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Level IV Data Package

MWH Group 203157

Method: 314

Sample No.:

2705010702

2705010703

2705010705

2705010708

2705010709

2705010710

2705010716

2705010717

Perchlorate QC Checklist

BATCH 1 rev. 27 Mar 03

Analysis Date: 5-4-07 Analyst: Raja

QC'd by m Date 13 Mar 07

Instrument: IC11 Calculated MCT Level: 3155 umhos/cm

Original IPC conductance: 3109 umhos/cm Daily IPC conductance: 3121 umhos/cm

Calibration including QCS

- QCS (20ppb) recovery is within 90% - 110% (18-22ppb) to verify that the calibration curve (minimum 5 points) still holds.
- Calibration curve is reanalyzed if QCS fails. Correlation Coefficient is 0.995 or better.

Initial QC Check Samples (MLBLANK, MRL, ICCSCV, IPC) to be analyzed with every batch (up to 20 samples) or part thereof

MLBLANK is analyzed before samples. Perchlorate, if present, is < or = half of the MRL.

~~N/A~~ L-ClO4 only: ICCSCV at 2ppb is within 50%-150% (1-3ppb)

ClO4 only: MRL at 4ppb is within 75%-125% (3-5ppb)

PDA/H = 7.4% ✓

IPC (25ppb) recovery is between 80%-120% (20-30ppb)

IPC retention time is within 5% of the retention time of the standards

IPC Conductance level is within 10% of the original

LCS/LCSD (25ppb)

Recoveries are between 90%-110% (22.5 - 27.5ppb)

One pair is analyzed per batch (up to 20 samples) or part thereof

MS/MSD (25ppb) NOTE: For UCMR, MS/MSD concentrations alternate between 4ppb and 25ppb

Recoveries are within 80%-120% (20-30ppb) for 25ppb spike ~~N/A~~ (3.2-4.8ppb) for 4ppb spike

One pair is analyzed per batch (up to 20 samples) or part thereof

RPD between MS and MSD is within 15%.

Continuing Calibration Verification (MCV, HCV) NOTE: For UCMR ECV and MCV are required

Verification Checks alternate between mid- and high-level during the analysis (low- and mid-level for UCMR)

MCV (25ppb) recovery is between 85%-115% (21.25 - 28.75ppb)

HCV (100ppb) recovery is between 85%-115% (85-115ppb) ~~N/A~~ ECV (4ppb) recovery is between 75%-125% (3.0-5.0)

Pretreat and include the following QC parameters for any batch or part thereof containing samples requiring pretreatment

~~N/A~~ One Laboratory Reagent Blank (LRB). Perchlorate is < or = half of MRL.

~~N/A~~ One pair of Laboratory Control Samples (LCS/LCSD). Recovery of perchlorate is between 85%-115%.

~~N/A~~ One Pair of Laboratory Fortified Matrices (MS/MSD). Recoveries are between 80%-120%

Samples

All samples are analyzed within 28 days of collection.

All samples are analyzed within MCT Conductance limit.

QIR

~~N/A~~ QIR needed for failed QC

~~N/A~~ QIR needed for samples analyzed outside of hold time

UB: Nm 5/15/07

Sample No.	Sample Name	Dil.Fac.	Comment	Time	Amount	CLO4 CD_1
1	autocal1	1.0		05.02.07 13:55		n.a.
2	autocal2	1.0	RAJA060913-2	05.02.07 14:18	2.2558	
3	autocal3	1.0	RAJA060913-3	05.02.07 14:40	3.8946	
4	autocal4	1.0	RAJA060913-4	05.02.07 15:02	9.9137	
5	autocal5	1.0	RAJA060913-5	05.02.07 15:25	20.8510	
6	autocal6	1.0	RAJA060913-6	05.02.07 15:47	50.1944	
7	autocal7	1.0	RAJA060913-7	05.02.07 16:10	99.9676	
8	autocal5	1.0	RAJA060913-5	05.02.07 16:32	24.7712	
9	WASH	1.0		05.04.07 10:49		n.a.
10	QCS	1.0		05.04.07 11:12	20.3801	102%
11	IPC	1.0		05.04.07 11:34	21.5904	86.4%
12	MBLK	1.0		05.04.07 11:56		n.a.
13	MRL-2	1.0		05.04.07 12:19	2.3479	117%
14	MRL-4	1.0		05.04.07 12:41	4.0931	102%
15	LCS1	1.0		05.04.07 13:03	25.8018	103%
16	LCS2	1.0		05.04.07 13:26	24.7589	99.0%
17	2705010124_1/50-DNR	50.0		05.04.07 13:48		n.a.
18	2705010126_1/50-DNR	50.0		05.04.07 14:11		n.a.
19	2705010127_1/100-DNR	100.0		05.04.07 15:24	316203.3425	
20	2705010128_1/100-DNR	100.0		05.04.07 15:46	226441.6241	
21	2705010132_1/5000	5000.0		05.04.07 16:09	172484.8364	✓
22	2705010133_1/10000	10000.0		05.04.07 16:31	373174.4311	✓
23	2705010135_1/10000	10000.0		05.04.07 16:54	445432.3919	✓
24	2705010136_1/500	500.0		05.04.07 17:16	14438.2723	✓
25	2705010136MS	1.0		05.04.07 17:39	56.0753	27.2 - 109%
26	2705010136MSD	1.0		05.04.07 18:01	52.7655	23.9 - 95.6%
27	2705010137_1/500	500.0		05.04.07 18:23	3687.7154	✓
28	2705010138_1/10000	10000.0		05.04.07 18:46	425048.8563	✓
29	CCV	1.0		05.04.07 19:08	26.0441	104%
30	2705010139_1/10000	10000.0		05.04.07 19:31	612053.1182	✓
31	2705010140_1/50	50.0		05.04.07 19:53	4230.8555	✓
32	2705010700_1/5-DNR	5.0		05.04.07 20:15	706.2256	✓
33	2705010702_1/500 ✓	500.0		05.04.07 20:38	8740.6479	✓
34	2705010703_1/500 ✓	500.0		05.04.07 21:00	9252.4953	✓
35	2705010705_1/50 ✓	50.0		05.04.07 21:22	3353.0749	✓
36	2705010707_1/50 ✓	50.0		05.04.07 21:45	267.1443	✓
37	2705010708_1/10 ✓	10.0		05.04.07 22:07	77.2671	✓
38	2705010709_1/5-DNR	5.0		05.04.07 22:30	1087.0216	—
39	2705010089_1/1000-DNR	1000.0		05.04.07 22:52	62562.9805	—
40	HCV	1.0		05.04.07 23:14	101.9627	102%
41	STOP	1.0		05.04.07 23:37		n.a.

CONDUCTIVITY MW SOP REVISION 5
SM2510B

Analysis Date: 05-04-07
Analyst: Raja
Reviewed By: _____
LIMS Check By: _____

Time of Analysis Start: _____ End: _____

MRL 2umho/cm: R# _____ exp of solution: _____
KCl Std 1412 R# 201596 exp of solution 0807
TV = 1412 umho/cm @ 25°C for 0.0100M
Reading: 1430
Instrument: YSI Model 3200 SN:01A0504, Year Acquired 2001 New

Was QC Criteria Met: Y N
Was CIR Needed: Y N

Run #	Sample Number	Sample ID	Client	Date Collected	Temp °C	pH	Scale (umho/mmho)	Result		Comments
								Instrument	Reported (umho/cm)	
	Blank						us	05123		
	STD MRL 2umho/cm							N/A		1-3 ±50% of TV
	STD KCl - 1000 mhos/cm							993		850-1050 ±5% of TV
1	2705010132	PC-128	Kemco	04-30-07				7145		
2	133	-129						8524		
3	135	-130						9223		
4	136	-131					ms	1531		
5	137	-132						1486		
6	138	M-96						8805		
7	139	-95						9770		
8	140	MD-5						7465		
9	700	HMW-9						4354		
10	702	PC93						6784		
DUP	↓	↓						6784		RPD < 5%
11	703	PC91						9999		
12	705	PC77						7156		
13	707	PC74						3283		
14	708	96						4028		
15	↓ 709	↓ 82						4362		
16										
17										
18										
19										
20										
DUP	2705010709	PC82	Kemco	04-30-07				4312		RPD < 5%
STD	KCl - 10 mhos/cm							N/A		8-12 RPD < 20% of TV

$$\% \text{ RPD} = \frac{|S1 - S2|}{(S1 + S2)/2} \cdot 100$$

S1 = reading of 1st sample
S2 = reading of 2nd sample

Sequence: 050407-CLO4-IC11
Operator: raja

Page 1 of 2
Printed: 5/7/2007 6:42:38 PM

Title:
Datasource: IC-SERVER_local
Location: IC11\2007\MAY
Timebase: IC11
#Samples: 41

Created: 5/3/2007 8:48:36 PM by raja
Last Update: 5/7/2007 2:40:35 PM by raja

No.	Name	Dil. Factor	Type	Comment	Status	Program
1	autocal1	1.0000	Standard		Finished	Perchlorate-IC11
2	autocal2	1.0000	Standard	RAJA060913-2	Finished	Perchlorate-IC11
3	autocal3	1.0000	Standard	RAJA060913-3	Finished	Perchlorate-IC11
4	autocal4	1.0000	Standard	RAJA060913-4	Finished	Perchlorate-IC11
5	autocal5	1.0000	Unknown	RAJA060913-5	Finished	Perchlorate-IC11
6	autocal6	1.0000	Standard	RAJA060913-6	Finished	Perchlorate-IC11
7	autocal7	1.0000	Standard	RAJA060913-7	Finished	Perchlorate-IC11
8	autocal5	1.0000	Standard	RAJA060913-5	Finished	Perchlorate-IC11
9	WASH	1.0000	Unknown		Finished	Perchlorate-IC11
10	QCS	1.0000	Unknown		Finished	Perchlorate-IC11
11	IPC	1.0000	Unknown		Finished	Perchlorate-IC11
12	MBLK	1.0000	Unknown		Finished	Perchlorate-IC11
13	MRL-2	1.0000	Unknown		Finished	Perchlorate-IC11
14	MRL-4	1.0000	Unknown		Finished	Perchlorate-IC11
15	LCS1	1.0000	Unknown		Finished	Perchlorate-IC11
16	LCS2	1.0000	Unknown		Finished	Perchlorate-IC11
17	2705010124_1/50-DNR	50.0000	Unknown		Finished	Perchlorate-IC11
18	2705010126_1/50-DNR	50.0000	Unknown		Finished	Perchlorate-IC11
19	2705010127_1/100-DNR	100.0000	Unknown		Finished	Perchlorate-IC11
20	2705010128_1/100-DNR	100.0000	Unknown		Finished	Perchlorate-IC11
21	2705010132_1/5000	5000.0000	Unknown		Finished	Perchlorate-IC11
22	2705010133_1/10000	10000.0000	Unknown		Finished	Perchlorate-IC11
23	2705010135_1/10000	10000.0000	Unknown		Finished	Perchlorate-IC11
24	2705010136_1/500	500.0000	Unknown		Finished	Perchlorate-IC11
25	2705010136MS	1.0000	Unknown		Finished	Perchlorate-IC11
26	2705010136MSD	1.0000	Unknown		Finished	Perchlorate-IC11
27	2705010137_1/500	500.0000	Unknown		Finished	Perchlorate-IC11
28	2705010138_1/10000	10000.0000	Unknown		Finished	Perchlorate-IC11
29	CCV	1.0000	Unknown		Finished	Perchlorate-IC11
30	2705010139_1/10000	10000.0000	Unknown		Finished	Perchlorate-IC11
31	2705010140_1/50	50.0000	Unknown		Finished	Perchlorate-IC11
32	2705010700_1/5-DNR	5.0000	Unknown		Finished	Perchlorate-IC11
33	2705010702_1/500	500.0000	Unknown		Finished	Perchlorate-IC11
34	2705010703_1/500	500.0000	Unknown		Finished	Perchlorate-IC11
35	2705010705_1/50	50.0000	Unknown		Finished	Perchlorate-IC11
36	2705010707_1/50	50.0000	Unknown		Finished	Perchlorate-IC11
37	2705010708_1/10	10.0000	Unknown		Finished	Perchlorate-IC11
38	2705010709_1/5-DNR	5.0000	Unknown		Finished	Perchlorate-IC11
39	2705010089_1/1000-DNR	1000.0000	Unknown		Finished	Perchlorate-IC11
40	HCV	1.0000	Unknown		Finished	Perchlorate-IC11
41	STOP	1.0000	Unknown		Interrupted	IC11 Stop

Sequence: 050407-CLO4-IC11
Operator: raja

Page 2 of 2
Printed: 5/7/2007 6:42:38 PM

Title:

