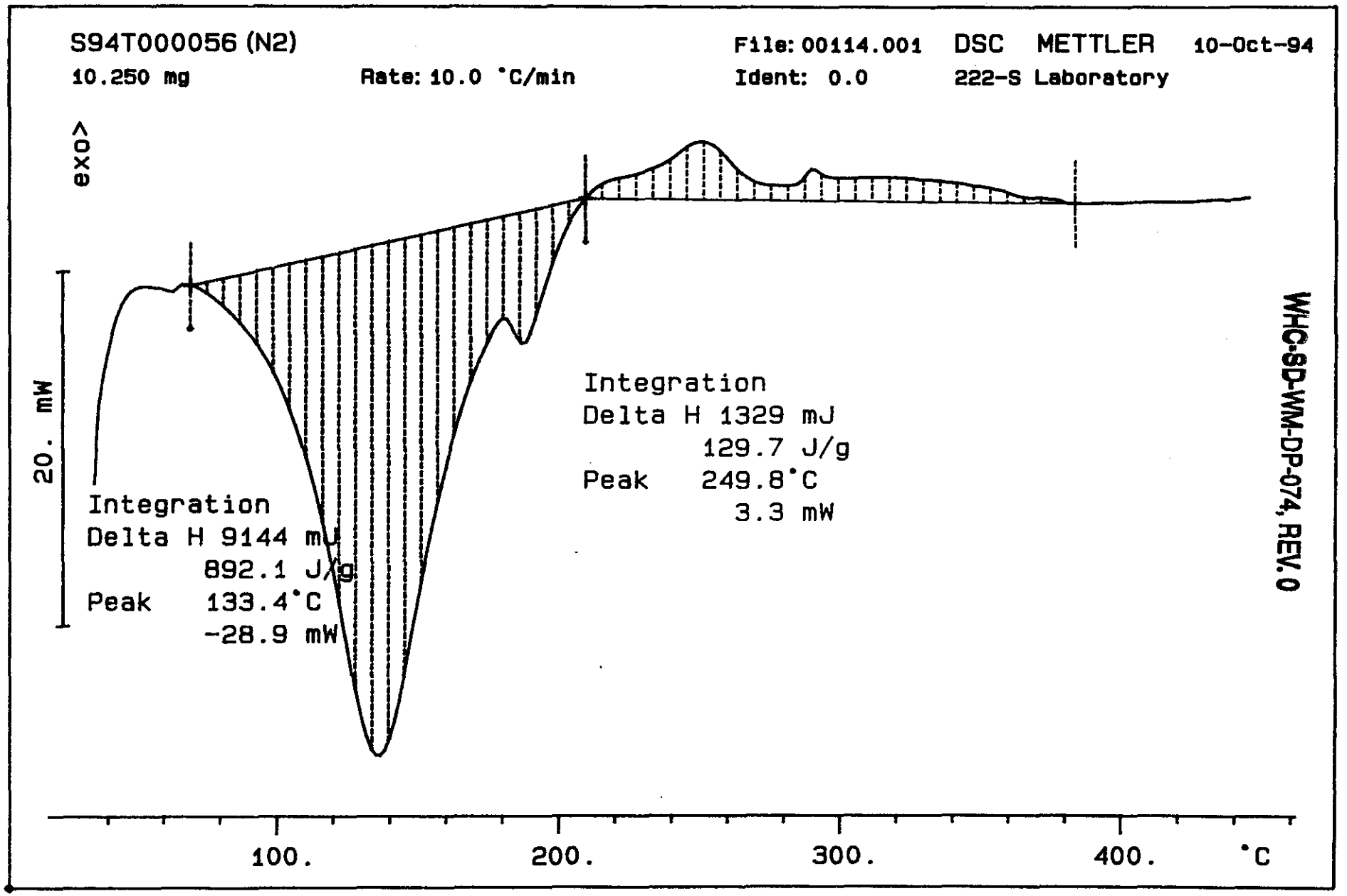
J. M. Fox 10/17/94

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 67 TO 73.

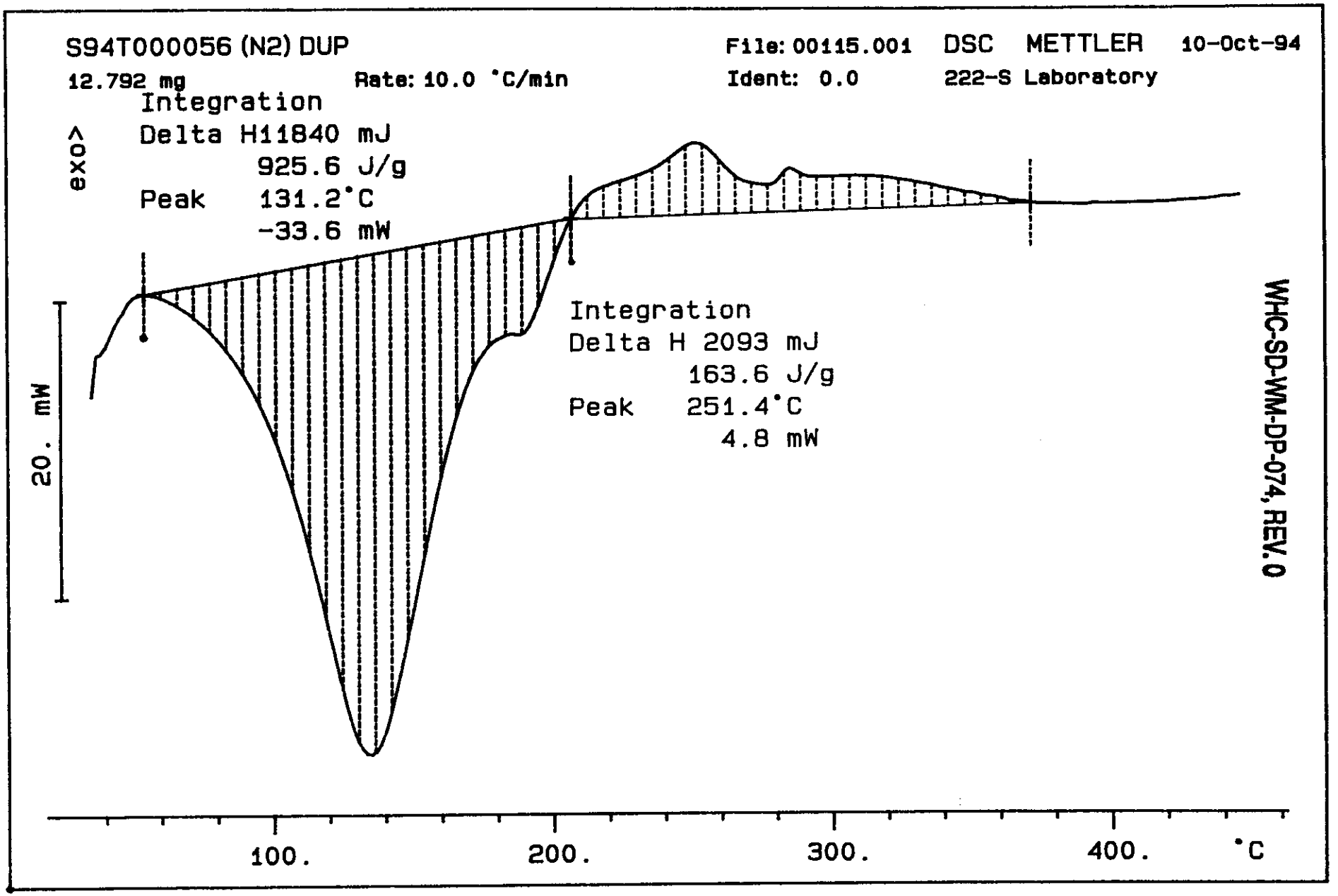


J. M. Fuge 10/17/94

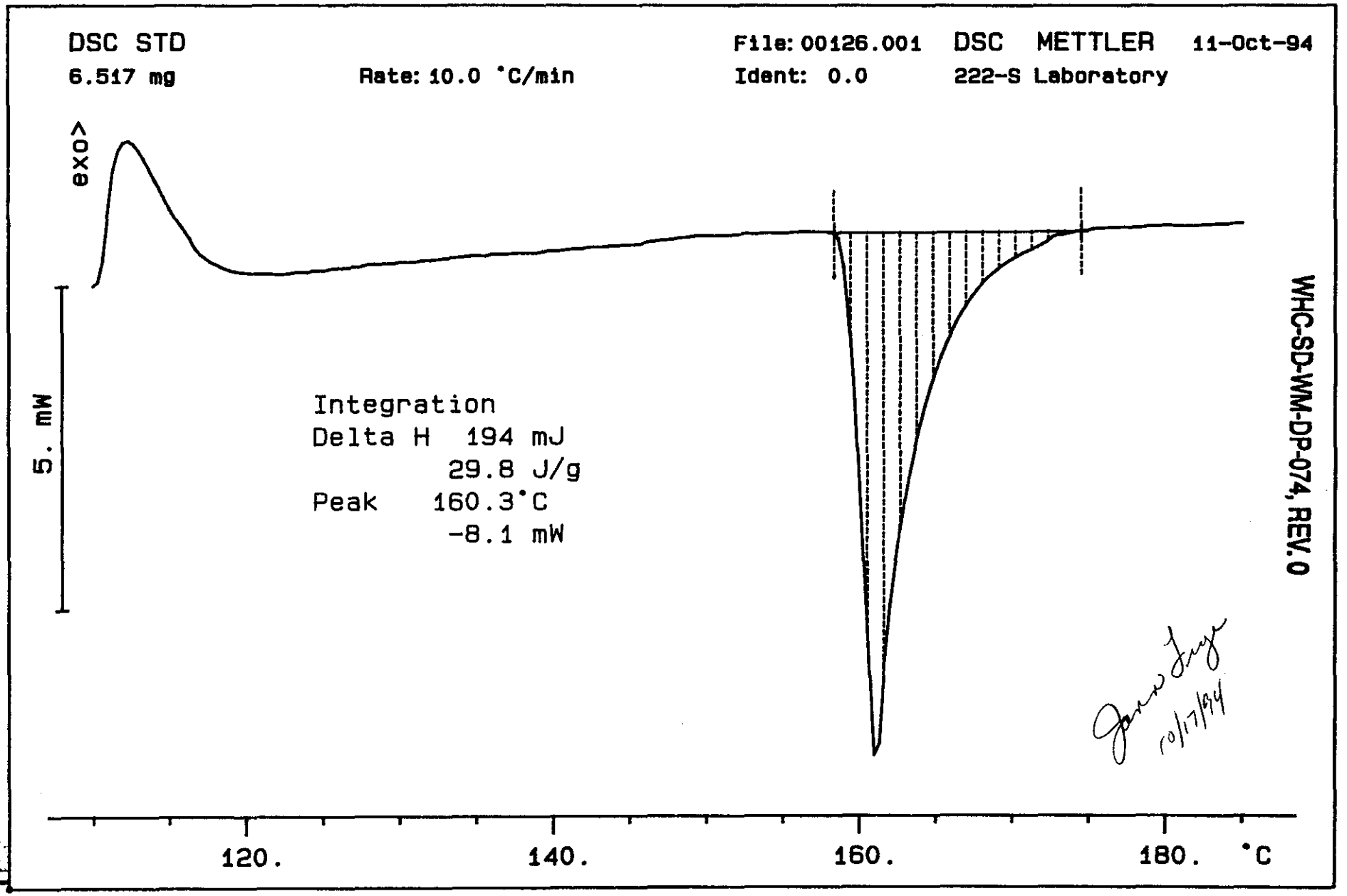
WHC-SD-WM-DP-074, REV. 0



WHC-SD-WM-DP-074, REV. 0

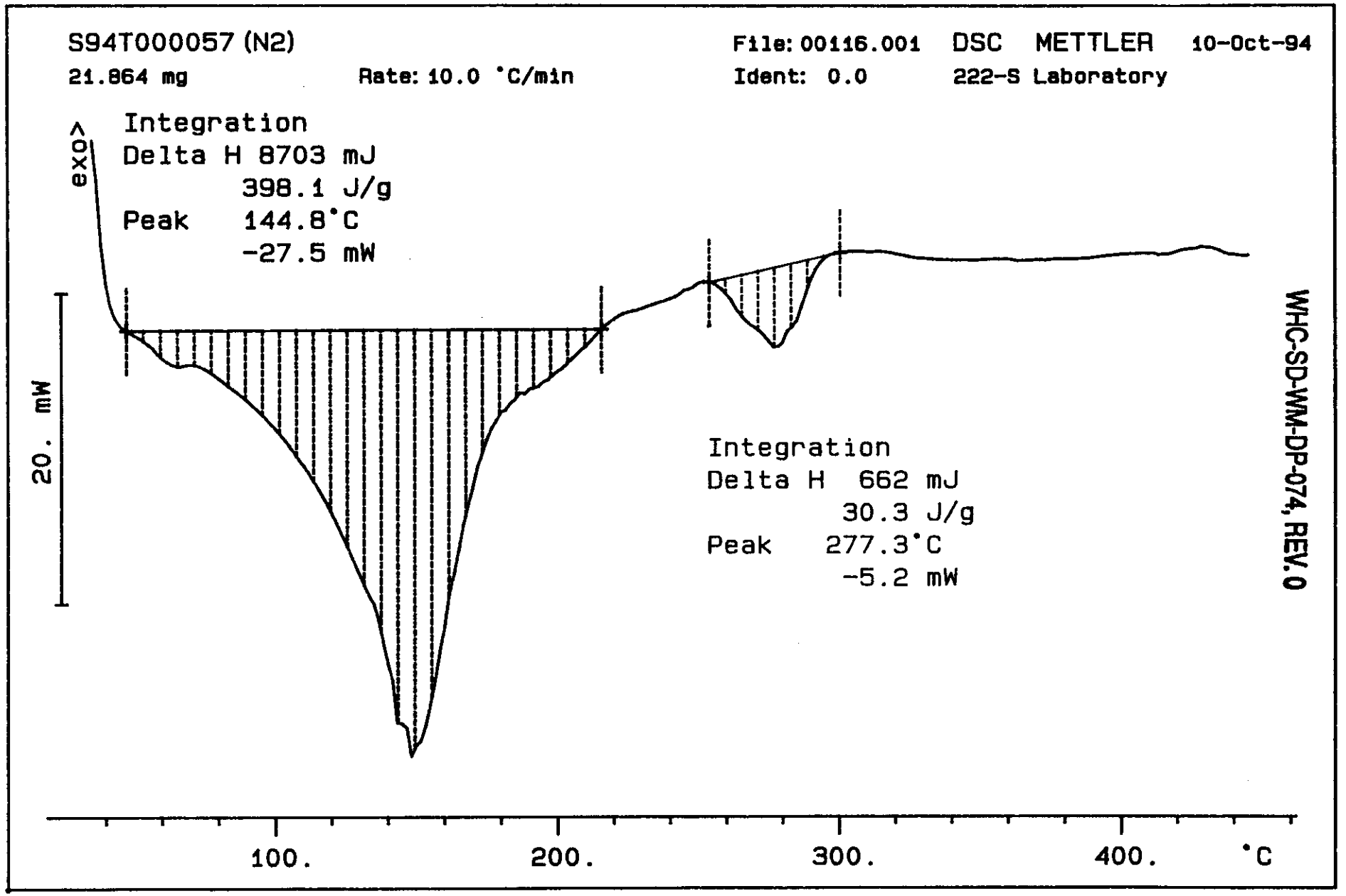


WHC-SD-WM-DP-074, REV. 0

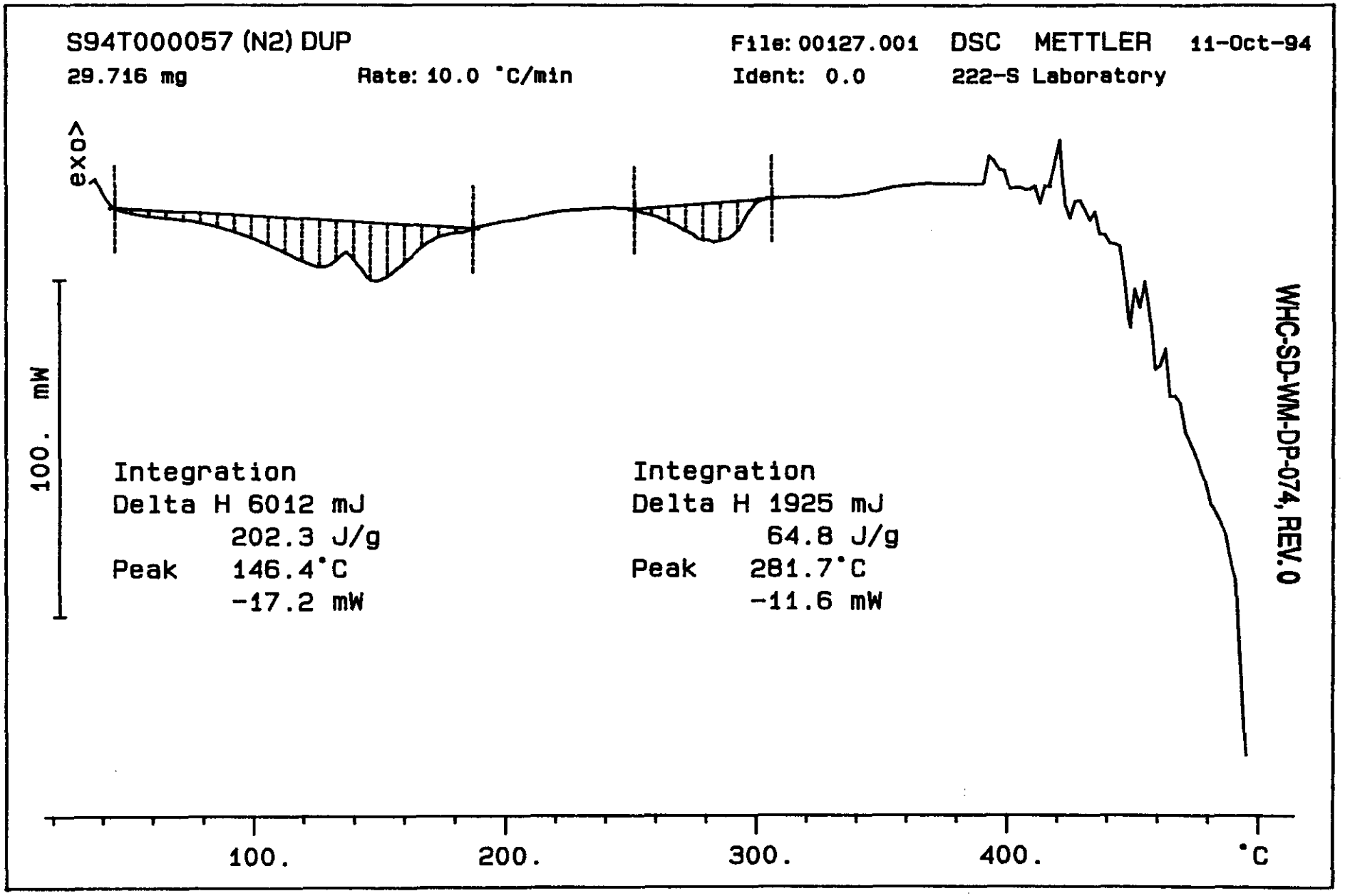


WHC-SD-WM-DP-074, REV. 0

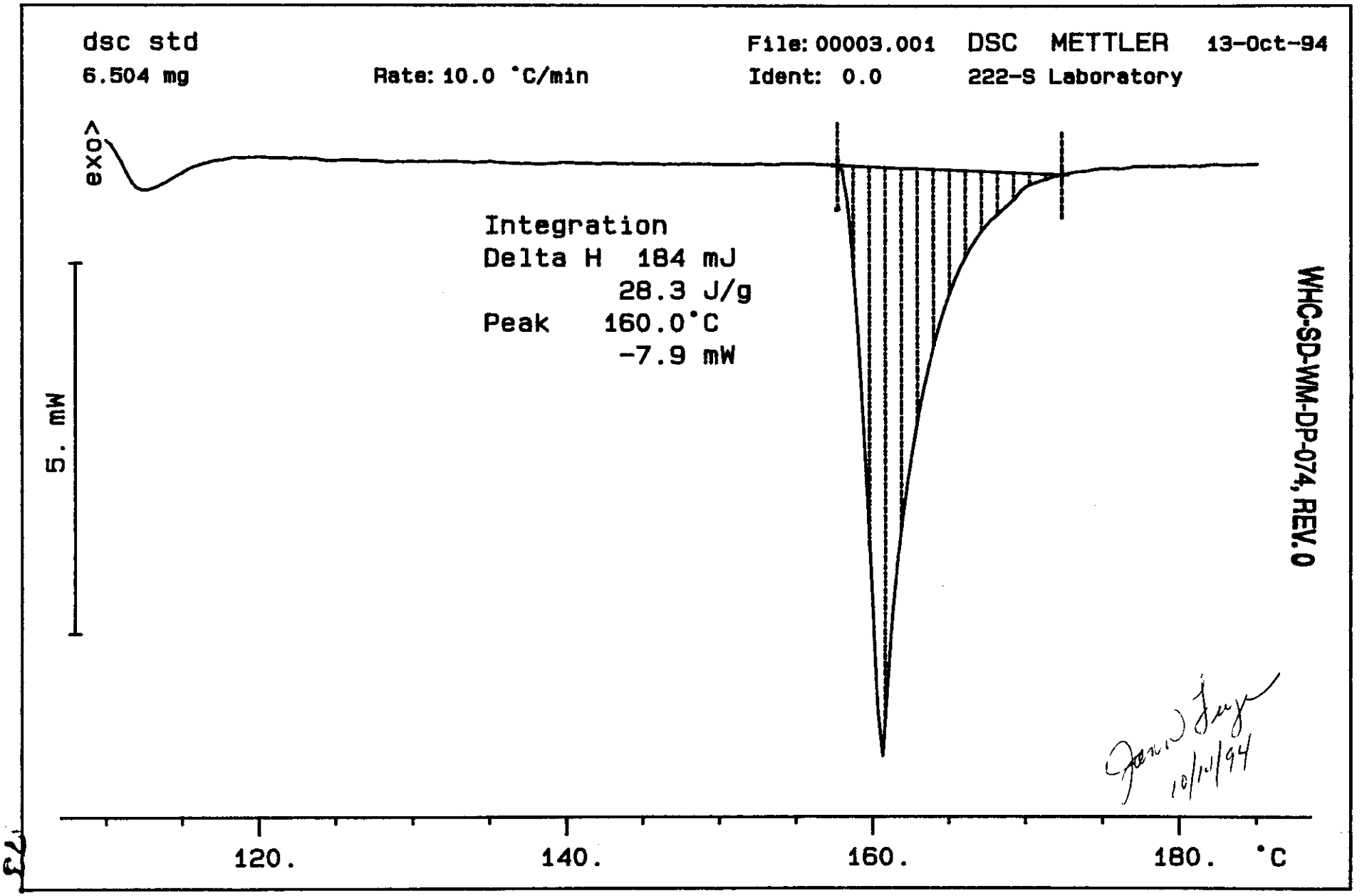
10/17/94



WHC-SD-WM-DP-074, REV.0



WHC-SD-WM-DP-074, REV. 0



WHC-SD-WM-DP-074, REV. 0

Jean D Fay
10/11/94

73

LABCORE Data Entry Template for Worklist# 147

Analyst: KLV **Instrument:** DSC01 **Method:** LA-514-113

Worklist Comment: S94T000058 was reintegrated JMF **WHC-SD-WM-DP-074, REV. 0**

Seg	Type	Sample#	Rep	Al	Test	Matrix	Actual	Found	DL	Unit
1	STD				DSC-01	SOLID	28.45	29.8	N/A	Joule
2	SAMPLE	S94T000058		0	DSC-01	SOLID	N/A	173.5		Joule
3	DUP	S94T000058		0	DSC-01	SOLID	173.5	175.1	N/A	Joule
4	STD				DSC-01	SOLID	28.45	27.3	N/A	Joule
5	SAMPLE	S94T000063		0	DSC-01	SOLID	N/A	202.6		Joule
6	DUP	S94T000063		0	DSC-01	SOLID	202.6	200.4	N/A	Joule

Final page for worklist # 147

Anne Fuge for KL Vogel
Analyst Signature

Date 11/2/94

Ran 10/20/94

Reintegrated.

Data Entry Comments: Worklist 47 attached

Units shown for QC (SPK) may not reflect the actual units.

Page: 1

LABCORE Data Entry Template for Worklist# 47

A2 15 of 7

Analyst: KLV **Instrument:** DSC01 **Method:** LA-514-113

Worklist Comment: Please run under N2 JMF **WHC-SD-WM-DP-074, REV. 0**

Seg	Type	Sample#	Rep	Al	Test	Matrix	Actual	Found	DL	Unit
1	STD				DSC-01	SOLID	28.45	29.8	104.7% Rec. N/A	Joule
2	SAMPLE	S94T000058		0	DSC-01	SOLID	N/A	~~252.6~~ 173.5 J/g 11/2/94 JMF		Joule
3	DUP	S94T000058		0	DSC-01	SOLID	~~252.6~~ 173.5 11/2/94 JMF	~~302.9~~ 925.1 J/g	N/A 11/2/94 JMF	Joule
4	STD				DSC-01	SOLID	28.45	28.3	99.5% Rec N/A	Joule
5	DUP	S94T000063		0	DSC-01	SOLID	202.6	200.4	N/A	Joule
6	SAMPLE	S94T000063		0	DSC-01	SOLID	N/A	202.6 J/g		Joule

Final page for worklist # 47

Analyst Signature

10-20-94
Date

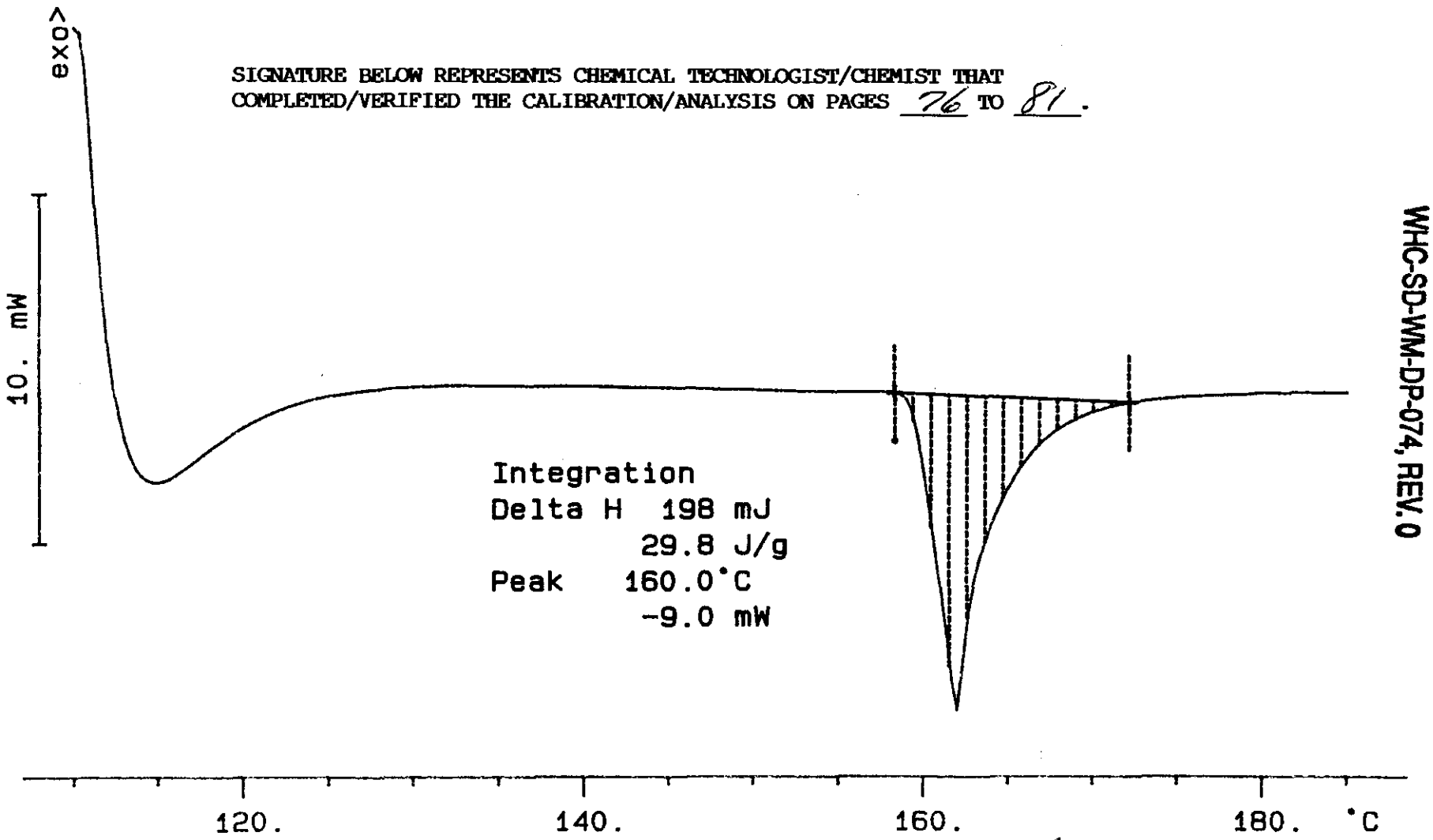
Data Entry Comments: Data Entered & ~~posted~~ completed JMF 10/6/94 but not reviewed

Reviewed - 10/20/94 JMF

Units shown for QC (SPK) may not reflect the actual units.

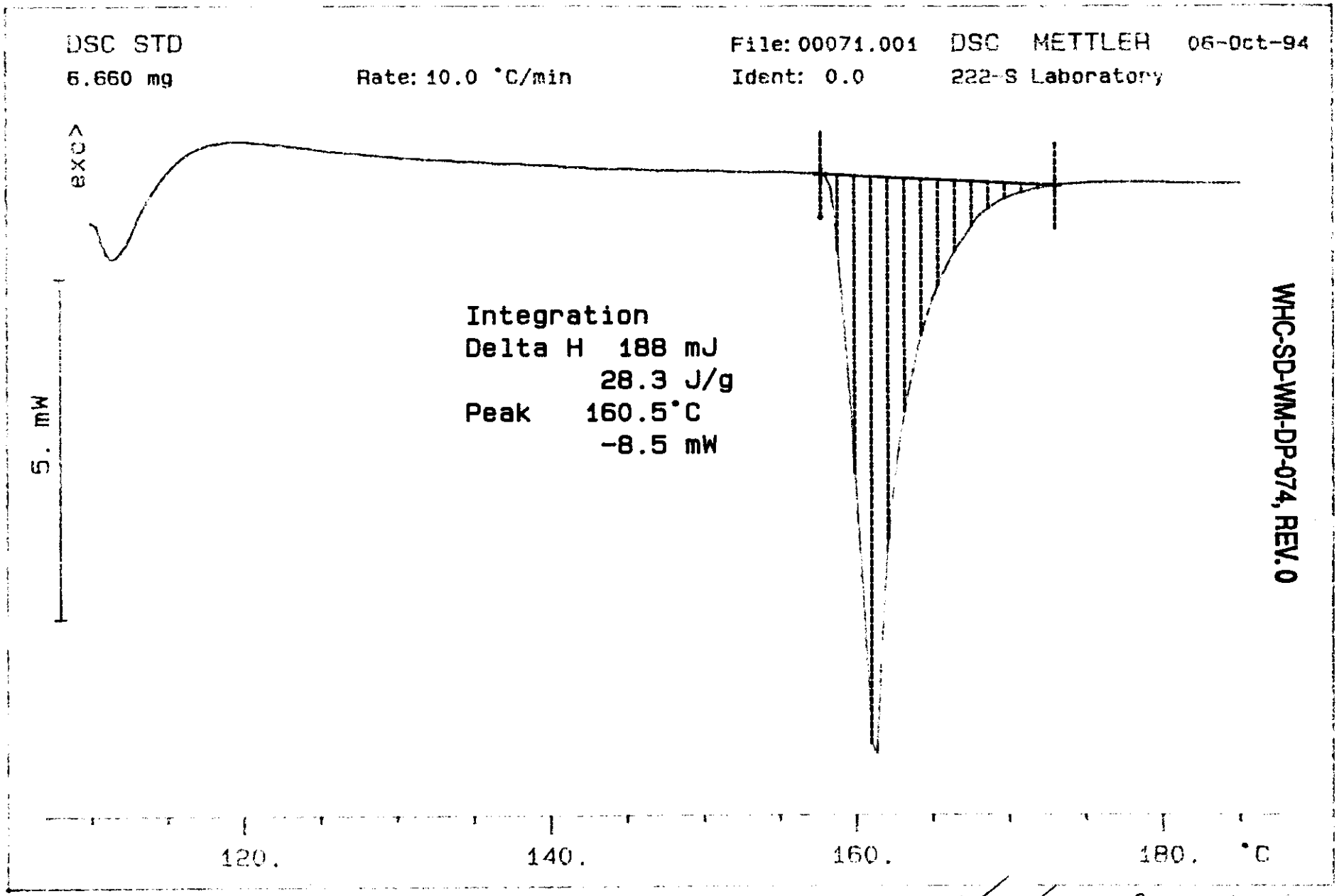
DSC STD
6.649 mg
Rate: 10.0 °C/min
File: 00053.001
Ident: 0.0
DSC METTLER
222-S Laboratory
04-Oct-94

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 76 TO 81.



WHC-SD-WM-DP-074, REV. 0

10/5/94



WHC-SD-WM-DP-074, REV.0

K Vassel 10/ 94

Reintegrated BW 11-4-94

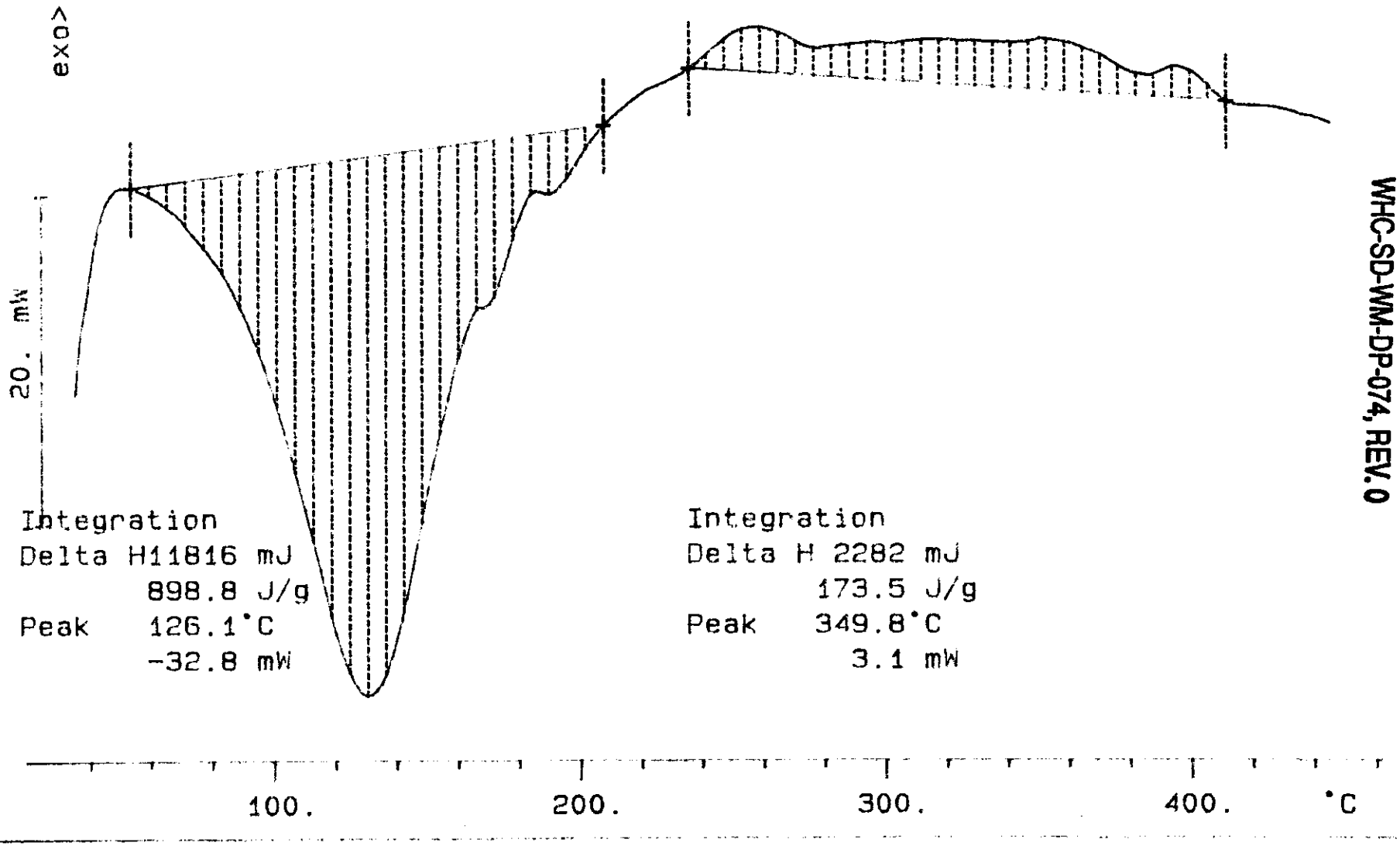
S94T000058 N2

13.147 mg

Rate: 10.0 °C/min

File: 00058.001 DSC METTLER 05-Oct-94

Ident: 0.0 222-S Laboratory



WHC-SD-WM-DP-074, REV. 0

Reintegrated BW 11-4-94

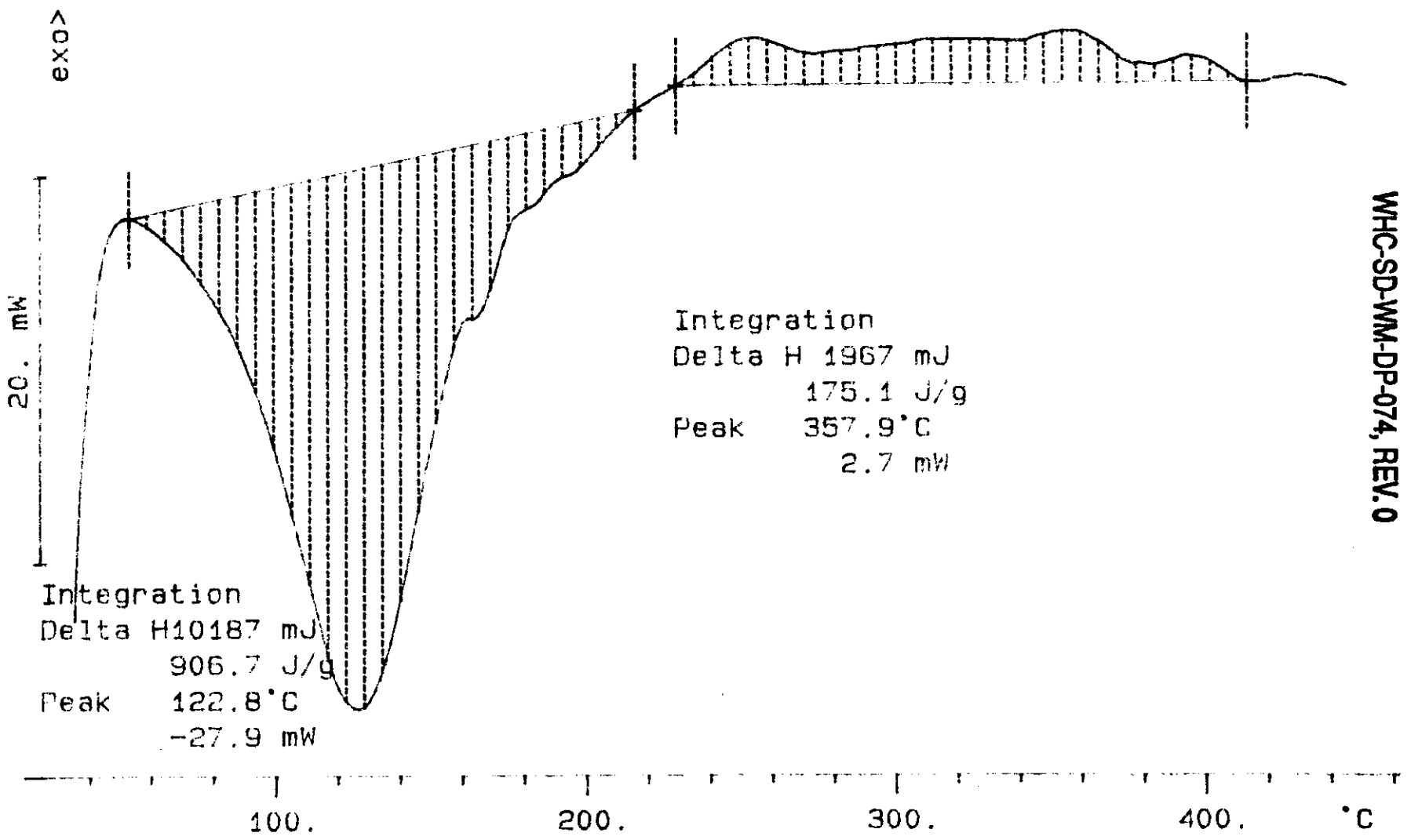
S94T000058 N2

11.235 mg

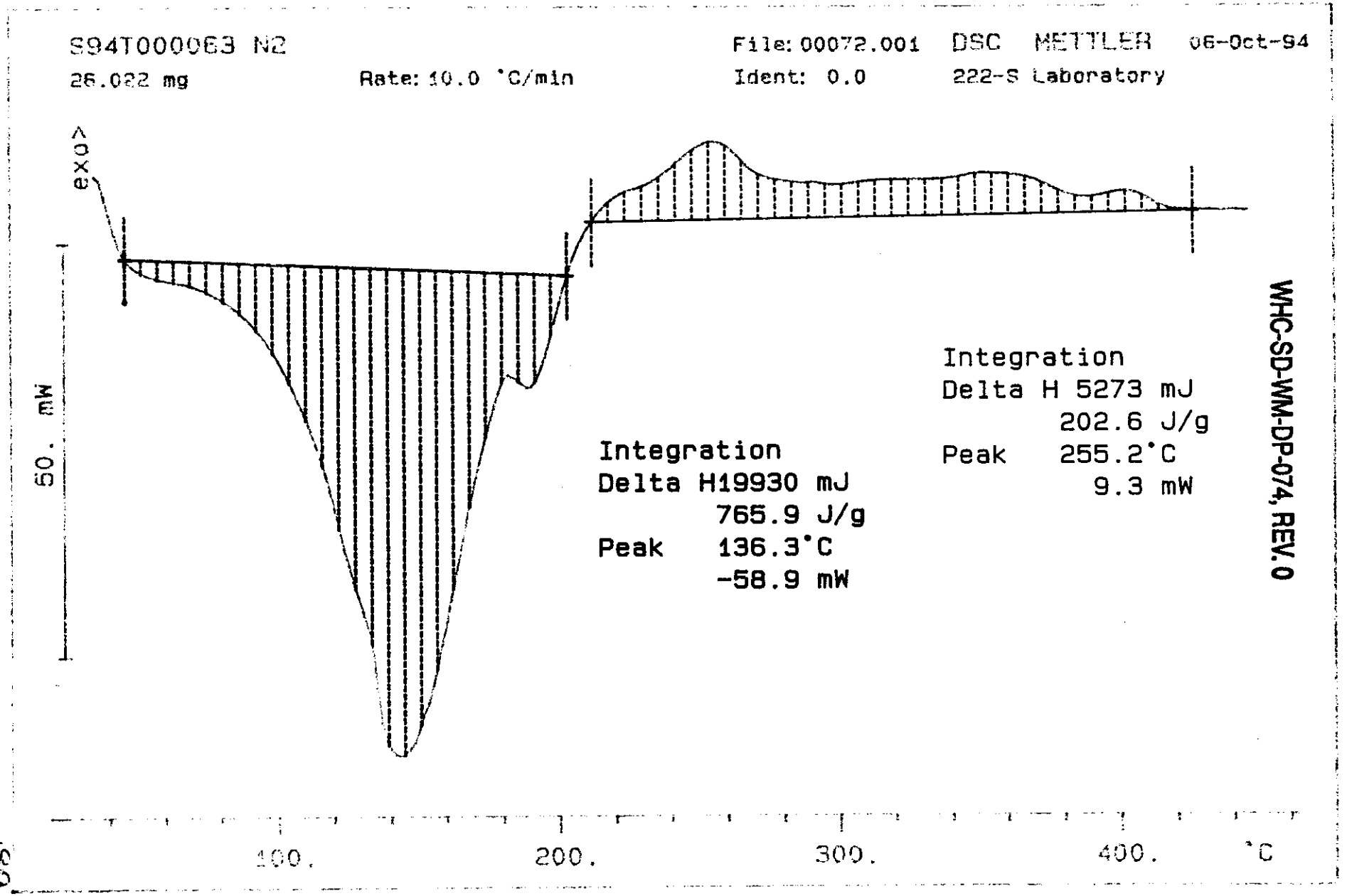
Rate: 10.0 °C/min

File: 00060.001 DSC METTLER 05-Oct-94

Ident: 0.0 222-S Laboratory



WHC-SD-WM-DP-074, REV. 0



WHC-SD-WM-DP-074, REV.0

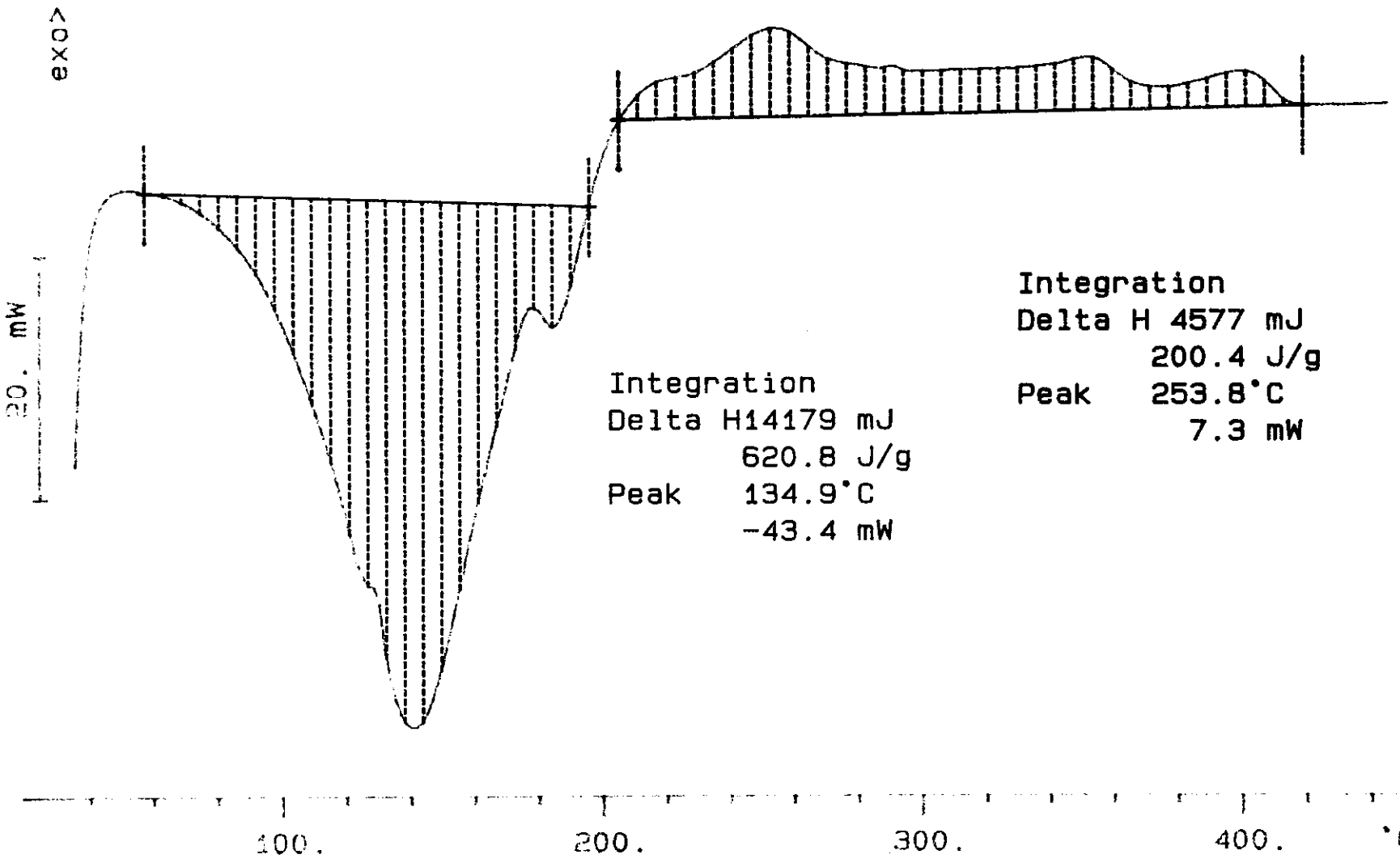
S94T000063 N2

22.839 mg

Rate: 10.0 °C/min

File: 00074.001 DSC METTLER 06-Oct-94

Ident: 0.0 222-S Laboratory



WHC-SD-WM-DP-074, REV.0

TQ

LABCORE Data Entry Template for Worklist# 143

Analyst: DWS **Instrument:** DSC01 **Method:** LA-514-113

Worklist Comment: Reintegration DSC data. JMF **WHC-SD-WM-DP-074, REV. 0**

Seg	Type	Sample#	Rep	Al	Test	Matrix	Actual	Found	DL	Unit
1	STD				DSC-01	SOLID	28.45	27.4	96.3 N/A	Joule
2	SAMPLE	S94T000070	0		DSC-01	SOLID	N/A	172.8		Joule
3	STD				DSC-01	SOLID	28.45 ~~172.8~~	29.4 ~~146.5~~	103.3 mK N/A 11/2/94	Joule
4	DUP	S94T000070	0		DSC-01	SOLID	172.8	146.5	N/A	Joule
5	STD				DSC-01	SOLID	28.45	29.7	104.4 N/A	Joule
6	SAMPLE	S94T000071	0		DSC-01	SOLID	N/A	91.7		Joule
7	DUP	S94T000071	0		DSC-01	SOLID	91.7	213.7	N/A	Joule

Final page for worklist # 143

Jann Fuge for Dave Smith
Analyst Signature

11/2/94
Date

Run done 10/20/94

Data Entry Comments: Goes with Worklist 48 which is attached.

Units shown for QC (SPK) may not reflect the actual units.

LABCORE Data Entry Template for Worklist# 48

Analyst: DWS **Instrument:** DSC01 **Method:** LA-514-113

Worklist Comment: Please run under N2 JMF

WHC-SD-WM-DP-074, REV. 0

Seg	Type	Sample#	Rep	Al	Test	Matrix	Actual	Found	DL	Unit
									96.3% Rec	
1	STD				DSC-01	SOLID	28.45	27.4	N/A	Joule
2	SAMPLE	S94T000070	0		DSC-01	SOLID	N/A	309.5		Joule
3	DUP	S94T000070	0		DSC-01	SOLID	309.5	164.5	N/A	Joule
									103.3% Rec	
4	STD				DSC-01	SOLID	28.45	29.4	N/A	Joule
	STD				DSC-01		28.45	29.7	104.4% Rec	
5	DUP	S94T000071	0		DSC-01	SOLID	127.3	467.0	N/A	Joule
6	SAMPLE	S94T000071	0		DSC-01	SOLID	N/A	127.3		Joule

Final page for worklist # 48

Analyst Signature

10-20-94

Date

Entered and posted 10/25/94. J. M. Fuge

Data Entry Comments:

Units shown for QC (SPK) may not reflect the actual units.

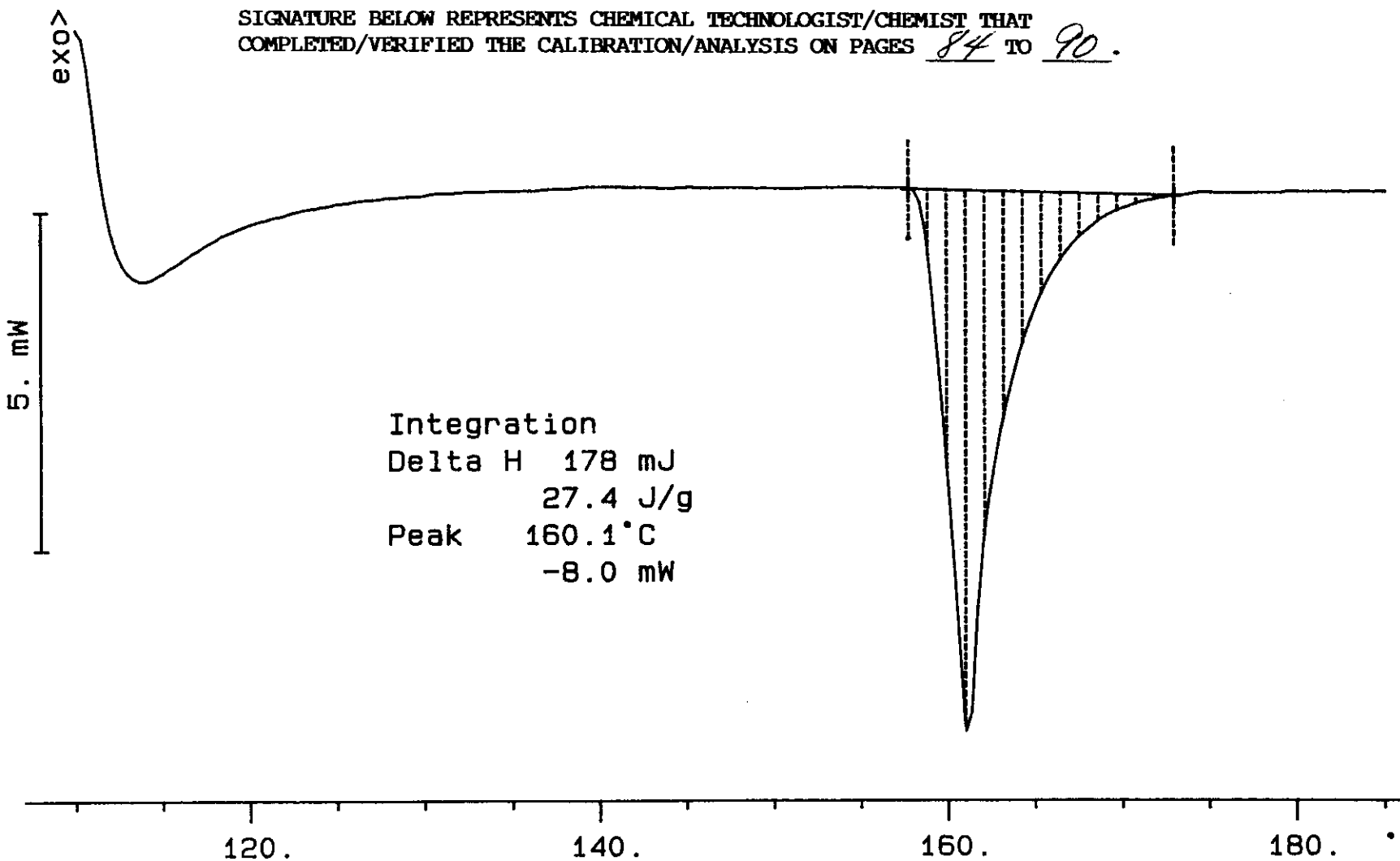
DSC STD
6.504 mg

Rate: 10.0 °C/min

File: 00060.001
Ident: 0.0

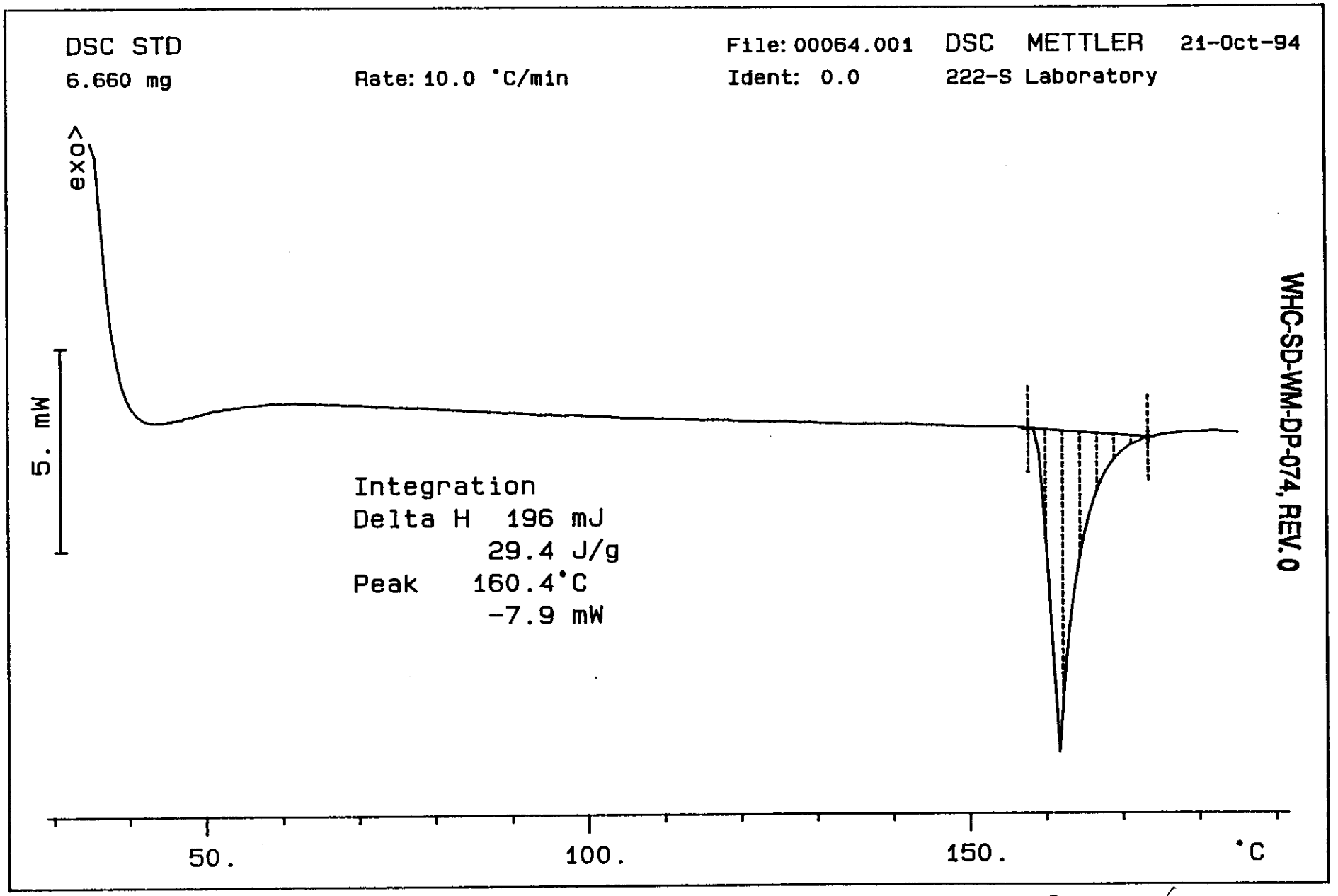
DSC METTLER 20-Oct-94
222-S Laboratory

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 84 TO 90.



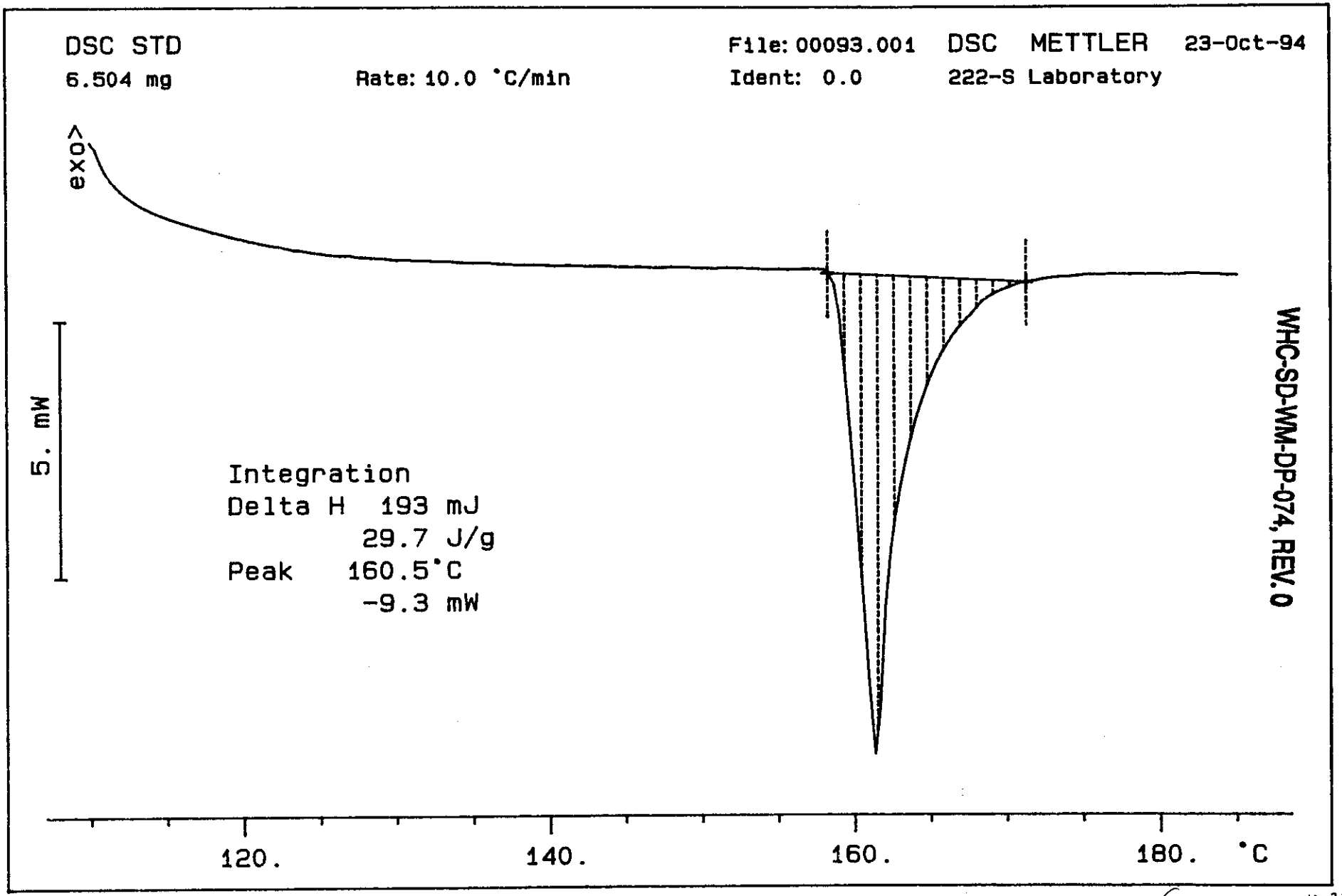
WHC-SD-WM-DP-074, REV. 0

10-20-94



WHC-SD-WM-DP-074, REV. 0

10-21-94



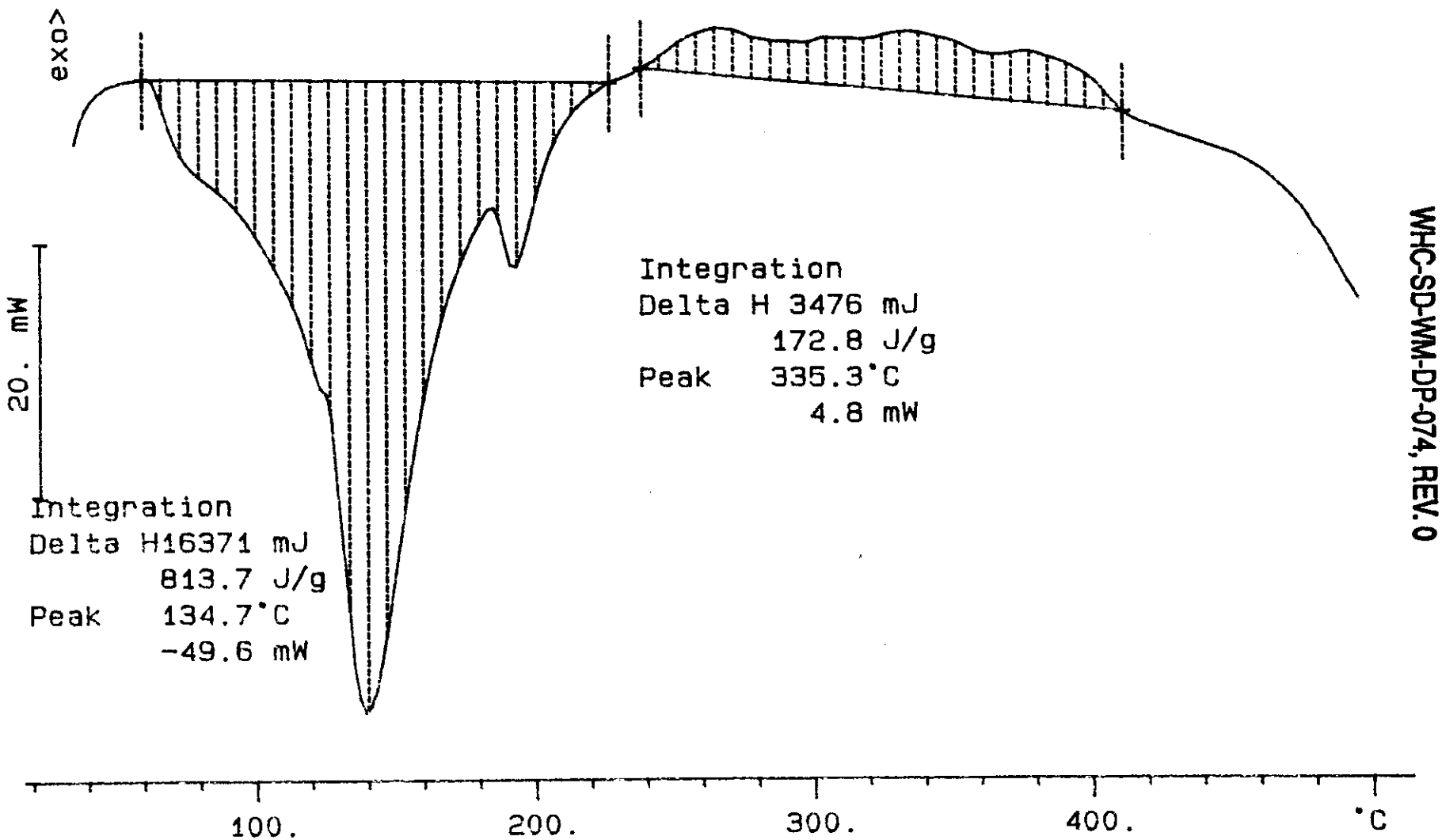
WHC-SD-WM-DP-074, REV. 0

10-27-94

Reintegrated

S94T000070 (N2) Not Baseline subtracted BW 11-4-94 File: 00061.001 DSC METTLER 20-Oct-94

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

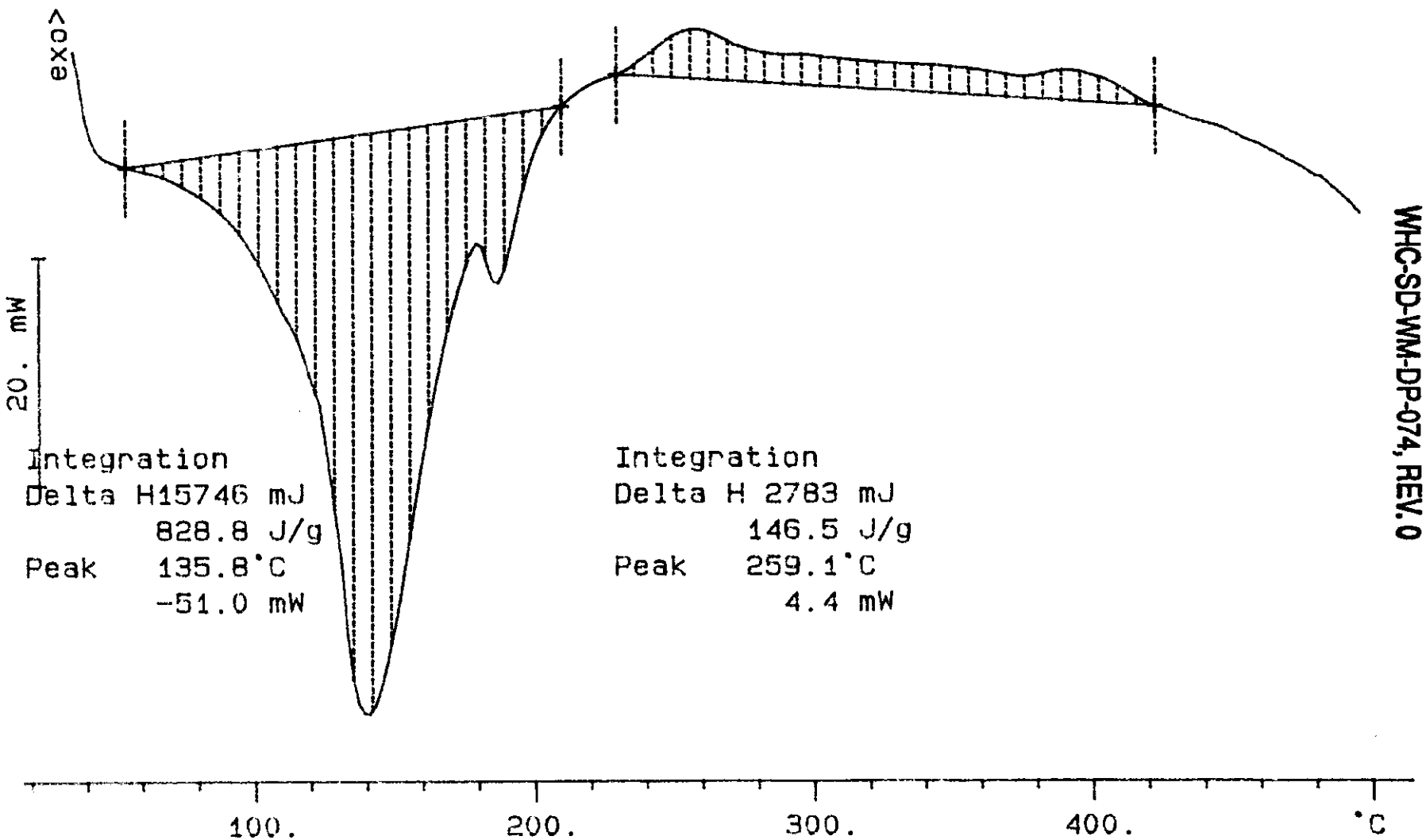


WHC-SD-WM-DP-074, REV. 0

Reintegrated BW 11-4-94

S94T000070 (N2) DUP Not Baseline Subtracted BW 11-4-94 File: 00062.001 DSC METTLER 21-Oct-94

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

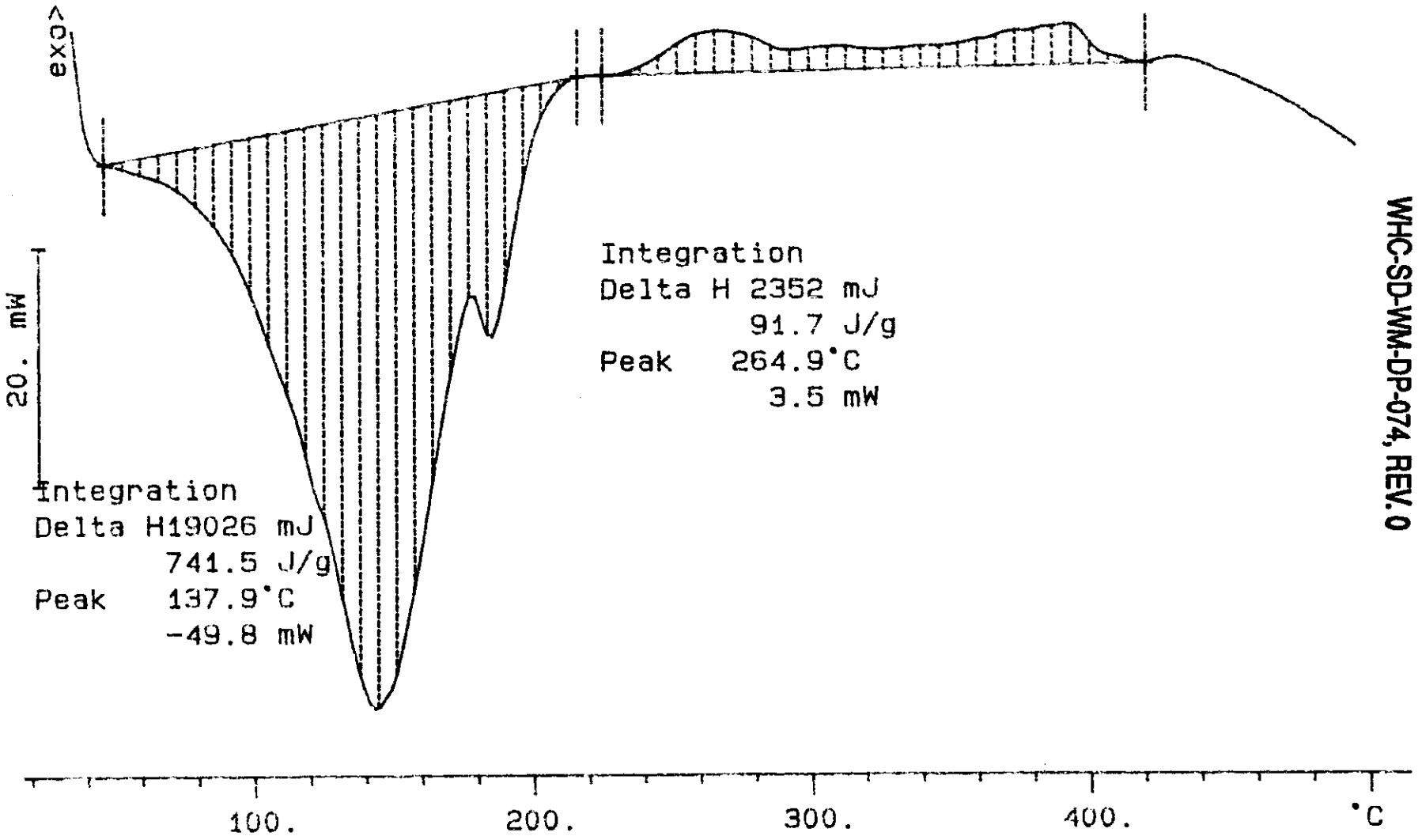


WHC-SD-WM-DP-074, REV. 0

Reintegrated BW 11-4-94

S94T000071 (N2) Not Baseline Subtracted File: 00069.001 DSC METTLER 21-Oct-94

25.658 mg Rate: 10.0 °C/min BW 11-4-94 Ident: 0.0 222-S Laboratory

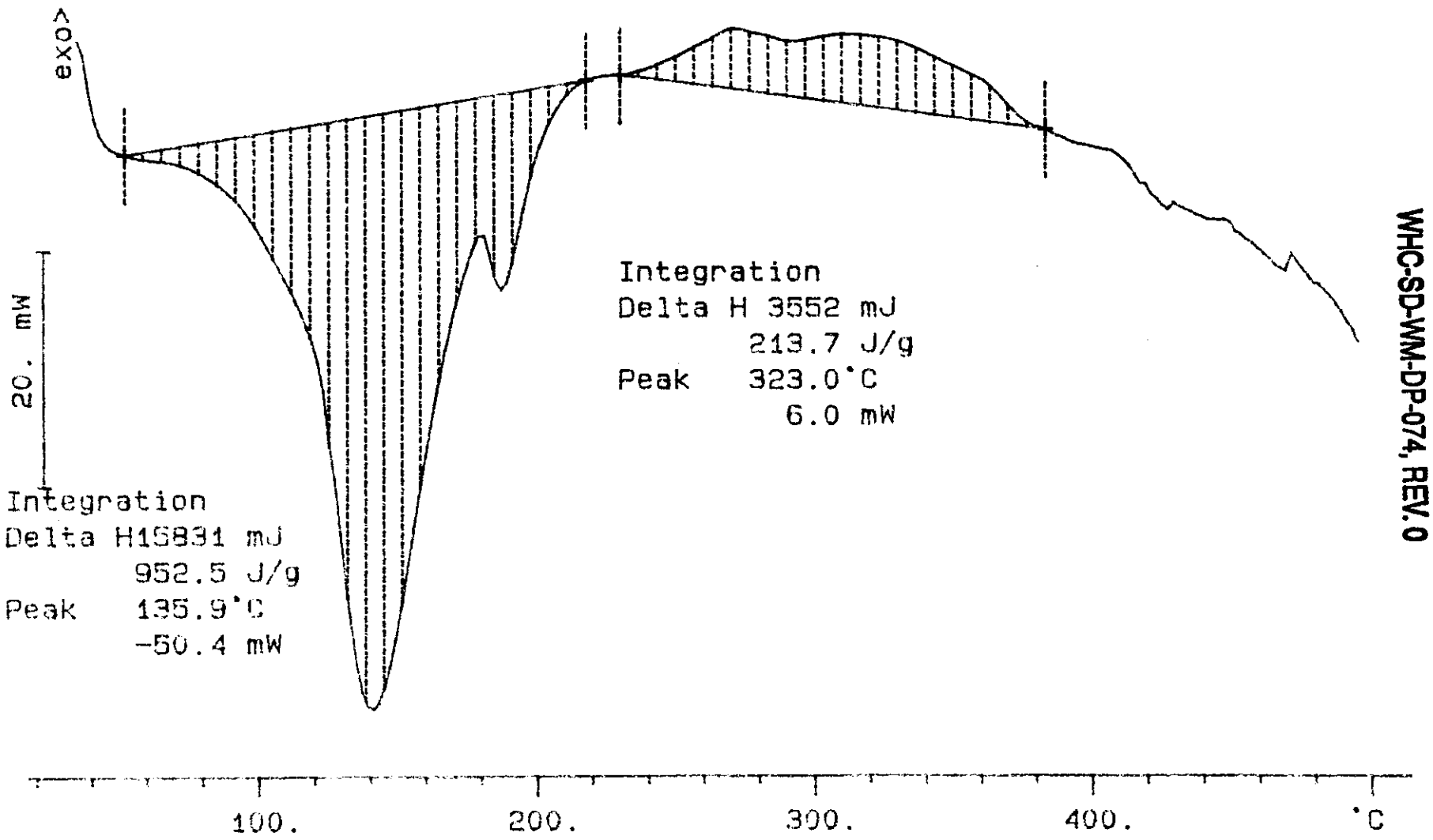


WHC-SD-WM-DP-074, REV. 0

Reintegrated BW 11-4-94

S94T000071 (N2) DUP Not Baseline Subtracted BW 11-4-94 File: 00094.001 DSC METTLER 23-Oct-94

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



WHC-SD-WM-DP-074, REV. 0

LABCORE Data Entry Template for Worklist# 138

Analyst: DWS **Instrument:** DSC01 **Method:** LA-514-113

Worklist Comment: Replicate analysis, Use N2 purge. JMF **WHC-SD-WM-DP-074, REV. 0**

Seg	Type	Sample#	Rep	Al	Test	Matrix	Actual	Found	DL	Unit
1	STD				DSC-01	SOLID	28.45	29.7	104.4% N/A	Joule
2	SAMPLE	S94T000071	1		DSC-01	SOLID	N/A	21.2		Joule

Final page for worklist # 138

Jann Fuge for Dave Smith
Analyst Signature

11/1/94
Date

Entered and posted 11/1/94. JM Fuge

Data Entry Comments: Sample has an endotherm of 834.8 J/g at 139.9°C. J.M. Fuge
The exotherm is at 403.2°C.

Units shown for QC (SPK) may not reflect the actual units.

Page: 1

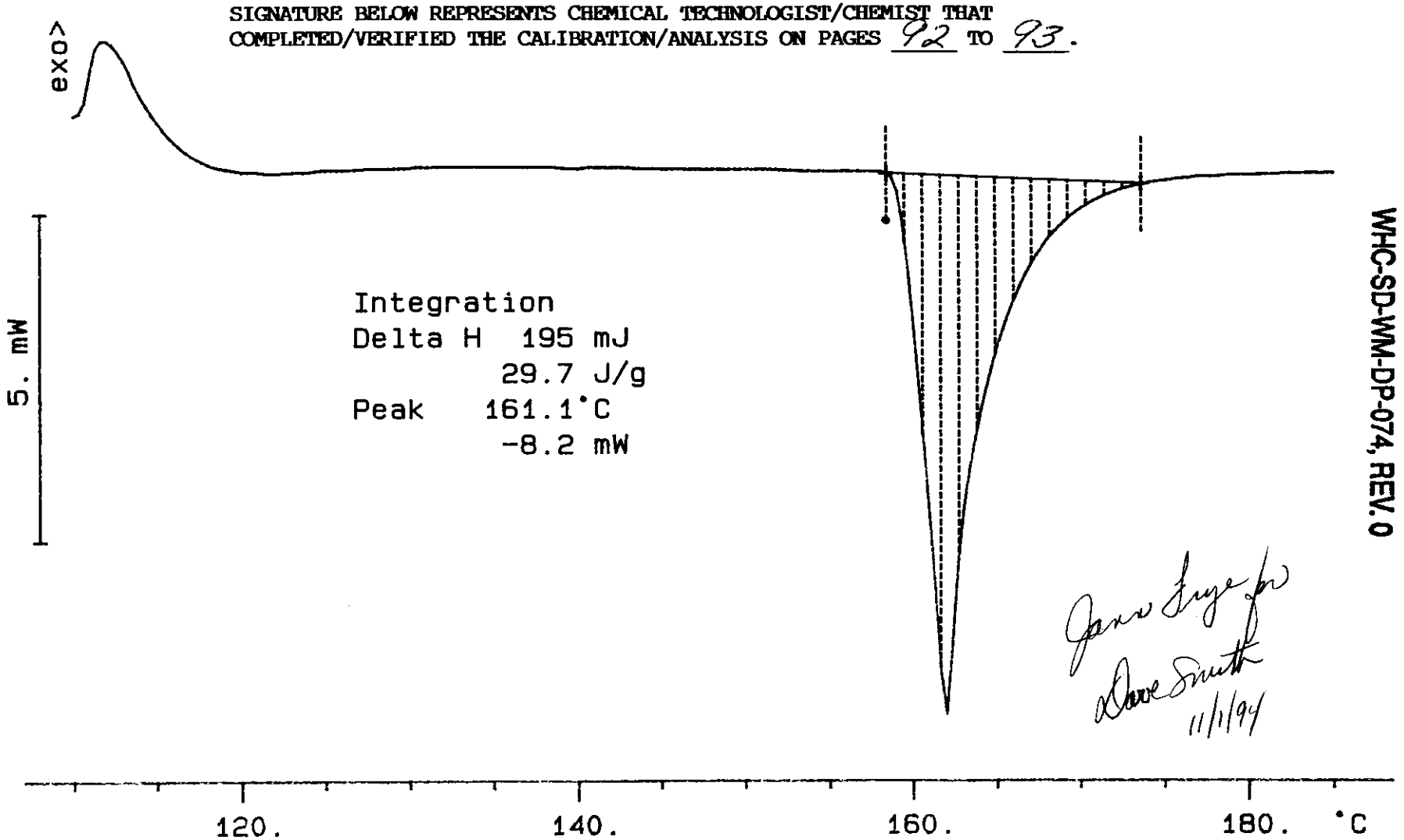
DSC STD
6.571 mg

Rate: 10.0 °C/min

File: 00055.001
Ident: 0.0

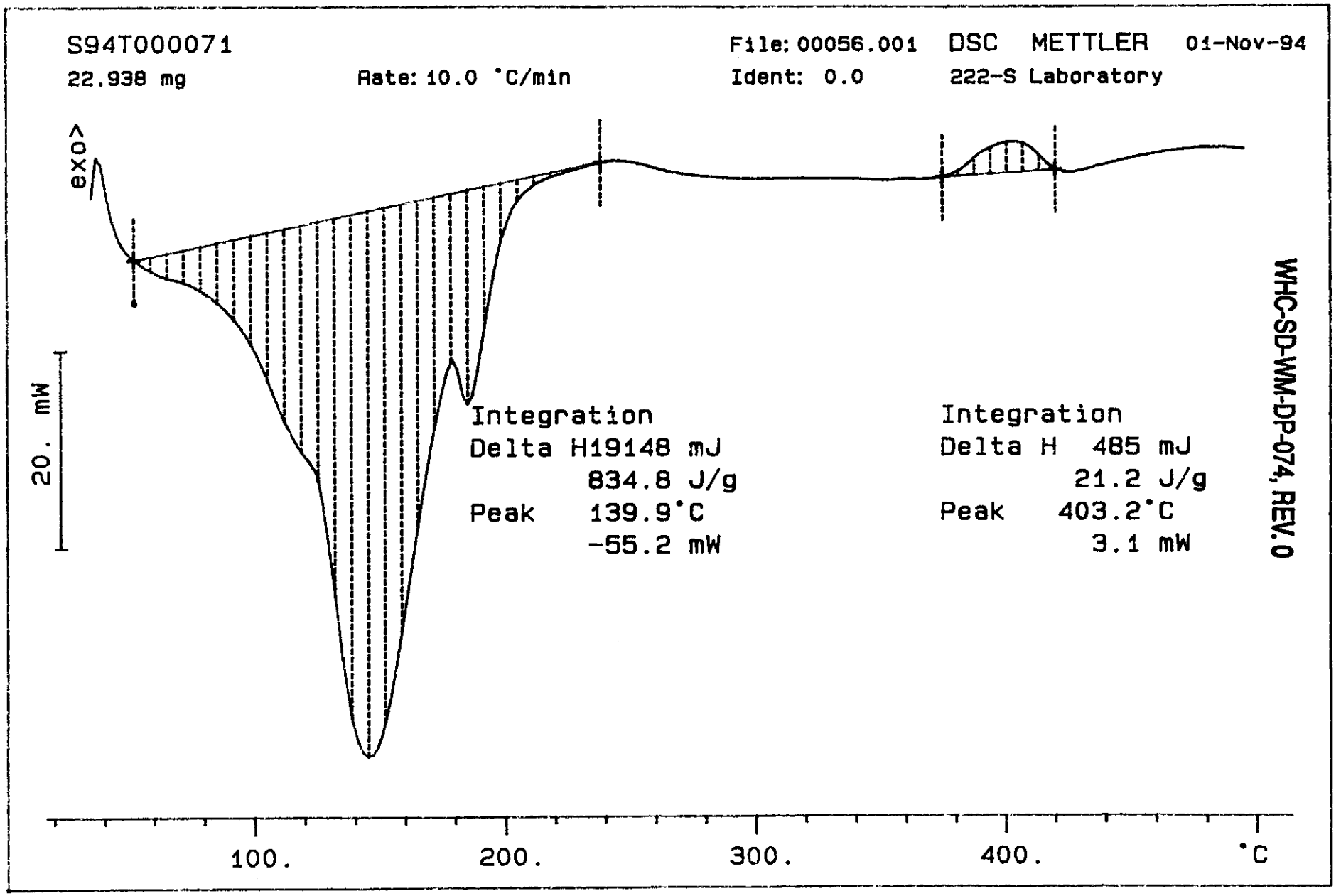
DSC METTLER 01-Nov-94
222-S Laboratory

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 92 TO 93.



