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ENGINEERING DATA TRANSMITTAL

Page 1 of 1

1. EDT 610402

2. To: (Receiving Organization) Distribution	3. From: (Originating Organization) Program Support	4. Related EDT No.: N/A
5. Proj./Prog./Dept./Div.: Tank C-108/Waste Management/PS/AS	6. Cog. Engr.: Andrew D. Rice	7. Purchase Order No.: N/A
8. Originator Remarks: This document is being released into the Supporting Document System for retrievability purposes.		9. Equip./Component No.: N/A
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		14. Required Response Date: 01/26/95

15. DATA TRANSMITTED

(A) Item No.	(B) Document/Drawing No.	(C) Sheet No.	(D) Rev. No.	(E) Title or Description of Data Transmitted	(F) Approval Designator	(G) Reason for Transmittal	(H) Originator Disposition	(I) Receiver Disposition
1	WHC-SD-WM-DP-082	N/A	0	45 Day Safety Screen Results for Tank C-108 - Augers 94-012, 94-014 and 94-015	Q	2	1	

16. KEY

Approval Designator (F)	Reason for Transmittal (G)	Disposition (H) & (I)
E, S, Q, D or N/A (see WHC-CM-3-5, Sec.12.7)	1. Approval 2. Release 3. Information 4. Review 5. Post-Review 6. Dist. (Receipt Acknow. Required)	1. Approved 2. Approved w/comment 3. Disapproved w/comment 4. Reviewed no/comment 5. Reviewed w/comment 6. Receipt acknowledged

17. SIGNATURE/DISTRIBUTION (See Approval Designator for required signatures)

(G) Reason	(H) Disp.	(J) Name	(K) Signature	(L) Date	(M) MSIN	(J) Name	(K) Signature	(L) Date	(M) MSIN	(G) Reason	(H) Disp.
2	1	Cog.Eng. A. D. Rice	[signature]	1-26-95		TL-06					
2	1	Cog. Mgr. J. G. Kristofzski	[signature]	1-26-95		TL-06					
2	1	QA Tzu L. TUNG	[signature]	1-31-95		S3-30					
		Safety									
		Env.									

18.	19.	20.	21. DOE APPROVAL (if required)
A. E. Young [signature] 1-26-95 Signature of EDT Originator Date	Authorized Representative for Receiving Organization Date	J. G. Kristofzski [signature] 1-26-95 Cognizant Manager Date	Ctrl. No. ☐ Approved ☐ Approved w/comments ☐ Disapproved w/comments

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RELEASE AUTHORIZATION

Document Number:	WHC-SD-WM-DP-082, REV 0
Document Title:	45 Day Safety Screen Results for Tank 241-C108 - Augers 94-012, 94-014 and 94-015
Release Date:	1/31/95

This document was reviewed following the procedures described in WHC-CM-3-4 and is:

APPROVED FOR PUBLIC RELEASE

WHC Information Release Administration Specialist:

Kara M. Broz — January 31, 1995

Kara M. Broz

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SUPPORTING DOCUMENT

1. Total Pages 76

2. Title	3. Number	4. Rev No.
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5. Key Words

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6. Author

Name: Andrew D. Rice

Signature

Organization/Charge Code 8E480/MDR2D

7. Abstract

N/A

8. RELEASE STAMP

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DATE JAN 01 1995

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Westinghouse
Hanford Company

P.O. Box 1970 Richland, WA 99352

WHC-SD-WM-DP-082, REV. 0

ANALYTICAL SERVICES

45 DAY SAFETY SCREEN RESULTS FOR TANK 241-C-108, AUGERS 94-012, 94-014 AND 94-015

TANK: 241-C-108

DATE: JANUARY 26, 1995

54-7600-075

Hanford Operations and Engineering Contractor for the US Department of Energy

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NARRATIVE

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45 DAY SAFETY SCREEN RESULTS FOR TANK 241-C-108 AUGERS 94-012, 94-014, 94-015

Summary

Three auger samples from tank C-108 were received by the 222-S laboratories. These samples underwent safety screening analysis (DSC, TGA, and Alpha Total) in accordance with reference below. No results exceeded the notification criteria.

Sample Receipt and Extrusion

Riser 7

Due to the calculated depth of sludge at riser 7, two augers were used to sample the sludge. The first (94-AUG-012) was a ten inch auger, the second (94-AUG-014) was a 20 inch auger.

Auger 94-AUG-012

Auger 94-AUG-012 was sampled on 11/18/94, and received at the 222-S laboratory on 11/21/94. Extrusion took place on 11/22, with the total amount of solid material recovered being about 95 grams. No drainable liquid was recovered. The sample recovery, based on an expected sample length of 10 inches, was 33 percent. The solid material was yellow to brown in color, crumbly in texture, and was deposited along the entire length of the auger, with the heaviest accumulation being on the uppermost flutes (flutes 1 and 2). To test for the presence of an upper layer, the sample was segregated into two portions, with flutes 1 and 2 (containing 29 grams) being designated as quarter segment A1, and the remainder of the auger, flutes 3-9 (containing 67 grams), being designated as quarter segment A2. Results for quarter segment A1 appear on page one of the summary table as sample numbers S94T000288 and S94T000289. Results for quarter segment A2 appear as sample numbers S94T000290 and S94T000296.

Auger 94-AUG-014

Auger 94-AUG-014 was sampled on 11/18/94, and received at the 222-S laboratory on 11/21/94. Extrusion took place on 11/22, with the total amount of solid material recovered being about 349 grams. No drainable liquid was recovered. The sample recovery, based on an expected sample length of 9 inches, was 100 percent. The solid material was tan in color, more moist and paste-like in appearance than the auger 12 sample. The sample was deposited on all but the two uppermost flutes of the auger (flutes 1 and 2). The heaviest accumulation was observed on the lower half of the auger (flutes 10-19). The solids were segregated into two portions, with flutes 3-13 (containing 206 grams) being designated as quarter segment B, and flutes 14-19 (containing 143 grams) being designated as quarter segment C. Results for these quarter segments appear on page 2 of the summary table.

Riser 4

One 20 inch auger (94-AUG-015) was used to sample the tank C-108 contents at riser 4.

Auger 94-AUG-015

Auger 94-AUG-015 was sampled on 12/12/94, and received at the 222-S laboratory on 12/14/94. Extrusion took place on 12/15, with the total amount of solid material recovered being about 295 grams. No drainable liquid was recovered. The expected sample length was 21 inches. The sample recovery was not calculated. The solid material was tan in color, moist and paste-like in appearance, with an off white material embedded throughout. The sample was distributed along the entire length of the auger. The off white chunks were hard, and could not be homogenized. If this material represented a discreet layer, then a significant amount of mixing occurred during the sampling process. Auger 15 was segregated into quarter segments, with flutes 1-4 designated as quarter segment A (105 grams), flutes 5-9 as quarter segment B (70 grams), flutes 10-14 as quarter segment C (55 grams), and flutes 15-19 as quarter segment D (65 grams). Results for these quarter segments appear on page 3 of the summary table.

Analytical Results

TGA (Moisture)

The weight percent water by Thermogravimetric Analysis (TGA) was performed utilizing procedure LA-560-112 with a nitrogen purge. All results were above the notification (Action) limit, therefore no notifications were made. Sample S94T000288, auger 12 quarter segment A1, exceeded the Tank Characterization Plan (TCP) precision criteria of 10% with a Relative Percent Deviation (RPD) between the sample and duplicate of 135. A rerun was requested and analyzed. The rerun result substantiated the apparent heterogeneous nature of the sample. The initial sample result was 15.35% water, its duplicate was 2.99%, and the rerun was 6.01%. Sample S94T000290, auger 12 quarter segment A2, demonstrated very much the same behavior. The sample result was 9.94% water, the duplicate was 27.66%, and the rerun was 11.98%. Rerun results are available in the raw data, but do not appear on the summary table. Two other samples (S94T000292/361) 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) under a nitrogen purge. There were no results which exceeded the safety screen notification (Action) limit of 482 joules/g. Two samples (S94T000291/292) exceeded the TCP limit for precision. No rerun was requested due to the small exotherm in each case, the dose rate, and the heterogeneous behavior of these samples. All samples met the TCP accuracy criteria.

Alpha Total

The Alpha Total analyses were performed using procedure LA-508-101. Most of the alpha results for C-108 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. Samples S94T000296 and S94T000298 each had one result above the detection limit, but were still significantly below the notification limit. The TCP requested Alpha Total analysis on a half segment level. Results have been provided on a quarter segment level to make use of existing fusion preparations performed for ICP analyses. The effort involved to provide the additional alpha results is minimal. Spike results were required once for each matrix, but have been provided on a more frequent basis. All spike results met the TCP requirements. The TCP accuracy criteria was met in each case.

Reference

WHC-SD-WM-TP-211, REV. 0, "Tank 241-C-108 Tank Characterization Plan", dated October 26, 1994, Westinghouse Hanford Company, Richland, WA 99352

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SAMPLE DATA SUMMARY

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45 DAY SAFETY SCREEN RESULTS FOR C-108 94-AUG-012/014/015
C-108

CORE NUMBER: n/a
SEGMENT #: 94-AUG-012

SEGMENT PORTION: A Top Quarter of Segment

Sample#	R	A#	Analyte	Unit	Action Limits Lower	Action Limits Upper	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S94T000288			% Water by TGA using Mettler	%	n/a	101.000	99.56	n/a	15.35	2.99	9.170	135	n/a	0.000	n/a
S94T000288			DSC Exotherm Dry Calculated	Joules/g Dry	n/a	482.000	n/a	n/a	0	0	0.000	n/a	n/a	0.000	n/a
S94T000288			DSC Exotherm using Mettler	Joules/g	n/a	n/a	104.7	n/a	0	0	0.000	n/a	n/a	0.000	n/a
S94T000289			Alpha of Digested Solid	uCi/g	n/a	41.000	89.24	<2.88e-02	< 4.70e-2	<5.01e-2	n/a	n/a	81.00	0.066	500
S94T000290			% Water by TGA using Mettler	%	n/a	101.000	99.56	n/a	9.94	27.66	18.80	94.3	n/a	0.000	n/a
S94T000290			DSC Exotherm Dry Calculated	Joules/g Dry	n/a	482.000	n/a	n/a	0	0	0.000	n/a	n/a	0.000	n/a
S94T000290			DSC Exotherm using Mettler	Joules/g	n/a	n/a	100.5	n/a	0	0	0.000	n/a	n/a	0.000	n/a
S94T000296			Alpha of Digested Solid	uCi/g	n/a	41.000	89.24	<2.88e-02	< 5.88e-2	1.08e-1	n/a	n/a	88.90	0.063	231.9

=> Limit violated
=> Selected Limit

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45 DAY SAFETY SCREEN RESULTS FOR C-108 94-AUG-012/014/015
C-108

CORE NUMBER: n/a
SEGMENT #: 94-AUG-014

SEGMENT PORTION: B Second Quarter of Segment

Sample#	R	A#	Analyte	Unit	Action Limits Lower	Action Limits Upper	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S94T000292			% Water by TGA using Mettler	%	n/a	101.000	98.68	n/a	32.97	39.15	36.06	17.1	n/a	0.000	n/a
S94T000292			DSC Exotherm Dry Calculated	Joules/g Dry	n/a	482.000	n/a	n/a	50.3	35.5	42.90	34.5	n/a	0.000	n/a
S94T000292			DSC Exotherm using Mettler	Joules/g	n/a	n/a	98.42	n/a	33.7	21.6	27.65	43.8	n/a	0.000	n/a
S94T000298			Alpha of Digested Solid	uCi/g	n/a	41.000	89.24	<3.17e-02	4.81e-2	<4.25e-2	n/a	n/a	n/a	0.071	92.9

SEGMENT PORTION: C Third Quarter of Segment

Sample#	R	A#	Analyte	Unit	Action Limits Lower	Action Limits Upper	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S94T000291			% Water by TGA using Mettler	%	n/a	101.000	98.68	n/a	45.76	46.28	46.02	1.13	n/a	0.000	n/a
S94T000291			DSC Exotherm Dry Calculated	Joules/g Dry	n/a	482.000	n/a	n/a	102.1	116.3	109.2	13.0	n/a	0.000	n/a
S94T000291			DSC Exotherm using Mettler	Joules/g	n/a	n/a	105.4	n/a	55.4	62.5	58.95	12.0	n/a	0.000	n/a
S94T000297			Alpha of Digested Solid	uCi/g	n/a	41.000	89.24	<3.17e-02	< 3.17e-2	<3.17e-2	n/a	n/a	n/a	0.073	196.0

=> Limit violated
=> Selected Limit

45 DAY SAFETY SCREEN RESULTS FOR C-108 94-AUG-012/014/015
C-108

CORE NUMBER: n/a
SEGMENT #: 94-AUG-015

SEGMENT PORTION: A Top Quarter of Segment

Sample#	R	A#	Analyte	Unit	Action Limits Lower	Action Limits Upper	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S94T000361			% Water by TGA using Mettler	%	n/a	101.000	100.0	n/a	51.85	46.8	49.33	10.2	n/a	0.000	n/a
S94T000361			DSC Exotherm Dry Calculated	Joules/g Dry	n/a	482.000	n/a	n/a	0	0	0.000	n/a	n/a	0.000	n/a
S94T000361			DSC Exotherm using Mettler	Joules/g	n/a	n/a	99.12	n/a	0	0	0.000	0.00	n/a	0.000	n/a
S94T000367			Alpha of Digested Solid	uCi/g	n/a	41.000	99.02	<2.65e-02	< 3.41E-2	<3.41E-2	n/a	n/a	91.10	0.062	500

SEGMENT PORTION: B Second Quarter of Segment

Sample#	R	A#	Analyte	Unit	Action Limits Lower	Action Limits Upper	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S94T000362			% Water by TGA using Mettler	%	n/a	101.000	100.0	n/a	48.57	50.45	49.51	3.80	n/a	0.000	n/a
S94T000362			DSC Exotherm Dry Calculated	Joules/g Dry	n/a	482.000	n/a	n/a	0	0	0.000	n/a	n/a	0.000	n/a
S94T000362			DSC Exotherm using Mettler	Joules/g	n/a	n/a	99.12	n/a	0	0	0.000	0.00	n/a	0.000	n/a
S94T000368			Alpha of Digested Solid	uCi/g	n/a	41.000	99.02	<2.65e-02	< 2.90E-2	<3.61E-2	n/a	n/a	87.60	0.068	500

SEGMENT PORTION: C Third Quarter of Segment

Sample#	R	A#	Analyte	Unit	Action Limits Lower	Action Limits Upper	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S94T000363			% Water by TGA using Mettler	%	n/a	101.000	98.48	n/a	52.97	52.41	52.69	1.06	n/a	0.000	n/a
S94T000363			DSC Exotherm Dry Calculated	Joules/g Dry	n/a	482.000	n/a	n/a	0	0	0.000	n/a	n/a	0.000	n/a
S94T000363			DSC Exotherm using Mettler	Joules/g	n/a	n/a	102.3	n/a	0	0	0.000	n/a	n/a	0.000	n/a
S94T000369			Alpha of Digested Solid	uCi/g	n/a	41.000	97.17	<3.97e-02	< 3.63E-2	<3.62E-2	n/a	n/a	92.40	0.067	500

SEGMENT PORTION: D Bottom Quarter of Segment

Sample#	R	A#	Analyte	Unit	Action Limits Lower	Action Limits Upper	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S94T000364			% Water by TGA using Mettler	%	n/a	101.000	98.48	n/a	47.79	49.23	48.51	2.97	n/a	0.000	n/a
S94T000364			DSC Exotherm Dry Calculated	Joules/g Dry	n/a	482.000	n/a	n/a	0	0	0.000	n/a	n/a	0.000	n/a
S94T000364			DSC Exotherm using Mettler	Joules/g	n/a	n/a	102.3	n/a	0	0	0.000	n/a	n/a	0.000	n/a
S94T000370			Alpha of Digested Solid	uCi/g	n/a	41.000	96.28	<2.41e-02	< 1.67E-1	<2.46e-2	n/a	n/a	85.60	0.057	459.7

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UNDIGESTED SAMPLE ANALYSES

DIFFERENTIAL SCANNING CALORIMETRY

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LABCORE Data Entry Template for Worklist# 186

C108

Analyst: KLV **Instrument:** DSC01 **Method:** LA-514-113 ~~B-0~~ B-1 LAD 1-25-95

Worklist Comment: Please run C-108 under N2. JMF

Seg	Type	Sample#	Rep	Al	Test	Matrix	Actual	Found	DL	Unit
1	STD	12W14A			DSC-01	SOLID			N/A	Joule/g
2	SAMPLE	S94T000288	0		DSC-01	SOLID	N/A			Joule/g
3	DUP	S94T000288	0		DSC-01	SOLID			N/A	Joule/g
4	STD				DSC-01	SOLID			N/A	Joule/g
5	SAMPLE	S94T000290	0		DSC-01	SOLID	N/A			Joule/g
6	DUP	S94T000290	0		DSC-01	SOLID			N/A	Joule/g

Final page for worklist # 186

LAD 1-30-95

Analyst Signature **Date**

WHC-SD-WM-DP-082, REV. 0

Data Entry Comments: See other copy of 186 for data JMF 12/6/94

Units shown for QC (SPK) may not reflect the actual units. ~~11~~ 10 1/25/95

Page: 1

LABCORE Data Entry Template for Worklist# 186

Analyst: KLV **Instrument:** DSC01 **Method:** LA-514-113 B-1

Worklist Comment: Please run C-108 under N2. JMF

Seg	Type	Sample#	Rep	Al	Test	Matrix	Actual	Found	DL	Unit
1	STD	12N14A			DSC-01	SOLID	28.45	29.8	N/A	Joule/g
2	SAMPLE	S94T000288	0		DSC-01	SOLID	N/A	~~654.0~~ JMF 12/5/94		Joule/g
3	DUP STD	S94T000288 12N14A	0		DSC-01	SOLID	0 28.45	0 28.6	N/A	Joule/g
4	SAMPLE	S94T000290	0		DSC-01	SOLID	N/A	0		Joule/g
5	DUP	S94T000290	0		DSC-01	SOLID	0	0	N/A	Joule/g

LAD 1-30945

Final page for worklist # 186

Analyst Signature

Date 12/2/94

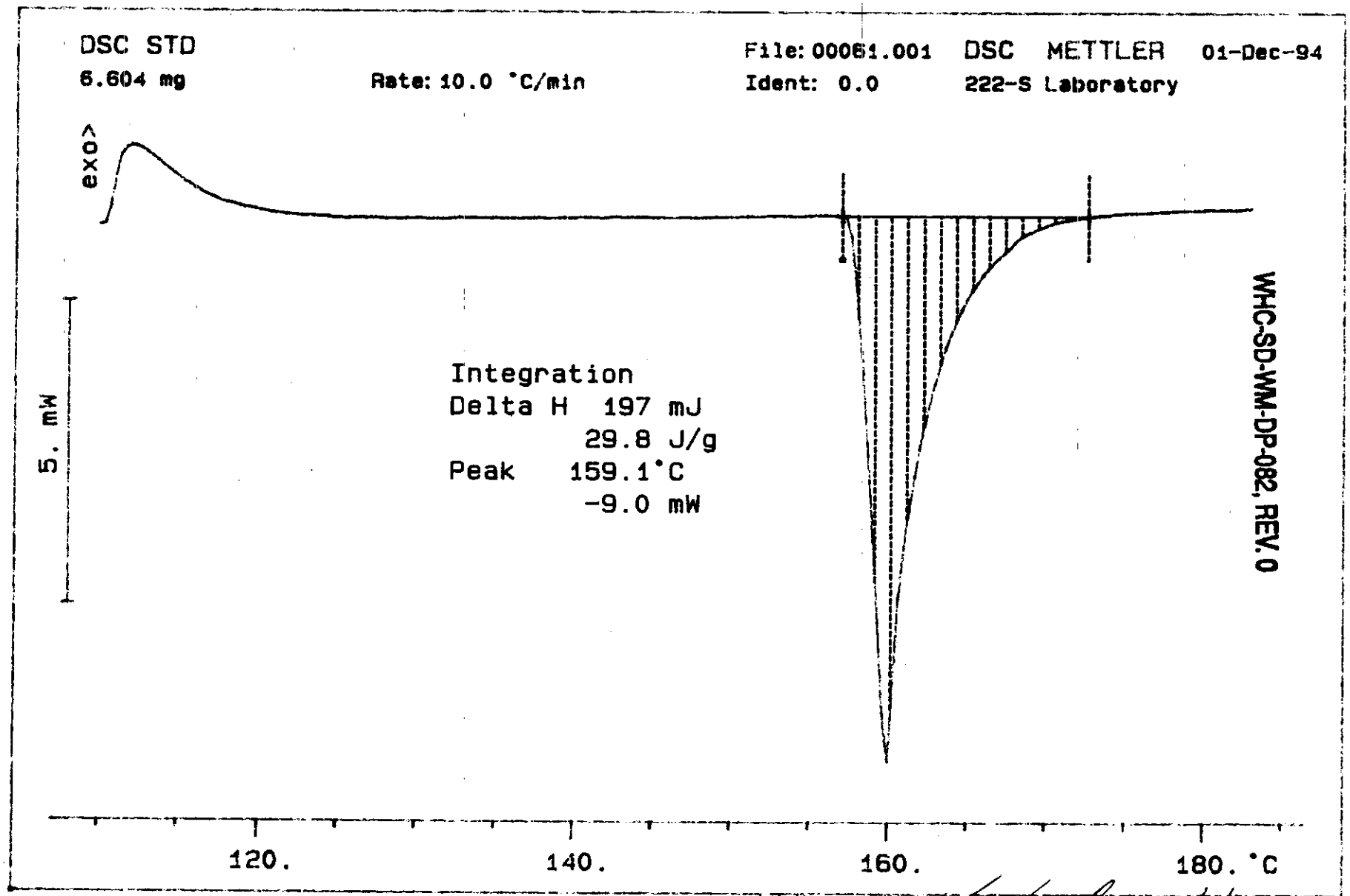
WHC-SD-WM-DP-082, REV. 0

Data entered & verified by B.D. Valenzuela 12/6/94

Data Entry Comments:

STD 12N14A S94T000288 has two endotherms of 453.7 J/g at 110.2°C and 658.1 J/g at 286.3°C; duplicate 366.1 J/g at 112.8°C and 744.3 J/g at 279.3°C. S94T000290 has two endotherms of 512.5 J/g at 122.8°C and 439.6 J/g at 278.3°C; duplicate 397.2 J/g at 112.1°C and 643.1 J/g at 286.2°C. J.M. Frye 12/5/94

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



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12N14A ~~42N8A~~ LAD 125-8 12/1/94

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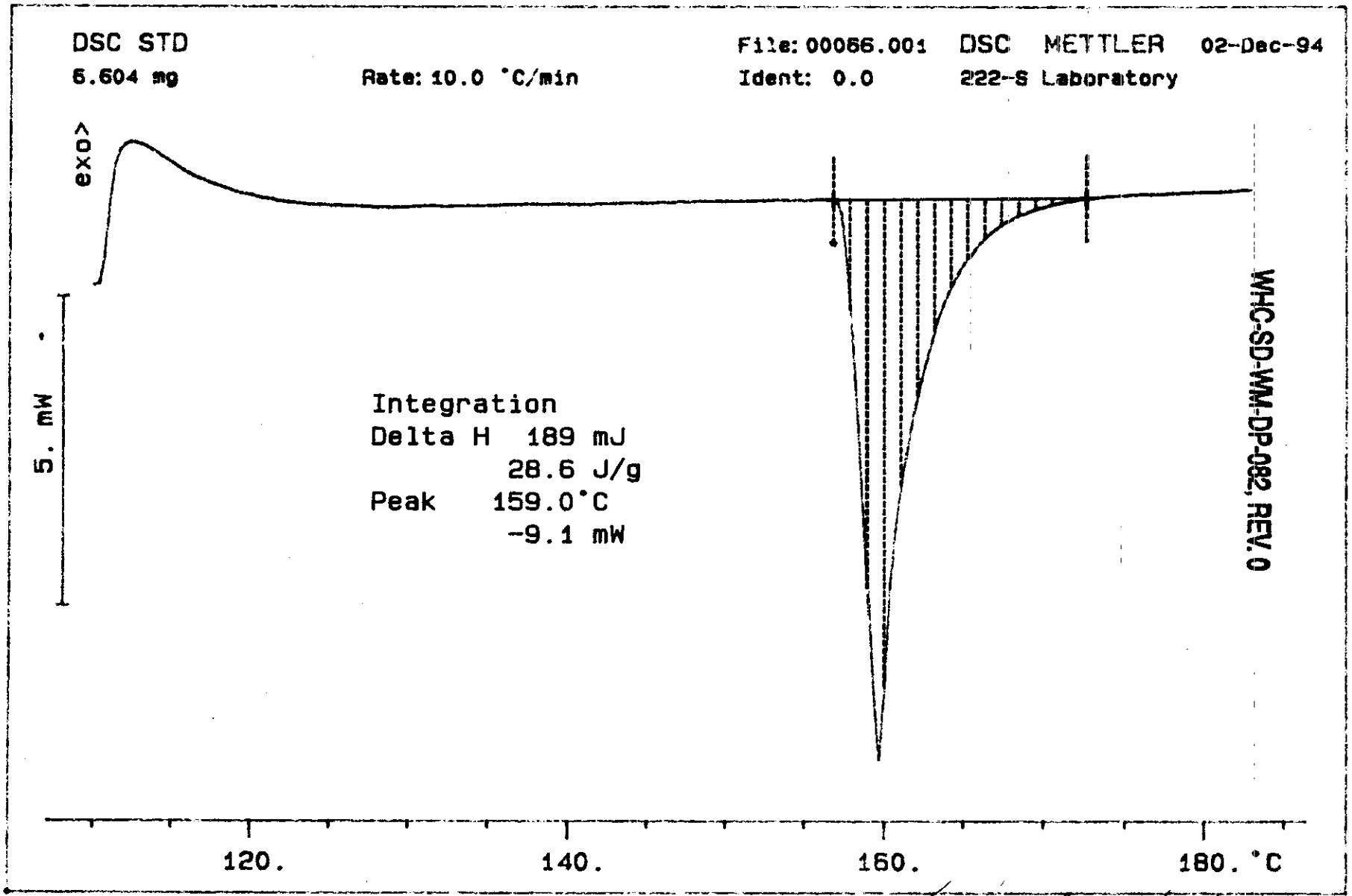
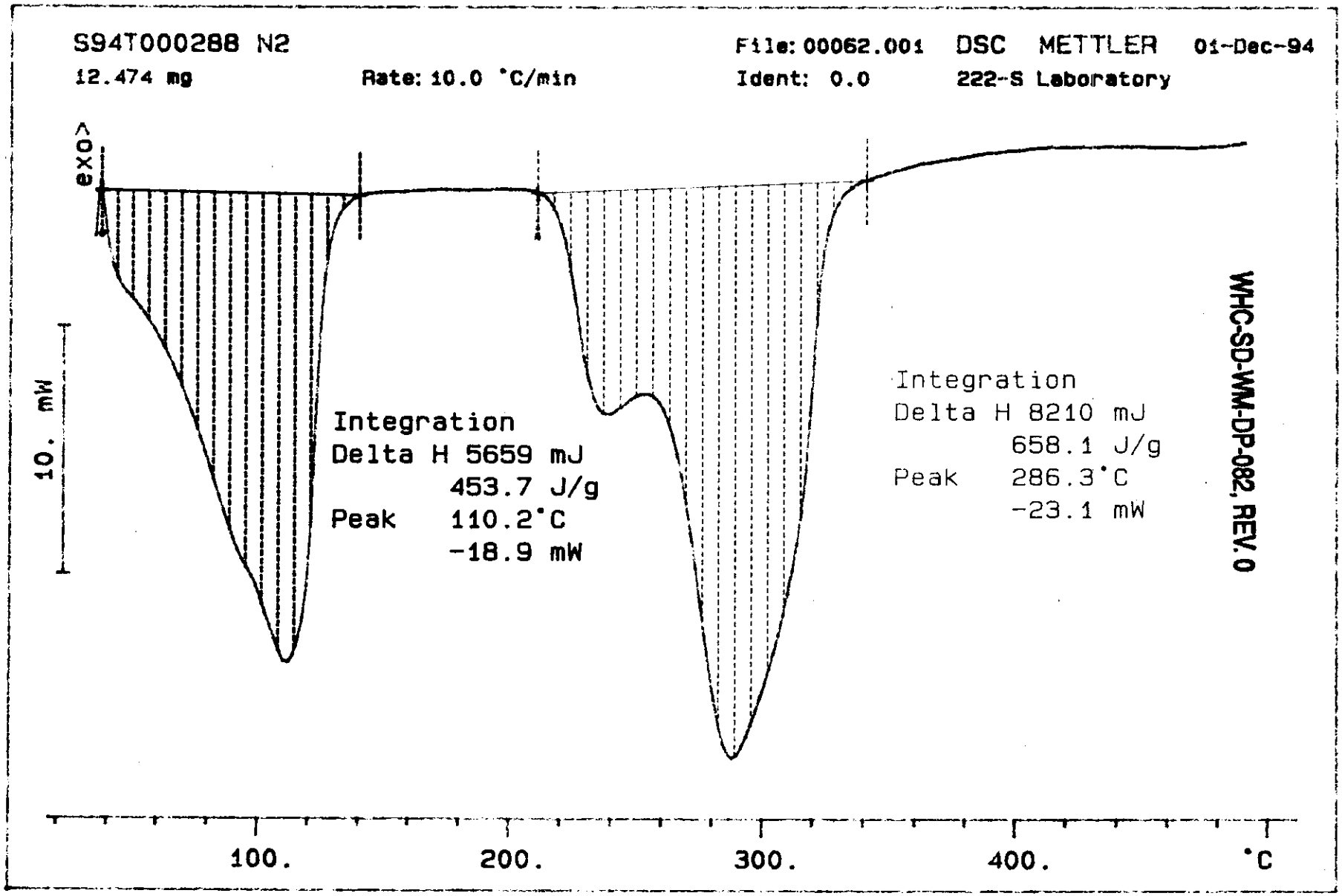


