Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\031905\P0319011.D Vial: 11
Acq On : 19 Mar 2005 11:59 am Operator: JG/MS/CLS
Sample : 5.0 PPB CAL Inst : GCMS1
Misc : 1X 10ML Multiplr: 1.00
MS Integration Params: DIOXANE.P
Quant Time: Mar 19 13:43 2005 Quant Results File: DX021605.RES

Quant Method : D:\HPCHEM\1\METHODS\DX021605.M (RTE Integrator)
Title : 8260 1,4-Dioxane Ini. Cal. (05/02/02)
Last Update : Wed Feb 16 15:53:54 2005
Response via : Initial Calibration
DataAcq Meth : DX021605

MC 3/21/05

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene (IS)	10.56	99	47558	1.00	ug/L	0.00
3) 1,4-DIOXANE-d8	12.35	64	5263	25.00	ug/L	0.00
5) 1,2,3-Trichloropropane-d5	0.00	79	0 NT	0.00	ug/L	-15.08
System Monitoring Compounds						
2) Dibromofluoromethane (SU1)	10.06	113	19072	0.52	ug/L	0.00
Spiked Amount 1.000	Range 80 - 120		Recovery = 52.00%#			
Target Compounds						Qvalue
4) 1,4-DIOXANE	12.43	88	2211	6.25	ug/L	99

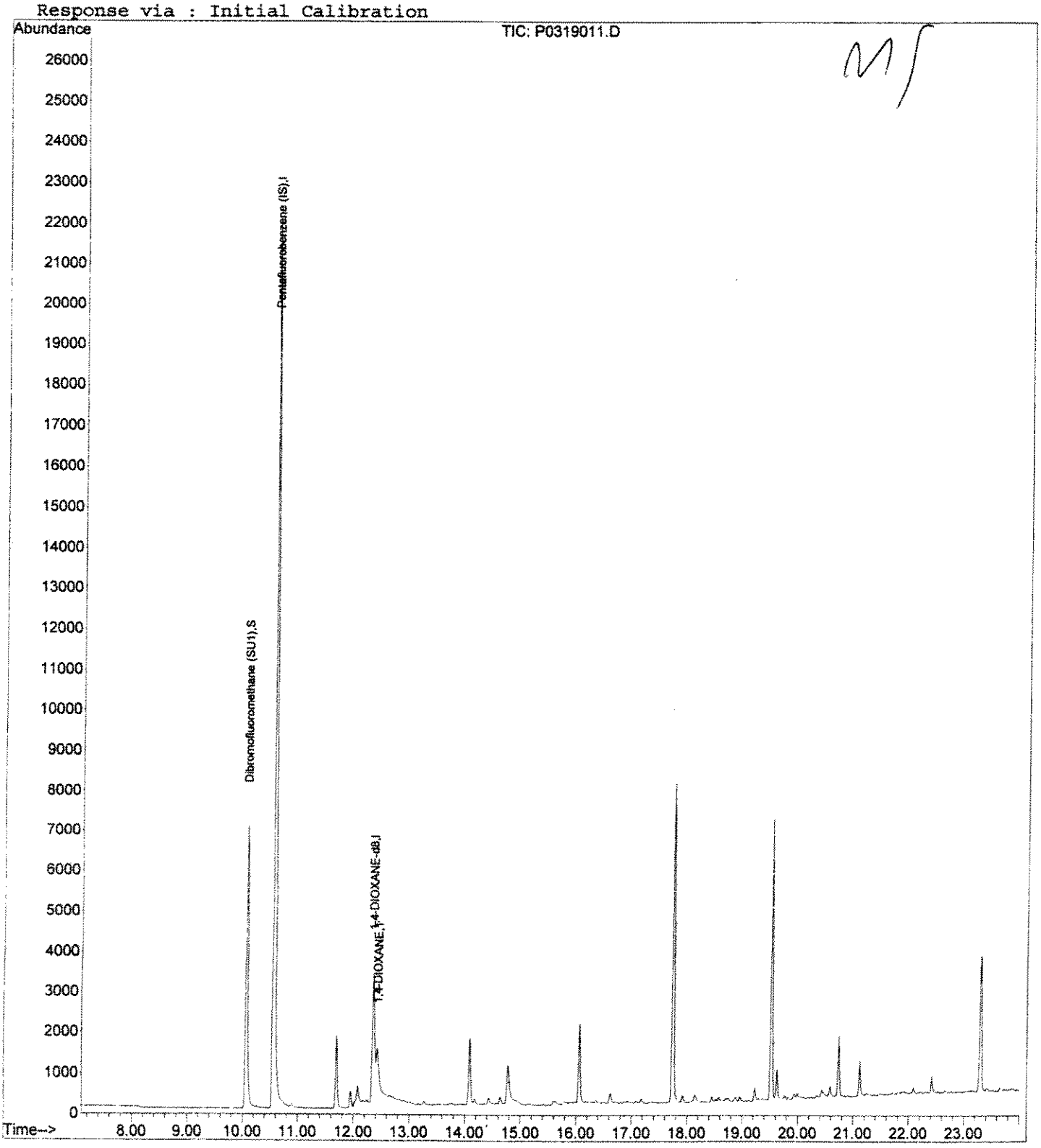
3/21/05

(#) = qualifier out of range (m) = manual integration
P0319011.D DX021605.M Sat Mar 19 13:43:33 2005 GCMS1

Quantitation Report

Data File : D:\HPCHEM\1\DATA\031905\P0319011.D Vial: 11
Acq On : 19 Mar 2005 11:59 am Operator: JG/MS/CLS
Sample : 5.0 PPB CAL Inst : GCMS1
Misc : 1X 10ML Multiplr: 1.00
MS Integration Params: DIOXANE.P
Quant Time: Mar 19 13:43 2005 Quant Results File: DX021605.RES

Method : D:\HPCHEM\1\METHODS\DX021605.M (RTE Integrator)
Title : 8260 1,4-Dioxane Ini. Cal. (05/02/02)
Last Update : Wed Feb 16 15:53:54 2005
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\031905\P0319012.D Vial: 12
Acq On : 19 Mar 2005 12:32 pm Operator: JG/MS/CLS
Sample : 10.0 PPB CAL Inst : GCMS1
Misc : 1X 10ML Multiplr: 1.00
MS Integration Params: DIOXANE.P
Quant Time: Mar 19 13:37 2005 Quant Results File: DX021605.RES

Quant Method : D:\HPCHEM\1\METHODS\DX021605.M (RTE Integrator)
Title : 8260 1,4-Dioxane Ini. Cal. (05/02/02)
Last Update : Wed Feb 16 15:53:54 2005
Response via : Initial Calibration
DataAcq Meth : DX021605

M 3/19/05

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene (IS)	10.57	99	47071	1.00	ug/L	0.00
3) 1,4-DIOXANE-d8	12.35	64	5034	25.00	ug/L	0.00
5) 1,2,3-Trichloropropane-d5	0.00	79	0 NT	0.00	ug/L	-15.08
System Monitoring Compounds						
2) Dibromofluoromethane (SU1)	10.07	113	34373	0.95	ug/L	0.00
Spiked Amount 1.000	Range 80 - 120		Recovery = 95.00%			
Target Compounds						Qvalue
4) 1,4-DIOXANE	12.43	88	3835	11.74	ug/L	99

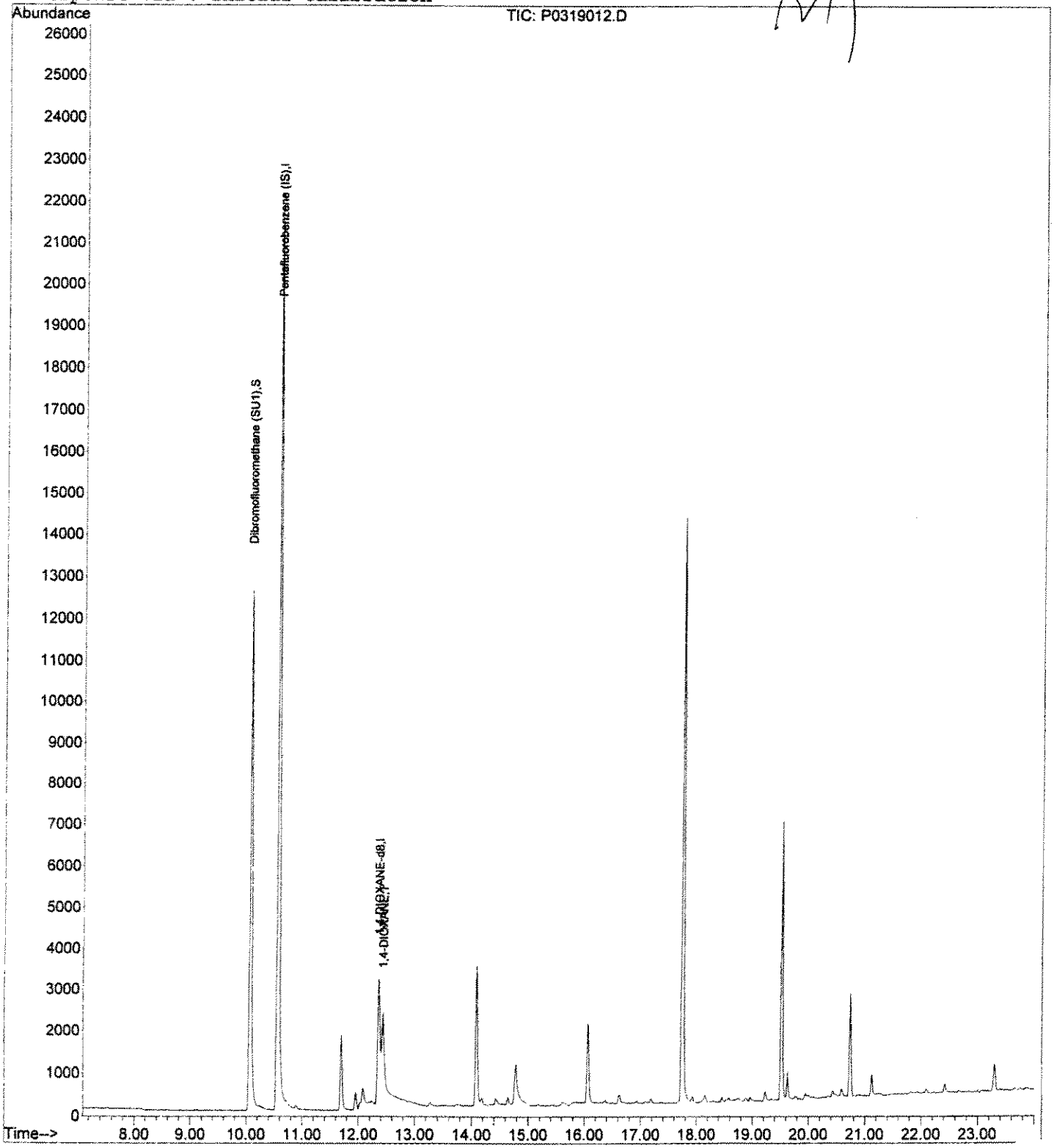
3/21/05

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\1\DATA\031905\P0319012.D Vial: 12
Acq On : 19 Mar 2005 12:32 pm Operator: JG/MS/CLS
Sample : 10.0 PPB CAL Inst : GCMS1
Misc : 1X 10ML Multiplr: 1.00
MS Integration Params: DIOXANE.P
Quant Time: Mar 19 13:37 2005 Quant Results File: DX021605.RES

Method : D:\HPCHEM\1\METHODS\DX021605.M (RTE Integrator)
Title : 8260 1,4-Dioxane Ini. Cal. (05/02/02)
Last Update : Wed Feb 16 15:53:54 2005
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\031905\P0319013.D Vial: 13
Acq On : 19 Mar 2005 1:05 pm Operator: JG/MS/CLS
Sample : 20.0 PPB CAL Inst : GCMS1
Misc : 1X 10ML Multiplr: 1.00
MS Integration Params: DIOXANE.P
Quant Time: Mar 19 13:37 2005 Quant Results File: DX021605.RES

Quant Method : D:\HPCHEM\1\METHODS\DX021605.M (RTE Integrator)
Title : 8260 1,4-Dioxane Ini. Cal. (05/02/02)
Last Update : Wed Feb 16 15:53:54 2005
Response via : Initial Calibration
DataAcq Meth : DX021605

MC 3/19/05

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene (IS)	10.56	99	47635	1.00	ug/L	0.00
3) 1,4-DIOXANE-d8	12.35	64	4790	25.00	ug/L	0.00
5) 1,2,3-Trichloropropane-d5	0.00	79	0 VT	0.00	ug/L	-15.08
System Monitoring Compounds						
2) Dibromofluoromethane (SU1)	10.07	113	68573	1.86	ug/L	0.00
Spiked Amount 1.000	Range 80 - 120		Recovery = 186.00%#			
Target Compounds						Qvalue
4) 1,4-DIOXANE	12.43	88	7646	25.14	ug/L	97

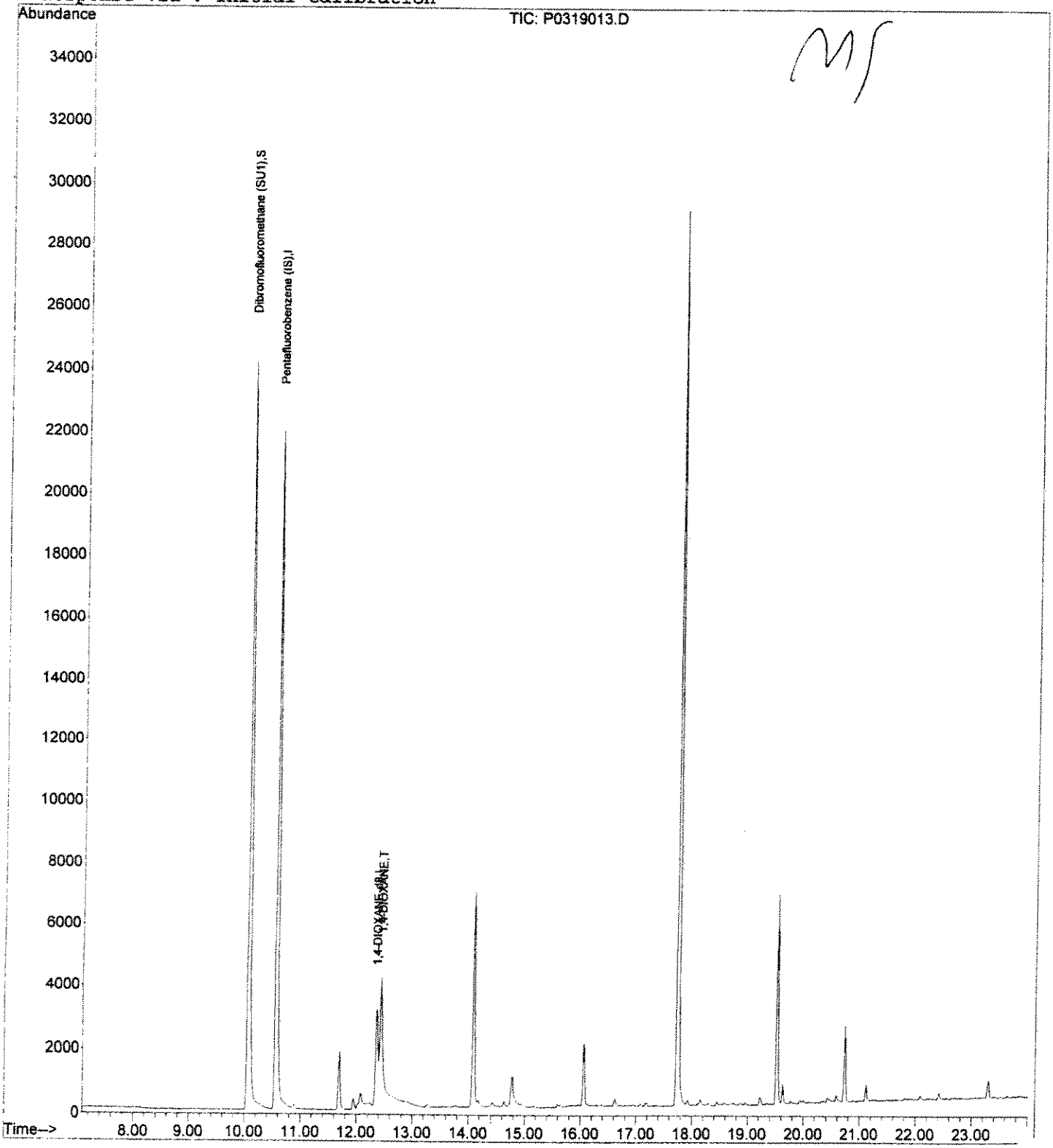
3/21/05

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\1\DATA\031905\P0319013.D Vial: 13
Acq On : 19 Mar 2005 1:05 pm Operator: JG/MS/CLS
Sample : 20.0 PPB CAL Inst : GCMS1
Misc : 1X 10ML Multiplr: 1.00
MS Integration Params: DIOXANE.P
Quant Time: Mar 19 13:37 2005 Quant Results File: DX021605.RES

Method : D:\HPCHEM\1\METHODS\DX021605.M (RTE Integrator)
Title : 8260 1,4-Dioxane Ini. Cal. (05/02/02)
Last Update : Wed Feb 16 15:53:54 2005
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\031905\P0319014.D Vial: 14
Acq On : 19 Mar 2005 1:38 pm Operator: JG/MS/CLS
Sample : 50.0 PPB CAL Inst : GCMS1
Misc : 1X 10ML Multiplr: 1.00
MS Integration Params: DIOXANE.P
Quant Time: Mar 19 14:18 2005 Quant Results File: DX021605.RES

Quant Method : D:\HPCHEM\1\METHODS\DX021605.M (RTE Integrator)
Title : 8260 1,4-Dioxane Ini. Cal. (05/02/02)
Last Update : Wed Feb 16 15:53:54 2005
Response via : Initial Calibration
DataAcq Meth : DX021605

MS 3/19/05

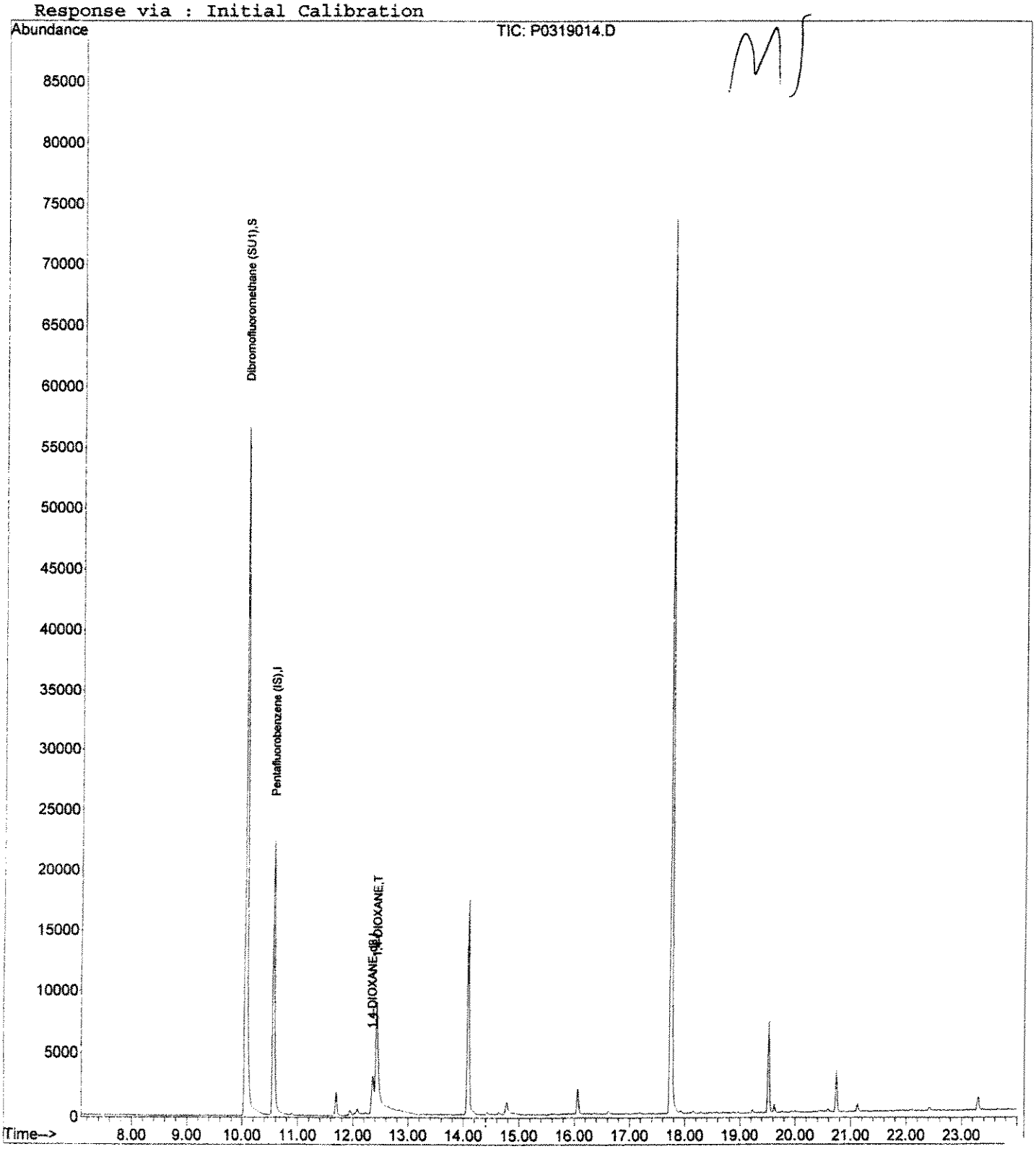
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene (IS)	10.56	99	47704	1.00	ug/L	0.00
3) 1,4-DIOXANE-d8	12.35	64	5034	25.00	ug/L	0.00
5) 1,2,3-Trichloropropane-d5	0.00	79	0 NT	0.00	ug/L	-15.08
System Monitoring Compounds						
2) Dibromofluoromethane (SU1)	10.07	113	164450	4.46	ug/L	0.00
Spiked Amount 1.000	Range 80 - 120		Recovery =	446.00%#		
Target Compounds						Qvalue
4) 1,4-DIOXANE	12.43	88	18344	58.04	ug/L	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\1\DATA\031905\P0319014.D Vial: 14
Acq On : 19 Mar 2005 1:38 pm Operator: JG/MS/CLS
Sample : 50.0 PPB CAL Inst : GCMS1
Misc : 1X 10ML Multiplr: 1.00
MS Integration Params: DIOXANE.P
Quant Time: Mar 19 14:18 2005 Quant Results File: DX021605.RES

Method : D:\HPCHEM\1\METHODS\DX021605.M (RTE Integrator)
Title : 8260 1,4-Dioxane Ini. Cal. (05/02/02)
Last Update : Wed Feb 16 15:53:54 2005
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\031905\P0319015.D
Acq On : 19 Mar 2005 2:11 pm
Sample : 100.0 PPB CAL
Misc : 1X 10ML
MS Integration Params: DIOXANE.P
Quant Time: Mar 19 14:54 2005

Vial: 15
Operator: JG/MS/CLS
Inst : GCMS1
Multiplr: 1.00
Quant Results File: DX021605.RES

Quant Method : D:\HPCHEM\1\METHODS\DX021605.M (RTE Integrator)
Title : 8260 1,4-Dioxane Ini. Cal. (05/02/02)
Last Update : Wed Feb 16 15:53:54 2005
Response via : Initial Calibration
DataAcq Meth : DX021605

3/21/05

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene (IS)	10.56	99	48150	1.00	ug/L	0.00
3) 1,4-DIOXANE-d8	12.35	64	5834	25.00	ug/L	0.00
5) 1,2,3-Trichloropropane-d5	0.00	79	0 NT	0.00	ug/L	-15.08
System Monitoring Compounds						
2) Dibromofluoromethane (SU1)	10.07	113	307967	8.28	ug/L	0.00
Spiked Amount 1.000	Range 80 - 120		Recovery = 828.00%#			
Target Compounds						Qvalue
4) 1,4-DIOXANE	12.43	88	44445	121.87	ug/L	98

