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ANALYTICAL SERVICES

45-DAY SAFETY SCREEN RESULTS FOR TANK 241-C-107, PUSH MODE, CORES 68 AND 69

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NARRATIVE

**45-DAY SAFETY SCREEN RESULTS FOR TANK 241-C-107
PUSH-MODE CORE SAMPLES 68 AND 69**

This is the 45-Day report for the fiscal year 1995 tank 241-C-107 (C-107) push-mode characterization effort. Reported below are the safety-screening analytes required by the C-107 tank characterization plan (TCP), or Reference 1. Also included are copies of the differential scanning calorimetry (DSC) and thermogravimetric analysis (TGA) scans as requested in the Reference.

Summary

Two core samples from tank C-107, obtained by the push-mode core sampling method, were received, extruded, and analyzed by the 222-S Laboratories in accordance with Reference 1. Drainable liquid was analyzed at the segment level for a separable organic layer, energetics by DSC, and percent water by TGA. Sludge samples were analyzed at the half-segment level by DSC, TGA, and for total alpha activity. No safety-screening notification limits were exceeded on any samples.

Sample Receipt and Extrusion

Core 68 was taken from riser 7 of tank C-107. Sample removal, receipt, and extrusion data are summarized for core 68 in Table 1. A second core sample was removed from riser 3 of tank C-107. Sample removal, receipt, and extrusion data for core 69 are summarized in Table 2. All segments were expected to contain the full 19 in. of sample, except the first segment in each core, which was expected to contain 14 in. and 13 in., respectively.

Analytical Results

The safety screening analytical results are presented in Table 3, which includes the LabCore sample number. Column 2 of the table indicates the sample preparation used, if any. As shown, analyses on fused samples are marked with "F".

DSC (Energetics Content)

Analyses by DSC were performed under a nitrogen atmosphere using procedure LA-514-113, Rev B-1. Note that analyses were performed on two different instruments. On one instrument, plotted results show exothermic peaks in an upward direction. Exothermic peaks point in the opposite direction when plotted on the other instrument. No exotherms were observed in all but three samples, including the only drainable liquid sample collected from both cores, segment 3 of core 69. The highest exotherm, measuring 102.7 J/g on the sample, is found on the lower half sludge from segment 3, core 68. This result becomes 209.5 J/g when calculated on a dry-weight basis. No exotherm was observed on the duplicate or a third sample that was run. For the remaining two samples showing exotherms, only the sample or duplicate showed exothermic behavior, consequently the relative percent difference between the two runs was very high. Re-runs were not performed because the exotherms were small and because of the high dose rates associated with these samples. Re-runs will be performed at the customer's request.

Table 1. Sample Receipt and Extrusion information for C-107, Core 68.

Segment	Date Sampled	Date Received	Date Extruded	Liner Liq. (g)	Drain. Liq. Recovered (g)	Solids Recovered (g)	Sample Description
1	3/2/95	3/3/95	3/14/95	1.06	0.0	190.49 (lower half) 108.18 (upper half)	Extruded approximately 14 in. of shiny, dark brown sludge that maintained its shape in the sample tray. The lower 9 in. was removed as the lower half; remainder was taken as the upper half.
2	3/2/95	3/3/95	3/15/95	9.24	0.0	203.43 (lower half) 206.04 (upper half)	Extruded 19 in. of shiny, dark brown sludge that maintained its shape in the sample tray. The lower 4 in. of material was less dark and less damp than the remaining sludge and contained a small amount of white, creamy material inside the sample. The sample was divided equally into upper and lower half subsamples.
3	3/2/95	3/3/95	3/15/95	8.31	0.0	206.98 (lower half) 234.11 (upper half)	Recovered 19 in. of sludge with a similar description as the bottom 4 in. of segment 2. The sample was divided equally into upper and lower half subsamples.
4	3/2/95	3/3/95	3/16/95	0.0	0.0	195.41 (lower half) 194.80 (upper half)	Two types of material were recovered. The upper 6 in. was similar to the segment 3 sample without the white material. The lower 13 in. was light yellow-brown in color and wetter than the darker material. The sample was divided equally into upper and lower half subsamples.
5	3/3/95	3/3/95	3/17/95	14.75	0.0	195.25 (lower half) 158.65 (upper half)	Collected 19 in. of shiny, smooth sample similar in color to the lower 13 in. of segment 4. The sample was divided equally into upper and lower half subsamples.

Table 2. Sample Receipt and Extrusion Information for C-107, Core 69.

Segment	Date Sampled	Date Received	Date Extruded	Liner Liq. (g)	Drain. Liq. Recovered (g)	Solids Recovered (g)	Sample Description
1	3/7/95	3/8/95	3/17/95	0.0	0.0	173.27 (lower half) 124.03 (upper half)	Collected approximately 13 in. of shiny, dark brown sludge that maintained its shape on the sample tray. The lower 9 in. was removed as the lower half subsample; the remainder was taken as the upper half subsample.
2	3/7/95	3/8/95	3/20/95	<5 mL*	0.0	209.67 (lower half) 185.67 (upper half)	The first 1 in. of material extruded was light brown sludge. Distributed inside this sample was soft, white material. The remaining 18 in. extruded was dark brown. The lower 8 in. of sample was more firm than the remainder of sample, which did not maintain its shape on the extrusion tray. The sample was divided equally into upper and lower half subsamples.
3	3/7/95	3/8/95	3/21/95	<5 mL*	27.81	175.60 (lower half) 194.69 (upper half)	Extruded roughly 7 in. of light brown sludge, followed by a 3.5 in. gap in which light brown drainable liquids were collected, then a final 8 in. of light brown solids. Soft, white material was visible on the surface of all solids. Upon subsampling, the amount of the white material was estimated as 50% of the sample volume. The lower 7 in. of sludge was collected as the lower half subsample while the remaining solids were collected as the upper half subsample.
4	3/7/95	3/9/95	3/21/95	16.23	0.0	165.00 (lower half) 165.06 (upper half)	Extruded roughly 14 in. of light to medium brown sludge followed by a 3 in. gap when a small amount of liquid emerged, then a final 1.5 in. of medium to dark brown sludge. The lower 8 in. of lighter colored sludge was collected as the lower half subsample. None of the white material was observed. The amount of liquid was too small to collect as drainable liquid.
5	3/8/95	3/13/95	3/21/95	0.0	0.0	203.66 (lower half) 139.18 (upper half)	Collected were 18 in. of light brown to tan sludge. The surface of the lower 9 showed some pitting and retained the shape of the sampler. This material was collected as the lower half subsample. The upper 9 in. was noticeably wetter, did not retain its shape, and contained some firm, white chunks of material. A small amount of liquid accompanied the upper half sludge, but it was not collected separately.
Field Blank	3/10/95	3/13/95	3/20/95	0.0	297.93	0.0	Collected clear, colorless liquid in two sample jars.

* Liquid was not retained

FB = field blank

TGA (Moisture Content)

Weight percent water by TGA was performed under a nitrogen atmosphere using procedure LA-560-112, Rev. A-2. Results on the only drainable liquid sample collected from both cores, segment 3 of core 69, are 79.04 and 78.71% water for the sample and duplicate, respectively. Results on the sludge samples are also significantly above the <17% notification limit, generally appearing in the 50-70% range. The exceptions are segment 3, core 69 and the upper half of segment 3, core 68, which are significantly drier, appearing in the 32-38% range. A third run was made on sample S95T000376 (Table 3) due to the high relative percent difference (RPD) between the sample and duplicate. The result on the third run is 48.66, in good agreement with the duplicate result.

Total Alpha

Total alpha analyses were performed on fusion digestions of all sludge subsamples using procedure LA-508-101, Rev D-2. Results range from 0.0769 to 15.1 uCi/g. The total alpha activity is the highest in the first two segments of each core, but all results are well below the TCP notification limit of 41 uCi/g. A RPD of greater than 10% exists on about half of the samples, with the highest being 42.3%. In addition, the spike recovery results on samples S95T000439 and S95T000444 (Table 3) were out of the $\pm 10\%$ TCP limit. Reruns of these samples were not requested due to the very high beta to alpha activity ratio in these samples. Large dilutions are necessary to reduce the beta activity to acceptable levels and, consequently, detection limits are high such that the alpha activity is only on the order of ten times the detection limit.

Reference: (1) WHC-SD-WM-TP-290, Rev. 0, "Tank 241-C-107 Tank Characterization Plan", Westinghouse Hanford Company, Richland, WA 99352, dated February 6, 1995.

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SAMPLE DATA SUMMARY

Table 3. C-107 Analytical Summary - Cores 68 and 69
C-107

CORE NUMBER: 68
SEGMENT #: 1

SEGMENT PORTION: U Upper Half of Segment

Sample#	R A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T000256		% Water by TGA using Mettler	%	96.28	n/a	62.88	64.05	63.47	1.84	n/a	n/a	n/a
S95T000256		DSC Exotherm using Mettler	Joules/g	98.77	n/a	0	0	0.000	n/a	n/a	n/a	n/a
S95T000414	F	Alpha of Digested Solid	uCi/g	85.14	<5.56e-01	6.75e0	6.22	6.48e+00	8.17	90.30	1.250	20.3

SEGMENT PORTION: L Lower Half of Segment

Sample#	R A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T000374		% Water by TGA using Mettler	%	99.51	n/a	62.75	61.84	62.30	1.46	n/a	n/a	n/a
S95T000374		DSC Exotherm Dry Calculated	Joules/g Dry	n/a	n/a	4.5	0	2.250	200	n/a	n/a	n/a
S95T000374		DSC Exotherm using Mettler	Joules/g	104.0	n/a	1.7	0	0.850	200	n/a	n/a	n/a
S95T000419	F	Alpha of Digested Solid	uCi/g	92.57	<2.22e-01	7.46e+0	6.47e+0	6.96e+00	14.2	92.60	5.18e-01	12.5

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Table 3. C-107 Analytical Summary - Cores 68 and 69
C-107

CORE NUMBER: 68

SEGMENT #: 2

SEGMENT PORTION: U Upper Half of Segment

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T000370			% Water by TGA on Perkin Elmer	%	97.84	n/a	57.98	57.67	57.83	0.54	n/a	n/a	n/a
S95T000370			DSC Exotherm using Mettler	Joules/g	108.6	n/a	0	0	0.000	n/a	n/a	n/a	n/a
S95T000415	F		Alpha of Digested Solid	uCi/g	85.14	<5.56e-01	8.25e0	1.08e+1	9.53e+00	26.8	n/a	1.080	16.6

SEGMENT PORTION: L Lower Half of Segment

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T000375			% Water by TGA using Mettler	%	99.51	n/a	41.26	41.46	41.36	0.48	n/a	n/a	n/a
S95T000375			DSC Exotherm using Mettler	Joules/g	104.0	n/a	0	0	0.000	n/a	n/a	n/a	n/a
S95T000420	F		Alpha of Digested Solid	uCi/g	97.97	<5.62e-01	8.83e+0	9.13e+0	8.98e+00	3.34	n/a	1.290	19.2

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Table 3. C-107 Analytical Summary - Cores 68 and 69
C-107

CORE NUMBER: 68
SEGMENT #: 3

SEGMENT PORTION: U Upper Half of Segment

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T000371			% Water by TGA on Perkin Elmer	%	97.84	n/a	31.87	31.98	31.93	0.34	n/a	n/a	n/a
S95T000371			DSC Exotherm using Mettler	Joules/g	108.6	n/a	0	0	0.000	n/a	n/a	n/a	n/a
S95T000416	F		Alpha of Digested Solid	uCi/g	106.1	<3.21e-01	1.51e+0	2.32e+0	1.92e+00	42.3	n/a	7.49e-01	43.9