WHC-SD-WM-DP-082, REV. 0

12/2/94



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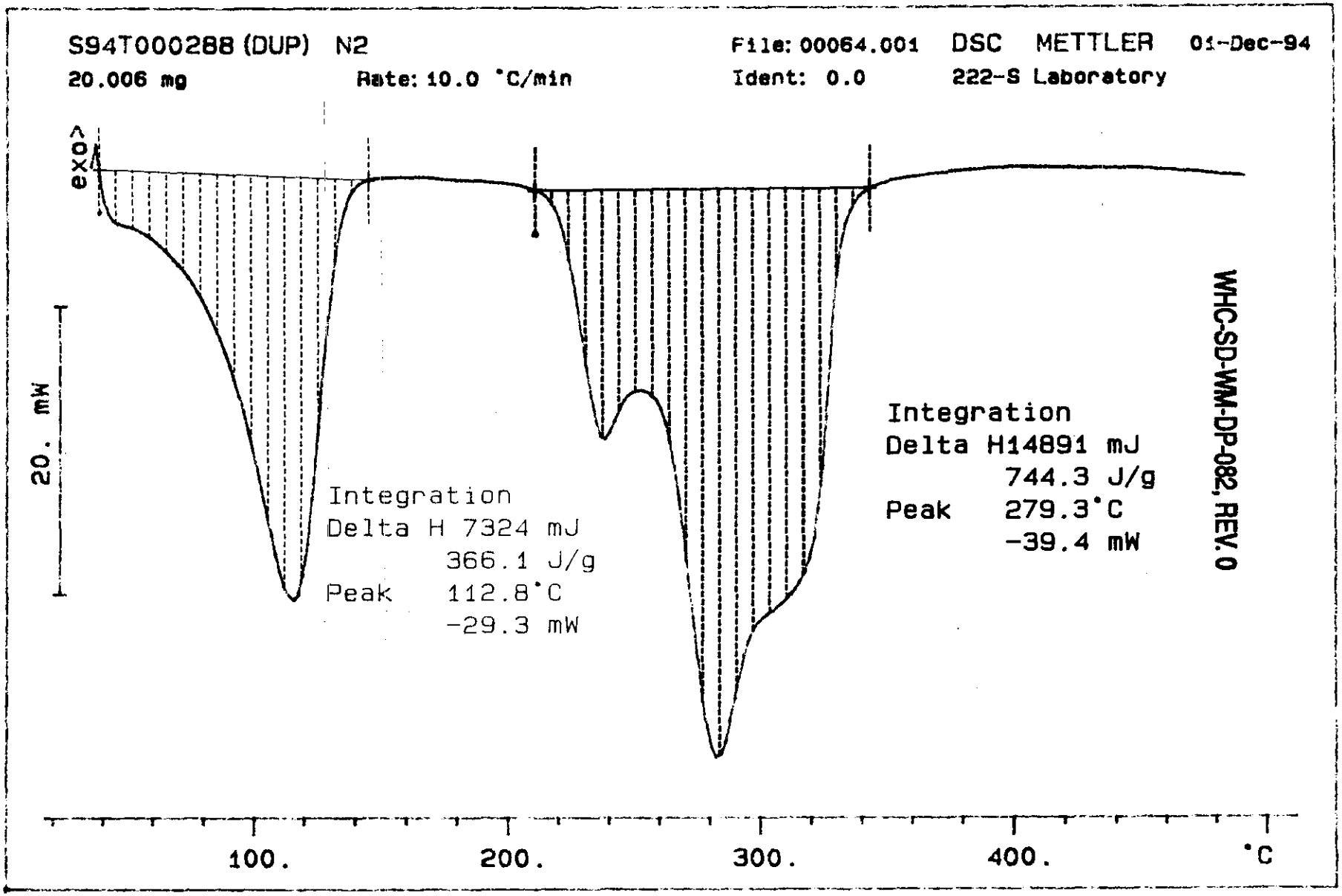

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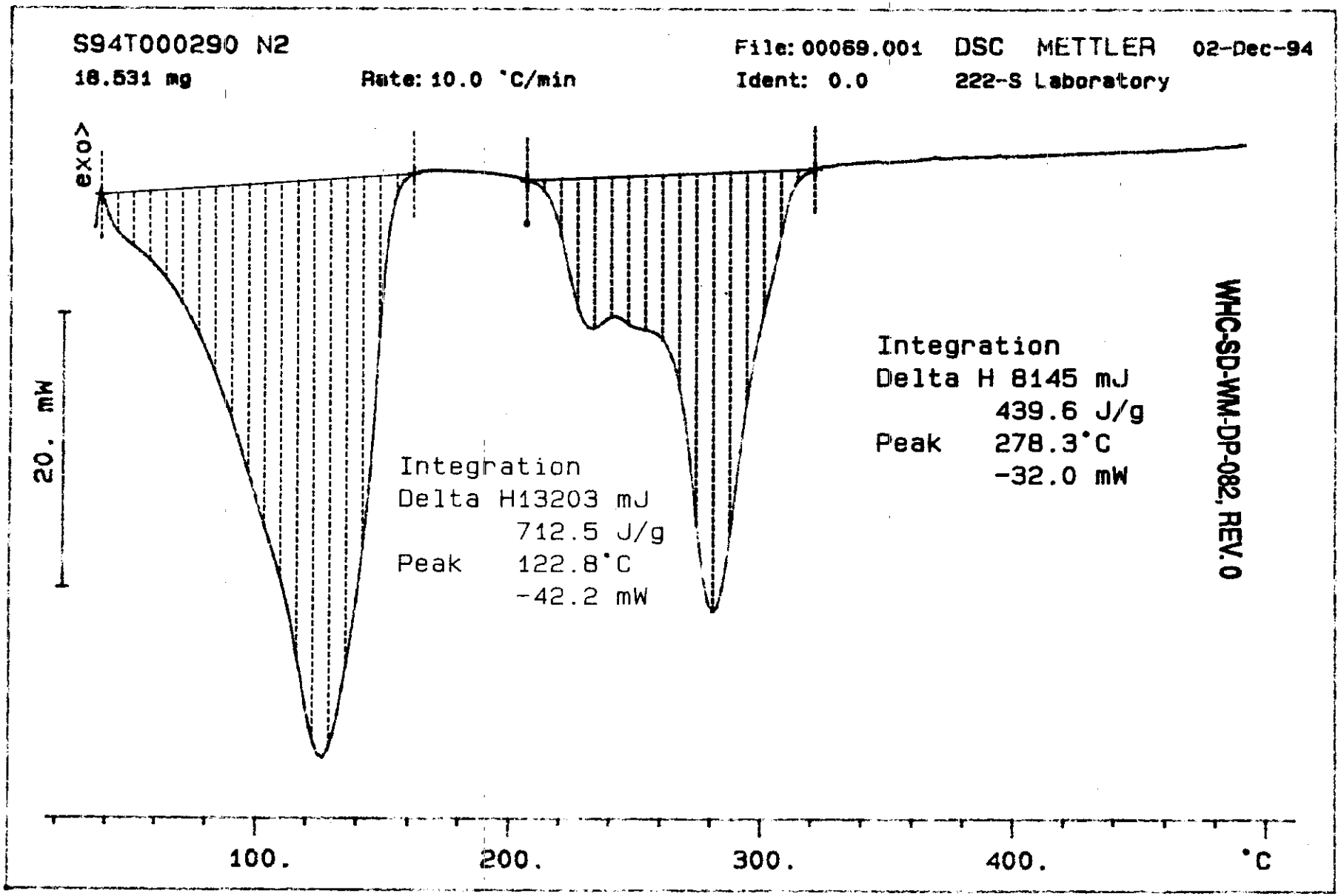
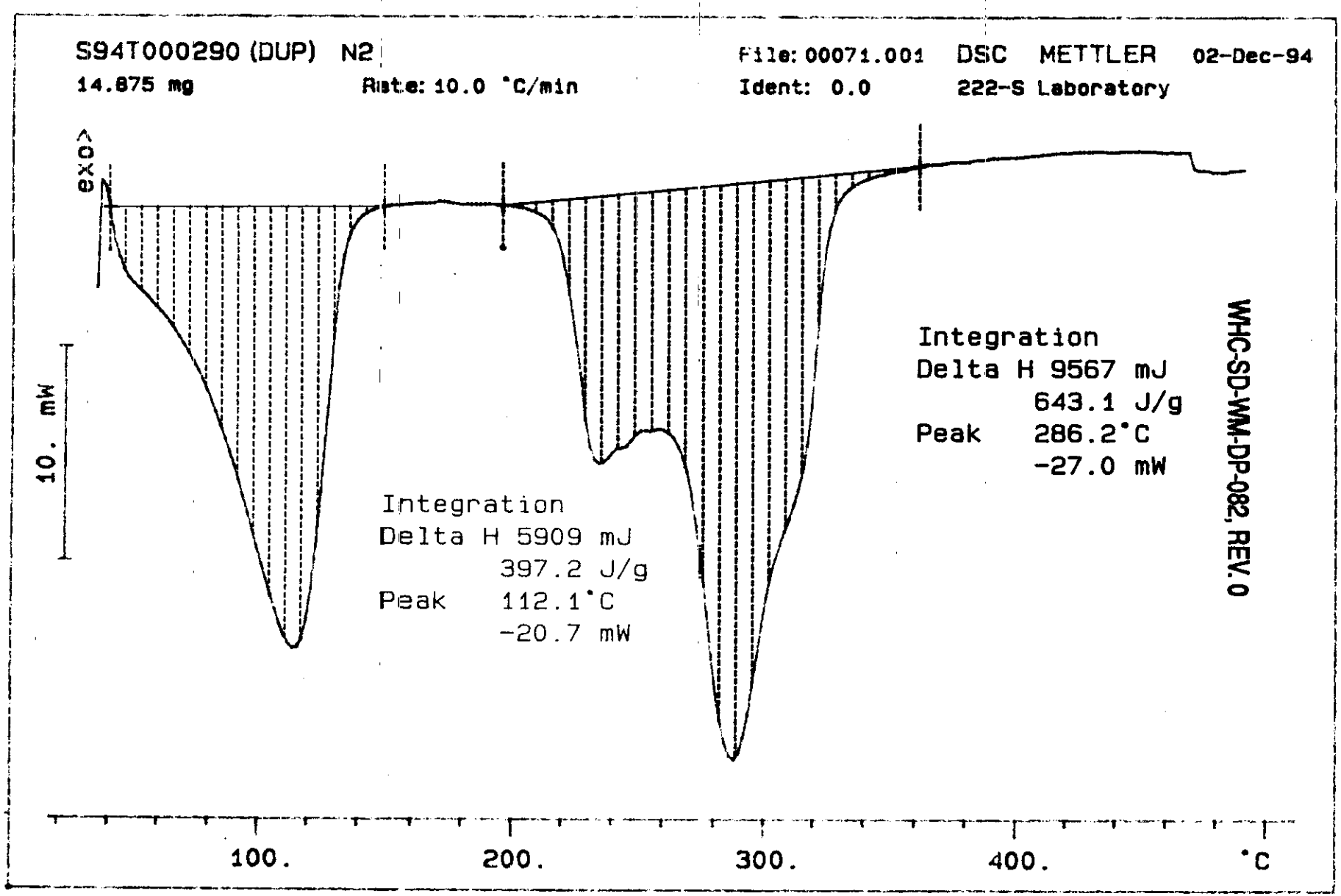


WHC-SD-WM-DP-082, REV. 0

9513332.1507



WHC-SD-WM-DP-082, REV. 0

9513332.1508

10A

LABCORE Data Entry Template for Worklist# 187

Analyst: DWS **Instrument:** DSC01 **Method:** LA-514-113 B-1 JMF 12/5/95

Worklist Comment: Please run C-108 samples N2. JMF

Seg	Type	Sample#	Rep Al	Test	Matrix	Actual	Found	DL	Unit
1	STD	#12N14-A		DSC-01	SOLID	28.45	30.0	N/A	Joule/g
2	SAMPLE	S94T000291	0	DSC-01	SOLID	N/A	55.4		Joule/g
3	DUP	S94T000291	0	DSC-01	SOLID	55.4	62.5	N/A	Joule/g
4	SAMPLE	S94T000292	0	DSC-01	SOLID	N/A	25.2		Joule/g
5	DUP	S94T000292	0	DSC-01	SOLID	25.2	19.2	N/A	Joule/g

LAD 1-30-95

Final page for worklist # 187

Analyst Signature

11-30-94
Date

WHC-SD-WM-DP-082, REV. 0

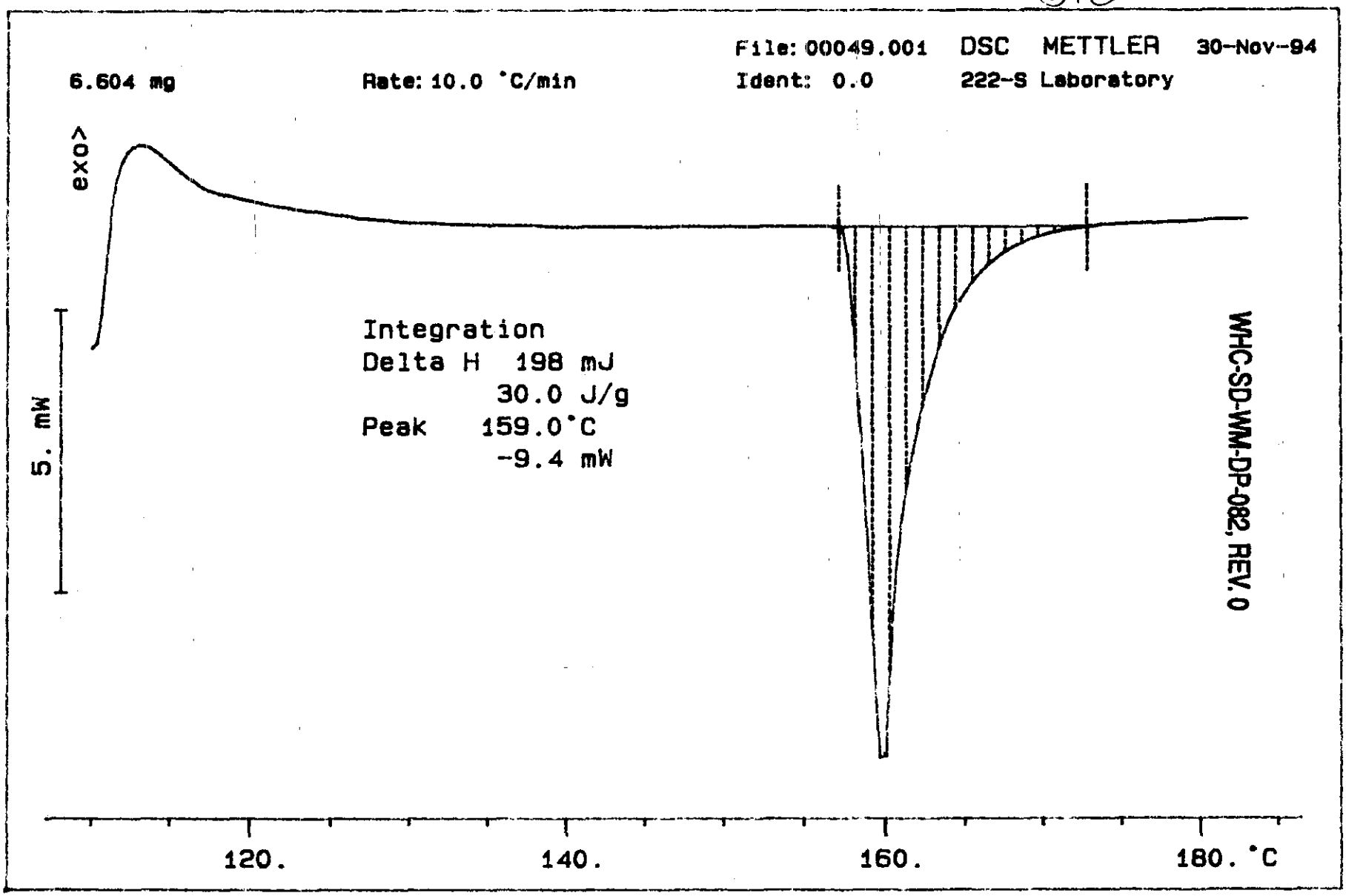
Verified 12/7/94. Rerun put out on S94T000292. J M Fuge
Rerun was not requested for S94T000291 because 30 J/g is the upper administrative limit for the standard. J M F 12/7/94

Data Entry Comments:
S94T000291 has two endotherms ~~at~~ of 950.1 J/g at 124.8°C and 140.4 J/g at 283.7°C; Duplicate has 1072.3 J/g at 118.6°C and 114.6 J/g at 278.2°C. The exotherm is at ~~325°C~~ 325 J/g. S94T000292 has two endotherms of 1050.8 J/g at 127°C and 176.5 J/g at 279.1°C; duplicate has 773.9 J/g at 119.3°C and 254.1 J/g at 282.6°C. The exotherm is at 330°C. J.M. Fuge 12/1/94. See Reports #49 & #50. DAA. DATA Entered 12-2-94 DAA

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

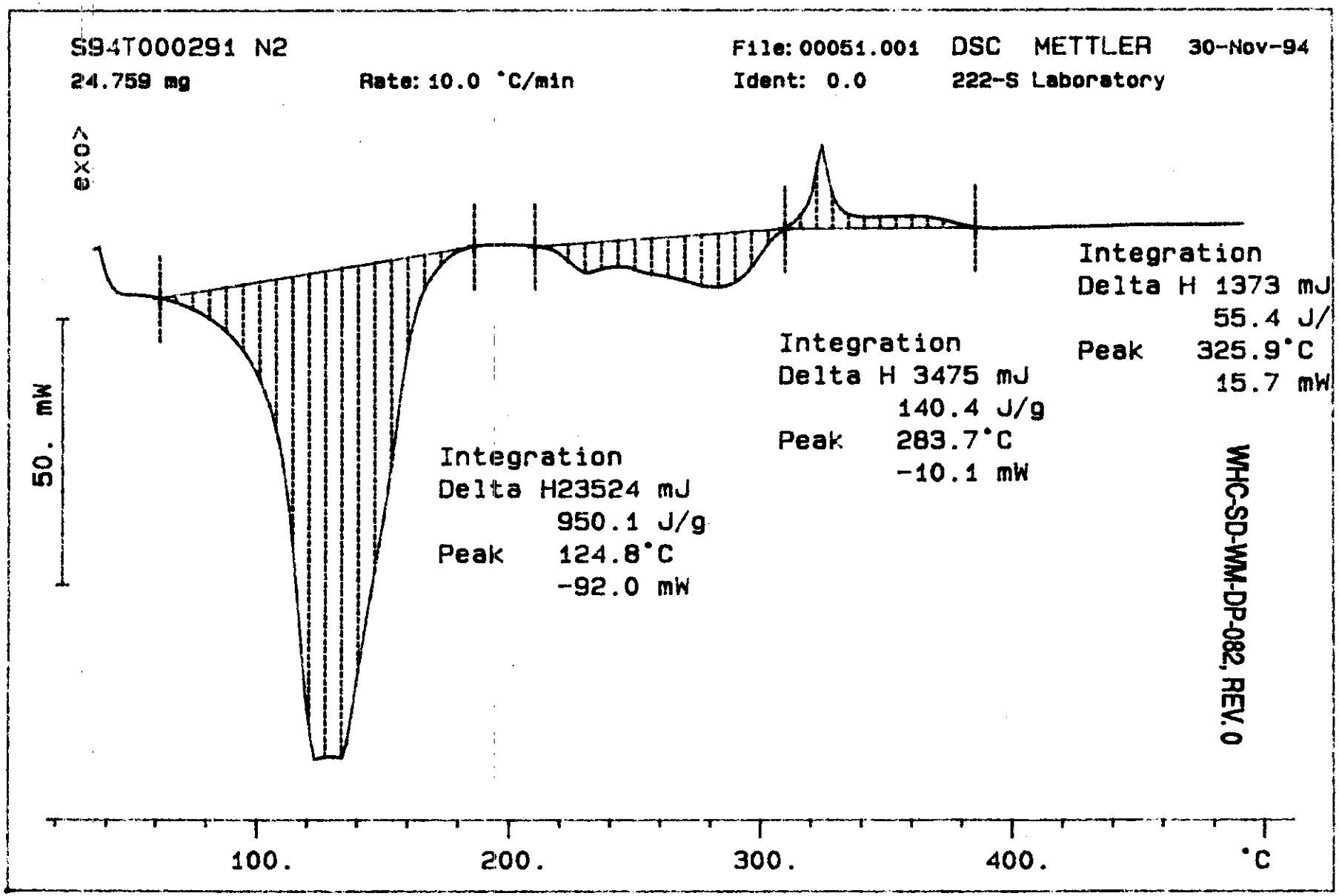
Page: 1

Std



WHC-SD-WM-DP-082, REV. 0

12N14A Dwk W Smith 11-30-94



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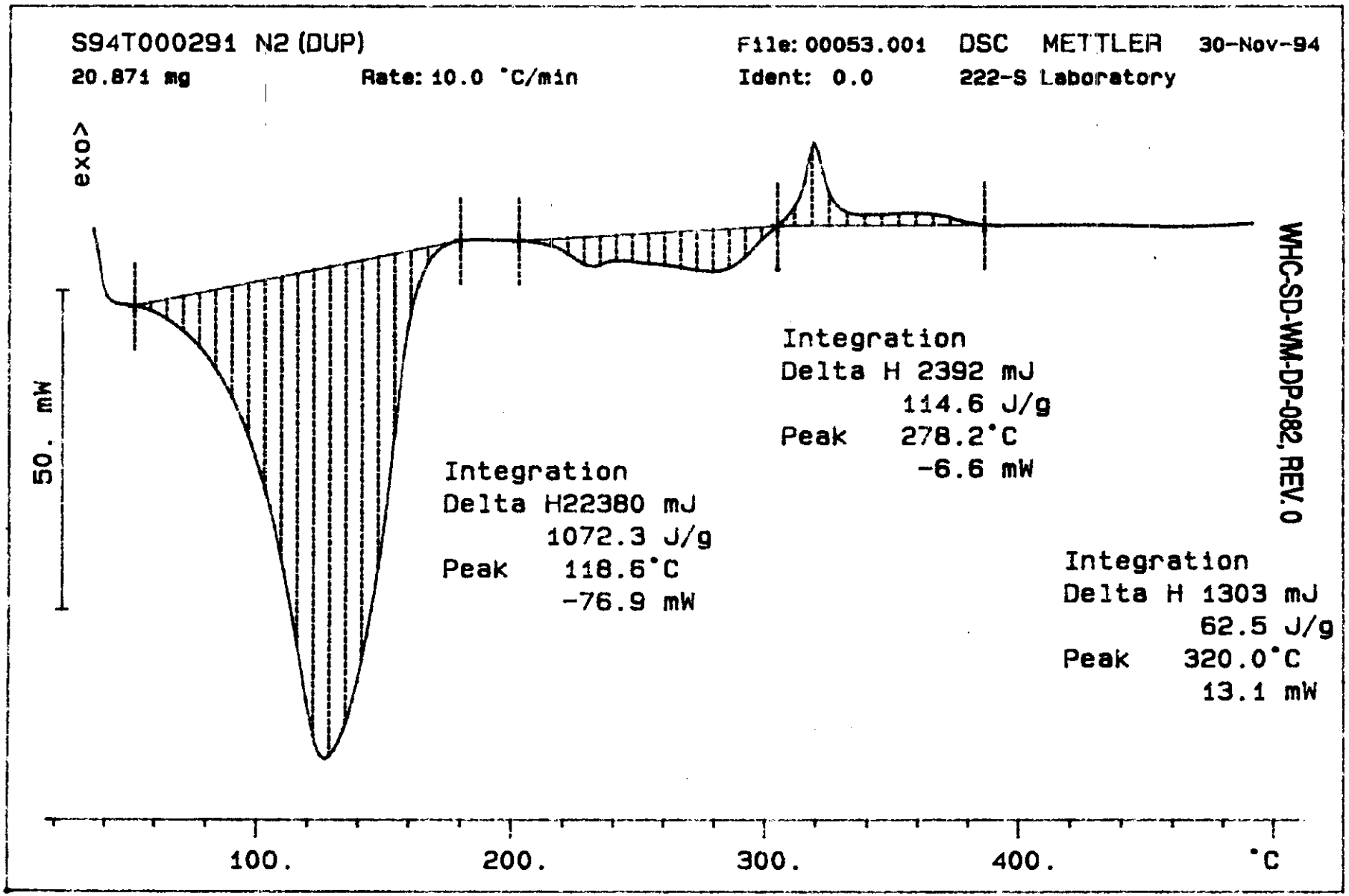
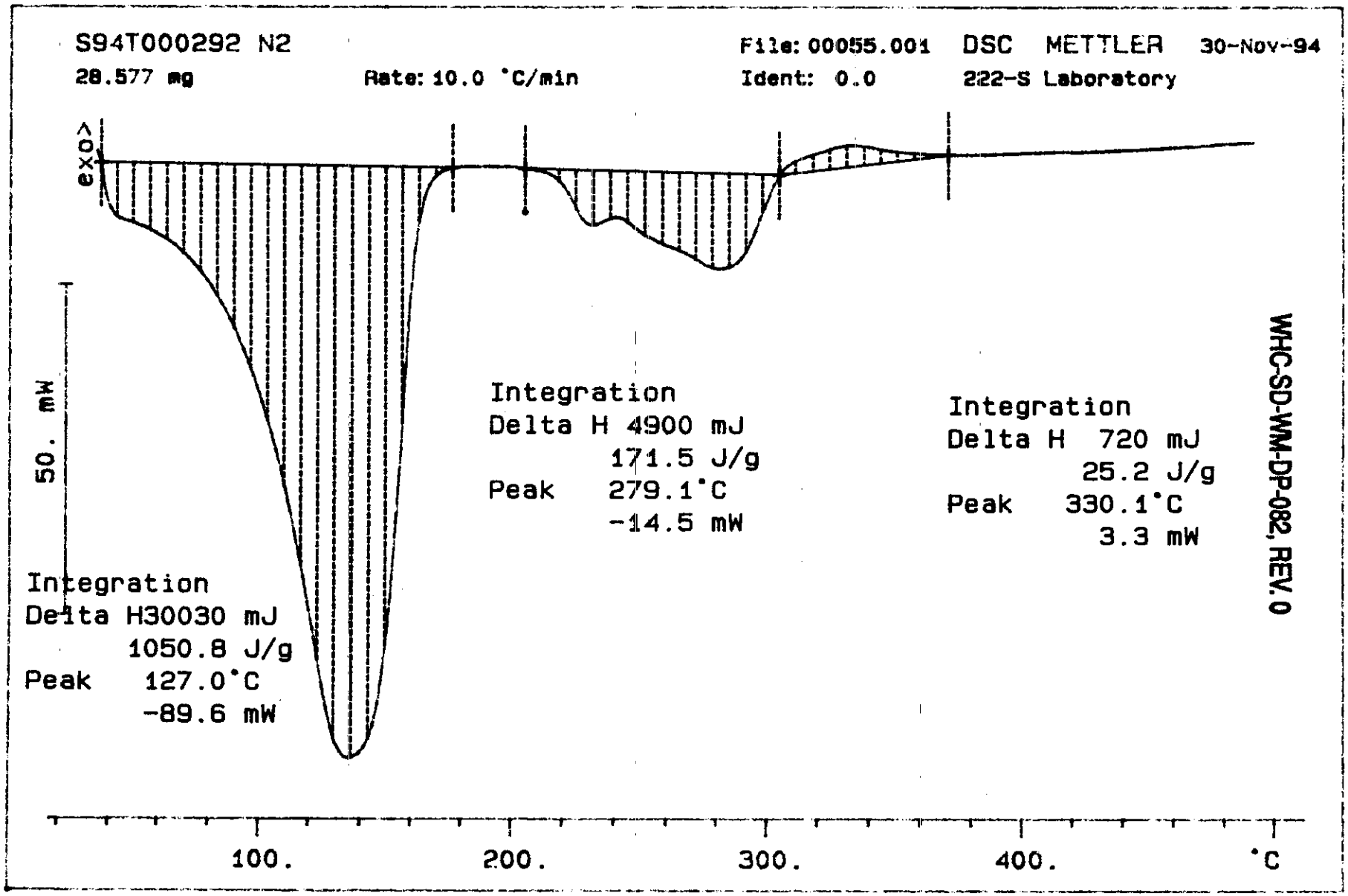
9513332.1509

