Columbia Analytical Services

2655 Park Center Drive, Suite A 1 Simi Vallay, CA 93065

805,526.7161

#### 5.626.7270 fax 1

www.caslab.com

### LABORATORY REPORT

June 16, 2010

Brian Baker Environmental Health & Engineering, Inc. 117 Fourth Avenue Needham, MA 02494

### RE: 17131

Dear Brian:

Enclosed are the results of the samples submitted to our laboratory on May 21, 2010. For your reference, these analyses have been assigned our service request number P1001783.

All analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.caslab.com. Results are intended to be considered in their entirety and apply only to the samples analyzed and reported herein. Your report contains 54 pages.

Columbia Analytical Services, Inc. is certified by the California Department of Health Services, NELAP Laboratory Certificate No. 02115CA; Arizona Department of Health Services, Certificate No. AZ0694; Florida Department of Health, NELAP Certification E871020; New Jersey Department of Environmental Protection, NELAP Laboratory Certification ID #CA009; New York State Department of Health, NELAP NY Lab ID No: 11221; Oregon Environmental Laboratory Accreditation Program, NELAP ID: CA20007; The American Industrial Hygiene Association, Laboratory #101661; United States Department of Defense Environmental Laboratory Accreditation No. 68-03307; TX Commission of Environmental Quality, NELAP ID T104704413-09-TX; Minnesota Department of Health, Certificate No. 11495AA; Washington State Department of Ecology, ELAP Lab ID: C946. Each of the certifications listed above have an explicit Scope of Accreditation that applies to specific matrices/methods/analytes; therefore, please contact me for information corresponding to a particular certification.

If you have any questions, please call me at (805) 526-7161.

Respectfully submitted,

**Columbia Analytical Services, Inc.** 

Culleste

Sue Anderson Project Manager



2655 Park Center Drive, Suite A

Simi Valley, CA 93065

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Client:	Environmental Health & Engineering, Inc.	CAS Project No:	P1001783
Project:	17131		

### CASE NARRATIVE

The samples were received intact under chain of custody on May 21, 2010 and were stored in accordance with the analytical method requirements. Please refer to the sample acceptance check form for additional information. The results reported herein are applicable only to the condition of the samples at the time of sample receipt.

#### Orthorhombic Cycloostasulfur Analysis

A portion of the wallboard samples was prepared and analyzed for orthorhombic cyclooctasulfur according to CAS AQL 103A using a gas chromatograph equipped with an electron capture detector (ECD).

The surrogate Hexabromobenzene was outside control criteria in Duplicate Laboratory Control Sample (DLCS) due to analyst error. During the preparation it was determined that the duplicate laboratory control sample was double spiked. The sample results were not affected by this anomaly. The other method controls, LCS surrogate and sample surrogate, met acceptance criteria; therefore, the data was approved.

The spike recovery in the Batch QC Matrix Spike (MS) was outside the lower control criterion due to matrix interference. No corrective action was appropriate.

The results for the samples in this delivery group are indicative of non-suspect wallboard.

The results of analyses are given in the attached laboratory report. All results are intended to be considered in their entirety, and Columbia Analytical Services, Inc. (CAS) is not responsible for utilization of less than the complete report.

### SAMPLE CROSS-REFERENCE

SAMPLE #	CLIENT SAMPLE ID	DATE	TIME
P1001783-001	111136	5/20/10	00:00
P1001783-002	111137	5/20/10	00:00
P1001783-003	111138	5/20/10	00:00

. .

Environmer Health &		CHAIN OF C		DATE: 5/20/10
In all correspor	hdence regarding this	a matter, please refer ered by EH&E Purcha	FROM: Environmental Health 60 Wells Avenue Newton, MA 02459-3 Please send invoices to AT Please send reports to ATT to EH&E Project #171	TN: Accounts Payable N: Data Coordinator
SAMPLE ID	ta Coordinator - URG		CAL METHOD/NUMBER	
			\	OTHER:Time/Date/Vol.
11136	Drywall	GC/EC		5/20/10 Apx. 1.29
111138				V
11170	6 felosocie served following			h more and the second s
		·		
Special instruc	ctions;			
	🗴 Standard tur	rn around time	□ Rush by —— date/time	Other
	□ Fax results	617-964-8556	date/time	
		AMPLES	Electronic transfer - datacood	linator@eheinc.com
	🔊 Additional re	port recipient	tminegishi@ eh	leinc. com
Each signate	ory please returr	n one copy of thi	s form to the above addr	ess
	and all and a second		ntal Health & Engineering, Inc.	Date: 5/20/10
	k ~ //		£	
Received by:			name) <u> </u>	
Relinquished by			name)	
			name)	
Relinquished by	•	of (company	name)	Date:
Received by:		of (company	name)	Date:
Lab Data Received by:		of Environme	ntal Health & Engineering, Inc.	Date:
,				1 6
				Page — of —

## Columbia Analytical Services, Inc.

Sample Acceptance Check Form

Client:	Environmenta	al Health & Engineerii	.ng, Inc.			Work order:	P1001783			***
Project:					-					
-	(s) received on:				Date opened:		by:	MZAN		
		samples received by CAS. T							on of	
compliance of	or nonconformity.	Thermal preservation and pH	H will only be evan	luated either at the	request of the che	ent and/or as required	d by the method/SOr	ор. <u>Yes</u>	<u>No</u>	<u>N/A</u>
1	Were sample	containers properly r	marked with c	client sample IJ	D?			$\mathbf{X}$		
2	_	supplied by CAS?		-				$\mathbf{X}$		
3	Did sample c	ontainers arrive in go	ood condition?	?				X		
4	Was a chain-	of-custody provided?						$\mathbf{X}$		
5	Was the chair	n-of-custody properly	completed?					$\mathbf{X}$		
6	Did sample c	ontainer labels and/or	or tags agree w	vith custody pa	.pers?			X		
7	Was sample v	volume received adequ	uate for analys	sis?				X		
8	Are samples v	within specified holdin	ag times?					$\mathbf{X}$		
9	Was proper te	emperature (thermal j	preservation)	of cooler at rec	ceipt adhered	to?				X
		-		°C Blank	Temperature		°C			
10		ank received?								$\mathbf{X}$
	-	supplied by CAS:								
11	-	seals on outside of co	poler/Box?						$\boxtimes$	
	Location of	• • •					Sealing Lid?			$\mathbf{X}$
		ture and date included	.?							$\mathbf{X}$
	Were seals i									$\boxtimes$
	-	seals on outside of sar	mple containe	л?			10		$\boxtimes$	
	Location of	• • •				657108-1009-100-100-100-100-100-100-100-100-10	Sealing Lid?			X
		ture and date included	.?							$\mathbf{X}$
	Were seals in		<b>'</b> 00	1º - to mot	1 1/00D of (	C1:	·			X
12		s have appropriate <b>pre</b>		-		lient specified i	information (			X
		ent indication that the			reserved?					X
	Diff. Sold State of the second state of the se	vials checked for prese					-			$\mathbf{X}$
÷ =,		nt/method/SOP require		•	sample pH an	id <u>if necessary</u> a	lter it?			X
13	Tubes:	Are the tubes cap	1	t?						$\mathbf{X}$
		Do they contain 1								$\mathbf{X}$
14	Badges:	Are the badges p				_				$\mathbf{X}$
		Are dual bed bad	lges separated	and individua	lly capped an	d intact?				$\mathbf{X}$
Lab	Sample ID	Container	Required	Received	Adjusted	VOA Headspac		pt / Presi	•••••••	
		Description	* Hq	pH	pH	(Presence/Absence	<u>s</u>	Commen	<i>i</i> ts	
P1001783		40mL VOA NP								
P1001783		40mL VOA NP	['	[!						
P1001783	9-003.01	40mL VOA NP	<u> </u>	<u> </u>	ļ′					
	,	· · · ·	1 '	1 '	1 7	1				ľ

Explain any discrepancies: (include lab sample ID numbers):

\*Required pH: Phenols/COD/NH3/TOC/TOX/NO3+NO2/TKN/T.PHOS, H2SO4 (pH<2); Metals, HNO3 (pH<2); CN (NaOH or NaOH/Asc Acid) (pH>12); Diss. Sulfide, NaOH (pH>12); T. Sulfide, NaOH/ZnAc (pH>12) RSK - MEEPP, HCL (pH<2); RSK - CO2, (pH 5-8); Sulfur (pH>4)

# RESULTS OF ORTHORHOMBIC CYCLOOCTASULFUR ANALYSIS

### COLUMBIA ANALYTICAL SERVICES, INC.

### **RESULTS OF ANALYSIS** Page 1 of 1

Client: Client Project ID:	Environmental Health & 17131	Engineering, Inc.	CAS Project ID: P1001783
		Orthorhombic Cyclooctasulfur	
Test Code: Instrument ID: Analyst: Sampling Media: Test Notes:	CAS AQL 103A HP6890/GC6/ECD/ECD Hani Cherazaie Wallboard		Date Received: 5/21/10 Date Extracted: 5/26/10 Date Analyzed: 5/26/10

		Sample	Extract				
Client Sample ID	CAS Sample ID	Amount	Volume D	oilution	Result	LOQ	Data
		Gram(s)	ml(s) I	Factor	mg/Kg	mg/Kg	Qualifier
111136	P1001783-001	1.00	5.0	1.00	ND	5.0	
111137	P1001783-002	1.00	5.0	1.00	ND	5.0	
111138	P1001783-003	1.00	5.0	1.00	ND	5.0	
Negative Control Sample	P100526-NCS	1.00	5.0	1.00	ND	5.0	

ND = Compound was analyzed for, but not detected above the limit of quantitation.