Jane Fuge for Dave Smith 11/1/94

WHC-SD-WM-DP-074, REV. 0



WHC-SD-WM-DP-074, REV.0

LABCORE Data Entry Template for Worklist# 65

Analyst: KLV **Instrument:** DSC01 **Method:** LA-514-113

Worklist Comment: Please run DSC under N2 to 450C, JMF. **WHC-SD-WM-DP-074, REV. 0**

Seg	Type	Sample#	Rep	Al	Test	Matrix	Actual	Found	DL	Unit
1	STD				DSC-01	SOLID	28.45	29.4	103.3 N/A	Joule
2	SAMPLE	S94T000072	0		DSC-01	SOLID	N/A	227.2		Joule
3	DUP	S94T000072	0		DSC-01	SOLID	227.2	226.9	N/A	Joule
4	SAMPLE	S94T000090	0		DSC-01	SOLID	N/A	203.9		Joule
5	DUP	S94T000090	0		DSC-01	SOLID	203.9	198.0	N/A	Joule

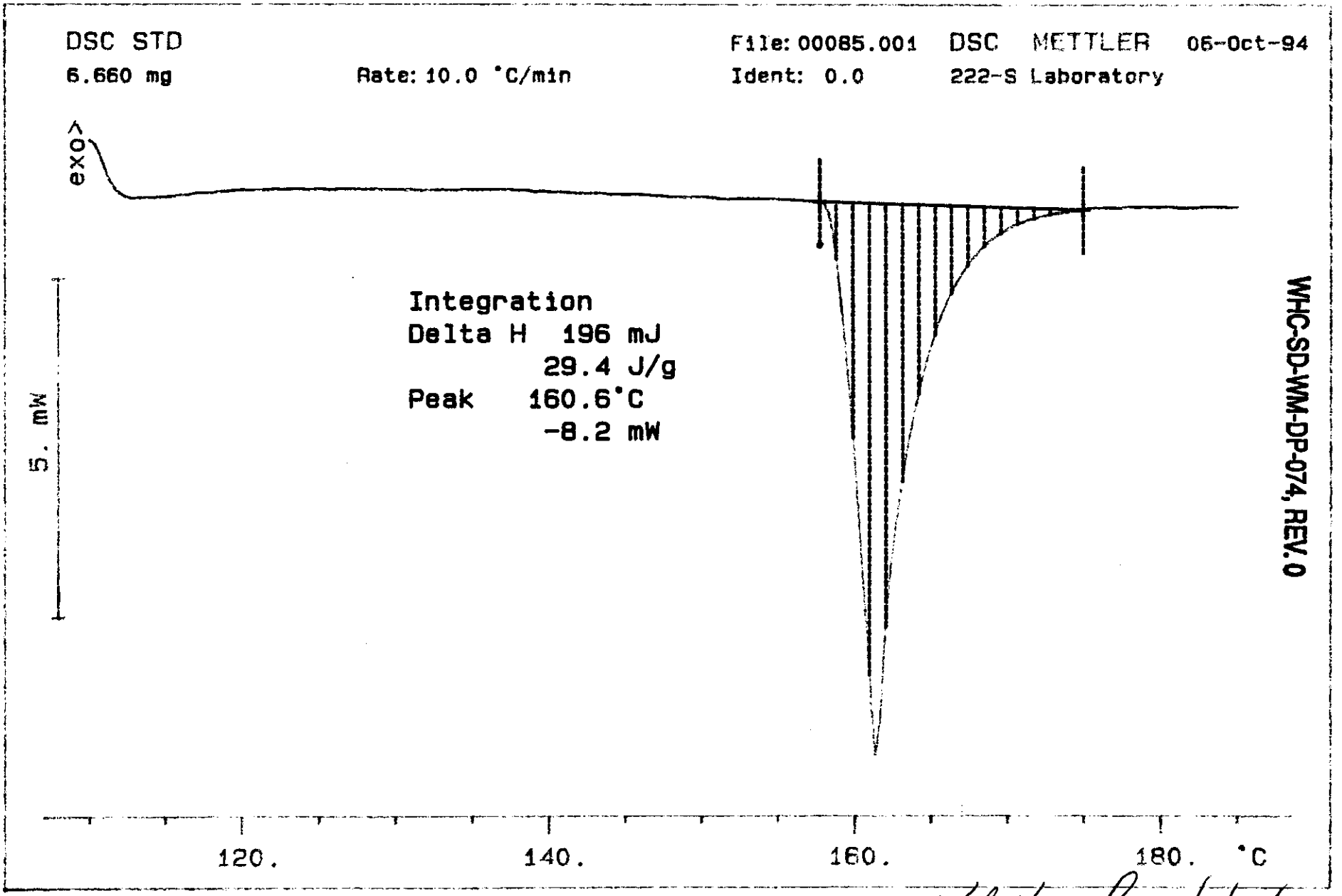
Final page for worklist # 65

Analyst Signature **Date** 10/7/94

Data Entry Comments: Data Entered & Completed 10/10/94 JMF

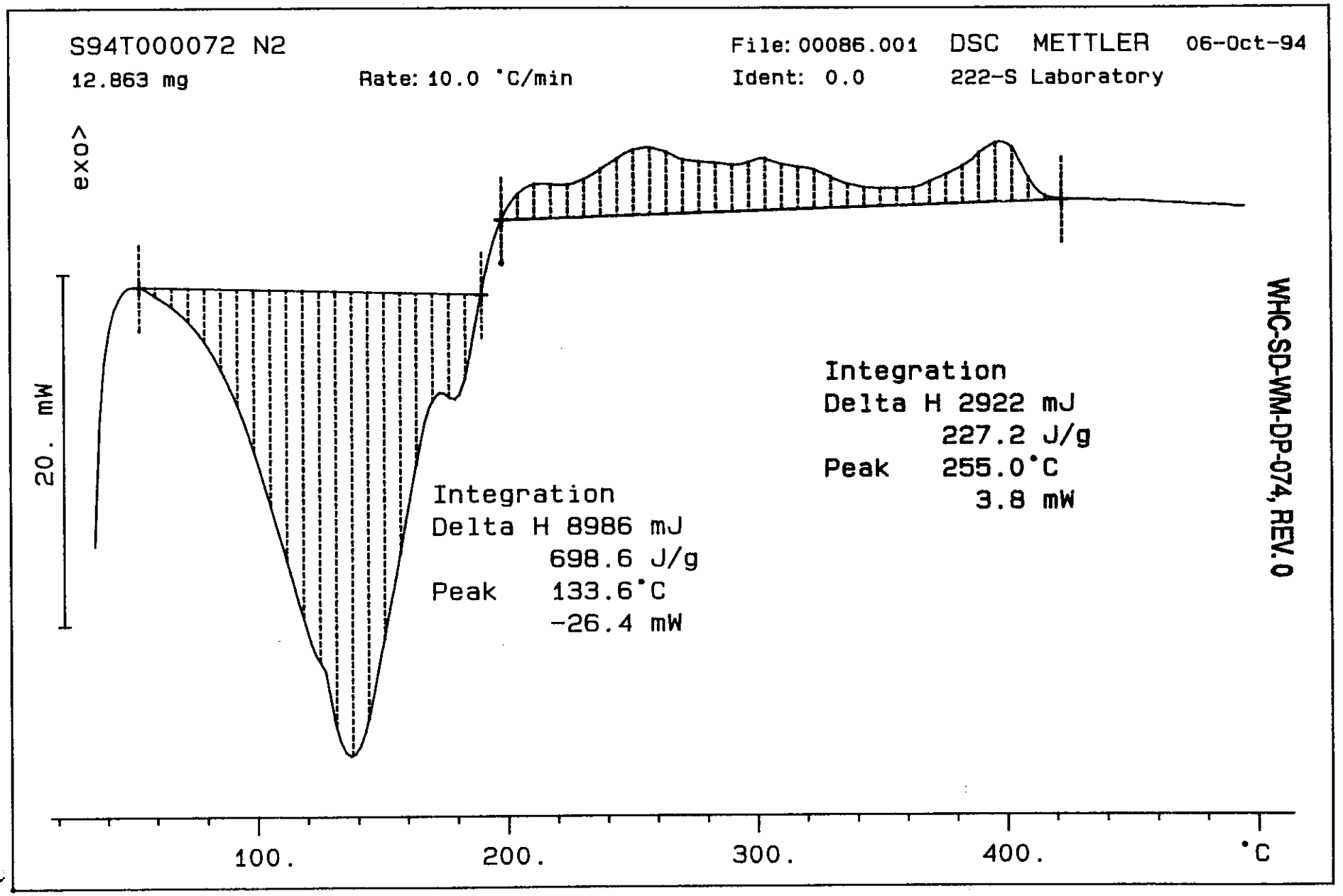
Units shown for QC (SPK) may not reflect the actual units.

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 95 TO 99.

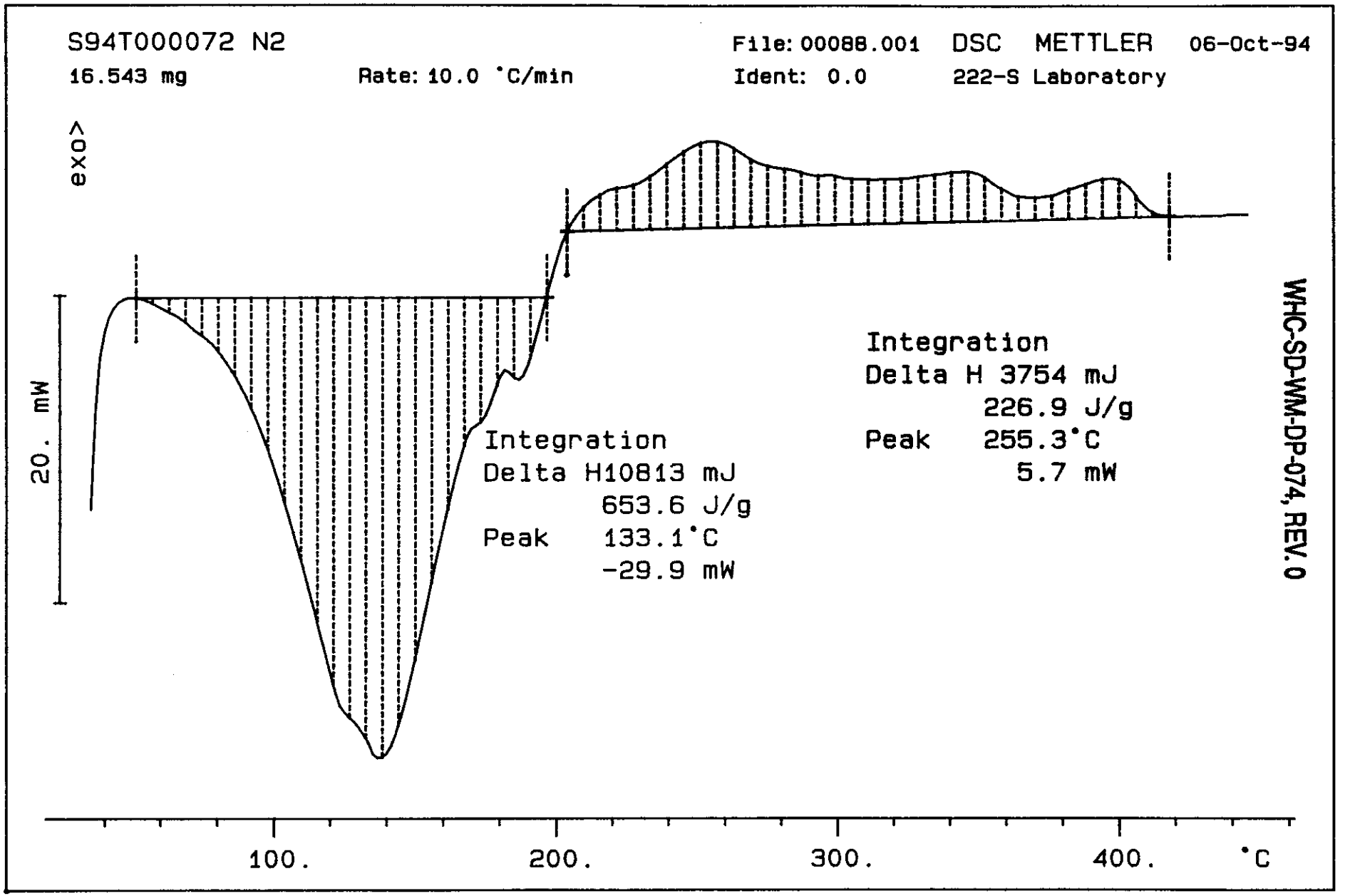


K L Vogel 10/7/94

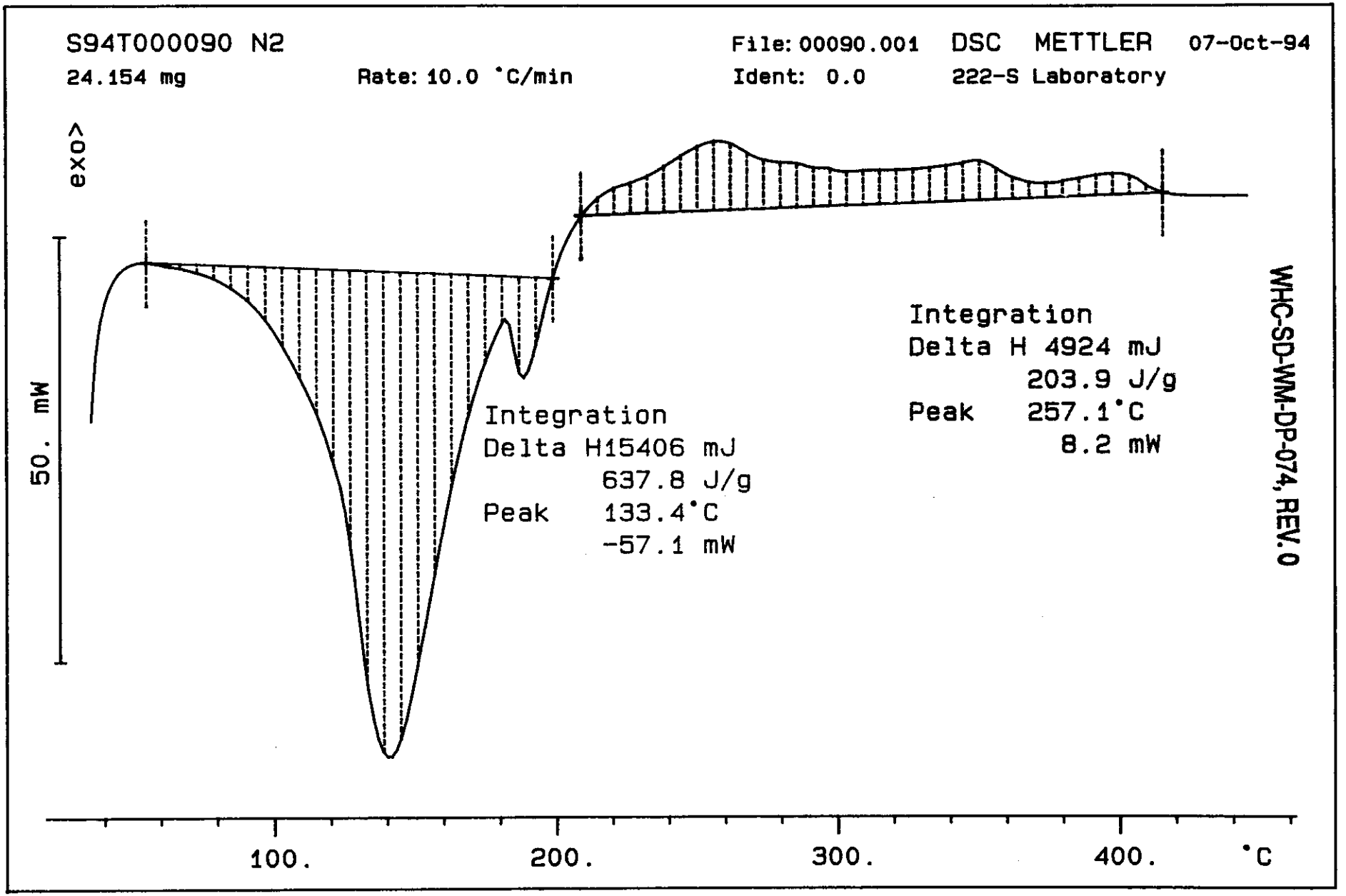
WHC-SD-WM-DP-074, REV. 0



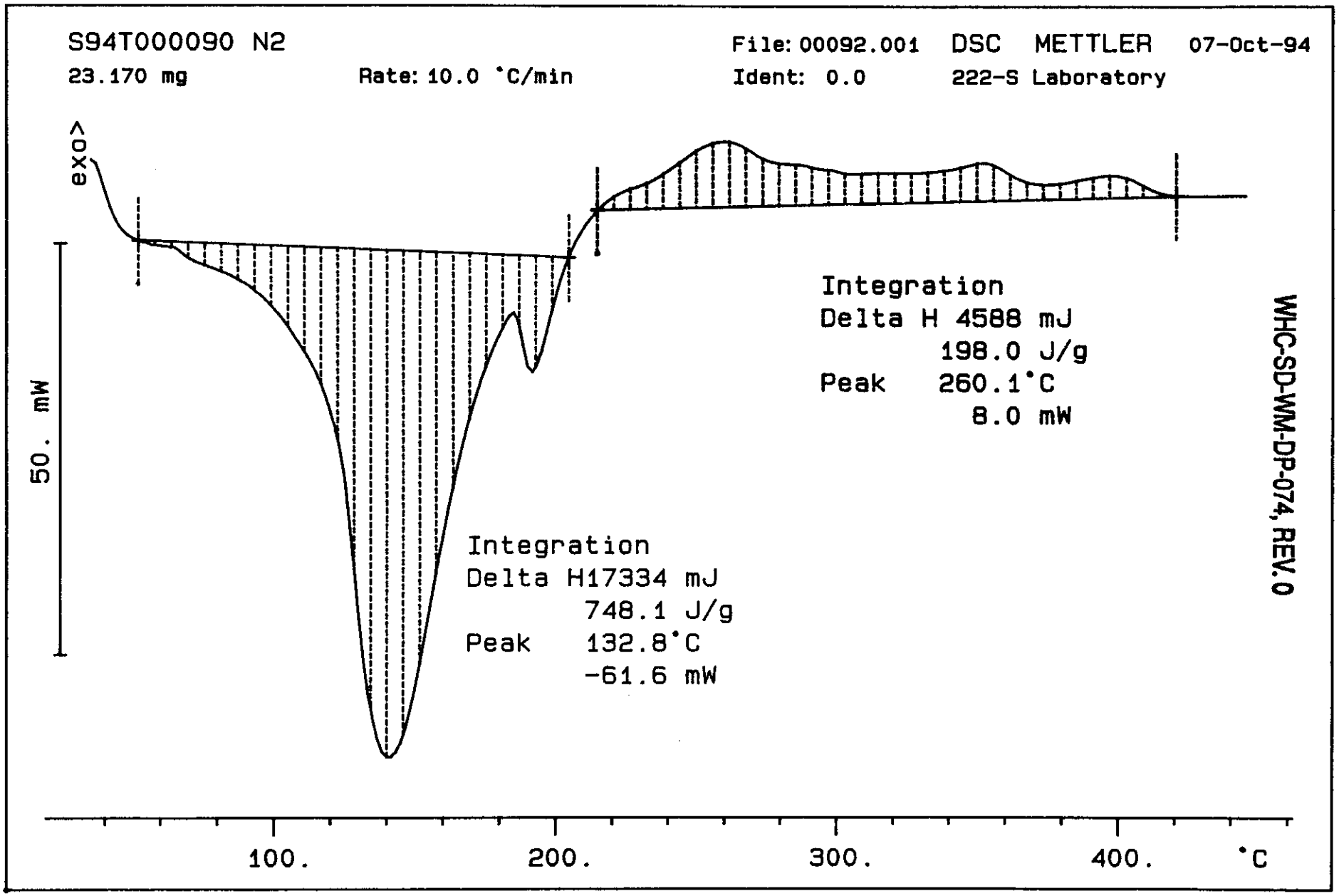
WHC-SD-WM-DP-074, REV. 0



WHC-SD-WM-DP-074, REV. 0



WHC-SD-WM-DP-074, REV.0



WHC-SD-WM-DP-074, REV. 0

LABCORE Data Entry Template for Worklist# 68

Analyst: JMFulton **Instrument:** DSC01 _____ **Method:** LA-514-113

Worklist Comment: Please run DSC under N2 to 450C, JMF. **WHC-SD-WM-DP-074, REV. 0**

Seg	Type	Sample#	Rep	Al	Test	Matrix	Actual	Found	DL	Unit
1	STD				DSC-01	SOLID	28.45	29.8	104.7% Rec N/A	Joule
2	SAMPLE	S94T000088	0		DSC-01	SOLID	N/A	179.7		Joule
3	DUP	S94T000088	0		DSC-01	SOLID	179.7	212.1	N/A	Joule
4	SAMPLE	S94T000089	0		DSC-01	SOLID	N/A	150.7		Joule
5	DUP	S94T000089	0		DSC-01	SOLID	150.7	148.2	N/A	Joule

Final page for worklist # 68

Susie R. Fulton
Analyst Signature

10-20-94
Date

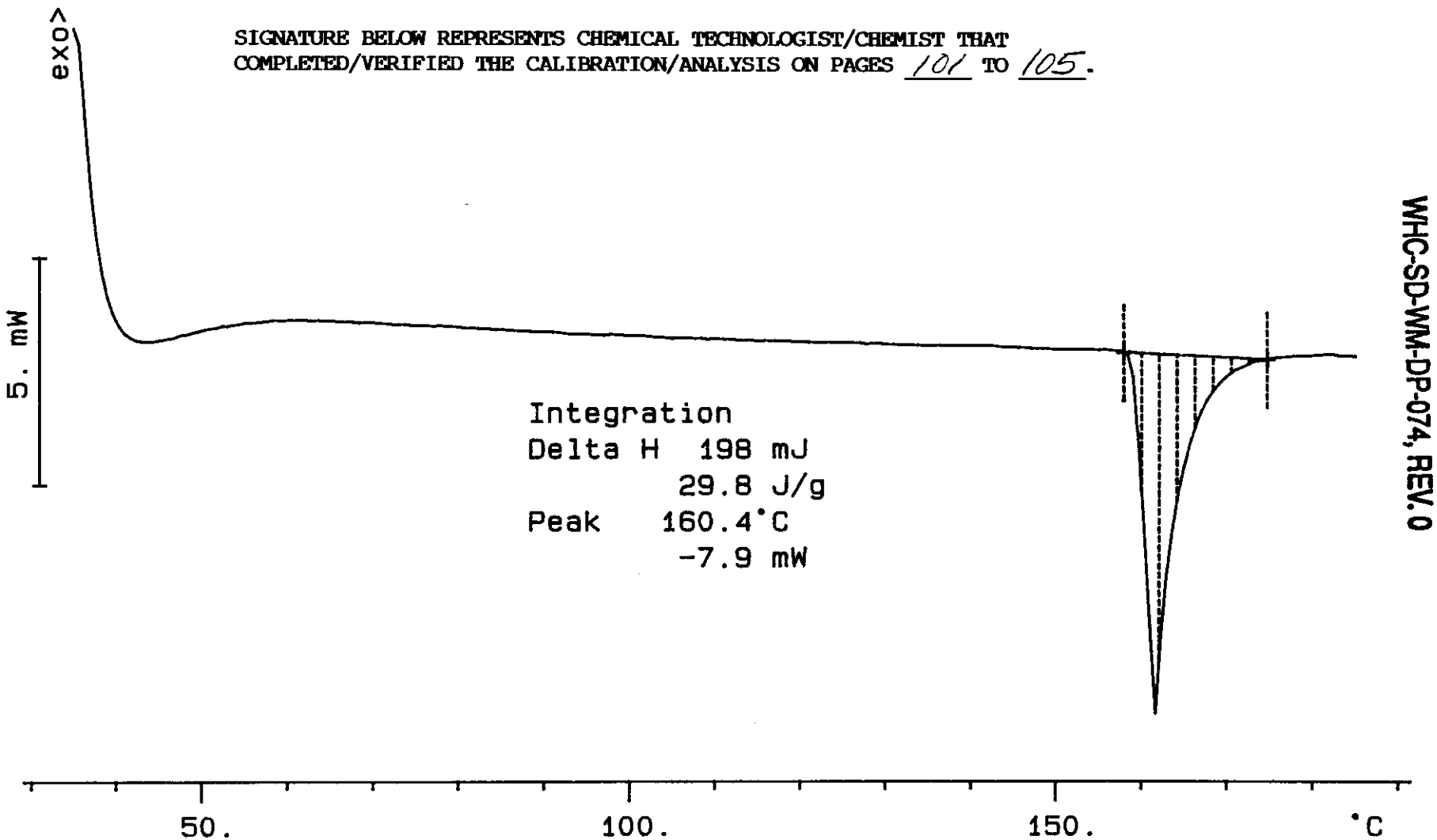
Data Posted + entered 10/26/94 JMF.

Data Entry Comments:
S94T000088 Endotherm in Sample 863.6 J/g at 135.6°C, Dup 723.7 J/g at 132.8°C; S94T000089 Endotherm in Sample 723.0 J/g at 125°C, p 741.5 J/g at 140.8°C JMF 10/26/94

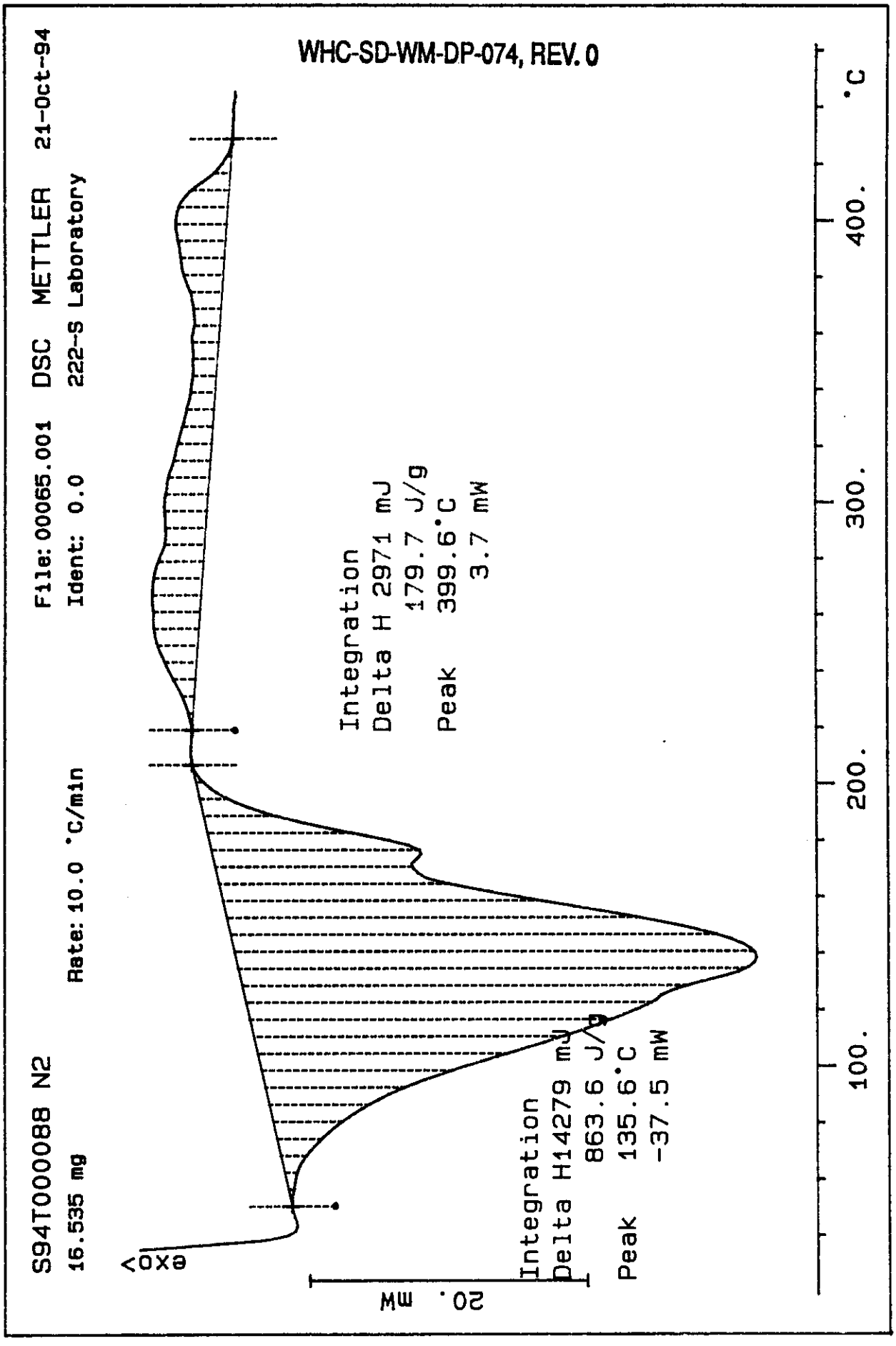
Units shown for QC (SPK) may not reflect the actual units.

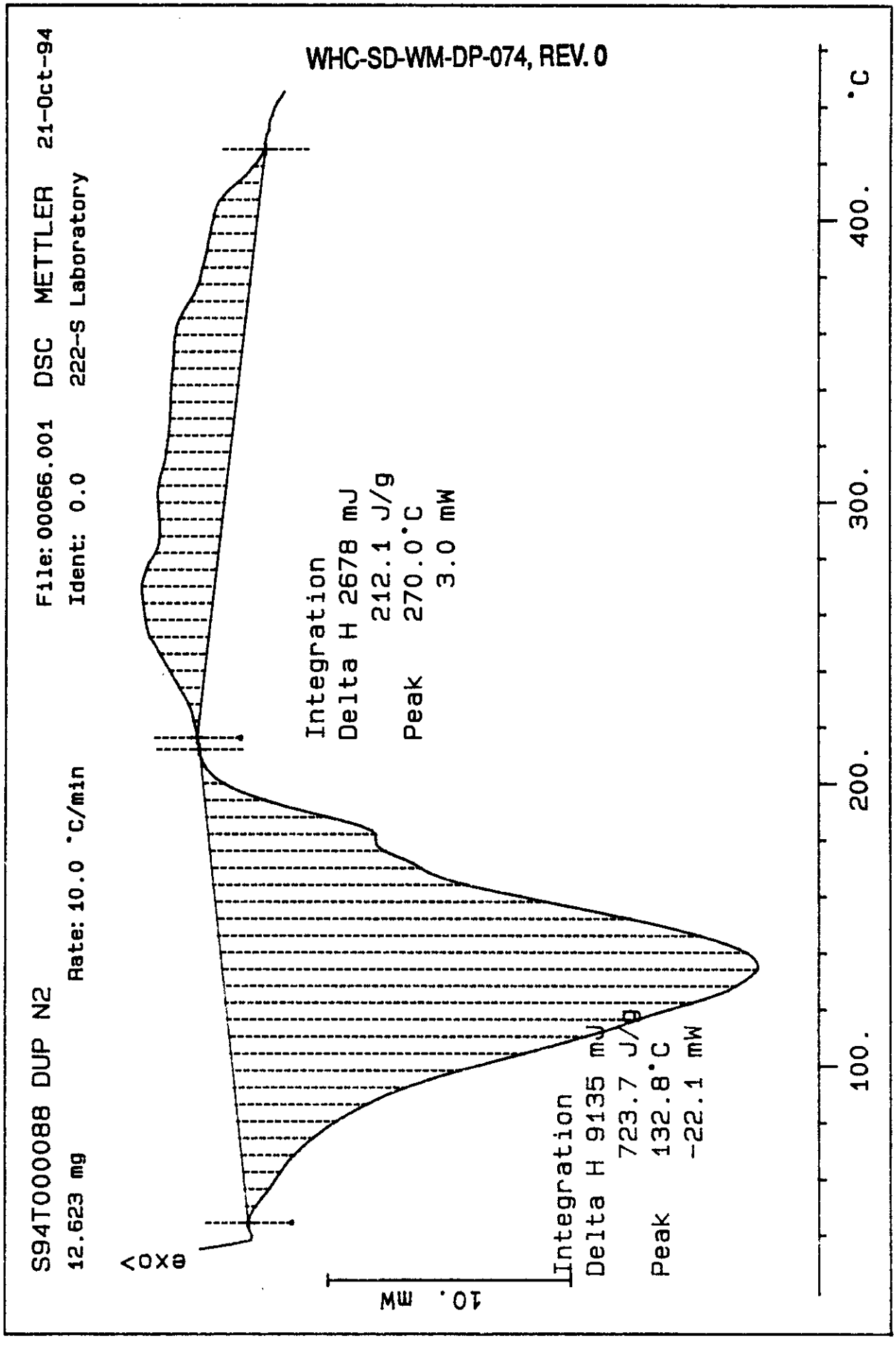
DSC STD
6.660 mg
Rate: 10.0 °C/min
File: 00064.001
Ident: 0.0
DSC METTLER
222-S Laboratory
21-Oct-94

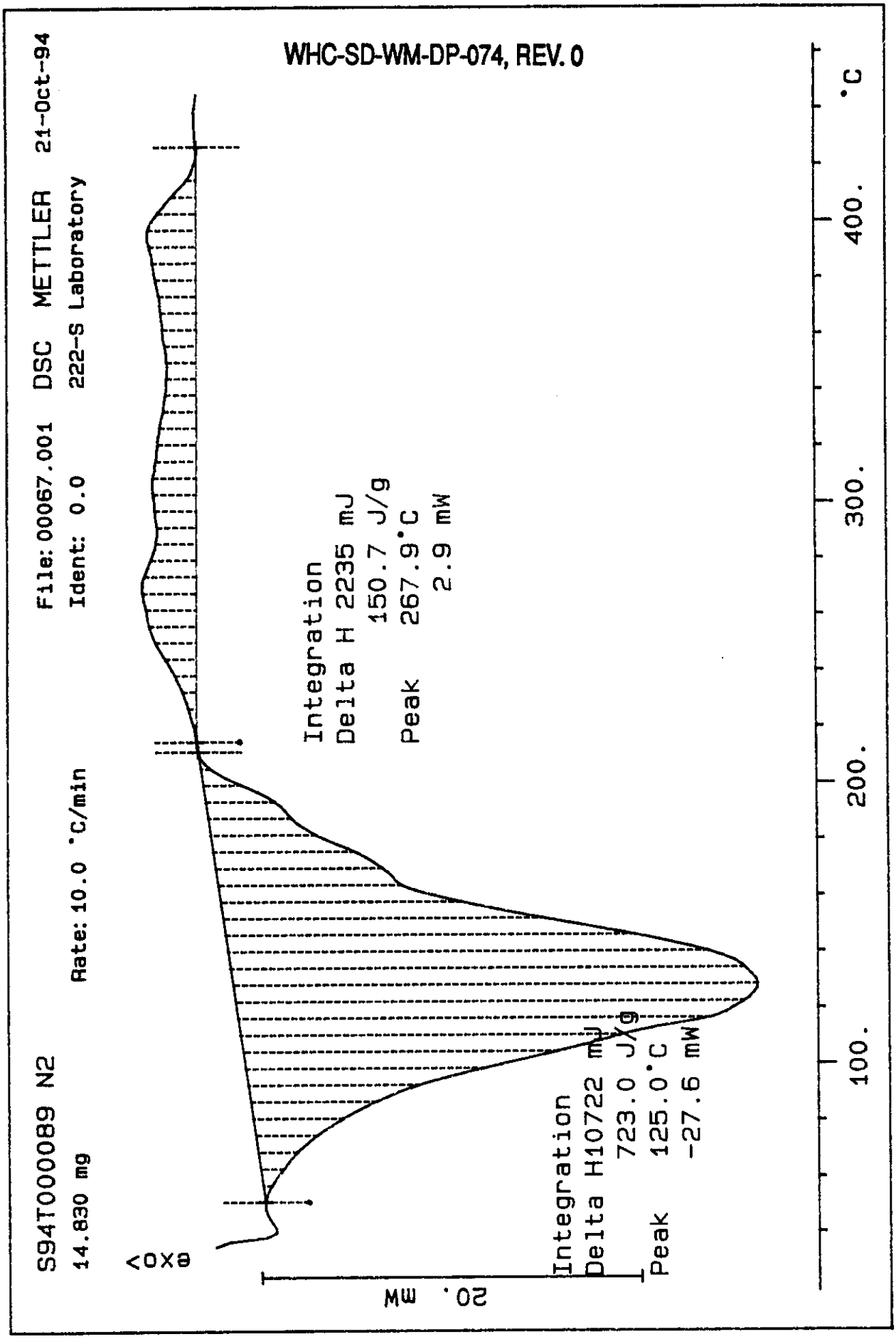
SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 101 TO 105.

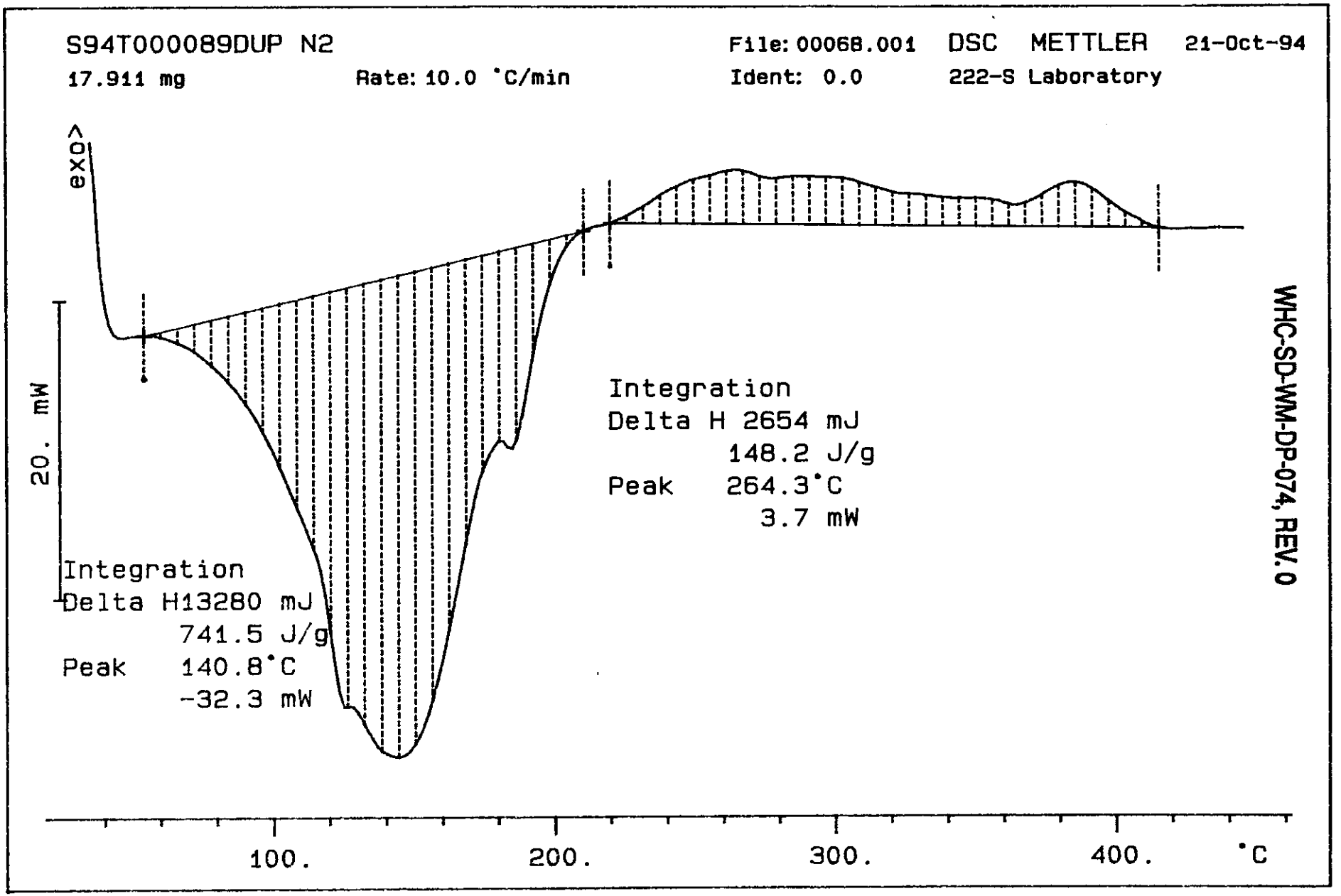


WHC-SD-WM-DP-074, REV. 0


S94T000088 N2
16.535 mg
Rate: 10.0 °C/min
File: 00065.001
Ident: 0.0
DSC METTLER 21-Oct-94
222-S Laboratory
Integration
Delta H 2971 mJ
179.7 J/g
Peak 399.6°C
3.7 mW
Integration
Delta H14279 mJ
863.6 J/g
Peak 135.6°C
-37.5 mW
exo>
20. mW
100.
200.
300.
400.
°C


S94T000088 DUP N2
12.623 mg
Rate: 10.0 °C/min
File: 00066.001 DSC METTLER 21-Oct-94
Ident: 0.0 222-S Laboratory
Integration
Delta H 2678 mJ
212.1 J/g
Peak 270.0°C
3.0 mW
Integration
Delta H 9135 mJ
723.7 J/g
Peak 132.8°C
-22.1 mW
exo>
10. mW
100.
200.
300.
400.
°C


S94T000089 N2
14.830 mg
Rate: 10.0 °C/min
File: 00067.001 DSC METTLER 21-Oct-94
Ident: 0.0 222-S Laboratory
Integration
Delta H 2235 mJ
150.7 J/g
Peak 267.9°C
2.9 mW
Integration
Delta H10722 mJ
723.0 J/g
Peak 125.0°C
-27.6 mW
exo>
20. mW
100.
200.
300.
400.
°C



WHC-SD-WM-DP-074, REV. 0

LABCORE Data Entry Template for Worklist# 66

QA 7

Analyst: SMF **Instrument:** DSC01 **Method:** LA-514-113

Worklist Comment: Please run DSC under N2 to 450C, JMF. **WHC-SD-WM-DP-074, REV. 0**

Seg	Type	Sample#	Rep	Al	Test	Matrix	Actual	Found	DL	Unit
1	STD				DSC-01	SOLID	28.45	27.9	102.0% N/A	Joule
2	SAMPLE	S94T000091	0		DSC-01	SOLID	N/A	364.2		Joule
3	DUP	S94T000091	0		DSC-01	SOLID	364.2	389.8	N/A	Joule
	STD						28.45	29.1	102.3%	
4	SAMPLE	S94T000092	0		DSC-01	SOLID	N/A	235.6		Joule
5	DUP	S94T000092	0		DSC-01	SOLID	235.6	310.3	N/A	Joule

Final page for worklist # 66

Jann Frye for Susan Fulton
Analyst Signature

Date 10/20/94

Data Entry Comments:
For S94T000092 baseline subtracted scans were used.
Data entered & posted 10/20/94 JMF.

Units shown for QC (SPK) may not reflect the actual units.

Page: 1

LABCORE Data Entry Template for Worklist# 66

Analyst: _____ **Instrument:** DSC01 _____ **Method:** LA-514-113

Worklist Comment: Please run DSC under N2 to 450C, JMF. **WHC-SD-WM-DP-074, REV. 0**

Seg	Type	Sample#	Rep	Al	Test	Matrix	Actual	Found	DL	Unit
1	STD				DSC-01	SOLID			N/A	Joule
2	SAMPLE	S94T000091	0		DSC-01	SOLID	N/A			Joule
3	DUP	S94T000091	0		DSC-01	SOLID			N/A	Joule
4	STD				DSC-01	SOLID			N/A	Joule
5	SAMPLE	S94T000092	0		DSC-01	SOLID	N/A			Joule
6	DUP	S94T000092	0		DSC-01	SOLID			N/A	Joule

Final page for worklist # 66

Analyst Signature _____ **Date** _____

Data Entry Comments: See attached sheet for data.

Units shown for QC (SPK) may not reflect the actual units.

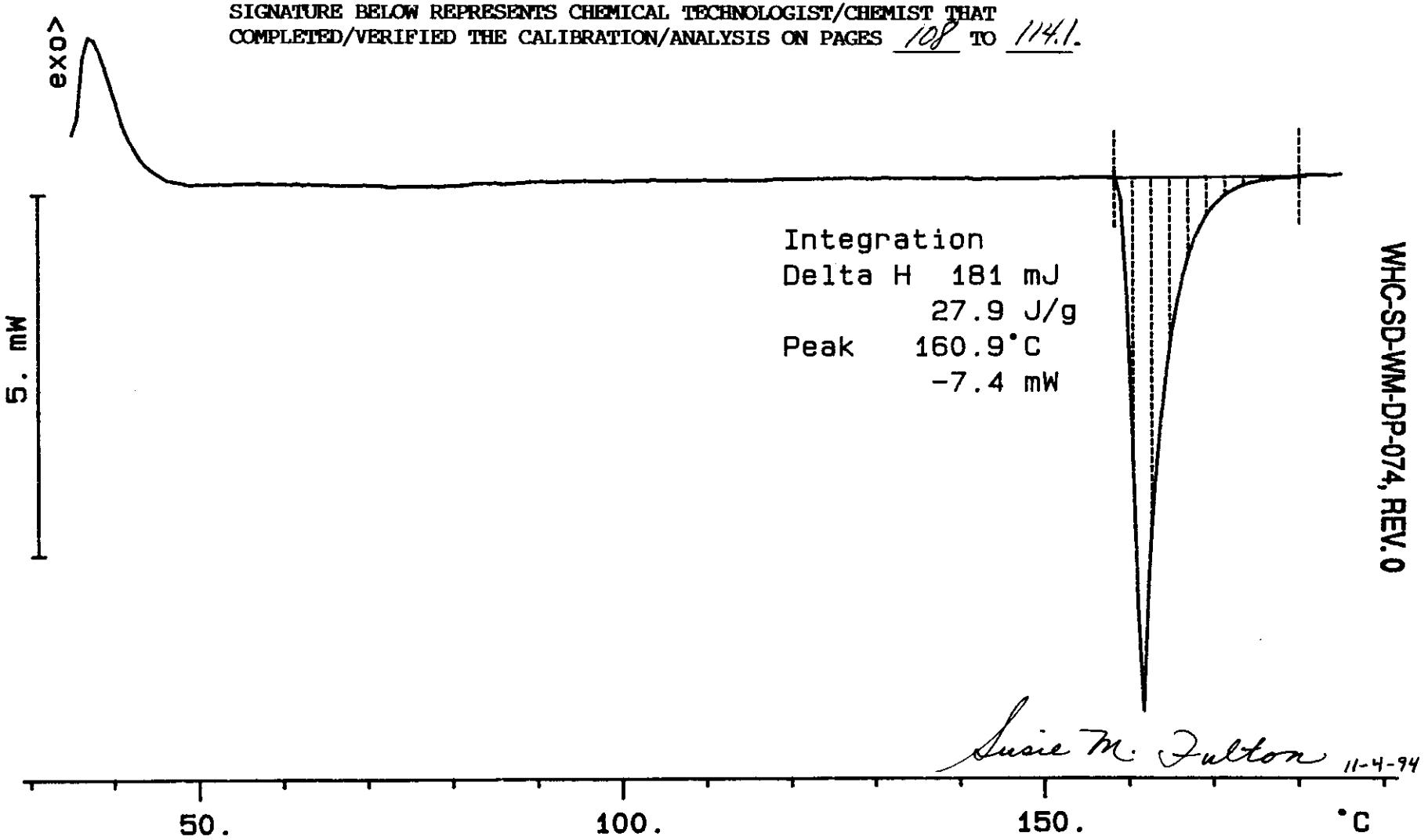
DSC STD
6.504 mg

Rate: 10.0 °C/min

File: 00013.001
Ident: 0.0

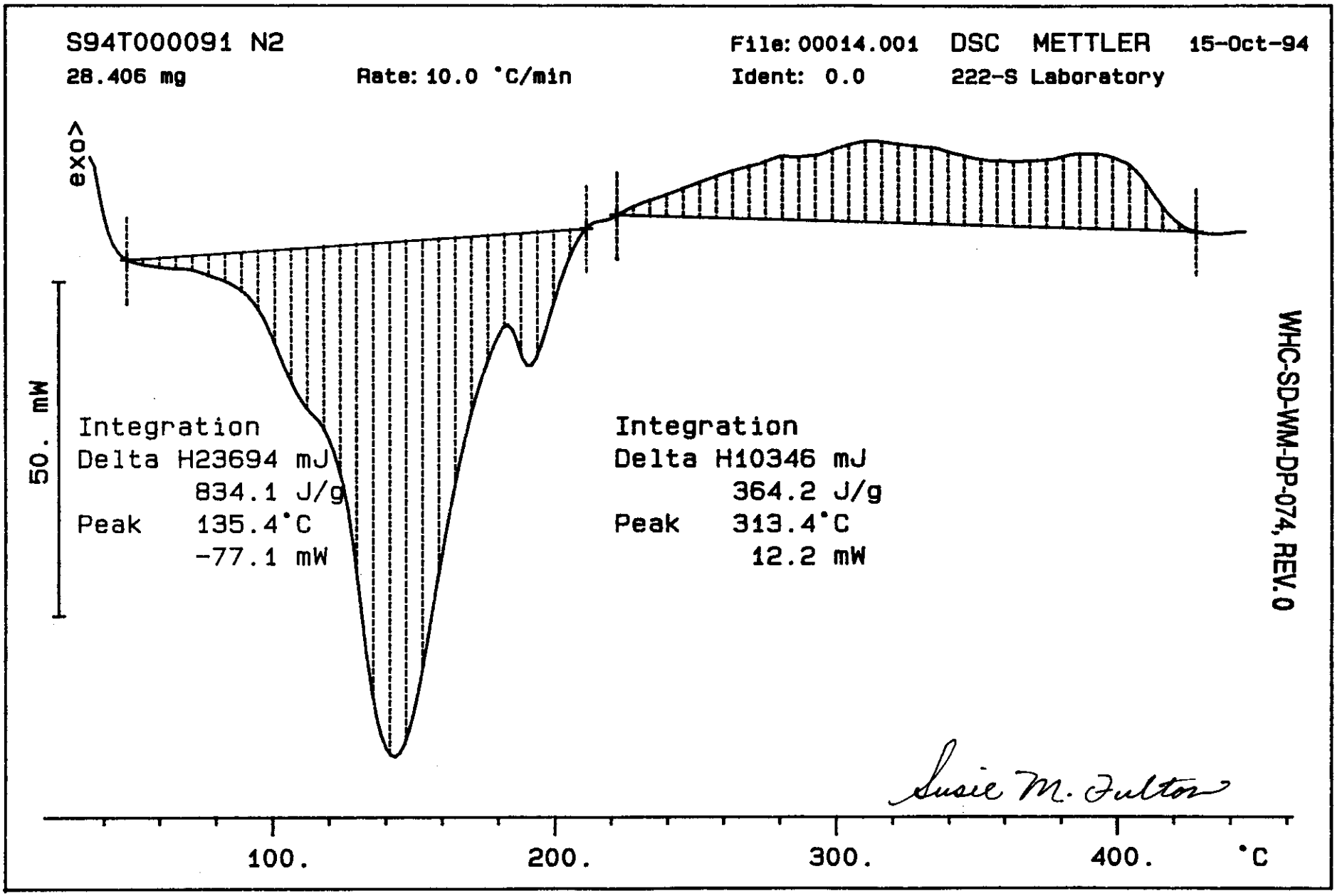
DSC METTLER 14-Oct-94
222-S Laboratory

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 108 TO 114.1.



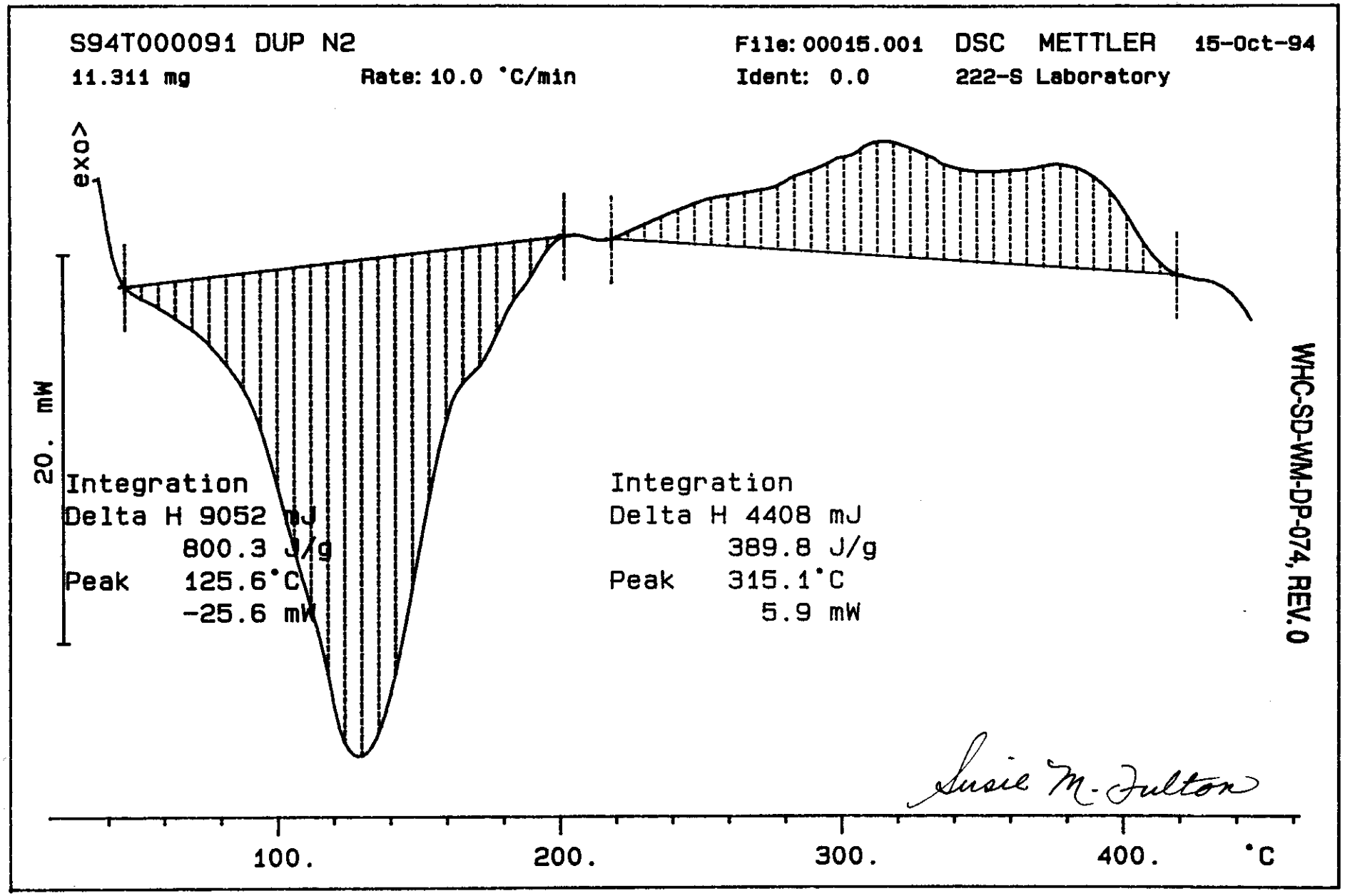
Susie M. Fulton 11-4-94

WHC-SD-WM-DP-074, REV. 0



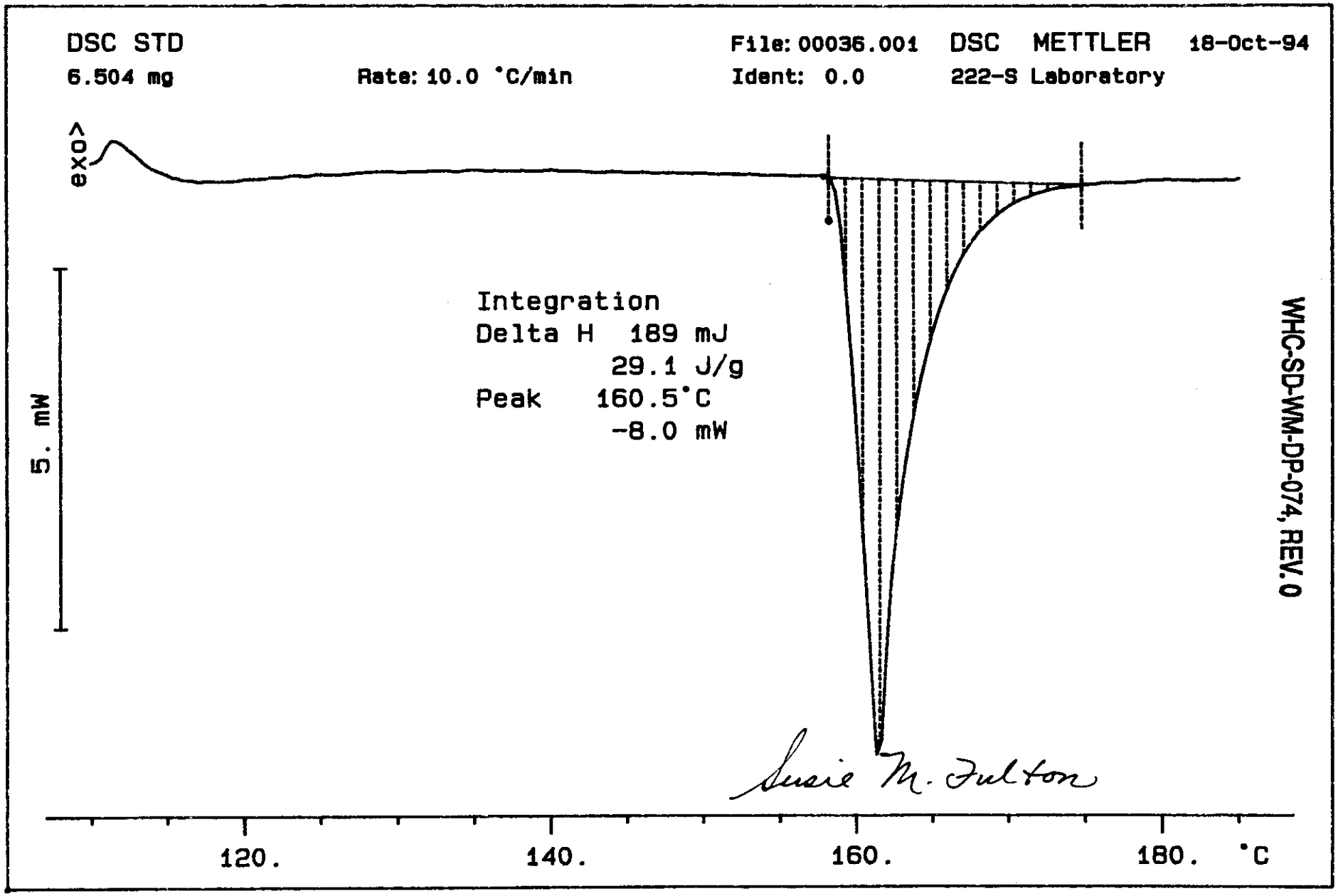
Susie M. Fulton

WHC-SD-WM-DP-074, REV.0

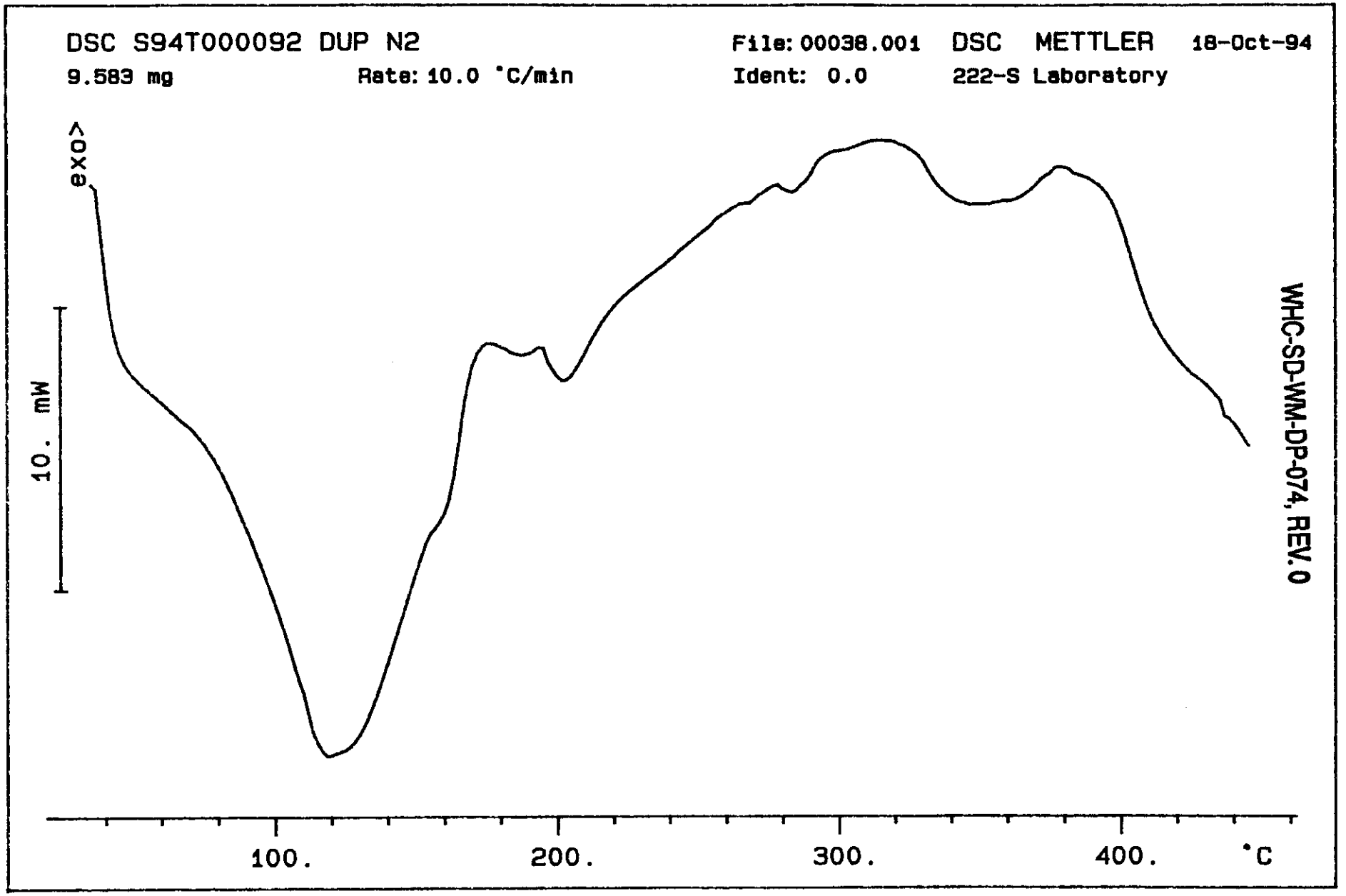


Susie M. Fulton

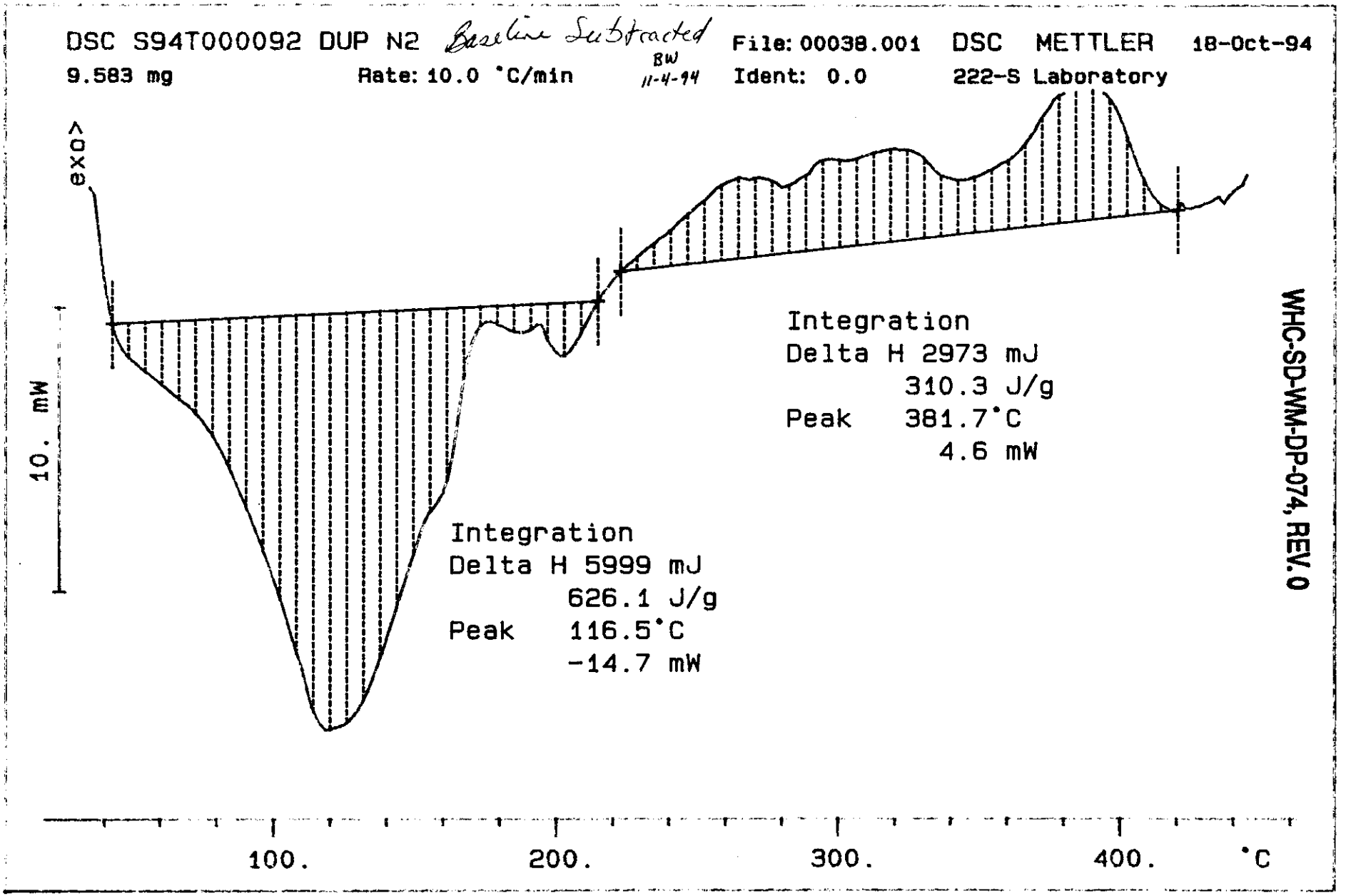
WHC-SD-WM-DP-074, REV. 0



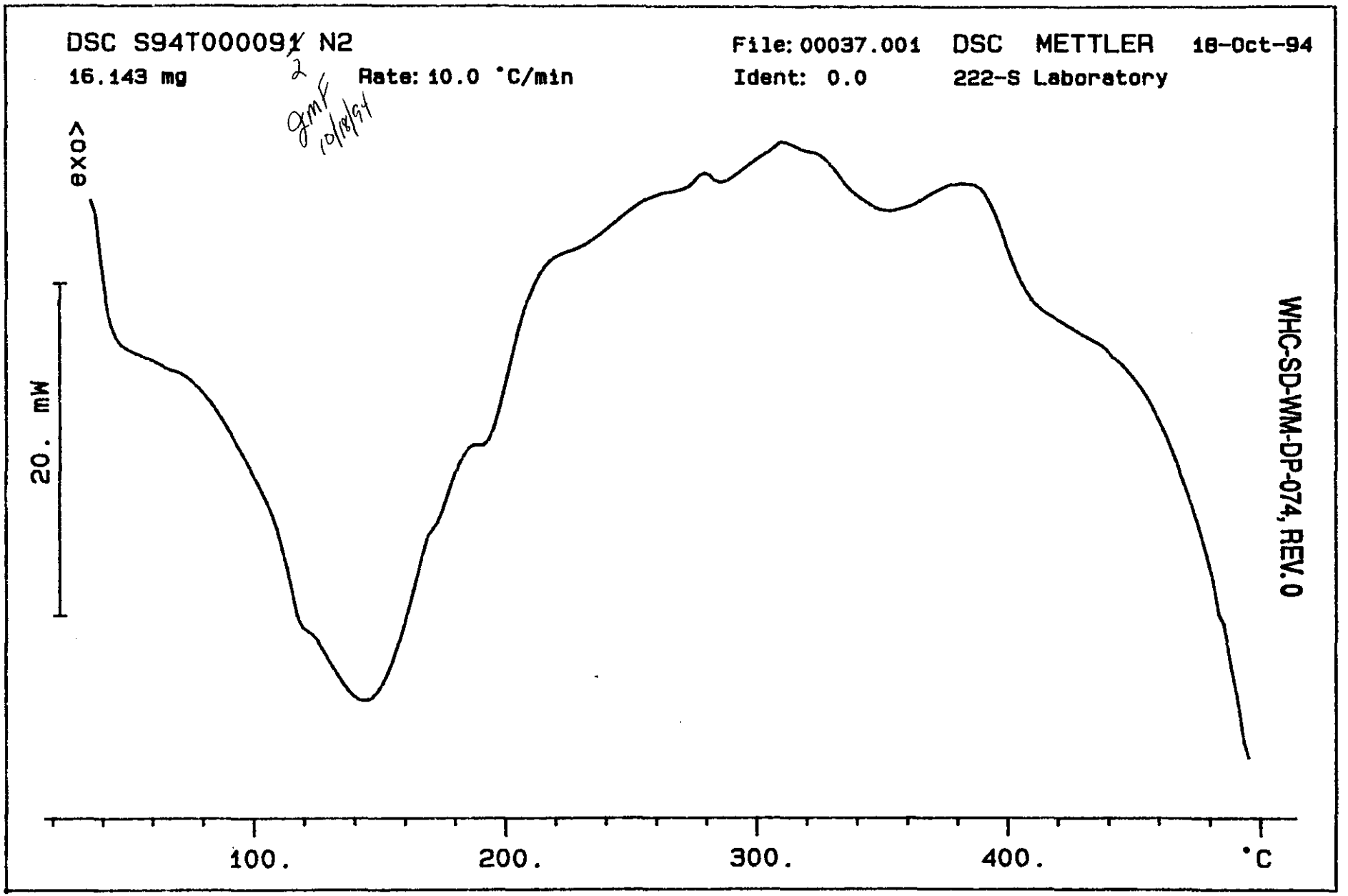
WHC-SD-WM-DP-074, REV. 0



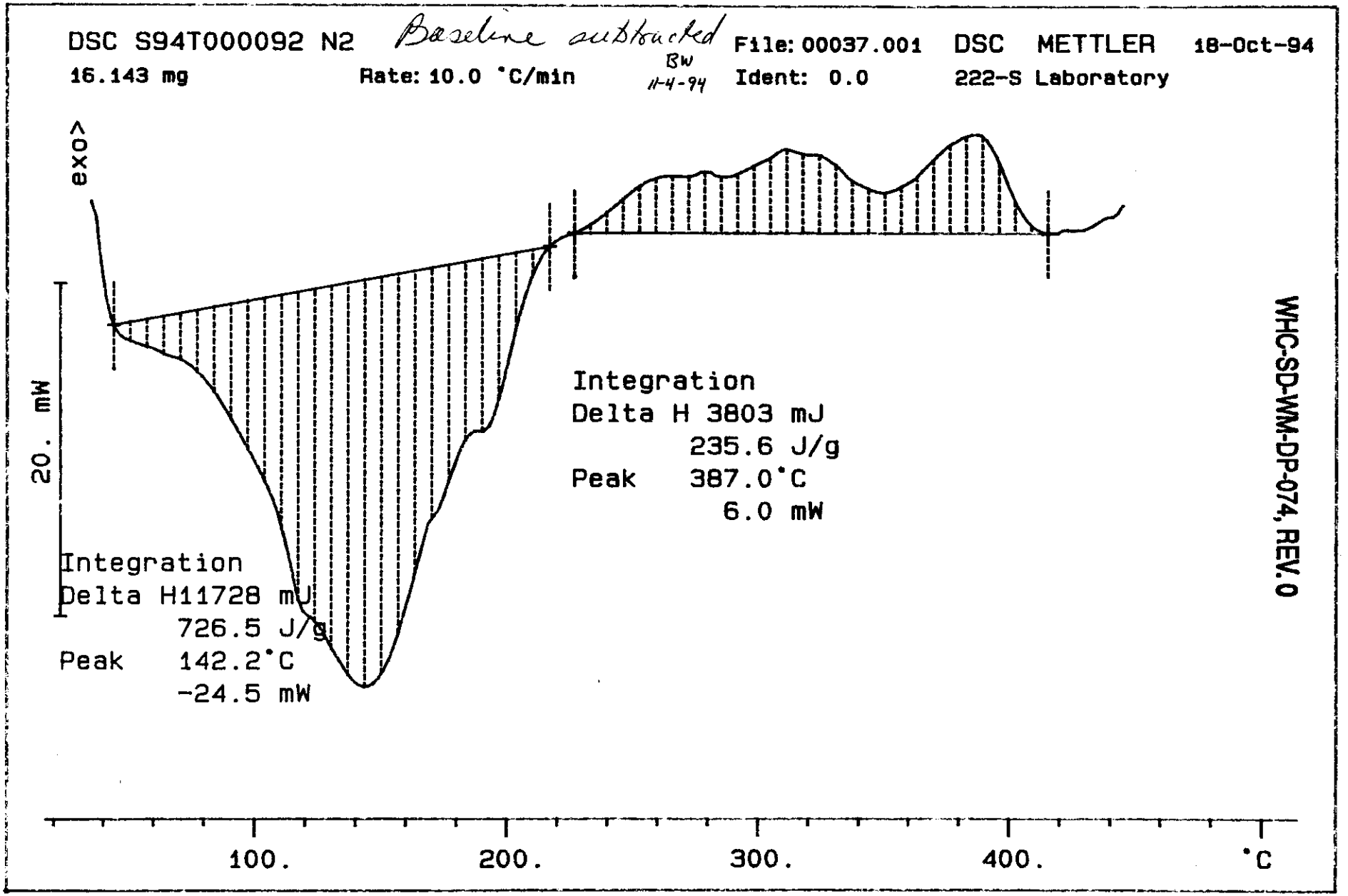
WHC-SD-WM-DP-074, REV.0



WHC-SD-WM-DP-074, REV.0



WHC-SD-WM-DP-074, REV. 0



WHC-SD-WM-DP-074, REV.0

LABCORE Data Entry Template for Worklist# 144

Analyst: _____ **Instrument:** DSC01 _____ **Method:** LA-514-113

Worklist Comment: Reintegration of 93. JMF

WHC-SD-WM-DP-074, REV. 0

Seg	Type	Sample#	Rep	Al	Test	Matrix	Actual	Found	DL	Unit
1	STD				DSC-01	SOLID	28.45	29.2	N/A	Joule
2	SAMPLE	S94T000093	0		DSC-01	SOLID	N/A	0		Joule
3	DUP	S94T000093	0		DSC-01	SOLID	0	0	N/A	Joule
4	STD				DSC-01	SOLID	28.45	28.8	N/A	Joule
5	SAMPLE	S94T000085	0		DSC-01	SOLID	N/A	124.2		Joule
6	DUP	S94T000085	0		DSC-01	SOLID	124.2	102.2	N/A	Joule

Final page for worklist # 144

Analyst Signature

Date 11/2/94 reentry
Run on 10/3/94

Data Entry Comments: Worklist 67 is attached. JM Fye

Units shown for QC (SPK) may not reflect the actual units.

12 OA 14

LABCORE Data Entry Template for Worklist# 67

Analyst: DWS **Instrument:** DSC01 **Method:** LA-514-113

Worklist Comment: Please run DSC under N2 to 450C, JMF. **WHC-SD-WM-DP-074, REV. 0**

Seg	Type	Sample#	Rep	Al	Test	Matrix	Actual	Found	DL	Unit
1	STD				DSC-01	SOLID	28.45	29.2	102.6% N/A	Joule
2	SAMPLE	S94T000093	0		DSC-01	SOLID	N/A	~~383.7~~ 0	JMF 11/1/94	Joule
3	DUP	S94T000093	0		DSC-01	SOLID	~~383.7~~ 0	~~220.3~~ 0	N/A	Joule
	STD						~~28.45~~	~~28.8~~	101.2%	
4	SAMPLE	S94T000085	0		DSC-01	SOLID	N/A	124.2		Joule
5	DUP	S94T000085	0		DSC-01	SOLID	124.2	102.2	N/A	Joule

Final page for worklist # 67

Dawn G. Smith
Analyst Signature

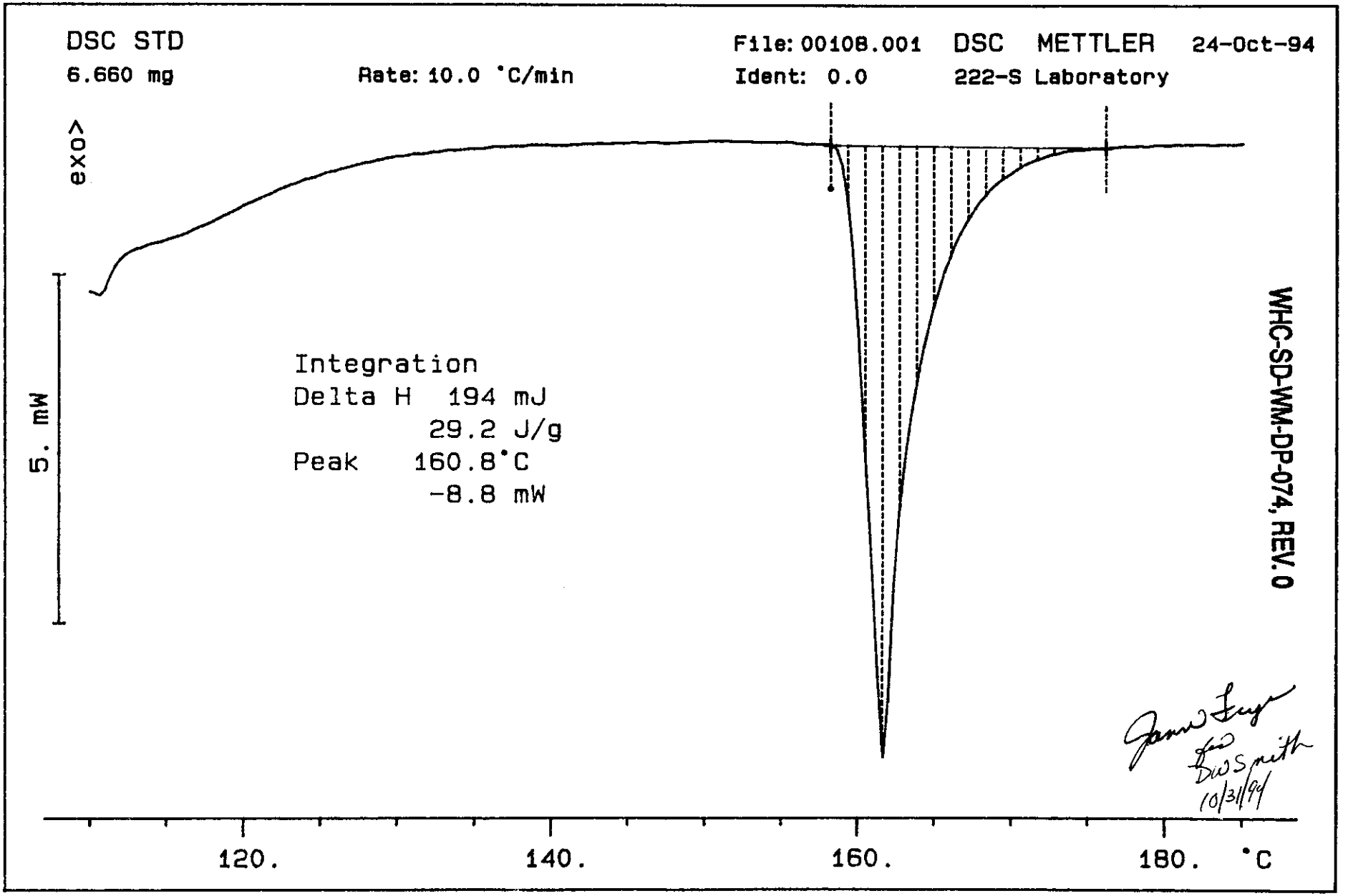
Date

Entered & reviewed 10/31/94. JMF

Data Entry Comments:
Sample S94T000093 has very large water endotherm 1359.7 J/g at 131.8°C and Dup 282.7 J/g at 125.8°C.
Sample S94T000085 has endotherm of 29 J/g at 144.8°C and dup of 67 J/g at 141.9°C. Also the sample was run the first time under air by mistake, then under N2 for duplicate. J. M. Fye 11/1/94

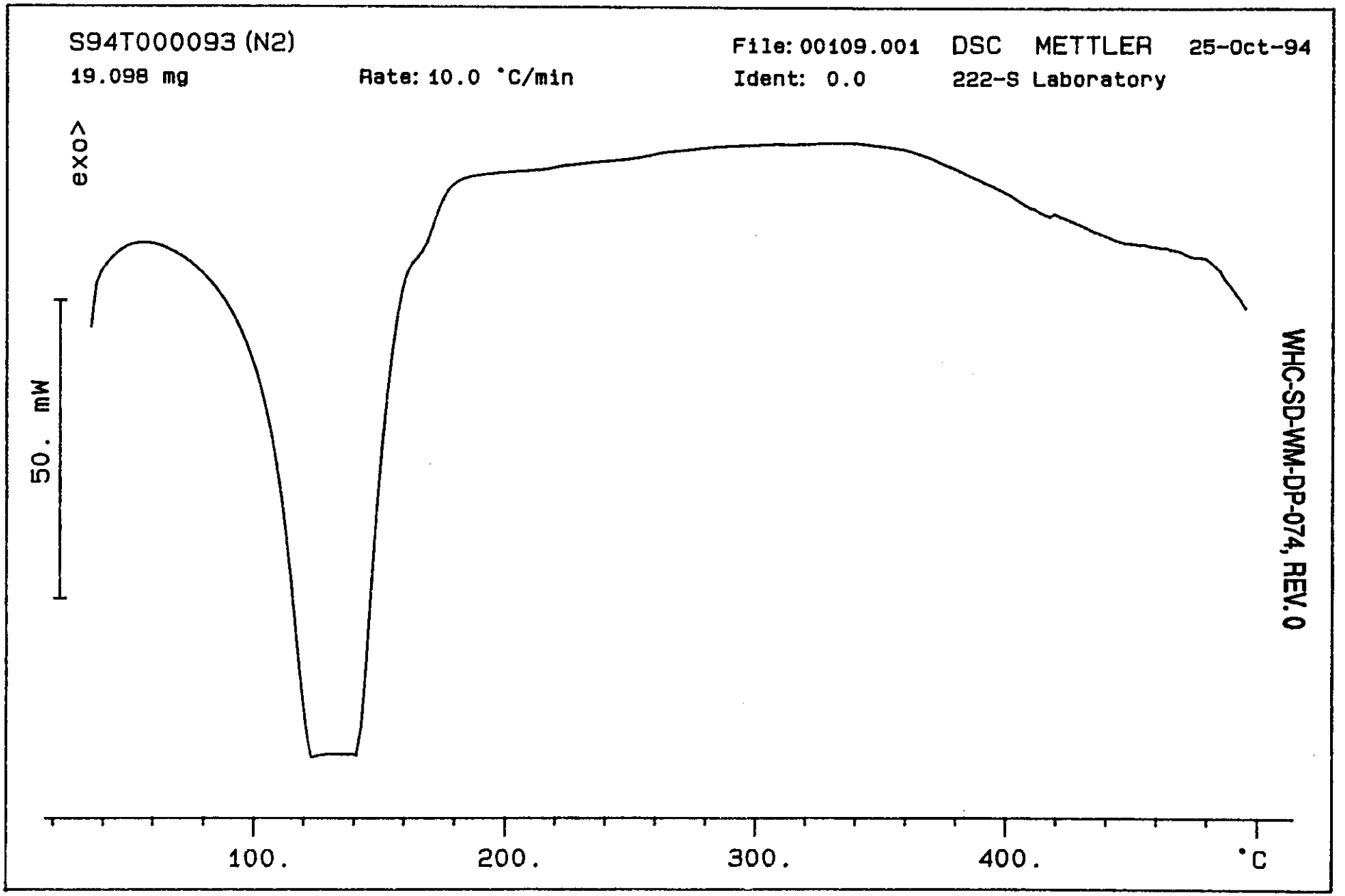
Units shown for QC (SPK) may not reflect the actual units.

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 117 TO 124.