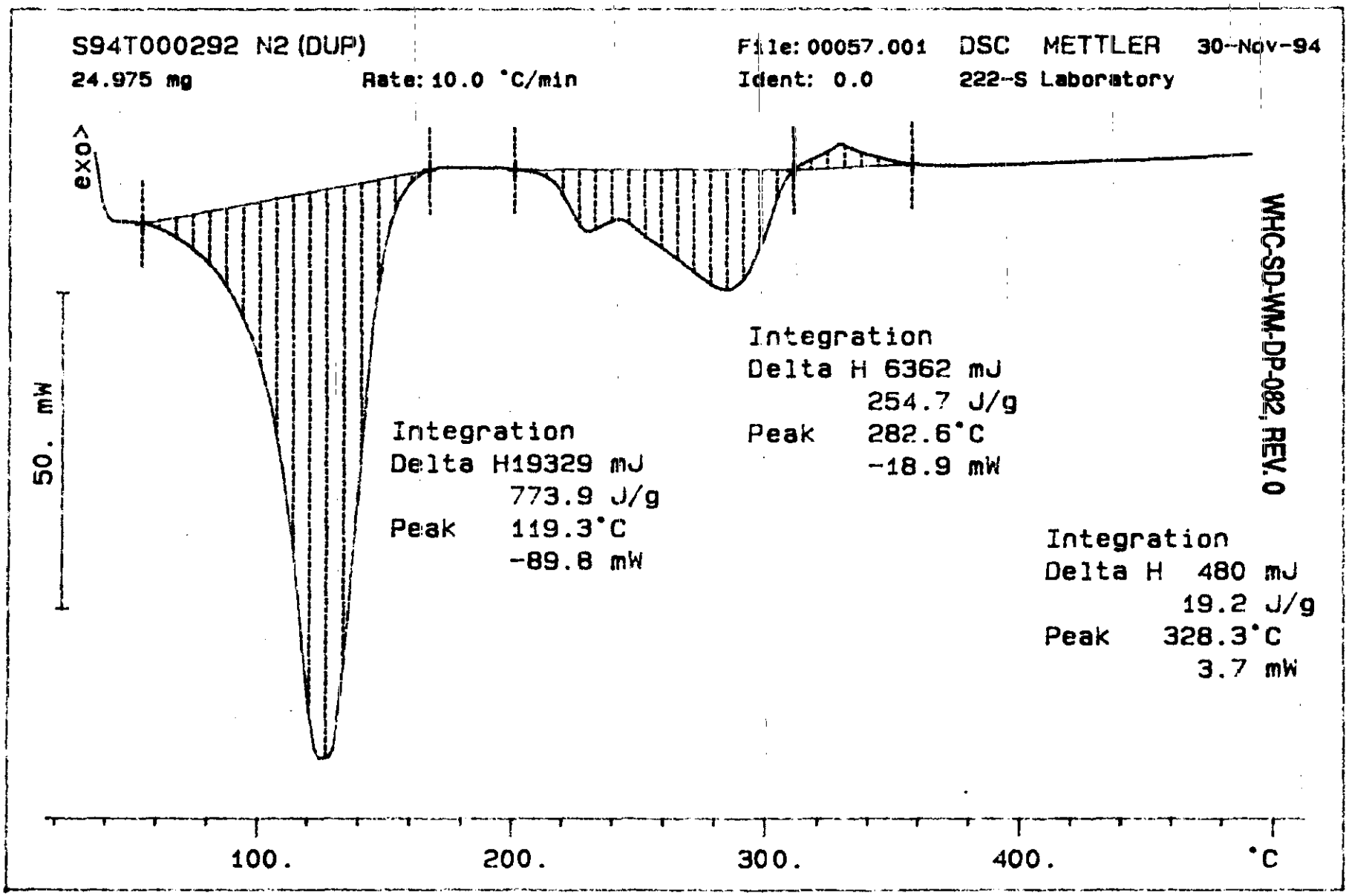


WHC-SD-WM-DP-082, REV.0



WHC-SD-WM-DP-082, REV. 0

9513332.1510



WHC-SD-WM-DP-082, REV. 0

9513332.1511

OA

LABCORE Data Entry Template for Worklist# 220

Analyst: KLV **Instrument:** DSC01 _____ **Method:** LA-514-113/ B-1

Worklist Comment: Please run under N2, this is a rerun due to poor RPD. JMF

Seg Type	Sample#	Rep Al	Test	Matrix	Actual	Found	DL	Unit
1 STD			DSC-01	SOLID	28.45	28.0	N/A	Joule/g
2 SAMPLE	S94T000292	0	DSC-01	SOLID	N/A	33.7		Joule/g
3 DUP	S94T000292	0	DSC-01	SOLID	33.7	21.6	N/A	Joule/g

Final page for worklist # 220

LAD 1-30-95

Analyst Signature **Date** 12/8/94

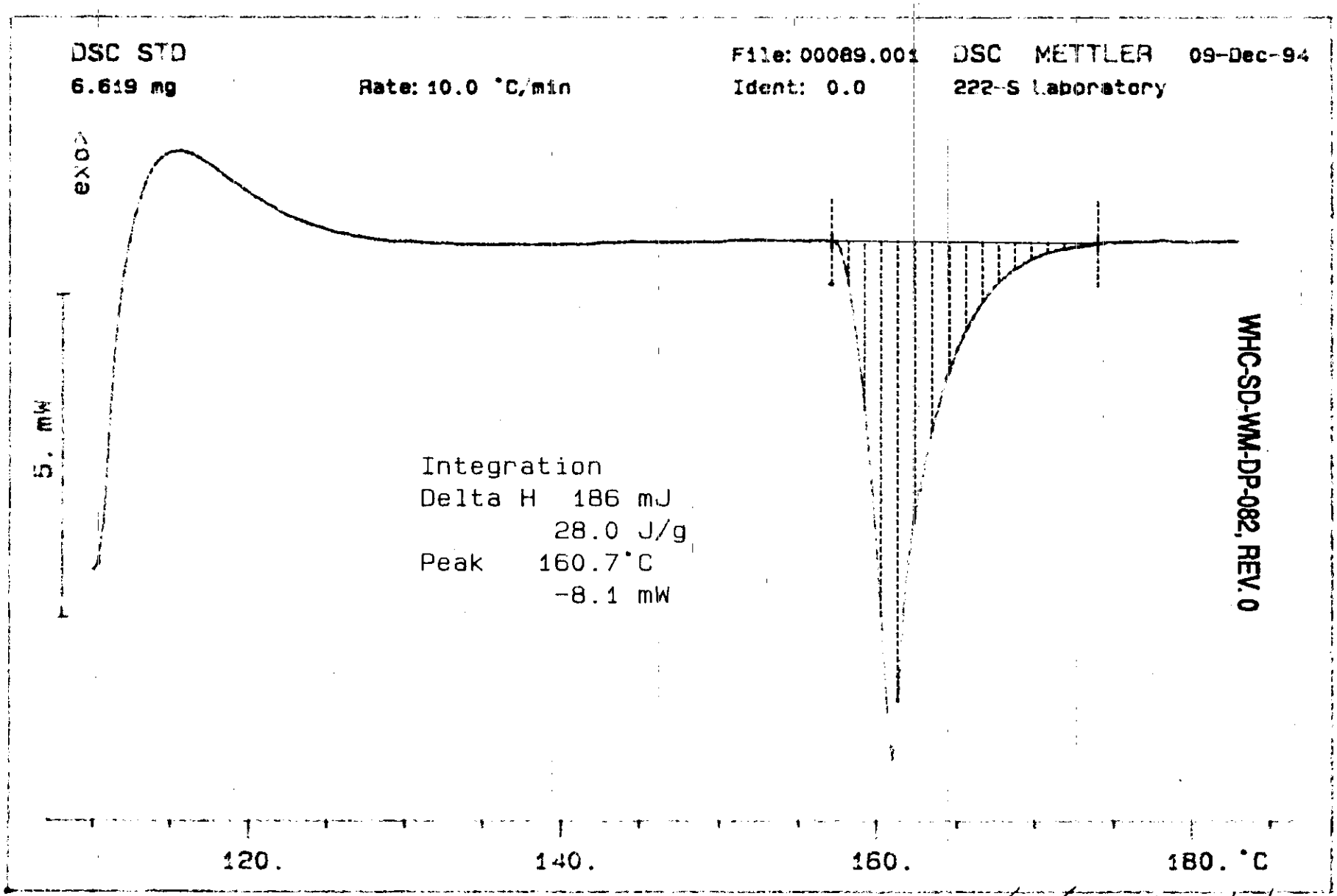
WHC-SD-WM-DP-082, REV. 0

Verified 12/12/94 J. M. Fuge

Data Entry Comments:
Std #12N14A DATA Entered 12-10-94
S94T000292 has two endotherms of 894.6 J/g at 128.7°C and 212.4 J/g at 286.9°C; duplicate has 930.8 J/g at 130.5°C and 282.4 J/g at 284.8°C

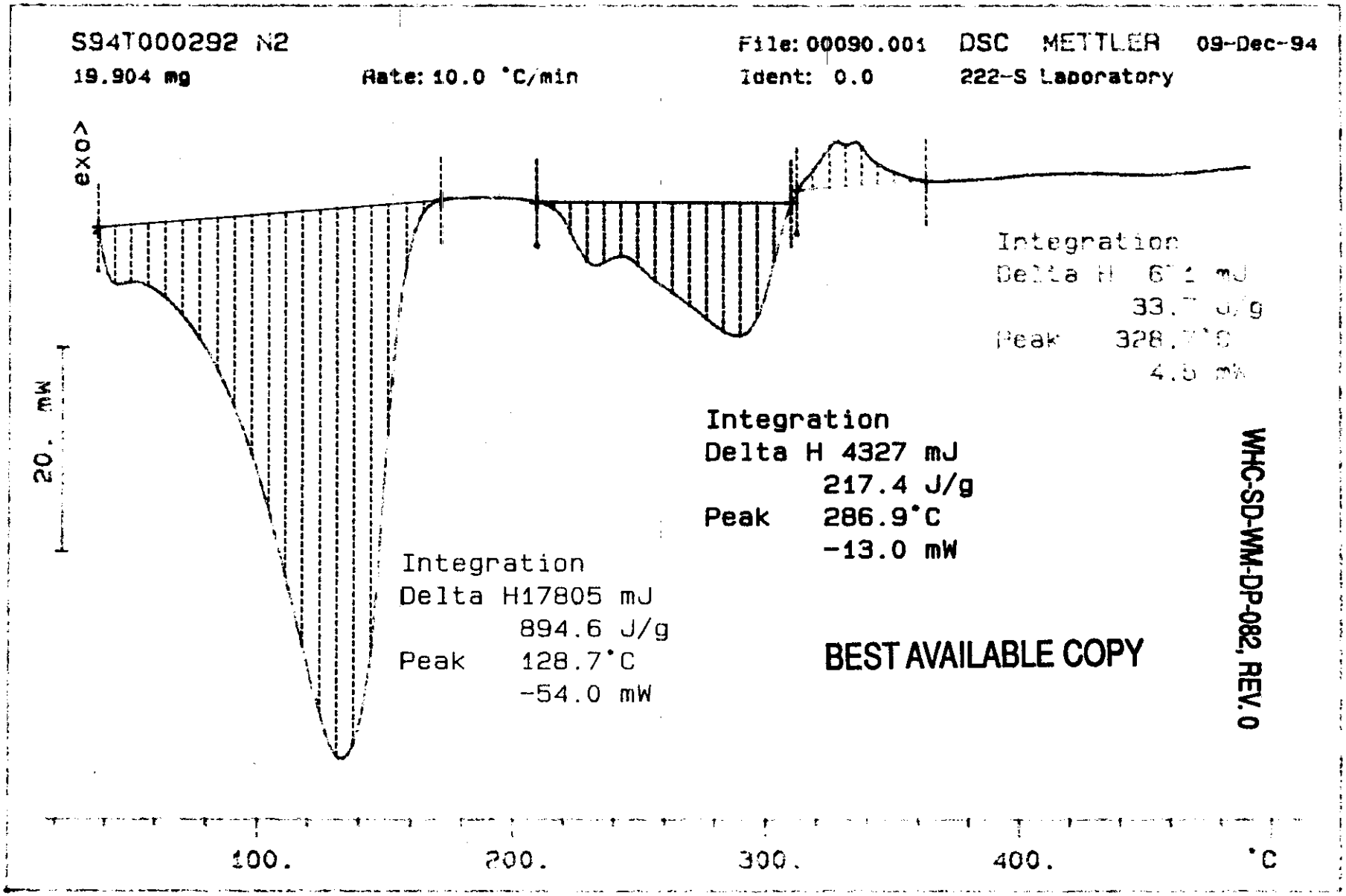
Units shown for QC (SPK) may not reflect the actual units.

Page: JMF 12/9/94



Std# 12N14A [illegible] 12/9/94

WHC-SD-WM-DP-082, REV. 0



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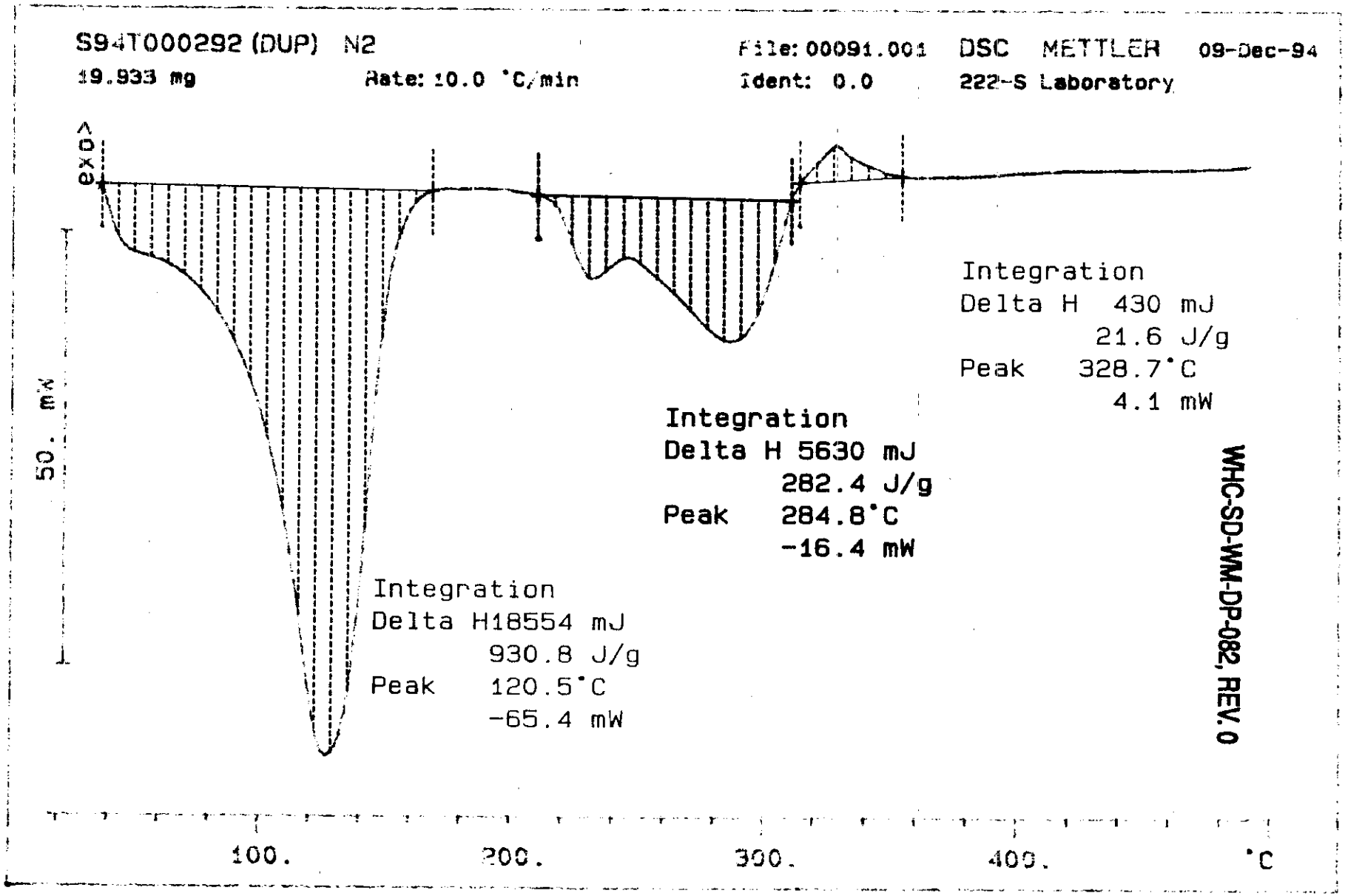
WHC-SD-WM-DP-082, REV. 0

9513332.1612



WHC-SD-WM-DP-082, REV. 0

9513332.1513

LABCORE Data Entry Template for Worklist# 277

Analyst: KLV **Instrument:** DSC01 **Method:** LA-514-113 B-1

Worklist Comment: Please run C-108 under N2. BDV

Seg	Type	Sample#	Rep	Al	Test	Matrix	Actual	Found	DL	Unit
1	STD	12NINA			DSC-01	SOLID	28.45	28.2	N/A	Joule/g
2	SAMPLE	S94T000361	0		DSC-01	SOLID	N/A	~~204.6~~ 0 JMF 1/18/95		Joule/g
3	DUP	S94T000361	0		DSC-01	SOLID	~~0~~ ~~204.6~~ JMF 1/18/95	~~0~~ ~~157.7~~ JMF 1/18/95	N/A	Joule/g
4	SAMPLE	S94T000362	0		DSC-01	SOLID	N/A	~~128.8~~ 0 JMF 1/18/95		Joule/g
5	DUP	S94T000362	0		DSC-01	SOLID	~~128.8~~ 0 JMF 1/18/95	~~134.8~~ 0 JMF 1/18/95	N/A	Joule/g

LAD 1-30-95

Final page for worklist # 277

Analyst Signature

Date 1-13-95

1-16-95

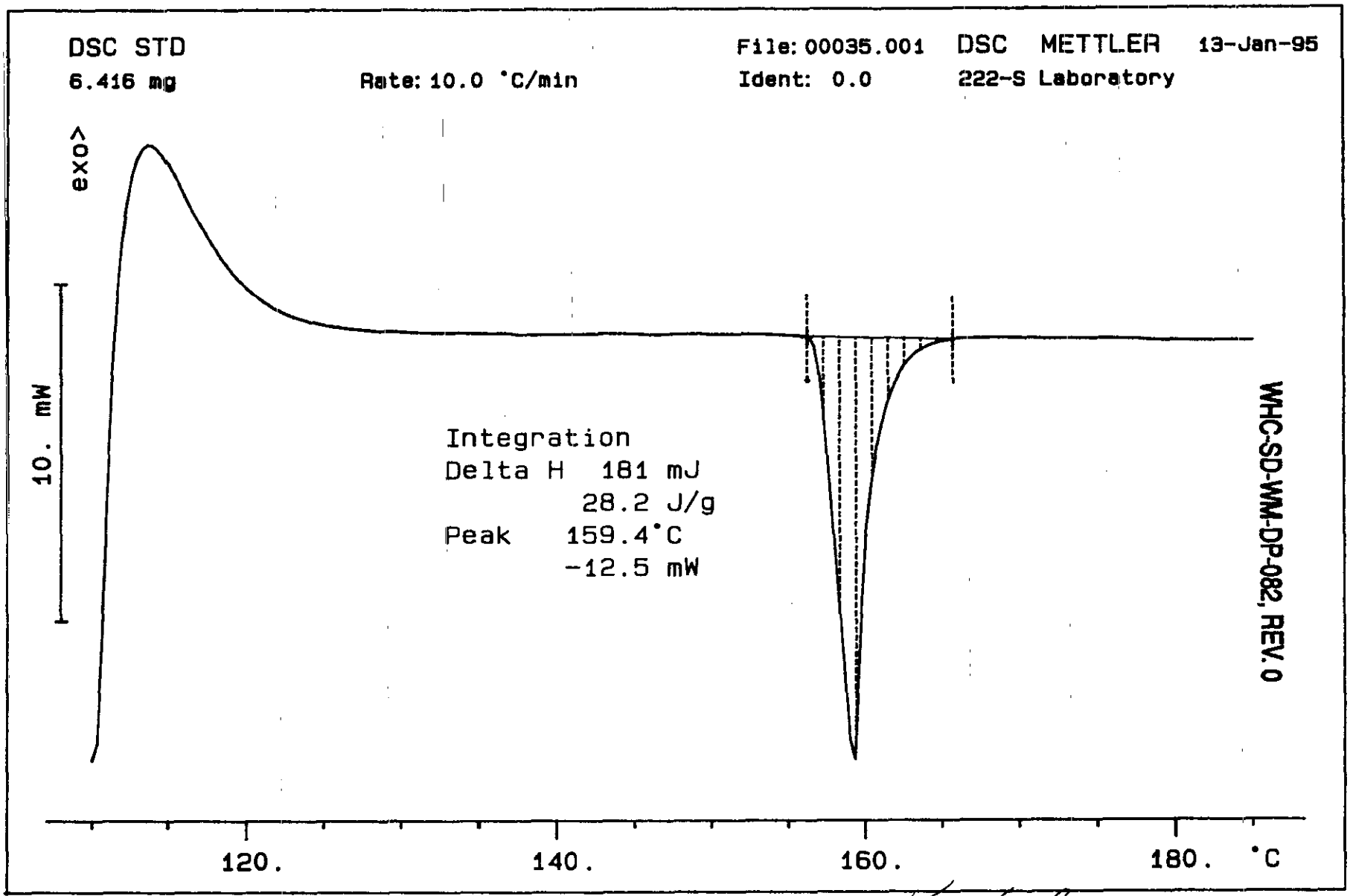
WHC-SD-WM-DP-082, REV. 0

Verified 1/18/95. JMFuge

Data Entry Comments:
Sample S94T000361 has two endotherms of 846.9 J/g at 124.1°C and 204.6 J/g at 287.7°C; duplicate has 894.3 J/g at 122.3°C and 157.7 J/g at 283.7°C. S94T000362 has two endotherms of 1137.9 J/g at ~~124.8~~ 126.7°C and 128.8 J/g at 243.5°C; dup has 880.1 J/g at 125.9°C and 134.8 J/g at 281.7°C. JMF

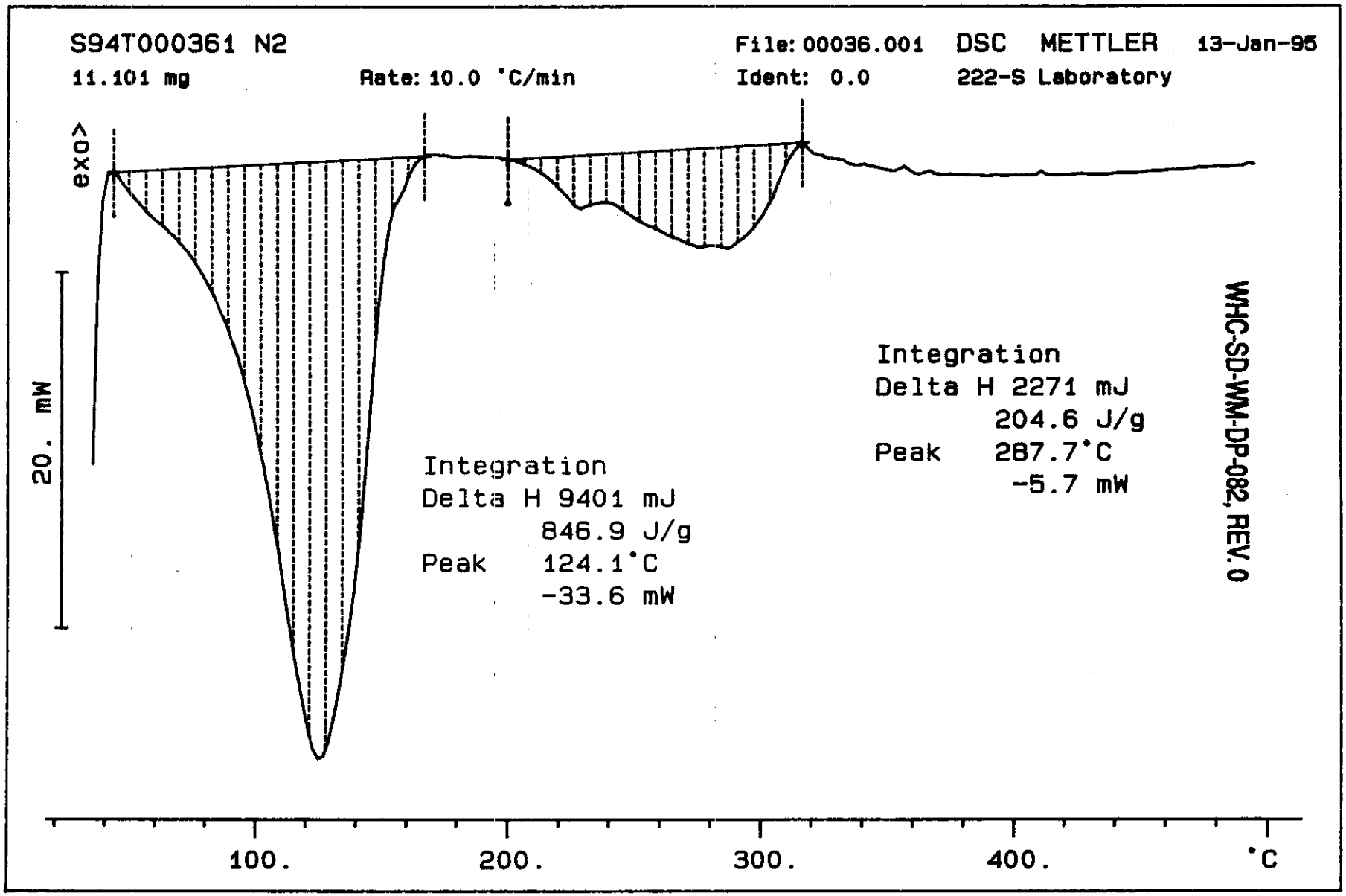
Units shown for QC (SPK) may not reflect the actual units.