SEGMENT PORTION: L Lower Half of Segment

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T000376			% Water by TGA on Perkin Elmer	%	97.50	n/a	56.15	48.10	52.12	15.4	n/a	n/a	n/a
S95T000376			DSC Exotherm on Perkin Elmer	Joules/g	99.40	n/a	102.7	0	51.35	200	n/a	n/a	n/a
S95T000376			DSC Exotherm Dry Calculated	Joules/g Dry	n/a	n/a	24.5 209.5	0	104.8	200	n/a	n/a	n/a
S95T000421	F		Alpha of Digested Solid	uCi/g	97.97	<5.62e-01	4.34e-1	4.01e-1	4.17e-01	7.90	n/a	6.20e-02	18.6

NA 4/3/95

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Table 3. C-107 Analytical Summary - Cores 68 and 69
C-107

CORE NUMBER: 68
SEGMENT #: 4

SEGMENT PORTION: U Upper Half of Segment

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T000372			% Water by TGA using Mettler	%	98.73	n/a	50.76	49.74	50.25	2.03	n/a	n/a	n/a
S95T000372			DSC Exotherm using Mettler	Joules/g	108.6	n/a	0	0	0.000	n/a	n/a	n/a	n/a
S95T000417	F		Alpha of Digested Solid	uCi/g	106.1	<3.21e-01	4.76e-1	<5.95e-1	n/a	n/a	n/a	7.82e-01	114.3

SEGMENT PORTION: L Lower Half of Segment

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T000377			% Water by TGA on Perkin Elmer	%	97.50	n/a	62.58	63.87	63.22	2.04	n/a	n/a	n/a
S95T000377			DSC Exotherm on Perkin Elmer	Joules/g	99.40	n/a	0	0	0.000	n/a	n/a	n/a	n/a
S95T000422	F		Alpha of Digested Solid	uCi/g	106.4	<1.30e-02	1.63e-1	1.26e-1	1.45e-01	25.6	n/a	3.00e-02	21.3

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Table 3. C-107 Analytical Summary - Cores 68 and 69
C-107

CORE NUMBER: 68

SEGMENT #: 5

SEGMENT PORTION: U Upper Half of Segment

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T000373			% Water by TGA using Mettler	%	98.73	n/a	66.58	66.90	66.74	0.48	n/a	n/a	n/a
S95T000373			DSC Exotherm using Mettler	Joules/g	108.6	n/a	0	0	0.000	n/a	n/a	n/a	n/a
S95T000418	F		Alpha of Digested Solid	uCi/g	78.38	<1.80e-01	< 1.80e-1	<2.06e-1	n/a	n/a	n/a	4.21e-01	500.0

SEGMENT PORTION: L Lower Half of Segment

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T000378			% Water by TGA using Mettler	%	98.58	n/a	70.64	68.69	69.66	2.80	n/a	n/a	n/a
S95T000378			DSC Exotherm using Mettler	Joules/g	95.61	n/a	0	0	0.000	n/a	n/a	n/a	n/a
S95T000423	F		Alpha of Digested Solid	uCi/g	106.4	<1.30e-02	2.44e+0	2.52e+0	2.48e+00	3.23	n/a	2.20e-02	4.3

Table 3. C-107 Analytical Summary - Cores 68 and 69
C-107

CORE NUMBER: 69
SEGMENT #: field blank

SEGMENT PORTION: Drainable Liquid

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T000436			% Water by TGA using Mettler	%	99.54	n/a	100.1	99.9	100.0	0.20	n/a	n/a	n/a
S95T000436			DSC Exotherm using Mettler	Joules/g	103.0	n/a	0	0	0.000	n/a	n/a	n/a	n/a

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WHC-SD-WM-DP-106, REV. 0

Table 3. C-107 Analytical Summary - Cores 68 and 69
C-107

CORE NUMBER: 69
SEGMENT #: 1

SEGMENT PORTION: U Upper Half of Segment

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T000424			% Water by TGA using Mettler	%	99.00	n/a	70.23	70.28	70.25	0.07	n/a	n/a	n/a
S95T000424			DSC Exotherm using Mettler	Joules/g	104.0	n/a	0	0	0.000	n/a	n/a	n/a	n/a
S95T000439	F		Alpha of Digested Solid	uCi/g	106.1	<8.94e-01	1.01e+1	9.76e+0	9.93e+00	3.42	113.4	2.090	26.7

SEGMENT PORTION: L Lower Half of Segment

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T000429			% Water by TGA using Mettler	%	98.94	n/a	51.15	50.66	50.91	0.96	n/a	n/a	n/a
S95T000429			DSC Exotherm using Mettler	Joules/g	107.2	n/a	0	0	0.000	n/a	n/a	n/a	n/a
S95T000444	F		Alpha of Digested Solid	uCi/g	77.36	<2.64e-03	7.65E+0	6.19e+0	6.92e+00	21.1	76.20	7.81e-01	15.4

WHC-SD-WM-DP-106, REV.0

Table 3. C-107 Analytical Summary - Cores 68 and 69
C-107

CORE NUMBER: 69

SEGMENT #: 2

SEGMENT PORTION: U Upper Half of Segment

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T000425			% Water by TGA using Mettler	%	99.00	n/a	59.50	58.89	59.20	1.03	n/a	n/a	n/a
S95T000425			DSC Exotherm Dry Calculated	Joules/g Dry	n/a	n/a	67.4	62.8	65.10	7.07	n/a	n/a	n/a
S95T000425			DSC Exotherm using Mettler	Joules/g	104.0	n/a	27.5	25.6	26.55	7.16	n/a	n/a	n/a
S95T000440	F		Alpha of Digested Solid	uCi/g	106.1	<8.94e-01	7.74e+0	6.20e+0	6.97e+00	22.1	n/a	3.400	53.3

SEGMENT PORTION: L Lower Half of Segment

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T000430			% Water by TGA using Mettler	%	99.53	n/a	49.35	48.76	49.05	1.20	n/a	n/a	n/a
S95T000430			DSC Exotherm using Mettler	Joules/g	96.31	n/a	0	0	0.000	n/a	n/a	n/a	n/a
S95T000445	F		Alpha of Digested Solid	uCi/g	107.8	<1.040	1.56e+1	1.45e+1	1.51e+01	7.31	n/a	2.400	18.6

WMC-SD-WM-DP-106, REV. 0

A-0002-1

Table 3. C-107 Analytical Summary - Cores 68 and 69
C-107

CORE NUMBER: 69

SEGMENT #: 3

SEGMENT PORTION: U Upper Half of Segment

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T000426			% Water by TGA on Perkin Elmer	%	98.70	n/a	36.86	38.52	37.69	4.40	n/a	n/a	n/a
S95T000426			DSC Exotherm on Perkin Elmer	Joules/g	99.54	n/a	0	0	0.000	n/a	n/a	n/a	n/a
S95T000441	F		Alpha of Digested Solid	uCi/g	79.39	<1.39e-02	1.36e-1	1.04e-1	1.20e-01	26.7	n/a	3.10e-02	25.0

SEGMENT PORTION: L Lower Half of Segment

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T000431			% Water by TGA using Mettler	%	99.53	n/a	34.84	35.84	35.34	2.83	n/a	n/a	n/a
S95T000431			DSC Exotherm using Mettler	Joules/g	96.31	n/a	0	0	0.000	n/a	n/a	n/a	n/a
S95T000446	F		Alpha of Digested Solid	uCi/g	107.8	<1.040	6.26e-1	6.66e-1	6.46e-01	6.19	n/a	1.10e-02	5.9

SEGMENT PORTION: Drainable Liquid

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T000435			% Water by TGA using Mettler	%	99.54	n/a	79.04	78.71	78.88	0.42	n/a	n/a	n/a
S95T000435			DSC Exotherm using Mettler	Joules/g	103.0	n/a	0	0	0.000	n/a	n/a	n/a	n/a

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WHC-SD-WM-DP-106, REV. 0

Table 3. C-107 Analytical Summary - Cores 68 and 69
C-107

CORE NUMBER: 69

SEGMENT #: 4

SEGMENT PORTION: U Upper Half of Segment

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T000427			% Water by TGA on Perkin Elmer	%	98.70	n/a	51.90	51.76	51.83	0.27	n/a	n/a	n/a
S95T000427			DSC Exotherm on Perkin Elmer	Joules/g	99.54	n/a	0	0	0.000	n/a	n/a	n/a	n/a
S95T000442	F		Alpha of Digested Solid	uCi/g	79.39	<1.39e-02	1.17e+0	9.01e-1	1.04e+00	26.0	n/a	3.60e-02	7.3

SEGMENT PORTION: L Lower Half of Segment

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T000432			% Water by TGA on Perkin Elmer	%	98.26	n/a	64.18	62.89	63.54	2.03	n/a	n/a	n/a
S95T000432			DSC Exotherm on Perkin Elmer	Joules/g	98.98	n/a	0	0	0.000	n/a	n/a	n/a	n/a
S95T000447	F		Alpha of Digested Solid	uCi/g	89.86	<2.02e-03	7.36e-2	8.17e-2	7.76e-02	10.4	n/a	5.00e-03	12.7

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WHC-SD-WM-DP-106, REV. 0

A-0002-1

Table 3. C-107 Analytical Summary - Cores 68 and 69
C-107

CORE NUMBER: 69

SEGMENT #: 5

SEGMENT PORTION: U Upper Half of Segment

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T000428			% Water by TGA using Mettler	%	98.94	n/a	49.77	54.92	52.34	9.84	n/a	n/a	n/a
S95T000428			DSC Exotherm using Mettler	Joules/g	107.2	n/a	0	0	0.000	n/a	n/a	n/a	n/a
S95T000443	F		Alpha of Digested Solid	uCi/g	77.36	<2.64e-03	7.17e-2	8.20e-2	7.69e-02	13.4	n/a	6.00e-03	14.0

SEGMENT PORTION: L Lower Half of Segment

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T000433			% Water by TGA on Perkin Elmer	%	98.26	n/a	57.47	57.84	57.66	0.64	n/a	n/a	n/a
S95T000433			DSC Exotherm on Perkin Elmer	Joules/g	98.98	n/a	0	0	0.000	n/a	n/a	n/a	n/a
S95T000448	F		Alpha of Digested Solid	uCi/g	89.86	<2.02e-03	1.54e-1	1.48e-1	1.51e-01	3.97	n/a	9.00e-03	12.2

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WHC-SD-WM-DP-106, REV. 0

WHC-SD-WM-DP-106, REV. 0

UNDIGESTED SAMPLE ANALYSES - DIRECT

worklistrpt Version 2.0 02/21/95
03/24/95 13:02

Page: 1

LABCORE Data Entry Template for Worklist# 807

Analyst: SMF Instrument: DSC01 Book # 12N14-AMethod: LA-514-113 Rev/Mod B-1

Worklist Comment: Please run C-107 DSC under N2. bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-01	SOLID	<u>28.45</u>	<u>28.6</u>	<u>N/A</u>	Joules/g
95000020	C-107	2 SAMPLE	S95T000374	0	DSC-01	SOLID	<u>N/A</u>	<u>1.7</u>		Joules/g
95000020	C-107	3 DUP	S95T000374	0	DSC-01	SOLID	<u>1.7</u>	<u>Ø</u>	<u>N/A</u>	Joules/g
95000020	C-107	4 SAMPLE	S95T000375	0	DSC-01	SOLID	<u>N/A</u>	<u>Ø</u>		Joules/g
95000020	C-107	5 DUP	S95T000375	0	DSC-01	SOLID	<u>Ø</u>	<u>Ø</u>	<u>N/A</u>	Joules/g

Final page for worklist # 807

Analyst Signature Surie M. Fulton Date 4-13-95Analyst Signature [Signature] Date 4-18-95Verified J. M. Lye 4/18/95

Data Entry Comments:

S95T000374 has one endotherm 1482.49/g at 103°C, the small exotherm may be an artifact; duplicate has 1315.19/g at 103°C. S95T000375 has two endotherms 778.49/g at 107°C, and 281.39/g at 290°C; duplicate has 940.69/g at 107 and 297.19/g at 291°C. J. M. Lye 4/17/95

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

DSC STD 12N14-A

6.340 mg

Rate: 10.0 °C/min

File: 00124.001

DSC METTLER

13-Apr-95

Ident: 0.0

222-S Laboratory

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 20 TO 24.

exo>

5. mW

Integration

Delta H 188 mJ

29.6 J/g

Peak 158.9°C

-12.1 mW

120.