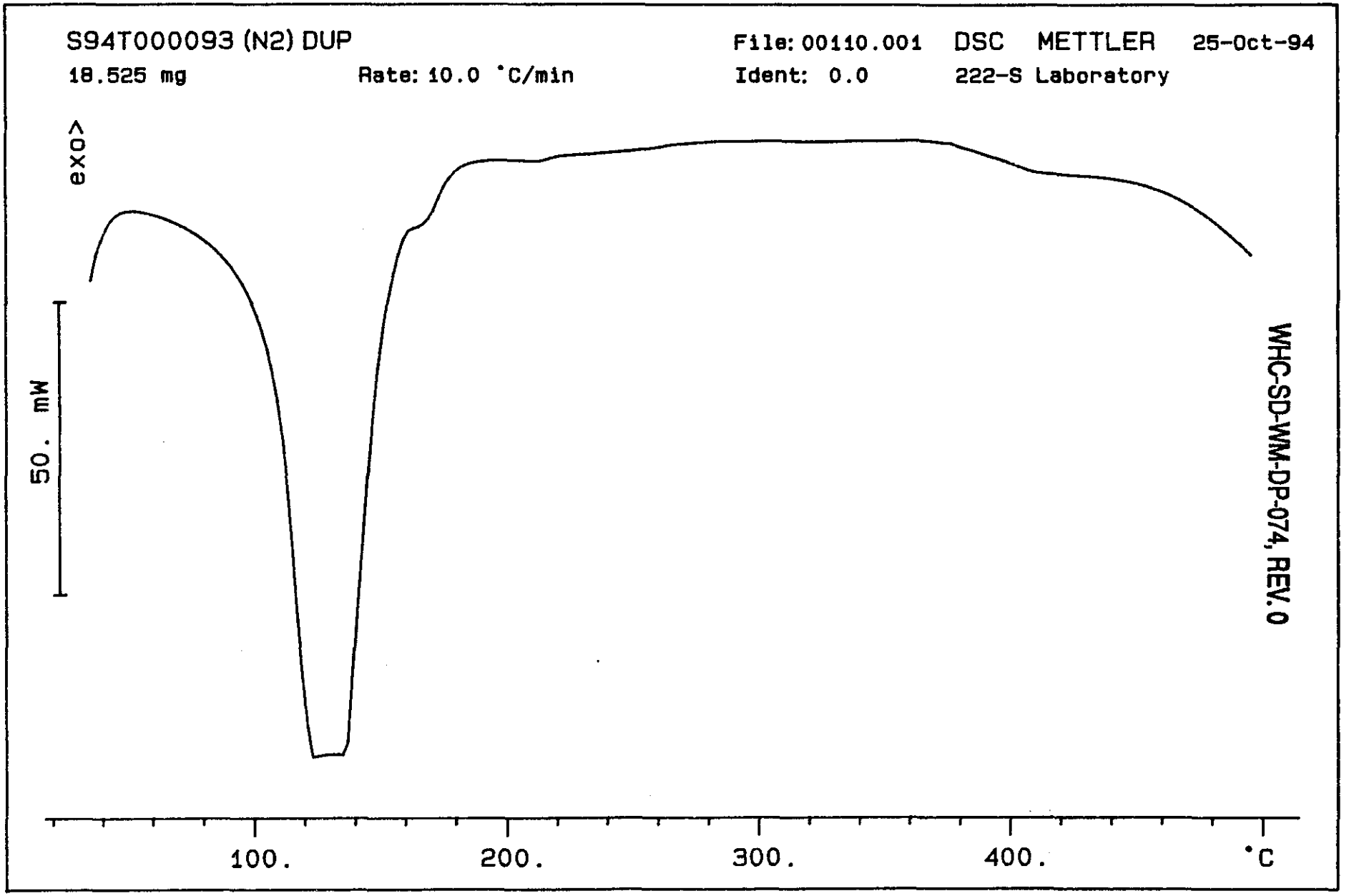


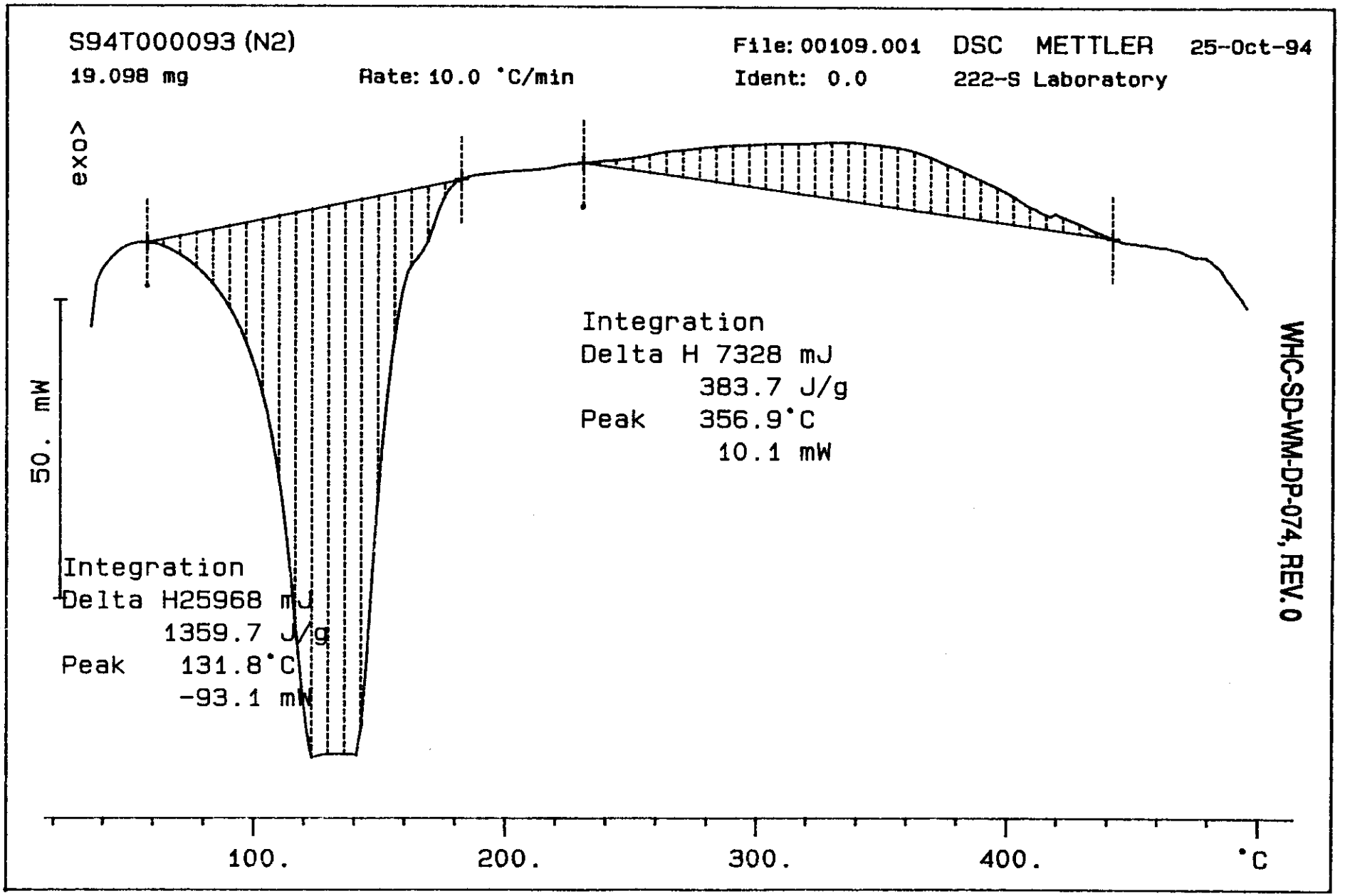
WHC-SD-WM-DP-074, REV. 0

James Lugo for DWSmith 10/31/94

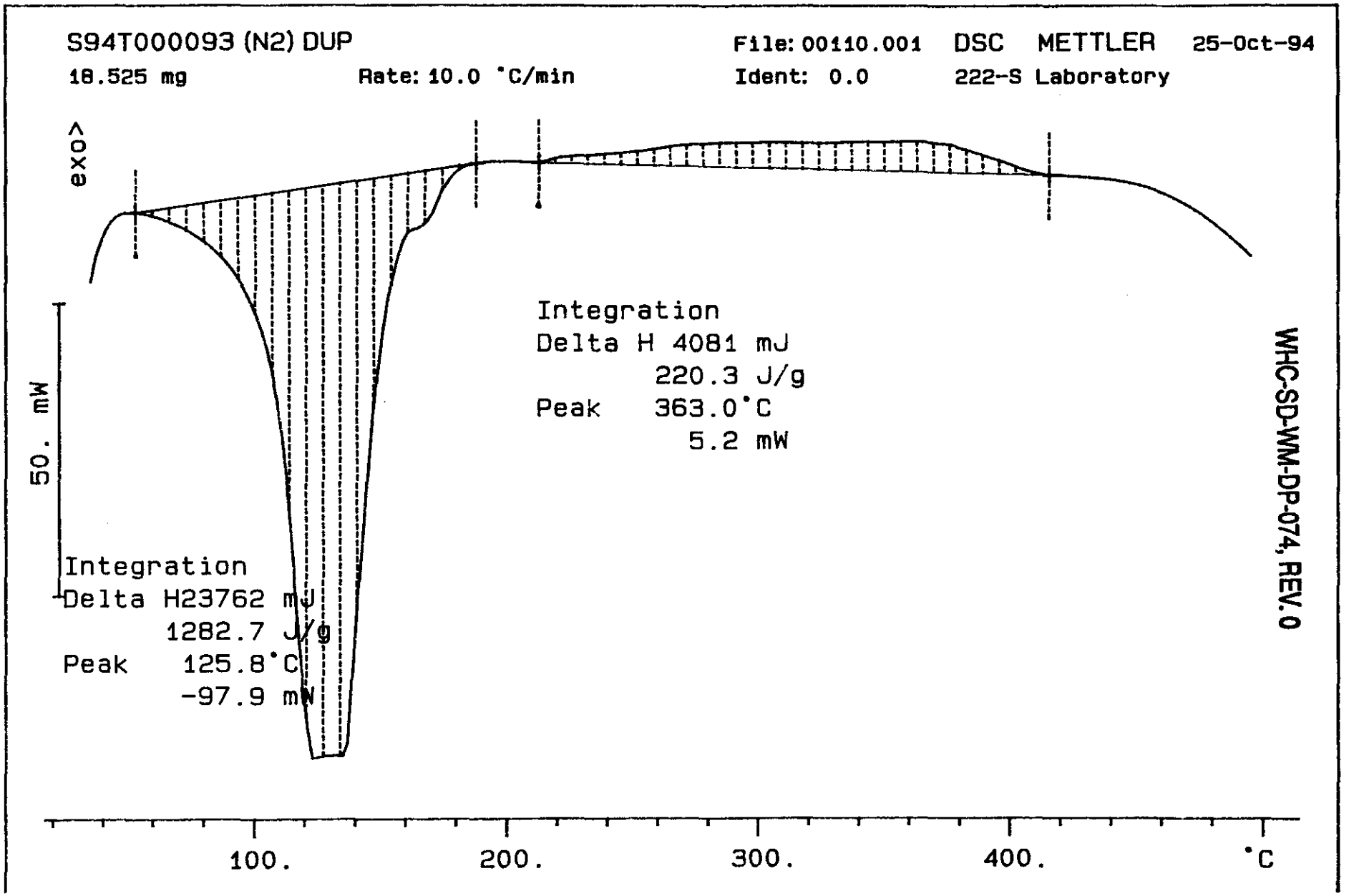


WHC-SD-WM-DP-074, REV. 0


S94T000093 (N2) DUP
18.525 mg
Rate: 10.0 °C/min
File: 00110.001
Ident: 0.0
DSC METTLER
222-S Laboratory
25-Oct-94
exo>
50. mW
100.
200.
300.
400.
°C



WHC-SD-WM-DP-074, REV. 0

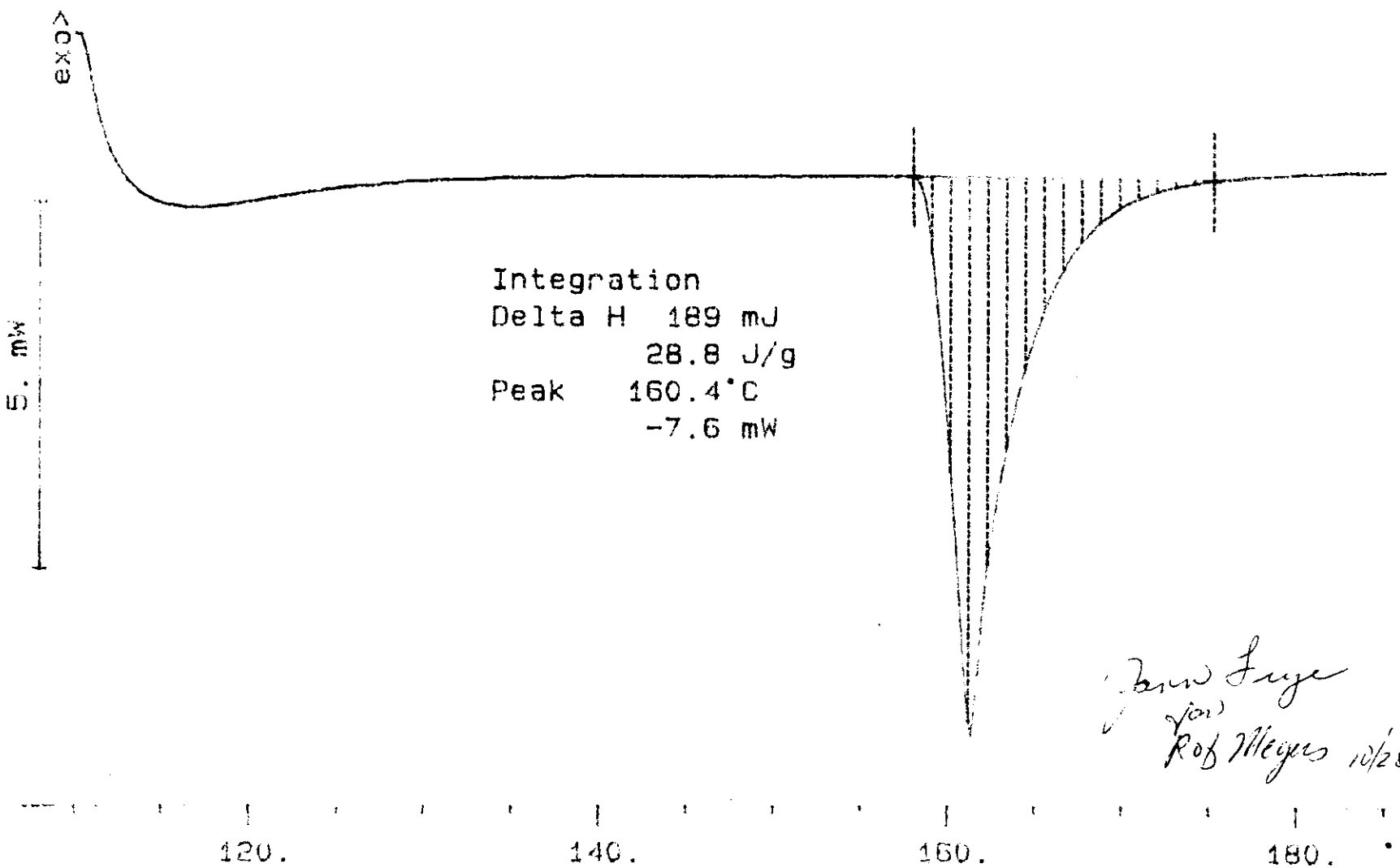


WHC-SD-WM-DP-074, REV.0

dsc std
6.565 mg

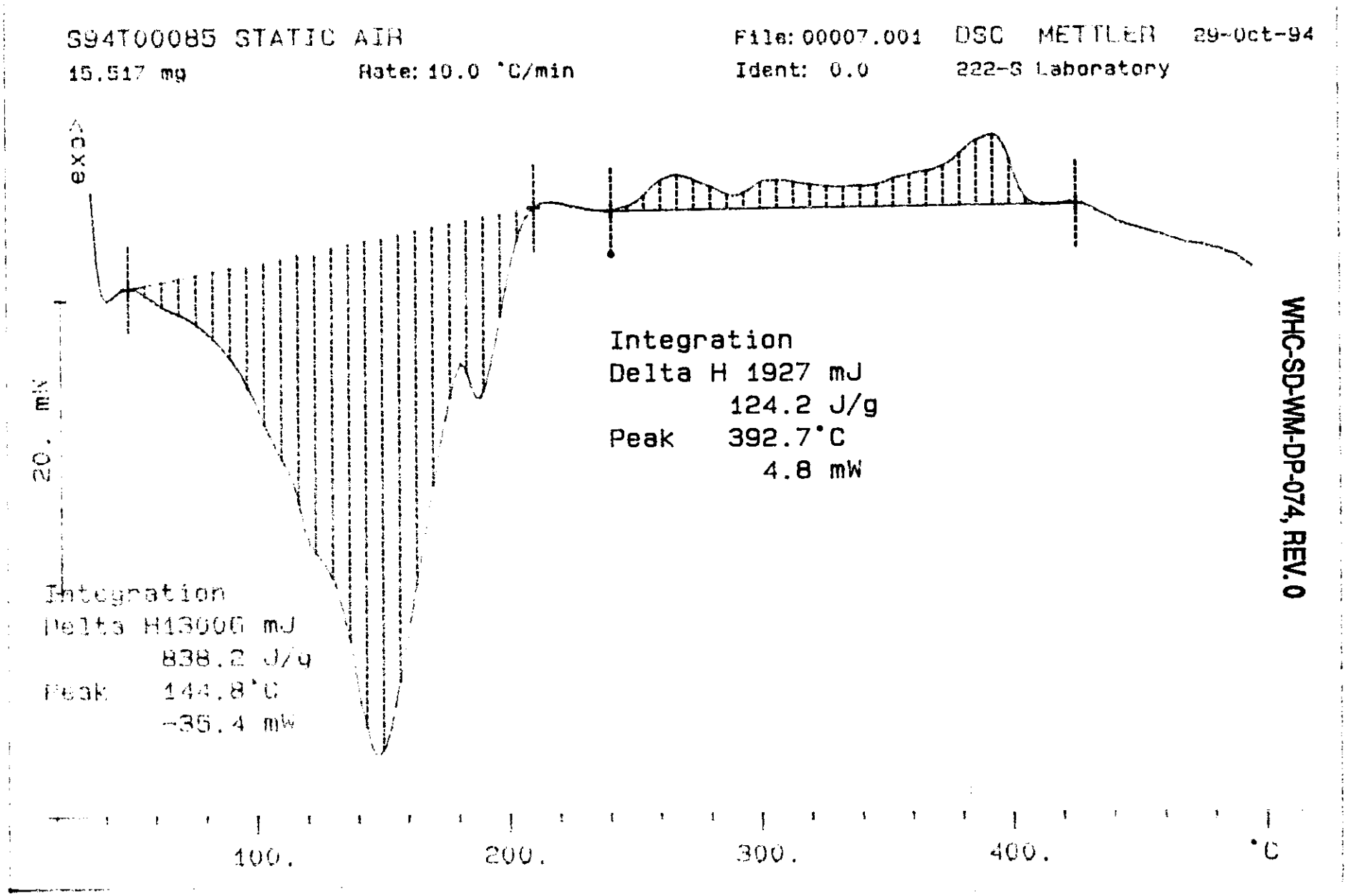
Rate: 10.0 °C/min

File: 00006.001 DSC METTLER 28-Oct-94
Ident: 0.0 222-S Laboratory



for Rob Meyers 10/28/94

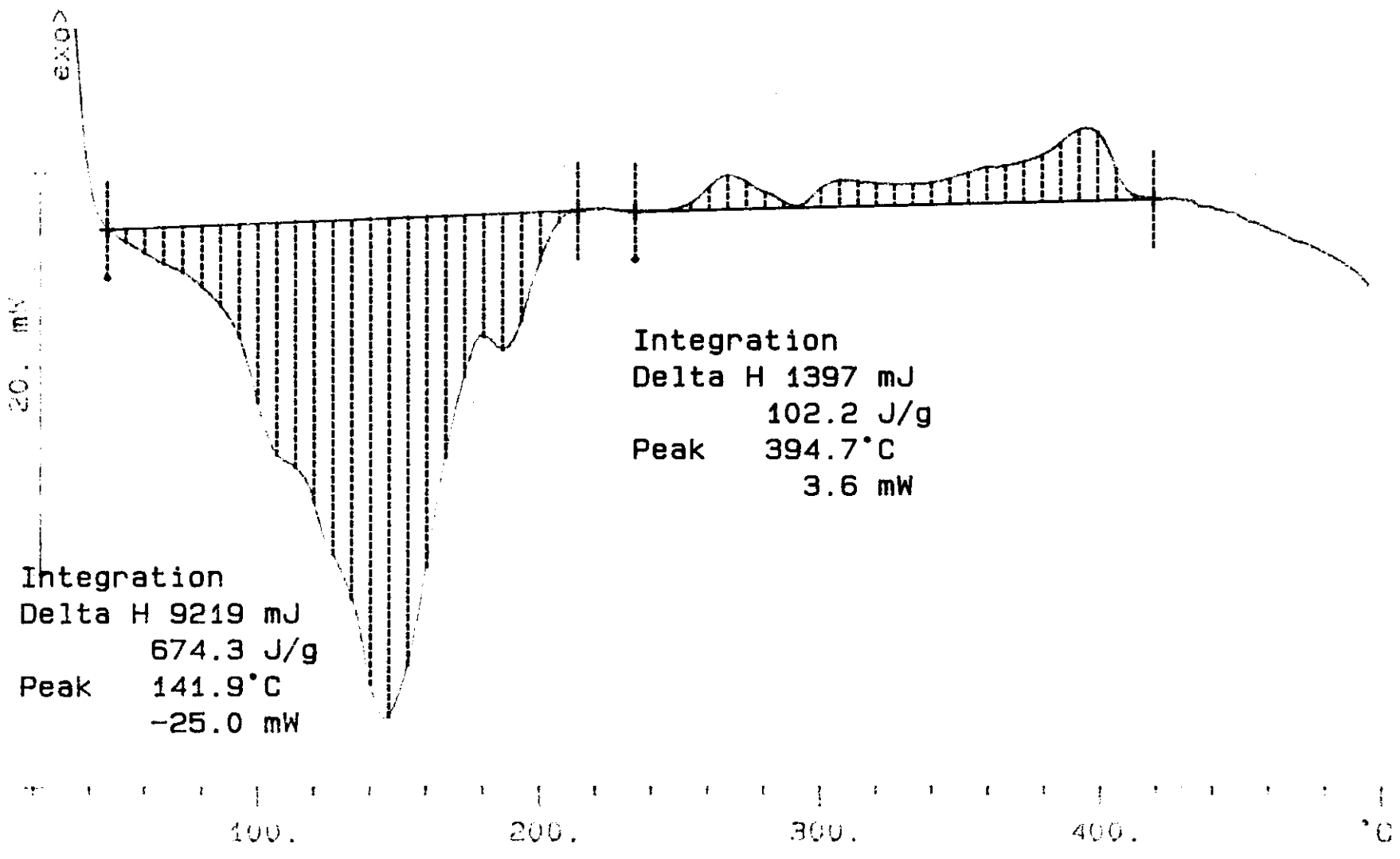
WHC-SD-WM-DP-074, REV. 0



WHC-SD-WM-DP-074, REV. 0

S94T00085 DUP N2 File: 00008.001 DSC METTLER 29-Oct-94

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



LABCORE Data Entry Template for Worklist# 49

Analyst: KLV **Instrument:** DSC01 **Method:** LA-514-113

Worklist Comment: PLease run under N2. JMF

WHC-SD-WM-DP-074, REV. 0

Seg	Type	Sample#	Rep	Al	Test	Matrix	Actual	Found	DL	Unit
1	STD				DSC-01	LIQUID	28.45	28.7	100.9% Rec N/A	Joule
2	SAMPLE	S94T000104	0		DSC-01	LIQUID	N/A	155.9		Joule
3	DUP	S94T000104	0		DSC-01	LIQUID	155.9	205.3	N/A	Joule
	STD				DSC-01		28.45	28.5	100.2% Rec	
4	SAMPLE	S94T000040	0		DSC-01	LIQUID	N/A	251.8		Joule
5	DUP	S94T000040	0		DSC-01	LIQUID	251.8	180.4	N/A	Joule

Final page for worklist # 49

Analyst Signature

10-22-94
Date

Data Entry Comments:
S94T000104, has endotherm of 1432.9 J/g at 116.0°C in sample + 1396.6 J/g at 117.8°C in dup. S94T000040 has 836.7 J/g endotherm at 134.5°C and 844.0 J/g at 134.4°C in duplicate. JMF 10/25/94

125

Units shown for QC (SPK) may not reflect the actual units.

Page: 1

Data entered & reviewed, but forgot to enter comments. Jenn Fry 10/25/94

LABCORE Data Entry Template for Worklist# 49

Analyst: _____ **Instrument:** DSC01 _____ **Method:** LA-514-113

Worklist Comment: PLease run under N2. JMF **WHC-SD-WM-DP-074, REV. 0**

Seg	Type	Sample#	Rep	Al	Test	Matrix	Actual	Found	DL	Unit
1	STD				DSC-01	LIQUID			N/A	Joule
2	SAMPLE	S94T000104	0		DSC-01	LIQUID	N/A			Joule
3	DUP	S94T000104	0		DSC-01	LIQUID			N/A	Joule
4	STD				DSC-01	LIQUID			N/A	Joule
5	SAMPLE	S94T000040	0		DSC-01	LIQUID	N/A			Joule
6	DUP	S94T000040	0		DSC-01	LIQUID			N/A	Joule

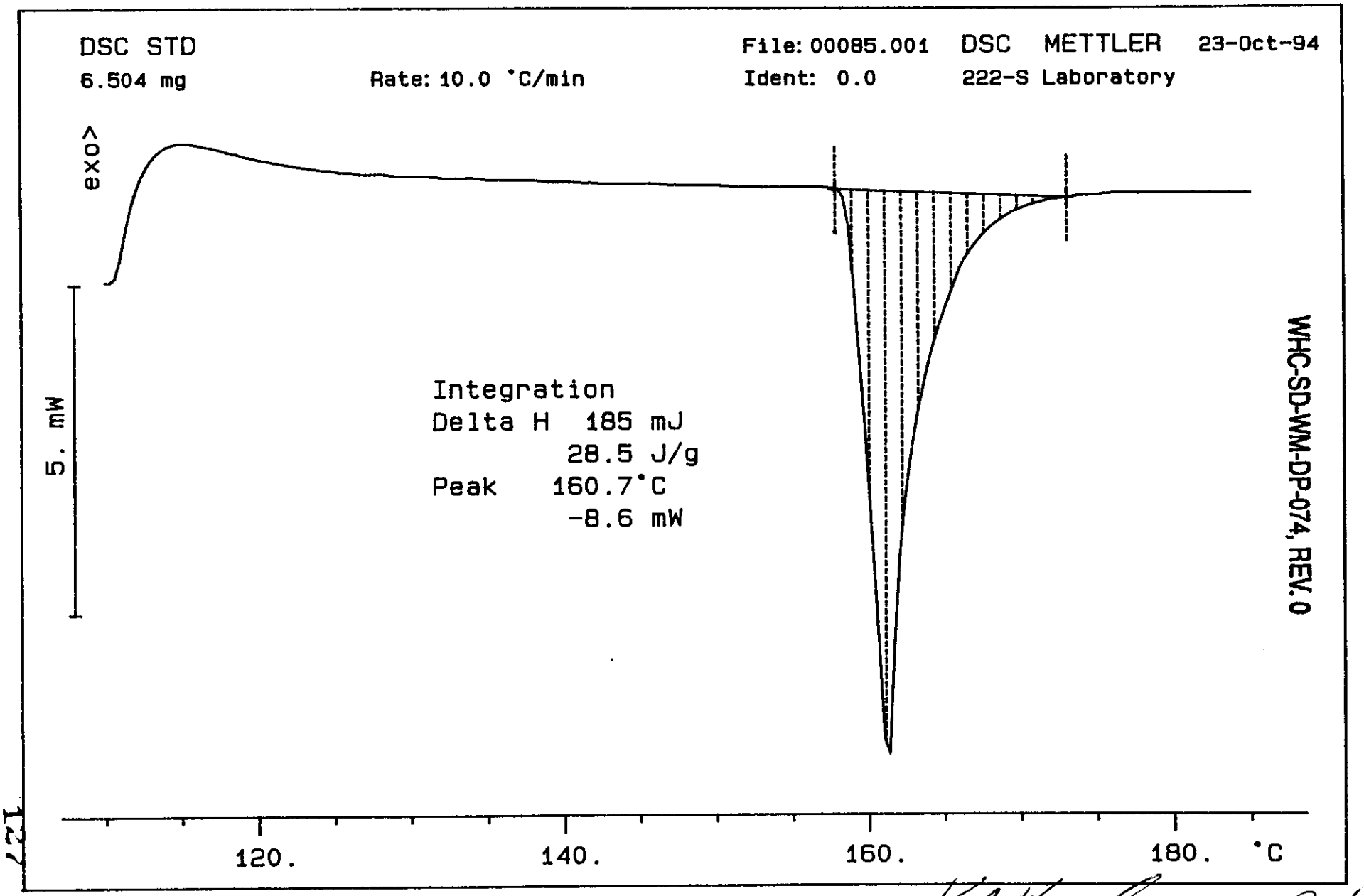
Final page for worklist # 49

Analyst Signature _____ **Date** _____

Data Entry Comments: See attached sheet. J.M.F 10/28/94

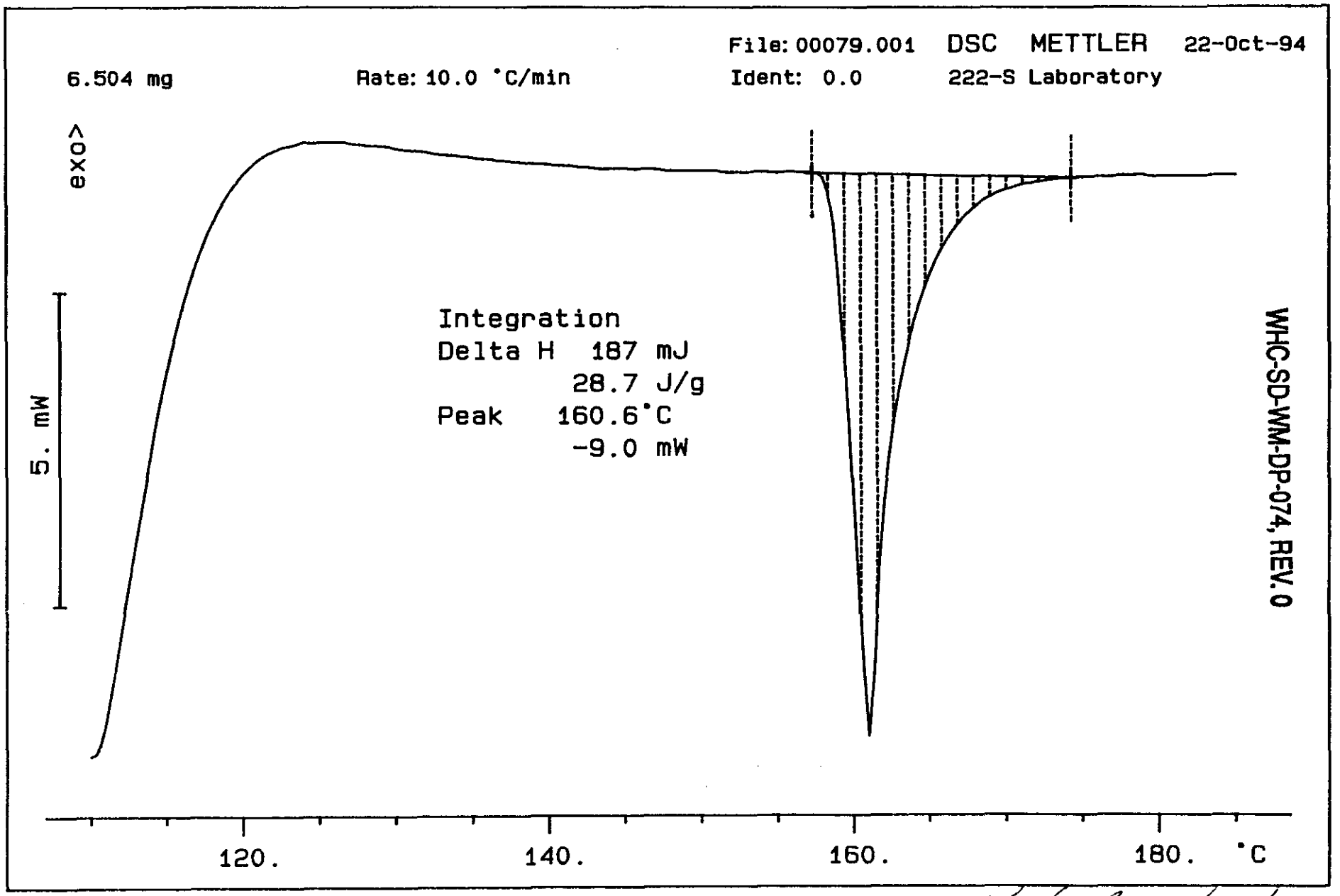
Units shown for QC (SPK) may not reflect the actual units.

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 127 TO 132.



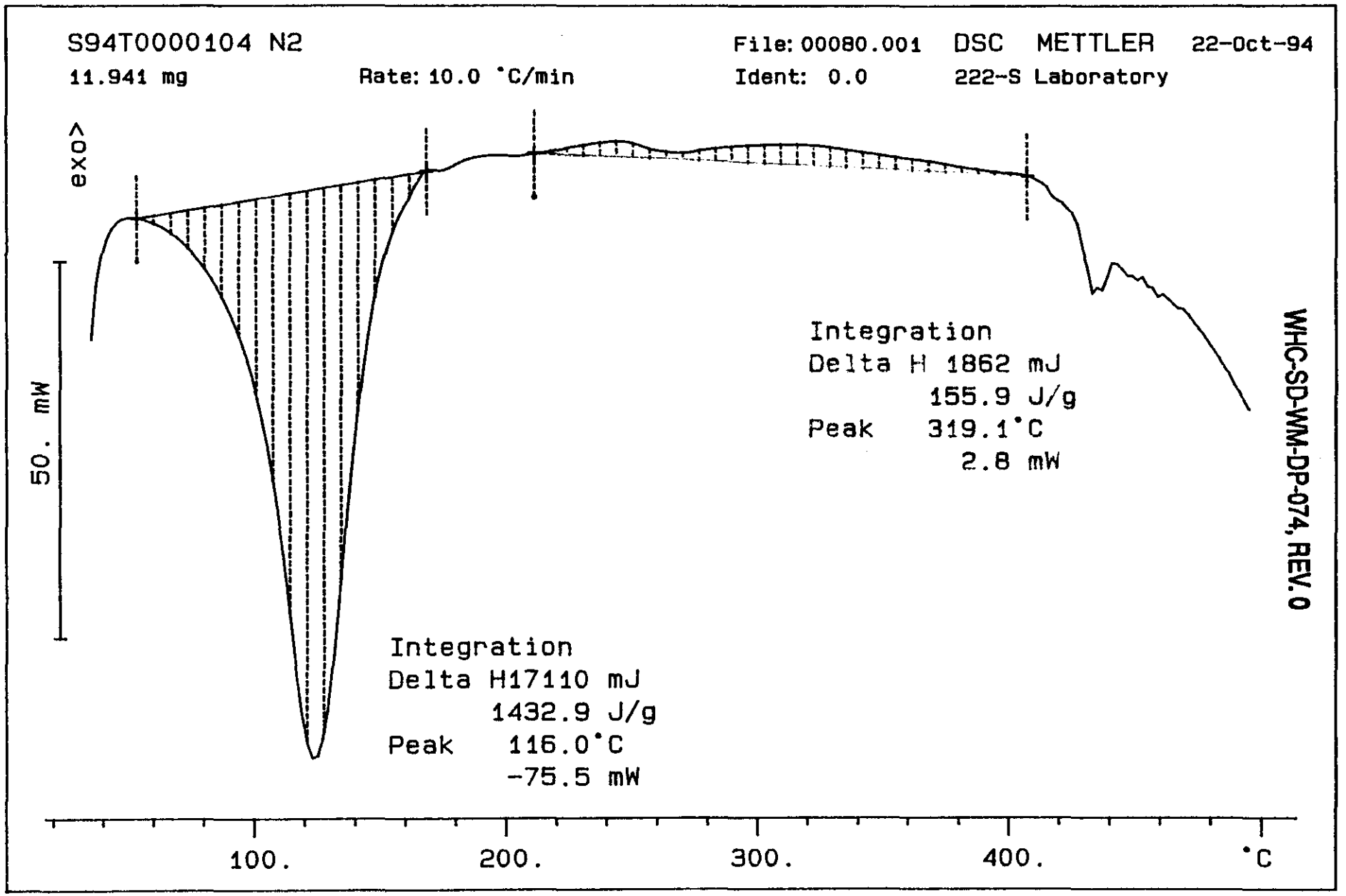
WHC-SD-WM-DP-074, REV. 0

K. Vogel 10-22-94

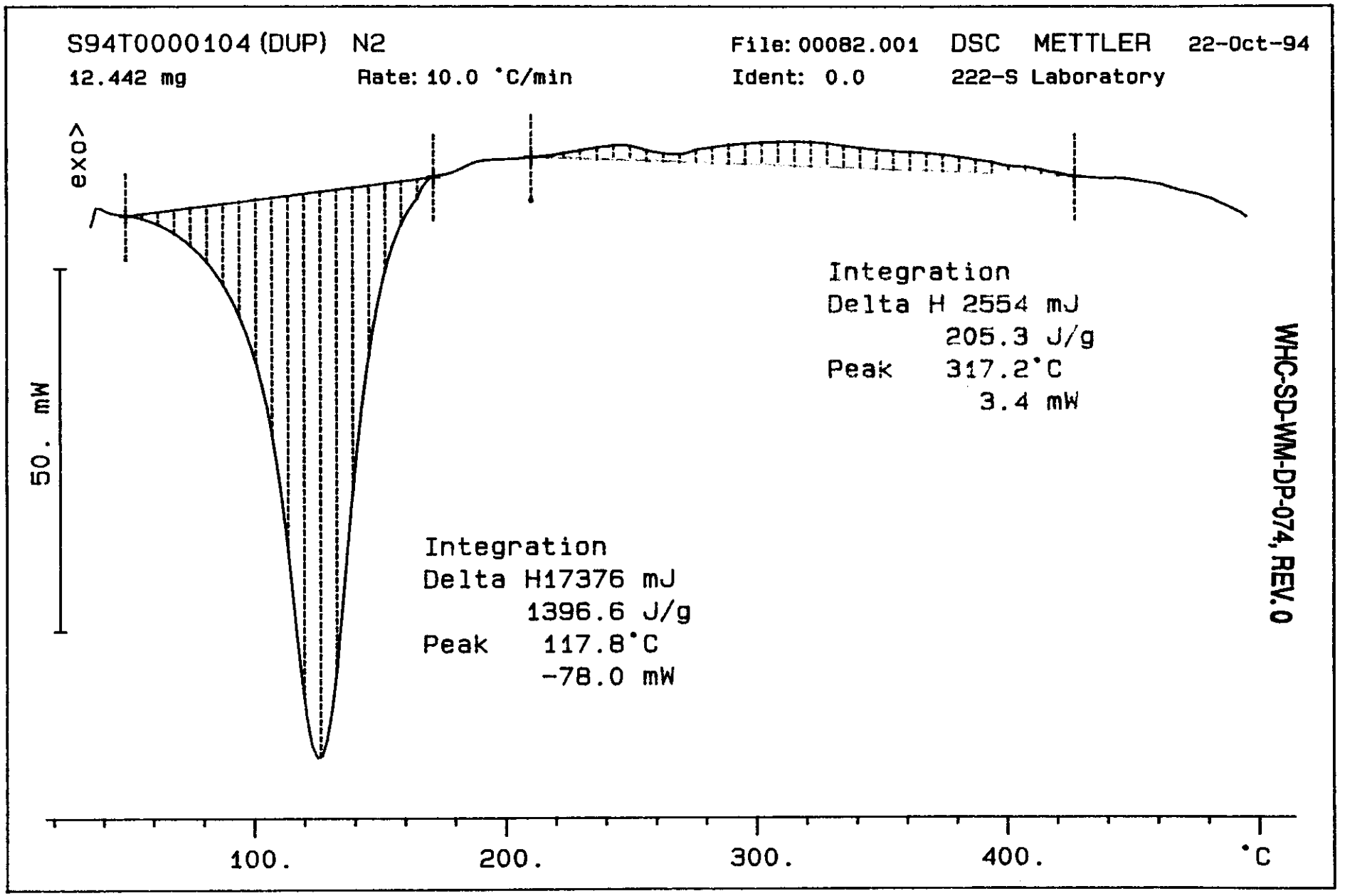


WHC-SD-WM-DP-074, REV. 0

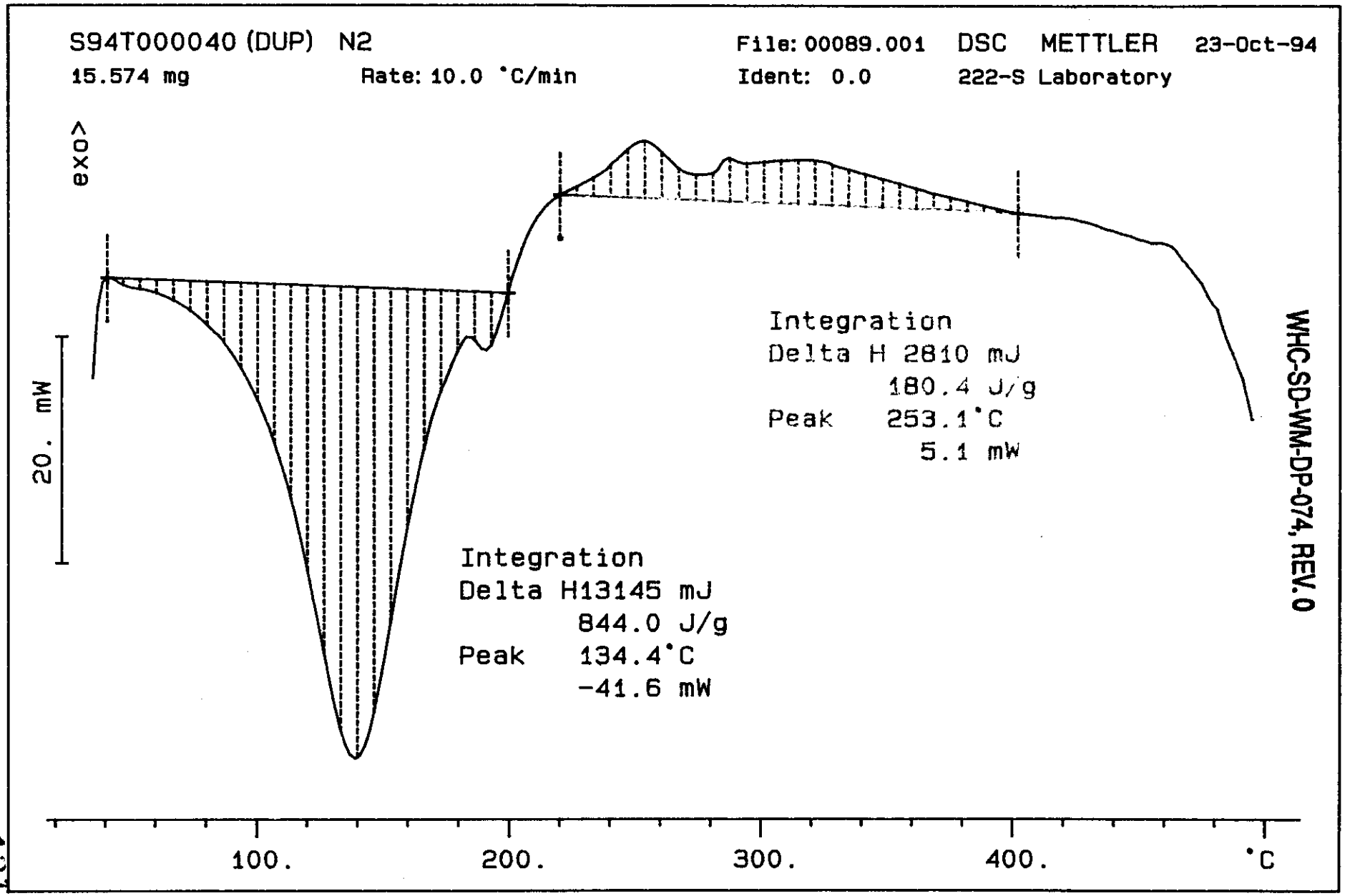
K. Vogel 10/21/94



WHC-SD-WM-DP-074, REV.0



WHC-SD-WM-DP-074, REV. 0



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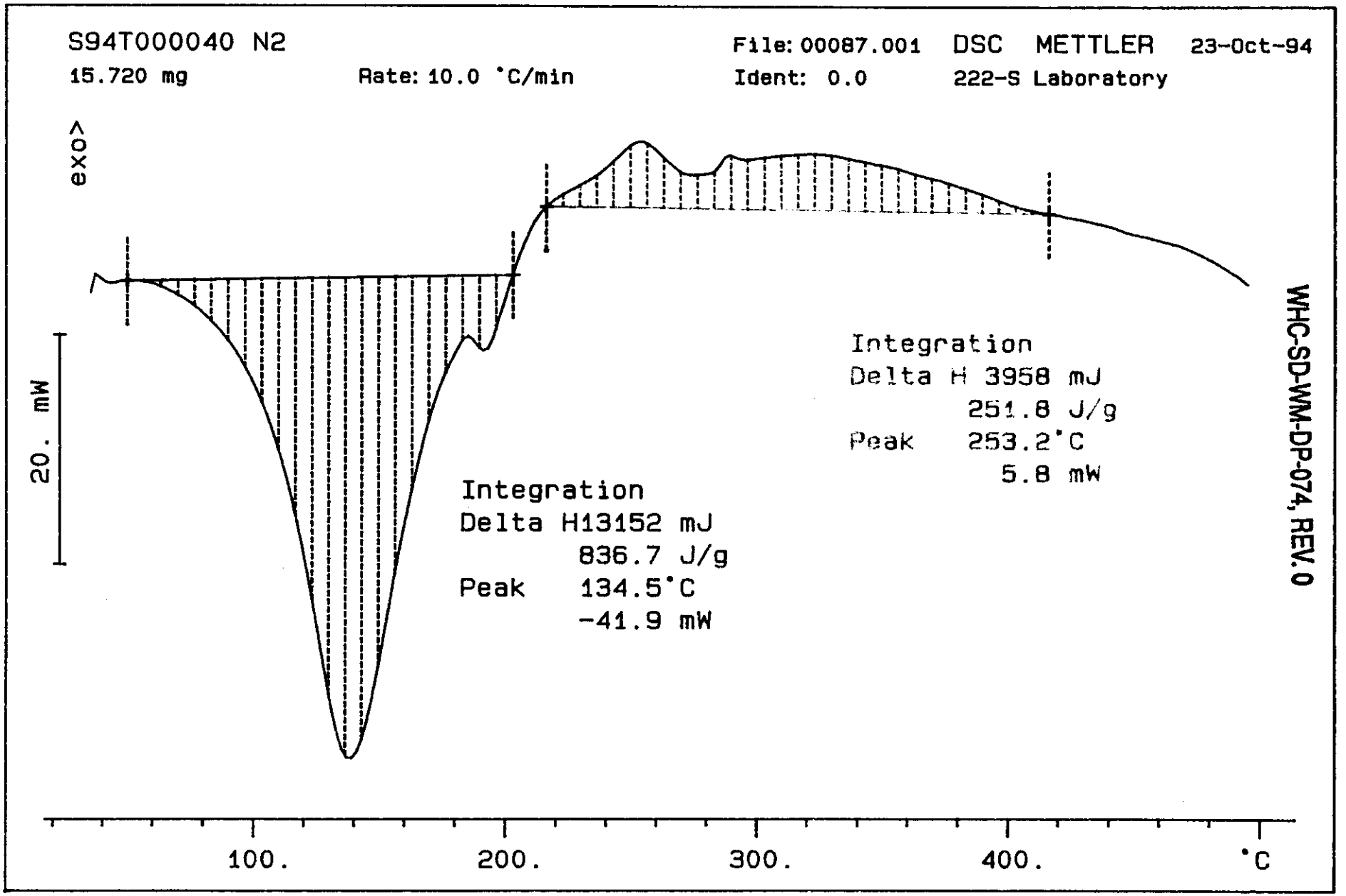


WHC-SD-WM-DP-074, REV. 0

LABCORE Data Entry Template for Worklist# 63

QA 7

Analyst: JLS **Instrument:** DSC01 **Method:** LA-514-113

Worklist Comment: Please run DSC for 105 and 106 under N2 to 450C, JMF.

Seg	Type	Sample#	Rep	Al	Test	Matrix	Actual	Found	DL	Unit
1	STD				DSC-01	LIQUID	28.45	28.3	100.5% N/A	Joule
2	SAMPLE	S94T000105	0		DSC-01	LIQUID	N/A	170.0 J/g		Joule
3	DUP	S94T000105	0		DSC-01	LIQUID	170.0 J/g	~~153.9 J/g~~ 145.5 JMF 10/19/94	N/A	Joule
4	SAMPLE	S94T000106	0		DSC-01	LIQUID	N/A	153.9 J/g		Joule
5	DUP	S94T000106	0		DSC-01	LIQUID	153.9	133.2	N/A	Joule

Final page for worklist # 63

Analyst Signature **Date**

WHC-SD-WM-DP-074, REV. 0

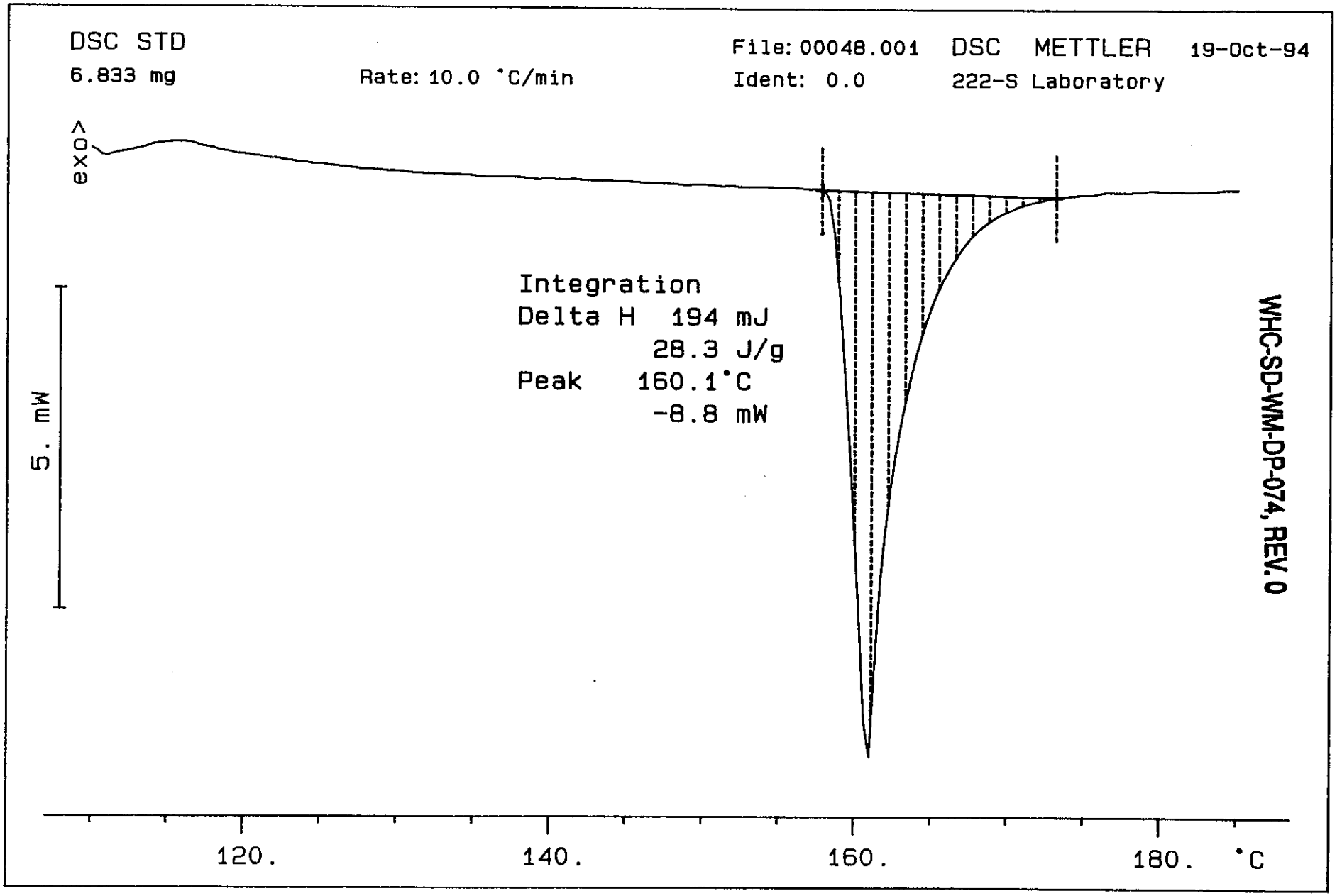
Data Entry Comments: Baseline subtracted scans were used. All samples had water endotherms; S94T000105 has an endotherm of 1396.4 J/g and ~~740.3 J/g~~ 900.7 J/g JMF 10/19/94; S94T000106 has 740.3 J/g and 97.1 J/g in sample and duplicate. The first run of S94T000105 was done under static air.

Units shown for QC (SPK) may not reflect the actual units. *Page:*

Entered + approved 10/19/94 J.M.F

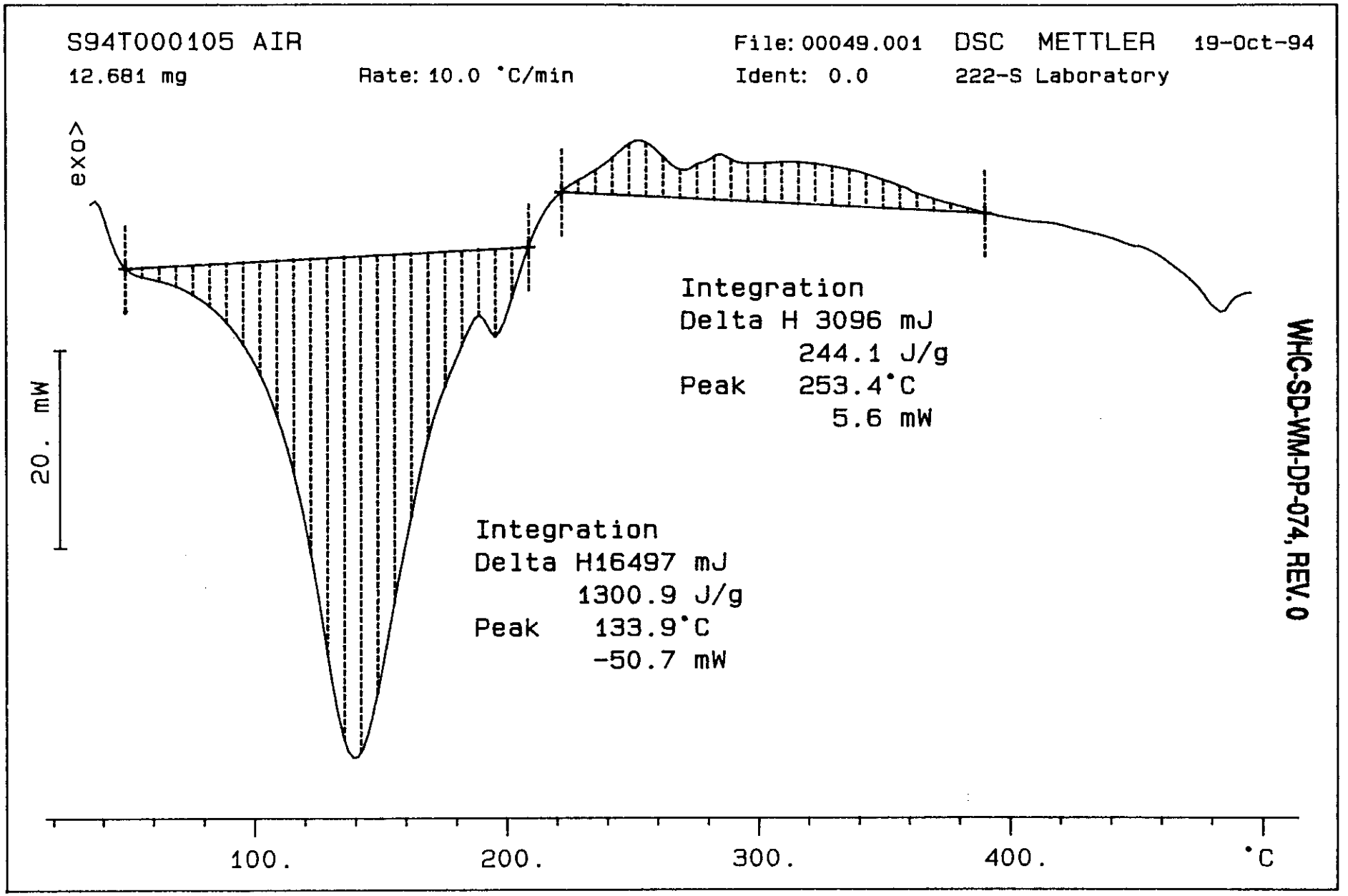
Jan Fuge 10/19/94

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 134 TO 142.



WHC-SD-WM-DP-074, REV. 0

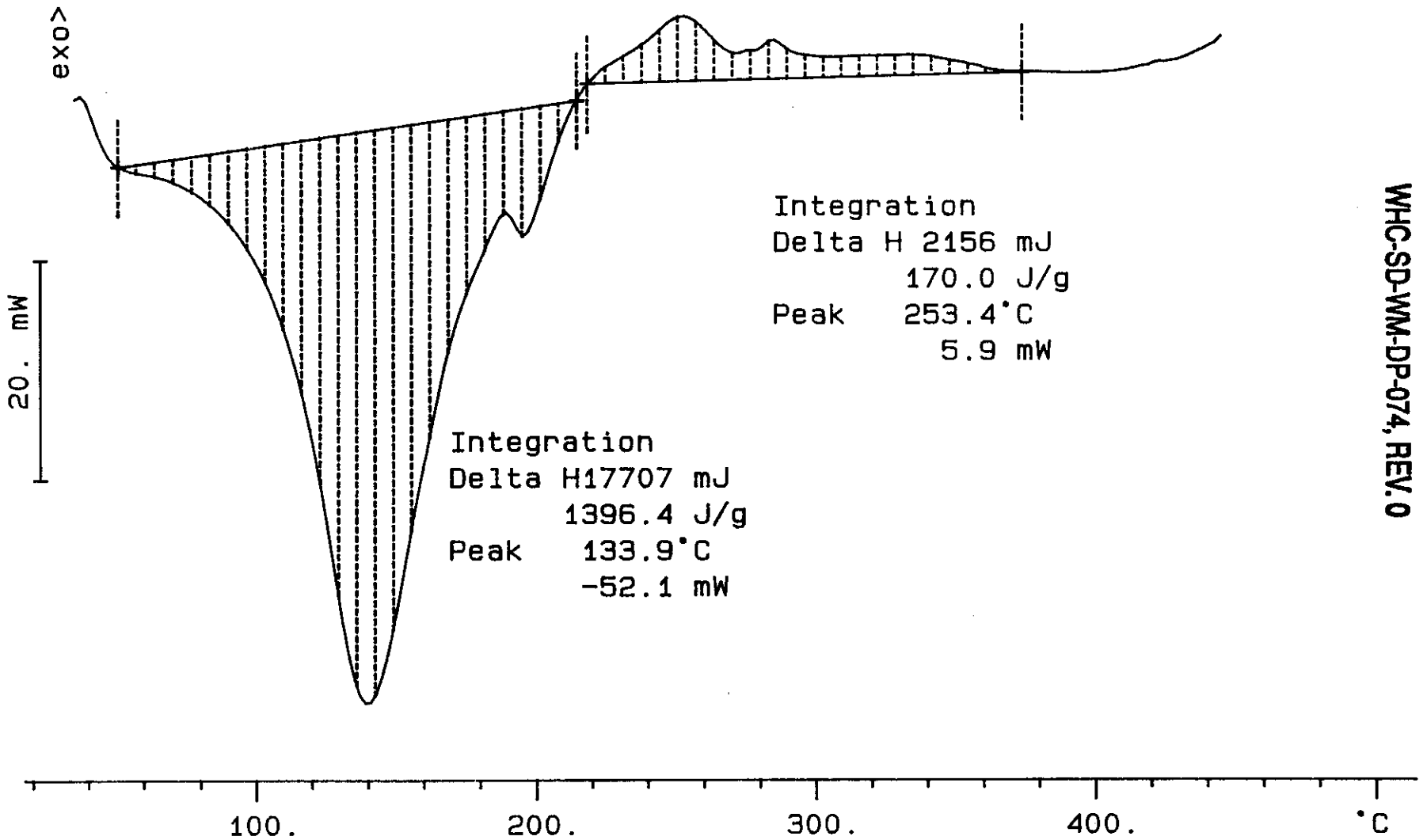
Brian Wels
11-4-94



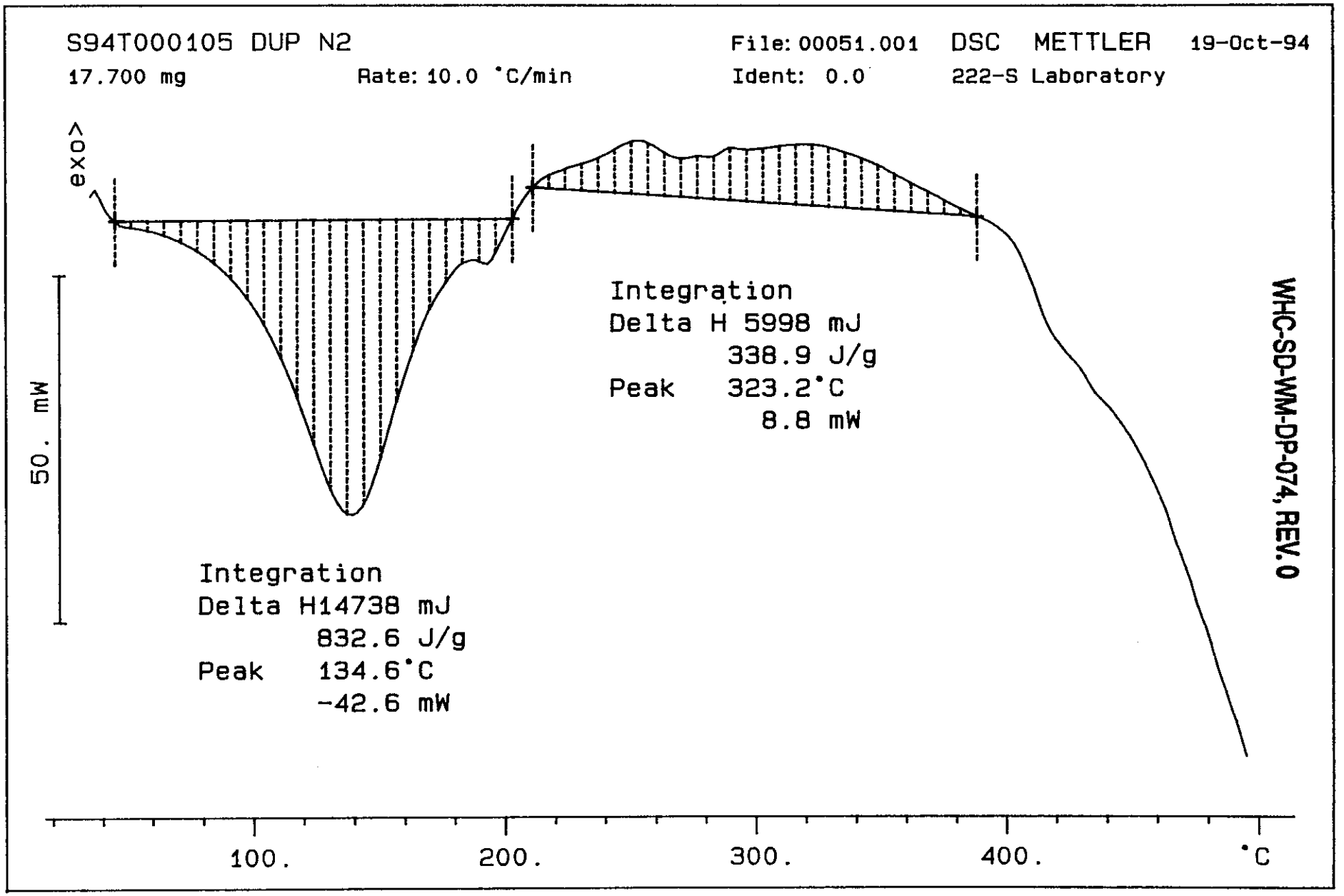
WHC-SD-WM-DP-074, REV. 0

S94T000105 AIR Baseline Subtracted BW 11-4-94 File: 00049.001 DSC METTLER 19-Oct-94

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



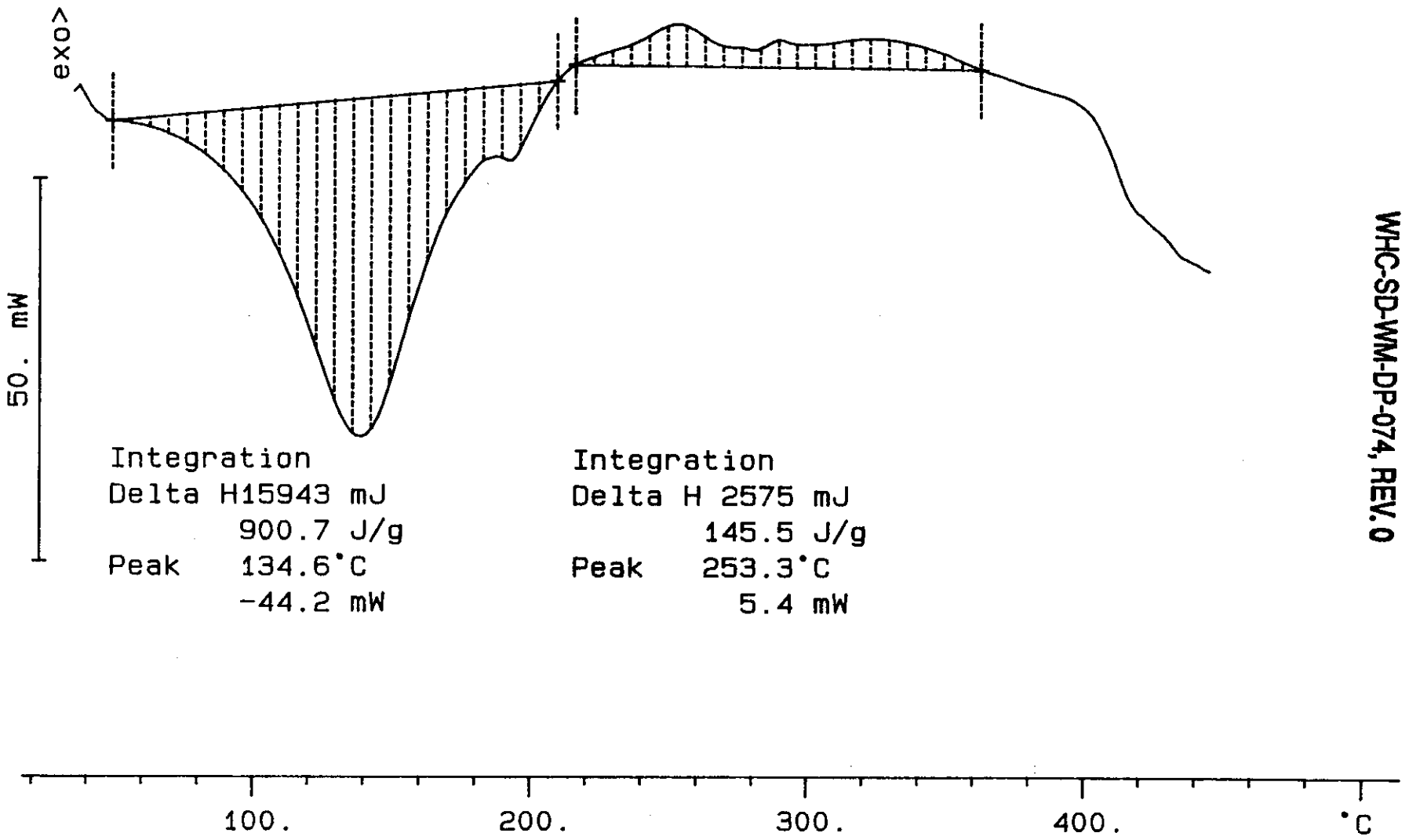
WHC-SD-WM-DP-074, REV.0



WHC-SD-WM-DP-074, REV.0

S94T000105 DUP N2 Baseline Subtracted BW 11-4-94 File: 00051.001 DSC METTLER 19-Oct-94

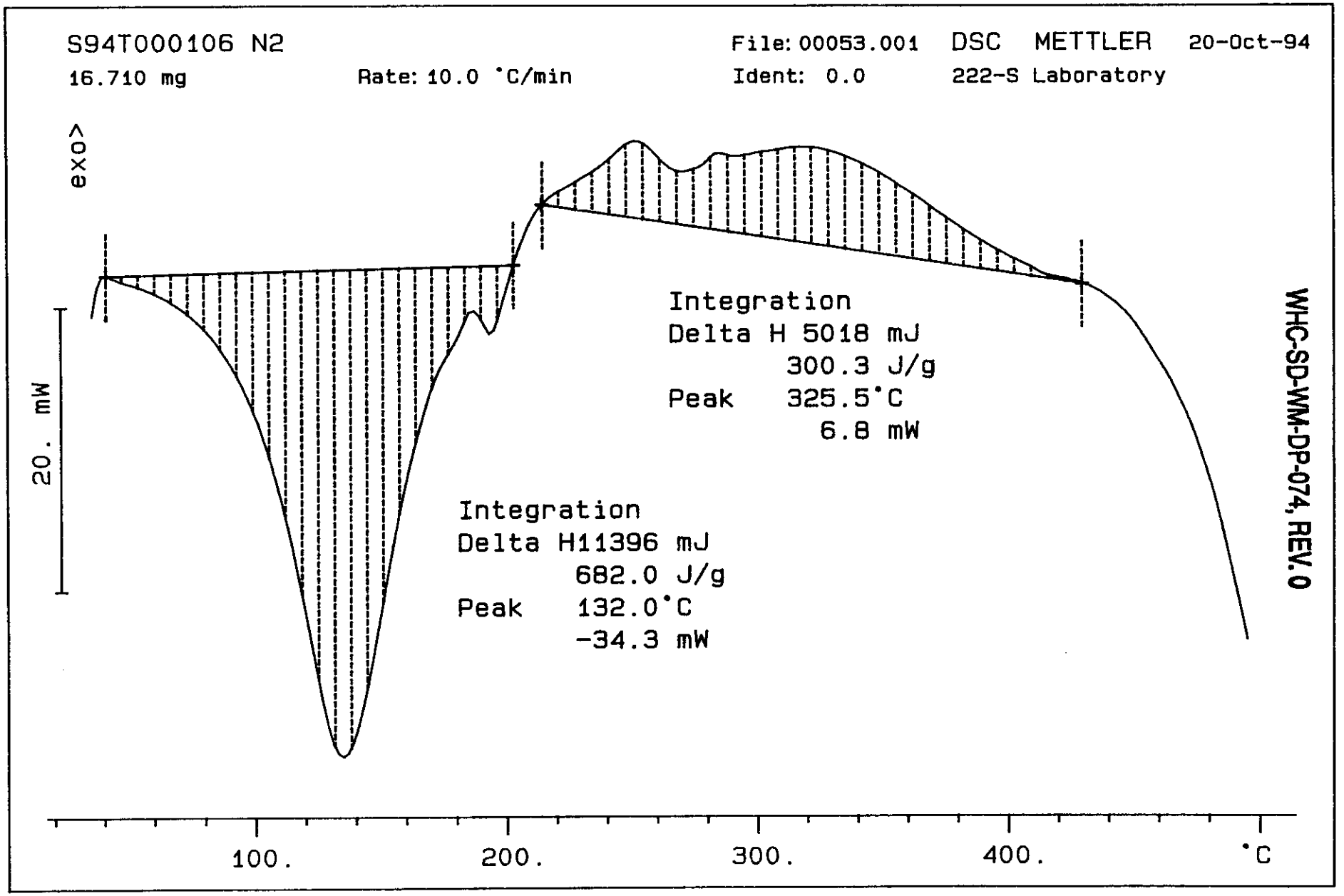
17.700 mg Rate: 10.0 °C/min Ident: 0.0 222-S Laboratory



Integration
Delta H15943 mJ
900.7 J/g
Peak 134.6°C
-44.2 mW

Integration
Delta H 2575 mJ
145.5 J/g
Peak 253.3°C
5.4 mW

WHC-SD-WM-DP-074, REV. 0



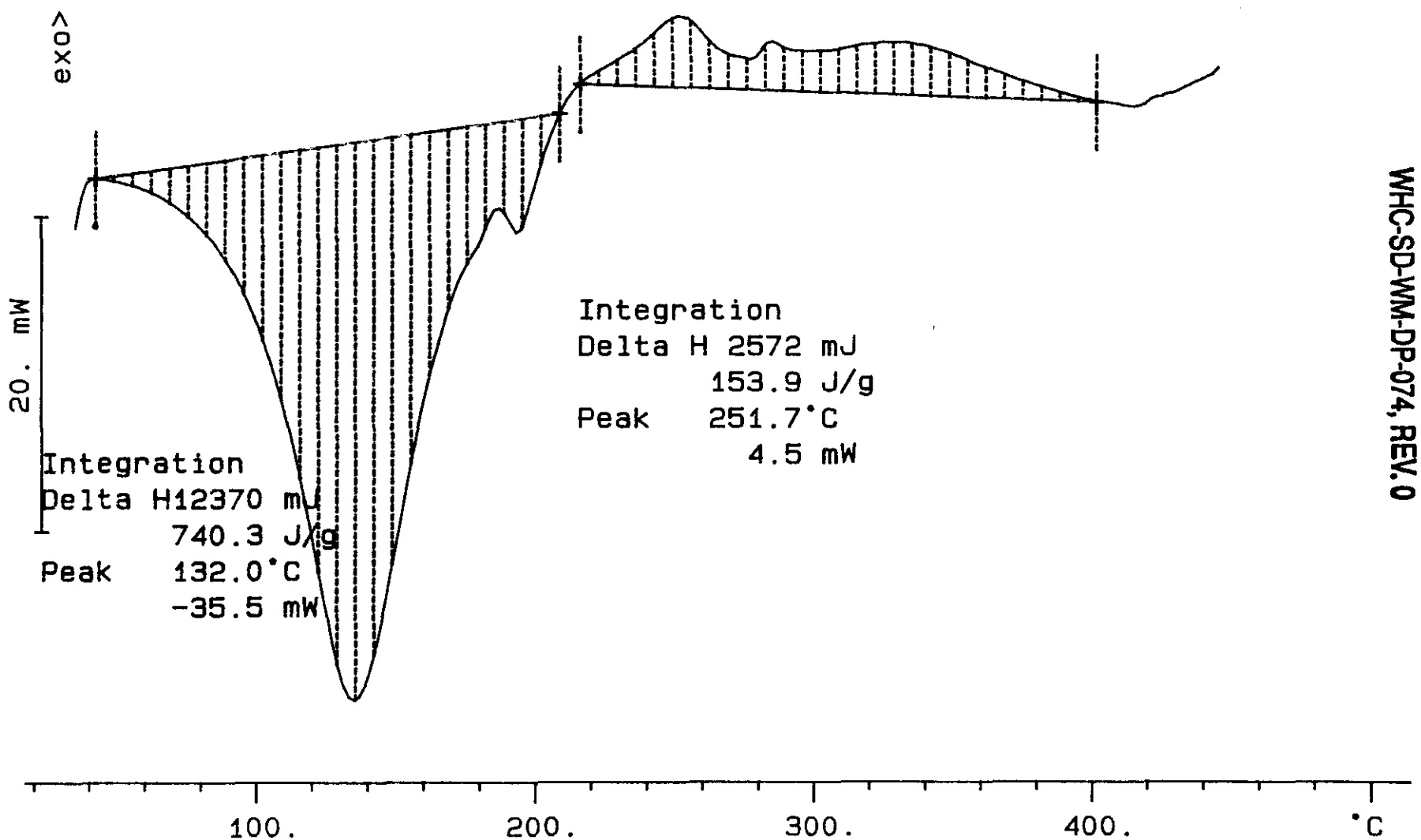
WHC-SD-WM-DP-074, REV.0

S94T000106 N2 Baseline Subtracted

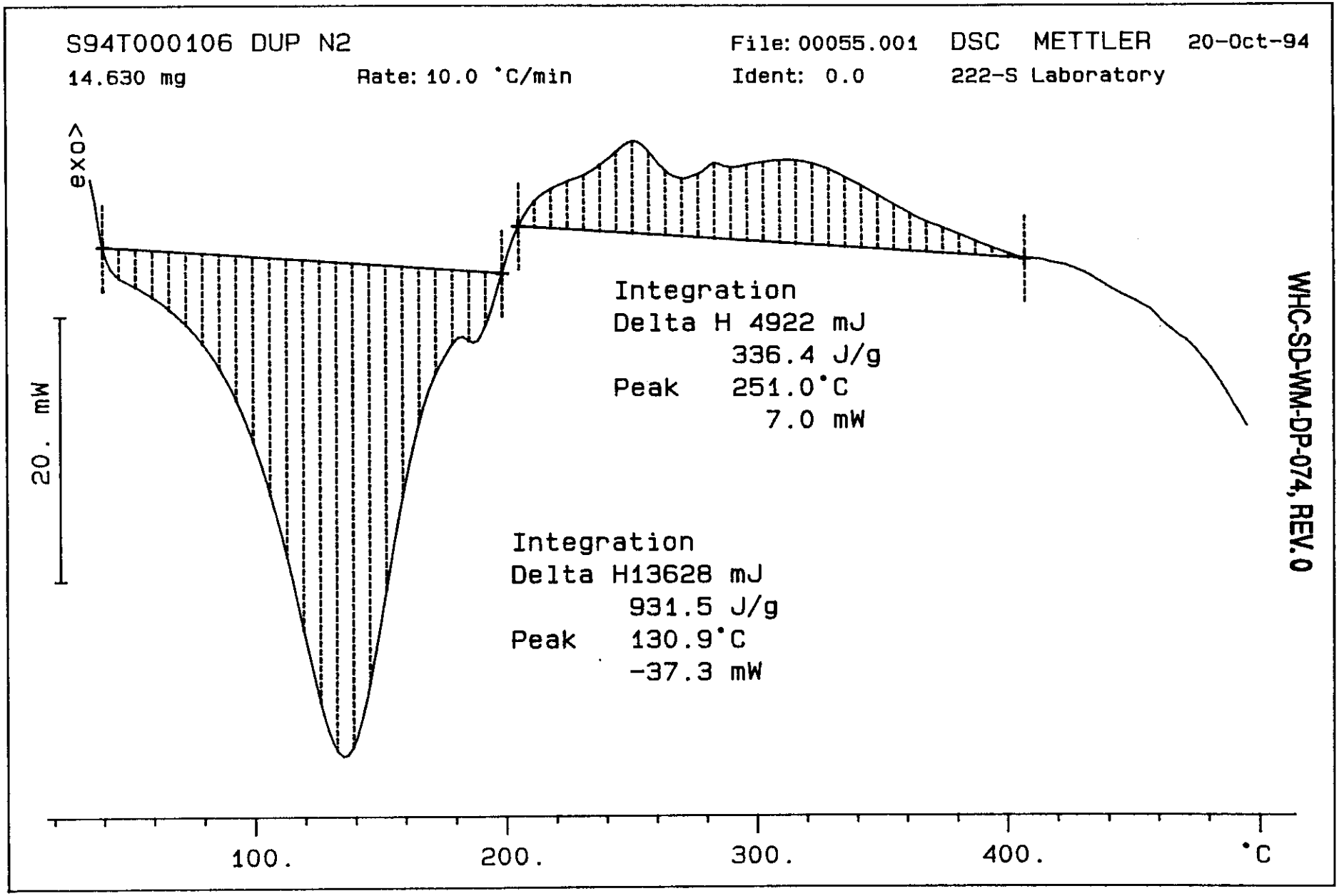
16.710 mg Rate: 10.0 °C/min BW 11-4-94

File: 00053.001 DSC METTLER 20-Oct-94

Ident: 0.0 222-S Laboratory



WHC-SD-WM-DP-074, REV. 0



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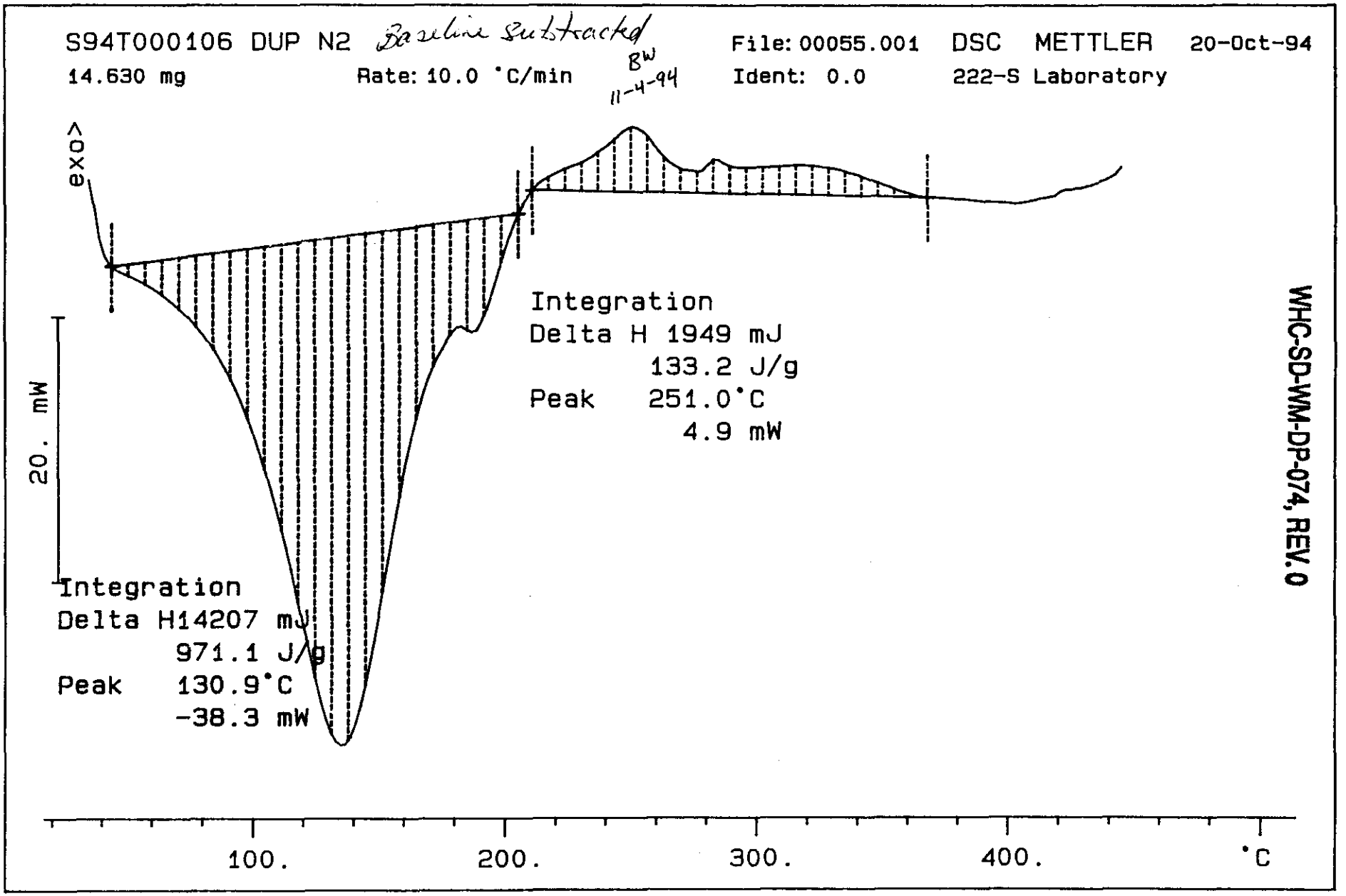


WHC-SD-WM-DP-074, REV. 0

LABCORE Data Entry Template for Worklist# 64

Analyst: KLV **Instrument:** DSC01 **Method:** LA-514-113

Worklist Comment: Please run DSC for 107 and 108 under N2 to 450C, JMF.

Seg	Type	Sample#	Rep	Al	Test	Matrix	Actual	Found	DL	Unit
1	STD				DSC-01	LIQUID	28.45	28.5	100.2% Rec N/A	Joule
2	SAMPLE	S94T000107	0		DSC-01	LIQUID	N/A	214.2		Joule
	STD				DSC-01		28.45	29.8	104.7% Rec	
3	DUP	S94T000107	0		DSC-01	LIQUID	214.2	239.2	N/A	Joule
4	SAMPLE	S94T000108	0		DSC-01	LIQUID	N/A	287.6		Joule
5	DUP	S94T000108	0		DSC-01	LIQUID	287.6	285.1	N/A	Joule

Final page for worklist # 64

Analyst Signature

10-23-94
Date

WHC-SD-WM-DP-074, REV. 0

Data Entry Comments:
S94T000107 Endotherms: Sample 761.4 J/g at 133.7°C, Dup 803.0 J/g at 134.2°C
S94T000108 Endotherms: Sample 788.7 J/g at 130.7°C, Dup 766.9 J/g at 132.1°C
Forgot to add comments, data entered + approved 10/25/94. JMF

Units shown for QC (SPK) may not reflect the actual units.

LABCORE Data Entry Template for Worklist# 64

Analyst: _____ **Instrument:** DSC01 _____ **Method:** LA-514-113

Worklist Comment: Please run DSC for 107 and 108 under N2 to 450C, JMF.