Page: 1



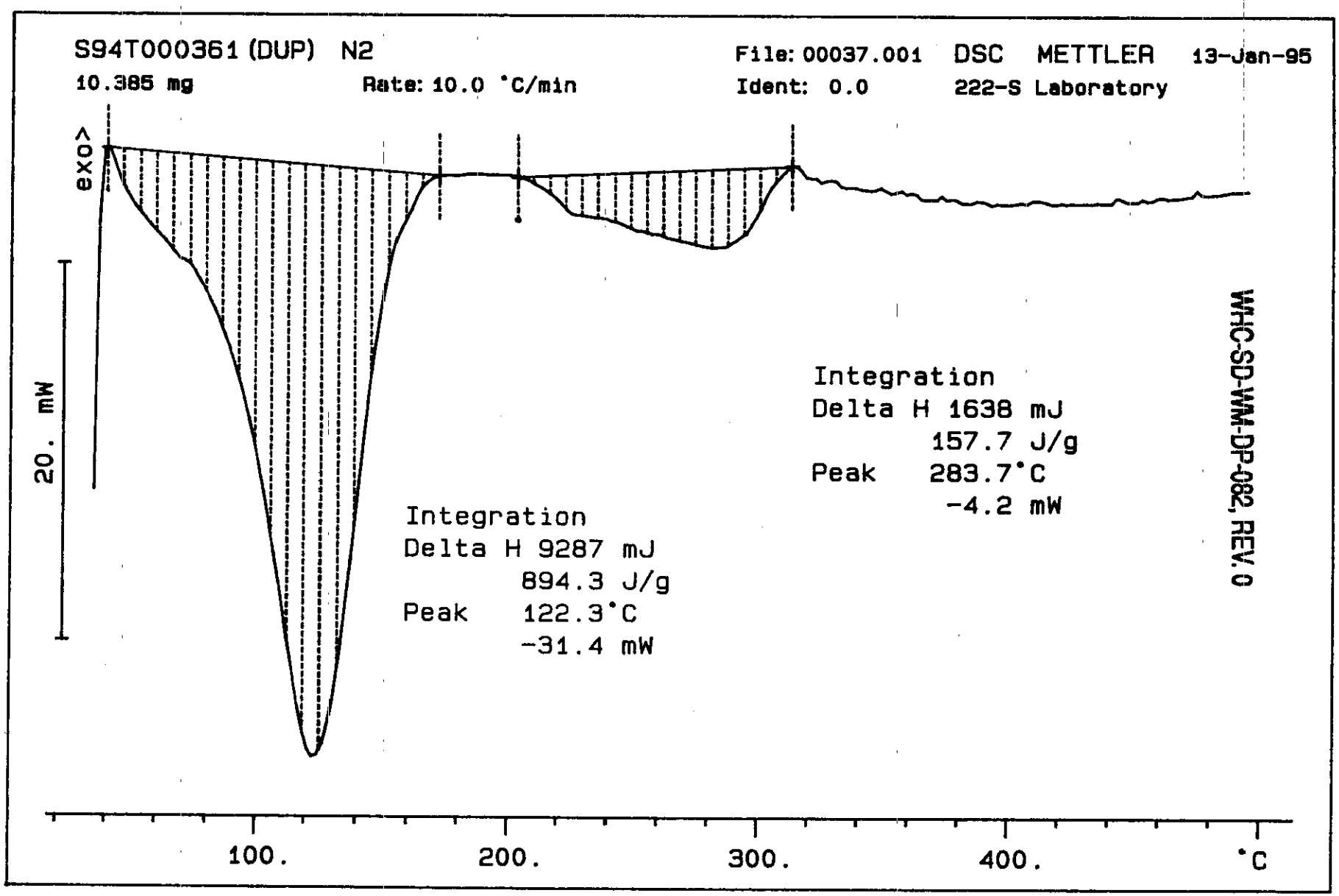
Std # 12N14A Kl Vogel 1-13-95

WHC-SD-WM-DP-082, REV. 0

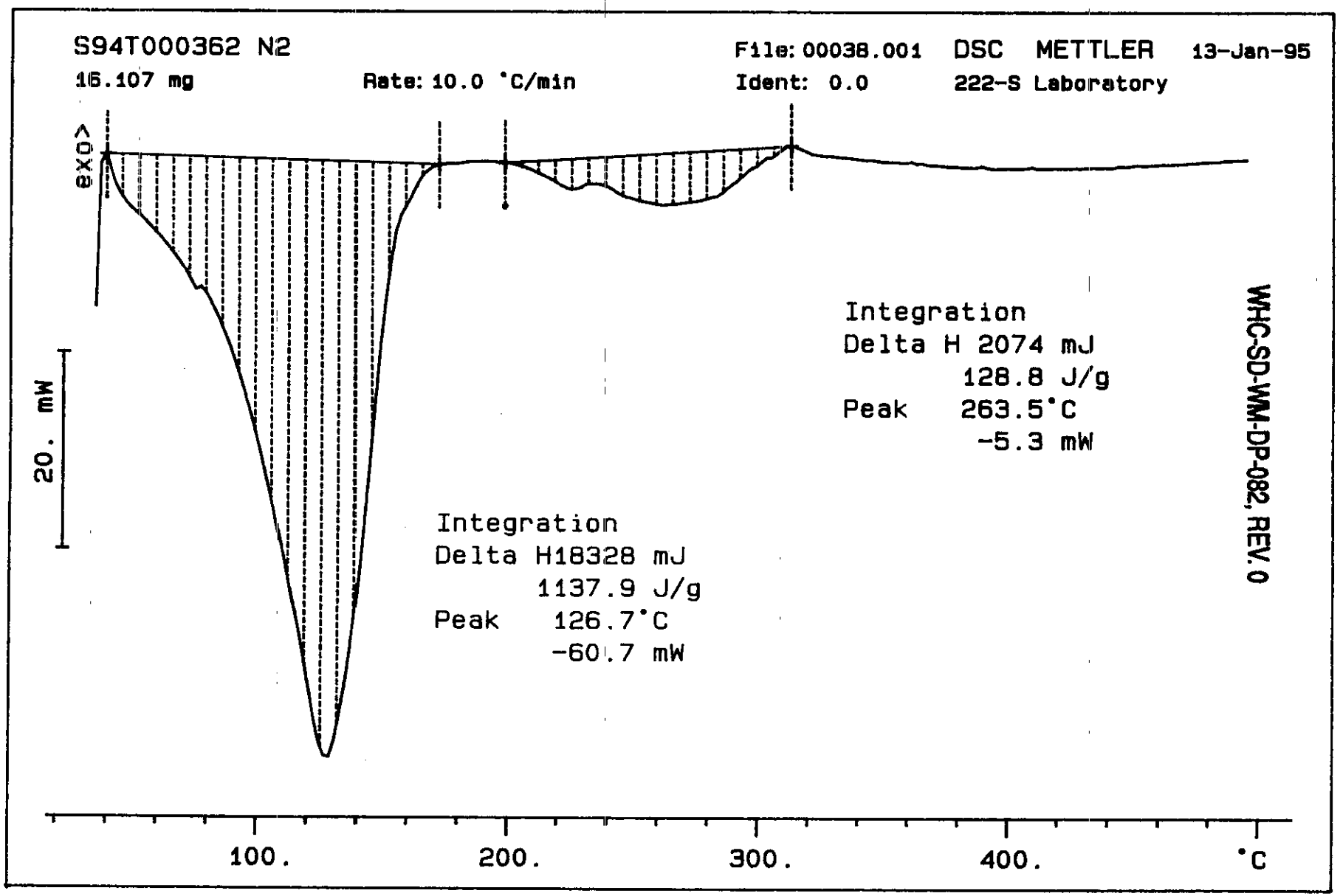


WHC-SD-WM-DP-082, REV. 0

9513332.1514

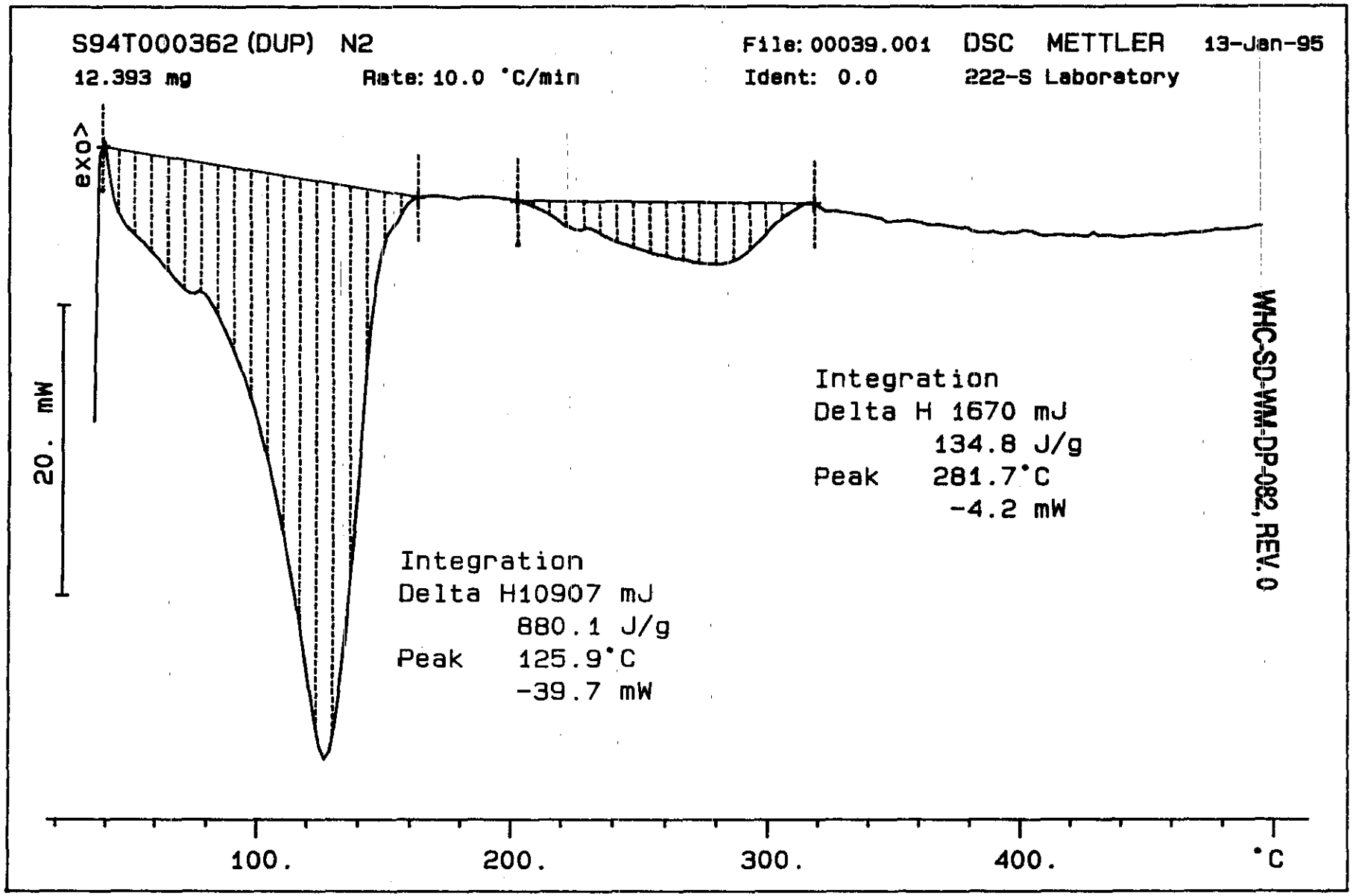


WHC-SD-WM-DP-082, REV. 0



WHC-SD-WM-DP-082, REV. 0

9513332.1515


S94T000362 (DUP) N2
12.393 mg
Rate: 10.0 °C/min
File: 00039.001
Ident: 0.0
DSC METTLER
222-S Laboratory
13-Jan-95
exo>
20. mW
Integration
Delta H 1670 mJ
134.8 J/g
Peak 281.7°C
-4.2 mW
Integration
Delta H10907 mJ
880.1 J/g
Peak 125.9°C
-39.7 mW
100.
200.
300.
400.
°C
WHC-SD-WM-DP-082, REV. 0

9513332.1516

. QA

LABCORE Data Entry Template for Worklist# 278

Analyst: DWS **Instrument:** DSC01 **Method:** LA-514-113 B-1

Worklist Comment: Please run C-108 DSC under N2. BDV

Seg	Type	Sample#	Rep	Al	Test	Matrix	Actual	Found	DL	Unit
1	STD				DSC-01	SOLID	28.45	29.1	N/A	Joule/g
2	SAMPLE	S94T000363	0		DSC-01	SOLID	N/A	Ø		Joule/g
3	DUP	S94T000363	0		DSC-01	SOLID	Ø	Ø	N/A	Joule/g
4	SAMPLE	S94T000364	0		DSC-01	SOLID	N/A	Ø		Joule/g
5	STD				DSC-01	SOLID	~~Ø~~ 28.45 1/17/95 BDV	~~Ø~~ 27.8 1/17/95 BDV	N/A	Joule/g
6	DUP	S94T000364	0		DSC-01	SOLID	Ø	Ø	N/A	Joule/g

LAD 1-30-95

Final page for worklist # 278

See attached page for signature
Analyst Signature

1-17-95
Date

1-18-95

WHC-SD-WM-DP-082, REV. 0

Verified 1/18/95. J M. Fuge

Data Entry Comments: S94T000363 had one endotherm at 113.3°C with a delta H of 951.8 J/g. S94T000364 had two endotherms one at 113.3°C with a delta H of 952.6 J/g and the second one at 265.2°C with a delta H of 75.1 J/g.

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

LABCORE Data Entry Template for Worklist# 278

Analyst: Rus **Instrument:** DSC01 **Method:** LA-514-113 - B - 1

Worklist Comment: Please run C-108 DSC under N2. BDV

Seg	Type	Sample#	Rep	Al	Test	Matrix	Actual	Found	DL	Unit
1	STD	12N14-17			DSC-01	SOLID	28.45	29.1	N/A	Joule/g
2	SAMPLE	S94T000363	0		DSC-01	SOLID	N/A	Ø		Joule/g
3	DUP	S94T000363	0		DSC-01	SOLID	Ø	Ø	N/A	Joule/g
4	SAMPLE	S94T000364	0		DSC-01	SOLID	N/A	Ø		Joule/g
5	DUP	S94T000364	0		DSC-01	SOLID	Ø	Ø	N/A	Joule/g

LAD 1-30-95

Final page for worklist # 278

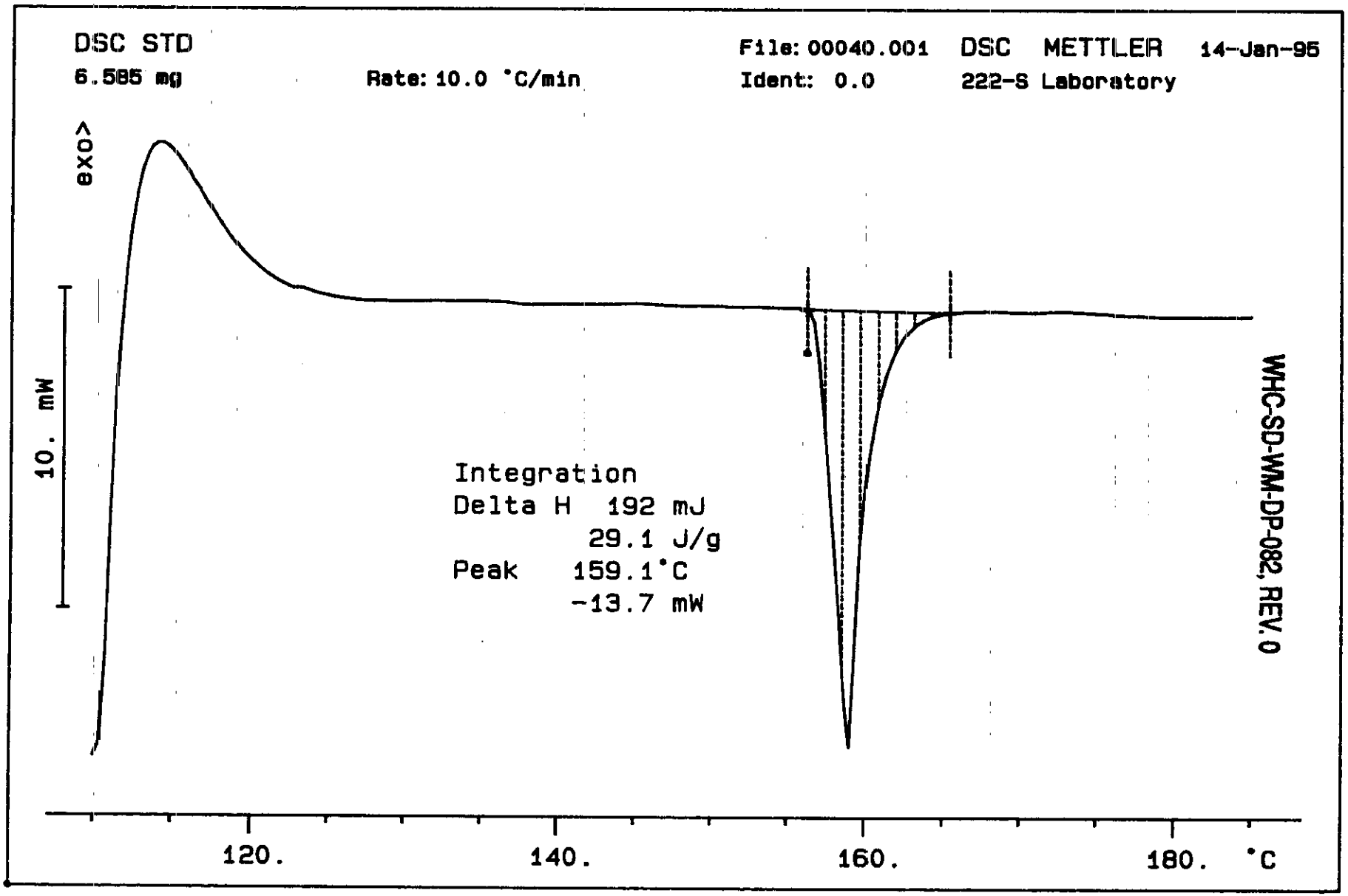
Analyst Signature

1-11-95
Date

WHC-SD-WM-DP-082, REV. 0

Data Entry Comments:

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

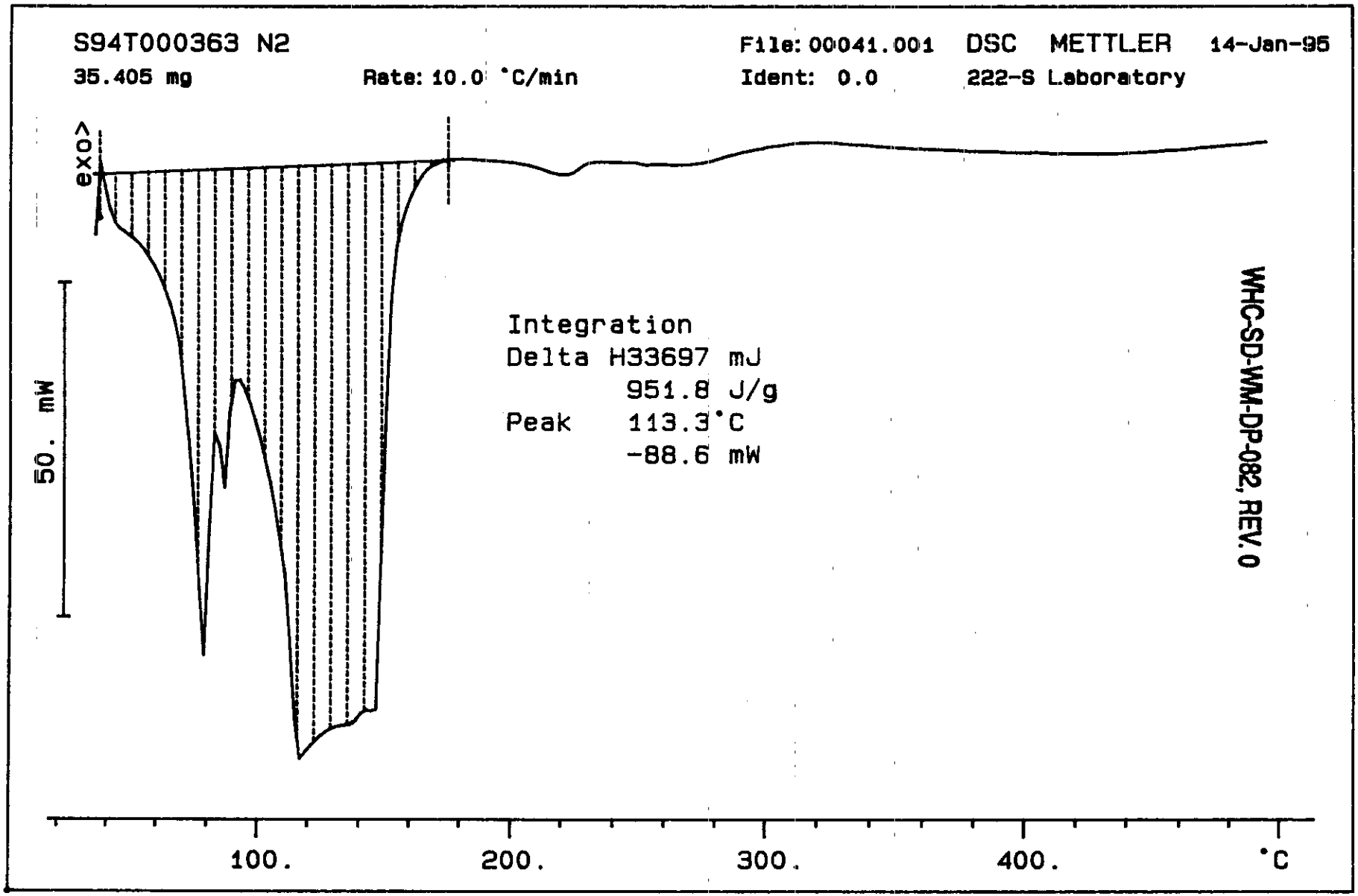


Std #
12N14-A

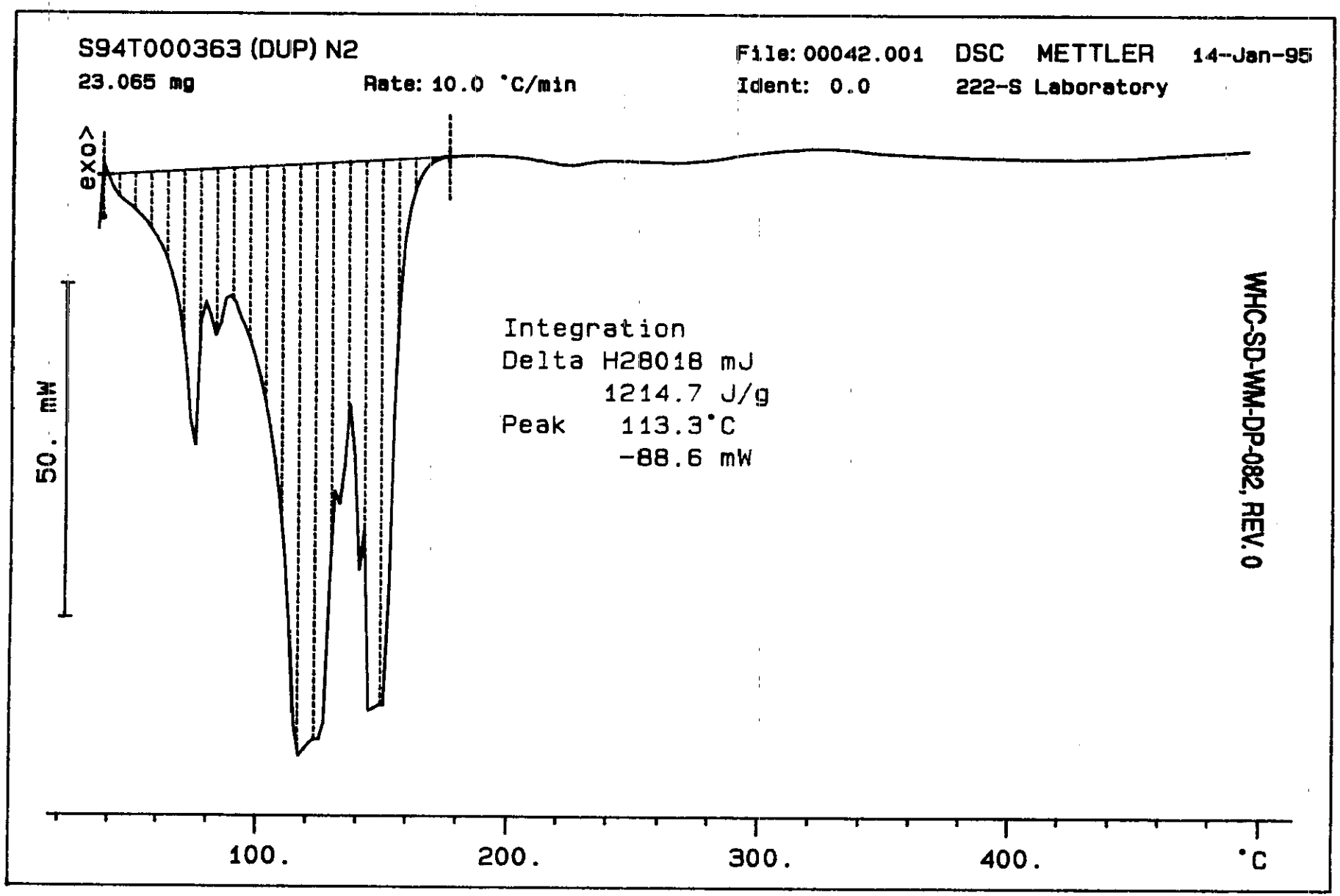
1-14-95

WHC-SD-WM-DP-082, REV. 0

9513332.1517



WHC-SD-WM-DP-082, REV. 0



WHC-SD-WM-DP-082, REV. 0

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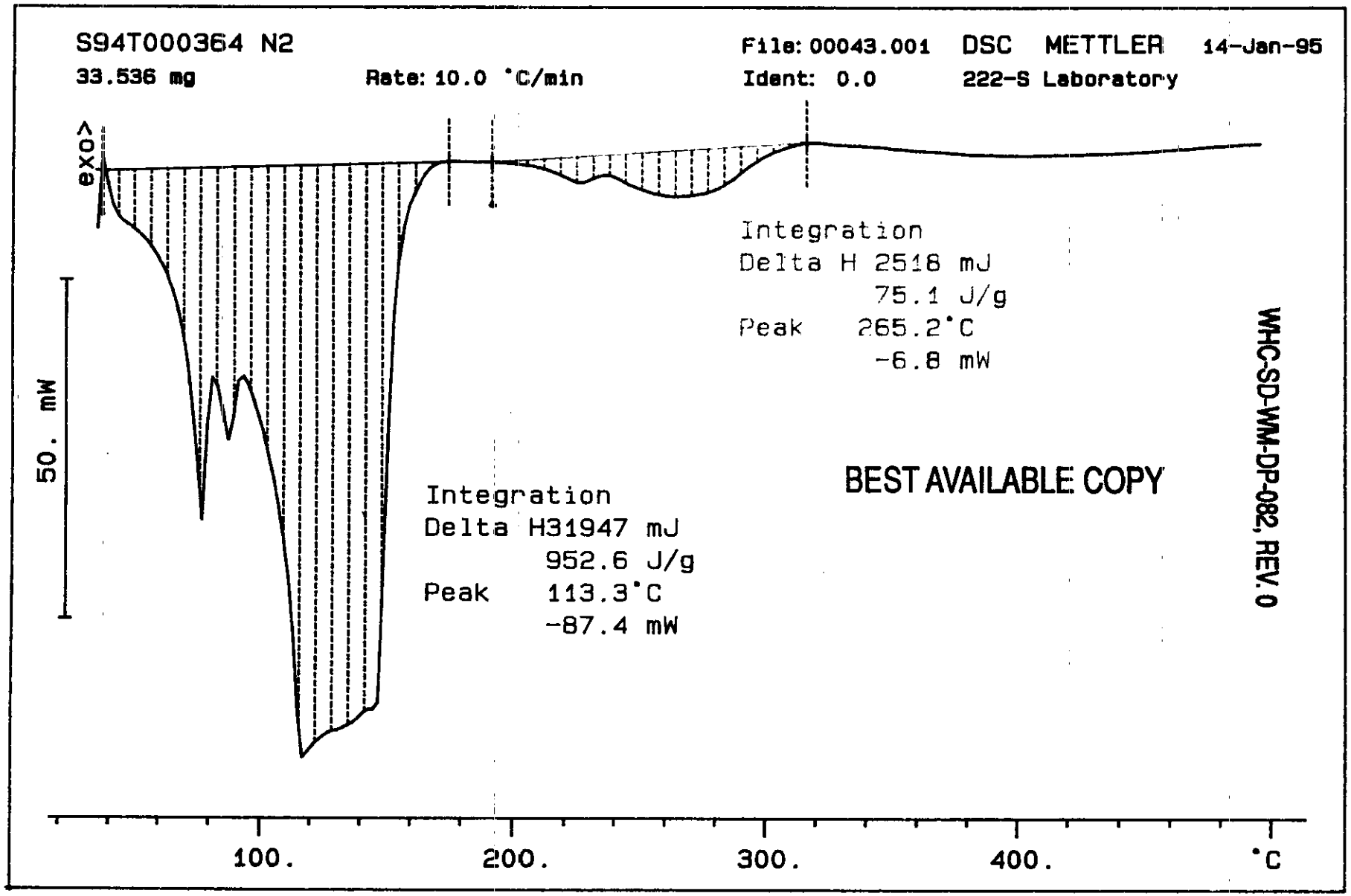