LOQ = Limit of Quantitation.

According to the Florida Department of Health (http://www.doh.state.fl.us/environment/community/indoor-air/casedefinition.html, 1/5/2010), a positive result above 10 mg/kg is indicative of corrosive drywall.

A positive result between 5-10 mg/kg is inconclusive; further testing may be warranted.

#### LABORATORY CONTROL SAMPLE / DUPLICATE LABORATORY CONTROL SAMPLE SUMMARY

		Spike Amount	Re	sult			CAS			
Client Sample ID	CAS Sample ID	LCS / DLCS	LCS	DLCS	% Re	covery	Acceptance	RPD	RPD	Data
		mg/Kg	mg/Kg	mg/Kg	LCS	DLCS	Limits		Limit	Qualifier
Dup Lab Control Sample	P100526-DLCS	44.7	50.0	49.5	112	111	70-130	1	20	

Data Path : J:\GC06\DATA\S8\2010 05\26\ Data File : 05261010.D Signal(s) : ECD1A.CH Acq On : 26 May 2010 5:04 pm Operator : HC Sample : P1001783-001-ext.5/26/10 fv=5ml Misc : GC/ECD method S8 : 8 ALS Vial Sample Multiplier: 1 Integration File: events.e Quant Time: May 27 10:22:57 2010 Quant Method : J:\GC06\METHODS\S8051910.M Quant Title : Elemental Sulfur by GC\ECD QLast Update : Wed May 19 16:45:50 2010 Response via : Initial Calibration Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped Volume Inj. : 1uL Signal Phase : RTX5Sil 2m x 18mm x.18um Signal Info : Response Signal: 05261010.D\ECD1A.CH 2.8e+07 2.6e+07 0.834 2.4e+07 2.2e+07 2e+07 1.8e+07 1.6e+07 1.4e+07 1.2e+07 1e+07 8000000 3.274 6000000 4000000 2000000 1.747 0 -2000000 Hexabromob etrabromo Elemental 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.20 2.40 2.60 2.80 3.00 3.20 3.40 3.60 3.80 4.00 4.20 4.40 4.60 4.80 Time

S8051910.M Thu May 27 10:25:35 2010

Data Path : J:\GC06\DATA\S8\2010 05\26\ Data File : 05261010.D Signal(s) : ECD1A.CH Acq On : 26 May 2010 5:04 pm Operator : HC Sample : P1001783-001-ext.5/26/10 fv=5ml Misc : GC/ECD method S8 ALS Vial : 8 Sample Multiplier: 1 Integration File: events.e Quant Time: May 27 10:22:57 2010 Quant Method : J:\GC06\METHODS\S8051910.M Quant Title : Elemental Sulfur by GC\ECD QLast Update : Wed May 19 16:45:50 2010 Response via : Initial Calibration Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped Volume Inj. : 1uL Signal Phase : RTX5Sil 2m x 18mm x.18um Signal Info : R.T. Response Conc Units Compound Internal Standards 1) Tetrabromobenzene 0.834 518833151 20.000 ug/ml Target Compounds 2)Elemental Sulfur1.74719799180.237 ug/ml3)Hexabromobenzene3.27513983361012.008 ug/ml SemiQuant Compounds - Not Calibrated on this Instrument \_\_\_\_\_

(f) = RT Delta > 1/2 Window

(m) = manual int.

Data Path : J:\GC06\DATA\S8\2010 05\26\ Data File : 05261011.D Signal(s) : ECD1A.CH Acq On : 26 May 2010 5:11 pm Operator : HC : P1001783-002-ext.5/26/10 fv=5ml Sample Misc : GC/ECD method S8 ALS Vial : 9 Sample Multiplier: 1 Integration File: events.e Quant Time: May 27 10:23:09 2010 Quant Method : J:\GC06\METHODS\S8051910.M Quant Title : Elemental Sulfur by GC\ECD QLast Update : Wed May 19 16:45:50 2010 Response via : Initial Calibration Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped Volume Inj. : 1uL Signal Phase : RTX5Sil 2m x 18mm x.18um Signal Info : Signal: 05261011.D\ECD1A.CH Response\_ 3.2e+07 3e+07 0.827 2.8e+07 2.6e+07 2.4e+07 2.2e+07 2e+07 1.8e+07 1.6e+07 1.4e+07 1.2e+07 1e+07 8000000 3.273 6000000 4000000 2000000 .740 0 -2000000 lexabromob etrabromo Elemental Time 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.20 2.40 2.60 2.80 3.00 3.20 3.40 3.60 3.80 4.00 4.20 4.40 4.60 4.80

S8051910.M Thu May 27 10:25:37 2010

Data Path : J:\GC06\DATA\S8\2010 05\26\ Data File : 05261011.D Signal(s) : ECD1A.CH Acq On : 26 May 2010 5:11 pm Operator : HC Sample : P1001783-002-ext.5/26/10 fv=5ml Misc : GC/ECD method S8 ALS Vial : 9 Sample Multiplier: 1 Integration File: events.e Quant Time: May 27 10:23:09 2010 Ouant Method : J:\GC06\METHODS\S8051910.M Quant Title : Elemental Sulfur by GC\ECD QLast Update : Wed May 19 16:45:50 2010 Response via : Initial Calibration Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped Volume Inj. : 1uL Signal Phase : RTX5Sil 2m x 18mm x.18um Signal Info : R.T. Response Conc Units Compound \_\_\_\_\_ Internal Standards 1) Tetrabromobenzene 0.827 629772173 20.000 ug/ml Target Compounds 2)Elemental Sulfur1.74123353350.230 ug/ml3)Hexabromobenzene3.27316469409711.651 ug/ml SemiQuant Compounds - Not Calibrated on this Instrument 

(f) = RT Delta > 1/2 Window

(m) = manual int.

Data Path : J:\GC06\DATA\S8\2010 05\26\ Data File : 05261012.D Signal(s) : ECD1A.CH : 26 May 2010 Acq On 5:18 pm Operator : HC : P1001783-003-ext.5/26/10 fv=5ml Sample Misc : GC/ECD method S8 ALS Vial : 10 Sample Multiplier: 1 Integration File: events.e Quant Time: May 27 10:23:25 2010 Quant Method : J:\GC06\METHODS\S8051910.M Quant Title : Elemental Sulfur by GC\ECD QLast Update : Wed May 19 16:45:50 2010 Response via : Initial Calibration Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped Volume Inj. : 1uL Signal Phase : RTX5Sil 2m x 18mm x.18um Signal Info : Response Signal: 05261012.D\ECD1A.CH 2.8e+07 2.6e+07 0.824 2.4e+07 2.2e+07 2e+07 1.8e+07 1.6e+07 1.4e+07 1.2e+07 1e+07 8000000 3.272 6000000 4000000 2000000 741 0 -2000000 lexabromob etrabromo amental 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.20 2.40 2.60 2.80 3.00 3.20 3.40 3.60 3.80 4.00 4.20 4.40 4.60 4.80 Time

S8051910.M Thu May 27 10:25:39 2010

Data Path : J:\GC06\DATA\S8\2010 05\26\ Data File : 05261012.D Signal(s) : ECD1A.CH Acq On : 26 May 2010 5:18 pm Operator : HC Sample : P1001783-003-ext.5/26/10 fv=5ml Misc : GC/ECD method S8 ALS Vial : 10 Sample Multiplier: 1 Integration File: events.e Quant Time: May 27 10:23:25 2010 Quant Method : J:\GC06\METHODS\S8051910.M Quant Title : Elemental Sulfur by GC\ECD QLast Update : Wed May 19 16:45:50 2010 Response via : Initial Calibration Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped Volume Inj. : 1uL Signal Phase : RTX5Sil 2m x 18mm x.18um Signal Info : R.T. Response Conc Units Compound Internal Standards 1) Tetrabromobenzene 0.825 519428259 20.000 ug/ml Target Compounds 2)Elemental Sulfur1.74114515430.173 ug/ml3)Hexabromobenzene3.27315906107113.643 ug/ml SemiQuant Compounds - Not Calibrated on this Instrument 

(f) = RT Delta > 1/2 Window

(m) = manual int.