Seg	Type	Sample#	Rep	Al	Test	Matrix	Actual	Found	DL	Unit
1	STD				DSC-01	LIQUID			N/A	Joule
2	SAMPLE	S94T000107	0		DSC-01	LIQUID	N/A			Joule
3	STD				DSC-01	LIQUID			N/A	Joule
4	DUP	S94T000107	0		DSC-01	LIQUID			N/A	Joule
5	SAMPLE	S94T000108	0		DSC-01	LIQUID	N/A			Joule
6	DUP	S94T000108	0		DSC-01	LIQUID			N/A	Joule

Final page for worklist # 64

_____ _____

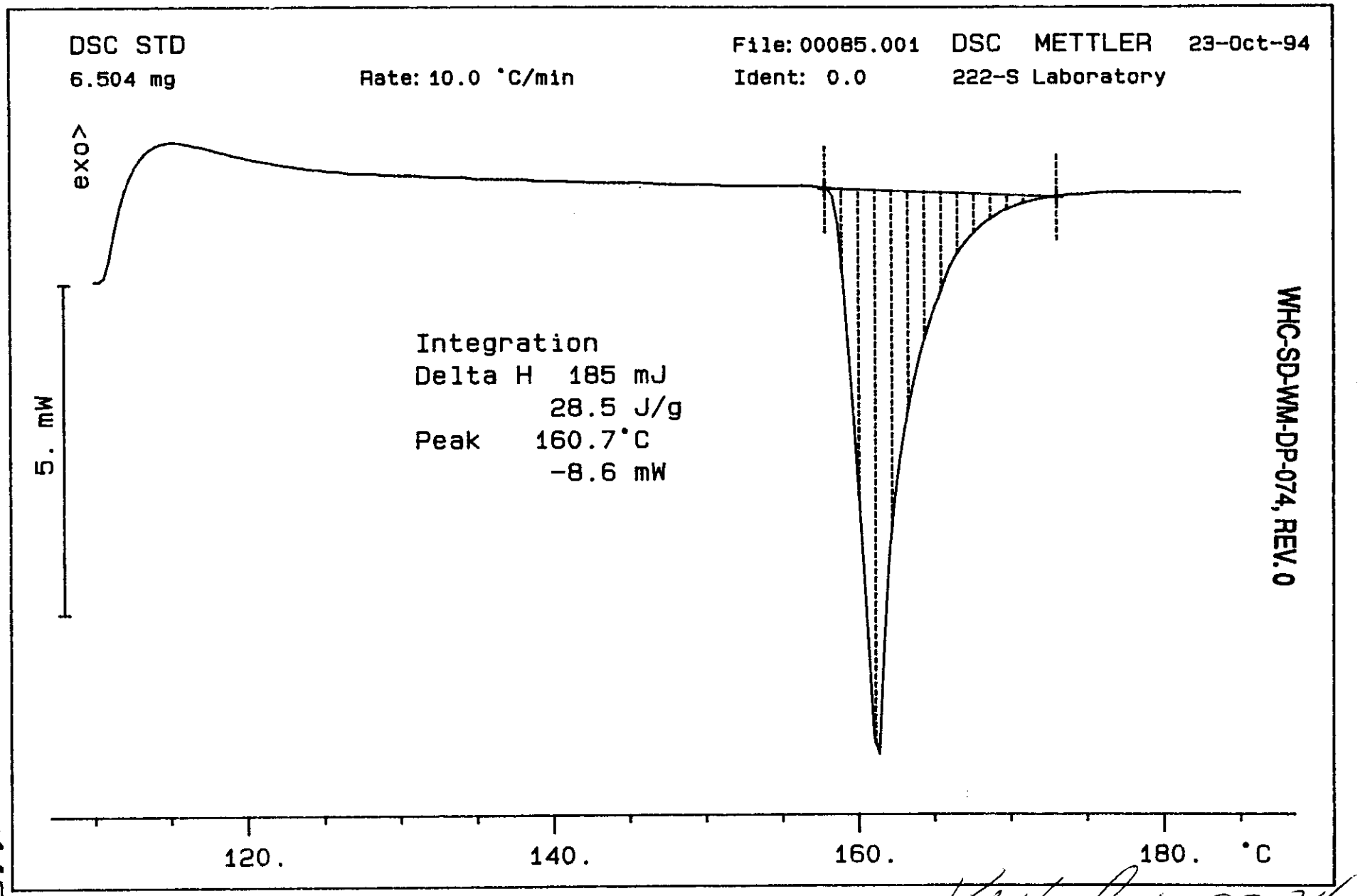
Analyst Signature **Date**

WHC-SD-WM-DP-074, REV. 0

Data Entry Comments: See attached sheet. J M. Faye 10/25/94

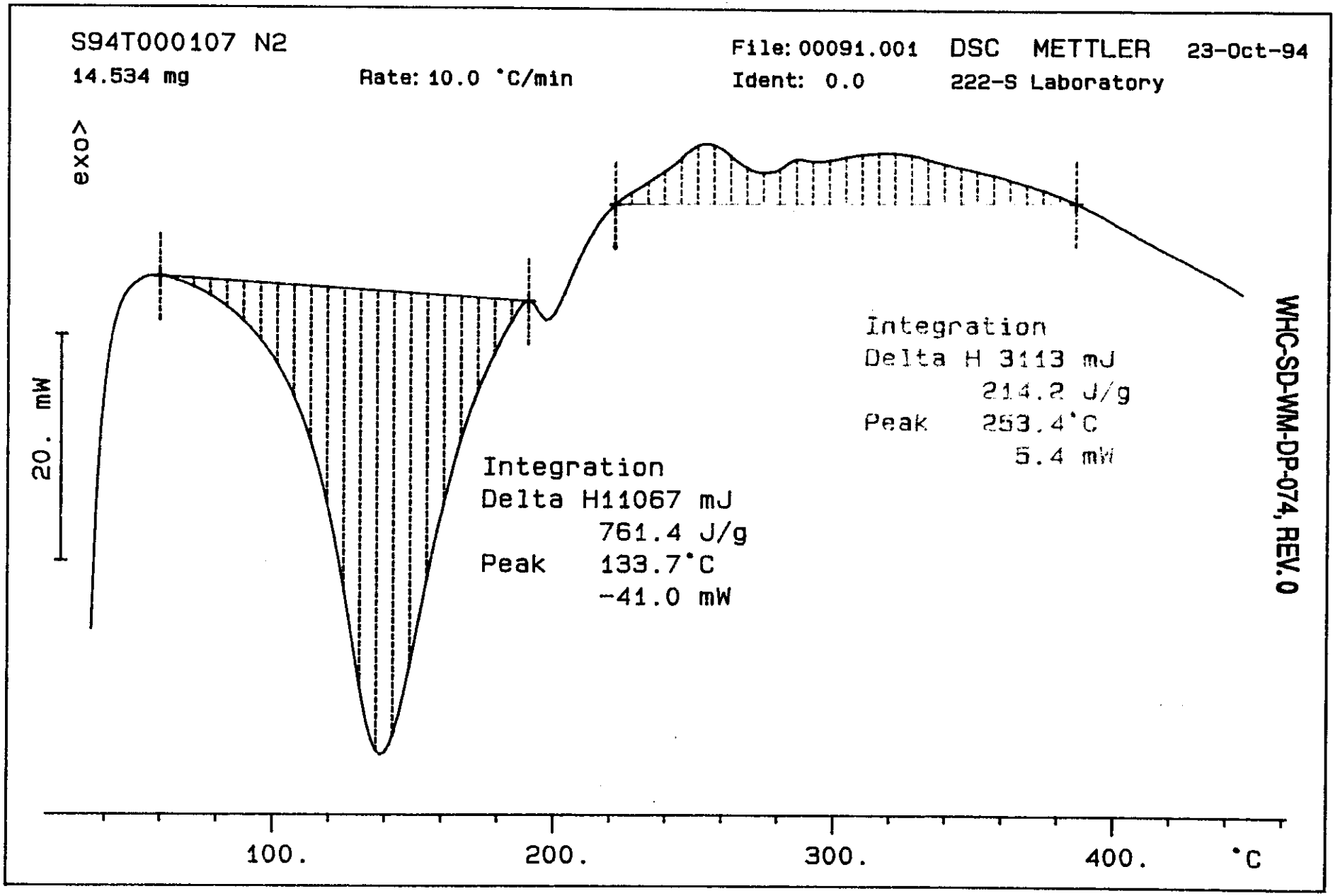
Units shown for QC (SPK) may not reflect the actual units.

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 145 TO 150.

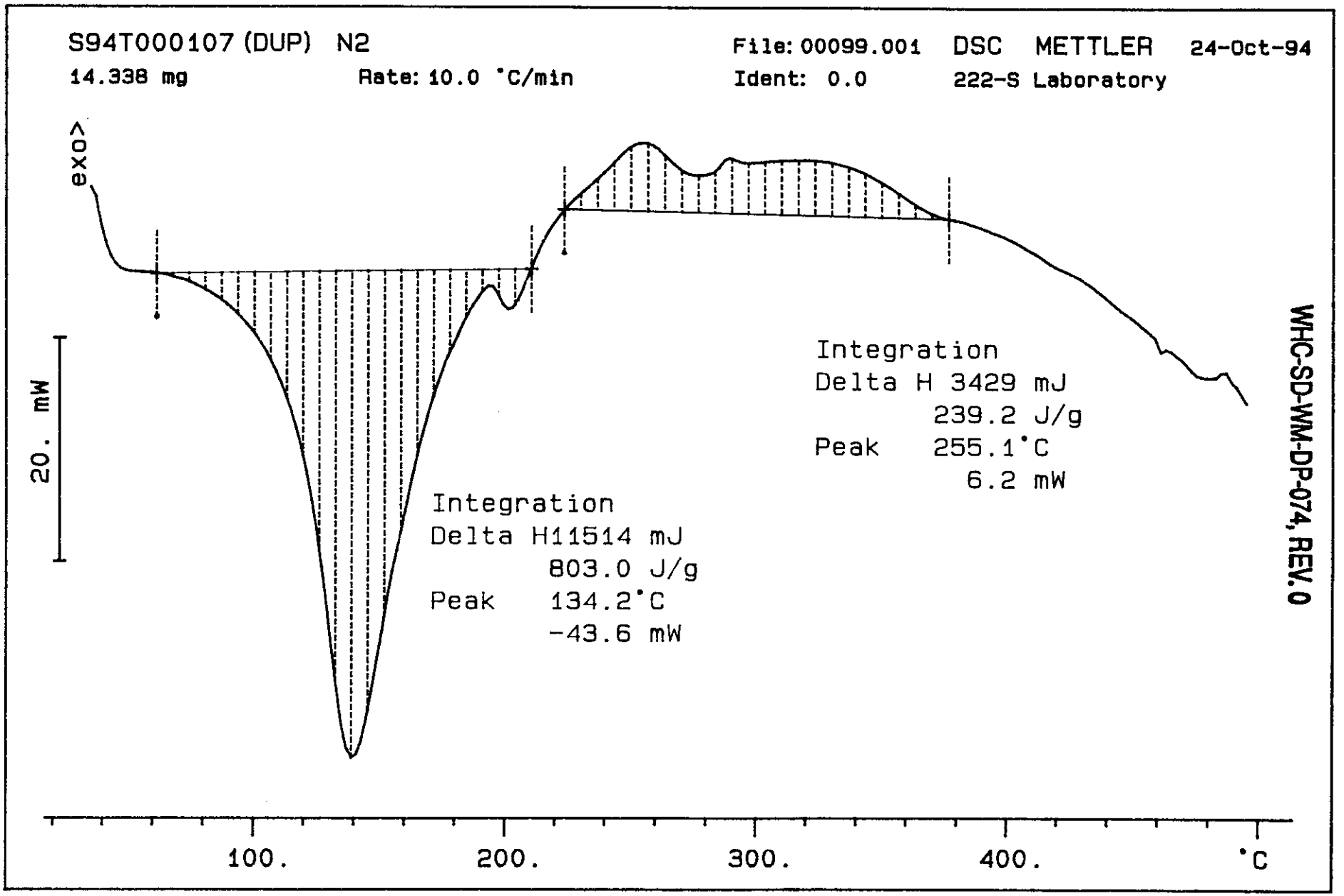


WHC-SD-WM-DP-074, REV.0

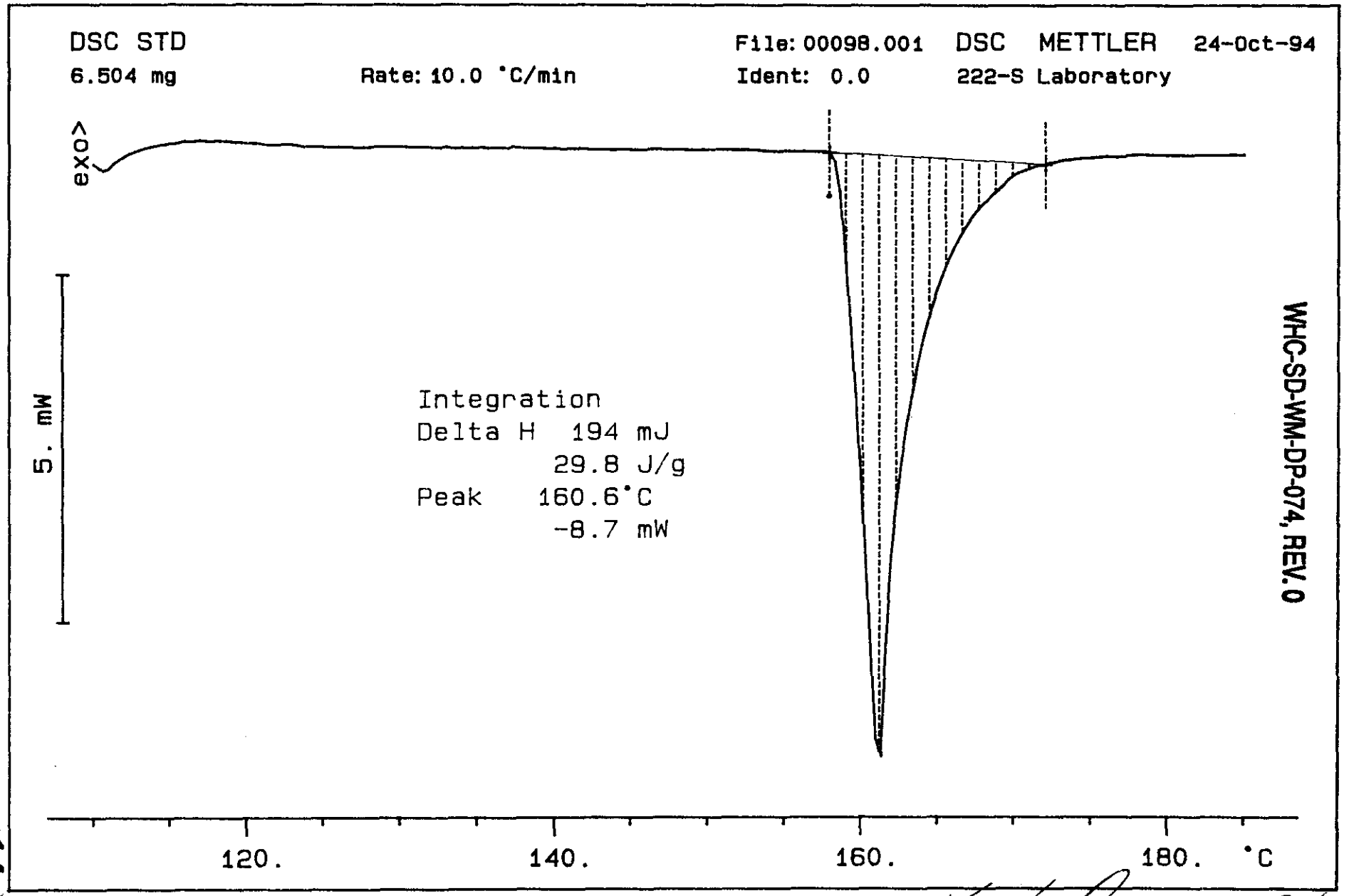
10-22-94



WHC-SD-WM-DP-074, REV. 0

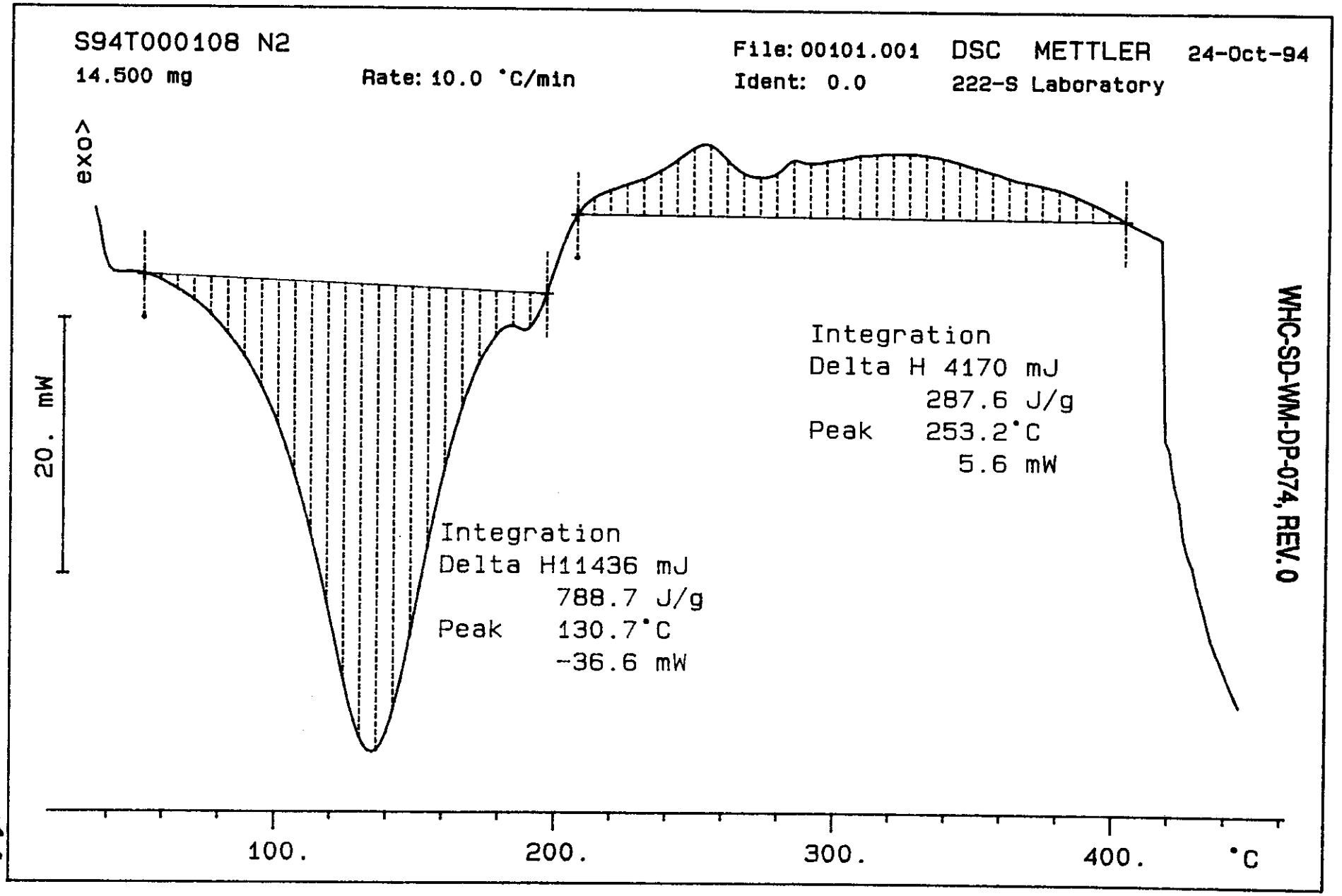


WHC-SD-WM-DP-074, REV. 0

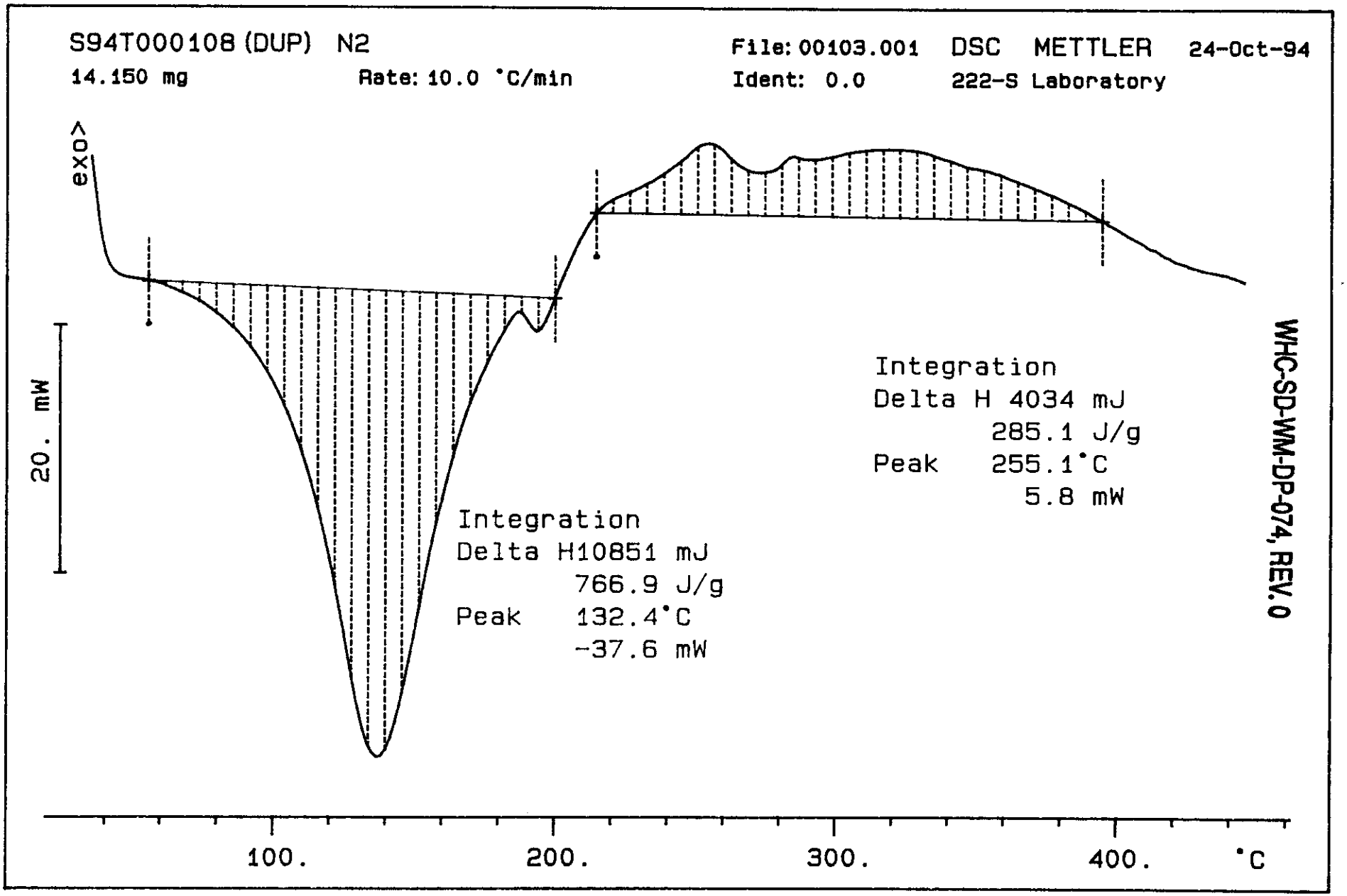


WHC-SD-WM-DP-074, REV. 0

10-23-94



WHC-SD-WM-DP-074, REV. 0



WHC-SD-WM-DP-074, REV. 0

THERMOGRAVIMETRIC ANALYSES

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LABCORE Data Entry Template for Worklist# 141

Analyst: KLV **Instrument:** TGA01 **Method:** LA-560-112

Worklist Comment: TGA recalculation of results. JMF WHC-SD-WM-DP-074, REV. 0

Seg	Type	Sample#	Rep	Al	Test	Matrix	Actual	Found	DL	Unit
1	STD				TGA-01	SOLID	100	100.2	N/A	%
2	SAMPLE	S94T000004	0		TGA-01	SOLID	N/A	40.92		%
3	DUP	S94T000004	0		TGA-01	SOLID	40.92	37.44	N/A	%
4	STD				TGA-01	SOLID	100	99.1	N/A	%
5	SAMPLE	S94T000011	0		TGA-01	SOLID	N/A	22.45		%
6	DUP	S94T000011	0		TGA-01	SOLID	22.45	33.45	N/A	%

Final page for worklist # 141

Jamie Frye for KLV
Analyst Signature

11/1/94 (Run 9/23/94)
Date

Entered + Approved. 11/1/94 J. M. Frye

Data Entry Comments: Recalculation of data. J M Frye
Summing of both steps - see Wkl. #4

Units shown for QC (SPK) may not reflect the actual units.

LABCORE Data Entry Template for Worklist# 4

Analyst: K. + Vogel Dave Smith **Instrument:** TGA01 **Method:** LA-560-112

Worklist Comment: Please run under nitrogen, notify A. Rice of < 17 % water

Seg	Type	Sample#	Rep	Al	Test	Matrix	Actual	Found	DL	Unit
1	STD				TGA-01	SOLID	100	100.2	N/A	%
2	SAMPLE	S94T000004	0		TGA-01	SOLID	N/A	14.28		%
3	DUP	S94T000004			TGA-01	SOLID	14.28	21.08	N/A	%
4	STD				TGA-01	SOLID	100	99.1	N/A	%
5	SAMPLE	S94T000011	0		TGA-01	SOLID	N/A	9.00		%
6	DUP	S94T000011			TGA-01	SOLID	9.00	20.53	N/A	%

Final page for worklist # 4

WHC-SD-WM-DP-074, REV. 0

K. Vogel
Analyst Signature

9-28-94
Date

These were recalculated by adding the first + second weight loss steps together + re entering them in LIMS. See attached sheet, wkl. #141.

J M Foye
11/1/94

Data Entry Comments:
Sample S94T000004 has further weight loss at 135°C of 26.49% in the sample and 16.36% in duplicate. Sample S94T000011 had a second wt loss step at 141°C of 13.45% in sample and 12.92% in the duplicate.
Jann Foye

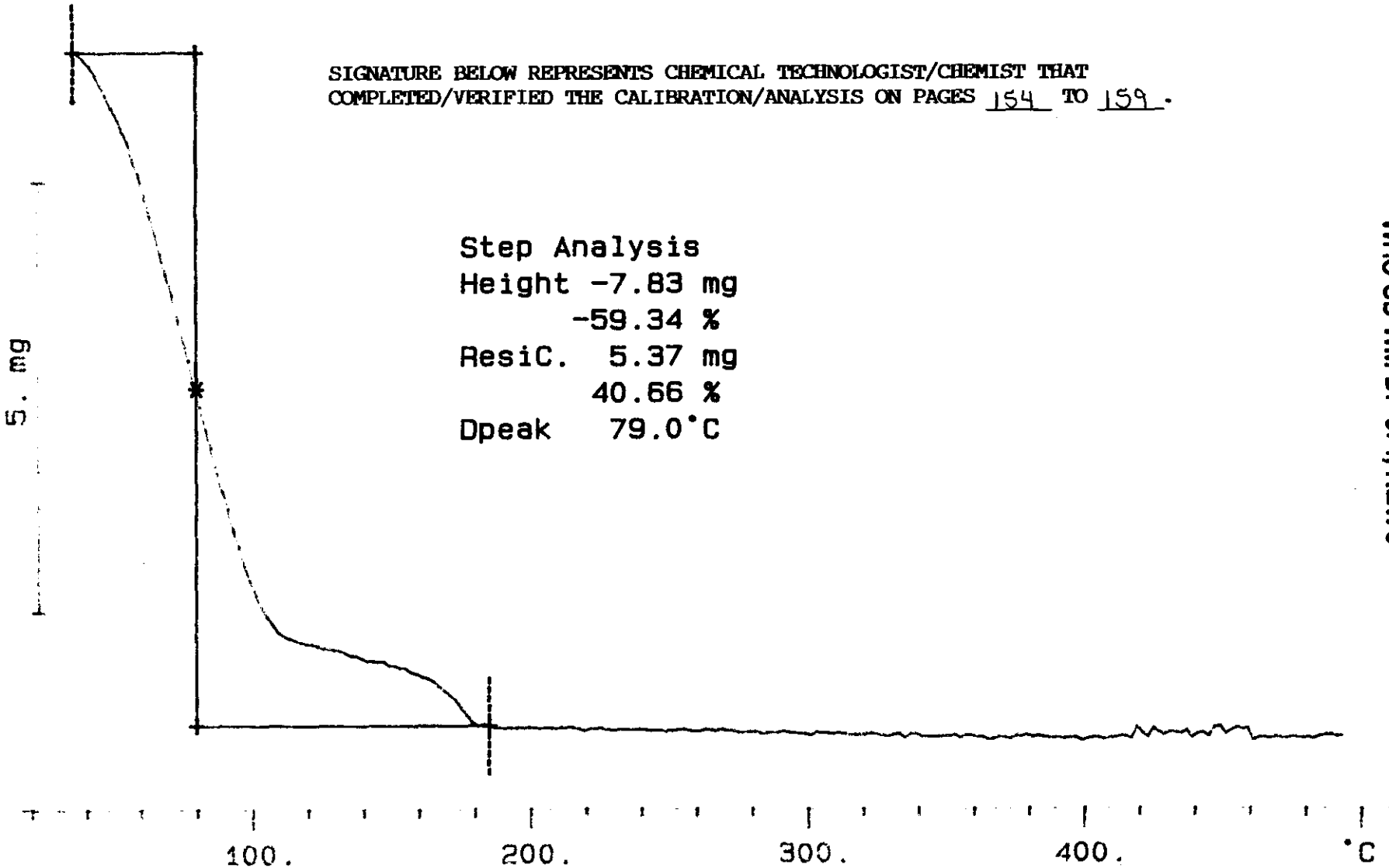
Units shown for QC (SPK) may not reflect the actual units.

TGA STD
13.197 mg

Rate: 10.0 °C/min

File: 00084.001 TG METTLER 17-Sep-94
Ident: 0.0 222-S Laboratory

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 154 TO 159.



WHC-SD-WM-DP-074, REV. 0

9/19/94

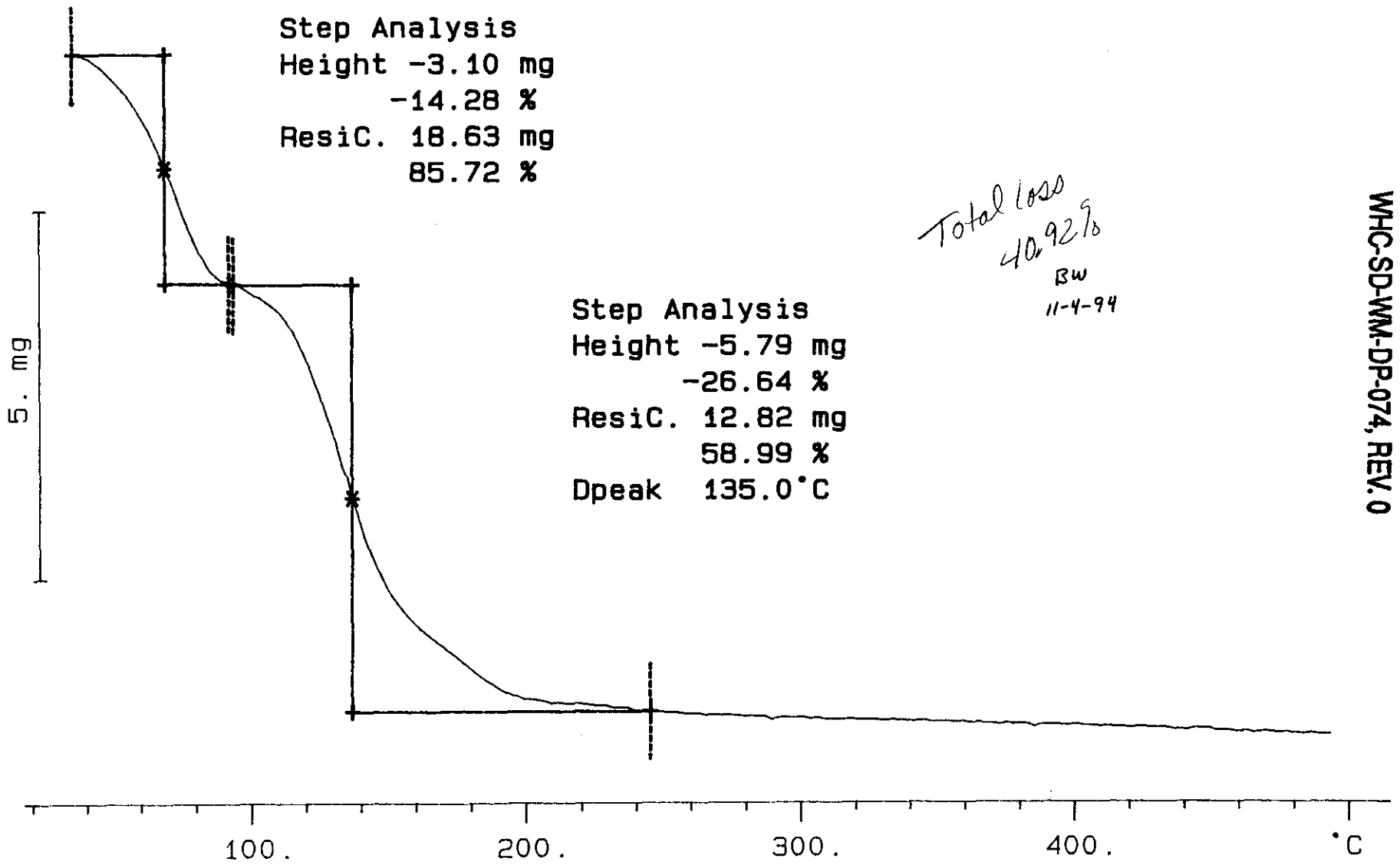
S94T000004 N2

21.734 mg

Rate: 10.0 °C/min

File: 00088.001 TG METTLER 17-Sep-94

Ident: 0.0 222-S Laboratory



Total loss 40.92%
BW
11-4-94

WHC-SD-WM-DP-074, REV. 0

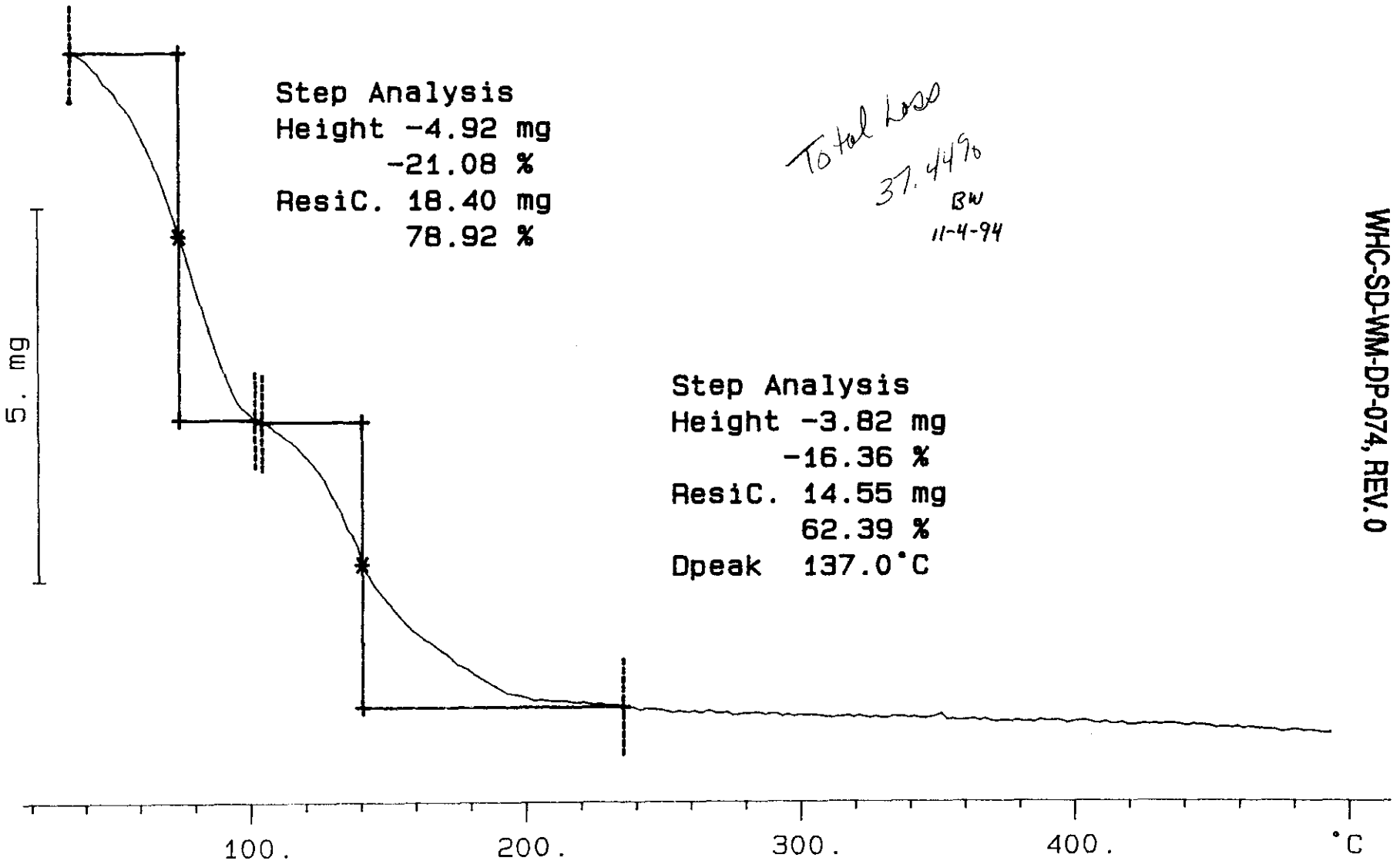
S94T000004 N2

23.316 mg

Rate: 10.0 °C/min

File: 00085.001 TG METTLER 17-Sep-94

Ident: 0.0 222-S Laboratory



Total Loss
37.44%
BW
11-4-94

WHC-SD-WM-DP-074, REV. 0

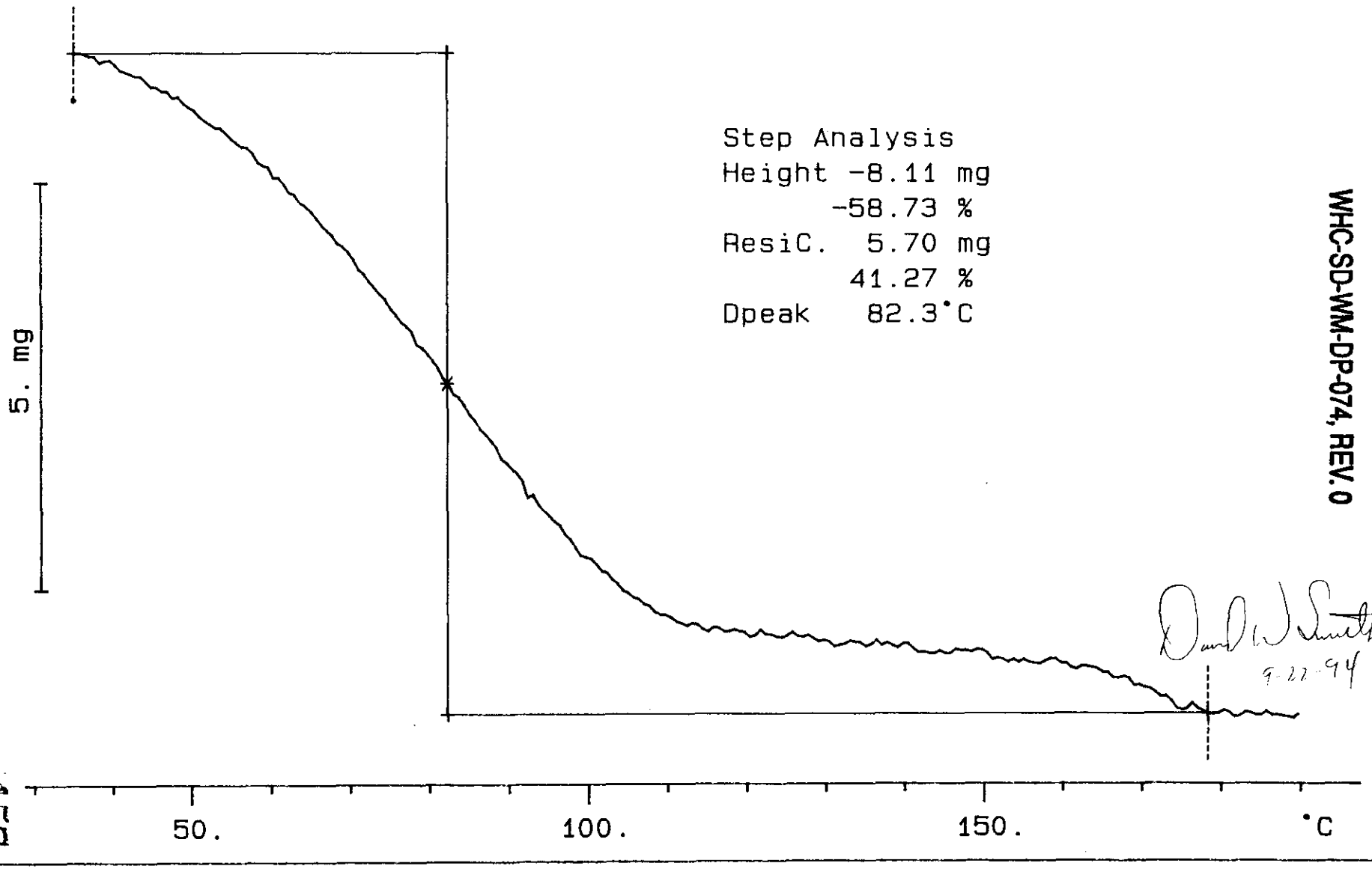
TGA STD (N2)

13.816 mg

Rate: 10.0 °C/min

File: 00103.001 TG METTLER 20-Sep-94

Ident: 0.0 222-S Laboratory



Step Analysis

Height -8.11 mg

-58.73 %

ResiC. 5.70 mg

41.27 %

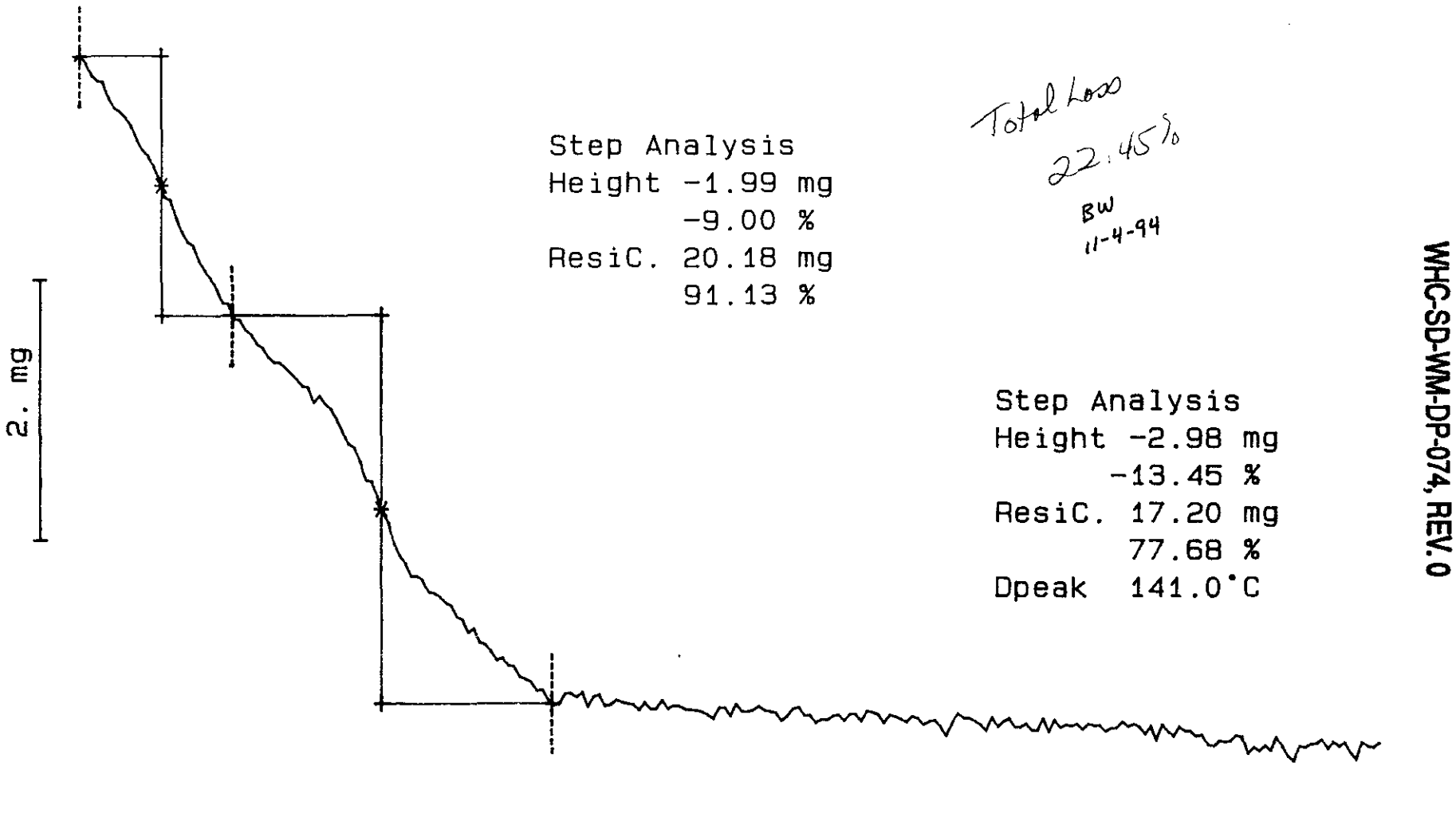
Dpeak 82.3°C

WHC-SD-WM-DP-074, REV. 0

David W Smith
9-22-94

157

S94T000011 (N2)
22.144 mg
Rate: 10.0 °C/min
File: 00104.001 TG METTLER 20-Sep-94
Ident: 0.0 222-S Laboratory



Step Analysis
Height -1.99 mg
-9.00 %
ResiC. 20.18 mg
91.13 %

Total Loss
22.45%
BW
11-4-94

Step Analysis
Height -2.98 mg
-13.45 %
ResiC. 17.20 mg
77.68 %
Dpeak 141.0°C

WHC-SD-WM-DP-074, REV. 0

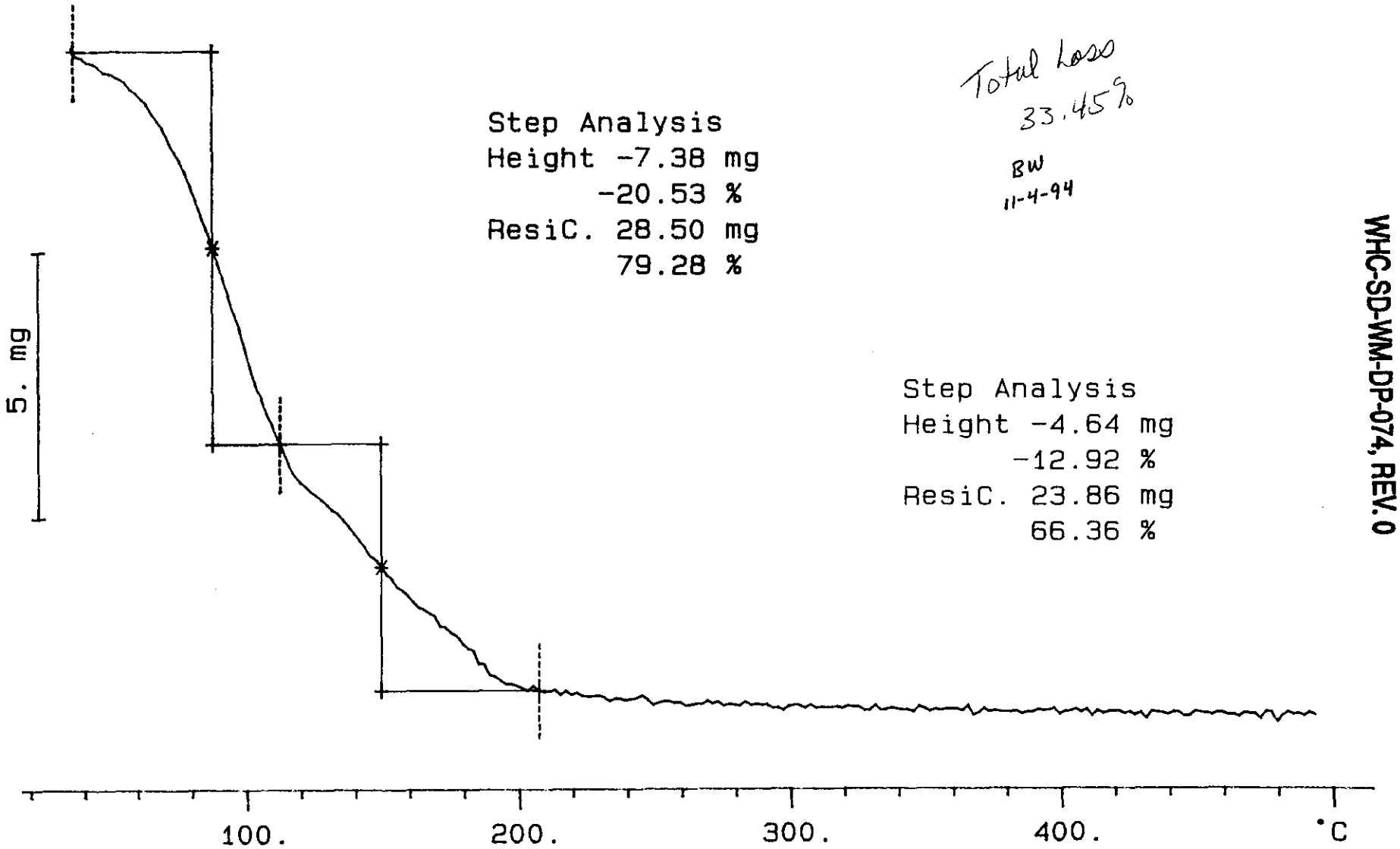
S94T000011 (N2) DUP

35.947 mg

Rate: 10.0 °C/min

File: 00106.001 TG METTLER 20-Sep-94

Ident: 0.0 222-S Laboratory



Total Loss
33.45%

BW
11-4-94

WHC-SD-WM-DP-074, REV. 0

LABCORE Data Entry Template for Worklist# 15

QA 5

Analyst: _____ **Instrument:** ~~DSC01~~ TGA01 **Method:** LA-560-112

Worklist Comment: Please run these under nitrogen, JMF. **WHC-SD-WM-DP-074, REV. 0**

Seg	Type	Sample#	Rep	Al	Test	Matrix	Actual	Found	DL	Unit
							100%		98.3% Recovery	
1	STD				TGA-01	LIQUID	59.25%	58.22%	N/A	%
2	SAMPLE	S94T000008	0		TGA-01	LIQUID	N/A	49.45		%
3	DUP	S94T000008			TGA-01	LIQUID	49.45	48.18	N/A	%
4	SAMPLE	S94T000015	0		TGA-01	LIQUID	N/A	48.27		%
5	DUP	S94T000015			TGA-01	LIQUID	48.27 ~~49.22~~	49.22	N/A	%

Final page for worklist # 15

Analyst Signature

9/29/94
Date

Data Entry Comments: Data Entry on 10/2/94 by caClark and approved.

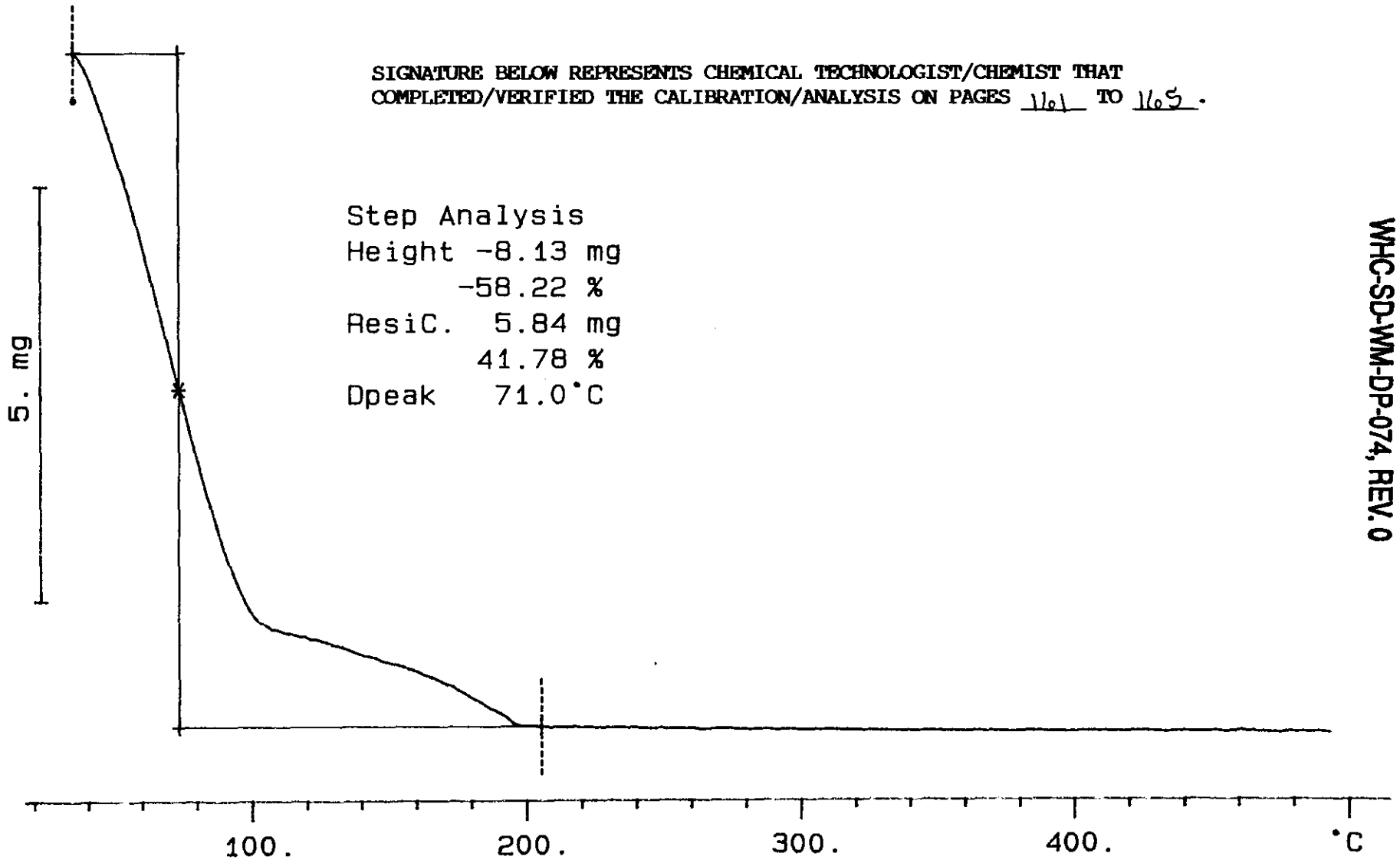
Units shown for QC (SPK) may not reflect the actual units.

TGA STD
13.969 mg

Rate: 10.0 °C/min

File: 00116.001 TG METTLER 27-Sep-94
Ident: 0.0 222-S Laboratory

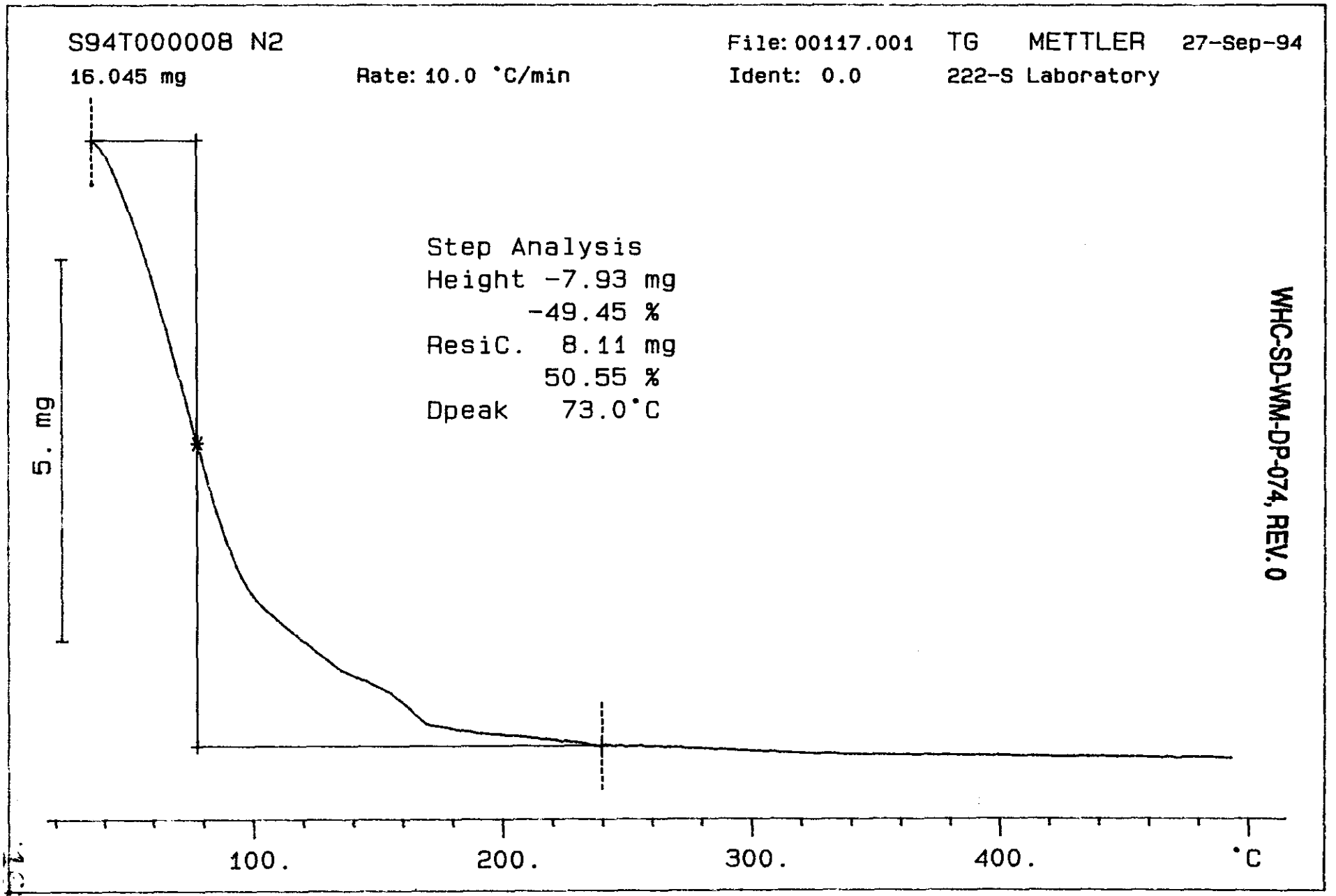
SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 101 TO 105.

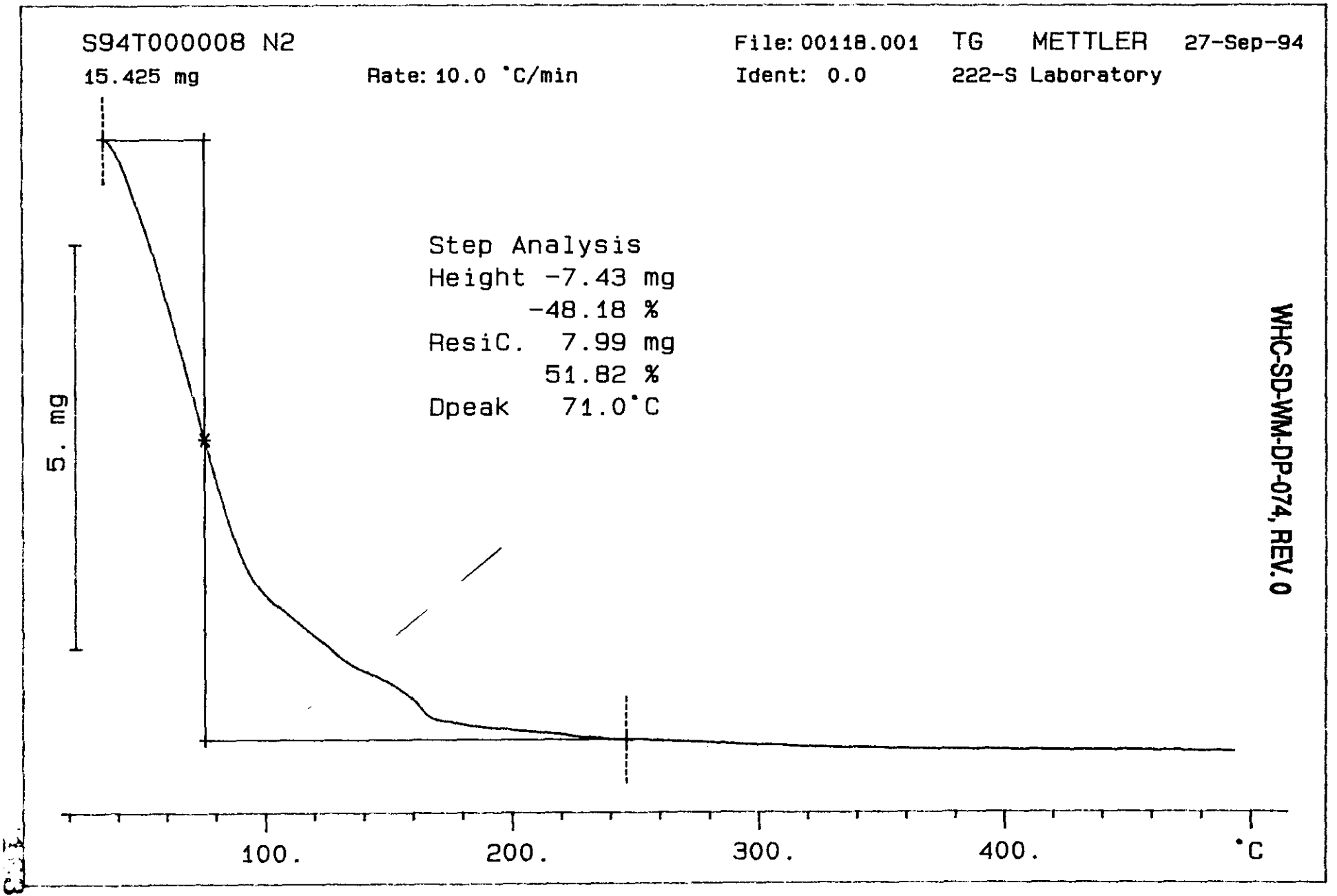


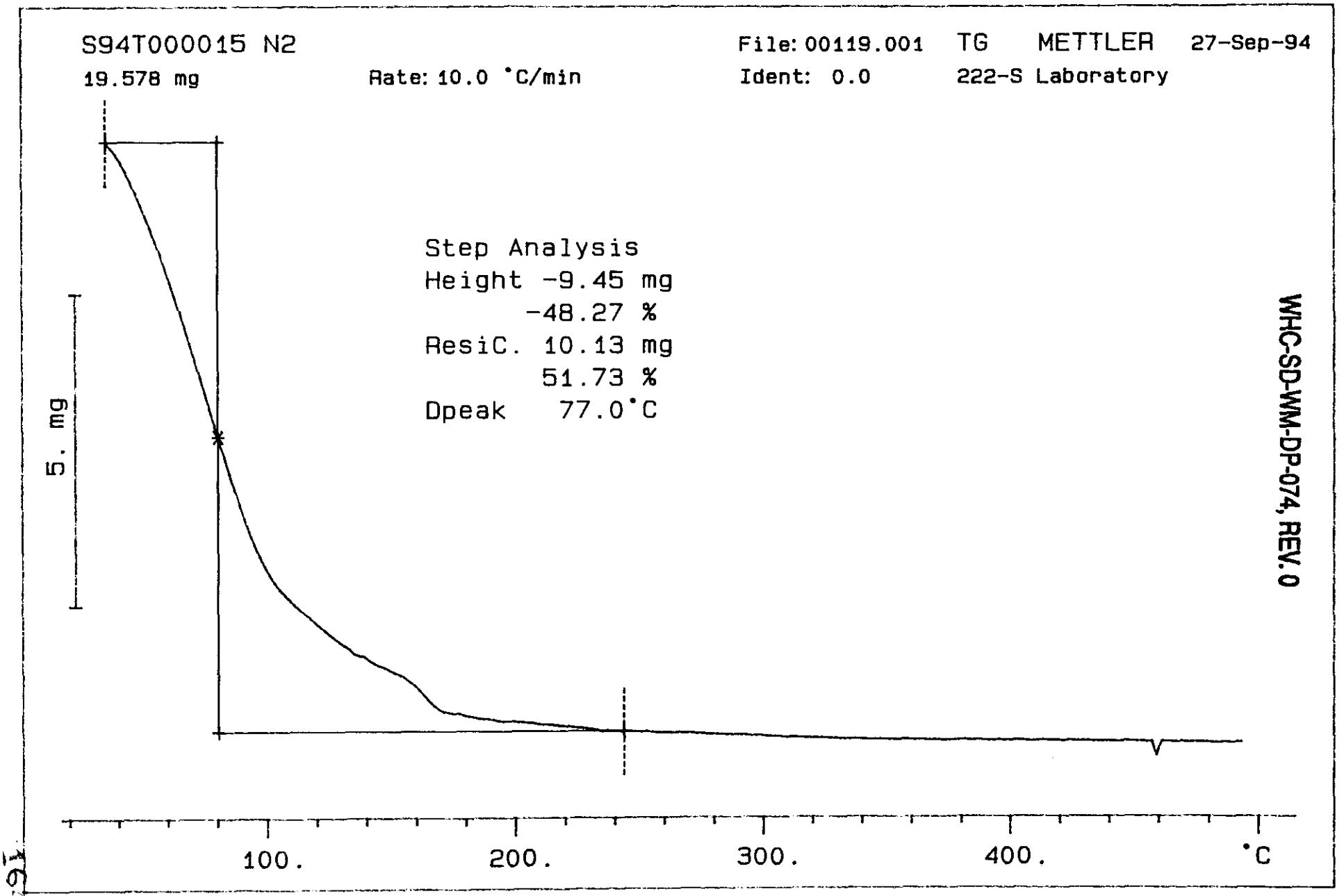
Step Analysis
Height -8.13 mg
-58.22 %
ResiC. 5.84 mg
41.78 %
Dpeak 71.0°C

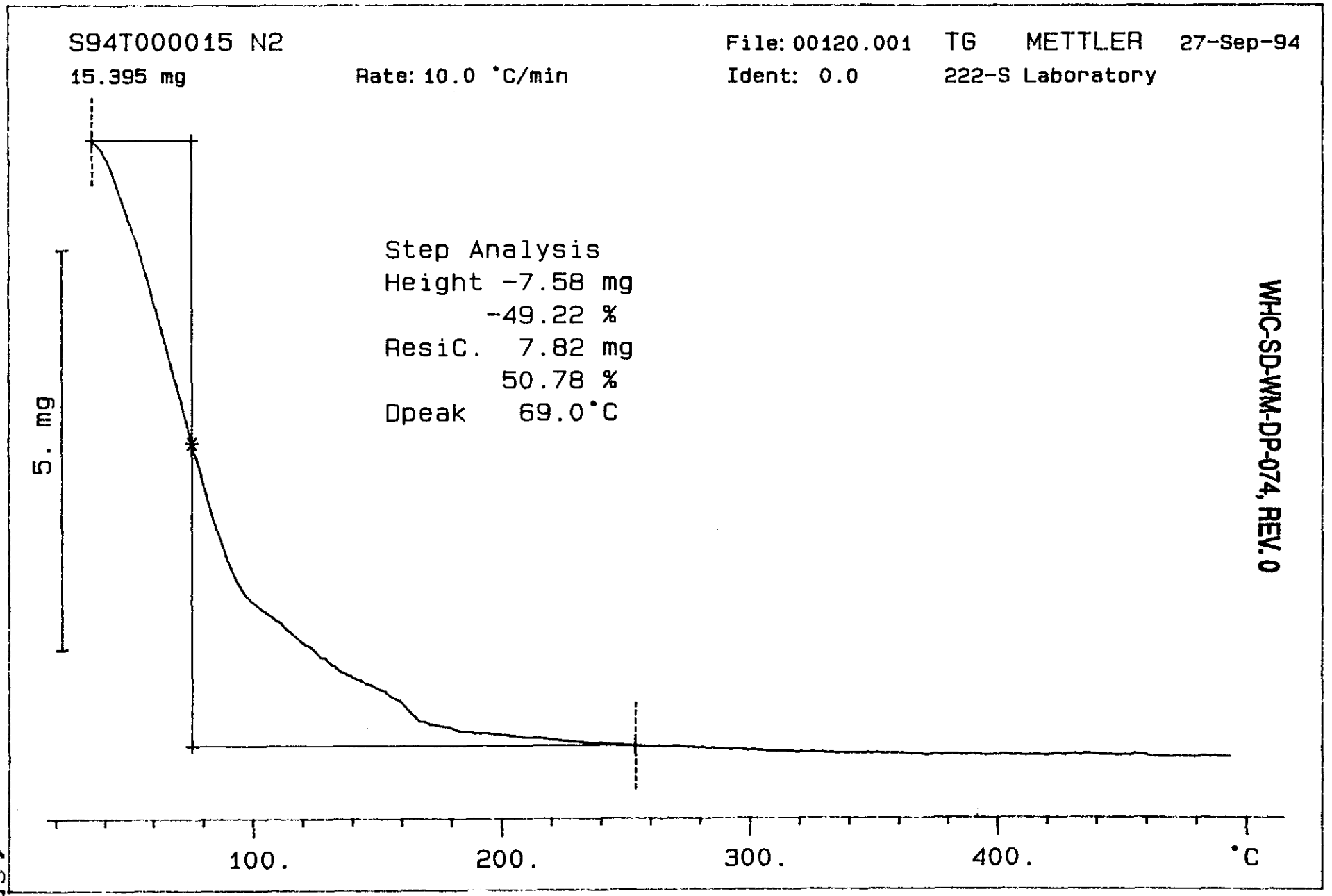
WHC-SD-WM-DP-074, REV. 0

9/29/30


S94T000008 N2
16.045 mg
Rate: 10.0 °C/min
File: 00117.001
TG METTLER 27-Sep-94
Ident: 0.0
222-S Laboratory
Step Analysis
Height -7.93 mg
-49.45 %
ResiC. 8.11 mg
50.55 %
Dpeak 73.0°C
5. mg
100.
200.
300.
400.
°C


S94T000008 N2
15.425 mg
Rate: 10.0 °C/min
File: 00118.001
TG
METTLER
27-Sep-94
Ident: 0.0
222-S Laboratory
Step Analysis
Height -7.43 mg
-48.18 %
ResiC. 7.99 mg
51.82 %
Dpeak 71.0°C
5. mg
100.
200.
300.
400.
°C


S94T000015 N2
19.578 mg
Rate: 10.0 °C/min
File: 00119.001
TG METTLER 27-Sep-94
Ident: 0.0
222-S Laboratory
Step Analysis
Height -9.45 mg
-48.27 %
ResiC. 10.13 mg
51.73 %
Dpeak 77.0°C
5. mg
100.
200.
300.
400.
°C


S94T000015 N2
15.395 mg
Rate: 10.0 °C/min
File: 00120.001
TG METTLER 27-Sep-94
Ident: 0.0
222-S Laboratory
Step Analysis
Height -7.58 mg
-49.22 %
ResiC. 7.82 mg
50.78 %
Dpeak 69.0°C
5. mg
100.
200.
300.
400.
°C

LABCORE Data Entry Template for Worklist# 142

Analyst: _____ **Instrument:** TGA01 _____ **Method:** LA-560-112

Worklist Comment: NEW TGA-01 WORKLIST FOR S94T000020 AND S94T000028

Seg	Type	Sample#	Rep	Al	Test	Matrix	Actual	Found	DL	Unit
1	STD				TGA-01	SOLID			N/A	%
2	SAMPLE	S94T000020	0		TGA-01	SOLID	N/A			%
3	DUP	S94T000020	0		TGA-01	SOLID			N/A	%
4	STD				TGA-01	SOLID			N/A	%
5	SAMPLE	S94T000028	0		TGA-01	SOLID	N/A			%
6	DUP	S94T000028	0		TGA-01	SOLID			N/A	%

Final page for worklist # 142

Analyst Signature _____ **Date** _____

Forgot to put in data entry comments to explain that these results are due to re-integration of the areas. [illegible] 11/2/94

Data Entry Comments:

Units shown for QC (SPK) may not reflect the actual units.

LABCORE Data Entry Template for Worklist# 16

Analyst: HDP **Instrument:** ~~DSC01~~ TGA01 JMF 9-28-94 **Method:** LA-560-112

Worklist Comment: Please run these under nitrogen, JMF.

WHC-SD-WM-DP-074, REV. 0

Seg	Type	Sample#	Rep	Al	Test	Matrix	Actual	Found	DL	Unit
1	STD				TGA-01	SOLID	57.25%	57.17%, 99.9%Rec	N/A	%
2	SAMPLE	S94T000020		0	TGA-01	SOLID	N/A	11.52		%
3	DUP	S94T000020			TGA-01	SOLID	11.52	10.79	N/A	%
4	STD				TGA-01	SOLID	~~58.7~~ 57.25% JMF 9-28-94	58.57, 99.4%Rec	N/A	%
5	SAMPLE	S94T000028		0	TGA-01	SOLID	N/A	16.96		%
6	DUP	S94T000028			TGA-01	SOLID	16.96	13.25	N/A	%

Final page for worklist # 16

Anthony Punuto
Analyst Signature

9-21-94
Date

Data Entry Comments:

Units shown for QC (SPK) may not reflect the actual units.

LABCORE Data Entry Template for Worklist# 16

Analyst: _____ **Instrument:** ~~DSC01~~ LAD 9-28-94 TGA 01 **Method:** LA-560-112

/orklist Comment: Please run these under nitrogen, JMF. **WHC-SD-WM-DP-074, REV. 0**

Seg	Type	Sample#	Rep	Al	Test	Matrix	Actual	Found	DL	Unit
1	STD				TGA-01	SOLID	59.25 LAD 9-26-94	Tony's 58.90 99.4% Rec	N/A	%
2	SAMPLE	S94T000020	0		TGA-01	SOLID	N/A	DUP 59.19 11.53% H_2O 99.9% Rec.	9.7% further wt loss	%
3	DUP	S94T000020			TGA-01	SOLID		10.79% H_2O	7.03% further wt loss	%
4	SAMPLE	S94T000028	0		TGA-01	SOLID	N/A	16.96% H_2O	18.55% further wt loss	
5	DUP	S94T000028			TGA-01	SOLID		13.25% H_2O	9.75% further wt loss	%

Final page for worklist # 16

Analyst Signature

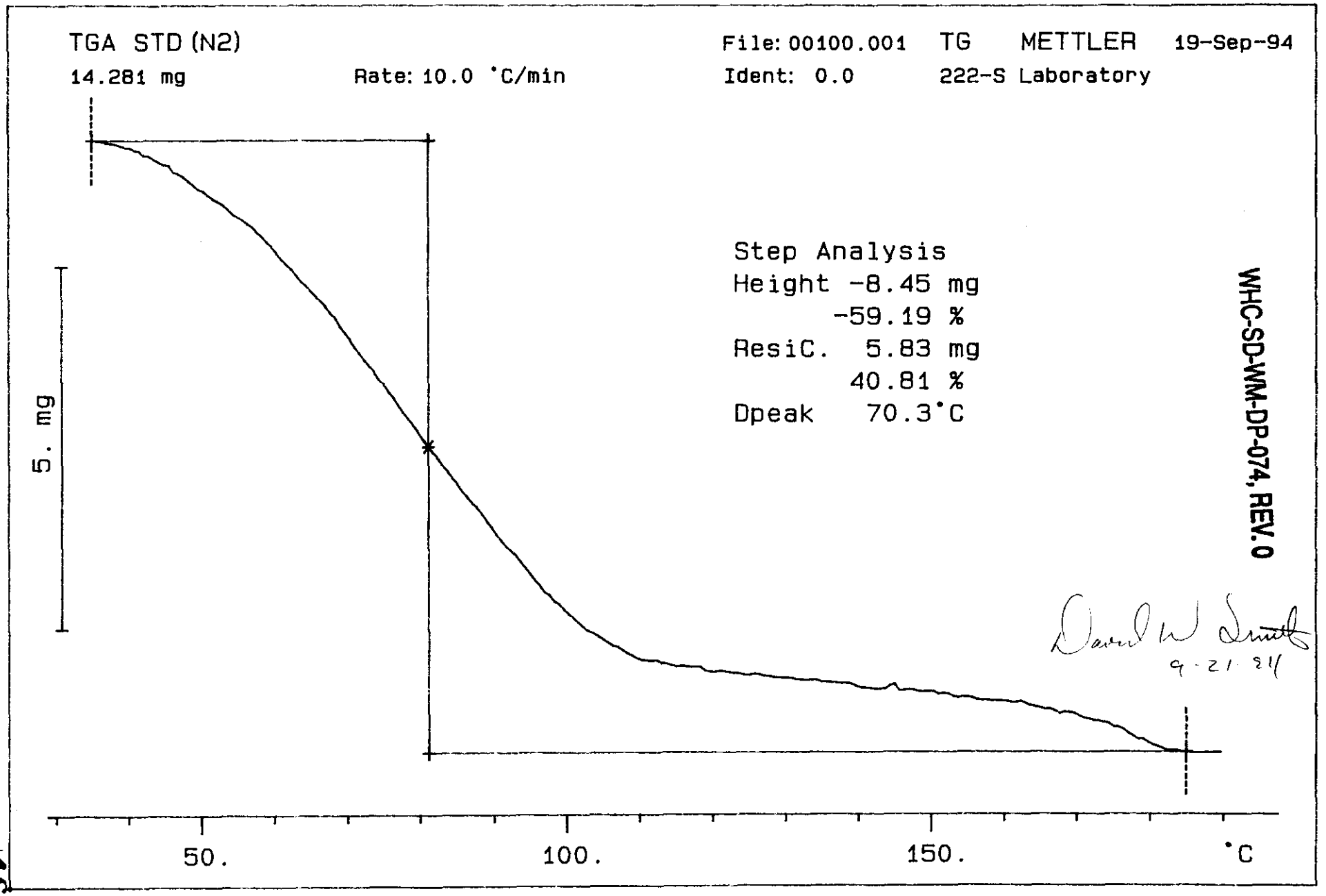
9-21-94
Date

Data Entry Comments:

Units shown for QC (SPK) may not reflect the actual units.

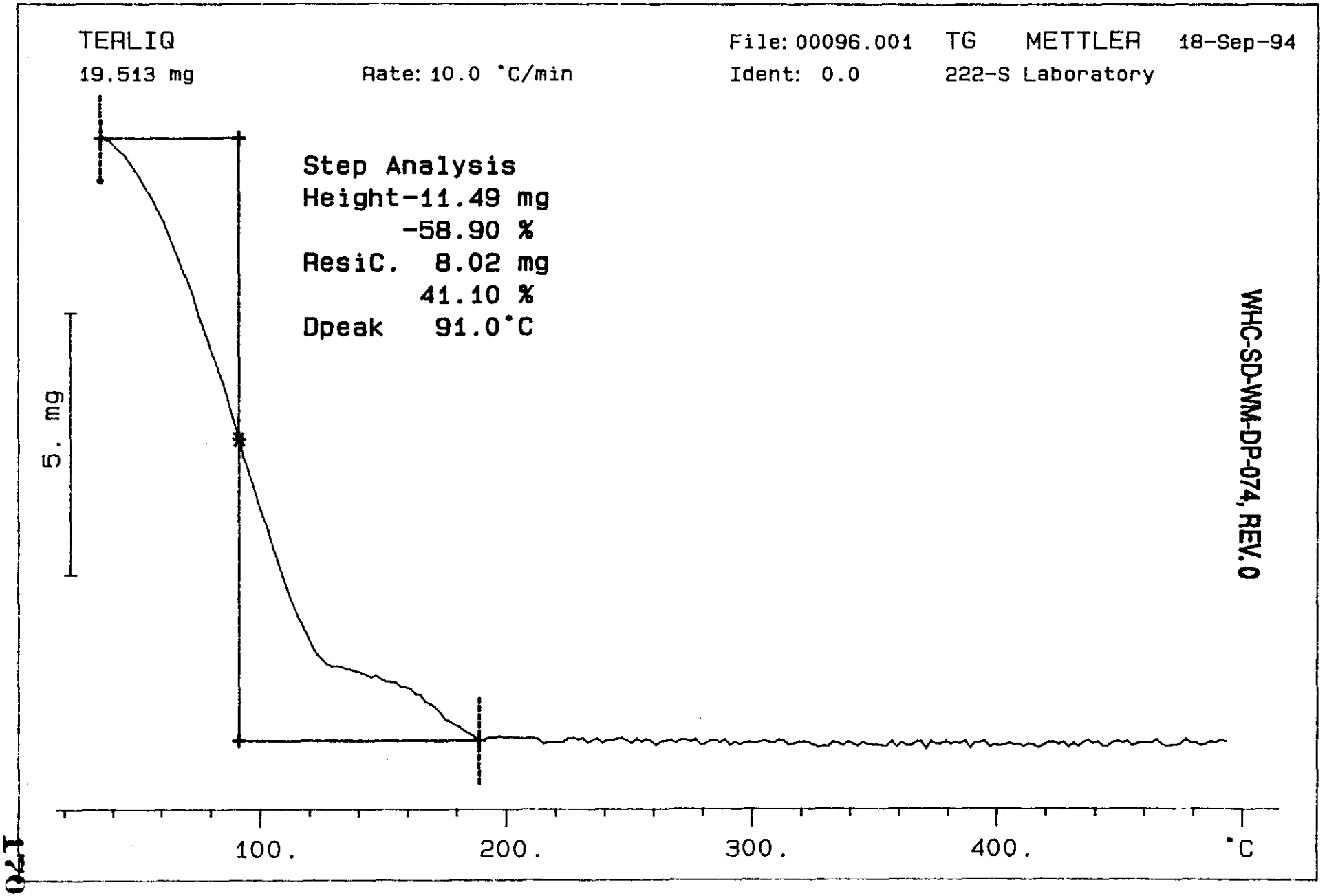
Page: 1

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 169 TO 174.