3/21/05

(#) = qualifier out of range (m) = manual integration

Quantitation Report

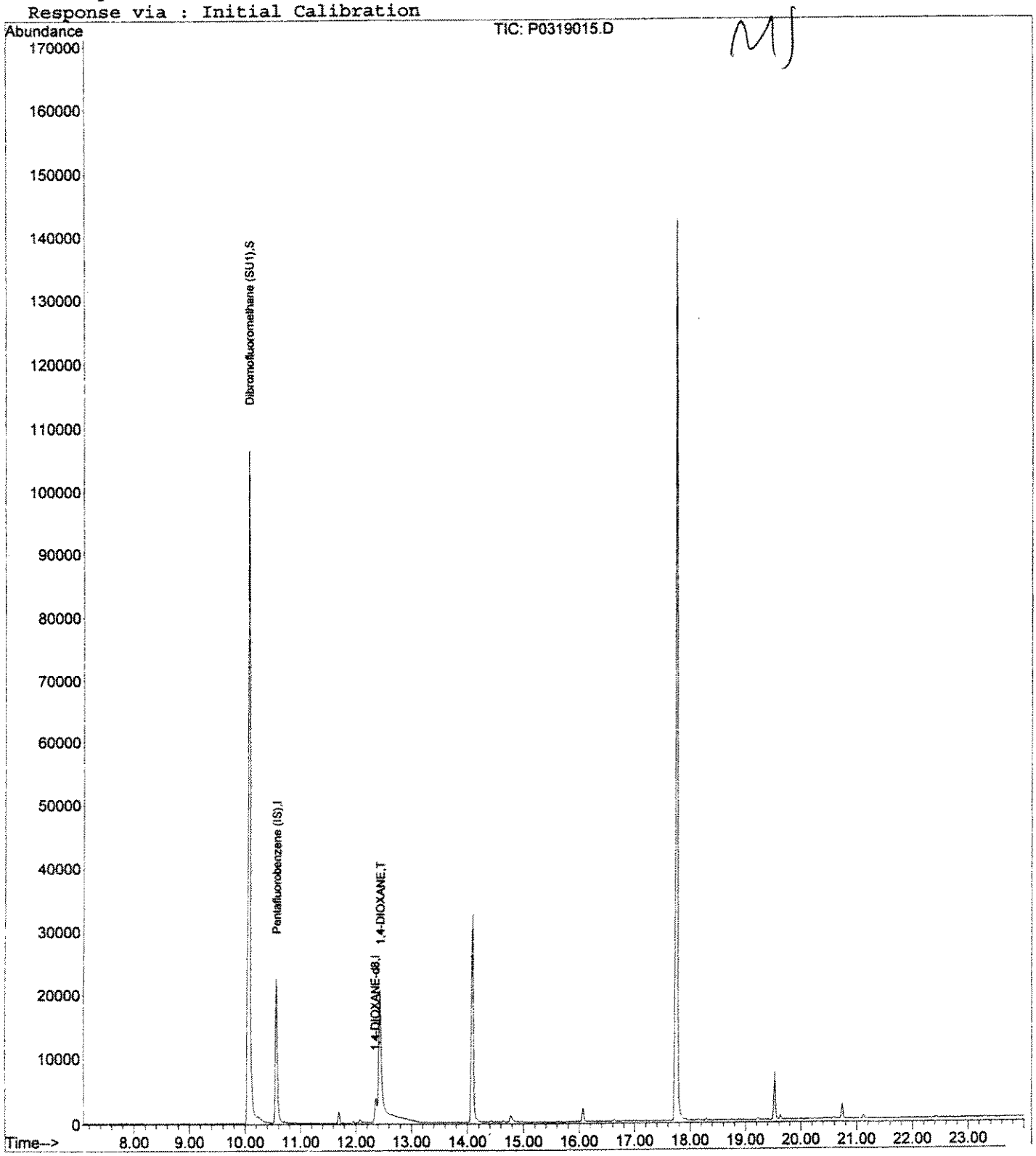
Data File : D:\HPCHEM\1\DATA\031905\P0319015.D
Acq On : 19 Mar 2005 2:11 pm
Sample : 100.0 PPB CAL
Misc : 1X 10ML
MS Integration Params: DIOXANE.P
Quant Time: Mar 19 14:54 2005

Vial: 15
Operator: JG/MS/CLS
Inst : GCMS1
Multiplr: 1.00

Quant Results File: DX021605.RES

Method : D:\HPCHEM\1\METHODS\DX021605.M (RTE Integrator)
Title : 8260 1,4-Dioxane Ini. Cal. (05/02/02)
Last Update : Wed Feb 16 15:53:54 2005
Response via : Initial Calibration

MJ



Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\031905\P0319016.D Vial: 16
Acq On : 19 Mar 2005 2:44 pm Operator: JG/MS/CLS
Sample : CLEAN OUT BLANK/TUNE Inst : GCMS1
Misc : 1X 10ML Multiplr: 1.00
MS Integration Params: DIOXANE.P
Quant Time: Mar 21 7:48 2005 Quant Results File: DX021605.RES

Quant Method : D:\HPCHEM\1\METHODS\DX021605.M (RTE Integrator)
Title : 8260 1,4-Dioxane Ini. Cal. (05/02/02)
Last Update : Wed Feb 16 15:53:54 2005
Response via : Initial Calibration
DataAcq Meth : W072903

3/21/05 JG

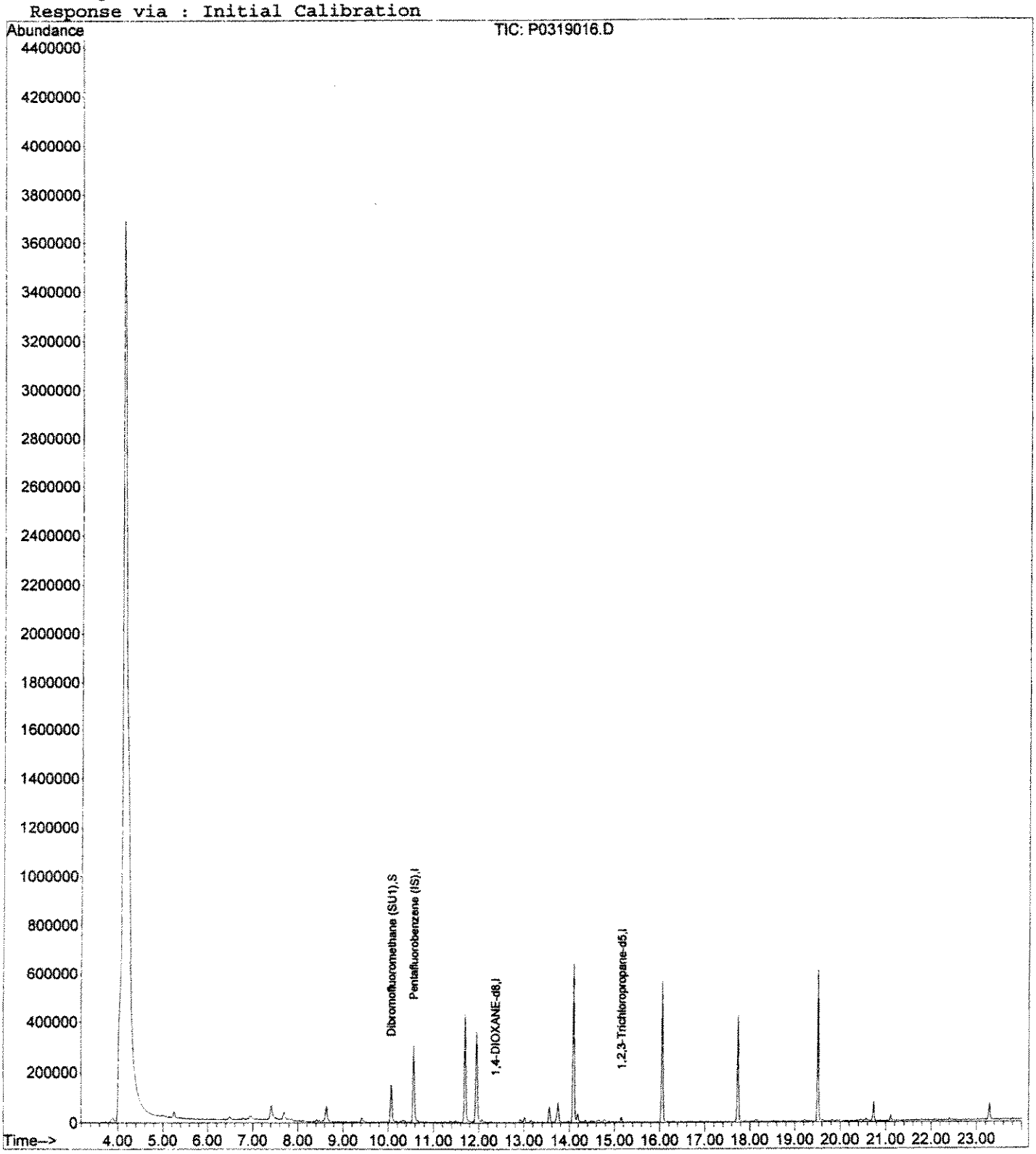
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene (IS)	10.56	99	168438	1.00	ug/L	0.00
3) 1,4-DIOXANE-d8	12.36	64	64	25.00	ug/L	0.00
5) 1,2,3-Trichloropropane-d5	15.15	79	57	500.00	ug/L	0.07
System Monitoring Compounds						
2) Dibromofluoromethane (SU1)	10.06	113	129670	1.00	ug/L	0.00
Spiked Amount 1.000	Range 80 - 120		Recovery = 100.00%			
Target Compounds						Qvalue

(#) = qualifier out of range (m) = manual integration

Quantitation Report

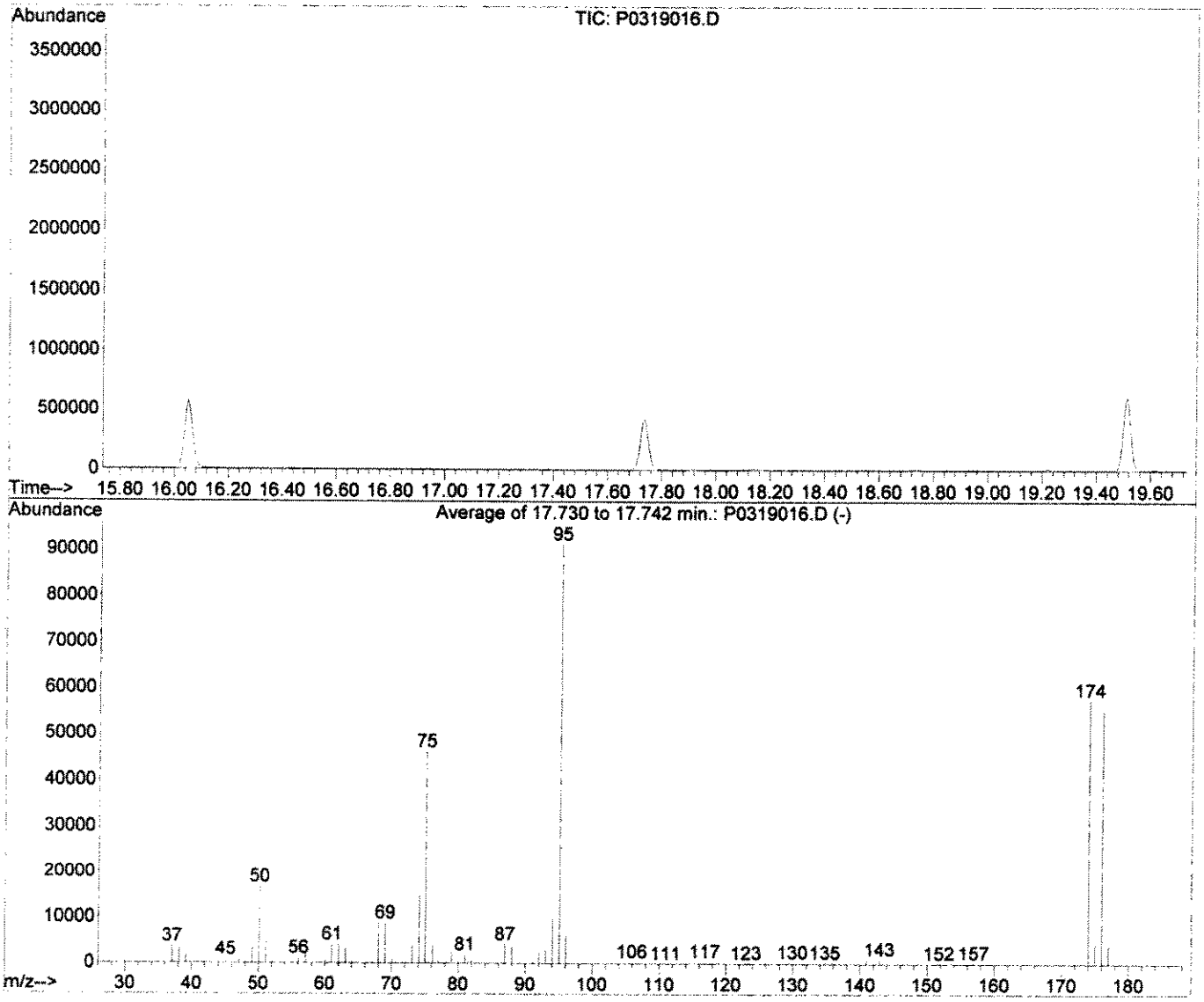
Data File : D:\HPCHEM\1\DATA\031905\P0319016.D Vial: 16
Acq On : 19 Mar 2005 2:44 pm Operator: JG/MS/CLS
Sample : CLEAN OUT BLANK/TUNE Inst : GCMS1
Misc : 1X 10ML Multiplr: 1.00
MS Integration Params: DIOXANE.P
Quant Time: Mar 21 7:48 2005 Quant Results File: DX021605.RES

Method : D:\HPCHEM\1\METHODS\DX021605.M (RTE Integrator)
Title : 8260 1,4-Dioxane Ini. Cal. (05/02/02)
Last Update : Wed Feb 16 15:53:54 2005
Response via : Initial Calibration



BFB

Data File : D:\HPCHEM\1\DATA\031905\P0319016.D Vial: 16
Acq On : 19 Mar 2005 2:44 pm Operator: JG/MS/CLS
Sample : CLEAN OUT BLANK/TUNE Inst : GCMS1
Misc : 1X 10ML Multiplr: 1.00
MS Integration Params: DIOXANE.P
Method : D:\HPCHEM\1\METHODS\TP032905.M (RTE Integrator)
Title : 8260 1,4-Dioxane Ini. Cal. (05/02/02)



AutoFind: Scans 2390, 2391, 2392; Background Corrected with Scan 2370

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	18.4	16808	PASS
75	95	30	60	50.6	46181	PASS
95	95	100	100	100.0	91312	PASS
96	95	5	9	6.5	5947	PASS
173	174	0.00	2	1.0	550	PASS
174	95	50	100	63.1	57600	PASS
175	174	5	9	7.6	4353	PASS
176	174	95	101	96.4	55517	PASS
177	176	5	9	7.2	4007	PASS

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\031905\P0319017.D Vial: 17
Acq On : 19 Mar 2005 3:21 pm Operator: JG/MS/CLS
Sample : BLANK Inst : GCMS1
Misc : 1X 10ML Multiplr: 1.00
MS Integration Params: DIOXANE.P
Quant Time: Mar 21 7:48 2005 Quant Results File: DX021605.RES

Quant Method : D:\HPCHEM\1\METHODS\DX021605.M (RTE Integrator)
Title : 8260 1,4-Dioxane Ini. Cal. (05/02/02)
Last Update : Wed Feb 16 15:53:54 2005
Response via : Initial Calibration
DataAcq Meth : DX021605

3/21/05 JG

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene (IS)	10.56	99	41664	1.00	ug/L	0.00
3) 1,4-DIOXANE-d8	12.35	64	6641	25.00	ug/L	0.00
5) 1,2,3-Trichloropropane-d5	0.00	79	0	0.00	ug/L	-15.08
System Monitoring Compounds						
2) Dibromofluoromethane (SU1)	10.07	113	34219	1.06	ug/L	0.00
Spiked Amount 1.000	Range 80 - 120		Recovery = 106.00%			
Target Compounds						Qvalue
4) 1,4-DIOXANE	12.43	88	233	N.D.		
6) 1,2,3-Trichloropropane	0.00	75	0	N.D.		

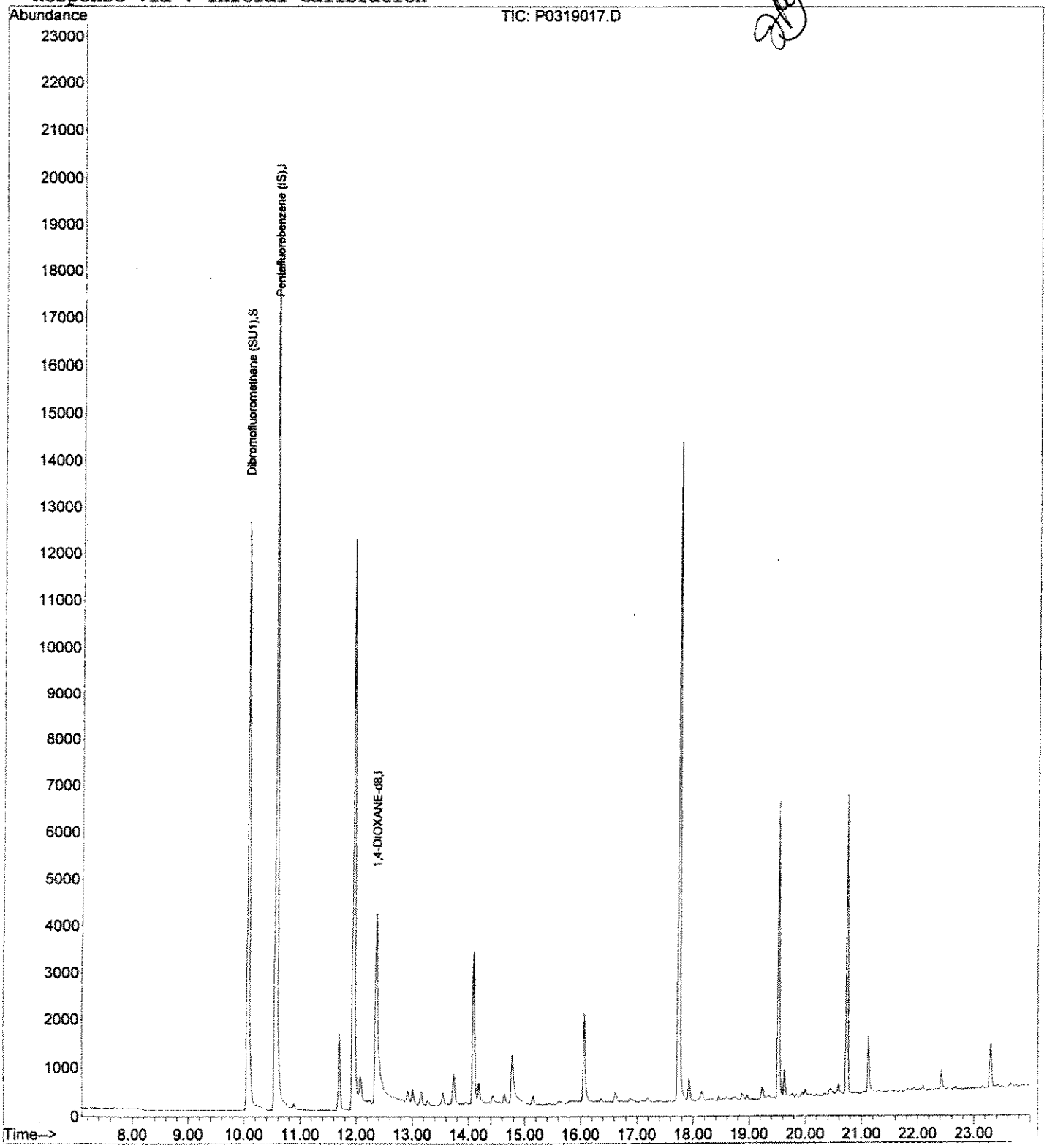
3/21/05

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\1\DATA\031905\P0319017.D Vial: 17
Acq On : 19 Mar 2005 3:21 pm Operator: JG/MS/CLS
Sample : BLANK Inst : GCMS1
Misc : 1X 10ML Multiplr: 1.00
MS Integration Params: DIOXANE.P
Quant Time: Mar 21 7:48 2005 Quant Results File: DX021605.RES

Method : D:\HPCHEM\1\METHODS\DX031905.M (RTE Integrator)
Title : 8260 1,4-Dioxane Ini. Cal. (05/02/02)
Last Update : Mon Mar 21 07:49:30 2005
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\031905\P0319018.D Vial: 18
Acq On : 19 Mar 2005 3:54 pm Operator: JG/MS/CLS
Sample : 1.0 PPB CAL Inst : GCMS1
Misc : 1X 10ML Multiplr: 1.00
MS Integration Params: DIOXANE.P
Quant Time: Mar 21 7:48 2005 Quant Results File: DX021605.RES

Quant Method : D:\HPCHEM\1\METHODS\DX021605.M (RTE Integrator)
Title : 8260 1,4-Dioxane Ini. Cal. (05/02/02)
Last Update : Wed Feb 16 15:53:54 2005
Response via : Initial Calibration
DataAcq Meth : DX021605

3/21/05 JG

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene (IS)	10.56	99	42387	1.00	ug/L	0.00
3) 1,4-DIOXANE-d8	12.35	64	6173	25.00	ug/L	0.00
5) 1,2,3-Trichloropropane-d5	0.00	79	0	0.00	ug/L	-15.08
System Monitoring Compounds						
2) Dibromofluoromethane (SU1)	10.07	113	3733	0.11	ug/L	0.00
Spiked Amount 1.000	Range 80 - 120		Recovery = 11.00%#			
Target Compounds						Qvalue
4) 1,4-DIOXANE	12.43	88	668	1.24	ug/L	97
6) 1,2,3-Trichloropropane	0.00	75	0	N.D.		

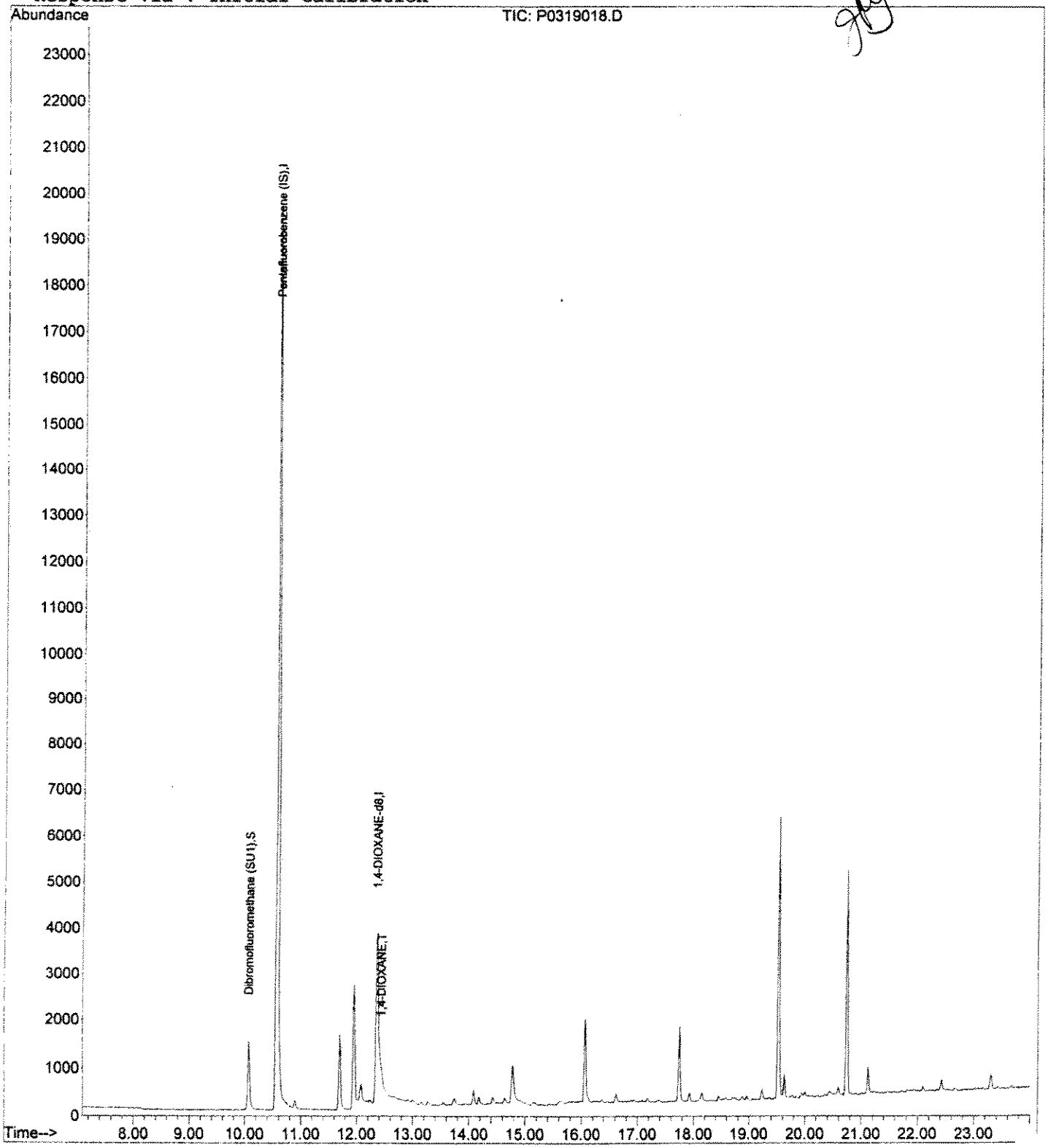
3/21/05

(#) = qualifier out of range (m) = manual integration
P0319018.D DX021605.M Mon Mar 21 07:48:51 2005 GCMS1

Quantitation Report

Data File : D:\HPCHEM\1\DATA\031905\P0319018.D Vial: 18
Acq On : 19 Mar 2005 3:54 pm Operator: JG/MS/CLS
Sample : 1.0 PPB CAL Inst : GCMS1
Misc : 1X 10ML Multiplr: 1.00
MS Integration Params: DIOXANE.P
Quant Time: Mar 21 7:48 2005 Quant Results File: DX021605.RES

Method : D:\HPCHEM\1\METHODS\DX021605.M (RTE Integrator)
Title : 8260 1,4-Dioxane Ini. Cal. (05/02/02)
Last Update : Wed Feb 16 15:53:54 2005
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\031905\P0319018.D Vial: 18
Acq On : 19 Mar 2005 3:54 pm Operator: JG/MS/CLS
Sample : 1.0 PPB CAL Inst : GCMS1
Misc : 1X 10ML Multiplr: 1.00
MS Integration Params: DIOXANE.P
Quant Time: Mar 21 12:54 2005 Quant Results File: DX031905.RES

Re-Calc

Quant Method : D:\HPCHEM\1\METHODS\DX031905.M (RTE Integrator)
Title : 8260 1,4-Dioxane Ini. Cal. (05/02/02)
Last Update : Mon Mar 21 12:54:07 2005
Response via : Initial Calibration
DataAcq Meth : DX021605

3/21/05 JG

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene (IS)	10.56	99	42387	1.00	ug/L	0.00
3) 1,4-DIOXANE-d8	12.35	64	6173	25.00	ug/L	0.00
5) 1,2,3-Trichloropropane-d5	0.00	79	0	0.00	ug/L	-15.08
System Monitoring Compounds						
2) Dibromofluoromethane (SU1)	10.07	113	3733	0.12	ug/L	0.00
Spiked Amount 1.000	Range 80 - 120		Recovery = 12.00%#			
Target Compounds						Qvalue
4) 1,4-DIOXANE	12.43	88	668	1.07	ug/L	96
6) 1,2,3-Trichloropropane	0.00	75	0	N.D.		