140.

160.

180. °C

Lucie M. Fulton 4-13-95

File: 00125.001 DSC METTLER 13-Apr-95
 Ident: 0.0 222-S Laboratory

S95T000374 N2
 14.947 mg

Rate: 10.0 °C/min

Integration
 Delta H 25 mJ
 1.7 J/g
 Peak 441.4°C
 1.4 mW

Integration
 Delta H22157 mJ
 1482.4 J/g
 Peak 103.4°C
 -86.6 mW

EXO

50. mW

100. 200. 300. 400. °C

S95T000375 N2

30.023 mg

File: 00130.001 DSC METTLER 14-Apr-95

Ident: 0.0 222-S Laboratory

Rate: 10.0 °C/min

S95T0000375 (DUP) N2
 14.522 mg
 File: 00132.001 DSC METTLER 14-Apr-95
 Rate: 10.0 °C/min
 Ident: 0.0 222-S Laboratory

Integration
 Delta H13659 mJ
 940.6 J/g
 Peak 109.3°C
 -83.4 mW

Integration
 Delta H 4314 mJ
 297.1 J/g
 Peak 291.7°C
 -22.0 mW

100. 200. 300. 400. °C

LABCORE Data Entry Template for Worklist# 808

Analyst: SMF Instrument: DSC01 Book # 12NH-AMethod: LA-514-114 Rev/Mod B-01 gmf 4/24/95

Worklist Comment: Please run C-107 DSC under N2. bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-03	SOLID	<u>28.45</u>	<u>28.28</u>	<u>N/A</u>	Joules/g
95000020	C-107	2 SAMPLE	S95T000376	0	DSC-03	SOLID	<u>N/A</u>	<u>102.72</u>	<u>N/A</u>	Joules/g
95000020	C-107	3 DUP	S95T000376	0	DSC-03	SOLID	<u>102.72</u>	<u>102.72</u>	<u>N/A</u>	Joules/g
95000020	C-107	4 DUP2	S95T000376	0	DSC-03	SOLID	<u>102.72</u>	<u>102.72</u>	<u>N/A</u>	Joules/g
95000020	C-107	5 SAMPLE	S95T000377	0	DSC-03	SOLID	<u>N/A</u>	<u>102.72</u>	<u>N/A</u>	Joules/g
95000020	C-107	6 DUP	S95T000377	0	DSC-03	SOLID	<u>102.72</u>	<u>102.72</u>	<u>N/A</u>	Joules/g

Final page for worklist # 808

See attached for signatures
Analyst Signature _____ Date _____new light 4/20/95
Analyst Signature _____ Date _____Verified by Blandina Valenzuela

Data Entry Comments:

Sample S95T000376 produced one endotherm at 81.69°C with a delta H of 1114.13 J/g. Sample S95T000377 produced one endotherm at 109.42°C with a delta H of 1457.28 J/g.

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

LABCORE Data Entry Template for Worklist# 808

Analyst: SNF Instrument: DSC01 _____ Book # 12N14-7

Method: LA-514-113 Rev/Mod LA-514-114/B-01

Worklist Comment: Please run C-107 DSC under N2. bdv

SNF 4-13-95

gmf 4/26/95

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-01	SOLID			N/A	Joules/g
95000020	C-107	2 SAMPLE	S95T000376	0	DSC-01	SOLID	N/A			Joules/g
95000020	C-107	3 DUP	S95T000376	0	DSC-01	SOLID			N/A	Joules/g
95000020	C-107	4 SAMPLE	S95T000377	0	DSC-01	SOLID	N/A			Joules/g
95000020	C-107	5 DUP	S95T000377	0	DSC-01	SOLID			N/A	Joules/g

Final page for worklist # 808

Intulton 4-13-95
Analyst Signature Date

Analyst Signature Date

Data Entry Comments:

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

Curve 1: DSC

File info: IND041301 Thu Apr 13 07:51:25 1995

Sample Weight: 6.687 mg

Indium at 10C/min

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 31 TO 32.

TEMP: 140.0 ° TIME: 0.0 min RATE: 10.0 °/min

SM FULTON
Westinghouse Hanford Co.
222-S Lab
Thu Apr 13 07:52:27 1995

WHC-SD-WM-DP-106, REV. 0

SM Fulton 4-13-95

Curve 1: DSC

File info: SAM041301 Thu Apr 13 09:31:27 1995

Sample Weight: 10.070 mg

S95T000376, 10C/min

WHC-SD-WM-DP-106, REV.0

exotherm down, nitrogen purge gas

TEMP: 30.0 °C TIME: 0.0 min RATE: 10.0 °/min

Temperature (°C)

SM Fulton
Westinghouse Hanford Co.
222-S Lab
Thu Apr 13 09:37:10 1995

Curve 1: DSC

File info: SAM041303 Thu Apr 13 10:54:44 1995

Sample Weight: 11.550 mg

S95T000376 (dup), 10C/min

WHC-SD-WM-DP-106, REV.0

exotherm down, nitrogen purge gas

TEMP: 25.0 °C TIME: 0.0 min RATE: 10.0 °C/min

Temperature (°C)

SM Fulton
Westinghouse Hanford Co.
222-S Lab
Thu Apr 13 11:17:00 1995

Curve 1: DSC

File info: SAM041304 Thu Apr 13 12:26:35 1995

Sample Weight: 26.880 mg

S95T000376 (DUP2), 10c/MIN

WHC-SD-WM-DP-106, REV. 0

exotherm down, nitrogen purge gas

TEMP: 35.0 °C TIME: 0.0 min RATE: 10.0 °C/min
TEMP: 500.0 °C

Temperature (°C)

SM Fulton
Westinghouse Hanford Co.
222-S Lab
Thu Apr 13 12:27:52 1995

Curve 1: DSC

File info: SAM041305 Thu Apr 13 13:22:10 1995

Sample Weight: 25.010 mg

S95T000377, 10C/min

exotherm down, nitrogen purge gas

TEMP: 25.0 °C TIME: 0.0 min RATE: 10.0 °C/min

Temperature (°C)

SM Fulton
Westinghouse Hanford Co.
222-S Lab
Thu Apr 13 13:34:51 1995

WHC-SD-WM-DP-106, REV.0

Curve 1: DSC

File Info: SAM041306 Thu Apr 13 14:30:36 1995

Sample Weight: 28.780 mg

S95T000377 (DUP), 10C/min

exotherm down, nitrogen purge gas

TEMP: 35.0 °C TIME: 0.0 min RATE: 10.0 °C/min

Temperature (°C)

SM Fulton
Westinghouse Hanford Co.
222-S Lab
Thu Apr 13 14:47:46 1995

WHC-SD-WM-DP-106, REV.0

LABCORE Data Entry Template for Worklist# 809

Analyst: KRM Instrument: DSC01 Book # 12N14A

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

Worklist Comment: Please run C-107 DSC under N2. bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-01	SOLID	<u>28.45</u>	<u>27.2</u>	<u>N/A</u>	Joules/g
95000020	C-107	2 SAMPLE	S95T000378	0	DSC-01	SOLID	<u>N/A</u>	<u>Ø</u>		Joules/g
95000020	C-107	3 DUP	S95T000378	0	DSC-01	SOLID	<u>Ø</u>	<u>Ø</u>	<u>N/A</u>	Joules/g

Final page for worklist # 809

[Signature] 4-12-95
Analyst Signature Date

[Signature] 4-18-95
Analyst Signature Date

Verified 4/18/95 J. M. Luge

Data Entry Comments:

S95T000378 has no endotherm of 1649.8 J/g at 113°C; duplicate
has 1588.0 J/g at 113°C J M Luge 4/17/95

DSC STD 12N14-A

6.340 mg

Rate: 10.0 °C/min

File: 00119.001 DSC METTLER 13-Apr-95

Ident: 0.0

222-S Laboratory

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 34 TO 36.

exo

120.

140.

160.

180. °C

James J. [Signature] 4-12-95

S95T000378 (DUP) N2
13.763 mg

Rate: 10.0 °C/min

File: 00122.001 DSC METTLER 13-Apr-95
Ident: 0.0 222-S Laboratory

worklistrpt Version 2.0 02/21/95
03/23/95 16:27

Page: 1

LABCORE Data Entry Template for Worklist# 810

Analyst: RMM Instrument: DSC01Book # 12N14A ~~12N14A~~ gmp
4/12/95Method: LA-514-113 Rev/Mod B-1

Worklist Comment: Please run C-107 DSC under N2. bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-01	SOLID	28.45	30.9	N/A	Joules/g
95000020	C-107	2 SAMPLE	S95T000370	0	DSC-01	SOLID	N/A	Ø		Joules/g
95000020	C-107	3 DUP	S95T000370	0	DSC-01	SOLID	Ø	Ø	N/A	Joules/g
95000020	C-107	4 SAMPLE	S95T000371	0	DSC-01	SOLID	N/A	Ø		Joules/g
95000020	C-107	5 DUP	S95T000371	0	DSC-01	SOLID	Ø	Ø	N/A	Joules/g

Final page for worklist # 810

RMM 4/12/95
Analyst Signature Date

Analyst Signature Date

Entered & reviewed 4/12/95 Jann M. Lye

Data Entry Comments:

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

DSC STD

6.340 mg

Rate: 10.0 °C/min

File: 00080.001 DSC METTLER 07-Apr-95

Ident: 0.0

222-S Laboratory

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 38 TO 44.

EXO

10. mW

Integration

Delta H 196 mJ

30.9 J/g

Peak 158.6°C

-13.2 mW

James M. Lyle
4/26/95

120.

140.

160.

180. °C

S95T000370 (DUP) N2

12.807 mg

Rate: 10.0 °C/min

File: 00082.001

DSC METTLER

07-Apr-95

Ident: 0.0

222-S Laboratory

exo

Integration

Delta H 88 mJ

6.8 J/g

Peak 217.2°C

-1.7 mW

50. mW

42

100.

200.

300.

400.

°C

LABCORE Data Entry Template for Worklist# 811

Analyst: SME Instrument: DSC01 Book # 12N14-A

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

Worklist Comment: Please run C-107 DSC under N2. bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-01	SOLID	<u>28.45</u>	<u>30.9</u>	<u>N/A</u>	Joules/g
95000020	C-107	2 SAMPLE	S95T000372	0	DSC-01	SOLID	<u>N/A</u>	<u>Ø</u>		Joules/g
95000020	C-107	3 DUP	S95T000372	0	DSC-01	SOLID	<u>Ø</u>	<u>Ø</u>	<u>N/A</u>	Joules/g
95000020	C-107	4 SAMPLE	S95T000373	0	DSC-01	SOLID	<u>N/A</u>	<u>Ø</u>		Joules/g
95000020	C-107	5 DUP	S95T000373	0	DSC-01	SOLID	<u>Ø</u>	<u>Ø</u>	<u>N/A</u>	Joules/g

Final page for worklist # 811

Susie M. Julten 4-12-95
Analyst Signature Date

[Signature]
Analyst Signature Date

Verified 4/14/95 J. M. Luge

Data Entry Comments:

45

S95T000372 is a thick dark brown sludge

S95T000373 is a thin med brown sludge

S95T000372 has two endotherms 1084.49 J/g at 109°C and 56.89 J/g at 287°C. Its duplicate has 1123.87 J/g at 113°C and 51.09 J/g at 287°C.