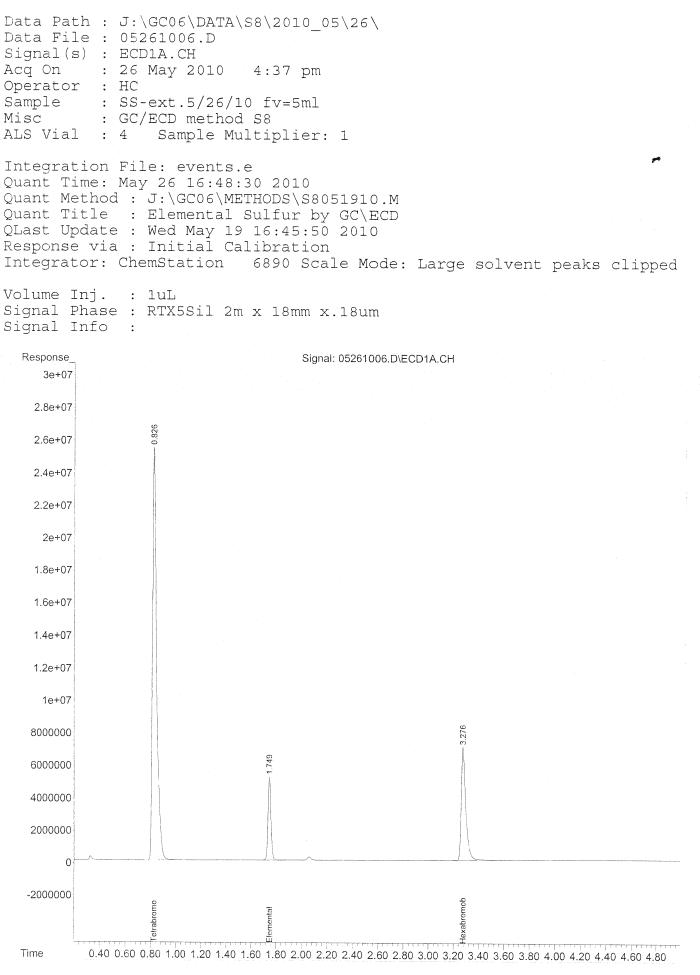
Data Path : J:\GC06\DATA\S8\2010 05\26\ Data File : 05261009.D Signal(s) : ECD1A.CH Acq On : 26 May 2010 4:57 pm Operator : HC Sample : NegativeControl-ext.5/26/10 fv=5ml Misc : GC/ECD method S8 ALS Vial : 7 Sample Multiplier: 1 Integration File: events.e Quant Time: May 26 17:06:53 2010 Quant Method : J:\GC06\METHODS\S8051910.M Quant Title : Elemental Sulfur by GC\ECD QLast Update : Wed May 19 16:45:50 2010 Response via : Initial Calibration Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped Volume Inj. : 1uL Signal Phase : RTX5Sil 2m x 18mm x.18um Signal Info : Response\_ Signal: 05261009.D\ECD1A.CH 3e+07 2.8e+07 0.824 2.6e+07 2.4e+07 2.2e+07 2e+07 1.8e+07 1.6e+07 1.4e+07 1.2e+07 1e+07 8000000 3.273 6000000 4000000 2000000 1.739 0 -2000000 Hexabromob etrabromo mental 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.20 2.40 2.60 2.80 3.00 3.20 3.40 3.60 3.80 4.00 4.20 4.40 4.60 4.80 Time

Data Path : J:\GC06\DATA\S8\2010 05\26\ Data File : 05261009.D Signal(s) : ECD1A.CH Acq On : 26 May 2010 4:57 pm Operator : HC Sample : NegativeControl-ext.5/26/10 fv=5ml Misc : GC/ECD method S8 ALS Vial : 7 Sample Multiplier: 1 Integration File: events.e Quant Time: May 26 17:06:53 2010 Quant Method : J:\GC06\METHODS\S8051910.M Quant Title : Elemental Sulfur by GC\ECD QLast Update : Wed May 19 16:45:50 2010 Response via : Initial Calibration Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped Volume Inj. : luL Signal Phase : RTX5Sil 2m x 18mm x.18um Signal Info : Compound R.T. Response Conc Units Internal Standards 1) Tetrabromobenzene 0.825 559714959 20.000 ug/ml Target Compounds Elemental Sulfur
Hexabromobenzene 1.740 1955025 0.217 ug/ml 3.273 154528148 12.301 ug/ml SemiQuant Compounds - Not Calibrated on this Instrument

(f)=RT Delta > 1/2 Window

(m)=manual int.

(QT Reviewed)



S8051910.M Thu May 27 10:25:27 2010

Quantitation Report (QT Reviewed) Data Path : J:\GC06\DATA\S8\2010 05\26\ Data File : 05261006.D Signal(s) : ECD1A.CH Acq On : 26 May 2010 4:37 pm Operator : HC Sample : SS-ext.5/26/10 fv=5ml Misc : GC/ECD method S8 ALS Vial : 4 Sample Multiplier: 1 Integration File: events.e Quant Time: May 26 16:48:30 2010 Quant Method : J:\GC06\METHODS\S8051910.M Quant Title : Elemental Sulfur by GC\ECD QLast Update : Wed May 19 16:45:50 2010 Response via : Initial Calibration Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped Volume Inj. : luL Signal Phase : RTX5Sil 2m x 18mm x.18um Signal Info : Compound R.T. Response Conc Units Internal Standards 1) Tetrabromobenzene 0.826 575848350 20.000 ug/ml Target Compounds 2) Elemental Sulfur 1.750830770408.943 ug/ml3.27617572284113.596 ug/ml 3) Hexabromobenzene SemiQuant Compounds - Not Calibrated on this Instrument

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(f) = RT Delta > 1/2 Window

(m)=manual int.

(QT Reviewed)

Data Path : J:\GC06\DATA\S8\2010 05\26\ Data File : 05261007.D Signal(s) : ECD1A.CH Acq On : 26 May 2010 4:44 pm Operator : HC Sample : LCS-ext.5/26/10 fv=5ml Misc : GC/ECD method S8 ALS Vial : 5 Sample Multiplier: 1 Integration File: events.e Quant Time: May 26 16:57:11 2010 Quant Method : J:\GC06\METHODS\S8051910.M Quant Title : Elemental Sulfur by GC\ECD QLast Update : Wed May 19 16:45:50 2010 Response via : Initial Calibration Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped Volume Inj. : 1uL Signal Phase : RTX5Sil 2m x 18mm x.18um Signal Info : Response Signal: 05261007.D\ECD1A.CH 4e+07 3.8e+07 3.6e+07 0.821 3.4e+07 3.2e+07 3e+07 2.8e+07 2.6e+07 2.4e+07 2.2e+07 2e+07 1.8e+07 1.6e+07 1.4e+07 1.2e+07 1e+07 3.274 745 8000000 6000000 4000000 2000000 0 -2000000 lexabromob trabromo -4000000 mental 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.20 2.40 2.60 2.80 3.00 3.20 3.40 3.60 3.80 4.00 4.20 4.40 4.60 4.80 Time

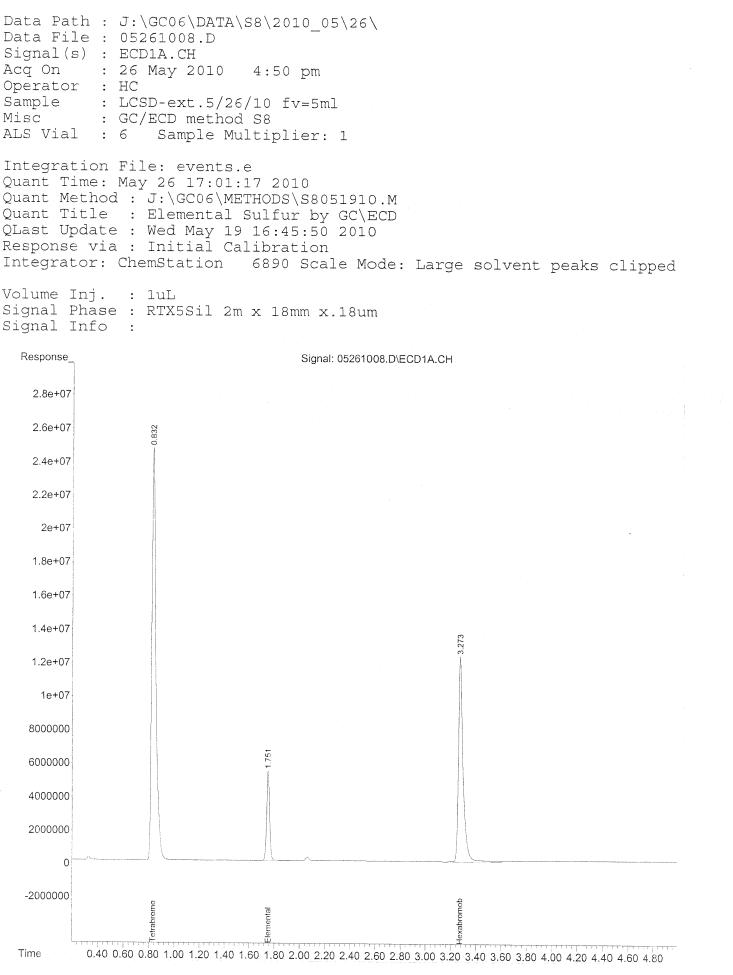
S8051910.M Thu May 27 10:25:29 2010

Data Path : J:\GC06\DATA\S8\2010\_05\26\ Data File : 05261007.D Signal(s) : ECD1A.CH Acq On : 26 May 2010 4:44 pm Operator : HC Sample : LCS-ext.5/26/10 fv=5ml Misc : GC/ECD method S8 ALS Vial : 5 Sample Multiplier: 1 Integration File: events.e Quant Time: May 26 16:57:11 2010 Quant Method : J:\GC06\METHODS\S8051910.M Quant Title : Elemental Sulfur by GC\ECD QLast Update : Wed May 19 16:45:50 2010 Response via : Initial Calibration Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped Volume Inj. : luL Signal Phase : RTX5Sil 2m x 18mm x.18um Signal Info : Compound R.T. Response Conc Units Internal Standards 1) Tetrabromobenzene 0.822 754019929 20.000 ug/ml Target Compounds Elemental Sulfur
Hexabromobenzene 1.7451215142549.990 ug/ml3.27521233580212.547 ug/ml SemiQuant Compounds - Not Calibrated on this Instrument 

(f) = RT Delta > 1/2 Window

(m)=manual int.