1.5 - 1.5

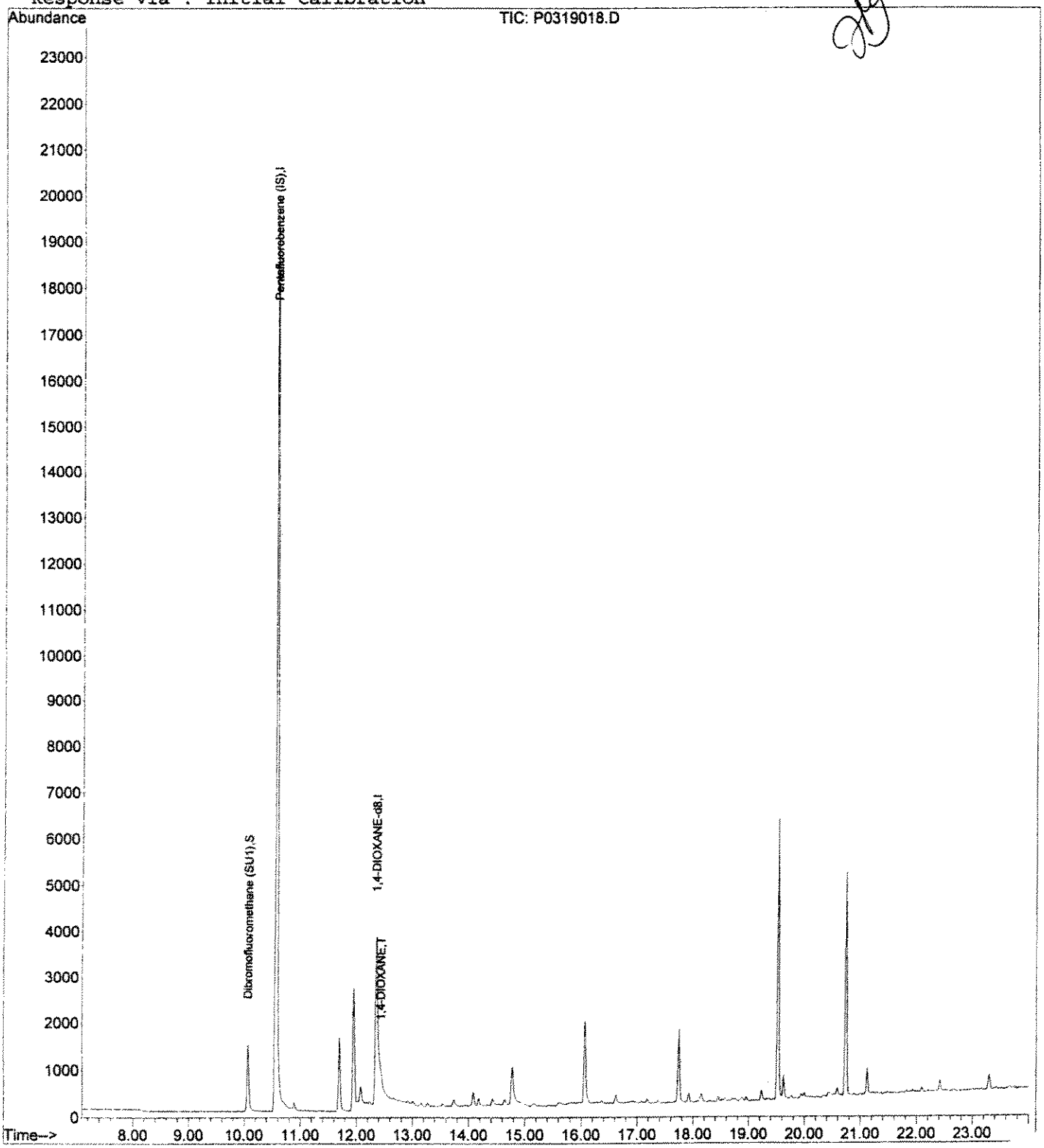
3/21/05

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\1\DATA\031905\P0319018.D Vial: 18
Acq On : 19 Mar 2005 3:54 pm Operator: JG/MS/CLS
Sample : 1.0 PPB CAL Inst : GCMS1
Misc : 1X 10ML Multiplr: 1.00
MS Integration Params: DIOXANE.P
Quant Time: Mar 21 12:54 2005 Quant Results File: DX031905.RES

Method : D:\HPCHEM\1\METHODS\DX031905.M (RTE Integrator)
Title : 8260 1,4-Dioxane Ini. Cal. (05/02/02)
Last Update : Mon Mar 21 12:54:07 2005
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\031905\P0319019.D Vial: 19
Acq On : 19 Mar 2005 4:27 pm Operator: JG/MS/CLS
Sample : SS/CCV Inst : GCMS1
Misc : 1X 10ML Multiplr: 1.00
MS Integration Params: DIOXANE.P
Quant Time: Mar 21 12:54 2005 Quant Results File: DX031905.RES

Quant Method : D:\HPCHEM\1\METHODS\DX031905.M (RTE Integrator)
Title : 8260 1,4-Dioxane Ini. Cal. (05/02/02)
Last Update : Mon Mar 21 12:54:07 2005
Response via : Initial Calibration
DataAcq Meth : DX021605

3/21/05 JG

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene (IS)	10.56	99	46539 ✓	1.00	ug/L	0.00
3) 1,4-DIOXANE-d8	12.35	64	4918 ✓	25.00	ug/L	0.00
5) 1,2,3-Trichloropropane-d5	0.00	79	0	0.00	ug/L	-15.08
System Monitoring Compounds						
2) Dibromofluoromethane (SU1)	10.07	113	37865	1.08	ug/L	0.00
Spiked Amount 1.000	Range 80 - 120		Recovery = 108.00% ✓			
Target Compounds						Qvalue
4) 1,4-DIOXANE	12.43	88	3745	9.75	ug/L ✓	93
6) 1,2,3-Trichloropropane	0.00	75	0	N.D.		

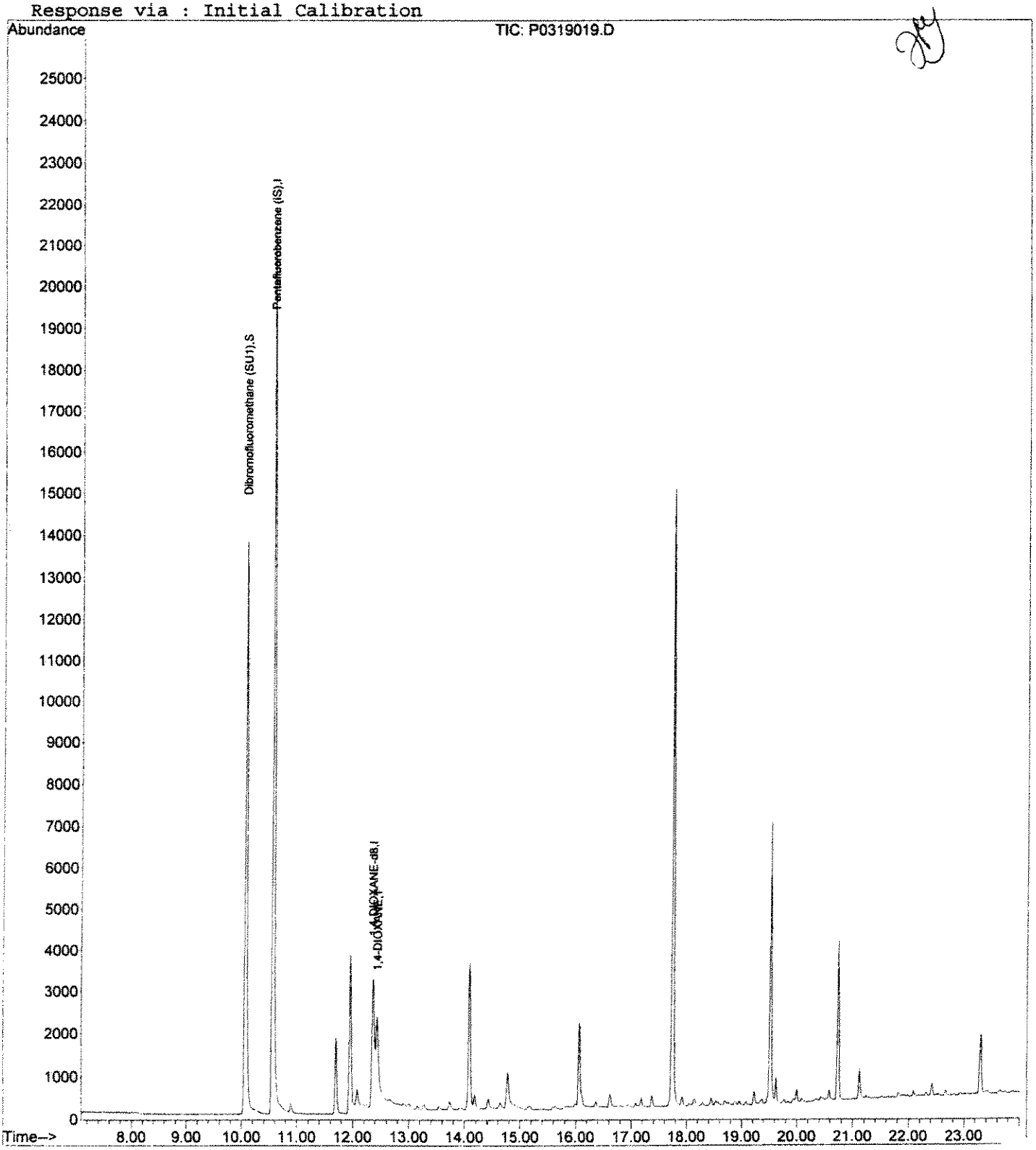
3/21/05

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\1\DATA\031905\P0319019.D Vial: 19
Acq On : 19 Mar 2005 4:27 pm Operator: JG/MS/CLS
Sample : SS/CCV Inst : GCMS1
Misc : 1X 10ML Multiplr: 1.00
MS Integration Params: DIOXANE.P
Quant Time: Mar 21 12:54 2005 Quant Results File: DX031905.RES

Method : D:\HPCHEM\1\METHODS\DX031905.M (RTE Integrator)
Title : 8260 1,4-Dioxane Ini. Cal. (05/02/02)
Last Update : Mon Mar 21 12:54:07 2005
Response via : Initial Calibration



1,4-DIOXANE BY METHOD 8260B SIM

Data File Name P0319019.D
Data File Path D:\HPCHEM\1\DATA\031905\
Sample Name SS/CCV

Date Acquired 3/19/2005 4:27
Operator JG/MS/CLS
Acq. Method File DX021605
GCMS1

3/21/05 JG

INTERNAL STANDARDS	CAL RESPONSE	TARGET RESPONSE	LOW LIMIT	HIGH LIMIT	T/F
Pentafluorobenzene (IS)	47071	46539	23536	94142	TRUE
1,4-DIOXANE-d8	5034	4918	2517	10068	TRUE

SURROGATE	AMOUNT	% RECOVERY	Low	High	T/F
Dibromofluoromethane (SU1)	1.08	107.7	80	125	TRUE

TARGET ANALYTE	AMOUNT	TRUE VALUE	RECOVER	Low	High	T/F
1,4-DIOXANE	9.75	10.00	97.48	70	130	TRUE

3/21/05

METHOD: 624 (8260B) 524.2

CMS #: 1 Date Analyzed: 041805

ANALYST REVIEW	METHOD CRITERIA	PEER REVIEW
✓	1. Sequence File is printed and in the file folder? Standard IDs and analyst's initials are present?	✓
NA	2. Initial Calibration met criteria?	
	a. Print calibration as Average Response Factor (624: RSD ≤ 35%) (8260B: ≤ 30% for CCCs, ≤ 15% for all other compounds, SPCCs met Criteria) (524.2: RSD ≤ 20%)	
	b. If non CCC RSD > 15%, print out the curve as Linear Regression $r \geq 0.995$ or $r^2 \geq 0.99$ (do not force through zero for 8260B)	
	c. If non CCC RSD > 15%, print out the curve as Quadratic $r \geq 0.995$ or $r^2 \geq 0.99$ (do not force through zero for 8260B)	
	d. Choose option (b or c) with the least negative intercept	
	e. Requant the low (RL) standard against the curve must be ± 30%, file with the calibration for reference	
	f. If samples contain negative values then: compare the area counts with the low standard on file if <, then report as N.D. with no flag if >, then report from RSD curve and flag that curve is out or report at an elevated RL as compared to a curve standard	
✓	3. Initial Midpoint / LCS / BFB Tune (624: use Table 5) (524.2: ±30%) (8260B: see control chart) SPCCs met criteria? CCCs met criteria (±20%)?	✓
✓	4. Checked integration of all peaks in Midpoint?	✓
✓	5. Method Blank < Report Limit, if not is data flagged? (624: every 20 samples) (524.2: every 12 hours) (8260B: every 12 hours)	✓
✓	6. MS/MSD (every 20 samples) (624: use Table 5) (524.2: N/A) (8260B: see Control Chart)	✓
✓	7. All samples met holding time? (Soil 72hr ext, 7/14days water)	✓
✓	8. All water samples checked to be pH < 2? (Note this on the sequence file)	✓
✓	9. LCS every 20 samples (624: See Table 5) (524.2: ±30%) (8260B: See Control Chart)	✓
✓	10. Cont. Midpoint / LCS / BFB Tune done every 12 hours (624: use Table 5) (524.2: ±30%) (8260B: see control chart) SPCCs met criteria? CCCs met criteria (±20%)?	✓
✓	11. Surrogates within acceptance limits (624 / 524.2 / 8260B: See Control Chart)	✓
✓	12. Internal Standards within acceptance limits (624 / 524.2 / 8260B: response must be -50 to +100%).	✓
	13. Manual re-integration(s) performed? yes:_____ no: ✓	
	14. Corrective Action Report required? yes:_____ (Attached) no: ✓	
	15. Reports impacted by the Corrective Action Report	

Analyst: [signature] Reviewer / Date: [signature] 4/5/05

6/13/01

Injection Log

Directory: D:\HPCHEM\1\DATA\040205

04 04 05

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	P0402001.D	1.8260	TUNE/BLANK	1X 10ML	2 Apr 2005 07:12
2	2	P0402002.D	1.	P5D0201-BS1 (CCV)	1X 10ML	2 Apr 2005 07:48
3	3	P0402003.D	1.	P5D0201-BSD1	1X 10ML	2 Apr 2005 08:21
4	4	P0402004.D	1.	P5D0201-BLK1	1X 10ML	2 Apr 2005 08:54
5	5	P0402005.D	1.	POC0786-05	10X 10ML	2 Apr 2005 09:27
6	6	P0402006.D	1.	POD0005-01	1X 10ML	2 Apr 2005 10:00
7	7	P0402007.D	1.	POC0786-06	1X 10ML	2 Apr 2005 10:33
8	8	P0402008.D	1.	P5D0201-MS1 POC0786-06	1X 10ML	2 Apr 2005 11:05
9	9	P0402009.D	1.	P5D0201-MSD1	1X 10ML	2 Apr 2005 11:38
10	10	P0402010.D	1.	POC0786-07	1X 10ML	2 Apr 2005 12:11
11	11	P0402011.D	1.	POC0786-08	1X 10ML	2 Apr 2005 12:44
12	12	P0402012.D	1.	~~POC0786-09~~ DNR	1X 10ML	2 Apr 2005 13:17
13	13	P0402013.D	1.	POC0891-01	1X 10ML	2 Apr 2005 13:49
14	14	P0402014.D	1.	POC0892-01	1X 10ML	2 Apr 2005 14:22
15	15	P0402015.D	1.	POC0892-02	1X 10ML	2 Apr 2005 14:55
16	16	P0402016.D	1.	POC0892-03	1X 10ML	2 Apr 2005 15:28
17	17	P0402017.D	1.	POC0892-04	1X 10ML	2 Apr 2005 16:01
18	18	P0402018.D	1.	POD0006-01	1X 10ML	2 Apr 2005 16:33
19	19	P0402019.D	1.	POD0006-02	1X 10ML	2 Apr 2005 17:06
20	20	P0402020.D	1.	POD0006-03	1X 10ML	2 Apr 2005 17:39
21	21	P0402021.D	1.	POD0006-04	1X 10ML	2 Apr 2005 18:11
22	22	P0402022.D	1.	POD0015-01	1X 10ML	2 Apr 2005 18:44
23	23	P0402023.D	1.	~~POC0786-09~~ DNR 72 hr clock	10X 10ML	2 Apr 2005 19:17

4/05/05 gy

DMAP GC/MS 1 DAILY LOG SUMMARY

DATE: 4-2-05 (4-4-05)

QC BATCH # (s): ~~P0405~~ P0D0201

ANALYST: CLS

SEQUENCE FILE: C:\GCMS1\DATA\040205.S

CALIBRATION METHOD(S): DX031905.M

POS #	FILENAME	SAMPLE ID.CLIENT	SAMPLE VOL.	pH	EPA METHOD	MATRIX	COMMENTS
/	P040201	tune	1mL	N+	8260	H2O	
1	02	CLV	1X10mL				P0D0201-BS1
2	03	CLS					BSD1
3	04	Blank					BLK1
4	05	~~P0405-05~~ P0D0786-03	10X1mL	L2			
5	06	P0D0205-01 A	1X10mL				
6	07	P0C0786-06 A					
7	08	P5D0201-MS1					P0C0786-06A
8	09	L MSD1					d
9	10	P0C0786-07 A					
10	11	08 A					
11	12	09 A					
12	13	P0C0894-01 A					Dva-Toluene
13	14	P0C0892-01 A					
14	15	02 A					
15	16	03 A					
16	17	04 A					
17	18	~~P000~~ P0D0206-01 A					
18	19	(4-4-05) 02 A					
19	20	03 A					
20	21	04 A					
21	22	P0D0205-01 A					
22	23	P0C0786-05 A	10X1mL	✓	✓	✓	DVA-Toluene-d8
		CLS 4-2-05					

STANDARD ID NUMBERS

CCV / H_2O LCS / H20 SPIKE: 5040030 22 0405

Internal Std: NA

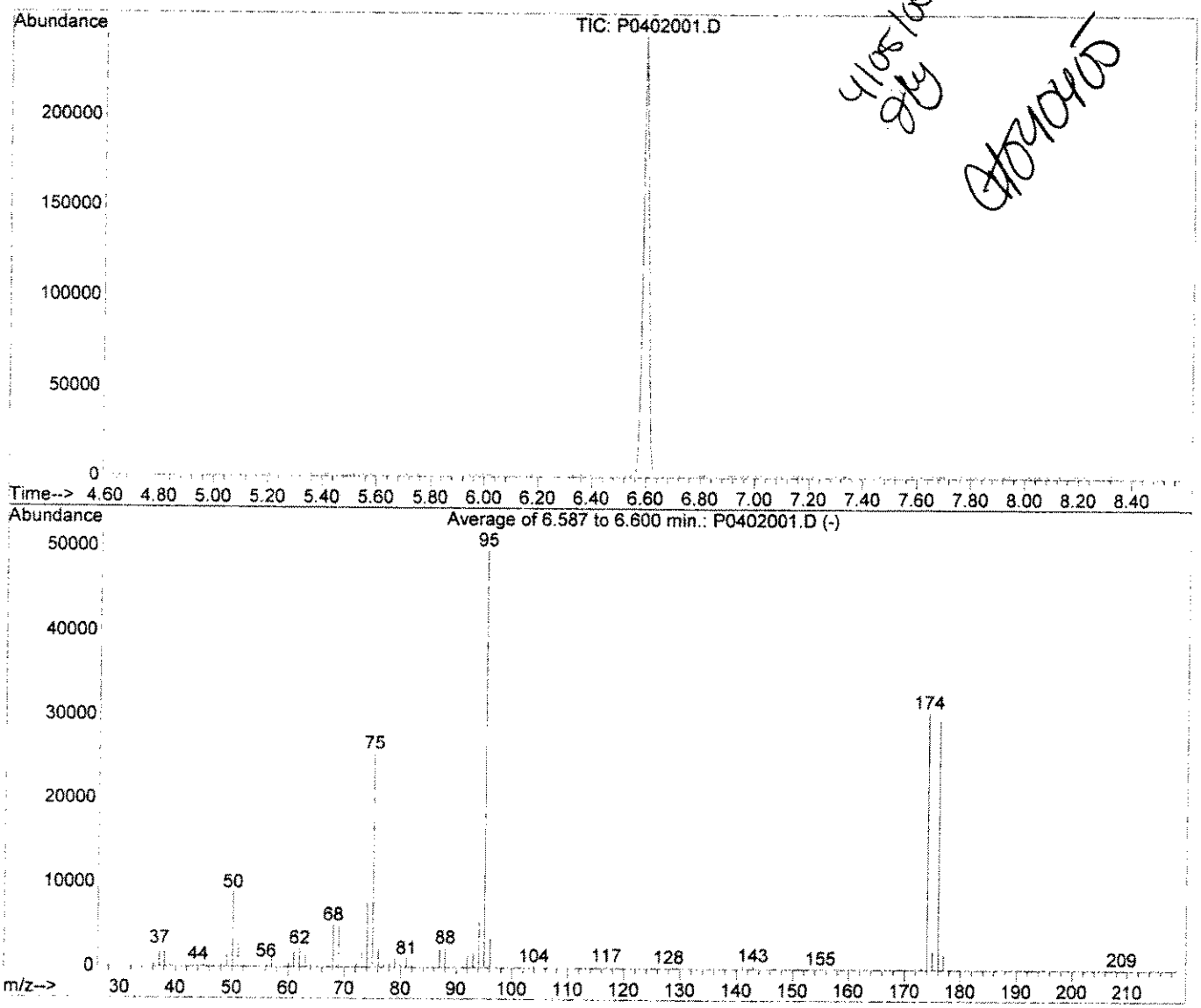
CALIBRATION STD: NA

IS / Surrogate / BFB: 5040021

REVIEWER / DATE: JLY 4/05/05

BFB

Data File : D:\HPCHEM\1\DATA\040205\P0402001.D Vial: 1
Acq On : 2 Apr 2005 7:12 am Operator: CS
Sample : TUNE/BLANK Inst : GCMS1
Misc : 1X 10ML Multiplr: 1.00
MS Integration Params: DIOXANE.P
Method : D:\HPCHEM\1\METHODS\DX031905.M (RTE Integrator)
Title : 8260 1,4-Dioxane Ini. Cal. (05/02/02)



AutoFind: Scans 411, 412, 413; Background Corrected with Scan 396

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	17.8	8831	PASS
75	95	30	60	51.3	25437	PASS
95	95	100	100	100.0	49600	PASS
96	95	5	9	6.9	3434	PASS
173	174	0.00	2	0.9	291	PASS
174	95	50	100	61.8	30648	PASS
175	174	5	9	7.0	2141	PASS
176	174	95	101	97.1	29773	PASS
177	176	5	9	6.3	1882	PASS

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\040205\P0402002.D Vial: 2
Acq On : 2 Apr 2005 7:48 am Operator: CS
Sample : P5D0201-BS1 /CCV Inst : GCMS1
Misc : 1X 10ML Multiplr: 1.00
MS Integration Params: DIOXANE.P

Method : D:\HPCHEM\1\METHODS\DX031905.M (RTE Integrator)
Title : 8260 1,4-Dioxane Ini. Cal. (05/02/02)
Last Update : Mon Mar 21 07:49:30 2005
Response via : Multiple Level Calibration

4/05/05 gly

Min. RRF : 0.100 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

4/04/05

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	Pentafluorobenzene (IS)	1.000	1.000	0.0	73	0.00
2	S	Dibromofluoromethane (SU1)	0.756	0.864	-14.3	86	0.00
3	I	1,4-DIOXANE-d8	1.000	1.000	0.0	144	0.00
4	T	1,4-DIOXANE	2.130	1.626	23.7	123	0.00
5	I	1,2,3-Trichloropropane-d5	1.000	1.000	0.0	0#	-15.08#
6	T	1,2,3-Trichloropropane	0.000	0.000#	0.0	0#	-15.08#

(#) = Out of Range SPCC's out = 0 CCC's out = 0

1,4-DIOXANE BY METHOD 8260B SIM

Data File Name P0402002.D
Data File Path D:\HPCHEM\1\DATA\040205\
Sample Name P5D0201-BS1 / CCV

Date Acquired 4/2/2005 7:48
Operator CS
Acq. Method File DX031905
GCMS1

4/05/05 gtg 04/02/05

INTERNAL STANDARDS	CAL RESPONSE	TARGET RESPONSE	LOW LIMIT	HIGH LIMIT	T/F
Pentafluorobenzene (IS)	47071	34208	23536	94142	TRUE
1,4-DIOXANE-d8	5034	7259	2517	10068	TRUE

SURROGATE	AMOUNT	% RECOVERY	Low	High	T/F
Dibromofluoromethane (SU1)	1.14	114.3	80	125	TRUE