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

S95T000373 has two endotherms 1192.09 J/g at 105°C and 3.09 J/g at 329°C. The duplicate has 1588.67 J/g at 113°C and 3.39 J/g at 329°C.

DSC STD 12N14-A

7.077 mg

Rate: 10.0 °C/min

File: 00106.001

DSC METTLER

12-Apr-95

Ident: 0.0

222-S Laboratory

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 46 TO 50.

exo >

10. mW

Integration

Delta H 219 mJ

30.9 J/g

Peak 158.5°C

-15.1 mW

120.

140.

160.

180. °C

Susie M. Julten 4-12-95

WHC-SD-WM-DP-106, REV. 0

S95T000373 (DUP) N2

8.530 mg

Rate: 10.0 °C/min

File: 00114.001 DSC METTLER 13-Apr-95

Ident: 0.0 222-S Laboratory

<exo>

Integration
Delta H 1588.6 mJ
Peak 113.6 °C
-81.9 mW

Integration
Delta H 28 mJ
Peak 329.4 °C
-0.7 mW

100. 200. 300. 400. °C

LABCORE Data Entry Template for Worklist# 812

Analyst: KRM Instrument: DSC01 Book # 12N14-A

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

Worklist Comment: Please run C-107 DSC under N2. bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-01	SOLID	<u>28.45</u>	<u>28.1</u>	<u>N/A</u>	Joules/g
95000020	C-107	2 SAMPLE	S95T000256	0	DSC-01	SOLID	<u>N/A</u>	<u>Ø</u>		Joules/g
95000020	C-107	3 DUP	S95T000256	0	DSC-01	SOLID	<u>Ø</u>	<u>Ø</u>	<u>N/A</u>	Joules/g

Final page for worklist # 812

[Signature] 4-9-95
Analyst Signature Date

[Signature] 4-9-95
Analyst Signature Date

Verified 4/14/95 J. M. Lye

Data Entry Comments:

S95T000256 has one endotherm, 1552.37 J/g at 103 °C,
and 1019.87 J/g at 103 °C. J. M. Lye

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

DSC STD 12N14-A

6.340 mg

File: 00101.001 DSC METTLER 10-Apr-95

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 52 TO 53. *4/12/95*

exo

120. 140. 160. 180. °C

James J. [Signature] 4-9-95

S95T000256 (DUP) N2

20.051 mg

Rate: 10.0 °C/min

File: 00104.001

DSC METTLER

10-Apr-95

Ident: 0.0

222-S Laboratory

EXO

50. mW

Integration

Delta H20448 mJ

1019.8 J/g

Peak 103.4 °C

-87.2 mW

100.

200.

300.

400.

°C

LABCORE Data Entry Template for Worklist# 923

Analyst: SNF Instrument: DSC01 Book # 19T 12N14-A

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

SNF
A-14-95

Worklist Comment: Please run C-107 DSC under N2. bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-01	SOLID	<u>28.45</u>	<u>29.6</u>	<u>N/A</u>	Joules/g
95000023	C-107	2 SAMPLE	S95T000424	0	DSC-01	SOLID	<u>N/A</u>	<u>Ø</u>		Joules/g
95000023	C-107	3 DUP	S95T000424	0	DSC-01	SOLID	<u>Ø</u>	<u>Ø</u>	<u>N/A</u>	Joules/g
95000023	C-107	4 SAMPLE	S95T000425	0	DSC-01	SOLID	<u>N/A</u>	<u>27.5</u>		Joules/g
95000023	C-107	5 DUP	S95T000425	0	DSC-01	SOLID	<u>27.5</u>	<u>25.6</u>	<u>N/A</u>	Joules/g

Final page for worklist # 923

Lusie M. Fulton
Analyst Signature Date 4-14-95

[Signature] 4-18-95
Analyst Signature Date

Verified 4/18/95 J. M. Luy

Data Entry Comments:

S95T000424 has one endotherm of 1382.79/g at 103°C; duplicate has
1170.99/g at 103°C. S95T000425 has one endotherm of 1245.89/g at 111°C
duplicate has 923.67/g at 107°C. J.M. Luy 4/17/95

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

DSC STD 121114-A
 6.340 mg
 Rate: 10.0 °C/min
 File: 00134.001 DSC NETTLER 14-Apr-95
 Ident: 0.0 222-S Laboratory

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
 COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 56 TO 60.

BEST AVAILABLE COPY

120. 140. 160. 180. °C

Susie M. Dutton 4-14-95

5957000-24 12
 11.078 mg
 Rate: 10.0 °C/min
 File: 00135.001 DSC NETTLE 14-Apr-95
 Ident: 0.0 222-S Laboratory

BEST AVAILABLE COPY

Integration
 Delta H15317 mJ
 1382.7 J/g
 Peak 103.3°C
 -86.8 mW

100 0.10 100 0.10 100 0.10
100 0.10 100 0.10 100 0.10

BEST AVAILABLE COPY

Integration
Delta H13467 mJ
1170.9 J/g
Peak 103.3°C
-83.8 mW

LABCORE Data Entry Template for Worklist# 924

Analyst: SMF Instrument: DSC01 Book # ^{4/20/95 BDX} 12N14-A

Method: LA-514-114 Rev/Mod B-01 SMF 4/24/95

Worklist Comment: Please run C-107 DSC under N2. bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-03	SOLID	<u>28.45</u>	<u>28.32</u>	<u>N/A</u>	Joules/g
95000023	C-107	2 SAMPLE	S95T000426	0	DSC-03	SOLID	<u>N/A</u>	<u>Ø</u>		Joules/g
95000023	C-107	3 DUP	S95T000426	0	DSC-03	SOLID	<u>Ø</u>	<u>Ø</u>	<u>N/A</u>	Joules/g
95000023	C-107	4 SAMPLE	S95T000427	0	DSC-03	SOLID	<u>N/A</u>	<u>Ø</u>		Joules/g
95000023	C-107	5 DUP	S95T000427	0	DSC-03	SOLID	<u>Ø</u>	<u>Ø</u>	<u>N/A</u>	Joules/g

Final page for worklist # 924

See attached for signatures
Analyst Signature _____ Date _____

NE Wright 4/20/95
Analyst Signature _____ Date _____

Verified by Blandina Valenzuela

Data Entry Comments:

^{4/20/95 BDX} Sample S95T000426 produced two endotherms one at 111.3°C and with a delta H of 927.87 J/g and the second at 266.89 °C with a delta H of 376.24 J/g. Sample S95T000427 produced two endotherms one at 103.24°C

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

with a delta H of 1228.44 J/g and the second at 255.58°C with a delta H of 60.3 J/g.

LABCORE Data Entry Template for Worklist# 924

Analyst: SMF Instrument: DSC01 Book # 12NKL-A

Method: LA-514-113 Rev/Mod LA-514-114/B-01

SMF 4-14-95

Worklist Comment: Please run C-107 DSC under N2. bdv

gmF 4/26/95

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-01	SOLID			N/A	Joules/g
95000023	C-107	2 SAMPLE	S95T000426	0	DSC-01	SOLID	N/A			Joules/g
95000023	C-107	3 DUP	S95T000426	0	DSC-01	SOLID			N/A	Joules/g
95000023	C-107	4 SAMPLE	S95T000427	0	DSC-01	SOLID	N/A			Joules/g
95000023	C-107	5 DUP	S95T000427	0	DSC-01	SOLID			N/A	Joules/g

Final page for worklist # 924

Lusie M. Feltner
Analyst Signature

Date 4-14-95

Analyst Signature

Date

Data Entry Comments:

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

Curve 1: DSC

File info: IND041401 Fri Apr 14 07:43:30 1995

Sample Weight: 6.650 mg

Indium at 10C/min

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT

~~COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 63 TO 67.~~

N2 exotherm down

TIME: 148.8 s TIME: 0.0 min RATE: 10.0 C/min

Temperature (°C)

SM FULTON

Westinghouse Hanford Co.

222-S Lab

Fri Apr 14 08:14:00 1995

Signature

Curve 1: DSC

File info: SAM041401 Fri Apr 14 09:45:57 1995

Sample Weight: 29.030 mg

S95T000426, 10C/min

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WHC-SD-WM-DP-106, REV.0

exotherm down, nitrogen purge gas

TEMP: 25.0 °C TIME: 0.0 min RATE: 10.0 °C/min

Temperature (°C)

SM Fulton
Westinghouse Hanford Co.
222-S Lab
Fri Apr 14 10:24:09 1995

Curve 1: DSC

File info: SAM041402 Fri Apr 14 11:18:25 1995

Sample Weight: 14.360 mg

S95T000426 (DUP), 10C/min

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exotherm down, nitrogen purge gas

TEMP: 25.0 °C TIME: 0.0 min RATE: 10.0 °C/min

Temperature (°C)

SM Fulton
Westinghouse Hanford Co.
222-S Lab
Fri Apr 14 11:29:40 1995

Curve 1: DSC

File info: SAM041403 Fri Apr 14 12:24:34 1995

Sample Weight: 21.930 mg

S95T000427, 10C/min

BEST AVAILABLE COPY

exotherm down, nitrogen purge gas

TEMP: 25.0 °C TIME: 0.0 min RATE: 10.0 C/min

Temperature (°C)

SM Fulton
Westinghouse Hanford Co.
222-S Lab
Fri Apr 14 13:21:04 1995

Curve 1: DSC

File info: SAM041404 Fri Apr 14 14:18:58 1995

Sample Weight: 14.560 mg

S95t000427 (DUP), 10C/min

BEST AVAILABLE COPY

exotherm down, nitrogen purge gas

TEMP: 25.0 °C TIME: 0.0 min RATE: 10.0 °C/min
TEMP: 500.0 °C

Temperature (°C)

SM Fulton
Westinghouse Hanford Co.
222-S Lab
Fri Apr 14 14:24:50 1995

LABCORE Data Entry Template for Worklist# 925

Analyst: DeS Instrument: DSC01 Book # 12WIL-A

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

Worklist Comment: Please run C-107 DSC under N2. bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-01	SOLID	<u>28.45</u>	<u>30.5</u>	N/A	Joules/g
95000023	C-107	2 SAMPLE	S95T000428	0	DSC-01	SOLID	N/A	<u>Ø</u>		Joules/g
95000023	C-107	3 DUP	S95T000428	0	DSC-01	SOLID	<u>Ø</u>	<u>Ø</u>	N/A	Joules/g
95000023	C-107	4 SAMPLE	S95T000429	0	DSC-01	SOLID	N/A	<u>Ø</u>		Joules/g
95000023	C-107	5 DUP	S95T000429	0	DSC-01	SOLID	<u>Ø</u>	<u>Ø</u>	N/A	Joules/g

Final page for worklist # 925

DeS 4-15-95
Analyst Signature Date

DeS 4-18-95
Analyst Signature Date

Verified 4/18/95 J.M. Lye

Data Entry Comments:

S95T000428 has one endotherm of 1108.3 J/g at 107°C; duplicate has 1450.0 J/g at 109°C. S95T000429 has one endotherm of 804.6 J/g at 105°C; duplicate has 868.8 J/g at 105°C. J.M. Lye 4/17/95

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

DSC STD 12N14-A
6.340 mg

File: 00154.001 DSC METTLER 16-Apr-95
Ident: 0.0 222-S Laboratory

Rate: 10.0 °C/min

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 69 TO 13.