WHC-SD-WM-DP-074, REV. 0

David W Smith
9-21-94


TERLIQ
19.513 mg
Rate: 10.0 °C/min
File: 00096.001
TG
METTLER
18-Sep-94
Ident: 0.0
222-S Laboratory
Step Analysis
Height-11.49 mg
-58.90 %
ResiC. 8.02 mg
41.10 %
Dpeak 91.0°C
5. mg
100.
200.
300.
400.
°C

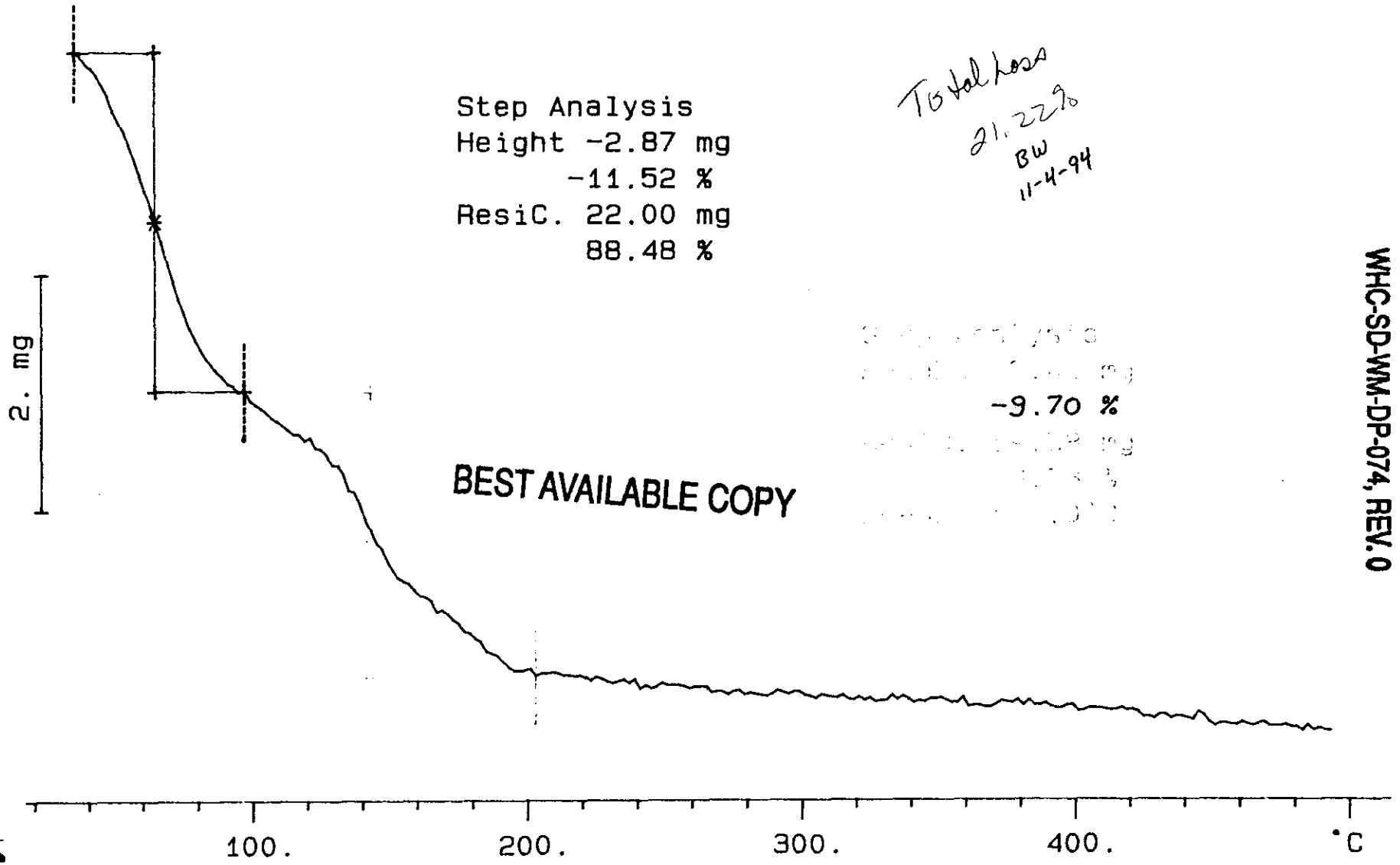
S94T000020 (N2)

24.861 mg

Rate: 10.0 °C/min

File: 00101.001 TG METTLER 19-Sep-94

Ident: 0.0 222-S Laboratory



Total loss
21.22%
BW
11-4-94

-9.70 %

BEST AVAILABLE COPY

WHC-SD-WM-DP-074, REV.0

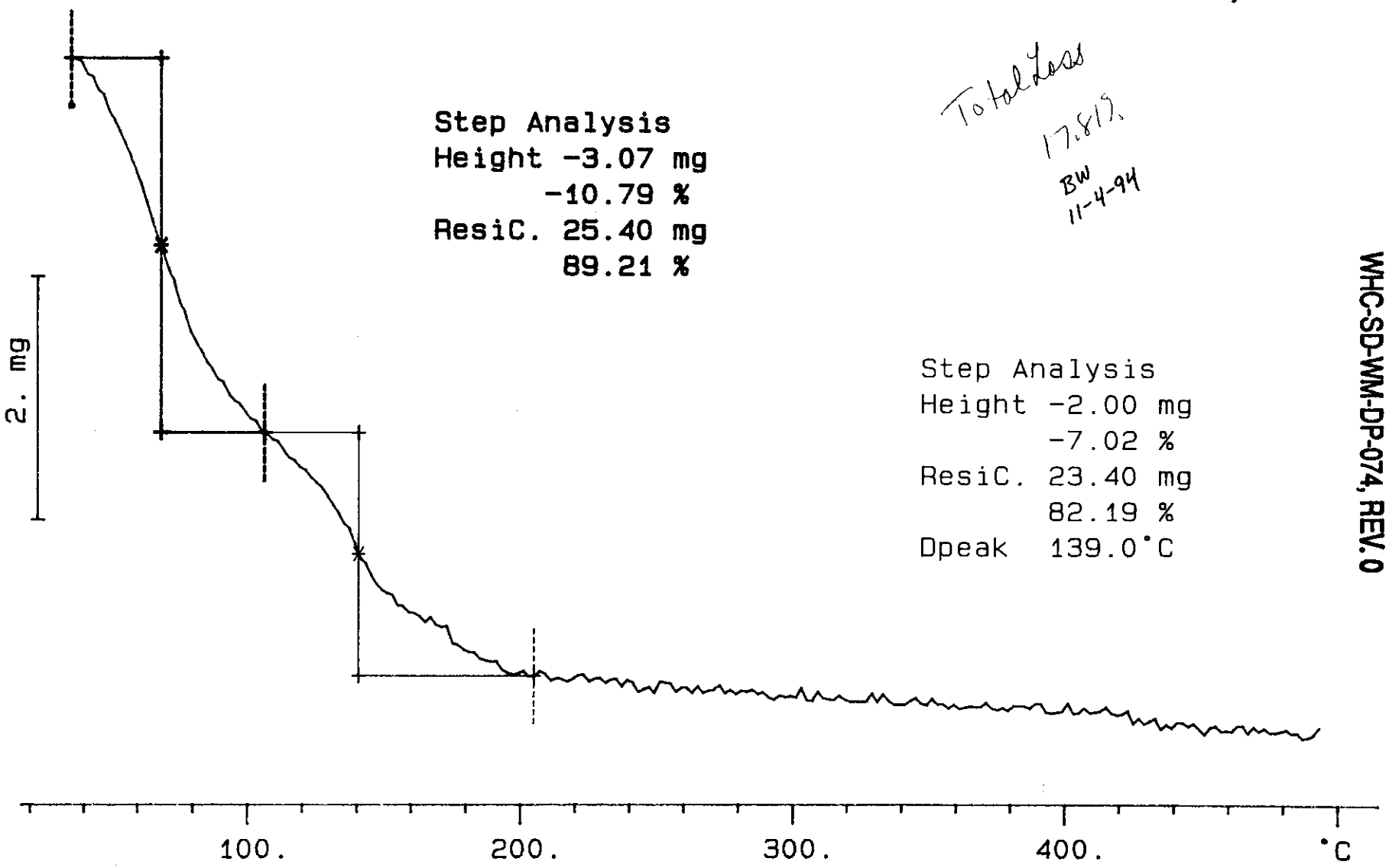
S94T000020 (N2) DUP

28.471 mg

Rate: 10.0 °C/min

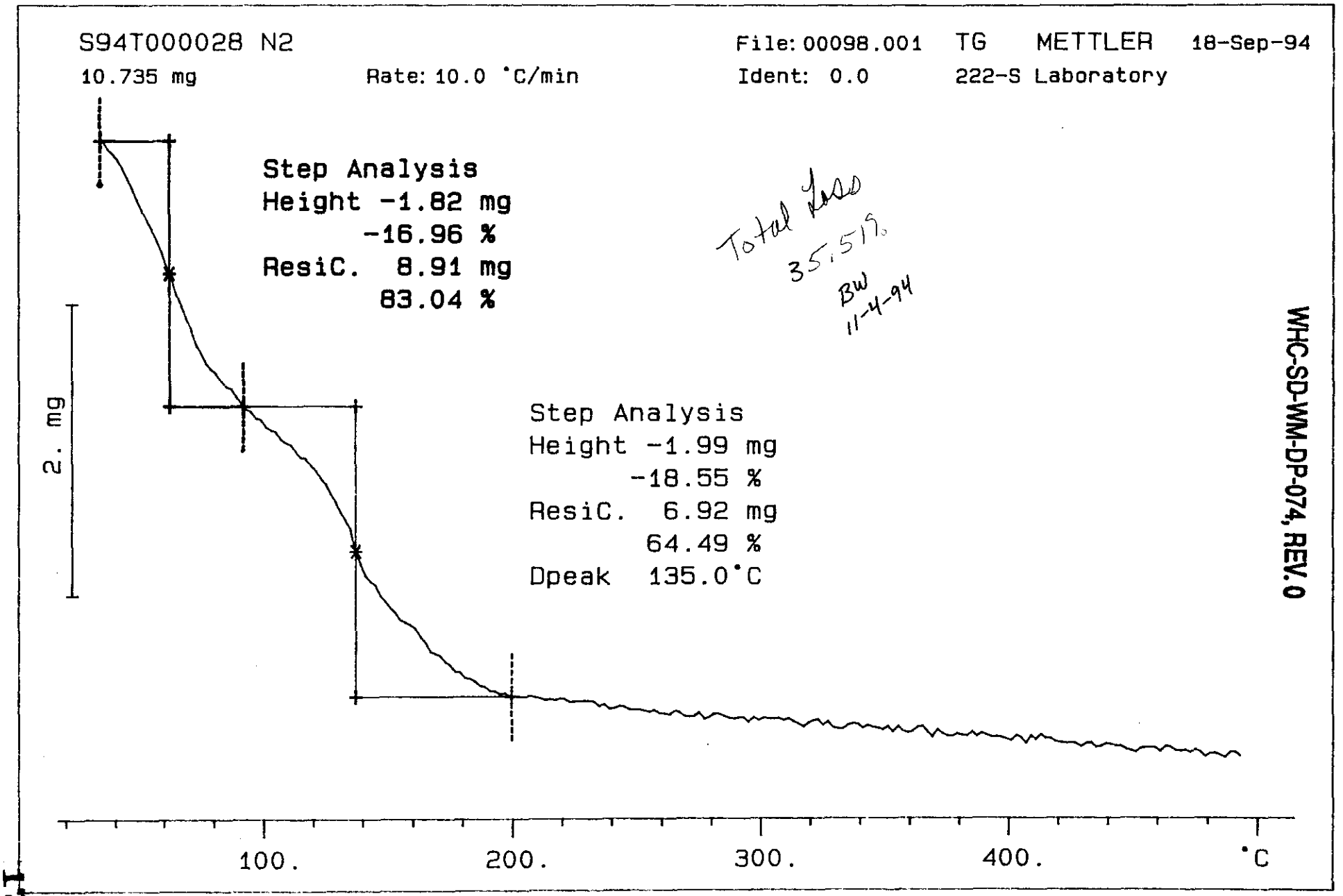
File: 00102.001 TG METTLER 19-Sep-94

Ident: 0.0 222-S Laboratory

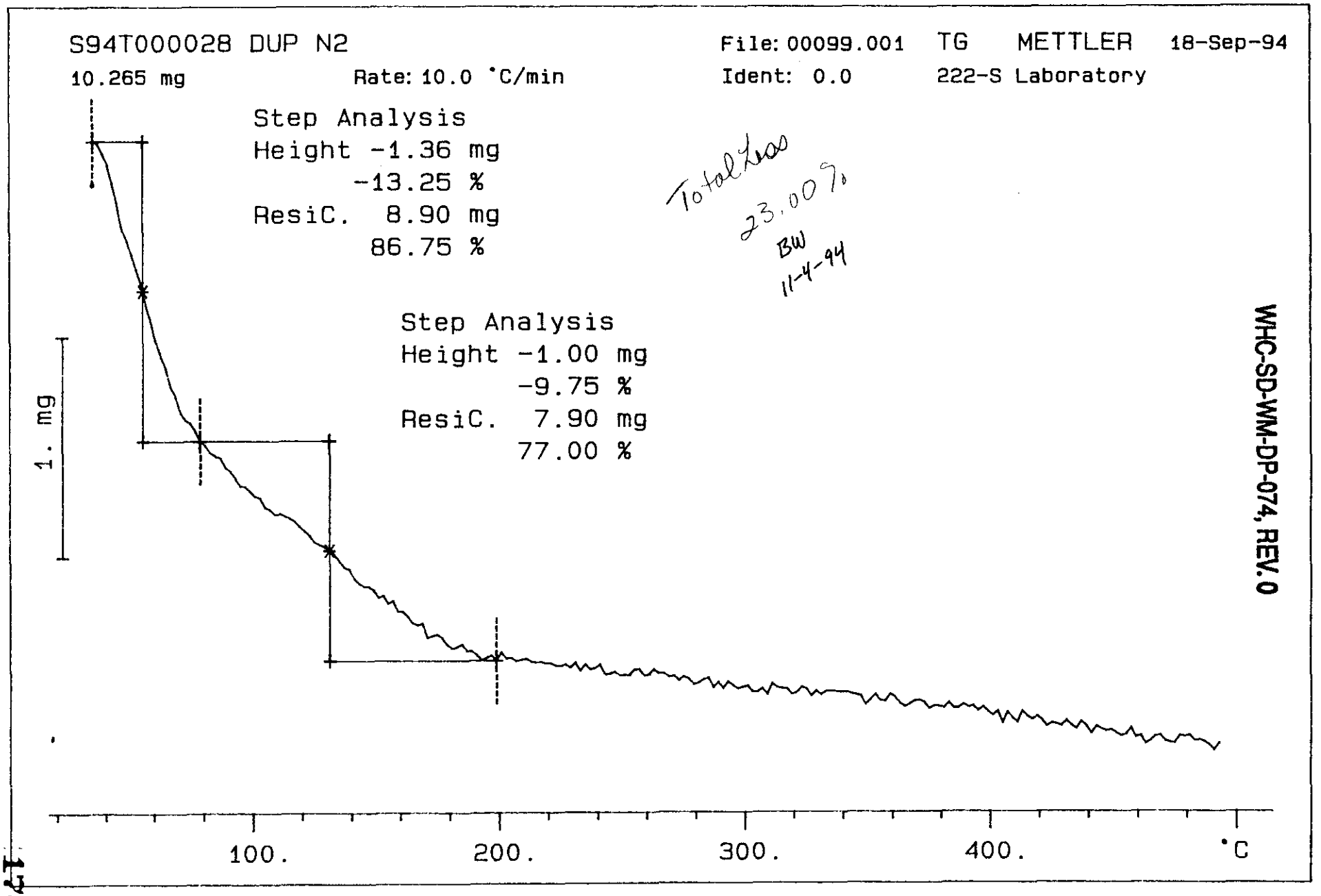


Total Loss 17.81%
BW 11-4-94

WHC-SD-WM-DP-074, REV. 0



WHC-SD-WM-DP-074, REV.0



WHC-SD-WM-DP-074, REV. 0

LABCORE Data Entry Template for Worklist# 137

Analyst: RdM **Instrument:** TGA01 _____ **Method:** LA-560-112

Worklist Comment: Replicate analysis, use N2 purge. JMF WHC-SD-WM-DP-074, REV. 0

Seg	Type	Sample#	Rep	Al	Test	Matrix	Actual	Found	DL	Unit
1	STD				TGA-01	SOLID	59.19	58.99	99.7% Rec N/A	%
2	SAMPLE	S94T000011	1		TGA-01	SOLID	N/A	47.01		%
3	SAMPLE	S94T000028	1		TGA-01	SOLID	N/A	47.21		%

Final page for worklist # 137

Joann Fuge for Rob Meyers
Analyst Signature

11/1/94
Date

Entered and posted 11/1/94 J. M. Fuge

Data Entry Comments:

Units shown for QC (SPK) may not reflect the actual units.

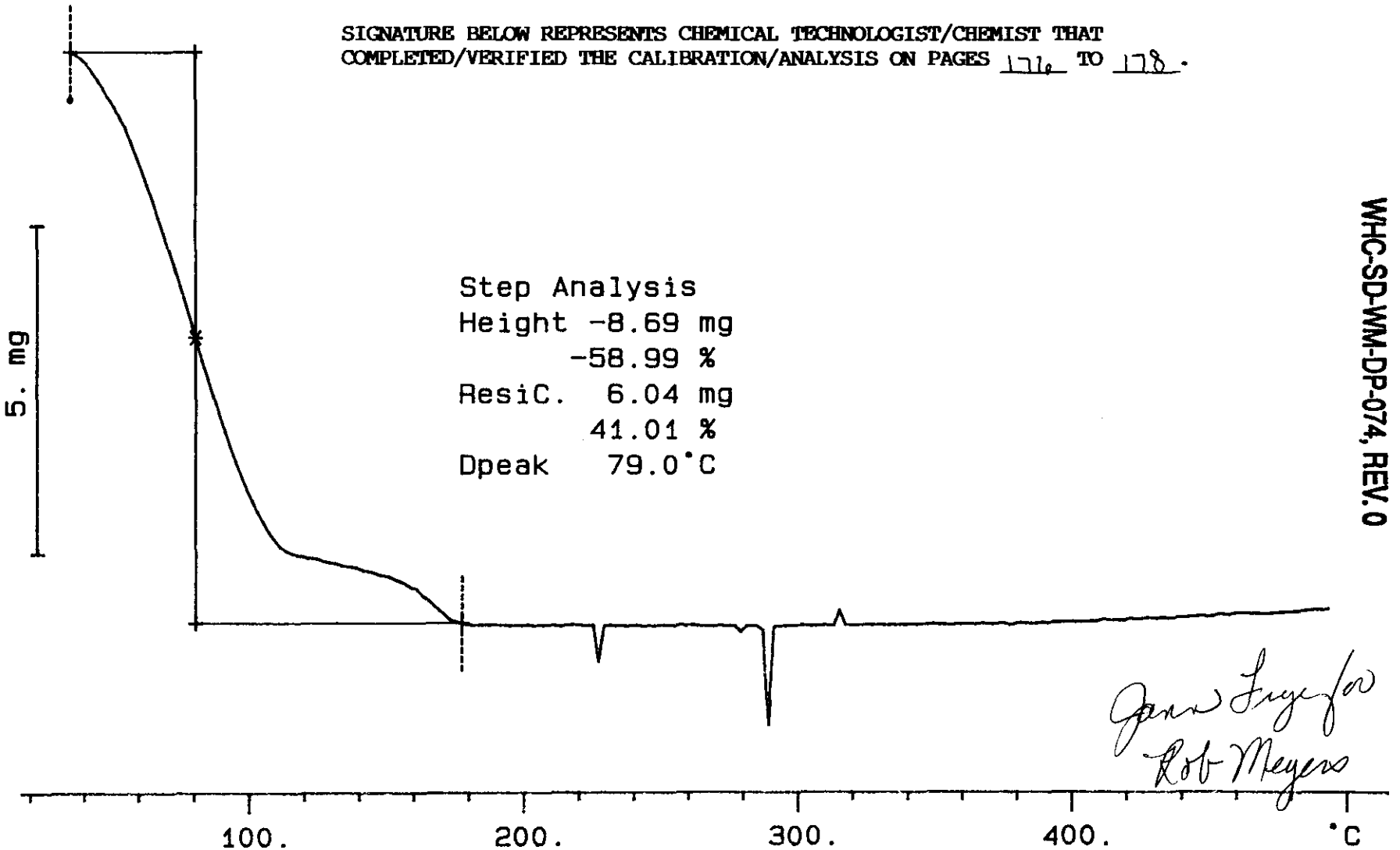
Page: 1

TGA STD
14.733 mg

Rate: 10.0 °C/min

File: 00050.001 TG METTLER 29-Oct-94
Ident: 0.0 222-S Laboratory

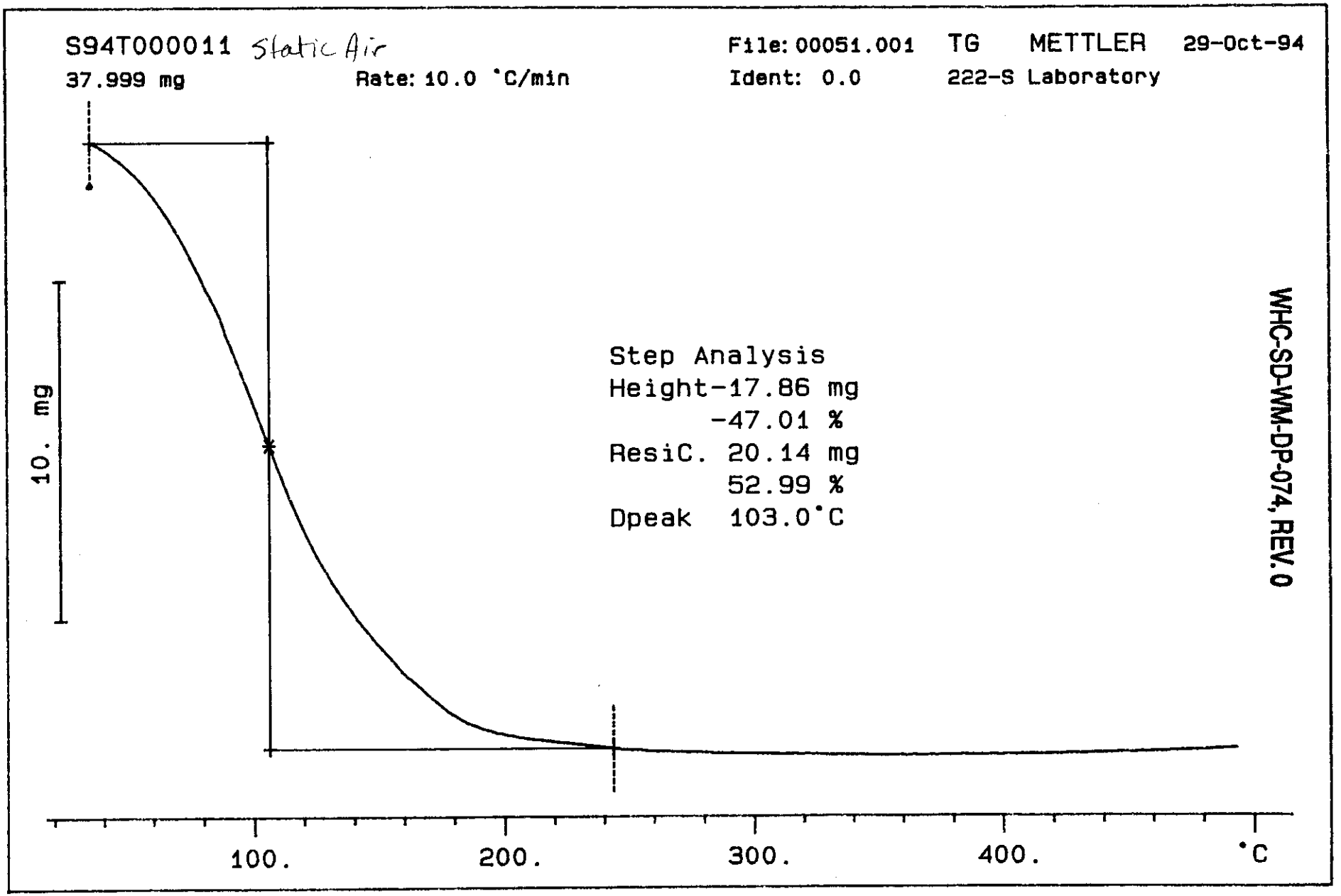
SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 176 TO 178.



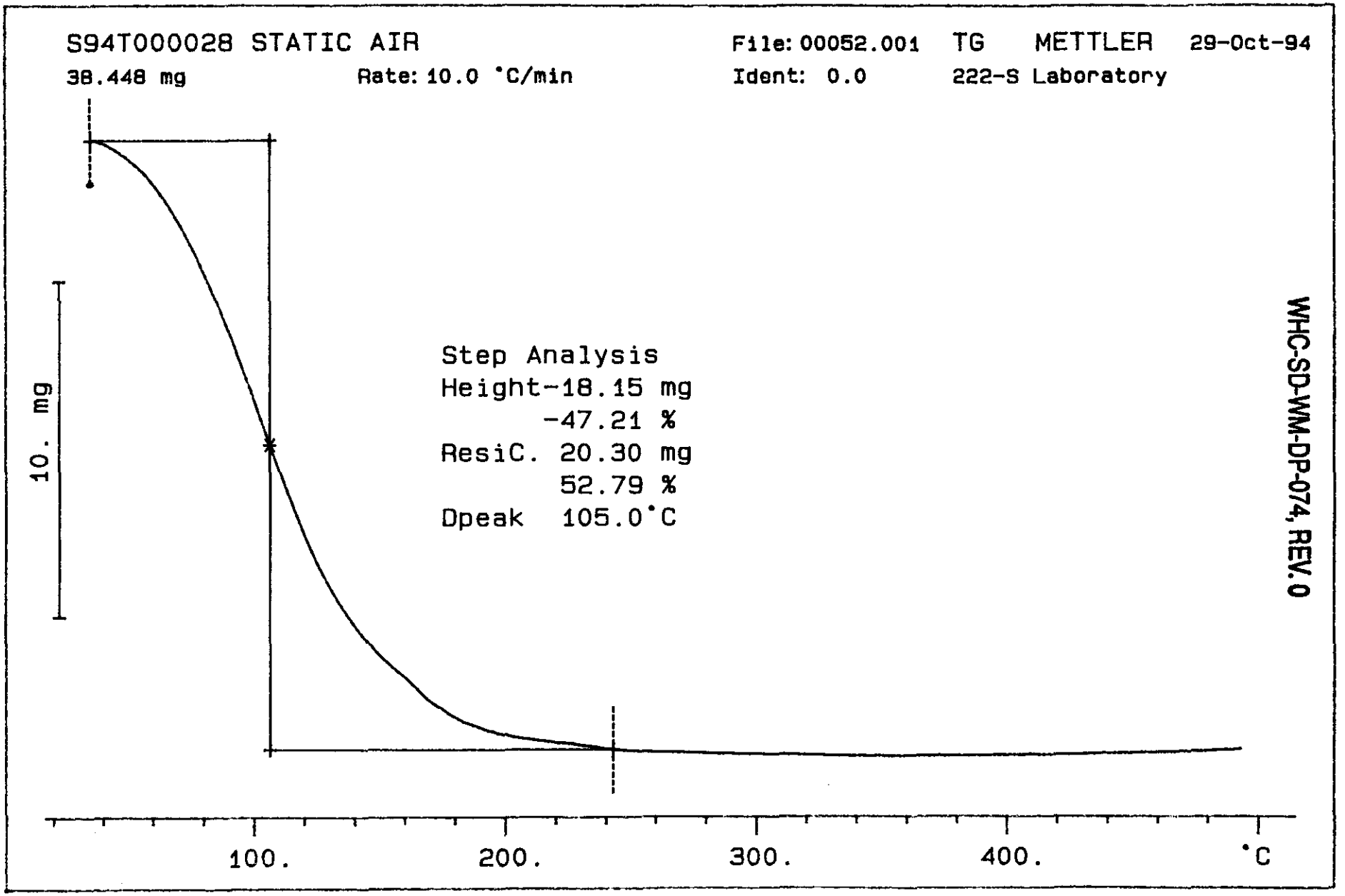
Step Analysis
Height -8.69 mg
-58.99 %
ResiC. 6.04 mg
41.01 %
Dpeak 79.0°C

Jane Fryer for Rob Meyers

WHC-SD-WM-DP-074, REV.0



WHC-SD-WM-DP-074, REV. 0


S94T000028 STATIC AIR
File: 00052.001
TG
METTLER
29-Oct-94
38.448 mg
Rate: 10.0 °C/min
Ident: 0.0
222-S Laboratory
Step Analysis
Height-18.15 mg
-47.21 %
ResiC. 20.30 mg
52.79 %
Dpeak 105.0°C
10. mg
100.
200.
300.
400.
°C

LABCORE Data Entry Template for Worklist# 102

Analyst: JLS 2 **Instrument:** TGA01 _____ **Method:** LA-560-112

Worklist Comment: Run under N2, JMF. **WHC-SD-WM-DP-074, REV. 0**

Seg Type	Sample#	Rep Al	Test	Matrix	Actual	Found	DL	Unit
1 STD			TGA-01	SOLID	~~100~~ 59.19 JMF 10/26/94	58.69	99.2% Rec N/A	%
2 SAMPLE	S94T000057	1	TGA-01	SOLID	N/A	15.27		%

Final page for worklist # 102

Jackie Steele for Jackie Steele
Analyst Signature

Date 10/26/94

Data Entry Comments:
Vibration from work overhead caused the rough trace on this sample.
This sample was performed to confirm previous low value. JS 10-28-94

Units shown for QC (SPK) may not reflect the actual units.

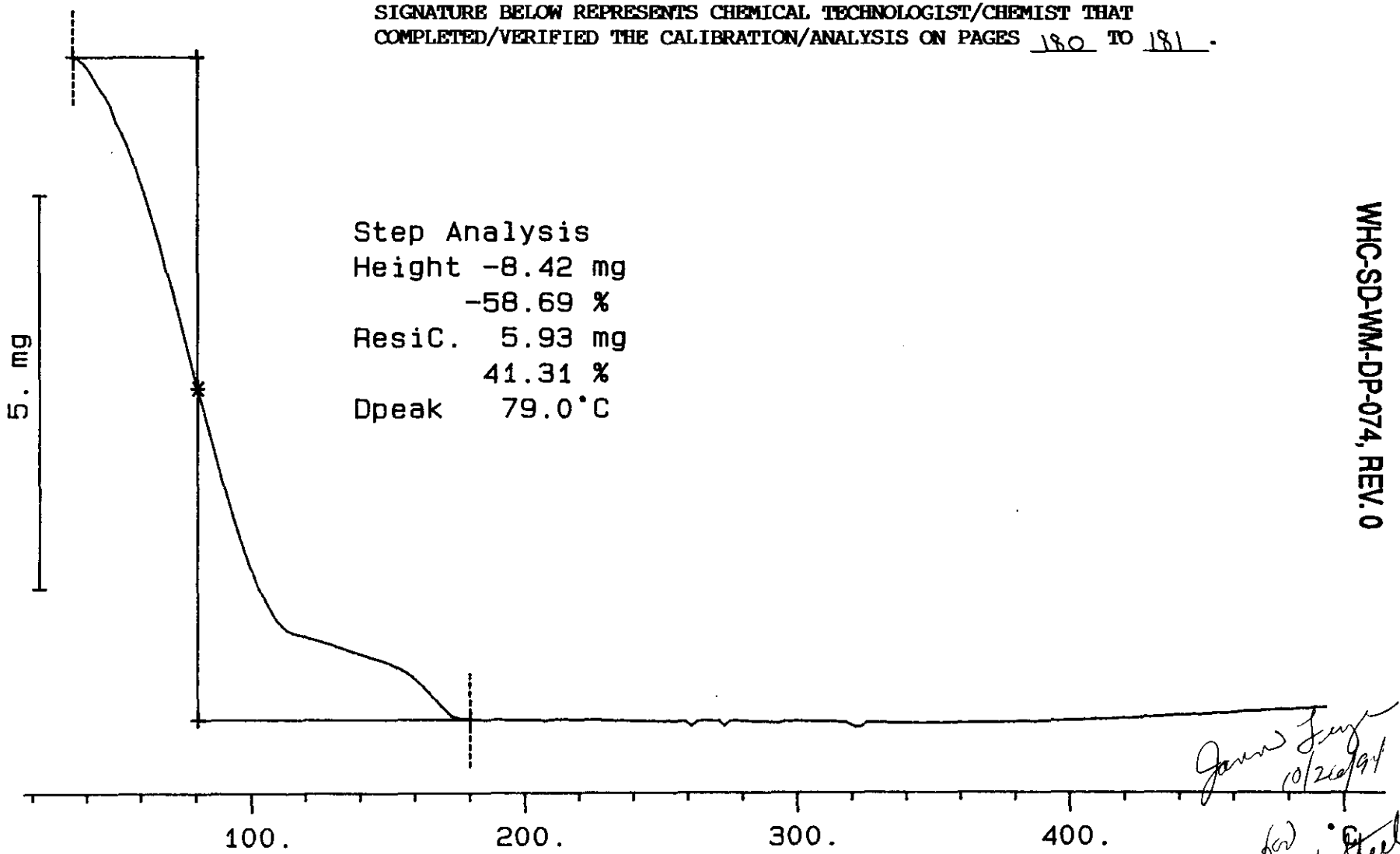
TGA STD

14.350 mg

File: 00050.001 TG METTLER 17-Oct-94

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

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 180 TO 181.

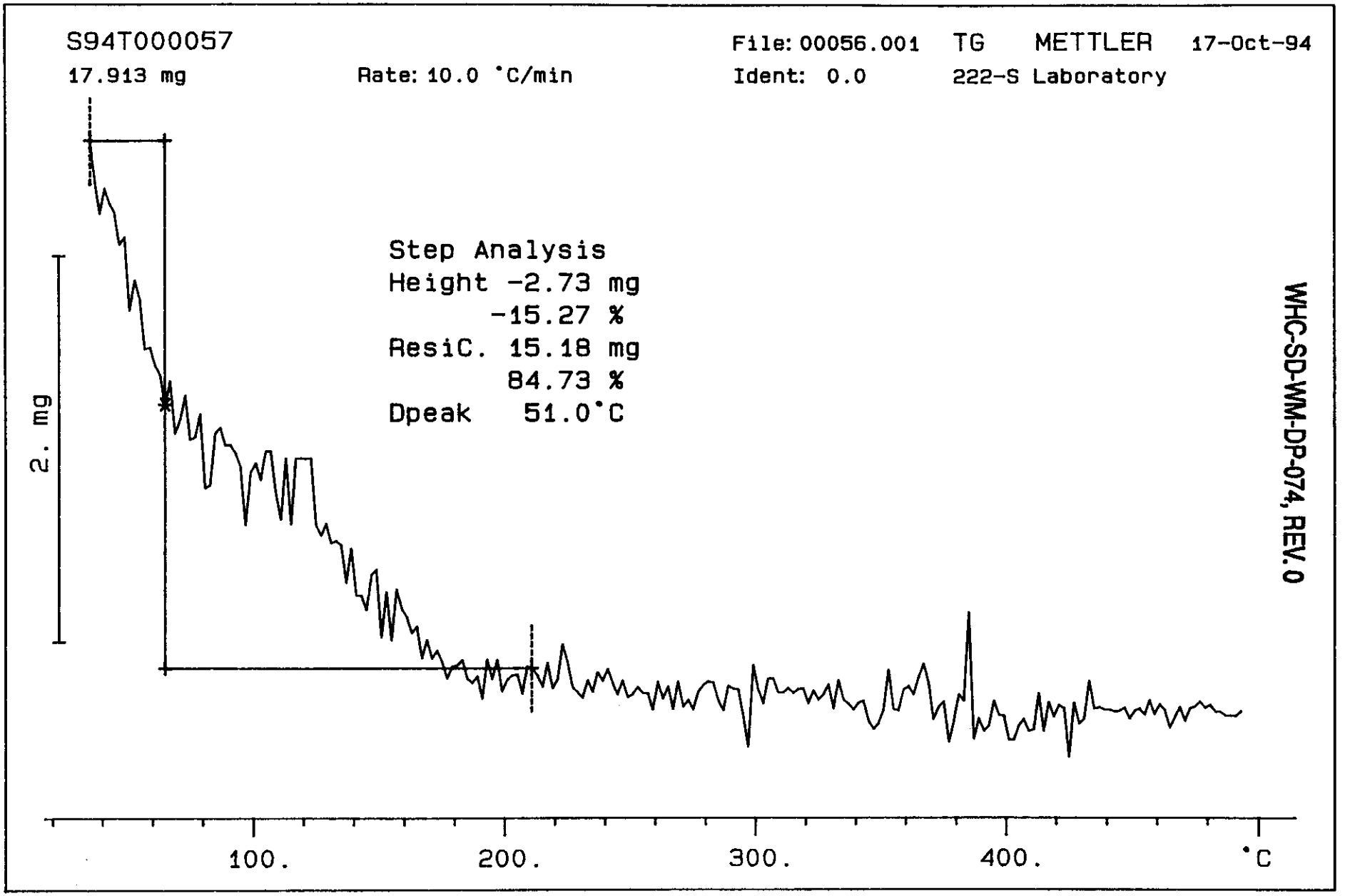


Step Analysis
Height -8.42 mg
-58.69 %
ResiC. 5.93 mg
41.31 %
Dpeak 79.0°C

WHC-SD-WM-DP-074, REV. 0

James Fry 10/26/94

for J. L. Steele



WHC-SD-WM-DP-074, REV. 0

LABCORE Data Entry Template for Worklist# 14

~ QA 2

Analyst: _____ **Instrument:** ~~DSC01~~ TGA01 JMF 10/5/94 **Method:** LA-560-112

Worklist Comment: Please run these under nitrogen, JMF.

WHC-SD-WM-DP-074, REV. 0

Seg	Type	Sample#	Rep	Al	Test	Matrix	Actual	Found	DL	Unit
1	STD				TGA-01	LIQUID	59.25	58.79	99.2% Rec N/A	%
2	SAMPLE	S94T000025	0		TGA-01	LIQUID	N/A	47.41		%
3	DUP	S94T000025			TGA-01	LIQUID	47.41	47.83	N/A	%
4	SAMPLE	S94T000032	0		TGA-01	LIQUID	N/A	48.51		%
5	DUP	S94T000032			TGA-01	LIQUID	48.51	48.54	N/A	%

Final page for worklist # 14

Analyst Signature _____ **Date** 10/3/94

Data Entry Comments: DATA ENTRY by Dan Hammond 10-4-94

Units shown for QC (SPK) may not reflect the actual units.

TGA STD

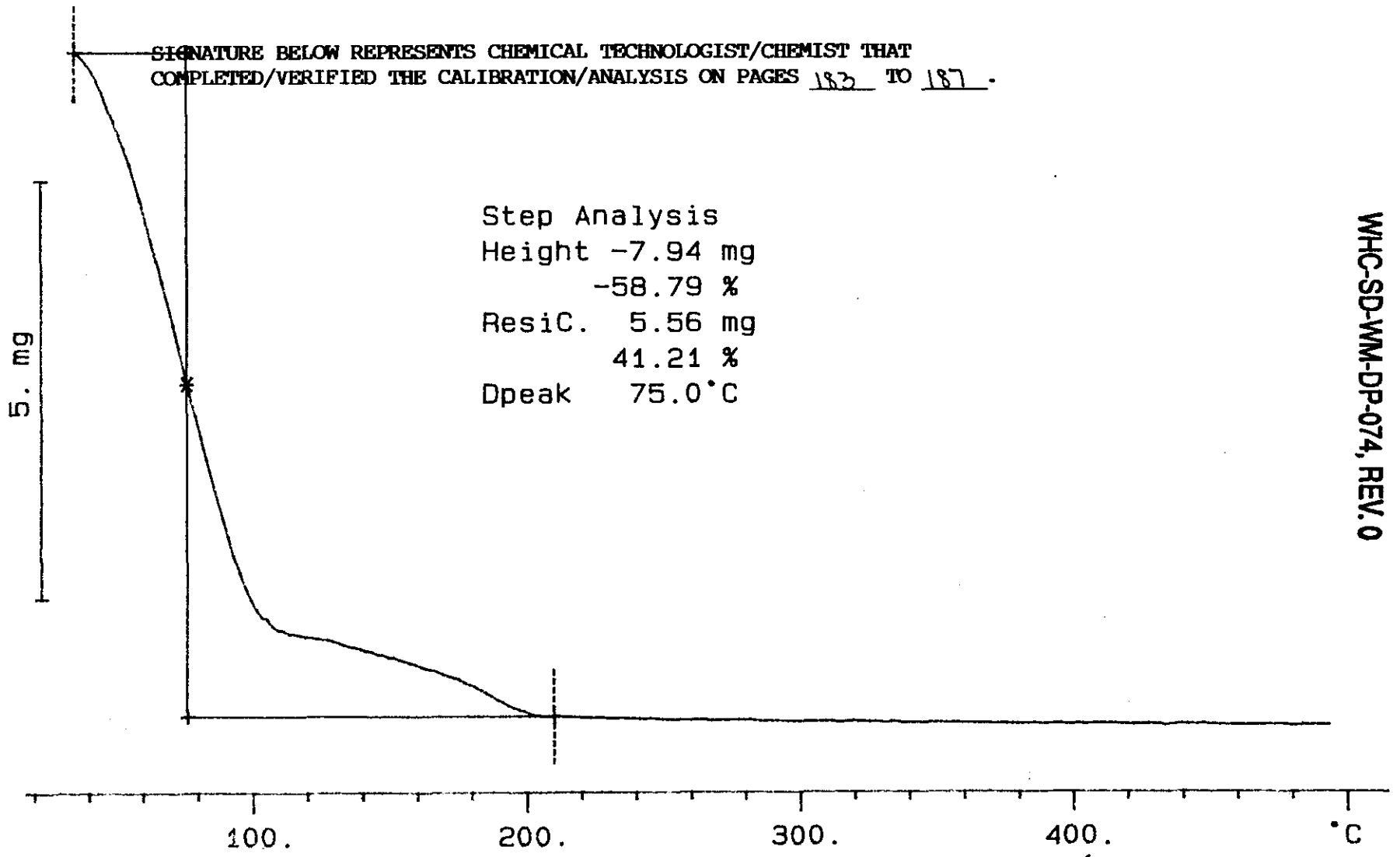
13.501 mg

Rate: 10.0 °C/min

File: 00016.001 TG METTLER 01-Oct-94

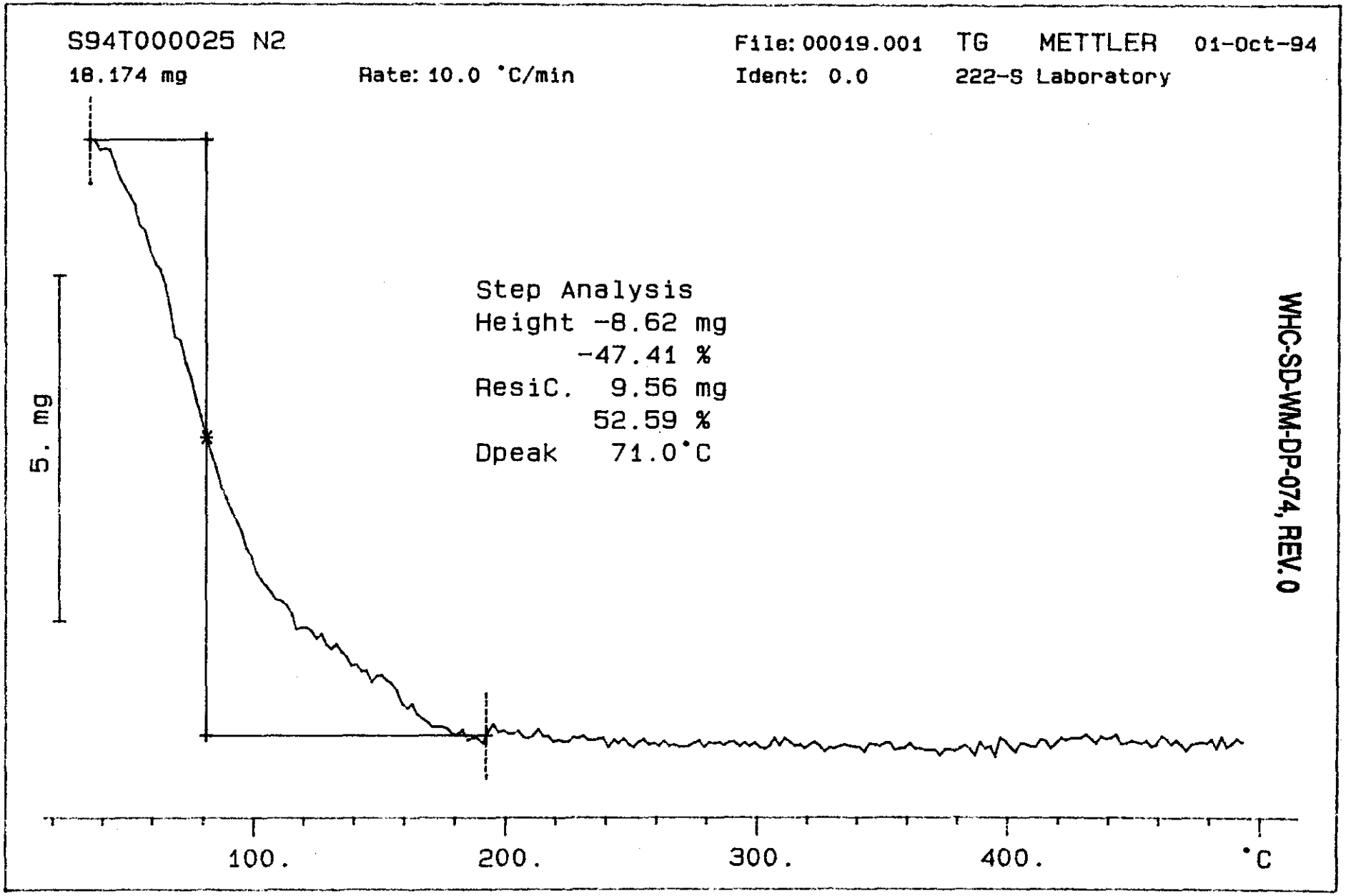
Ident: 0.0 222-S Laboratory

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 183 TO 187.

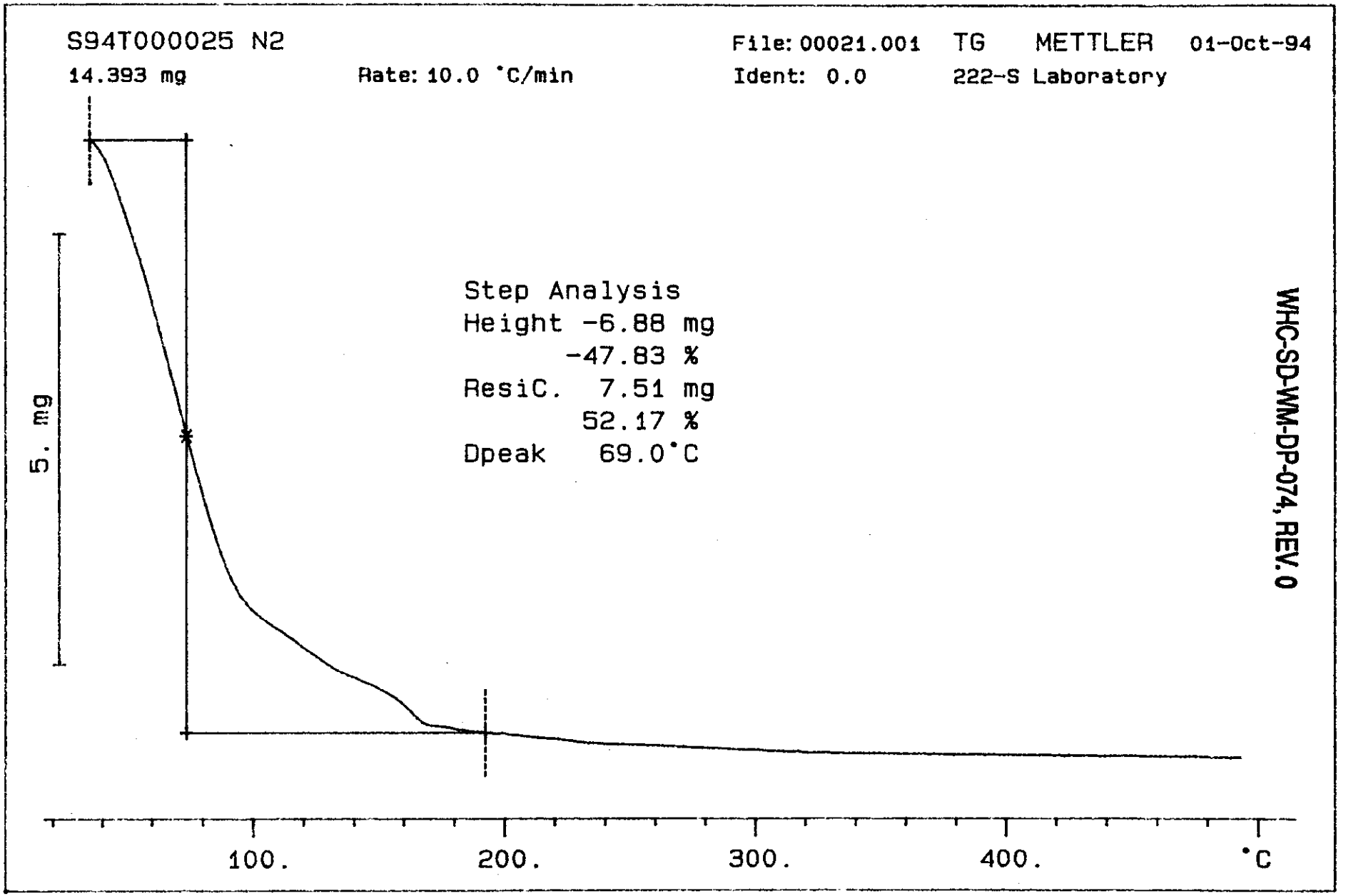


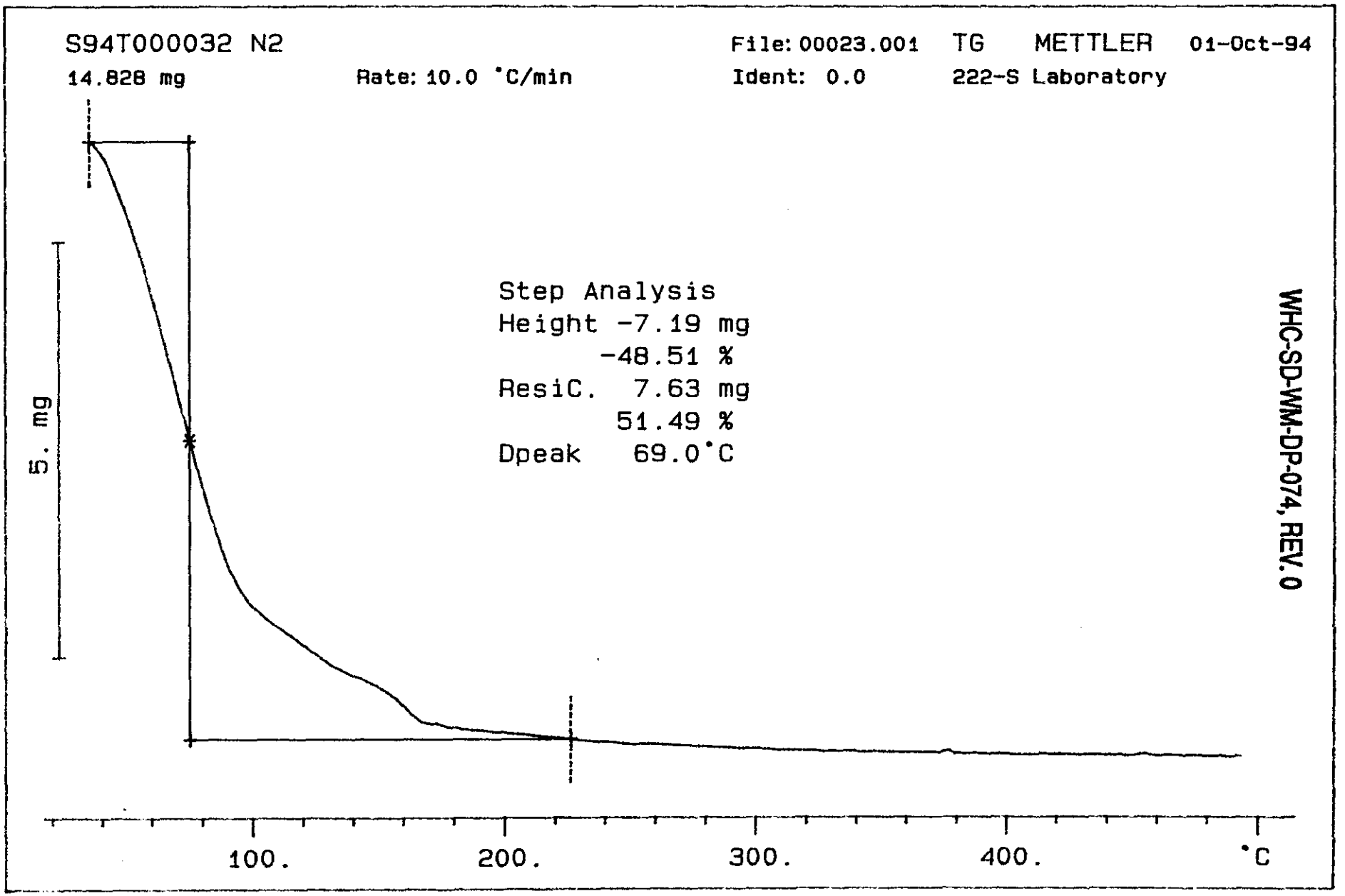
WHC-SD-WM-DP-074, REV. 0

K Vogel 10/3/94

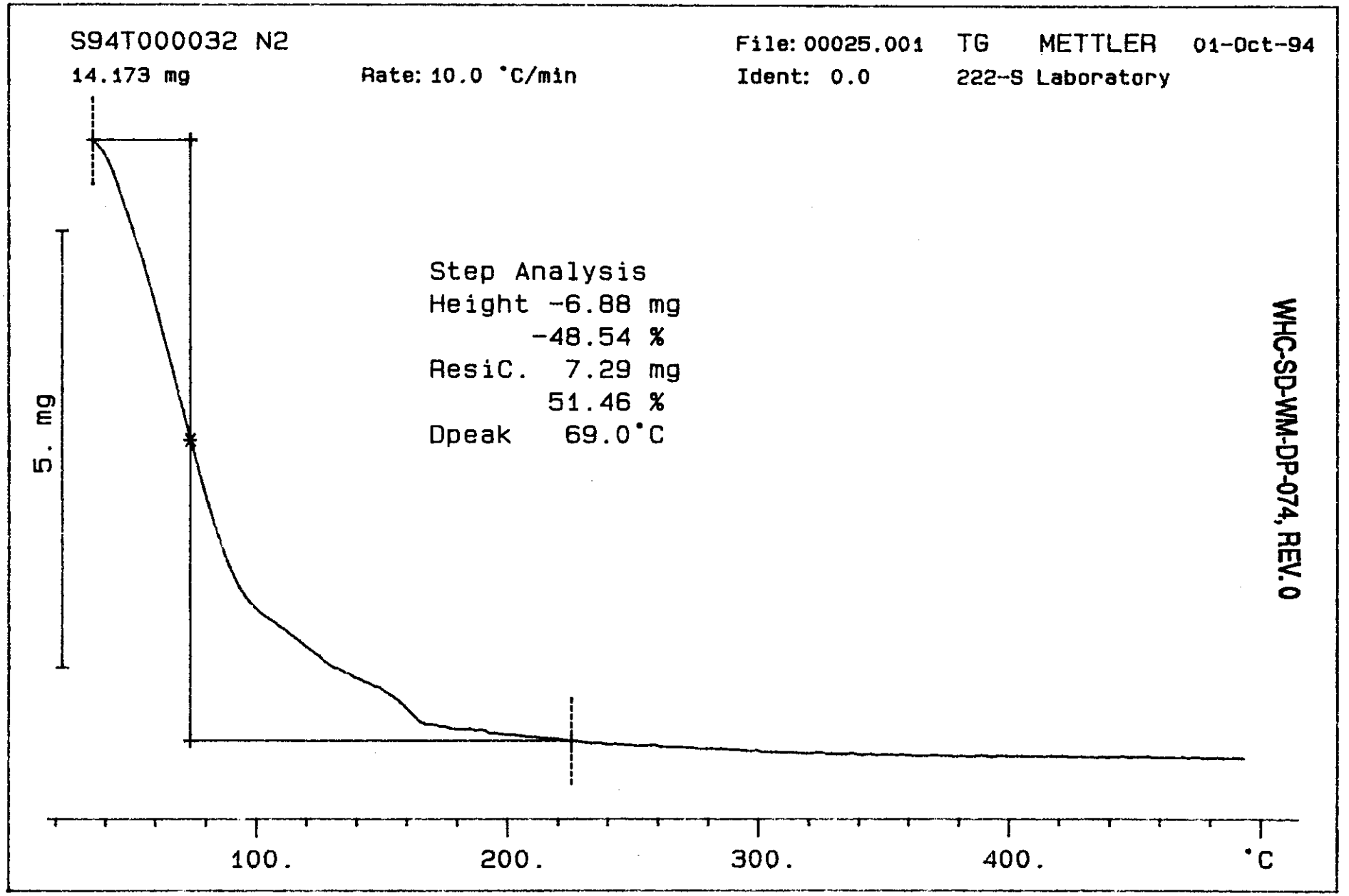


WHC-SD-WM-DP-074, REV. 0


S94T000025 N2
14.393 mg
Rate: 10.0 °C/min
File: 00021.001
TG METTLER 01-Oct-94
Ident: 0.0
222-S Laboratory
Step Analysis
Height -6.88 mg
-47.83 %
ResiC. 7.51 mg
52.17 %
Dpeak 69.0°C
5. mg
100.
200.
300.
400.
°C



WHC-SD-WM-DP-074, REV. 0



WHC-SD-WM-DP-074, REV.0

LABCORE Data Entry Template for Worklist# 50

m Qi+ 2.

Analyst: KLV **Instrument:** TGA01 **Method:** LA-560-112

Worklist Comment: Please run under N2, JMF. **WHC-SD-WM-DP-074, REV. 0**

Seg	Type	Sample#	Rep	Al	Test	Matrix	Actual	Found	DL	Unit
1	STD				TGA-01	SOLID	59.25%	58.54 (98.8% Rec)	N/A	%
2	SAMPLE	S94T000036	0		TGA-01	SOLID	N/A	20.78%		%
3	DUP STD	S94T000036	0		TGA-01	SOLID	~~20.78%~~ 59.25%	18.60% 58.76%	N/A 99.22% Rec	%
4	SAMPLE	S94T000055	0		TGA-01	SOLID	N/A	~~14.10~~ 31.74% gmF		% 10/6/94
5	DUP	S94T000055	0		TGA-01	SOLID	~~14.10~~ 31.74% gmF 10/6/94	~~9.65~~ 27.41% gmF	N/A 10/6/94	%

Final page for worklist # 50

Analyst Signature **Date** 10/04/94

Data Entered 10/5/94, JMF, not marked complete. Completed + posted 10/11/94 JMF

Data Entry Comments:
Sample S94T000055 has second step at 129°C of 17.64% on the sample and 17.76% on the duplicate. It is probably due to chemically bound water. I summed both steps as total moisture.

Units shown for QC (SPK) may not reflect the actual units.

LABCORE Data Entry Template for Worklist# 50

Analyst: _____ **Instrument:** TGA01 _____ **Method:** LA-560-112

Worklist Comment: Tga please run under N2. JMF **WHC-SD-WM-DP-074, REV. 0**

Seg	Type	Sample#	Rep	Al	Test	Matrix	Actual	Found	DL	Unit
1	STD				TGA-01	SOLID			N/A	%
2	SAMPLE	S94T000036	0		TGA-01	SOLID	N/A			%
3	DUP	S94T000036	0		TGA-01	SOLID			N/A	%
4	STD				TGA-01	SOLID			N/A	%
5	SAMPLE	S94T000055	0		TGA-01	SOLID	N/A			%
6	DUP	S94T000055	0		TGA-01	SOLID			N/A	%

Final page for worklist # 50

Analyst Signature _____ **Date** _____

Data Entry Comments: See attached worklist 50

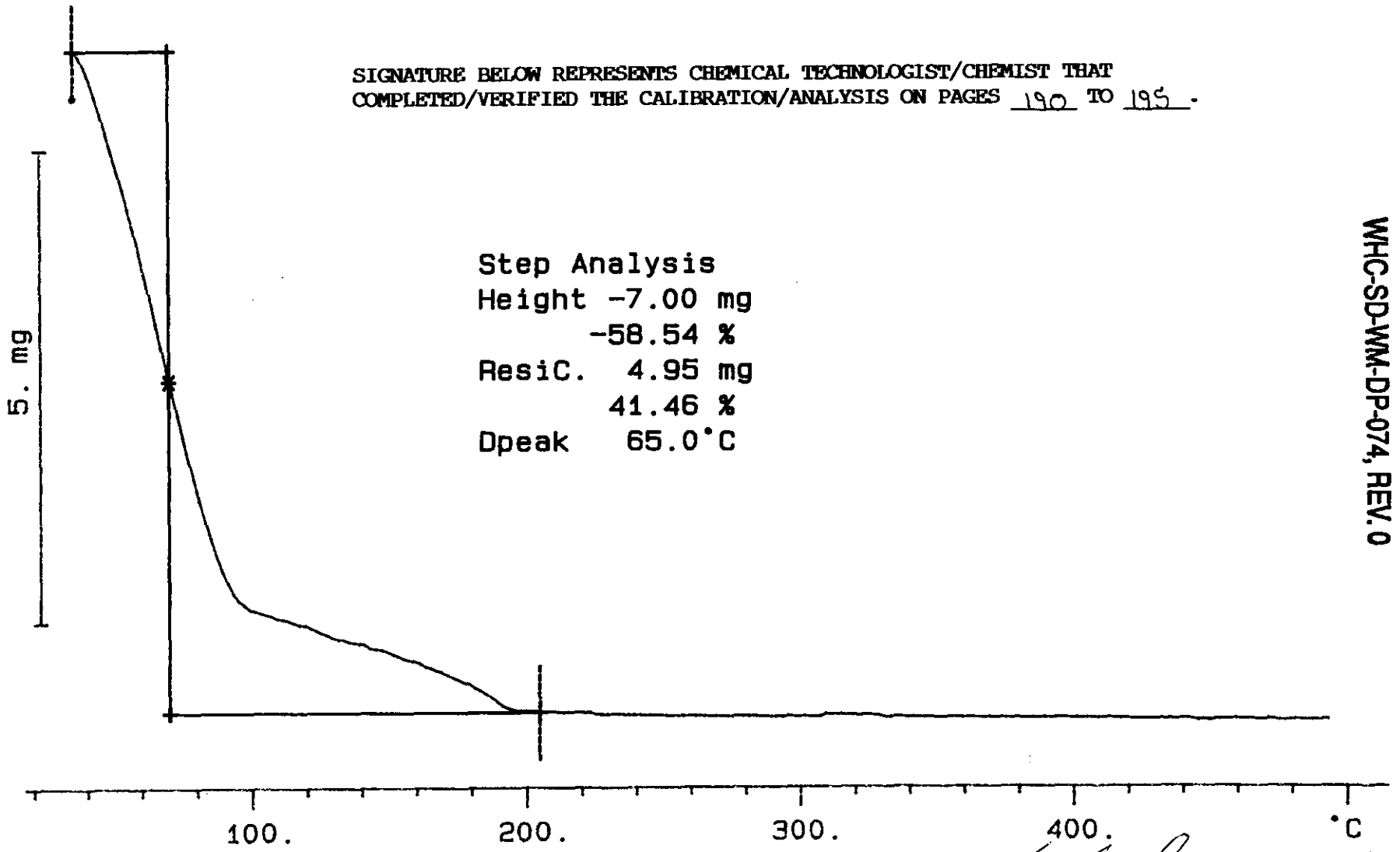
Units shown for QC (SPK) may not reflect the actual units.

TGA STD
11.950 mg

Rate: 10.0 °C/min

File: 00032.001 TG METTLER 02-Oct-94
Ident: 0.0 222-S Laboratory

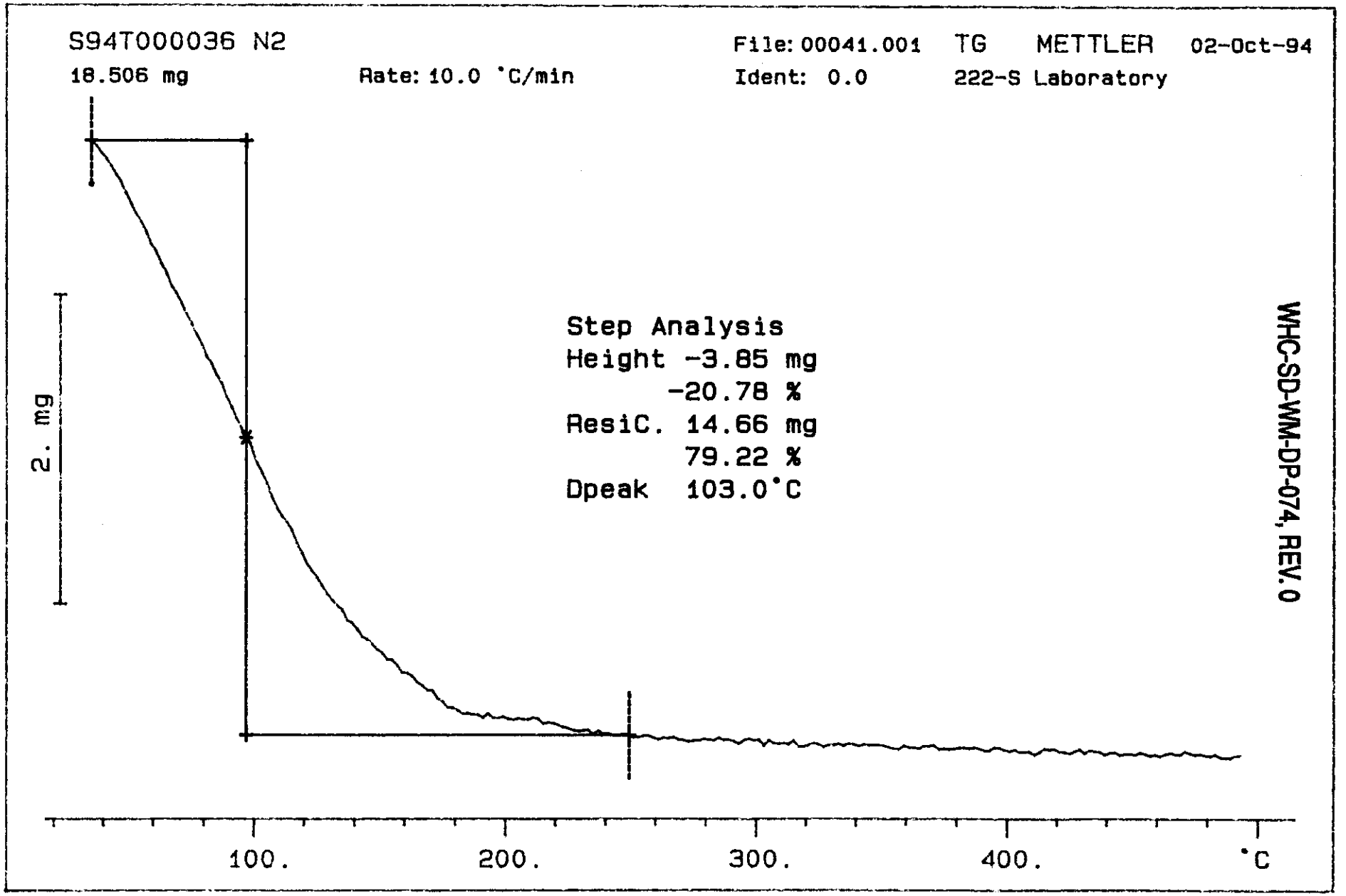
SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 190 TO 195.



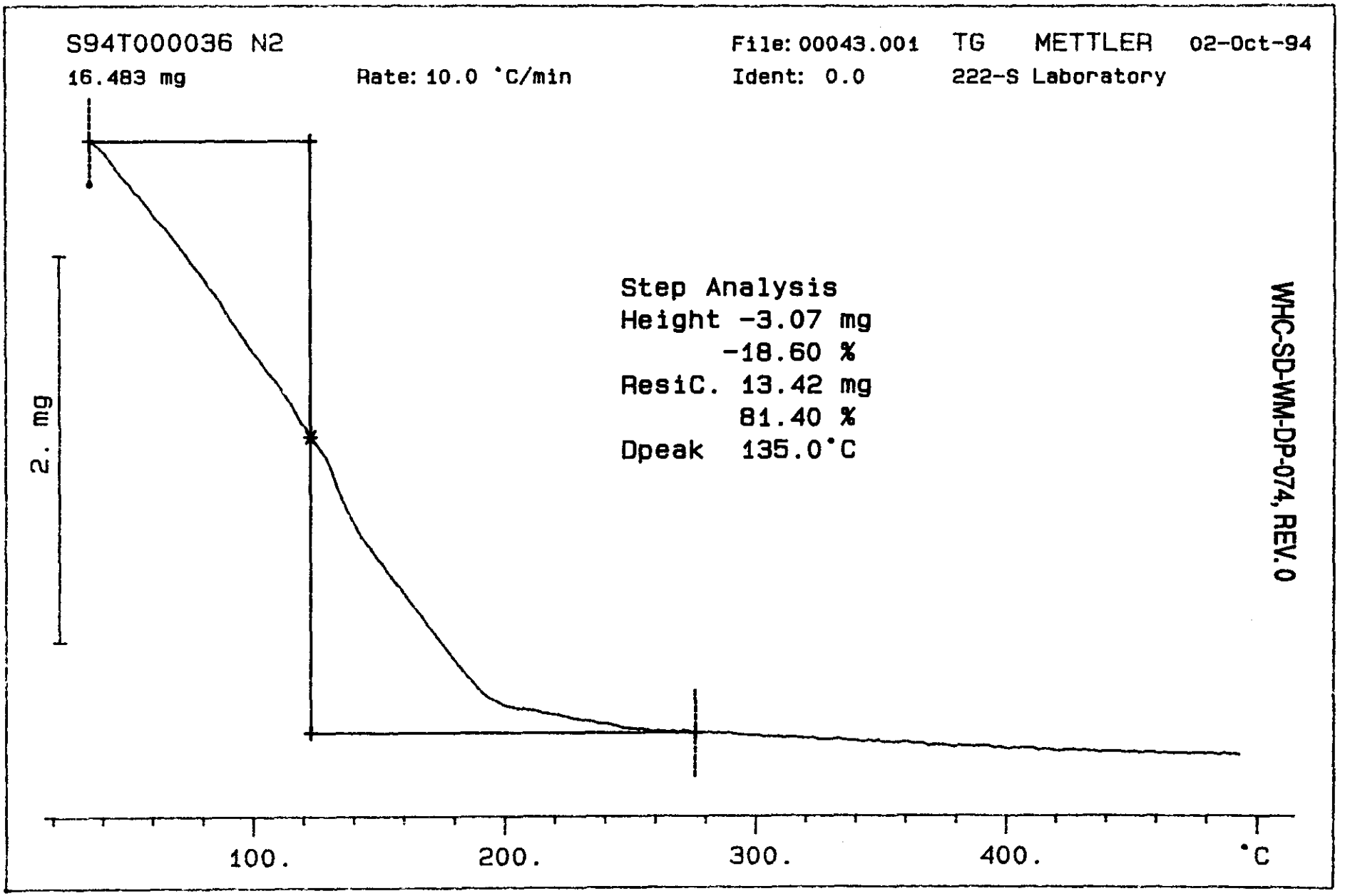
Step Analysis
Height -7.00 mg
-58.54 %
ResiC. 4.95 mg
41.46 %
Dpeak 65.0°C

WHC-SD-WM-DP-074, REV. 0

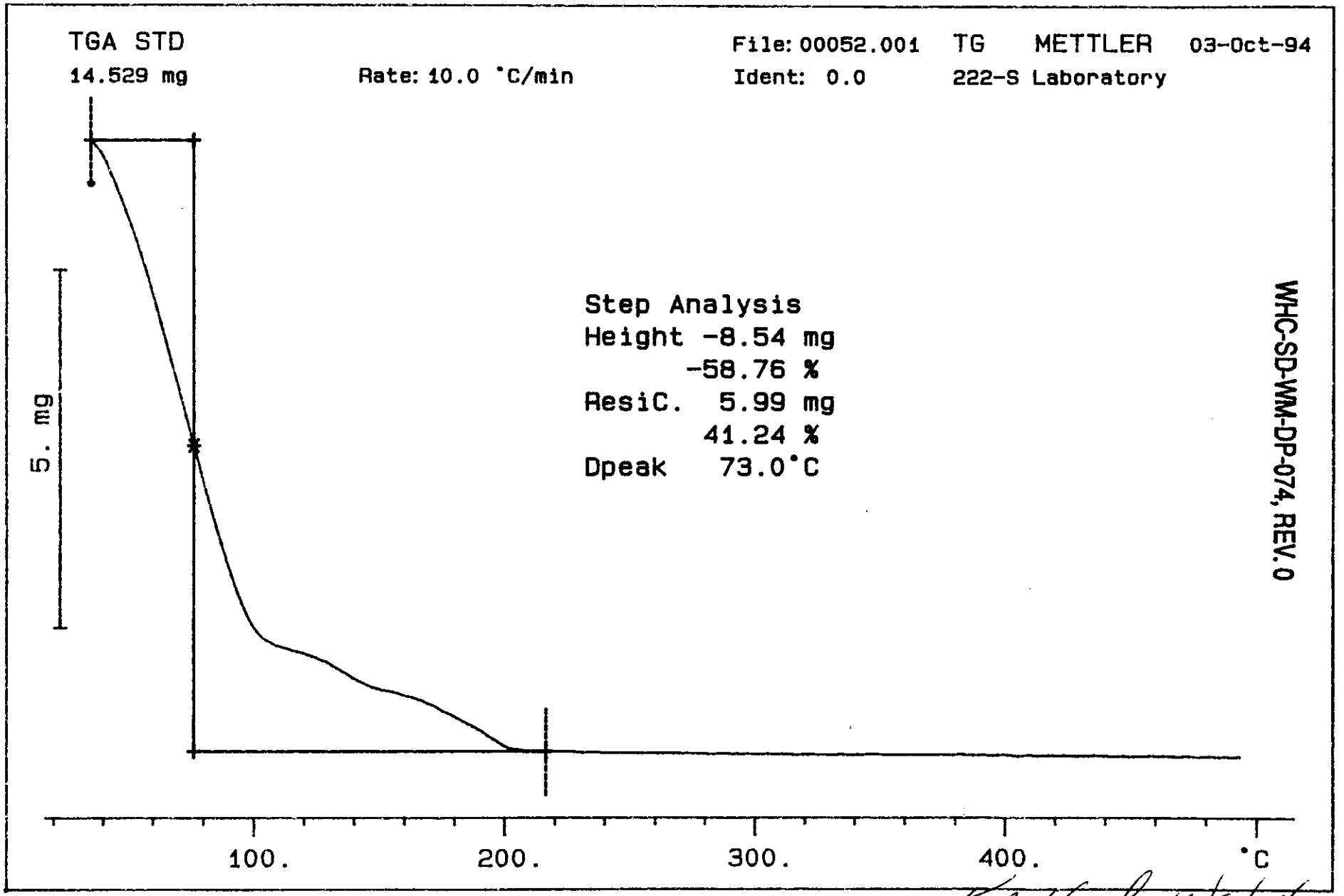
10-4-94



WHC-SD-WM-DP-074, REV.0

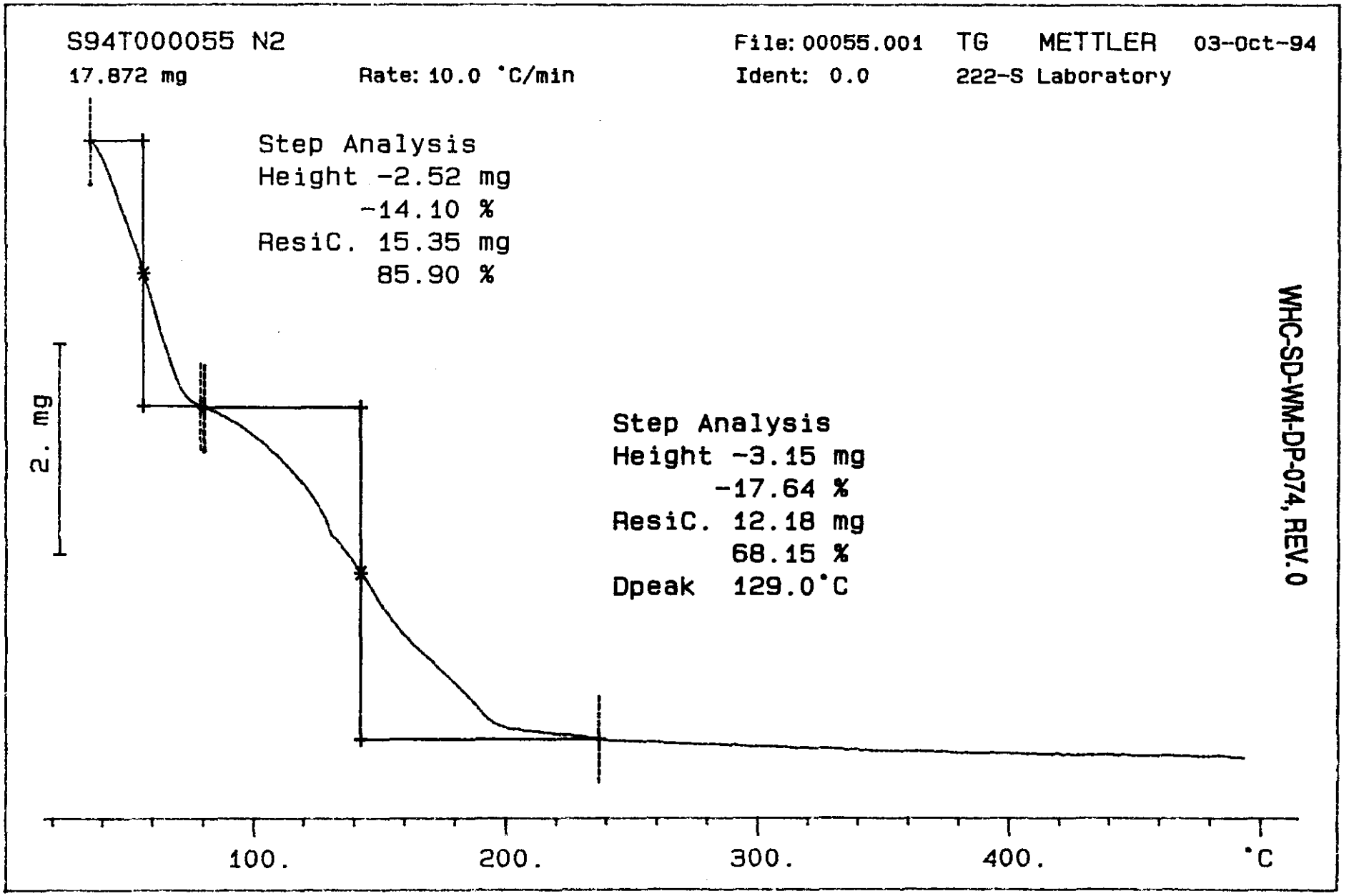


WHC-SD-WM-DP-074, REV. 0

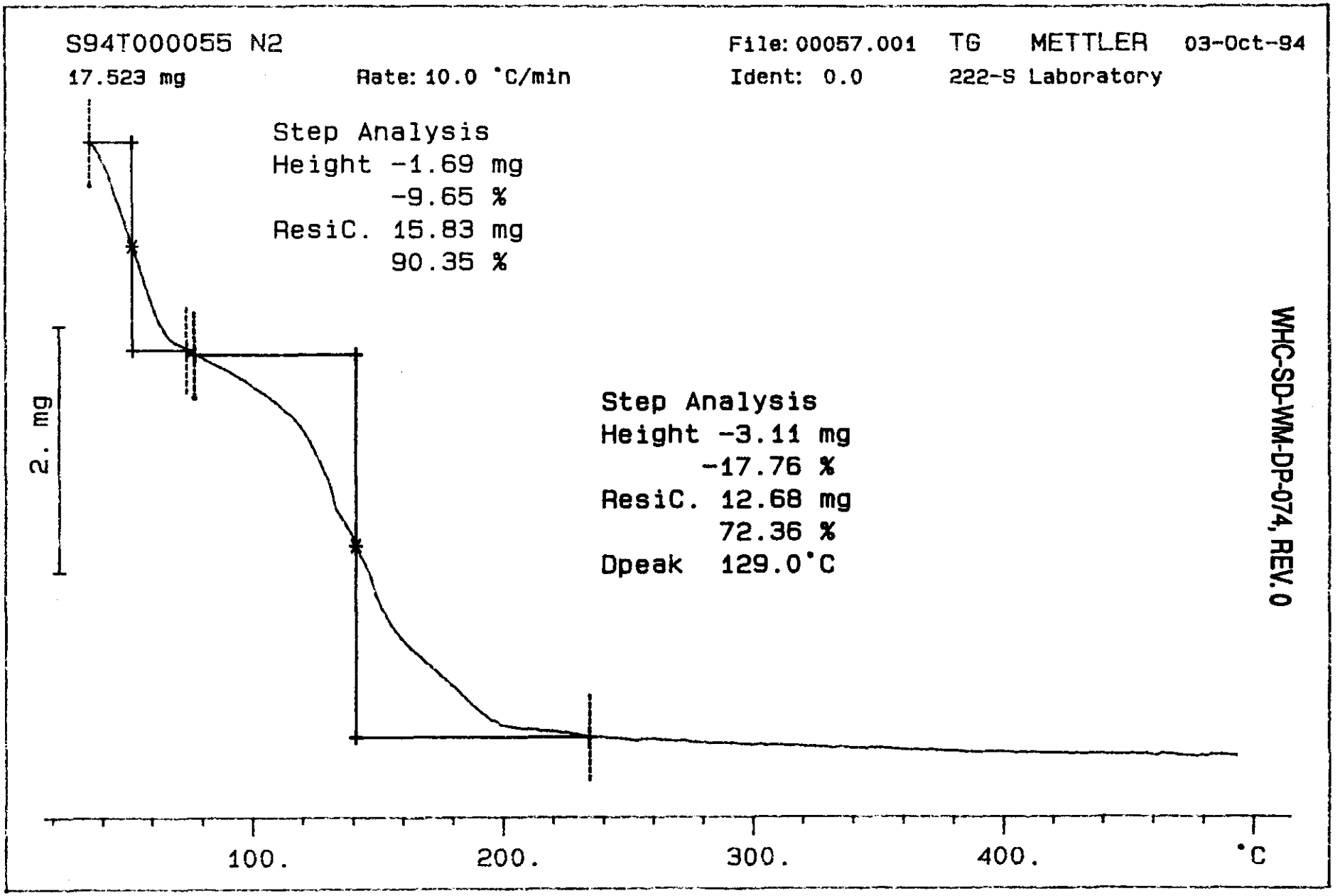


WHC-SD-WM-DP-074, REV. 0

10/5/94

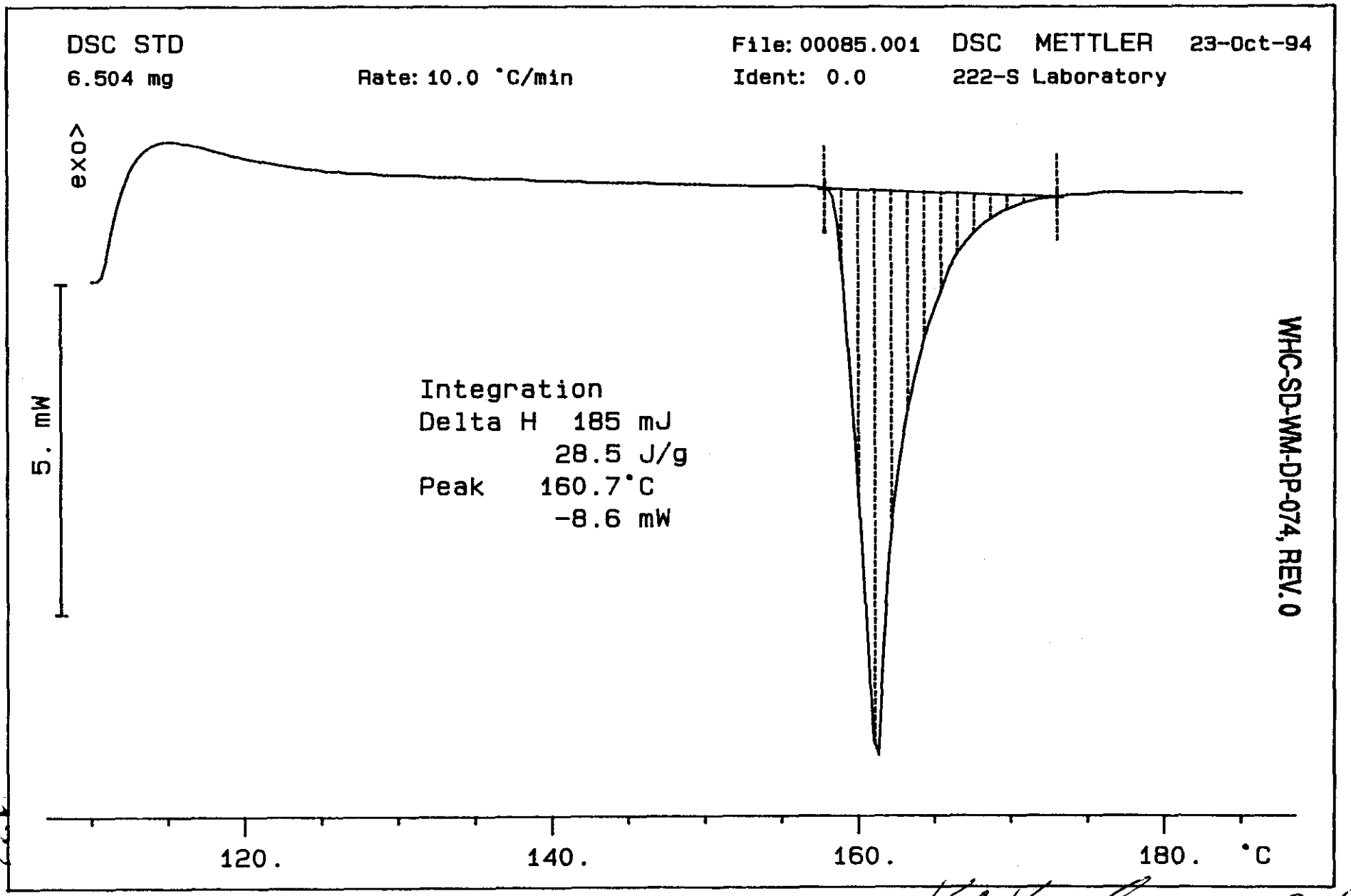


WHC-SD-WM-DP-074, REV.0



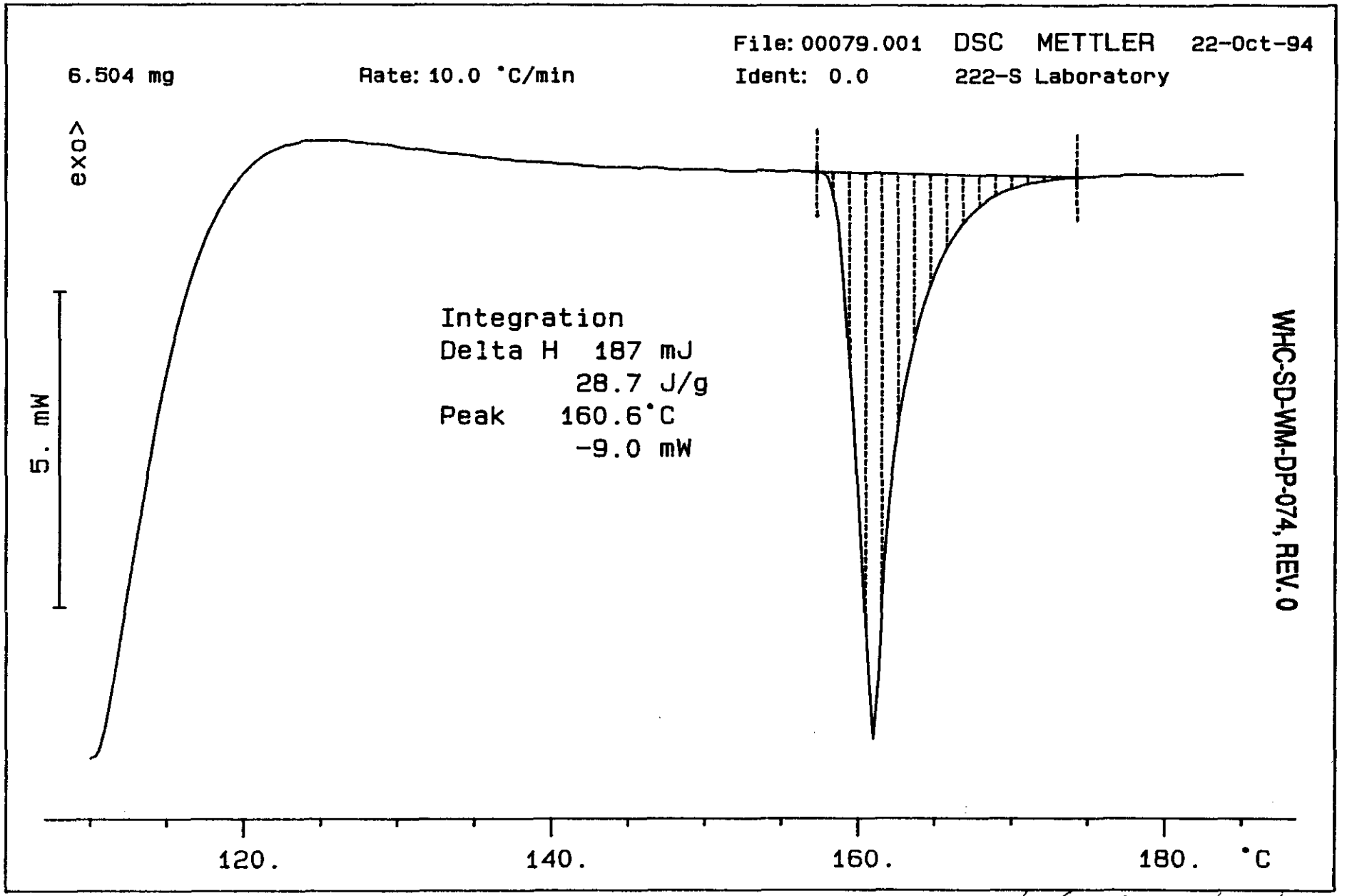
WHC-SD-WM-DP-074, REV. 0

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 127 TO 132.