Datasource: IC-SERVER_local

Location: IC11\2007\MAY

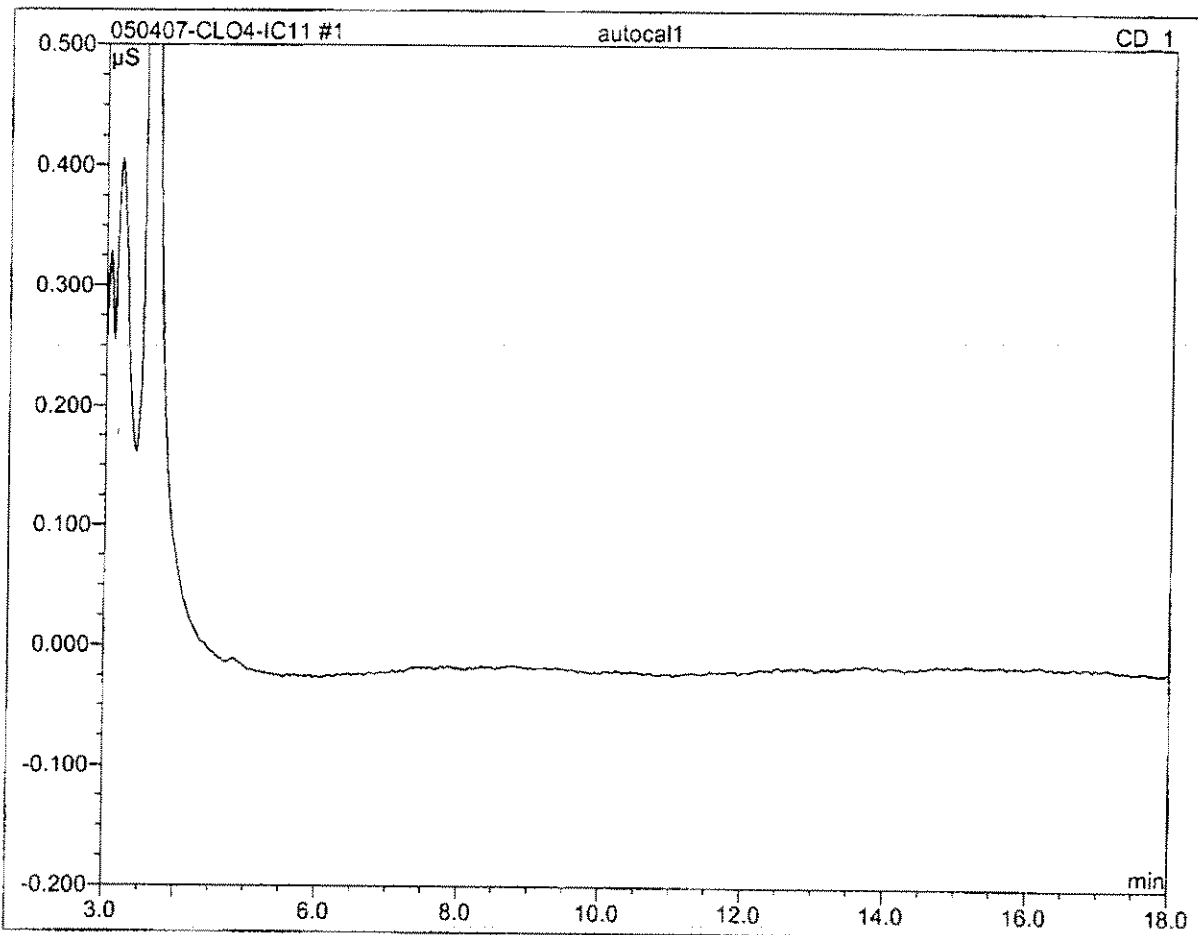
Timebase: IC11

#Samples: 41

Created: 5/3/2007 8:48:36 PM by raja
Last Update: 5/7/2007 2:40:35 PM by raja

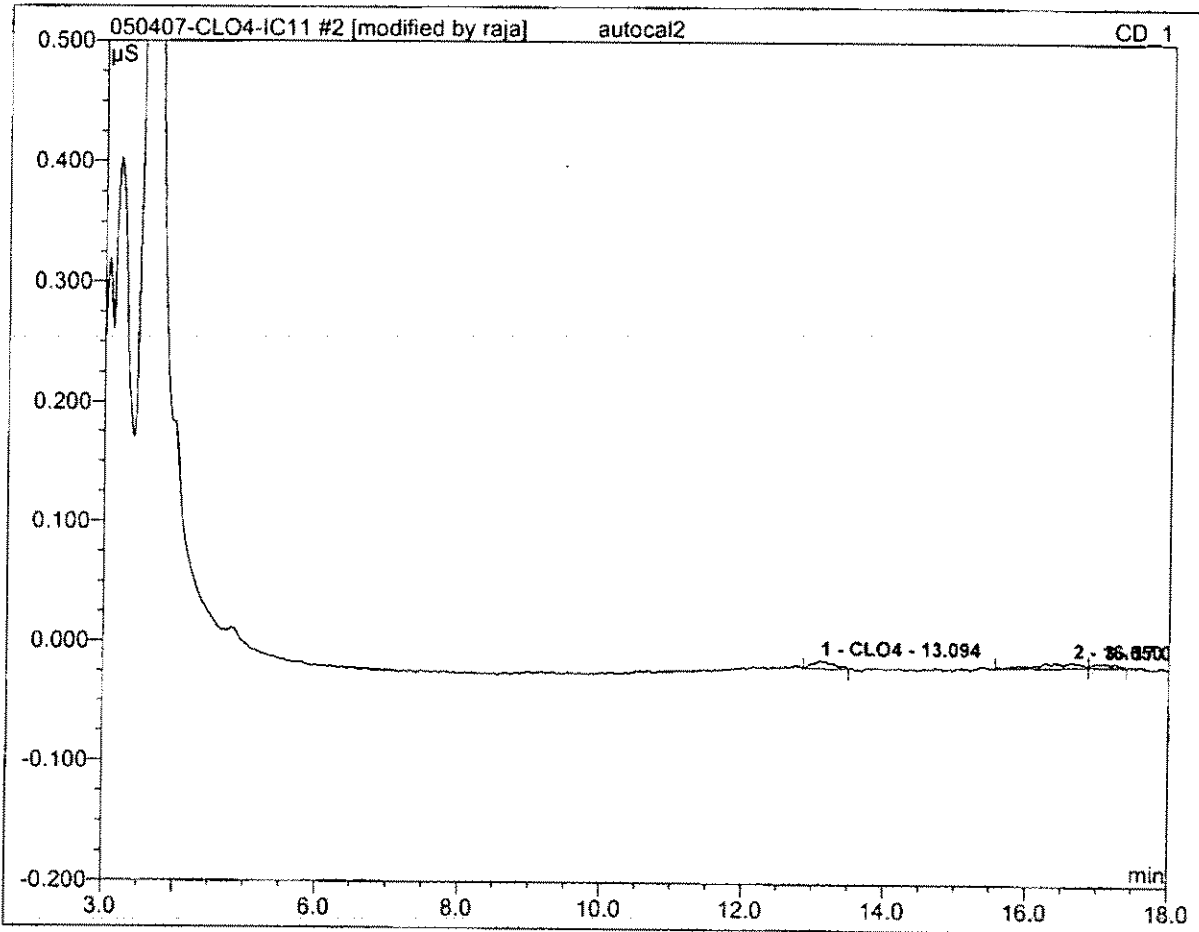
No.	Name	Method	Inj. Date/Time	*Analyst
1	autocal1	IC#4-CLO4-LOW	5/2/2007 1:55:41 PM	Raja
2	autocal2	IC#4-CLO4-LOW	5/2/2007 2:18:05 PM	Raja
3	autocal3	IC#4-CLO4-LOW	5/2/2007 2:40:28 PM	Raja
4	autocal4	IC#4-CLO4-LOW	5/2/2007 3:02:52 PM	Raja
5	autocal5	IC#4-CLO4-LOW	5/2/2007 3:25:16 PM	Raja
6	autocal6	IC#4-CLO4-LOW	5/2/2007 3:47:40 PM	Raja
7	autocal7	IC#4-CLO4-LOW	5/2/2007 4:10:03 PM	Raja
8	autocal5	IC#4-CLO4-LOW	5/2/2007 4:32:27 PM	Raja
9	WASH	IC#4-CLO4-LOW	5/4/2007 10:49:36 AM	Raja
10	QCS	IC#4-CLO4-LOW	5/4/2007 11:12:00 AM	Raja
11	IPC	IC#4-CLO4-LOW	5/4/2007 11:34:23 AM	Raja
12	MBLK	IC#4-CLO4-LOW	5/4/2007 11:56:47 AM	Raja
13	MRL-2	IC#4-CLO4-LOW	5/4/2007 12:19:10 PM	Raja
14	MRL-4	IC#4-CLO4-LOW	5/4/2007 12:41:34 PM	Raja
15	LCS1	IC#4-CLO4-LOW	5/4/2007 1:03:58 PM	Raja
16	LCS2	IC#4-CLO4-LOW	5/4/2007 1:26:21 PM	Raja
17	2705010124_1/50-DNR	IC#4-CLO4-LOW	5/4/2007 1:48:45 PM	Raja
18	2705010126_1/50-DNR	IC#4-CLO4-LOW	5/4/2007 2:11:08 PM	Raja
19	2705010127_1/100-DNR	IC#4-CLO4-LOW	5/4/2007 3:24:31 PM	Raja
20	2705010128_1/100-DNR	IC#4-CLO4-LOW	5/4/2007 3:46:55 PM	Raja
21	2705010132_1/5000	IC#4-CLO4-LOW	5/4/2007 4:09:18 PM	Raja
22	2705010133_1/10000	IC#4-CLO4-LOW	5/4/2007 4:31:49 PM	Raja
23	2705010135_1/10000	IC#4-CLO4-LOW	5/4/2007 4:54:13 PM	Raja
24	2705010136_1/500	IC#4-CLO4-LOW	5/4/2007 5:16:37 PM	Raja
25	2705010136MS	IC#4-CLO4-LOW	5/4/2007 5:39:00 PM	Raja
26	2705010136MSD	IC#4-CLO4-LOW	5/4/2007 6:01:24 PM	Raja
27	2705010137_1/500	IC#4-CLO4-LOW	5/4/2007 6:23:48 PM	Raja
28	2705010138_1/10000	IC#4-CLO4-LOW	5/4/2007 6:46:12 PM	Raja
29	CCV	IC#4-CLO4-LOW	5/4/2007 7:08:36 PM	Raja
30	2705010139_1/10000	IC#4-CLO4-LOW	5/4/2007 7:31:00 PM	Raja
31	2705010140_1/50	IC#4-CLO4-LOW	5/4/2007 7:53:23 PM	Raja
32	2705010700_1/5-DNR	IC#4-CLO4-LOW	5/4/2007 8:15:47 PM	Raja
33	2705010702_1/500	IC#4-CLO4-LOW	5/4/2007 8:38:11 PM	Raja
34	2705010703_1/500	IC#4-CLO4-LOW	5/4/2007 9:00:35 PM	Raja
35	2705010705_1/50	IC#4-CLO4-LOW	5/4/2007 9:22:58 PM	Raja
36	2705010707_1/50	IC#4-CLO4-LOW	5/4/2007 9:45:22 PM	Raja
37	2705010708_1/10	IC#4-CLO4-LOW	5/4/2007 10:07:46 PM	Raja
38	2705010709_1/5-DNR	IC#4-CLO4-LOW	5/4/2007 10:30:10 PM	Raja
39	2705010089_1/1000-DNR	IC#4-CLO4-LOW	5/4/2007 10:52:33 PM	Raja
40	HCV	IC#4-CLO4-LOW	5/4/2007 11:14:57 PM	Raja
41	STOP	IC#4-CLO4-LOW	5/4/2007 11:37:21 PM	Raja

1 autocal1			
Sample Name:	autocal1	Channel:	CD_1
Sample Type:	standard	Control Program:	Perchlorate-IC11
Recording Time:	05/02/2007 13:55	Quantif. Method:	IC#4-CLO4-LOW
Analyst:	Raja	Dilution Factor:	1.0000



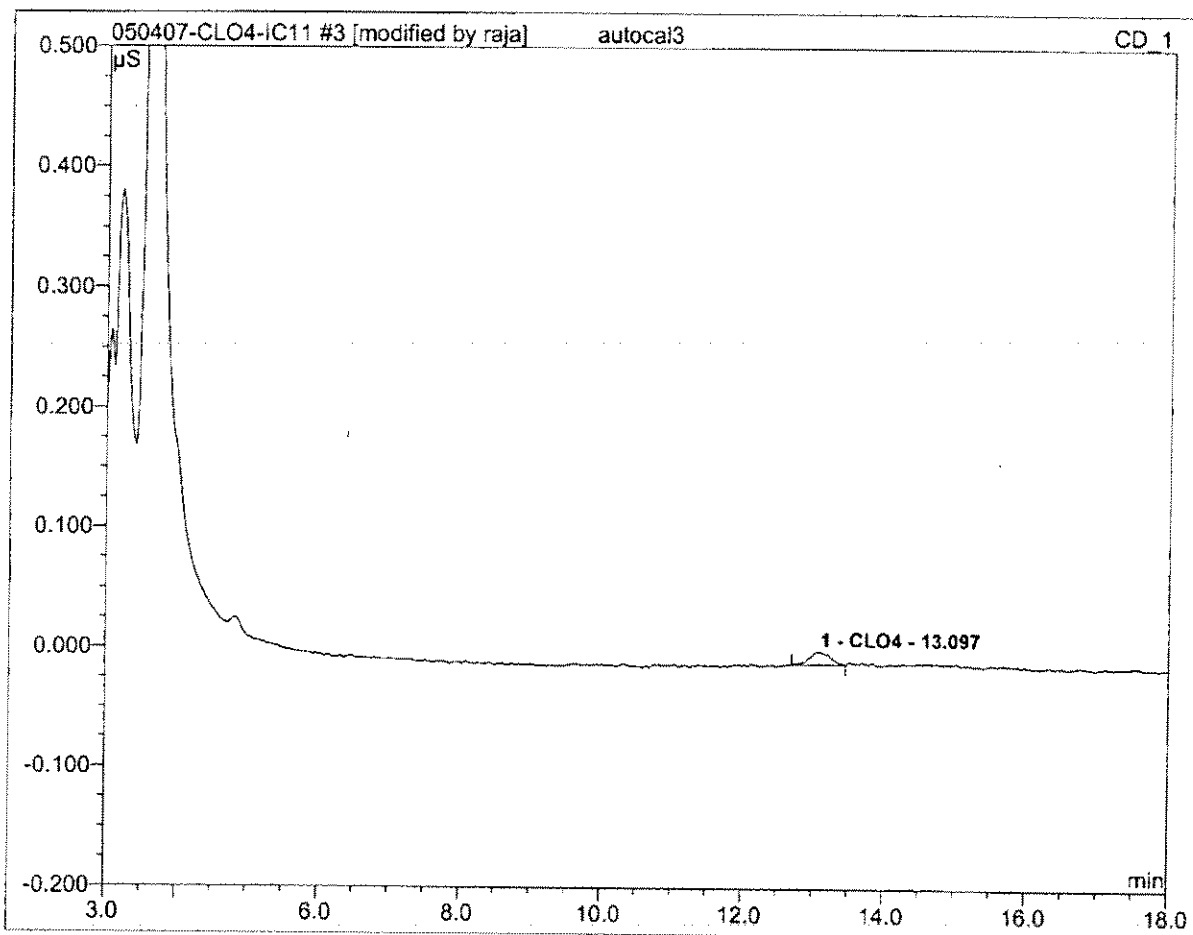
No.	Ret.Time min	Peak Name	Height μS	Area μS*min	Rel.Area %	Amount	Type
Total:			0.000	0.000	0.00	0.000	

2 autocal2			
RAJA060913-2			
Sample Name:	autocal2	Channel:	CD_1
Sample Type:	standard	Control Program:	Perchlorate-IC11
Recording Time:	05/02/2007 14:18	Quantif. Method:	IC#4-CLO4-LOW
Analyst:	Raja	Dilution Factor:	1.0000



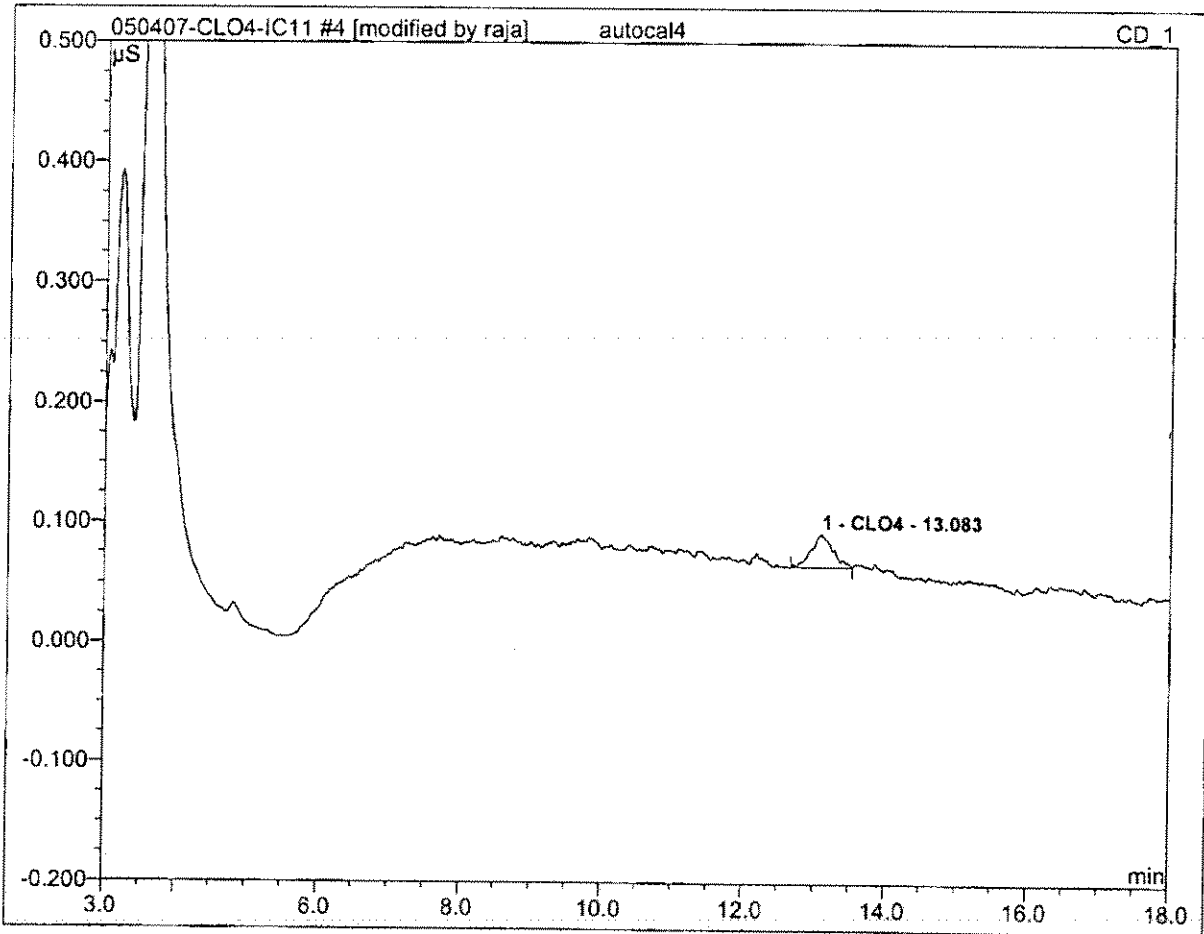
No.	Ret.Time min	Peak Name	Height μS	Area μS*min	Rel.Area %	Amount	Type
1	13.09	CLO4	0.007	0.002	33.99	2.256	BMB*
Total:			0.007	0.002	33.99	2.256	

3 autocal3			
RAJA060913-3			
Sample Name:	autocal3	Channel:	CD_1
Sample Type:	standard	Control Program:	Perchlorate-IC11
Recording Time:	05/02/2007 14:40	Quantif. Method:	IC#4-CLO4-LOW
Analyst:	Raja	Dilution Factor:	1.0000



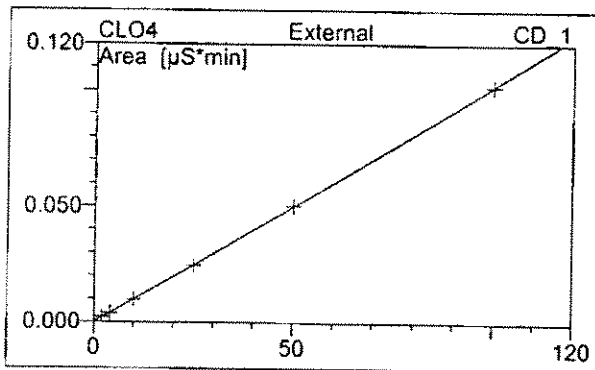
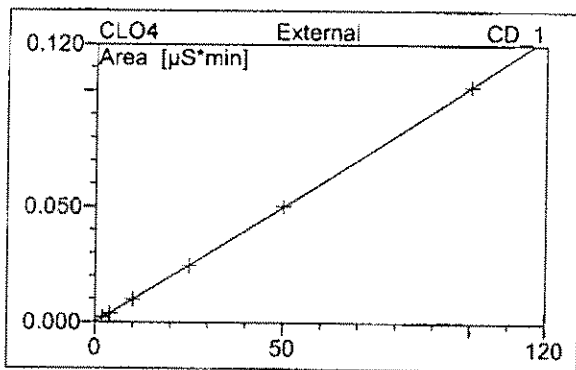
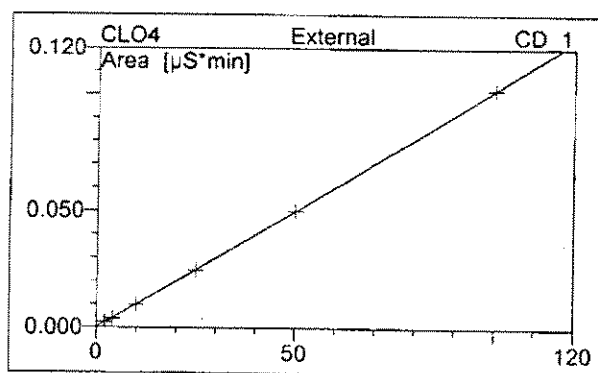
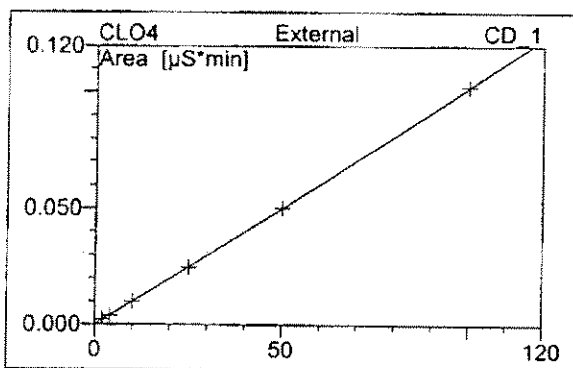
No.	Ret.Time min	Peak Name	Height μS	Area μS*min	Rel.Area %	Amount	Type
1	13.10	CLO4	0.011	0.004	100.00	3.895	BMB*
Total:			0.011	0.004	100.00	3.895	

4 autocal4			
RAJA060913-4			
Sample Name:	autocal4	Channel:	CD_1
Sample Type:	standard	Control Program:	Perchlorate-IC11
Recording Time:	05/02/2007 15:02	Quantif. Method:	IC#4-CLO4-LOW
Analyst:	Raja	Dilution Factor:	1.0000