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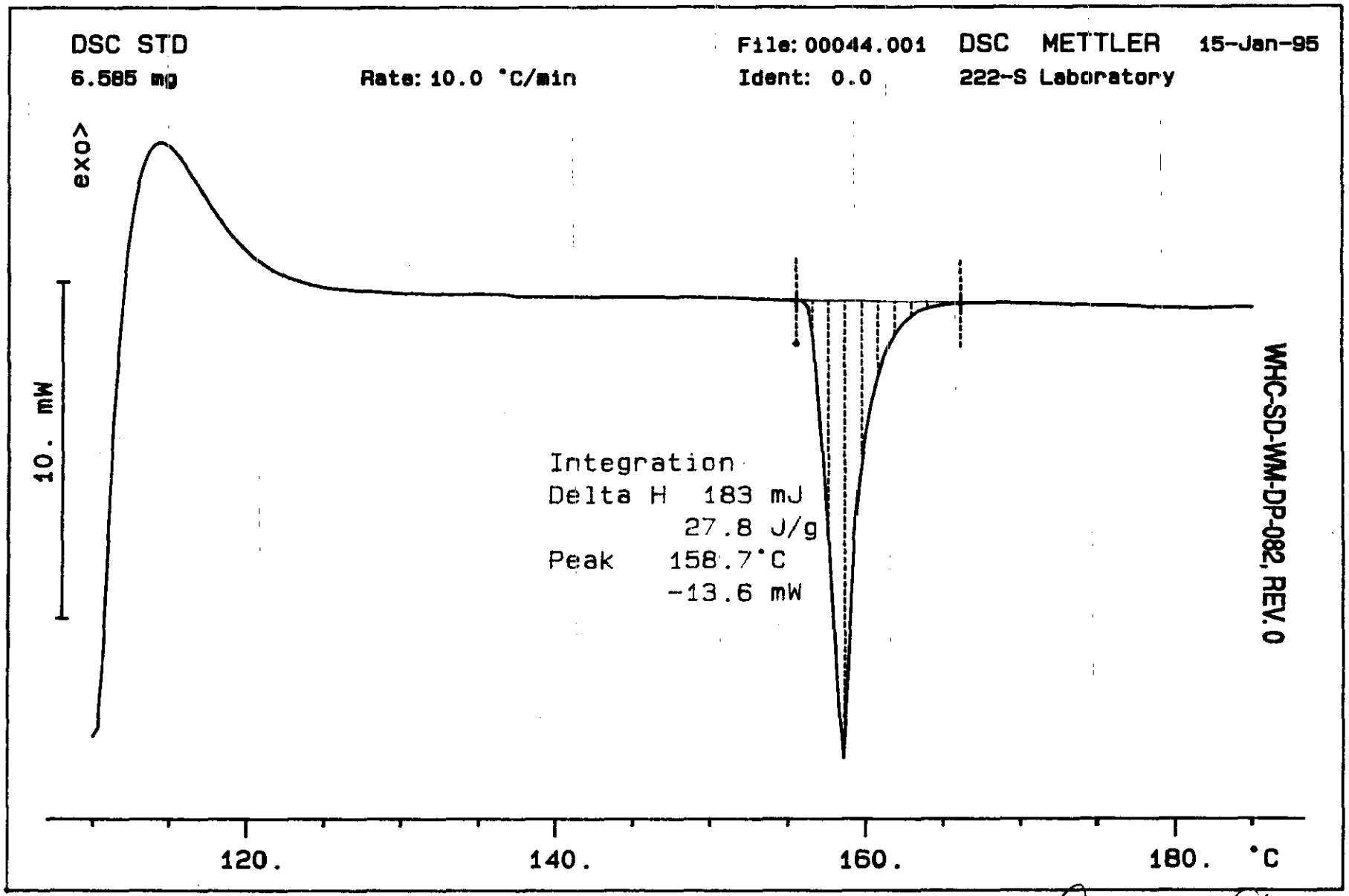
WHC-SD-WM-DP-082, REV. 0

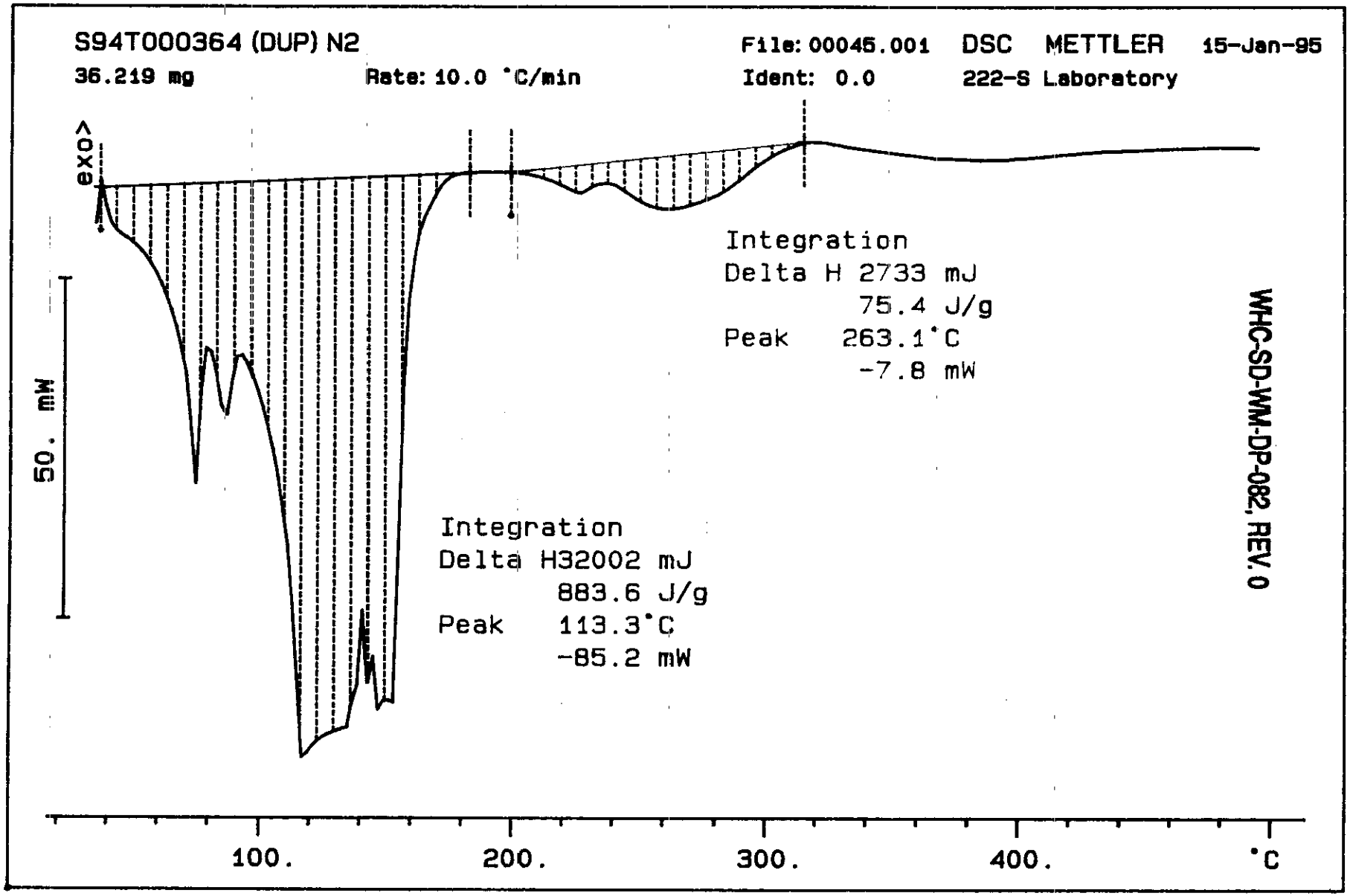


WHC-SD-WM-DP-082, REV. 0

Std # 12Ni4-A

1-16-95

9513332.1519



WHC-SD-WM-DP-082, REV. 0

9513332.1520

LABCORE Data Entry Template for Worklist# 401

Analyst: JMF/BDV **Instrument:** DSC01 _____ **Method:** LA-514-113

Worklist Comment: Calculated C-108 dry DSC. bdv

LAD 1-30-95

Seg	Type	Sample#	Rep Al	Test	Matrix	DSC Joule/g ~~Actual~~	TGA % ~~Found~~	DSC 02 DL Calc	Unit
1	SAMPLE	S94T000288	0	DSC-02 12-6-94 7-94	SOLID	Ø	15.35	0	DRY Joule/g
2	DUP	S94T000288	0	DSC-02 [illegible]	SOLID	Ø	2.99	0 N/A	Joule/g
3	SAMPLE	S94T000290	0	DSC-02 12/6 12/7	SOLID	Ø	4.94	0	Joule/g
4	DUP	S94T000290	0	DSC-02 12-7-94	SOLID	Ø	11.98	0 N/A	Joule/g
5	SAMPLE	S94T000291	0	DSC-02 11/30 11/30	SOLID	55.4	45.76	102.1	Joule/g
6	DUP	S94T000291	0	DSC-02 11-30-94	SOLID	62.5	46.2[illegible]	116.3 N/A	Joule/g
7	SAMPLE	S94T000292	0	DSC-02 12/8 11/30	SOLID	33.7	32.93	50.3	Joule/g
8	DUP	S94T000292	0	DSC-02 11-30-94	SOLID	21.6	39.15	35.5 N/A	Joule/g
9	SAMPLE	S94T000361	0	DSC-02 1/13 12/29	SOLID	Ø	51.85	Ø	Joule/g
10	DUP	S94T000361	0	DSC-02	SOLID	Ø	46.20	Ø N/A	Joule/g
11	SAMPLE	S94T000362	0	DSC-02 12/29 1/13	SOLID	Ø	48.57	Ø	Joule/g
12	DUP	S94T000362	0	DSC-02	SOLID	Ø	50.45	Ø N/A	Joule/g
13	SAMPLE	S94T000363	0	DSC-02 1/17 1/4	SOLID	Ø	52.97	Ø	Joule/g
14	DUP	S94T000363	0	DSC-02	SOLID	Ø	52.41	Ø N/A	Joule/g
15	SAMPLE	S94T000364	0	DSC-02 1/17 1/4	SOLID	Ø	47.79	Ø	Joule/g
16	DUP	S94T000364	0	DSC-02	SOLID	Ø	49.23	Ø N/A	Joule/g

LAD 1-30-95

Final page for worklist # 401

Jann Fuye
Analyst Signature

1/20/95
Date

WHC-SD-WM-DP-082, REV. 0

Data Entry Comments: Entered and verified 1/20/95. J. M. Fuye

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

Page: 1

Blandina Valenzuela

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UNDIGESTED SAMPLE ANALYSES

THERMAL GRAVIMETRIC ANALYSES

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HCA 1

LABCORE Data Entry Template for Worklist# 184

Analyst: KLV **Instrument:** TGA01 **Method:** LA-560-112 A-2

Worklist Comment: Please run under N2. JMF

Seg	Type	Sample#	Rep Al	Test	Matrix	Actual	Found	DL	Unit
1	STD	42N8A		TGA-01	SOLID	59.19	58.93	N/A	%
2	SAMPLE	S94T000288	0	TGA-01	SOLID	N/A	15.35		%
3	DUP	S94T000288	0	TGA-01	SOLID	15.35	6.01	N/A	%
4	STD			TGA-01	SOLID	59.19	58.45	N/A	%
5	DUP	S94T000288	0	TGA-01	SOLID	15.35	2.99	N/A	%
6	SAMPLE	S94T000290	0	TGA-01	SOLID	N/A	9.94		%
7	DUP	S94T000290	0	TGA-01	SOLID	9.94	27.66	N/A	%
8	STD			TGA-01	SOLID	59.19	58.77	N/A	%
9	DUP	S94T000290	0	TGA-01	SOLID	9.94	11.98	N/A	%

Final page for worklist # 184

Analyst Signature **Date** 12/7/94

See attached worklist for analyst signature

WHC-SD-WM-DP-082, REV. 0

Reviewed & verified 12/7/94. J.M. Fuye

Data Entry Comments:

S94T000288 has second weight loss step of 27.74% at 277°C; duplicate 1 has 28.54% at 277°C; duplicate 2 has 29.19% at 273°C. JMF

S94T000290 has a second weight loss step of 25.77% at 271°C; duplicate 1 has 12.12% at 271°C; duplicate 2 has 25.10% at 279°C. JMF

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

Page: 1

LABCORE Data Entry Template for Worklist# 184

Analyst: KLV **Instrument:** TGA01 **Method:** LA-560-112 A-2

Worklist Comment: Please run under N2. JMF

Seg	Type	Sample#	Rep Al	Test	Matrix	Actual	Found	DL	Unit
1	STD	42N8A		TGA-01	SOLID	59.19	58.93	N/A	%
2	SAMPLE	S94T000288	0	TGA-01	SOLID	N/A	15.35		%
3	DUP	S94T000288	0	TGA-01	SOLID	15.35	6.01	N/A	%
						15.35	9.99		
4	SAMPLE	S94T000290	0	TGA-01	SOLID	N/A	9.94		%
5	DUP	S94T000290	0	TGA-01	SOLID	9.94	27.66	N/A	%
	STD	42N8A				59.19	58.45		

Final page for worklist # 184

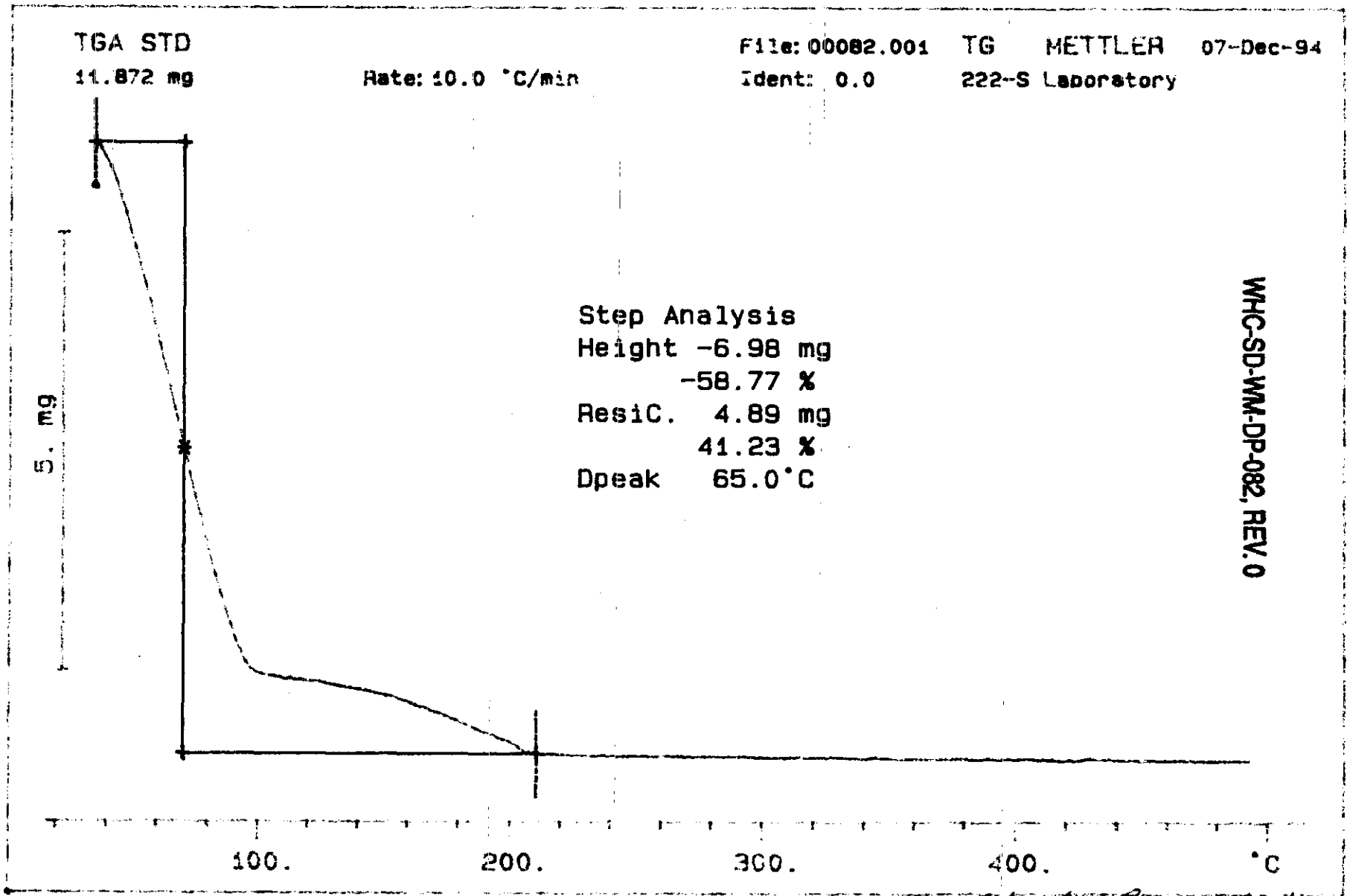
Analyst Signature

12/2/94
Date

WHC-SD-WM-DP-082, REV. 0

Data Entry Comments:
Std # 42N8A

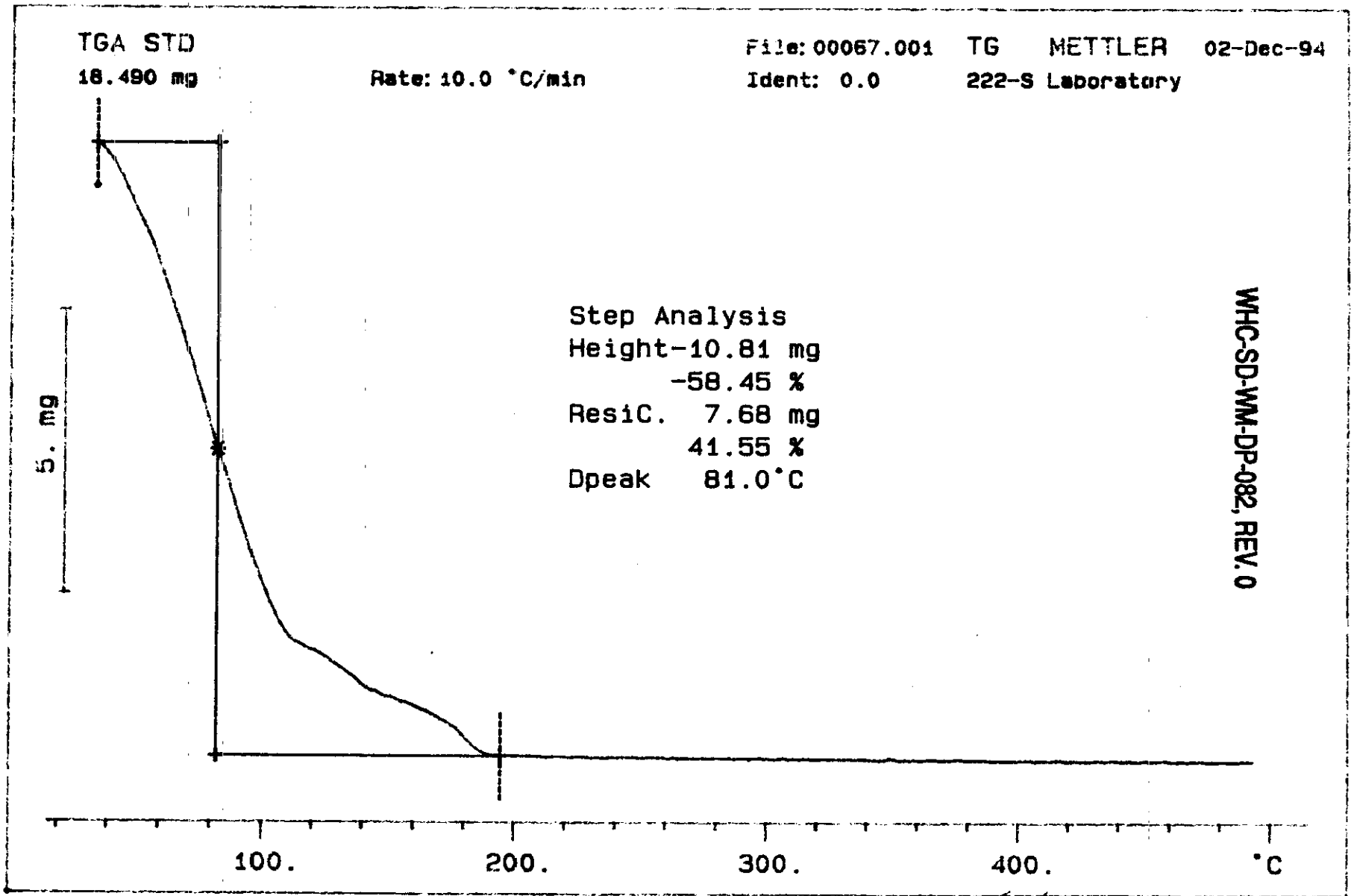
Units shown for QC (SPK) may not reflect the actual units.