S8051910.M Thu May 27 10:25:29 2010



Data Path : J:\GC06\DATA\S8\2010 05\26\ Data File : 05261008.D Signal(s) : ECD1A.CH Acq On : 26 May 2010 4:50 pm Operator : HC Sample:LCSD-ext.5/26/10 fv=5mlMisc:GC/ECD method S8ALS Vial:6Sample Multiplier:1 Integration File: events.e Quant Time: May 26 17:01:17 2010 Quant Method : J:\GC06\METHODS\S8051910.M Quant Title : Elemental Sulfur by GC\ECD QLast Update : Wed May 19 16:45:50 2010 Response via : Initial Calibration Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped Volume Inj. : 1uL Signal Phase : RTX5Sil 2m x 18mm x.18um Signal Info : R.T. Response Conc Units Compound Internal Standards 1) Tetrabromobenzene 0.832 572894001 20.000 ug/ml Target Compounds 2)Elemental Sulfur1.751914106369.891 ug/ml3)Hexabromobenzene3.27432101035024.965 ug/ml SemiQuant Compounds - Not Calibrated on this Instrument \_\_\_\_\_

(f) = RT Delta > 1/2 Window

(m) = manual int.

## INITIAL CALIBRATION STANDARDS

Method Title Last U	d Path : J:\GC0 d File : S80519 : Elementa Jpdate : Wed M hse Via : Initi	10.M 1 Sulfur May 19 16:	, by GC\1 45:50 2						
10.0	ration Files =05191008.D =05191009.D	1.0 = 50.0 =	051910( 051910]		5.0 100		91007. 91011.		
	Compound	10.0	1.0	5.0	20.0	50.0	100	Avg	%RSD
1) 2) 3)	Tetrabromoben Elemental Sul Hexabromobenz	fur 0.369	0.303	0.315	0.327	0.313	0.308	0.323	7.49
(#) = 0	)ut of Range							010	

46 Jul 10

Method Path : J:\GC06\METHODS\ Method File : S8051910.M Title : Elemental Sulfur by GC\ECD Last Update : Wed May 19 16:45:50 2010 Response Via : Initial Calibration

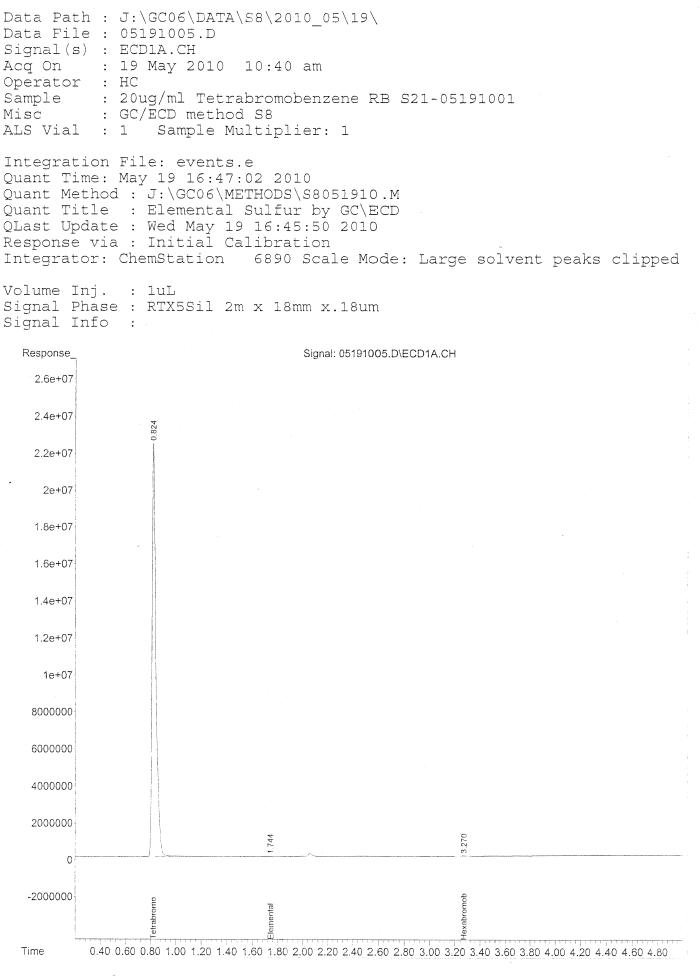
#	ID	Conc	ISTD Conc	Path\File
1	10.0	10	20	J:\GC06\DATA\S8\2010 05\19\05191008.D
2	1.0	1	20	J:\GC06\DATA\S8\2010_05\19\05191006.D
3	5.0	5	20	J:\GC06\DATA\S8\2010_05\19\05191007.D
4	20.0	20	20	J:\GC06\DATA\S8\2010_05\19\05191009.D
5	50.0	50	20	J:\GC06\DATA\S8\2010_05\19\05191010.D
6	100	100	20	J:\GC06\DATA\S8\2010_05\19\05191011.D

#	ID	Update Time	Quant Time	Acquisition Time
			Mark Ball Mark tips back the data back back base to a first ages and ages and ages one	
1	10.0	May 19 16:44 2010	May 19 16:44 2010	19 May 2010 11:00 am
2	1.0	May 19 16:44 2010	May 19 16:43 2010	19 May 2010 10:47 am
3	5.0	May 19 16:44 2010	May 19 16:44 2010	19 May 2010 10:54 am
	20.0	<b>_</b>	May 19 16:45 2010	19 May 2010 11:06 am
		May 19 16:45 2010	May 19 16:45 2010	19 May 2010 11:13 am
6	100	May 19 16:45 2010	May 19 16:45 2010	19 May 2010 11:20 am

S8051910.M Wed May 19 16:46:31 2010

Quantitation Report (Q1

(QT Reviewed)



Data Path : J:\GC06\DATA\S8\2010 05\19\ Data File : 05191005.D Signal(s) : ECD1A.CH Acq On : 19 May 2010 10:40 am Operator : HC Sample : 20ug/ml Tetrabromobenzene RB S21-05191001 Misc : GC/ECD method S8 ALS Vial : 1 Sample Multiplier: 1 Integration File: events.e Quant Time: May 19 16:47:02 2010 Quant Method : J:\GC06\METHODS\S8051910.M Quant Title : Elemental Sulfur by GC\ECD QLast Update : Wed May 19 16:45:50 2010 Response via : Initial Calibration Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped Volume Inj. : luL Signal Phase : RTX5Sil 2m x 18mm x.18um Signal Info : Compound R.T. Response Conc Units Internal Standards 1) Tetrabromobenzene 0.825 491018470 20.000 ug/ml Target Compounds 1.7443259970.041 ug/ml3.2714415800.040 ug/ml Elemental Sulfur
Hexabromobenzene 3) SemiQuant Compounds - Not Calibrated on this Instrument 

(f) = RT Delta > 1/2 Window

(m)=manual int.

Data Path : J:\GC06\DATA\S8\2010 05\19\ Data File : 05191006.D Signal(s) : ECD1A.CH Acg On : 19 May 2010 10:47 am Operator : HC Sample : lug/ml S8 Std S21-05191010 : GC/ECD method S8 Misc ALS Vial : 2 Sample Multiplier: 1 Integration File: events.e Quant Time: May 19 16:43:38 2010 Quant Method : J:\GC06\METHODS\S8051910.M Quant Title : Elemental Sulfur by GC\ECD QLast Update : Wed May 19 11:31:33 2010 Response via : Initial Calibration Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped Volume Inj. : 1uL Signal Phase : RTX5Sil 2m x 18mm x.18um Signal Info : Response\_ Signal: 05191006.D\ECD1A.CH 2.2e+07 2e+07 0.829 1.8e+07 1.6e+07 1.4e+07 1.2e+07 1e+07 8000000 6000000 4000000 2000000 3.269 1.746 0 lexabromob hrahromo emental

0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.20 2.40 2.60 2.80 3.00 3.20 3.40 3.60 3.80 4.00 4.20 4.40 4.60 4.80

S8051910.M Wed May 19 16:47:28 2010

Time

Quantitation Report (QT Reviewed)

Data Path : J:\GC06\DATA\S8\2010 05\19\ Data File : 05191006.D Signal(s) : ECD1A.CH Acq On : 19 May 2010 10:47 am Operator : HC Sample : lug/ml S8 Std S21-05191010 Misc : GC/ECD method S8 : GC/ECD method S8 ALS Vial : 2 Sample Multiplier: 1 Integration File: events.e Quant Time: May 19 16:43:38 2010 Quant Method : J:\GC06\METHODS\S8051910.M Quant Title : Elemental Sulfur by GC\ECD QLast Update : Wed May 19 11:31:33 2010 Response via : Initial Calibration Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped Volume Inj. : luL Signal Phase : RTX5Sil 2m x 18mm x.18um Signal Info : Compound R.T. Response Conc Units Internal Standards 1) Tetrabromobenzene 0.829 415113053 20.000 ug/ml Target Compounds 2)Elemental Sulfur1.74662929370.939 ug/mlm3)Hexabromobenzene3.270105633671.132 ug/ml SemiQuant Compounds - Not Calibrated on this Instrument

(f) = RT Delta > 1/2 Window

(m)=manual int.