David W. Smith
4-15-95

S95T000428 N2
 27.006 mg
 Rate: 10.0 °C/min
 File: 00157.001 DSC METTLER 16-Apr-95
 Ident: 0.0 222-S Laboratory

S95T000429 N2

36.624 mg

File: 00160.001 DSC METTLER 16-Apr-95

Ident: 0.0 222-S Laboratory

Rate: 10.0 °C/min

exo v

50. mW

100. 200. 300. 400. °C

S95T000429 (DUP) N2

39.510 mg

Rate: 10.0 °C/min

File: 00162.001 DSC METTLER 16-Apr-95

Ident: 0.0 222-S Laboratory

LABCORE Data Entry Template for Worklist# 926

Analyst: SMF Instrument: DSC01 Book # 12N14-17

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

Worklist Comment: Please run C-107 DSC under N2. bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-01	SOLID	28.45	27.4	N/A	Joules/g
95000023	C-107	2 SAMPLE	S95T000430	0	DSC-01	SOLID	N/A	Ø		Joules/g
95000023	C-107	3 DUP	S95T000430	0	DSC-01	SOLID	Ø	Ø	N/A	Joules/g
95000023	C-107	4 SAMPLE	S95T000431	0	DSC-01	SOLID	N/A	Ø		Joules/g
95000023	C-107	5 DUP	S95T000431	0	DSC-01	SOLID	Ø	Ø	N/A	Joules/g

Final page for worklist # 926

Intulston 4-17-95
Analyst Signature Date

Jay H. Hunsatt
Analyst Signature Date

Verified 4/18/95 J. M. Luge

Data Entry Comments:

^{SMF 4/17/95}
~~three~~
S95T000430 has ~~two~~ endotherms; 953.89/g at 109°C, 6.39/g at 157°C, 103.49/g at 290°C. Duplicate has 1145.72/g at 106°C, 7.39/g at 143°C, 111.49/g at 290°C.
S95T000431 has two endotherms 862.49/g at 112°C, 542.29/g at 284°C. Duplicate has 826.69/g at 109°C, 531.09/g at 283°C. JML 4/17/95
Units shown for 00 (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

DSC STD 12N14-A

6.525 mg

Rate: 10.0 °C/min

File: 00165.001

DSC METTLER

17-Apr-95

Ident: 0.0

222-S Laboratory

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 25 TO 29.

exo ^

5. mW

BEST AVAILABLE COPY

120.

140.

160.

180. °C

Lusie M. Fulton 4-17-95

WHCSD-WM-DP-106, REV. 0

BEST AVAILABLE COPY

BEST AVAILABLE COPY

S95T000430 (DUP) N2
 9.059 mg
 File: 00169.001 DSC METTLER 18-Apr-95
 Rate: 10.0 °C/min Ident: 0.0 222-S Laboratory

BEST AVAILABLE COPY

S95T000431 N2
13.306 mg

File: 00171.001 DSC METTLER 18-Apr-95
Ident: 0.0 222-S Laboratory

Rate: 10.0 °C/min

Integration
Delta H 11475 mJ
862.4 J/g
Peak 112.7 °C
-55.5 mW

Integration
Delta H 7214 mJ
542.2 J/g
Peak 284.8 °C
-37.1 mW

LABCORE Data Entry Template for Worklist# 927

Analyst: SMF Instrument: DSC01 Book # 12N14-A

Method: LA-514-114 Rev/Mod B-Ø1 JMF 4/24/95

Worklist Comment: Please run C-107 DSC under N2. bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-03	SOLID	<u>28.45</u>	<u>28.16</u>	<u>N/A</u>	Joules/g
95000023	C-107	2 SAMPLE	S95T000432	0	DSC-03	SOLID	<u>N/A</u>	<u>Ø</u>		Joules/g
95000023	C-107	3 DUP	S95T000432	0	DSC-03	SOLID	<u>Ø</u>	<u>Ø</u>	<u>N/A</u>	Joules/g
95000023	C-107	4 SAMPLE	S95T000433	0	DSC-03	SOLID	<u>N/A</u>	<u>Ø</u>		Joules/g
95000023	C-107	5 DUP	S95T000433	0	DSC-03	SOLID	<u>Ø</u>	<u>Ø</u>	<u>N/A</u>	Joules/g

Final page for worklist # 927

See attached for signatures
Analyst Signature _____ Date _____

Analyst Signature _____ Date _____

Data entered and verified by
Blandina Valenzuela

Data Entry Comments:

Sample S95T000432 produced one endotherm at 107.0°C with a
delta H of 1502.55 J/g. Sample S95T000433 produced one endotherm at 110.0°C
with a delta H of 1349.67 J/g.

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

LABCORE Data Entry Template for Worklist# 927

Analyst: SMF Instrument: DSC01 Book # 12N14-17

Method: ~~LA-514-113~~ Rev/Mod LA-514-114/B-01
SMF

Worklist Comment: Please run C-107 DSC under N2. bdv

gm F 4/26/95

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-01	SOLID			N/A	Joules/g
95000023	C-107	2 SAMPLE	S95T000432	0	DSC-01	SOLID	N/A			Joules/g
95000023	C-107	3 DUP	S95T000432	0	DSC-01	SOLID			N/A	Joules/g
95000023	C-107	4 SAMPLE	S95T000433	0	DSC-01	SOLID	N/A			Joules/g
95000023	C-107	5 DUP	S95T000433	0	DSC-01	SOLID			N/A	Joules/g

Final page for worklist # 927

Susie M. Fulton
Analyst Signature Date 4-17-95

Analyst Signature Date

Data Entry Comments:

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

Curve 1: DSC

File info: IND041701 Mon Apr 17 07:54:33 1995

Sample Weight: 6.650 mg

Indium at 10C/min

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 82 TO 86.

N2 exotherm down

TEMP: 140.0 °C TIME: 0.0 min RATE: 10.0 °C/min
TEMP: 178.0 °C

Temperature (°C)

SM FULTON
Westinghouse Hanford Co.
222-S Lab
Mon Apr 17 07:55:28 1995

Susie M. Fulton 4-17-95

Curve 1: DSC

File info: SAM041701 Mon Apr 17 09:23:20 1995

Sample Weight: 16.330 mg

S95T000432, 10C/min

exotherm down, nitrogen purge gas

TEMP: 25.0 °C TIME: 0.0 min RATE: 10.0 °C/min
TEMP: 500.0 °C

Temperature (°C)

SM Fulton
Westinghouse Hanford Co.
222-S Lab
Mon Apr 17 10:21:13 1995

Curve 1: DSC

File info: SAM041703 Mon Apr 17 11:55:02 1995

Sample Weight: 19.370 mg

S95T000432 (DUP), 10C/min

exotherm down, nitrogen purge gas

TEMP1: 25.0 °C TIME1: 0.0 min RATE1: 10.0 °C/min
TEMP2: 500.0 °C

Temperature (°C)

SM Fulton
Westinghouse Hanford Co.
222-S Lab
Mon Apr 17 12:53:36 1995

Curve 2: DSC
 File info: SAK041704 Mon Apr 17 13:48:52 1995
 Sample Weight: 18.120 mg
 S951000433, 100, min

exotherm down, nitrogen purge gas
 Temp: 35.0 °C Time: 0.0 min Rate: 10.0 °C/min
 SW Fulton Westinghouse Hanford Co.
 222-S Lab
 Mon Apr 17 15:19:00 1995

Curve 1: DSC
 File info: 041105 Mon Apr 17 12:42:52 1995
 Sample Weight: 19.550 mg
 S957000-33 (JLP), 100 min

exotherm down, nitrogen purge gas
 Temp: 35.0 °C Time: 0.0 min Rate: 10.0 °C/min
 Temp: 500.0 °C
 SV: Fulton
 Westinghouse Hanford Co.
 222-S Lab
 Mon Apr 17 15:25:25 1995

LABCORE Data Entry Template for Worklist# 928

Analyst: SMF Instrument: DSC01 Book # 12N14-1A

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

Worklist Comment: Please run C-107 DSC under N2. bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-01	LIQUID	<u>28.45</u>	<u>29.3</u>	N/A	Joules/g
95000023	C-107	2 SAMPLE	S95T000435	0	DSC-01	LIQUID	N/A	<u>0</u>		Joules/g
95000023	C-107	3 DUP	S95T000435	0	DSC-01	LIQUID	<u>0</u>	<u>0</u>	N/A	Joules/g
95000023	C-107	4 SAMPLE	S95T000436	0	DSC-01	LIQUID	N/A	<u>0</u>		Joules/g
95000023	C-107	5 DUP	S95T000436	0	DSC-01	LIQUID	<u>0</u>	<u>0</u>	N/A	Joules/g

Final page for worklist # 928

Lurie M. Fulton 4-7-95
Analyst Signature Date

Shirley Hammett 4-12-95
Analyst Signature Date

Verified 4/14/95. J.M. Lye

Data Entry Comments:

S95T000435 a bright yellow liquid
S95T000435 has three endotherms 156.3 J/g at 107°C; 3.8 J/g at 173°C; 11.9 J/g at 215°C. Its duplicate has 1341.1 J/g at 105°C; 1.0 J/g at 173°C; 11.5 J/g at 215°C.

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

S95T000436 has one endotherm 1619.7 J/g at 99°C and its duplicate has 1656.1 J/g at 99°C. J.M. Lye
87 4/29/95

DSC STD 12N14-A
6.340 mg
Rate: 10.0 °C/min
File: 00085.001
Ident: 0.0
DSC METTLER 07-Apr-95
222-S Laboratory

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 88 TO 92.

exo v

10. mW

120. 140. 160. 180. °C

Lucie M. Fulton 4-7-95

S95T000435 N2
11.834 mg

File: 00087.001 DSC METTLER 07-Apr-95
Ident: 0.0 222-S Laboratory

Rate: 10.0 °C/min

<exo>

S95T000435 (DUP) N2
 12.991 mg
 Rate: 10.0 °C/min
 File: 00089.001 DSC METTLER 08-Apr-95
 Ident: 0.0 222-S Laboratory

S95T000436 N2
 9.996 mg
 Rate: 10.0 °C/min
 File: 00091.001 DSC METTLER 08-Apr-95
 Ident: 0.0 222-S Laboratory

S95T000436 (DUP) N2
 9.890 mg
 Rate: 10.0 °C/min
 File: 00093.001 DSC METTLER 08-Apr-95
 Ident: 0.0 222-S Laboratory

LABCORE Data Entry Template for Worklist# 1205

Analyst: _____ Instrument: DSC01 _____ Book # _____

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

Worklist Comment: Calculated dry DSC for C-107. bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
95000020	C-107	1 SAMPLE	S95T000374	0	DSC-02	SOLID	N/A	4.5		Joules/g Dry
95000020	C-107	2 DUP	S95T000374	0	DSC-02	SOLID	4.5	Ø	N/A	Joules/g Dry
95000020	C-107	3 SAMPLE	S95T000376	0	DSC-02	SOLID	N/A	214.5 209.5	5/4/95 BDV	Joules/g Dry
95000020	C-107	4 DUP	S95T000376	0	DSC-02	SOLID BDV	214.5 209.5	Ø	N/A	Joules/g Dry
95000020	C-107	5 DUP2	S95T000376	0	DSC-02	SOLID BDV	214.5 209.5	Ø	N/A	Joules/g Dry
95000023	C-107	6 SAMPLE	S95T000425	0	DSC-02	SOLID	N/A	67.4		Joules/g Dry
95000023	C-107	7 DUP	S95T000425	0	DSC-02	SOLID	67.4	62.8	N/A	Joules/g Dry

Data entered + verified by

Final page for worklist # 1205

Analyst Signature

Date

Analyst Signature

Date

Data Entry Comments:

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

C-107

94

LABCORE Data Entry Template for Worklist# 814

Analyst: SMF Instrument: TGA01 Book # 42N8-A

Method: LA-514-114 Rev/Mod B-Ø1 SMF 4/24/95

Worklist Comment: Please run C-107 TGA under N2. bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-03	SOLID	<u>59.19</u>	<u>57.91</u>	<u>N/A</u>	%
95000020	C-107	2 SAMPLE	S95T000370	0	TGA-03	SOLID	<u>N/A</u>	<u>57.98</u>		%
95000020	C-107	3 DUP	S95T000370	0	TGA-03	SOLID	<u>57.98</u>	<u>57.67</u>	<u>N/A</u>	%
		4 STD			TGA-03	SOLID	<u>59.19</u>	<u>57.68</u>	<u>N/A</u>	%
95000020	C-107	5 SAMPLE	S95T000371	0	TGA-03	SOLID	<u>N/A</u>	<u>31.87</u>		%
95000020	C-107	6 DUP	S95T000371	0	TGA-03	SOLID	<u>31.87</u>	<u>31.98</u>	<u>N/A</u>	%

Final page for worklist # 814

See attached for signatures
Analyst Signature _____ Date _____

Data entered and verified by
Blandina Valenzuela
Analyst Signature _____ Date _____

Data Entry Comments: S95T000371 produced a second weight loss step of 13.95%.
at approximately 300°C

Units shown for QC (SPK & STD) may not reflect the actual units 95 = Detection Limit, S = Worklist Slot Number,
R = Replicate Number, A = Aliquot Code.