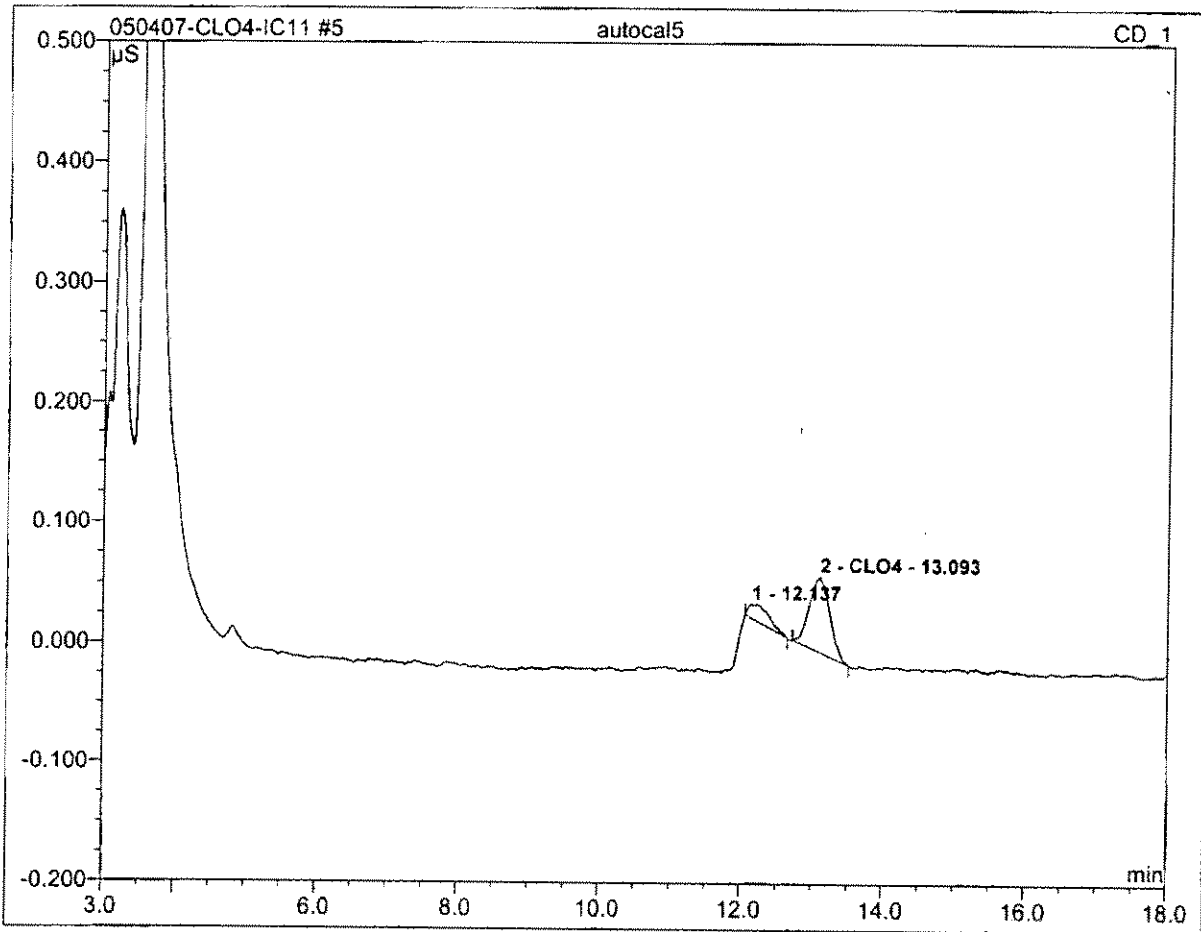
No.	Ret.Time min	Peak Name	Height μS	Area μS*min	Rel.Area %	Amount	Type
1	13.08	CLO4	0.028	0.010	100.00	9.914	BMB*
Total:			0.028	0.010	100.00	9.914	

4 autocal4	
RAJA060913-4	
Sample Name: autocal4	Injection Volume: 20.0
Vial Number: 106	Channel: CD_1
Sample Type: standard	Wavelength: n.a.
Control Program: Perchlorate-IC11	Bandwidth: n.a.
Quantif. Method: IC#4-CLO4-LOW	Dilution Factor: 1.0000
Recording Time: 5/2/2007 15:02	Sample Weight: 1.0000
Run Time (min): 20.00	Sample Amount: 1.0000



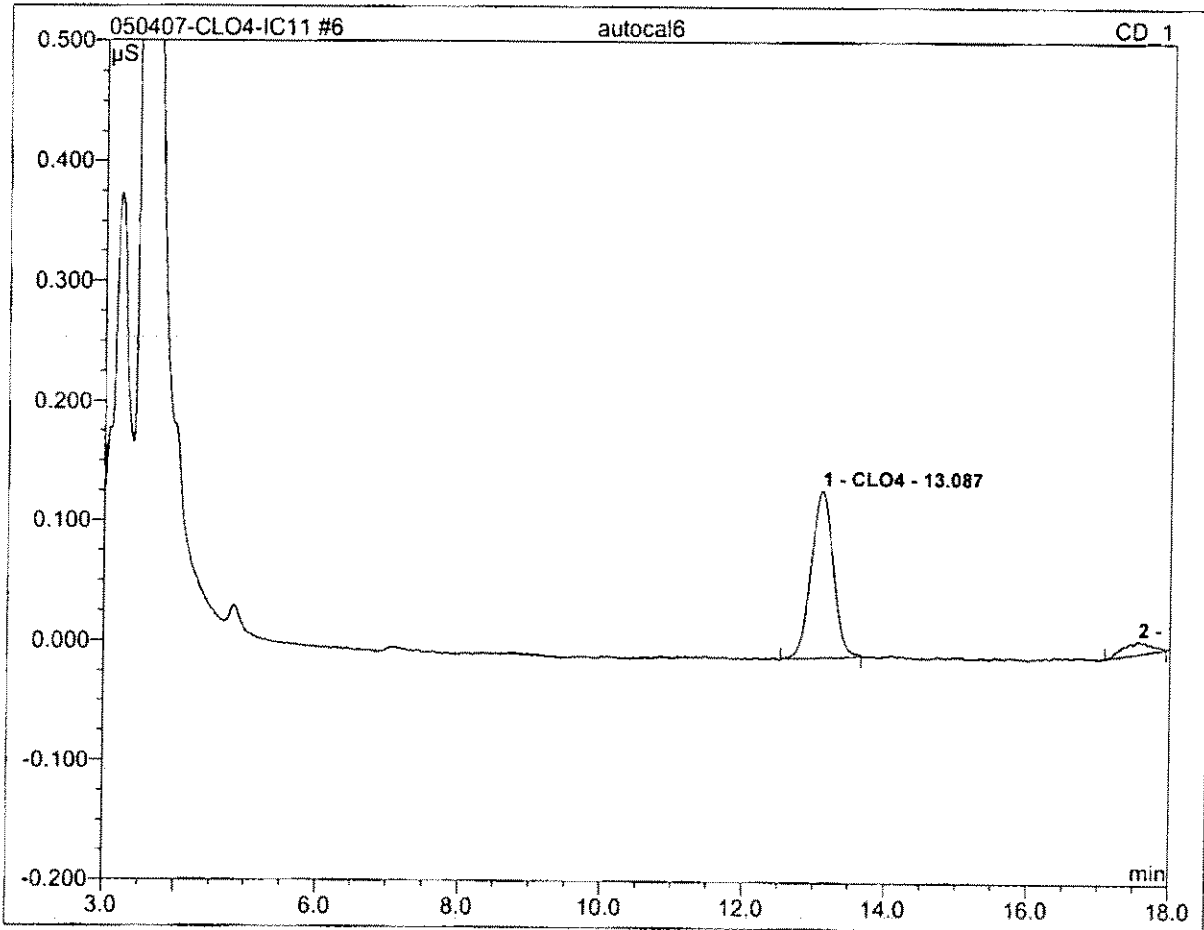
No.	Ret.Time min	Peak Name	Cal.Type	Points	Corr.Coeff. %	Offset	Slope	Curve
1	13.08	CLO4	0QOff	6	99.9930	0.0000	0.0010	0.0000
Average:					99.9930	0.0000	0.0010	0.0000

5 autocal5			
RAJA060913-5			
Sample Name:	autocal5	Channel:	CD_1
Sample Type:	unknown	Control Program:	Perchlorate-IC11
Recording Time:	05/02/2007 15:25	Quantif. Method:	IC#4-CLO4-LOW
Analyst:	Raja	Dilution Factor:	1.0000



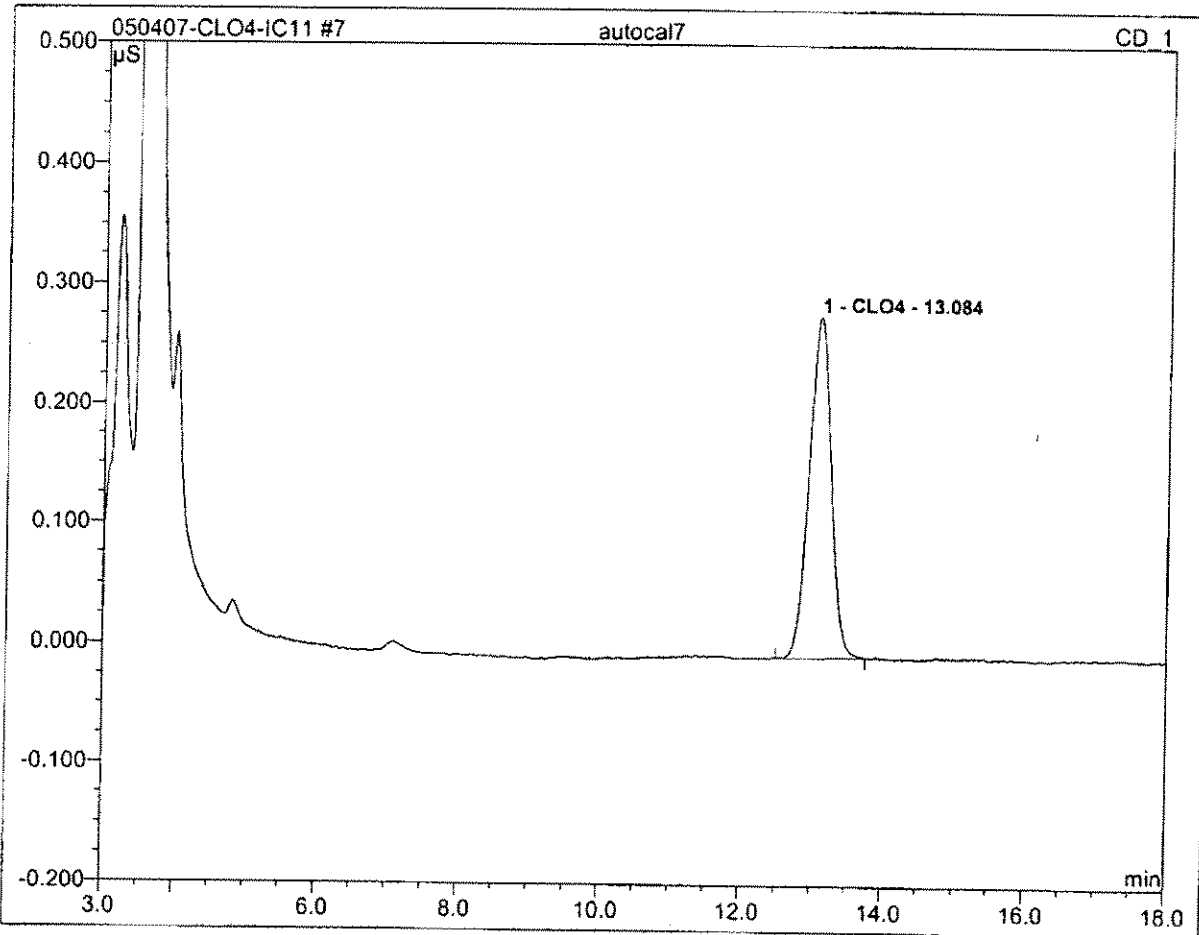
No.	Ret.Time min	Peak Name	Height μS	Area $\mu\text{S}\cdot\text{min}$	Rel.Area %	Amount	Type
2	13.09	CLO4	0.062	0.021	81.41	20.851	BMB
Total:			0.062	0.021	81.41	20.851	

6 autocal6			
RAJA060913-6			
Sample Name:	autocal6	Channel:	CD_1
Sample Type:	standard	Control Program:	Perchlorate-IC11
Recording Time:	05/02/2007 15:47	Quantif. Method:	IC#4-CLO4-LOW
Analyst:	Raja	Dilution Factor:	1.0000



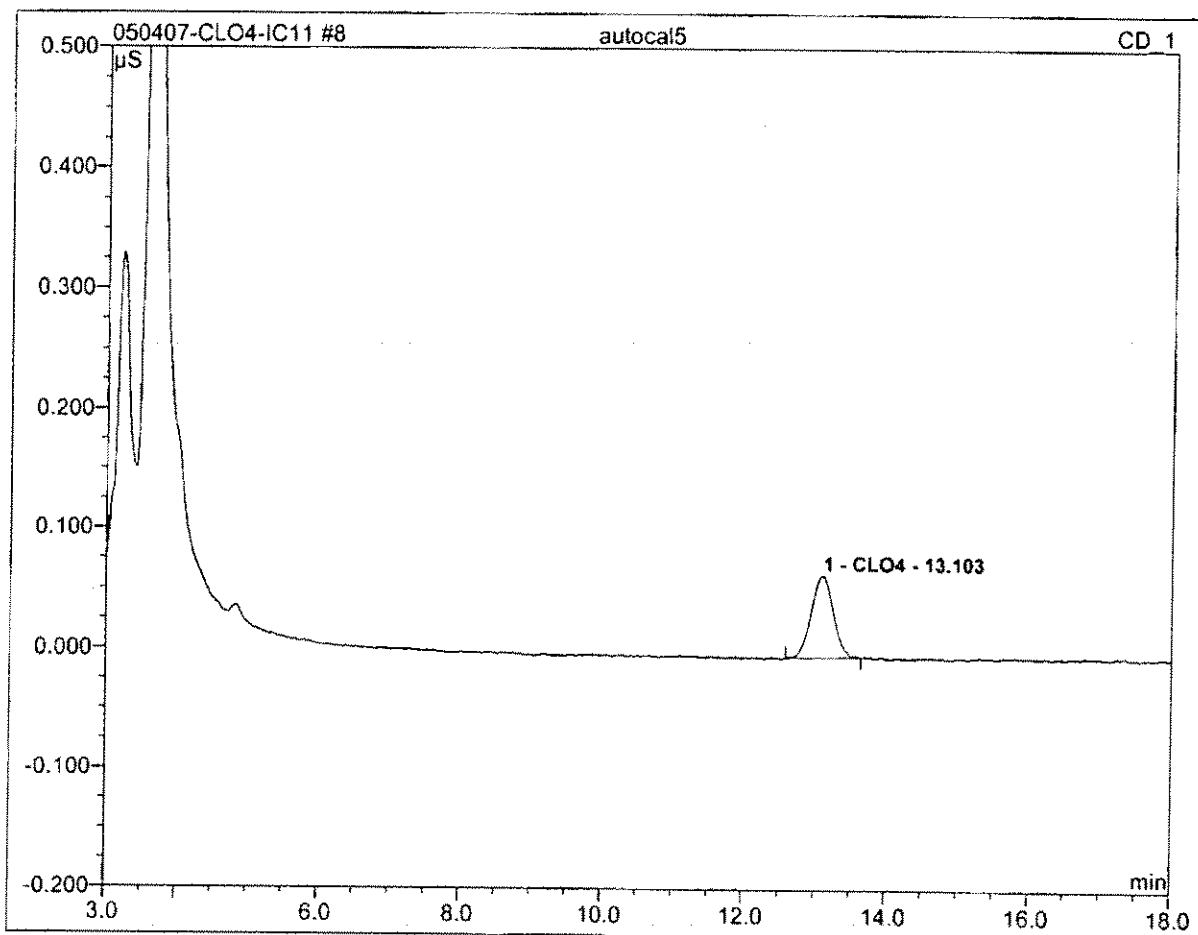
No.	Ret.Time min	Peak Name	Height μS	Area μS*min	Rel.Area %	Amount	Type
1	13.09	CLO4	0.139	0.050	91.15	50.194	BMB
Total:			0.139	0.050	91.15	50.194	

7 autocal7			
RAJA060913-7			
Sample Name:	autocal7	Channel:	CD_1
Sample Type:	standard	Control Program:	Perchlorate-IC11
Recording Time:	05/02/2007 16:10	Quantif. Method:	IC#4-CLO4-LOW
Analyst:	Raja	Dilution Factor:	1.0000



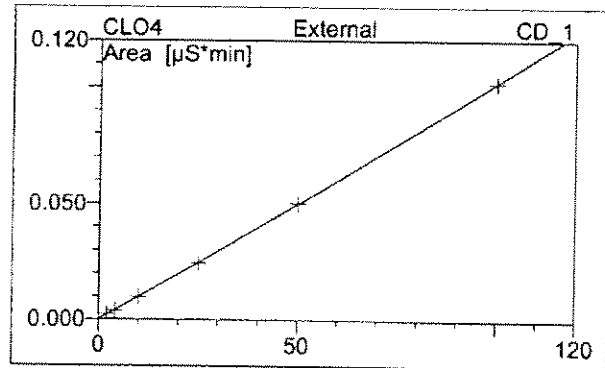
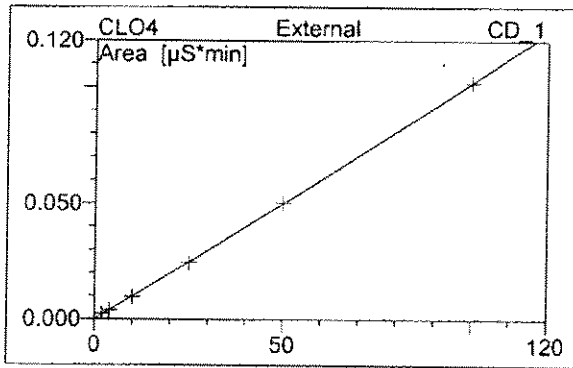
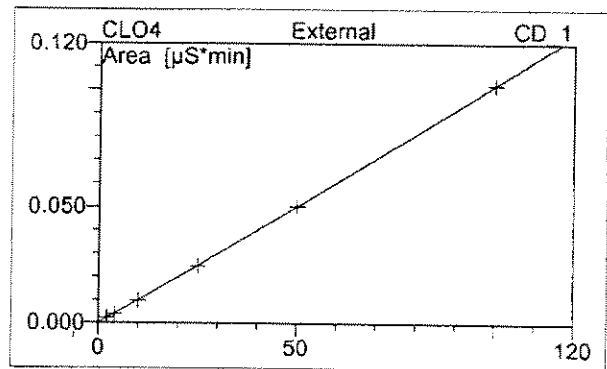
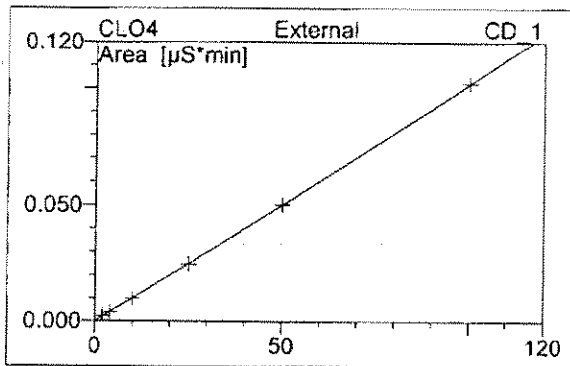
No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	13.08	CLO4	0.285	0.102	100.00	99.968	BMB
Total:			0.285	0.102	100.00	99.968	

8 autocal5			
RAJA060913-5			
Sample Name:	autocal5	Channel:	CD_1
Sample Type:	standard	Control Program:	Perchlorate-IC11
Recording Time:	05/02/2007 16:32	Quantif. Method:	IC#4-CLO4-LOW
Analyst:	Raja	Dilution Factor:	1.0000