Data Path : J:\GC06\DATA\S8\2010 05\19\ Data File : 05191006.D Signal(s) : ECD1A.CH : 19 May 2010 10:47 am Acq On Operator : HC : lug/ml S8 Std S21-05191010 Sample Misc : GC/ECD method S8 ALS Vial : 2 Sample Multiplier: 1 Integration File: events.e Quant Time: May 19 16:40:54 2010 Quant Method : J:\GC06\METHODS\S8051910.M Quant Title : Elemental Sulfur by GC\ECD QLast Update : Wed May 19 11:31:33 2010 Response via : Initial Calibration Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped Volume Inj. : 1uL Signal Phase : RTX5Sil 2m x 18mm x.18um Signal Info : Response\_ Signal: 05191006.D\ECD1A.CH 1.746 600000 550000 500000 450000 400000 350000 300000 250000 200000 Time 0.60 0.70 0.80 0.90 1.00 1.10 1.20 1.30 1.40 1.50 1.60 1.70 1.80 1.90 2.00 2.10 2.20 2.30 2.40 2.50 2.60 2.70 QEdit (2) Elemental Sulfur 1.747min 0.979 ug/ml

(+) = Expected Retention Time S8051910.M Wed May 19 16:43:31 2010

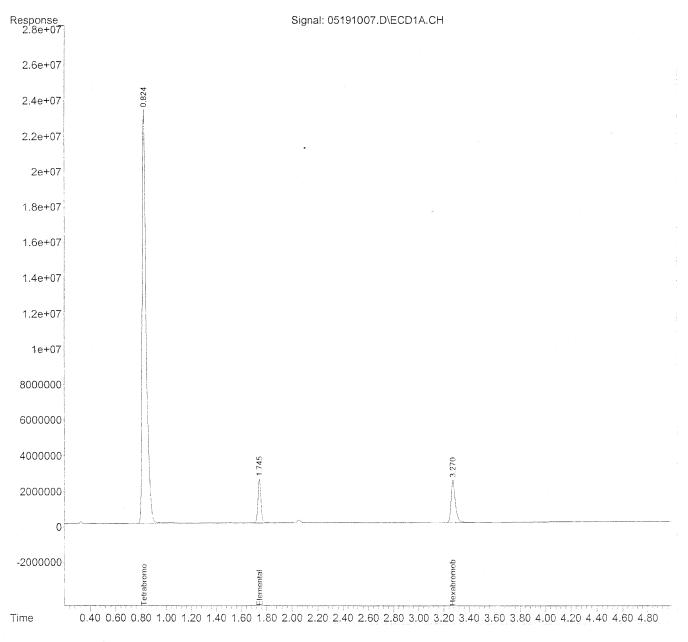
response 6555884

Data Path : J:\GC06\DATA\S8\2010 05\19\ Data File : 05191006.D Signal(s) : ECD1A.CH Acq On : 19 May 2010 10:47 am Operator : HC Sample : lug/ml S8 Std S21-05191010 Misc : GC/ECD method S8 : 2 Sample Multiplier: 1 ALS Vial Integration File: events.e Quant Time: May 19 16:40:54 2010 Quant Method : J:\GC06\METHODS\S8051910.M Quant Title : Elemental Sulfur by GC\ECD QLast Update : Wed May 19 11:31:33 2010 Response via : Initial Calibration Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped Volume Inj. : luL Signal Phase : RTX5Sil 2m x 18mm x.18um Signal Info : Signal: 05191006.D\ECD1A.CH Response 750000 700000 650000 1.746 600000 550000 500000 450000 400000 350000 300000 250000 200000 Time 1.45 1.50 1.55 1.60 1.65 1.70 1.75 1.80 1.85 1.90 1.95 2.00 2.05 2.10 2.15 2.20 2.25 2.30 QEdit (2) Elemental Sulfur 1.746min 0.939 ug/ml m 70 /10/11 response 6292937 10

(+) = Expected Retention Time S8051910.M Wed May 19 16:43:45 2010 Data Path : J:\GC06\DATA\S8\2010\_05\19\ Data File : 05191007.D Signal(s) : ECD1A.CH Acq On : 19 May 2010 10:54 am Operator : HC Sample : 5ug/ml S8 Std S21-05191009 Misc : GC/ECD method S8 ALS Vial : 3 Sample Multiplier: 1

Integration File: events.e Quant Time: May 19 16:44:26 2010 Quant Method : J:\GC06\METHODS\S8051910.M Quant Title : Elemental Sulfur by GC\ECD QLast Update : Wed May 19 16:44:03 2010 Response via : Initial Calibration Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1uL Signal Phase : RTX5Sil 2m x 18mm x.18um Signal Info :



Data Path : J:\GC06\DATA\S8\2010 05\19\ Data File : 05191007.D Signal(s) : ECD1A.CH Acq On : 19 May 2010 10:54 am Operator : HC Sample : 5ug/ml S8 Std S21-05191009 Misc : GC/ECD method S8 : GC/ECD method S8 ALS Vial : 3 Sample Multiplier: 1 Integration File: events.e Quant Time: May 19 16:44:26 2010 Quant Method : J:\GC06\METHODS\S8051910.M Quant Title : Elemental Sulfur by GC\ECD QLast Update : Wed May 19 16:44:03 2010 Response via : Initial Calibration Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped Volume Inj. : 1uL Signal Phase : RTX5Sil 2m x 18mm x.18um Signal Info : R.T. Response Conc Units Compound \_\_\_\_\_ Internal Standards 1) Tetrabromobenzene 0.824 519499449 20.000 ug/ml Target Compounds 1.745409560034.887 ug/ml3.270573987074.923 ug/ml 2) Elemental Sulfur 3) Hexabromobenzene SemiQuant Compounds - Not Calibrated on this Instrument 

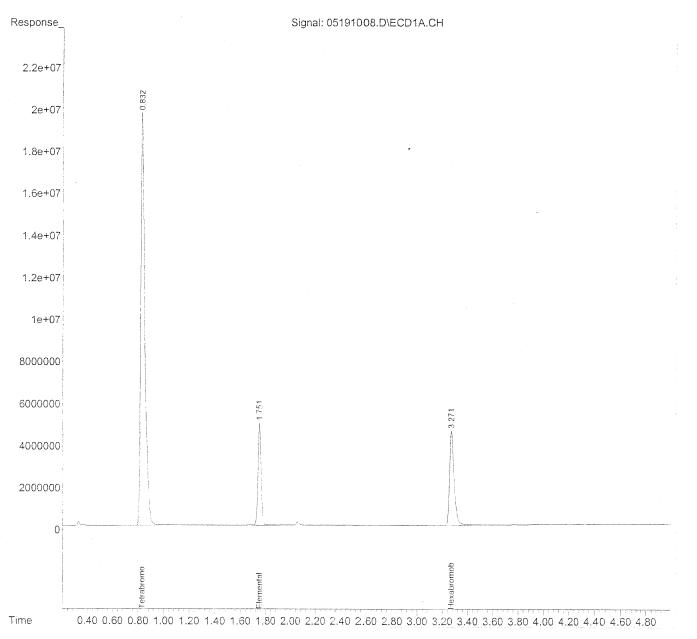
(f) = RT Delta > 1/2 Window

(m) = manual int.

Data Path : J:\GC06\DATA\S8\2010 05\19\ Data File : 05191008.D Signal(s) : ECD1A.CH : 19 May 2010 11:00 am Acq On Operator : HC Sample : 10ug/ml S8 Std S21-05191008 : GC/ECD method S8 Misc ALS Vial : 4 Sample Multiplier: 1

Integration File: events.e Quant Time: May 19 16:44:41 2010 Quant Method : J:\GC06\METHODS\S8051910.M Quant Title : Elemental Sulfur by GC\ECD QLast Update : Wed May 19 16:44:35 2010 Response via : Initial Calibration Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : luL Signal Phase : RTX5Sil 2m x 18mm x.18um Signal Info :



S8051910.M Wed May 19 16:47:32 2010

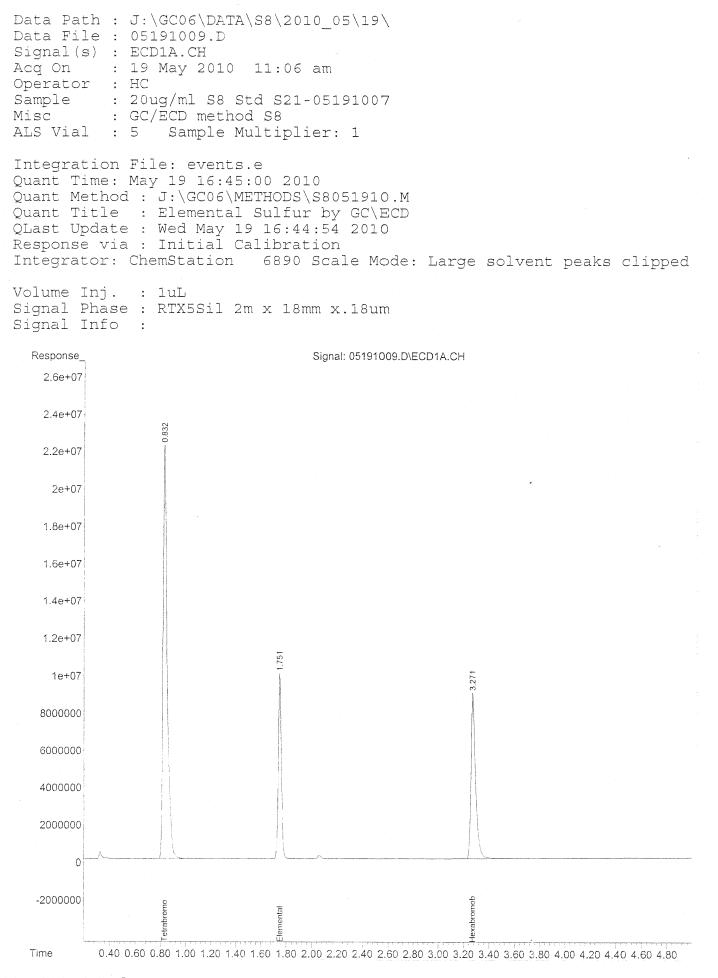
Quantitation Report (QT Reviewed)

Data Path : J:\GC06\DATA\S8\2010 05\19\ Data File : 05191008.D Signal(s) : ECD1A.CH Acq On : 19 May 2010 11:00 am Operator : HC Sample : 10ug/ml S8 Std S21-05191008 Misc : GC/ECD method S8 ALS Vial : 4 Sample Multiplier: 1 Integration File: events.e Quant Time: May 19 16:44:41 2010 Quant Method : J:\GC06\METHODS\S8051910.M Quant Title : Elemental Sulfur by GC\ECD QLast Update : Wed May 19 16:44:35 2010 Response via : Initial Calibration Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped Volume Inj. : luL Signal Phase : RTX5Sil 2m x 18mm x.18um Signal Info : Compound R.T. Response Conc Units \_\_\_\_\_ Internal Standards 1) Tetrabromobenzene 0.833 436626404 20.000 ug/ml Target Compounds 1.751 80613906 11.445 ug/ml 3.272 110773538 11.303 ug/ml Elemental Sulfur
Hexabromobenzene SemiQuant Compounds - Not Calibrated on this Instrument \_\_\_\_\_\_

(f) = RT Delta > 1/2 Window

(m)=manual int.