WHC-SD-WM-DP-074, REV. 0

K. Vogel 10-22-94



WHC-SD-WM-DP-074, REV. 0

K Vogel 10/21/94

LABCORE Data Entry Template for Worklist# 51

Analyst: DWS **Instrument:** TGA01 _____ **Method:** LA-560-112

Worklist Comment: Please run under N2. JMF **WHC-SD-WM-DP-074, REV. 0**

Seg	Type	Sample#	Rep	Al	Test	Matrix	Actual	Found	DL	Unit
1	STD				TGA-01	SOLID	~~58.19~~ ~~58.25~~	58.11	98.2% Rec N/A	%
2	SAMPLE	S94T000056		0	TGA-01	SOLID	N/A	48.31		%
3	DUP	S94T000056		0	TGA-01	SOLID	48.31	17.18	N/A	%
4	SAMPLE std	S94T000057		0	TGA-01	SOLID	N/A 59.19	13.67 55.12	98.2% Rec	%
5	DUP	S94T000057		0	TGA-01	SOLID	13.67	17.84	N/A	%

Final page for worklist # 51

Analyst Signature _____ **Date** 10-11-94

Data Entry Comments: Data Entered & Posted & Reviewed. 10/11/94 JMF
See attached worklist for corrected worklist format. Jean Fryer 10/11/94

Units shown for QC (SPK) may not reflect the actual units.

LABCORE Data Entry Template for Worklist# 51

Analyst: _____ **Instrument:** TGA01 _____ **Method:** LA-560-112

Worklist Comment: Please run under N2. JMF

WHC-SD-WM-DP-074, REV. 0

Seg	Type	Sample#	Rep	Al	Test	Matrix	Actual	Found	DL	Unit
1	STD				TGA-01	SOLID			N/A	%
2	SAMPLE	S94T000056	0		TGA-01	SOLID	N/A			%
3	DUP	S94T000056	0		TGA-01	SOLID			N/A	%
4	SAMPLE	S94T000057	0		TGA-01	SOLID	N/A			%
5	STD				TGA-01	SOLID			N/A	%
6	DUP	S94T000057	0		TGA-01	SOLID			N/A	%

Final page for worklist # 51

Analyst Signature _____ **Date** _____

Data Entry Comments: See attached worklist 51 for data. JMF

Units shown for QC (SPK) may not reflect the actual units.

TGA STD

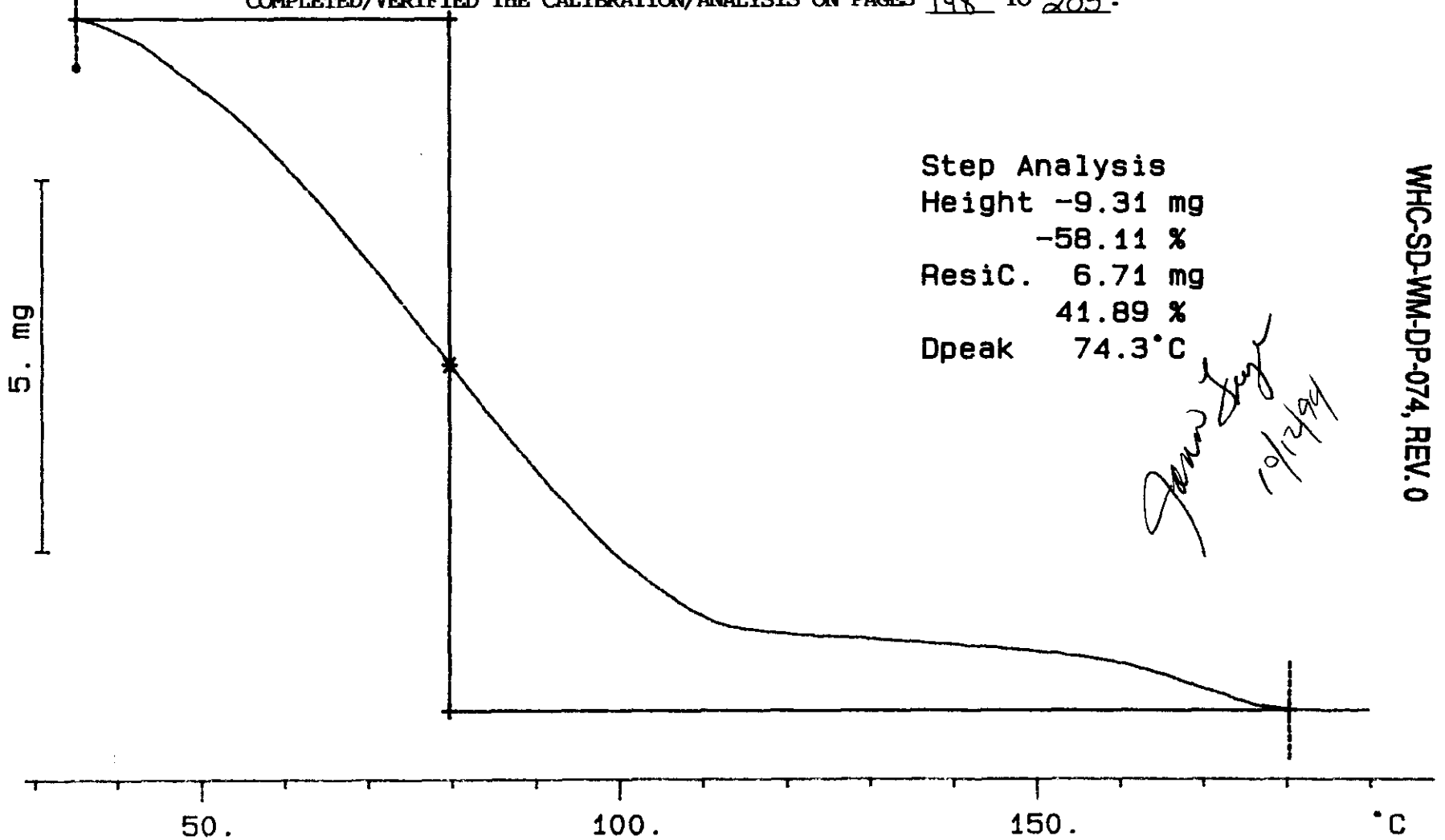
16.016 mg

Rate: 10.0 °C/min

File: 00045.001 TG METTLER 02-Oct-94

Ident: 0.0 222-S Laboratory

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 198 TO 203.



Step Analysis

Height -9.31 mg

-58.11 %

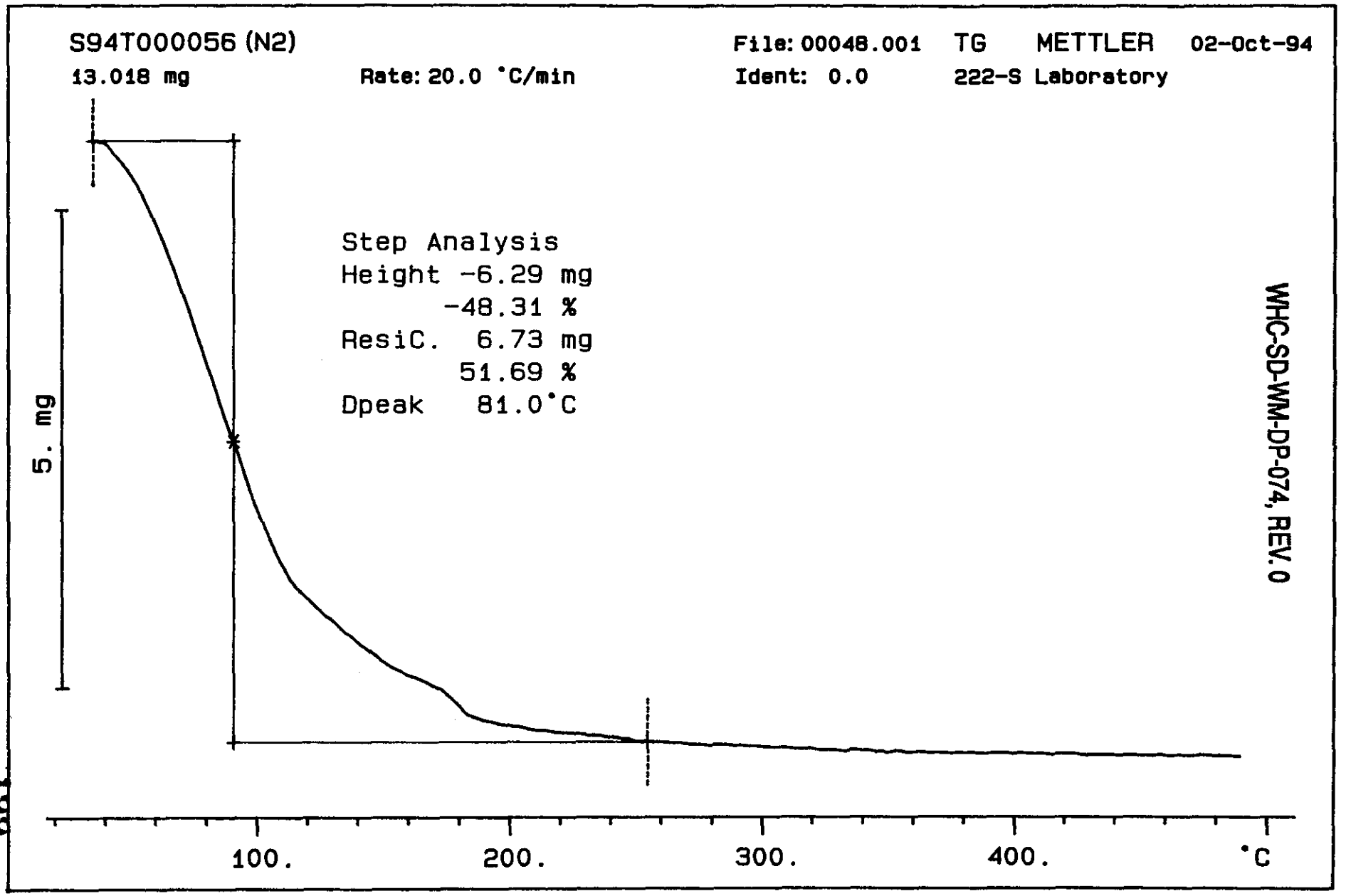
ResiC. 6.71 mg

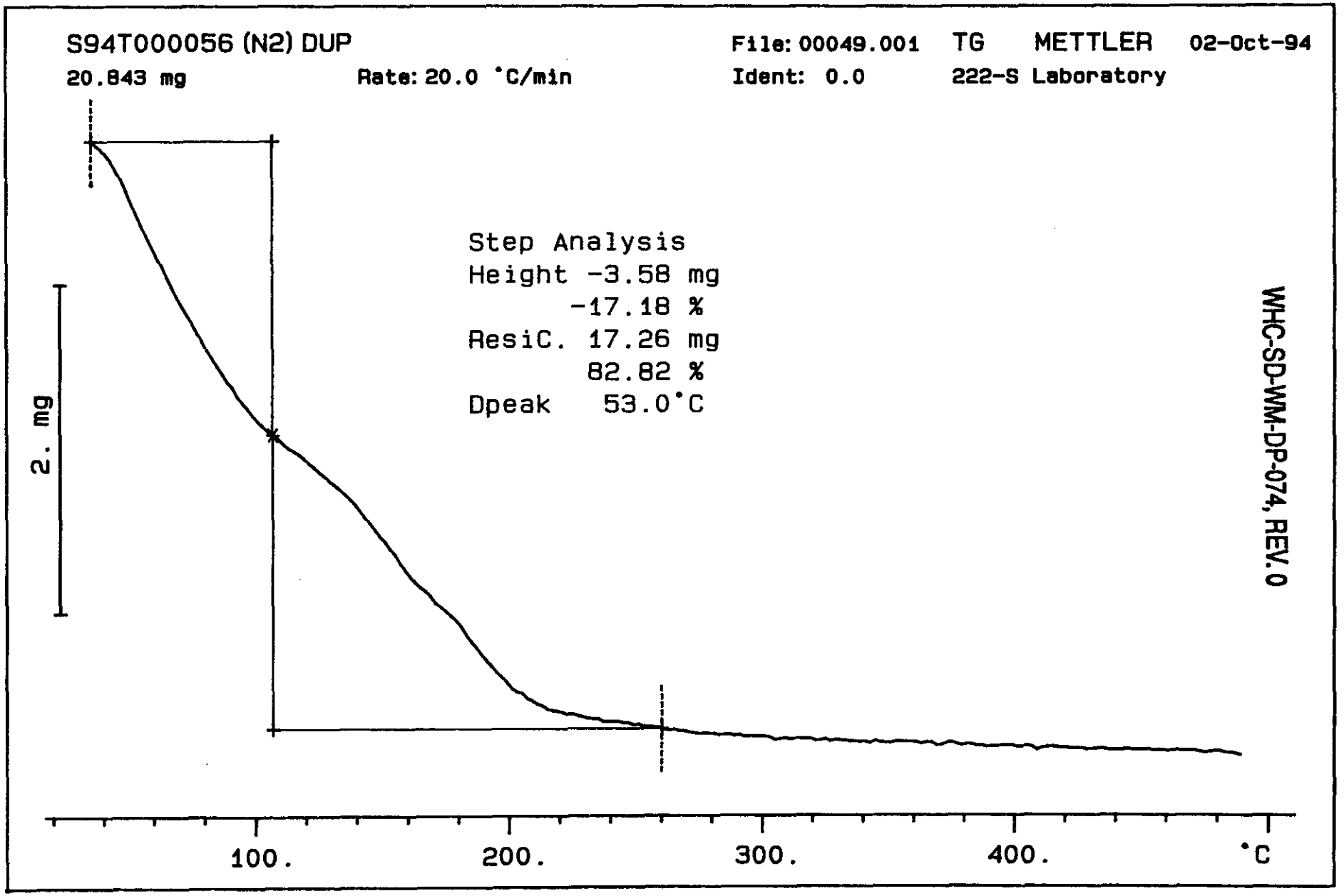
41.89 %

Dpeak 74.3°C

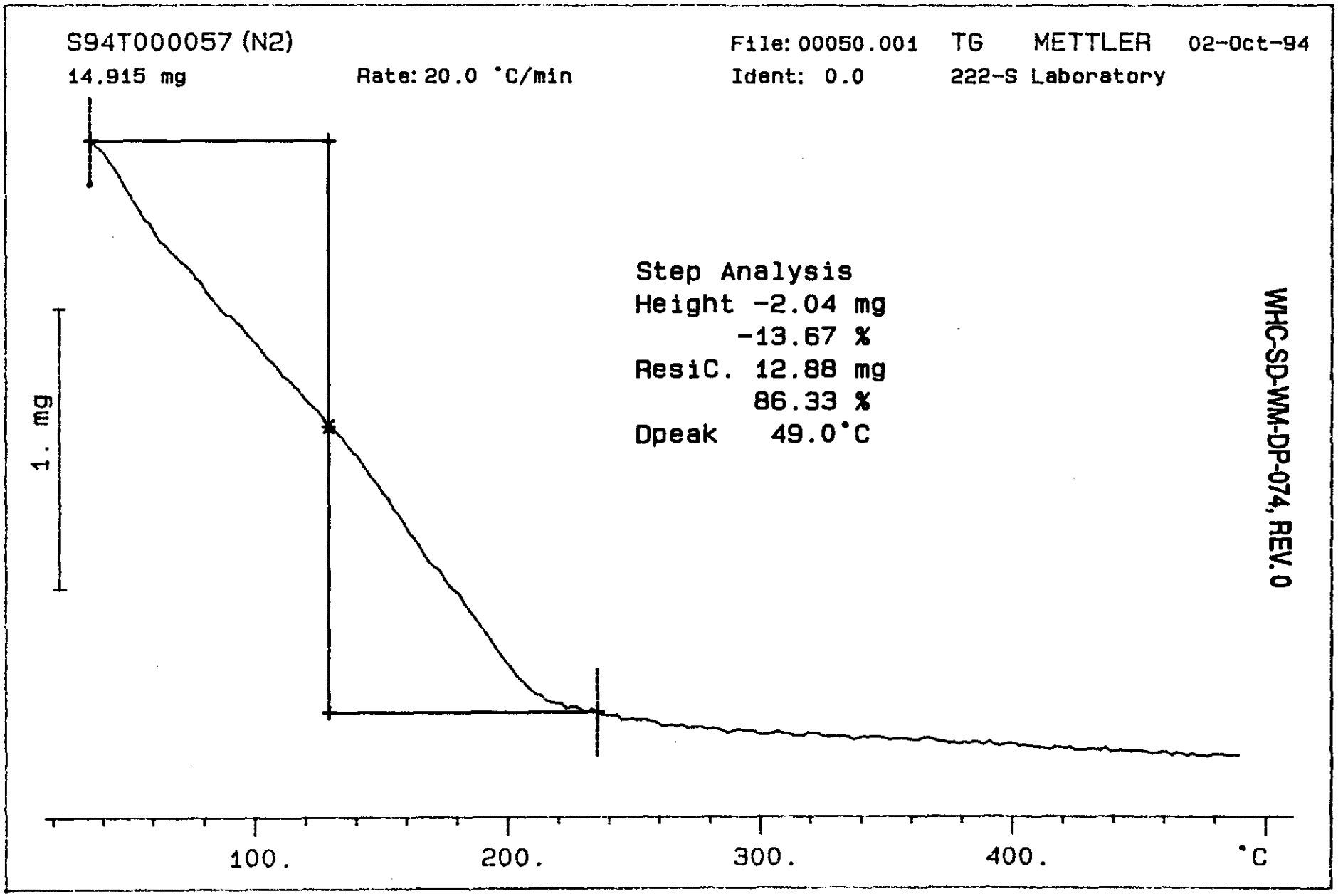
10/2/94

WHC-SD-WM-DP-074, REV. 0

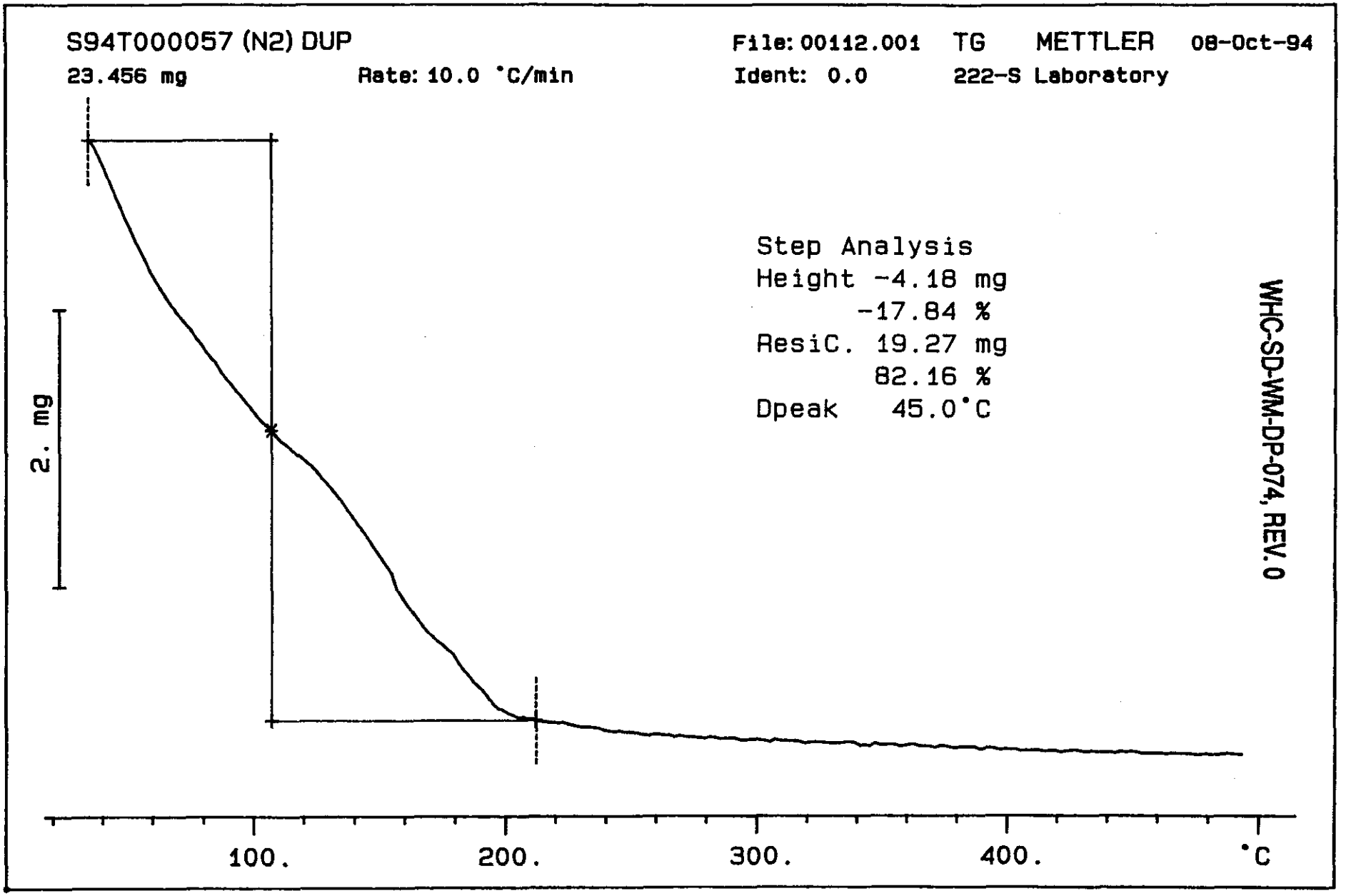

S94T000056 (N2)
13.018 mg
Rate: 20.0 °C/min
File: 00048.001
TG
METTLER
02-Oct-94
Ident: 0.0
222-S Laboratory
Step Analysis
Height -6.29 mg
-48.31 %
ResiC. 6.73 mg
51.69 %
Dpeak 81.0°C
5. mg
100.
200.
300.
400.
°C



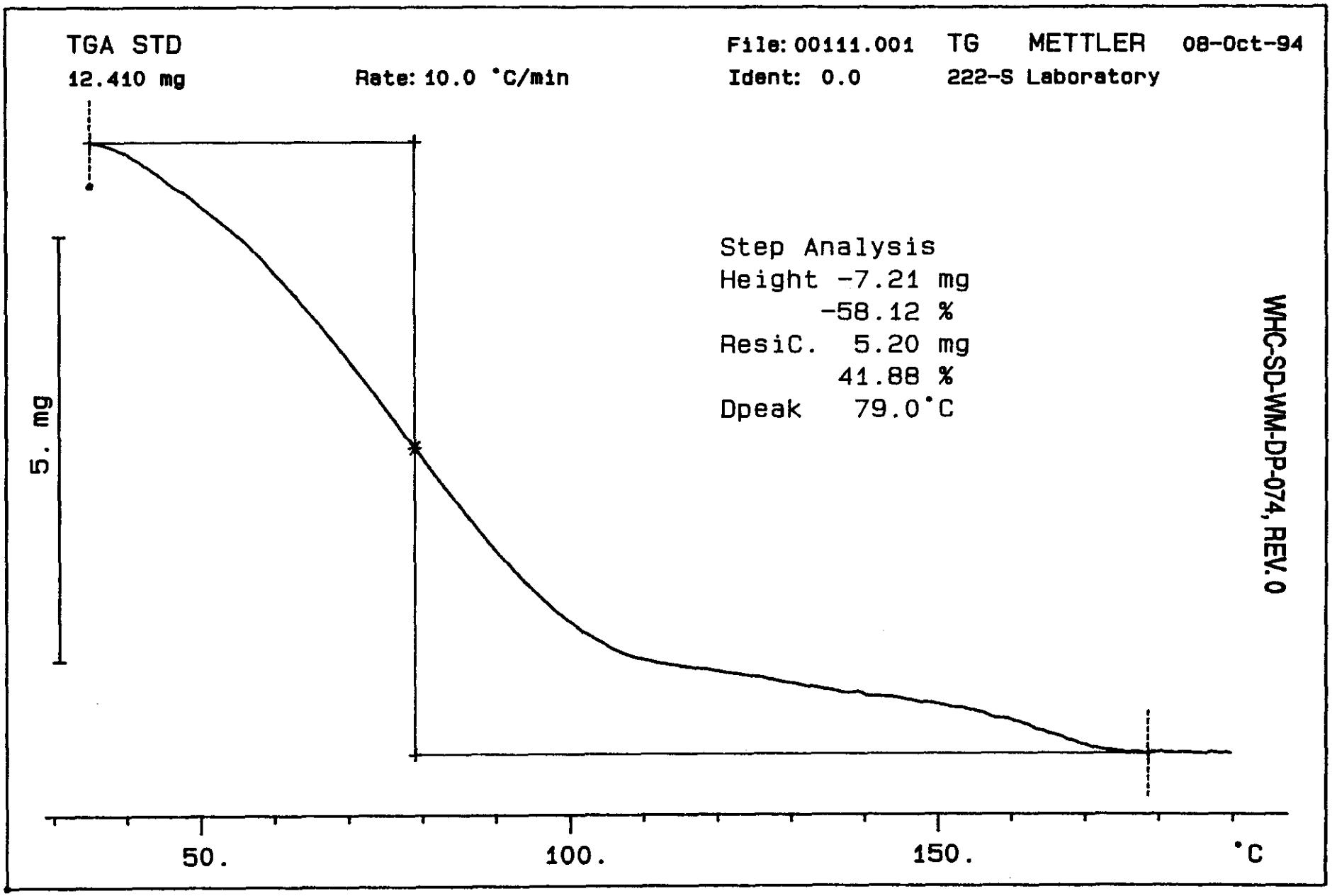
WHC-SD-WM-DP-074, REV.0



WHC-SD-WM-DP-074, REV. 0



WHC-SD-WM-DP-074, REV. 0



WHC-SD-WM-DP-074, REV. 0

m QH

LABCORE Data Entry Template for Worklist# 140

Analyst: DWS **Instrument:** TGA01 _____ **Method:** LA-560-112

Worklist Comment: TGA, mettler, run under N2. JMF WHC-SD-WM-DP-074, REV. 0

Seg	Type	Sample#	Rep	Al	Test	Matrix	Actual	Found	DL	Unit
1	STD				TGA-01	SOLID	59.19	59.00	99.7% N/A	%
2	SAMPLE	S94T000056	1		TGA-01	SOLID	N/A	15.3		%

Final page for worklist # 140

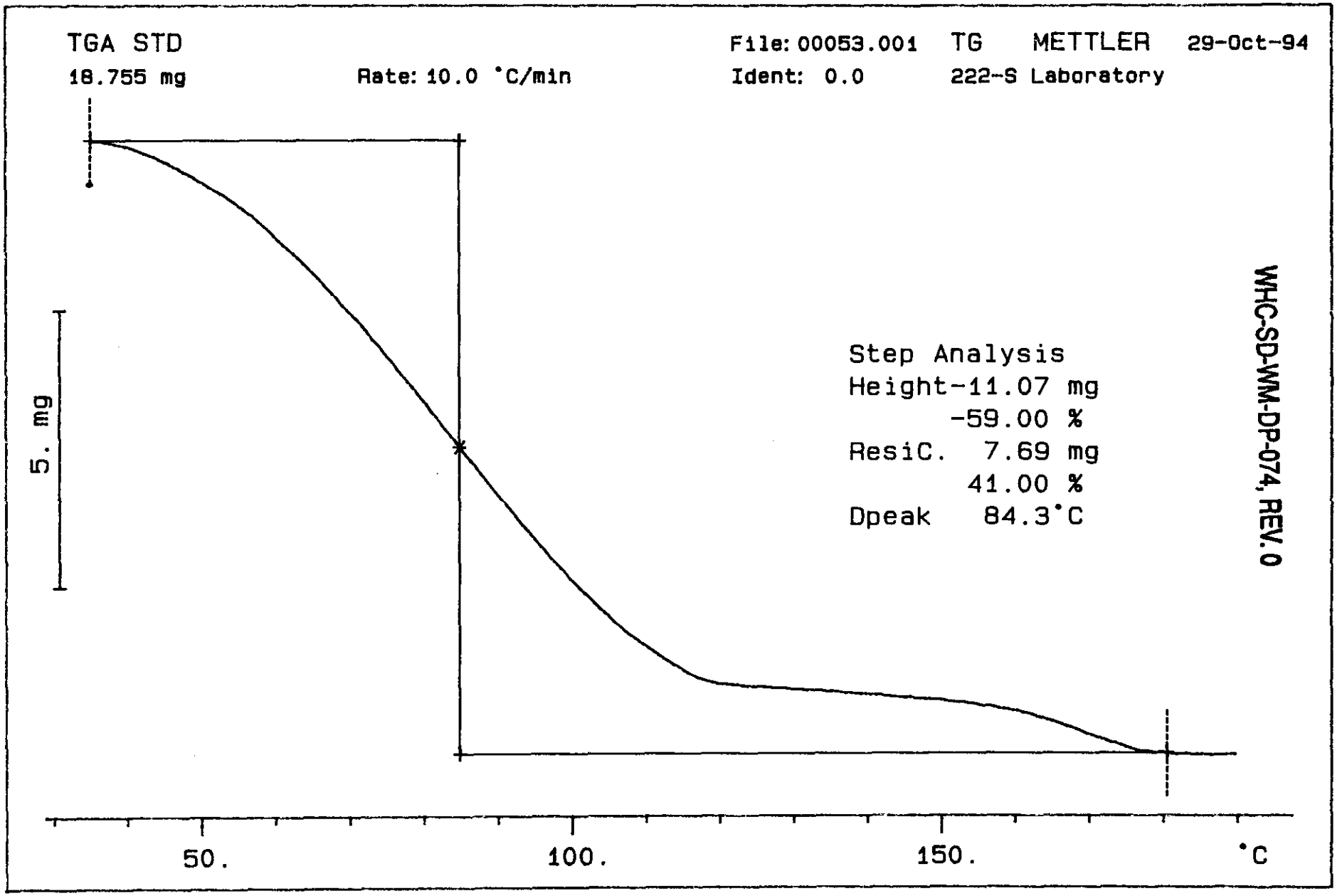
Jann Fuge for Dave Smith
Analyst Signature

11/1/94
Date

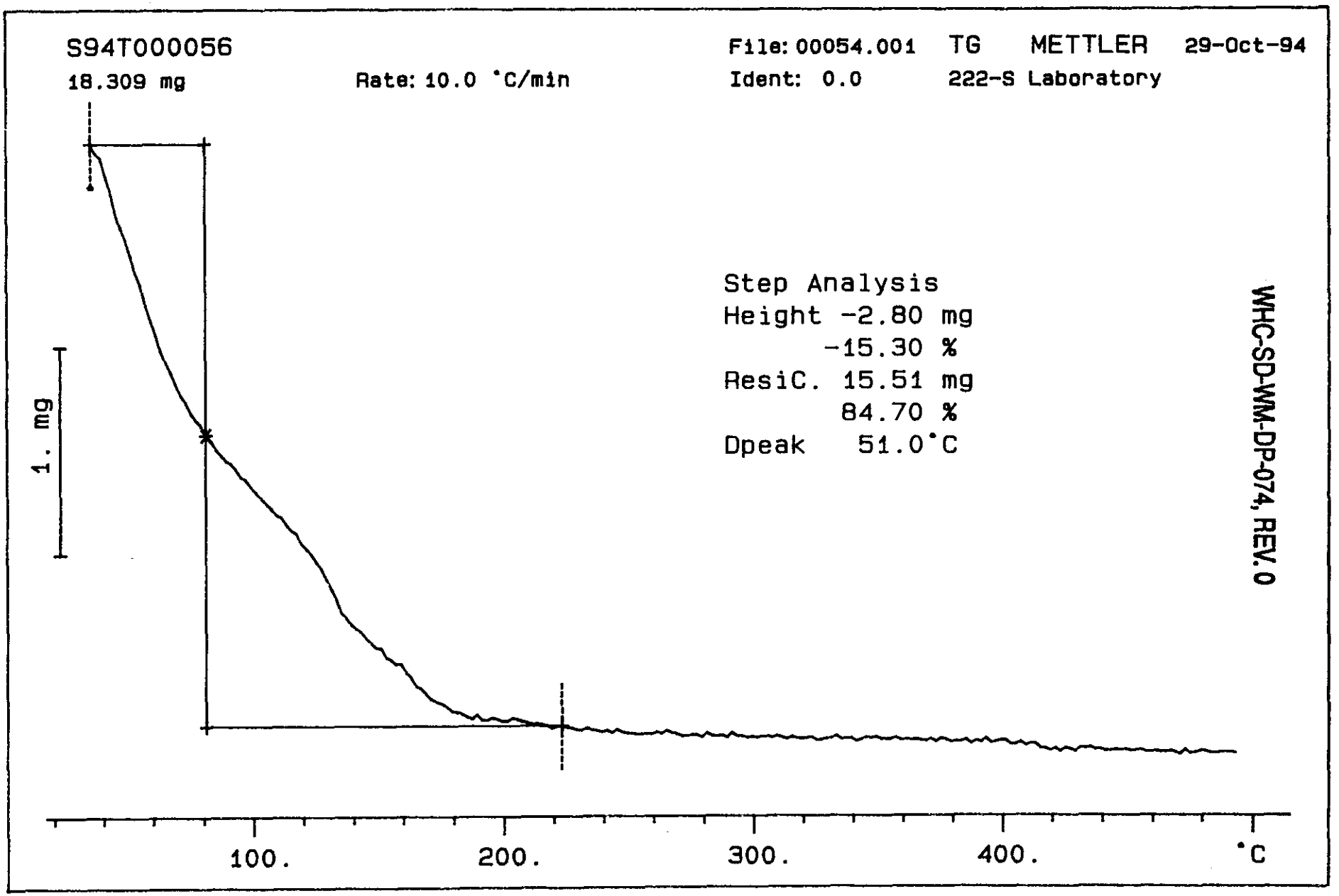
Entered and posted 11/1/94. J M Fuge
Data Entry Comments:

Units shown for QC (SPK) may not reflect the actual units.

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 205 TO 206.



WHC-SD-WM-DP-074, REV. 0



WHC-SD-WM-DP-074, REV. 0

LABCORE Data Entry Template for Worklist# 52

Analyst: KLV **Instrument:** TGA01 **Method:** LA-560-112

Worklist Comment: Please run under N2. JMF **WHC-SD-WM-DP-074, REV. 0**

Seg	Type	Sample#	Rep	Al	Test	Matrix	Actual	Found	DL	Unit
1	STD				TGA-01	SOLID	59.25	58.77	99.2% Rec N/A	%
2	SAMPLE	S94T000058		0	TGA-01	SOLID	N/A	46.03		%
3	DUP	S94T000058		0	TGA-01	SOLID	46.03	44.64	N/A	%
4	STD				TGA-01	SOLID	59.25	58.38	98.5% Rec N/A	%
5	SAMPLE	S94T000063		0	TGA-01	SOLID	N/A	44.33		%
6	DUP	S94T000063		0	TGA-01	SOLID	44.33	43.10	N/A	%

Final page for worklist # 52

Analyst Signature **Date** 10-20-94

Entered + Reviewed JMF 10/26/94

Data Entry Comments:

Units shown for QC (SPK) may not reflect the actual units.

LABCORE Data Entry Template for Worklist# 52

Analyst: _____ **Instrument:** TGA01 _____ **Method:** LA-560-112

Worklist Comment: Please run under N2. JMF

WHC-SD-WM-DP-074, REV. 0

Seg	Type	Sample#	Rep	Al	Test	Matrix	Actual	Found	DL	Unit
1	STD				TGA-01	SOLID	59.25	58.77 99.2% Rec.	N/A	%
2	SAMPLE	S94T000058	0		TGA-01	SOLID	N/A	46.03%		%
3	DUP	S94T000058	0		TGA-01	SOLID	46.03%	44.64%	N/A	%
	STD						59.25	58.38	98.5% Rec.	
4	SAMPLE	S94T000063	0		TGA-01	SOLID	N/A	44.33%		%
5	DUP	S94T000063	0		TGA-01	SOLID	44.33%	43.10%	N/A	%

Final page for worklist # 52

Analyst Signature _____ **Date** 10/6/94

Data Entry Comments:

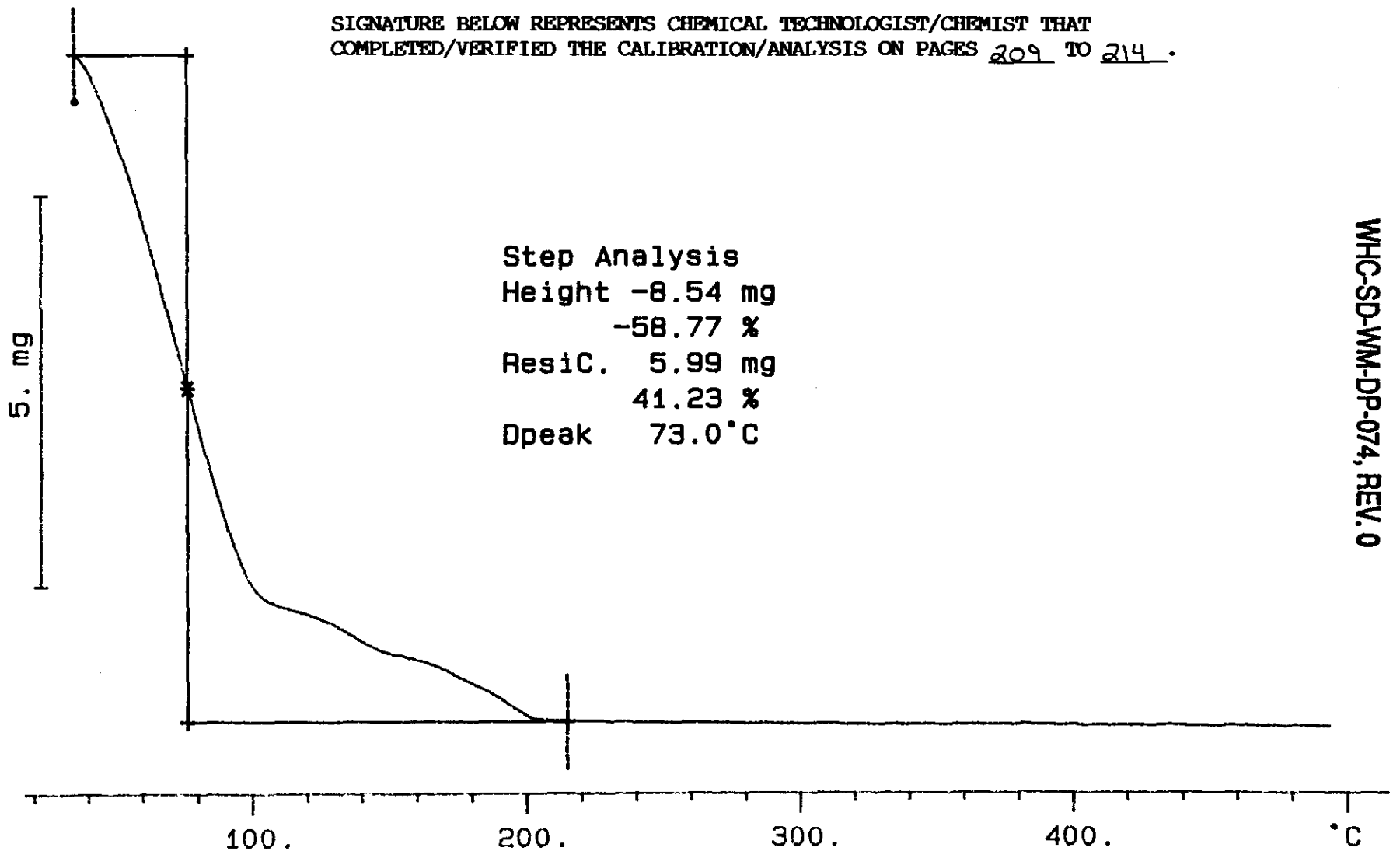
Units shown for QC (SPK) may not reflect the actual units.

TGA STD
14.529 mg

Rate: 10.0 °C/min

File: 00052.001 TG METTLER 03-Oct-94
Ident: 0.0 222-S Laboratory

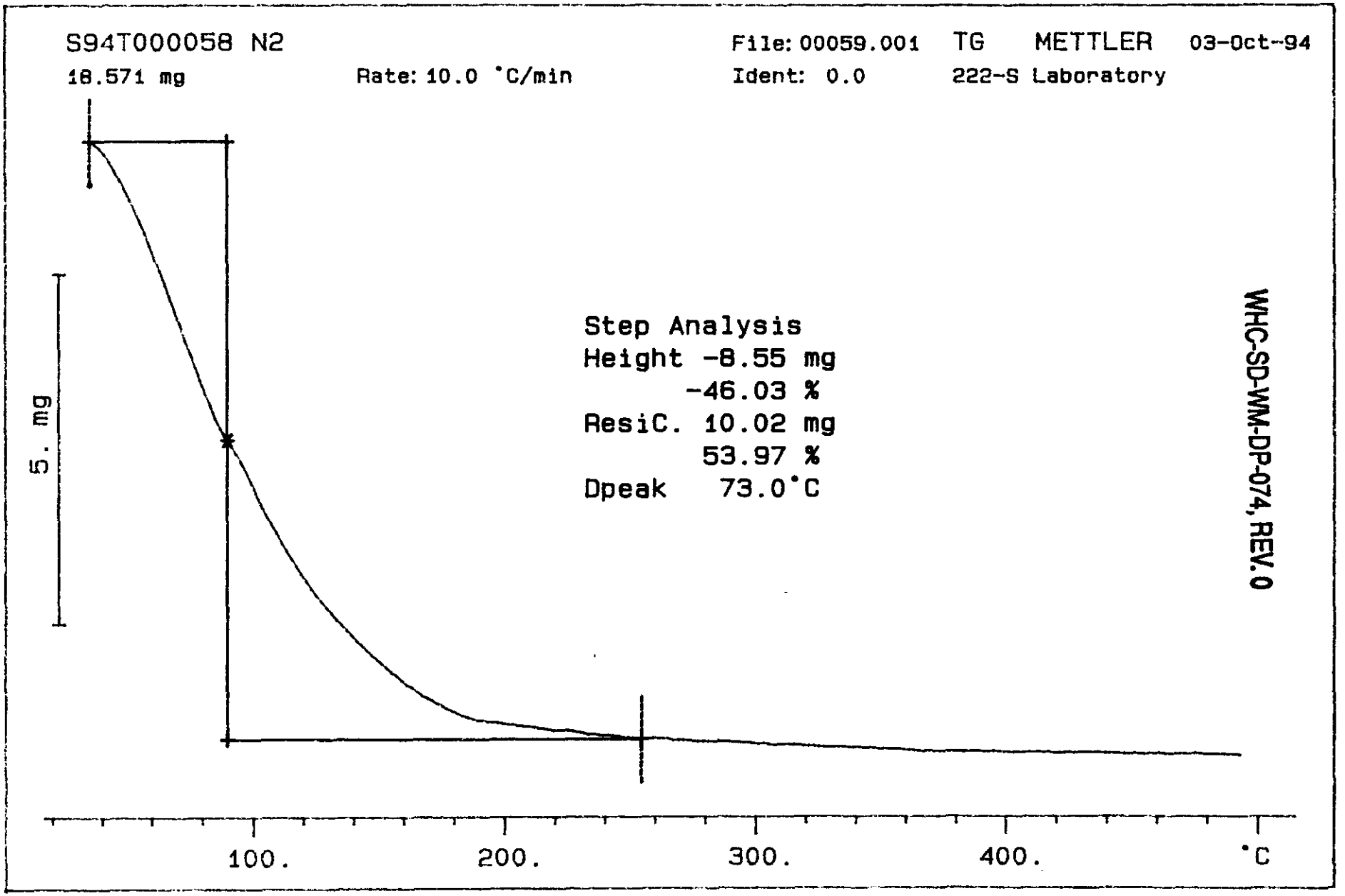
SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 209 TO 214.



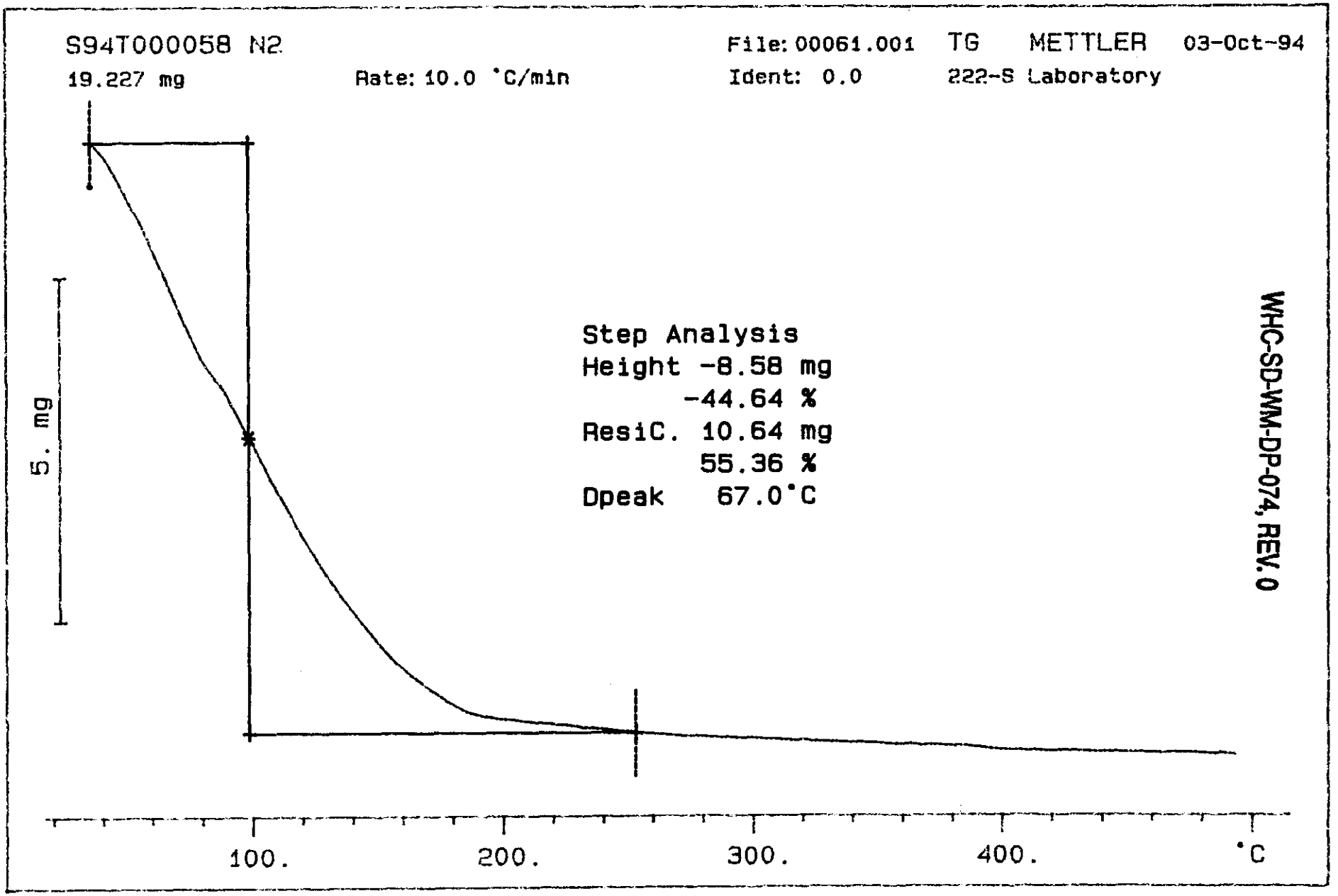
Step Analysis
Height -8.54 mg
-58.77 %
ResiC. 5.99 mg
41.23 %
Dpeak 73.0°C

WHC-SD-WM-DP-074, REV. 0

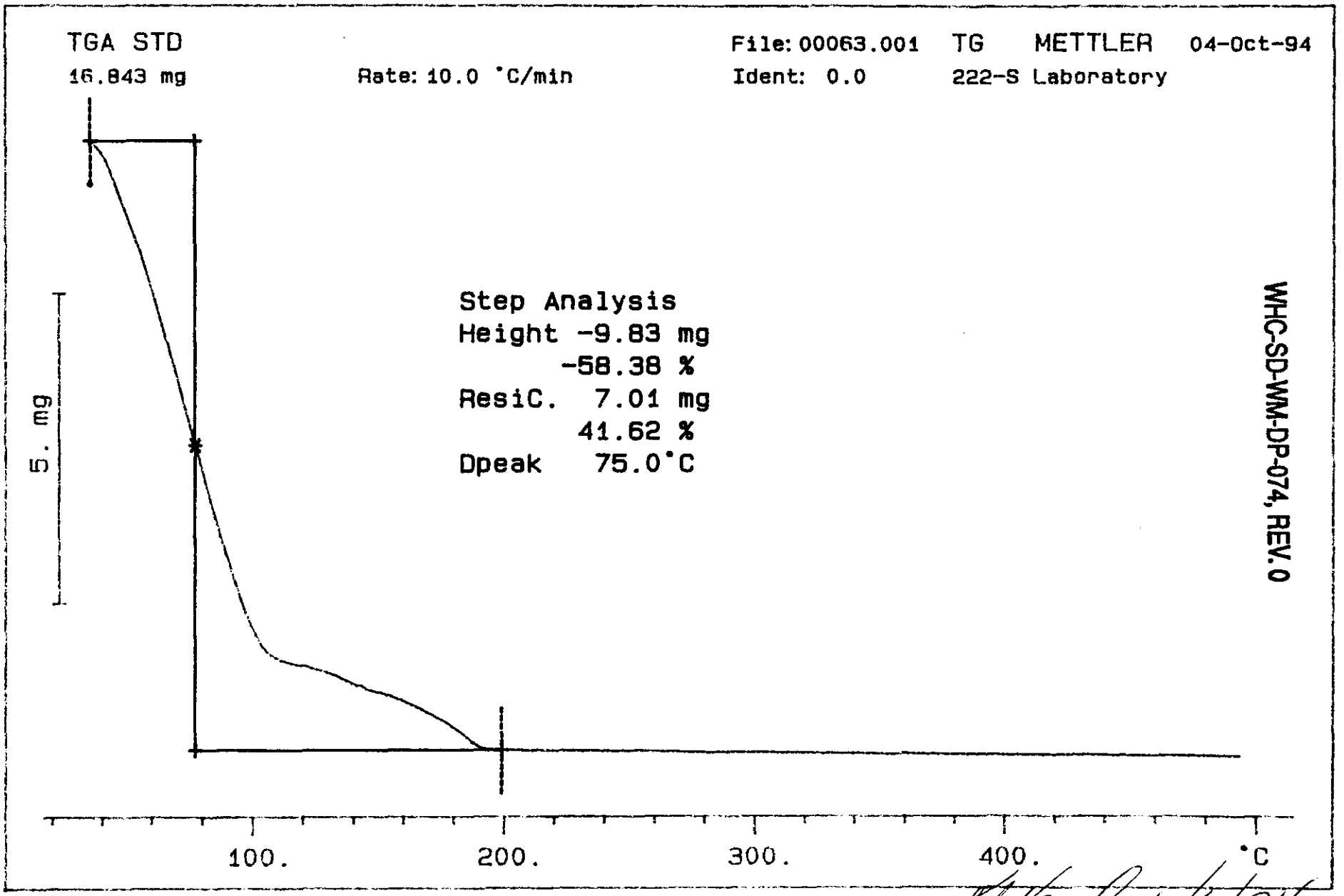
10/5/94



WHC-SD-WM-DP-074, REV. 0

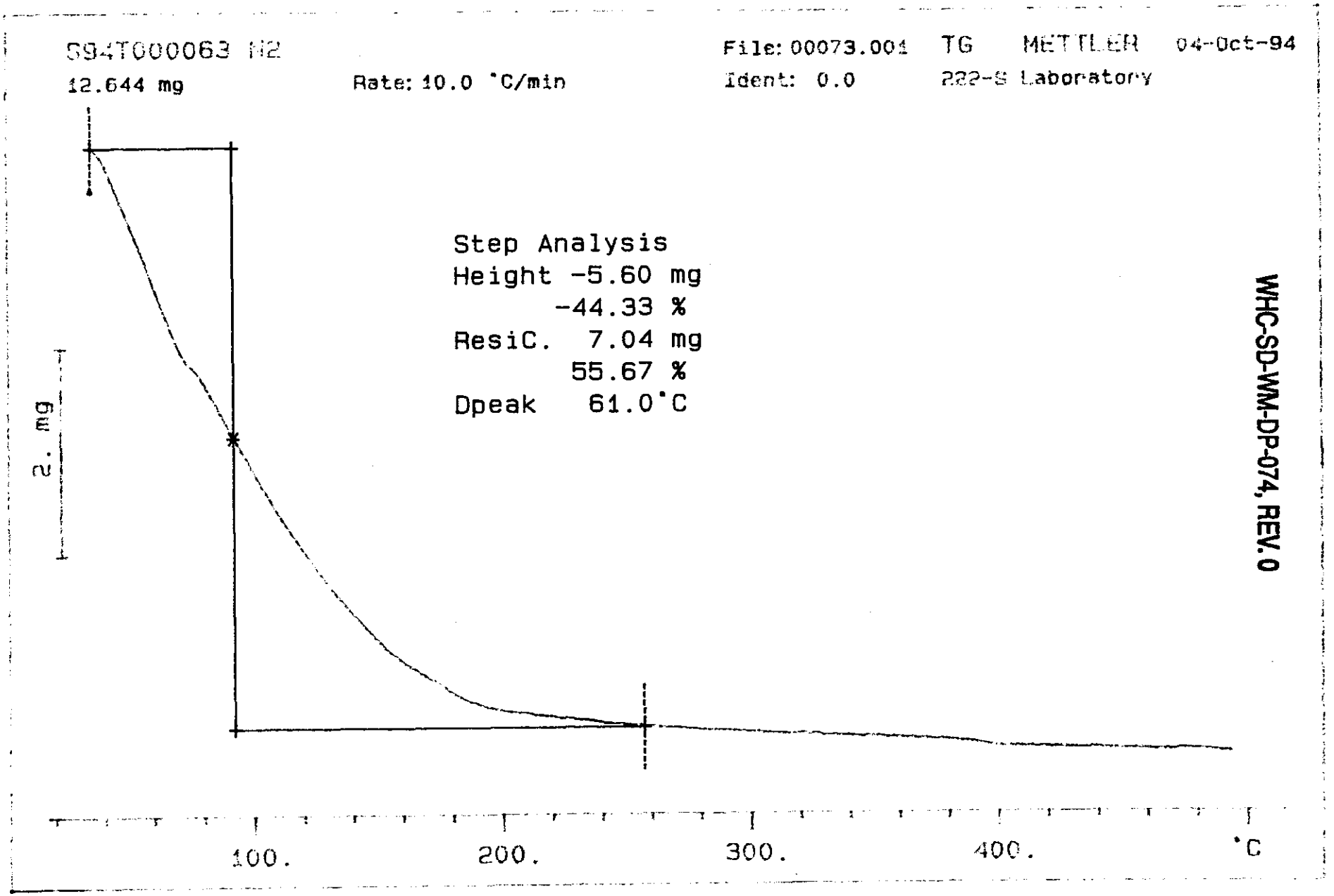


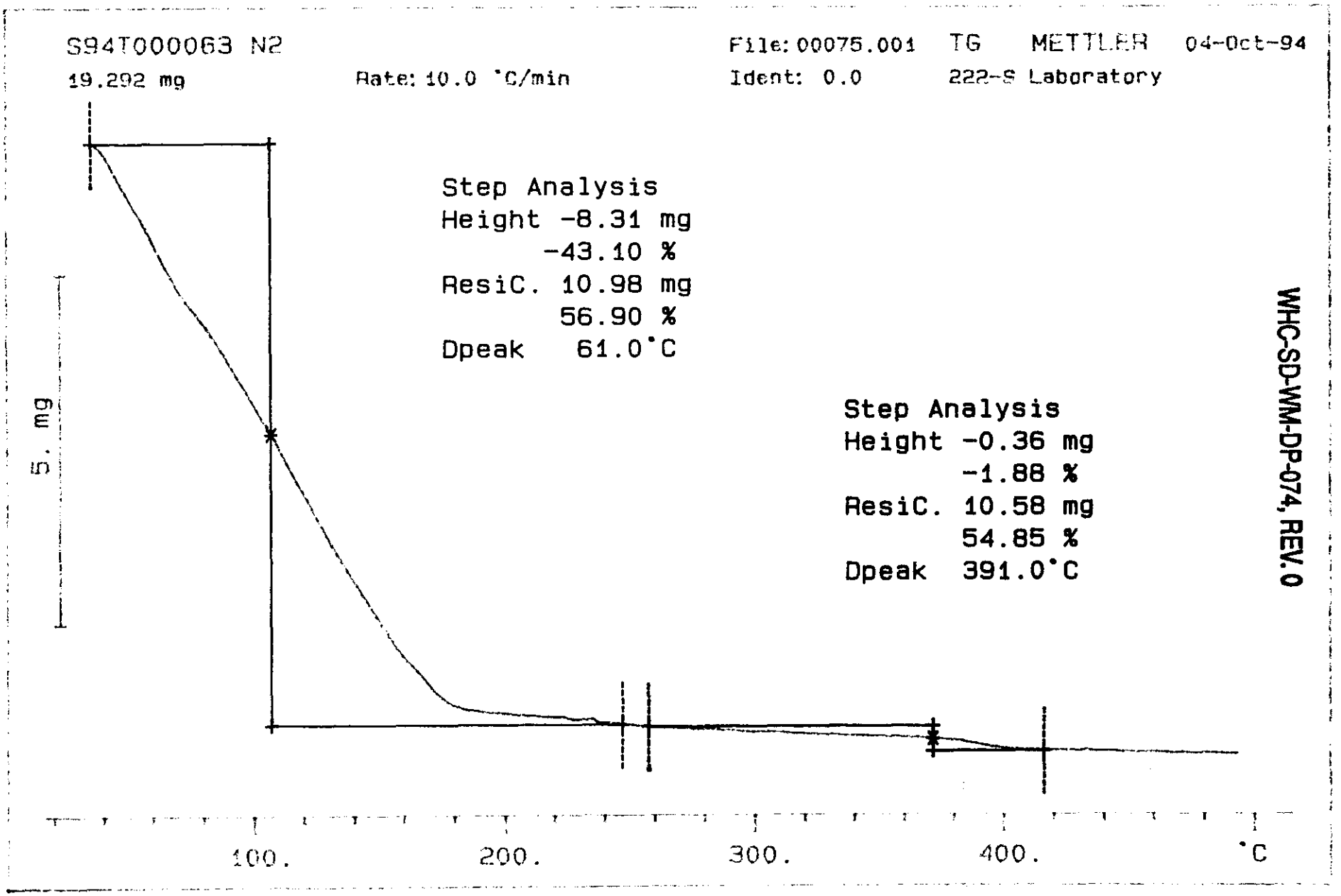
WHC-SD-WM-DP-074, REV. 0



10/6/94

WHC-SD-WM-DP-074, REV. 0


S94T000063 N2
12.644 mg
Rate: 10.0 °C/min
File: 00073.001
TG
METTLER
04-Oct-94
Ident: 0.0
222-S Laboratory
Step Analysis
Height -5.60 mg
-44.33 %
ResiC. 7.04 mg
55.67 %
Dpeak 61.0°C
2. mg
100.
200.
300.
400.
°C



WHC-SD-WM-DP-074, REV.0

LABCORE Data Entry Template for Worklist# 58

Analyst: DWS **Instrument:** TGA01 **Method:** LA-560-112

Worklist Comment: Please run under N2, JMF

WHC-SD-WM-DP-074, REV. 0

Seg	Type	Sample#	Rep	Al	Test	Matrix	Actual	Found	DL	Unit
1	STD				TGA-01	SOLID	59.19	59.04	99.7% N/A	%
2	SAMPLE	S94T000070	0		TGA-01	SOLID	N/A	40.80%		%
3	DUP	S94T000070	0		TGA-01	SOLID	40.80%	40.04%	N/A	%
	STD				TGA-01		59.19	58.34	98.6% Rec.	
4	SAMPLE	S94T000071	0		TGA-01	SOLID	N/A	39.17		%
5	DUP	S94T000071	0		TGA-01	SOLID	39.17	37.52	N/A	%

Final page for worklist # 58

Analyst Signature **Date** 10-24-94

Data Entry Comments: Entered and verified 10/25/94. JMF See attached sheet for corrected worklist. JMF 10/25/94

Units shown for QC (SPK) may not reflect the actual units.

LABCORE Data Entry Template for Worklist# 58

Analyst: _____ **Instrument:** TGA01 _____ **Method:** LA-560-112

Worklist Comment: Please run under N2, JMF **WHC-SD-WM-DP-074, REV. 0**

Seg	Type	Sample#	Rep	Al	Test	Matrix	Actual	Found	DL	Unit
1	STD				TGA-01	SOLID			N/A	%
2	SAMPLE	S94T000070	0		TGA-01	SOLID	N/A			%
3	DUP	S94T000070	0		TGA-01	SOLID			N/A	%
4	STD				TGA-01	SOLID			N/A	%
5	SAMPLE	S94T000071	0		TGA-01	SOLID	N/A			%
6	DUP	S94T000071	0		TGA-01	SOLID			N/A	%

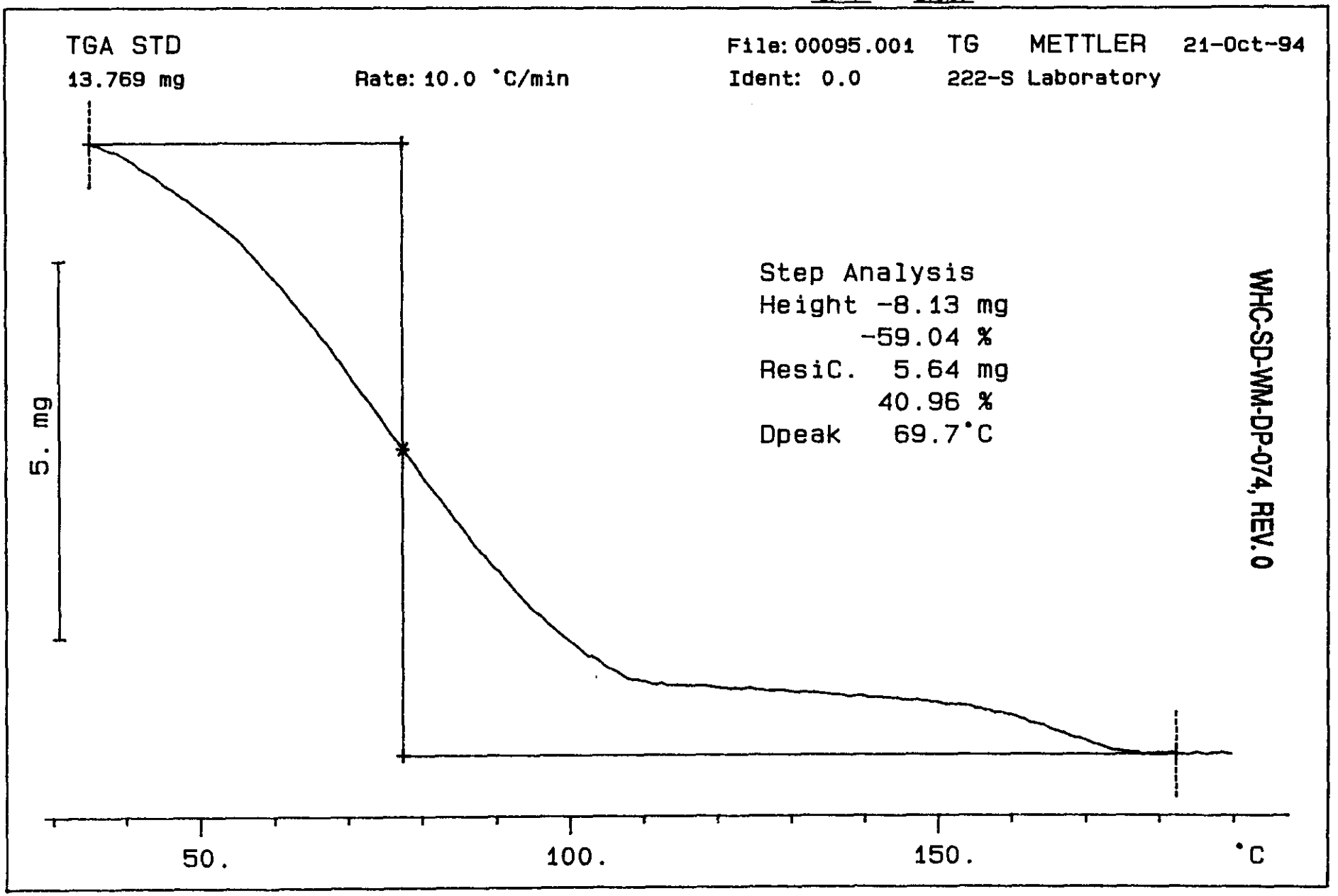
Final page for worklist # 58

Analyst Signature _____ **Date** _____

Data Entry Comments: See attached sheet for data. JMF 10/25/94

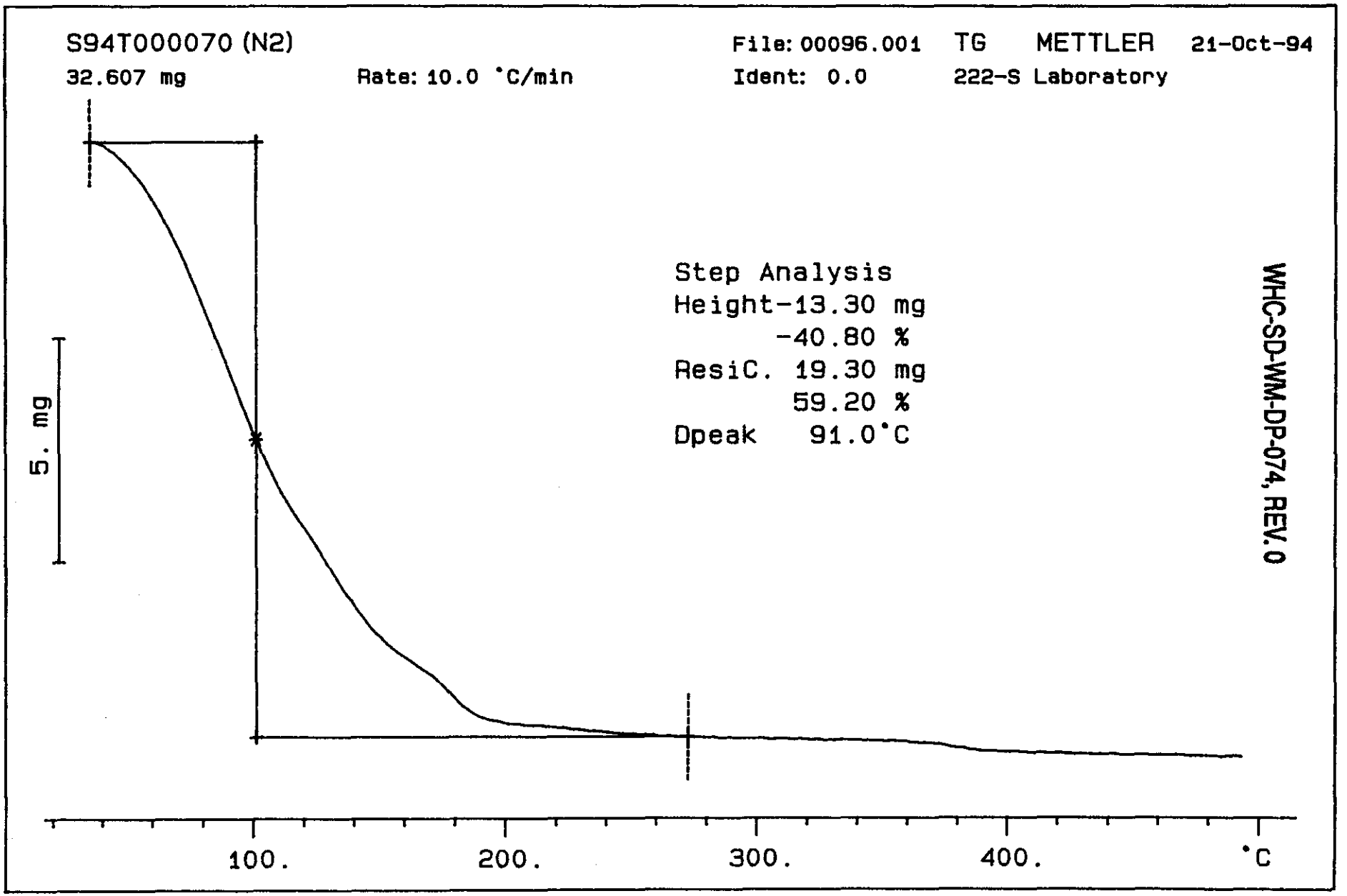
Units shown for QC (SPK) may not reflect the actual units.

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 217 TO 222.

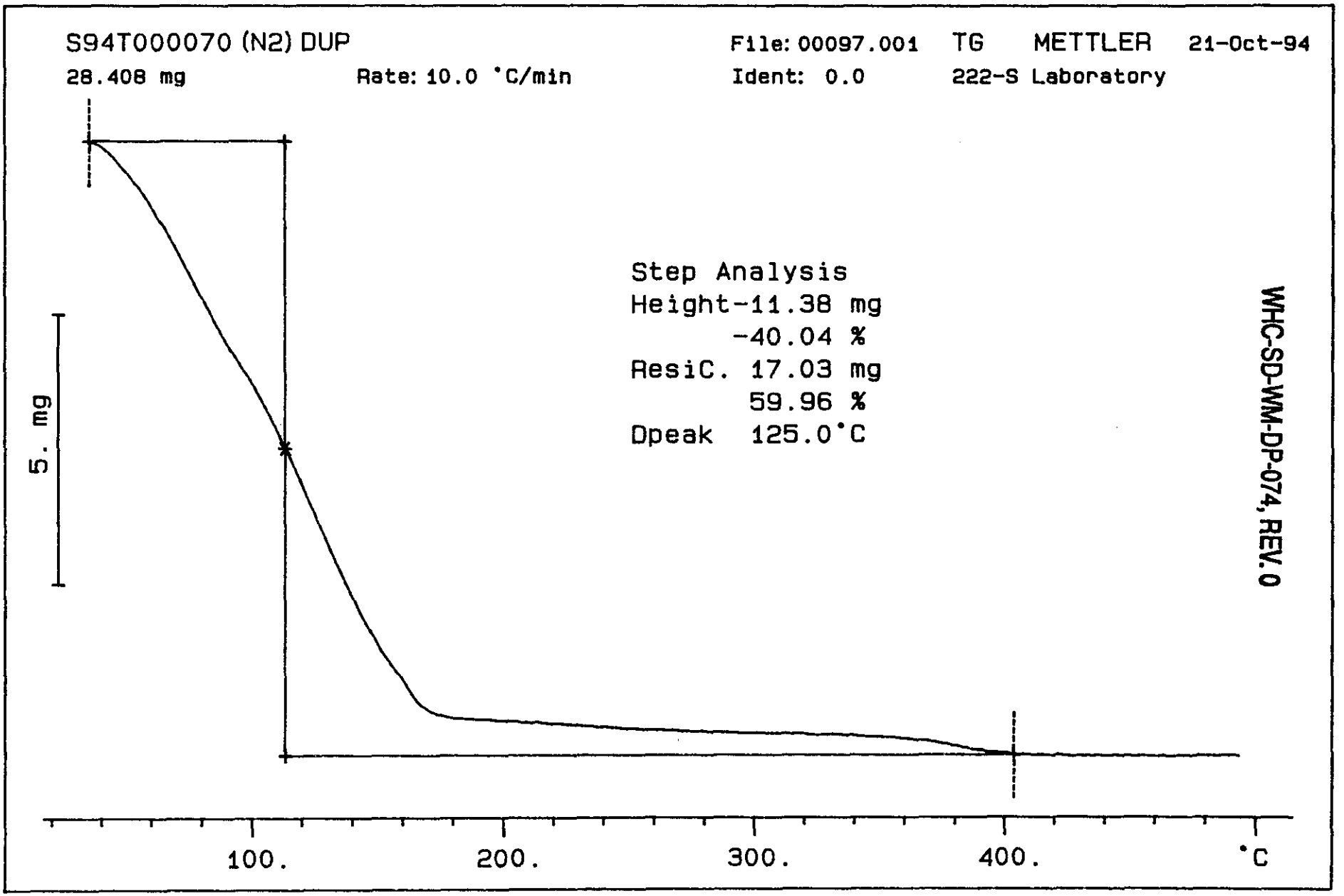


WHC-SD-WM-DP-074, REV. 0

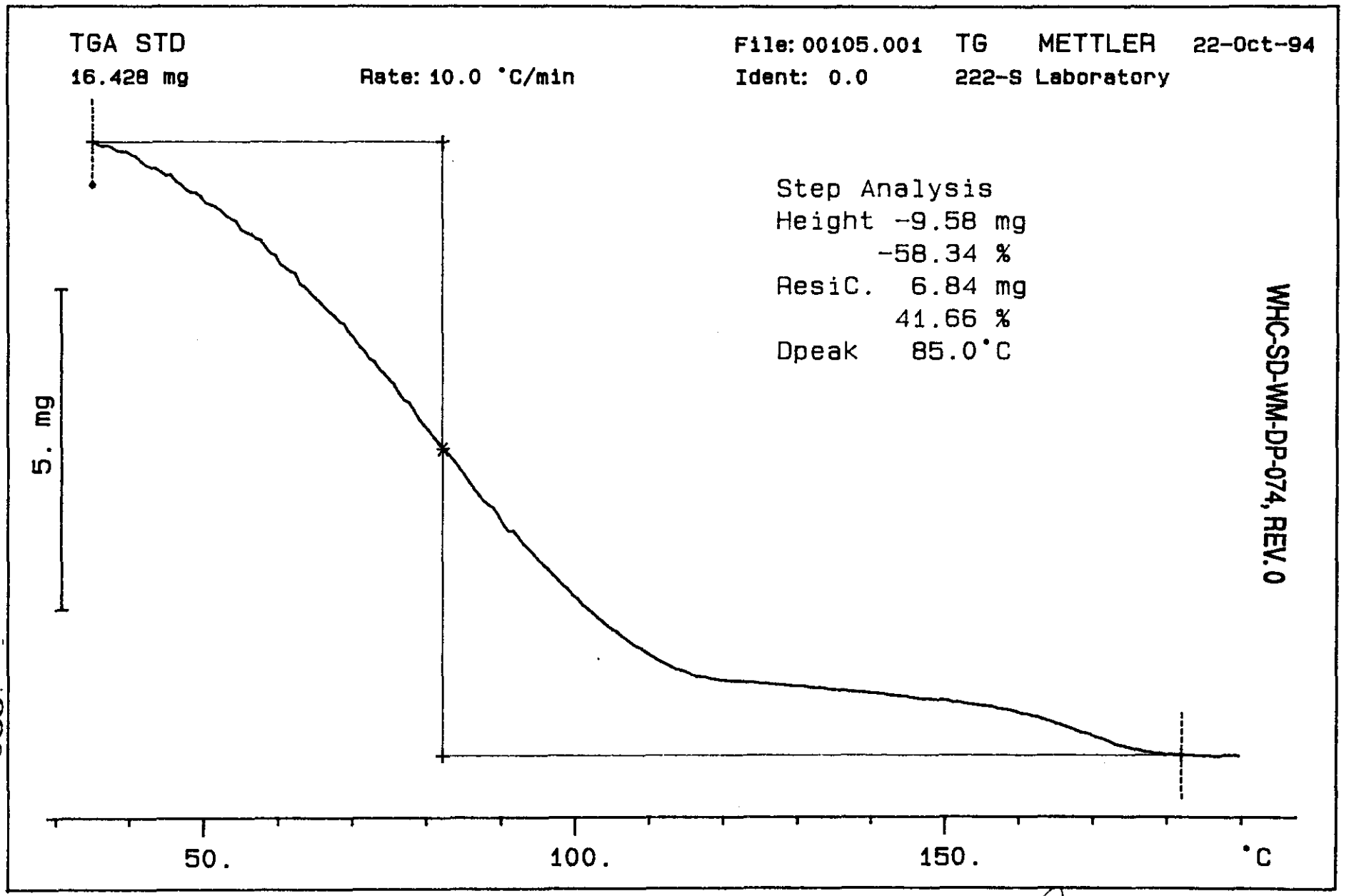
D W Smith 11 3 94



WHC-SD-WM-DP-074, REV. 0



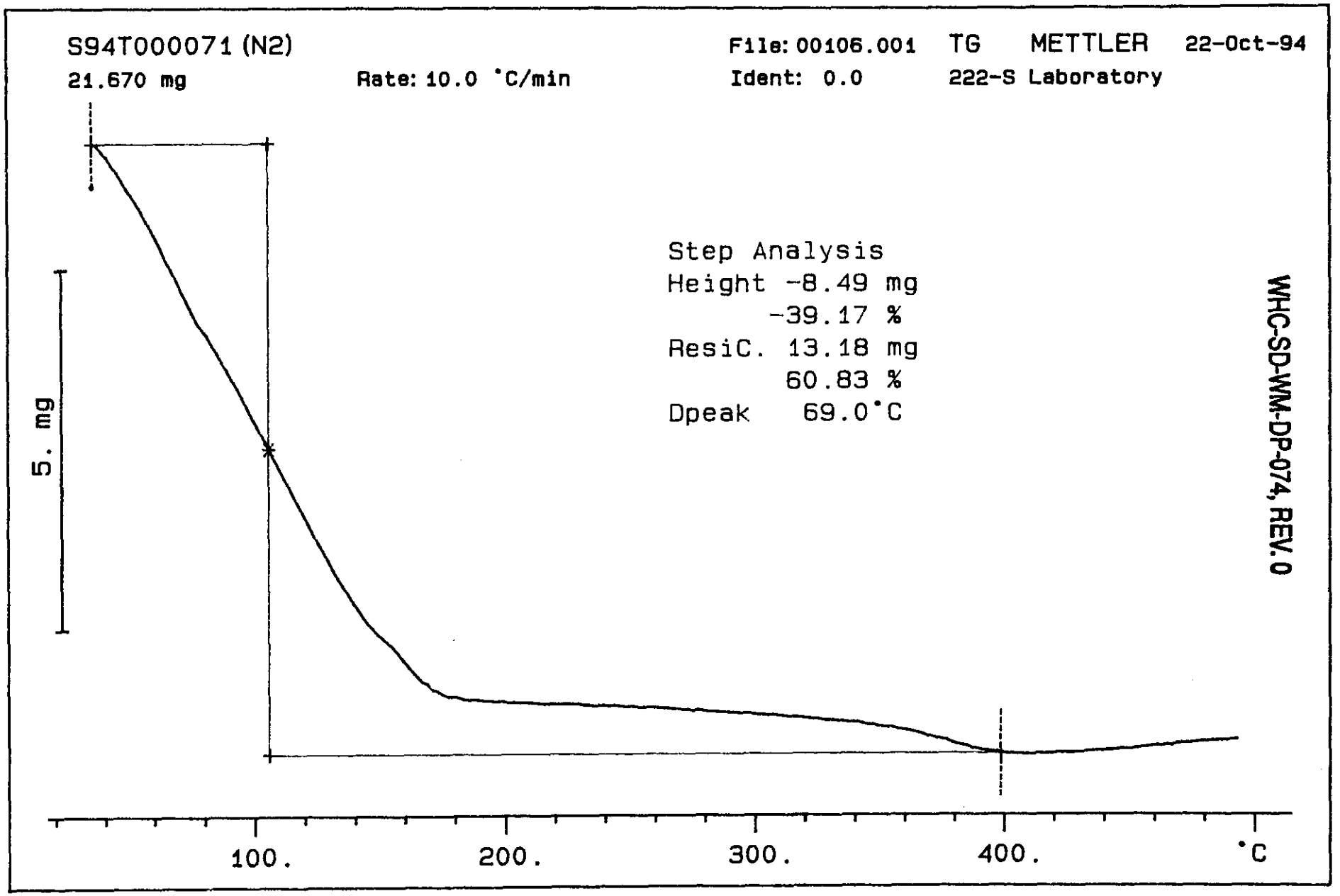
WHC-SD-WM-DP-074, REV. 0



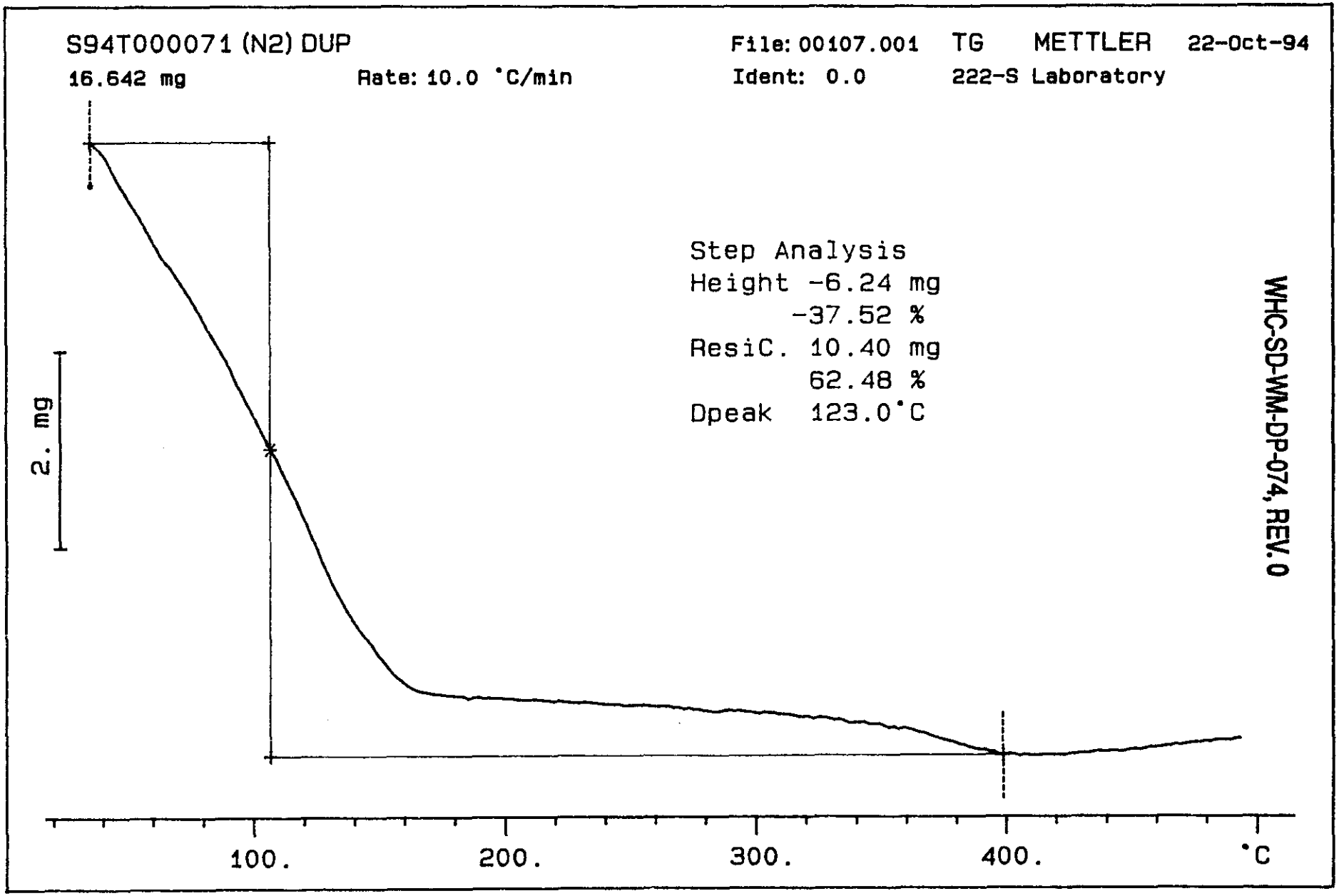
WHC-SD-WM-DP-074, REV. 0

220

10-24-94



WHC-SD-WM-DP-074, REV. 0



WHC-SD-WM-DP-074, REV. 0

LABCORE Data Entry Template for Worklist# 59

DA 2

Analyst: KLV **Instrument:** TGA01 **Method:** LA-560-112

Worklist Comment: Please run TGA for 72 and 90 under N2, JMF. **WHC-SD-WM-DP-074, REV. 0**

Seg	Type	Sample#	Rep	Al	Test	Matrix	Actual	Found	DL	Unit
1	STD				TGA-01	SOLID	59.25%	57.82%	47.6% N/A	%
2	SAMPLE	S94T000072	0		TGA-01	SOLID	N/A	46.45%		%
3	DUP	S94T000072	0		TGA-01	SOLID	46.45%	~~46.55~~ 45.04 [illegible] 10-28-94	N/A	%
4	SAMPLE	S94T000090	0		TGA-01	SOLID	N/A	43.04%		%
5	DUP	S94T000090	0		TGA-01	SOLID	43.04	41.86%	N/A	%

Final page for worklist # 59

Analyst Signature

Date 10/7/94

Data Entry Comments: Data Entered & Completed, JMF 10/10/94

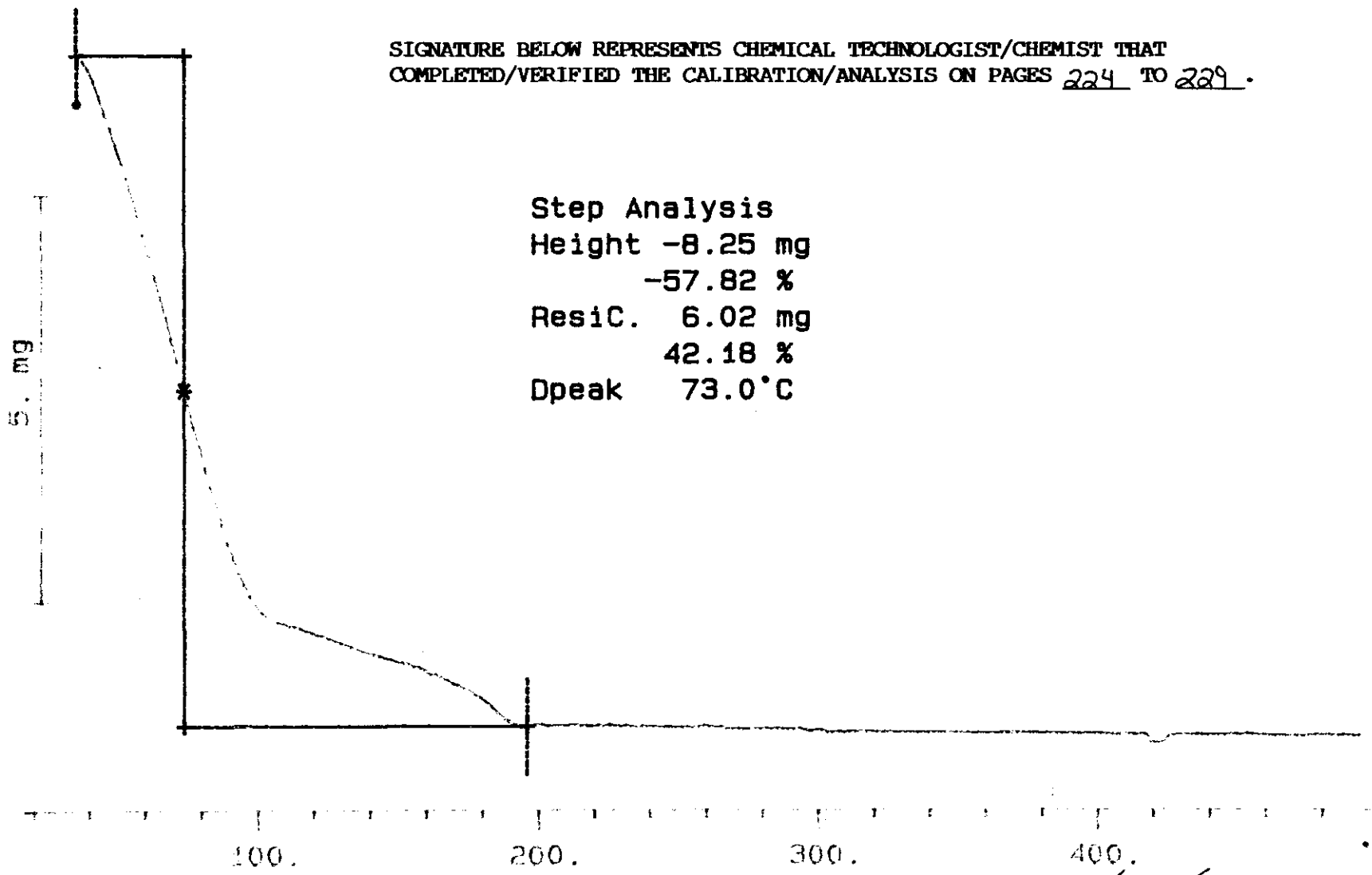
Units shown for QC (SPK) may not reflect the actual units.