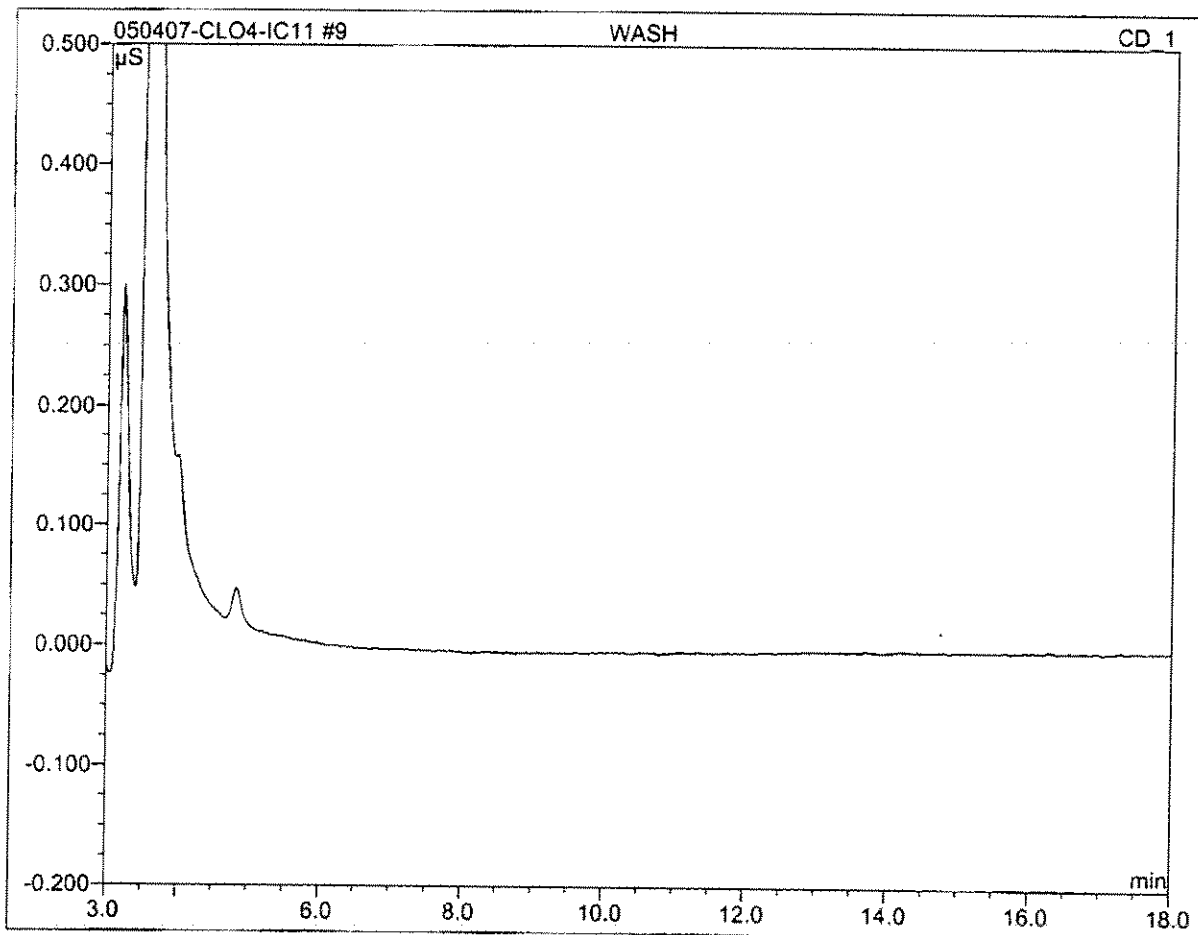
No.	Ret.Time min	Peak Name	Height μS	Area μS*min	Rel.Area %	Amount	Type
1	13.10	CLO4	0.068	0.024	100.00	24.771	BMB
Total:			0.068	0.024	100.00	24.771	

8 autocal5	
RAJA060913-5	
Sample Name:	autocal5
Vial Number:	110
Sample Type:	standard
Control Program:	Perchlorate-IC11
Quantif. Method:	IC#4-CLO4-LOW
Recording Time:	5/2/2007 16:32
Run Time (min):	20.00
Injection Volume:	20.0
Channel:	CD_1
Wavelength:	n.a.
Bandwidth:	n.a.
Dilution Factor:	1.0000
Sample Weight:	1.0000
Sample Amount:	1.0000



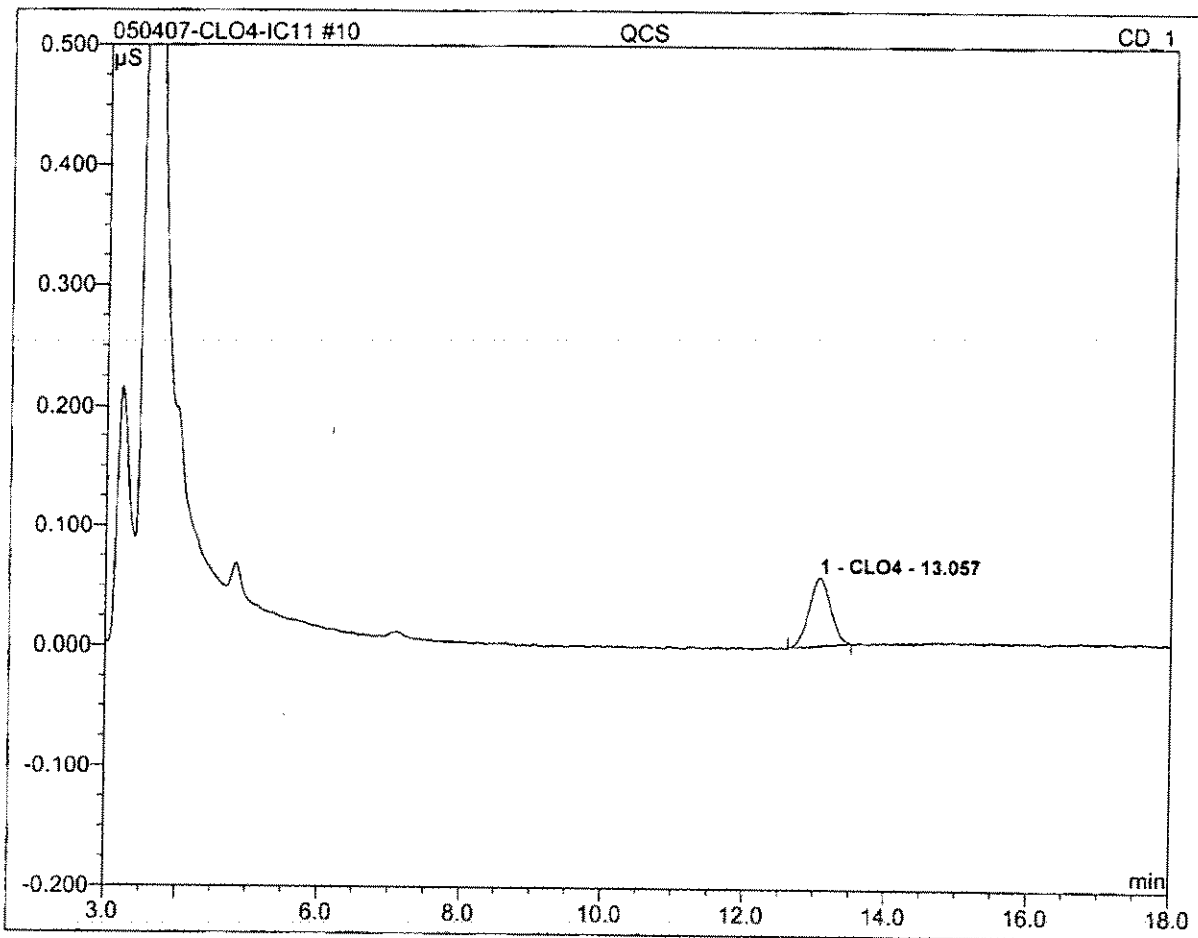
No.	Ret.Time min	Peak Name	Cal.Type	Points	Corr.Coeff. %	Offset	Slope	Curve
1	13.10	CLO4	0QOff	6	99.9930	0.0000	0.0010	0.0000
Average:					99.9930	0.0000	0.0010	0.0000

9 WASH			
Sample Name:	WASH	Channel:	CD_1
Sample Type:	unknown	Control Program:	Perchlorate-IC11
Recording Time:	05/04/2007 10:49	Quantif. Method:	IC#4-CLO4-LOW
Analyst:	Raja	Dilution Factor:	1.0000



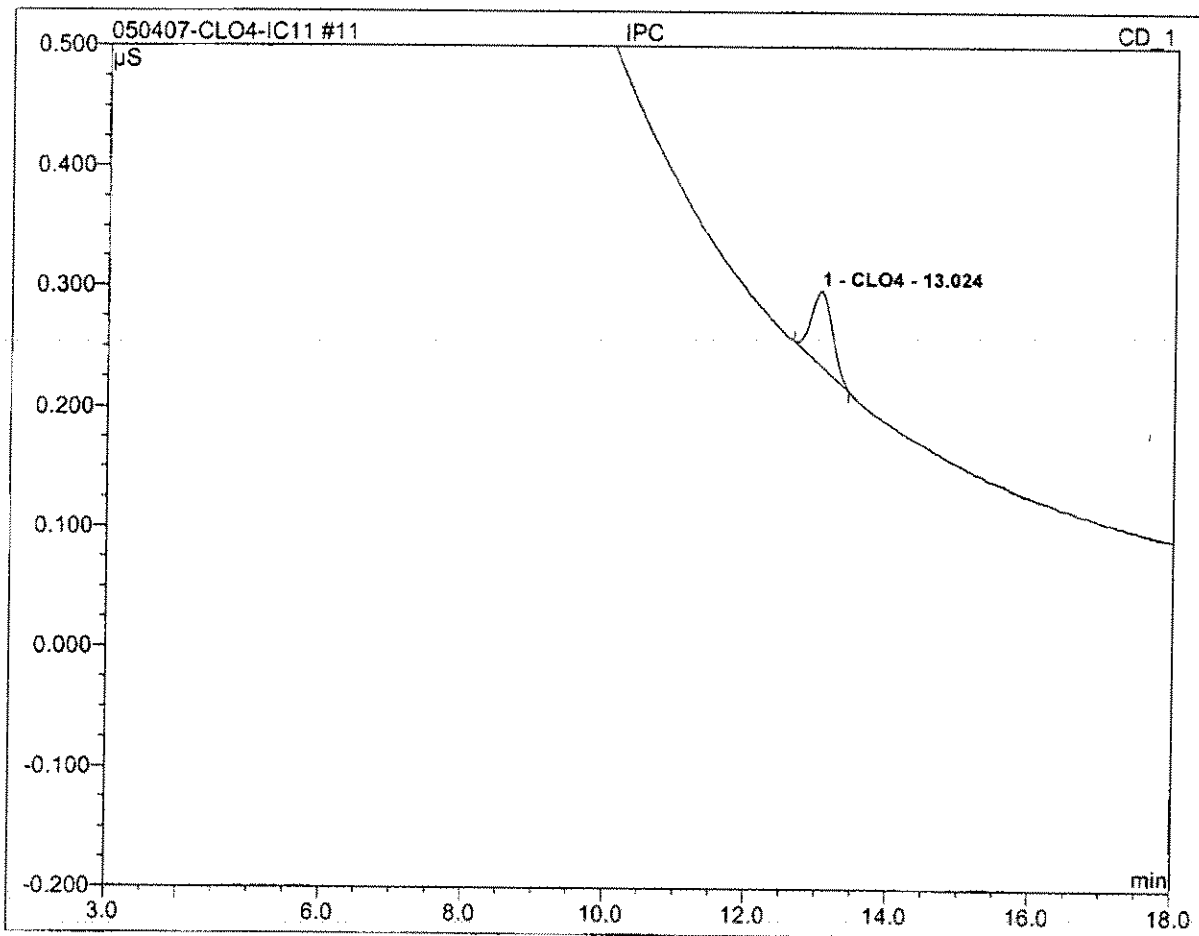
No.	Ret.Time min	Peak Name	Height μS	Area μS*min	Rel.Area %	Amount	Type
Total:			0.000	0.000	0.00	0.000	

10 QCS			
Sample Name:	QCS	Channel:	CD_1
Sample Type:	unknown	Control Program:	Perchlorate-IC11
Recording Time:	05/04/2007 11:12	Quantif. Method:	IC#4-CLO4-LOW
Analyst:	Raja	Dilution Factor:	1.0000



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	13.06	CLO4	0.057	0.020	100.00	20.380	BMB
Total:			0.057	0.020	100.00	20.380	

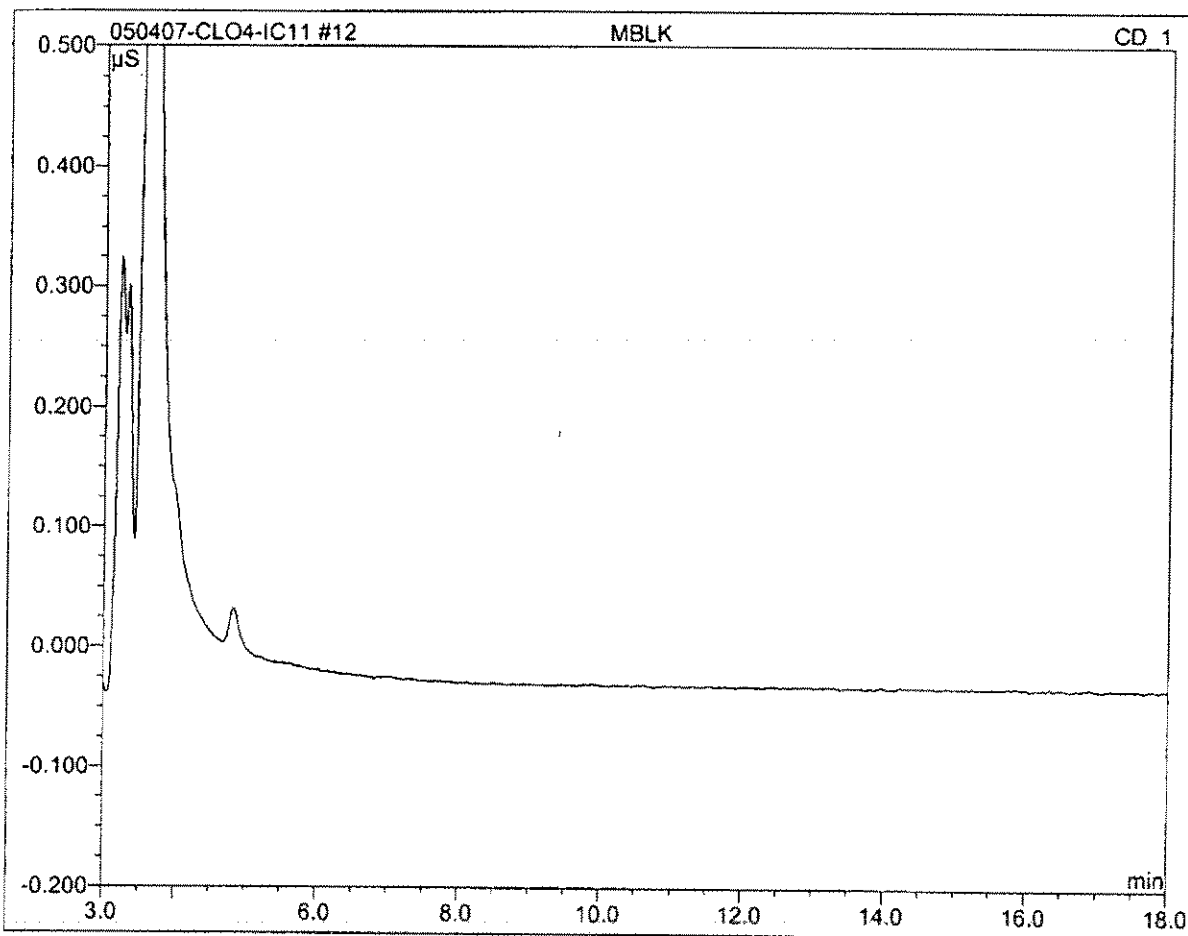
11 IPC			
Sample Name:	IPC	Channel:	CD_1
Sample Type:	unknown	Control Program:	Perchlorate-IC11
Recording Time:	05/04/2007 11:34	Quantif. Method:	IC#4-CLO4-LOW
Analyst:	Raja	Dilution Factor:	1.0000



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	13.02	CLO4	0.062	0.021	100.00	21.590	BMB
Total:			0.062	0.021	100.00	21.590	

12 MBLK

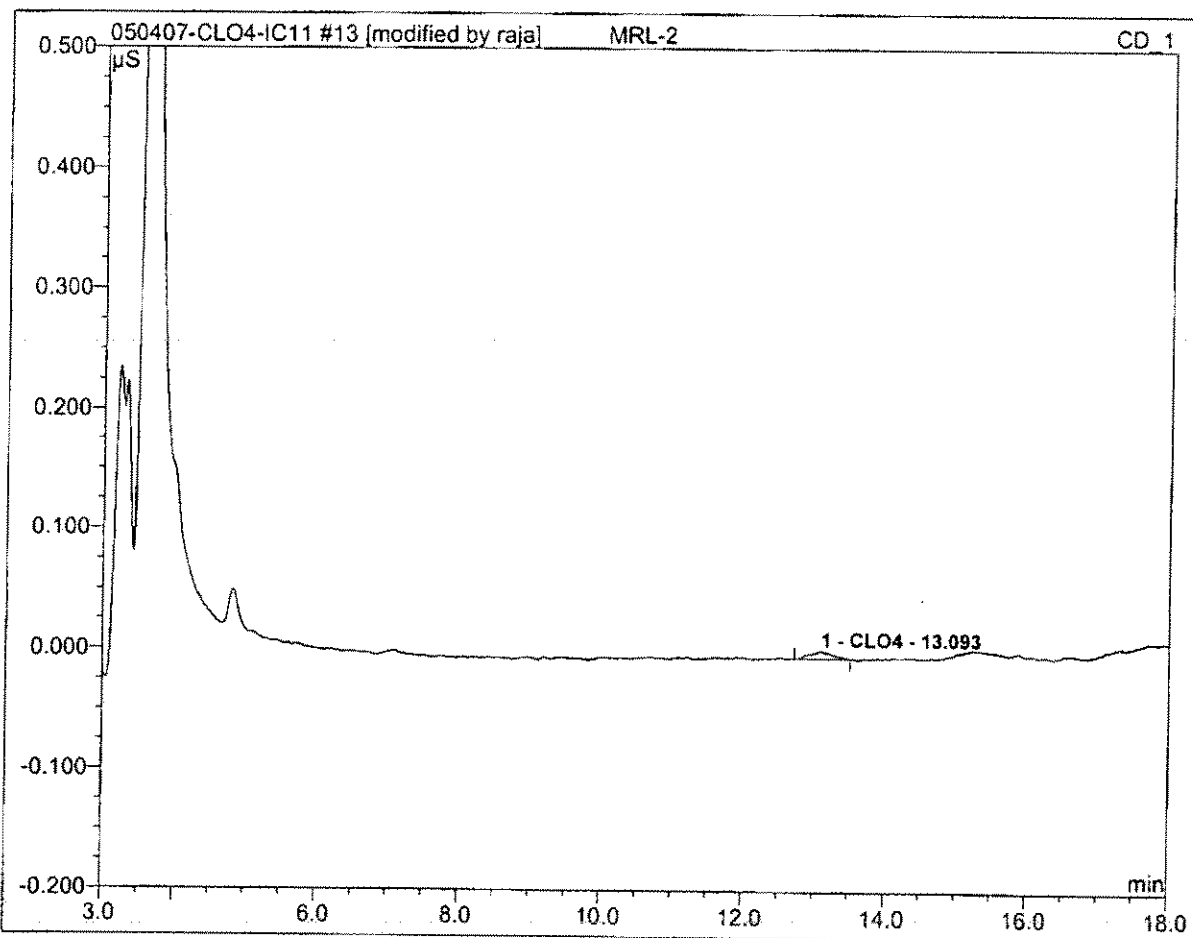
Sample Name:	MBLK	Channel:	CD_1
Sample Type:	unknown	Control Program:	Perchlorate-IC11
Recording Time:	05/04/2007 11:56	Quantif. Method:	IC#4-CLO4-LOW
Analyst:	Raja	Dilution Factor:	1.0000