(QT Reviewed)



Data Path : J:\GC06\DATA\S8\2010 05\19\ Data File : 05191009.D Signal(s) : ECD1A.CH Acq On : 19 May 2010 11:06 am Operator : HC Sample : 20ug/ml S8 Std S21-05191007 Misc : GC/ECD method S8 ALS Vial : 5 Sample Multiplier: 1 Integration File: events.e Quant Time: May 19 16:45:00 2010 Quant Method : J:\GC06\METHODS\S8051910.M Quant Title : Elemental Sulfur by GC\ECD QLast Update : Wed May 19 16:44:54 2010 Response via : Initial Calibration Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped Volume Inj. : luL Signal Phase : RTX5Sil 2m x 18mm x.18um Signal Info : R.T. Response Conc Units Compound Internal Standards 1) Tetrabromobenzene 0.832 502946939 20.000 ug/ml Target Compounds 1.75116433817020.255 ug/ml3.27122356882219.805 ug/ml Elemental Sulfur
Hexabromobenzene SemiQuant Compounds - Not Calibrated on this Instrument 

(f) = RT Delta > 1/2 Window

(m) = manual int.

(QT Reviewed)

Data Path : J:\GC06\DATA\S8\2010 05\19\ Data File : 05191010.D Signal(s) : ECD1A.CH Acq On : 19 May 2010 11:13 am Operator : HC Sample : 50ug/ml S8 Std S21-05191006 Misc : GC/ECD method S8 ALS Vial : 6 Sample Multiplier: 1 Integration File: events.e Quant Time: May 19 16:45:18 2010 Quant Method : J:\GC06\METHODS\S8051910.M Quant Title : Elemental Sulfur by GC\ECD QLast Update : Wed May 19 16:45:12 2010 Response via : Initial Calibration Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped Volume Inj. : 1uL Signal Phase : RTX5Sil 2m x 18mm x.18um Signal Info : Response Signal: 05191010.D\ECD1A.CH 4e+073.8e+07 3.6e+07 745 3.4e+07 3.2e+07 0.823 3e+07 .270 2.8e+07 2.6e+07 2.4e+07 2.2e+07 2e+07 1.8e+07 1.6e+07 1.4e+07 1.2e+07 1e+07 8000000 6000000 4000000 2000000 0 -2000000 lexabromob -4000000 nentai Time 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.20 2.40 2.60 2.80 3.00 3.20 3.40 3.60 3.80 4.00 4.20 4.40 4.60 4.80

Quantitation Report (QT Reviewed)

Data Path : J:\GC06\DATA\S8\2010 05\19\ Data File : 05191010.D Signal(s) : ECD1A.CH Acq On : 19 May 2010 11:13 am Operator : HC Sample : 50ug/ml S8 Std S21-05191006 Misc : GC/ECD method S8 : GC/ECD method S8 ALS Vial : 6 Sample Multiplier: 1 Integration File: events.e Quant Time: May 19 16:45:18 2010 Quant Method : J:\GC06\METHODS\S8051910.M Quant Title : Elemental Sulfur by GC\ECD QLast Update : Wed May 19 16:45:12 2010 Response via : Initial Calibration Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped Volume Inj. : luL Signal Phase : RTX5Sil 2m x 18mm x.18um Signal Info : Compound R.T. Response Conc Units Internal Standards 0.823 697751496 20.000 ug/ml 1) Tetrabromobenzene Target Compounds 2) Elemental Sulfur 3) Hexabromobenzene 1.745 546186094 48.523 ug/ml 3.270 713197963 45.540 ug/ml SemiQuant Compounds - Not Calibrated on this Instrument 

(f) = RT Delta > 1/2 Window

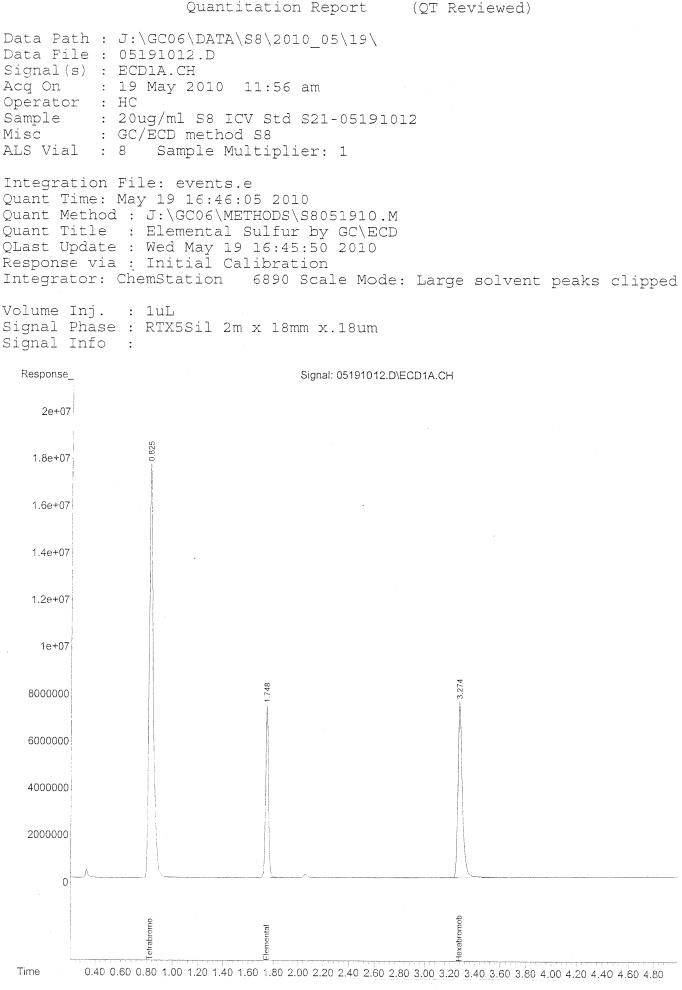
Data Path : J:\GC06\DATA\S8\2010 05\19\ Data File : 05191011.D Signal(s) : ECD1A.CH Acq On : 19 May 2010 11:20 am Operator : HC Sample : 100ug/ml S8 Std S21-05191005 Misc : GC/ECD method S8 ALS Vial : 7 Sample Multiplier: 1 Integration File: events.e Quant Time: May 19 16:45:38 2010 Quant Method : J:\GC06\METHODS\S8051910.M Quant Title : Elemental Sulfur by GC\ECD QLast Update : Wed May 19 16:45:30 2010 Response via : Initial Calibration Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped Volume Inj. : luL Signal Phase : RTX5Sil 2m x 18mm x.18um Signal Info : Response Signal: 05191011.D\ECD1A.CH 7e+07 6.5e+07 .752 6e+07 5.5e+07 5e+07 272 4.5e+07 4e+07 3.5e+07 3e+07 0.831 2.5e+07 2e+07 1.5e+07 1e+07 5000000 n -5000000 lexabromob Putal

Time 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.20 2.40 2.60 2.80 3.00 3.20 3.40 3.60 3.80 4.00 4.20 4.40 4.60 4.80

Data Path : J:\GC06\DATA\S8\2010 05\19\ Data File : 05191011.D Signal(s) : ECD1A.CH Acq On : 19 May 2010 11:20 am Operator : HC Sample : 100ug/ml S8 Std S21-05191005 Misc : GC/ECD method S8 : GC/ECD method S8 ALS Vial : 7 Sample Multiplier: 1 Integration File: events.e Quant Time: May 19 16:45:38 2010 Quant Method : J:\GC06\METHODS\S8051910.M Quant Title : Elemental Sulfur by GC\ECD QLast Update : Wed May 19 16:45:30 2010 Response via : Initial Calibration Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped Volume Inj. : 1uL Signal Phase : RTX5Sil 2m x 18mm x.18um Signal Info : Compound R.T. Response Conc Units -Internal Standards 1) Tetrabromobenzene 0.832 594102818 20.000 ug/ml Target Compounds Elemental Sulfur
Hexabromobenzene 1.753 915446103 95.518 ug/ml 3.272 1133866593 85.032 ug/ml

SemiQuant Compounds - Not Calibrated on this Instrument

(f) = RT Delta > 1/2 Window



Data Path : J:\GC06\DATA\S8\2010 05\19\ Data File : 05191012.D Signal(s) : ECD1A.CH Acq On : 19 May 2010 11:56 am Operator : HC Sample : 20ug/ml S8 ICV Std S21-05191012 Misc : GC/ECD method S8 ALS Vial : 8 Sample Multiplier: 1 Integration File: events.e Ouant Time: May 19 16:46:05 2010 Quant Method : J:\GC06\METHODS\S8051910.M Quant Title : Elemental Sulfur by GC\ECD QLast Update : Wed May 19 16:45:50 2010 Response via : Initial Calibration Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped Volume Inj. : luL Signal Phase : RTX5Sil 2m x 18mm x.18um Signal Info : Compound R.T. Response Conc Units \_\_\_\_\_ Internal Standards 1) Tetrabromobenzene 0.826 390104705 20.000 ug/ml Target Compounds 2) Elemental Sulfur 3) Hexabromobenzene 1.748 117851821 18.727 ug/ml 3.274 182727145 20.869 ug/ml SemiQuant Compounds - Not Calibrated on this Instrument