TARGET ANALYTE	AMOUNT	TRUE VALUE	RECOVER	Low	High	T/F
1,4-DIOXANE	8.59	10.00	85.95	70	130	TRUE

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\040205\P0402002.D Vial: 2
Acq On : 2 Apr 2005 7:48 am Operator: CS
Sample : P5D0201-BS1/ccv Inst : GCMS1
Misc : 1X 10ML Multiplr: 1.00
MS Integration Params: DIOXANE.P
Quant Time: Apr 4 11:21 2005 Quant Results File: DX031905.RES

Quant Method : D:\HPCHEM\1\METHODS\DX031905.M (RTE Integrator)
Title : 8260 1,4-Dioxane Ini. Cal. (05/02/02)
Last Update : Mon Mar 21 07:49:30 2005
Response via : Initial Calibration
DataAcq Meth : DX031905

4/05/05 gly

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene (IS)	10.56	99	34208 ✓	1.00	ug/L	0.00
3) 1,4-DIOXANE-d8	12.35	64	7259 ✓	25.00	ug/L	0.00
5) 1,2,3-Trichloropropane-d5	0.00	79	0	0.00	ug/L	-15.08
System Monitoring Compounds						
2) Dibromofluoromethane (SU1)	10.07	113	29546	1.14	ug/L	0.00
Spiked Amount 1.000	Range 80 - 120		Recovery = 114.00% ✓			
Target Compounds						Qvalue
4) 1,4-DIOXANE	12.43	88	4722	8.59	ug/L ✓	93

(#) = qualifier out of range (m) = manual integration

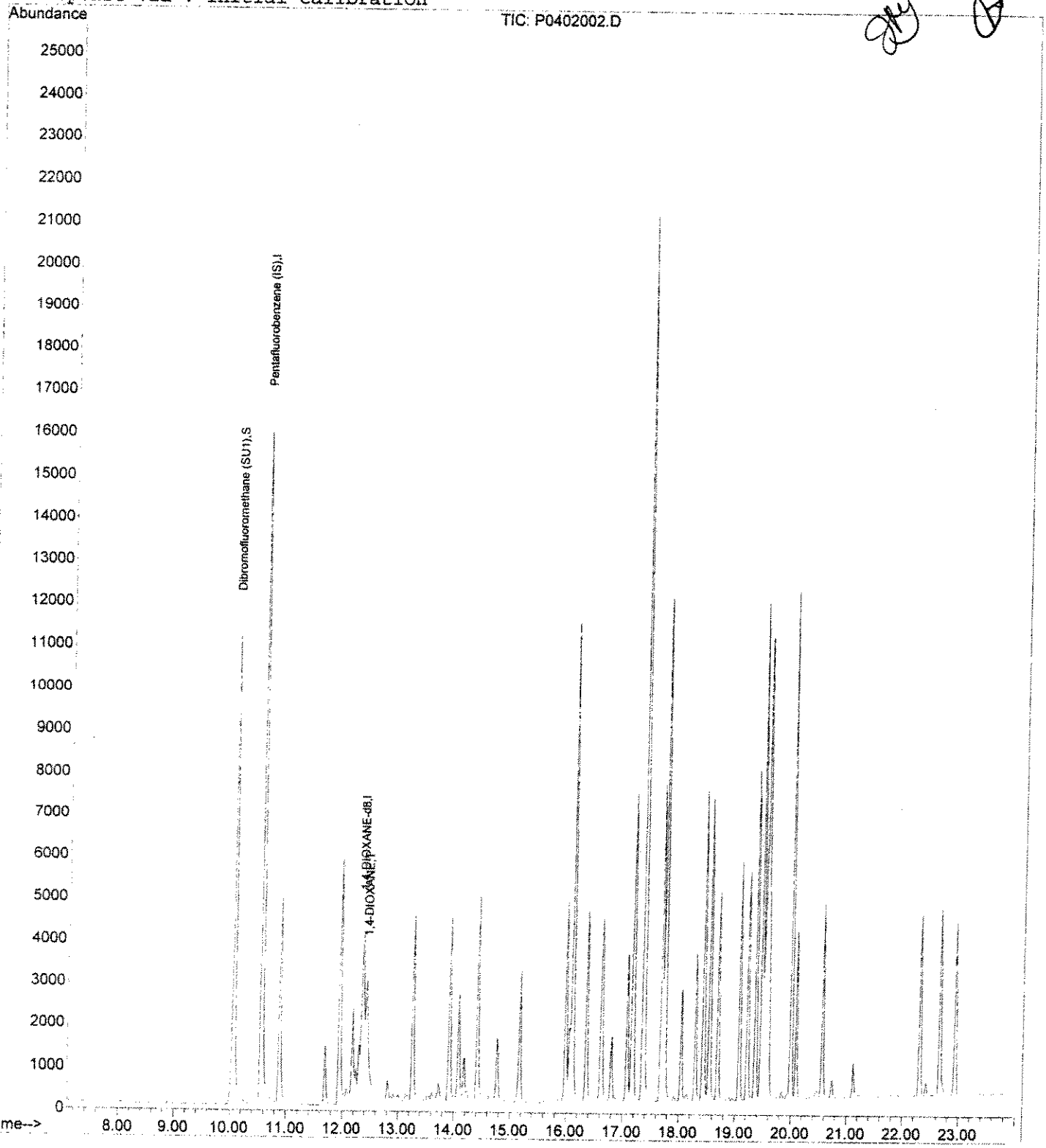
Quantitation Report

Data File : D:\HPCHEM\1\DATA\040205\P0402002.D
Acq On : 2 Apr 2005 7:48 am
Sample : P5D0201-BS1
Misc : 1X 10ML
MS Integration Params: DIOXANE.P
Quant Time: Apr 4 11:21 2005

Vial: 2
Operator: CS
Inst : GCMS1
Multiplr: 1.00

Quant Results File: DX031905.RES

Method : D:\HPCHEM\1\METHODS\DX031905.M (RTE Integrator)
Title : 8260 1,4-Dioxane Ini. Cal. (05/02/02)
Last Update : Mon Mar 21 07:49:30 2005
Response via : Initial Calibration



1,4-DIOXANE BY METHOD 8260B SIM

Data File Name P0402003.D
Data File Path D:\HPCHEM\1\DATA\040205\
Sample Name P5D0201-BSD1 / LCS DUP

Date Acquired 4/2/2005 8:21
Operator CS
Acq. Method File DX031905
GCMS1

4/05/05 gy

04/04/05

INTERNAL STANDARDS	CAL RESPONSE	TARGET RESPONSE	LOW LIMIT	HIGH LIMIT	T/F
Pentafluorobenzene (IS)	47071	35711	23536	94142	TRUE
1,4-DIOXANE-d8	5034	4308	2517	10068	TRUE

SURROGATE	AMOUNT	% RECOVERY	Low	High	T/F
Dibromofluoromethane (SU1)	1.14	113.8	80	125	TRUE

TARGET ANALYTE	AMOUNT	TRUE VALUE	RECOVER	Low	High	T/F
1,4-DIOXANE	9.04	10.00	90.38	70	130	TRUE

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\040205\P0402003.D
Acq On : 2 Apr 2005 8:21 am
Sample : P5D0201-BSD1
Misc : 1X 10ML
MS Integration Params: DIOXANE.P
Quant Time: Apr 4 11:21 2005

Vial: 3
Operator: CS
Inst : GCMS1
Multiplr: 1.00

Quant Results File: DX031905.RES

Quant Method : D:\HPCHEM\1\METHODS\DX031905.M (RTE Integrator)
Title : 8260 1,4-Dioxane Ini. Cal. (05/02/02)
Last Update : Mon Mar 21 07:49:30 2005
Response via : Initial Calibration
DataAcq Meth : DX031905

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene (IS)	10.56	99	35711	1.00	ug/L	0.00
3) 1,4-DIOXANE-d8	12.35	64	4308	25.00	ug/L	0.00
5) 1,2,3-Trichloropropane-d5	0.00	79	0	0.00	ug/L	-15.08
System Monitoring Compounds						
2) Dibromofluoromethane (SU1)	10.07	113	30707	1.14	ug/L	0.00
Spiked Amount 1.000	Range 80 - 120		Recovery = 114.00%			
Target Compounds						Qvalue
4) 1,4-DIOXANE	12.43	88	2947	9.04	ug/L	96

(#) = qualifier out of range (m) = manual integration

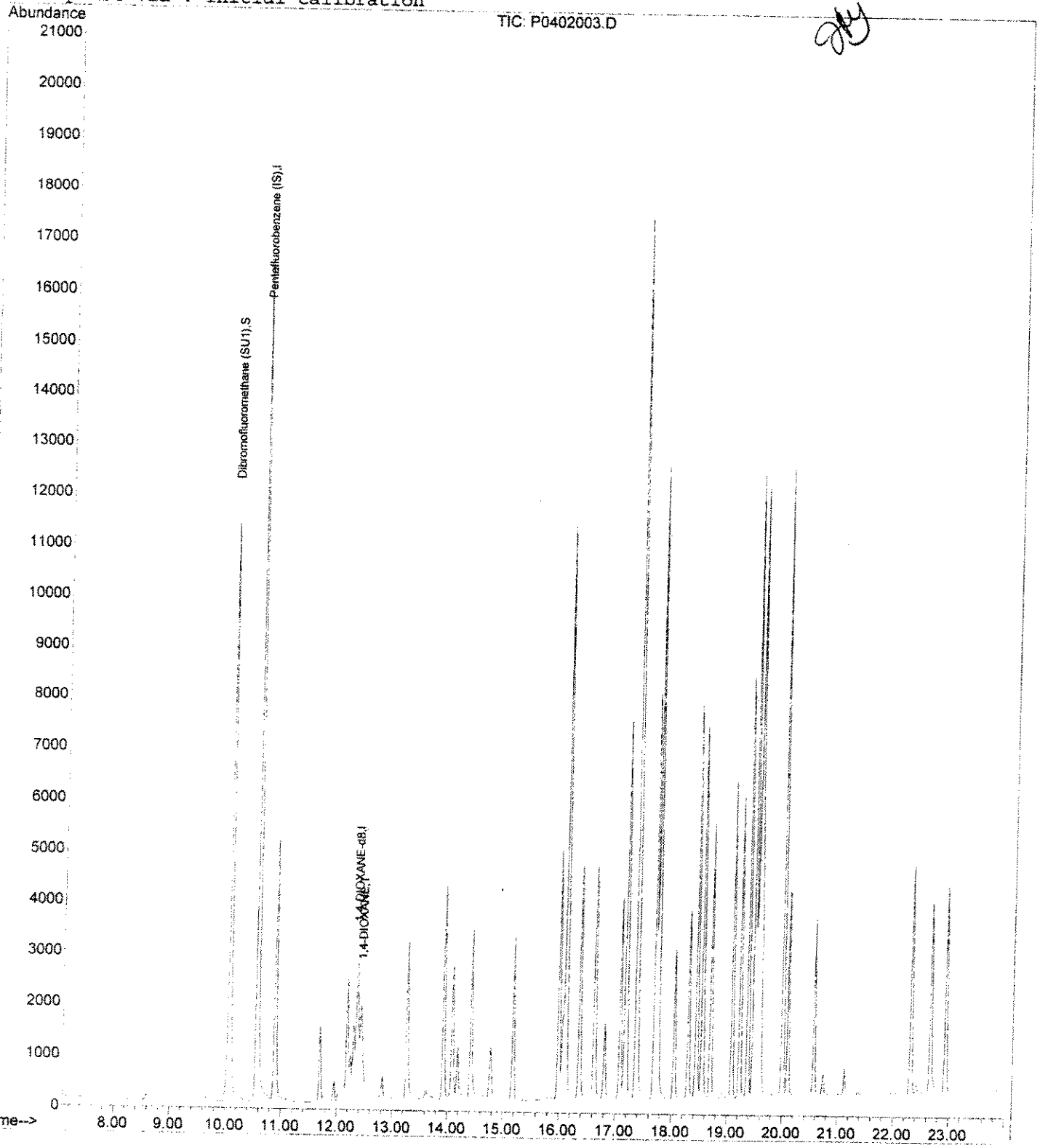
Quantitation Report

Data File : D:\HPCHEM\1\DATA\040205\P0402003.D
Acq On : 2 Apr 2005 8:21 am
Sample : P5D0201-BSD1
Misc : 1X 10ML
MS Integration Params: DIOXANE.P
Quant Time: Apr 4 11:21 2005

Vial: 3
Operator: CS
Inst : GCMS1
Multiplr: 1.00

Quant Results File: DX031905.RES

Method : D:\HPCHEM\1\METHODS\DX031905.M (RTE Integrator)
Title : 8260 1,4-Dioxane Ini. Cal. (05/02/02)
Last Update : Mon Mar 21 07:49:30 2005
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\040205\P0402004.D
Acq On : 2 Apr 2005 8:54 am
Sample : P5D0201-BLK1 / Blank
Misc : 1X 10ML
MS Integration Params: DIOXANE.P
Quant Time: Apr 4 11:22 2005

Vial: 4
Operator: CS
Inst : GCMS1
Multiplr: 1.00

Quant Results File: DX031905.RES

Quant Method : D:\HPCHEM\1\METHODS\DX031905.M (RTE Integrator)
Title : 8260 1,4-Dioxane Ini. Cal. (05/02/02)
Last Update : Mon Mar 21 07:49:30 2005
Response via : Initial Calibration
DataAcq Meth : DX031905

4/05/05 gly

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene (IS)	10.56	99	36727	1.00	ug/L	0.00
3) 1,4-DIOXANE-d8	12.35	64	6531	25.00	ug/L	0.00
5) 1,2,3-Trichloropropane-d5	0.00	79	0	0.00	ug/L	-15.08
System Monitoring Compounds						
2) Dibromofluoromethane (SU1)	10.07	113	31451	1.13	ug/L	0.00
Spiked Amount 1.000	Range 80 - 120		Recovery = 113.00%			
Target Compounds						Qvalue
4) 1,4-DIOXANE	12.43	88	153	0.31	ug/L	91

(#) = qualifier out of range (m) = manual integration

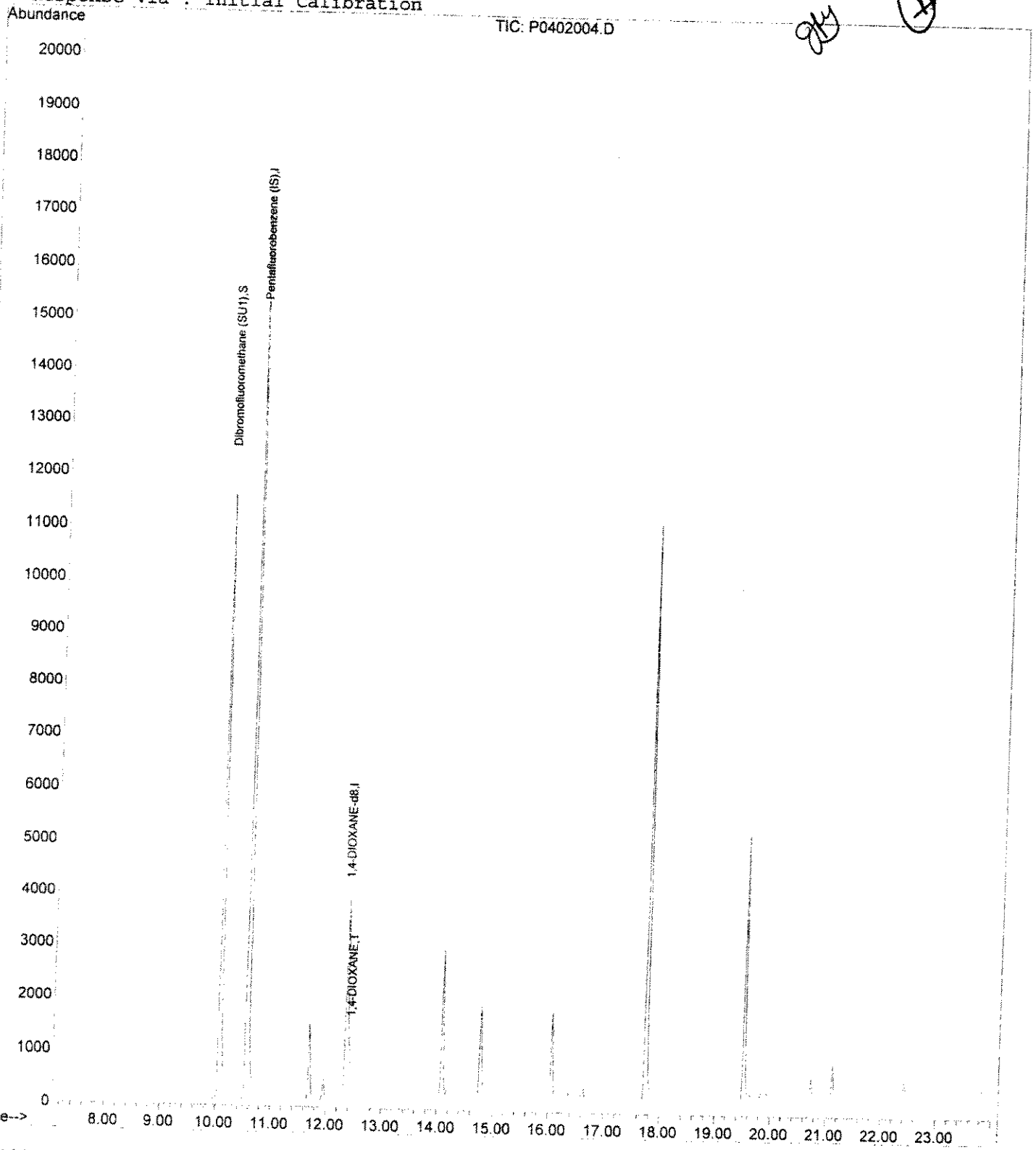
Quantitation Report

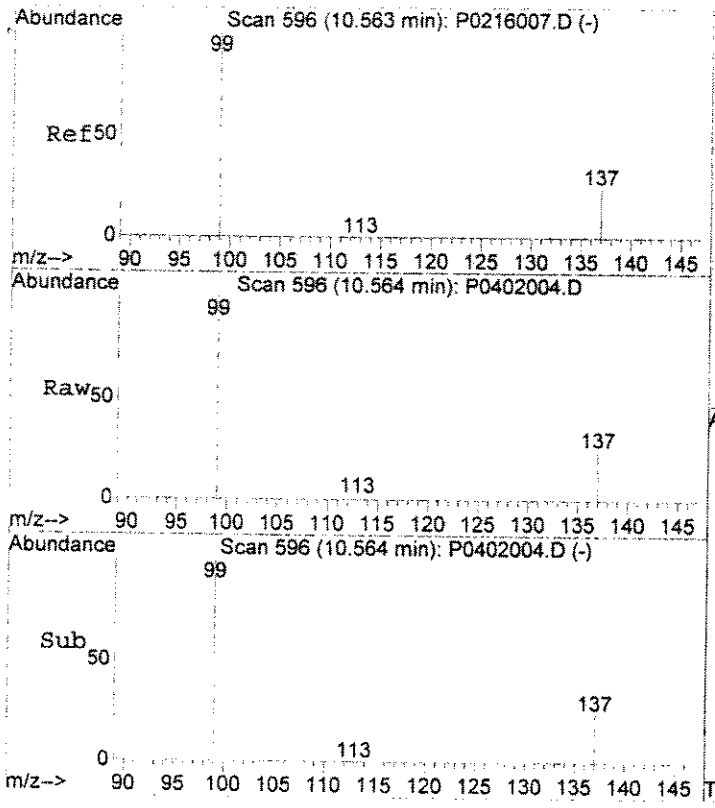
Data File : D:\HPCHEM\1\DATA\040205\P0402004.D
Acq On : 2 Apr 2005 8:54 am
Sample : P5D0201-BLK1
Misc : 1X 10ML
MS Integration Params: DIOXANE.P
Quant Time: Apr 4 11:22 2005

Vial: 4
Operator: CS
Inst : GCMS1
Multiplr: 1.00

Quant Results File: DX031905.RES

Method : D:\HPCHEM\1\METHODS\DX031905.M (RTE Integrator)
Title : 8260 1,4-Dioxane Ini. Cal. (05/02/02)
Last Update : Mon Mar 21 07:49:30 2005
Response via : Initial Calibration

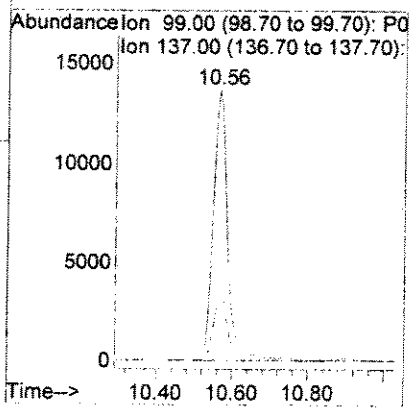


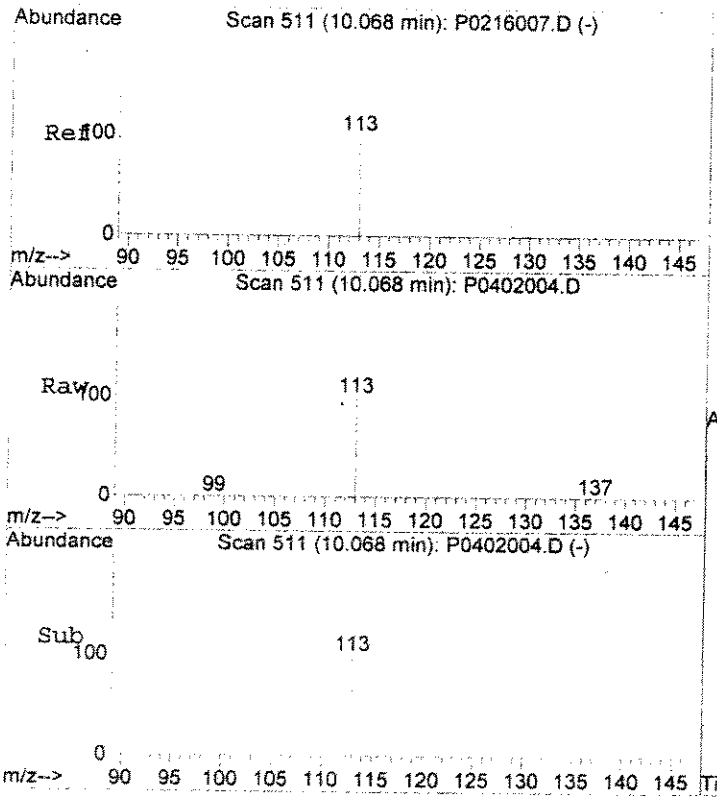


#1
Pentafluorobenzene (IS)
Concen: 1.00 ug/L
RT: 10.56 min Scan# 596
Delta R.T. -0.00 min
Lab File: P0402004.D
Acq: 2 Apr 2005 8:54 am

Tgt Ion: 99 Resp: 36727

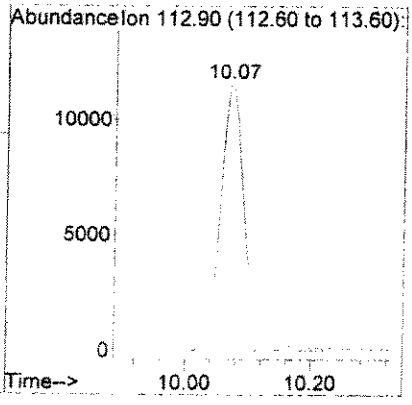
Ion	Ratio	Lower	Upper
99	100		
137	24.3	3.8	43.8

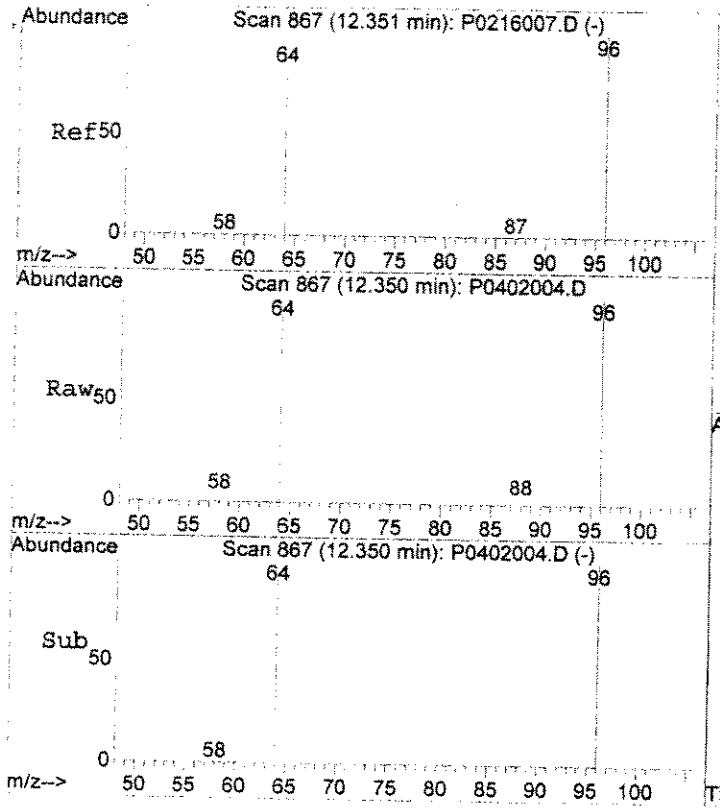




#2
Dibromofluoromethane (SU1)
Concen: 1.00 ug/L
RT: 10.07 min Scan# 511
Delta R.T. -0.00 min
Lab File: P0402004.D
Acq: 2 Apr 2005 8:54 am