No.	Ret.Time min	Peak Name	Height μS	Area μS*min	Rel.Area %	Amount	Type
Total:			0.000	0.000	0.00	0.000	

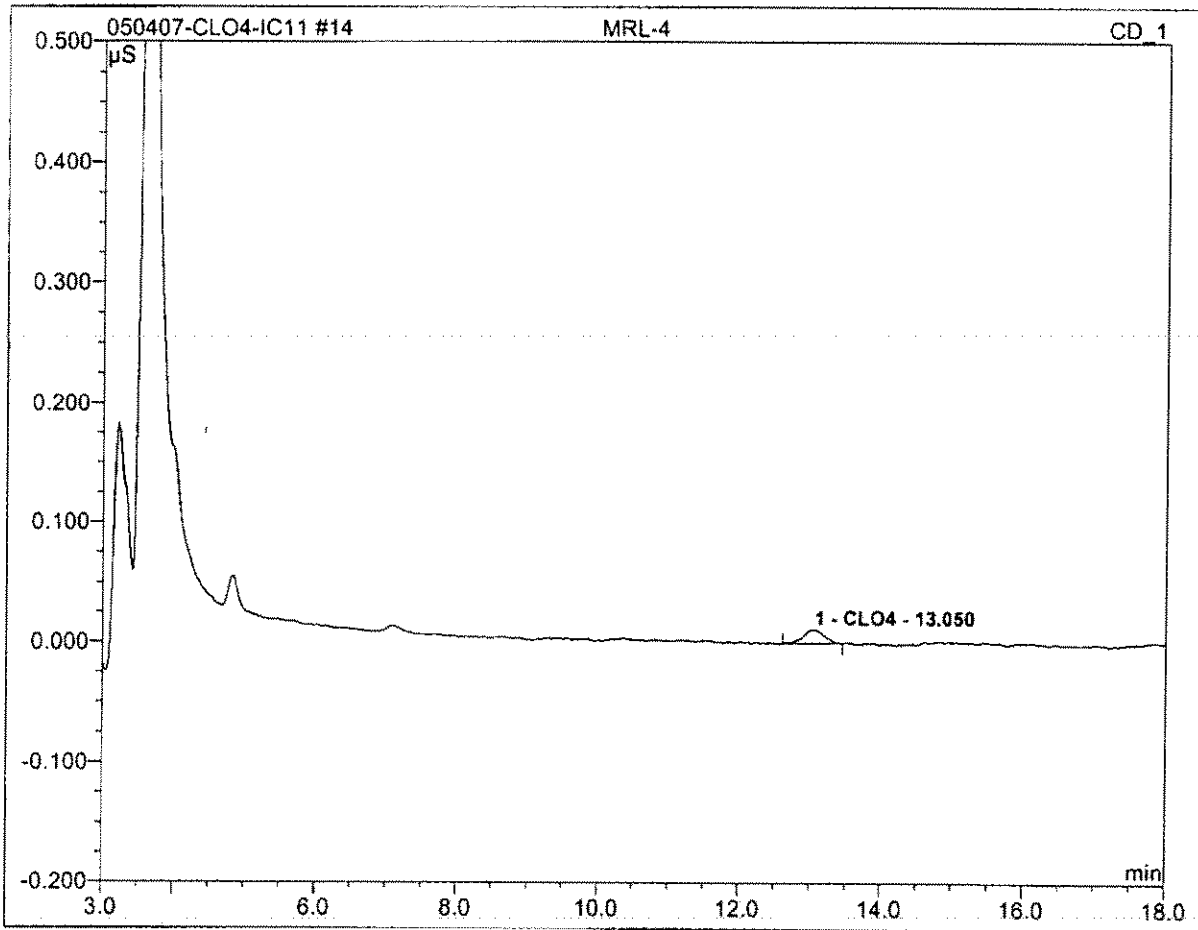
13 MRL-2

Sample Name:	MRL-2	Channel:	CD_1
Sample Type:	unknown	Control Program:	Perchlorate-IC11
Recording Time:	05/04/2007 12:19	Quantif. Method:	IC#4-CLO4-LOW
Analyst:	Raja	Dilution Factor:	1.0000



No.	Ret.Time min	Peak Name	Height μS	Area μS*min	Rel.Area %	Amount	Type
1	13.09	CLO4	0.006	0.002	100.00	2.348	BMB*
Total:			0.006	0.002	100.00	2.348	

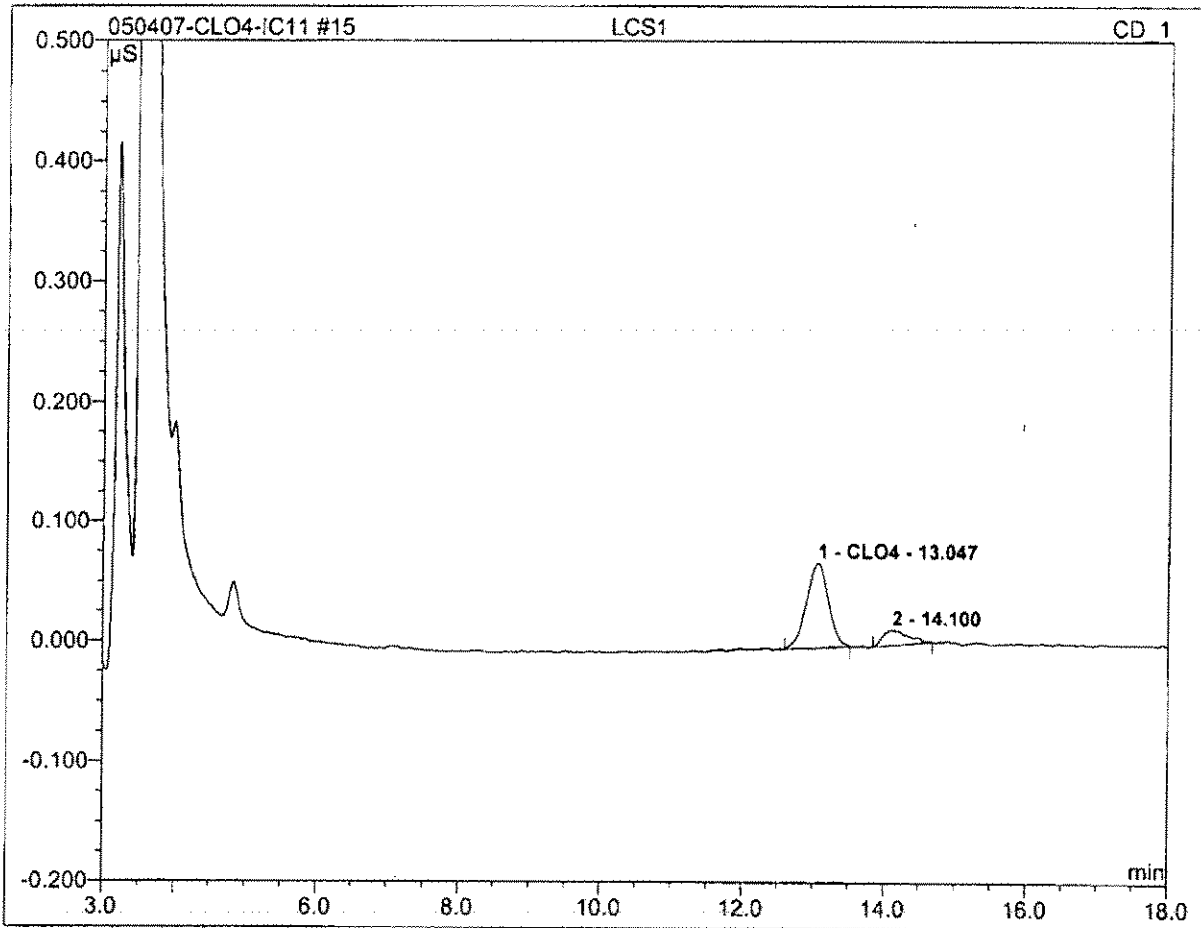
14 MRL-4			
Sample Name:	MRL-4	Channel:	CD_1
Sample Type:	unknown	Control Program:	Perchlorate-IC11
Recording Time:	05/04/2007 12:41	Quantif. Method:	IC#4-CLO4-LOW
Analyst:	Raja	Dilution Factor:	1.0000



No.	Ret.Time min	Peak Name	Height μS	Area μS*min	Rel.Area %	Amount	Type
1	13.05	CLO4	0.012	0.004	100.00	4.093	BMB
Total:			0.012	0.004	100.00	4.093	

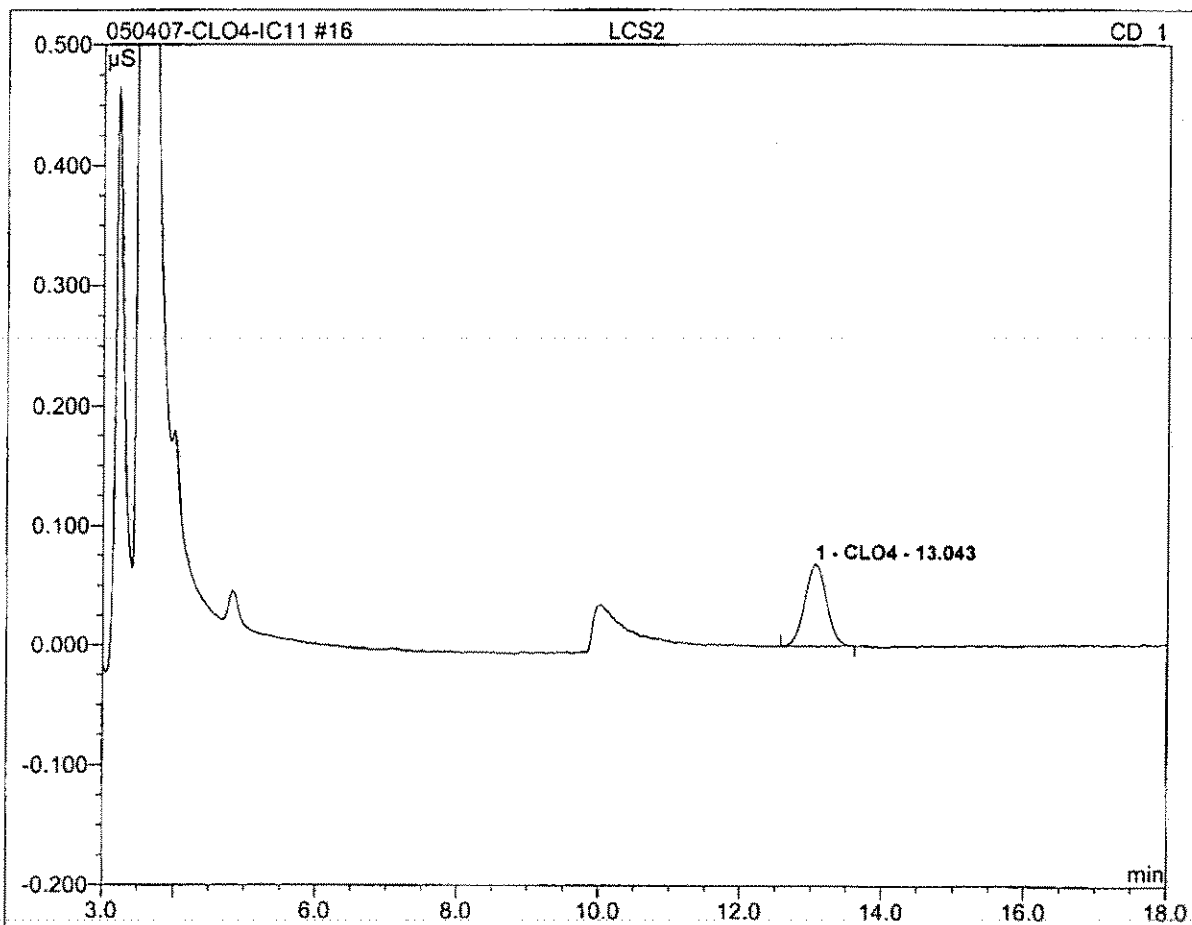
15 LCS1

Sample Name:	LCS1	Channel:	CD_1
Sample Type:	unknown	Control Program:	Perchlorate-IC11
Recording Time:	05/04/2007 13:03	Quantif. Method:	IC#4-CLO4-LOW
Analyst:	Raja	Dilution Factor:	1.0000



No.	Ret.Time min	Peak Name	Height μS	Area μS*min	Rel.Area %	Amount	Type
1	13.05	CLO4	0.071	0.026	82.95	25.802	BMB
Total:			0.071	0.026	82.95	25.802	

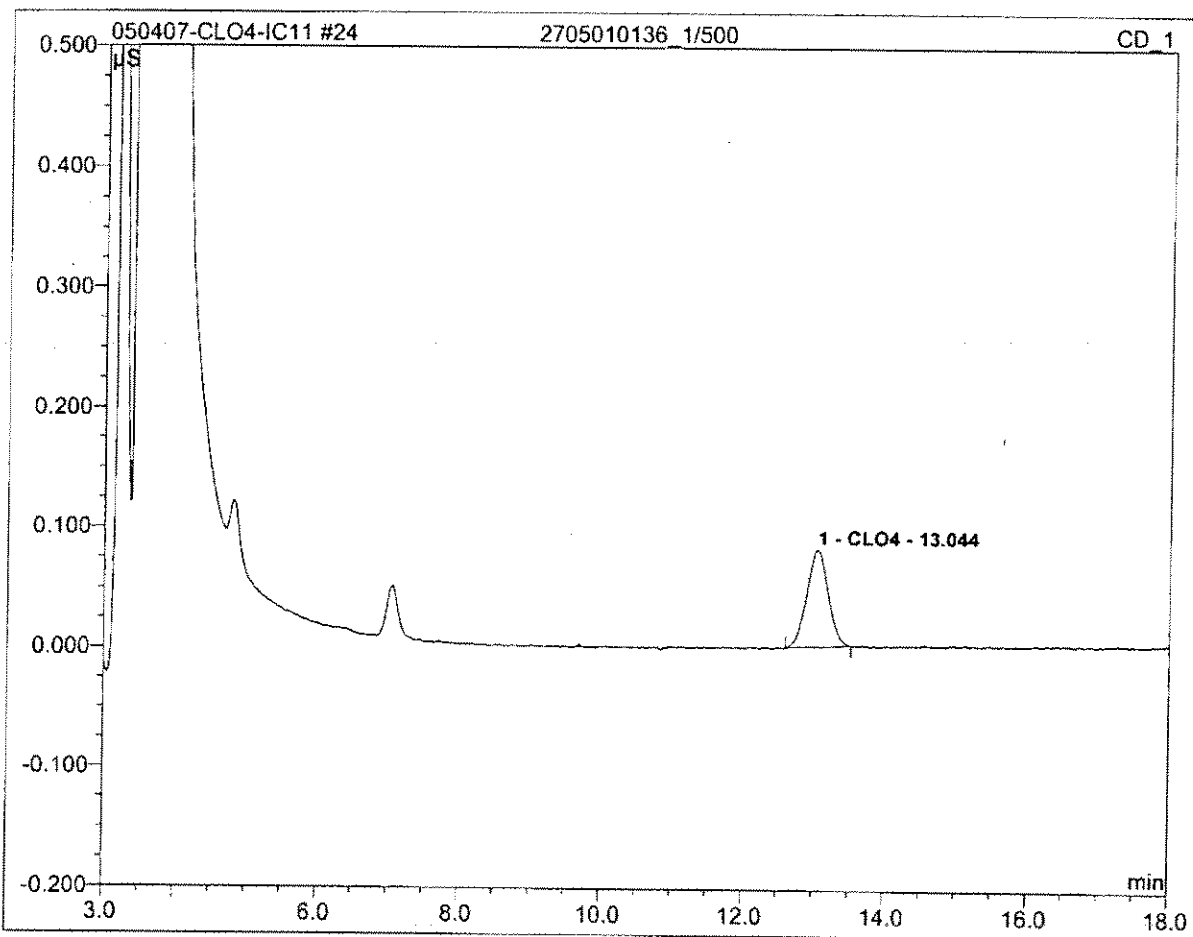
16 LCS2			
Sample Name:	LCS2	Channel:	CD_1
Sample Type:	unknown	Control Program:	Perchlorate-IC11
Recording Time:	05/04/2007 13:26	Quantif. Method:	IC#4-CLO4-LOW
Analyst:	Raja	Dilution Factor:	1.0000



No.	Ret.Time min	Peak Name	Height μS	Area μS*min	Rel.Area %	Amount	Type
1	13.04	CLO4	0.069	0.024	100.00	24.759	BMB
Total:			0.069	0.024	100.00	24.759	