Semiguant compounds - Not calibrated on this instrument

(f) = RT Delta > 1/2 Window

Evaluate Continuing Calibration Report Data Path : J:\GC06\DATA\S8\2010 05\19\ Data File : 05191012.D Signal(s) : ECD1A.CH Acq On : 19 May 2010 11:56 am Operator : HC Sample : 20ug/ml S8 ICV Std S21-05191012 Misc : GC/ECD method S8 : GC/ECD method S8 ALS Vial : 8 Sample Multiplier: 1 Integration File: events.e Quant Time: May 19 16:46:05 2010 Quant Method : J:\GC06\METHODS\S8051910.M Quant Title : Elemental Sulfur by GC\ECD QLast Update : Wed May 19 16:45:50 2010 Response via : Initial Calibration Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped Volume Inj. : luL Signal Phase : RTX5Sil 2m x 18mm x.18um Signal Info : Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min Max. RRF Dev : 25% Max. Rel. Area : 150% Compound AvgRF CCRF %Dev Area% Dev(Min) 1Tetrabromobenzene1.0001.0000.0780.002Elemental Sulfur0.3230.3026.5720.003Hexabromobenzene0.4490.468-4.2820.00 Evaluate Continuing Calibration Report - Not Founds \_\_\_\_\_ (#) = Out of Range SPCC's out = 0 CCC's out = 0

## CONTINUING CALIBRATION STANDARDS

P1001783 Final\_Report

**Columbia Analytical Services** 

## Wall Board Elemental Octaatomic Sulfur Extraction GC/ECD Analysis

Method : Elemental Sulfur by GC\ECD Client & Job# : EH&E P1001783 Analyst : HC

Printed : 5/27/10 Instrument : ECD 06 Date Acquired : 5/26/10

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Sample Information: MRL=1ug/mI		Amount (g)	Dilution Factor	Volume	(mg/Kg)	Response	Response % to CCV	Check (50 - 200%)	SS (ug/ml)	so % Recovery	Check (70 - 130%)
50ug/ml S8 Std S21-05191006	44.70					558350010	100.0%		12.00		
SS-ext.5/26/10 fv=5ml	8.94	1.00	<b>,</b>	5.0	44.70	575848350	103.1%	Pass	13.60	113.3%	Pass
LCS-ext.5/26/10 fv=5ml	66.6	1.00	1.00	5.0	49.95	754019929	135.0%	Pass	12.55	104.6%	Pass
LCSD-ext.5/26/10 fv=5ml	9.89	1.00	1.00	5.0	49.45	572894001	102.6%	Pass	24.96	208.0%	Fail
NegativeControl-ext.5/26/10 fv=5ml	0.22	1.00	1.00	5.0	ND	559714959	100.2%	Pass	12.30	102.5%	Pass
P1001783-001-ext.5/26/10 fv=5ml	0.24	1.00		5.0	ND	518833151	92.9%	Pass	12.01	100.1%	Pass
P1001783-002-ext.5/26/10 fv=5ml	0.23	1.00	1.00	5.0	QN	629772173	112.8%	Pass	11.65	97.1%	Pass
P1001783-003-ext.5/26/10 fv=5ml	0.17	1.00	1.00	5.0	QN	519428259	93.0%	Pass	13.64	113.7%	Pass
50ug/ml S8 Std S21-05191006	49.58	1.00	1.00	5.0	247.90	610218749	109.3%	Pass			
P1001828-002-ext.5/26/10 fv=5ml	22.66	1.00	1.00	5.0	113.30	515506197	92.3%	Pass	12.95	107.9%	Pass
P1001828-002MS-ext.5/26/10 fv=5ml	28.23	1.00	1.00	5.0	141.15	538031430	96.4%	Pass	11.67	97.3%	Pass
50ug/ml S8 Std S21-05191006	46.07	1.00	1.00	5.0	230.35	840775259	150.6%	Pass			
					_						

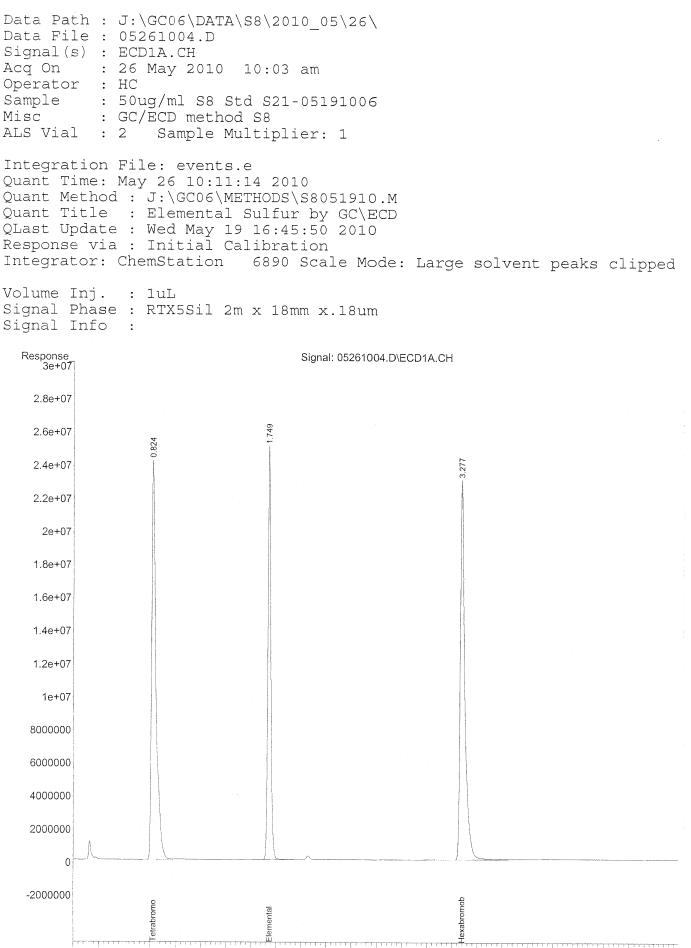
## CCV QC Check (+/- 20%)

	Extract ug/ml	Extract ug/ml Expect ug/ml % Difference QC Result	% Difference	QC Result
50ug/ml S8 Std S21-05191006	44.70	50.00	10.6%	Pass
50ug/ml S8 Std S21-05191006	49.58	50.00	0.8%	Pass
50ug/ml S8 Std S21-05191006	46.07	50.00	7.9%	Pass
	LCS/L	LCS/LCSD QC Check	heck	

	Result	Result Expect ug/mL % Recovery % RPD	% Recovery	% RPD
SS	8.94			
LCS-ext.5/26/10 fv=5ml	9.99	8.9	111.7%	1.0%
LCSD-ext.5/26/10 fv=5ml	9.89	8.9	110.6%	
	WS/I	<b>MS/MSD QC Check</b>	eck	

	Result	Expect ug/mL	% Recovery	% RPD
P1001828-002-ext.5/26/10 fv=5ml	22.66			
P1001828-002MS-ext.5/26/10 fv=5ml	28.23	8.9	62.3%	

Page 1 of 1



Time 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.20 2.40 2.60 2.80 3.00 3.20 3.40 3.60 3.80 4.00 4.20 4.40 4.60 4.80

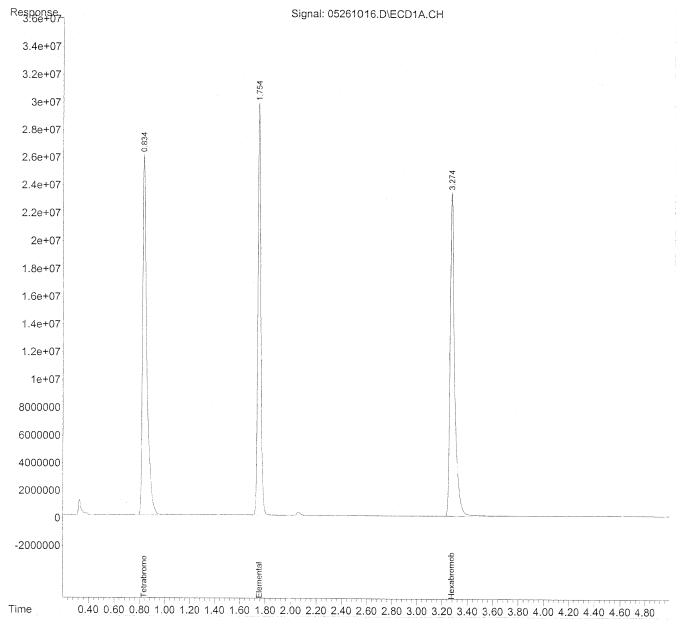
Quantitation Report (QT Reviewed) Data Path : J:\GC06\DATA\S8\2010 05\26\ Data File : 05261004.D Signal(s) : ECD1A.CH Acq On : 26 May 2010 10:03 am Operator : HC Sample : 50ug/ml S8 Std S21-05191006 Misc : GC/ECD method S8 ALS Vial : 2 Sample Multiplier: 1 Integration File: events.e 4 5127/100 Quant Time: May 26 10:11:14 2010 Quant Method : J:\GC06\METHODS\S8051910.M Quant Title : Elemental Sulfur by GC\ECD QLast Update : Wed May 19 16:45:50 2010 Response via : Initial Calibration Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped Volume Inj. : luL Signal Phase : RTX5Sil 2m x 18mm x.18um Signal Info : R.T. Response Conc Units Compound Internal Standards 1) Tetrabromobenzene 0.825 558350010 20.000 ug/ml Target Compounds 2)Elemental Sulfur1.75040262045844.699 ug/ml3)Hexabromobenzene3.27858581995746.746 ug/ml SemiQuant Compounds - Not Calibrated on this Instrument 