STD# 42N8A 12/7/94

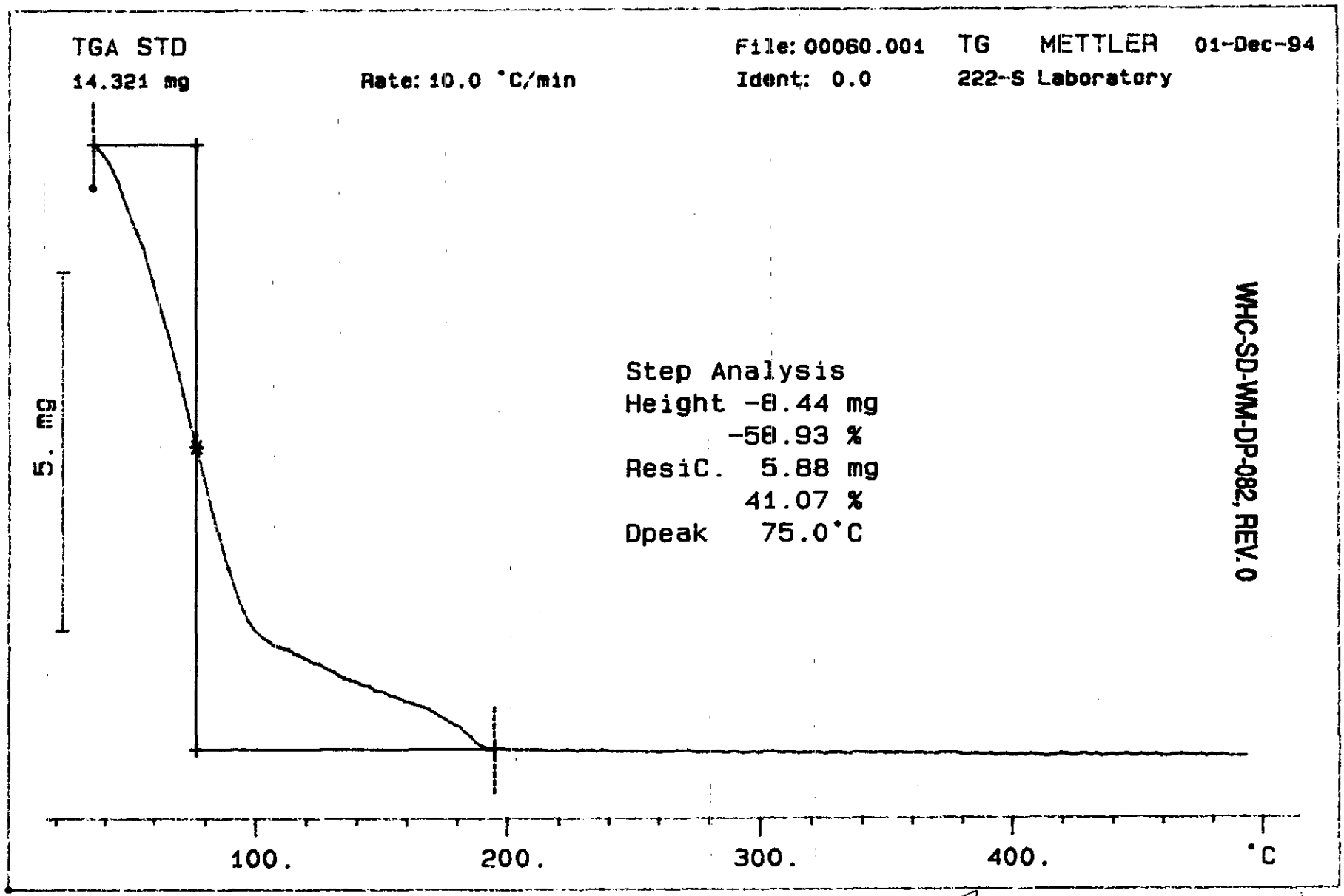
WHC-SD-WM-DP-082, REV. 0

9513332.1523



WHC-SD-WM-DP-082, REV. 0

12/2/94 Std + 42N&A

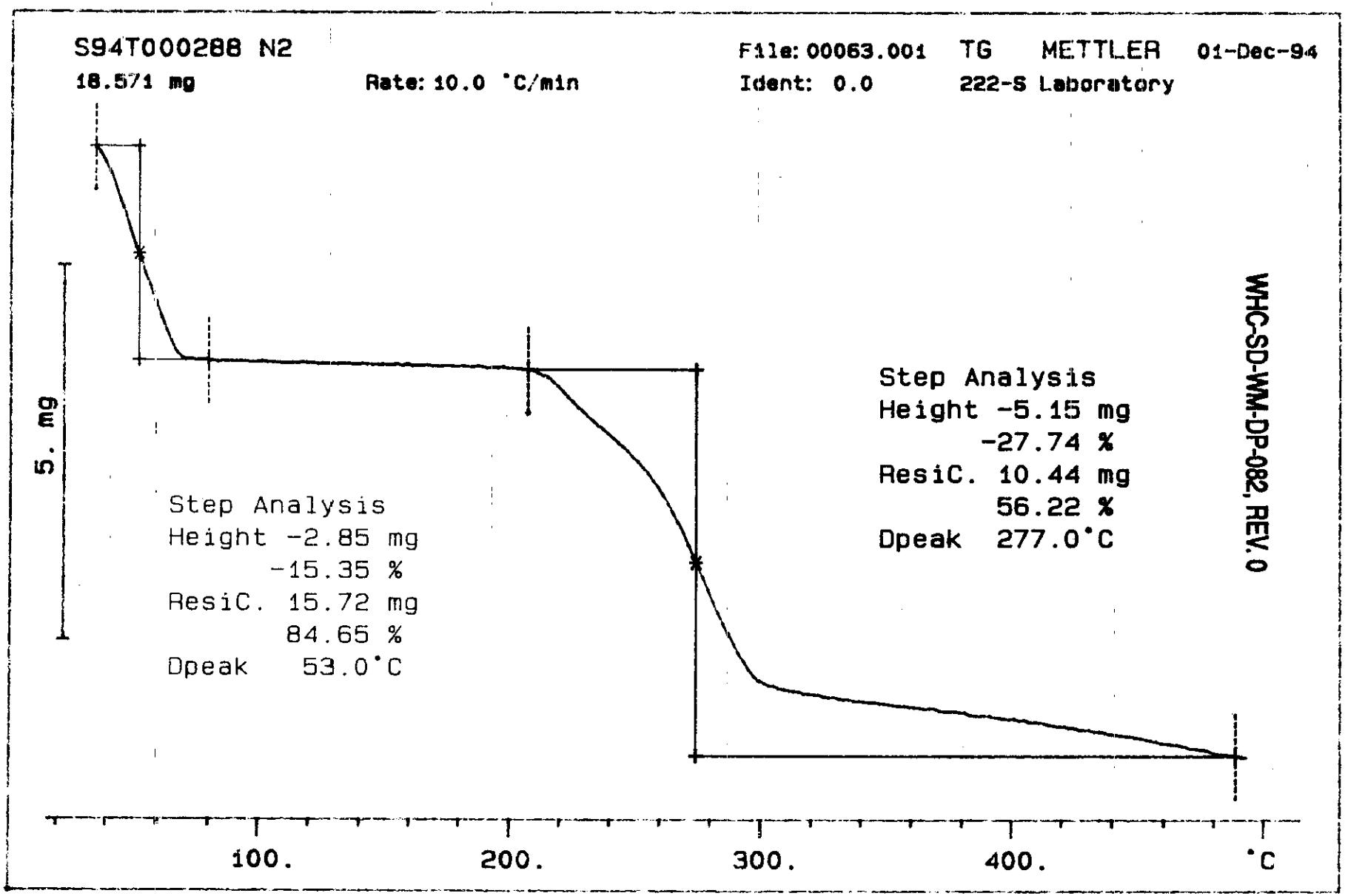


WHC-SD-WM-DP-082, REV. 0

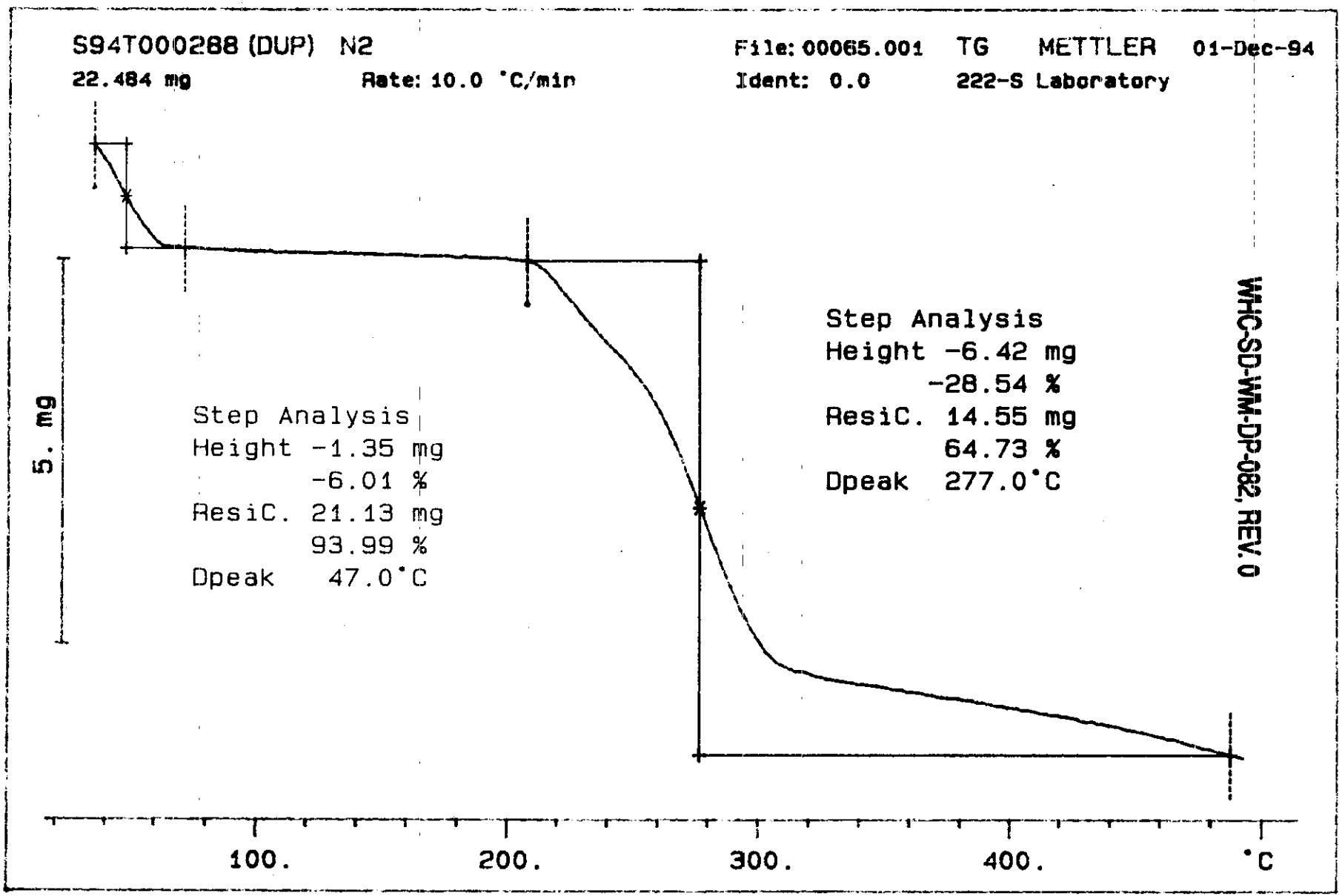
9513332.1524

Kl Vogel 12/1/94

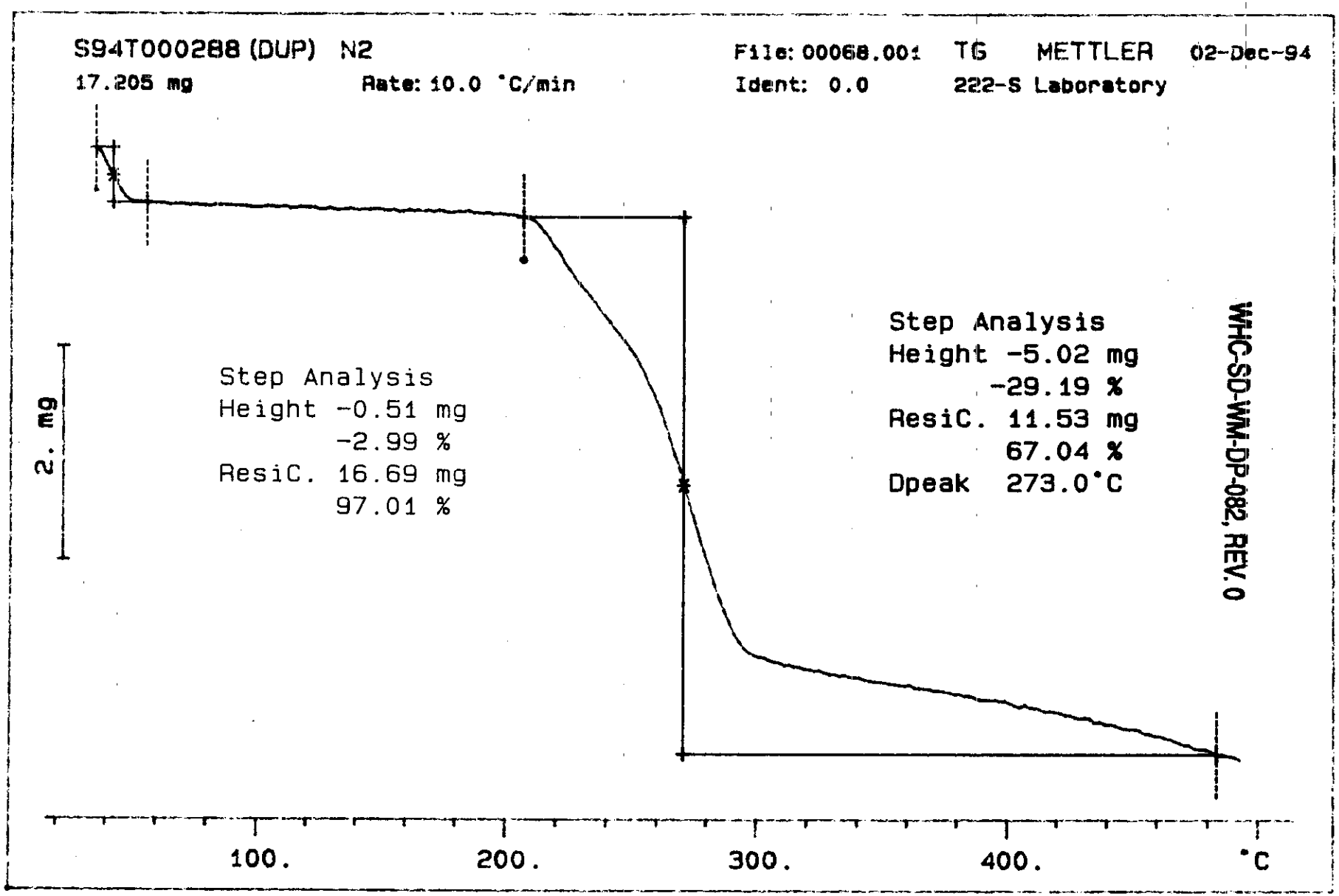
STD # 42N 8A



WHC-SD-WM-DP-082, REV. 0



9513332.1525



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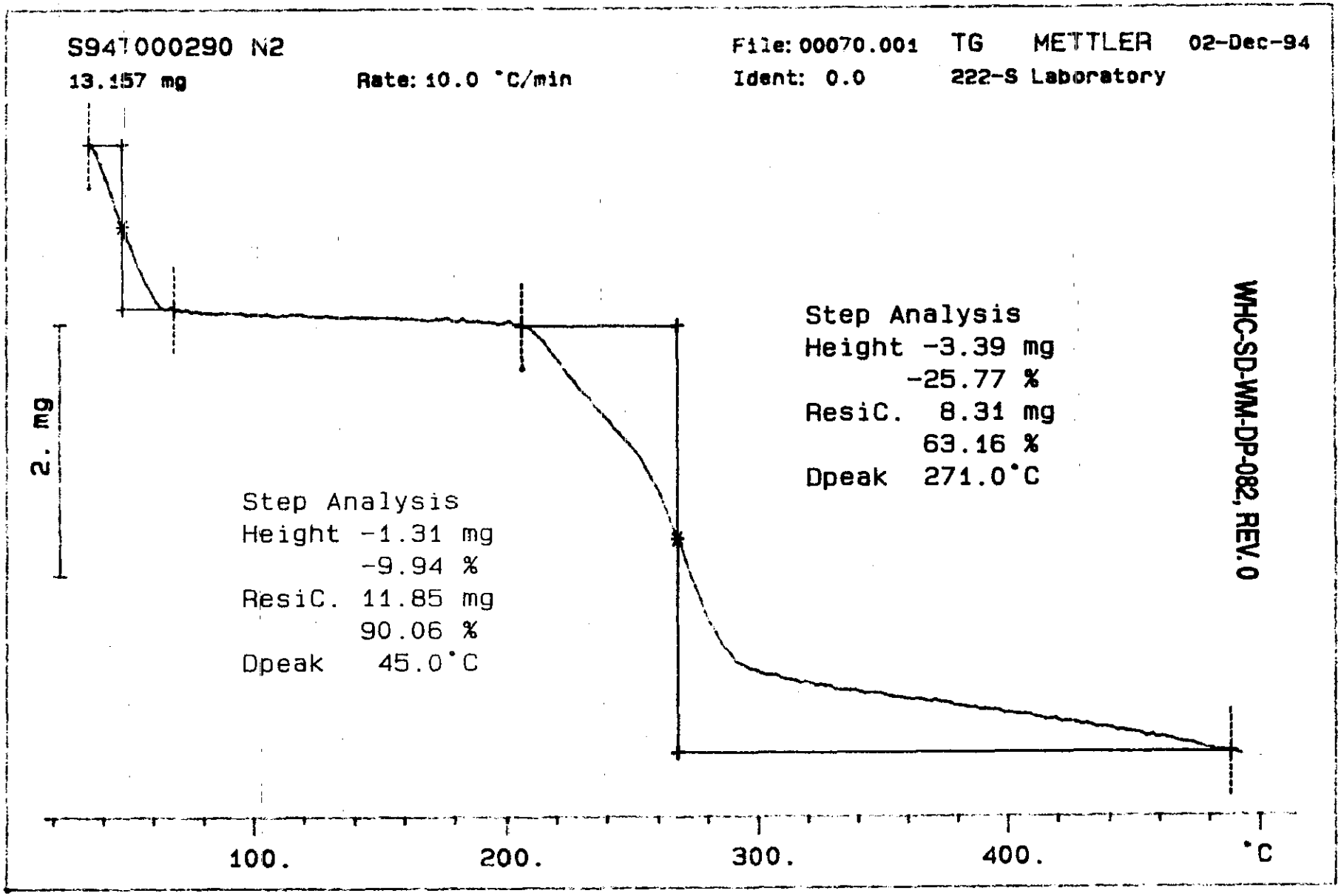

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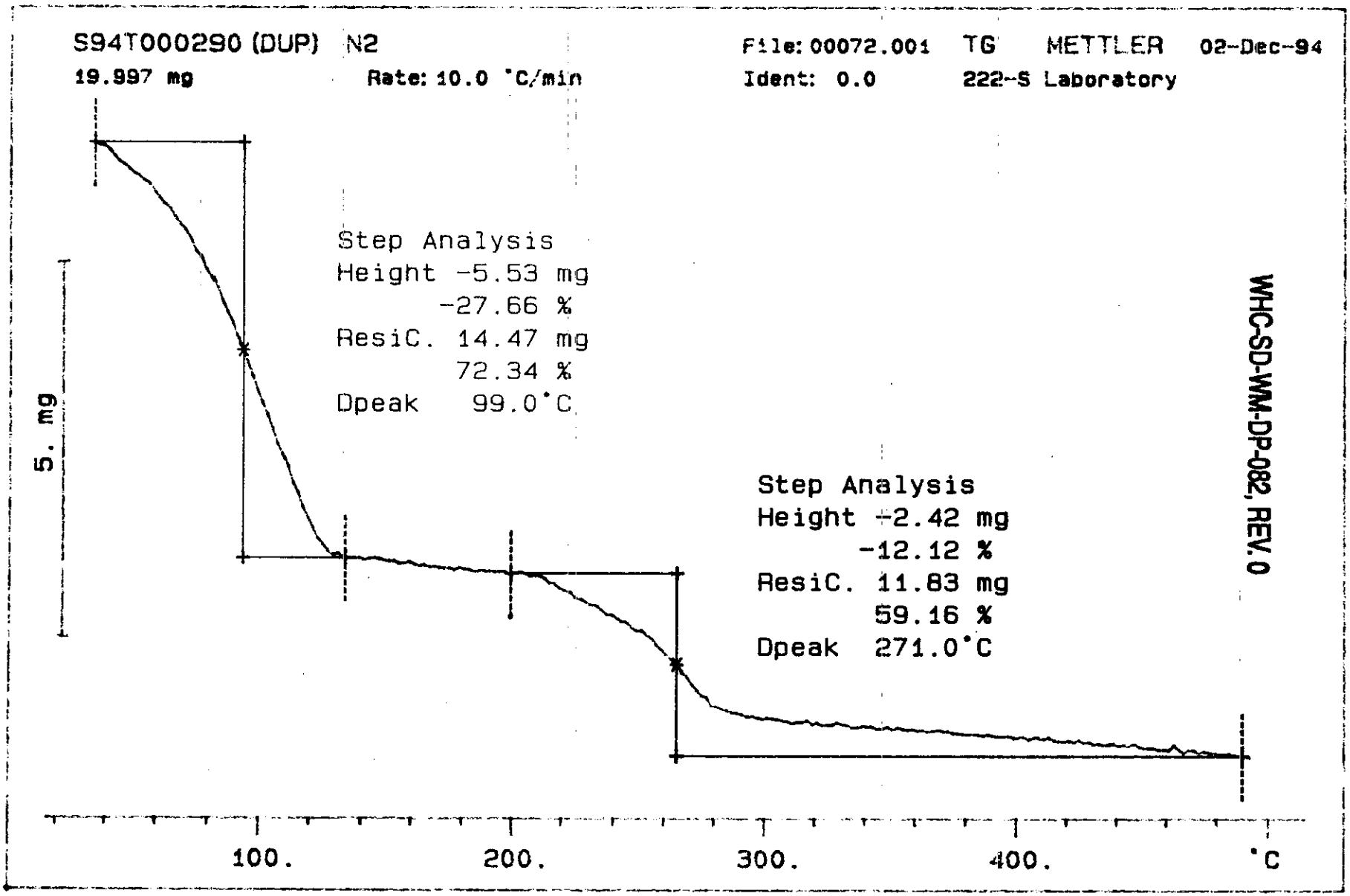

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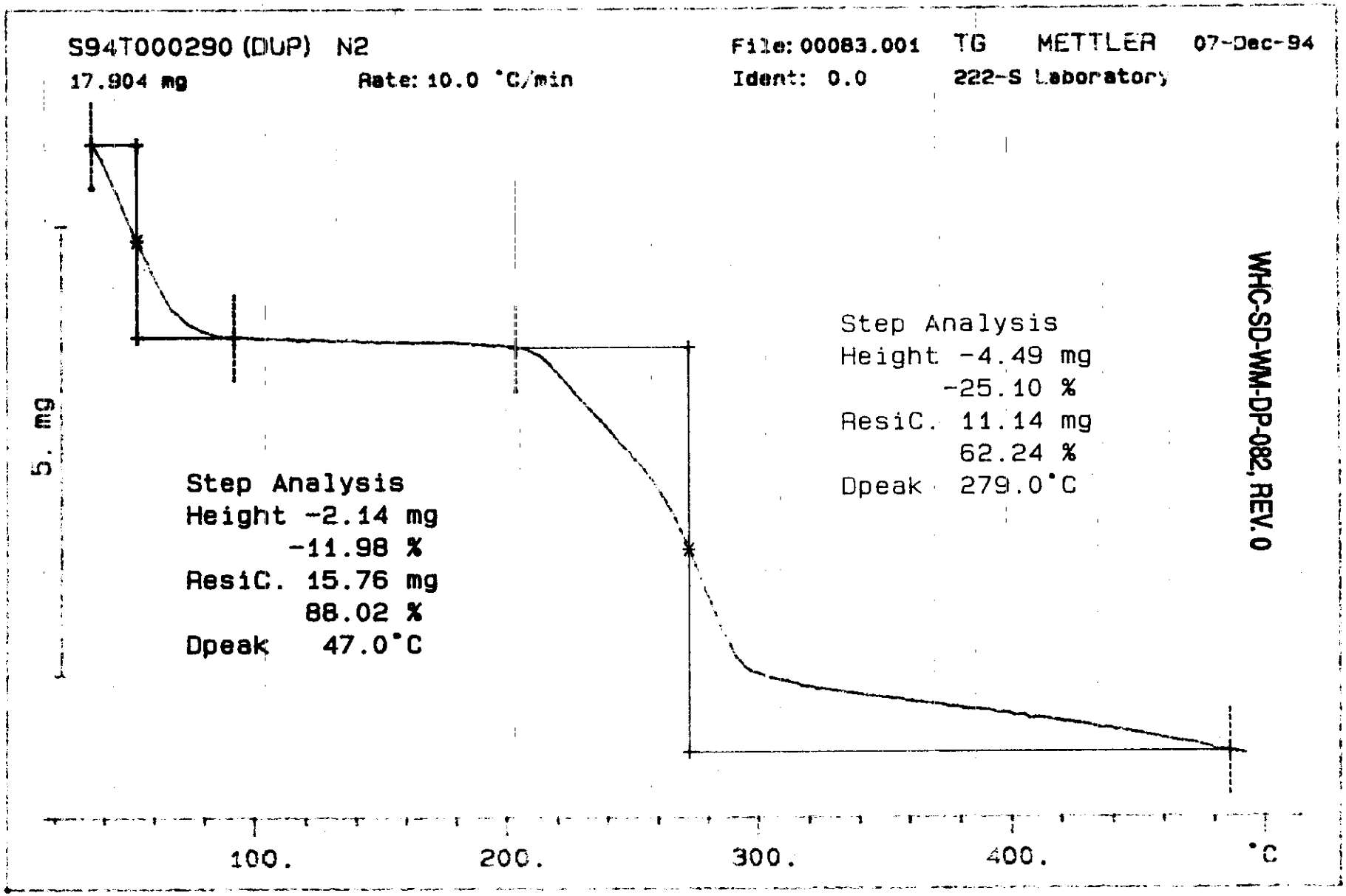


9513332.1627

OA
'2

LABCORE Data Entry Template for Worklist# 185

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

Worklist Comment: Please run under N2. JMF

Seg	Type	Sample#	Rep	Al	Test	Matrix	Actual	Found	DL	Unit
1	STD	#42N8A			TGA-01	SOLID	59.19	58.41	N/A	%
2	SAMPLE	S94T000291	0		TGA-01	SOLID	N/A	45.76		%
3	DUP	S94T000291	0		TGA-01	SOLID	45.76	46.28	N/A	%
4	SAMPLE	S94T000292	0		TGA-01	SOLID	N/A	32.97		%
5	DUP	S94T000292	0		TGA-01	SOLID	32.97	39.15	N/A	%

Final page for worklist # 185

Analyst Signature **Date** 11-30-94

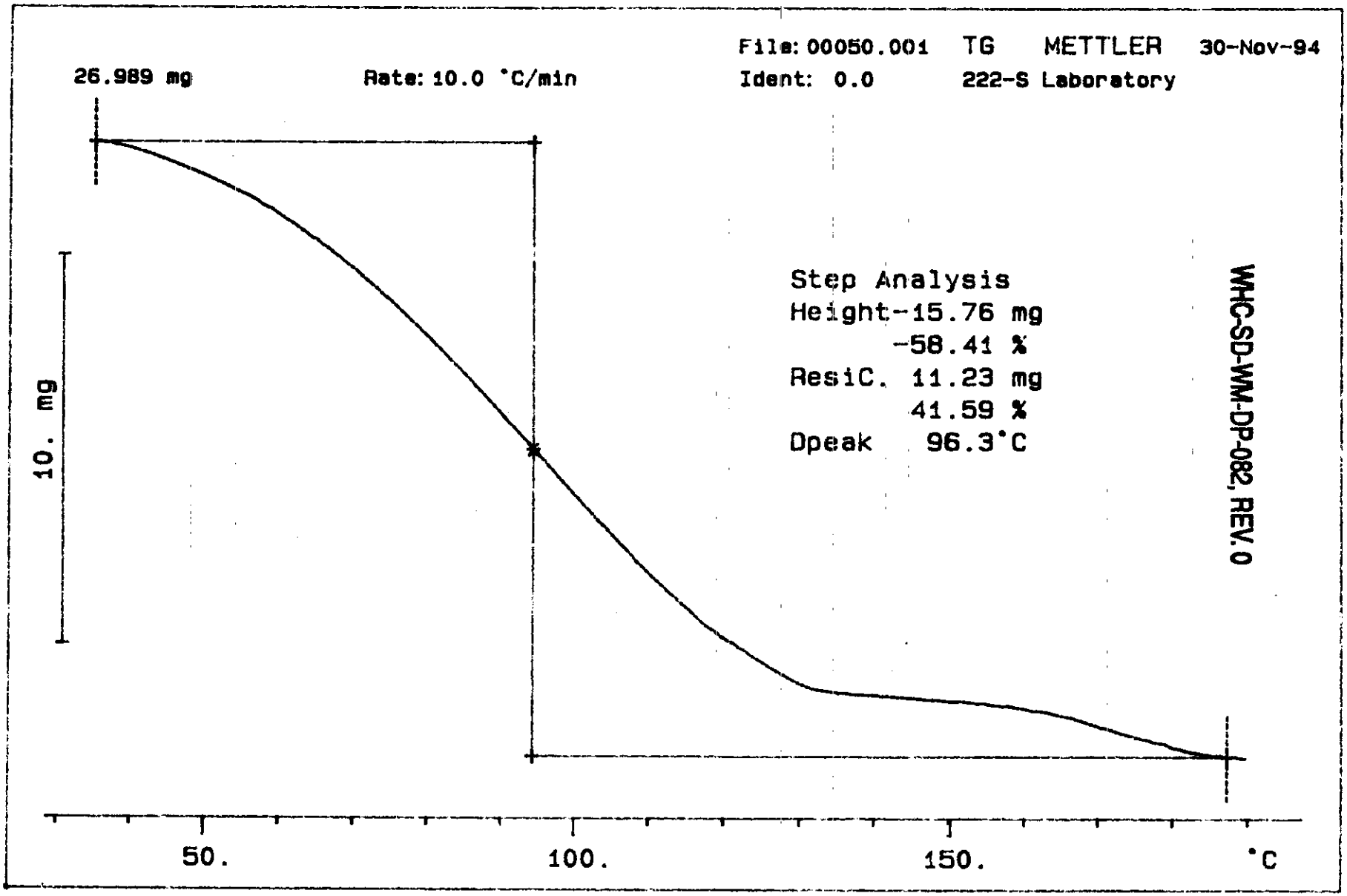
WHC-SD-WM-DP-082, REV. 0

Verified 12/6/94 J. M. Fuge

Data Entry Comments:
S94T000291 has a second weight loss step of 6.25% at 250°C; duplicate has ~~46.28%~~ 60.79% JMF at 250°C. S94T000292 has a second step of 11.77% at 250°C; duplicate has 9.32% at 250°C. J. M. Fuge 12/1/94

Units shown for QC (SPK) may not reflect the actual units. DATA Entered 12-2-94 BJH