24 2705010136_1/500

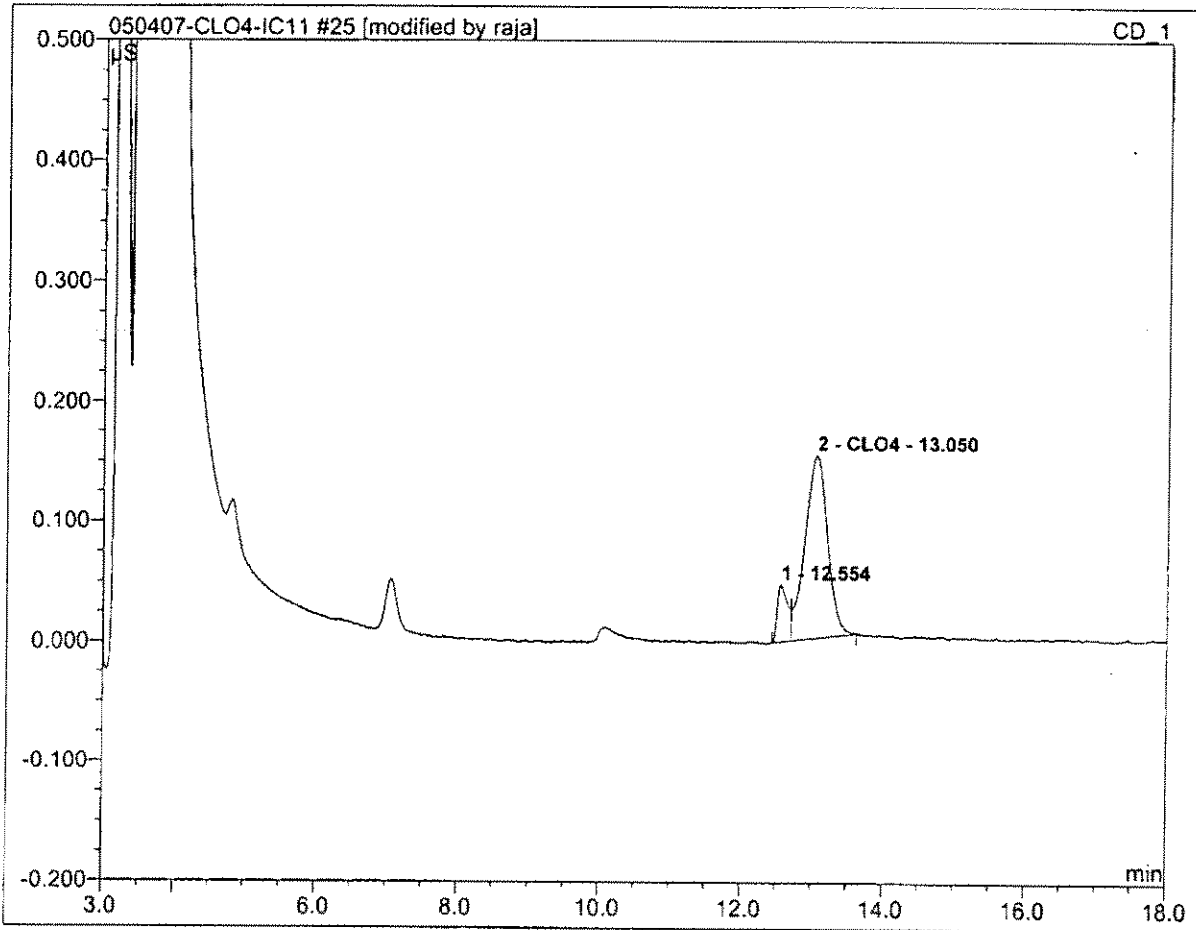
Sample Name:	2705010136_1/500	Channel:	CD_1
Sample Type:	unknown	Control Program:	Perchlorate-IC11
Recording Time:	05/04/2007 17:16	Quantif. Method:	IC#4-CLO4-LOW
Analyst:	Raja	Dilution Factor:	500.0000



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	13.04	CLO4	0.081	0.029	100.00	14438.272	BMB
Total:			0.081	0.029	100.00	14438.272	

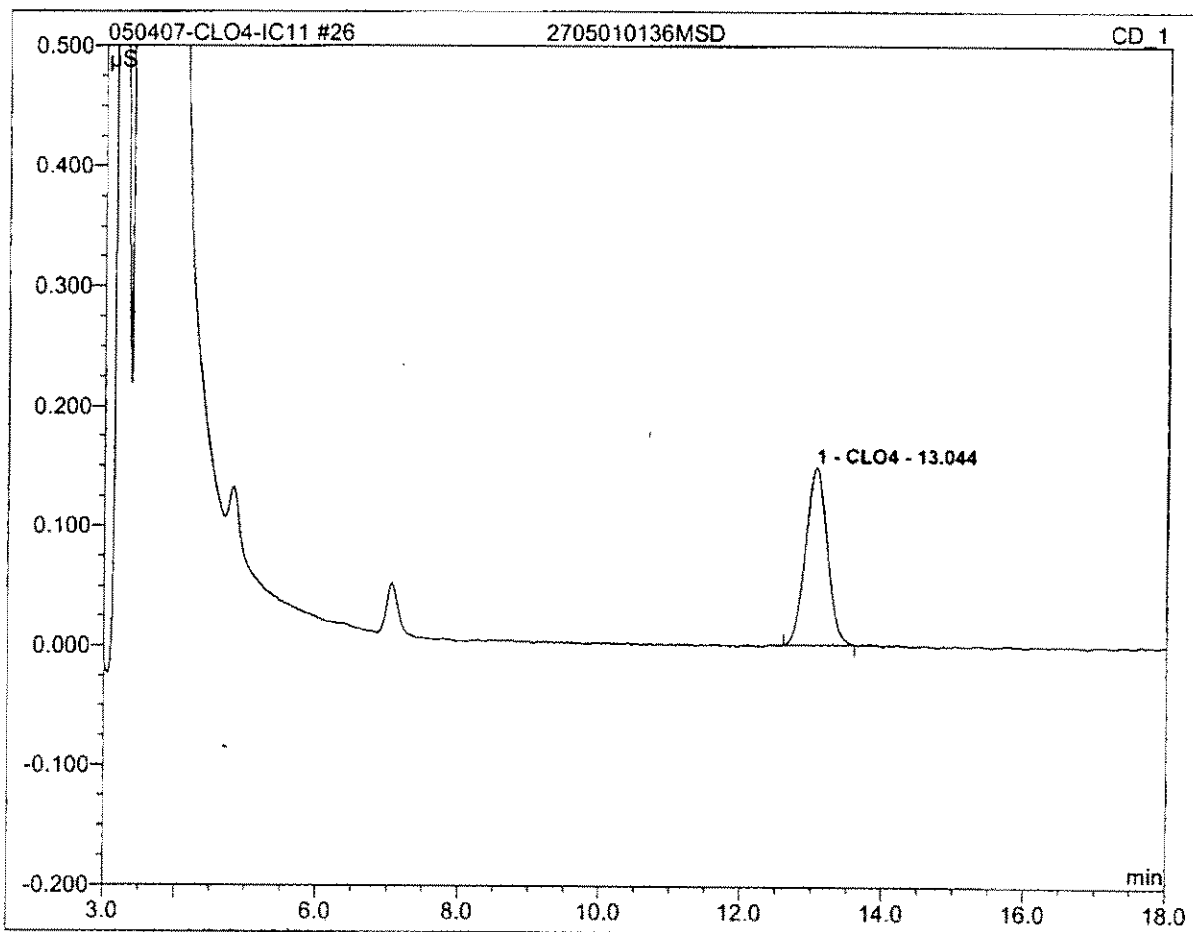
25 2705010136MS

Sample Name:	2705010136MS	Channel:	CD_1
Sample Type:	unknown	Control Program:	Perchlorate-IC11
Recording Time:	05/04/2007 17:39	Quantif. Method:	IC#4-CLO4-LOW
Analyst:	Raja	Dilution Factor:	1.0000



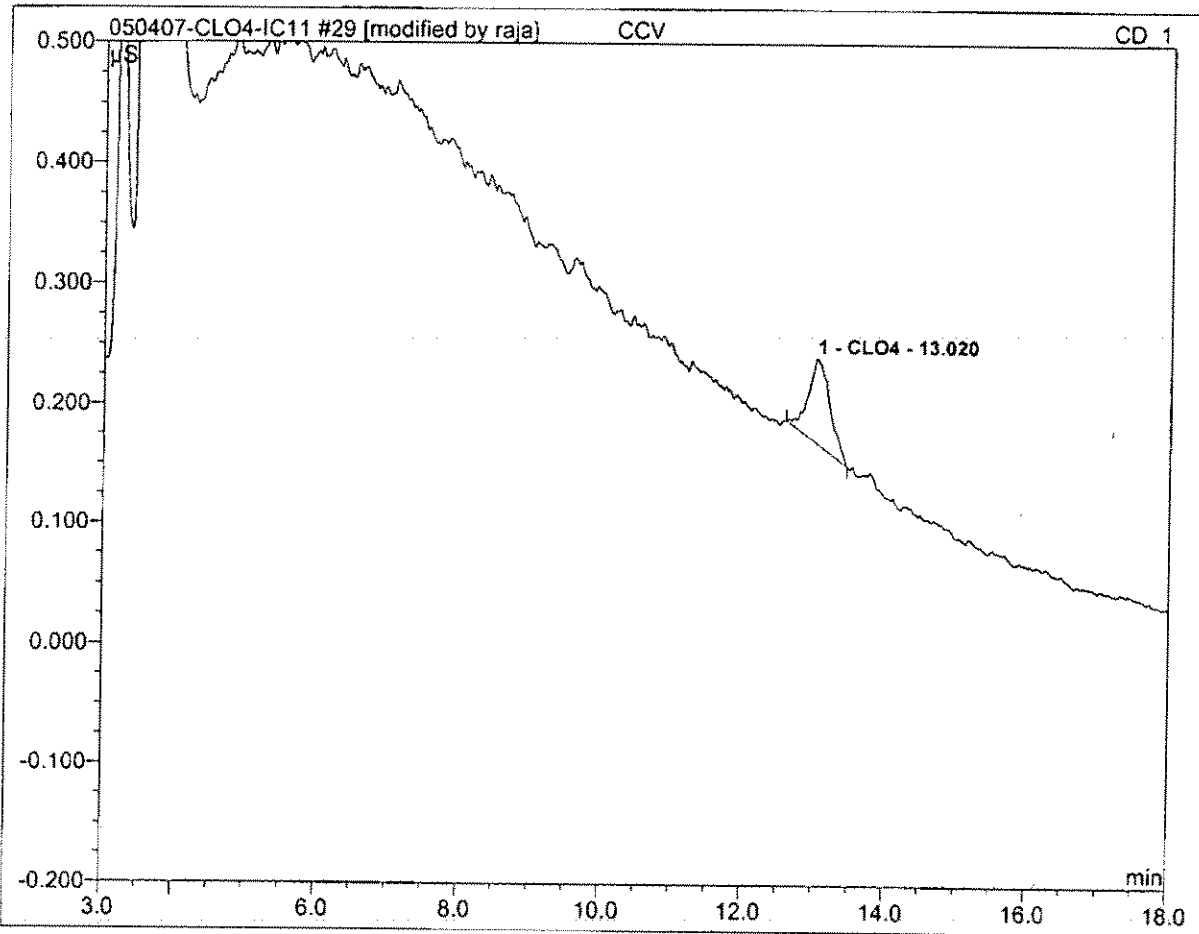
No.	Ret.Time min	Peak Name	Height μS	Area μS*min	Rel.Area %	Amount	Type
2	13.05	CLO4	0.152	0.056	87.58	56.075	MB*
Total:			0.152	0.056	87.58	56.075	

26 2705010136MSD			
Sample Name:	2705010136MSD	Channel:	CD_1
Sample Type:	unknown	Control Program:	Perchlorate-IC11
Recording Time:	05/04/2007 18:01	Quantif. Method:	IC#4-CLO4-LOW
Analyst:	Raja	Dilution Factor:	1.0000



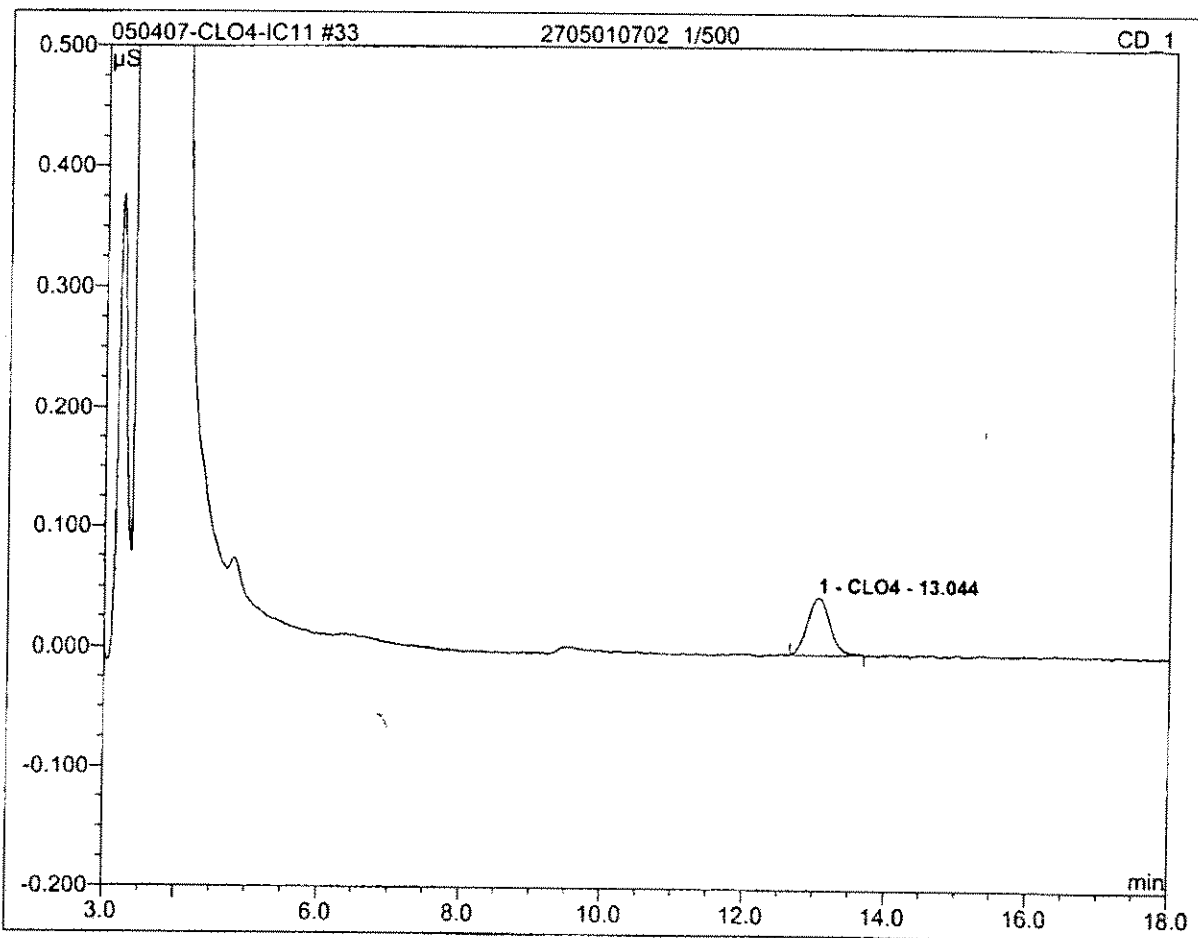
No.	Ret.Time min	Peak Name	Height μS	Area μS*min	Rel.Area %	Amount	Type
1	13.04	CLO4	0.148	0.053	100.00	52.766	BMB
Total:			0.148	0.053	100.00	52.766	

29 CCV			
Sample Name:	CCV	Channel:	CD_1
Sample Type:	unknown	Control Program:	Perchlorate-IC11
Recording Time:	05/04/2007 19:08	Quantif. Method:	IC#4-CLO4-LOW
Analyst:	Raja	Dilution Factor:	1.0000



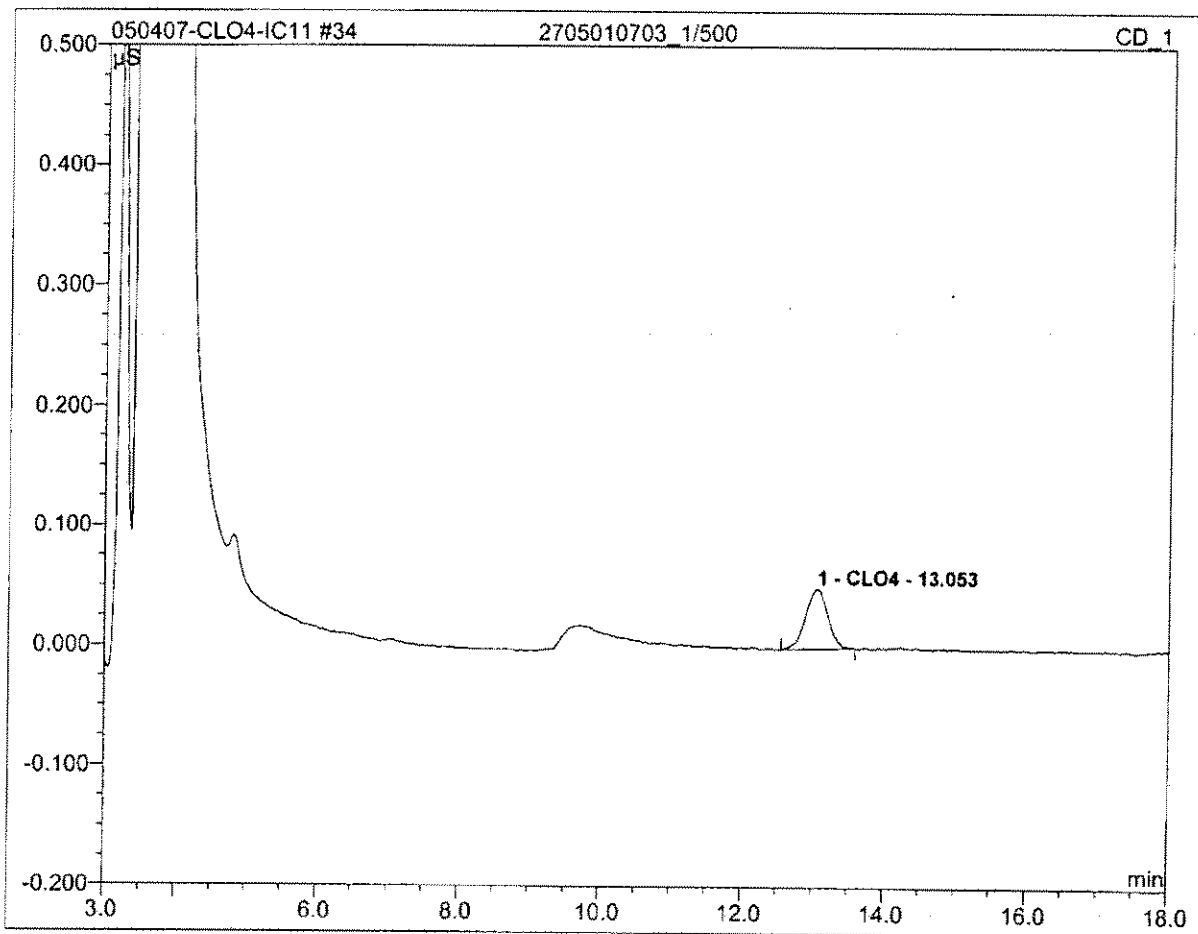
No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	13.02	CLO4	0.071	0.026	100.00	26.044	BMB*
Total:			0.071	0.026	100.00	26.044	

33 2705010702_1/500			
Sample Name:	2705010702_1/500	Channel:	CD_1
Sample Type:	unknown	Control Program:	Perchlorate-IC11
Recording Time:	05/04/2007 20:38	Quantif. Method:	IC#4-CLO4-LOW
Analyst:	Raja	Dilution Factor:	500.0000