(f) = RT Delta > 1/2 Window

Data Path : J:\GC06\DATA\S8\2010\_05\26\ Data File : 05261016.D Signal(s) : ECD1A.CH Acq On : 26 May 2010 5:43 pm Operator : HC Sample : 50ug/ml S8 Std S21-05191006 Misc : GC/ECD method S8 ALS Vial : 1 Sample Multiplier: 1

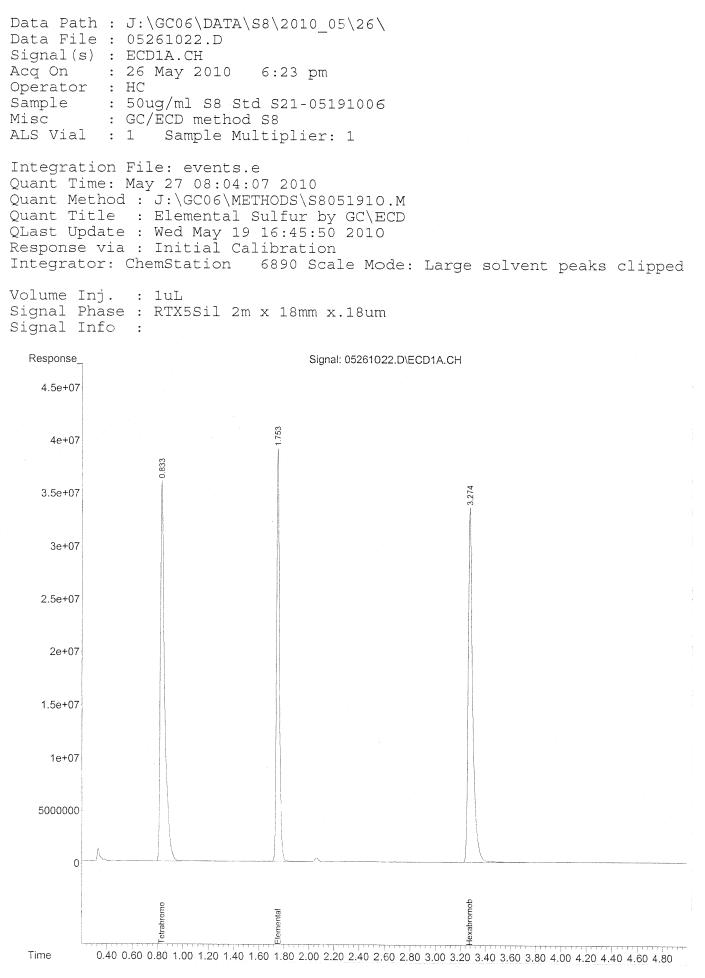
Integration File: events.e Quant Time: May 27 08:05:22 2010 Quant Method : J:\GC06\METHODS\S8051910.M Quant Title : Elemental Sulfur by GC\ECD QLast Update : Wed May 19 16:45:50 2010 Response via : Initial Calibration Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1uL Signal Phase : RTX5Sil 2m x 18mm x.18um Signal Info :



Data Path : J:\GC06\DATA\S8\2010 05\26\ Data File : 05261016.D Signal(s) : ECD1A.CH Acq On : 26 May 2010 5:43 pm Operator : HC Sample: 50ug/ml S8 Std S21-05191006Misc: GC/ECD method S8ALS Vial: 1 Sample Multiplier: 1 Integration File: events.e Quant Time: May 27 08:05:22 2010 Quant Method : J:\GC06\METHODS\S8051910.M Quant Title : Elemental Sulfur by GC\ECD QLast Update : Wed May 19 16:45:50 2010 Response via : Initial Calibration Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped Volume Inj. : luL Signal Phase : RTX5Sil 2m x 18mm x.18um Signal Info : Compound R.T. Response Conc Units Internal Standards 1) Tetrabromobenzene 0.835 610218749 20.000 ug/ml Target Compounds 2)Elemental Sulfur1.75448806547149.580 ug/ml3)Hexabromobenzene3.27458931263943.027 ug/ml SemiQuant Compounds - Not Calibrated on this Instrument 

(f) = RT Delta > 1/2 Window



Data Path : J:\GC06\DATA\S8\2010 05\26\ Data File : 05261022.D Signal(s) : ECD1A.CH Acq On : 26 May 2010 6:23 pm Operator : HC Sample : 50ug/ml S8 Std S21-05191006 Misc : GC/ECD method S8 ALS Vial : 1 Sample Multiplier: 1 Integration File: events.e Quant Time: May 27 08:04:07 2010 Quant Method : J:\GC06\METHODS\S8051910.M Quant Title : Elemental Sulfur by GC\ECD QLast Update : Wed May 19 16:45:50 2010 Response via : Initial Calibration Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped Volume Inj. : 1uL Signal Phase : RTX5Sil 2m x 18mm x.18um Signal Info : R.T. Response Conc Units Compound \_\_\_\_\_ Internal Standards 1) Tetrabromobenzene 0.834 840775259 20.000 ug/ml Target Compounds 2)Elemental Sulfur1.75362491638346.074 ug/ml3)Hexabromobenzene3.27583990657044.508 ug/ml SemiQuant Compounds - Not Calibrated on this Instrument 

(f) = RT Delta > 1/2 Window

## RUN LOGS

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	05191001.d	1.	toluene w/IS	GC/ECD method S8	19 May 10 09:5!
2	1	05191002.d	1.	toluene w/IS	GC/ECD method S8	19 May 10 10:0/
3	1	05191003.d	1.	toluene w/IS	GC/ECD method S8	19 May 10 10:0
4	1	05191004.d	1.	toluene w/IS	GC/ECD method S8	19 May 10 10:1(
5	1	05191005.d	1.	20ug/ml Tetrabromobenzene RB S21-05	1910	
				-	GC/ECD method S8	19 May 10 10:4(
6	2	05191006.d	1.	1ug/ml S8 Std S21-05191010	GC/ECD method S8	19 May 10 10:4
7	3	05191007.d	1.	5ug/ml S8 Std S21-05191009	GC/ECD method S8	19 May 10 10:54
8	4	05191008.d	1.	10ug/ml S8 Std S21-05191008	GC/ECD method S8	19 May 10 11:00
9	5	05191009.d	1.	20ug/ml S8 Std S21-05191007	GC/ECD method S8	19 May 10 11:00
10 11	6 7	05191010.d 05191011.d	1. 1.	50ug/ml S8 Std S21-05191006 100ug/ml S8 Std S21-05191005	GC/ECD method S8 GC/ECD method S8	19 May 10 11:1: 19 May 10 11:2(
12	8	05191012.d	1.	20ug/ml S8 ICV Std S21-05191012	GC/ECD method S8	19 May 10 11:5(

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1 2 3 4 5 6 7 8 9 10	1 1 2 3 4 5 6 7 8	05261001.d 05261002.d 05261003.d 05261004.d 05261005.d 05261006.d 05261007.d 05261008.d 05261009.d 05261010.d	1. 1. 1. 1. 1. 1. 1. 1. 1.	toluene w/IS toluene w/IS toluene w/IS 50ug/ml S8 Std S21-05191006 toluene with IS SS-ext.5/26/10 fv=5ml LCSD-ext.5/26/10 fv=5ml LCSD-ext.5/26/10 fv=5ml NegativeControl-ext.5/26/10 P1001783-001-ext.5/26/10 fv	GC/ECD method S8 GC/ECD method S8	26 May 2010 08:28 26 May 2010 08:35 26 May 2010 08:42 26 May 2010 10:03 26 May 2010 14:46 26 May 2010 16:37 26 May 2010 16:44 26 May 2010 16:50 26 May 2010 16:57 26 May 2010 17:04
11 12 13 14 15 16 17 18 19 20	9 10 11 12 13 1 14 15 16 17	05261011.d 05261012.d 05261013.d 05261014.d 05261015.d 05261016.d 05261017.d 05261018.d 05261019.d 05261020.d	1. 1. 1. 1. 1. 1. 1. 1. 1.	P1001783-002-ext.5/26/10 fv P1001783-003-ext.5/26/10 fv P1001820-001-ext.5/26/10 fv P1001821-001-ext.5/26/10 fv P1001821-002-ext.5/26/10 fv 50ug/ml S8 Std S21-05191006 P1001823-001-ext.5/26/10 fv P1001828-001-ext.5/26/10 fv P1001828-002-ext.5/26/10 fv	GC/ECD method S8 GC/ECD method S8	26 May 2010 17:11 26 May 2010 17:18 26 May 2010 17:24 26 May 2010 17:30 26 May 2010 17:37 26 May 2010 17:37 26 May 2010 17:50 26 May 2010 17:56 26 May 2010 18:03 26 May 2010 18:09
21 22	18 1	05261021.d 05261022.d	1. 1.	P1001828-002MS-ext.5/26/10 50ug/ml S8 Std S21-05191006	GC/ECD method S8 GC/ECD method S8	26 May 2010 18:16 26 May 2010 18:23

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