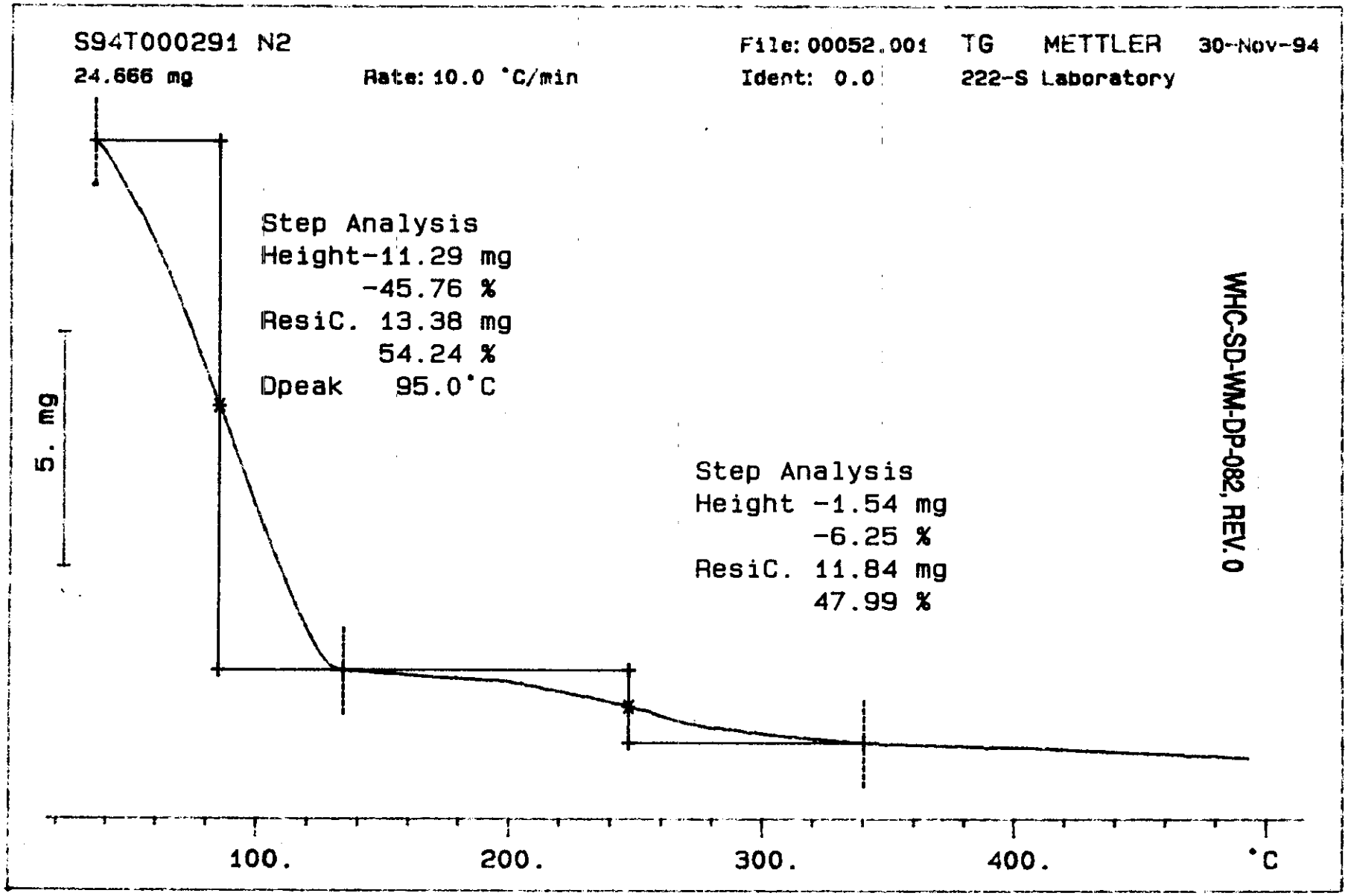
STD



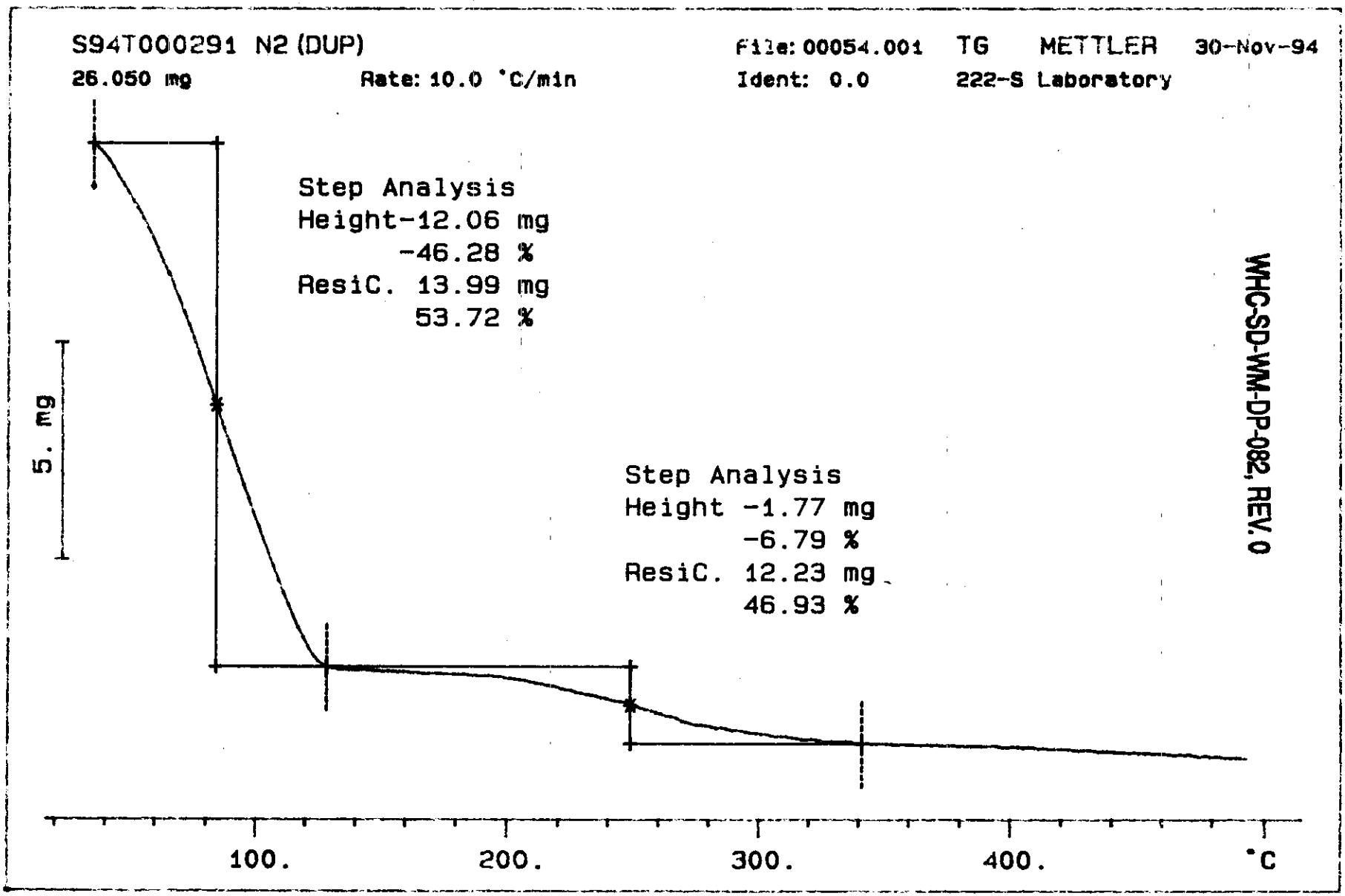
WHC-SD-WM-DP-082, REV. 0

Std# 4208A 11-30-94

9513332.1528



WHC-SD-WM-DP-082, REV. 0



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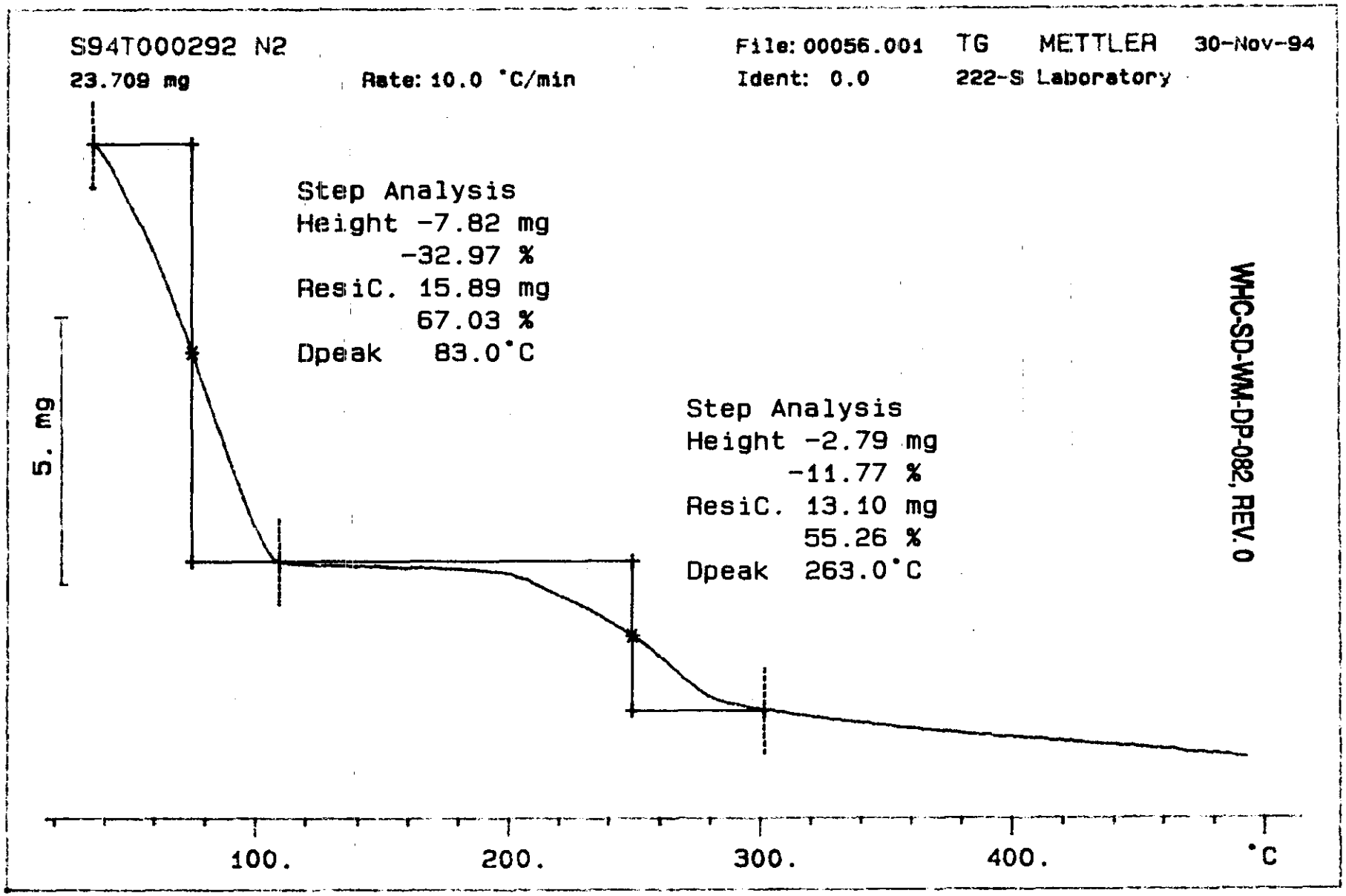

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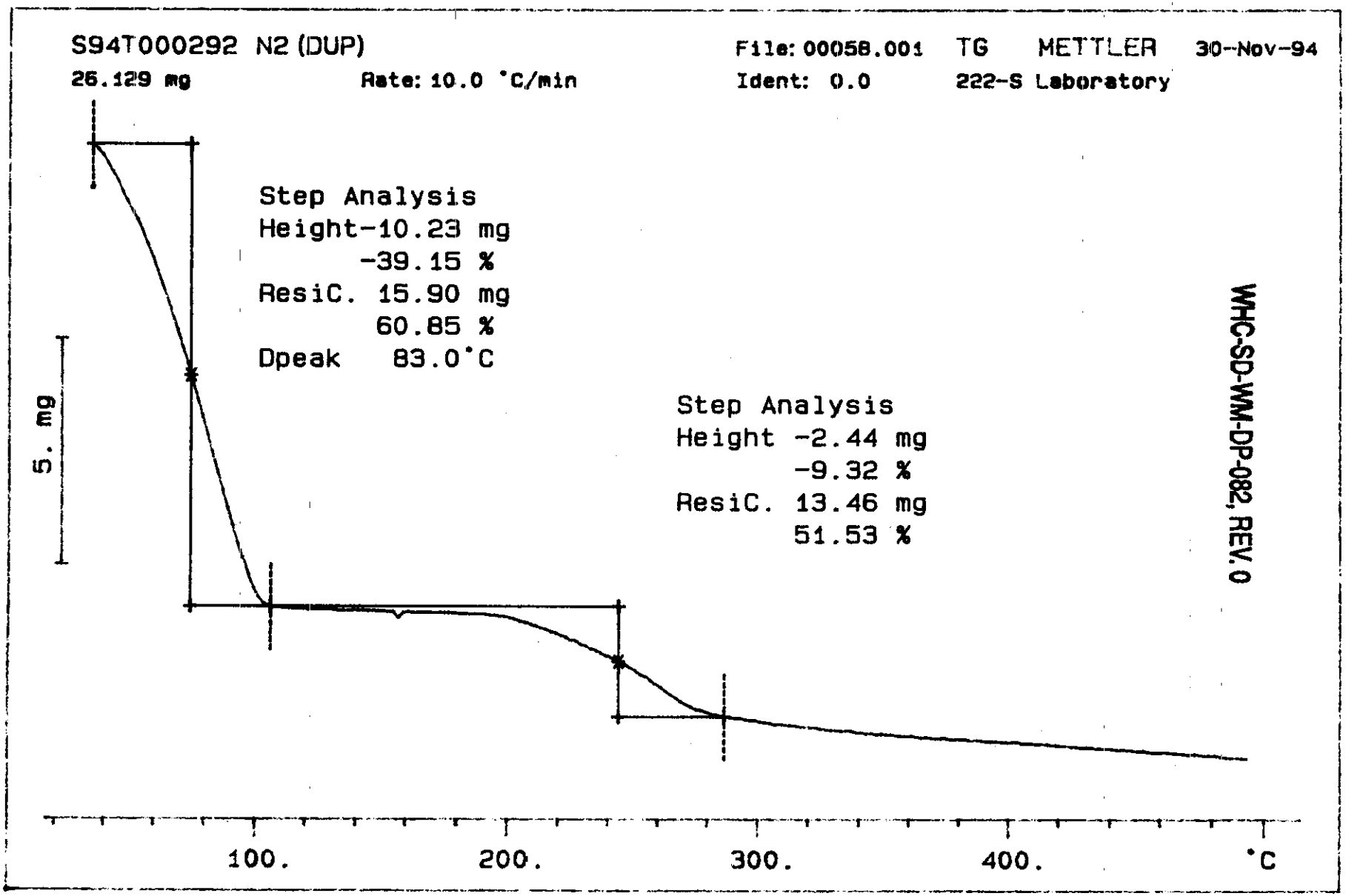


WHC-SD-WM-DP-082, REV. 0

9513332.1530

UA

LABCORE Data Entry Template for Worklist# 279

Analyst: KLV **Instrument:** TGA01 **Method:** LA-560-112 +2

Worklist Comment: Please run C-108 TGA under N2. BDV

Seg	Type	Sample#	Rep	Al	Test	Matrix	Actual	Found	DL	Unit
1	STD	KV 12/29/94 ~~T21~~ 42N8A			TGA-01	SOLID	59.19	59.19	N/A	%
2	SAMPLE	S94T000361	0		TGA-01	SOLID	N/A	51.85		%
3	DUP	S94T000361	0		TGA-01	SOLID	51.85	46.80	N/A	%
4	SAMPLE	S94T000362	0		TGA-01	SOLID	N/A	48.57		%
5	DUP	S94T000362	0		TGA-01	SOLID	48.57	50.45	N/A	%

Final page for worklist # 279

Analyst Signature 12/29/94 **Date**

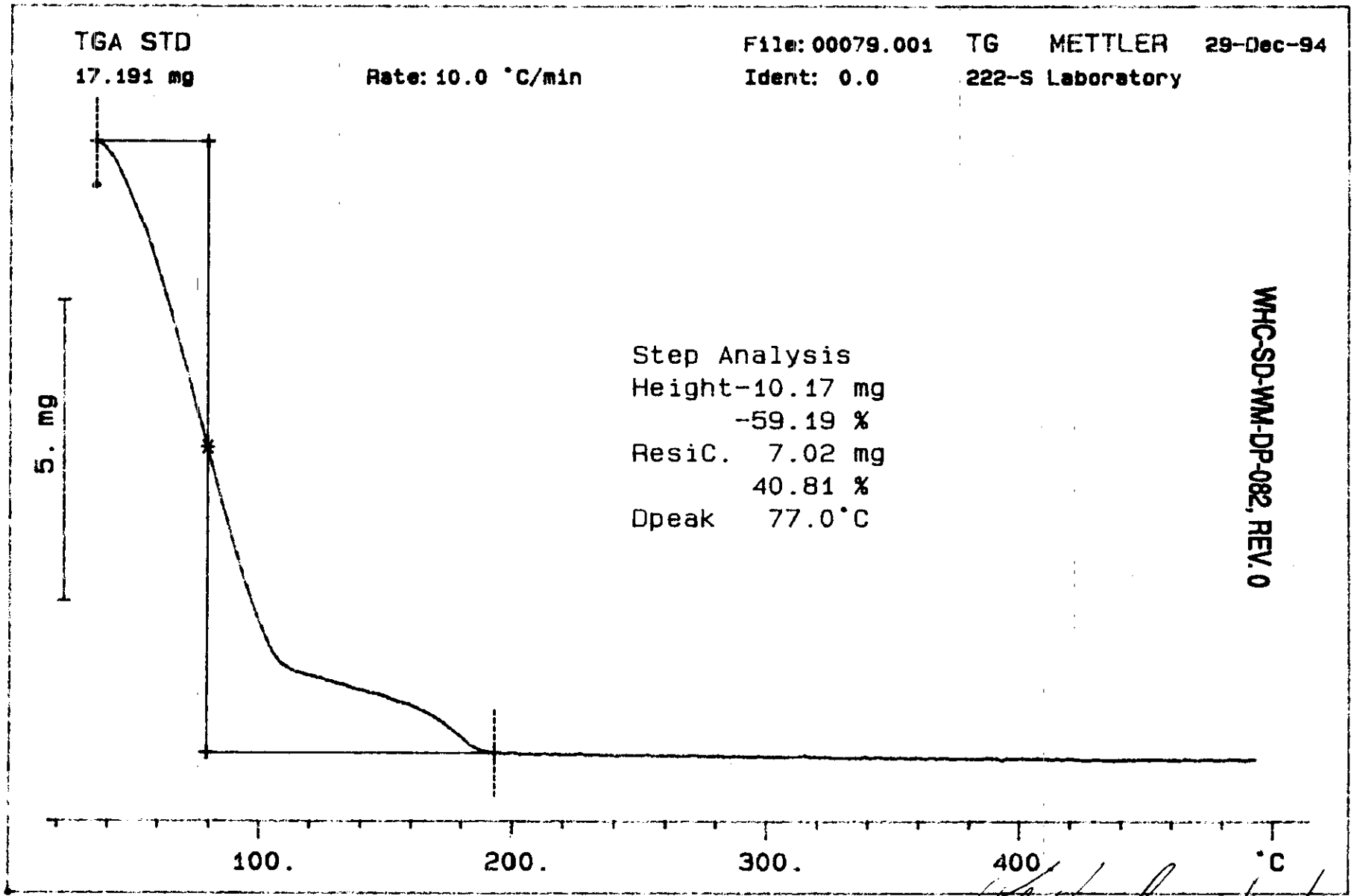
1/10/95

Verified by Blandina Valenzuela 1/11/95

WHC-SD-WM-DP-082, REV. 0

Data Entry Comments:
S94T000361 had a second weight loss step of 6.27%
S94T000362 had a second weight loss step of 8.07%

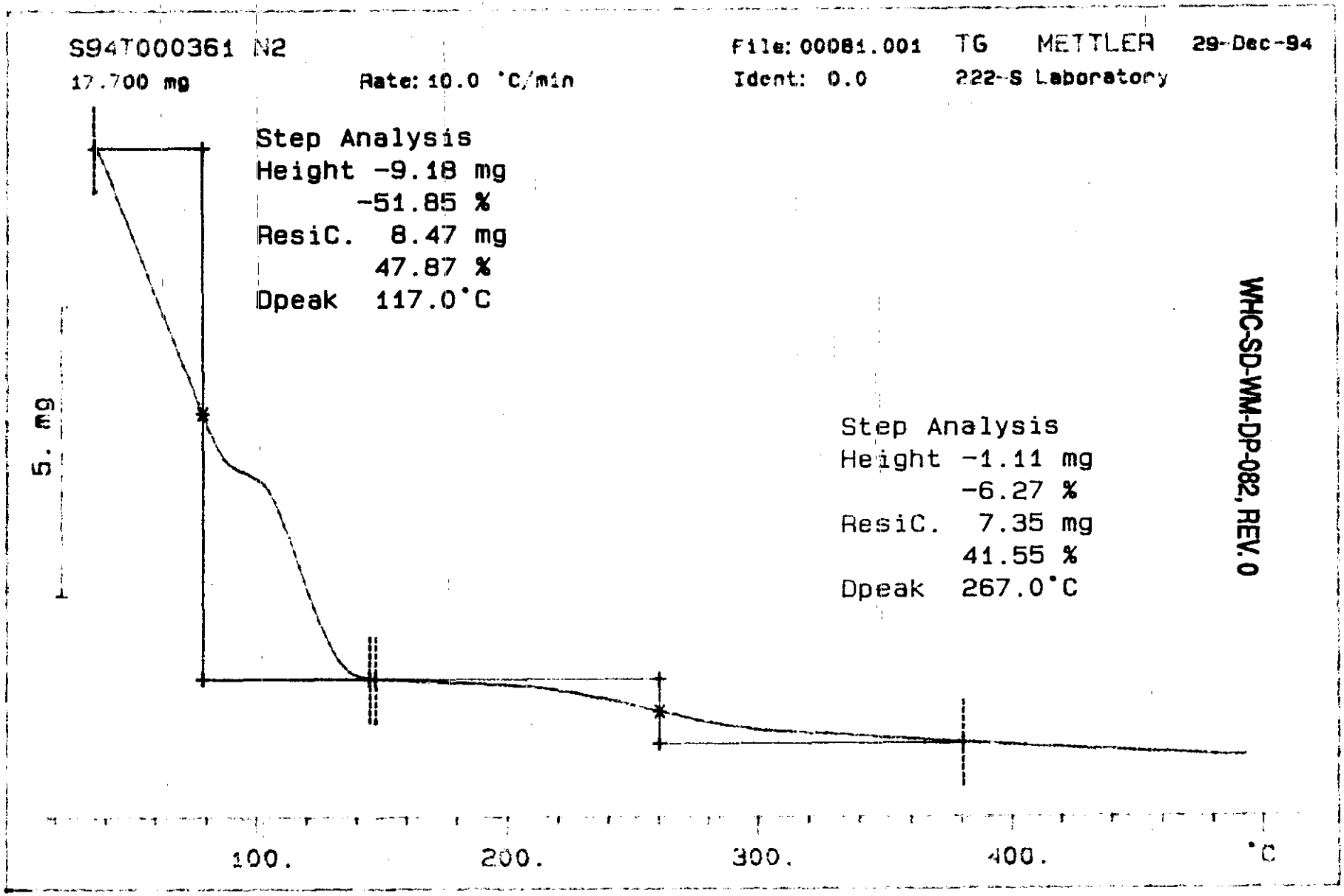
Units shown for QC (SPK) may not reflect the actual units.



WHC-SD-WM-DP-082, REV. 0

9513332.1531

Std #42N8A 12/29/94



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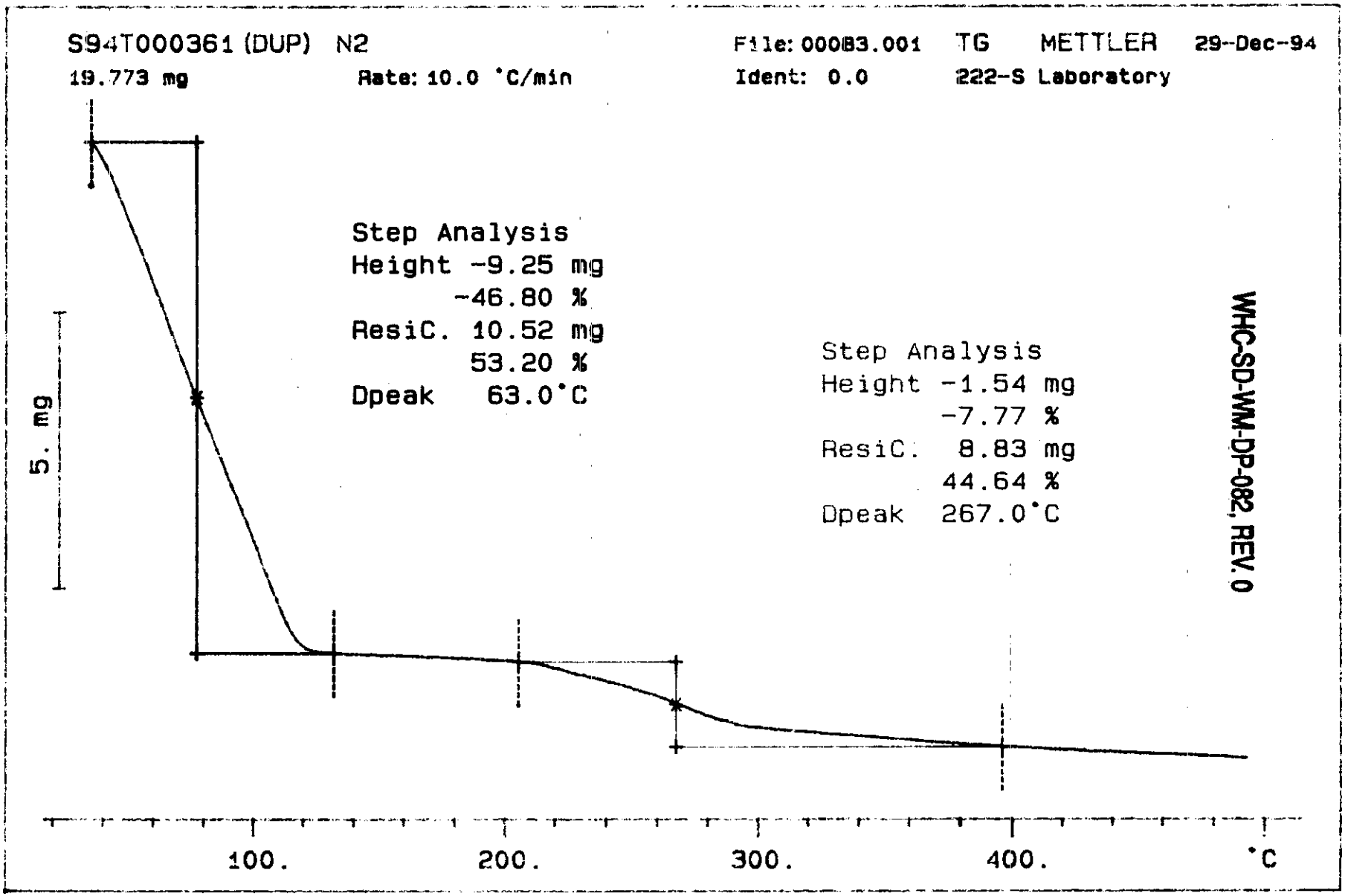

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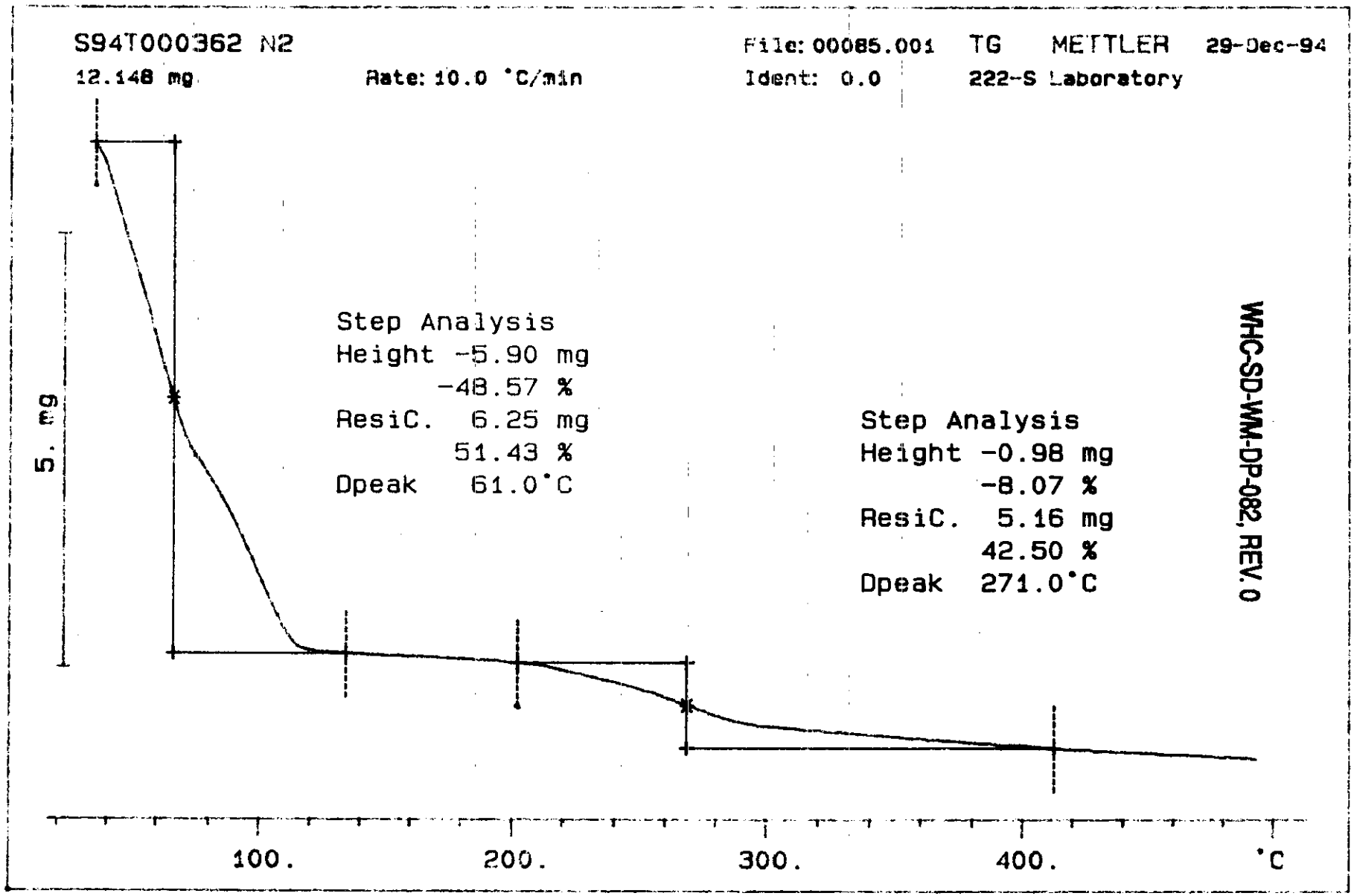
9513332.1532