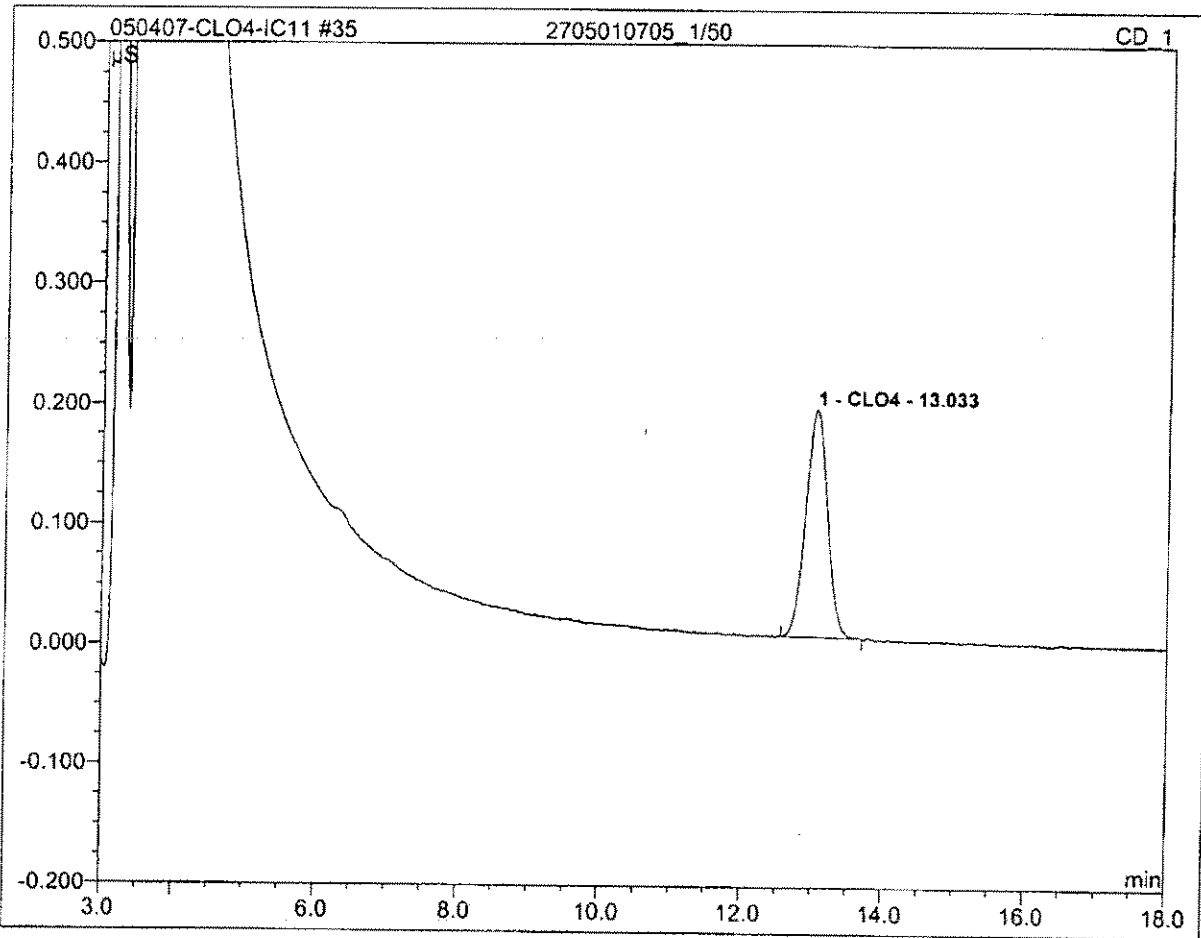
No.	Ret.Time min	Peak Name	Height μS	Area μS*min	Rel.Area %	Amount	Type
1	13.04	CLO4	0.047	0.017	100.00	8740.648	BMB
Total:			0.047	0.017	100.00	8740.648	

34 2705010703_1/500			
Sample Name:	2705010703_1/500	Channel:	CD_1
Sample Type:	unknown	Control Program:	Perchlorate-IC11
Recording Time:	05/04/2007 21:00	Quantif. Method:	IC#4-CLO4-LOW
Analyst:	Raja	Dilution Factor:	500.0000



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	13.05	CLO4	0.050	0.018	100.00	9252.495	BMB
Total:			0.050	0.018	100.00	9252.495	

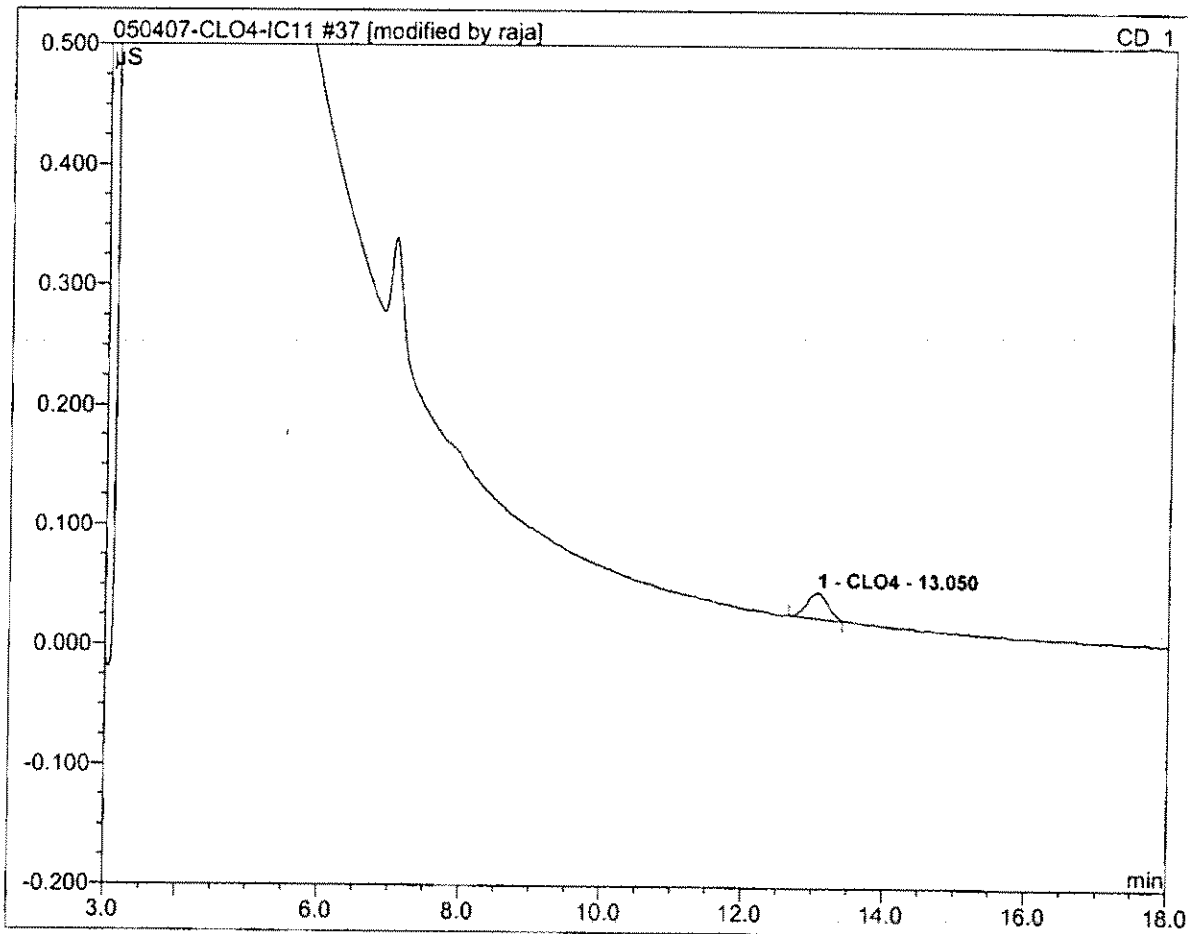
35 2705010705_1/50			
Sample Name:	2705010705_1/50	Channel:	CD_1
Sample Type:	unknown	Control Program:	Perchlorate-IC11
Recording Time:	05/04/2007 21:22	Quantif. Method:	IC#4-CLO4-LOW
Analyst:	Raja	Dilution Factor:	50.0000



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	13.03	CLO4	0.189	0.067	100.00	3353.075	BMB
Total:			0.189	0.067	100.00	3353.075	

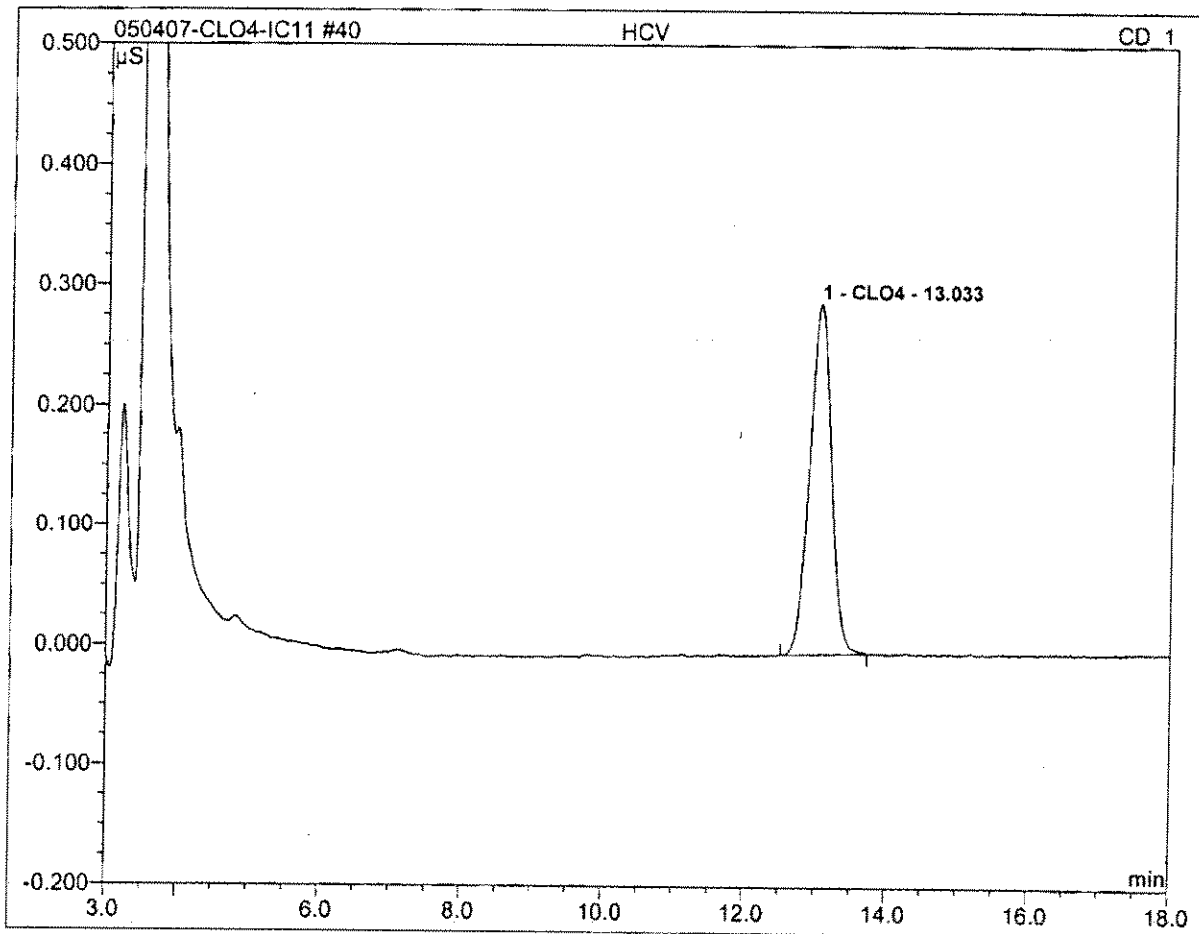
37 2705010708_1/10

Sample Name:	2705010708_1/10	Channel:	CD_1
Sample Type:	unknown	Control Program:	Perchlorate-IC11
Recording Time:	05/04/2007 22:07	Quantif. Method:	IC#4-CLO4-LOW
Analyst:	Raja	Dilution Factor:	10.0000



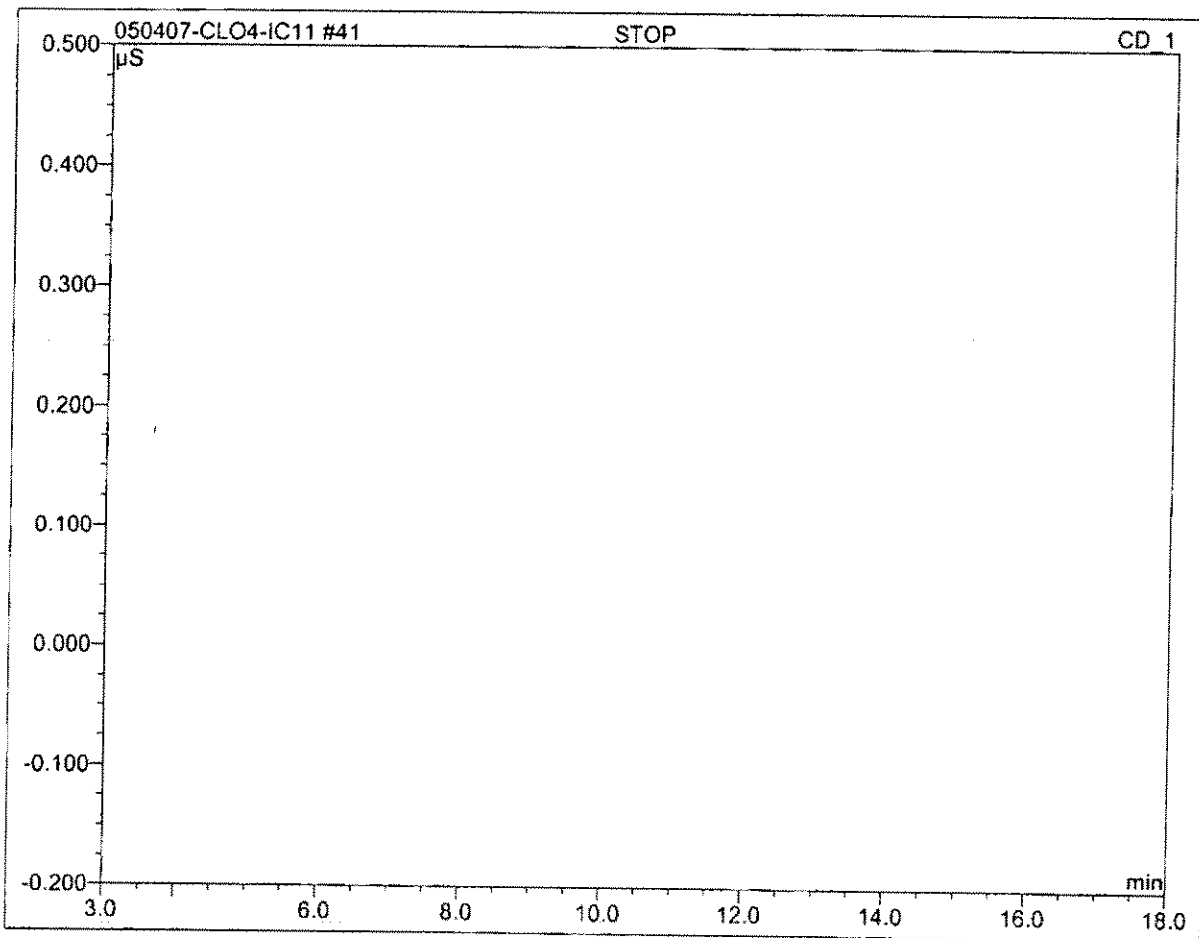
No.	Ret.Time min	Peak Name	Height μS	Area μS*min	Rel.Area %	Amount	Type
1	13.05	CLO4	0.022	0.008	100.00	77.267	BMB*
Total:			0.022	0.008	100.00	77.267	

40 HCV			
Sample Name:	HCV	Channel:	CD_1
Sample Type:	unknown	Control Program:	Perchlorate-IC11
Recording Time:	05/04/2007 23:14	Quantif. Method:	IC#4-CLO4-LOW
Analyst:	Raja	Dilution Factor:	1.0000



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	13.03	CLO4	0.292	0.104	100.00	101.963	BMB
Total:			0.292	0.104	100.00	101.963	

41 STOP			
Sample Name:	STOP	Channel:	CD_1
Sample Type:	unknown	Control Program:	IC11 Stop
Recording Time:	05/04/2007 23:37	Quantif. Method:	IC#4-CLO4-LOW
Analyst:	Raja	Dilution Factor:	1.0000



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
Total:			0.000	0.000	0.00	0.000	

Perchlorate QC Checklist

BATCH 2

rev. 27 Mar 03

Analysis Date: 05-01-07 Analyst: Raja

QC'd by [Signature] Date 10 May 07

Instrument: IC11 Calculated MCT Level: 3155 umhos/cm

Original IPC conductance: 309 umhos/cm Daily IPC conductance: 3121 umhos/cm

Calibration including QCS

- QCS (20ppb) recovery is within 90% - 110% (18-22ppb) to verify that the calibration curve (minimum 5 points) still holds.
- Calibration curve is reanalyzed if QCS fails. Correlation Coefficient is 0.995 or better.

Initial QC Check Samples (MLBLANK, MRL, ICCSCV, IPC) to be analyzed with every batch (up to 20 samples) or part thereof

MLBLANK is analyzed before samples. Perchlorate, if present, is < or = half of the MRL.

N/A L-ClO4 only: ICCSCV at 2ppb is within 50%-150% (1-3ppb)

ClO4 only: MRL at 4ppb is within 75%-125% (3-5ppb)

PDA/H = 4.5% ✓

IPC (25ppb) recovery is between 80%-120% (20-30ppb)

IPC retention time is within 5% of the retention time of the standards

IPC Conductance level is within 10% of the original

LCS/LCSD (25ppb)

Recoveries are between 90%-110% (22.5 - 27.5ppb)

One pair is analyzed per batch (up to 20 samples) or part thereof

MS/MSD (25ppb) NOTE: For UCMR, MS/MSD concentrations alternate between 4ppb and 25ppb

Recoveries are within 80%-120% (20-30ppb) for 25ppb spike N/A (3.2-4.8ppb) for 4ppb spike

One pair is analyzed per batch (up to 20 samples) or part thereof

RPD between MS and MSD is within 15%.

Continuing Calibration Verification (MCV, HCV) NOTE: For UCMR ECV and MCV are required

Verification Checks alternate between mid- and high-level during the analysis (low- and mid-level for UCMR)

MCV (25ppb) recovery is between 85%-115% (21.25 - 28.75ppb)

HCV (100ppb) recovery is between 85%-115% (85-115ppb) N/A ECV (4ppb) recovery is between 75%-125% (3.0-5.0)

Pretreat and include the following QC parameters for any batch or part thereof containing samples requiring pretreatment

N/A One Laboratory Reagent Blank (LRB). Perchlorate is < or = half of MRL.