TGA STD
14.270 mg

Rate: 10.0 °C/min

File: 00080.001 TG METTLER 05-Oct-94
Ident: 0.0 222-S Laboratory

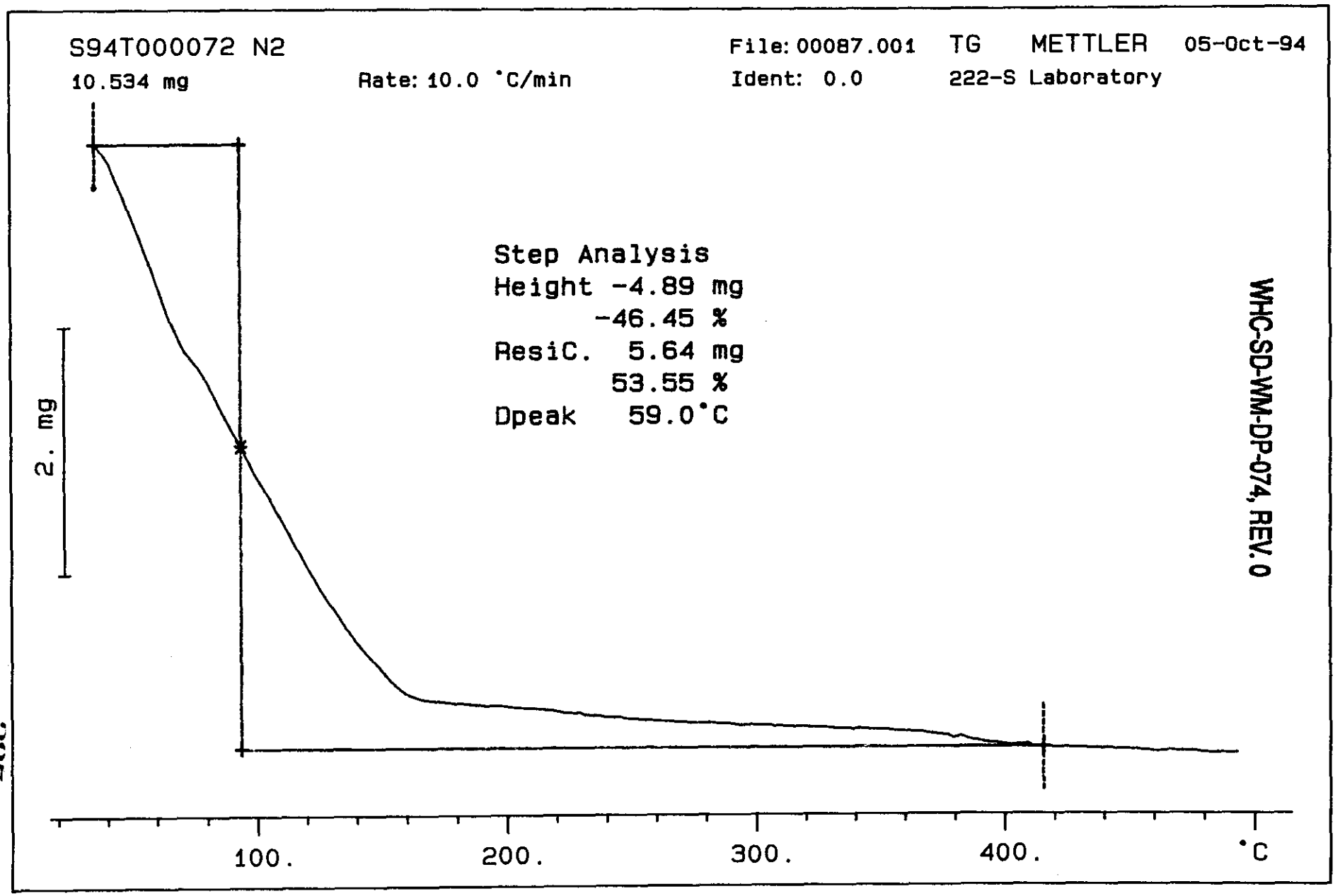
SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 224 TO 229.

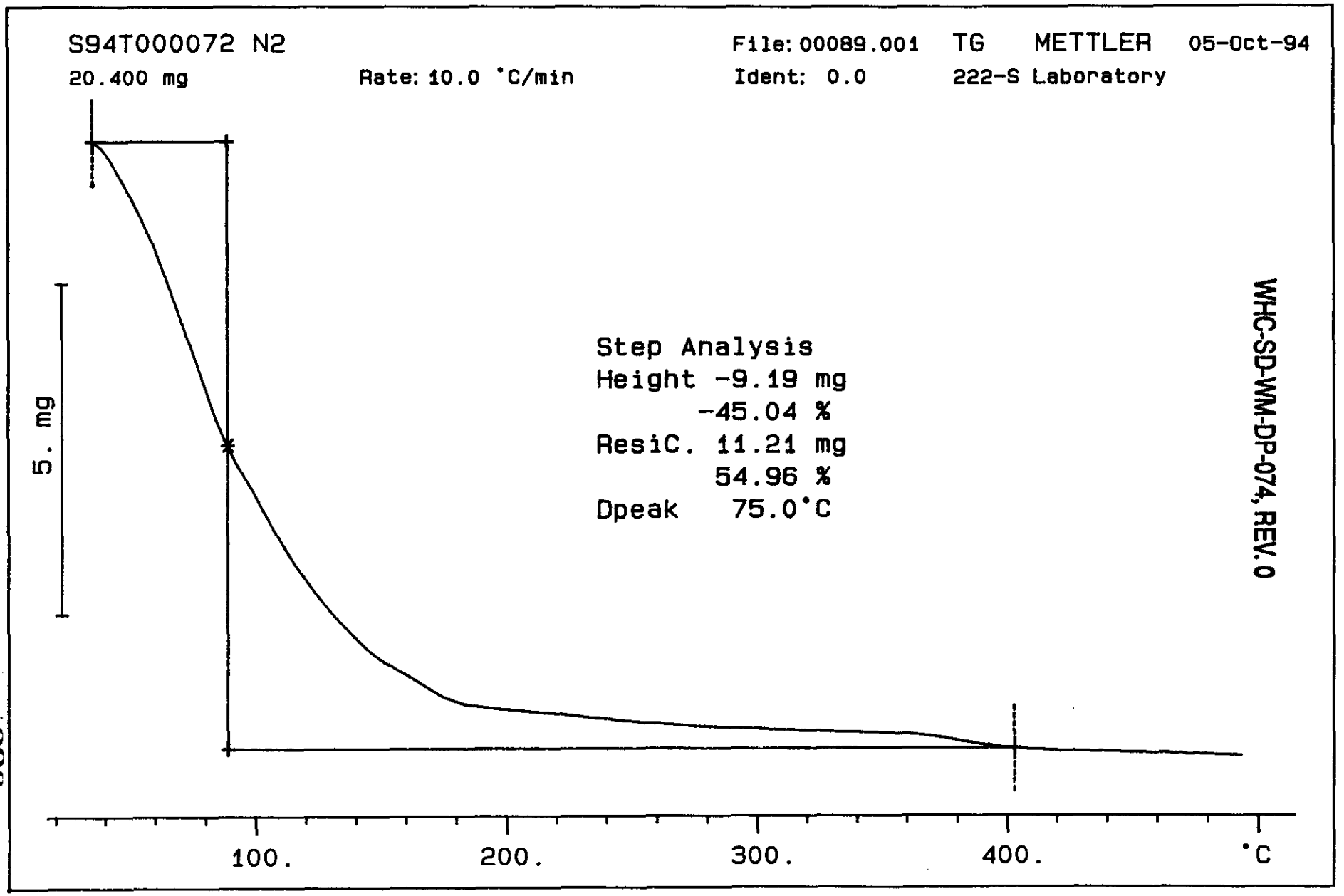


Step Analysis
Height -8.25 mg
-57.82 %
ResiC. 6.02 mg
42.18 %
Dpeak 73.0°C

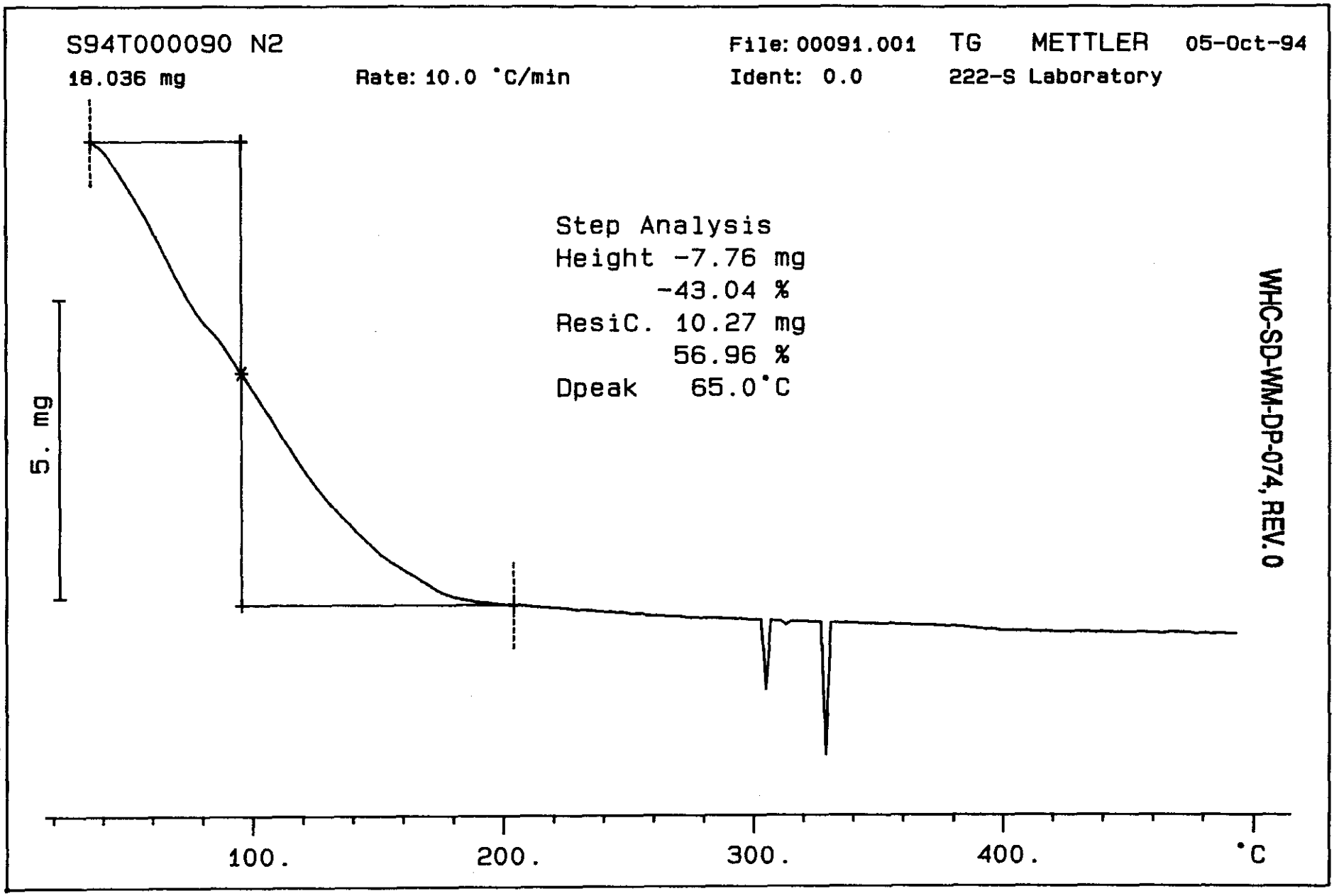
WHC-SD-WM-DP-074, REV. 0

K. Vazel 10/7/94

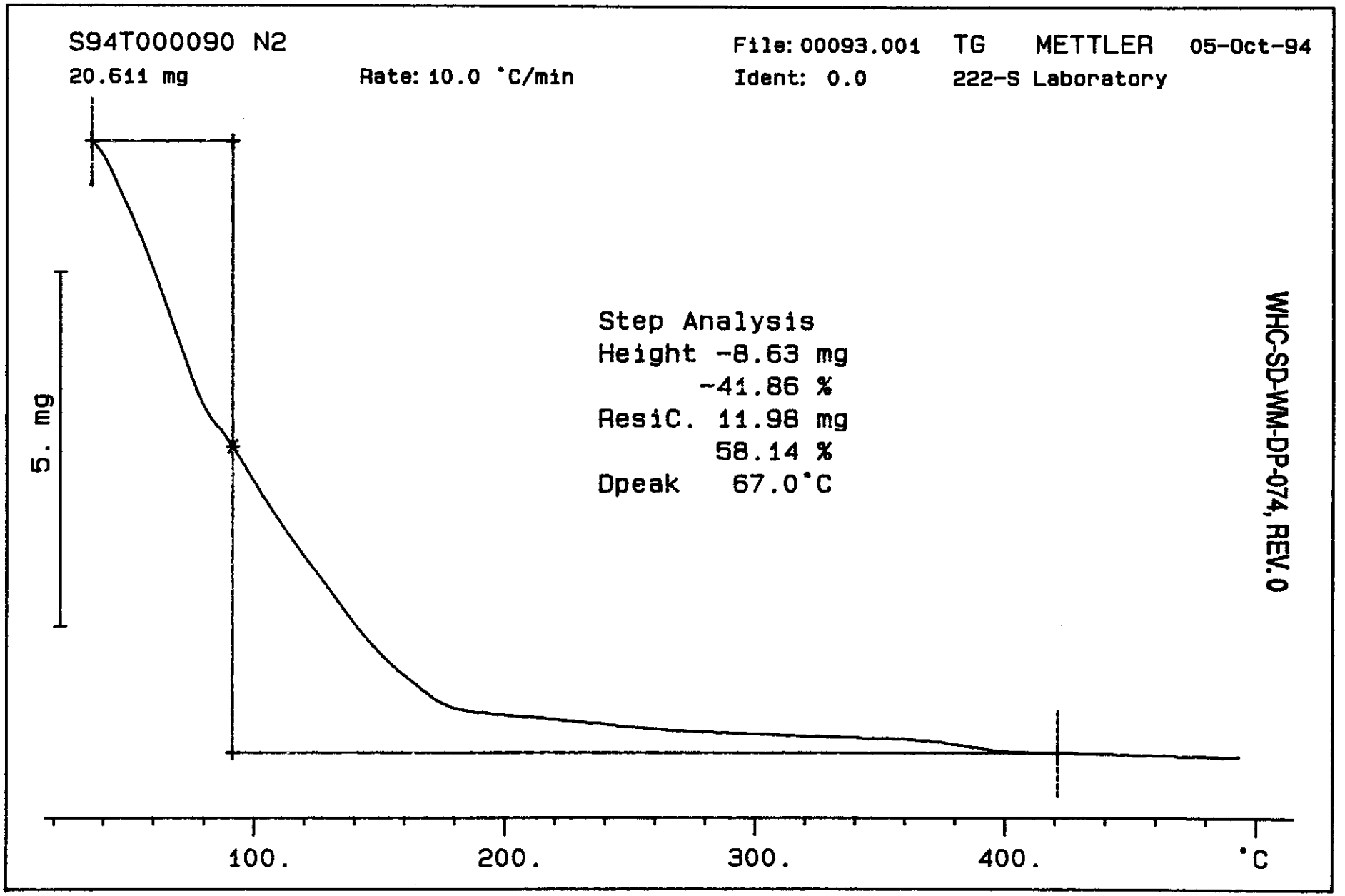

S94T000072 N2
10.534 mg
Rate: 10.0 °C/min
File: 00087.001
Ident: 0.0
TG
METTLER
222-S Laboratory
05-Oct-94
Step Analysis
Height -4.89 mg
-46.45 %
ResiC. 5.64 mg
53.55 %
Dpeak 59.0°C
2. mg
100.
200.
300.
400.
°C



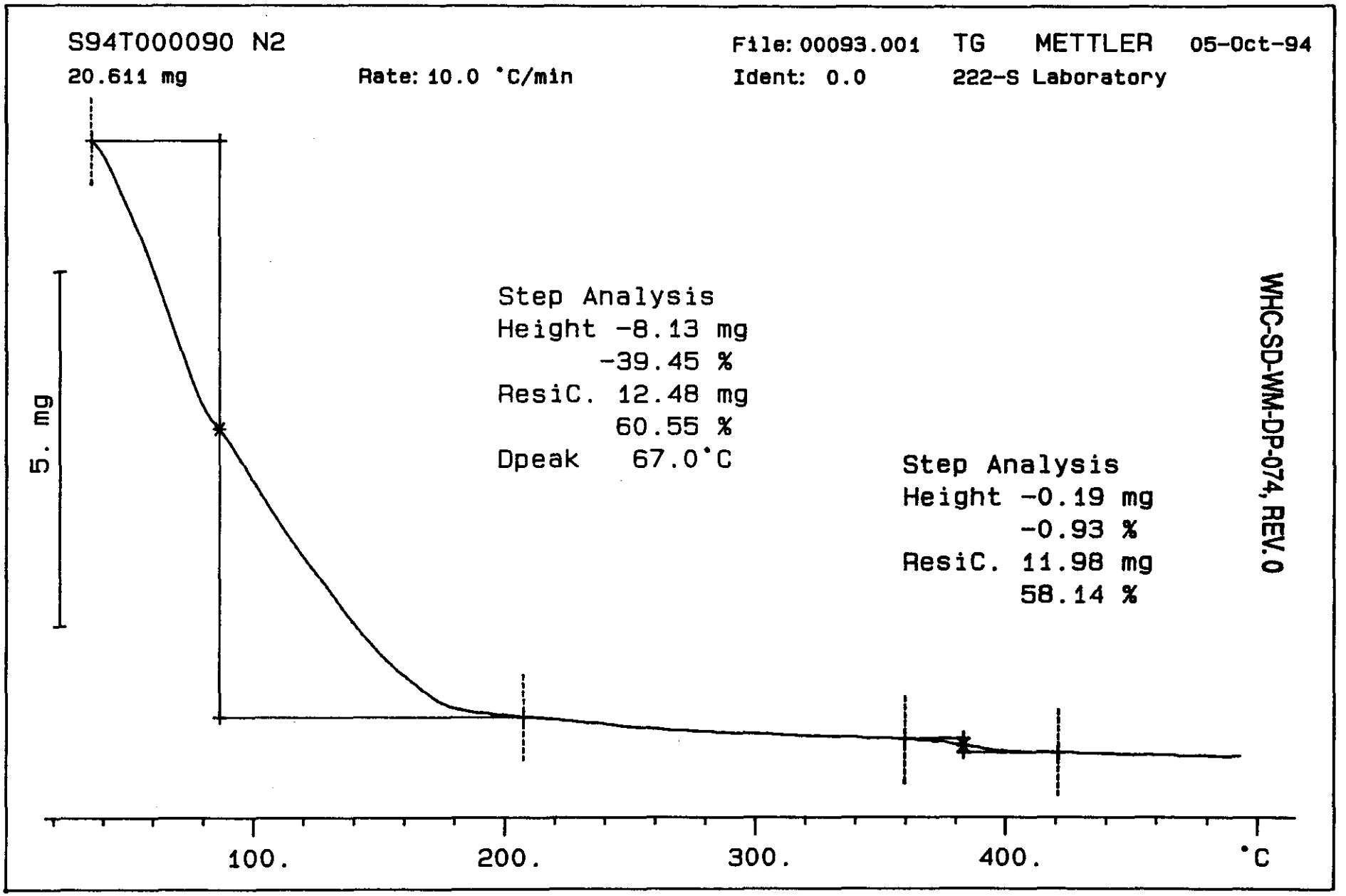
WHC-SD-WM-DP-074, REV. 0



WHC-SD-WM-DP-074, REV. 0



WHC-SD-WM-DP-074, REV. 0



WHC-SD-WM-DP-074, REV. 0

LABCORE Data Entry Template for Worklist# 62

A2 05

Analyst: JLS **Instrument:** TGA01 **Method:** LA-560-112

Worklist Comment: Please run TGA for 88 and 89 under N2, JMF. **WHC-SD-WM-DP-074, REV. 0**

Seg	Type	Sample#	Rep	Al	Test	Matrix	Actual	Found	DL	Unit
1	STD				TGA-01	SOLID	59.19%	57.83%	97.7% Rec N/A	%
2	SAMPLE	S94T000088	0		TGA-01	SOLID	N/A	39.77		%
	std				TGA-01	59.19	~~58.58~~	58.58	99.0% Rec	
3	DUP	S94T000088	0		TGA-01	SOLID	~~39.77~~	~~39.85~~	N/A	%
4	SAMPLE	S94T000089	0		TGA-01	SOLID	N/A	40.84		%
5	DUP	S94T000089	0		TGA-01	SOLID	40.84	36.77	N/A	%

Final page for worklist # 62

Jackie Steele
Analyst Signature

10-17-94
Date

Data Entry Comments:
Sample S94T000088 has a second step in weight loss at 389°C of 3.39% in sample and 3.05% in duplicate. Sample S94T000089 has a second step at 393°C of 2.88% in sample and 2.06% in duplicate.

Units shown for QC (SPK) may not reflect the actual units.

Page: 1

Entered data & approved but forgot to enter comment. J. M. Fry 10/17/94
Analyst entered as JMF because JLS not in system yet.

230

LABCORE Data Entry Template for Worklist# 62

Analyst: _____ **Instrument:** TGA01 _____ **Method:** LA-560-112

Worklist Comment: Please run TGA for 88 and 89 under N2, JMF. WHC-SD-WM-DP-074, REV. 0

Seg	Type	Sample#	Rep	Al	Test	Matrix	Actual	Found	DL	Unit
1	STD				TGA-01	SOLID			N/A	%
2	SAMPLE	S94T000088	0		TGA-01	SOLID	N/A			%
3	STD				TGA-01	SOLID			N/A	%
4	DUP	S94T000088	0		TGA-01	SOLID			N/A	%
5	SAMPLE	S94T000089	0		TGA-01	SOLID	N/A			%
6	DUP	S94T000089	0		TGA-01	SOLID			N/A	%

Final page for worklist # 62

Analyst Signature _____ **Date** _____

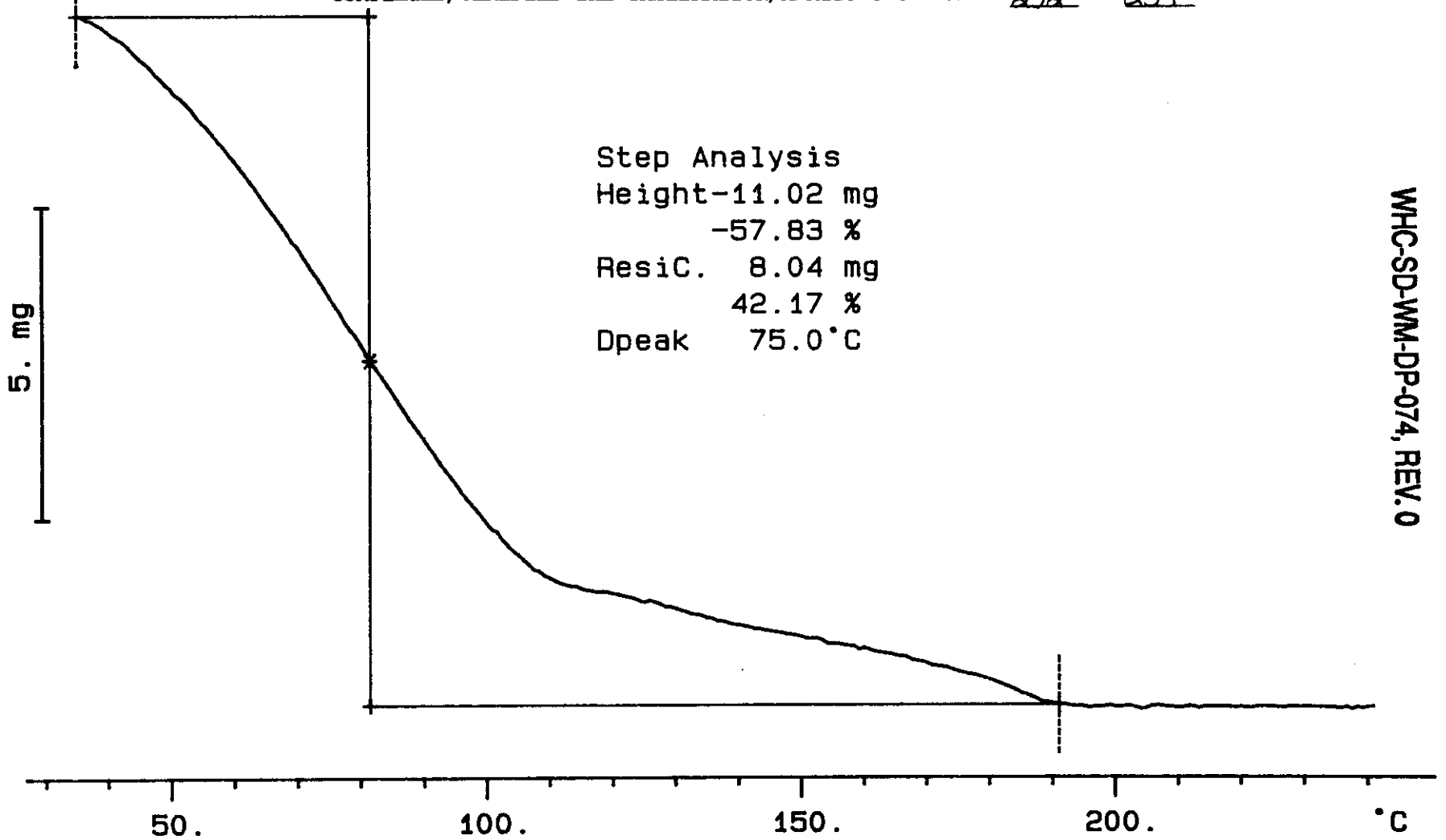
Data Entry Comments: See other sheet. JMF 10/17/94

Units shown for QC (SPK) may not reflect the actual units.

tga std
19.058 mg

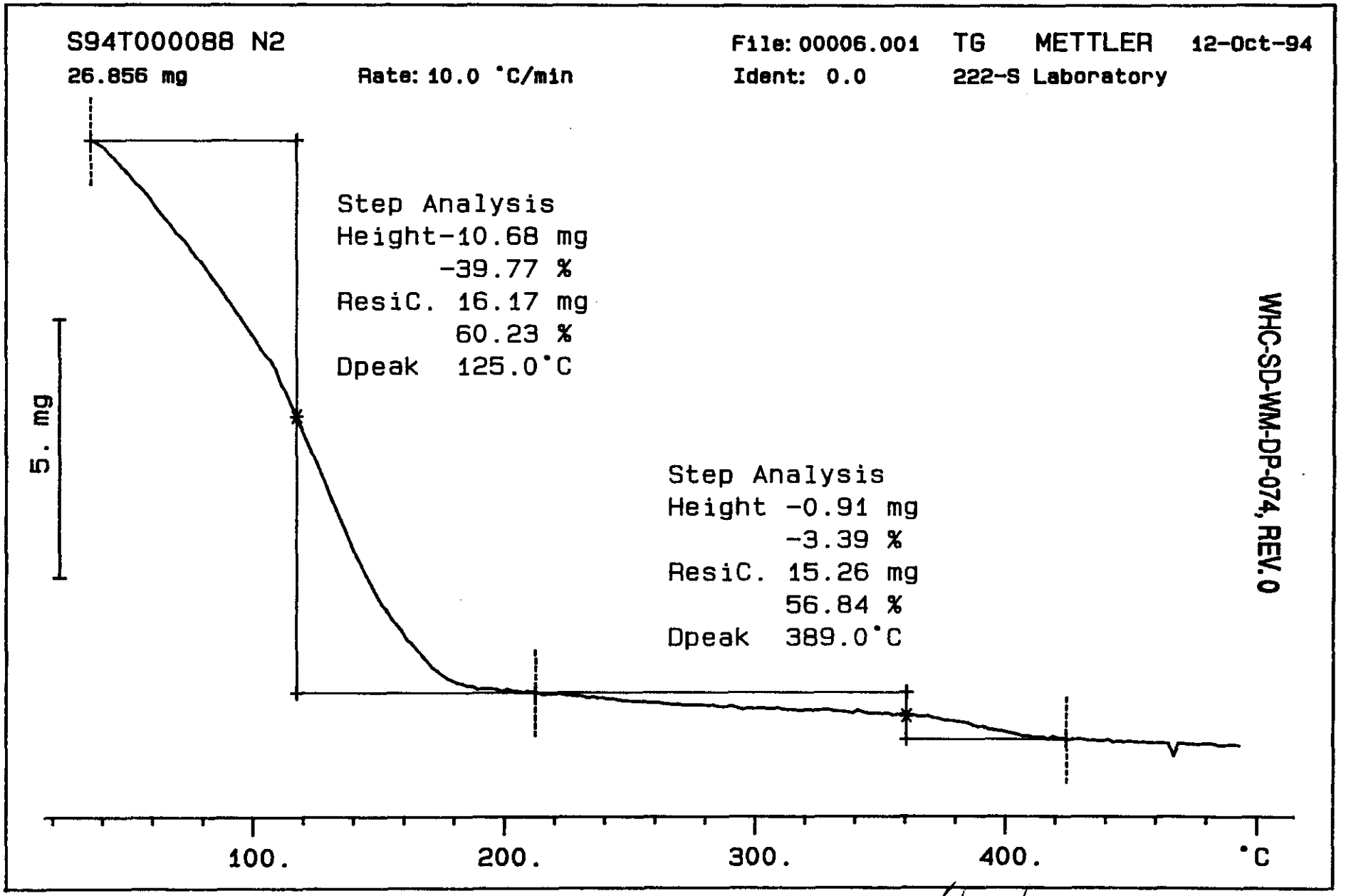
File: 00005.001 TG METTLER 12-Oct-94
Rate: 10.0 °C/min Ident: 0.0 222-S Laboratory

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 232 TO 237.



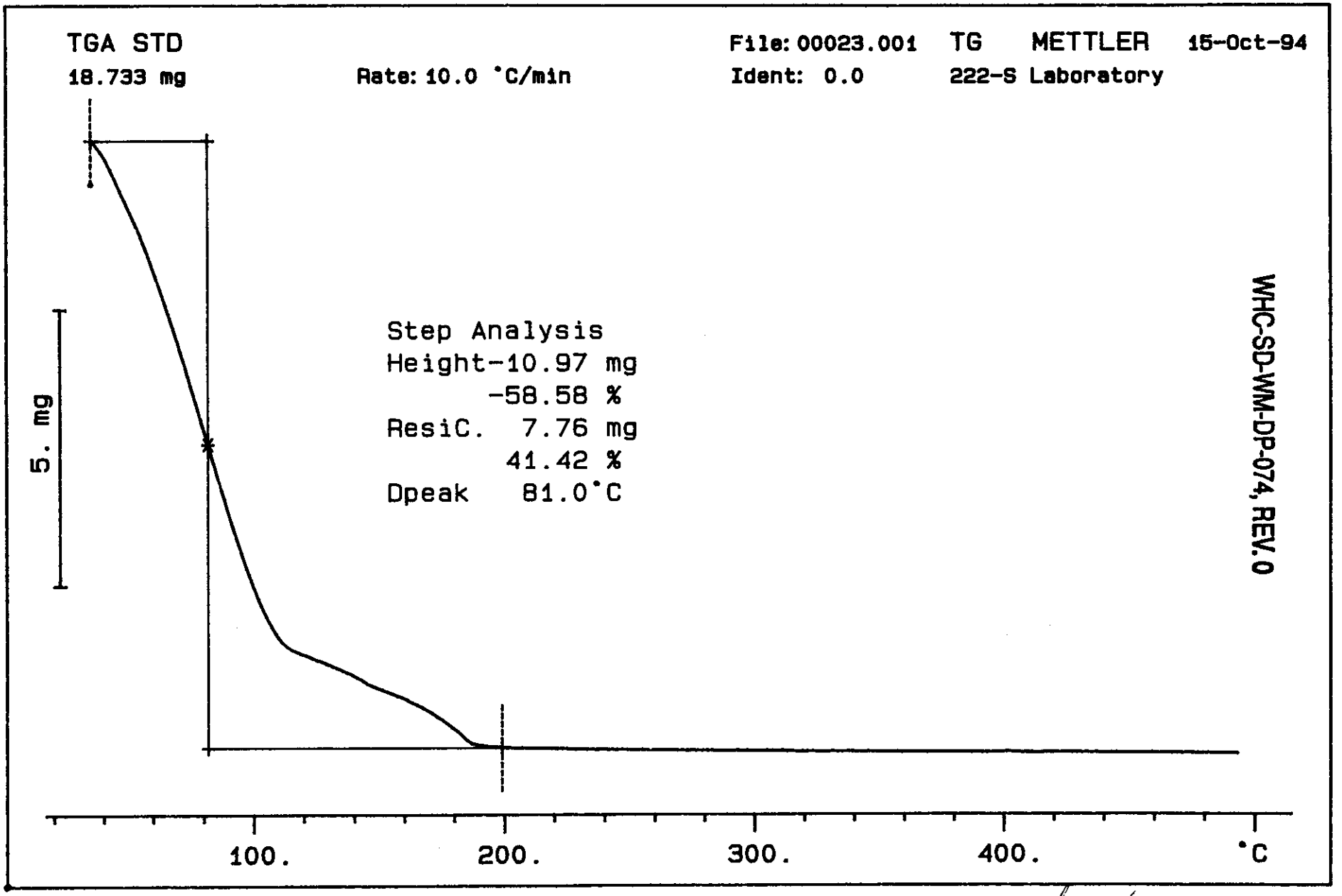
Joanne Steele
10-14-94

WHC-SD-WM-DP-074, REV.0



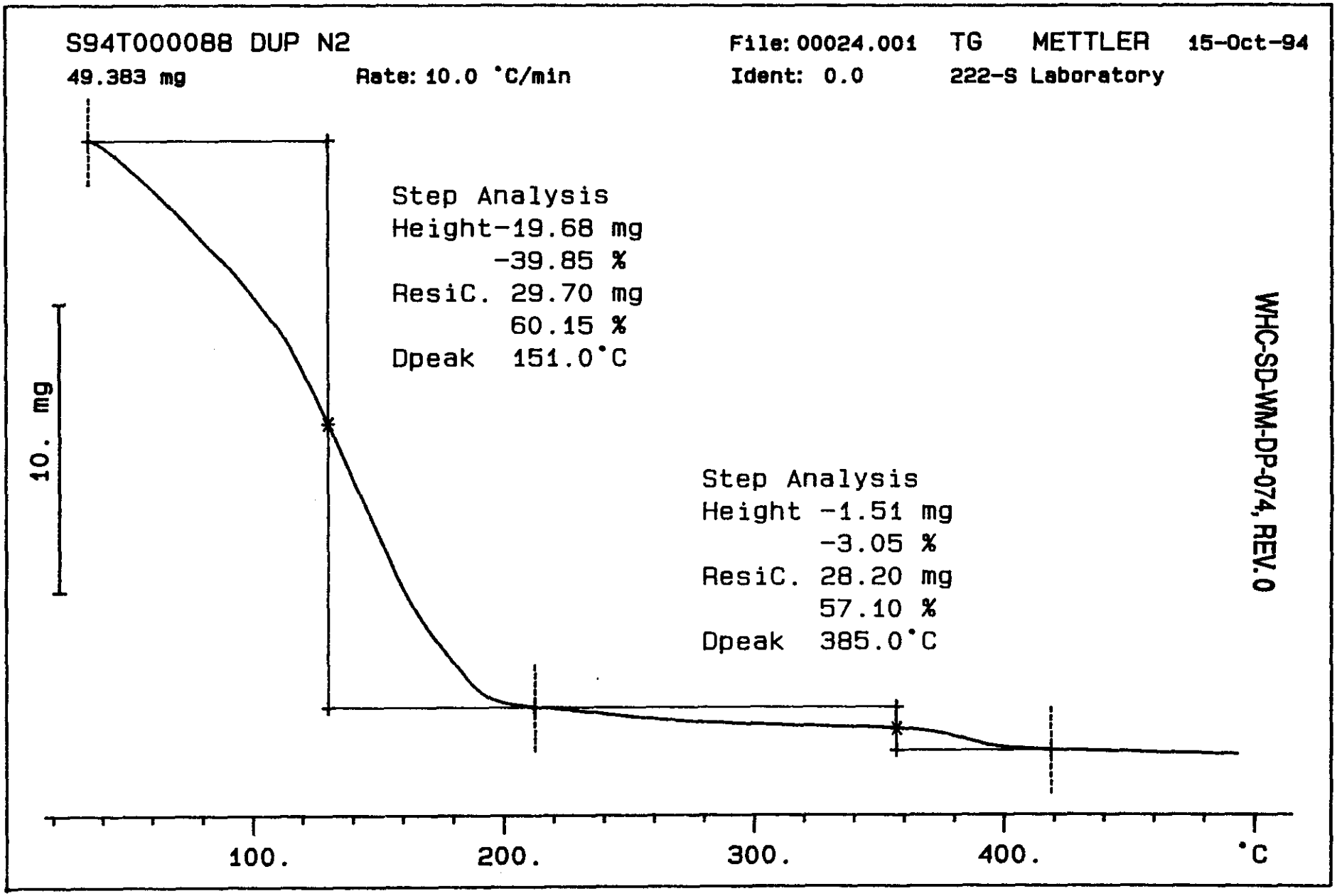
WHC-SD-WM-DP-074, REV.0

Jackie Steele
10-14-94

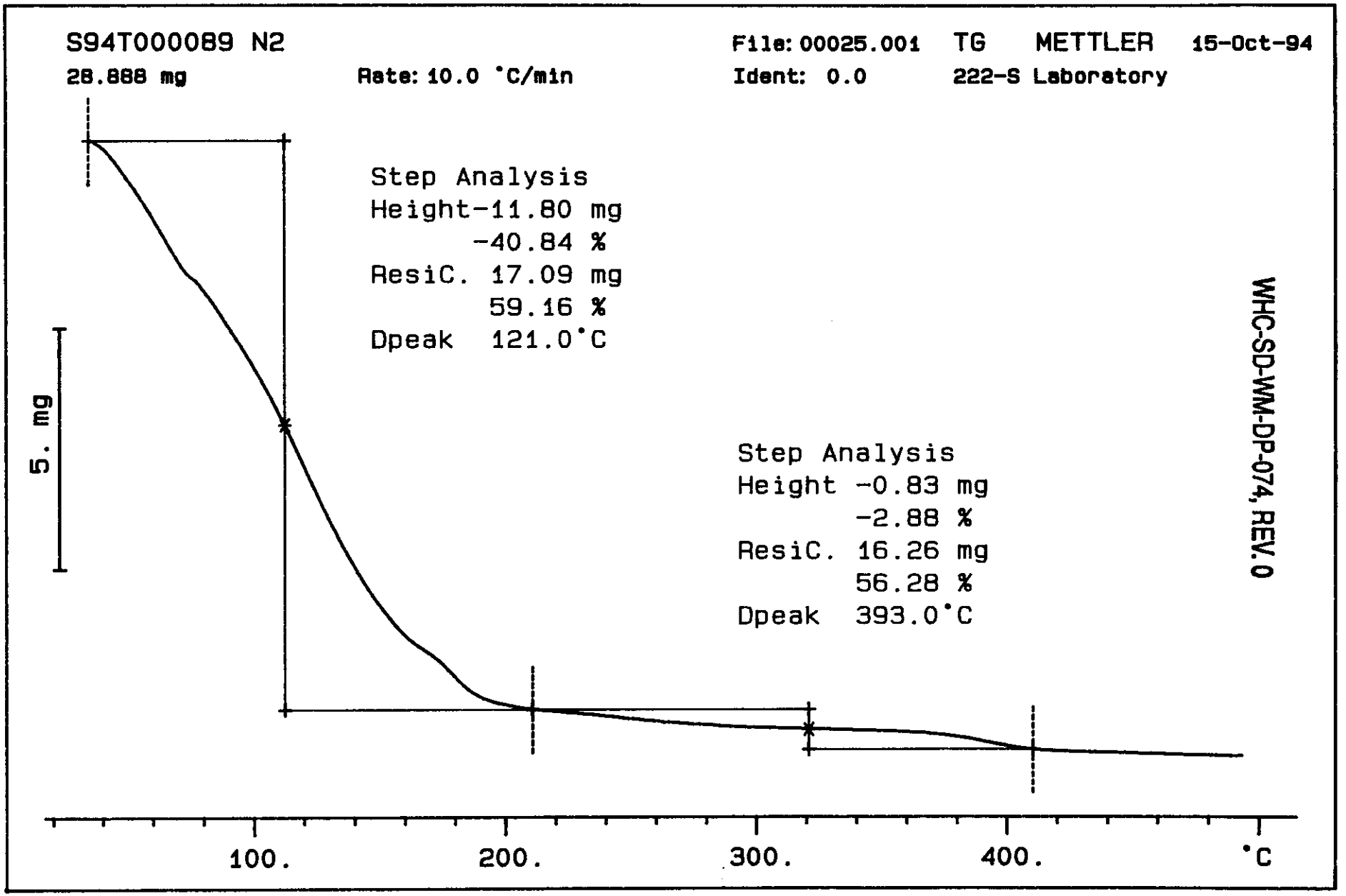


WHC-SD-WM-DP-074, REV.0

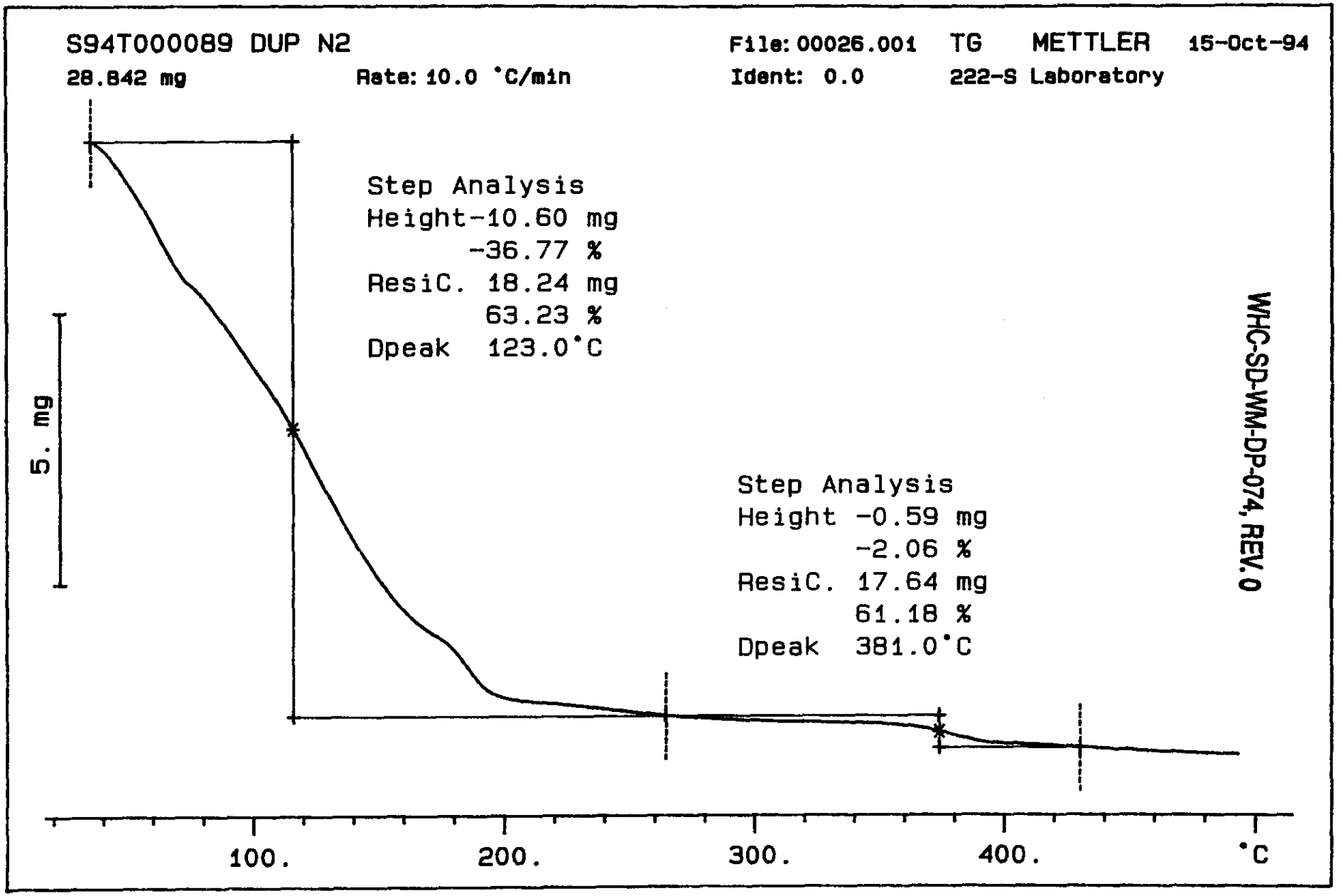
Jacie Stale
10-17-94



WHC-SD-WM-DP-074, REV.0



WHC-SD-WM-DP-074, REV. 0



WHC-SD-WM-DP-074, REV.0

m 04 5

LABCORE Data Entry Template for Worklist# 60

Analyst: SMF **Instrument:** TGA01 **Method:** LA-560-112

Worklist Comment: Please run TGA under N2,JMF. **WHC-SD-WM-DP-074, REV. 0**

Seg	Type	Sample#	Rep	Al	Test	Matrix	Actual	Found	DL 98.5% Rec	Unit
1	STD				TGA-01	SOLID	57.19	58.31	N/A	%
2	SAMPLE	S94T000091	0		TGA-01	SOLID	N/A	41.20		%
3	DUP	S94T000091	0		TGA-01	SOLID	41.20	39.23	N/A	%
4	SAMPLE	S94T000092	0		TGA-01	SOLID	N/A	40.59		%
5	DUP	S94T000092	0		TGA-01	SOLID	40.59	41.61	N/A	%

Final page for worklist # 60

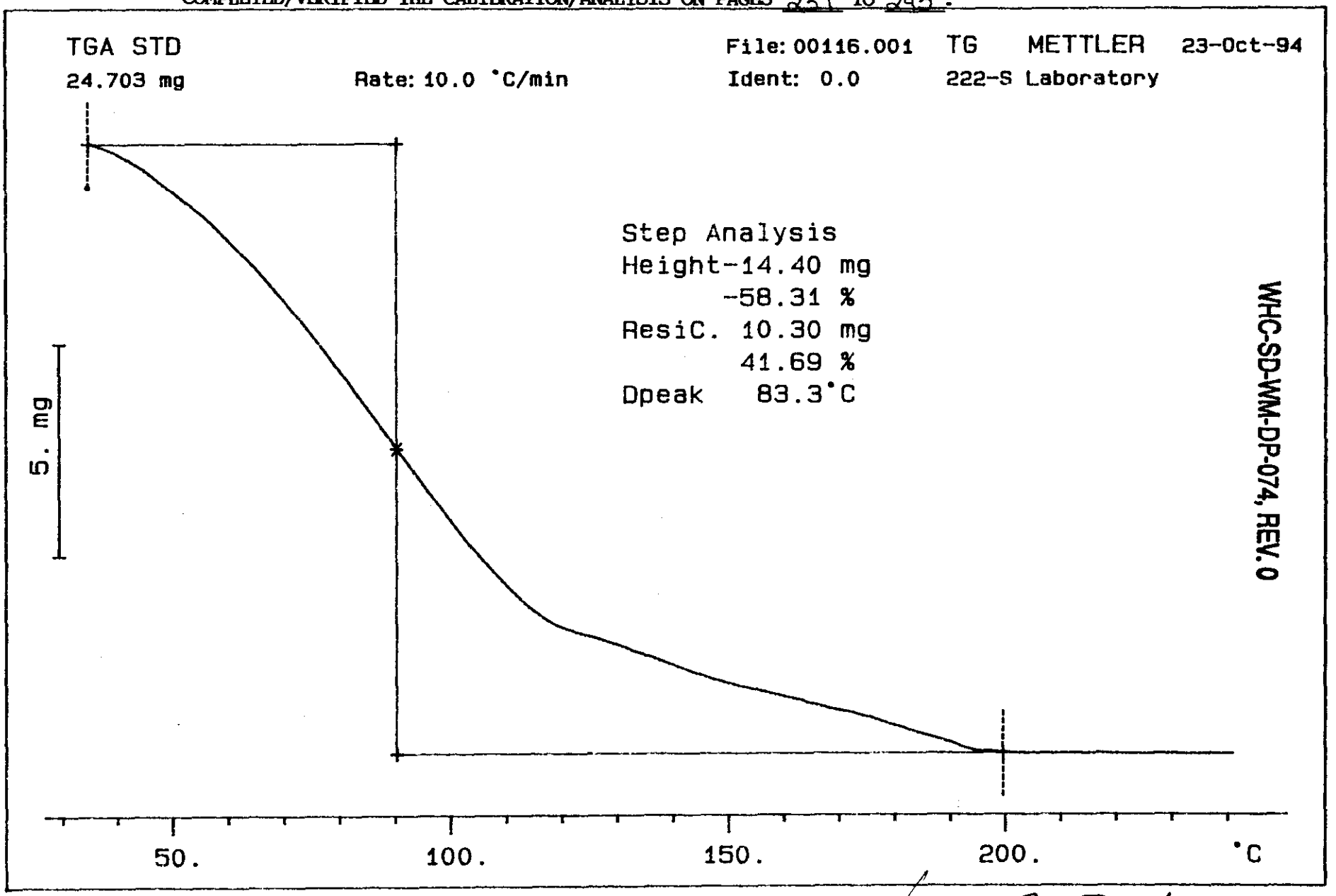
Susie M. Fulton
Analyst Signature

10-25-94
Date

Data Entry Comments: Entered + Reviewed 10/26/94 JM Lage

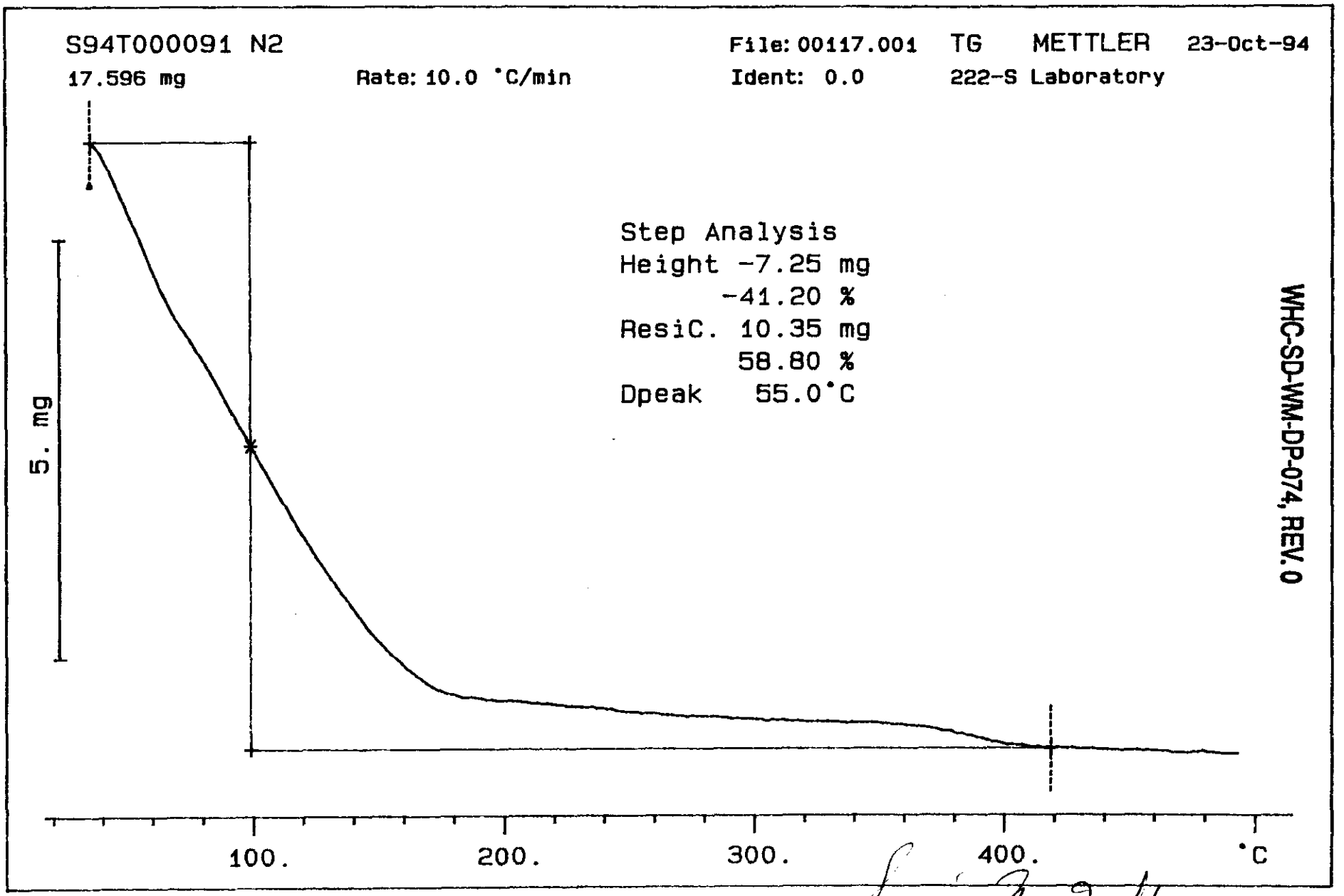
Units shown for QC (SPK) may not reflect the actual units.

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 239 TO 243.



Susie M. Fulto
11-. 94

WHC-SD-WM-DP-074, REV. 0

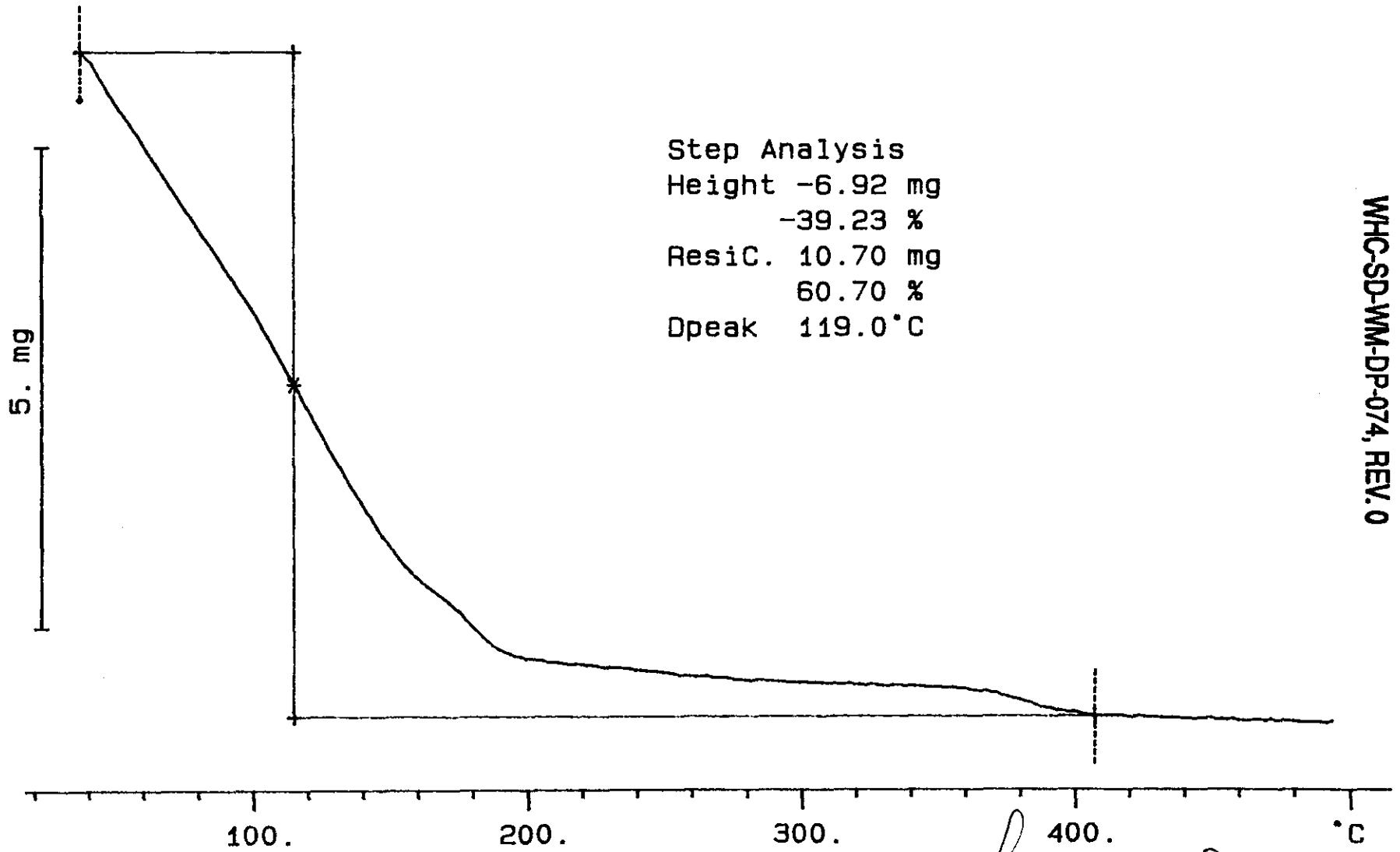


Susie M. Fulton

WHC-SD-WM-DP-074, REV. 0

S94T000091 (DUP) N2 File: 00118.001 TG METTLER 23-Oct-94

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



Step Analysis
Height -6.92 mg
-39.23 %
ResiC. 10.70 mg
60.70 %
Dpeak 119.0°C

WHC-SD-WM-DP-074, REV. 0

Susie M. Dalton

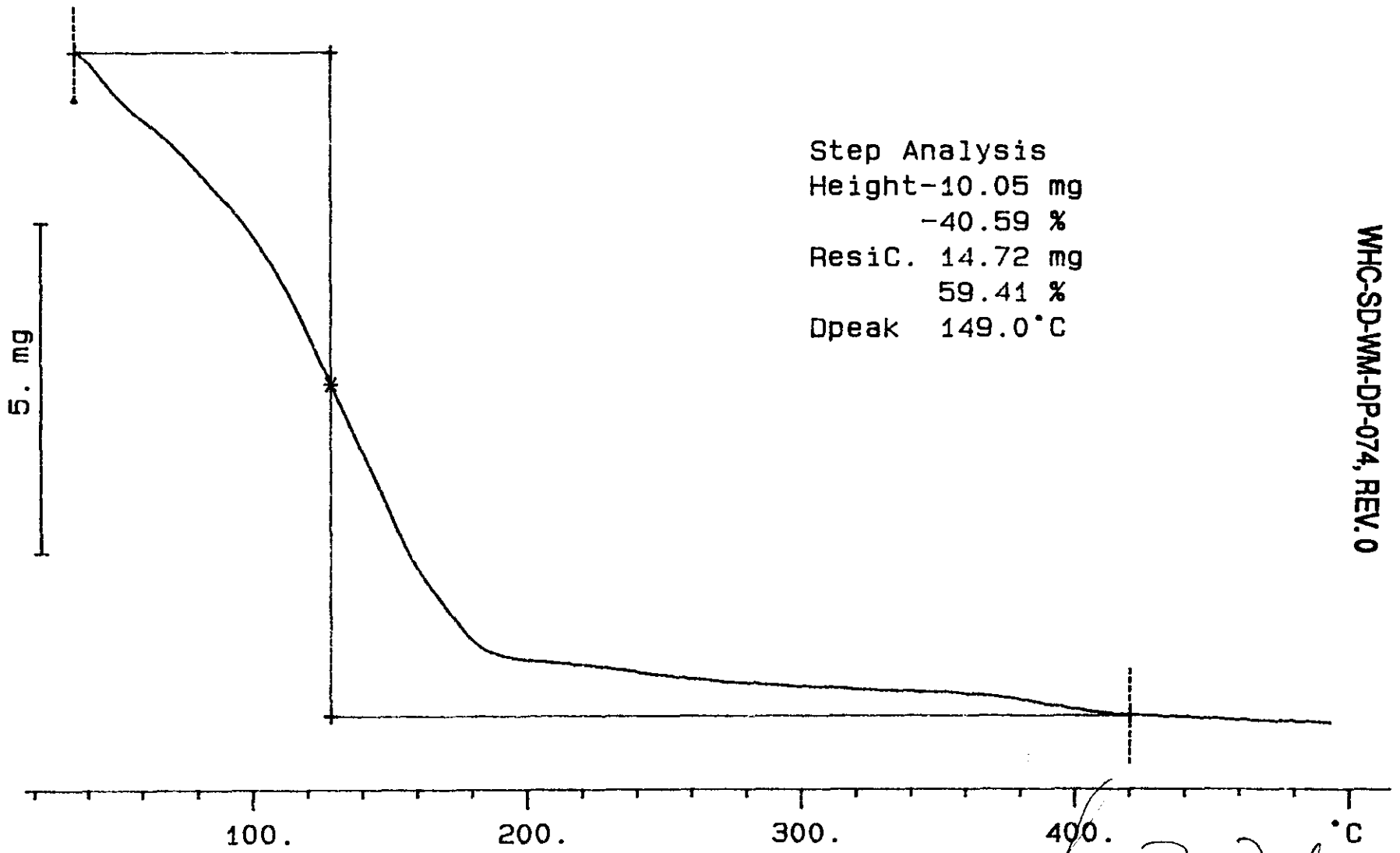
S94T000092 N2

24.767 mg

Rate: 10.0 °C/min

File: 00119.001 TG METTLER 23-Oct-94

Ident: 0.0 222-S Laboratory

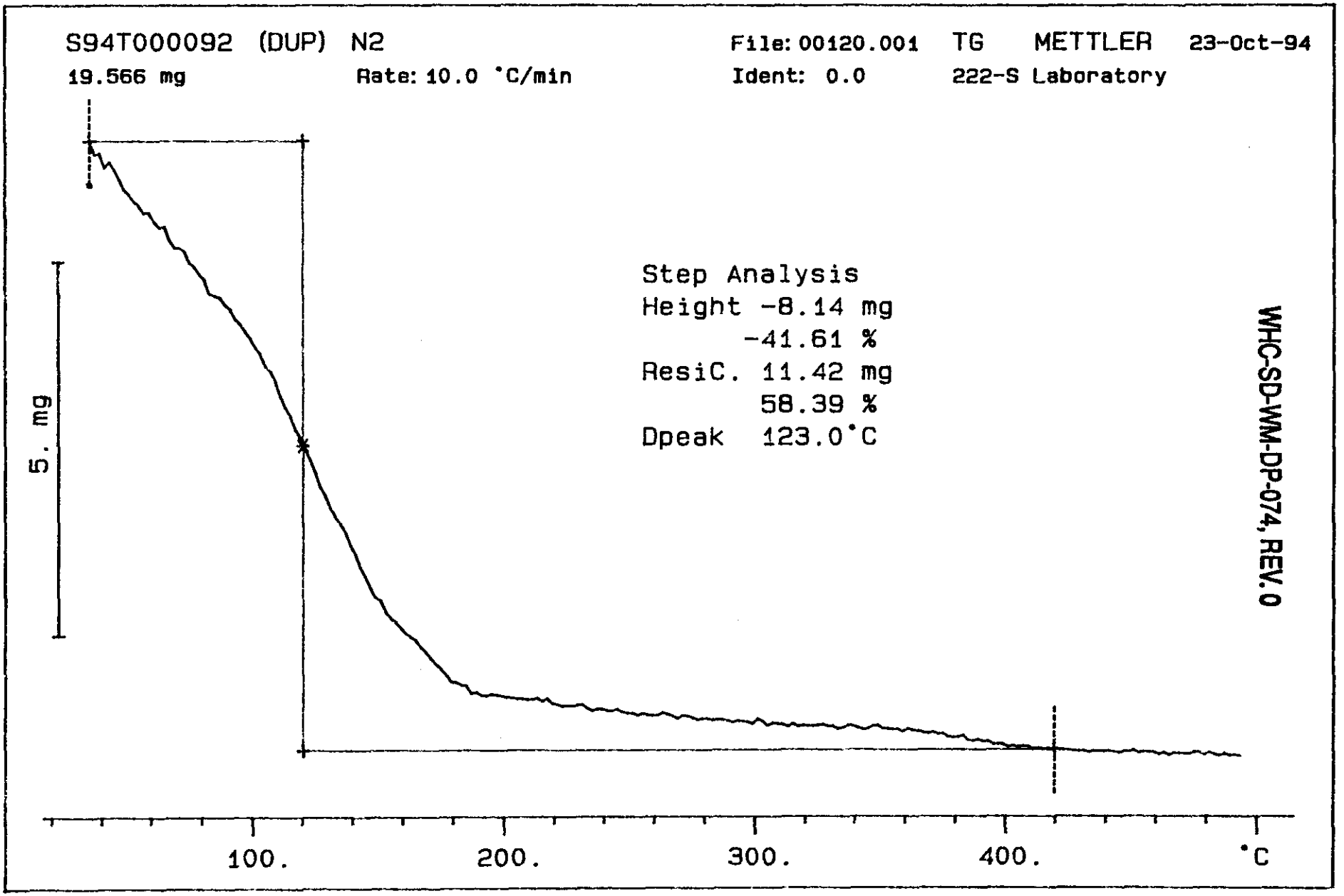


Step Analysis
Height-10.05 mg
-40.59 %
ResiC. 14.72 mg
59.41 %
Dpeak 149.0°C

WHC-SD-WM-DP-074, REV. 0

242

Susie M. Dulton



WHC-SD-WM-DP-074, REV. 0

LABCORE Data Entry Template for Worklist# 61

Analyst: KLV **Instrument:** TGA01 **Method:** LA-560-112

Worklist Comment: Please run TGA for 93 and 85 under N2, JMF. **WHC-SD-WM-DP-074, REV. 0**

Seg	Type	Sample#	Rep	Al	Test	Matrix	Actual	Found	DL	Unit
1	STD				TGA-01	SOLID	59.19	59.24	100.1 % N/A	%
2	SAMPLE	S94T000093	0		TGA-01	SOLID	N/A	68.87		%
3	DUP	S94T000093	0		TGA-01	SOLID	68.87	68.64	N/A	%
4	SAMPLE	S94T000085	0		TGA-01	SOLID	N/A	40.03		%
5	DUP	S94T000085	0		TGA-01	SOLID	40.03	42.95	N/A	%

Final page for worklist # 61

Analyst Signature **Date** 10-24-94

Data Entry Comments:
Samples S94T000093, 85 not homogeneous, dark brown & muddy
KLV.
Data entered and posted 10/26/94. JM Frye.

Units shown for QC (SPK) may not reflect the actual units.

LABCORE Data Entry Template for Worklist# 67

Analyst: _____ **Instrument:** DSC01 _____ **Method:** LA-514-113

Worklist Comment: Please run DSC under N2 to 450C, JMF. WHC-SD-WM-DP-074, REV. 0

Seg	Type	Sample#	Rep	Al	Test	Matrix	Actual	Found	DL	Unit
1	STD				DSC-01	SOLID			N/A	Joule
2	SAMPLE	S94T000093	0		DSC-01	SOLID	N/A			Joule
3	DUP	S94T000093	0		DSC-01	SOLID			N/A	Joule
4	STD				DSC-01	SOLID			N/A	Joule
5	SAMPLE	S94T000085	0		DSC-01	SOLID	N/A			Joule
6	DUP	S94T000085	0		DSC-01	SOLID			N/A	Joule

Final page for worklist # 67

Analyst Signature _____ **Date** _____

Data Entry Comments: See attached sheet JMF 10/31/94

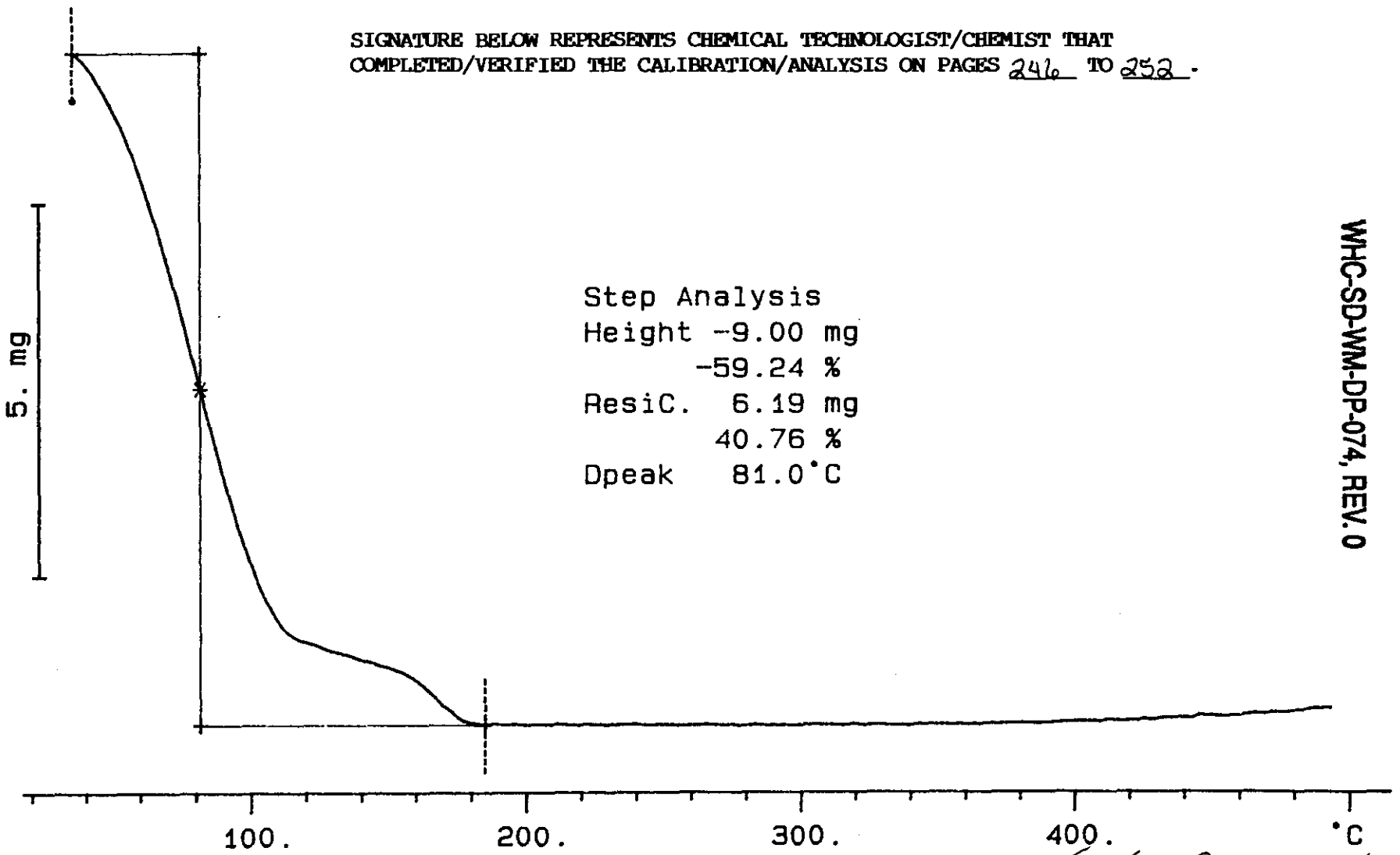
Units shown for QC (SPK) may not reflect the actual units.

TGA STD
15.195 mg

Rate: 10.0 °C/min

File: 00111.001 TG METTLER 22-Oct-94
Ident: 0.0 222-S Laboratory

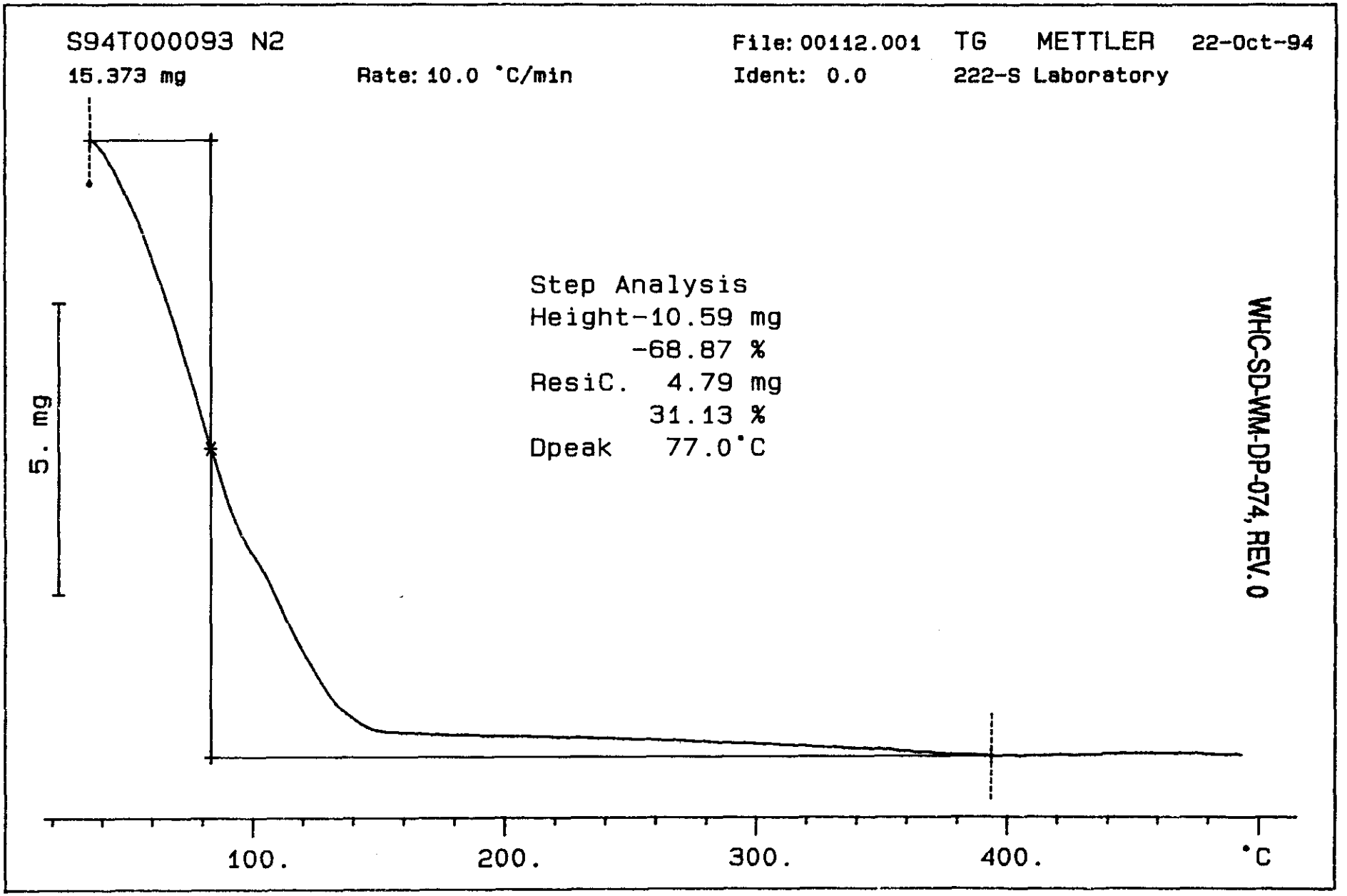
SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 246 TO 252.