WHC-SD-WM-DP-106, REV. 0
LABCORE Data Entry Template for Worklist# 814

Analyst: SMF Instrument: TGA01 Book # 42 N8A

Method: ~~LA-560-112~~ Rev/Mod LA-514-114 (B) gmf
SWF 4/25/95

Worklist Comment: Please run C-107 TGA under N2. bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-01	SOLID			N/A	%
95000020	C-107	2 SAMPLE	S95T000370	0	TGA-01	SOLID	N/A			%
95000020	C-107	3 DUP	S95T000370	0	TGA-01	SOLID			N/A	%
95000020	C-107	4 SAMPLE	S95T000371	0	TGA-01	SOLID	N/A			%
95000020	C-107	5 DUP	S95T000371	0	TGA-01	SOLID			N/A	%

Final page for worklist # 814

Susie M. Fulton 4-19-95
Analyst Signature Date

Analyst Signature Date

Data Entry Comments:

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

Curve 1: TGA

File info: SAM041803 Tue Apr 18 13:03:17 1995

Sample Weight: 16.850 mg

S95T000370 (DUP), 10C/min

gmF
4/19/95

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 97 TO 101.

WHC-SD-WM-DP-106, REV.0

N2

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

Temperature (°C)

SM Fulton
PERKIN-ELMER
7 Series Thermal Analysis System
Tue Apr 18 13:12:02 1995

Curve 1: TGA

File info: SAM041804 Tue Apr 18 14:17:56 1995

Sample Weight: 11.392 mg

S95T000370 (DUP2), 10C/min

JMF 4/19/95

86

Weight (Wt. %)

WHC-SD-MM-DP-106, REV.0

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

Temperature (°C)

SM Fulton
PERKIN-ELMER
7 Series Thermal Analysis System
Tue Apr 18 14:25:26 1995

Curve 1: TGA

File info: TER041901 Wed Apr 19 09:08:39 1995

Sample Weight: 14.691 mg

42NBA Terliq

WHCSD-WM-DP-106, REV.0

66

Susie M. Fulton 4-19-95

N2
TEMP: 35.0 C
TEMP: 250.0 C
TIME: 0.0 min
RATE: 10.0 C/min

Temperature (°C)

SM Fulton
PERKIN-ELMER
7 Series Thermal Analysis System
Wed Apr 19 09:12:30 1995

S95T000371, 10C/min

WHC-SD-WM-DP-106, REV. 0

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

SM Fulton
PERKIN-ELMER
7 Series Thermal Analysis System
Wed Apr 19 11:39:31 1995

Curve 1: TGA

File info: SAM041902 Wed Apr 19 12: 47: 21 1995

Sample Weight: 24.784 mg

S95T000371 (DUP), 10C/min

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

SM Fulton
PERKIN-ELMER
7 Series Thermal Analysis System
Wed Apr 19 13: 20: 02 1995

WHC-SD-WM-DP-106, REV.0

LABCORE Data Entry Template for Worklist# 815

Analyst: SMF Instrument: TGA01 _____ Book # 42N8-A

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

Worklist Comment: Please run C-107 TGA under N2. bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-01	SOLID	<u>59.19</u>	<u>58.44</u>	<u>N/A</u>	%
95000020	C-107	2 SAMPLE	S95T000372	0	TGA-01	SOLID	<u>N/A</u>	<u>50.76</u>		%
95000020	C-107	3 DUP	S95T000372	0	TGA-01	SOLID	<u>50.76</u>	<u>49.74</u>	<u>N/A</u>	%
95000020	C-107	4 SAMPLE	S95T000373	0	TGA-01	SOLID	<u>N/A</u>	<u>66.58</u>		%
95000020	C-107	5 DUP	S95T000373	0	TGA-01	SOLID	<u>66.58</u>	<u>66.90</u>	<u>N/A</u>	%

Final page for worklist # 815

Susie M. Dalton 4-12-95
Analyst Signature Date

Tim H. Hume 4-12-95
Analyst Signature Date

Verified 4/14/95. J.M. Luy

Data Entry Comments:

S95T000372 is a thick dark brown sludge

S95T000373 is a thin med. brown sludge

TGA STD 42N8-A

18.819 mg

Rate: 10.0 °C/min

File: 00107.001 TG METTLER 12-Apr-95

Ident: 0.0

222-S Laboratory

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 103 TO 107.

Step Analysis

Height-11.00 mg

-58.44 %

ResidC. 7.82 mg

41.56 %

Dpeak 87.0 °C

103

WHC-SD-WM-DP-106, REV.0

Lusie M. Julten 4-12-95

File: 00109.001 TG METTLER 12-Apr-95
 Ident: 0.0 222-S Laboratory

Rate: 10.0 °C/min

S95T000372 N2
 23.323 mg

Step Analysis
 Height-11.84 mg
 -50.76 %
 Resid. 11.48 mg
 49.24 %
 Dpeak 95.0 °C

S95T000373 (DUP) N2

24.145 mg

Rate: 10.0 °C/min

File: 00115.001

Ident: 0.0

TG METTLER

12-Apr-95

222-S Laboratory

Step Analysis

Height-16.15 mg

-66.90 %

ResidC. 7.99 mg

33.10 %

Dpeak 115.0 °C

LABCORE Data Entry Template for Worklist# 816

Analyst: KRM Instrument: TGA01 Book # 42N8A

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

Worklist Comment: Please run C-107 TGA under N2. bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-01	SOLID	<u>59.19</u>	<u>56.99</u>	<u>N/A</u>	%
95000020	C-107	2 SAMPLE	S95T000256	0	TGA-01	SOLID	<u>N/A</u>	<u>62.88</u>		%
95000020	C-107	3 DUP	S95T000256	0	TGA-01	SOLID	<u>62.88</u>	<u>64.05</u>	<u>N/A</u>	%

Final page for worklist # 816

[Signature] 4-9-95
Analyst Signature Date

[Signature] 4-12-95
Analyst Signature Date

Verified 4/14/95 J. M. Lye

Data Entry Comments:

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

TGA STD 42N8-A

16.356 mg

Rate: 10.0 °C/min

File: 00099.001 TG METTLER 09-Apr-95

Ident: 0.0 222-S Laboratory

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 109 TO 111.

5. mg

Step Analysis
Height -9.32 mg
-56.99 %
Resid. 7.04 mg
43.01 %
Dpeak 81.7 °C

50. 100. 150. 200. 250. °C

[Signature] 4-9-95

S95T000256 N2

16.833 mg

Rate: 10.0 °C/min

File: 00103.001 TG METTLER 09-Apr-95

Ident: 0.0

222-S Laboratory

Step Analysis
Height-10.58 mg
-62.88 %
ResiC. 6.25 mg
37.12 %
Dpeak 79.0 °C

110

5. mg

100.

200.

300.

400.

°C

WHC-SD-WM-DP-106, REV.0

LABCORE Data Entry Template for Worklist# 817

Analyst: SMF Instrument: TGA01 Book # 42N8-17

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

Worklist Comment: Please run C-107 TGA under N2. bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-01	SOLID	<u>59.19</u>	<u>58.90</u>	N/A	%
95000020	C-107	2 SAMPLE	S95T000374	0	TGA-01	SOLID	N/A	<u>62.75</u>		%
95000020	C-107	3 DUP	S95T000374	0	TGA-01	SOLID	<u>62.75</u>	<u>61.84</u>	N/A	%
95000020	C-107	4 SAMPLE	S95T000375	0	TGA-01	SOLID	N/A	<u>41.26</u>		%
95000020	C-107	5 DUP	S95T000375	0	TGA-01	SOLID	<u>41.26</u>	<u>41.46</u>	N/A	%

Final page for worklist # 817

Lucie M. Fulton 4-13-95
Analyst Signature Date

[Signature] 4-13-95
Analyst Signature Date

Verified 4/18/95 J M Luge

Data Entry Comments:

^{SMF initials}
S95T000374 has one Gmf 4/17/95 S95T000375 has a second weight loss step of
10.86% at 283°C, duplicate has 9.87% at 285°C. J M Luge 4/17/95

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

TGA STD 42N8-A

File: 00125.001

TG

METTLER

13-Apr-95

15.120 mg

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 113 TO 117.

Step Analysis

Height -8.91 mg

-58.90 %

ResiC. 6.21 mg

41.10 %

Dpeak 82.5°C

WHC-SD-MM-DP-106, REV.0

113

5. mg

50. 100. 150. 200. °C

Susie M. Daulton 4-13-95

File: 00127.001 TG METTLER 13-Apr-95
 Ident: 0.0 222-S Laboratory

Rate: 10.0 °C/min

S95T000374 N2
 21.434 mg

Step Analysis
 Height-13.45 mg
 -62.75 %
 Resid. 7.98 mg
 37.25 %
 Dpeak 83.3 °C

File: 00129.001 TG METTLER 13-Apr-95

Ident: 0.0 222-S Laboratory

S95T000374 (DUP) N2

10.157 mg

Rate: 10.0 °C/min

Step Analysis
 Height -6.28 mg
 -51.84 %
 Resid. 3.88 mg
 38.16 %
 Dpeak 65.0 °C

File: 00131.001 16 10/11/98 13-Apr-98
 Ident: 0.0 222-S Laboratory

Rate: 10.0 °C/min

925100075 1.2
 20.801 mg

Step Analysis
 Height -8.58 mg
 -41.26 %
 Resid. 12.22 mg
 58.74 %

Step Analysis
 Height -2.26 mg
 -10.86 %
 Resid. 9.61 mg
 46.21 %
 Dpeak 283.0 °C

89570003 'S (DUP)

File: 00133.001 TG METTLER 113 100 20

117

117

117

117

Step Analysis
Height-12.71 mg
-41.46 %
ResiC. 17.95 mg
58.54 %
Dpeak 87.0°C

BEST AVAILABLE COPY

Step Analysis
Height -3.03 mg
-9.87 %
ResiC. 14.51 mg
47.33 %
Dpeak 285.0°C

WHC-SD-WM-DP-106, REV.0

LABCORE Data Entry Template for Worklist# 818

Analyst: SMF Instrument: TGA01 Book # 42N8-A

Method: LA-514-114 Rev/Mod B-01 JMF 4/20/95

Worklist Comment: Please run C-107 TGA under N2. bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-03	SOLID	<u>59.19</u>	<u>57.71</u>	<u>N/A</u>	%
95000020	C-107	2 SAMPLE	S95T000376	0	TGA-03	SOLID	<u>N/A</u>	<u>56.15</u>		%
95000020	C-107	3 DUP	S95T000376	0	TGA-03	SOLID	<u>56.15</u>	<u>48.10</u>	<u>N/A</u>	%
95000020	C-107	4 DUP2	S95T000376	0	TGA-03	SOLID	<u>56.15</u> <u>48.10</u>	<u>48.66</u>	<u>N/A</u>	%
95000020	C-107	5 SAMPLE	S95T000377	0	TGA-03	SOLID	<u>N/A</u>	<u>62.58</u>		%
95000020	C-107	6 DUP	S95T000377	0	TGA-03	SOLID	<u>62.58</u>	<u>63.87</u>	<u>N/A</u>	%

Final page for worklist # 818

See attached for signatures
Analyst Signature Date

Newight 4/20/95
Analyst Signature Date

Verified by Blundina Valenzuela 4/24/95

Data Entry Comments:

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

LABCORE Data Entry Template for Worklist# 818

Analyst: SMF Instrument: TGA01 Book # 42N8-17

Method: LA-560-112 Rev/Mod SMF 4-13-95 LA-514-114 BDI

Worklist Comment: Please run C-107 TGA under N2. bdv

SMF 4/26/95

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-01	SOLID			N/A	%
95000020	C-107	2 SAMPLE	S95T000376	0	TGA-01	SOLID	N/A			%
95000020	C-107	3 DUP	S95T000376	0	TGA-01	SOLID			N/A	%
95000020	C-107	4 SAMPLE	S95T000377	0	TGA-01	SOLID	N/A			%
95000020	C-107	5 DUP	S95T000377	0	TGA-01	SOLID			N/A	%

Final page for worklist # 818

Susie M. Dulton
Analyst Signature Date 4-13-95

Analyst Signature Date

Data Entry Comments:

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

Curve 1: TGA

File info: TER041301 Thu Apr 13 08:07:21 1995

Sample Weight: 15.017 mg

42N8A Terliq

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 120 TO 125.