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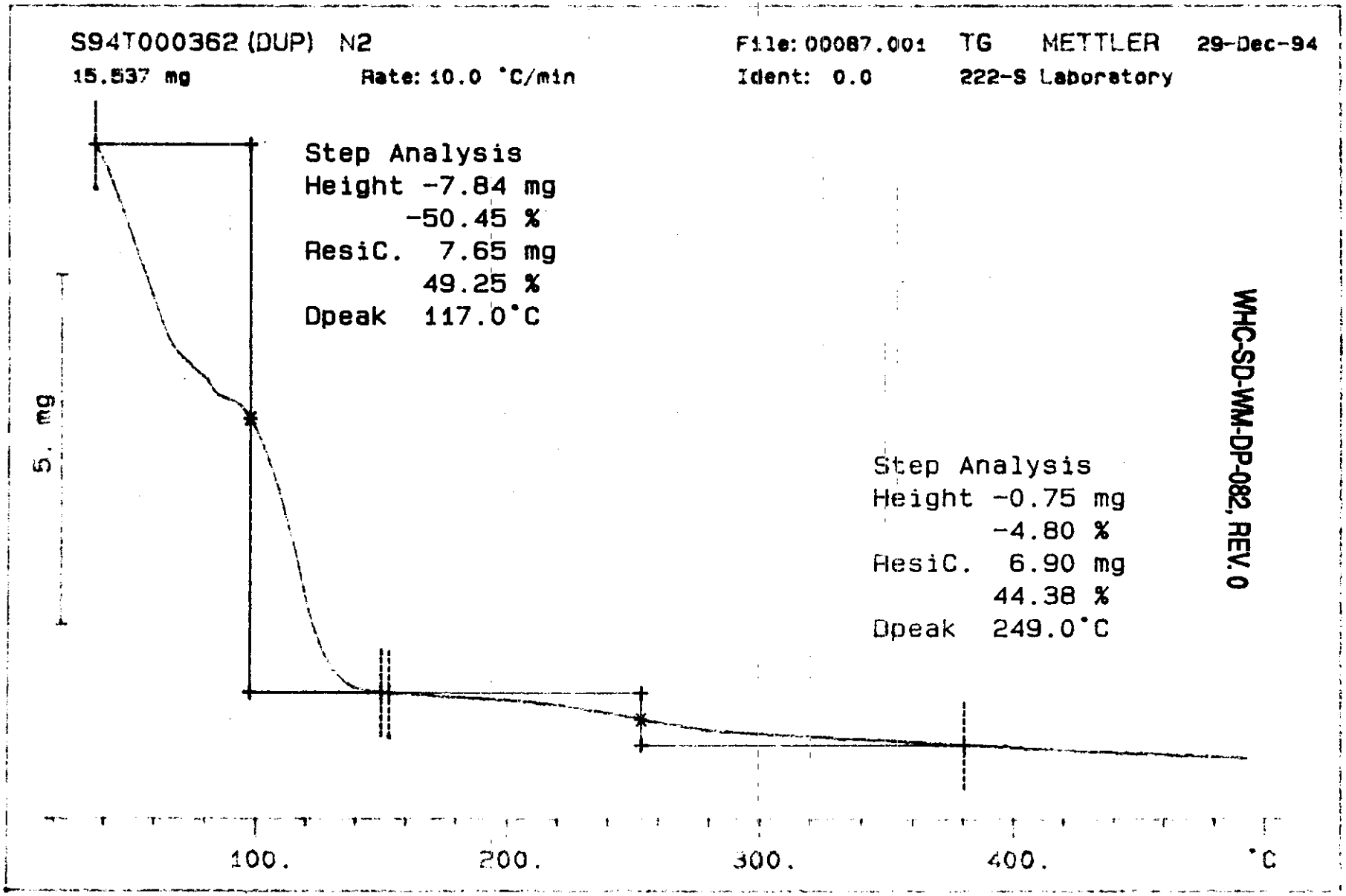


WHC-SD-WM-DP-082, REV. 0

9513332.1533

LABCORE Data Entry Template for Worklist# 280

Analyst: KLV **Instrument:** TGA01 **Method:** LA-560-112 A-2

Worklist Comment: Please run C-108 TGA under N2. BDV

Seg	Type	Sample#	Rep Al	Test	Matrix	Actual	Found	DL	Unit
1	STD	42 ~~24~~N8A LAD 1-25-95		TGA-01	SOLID	59.19	58.29	N/A	%
2	SAMPLE	S94T000363	0	TGA-01	SOLID	N/A	52.97		%
3	DUP	S94T000363	0	TGA-01	SOLID	52.97	52.41	N/A	%
4	SAMPLE	S94T000364	0	TGA-01	SOLID	N/A	47.79		%
5	DUP	S94T000364	0	TGA-01	SOLID	47.79	49.23	N/A	%

Final page for worklist # 280

See attached for signatures
Analyst Signature

1/4/95
Date

1/10/95

1/11/95

Verified by Blandina Valenzuela

WHC-SD-WM-DP-082, REV. 0

Data Entry Comments:
S94T000363 had a second weight loss of 4.01%
S94T000363 had a second weight loss of 5.00%

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

Page: 1

LABCORE Data Entry Template for Worklist# 280

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

Worklist Comment: Please run C-108 TGA under N2. BDV

Seg	Type	Sample#	Rep	Al	Test	Matrix	Actual	Found	DL	Unit
1	STD	2NNBA			TGA-01	SOLID	~~59.19~~	~~58.29~~ 52.97 BDV 1/4/95	N/A	%
2	SAMPLE	S94T000363	0		TGA-01	SOLID	N/A ~~52~~ BDV 1/4/95	~~57.55~~ 1/4/95 BDV 1/4/95		%
3	DUP	S94T000363	0		TGA-01	SOLID	~~57.55~~ BDV	~~56.07~~ BDV 1/4/95	N/A	%
4	SAMPLE	S94T000364	0		TGA-01	SOLID	N/A BDV 1/4/95	~~53.30~~ BDV 1/4/95		%
5	DUP	S94T000364	0		TGA-01	SOLID	~~53.30~~	~~54.06~~	N/A	%

Final page for worklist # 280

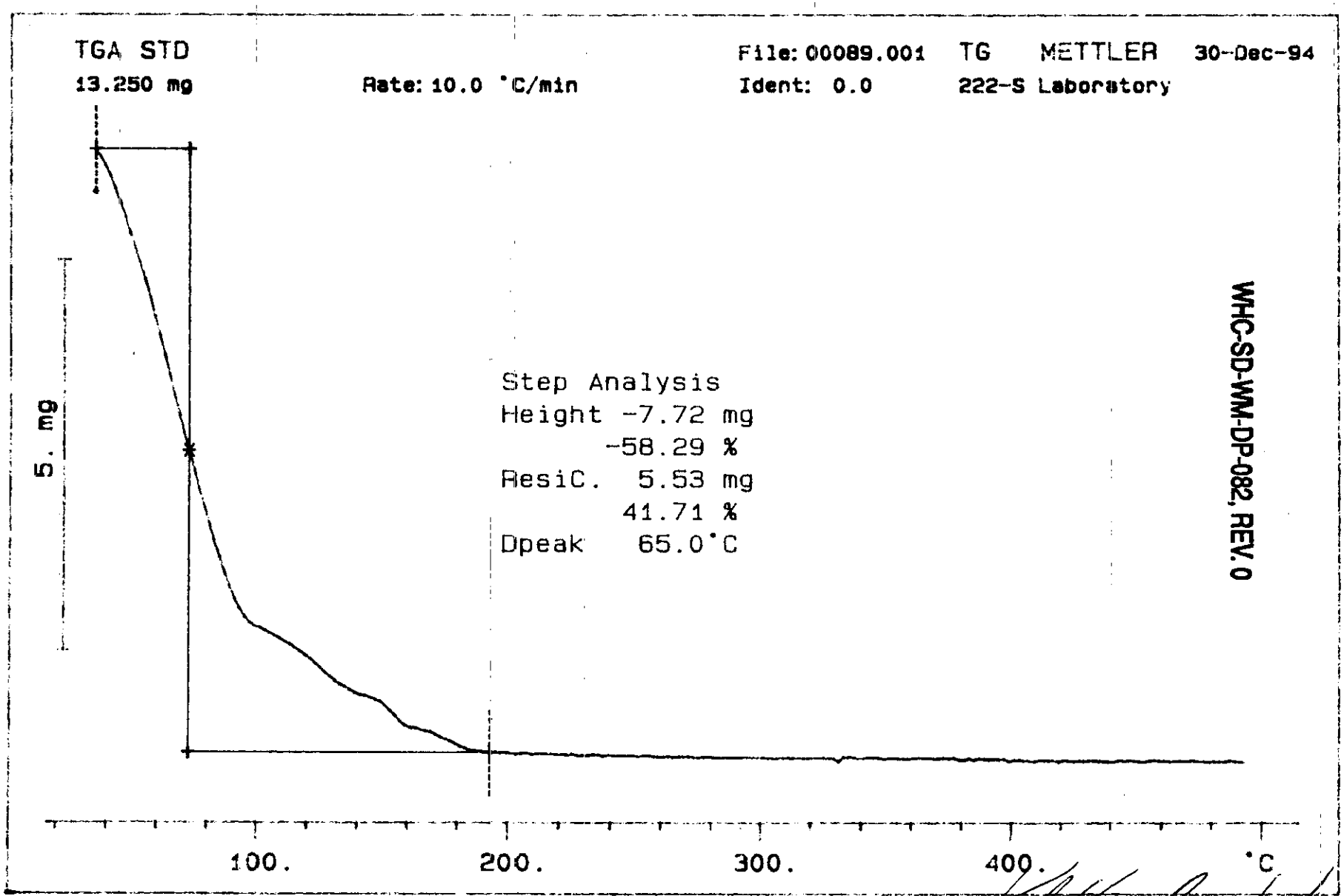
Analyst Signature

10/30/94
Date

WHC-SD-WM-DP-082, REV. 0

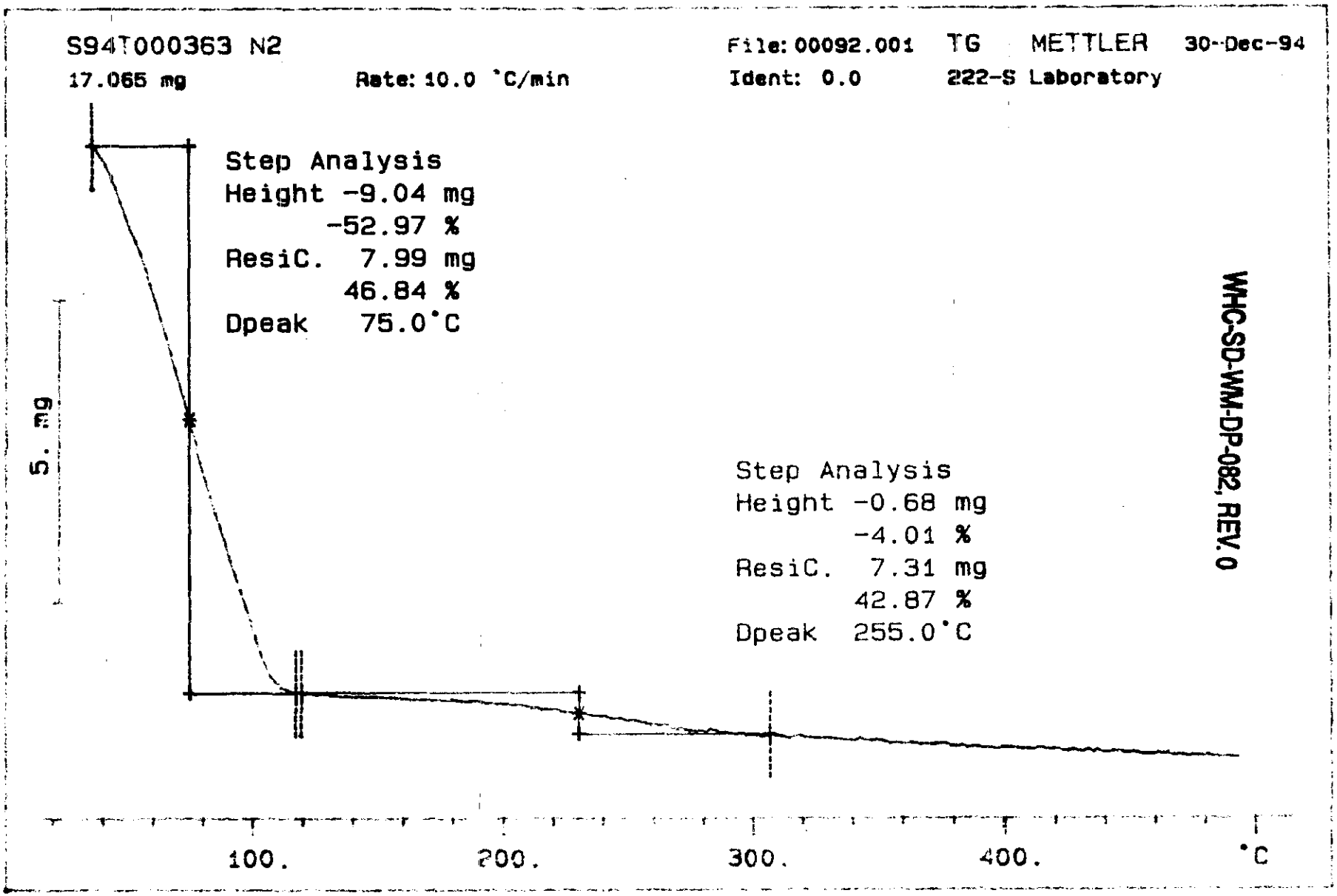
Data Entry Comments: S94T000363 had a second weight loss of 4.01%

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



Std #42108A 12/30/94

WHC-SD-WM-DP-082, REV. 0



WHC-SD-WM-DP-082, REV. 0

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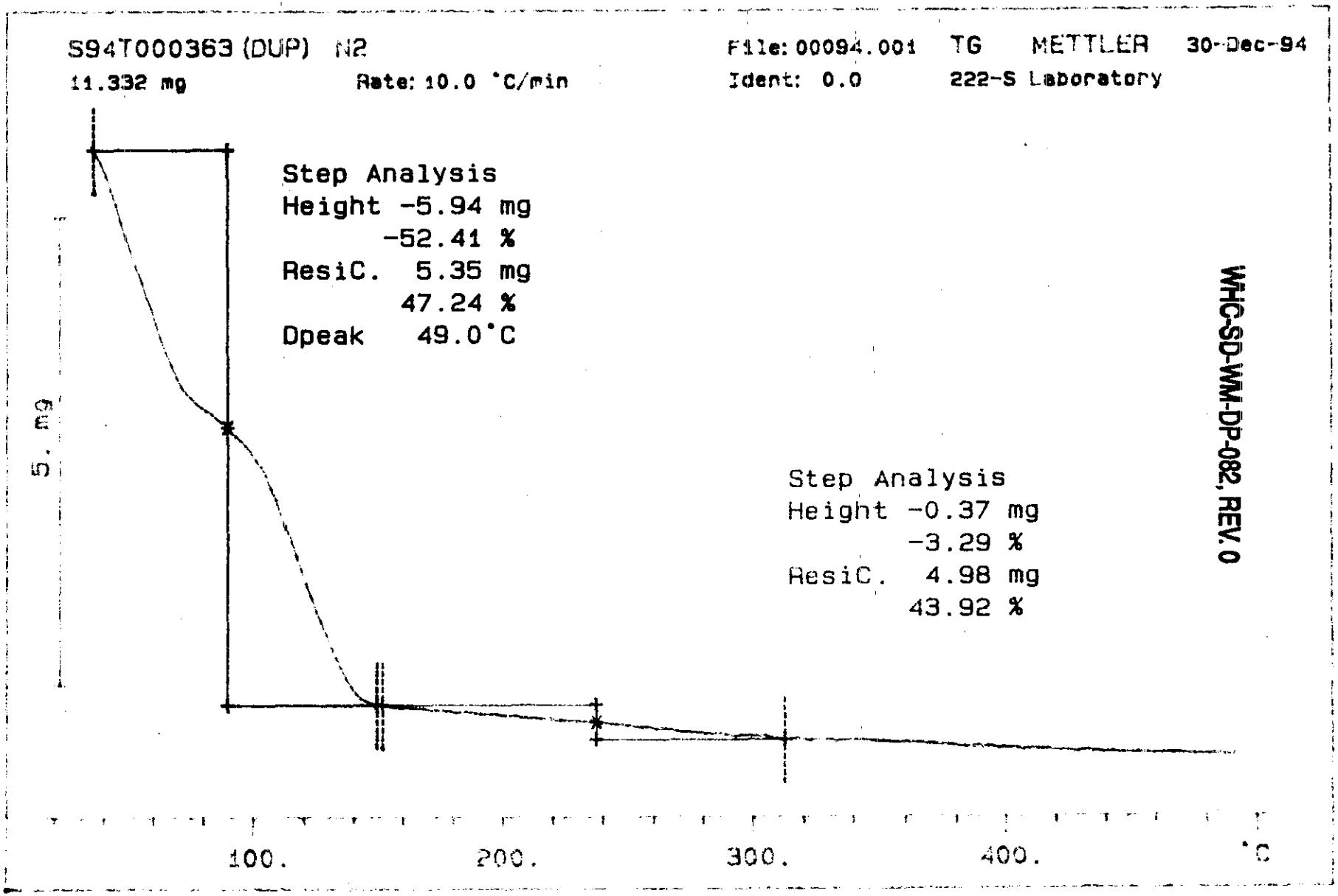

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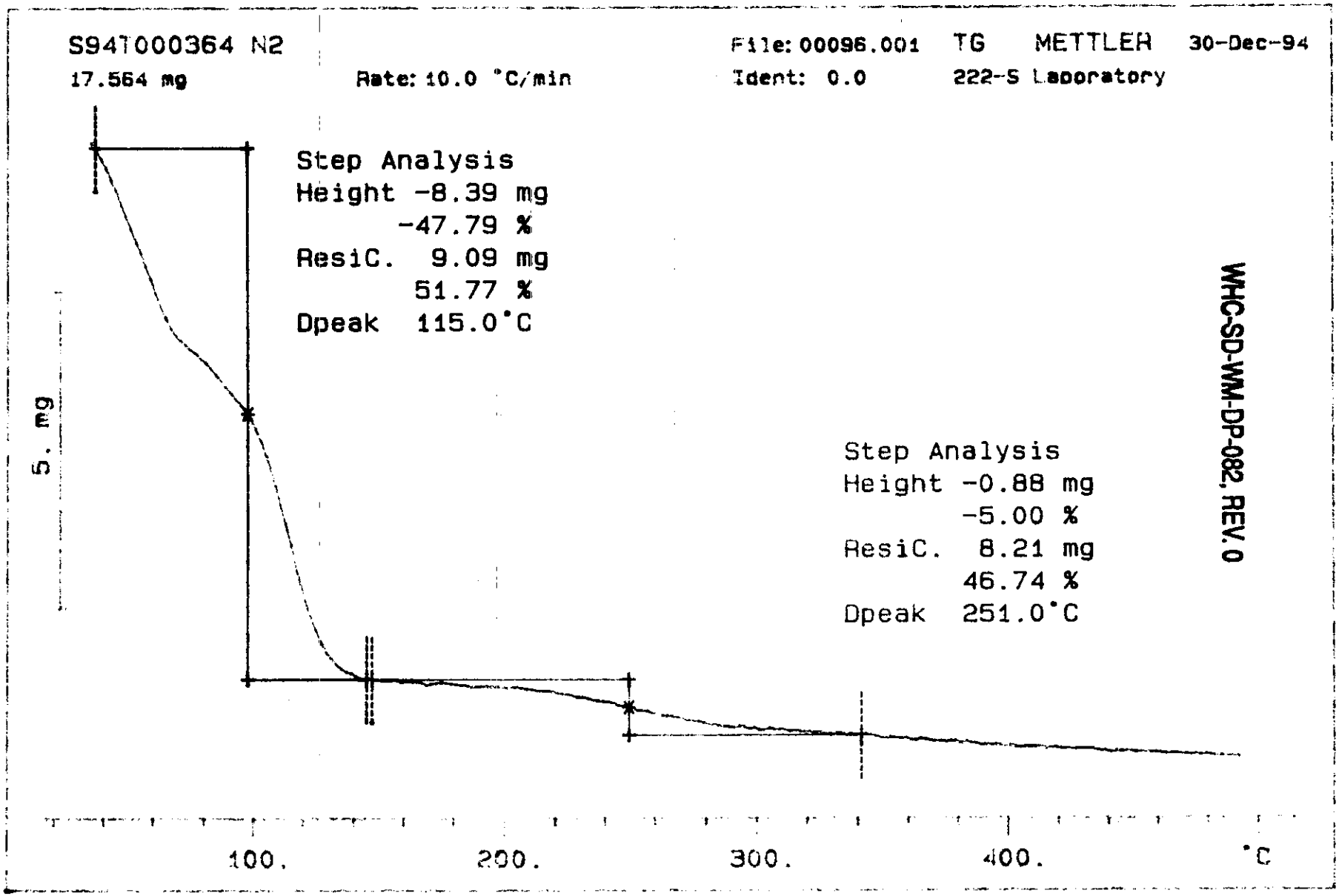

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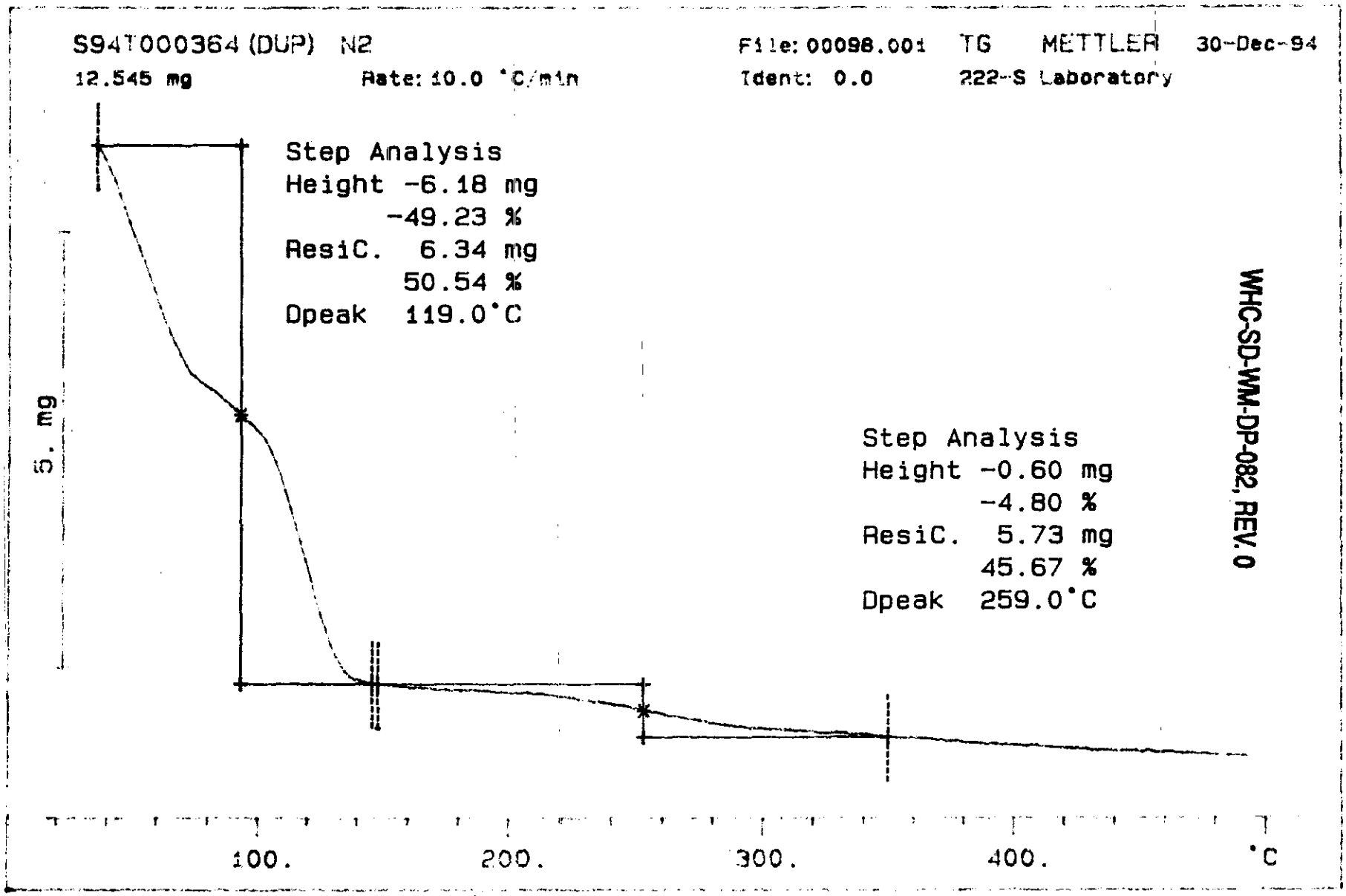

WHC-SD-WM-DP-082, REV. 0

9513332.1537

DISTRIBUTION SHEET

To	From	Page 1 of 2
DISTRIBUTION	ANALYTICAL SERVICES	Date: 01/26/95
Project Title/Work Order WHC-SD-WM-DP-082, Rev. 0 45 Day Safety Screen Results for Tank 241-C-108 - Augers 94-012, 94-014 and 94-015		EDT NO.: EDT-610402 ECN NO.: N/A

Name	MSIN	Text With all Attach	Addendum 1A Only	EDT/ECN Only
ONSITE				
Pacific Northwest Laboratory				
S. F. Bobrowski	K7-28			X
J. R. Gormsen	K7-28			X
S. J. Harris	K7-22			X
P. G. Heasler	K5-12			X
S. G. McKinley	P7-22			X
J. L. Scott	R3-87			X
U.S. Department of Energy, RL				
C. A. Babel	S7-54			X
J. M. Clark	S7-54			X
Westinghouse Hanford Company				
J. N. Appel	G3-21			X
H. Babad	S7-30			X
D. R. Bratzel	S7-31			X
R. J. Cash	S7-15			X
J. L. Deichman	H4-19			X
G. T. Dukelow	S7-15			X
S. J. Eberlein	R2-12			X
C. E. Golberg	H5-49			X
D. C. Hetzer	S6-31			X
J. G. Hill	K7-97	X		
L. Jensen	T6-07	X		
N. W. Kirch	R2-11			X
J. G. Kristofzski	T6-06			X
E. J. Mcaffee	K7-22	X		
J. E. Meacham	S7-15			X
P. M. Morant	H4-25			X
A. F. Noonan	K9-81	X		
A. D. Rice	T6-06	X		
P. Sathyanarayana	R2-12	2		
R. D. Schreiber	R2-12			X
B. C. Simpson	R2-12			X
D. A. Turner	S7-15			X
J. A. Voogd	R4-01			X
O. S. Wang	S7-15			X
W. I. Winters	T6-50			X
Central Files	L8-04	2		
EDMC	H6-08	X		
LTIC	T6-03			X
OSTI	L8-07	2		
TFIC (Tank Farm Information Center)	R1-20			X

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DISTRIBUTION SHEET

To	From	Page 2 of 2
DISTRIBUTION	ANALYTICAL SERVICES	Date: 01/26/95
Project Title/Work Order WHC-SD-WM-DP-082, Rev. 0 45 Day Safety Screen Results for Tank 241-C-108 - Augers 94-012, 94-014 and 94-015		EDT NO.: EDT-610402 ECN NO.: N/A

Name	MSIN	Text With all Attach	Addendum 1A Only	EDT/ECN Only
OFFSITE				
Washington State Department of Ecology Single-Shell Tank Unit Manager S. E. McKinney P.O. Box 47600 Olympia, Washington 98504-7600				X
Environmental Protection Agency Single-Shell Tank Unit Manager D. R. Sherwood 712 Swift Boulevard, Suite 5 Richland, Washington 99352				X

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