Tgt Ion:113 Resp: 31451

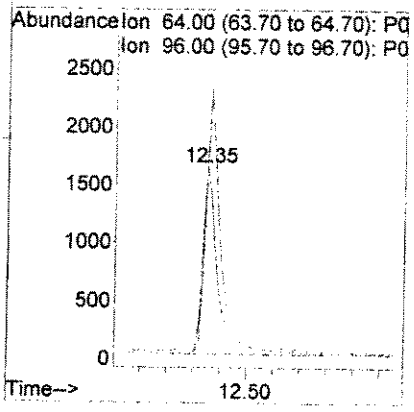


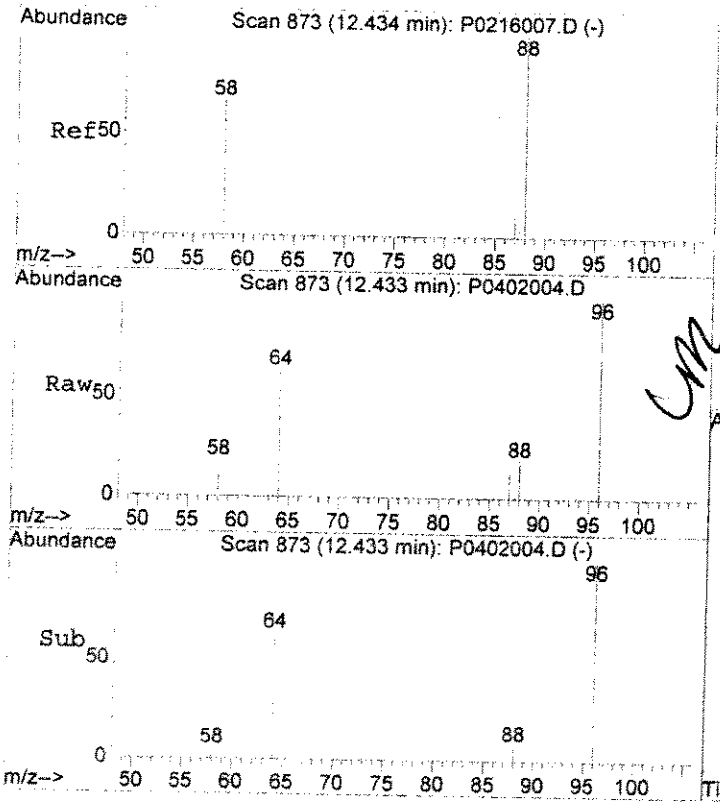


#3
1,4-DIOXANE-d8
Concen: 25.00 ug/L
RT: 12.35 min Scan# 867
Delta R.T. -0.00 min
Lab File: P0402004.D
Acq: 2 Apr 2005 8:54 am

Tgt Ion: 64 Resp: 6531

Ion	Ratio	Lower	Upper
64	100		
96	101.3	72.7	172.7

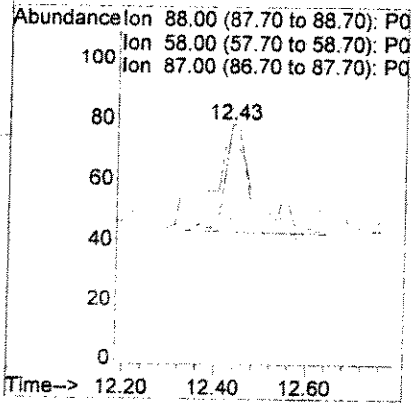


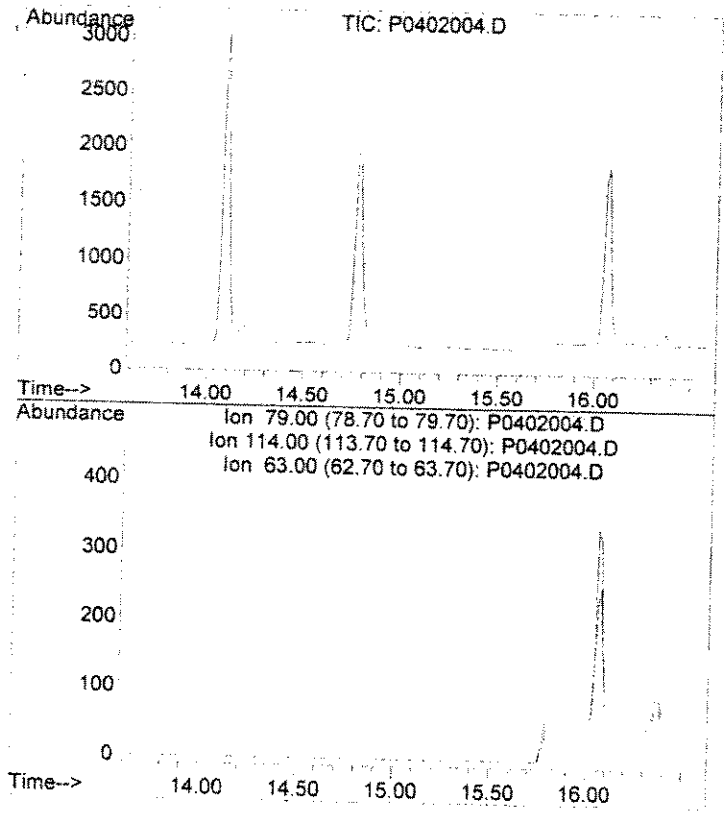


#4
1,4-DIOXANE
Concen: 0.31 ug/L
RT: 12.43 min Scan# 873
Delta R.T. -0.00 min
Lab File: P0402004.D
Acq: 2 Apr 2005 8:54 am

Tgt Ion: 88 Resp: 153

Ion	Ratio	Lower	Upper
88	100		
58	72.2	15.8	115.8
87	13.9	0.0	59.5





#5
1,2,3-Trichloropropane-d5
Concen: 0.00 ug/L
Expected RT: 15.08 min

Lab File: P0402004.D
Acq: 2 Apr 2005 8:54 am

Tgt Ion: 79

Sig	Exp Ratio
79	100
114	0.0
63	98.0

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\040205\P0402006.D
Acq On : 2 Apr 2005 10:00 am
Sample : POD0005-01
Misc : 1X 10ML
MS Integration Params: DIOXANE.P
Quant Time: Apr 4 11:23 2005

Vial: 6
Operator: CS
Inst : GCMS1
Multiplr: 1.00

Quant Results File: DX031905.RES

Quant Method : D:\HPCHEM\1\METHODS\DX031905.M (RTE Integrator)
Title : 8260 1,4-Dioxane Ini. Cal. (05/02/02)
Last Update : Mon Mar 21 07:49:30 2005
Response via : Initial Calibration
DataAcq Meth : DX031905

4/05/05 gty

04040405

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene (IS)	10.57	99	34198	1.00	ug/L	0.00
3) 1,4-DIOXANE-d8	12.35	64	5751	25.00	ug/L	0.00
5) 1,2,3-Trichloropropane-d5	0.00	79	0	0.00	ug/L	-15.08
System Monitoring Compounds						
2) Dibromofluoromethane (SU1)	10.07	113	29965	1.16	ug/L	0.00
Spiked Amount 1.000	Range 80 - 120		Recovery = 116.00%			
Target Compounds						Qvalue
4) 1,4-DIOXANE	12.43	88	123	0.28	ug/L	60

(#) = qualifier out of range (m) = manual integration

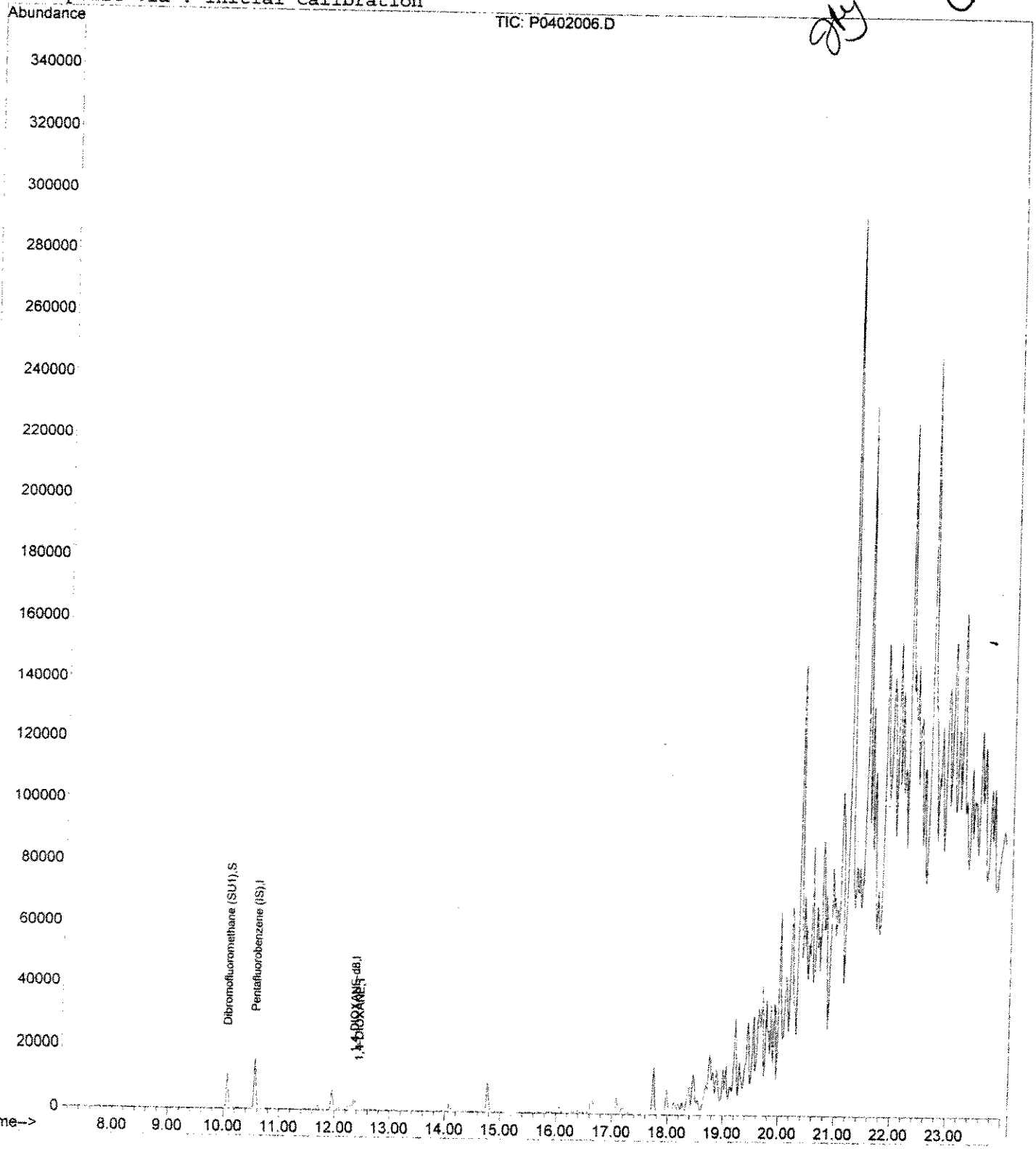
Quantitation Report

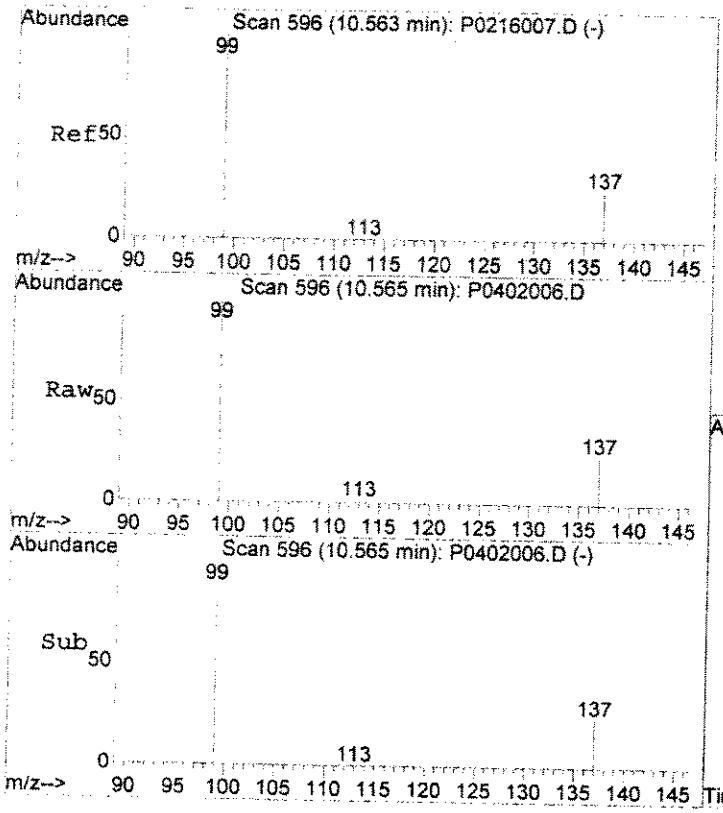
Data File : D:\HPCHEM\1\DATA\040205\P0402006.D
Acq On : 2 Apr 2005 10:00 am
Sample : POD0005-01
Misc : 1X 10ML
MS Integration Params: DIOXANE.P
Quant Time: Apr 4 11:23 2005

Vial: 6
Operator: CS
Inst : GCMS1
Multiplr: 1.00

Quant Results File: DX031905.RES

Method : D:\HPCHEM\1\METHODS\DX031905.M (RTE Integrator)
Title : 8260 1,4-Dioxane Ini. Cal. (05/02/02)
Last Update : Mon Mar 21 07:49:30 2005
Response via : Initial Calibration

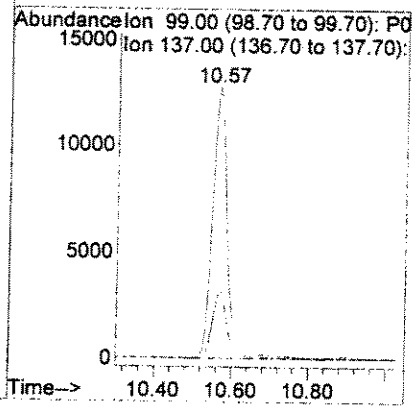


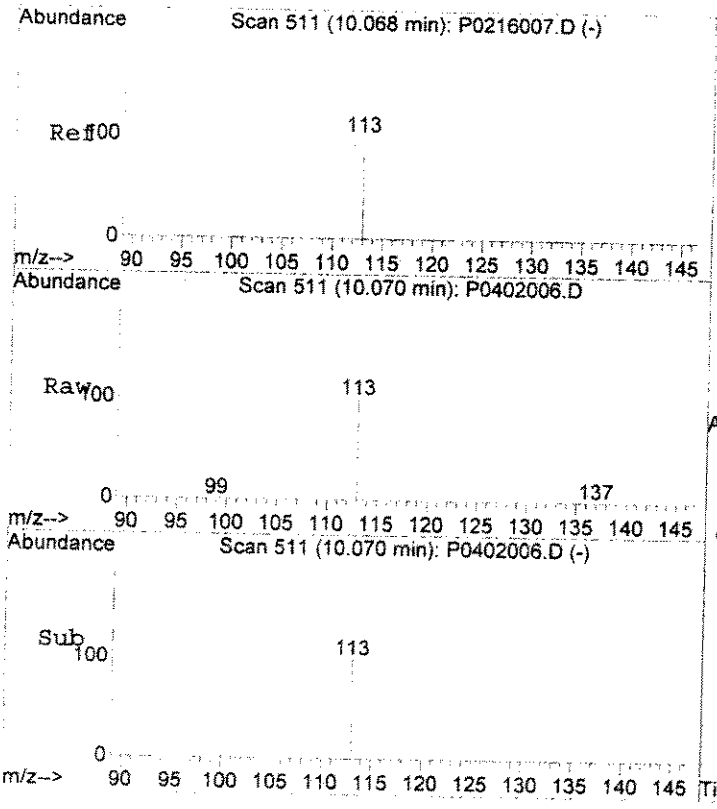


#1
Pentafluorobenzene (IS)
Concen: 1.00 ug/L
RT: 10.57 min Scan# 596
Delta R.T. -0.00 min
Lab File: P0402006.D
Acq: 2 Apr 2005 10:00 am

Tgt Ion: 99 Resp: 34198

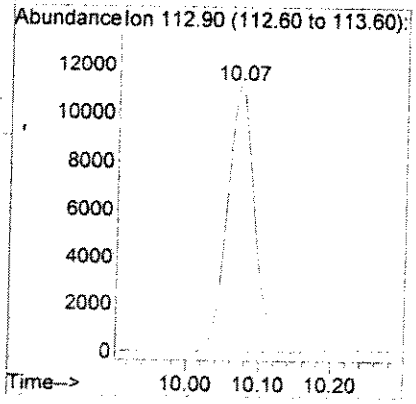
Ion	Ratio	Lower	Upper
99	100		
137	24.1	3.8	43.8

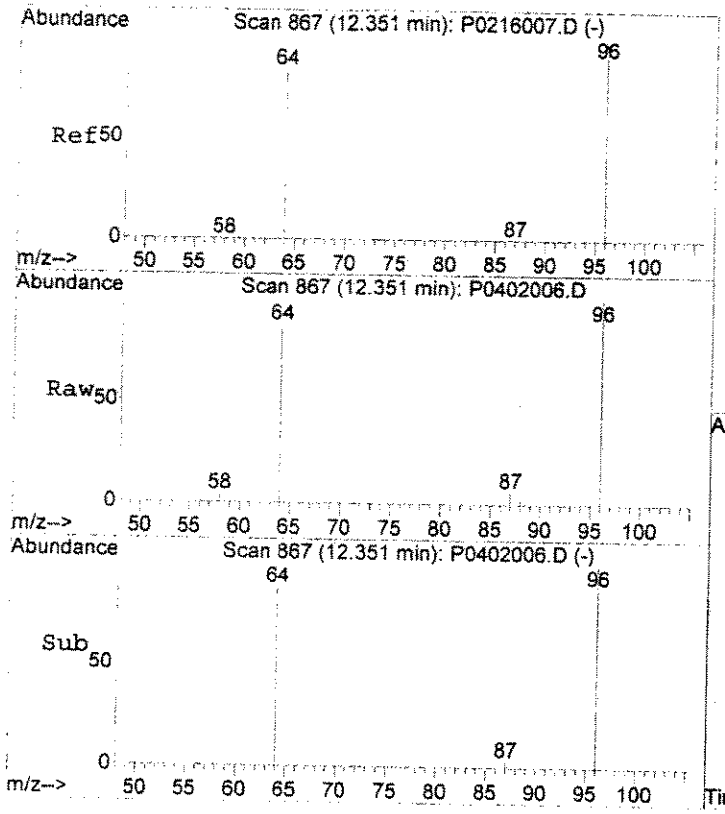




#2
Dibromofluoromethane (SU1)
Concen: 1.00 ug/L
RT: 10.07 min Scan# 511
Delta R.T. -0.00 min
Lab File: P0402006.D
Acq: 2 Apr 2005 10:00 am

Tgt Ion:113 Resp: 29965

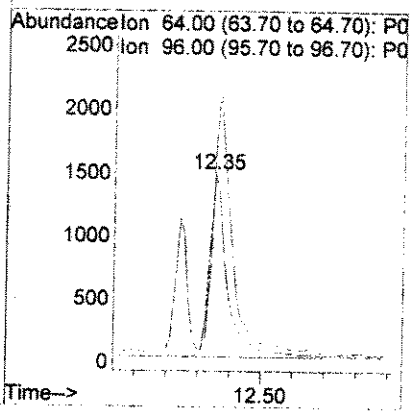


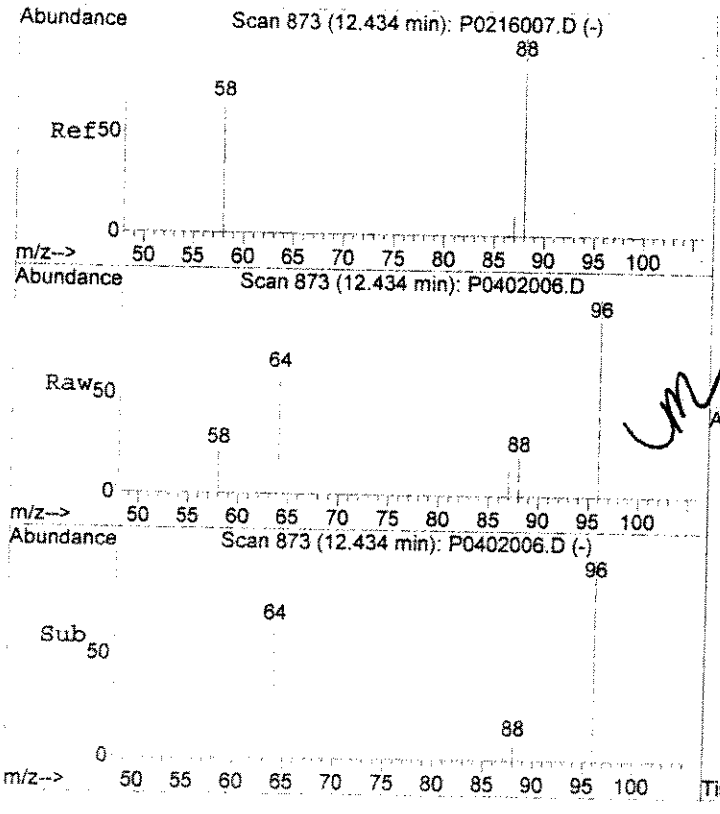


#3
1,4-DIOXANE-d8
Concen: 25.00 ug/L
RT: 12.35 min Scan# 867
Delta R.T. 0.00 min
Lab File: P0402006.D
Acq: 2 Apr 2005 10:00 am

Tgt Ion: 64 Resp: 5751

Ion	Ratio	Lower	Upper
64	100		
96	113.2	72.7	172.7

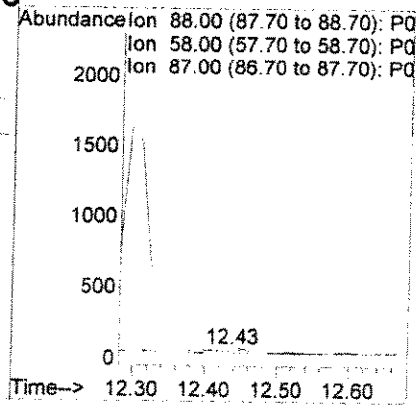


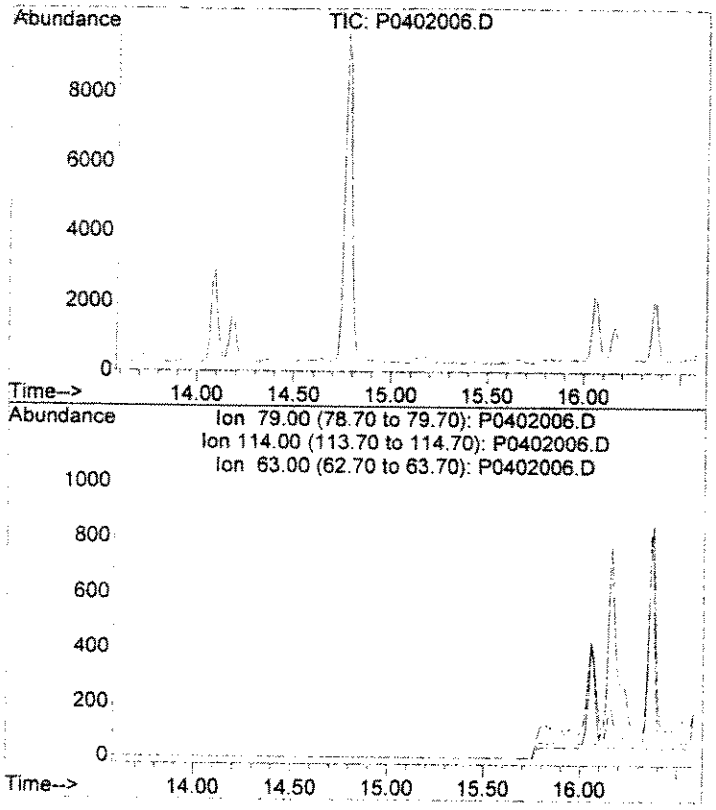


#4
1,4-DIOXANE
Concen: 0.28 ug/L
RT: 12.43 min Scan# 873
Delta R.T. 0.00 min
Lab File: P0402006.D
Acq: 2 Apr 2005 10:00 am

Tgt Ion: 88 Resp: 123

Ion	Ratio	Lower	Upper
88	100		
58	93.8	15.8	115.8
87	37.5	0.0	59.5





#5
1,2,3-Trichloropropane-d5
Concen: 0.00 ug/L
Expected RT: 15.08 min

Lab File: P0402006.D
Acq: 2 Apr 2005 10:00 am

Tgt Ion: 79

Sig	Exp Ratio
79	100
114	0.0
63	98.0

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\040205\P0402007.D
Acq On : 2 Apr 2005 10:33 am
Sample : POC0786-06
Misc : 1X 10ML
MS Integration Params: DIOXANE.P
Quant Time: Apr 4 11:23 2005

Vial: 7
Operator: CS
Inst : GCMS1
Multiplr: 1.00

Quant Results File: DX031905.RES

Quant Method : D:\HPCHEM\1\METHODS\DX031905.M (RTE Integrator)
Title : 8260 1,4-Dioxane Ini. Cal. (05/02/02)
Last Update : Mon Mar 21 07:49:30 2005
Response via : Initial Calibration
DataAcq Meth : DX031905

4/05/05 gty

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene (IS)	10.56	99	42954	1.00	ug/L	0.00
3) 1,4-DIOXANE-d8	12.35	64	9166	25.00	ug/L	0.00
5) 1,2,3-Trichloropropane-d5	0.00	79	0	0.00	ug/L	-15.08
System Monitoring Compounds						
2) Dibromofluoromethane (SU1)	10.07	113	29832	0.92	ug/L	0.00
Spiked Amount 1.000	Range 80 - 120		Recovery = 92.00%			
Target Compounds						Qvalue
4) 1,4-DIOXANE	12.43	88	172	0.25	ug/L	# 1