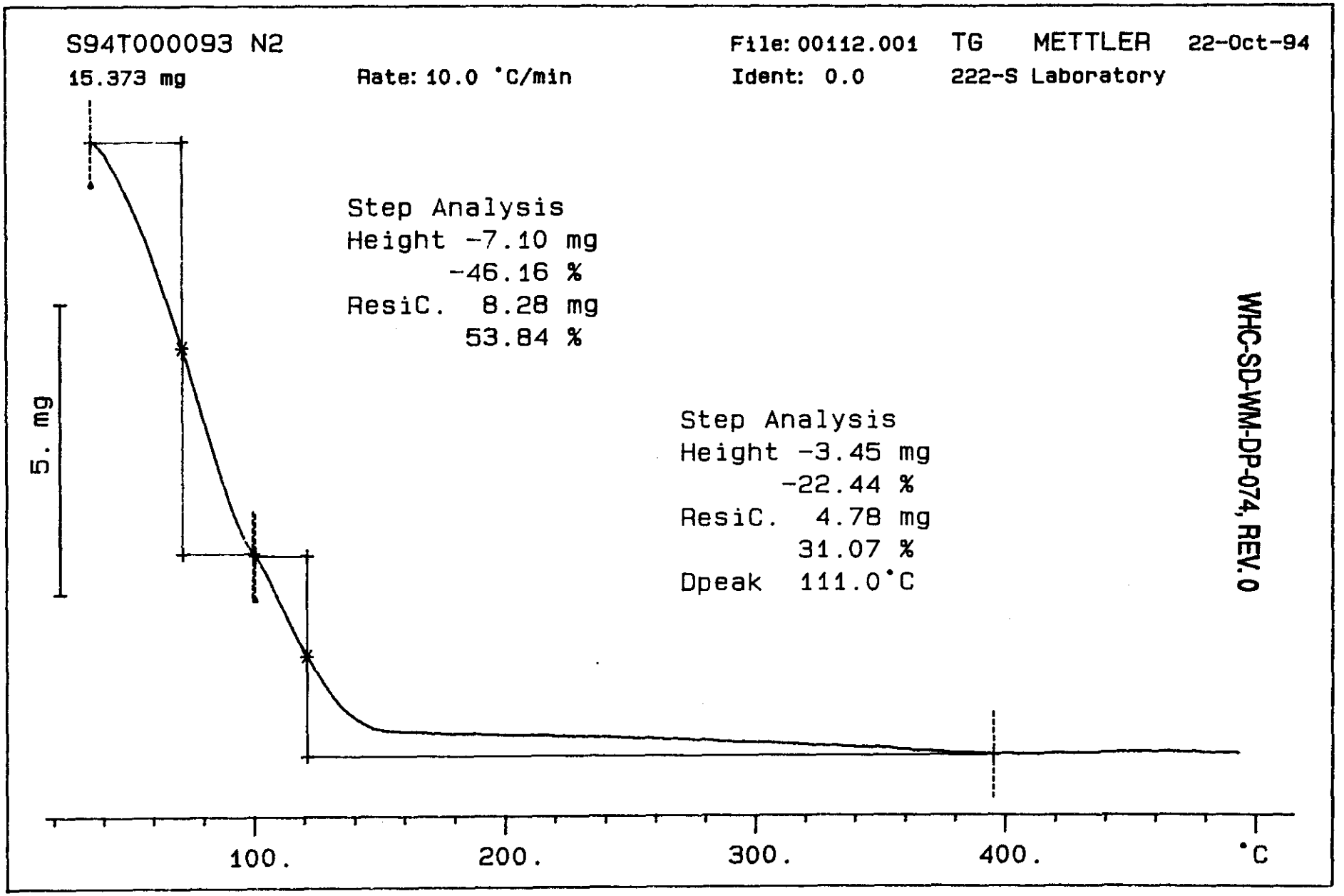
Step Analysis
Height -9.00 mg
-59.24 %
ResiC. 6.19 mg
40.76 %
Dpeak 81.0°C

WHC-SD-WM-DP-074, REV.0

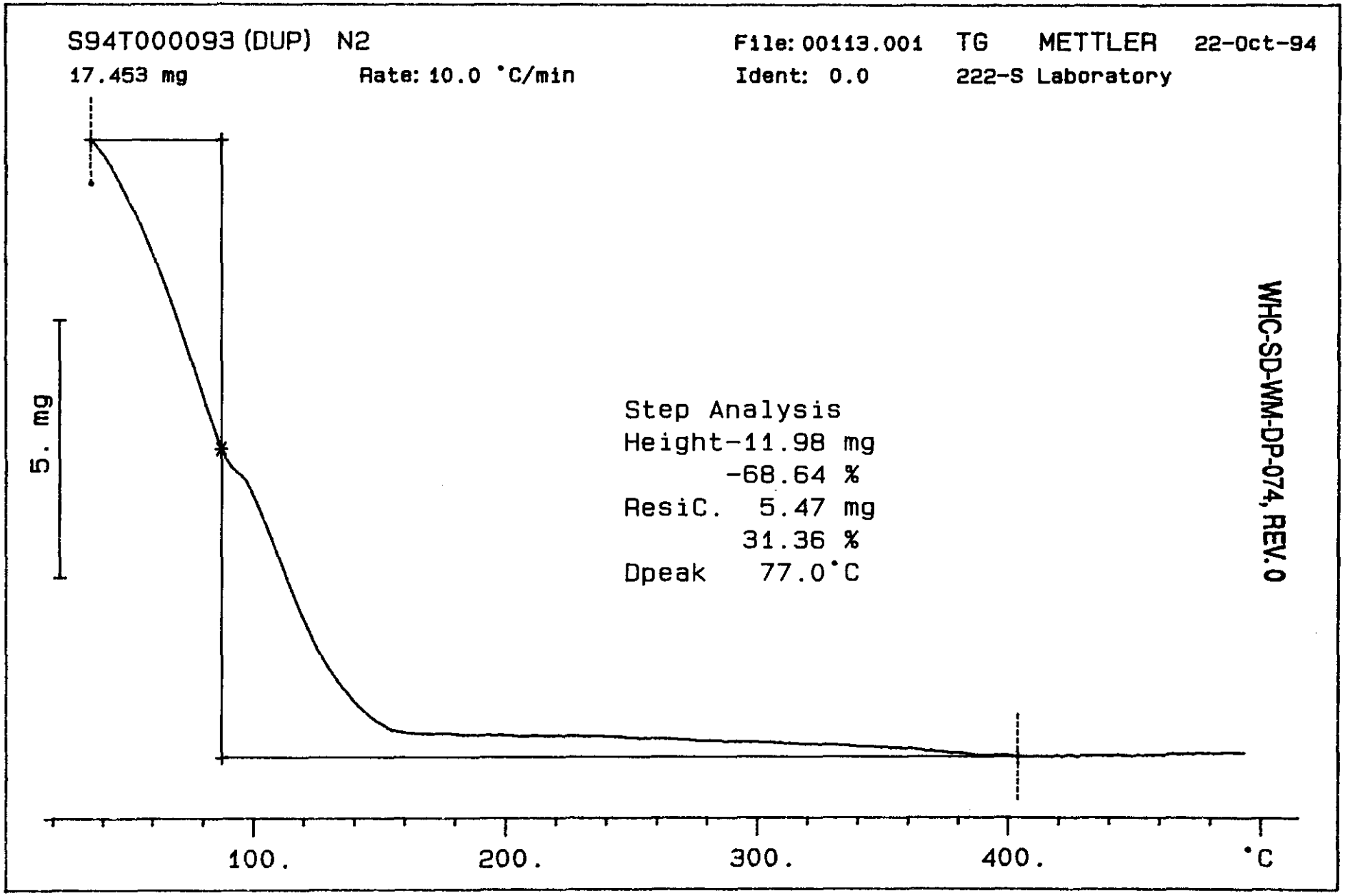
10-24-94



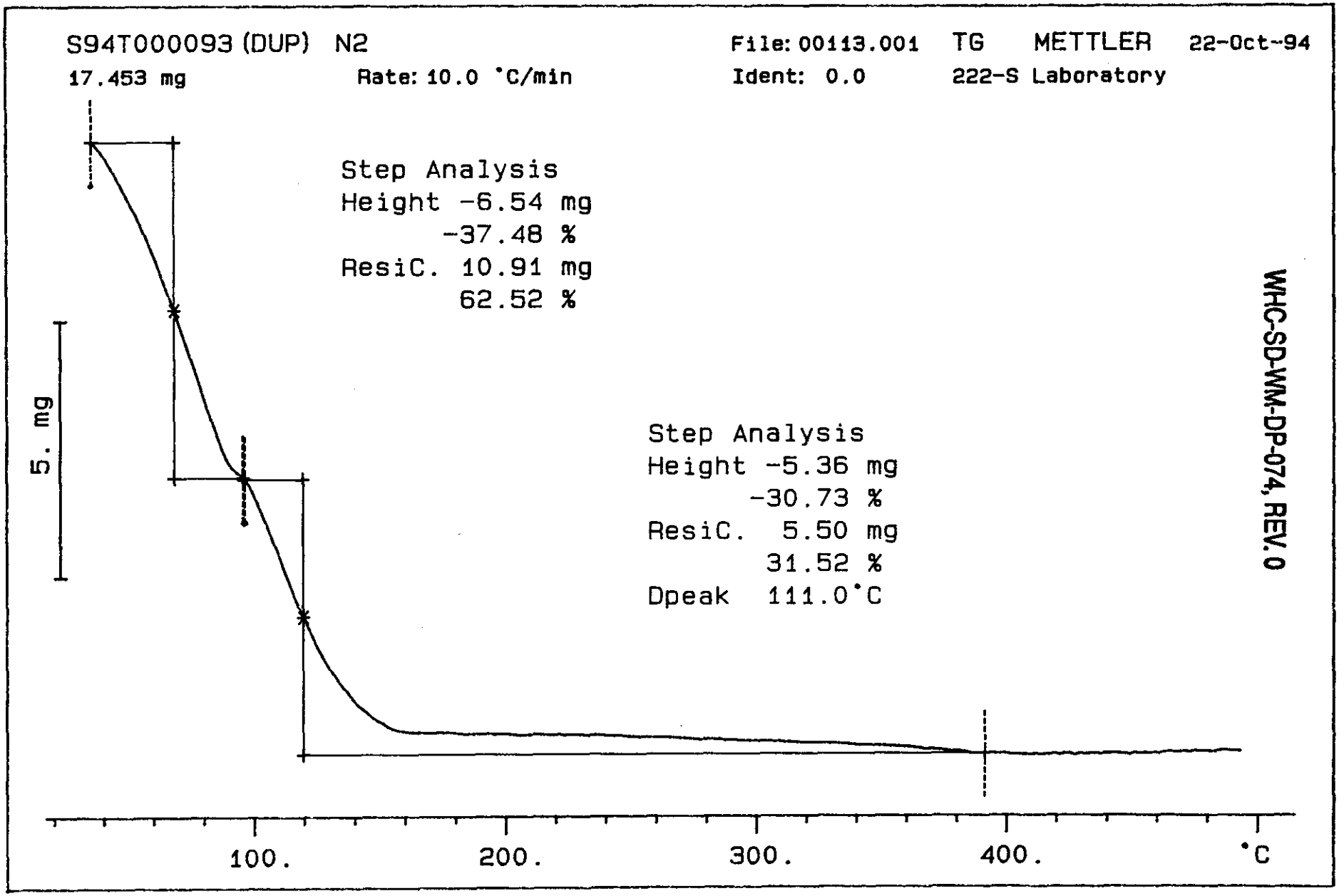
WHC-SD-WM-DP-074, REV. 0



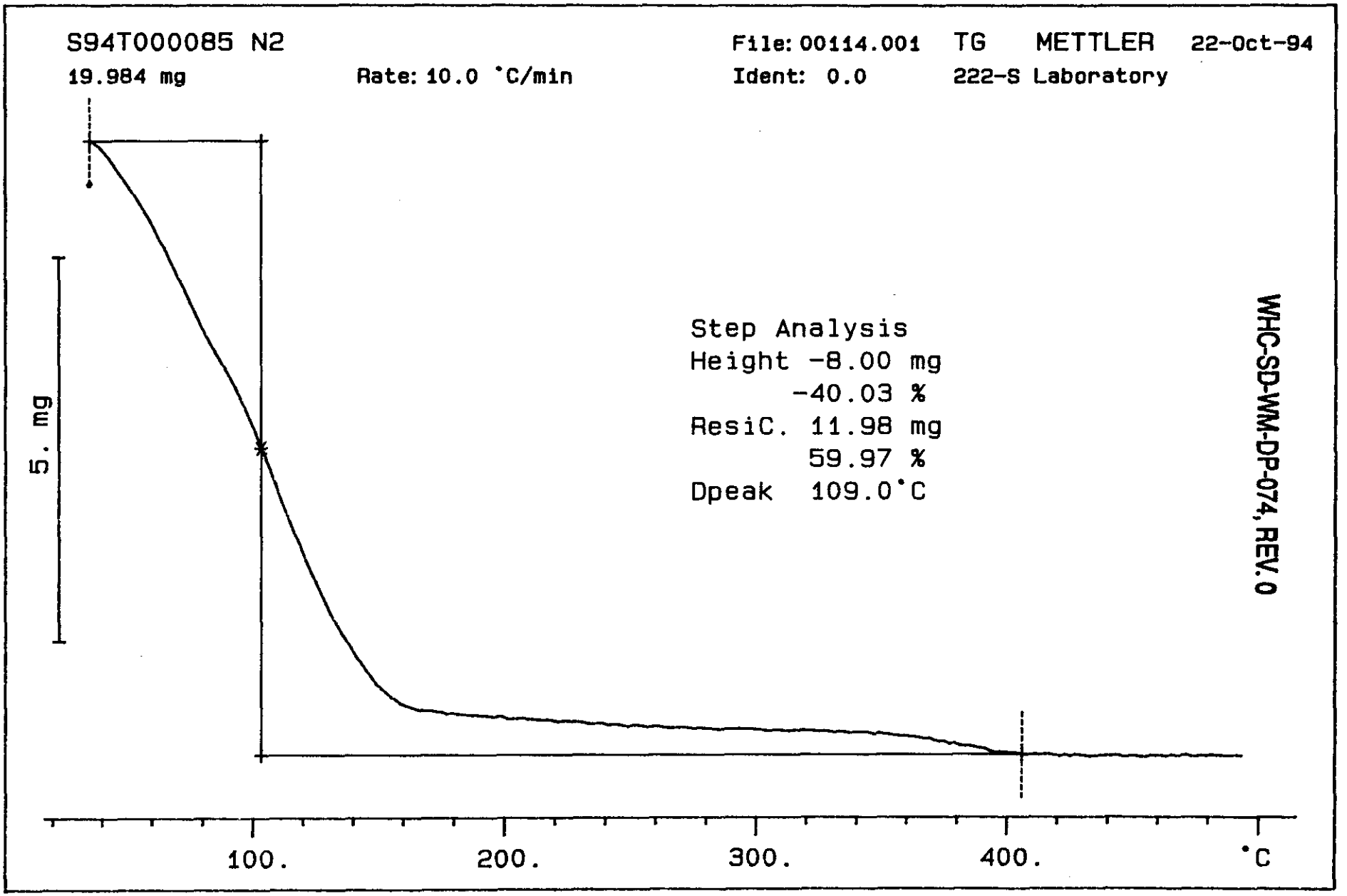
WHC-SD-WM-DP-074, REV. 0



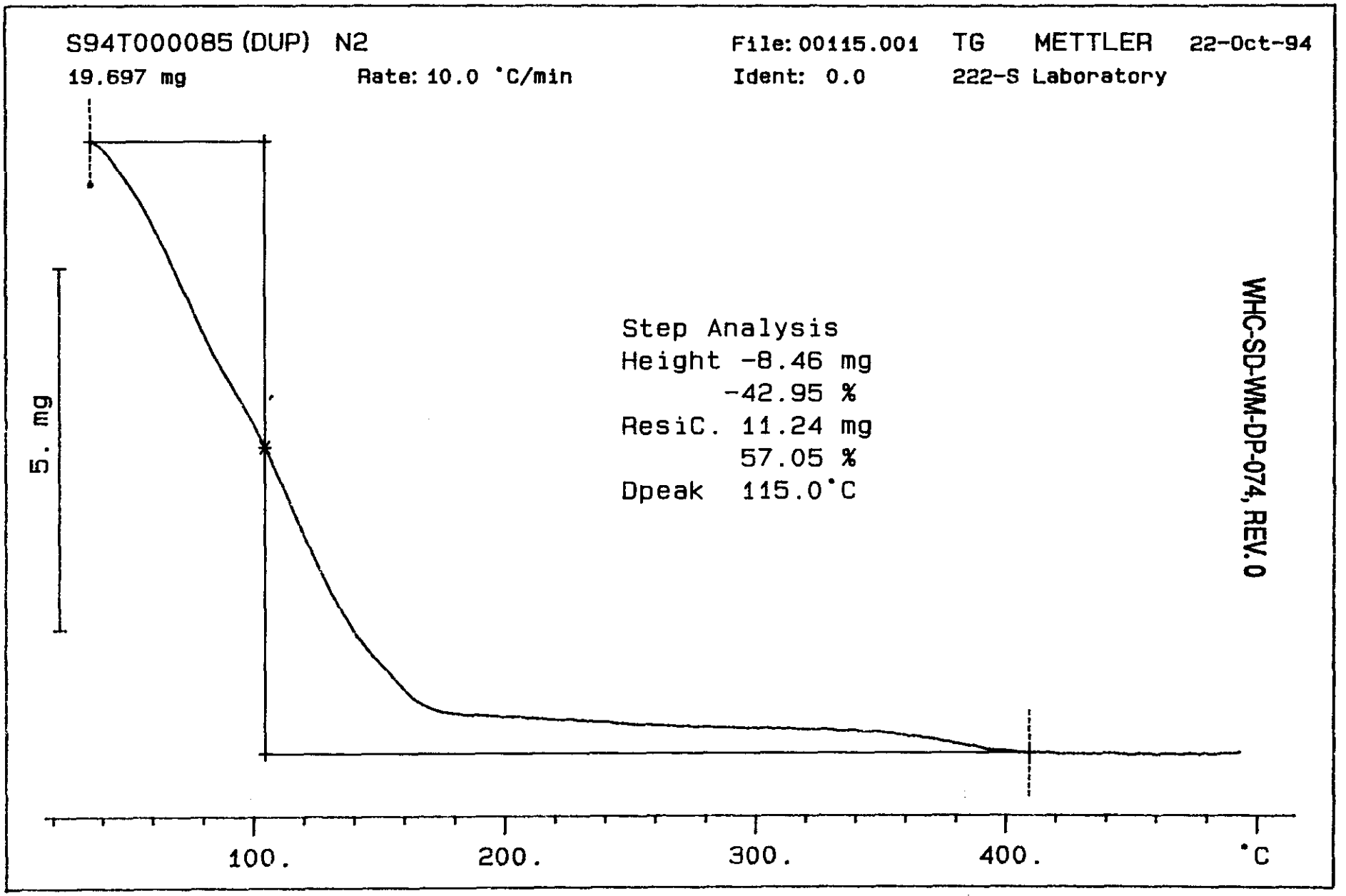
WHC-SD-WM-DP-074, REV. 0



WHC-SD-WM-DP-074, REV. 0



WHC-SD-WM-DP-074, REV. 0



WHC-SD-WM-DP-074, REV. 0

LABCORE Data Entry Template for Worklist# 55

Analyst: KLV **Instrument:** TGA01 **Method:** LA-560-112

Worklist Comment: Please run under N2, JMF. **WHC-SD-WM-DP-074, REV. 0**

Seg	Type	Sample#	Rep	Al	Test	Matrix	Actual	Found	DL	Unit
1	STD				TGA-01	LIQUID	59.19	59.83	101.1% N/A	%
2	SAMPLE	S94T000104	0		TGA-01	LIQUID	N/A	74.74		%
3	DUP	S94T000104	0		TGA-01	LIQUID	74.74	75.39	N/A	%
	STD				TGA-01		59.19	58.59	99.0	
4	SAMPLE	S94T000040	0		TGA-01	LIQUID	N/A	48.72		%
5	DUP	S94T000040	0		TGA-01	LIQUID	48.72	47.97	N/A	%

Final page for worklist # 55

Analyst Signature

10-27-94
Date

Data Entry Comments: Data entered and verified 10/25/94 JMF

Units shown for QC (SPK) may not reflect the actual units.

LABCORE Data Entry Template for Worklist# 55

Analyst: _____ **Instrument:** TGA01 _____ **Method:** LA-560-112

Worklist Comment: Please run under N2, JMF. **WHC-SD-WM-DP-074, REV. 0**

Seg	Type	Sample#	Rep	Al	Test	Matrix	Actual	Found	DL	Unit
1	STD				TGA-01	LIQUID			N/A	%
2	SAMPLE	S94T000104	0		TGA-01	LIQUID	N/A			%
3	DUP	S94T000104	0		TGA-01	LIQUID			N/A	%
4	STD				TGA-01	LIQUID			N/A	%
5	SAMPLE	S94T000040	0		TGA-01	LIQUID	N/A			%
6	DUP	S94T000040	0		TGA-01	LIQUID			N/A	%

Final page for worklist # 55

Analyst Signature _____ **Date** _____

Data Entry Comments: See attached sheet for data. JMF.

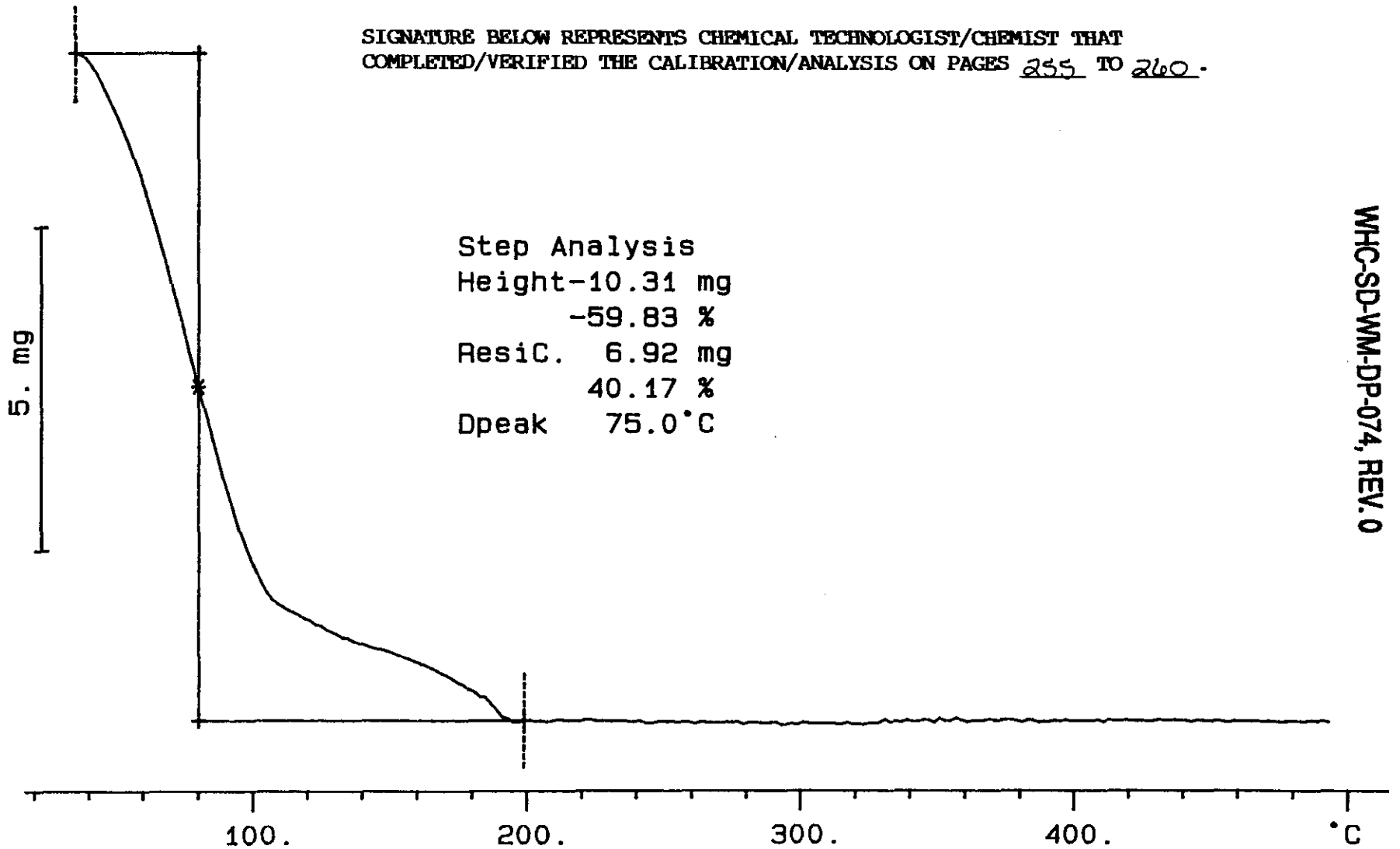
Units shown for QC (SPK) may not reflect the actual units.

TGA STD
17.223 mg

Rate: 10.0 °C/min

File: 00072.001 TG METTLER 19-Oct-94
Ident: 0.0 222-S Laboratory

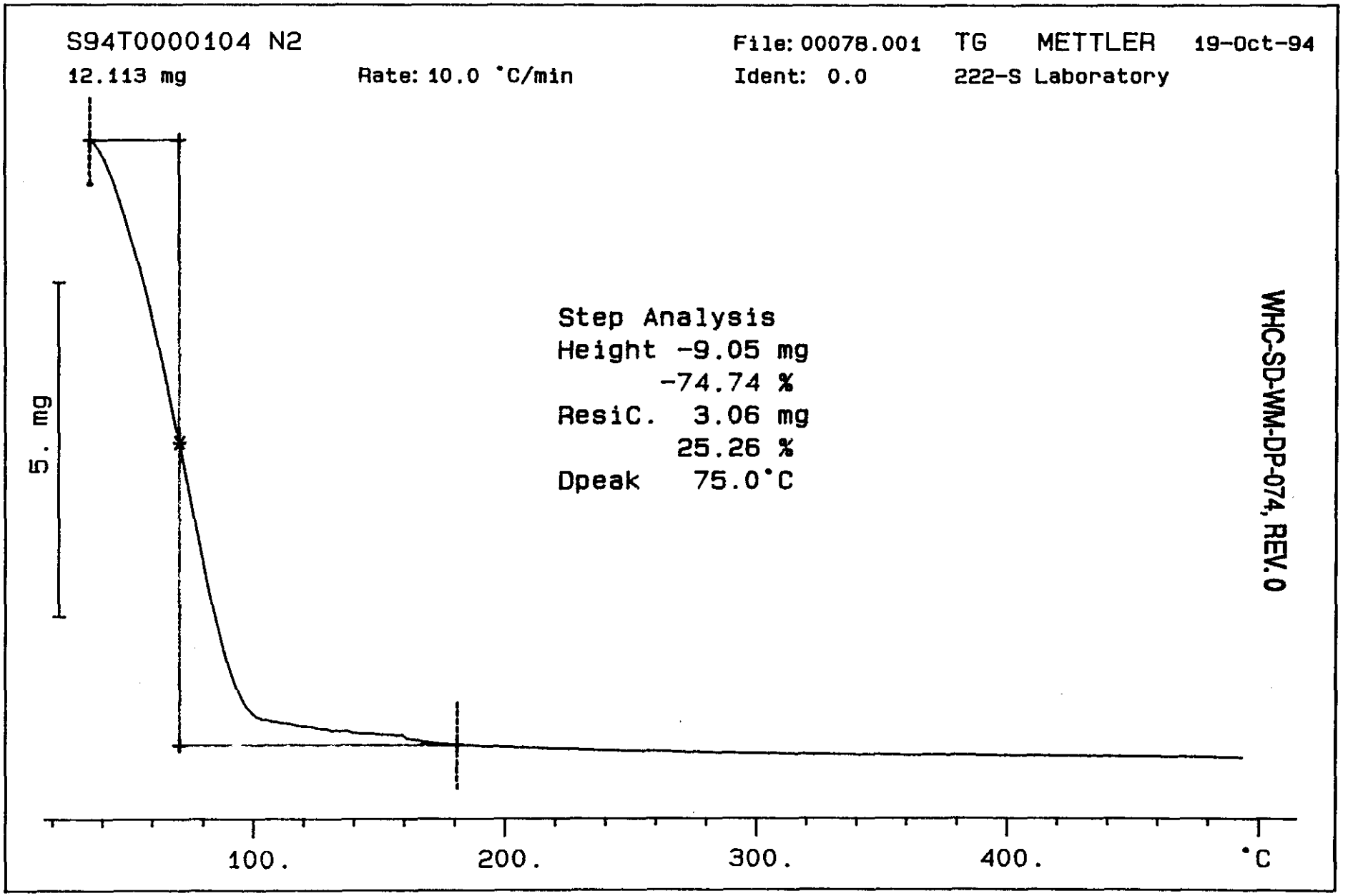
SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 255 TO 260.



Step Analysis
Height-10.31 mg
-59.83 %
ResiC. 6.92 mg
40.17 %
Dpeak 75.0°C

WHC-SD-WM-DP-074, REV. 0

10/2.194



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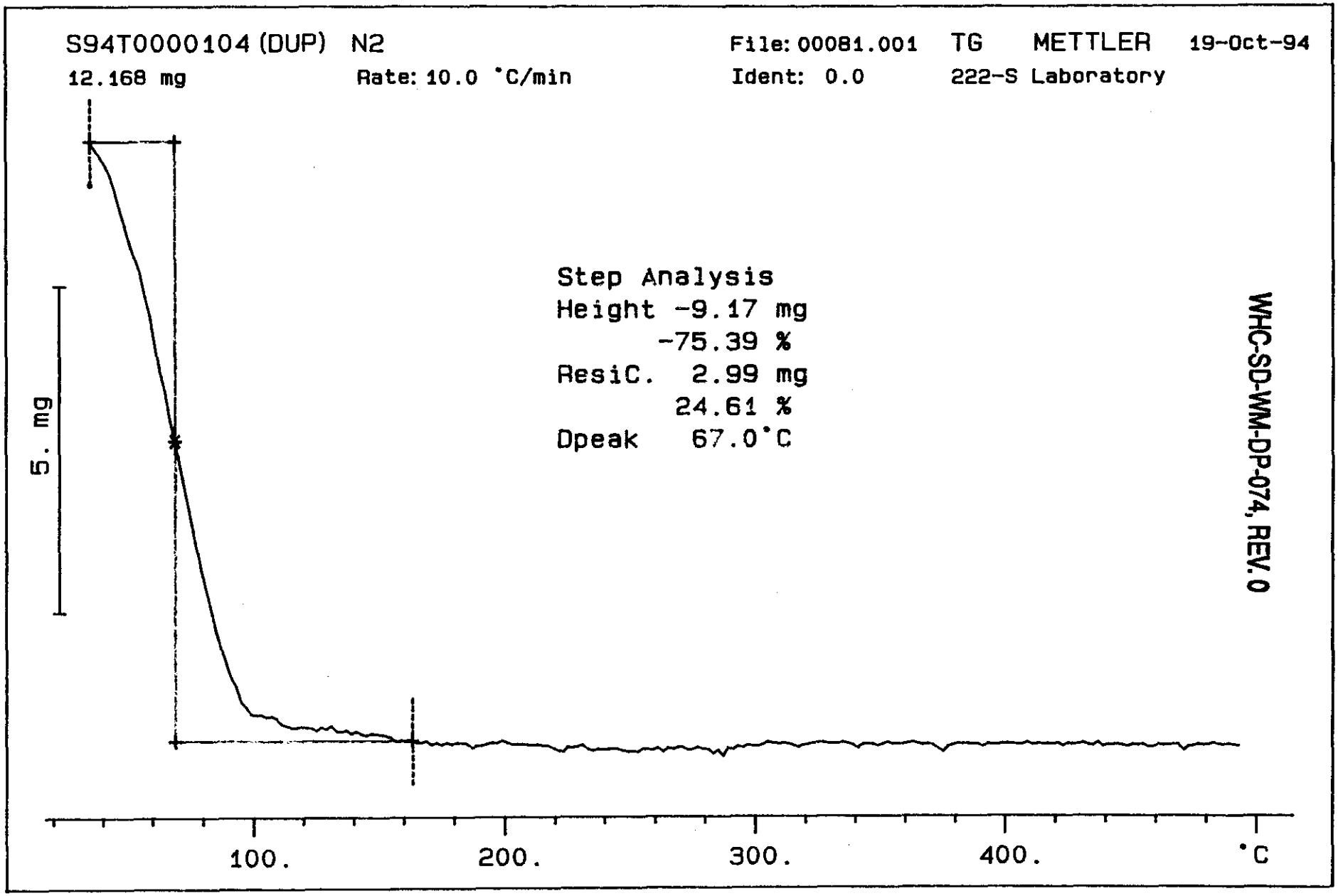
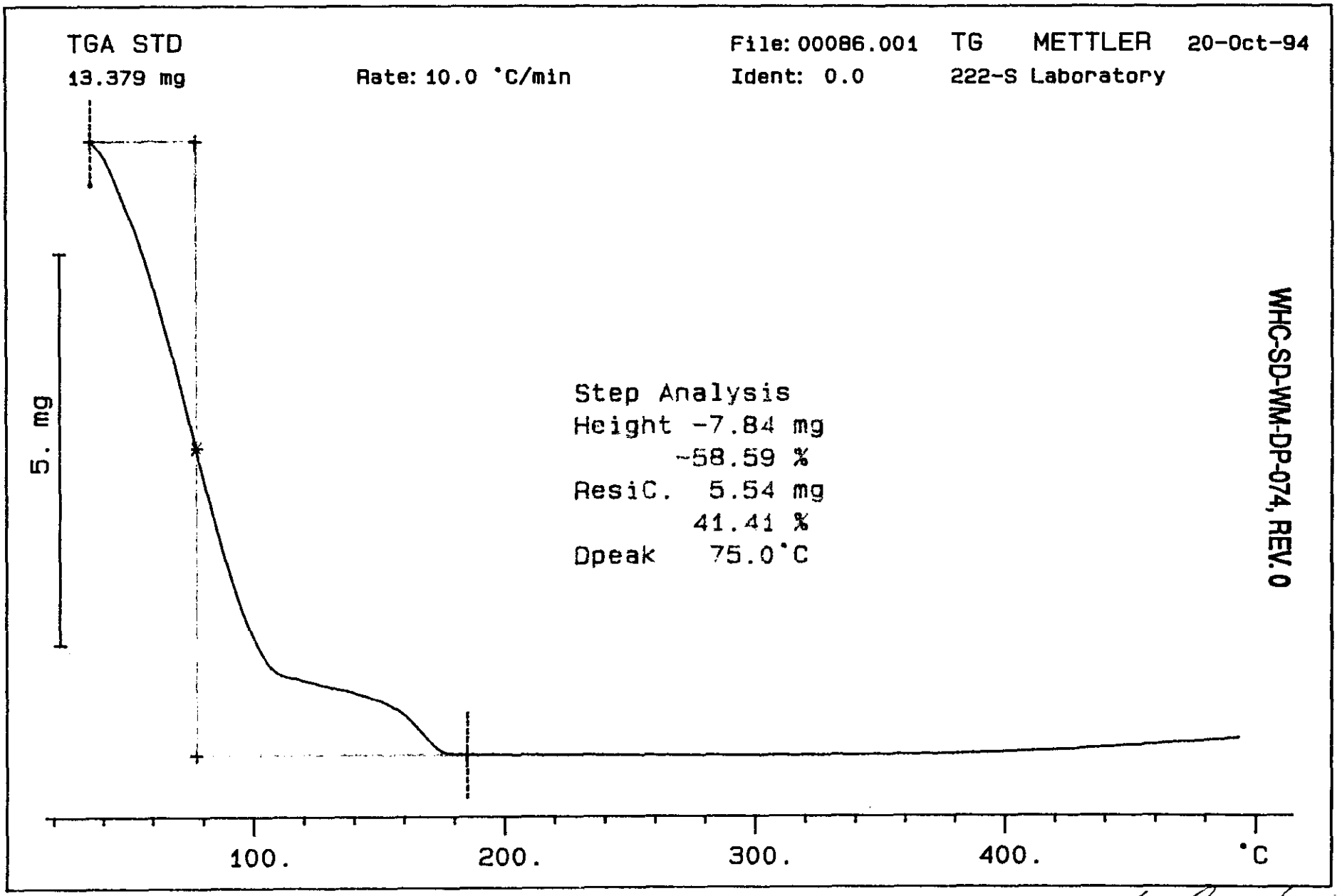


WHC-SD-WM-DP-074, REV. 0



WHC-SD-WM-DP-074, REV.0

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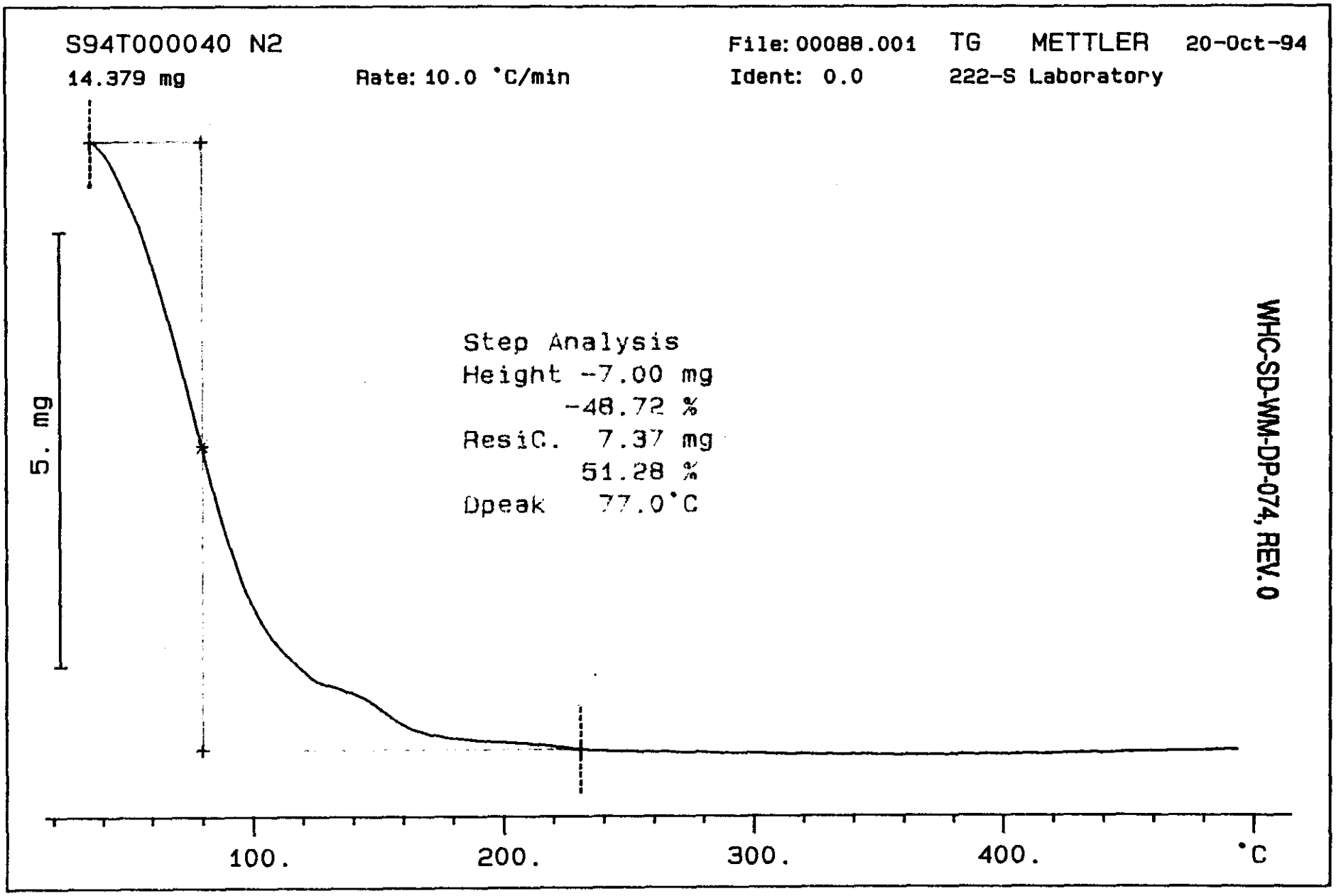
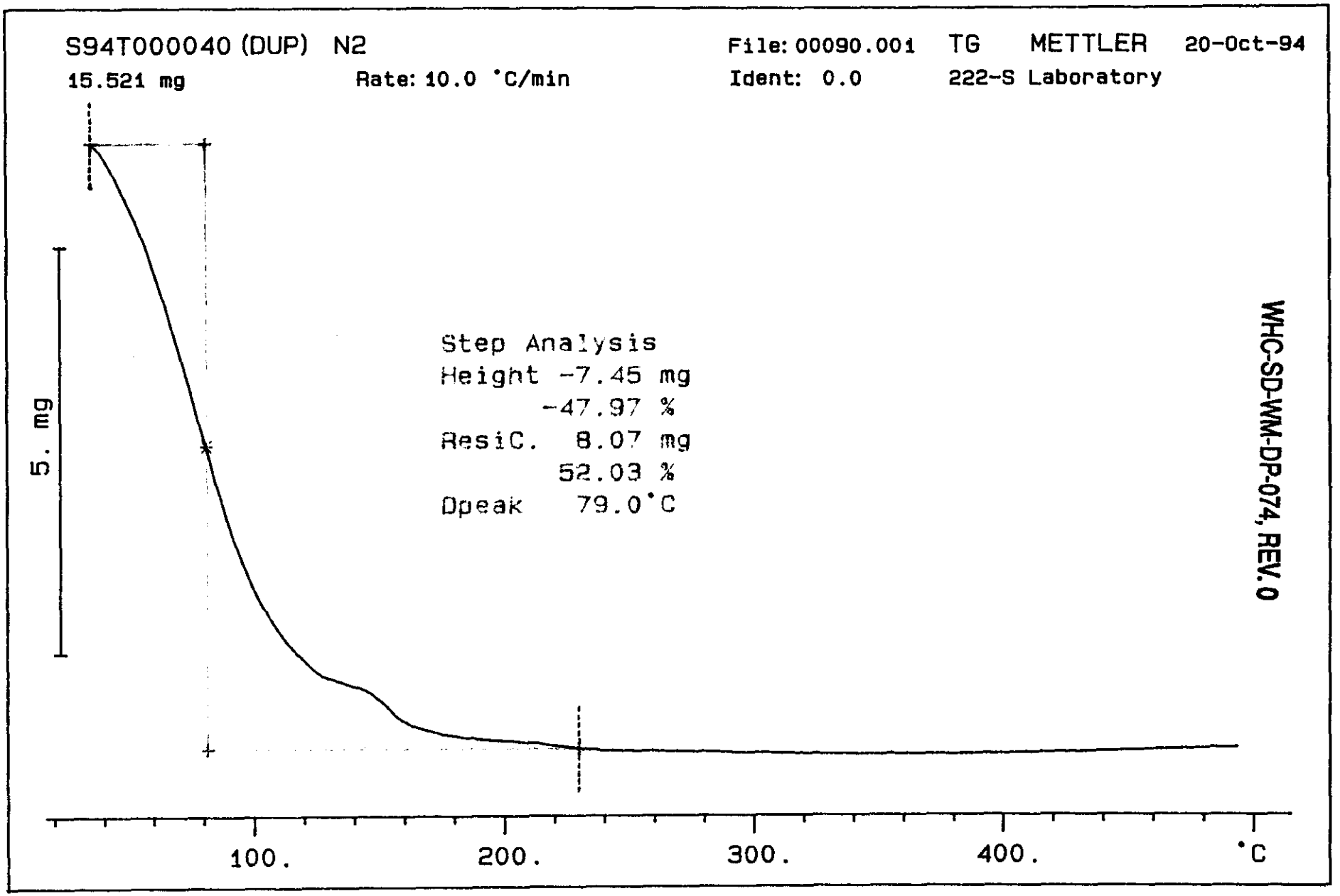
10/22/94



WHC-SD-WM-DP-074, REV. 0



WHC-SD-WM-DP-074, REV. 0

LABCORE Data Entry Template for Worklist# 56

Analyst: JLS **Instrument:** TGA01 **Method:** LA-560-112

Worklist Comment: Please run under N2. JMF

WHC-SD-WM-DP-074, REV. 0

Seg	Type	Sample#	Rep	Al	Test	Matrix	Actual	Found	DL	Unit
1	STD				TGA-01	LIQUID	59.19%	58.57%	99.6% Rec N/A	%
2	SAMPLE	S94T000105	0		TGA-01	LIQUID	N/A	49.10%		%
3	DUP	S94T000105	0		TGA-01	LIQUID	49.10%	49.34%	N/A	%
	STD				TGA		59.19%	58.67%	99.1% Rec	
4	SAMPLE	S94T000106	0		TGA-01	LIQUID	N/A	48.89%		%
5	DUP	S94T000106	0		TGA-01	LIQUID	48.89%	50.68%	N/A	%

Final page for worklist # 56

Jann Sage for J.L. Steele

Analyst Signature

Date 10/19/94

Data Entry Comments: Noise in duplicate run of S94T000106 due to vibrations from drilling being done upstairs of Lab 4D. JMF 10/1

Entered & approved 10/19/94 J.M.F.

Units shown for QC (SPK) may not reflect the actual units.

LABCORE Data Entry Template for Worklist# 56

Analyst: _____ **Instrument:** TGA01 _____ **Method:** LA-560-112

Worklist Comment: Please run under N2. JMF

WHC-SD-WM-DP-074, REV. 0

Seg	Type	Sample#	Rep	Al	Test	Matrix	Actual	Found	DL	Unit
1	STD				TGA-01	LIQUID			N/A	%
2	SAMPLE	S94T000105		0	TGA-01	LIQUID	N/A			%
3	DUP	S94T000105		0	TGA-01	LIQUID			N/A	%
4	STD				TGA-01	LIQUID			N/A	%
5	SAMPLE	S94T000106		0	TGA-01	LIQUID	N/A			%
6	DUP	S94T000106		0	TGA-01	LIQUID			N/A	%

Final page for worklist # 56

Analyst Signature _____ **Date** _____

Data Entry Comments: See attached Sheet. JMF

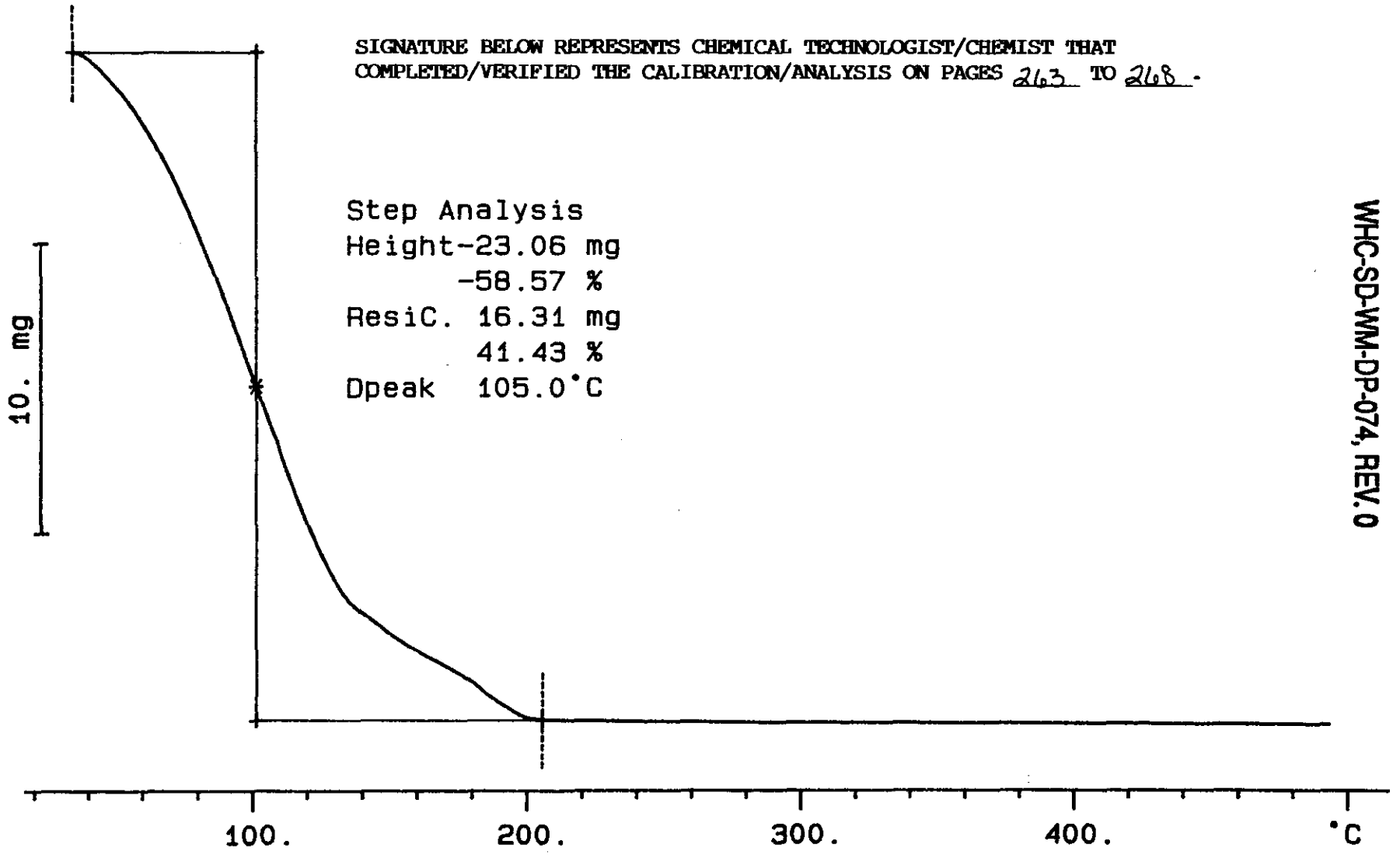
Units shown for QC (SPK) may not reflect the actual units.

TGA STD
39.371 mg

Rate: 10.0 °C/min

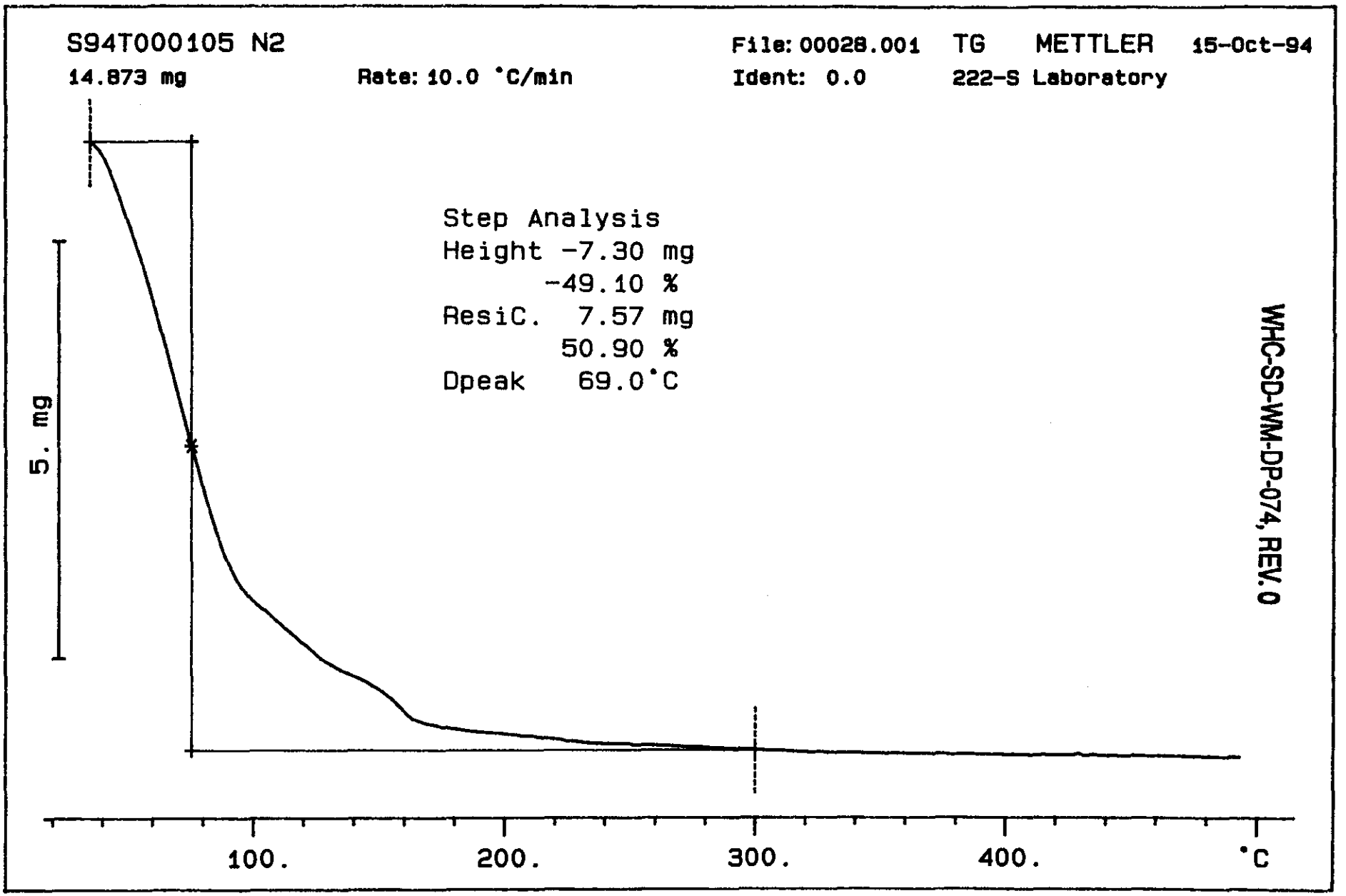
File: 00027.001 TG METTLER 15-Oct-94
Ident: 0.0 222-S Laboratory

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 263 TO 268.

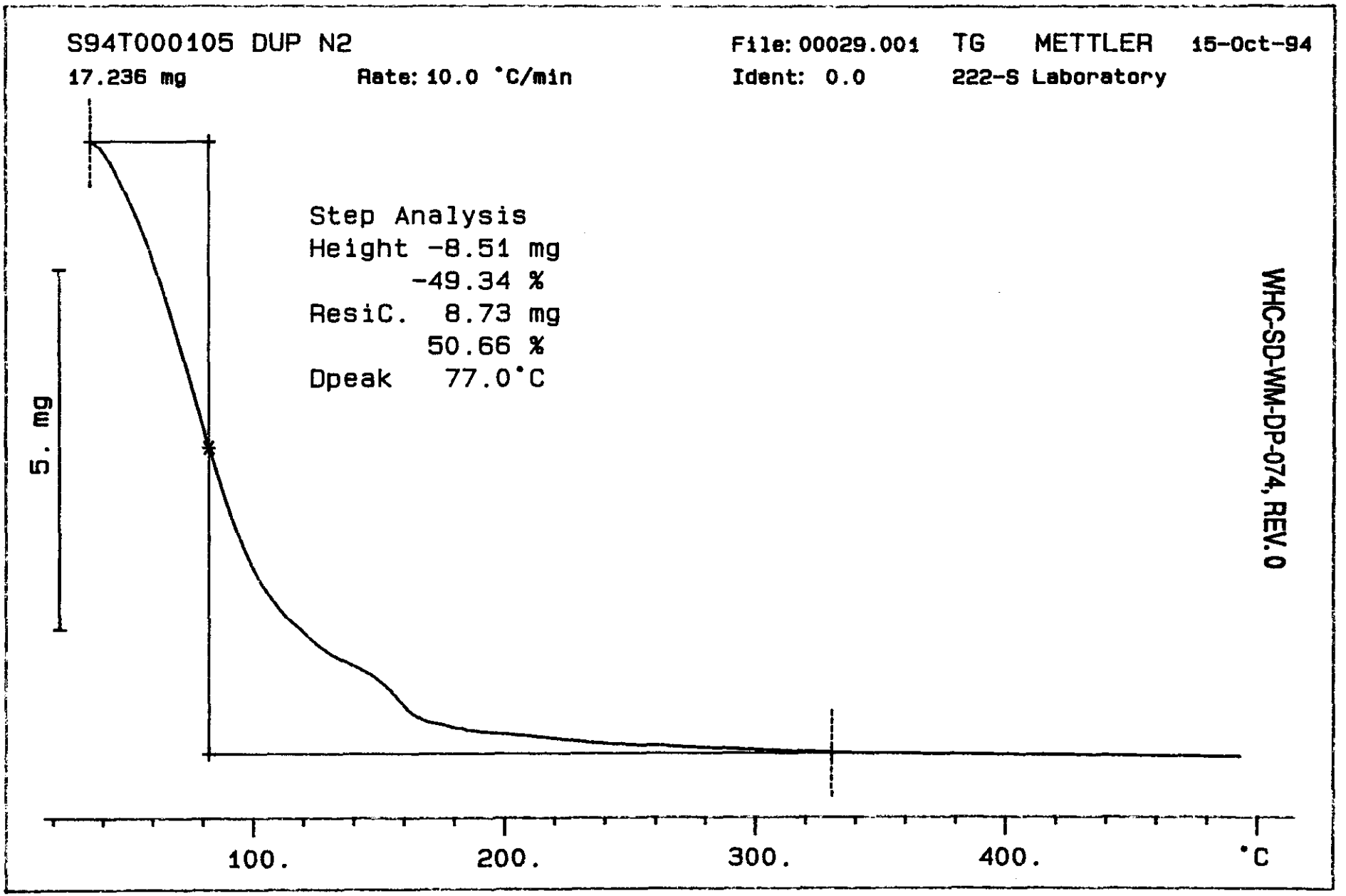


WHC-SD-WM-DP-074, REV. 0

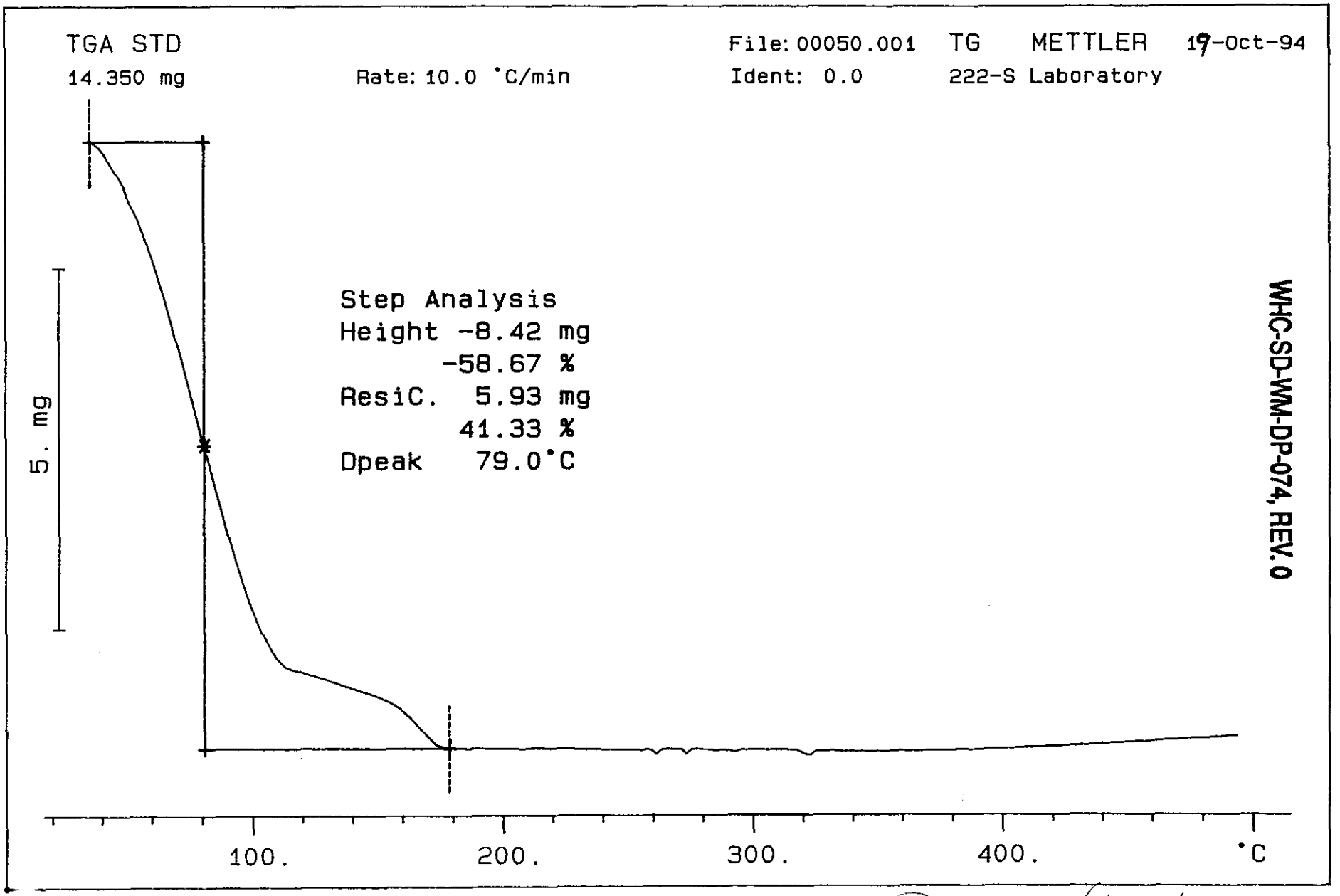
Jackie Steele 10-17-94



WHC-SD-WM-DP-074, REV. 0

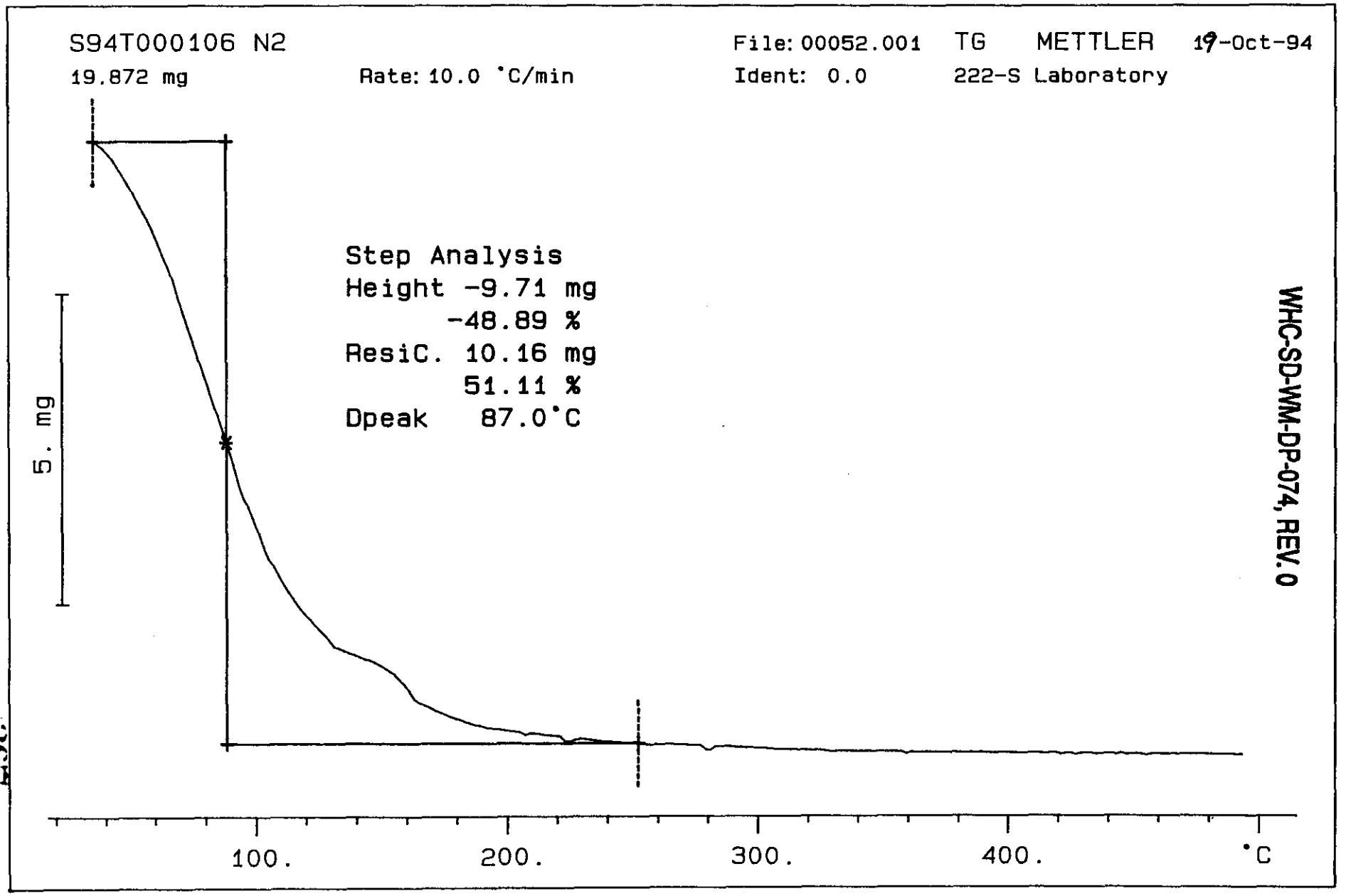


WHC-SD-WM-DP-074, REV. 0

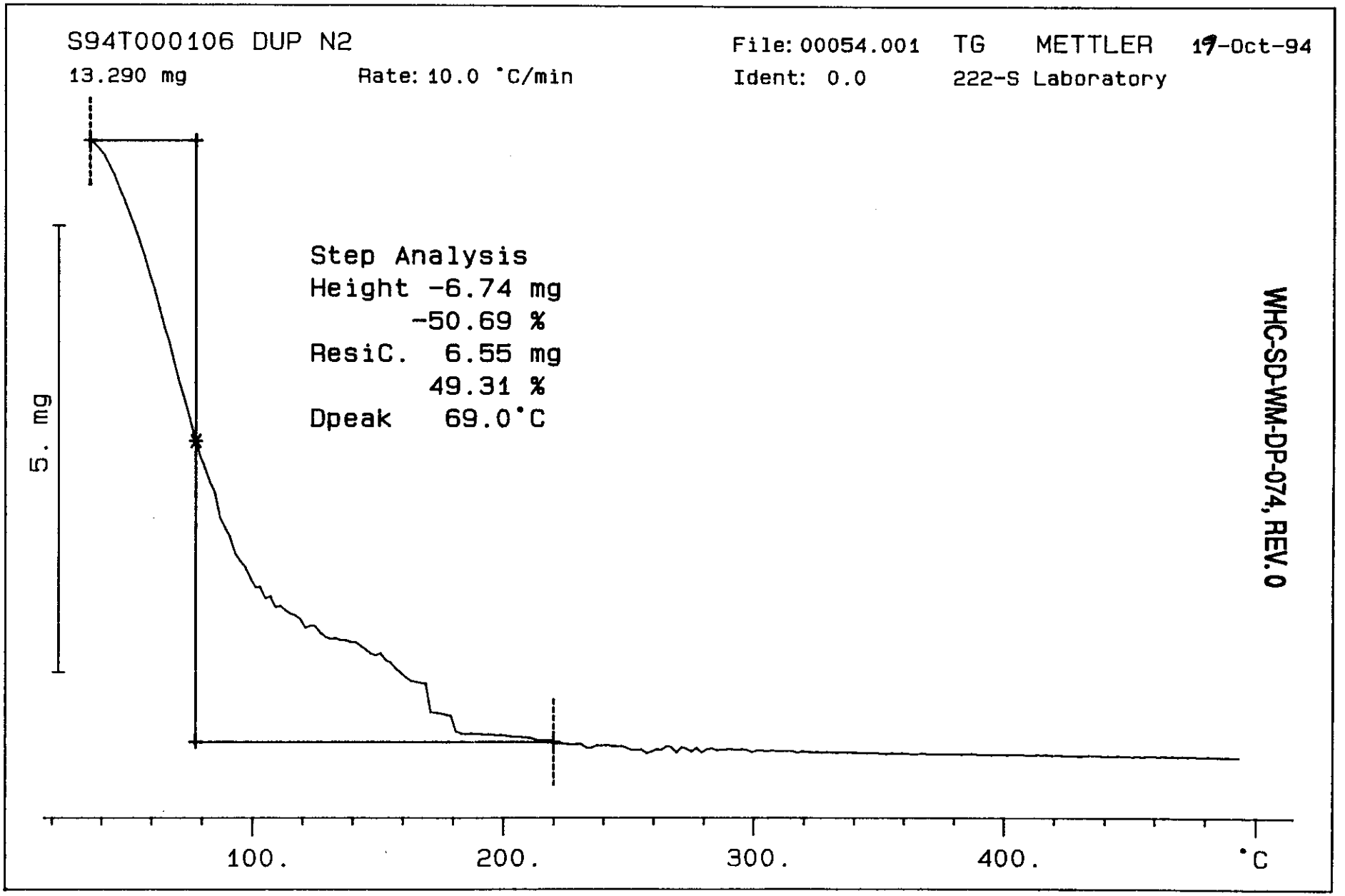


WHC-SD-WM-DP-074, REV. 0

Jackie Steele
10-19-94



WHC-SD-WM-DP-074, REV. 0



WHC-SD-WM-DP-074, REV. 0

LABCORE Data Entry Template for Worklist# 57

Analyst: KLV **Instrument:** TGA01 **Method:** LA-560-112

Worklist Comment: Please run under N2. JMF

WHC-SD-WM-DP-074, REV. 0

Seg	Type	Sample#	Rep	Al	Test	Matrix	Actual	Found	DL	Unit
1	STD				TGA-01	LIQUID	59.19	58.57	99.0% N/A	%
2	SAMPLE	S94T000107	0		TGA-01	LIQUID	N/A	49.03		%
3	DUP	S94T000107	0		TGA-01	LIQUID	~~59.19~~ 59.19 JMF 10/24/94 49.03	~~48.75~~ 59.04 48.75	99.7% N/A	%
4	SAMPLE	S94T000108	0		TGA-01	LIQUID	N/A	48.70		%
5	DUP	S94T000108	0		TGA-01	LIQUID	48.70	48.95	N/A	%

Final page for worklist # 57

Analyst Signature

10-23-94
Date

Data Entry Comments: Data entered and reviewed 10/25/94, JMF

Units shown for QC (SPK) may not reflect the actual units.

LABCORE Data Entry Template for Worklist# 57

Analyst: _____ **Instrument:** TGA01 _____ **Method:** LA-560-112

Worklist Comment: Please run under N2. JMF

WHC-SD-WM-DP-074, REV. 0

Seg	Type	Sample#	Rep	Al	Test	Matrix	Actual	Found	DL	Unit
1	STD				TGA-01	LIQUID			N/A	%
2	SAMPLE	S94T000107	0		TGA-01	LIQUID	N/A			%
3	STD				TGA-01	LIQUID			N/A	%
4	DUP	S94T000107	0		TGA-01	LIQUID			N/A	%
5	SAMPLE	S94T000108	0		TGA-01	LIQUID	N/A			%
6	DUP	S94T000108	0		TGA-01	LIQUID			N/A	%

Final page for worklist # 57

Analyst Signature _____ **Date** _____

Data Entry Comments: See attached sheet for data. J MF 10/25/94

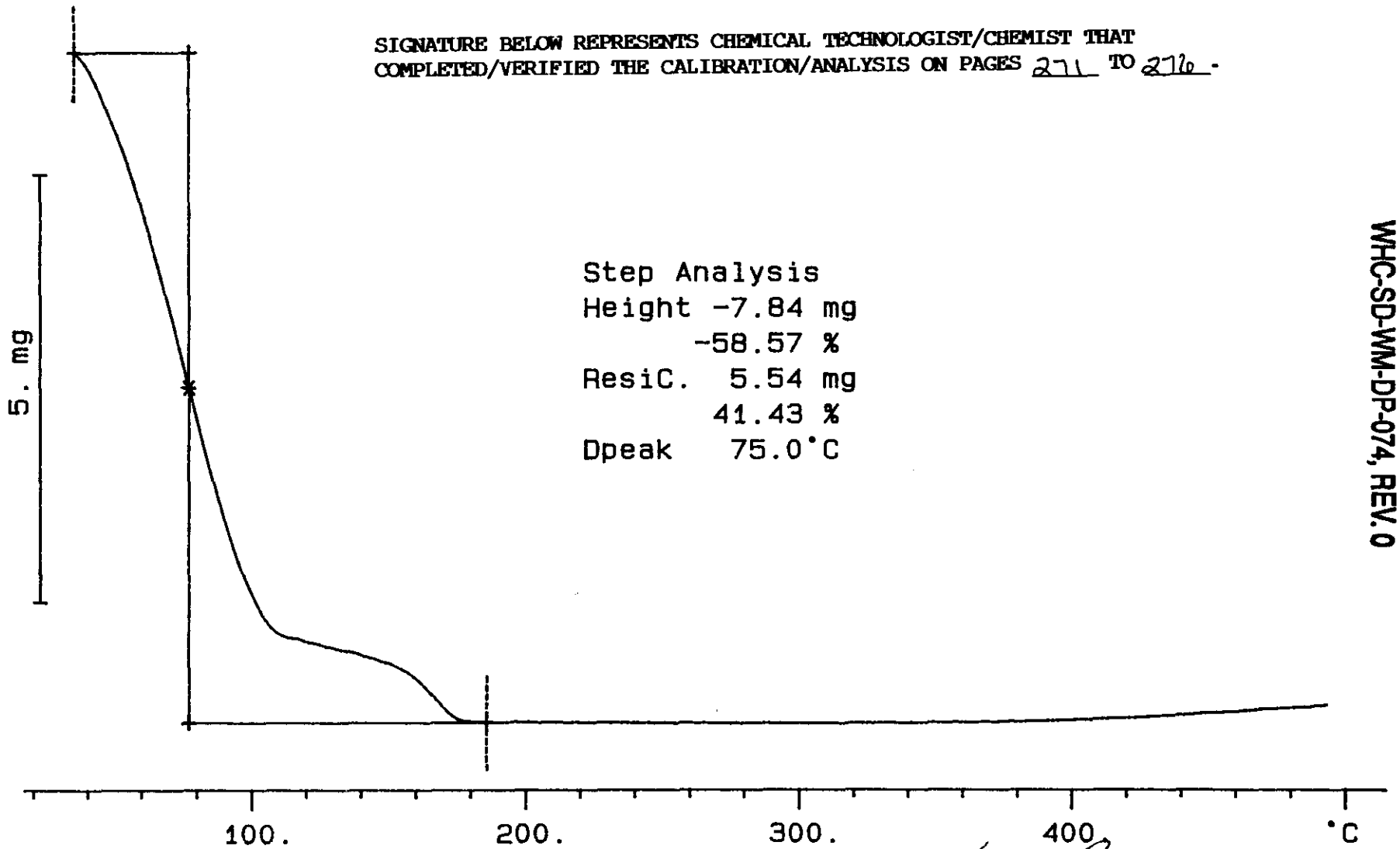
Units shown for QC (SPK) may not reflect the actual units.

TGA STD
13.379 mg

Rate: 10.0 °C/min

File: 00086.001 TG METTLER 20-Oct-94
Ident: 0.0 222-S Laboratory

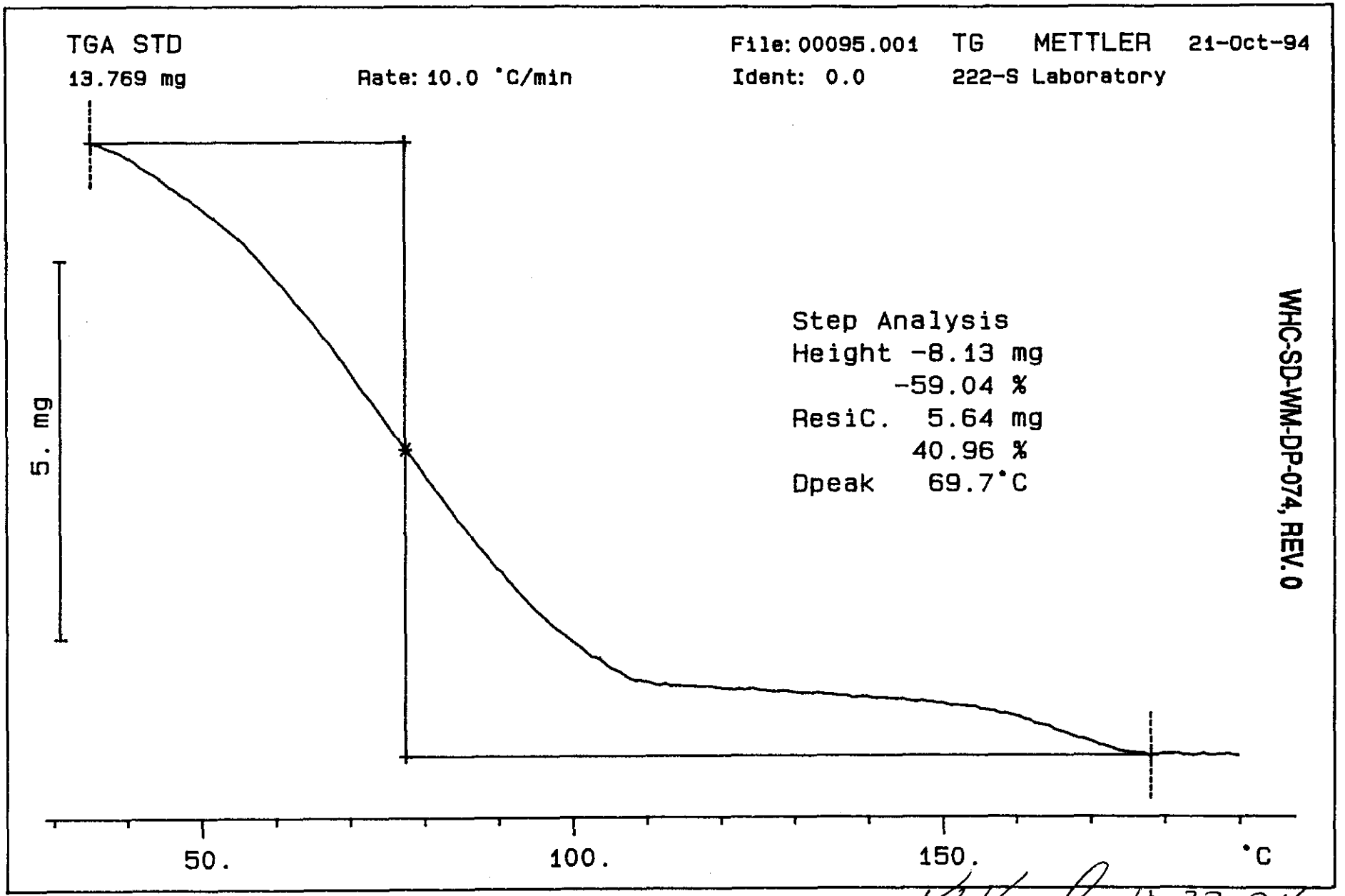
SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 271 TO 276.



Step Analysis
Height -7.84 mg
-58.57 %
ResiC. 5.54 mg
41.43 %
Dpeak 75.0°C

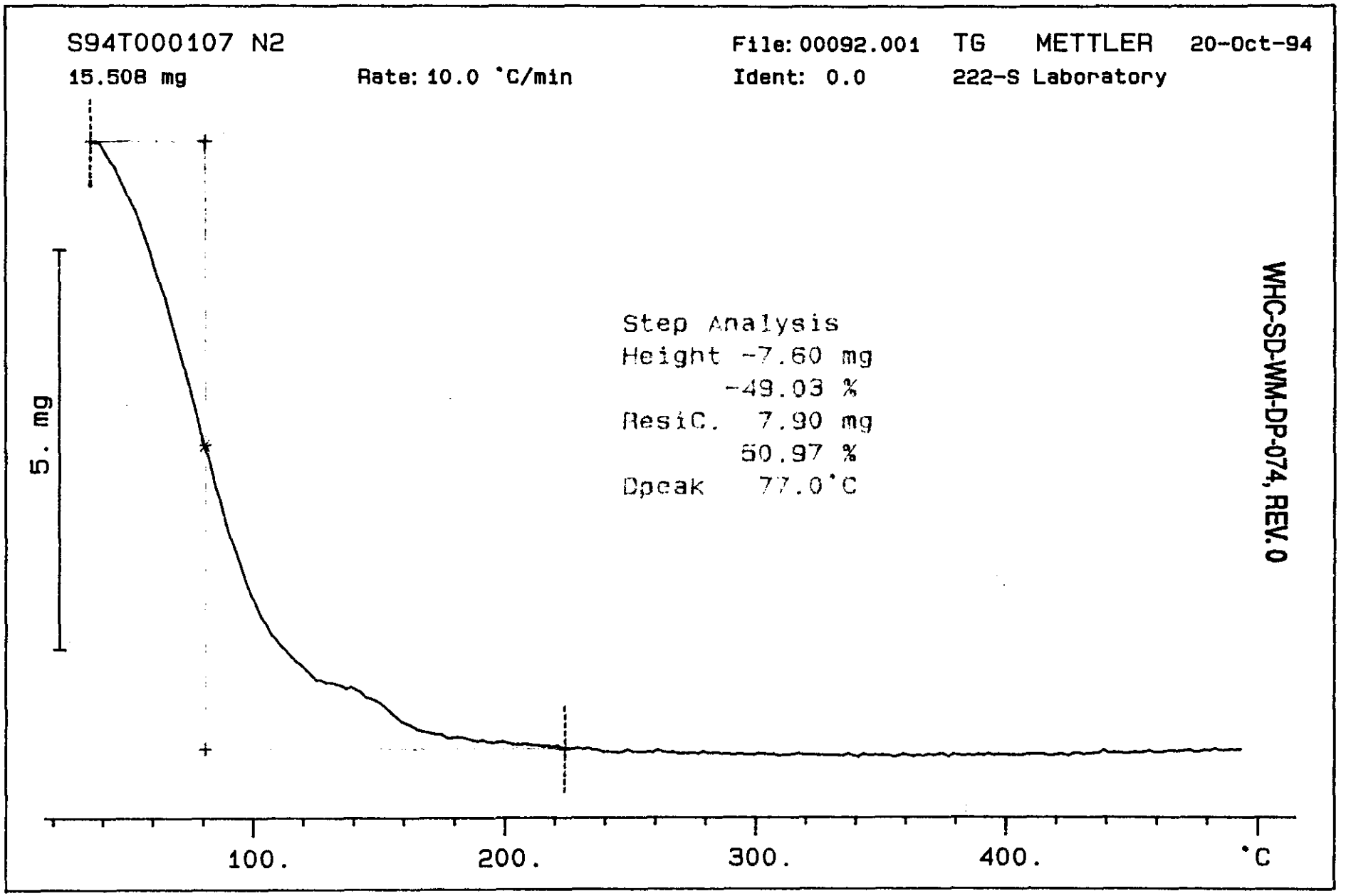
10-22-94

WHC-SD-WM-DP-074, REV. 0

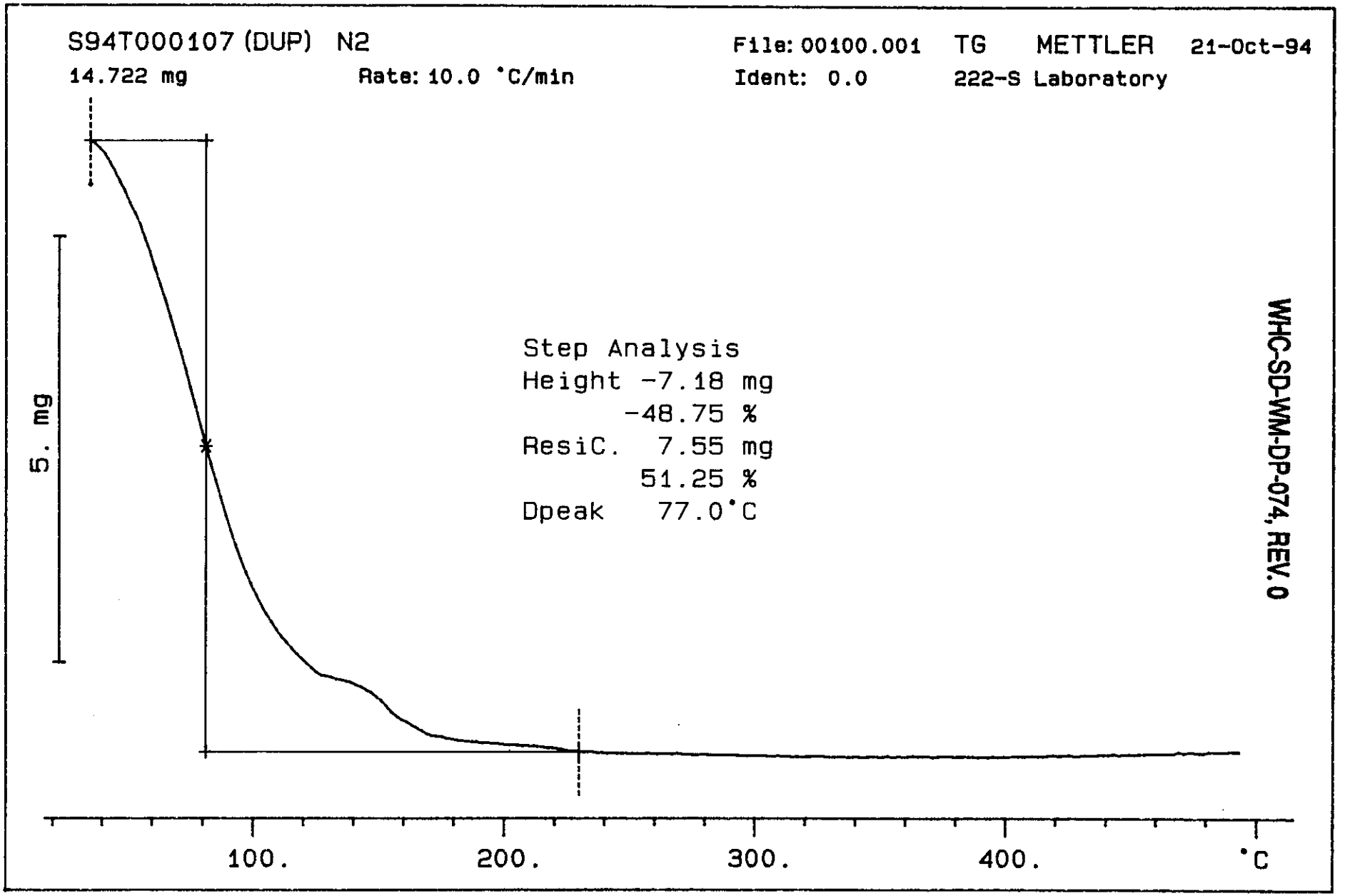


WHC-SD-WM-DP-074, REV. 0

K Vogel 10-23-94



WHC-SD-WM-DP-074, REV. 0



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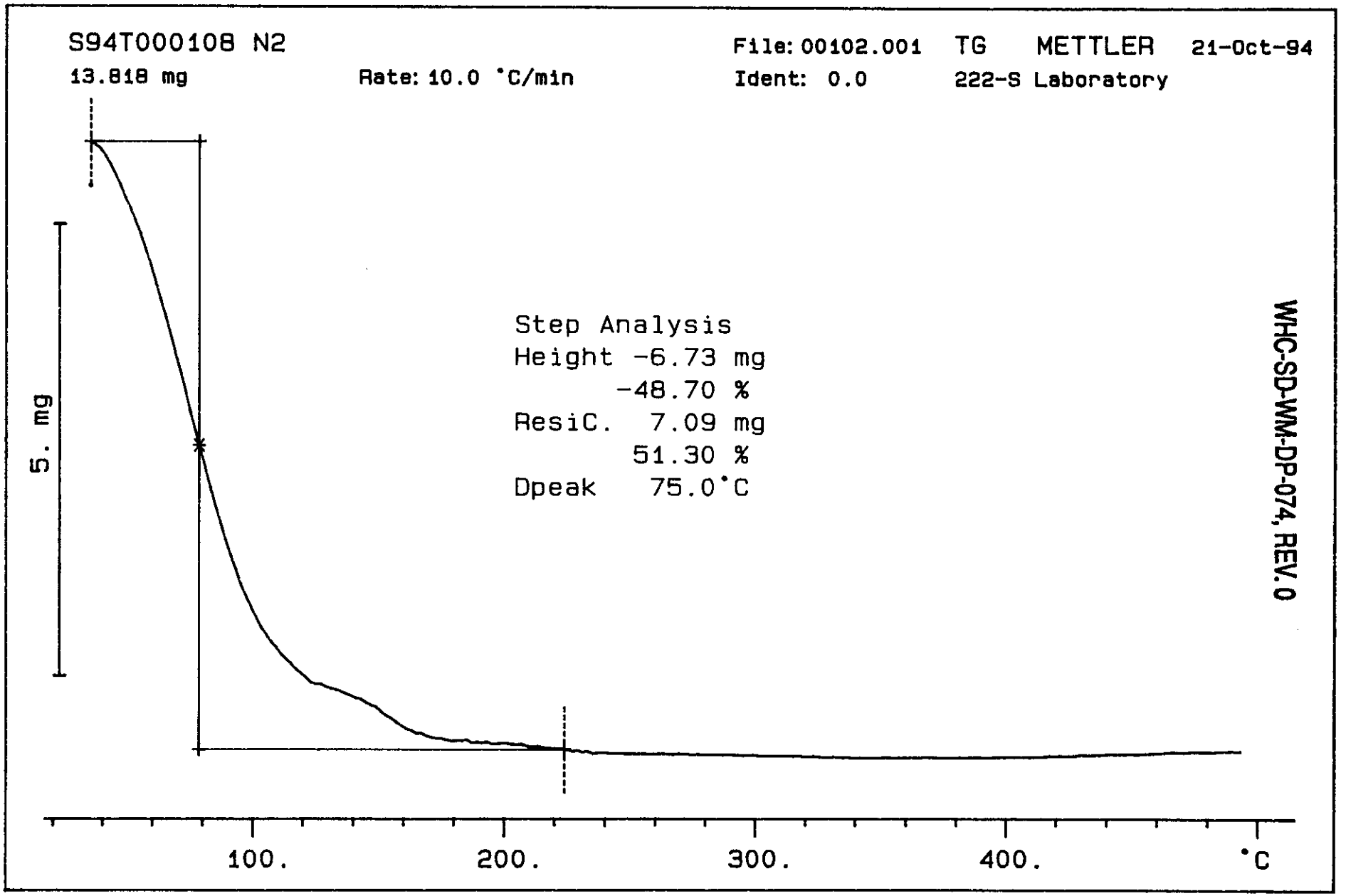

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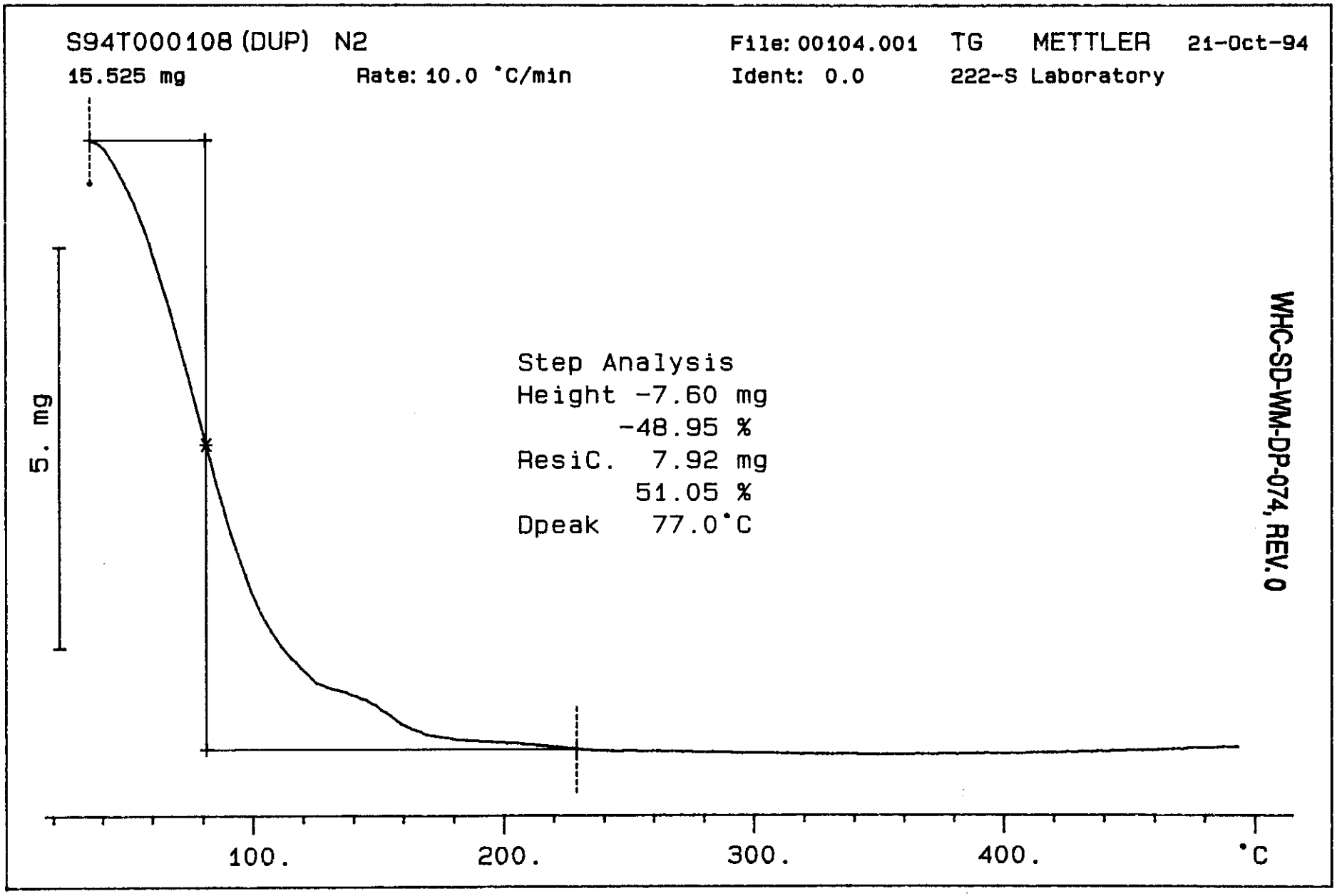

WHC-SD-WM-DP-074, REV. 0

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