N2
TEMP: 25.0 °C
TIME: 0.0 min RATE: 10.0 °/min

SM Fulton
PERKIN-ELMER
7 Series Thermal Analysis System
Thu Apr 13 08:17:24 1995

Susie M. Fulton 4-13-95

Curve 1: TGA

File info: SAM041301 Thu Apr 13 09:37:29 1995

Sample Weight: 11.739 mg

S95T000376, 10C/min

WHC-SD-WM-DP-106, REV. 0

N2
TEMP: 25.0 °C
TIME: 0.0 min RATE: 10.0 °C/min

Temperature (°C)

SM Fulton
PERKIN-ELMER
7 Series Thermal Analysis System
Thu Apr 13 09:43:31 1995

Curve 1: TGA

File info: SAM041302 Thu Apr 13 10:38:06 1995

Sample Weight: 12.324 mg

S95T000376 (DUP), 10C/min

WHC-SD-WM-DP-106, REV. 0

N2
TEMP: 35.0 °C
TIME: 0.0 min RATE: 10.0 °C/min

Temperature (°C)

SM Fulton
PERKIN-ELMER
7 Series Thermal Analysis System
Thu Apr 13 11:28:00 1995

Curve 1: TGA

File info: SAM041303 Thu Apr 13 12:33:57 1995

Sample Weight: 13.123 mg

S95T000376 (DUP2) 10C/min

WHC-SD-WM-DP-106, REV. 0

N2

TEMP: 25.0 °C TIME: 0.0 min RATE: 10.0 °C/min

Temperature (°C)

SM Fulton
PERKIN-ELMER
7 Series Thermal Analysis System
Thu Apr 13 12:37:25 1995

Curve 1: TGA

File info: SAM0413004 Thu Apr 13 13: 41: 15 1995

Sample Weight: 10.480 mg

S95T000377, 10C/min

N2
TEMP: 25.0 °C
TIME: 0.0 min RATE: 10.0 °C/min

SM Fulton
PERKIN-ELMER
7 Series Thermal Analysis System
Thu Apr 13 13: 43: 50 1995

Curve 1: TGA

File info: Sam041305 Thu Apr 13 14:50:36 1995

Sample Weight: 16.606 mg

S95T000377 (DUP), 10C/min

WHC-SD-WM-DP-106, REV. 0

N2

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

Temperature (°C)

SM Fulton
PERKIN-ELMER
7 Series Thermal Analysis System
Thu Apr 13 14:53:55 1995

LABCORE Data Entry Template for Worklist# 819

Analyst: KRM Instrument: TGA01 _____ Book # 42N8A

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

Worklist Comment: Please run C-107 TGA under N2. bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-01	SOLID	<u>59.19</u>	<u>58.35</u>	N/A	%
95000020	C-107	2 SAMPLE	S95T000378	0	TGA-01	SOLID	<u>N/A</u>	<u>70.64</u>		%
95000020	C-107	3 DUP	S95T000378	0	TGA-01	SOLID	<u>70.64</u>	<u>68.69</u>	N/A	%

Final page for worklist # 819

[Signature] 4-12-95
Analyst Signature Date

[Signature] 4-18-95
Analyst Signature Date

Verified 4/18/95 J. M. Lye

Data Entry Comments:

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

TGA STD 42N8A

File: 00117.001 TG METTLER 12-Apr-95

16.860 mg

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 127 TO 129.

Step Analysis

Height -9.84 mg

-58.35 %

ResiC. 7.02 mg

41.65 %

Dpeak 89.8 °C

WHCSD-WM-DP-106, REV.0

127

5. mg

50. 100. 150. 200. 250. °C

[Signature] 4-12-95

S95T000378 (DUP) N2
8.448 mg

Rate: 10.0 °C/min

File: 00123.001 TG METTLER 12-Apr-95
Ident: 0.0 222-S Laboratory

Step Analysis
Height -5.80 mg
-68.69 %
Resic. 2.65 mg
31.31 %
Dpeak 65.0 °C

2. mg

LABCORE Data Entry Template for Worklist# 931

Analyst: SMF Instrument: TGA01 Book # 42N8-A

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

Worklist Comment: Please run C-107 TGA under N2. bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-01	SOLID	<u>59.19</u>	<u>58.60</u>	<u>N/A</u>	%
95000023	C-107	2 SAMPLE	S95T000424	0	TGA-01	SOLID	<u>N/A</u>	<u>70.23</u>		%
95000023	C-107	3 DUP	S95T000424	0	TGA-01	SOLID	<u>70.23</u>	<u>70.28</u>	<u>N/A</u>	%
95000023	C-107	4 SAMPLE	S95T000425	0	TGA-01	SOLID	<u>N/A</u>	<u>59.50</u>		%
95000023	C-107	5 DUP	S95T000425	0	TGA-01	SOLID	<u>59.50</u>	<u>58.89</u>	<u>N/A</u>	%

Final page for worklist # 931

Lusie M. Dulter
Analyst Signature Date 4-14-95

John Smith 4-18-95
Analyst Signature Date

Verified J. M. Lye 4/18/95

Data Entry Comments:

BEST AVAILABLE COPY

TGA STD 42NB-A
15.694 mg
Rate: 10.0 °C/min
File: 00135.001 TG METTLER 14-Apr-95
Ident: 0.0 222-S Laboratory

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 131 TO 135.

Step Analysis
Height -9.20 mg
-58.60 %
Resid. 6.50 mg
41.40 %
Dpeak 78.0 °C

BEST AVAILABLE COPY

Susie M. Fulton 4-14-95

File: 00137.001 TC 14.771 min 10 Apr-95
 Ident: 0.0 022-S Laboratory

Rate: 10.0 °C/min

5907000424 12
 9.345 mg

Step Analysis
 Height -6.56 mg
 -70.23 %
 ResiC. 2.78 mg
 29.77 %
 Dpeak 65.0 °C

BEST AVAILABLE COPY

100. 80. 60. 40. 20. 0. 0 20 40 60 80 100

Step Analysis
Height-20.40 mg
-70.28 %
Resic. 8.63 mg
29.72 %

BEST AVAILABLE COPY

BEST AVAILABLE COPY

BEST AVAILABLE COPY

S95T000425 (DUP) N2
 15.891 mg

Rate: 10.0 °C/min

File: 00143.001

Ident: 0.0

TG METTLER

14-Apr-95

222-S Laboratory

Step Analysis
 Height -9.36 mg
 ~58.89 %
 Resid. 6.53 mg
 41.11 %
 Dpeak 79.0 °C

LABCORE Data Entry Template for Worklist# 932

Analyst: SMF Instrument: TGA01 Book # 42N8-A

Method: LA-514-114 Rev/Mod B-01 SMF
4/24/95

Worklist Comment: Please run C-107 TGA under N2. bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-03	SOLID	<u>59.19</u>	<u>58.42</u>	<u>N/A</u>	%
95000023	C-107	2 SAMPLE	S95T000426	0	TGA-03	SOLID	<u>N/A</u>	<u>36.86</u>		%
95000023	C-107	3 DUP	S95T000426	0	TGA-03	SOLID	<u>36.86</u>	<u>38.52</u>	<u>N/A</u>	%
95000023	C-107	4 SAMPLE	S95T000427	0	TGA-03	SOLID	<u>N/A</u>	<u>51.90</u>		%
95000023	C-107	5 DUP	S95T000427	0	TGA-03	SOLID	<u>51.90</u>	<u>51.76</u>	<u>N/A</u>	%

Final page for worklist # 932

See attached for signature
Analyst Signature Date

RE Wright 4/20/95
Analyst Signature Date

Verified by Blandina Valenzuela 4/24/95

Data Entry Comments: Sample S95T000426 produced a second weight loss step
of 13.99 wt %.

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

LABCORE Data Entry Template for Worklist# 932

Analyst: SMF Instrument: TGA01 Book # 42N8-A

Method: ~~LA-560-112 Rev/Mod~~ LA-514-114/B-Ø
SMF 4-14-95 19mf 4/26/95

Worklist Comment: Please run C-107 TGA under N2. bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-01	SOLID			N/A	%
95000023	C-107	2 SAMPLE	S95T000426	0	TGA-01	SOLID	N/A			%
95000023	C-107	3 DUP	S95T000426	0	TGA-01	SOLID			N/A	%
95000023	C-107	4 SAMPLE	S95T000427	0	TGA-01	SOLID	N/A			%
95000023	C-107	5 DUP	S95T000427	0	TGA-01	SOLID			N/A	%

Final page for worklist # 932

Lucie M. Fulton
Analyst Signature Date 4-14-95

Analyst Signature Date

Data Entry Comments:

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

Curve 1: TGA

File info: TER041401 Fri Apr 14 08:07:33 1995

Sample Weight: 16.373 mg

42N8A Terliq

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 138 TO 142.