CM 4/08/05

(#) = qualifier out of range (m) = manual integration

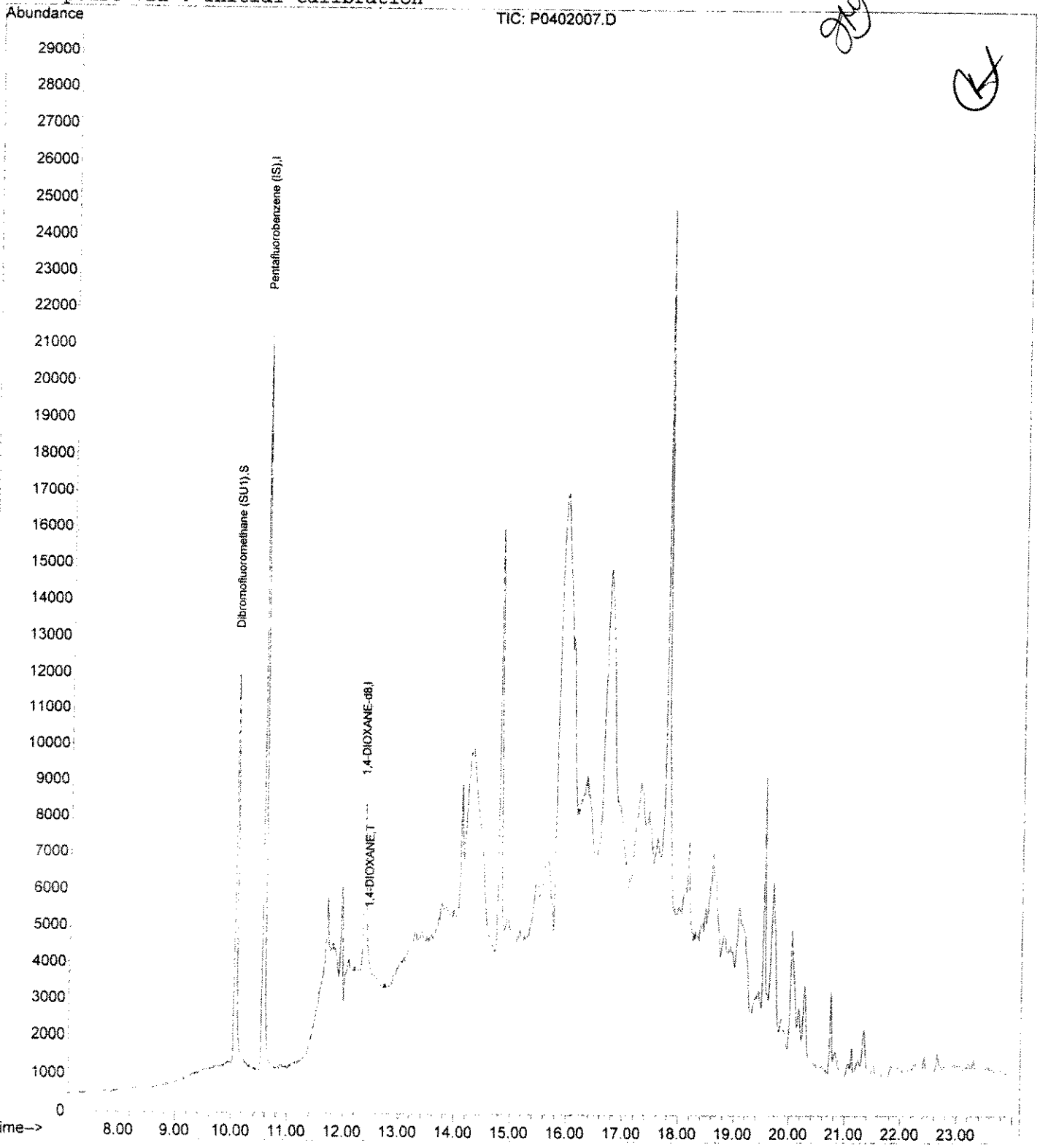
Quantitation Report

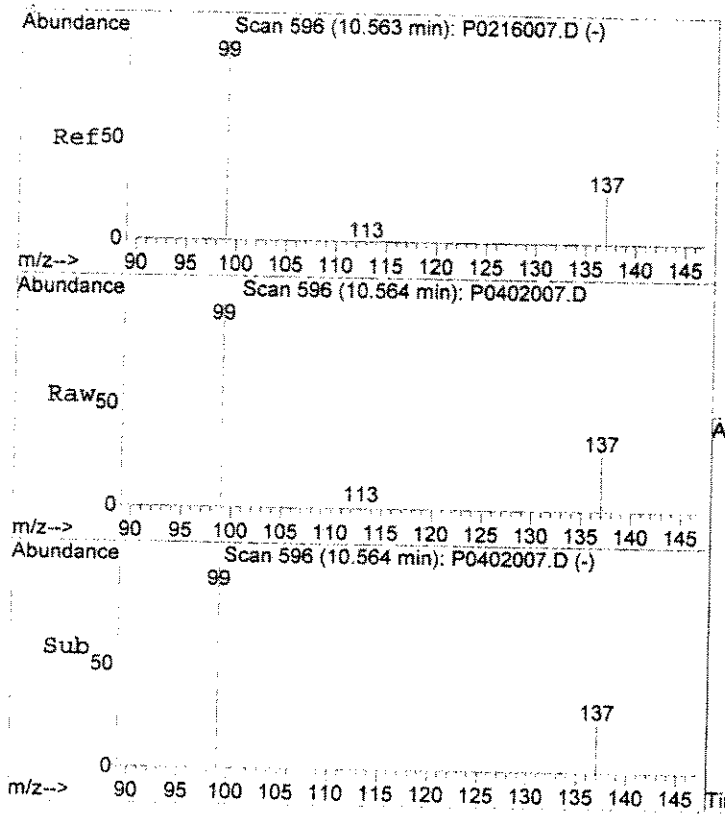
Data File : D:\HPCHEM\1\DATA\040205\P0402007.D
Acq On : 2 Apr 2005 10:33 am
Sample : POC0786-06
Misc : 1X 10ML
MS Integration Params: DIOXANE.P
Quant Time: Apr 4 11:23 2005

Vial: 7
Operator: CS
Inst : GCMS1
Multiplr: 1.00

Quant Results File: DX031905.RES

Method : D:\HPCHEM\1\METHODS\DX031905.M (RTE Integrator)
Title : 8260 1,4-Dioxane Ini. Cal. (05/02/02)
Last Update : Mon Mar 21 07:49:30 2005
Response via : Initial Calibration

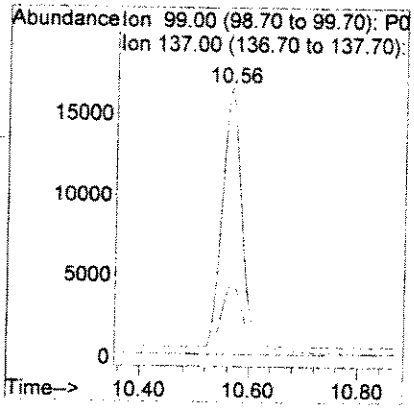


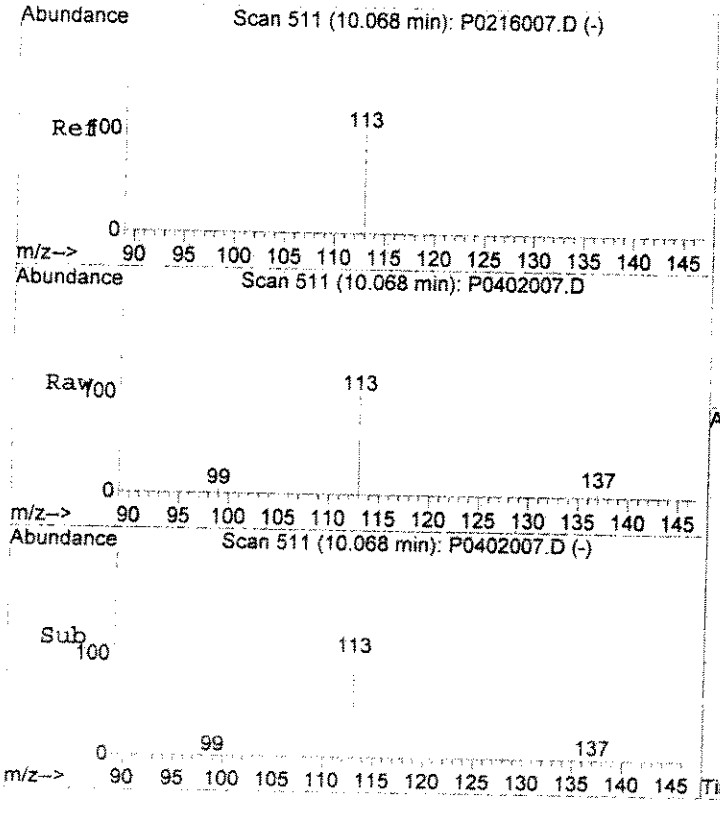


#1
Pentafluorobenzene (IS)
Concen: 1.00 ug/L
RT: 10.56 min Scan# 596
Delta R.T. -0.00 min
Lab File: P0402007.D
Acq: 2 Apr 2005 10:33 am

Tgt Ion: 99 Resp: 42954

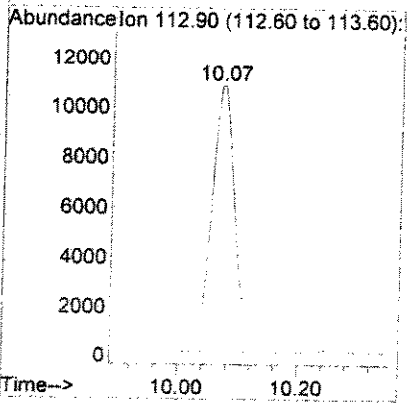
Ion	Ratio	Lower	Upper
99	100		
137	24.0	3.8	43.8

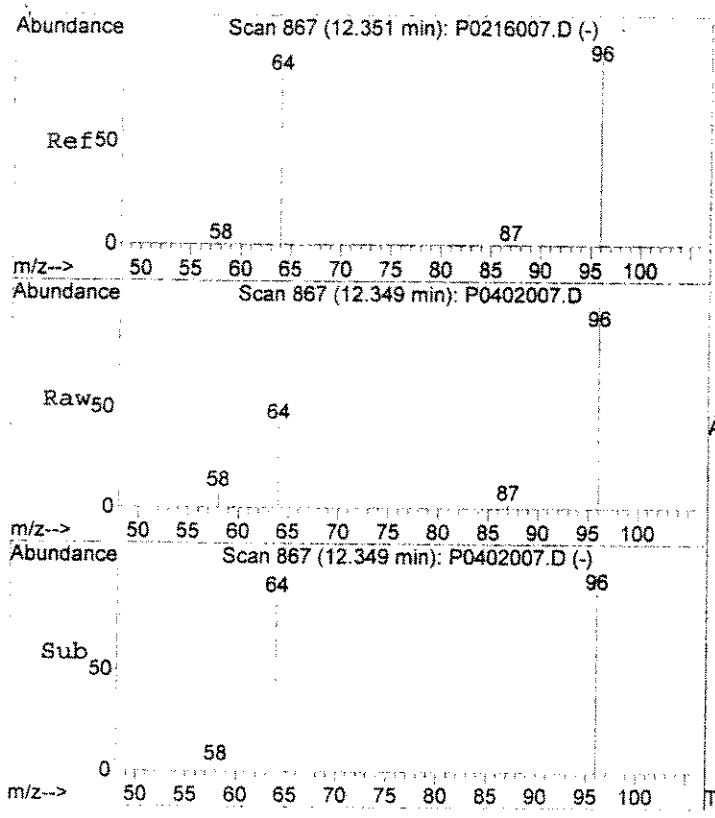




#2
Dibromofluoromethane (SU1)
Concen: 1.00 ug/L
RT: 10.07 min Scan# 511
Delta R.T. -0.00 min
Lab File: P0402007.D
Acq: 2 Apr 2005 10:33 am

Tgt Ion:113 Resp: 29832

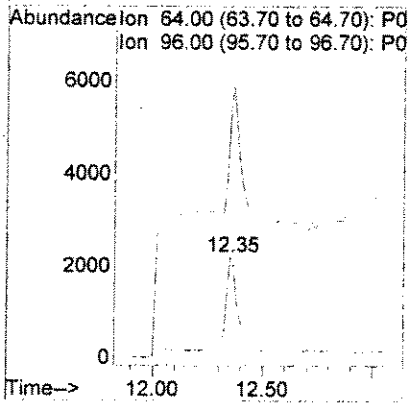


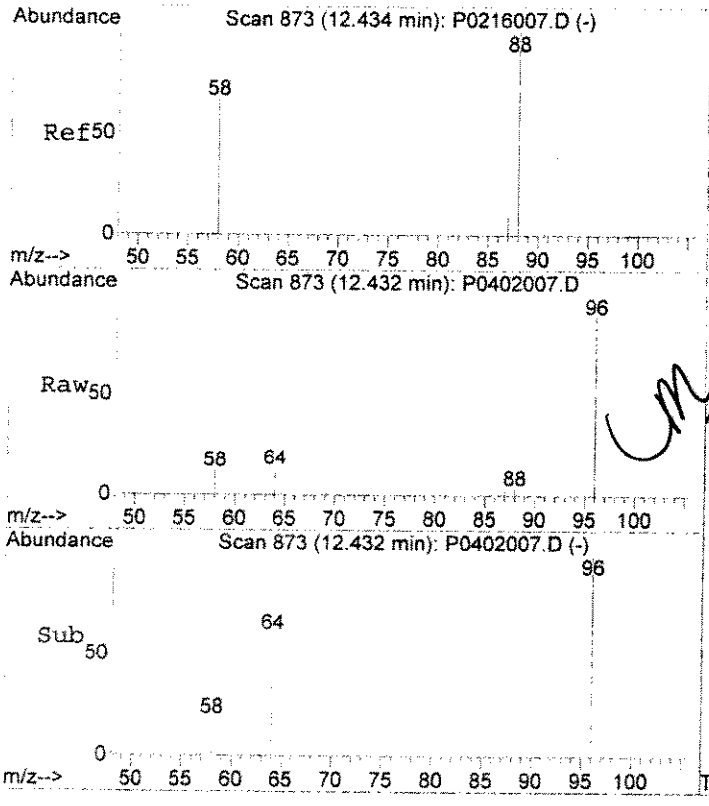


#3
1,4-DIOXANE-d8
Concen: 25.00 ug/L
RT: 12.35 min Scan# 867
Delta R.T. -0.00 min
Lab File: P0402007.D
Acq: 2 Apr 2005 10:33 am

Tgt Ion: 64 Resp: 9166

Ion	Ratio	Lower	Upper
64	100		
96	112.3	72.7	172.7

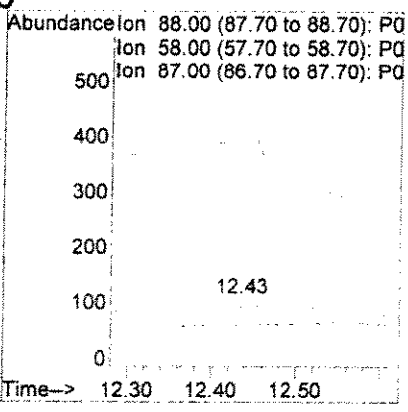


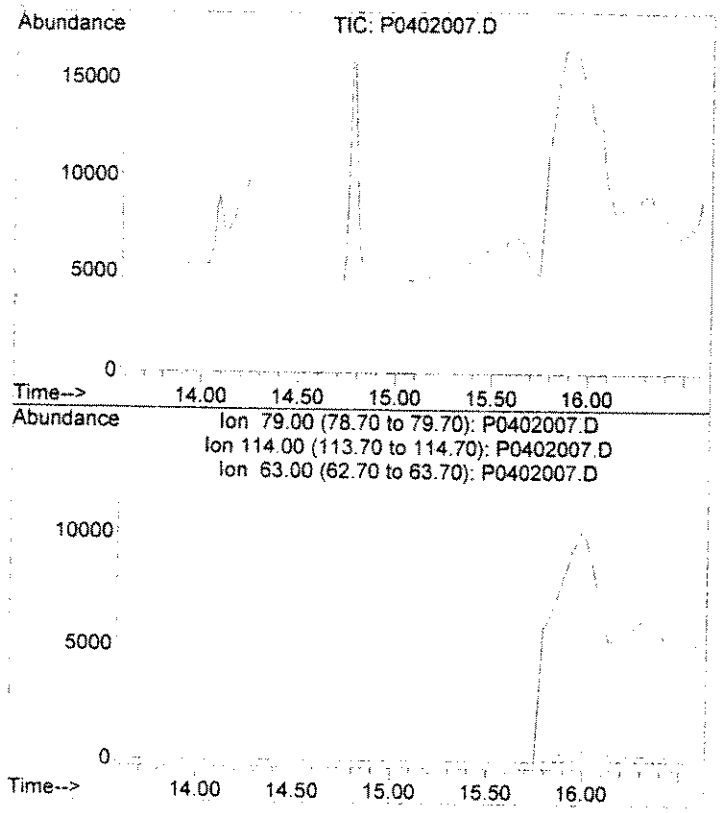


#4
1,4-DIOXANE
Concen: 0.25 ug/L
RT: 12.43 min Scan# 873
Delta R.T. -0.00 min
Lab File: P0402007.D
Acq: 2 Apr 2005 10:33 am

Tgt Ion: 88 Resp: 172

Ion	Ratio	Lower	Upper
88	100		
58	202.0	15.8	115.8#
87	18.0	0.0	59.5





#5
1,2,3-Trichloropropane-d5
Concen: 0.00 ug/L
Expected RT: 15.08 min

Lab File: P0402007.D
Acq: 2 Apr 2005 10:33 am

Tgt Ion: 79

Sig	Exp Ratio
79	100
114	0.0
63	98.0

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\040205\P0402008.D Vial: 8
Acq On : 2 Apr 2005 11:05 am Operator: CS
Sample : P5D0201-MS1 Inst : GCMS1
Misc : 1X 10ML Multiplr: 1.00
MS Integration Params: DIOXANE.P
Quant Time: Apr 4 11:24 2005 Quant Results File: DX031905.RES

Quant Method : D:\HPCHEM\1\METHODS\DX031905.M (RTE Integrator)
Title : 8260 1,4-Dioxane Ini. Cal. (05/02/02)
Last Update : Mon Mar 21 07:49:30 2005
Response via : Initial Calibration
DataAcq Meth : DX031905

4/05/05 JLY

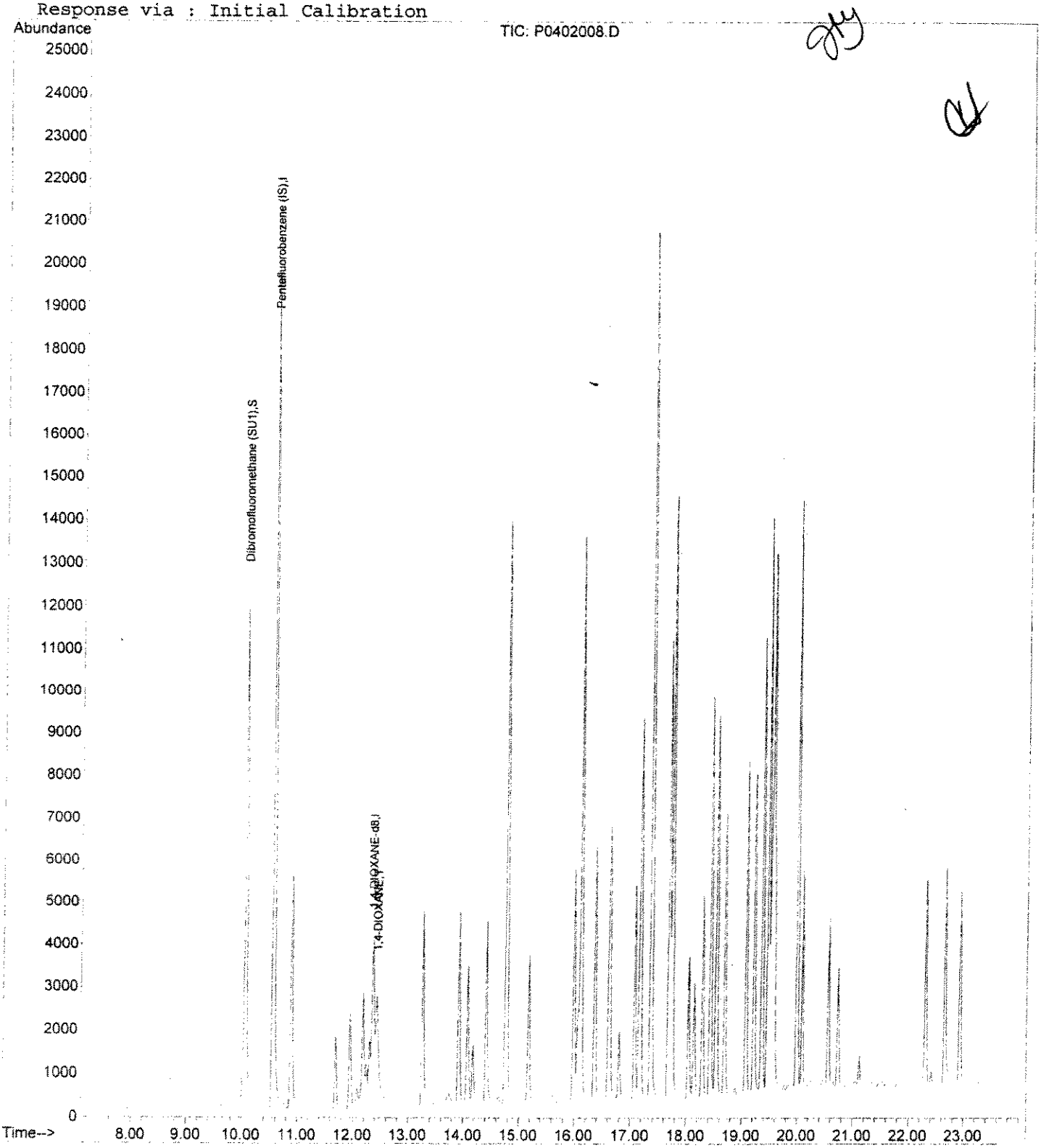
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene (IS)	10.56	99	42443	1.00	ug/L	0.00
3) 1,4-DIOXANE-d8	12.35	64	6479	25.00	ug/L	0.00
5) 1,2,3-Trichloropropane-d5	0.00	79	0	0.00	ug/L	-15.08
System Monitoring Compounds						
2) Dibromofluoromethane (SU1)	10.07	113	32423	1.01	ug/L	0.00
Spiked Amount 1.000	Range 80 - 120		Recovery =	101.00%		
Target Compounds						Qvalue
4) 1,4-DIOXANE	12.43	88	4210	8.59	ug/L	91

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\1\DATA\040205\P0402008.D Vial: 8
Acq On : 2 Apr 2005 11:05 am Operator: CS
Sample : P5D0201-MS1 Inst : GCMS1
Misc : 1X 10ML Multiplr: 1.00
MS Integration Params: DIOXANE.P
Quant Time: Apr 4 11:24 2005 Quant Results File: DX031905.RES

Method : D:\HPCHEM\1\METHODS\DX031905.M (RTE Integrator)
Title : 8260 1,4-Dioxane Ini. Cal. (05/02/02)
Last Update : Mon Mar 21 07:49:30 2005
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\040205\P0402009.D Vial: 9
Acq On : 2 Apr 2005 11:38 am Operator: CS
Sample : P5D0201-MSD1 Inst : GCMS1
Misc : 1X 10ML Multiplr: 1.00
MS Integration Params: DIOXANE.P
Quant Time: Apr 4 11:24 2005 Quant Results File: DX031905.RES

Quant Method : D:\HPCHEM\1\METHODS\DX031905.M (RTE Integrator)
Title : 8260 1,4-Dioxane Ini. Cal. (05/02/02)
Last Update : Mon Mar 21 07:49:30 2005
Response via : Initial Calibration
DataAcq Meth : DX031905

4/05/05 gly

GA 4/11/05

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene (IS)	10.56	99	38636	1.00	ug/L	0.00
3) 1,4-DIOXANE-d8	12.35	64	6270	25.00	ug/L	0.00
5) 1,2,3-Trichloropropane-d5	0.00	79	0	0.00	ug/L	-15.08
System Monitoring Compounds						
2) Dibromofluoromethane (SU1)	10.07	113	30203	1.03	ug/L	0.00
Spiked Amount 1.000	Range 80 - 120		Recovery = 103.00%			
Target Compounds						Qvalue
4) 1,4-DIOXANE	12.43	88	4228	8.91	ug/L	91

(#) = qualifier out of range (m) = manual integration
P0402009.D DX031905.M Mon Apr 04 11:24:56 2005 GCMS1

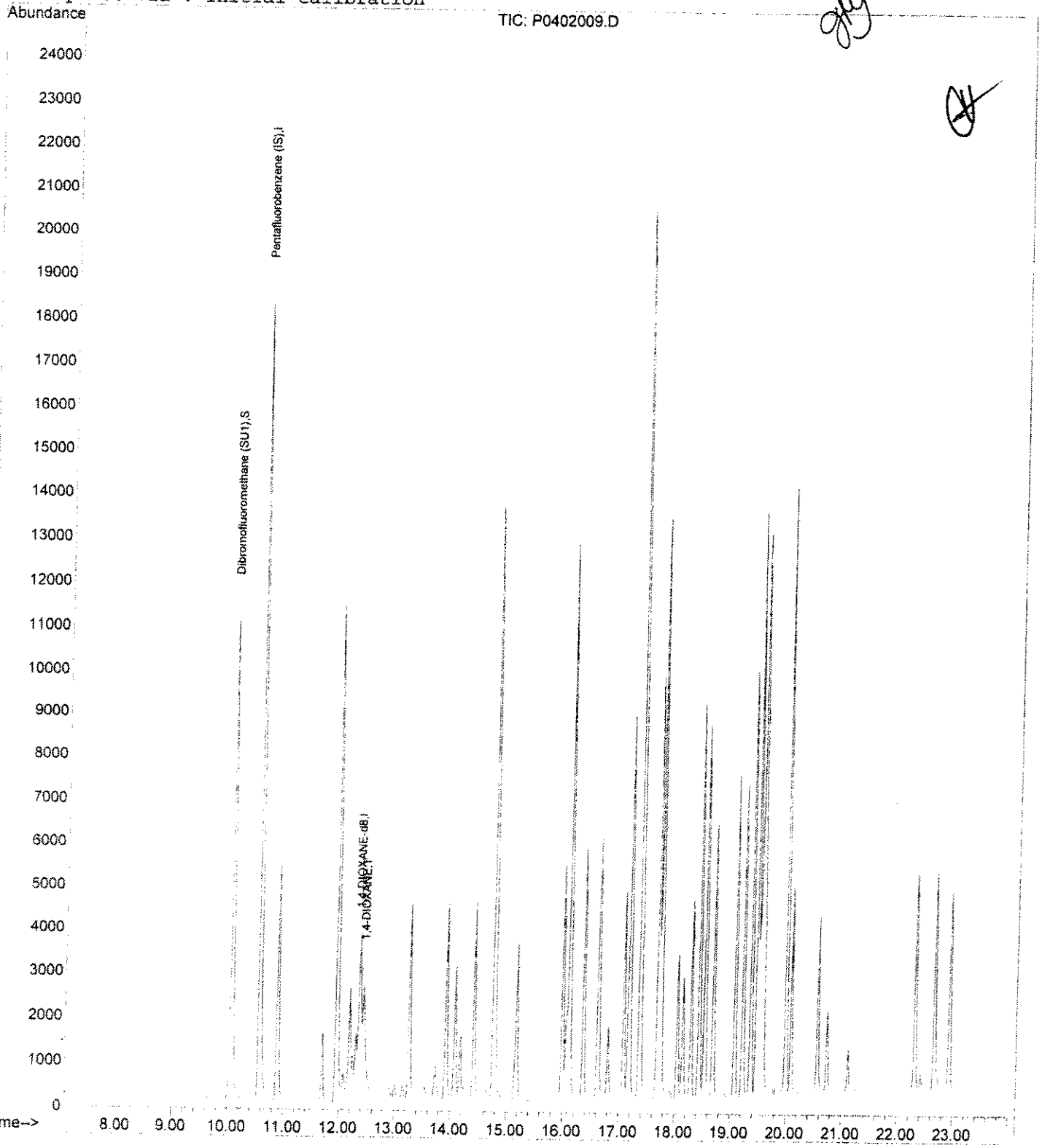
Quantitation Report

Data File : D:\HPCHEM\1\DATA\040205\P0402009.D
Acq On : 2 Apr 2005 11:38 am
Sample : P5D0201-MSD1
Misc : 1X 10ML
MS Integration Params: DIOXANE.P
Quant Time: Apr 4 11:24 2005

Vial: 9
Operator: CS
Inst : GCMS1
Multiplr: 1.00

Quant Results File: DX031905.RES

Method : D:\HPCHEM\1\METHODS\DX031905.M (RTE Integrator)
Title : 8260 1,4-Dioxane Ini. Cal. (05/02/02)
Last Update : Mon Mar 21 07:49:30 2005
Response via : Initial Calibration



PREPARATION BENCH SHEET

P5D0201

Del Mar Analytical - Phoenix

Printed: 4/4/05 11:47:25AM

Matrix: Water

Prepared using: GCMS - EPA 5030 GCMS

Surrogate used: 5040021

Lab Number	C	Analysis	Prepared	Initial (ml)	Final (ml)	Spike ID	Source ID	ul Spike	ul Surrogate	Initials			Extraction Comments
P5D0201-BLK1		QC	04/02/05 00:00	10	10				1				
P5D0201-BS1		QC	04/02/05 00:00	10	10	5040022		10	1				
P5D0201-BSD1		QC	04/02/05 00:00	10	10	5040022		10	1				
P5D0201-MS1		QC	04/02/05 00:00	10	10	5040022	POC0786-06	10	1				
P5D0201-MSD1		QC	04/02/05 00:00	10	10	5040022	POC0786-06	10	1				
POC0786-05	B	8260B (1,4-Dioxane	04/02/05 00:00	10	10				1				
POC0786-06	A	8260B (1,4-Dioxane	04/02/05 00:00	10	10				1				
POC0786-07	A	8260B (1,4-Dioxane	04/02/05 00:00	10	10				1				
POC0786-08	A	8260B (1,4-Dioxane	04/02/05 00:00	10	10				1				
POC0891-01	A	8260B (1,4-Dioxane	04/02/05 00:00	10	10				1				J flag to MDL; monthly
POC0892-01	A	8260B (1,4-Dioxane	04/02/05 00:00	10	10				1				J Flags, 2 ppb RL
POC0892-02	A	8260B (1,4-Dioxane	04/02/05 00:00	10	10				1				J Flags, 2 ppb RL.
POC0892-03	A	8260B (1,4-Dioxane	04/02/05 00:00	10	10				1				J Flags, 2 ppb RL
POC0892-04	A	8260B (1,4-Dioxane	04/02/05 00:00	10	10				1				J Flags, 2 ppb RL
POD0005-01	A	8260B (1,4-Dioxane	04/02/05 00:00	10	10				1				Boeing-permit,sub DMAP, J flags,
POD0006-01	A	8260B (1,4-Dioxane	04/02/05 00:00	10	10				1				J&B flags
POD0006-02	A	8260B (1,4-Dioxane	04/02/05 00:00	10	10				1				J&B flags
POD0006-03	A	8260B (1,4-Dioxane	04/02/05 00:00	10	10				1				J&B flags
POD0006-04	A	8260B (1,4-Dioxane	04/02/05 00:00	10	10				1				J&B flags
POD0015-01	A	8260B (1,4-Dioxane	04/02/05 00:00	10	10				1				

NA
Witnessed By Date

Preparation Reviewed By 4/05/05 Date

MA
Extracts Received By Date

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Analytical Standard Record

Del Mar Analytical - Phoenix

5030018

Description:	1,4-Dioxane SSC 10 ppm	Expires:	04/01/05
Standard Type:	Analyte Spike	Prepared:	03/01/05
Solvent:	MeOH #44337	Prepared By:	Melissa Spencer
Final Volume (mls):	1	Department:	GCMS
Vials:	1	Last Edit:	03/01/05 12:38 by MS

1,4-Dioxane SSC 10ppm

Analyte	CAS Number	Concentration (ppm)
1,4-Dioxane	123-91-1	10

Parent Standards used in this standard:

Standard	Description	Prepared	Prepared By	Expires	Last Edit	Amount (mls)
5030017	1,4-Dioxane SS 2000 ppm STOCK	03/01/05	Melissa Spencer	04/01/05	03/01/05 12:38 by M	0.005

Brenda Steffy — Reviewed By

03-08-2005 — Date

Analytical Standard Record

Del Mar Analytical - Phoenix

5030017

Description:	1,4-Dioxane SS 2000 ppm STOCK	Expires:	04/01/05
Standard Type:	Other Solution	Prepared:	03/01/05
Solvent:	MeOH	Prepared By:	Melissa Spencer
Final Volume (mls):	1	Department:	GCMS
Vials:	1	Last Edit:	03/01/05 12:38 by MS

O2SI, 1,4-Dioxane 2000 ppm in Methanol PART#020223-01 LOT#109885
CRACKED NEW AMPULE -- original log in #4120027

Analyte	CAS Number	Concentration (ppm)
1,4-Dioxane	123-91-1	2000

Brenda Steffy — Reviewed By

03-08-2005 — Date

Analytical Standard Record

Del Mar Analytical - Phoenix

5030321

Description:	IS/SURR MIX DIOXANE250/10/10PPM	Expires:	04/01/05
Standard Type:	Surrogate Spike	Prepared:	03/18/05
Solvent:	MeOH/EMD#44337	Prepared By:	Corey Schrader
Final Volume (mls):	1	Department:	GCMS
Vials:	1	Last Edit:	03/18/05 11:10 by cs

IS/SURR MIX for 1,4-Dioxane:1,4-Dioxane-d8 at 250 ppm,Pentafluorobenzene at 10 ppm,Dibromofluoromethane at 10 ppm

Analyte	CAS Number	Concentration (ppm)
1,4-Dichlorobenzene d4	3855-82-1	10
1,4-Difluorobenzene	540-36-3	10
1,4-Dioxane-d8	17647-74-4	250
4-Bromofluorobenzene	460-00-4	10
Chlorobenzene-d5	3114-55-4	10
Dibromofluoromethane	1868-53-7	10
Pentafluorobenzene	NA	10
Toluene-d8	2037-26-5	10

Parent Standards used in this standard:

Standard	Description	Prepared	Prepared By	Expires	Last Edit	Amount (mls)
5030019	1,4-Dioxane-d8 10000 PPB	03/01/05	Melissa Spencer	04/01/05	03/01/05 12:03 by M	0.025
5030256	8260 INTERNAL STANDARD	03/15/05	Jody Galassi	04/15/05	03/15/05 10:23 by J	0.005
5030320	8260 SURR,2000PPM	03/18/05	Corey Schrader	04/18/05	03/18/05 11:08 by c	0.005

Melissa Spencer — Reviewed By

03-18-2005 — Date

Analytical Standard Record

Del Mar Analytical - Phoenix

5030320

Description:	8260 SURR,2000PPM	Expires:	04/18/05
Standard Type:	Surrogate Spike	Prepared:	03/18/05
Solvent:	MEOH	Prepared By:	Corey Schrader
Final Volume (mls):	1	Department:	GCMS
Vials:	1	Last Edit:	03/18/05 11:08 by cs

ABSOLUTE, PART#21002, LOT#060304, 3 COMP @ 2000ug/mL
CRACKED NEW AMPULE--original log in #5010497

Analyte	CAS Number	Concentration (ppm)
4-Bromofluorobenzene	460-00-4	2000
Dibromofluoromethane	1868-53-7	2000
Toluene-d8	2037-26-5	2000

Melissa Spencer — Reviewed By

03-18-2005 — Date

Analytical Standard Record

Del Mar Analytical - Phoenix

5030256

Description:	8260 INTERNAL STANDARD	Expires:	04/15/05
Standard Type:	Other Solution	Prepared:	03/15/05
Solvent:	N/A	Prepared By:	Jody Galassi
Final Volume (mls):	1	Department:	GCMS
Vials:	1	Last Edit:	03/15/05 10:23 by JG

Absolute PART#20013, LOT#122104, 2000PPM
CRACKED NEW AMPULE--ORIGINAL LOG-IN ID#5010496

Analyte	CAS Number	Concentration (ppm)
1,4-Dichlorobenzene d4	3855-82-1	2000
1,4-Difluorobenzene	540-36-3	2000
Chlorobenzene-d5	3114-55-4	2000
Pentafluorobenzene	NA	2000

Melissa Spencer — Reviewed By

03-18-2005 — Date

Analytical Standard Record

Del Mar Analytical - Phoenix

5030019

Description:	1,4-Dioxane-d8 10000 PPB	Expires:	04/01/05
Standard Type:	Other Solution	Prepared:	03/01/05
Solvent:	MeOH	Prepared By:	Melissa Spencer
Final Volume (mls):	1	Department:	GCMS
Vials:	1	Last Edit:	03/01/05 12:03 by MS

Absolute Part# 92785, Lot# 022301, 1,4-Dioxane-d8, 10mg/mL in methanol
ORIGINAL LOG-IN ID#5010501

Analyte	CAS Number	Concentration (ppm)
1,4-Dioxane-d8	17647-74-4	10000

Brenda Steffy — Reviewed By

03-08-2005 — Date

Analytical Standard Record

Del Mar Analytical - Phoenix

5040022

Description:	1,4-Dioxane SSC 10 ppm	Expires:	05/01/05
Standard Type:	Analyte Spike	Prepared:	04/01/05
Solvent:	MeOH #44337	Prepared By:	Corey Schrader
Final Volume (mls):	1	Department:	GCMS
Vials:	1	Last Edit:	04/01/05 14:57 by cs

1,4-Dioxane SSC 10ppm

Analyte	CAS Number	Concentration (ppm)
1,4-Dioxane	123-91-1	10

Parent Standards used in this standard:

Standard	Description	Prepared	Prepared By	Expires	Last Edit	Amount (mls)
5040018	1,4-Dioxane SS 2000 ppm STOCK	04/01/05	Corey Schrader	05/01/05	04/01/05 14:26 by c	0.005

Reviewed By Date

Analytical Standard Record

Del Mar Analytical - Phoenix

5040018

Description:	1,4-Dioxane SS 2000 ppm STOCK	Expires:	05/01/05
Standard Type:	Other Solution	Prepared:	04/01/05
Solvent:	MeOH	Prepared By:	Corey Schrader
Final Volume (mls):	1	Department:	GCMS
Vials:	1	Last Edit:	04/01/05 14:26 by cs

O2SI, 1,4-Dioxane 2000 ppm in Methanol PART#020223-01 LOT#109885
CRACKED NEW AMPULE -- original log in #4120027

Analyte	CAS Number	Concentration (ppm)
1,4-Dioxane	123-91-1	2000

Reviewed By Date

Analytical Standard Record

Del Mar Analytical - Phoenix

5040021

Description:	IS/SURR MIX DIOXANE250/10/10PPM	Expires:	04/15/05
Standard Type:	Surrogate Spike	Prepared:	04/01/05
Solvent:	MeOH/EMD#44337	Prepared By:	Corey Schrader
Final Volume (mls):	1	Department:	GCMS
Vials:	1	Last Edit:	04/01/05 14:56 by cs

IS/SURR MIX for 1,4-Dioxane:1,4-Dioxane-d8 at 250 ppm,Pentafluorobenzene at 10 ppm,Dibromofluoromethane at 10 ppm

Analyte	CAS Number	Concentration (ppm)
1,4-Dichlorobenzene d4	3855-82-1	10
1,4-Difluorobenzene	540-36-3	10
1,4-Dioxane-d8	17647-74-4	250
4-Bromofluorobenzene	460-00-4	10
Chlorobenzene-d5	3114-55-4	10
Dibromofluoromethane	1868-53-7	10
Pentafluorobenzene	NA	10
Toluene-d8	2037-26-5	10

Parent Standards used in this standard:

Standard	Description	Prepared	Prepared By	Expires	Last Edit	Amount (mls)
5030256	8260 INTERNAL STANDARD	03/15/05	Jody Galassi	04/15/05	03/15/05 10:23 by J	0.005
5030320	8260 SURR,2000PPM	03/18/05	Corey Schrader	04/18/05	03/18/05 11:08 by c	0.005
5040020	1,4-Dioxane-d8 10000 PPB	04/01/05	Corey Schrader	04/01/06	04/01/05 14:29 by c	0.025

Reviewed By Date

Analytical Standard Record

Del Mar Analytical - Phoenix

5040020

Description:	1,4-Dioxane-d8 10000 PPB	Expires:	04/01/06
Standard Type:	Other Solution	Prepared:	04/01/05
Solvent:	MeOH	Prepared By:	Corey Schrader
Final Volume (mls):	1	Department:	GCMS
Vials:	1	Last Edit:	04/01/05 14:29 by cs

Absolute Part# 92785, Lot# 022301, 1,4-Dioxane-d8, 10mg/mL in methanol
ORIGINAL LOG-IN ID#5010501

Analyte	CAS Number	Concentration (ppm)
1,4-Dioxane-d8	17647-74-4	10000

Reviewed By Date

Analytical Standard Record

Del Mar Analytical - Phoenix

5030018

Description:	1,4-Dioxane SSC 10 ppm	Expires:	04/01/05
Standard Type:	Analyte Spike	Prepared:	03/01/05
Solvent:	MeOH #44337	Prepared By:	Melissa Spencer
Final Volume (mls):	1	Department:	GCMS
Vials:	1	Last Edit:	03/01/05 12:38 by MS

1,4-Dioxane SSC 10ppm

Analyte	CAS Number	Concentration (ppm)
1,4-Dioxane	123-91-1	10

Parent Standards used in this standard

Standard	Description	Prepared	Prepared By	Expires	Last Edit	Amount (mls)
5030017	1,4-Dioxane SS 2000 ppm STOCK	03/01/05	Melissa Spencer	04/01/05	03/01/05 12:38 by M	0.005

Brenda Steffy — Reviewed By

03-08-2005 — Date

Analytical Standard Record

Del Mar Analytical - Phoenix

5030017

Description:	1,4-Dioxane SS 2000 ppm STOCK	Expires:	04/01/05
Standard Type:	Other Solution	Prepared:	03/01/05
Solvent:	MeOH	Prepared By:	Melissa Spencer
Final Volume (mls):	1	Department:	GCMS
Vials:	1	Last Edit:	03/01/05 12:38 by MS

O2SI, 1,4-Dioxane 2000 ppm in Methanol PART#020223-01 LOT#109885
CRACKED NEW AMPULE -- original log in #4120027

Analyte	CAS Number	Concentration (ppm)
1,4-Dioxane	123-91-1	2000

Brenda Steffy — Reviewed By

03-08-2005 — Date

Analytical Standard Record

Del Mar Analytical - Phoenix

5030349

Description:	1,4-Dioxane/Surr CAL Dil 10/1ppm	Expires:	04/18/05
Standard Type:	Other Solution	Prepared:	03/19/05
Solvent:	MeOH/EMD#44337	Prepared By:	Melissa Spencer
Final Volume (mls):	1	Department:	GCMS
Vials:	1	Last Edit:	03/19/05 09:37 by MS

1,4-Dioxane/Surr CAL DIL 100/1ppm

Analyte	CAS Number	Concentration (ppm)
1,4-Dioxane	123-91-1	10
4-Bromofluorobenzene	460-00-4	1
Dibromofluoromethane	1868-53-7	1
Toluene-d8	2037-26-5	1

Parent Standards used in this standard:

Standard	Description	Prepared	Prepared By	Expires	Last Edit	Amount (mls)
5030348	1,4-Dioxane/Surr CAL Dil 100/10ppm	03/19/05	Melissa Spencer	04/18/05	03/19/05 09:36 by M	0.1

Reviewed By Date

Analytical Standard Record

Del Mar Analytical - Phoenix

5030348

Description:	1,4-Dioxane/Surr CAL Dil 100/10ppm	Expires:	04/18/05
Standard Type:	Other Solution	Prepared:	03/19/05
Solvent:	MeOH/EMD#44337	Prepared By:	Melissa Spencer
Final Volume (mls):	1	Department:	GCMS
Vials:	1	Last Edit:	03/19/05 09:36 by MS

1,4-Dioxane/Surr CAL DIL 100/10ppm

Analyte	CAS Number	Concentration (ppm)
1,4-Dioxane	123-91-1	100
4-Bromofluorobenzene	460-00-4	10
Dibromofluoromethane	1868-53-7	10
Toluene-d8	2037-26-5	10

Parent Standards used in this standard:

Standard	Description	Prepared	Prepared By	Expires	Last Edit	Amount (mls)
5030320	8260 SURR,2000PPM	03/18/05	Corey Schrader	04/18/05	03/18/05 11:08 by c	0.005
5030347	1,4-Dioxane ps 2000 ppm	03/19/05	Melissa Spencer	04/19/05	03/19/05 09:34 by M	0.05

Reviewed By Date

Analytical Standard Record

Del Mar Analytical - Phoenix

5030320

Description:	8260 SURR,2000PPM	Expires:	04/18/05
Standard Type:	Surrogate Spike	Prepared:	03/18/05
Solvent:	MEOH	Prepared By:	Corey Schrader
Final Volume (mls):	1	Department:	GCMS
Vials:	1	Last Edit:	03/18/05 11:08 by cs

ABSOLUTE, PART#21002, LOT#060304, 3 COMP @ 2000ug/mL
CRACKED NEW AMPULE--original log in #5010497

Analyte	CAS Number	Concentration (ppm)
4-Bromofluorobenzene	460-00-4	2000
Dibromofluoromethane	1868-53-7	2000
Toluene-d8	2037-26-5	2000

Melissa Spencer — Reviewed By

03-18-2005 — Date

Analytical Standard Record

Del Mar Analytical - Phoenix

5030347

Description:	1,4-Dioxane ps 2000 ppm	Expires:	04/19/05
Standard Type:	Analyte Spike	Prepared:	03/19/05
Solvent:	METHANOL	Prepared By:	Melissa Spencer
Final Volume (mls):	1	Department:	GCMS
Vials:	1	Last Edit:	03/19/05 09:34 by MS

CRESCENT PART #3195M.20 LOT #12DD087 ; 1,4-DIOXANE 2000 PPM IN MEOH
original log-in ID#-5010041

Analyte	CAS Number	Concentration (ppm)
1,4-Dioxane	123-91-1	2000

Reviewed By Date

Analytical Standard Record

Del Mar Analytical - Phoenix

5030353

Description:	IS ONLY MIX DIOXANE250/10PPM	Expires:	04/01/05
Standard Type:	Surrogate Spike	Prepared:	03/19/05
Solvent:	MeOH/EMD#44337	Prepared By:	Melissa Spencer
Final Volume (mls):	1	Department:	GCMS
Vials:	1	Last Edit:	03/19/05 10:34 by MS

IS ONLY MIX for 1,4-Dioxane:1,4-Dioxane-d8 at 250 ppm,Pentafluorobenzene at 10 ppm

Analyte	CAS Number	Concentration (ppm)
1,4-Dichlorobenzene d4	3855-82-1	10
1,4-Difluorobenzene	540-36-3	10
1,4-Dioxane-d8	17647-74-4	250
Chlorobenzene-d5	3114-55-4	10
Pentafluorobenzene	NA	10

Parent Standards used in this standard:

Standard	Description	Prepared	Prepared By	Expires	Last Edit	Amount (mls)
5030019	1,4-Dioxane-d8 10000 PPB	03/01/05	Melissa Spencer	04/01/05	03/01/05 12:03 by M	0.025
5030256	8260 INTERNAL STANDARD	03/15/05	Jody Galassi	04/15/05	03/15/05 10:23 by J	0.005

Reviewed By Date

Analytical Standard Record

Del Mar Analytical - Phoenix

5030019

Description:	1,4-Dioxane-d8 10000 PPB	Expires:	04/01/05
Standard Type:	Other Solution	Prepared:	03/01/05
Solvent:	MeOH	Prepared By:	Melissa Spencer
Final Volume (mls):	1	Department:	GCMS
Vials:	1	Last Edit:	03/01/05 12:03 by MS

Absolute Part# 92785, Lot# 022301, 1,4-Dioxane-d8, 10mg/mL in methanol
ORIGINAL LOG-IN ID#5010501

Analyte	CAS Number	Concentration (ppm)
1,4-Dioxane-d8	17647-74-4	10000

Brenda Steffy — Reviewed By

03-08-2005 — Date

Analytical Standard Record

Del Mar Analytical - Phoenix

5030256

Description:	8260 INTERNAL STANDARD	Expires:	04/15/05
Standard Type:	Other Solution	Prepared:	03/15/05
Solvent:	N/A	Prepared By:	Jody Galassi
Final Volume (mls):	1	Department:	GCMS
Vials:	1	Last Edit:	03/15/05 10:23 by JG

Absolute PART#20013, LOT#122104, 2000PPM
CRACKED NEW AMPULE--ORIGINAL LOG-IN ID#5010496

Analyte	CAS Number	Concentration (ppm)
1,4-Dichlorobenzene d4	3855-82-1	2000
1,4-Difluorobenzene	540-36-3	2000
Chlorobenzene-d5	3114-55-4	2000
Pentafluorobenzene	NA	2000

Melissa Spencer — Reviewed By

03-18-2005 — Date

Analytical Standard Record

Del Mar Analytical - Phoenix

5030321

Description:	IS/SURR MIX DIOXANE250/10/10PPM	Expires:	04/01/05
Standard Type:	Surrogate Spike	Prepared:	03/18/05
Solvent:	MeOH/EMD#44337	Prepared By:	Corey Schrader
Final Volume (mls):	1	Department:	GCMS
Vials:	1	Last Edit:	03/18/05 11:10 by cs

IS/SURR MIX for 1,4-Dioxane:1,4-Dioxane-d8 at 250 ppm,Pentafluorobenzene at 10 ppm,Dibromofluoromethane at 10 ppm

Analyte	CAS Number	Concentration (ppm)
1,4-Dichlorobenzene d4	3855-82-1	10
1,4-Difluorobenzene	540-36-3	10
1,4-Dioxane-d8	17647-74-4	250
4-Bromofluorobenzene	460-00-4	10
Chlorobenzene-d5	3114-55-4	10
Dibromofluoromethane	1868-53-7	10
Pentafluorobenzene	NA	10
Toluene-d8	2037-26-5	10

Parent Standards used in this standard:

Standard	Description	Prepared	Prepared By	Expires	Last Edit	Amount (mls)
5030019	1,4-Dioxane-d8 10000 PPB	03/01/05	Melissa Spencer	04/01/05	03/01/05 12:03 by M	0.025
5030256	8260 INTERNAL STANDARD	03/15/05	Jody Galassi	04/15/05	03/15/05 10:23 by J	0.005
5030320	8260 SURR,2000PPM	03/18/05	Corey Schrader	04/18/05	03/18/05 11:08 by c	0.005

Melissa Spencer — Reviewed By

03-18-2005 — Date

Analytical Standard Record

Del Mar Analytical - Phoenix

5030090

Description:	4-BFB FOR TUNE	Expires:	04/04/05
Standard Type:	Surrogate Spike	Prepared:	03/04/05
Solvent:	MeOH/EMD-#44337	Prepared By:	Jody Galassi
Final Volume (mls):	1	Department:	GCMS
Vials:	1	Last Edit:	03/04/05 14:55 by JG

Analyte	CAS Number	Concentration (ppm)
4-BFB (FID)	460-00-4	40
4-BFB (PID)	460-00-4	40
4-Bromofluorobenzene	460-00-4	40

Parent Standards used in this standard:

Standard	Description	Prepared	Prepared By	Expires	Last Edit	Amount (mls)
5030084	4-BFB STOCK 2000ppm	03/04/05	Carlos Warner	04/04/05	03/04/05 13:48 by c	0.02

Brenda Steffy — Reviewed By

03-08-2005 — Date

Analytical Standard Record

Del Mar Analytical - Phoenix

5030084

Description:	4-BFB STOCK 2000ppm	Expires:	04/04/05
Standard Type:	Surrogate Spike	Prepared:	03/04/05
Solvent:	MeOH	Prepared By:	Carlos Warner
Final Volume (mls):	1	Department:	BTEX
Vials:	1	Last Edit:	03/04/05 13:48 by cw

CRACKED NEW VIAL OF ULTRA SCIENTIFIC PART# STS-110N, LOT# U-1409, 2000ug/ml in methanol. Original Log in # 4100456
This lot # has been used previously, no confirmation necessary.