Susie M. Fulton 4-14-95

Curve 1: TGA

File info: SAM041401 Fri Apr 14 09:42:19 1995

Sample Weight: 19.028 mg

S95T000426, 10C/min

139

WHC-SD-WM-DP-106, REV.0

N2
TEMP1: 25.0 C
TEMP2: 500.0 C
TIME1: 0.0 min
RATE1: 10.0 C/min

SM Fulton
PERKIN-ELMER
7 Series Thermal Analysis System
Fri Apr 14 13:45:26 1995

Curve 1: TGA
File Info: SAM041402 Fri Apr 14 11:22:17 1995
Sample Weight: 17.554 mg
S95T000426 (DUP), 10C/min

WHC-SD-WM-DP-106, REV. 0

N2
TIME: 35.0 C
TIME: 500.0 C
TIME: 0.0 min RATE: 10.0 C/min

Temperature (°C)

SM Fulton
PERKIN-ELMER
7 Series Thermal Analysis System
Fri Apr 14 11:41:51 1995

Curve 1: TGA
 File info: SAM041403 Fri Apr 14 12:34:24 1995
 Sample Weight: 11.567 mg
 S95T000427X, 10C/min

Sub-A-H-A

N2
 TEMPERATURE 26.233 °C
 TIME: 0.0 min RATE: 10.0 °C/min
 SM Fulton
 PERKIN-ELMER
 7 Series Thermal Analysis System
 Fri Apr 14 13:15:43 1995

Curve 1: TGA
 File info: SAM041404 Fri Apr 14 14:24:03 1995
 Sample Weight: 14.863 mg
 S95T000427, 10C/min

WHC-SD-WM-DP-106, REV.0

N2
 TEMP: 35.0 °C TIME: 0.0 min RATE: 10.0 °C/min
 TEND: 500.0 °C

Temperature (°C)

SM Fulton
 PERKIN-ELMER
 7 Series Thermal Analysis System
 Fri Apr 14 14:32:44 1995

LABCORE Data Entry Template for Worklist# 933

Analyst: DWS Instrument: TGA01 Book # 42W8-14

Method: LA-560-112 Rev/Mod A2

Worklist Comment: Please run C-107 TGA under N2. bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-01	SOLID	<u>59.19</u>	<u>58.56</u>	<u>N/A</u>	%
95000023	C-107	2 SAMPLE	S95T000428	0	TGA-01	SOLID	<u>N/A</u>	<u>49.77</u>		%
95000023	C-107	3 DUP	S95T000428	0	TGA-01	SOLID	<u>49.77</u>	<u>54.92</u>	<u>N/A</u>	%
95000023	C-107	4 SAMPLE	S95T000429	0	TGA-01	SOLID	<u>N/A</u>	<u>51.15</u>		%
95000023	C-107	5 DUP	S95T000429	0	TGA-01	SOLID	<u>51.15</u>	<u>50.66</u>	<u>N/A</u>	%

Final page for worklist # 933

David W. Smith 4-15-95
Analyst Signature Date

David W. Smith 4-19-95
Analyst Signature Date

Verified 4/18/95 J. M. Lye

Data Entry Comments:

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

File: 00159.001 TG METTLER 15-Apr-95
 Ident: 0.0 222-S Laboratory

Rate: 10.0 °C/min

S95T000428 N2

38.250 mg

Step Analysis
 Height-19.04 mg
 -49.77 %
 Resid. 19.21 mg
 50.23 %
 Dpeak 103.0 °C

S954T000429 N2
37.503 mg

Rate: 10.0 °C/min

File: 00161.001 TG

METTLER

15-Apr-95

Ident: 0.0 222-S Laboratory

LABCORE Data Entry Template for Worklist# 934

Analyst: SMF Instrument: TGA01 Book # 42N8-N

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

Worklist Comment: Please run C-107 TGA under N2. bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-01	SOLID	<u>59.19</u>	<u>58.91</u>	<u>N/A</u>	%
95000023	C-107	2 SAMPLE	S95T000430	0	TGA-01	SOLID	<u>N/A</u>	<u>49.35</u>		%
95000023	C-107	3 DUP	S95T000430	0	TGA-01	SOLID	<u>49.35</u>	<u>48.76</u>	<u>N/A</u>	%
95000023	C-107	4 SAMPLE	S95T000431	0	TGA-01	SOLID	<u>N/A</u>	<u>34.84</u>		%
95000023	C-107	5 DUP	S95T000431	0	TGA-01	SOLID	<u>34.84</u>	<u>35.84</u>	<u>N/A</u>	%

Final page for worklist # 934

Lucie M. Fulton 4-17-95
Analyst Signature Date

[Signature] 4-18-95
Analyst Signature Date

Verified 4/18/95 J. M. Faye

Data Entry Comments:

S95T000430 has a second weight loss step of 5.2% at 280°C; duplicate has 5.04% at 280°C. S95T000431 has a second weight loss step of 15.72% at 280°C, duplicate has 15.18% at 283°C. J. M. Faye 4/17/95

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

TGA STD 42N8-A

File: 00166.001 TG METTLER 17-Apr-95

12.769 mg

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 150 TO 154.

Step Analysis

Height -7.52 mg

-58.91 %

ResiC. 5.25 mg

41.09 %

Dpeak 69.2 °C

BEST AVAILABLE COPY

150

5. mg

50. 100. 150. 200. °C

Susie M. Fulton 4-17-95

WHC-SD-WM-DP-106, REV. 0

S95T000430 N2

17.581 mg

Rate: 10.0 °C/min

File: 00168.001

TG

METTLER

17-Apr-95

Ident: 0.0

222-S Laboratory

151

WHC-SD-WM-DP-106, REV.0

S95T000430 (DUP) N2

24.504 mg

Rate: 10.0 °C/min

File: 00170.001

TG

METTLER

17-Apr-95

Ident: 0.0

222-S Laboratory

S95T000431 N2

8.784 mg

Rate: 10.0 °C/min

File: 00172.001

TG

METTLER

17-Apr-95

Ident: 0.0

222-S Laboratory

Step Analysis

Height -3.06 mg

-34.84 %

ResiC. 5.72 mg

65.16 %

Dpeak 51.0 °C

Step Analysis

Height -1.38 mg

-15.72 %

ResiC. 4.20 mg

47.86 %

Dpeak 277.0 °C

BEST AVAILABLE COPY

153

2. mg

100. 200. 300. 400. °C

S95T000431 (DUP) N2

21.108 mg

Rate: 10.0 °C/min

File: 00174.001

TG

METTLER

17-Apr-95

Ident: 0.0

222-S Laboratory

LABCORE Data Entry Template for Worklist# 935

Analyst: SME Instrument: TGA01 Book # 42N8-A

Method: LA-514-114 Rev/Mod B-01 gmf 4/24/95

Worklist Comment: Please run C-107 TGA under N2. bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-03	SOLID	<u>59.19</u>	<u>58.16</u>	<u>N/A</u>	%
95000023	C-107	2 SAMPLE	S95T000432	0	TGA-03	SOLID	<u>N/A</u>	<u>64.18</u>		%
95000023	C-107	3 DUP	S95T000432	0	TGA-03	SOLID	<u>64.18</u>	<u>62.89</u>	<u>N/A</u>	%
95000023	C-107	4 SAMPLE	S95T000433	0	TGA-03	SOLID	<u>N/A</u>	<u>57.47</u>		%
		5 STD			TGA-03	SOLID	<u>59.19</u>	<u>57.91</u>	<u>N/A</u>	%
95000023	C-107	6 DUP	S95T000433	0	TGA-03	SOLID	<u>57.47</u>	<u>57.84</u>	<u>N/A</u>	%

Final page for worklist # 935

See attached for signatures
Analyst Signature _____ Date _____

Data entered + verified by
Blandina Valenzuela 4/24/95
Analyst Signature _____ Date _____

Data entered 4/24/95
BDV

Data Entry Comments:

Sample S95T000433 (DUP) was analyzed ~~the~~ the day after
the previous samples. The technician did not have time to complete the
worklist. The dates found in the lower right hand corner of the graphs
is when the graph was printed.

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

LABCORE Data Entry Template for Worklist# 935

Analyst: SWF Instrument: TGA01 Book # 42N8-A

Method: ~~EA-560-112 Rev/Mod~~ LA-514-114/B-Ø1 gmf 4/26/95
SWF

Worklist Comment: Please run C-107 TGA under N2. bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-01	SOLID			N/A	%
95000023	C-107	2 SAMPLE	S95T000432	0	TGA-01	SOLID	N/A			%
95000023	C-107	3 DUP	S95T000432	0	TGA-01	SOLID			N/A	%
95000023	C-107	4 SAMPLE	S95T000433	0	TGA-01	SOLID	N/A			%
95000023	C-107	5 DUP	S95T000433	0	TGA-01	SOLID			N/A	%

Final page for worklist # 935

Susie M. Fulton 4-17-95
Analyst Signature Date

Analyst Signature Date

Data Entry Comments:

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

Mon Apr 17 08:25:13 1995
Laurie M. Fulton 4-17-95

Curve 1: TGA

File info: SAM041701 Mon Apr 17 09:32:10 1995

Sample Weight: 18.758 mg

S95T000432, 10C/min

WHC-SD-WM-DP-106, REV. 0

158

N2

TEMP1: 25.0 °C TIME1: 0.0 min RATE1: 10.0 °C/min
TEMP2: 500.0 °C

SM Fulton
PERKIN-ELMER
7 Series Thermal Analysis System
Mon Apr 17 10:28:22 1995

Curve 1: TGA

File info: SAM041702 Mon Apr 17 11:57:46 1995

Sample Weight: 20.614 mg

S95T000432 (DUP), 10C/min

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

Temperature (°C)

SM Fulton
PERKIN-ELMER
7 Series Thermal Analysis System
Tue Apr 18 11:17:44 1995

Curve 1: TGA

File info: SAM041703 Mon Apr 17 13:51:02 1995

Sample Weight: 19.133 mg

S95T000433, 10C/min

WHC-SD-WM-DP-106, REV.0

N2

TEMP1: 35.0 °C TIME1: 0.0 min RATE1: 10.0 °C/min

TEMP2: 500.0 °C

Temperature (°C)

SM Fulton
PERKIN-ELMER
7 Series Thermal Analysis System
Tue Apr 18 11:23:45 1995

Curve 1: TGA

File info: TER041801 Tue Apr 18 09:29:47 1995

Sample Weight: 9.813 mg

42N8A Terliq

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

Temperature (°C)

SM Fulton
PERKIN-ELMER
7 Series Thermal Analysis System
Tue Apr 18 10:51:14 1995

Susie M. Fulton 4-18-95

Curve 1: TGA

File info: SAM041801 Tue Apr 18 10:34:05 1995

Sample Weight: 21.057 mg

S95T000433 (DUP), 10C/min

WHC-SD-WM-DP-106, REV.0

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

Temperature (°C)

SM Fulton
PERKIN-ELMER
7 Series Thermal Analysis System
Tue Apr 18 10:39:19 1995

LABCORE Data Entry Template for Worklist# 936

Analyst: SMF Instrument: TGA01 Book # 42N8-A

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

Worklist Comment: Please run C-107 TGA under N2. bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-01	LIQUID	<u>59.19</u>	<u>58.92</u>	<u>N/A</u>	%
95000023	C-107	2 SAMPLE	S95T000435	0	TGA-01	LIQUID	<u>N/A</u>	<u>79.04</u>		%
95000023	C-107	3 DUP	S95T000435	0	TGA-01	LIQUID	<u>79.04</u>	<u>78.71</u>	<u>N/A</u>	%
95000023	C-107	4 SAMPLE	S95T000436	0	TGA-01	LIQUID	<u>N/A</u>	<u>100.06</u>		%
95000023	C-107	5 DUP	S95T000436	0	TGA-01	LIQUID	<u>100.06</u>	<u>99.90</u>	<u>N/A</u>	%

Final page for worklist # 936

Lusie M. Gulton 4-7-95
Analyst Signature Date

[Signature] 4-12-95
Analyst Signature Date

Verified 4/14/95 J. M. Luy

Data Entry Comments:

595T000435 a bright yellow liquid

TGA STD 42N8-A
16.600 mg

File: 00086.001

TG

METTLER

07-Apr-95

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 164 TO 168.

Step Analysis

Height -9.78 mg

-58.92 %

Resid. 6.82 mg

41.08 %

Dpeak 83.3 °C

200. °C

150.

100.

50.

Lucas M. Fulton 4-795

S95T000435 N2
11.546 mg

File: 00088.001 TG METTLER 07-Apr-95
Ident: 0.0 222-S Laboratory

Rate: 10.0 °C/min

Step Analysis
Height -9.13 mg
-79.04 %
Resid. 2.42 mg
20.96 %
Dpeak 79.0 °C

100. 200. 300. 400. °C

File: 00090.001 TG METTLER 07-Apr-95
 Ident: 0.0 222-S Laboratory

S95T000435 (DUP) N2
 12.921 mg Rate: 10.0 °C/min

Step Analysis
 Height-10.17 mg
 -78.71 %
 ResidC. 2.75 mg
 21.29 %
 Dpeak 81.0 °C

S95T000436 N2

10.021 mg

Rate: 10.0 °C/min

File: 00092.001

TG

METTLER

07-Apr-95

Ident: 0.0

222-S Laboratory

Step Analysis

Height-10.03 mg

-100.06 %

ResiC. -0.01 mg

-0.06 %

167

WHC-SD-WM-DP-106, REV.0