Analyte	CAS Number	Concentration (ppm)
4-BFB (FID)	460-00-4	2000
4-BFB (PID)	460-00-4	2000
4-Bromofluorobenzene	460-00-4	2000

Reviewed By Date

CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA

AMEC Earth & Environmental
550 South Wadsworth Boulevard
Suite 500
Lakewood, CO 80226

Laboratory Del Mar
Reviewer M. Pokorny
Analysis/Method Semivolatiles

Package ID T711SV54
Task Order 313150010
SDG No. IOC2360
No. of Analyses 21

Date: April 11, 2005
Reviewer's Signature M. Pokorny

ACTION ITEMS[a]	
1. **Case Narrative Deficiencies**	
2. **Out of Scope Analyses**	
3. **Analyses Not Conducted**	
4. **Missing Hardcopy Deliverables**	
5. **Incorrect Hardcopy Deliverables**	
6. **Deviations from Analysis Protocol, e.g.,**	
Holding Times	
GC/MS Tune/Inst. Perform	
Calibrations	
Blanks	
Surrogates	
Matrix Spike/Dup LCS	
Field QC	
Internal Standard Performance	
Compound Identification and Quantitation	
System Performance	
COMMENTS[b]	Acceptable as reviewed.

[a] Subcontracted analytical laboratory is not meeting contract and/or method requirements.
[b] Differences in protocol have been adopted by the laboratory but no action against the laboratory is required.

DATA VALIDATION REPORT

NPDES Monitoring

ANALYSIS: SEMIVOLATILES

SAMPLE DELIVERY GROUP: IOC2360

Prepared by

AMEC Denver Operations
550 South Wadsworth Boulevard, Suite 500
Lakewood, Colorado 80226

1. INTRODUCTION

Task Order Title:	NPDES Monitoring
Contract Task Order #:	313150010
SDG#:	IOC2360
Project Manager:	B. McIlvaine
Matrix:	Water
Analysis:	Semivolatiles
QC Level:	Level IV
No. of Samples:	1
No. of Reanalyses/Dilutions:	0
Reviewer:	M. Pokorny
Date of Review:	April 12, 2005

The samples listed in Table 1 were validated based on the guidelines outlined in the *AMEC Data Validation Procedure for Levels C and D Semivolatile Organics (DVP-3, Rev. 2), EPA Method 625,* and the *National Functional Guidelines For Organic Data Review* (2/94). Any deviations from these procedures are documented herein. Qualifiers were applied in cases where the data did not meet the required QC criteria or where special consideration by the data user is required. Data qualifiers were placed on Form Is with the associated qualification codes. Analytes that were rejected for any reason are denoted on the Form I as having only the "R" data qualifier and associated qualification code(s) denoting the reason for rejection. Any additional problems with the data that may have resulted in an estimated value were not denoted by a qualification code since the data had already been rejected.

Table 1. Sample identification

Client ID	EPA ID	Lab No.	Matrix	Method
Outfall 012	Outfall 012	IOC2360-01	water	625

2. DATA VALIDATION FINDINGS

2.1 SAMPLE MANAGEMENT

The sample in this SDG was received at the laboratory within the temperature limits of 4°C ±2°C. The analysis did not require preservation, and no preservation was noted in the field. The COC noted that the sample was received intact. No qualifications were required.

2.1.2 Chain of Custody

The COC was signed and dated by both field and laboratory personnel. The COC accounted for the analysis presented in this SDG. As the sample was couriered directly to the laboratory, custody seals were not required. No qualifications were required.

2.1.3 Holding Times

The water sample was extracted within seven days of collection and analyzed within 40 days of collection. No qualifications were required.

2.2 GC/MS TUNING

The DFTPP tunes met the criteria specified in Method 625, and the sample was analyzed within 12 hours of the DFTPP injection time. No qualifications were required.

2.3 CALIBRATION

The initial calibration associated with this SDG was dated 03/07/05. The average RRFs were ≥0.05 and the %RSDs were ≤35% or r^2 ≥0.995 for both target compounds. A representative number of average RRFs and %RSDs were checked from the raw data, and no calculation or transcription errors were noted. The continuing calibration associated with the sample analysis was analyzed 04/05/05. The RRFs for both target compounds were ≥0.05, and the %Ds were ≤20%. A representative number of RRFs, r^2 values, and %Ds were checked from the raw data, and no calculation or transcription errors were noted. No qualifications were required.

2.4 BLANKS

One method blank (5C31053-BLK1) was extracted and analyzed with this SDG. No target compounds were reported in the method blank. Review of the raw data indicated no reportable false negatives. No qualifications were required.

2.5 BLANK SPIKES AND LABORATORY CONTROL SAMPLES

One blank spike/blank spike duplicate pair (5C31053-BS1/BSD1) was extracted and analyzed with this SDG. For blank spike/blank spike duplicate pairs, qualifications are applied, if necessary,

to the associated samples based on those recoveries consistently outside of the laboratory-established QC limits in both the blank spike and blank spike duplicate. Results for those compounds with recoveries not consistent within the pair, with RPDs above the QC limit, are qualified as estimated, "UJ," for nondetects, and "J," for detects, in the associated samples. All percent recoveries and RPDs were within the laboratory QC limits. A representative number of recoveries and RPDs were calculated from the raw data and no calculation or transcription errors were found. No qualifications were required.

2.6 SURROGATE RECOVERY

The sample surrogate recoveries were within the laboratory QC limits. A representative number of recoveries were calculated from the raw data, and no transcription or calculation errors were noted. No qualifications were required.

2.7 MATRIX SPIKE/MATRIX SPIKE DUPLICATE

No MS/MSD analyses were associated with this SDG. Evaluation of method accuracy and precision was based on blank spike/blank spike duplicate results. No qualifications were required.

2.8 FIELD QC SAMPLES

Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site sample. Following are findings associated with field QC samples:

2.8.1 Field Blanks and Equipment Rinsates

There were no field QC samples associated with this SDG. No qualifications were required.

2.8.2 Field Duplicates

There were no field duplicate samples associated with this SDG. No qualifications were required.

2.9 INTERNAL STANDARDS PERFORMANCE

The internal standard area counts and retention times were within the control limits established by the continuing calibration standards: -50%/+100% for internal standard areas and ±30 seconds for retention times. A representative number of recoveries were checked from the raw data, and no transcription or calculation errors were noted. No qualifications were required.

2.10 COMPOUND IDENTIFICATION

The laboratory analyzed for two semivolatile target compounds by EPA Method 625. Review of the sample chromatogram, retention times, and spectra indicated no problems with target compound identification. No qualifications were required.

2.11 COMPOUND QUANTIFICATION AND REPORTED DETECTION LIMITS

Compound quantification is verified at a Level IV data validation. No calculation or transcription errors were found. The reporting limits were supported by the low level of the initial calibration and the method detection limit study. No qualifications were required.

2.12 TENTATIVELY IDENTIFIED COMPOUNDS

TICs were not reported by the laboratory for this SDG. No qualifications were required.

2.13 SYSTEM PERFORMANCE

Review of the raw data indicated no problems with system performance. No qualifications were required.

Del Mar Analytical

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9484 Chesapeake Dr., Suite 805, San Diego, CA 92123 (858) 505-8596 FAX (858) 505-9689
9830 South 51st St., Suite B-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-0851
2520 E. Sunset Rd. #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

MWH-Pasadena/Boeing
300 North Lake Avenue, Suite 1200
Pasadena, CA 91101
Attention: Bronwyn Kelly

Project ID: Alfa Outfall 012 - During Test

Report Number: IOC2360

Sampled: 03/30/05
Received: 03/30/05

DRAFT: ACID & BASE/NEUTRALS BY GC/MS (EPA 625)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers	REV QUAL	QUAL CODE
Sample ID: IOC2360-01 (DRAFT: Outfall 012 - Water)											
Reporting Units: ug/l											
Naphthalene	EPA 625	5C31053	4.5	10	**13**	0.98	03/31/05	04/06/05			
N-Nitrosodimethylamine	EPA 625	5C31053	3.7	20	ND	0.98	03/31/05	04/06/05		U	
Surrogate: 2-Fluorophenol (30-120%)					*65 %*						
Surrogate: Phenol-d6 (35-120%)					*68 %*						
Surrogate: 2,4,6-Tribromophenol (45-120%)					*72 %*						
Surrogate: Nitrobenzene-d5 (45-120%)					*79 %*						
Surrogate: 2-Fluorobiphenyl (45-120%)					*88 %*						
Surrogate: Terphenyl-d14 (45-120%)					*111 %*						

AMEC VALIDATED

DRAFT REPORT
DRAFT REPORT
DATA SUBJECT TO CHANGE

LEVEL IV

CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA

AMEC Earth & Environmental
550 South Wadsworth Boulevard
Suite 500
Lakewood, CO 80226

Laboratory Pacific Analytical
Reviewer L. Calvin
Analysis/Method GRO by Method 8015M

Package ID T711TF62
Task Order 313150010
SDG No. IOC2360
No. of Analyses 2

Date: April 11, 2005
Reviewers Signature L Calvin

ACTION ITEMS[a]	
1. **Case Narrative Deficiencies**	
2. **Out of Scope Analyses**	
3. **Analyses Not Conducted**	
4. **Missing Hardcopy Deliverables**	
5. **Incorrect Hardcopy Deliverables**	
6. **Deviations from Analysis Protocol, e.g.,**	
Holding Times	
GC/MS Tune/Inst. Performance	
Calibration	
Method blanks	
Surrogates	
Matrix Spike/Dup LCS	
Field QC	
Internal Standard Performance	
Compound Identification	
Quantitation	
System Performance	
COMMENTS[b]	Acceptable as reviewed.

[a] Subcontracted analytical laboratory is not meeting contract and/or method requirements.
[b] Differences in protocol have been adopted by the laboratory but no action against the laboratory is required.

Data Qualifier Reference Table

Qualifier	Organics	Inorganics
U	The analyte was analyzed for, but was not detected above the reported sample quantitation limit.	The material was analyzed for, but was not detected above the level of the associated value. The associated value is either the sample quantitation limit or the sample detection limit.
J	The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.	The associated value is an estimated quantity.
N	The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification."	Not applicable.
NJ	The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.	Not applicable.
UJ	The analyte was not deemed above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.	The material was analyzed for, but was not detected. The associated value is an estimate and may be inaccurate or imprecise.
R	The sample results are rejected due to serious deficiencies in the ability to analyze the sample and to meet quality control criteria. The presence or absence of the analyte cannot be verified.	The data are unusable. (Note: Analyte may or may not be present).

Qualification Code Reference Table

Qualifier	Organics	Inorganics
H	Holding times were exceeded.	Holding times were exceeded.
S	Surrogate recovery was outside QC limits.	The sequence or number of standards used for the calibration was incorrect
C	Calibration %RSD or %D were noncompliant.	Correlation coefficient is <0.995.
R	Calibration RRF was <0.05.	%R for calibration is not within control limits.
B	Presumed contamination from preparation (method) blank.	Presumed contamination from preparation (method) or calibration blank.
L	Laboratory Blank Spike/Blank Spike Duplicate %R was not within control limits.	Laboratory Control Sample %R was not within control limits.
Q	MS/MSD recovery was poor or RPD high.	MS recovery was poor.
E	Not applicable.	Duplicates showed poor agreement.
I	Internal standard performance was unsatisfactory.	ICP ICS results were unsatisfactory.
A	Not applicable.	ICP Serial Dilution %D were not within control limits.
M	Tuning (BFB or DFTPP) was noncompliant.	Not applicable.
T	Presumed contamination from trip blank.	Not applicable.
+	False positive – reported compound was not present. Not applicable.	
-	False negative – compound was present but not reported.	Not applicable.
F	Presumed contamination from FB, or ER.	Presumed contamination from FB or ER.
$	Reported result or other information was incorrect.	Reported result or other information was incorrect.
?	TIC identity or reported retention time has been changed.	Not applicable.
D	The analysis with this flag should not be used because another more technically sound analysis is available.	The analysis with this flag should not be used because another more technically sound analysis is available.
P	Instrument performance for pesticides was poor.	Post Digestion Spike recovery was not within control limits.
DNQ	The compound was detected between the MDL and the RL and, by definition, is considered an estimated value.	The compound was detected between the MDL and the RL and, by definition, is considered an estimated value.

*#	Unusual problems found with the data that have been described in Section 2.#, "Data Validation Findings." The number following the asterisk (*) will indicate the subsection where a description of the problem can be found (eg. *1 would indicate a sample was not within temperature limits).	Unusual problems found with the data that have been described in Section 2.#, "Data Validation Findings." The number following the asterisk (*) will indicate the subsection where a description of the problem can be found (eg. *1 would indicate a sample was not within temperature limits).

DATA VALIDATION REPORT

NPDES Monitoring

ANALYSIS: TPH/Purgeable

SAMPLE DELIVERY GROUP: IOC2360

Prepared by

AMEC Denver Operations
550 South Wadsworth Boulevard, Suite 500
Lakewood, Colorado 80226

1. INTRODUCTION

Task Order Title:	NPDES Monitoring
Contract Task Order #:	313150010
SDG#:	IOC2360
Project Manager:	B. McIlvaine
Matrix:	Water
Analysis:	TPH-Purgeable
QC Level:	Level IV
No. of Samples:	2
No. of Reanalyses/Dilutions:	0
Reviewer:	L. Calvin
Date of Review:	April 11, 2005

The samples listed in Table 1 were validated based on the general guidelines outlined in the *AMEC Data Validation Procedure for Levels C and D Extractable Total Fuel Hydrocarbons by GC (DVP-8, Rev. 2)*, USEPA SW-846 Method 8015M, and validation guidelines outlined in the USEPA CLP *National Functional Guidelines for Organic Data Review* (2/94). Any deviations from these procedures are documented herein. Qualifiers were applied in cases where the data did not meet the required QC criteria or where special consideration by the data user is required. Data qualifiers were placed on Form Is with the associated qualification codes. Analytes that were rejected for any reason are denoted on the Form I as having only the "R" data qualifier and associated qualification code(s) denoting the reason for rejection. Any additional problems with the data that may have resulted in an estimated value were not denoted by a qualification code since the data had already been rejected.

Table 1. Sample identification

Client ID	EPA ID	Lab No.	Matrix	Method
Outfall 012	Outfall 012	IOC2360-01	water	8015M/GRO
Trip Blank	Trip Blank	IOC2360-02	water	8015M/GRO

2. DATA VALIDATION FINDINGS

2.1 SAMPLE MANAGEMENT

The following are findings associated with sample management:

2.1.1 Sample Preservation, Handling, and Transport

The samples in this SDG were received at Del Mar Analytical on ice within the temperature limits of 4°C ±2°C, at 4°C. The Del Mar Analytical case narrative noted that the samples were received intact, and the COC indicated the samples were properly preserved. No qualifications were required.

2.1.2 Chain of Custody

The COC was signed and dated by both field and laboratory personnel. As the samples were couriered directly to the laboratory, custody seals were not required. The TPH-GRO analysis was not requested on the COC for the trip blank sample; however, as the laboratory analyzed the trip blank and included it in the data package, the analysis was validated. No qualifications were required.

2.1.3 Holding Times

The water samples were analyzed within 14 days of collection. No qualifications were required.

2.2 CALIBRATION

One gasoline standard initial calibration dated 08/26/04 was associated with the sample analyses. The %RSD for GRO (C4-C12) was within the QC limit of ≤20%. An initial calibration verification (ICV) was not provided in the data package. The %Ds for all CCVs bracketing the sample analyses were within the Method QC limit of ≤15%. The %RSD and %Ds were recalculated from the raw data and no transcription or calculation errors were noted. No qualifications were required

2.4 METHOD BLANKS

One water method blank (5C31001-BLK1) were associated with the sample analyses. GRO (C4-C12) was not detected above the MDL in the method blank. Review of the raw data indicated no false negative result. No qualifications were necessary.

2.5 BLANK SPIKES AND LABORATORY CONTROL SAMPLES

One water method blank spike (5C31001-BS1) was associated with the sample analyses. GRO (C4-C12) was recovered within the laboratory-established QC limits of 70-140% in the blank spike.

The recovery was checked from the raw data, and no calculation or transcription errors were noted. No qualifications were required.

2.6 SURROGATE RECOVERY

The samples were fortified with the surrogate compound 4-bromofluorobenzene (BFB). Surrogate recoveries were within the laboratory-established QC limits of 65-140%. Recoveries were calculated from the raw data and no transcription or calculation errors were noted. No qualifications were required.

2.7 MATRIX SPIKE/MATRIX SPIKE DUPLICATE

MS/MSD analyses were not performed on the site sample in this SDG; therefore, evaluation of method accuracy was based on the blank spike results. No qualifications were required.

2.8 FIELD QC SAMPLES

Field QC samples are evaluated, and if necessary, qualified based on method blanks and laboratory QC samples for usability. Any remaining detects are used to evaluate the associated samples. The following are findings associated with field QC samples:

2.9.1 Trip Blanks, Field Blanks, and Equipment Rinsates

Sample Trip Blank was the trip blank associated with site sample Outfall 012. GRO (C4-C12) was not detected above the MDL in the trip blank. Review of the raw data indicated no false negative result. There were no field blank or equipment rinsate samples associated with this SDG. No qualifications were necessary.

2.9.2 Field Duplicates

There were no field duplicate samples in this SDG.

2.10 COMPOUND IDENTIFICATION

The laboratory analyzed for GRO (C4-C12) by Method 8015M. Compound identification is verified at a Level IV validation. Review of chromatograms and retention times indicated no problems with compound identification for the samples in this SDG. No qualifications were required.

2.11 COMPOUND QUANTIFICATION AND REPORTED DETECTION LIMITS

Compound quantification was verified for this SDG by recalculating any sample detects, blank spike recoveries, and a representative number of surrogate recoveries. Reporting limits were supported by the low level standard of the initial calibration and by the laboratory MDL. The results were reported in mg/L (ppm). No qualifications were required.

Del Mar Analytical

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MWH-Pasadena/Boeing
300 North Lake Avenue, Suite 1200
Pasadena, CA 91101
Attention: Bronwyn Kelly

Project ID: Alfa Outfall 012 - During Test

Report Number: IOC2360

Sampled: 03/30/05
Received: 03/30/05

DRAFT: VOLATILE FUEL HYDROCARBONS (EPA 5030/CADHS Mod. 8015)

Analyte	Method	Batch	MDL	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IOC2360-01 (DRAFT: Outfall 012 - Water) - cont.									
Reporting Units: mg/l									
GRO (C4 - C12)	EPA 8015 Mod.	5C31001	0.050	0.10	1.4	1	03/31/05	03/31/05	
Surrogate: 4-BFB (FID) (65-140%)					*112 %*				
Sample ID: IOC2360-02 (DRAFT: Trip Blank - Water)									
Reporting Units: mg/l									
GRO (C4 - C12)	EPA 8015 Mod.	5C31001	0.050	0.10	ND	1	03/31/05	03/31/05	U
Surrogate: 4-BFB (FID) (65-140%)					*91 %*				

very qual
qual Acad

AMEC VALIDATED

LEVEL IV

DRAFT REPORT
DRAFT REPORT
DATA SUBJECT TO CHANGE

CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA

AMEC Earth & Environmental
550 South Wadsworth Boulevard
Suite 500
Lakewood, CO 80226

Laboratory Pacific Analytical
Reviewer L. Calvin
Analysis/Method EPH by Method 8015B

Package ID T711TF63
Task Order 313150010
SDG No. IOC2360
No. of Analyses 1

Date: April 11, 2005
Reviewer's Signature L Calvin

ACTION ITEMS[a]	
. **Case Narrative Deficiencies**	
2. **Out of Scope Analyses**	
3. **Analyses Not Conducted**	
4. **Missing Hardcopy Deliverables**	
5. **Incorrect Hardcopy Deliverables**	
6. **Deviations from Analysis Protocol, e.g.,**	
Holding Times	
GC/MS Tune/Inst. Performance	
Calibration	
Method blanks	
Surrogates	
Matrix Spike/Dup LCS	
Field QC	
Internal Standard Performance	
Compound Identification	
Quantitation	
System Performance	
COMMENTS[b]	Acceptable as reviewed.

[a] Subcontracted analytical laboratory is not meeting contract and/or method requirements.
[b] Differences in protocol have been adopted by the laboratory but no action against the laboratory is required.

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Qualifier	Organics	Inorganics
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N	The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification."	Not applicable.
NJ	The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.	Not applicable.
UJ	The analyte was not deemed above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.	The material was analyzed for, but was not detected. The associated value is an estimate and may be inaccurate or imprecise.
R	The sample results are rejected due to serious deficiencies in the ability to analyze the sample and to meet quality control criteria. The presence or absence of the analyte cannot be verified.	The data are unusable. (Note: Analyte may or may not be present).

Qualification Code Reference Table

Qualifier	Organics	Inorganics
H	Holding times were exceeded.	Holding times were exceeded.
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C	Calibration %RSD or %D were noncompliant.	Correlation coefficient is <0.995.
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B	Presumed contamination from preparation (method) blank.	Presumed contamination from preparation (method) or calibration blank.
L	Laboratory Blank Spike/Blank Spike Duplicate %R was not within control limits.	Laboratory Control Sample %R was not within control limits.
Q	MS/MSD recovery was poor or RPD high.	MS recovery was poor.
E	Not applicable.	Duplicates showed poor agreement.
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A	Not applicable.	ICP Serial Dilution %D were not within control limits.
M	Tuning (BFB or DFTPP) was noncompliant.	Not applicable.
T	Presumed contamination from trip blank.	Not applicable.
+	False positive – reported compound was not present. Not applicable.	
-	False negative – compound was present but not reported.	Not applicable.
F	Presumed contamination from FB, or ER.	Presumed contamination from FB or ER.
$	Reported result or other information was incorrect.	Reported result or other information was incorrect.
?	TIC identity or reported retention time has been changed.	Not applicable.
D	The analysis with this flag should not be used because another more technically sound analysis is available.	The analysis with this flag should not be used because another more technically sound analysis is available.
P	Instrument performance for pesticides was poor.	Post Digestion Spike recovery was not within control limits.
DNQ	The compound was detected between the MDL and the RL and, by definition, is considered an estimated value.	The compound was detected between the MDL and the RL and, by definition, is considered an estimated value.

*#	Unusual problems found with the data that have been described in Section 2.#, "Data Validation Findings." The number following the asterisk (*) will indicate the subsection where a description of the problem can be found (eg. *1 would indicate a sample was not within temperature limits).	Unusual problems found with the data that have been described in Section 2.#, "Data Validation Findings." The number following the asterisk (*) will indicate the subsection where a description of the problem can be found (eg. *1 would indicate a sample was not within temperature limits).

DATA VALIDATION REPORT

NPDES Monitoring

ANALYSIS: TPH/EXTRACTABLE

SAMPLE DELIVERY GROUP: IOC2360

Prepared by

AMEC Denver Operations
550 South Wadsworth Boulevard, Suite 500
Lakewood, Colorado 80226

1. INTRODUCTION

Task Order Title:	NPDES Monitoring
Contract Task Order #:	313150010
SDG#:	IOC2360
Project Manager:	B. McIlvaine
Matrix:	Water
Analysis:	TPH-Extractable
QC Level:	Level IV
No. of Samples:	1
No. of Reanalyses/Dilutions:	0
Reviewer:	L. Calvin
Date of Review:	April 11, 2005

The samples listed in Table 1 were validated based on the general guidelines outlined in the *AMEC Data Validation Procedure for Levels C and D Extractable Total Fuel Hydrocarbons by GC (DVP-8, Rev. 2)*, USEPA SW-846 Method 8015M, and validation guidelines outlined in the USEPA CLP *National Functional Guidelines for Organic Data Review* (2/94). Any deviations from these procedures are documented herein. Qualifiers were applied in cases where the data did not meet the required QC criteria or where special consideration by the data user is required. Data qualifiers were placed on Form Is with the associated qualification codes. Analytes that were rejected for any reason are denoted on the Form I as having only the "R" data qualifier and associated qualification code(s) denoting the reason for rejection. Any additional problems with the data that may have resulted in an estimated value were not denoted by a qualification code since the data had already been rejected.