N/A One pair of Laboratory Control Samples (LCS/LCSD). Recovery of perchlorate is between 85%-115%.

N/A One Pair of Laboratory Fortified Matrices (MS/MSD). Recoveries are between 80%-120%

Samples

All samples are analyzed within 28 days of collection.

All samples are analyzed within MCT Conductance limit.

QIR

N/A QIR needed for failed QC

N/A QIR needed for samples analyzed outside of hold time

Sample No.	Sample Name	Dil.Fac.	Comment	Time	Amount	CLO4 CD_1
1	autocal1	1.0		05.07.07 17:06		n.a.
2	autocal2	1.0	RAJA060913-2	05.07.07 17:28	1.7965	
3	autocal3	1.0	RAJA060913-3	05.07.07 17:51	3.7279	
4	autocal4	1.0	RAJA060913-4	05.07.07 18:13	10.0178	
5	autocal5	1.0	RAJA060913-5	05.07.07 18:35	25.3895	
6	autocal6	1.0	RAJA060913-6	05.07.07 18:58	49.7625	
7	autocal7	1.0	RAJA060913-7	05.07.07 19:20	100.0346	
8	WASH	1.0		05.07.07 19:43		n.a.
9	QCS	1.0		05.07.07 20:05	21.1895	106%
10	IPC	1.0		05.07.07 20:27	26.1385	105%
11	MBLK	1.0		05.07.07 20:50		n.a.
12	MRL-2	1.0		05.07.07 21:12	2.2995	115%
13	MRL-4	1.0		05.07.07 21:35	✓ 4.3743	109%
14	LCS1	1.0		05.07.07 21:57	✓ 26.3775	106%
15	LCS2	1.0		05.07.07 22:19	✓ 26.3750	106%
16	2705010124_1/10000	10000.0		05.07.07 22:42	✓ 681129.2430	
17	2705010126_1/10000	10000.0		05.07.07 23:04	✓ 839363.1481	
18	2705010127_1/10000	10000.0		05.07.07 23:27	✓ 647153.8778	
19	2705010128_1/10000	10000.0		05.07.07 23:49	✓ 392712.8325	
20	2705010710_1/10-DNR	10.0		05.08.07 00:11	43.0077	
21	2705010712_1/100	100.0		05.08.07 00:34	✓ 1623.2578	
22	2705010716_1/5-DNR	5.0		05.08.07 00:56	5859.5515	
23	2705010717_1/2 ✓	2.0		05.08.07 01:18	✓	n.a.
24	2705010734_1/5	5.0		05.08.07 01:41	✓ 106.9382	
25	2705010735_1/5000	5000.0		05.08.07 02:03	✓ 101990.3449	
26	CCV	1.0		05.08.07 02:26	27.4739	110%
27	2705010736_1/10000	10000.0		05.08.07 02:48	✓ 365669.1945	
28	2705010736MS	1.0		05.08.07 03:10	✓ 61.4241	24.9-99.6%
29	2705010736MSD	1.0		05.08.07 03:33	✓ 60.5355	24.0-96.0%
30	2705010737_1/10000	10000.0		05.08.07 03:55	✓ 359411.3572	
31	2705010738_1/5000-DNR	5000.0		05.08.07 04:18	83720.8866	
32	2705010739_1/5000	5000.0		05.08.07 04:40	✓ 147663.4165	
33	2705010740_1/10000	10000.0		05.08.07 05:02	✓ 294427.3143	
34	2705010089_1/1000	1000.0		05.08.07 05:25	32902.8575	✓
35	2705010700_1/10	10.0		05.08.07 05:47	✓ 770.7696	
36	2705010709_1/50	50.0		05.08.07 06:10	✓ 1328.9465	
37	2705010743_1/500	500.0		05.08.07 06:32	✓ 22314.8314	
38	2705010744_1/500	500.0		05.08.07 06:54	✓ 17926.5027	
39	HCV	1.0		05.08.07 07:17	110.2759	110%

VB: NMS/10/07

CONDUCTIVITY MW SOP REVISION 5
SM2510B

Analysis Date: 05-07-07
Analyst: Raja
Reviewed By: _____
LIMS Check By: _____

Time of Analysis Start: _____ End: _____

MRL 2umhos/cm: R# _____ exp of solution: _____
KCl Std 1412 R# 201556 exp of solution 08107
TV = 1412 umhos/cm @ 25°C for 0.0100M
Reading: 1412
Instrument: YSI Model 3200 SN:01A0504, Year Acquired 2001 New

Was QC Criteria Met: Y N
Was CIR Needed: Y N

Run #	Sample Number	Sample ID	Client	Date Collected	Temp °C	pH	Scale (umho/mmho)	Result		Comments
								Instrument	Reported (umho/cm)	
	Blank						AS	0.495		
	STD MRL 2umhos/cm							N/A		
	STD KCl - 1000 mhos/cm							999		1-3 --- ±50% of TV
1	2705010710	PC79	Kerrmaga	4-30-07				3430		850-1050 --- ±5% of TV
2	712	PC86						3921		
3	716	PC4						8491		
4	717	28043007						17.6		
5	734	Act - 1						9999		
6	735	- 2					ms	14.10		
7	736	- 3						11.92		
8	737	- 4					AS	8287		
9	738	- 6						9643		
10	739	- 7					ms	13.84		
	DUP ↓	↓						13.84		
11	740	- 8						13.91		RPD < 5%
12	743	PC-99R3						AS 7691		
13	744	- 105R						7731		
14										
15										
16										
17										
18										
19										
20										
	DUP 2705010744	PC-115R	Kerrmaga	4-30-07				AS 7731		
	STD KCl - 10 mhos/cm							N/A		8-12 --- RPD < 20% of TV

$$\% \text{RPD} = \frac{|S1 - S2|}{(S1 + S2)/2} * 100$$

S1 = reading of 1st sample
S2 = reading of 2nd sample

Sequence: 050707-CLO4-IC11-II
Operator: raja

Page 1 of 2
Printed: 5/9/2007 1:31:40 PM

Title:

Datasource: IC-SERVER_local
Location: IC11\2007\MAY
Timebase: IC11
#Samples: 39

Created: 5/7/2007 1:04:02 PM by raja
Last Update: 5/8/2007 11:44:52 AM by raja

No.	Name	Dil. Factor	Type	Comment	Status	Program
1	autocal1	1.0000	Standard		Finished	Perchlorate-IC11
2	autocal2	1.0000	Standard	RAJA060913-2	Finished	Perchlorate-IC11
3	autocal3	1.0000	Standard	RAJA060913-3	Finished	Perchlorate-IC11
4	autocal4	1.0000	Standard	RAJA060913-4	Finished	Perchlorate-IC11
5	autocal5	1.0000	Standard	RAJA060913-5	Finished	Perchlorate-IC11
6	autocal6	1.0000	Standard	RAJA060913-6	Finished	Perchlorate-IC11
7	autocal7	1.0000	Standard	RAJA060913-7	Finished	Perchlorate-IC11
8	WASH	1.0000	Unknown		Finished	Perchlorate-IC11
9	QCS	1.0000	Unknown		Finished	Perchlorate-IC11
10	IPC	1.0000	Unknown		Finished	Perchlorate-IC11
11	MBLK	1.0000	Unknown		Finished	Perchlorate-IC11
12	MRL-2	1.0000	Unknown		Finished	Perchlorate-IC11
13	MRL-4	1.0000	Unknown		Finished	Perchlorate-IC11
14	LCS1	1.0000	Unknown		Finished	Perchlorate-IC11
15	LCS2	1.0000	Unknown		Finished	Perchlorate-IC11
16	2705010124_1/10000	10000.0000	Unknown		Finished	Perchlorate-IC11
17	2705010126_1/10000	10000.0000	Unknown		Finished	Perchlorate-IC11
18	2705010127_1/10000	10000.0000	Unknown		Finished	Perchlorate-IC11
19	2705010128_1/10000	10000.0000	Unknown		Finished	Perchlorate-IC11
20	2705010710_1/10-DNR	10.0000	Unknown		Finished	Perchlorate-IC11
21	2705010712_1/100	100.0000	Unknown		Finished	Perchlorate-IC11
22	2705010716_1/5-DNR	5.0000	Unknown		Finished	Perchlorate-IC11
23	2705010717_1/2	2.0000	Unknown		Finished	Perchlorate-IC11
24	2705010734_1/5	5.0000	Unknown		Finished	Perchlorate-IC11
25	2705010735_1/5000	5000.0000	Unknown		Finished	Perchlorate-IC11
26	CCV	1.0000	Unknown		Finished	Perchlorate-IC11
27	2705010736_1/10000	10000.0000	Unknown		Finished	Perchlorate-IC11
28	2705010736MS	1.0000	Unknown		Finished	Perchlorate-IC11
29	2705010736MSD	1.0000	Unknown		Finished	Perchlorate-IC11
30	2705010737_1/10000	10000.0000	Unknown		Finished	Perchlorate-IC11
31	2705010738_1/5000-DNR	5000.0000	Unknown		Finished	Perchlorate-IC11
32	2705010739_1/5000	5000.0000	Unknown		Finished	Perchlorate-IC11
33	2705010740_1/10000	10000.0000	Unknown		Finished	Perchlorate-IC11
34	2705010089_1/1000	1000.0000	Unknown		Finished	Perchlorate-IC11
35	2705010700_1/10	10.0000	Unknown		Finished	Perchlorate-IC11
36	2705010709_1/50	50.0000	Unknown		Finished	Perchlorate-IC11
37	2705010743_1/500	500.0000	Unknown		Finished	Perchlorate-IC11
38	2705010744_1/500	500.0000	Unknown		Finished	Perchlorate-IC11
39	HCV	1.0000	Unknown		Finished	Perchlorate-IC11

Sequence: 050707-CLO4-IC11-II
Operator: raja

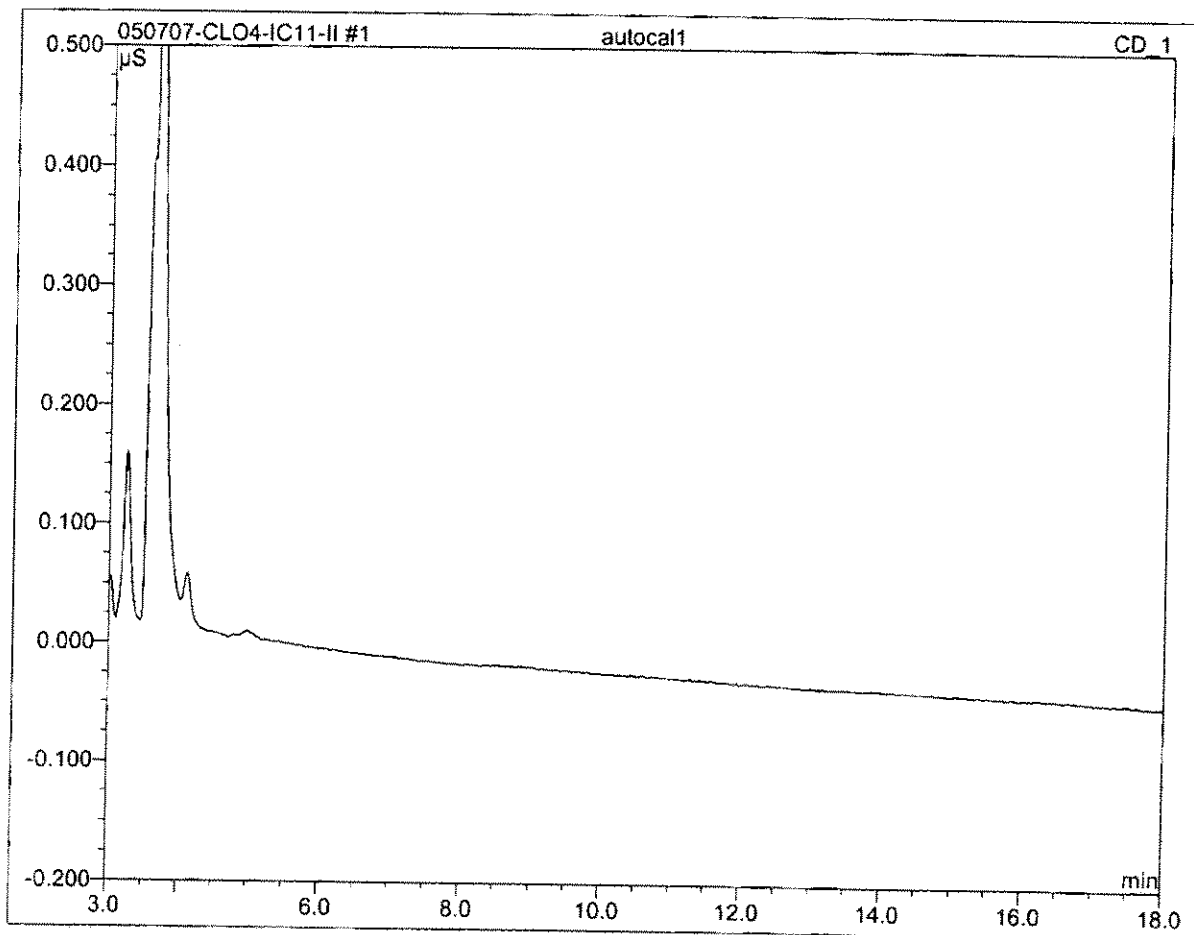
Page 2 of 2
Printed: 5/9/2007 1:31:40 PM

Title:
Datasource: IC-SERVER_local
Location: IC11\2007\MAY
Timebase: IC11
#Samples: 39

Created: 5/7/2007 1:04:02 PM by raja
Last Update: 5/8/2007 11:44:52 AM by raja

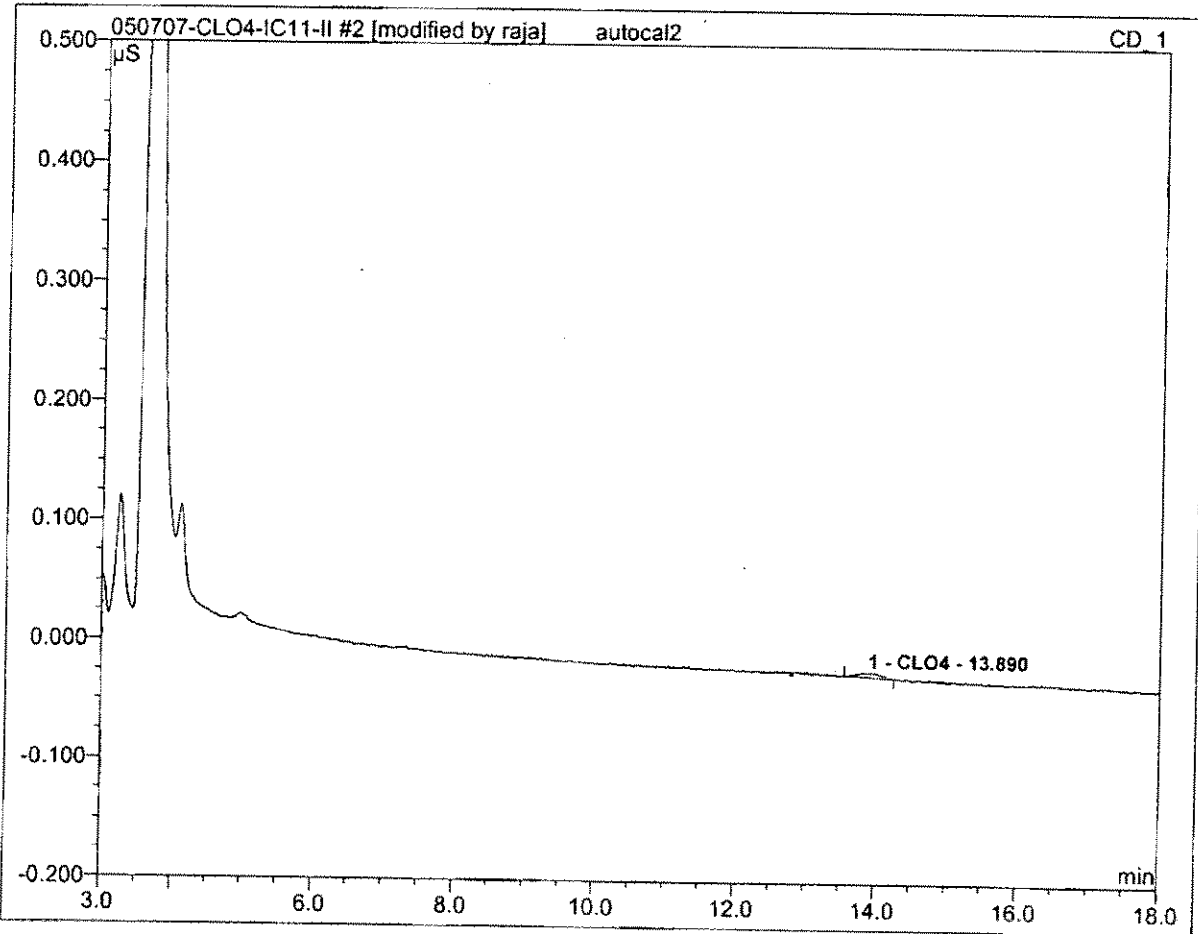
No.	Name	Method	Inj. Date/Time	*Analyst
1	autocal1	IC#4-CLO4-LOW	5/7/2007 5:06:18 PM	Raja
2	autocal2	IC#4-CLO4-LOW	5/7/2007 5:28:41 PM	Raja
3	autocal3	IC#4-CLO4-LOW	5/7/2007 5:51:06 PM	Raja
4	autocal4	IC#4-CLO4-LOW	5/7/2007 6:13:29 PM	Raja
5	autocal5	IC#4-CLO4-LOW	5/7/2007 6:35:53 PM	Raja
6	autocal6	IC#4-CLO4-LOW	5/7/2007 6:58:17 PM	Raja
7	autocal7	IC#4-CLO4-LOW	5/7/2007 7:20:40 PM	Raja
8	WASH	IC#4-CLO4-LOW	5/7/2007 7:43:04 PM	Raja
9	QCS	IC#4-CLO4-LOW	5/7/2007 8:05:28 PM	Raja
10	IPC	IC#4-CLO4-LOW	5/7/2007 8:27:51 PM	Raja
11	MBLK	IC#4-CLO4-LOW	5/7/2007 8:50:15 PM	Raja
12	MRL-2	IC#4-CLO4-LOW	5/7/2007 9:12:39 PM	Raja
13	MRL-4	IC#4-CLO4-LOW	5/7/2007 9:35:03 PM	Raja
14	LCS1	IC#4-CLO4-LOW	5/7/2007 9:57:26 PM	Raja
15	LCS2	IC#4-CLO4-LOW	5/7/2007 10:19:49 PM	Raja
16	2705010124_1/10000	IC#4-CLO4-LOW	5/7/2007 10:42:13 PM	Raja
17	2705010126_1/10000	IC#4-CLO4-LOW	5/7/2007 11:04:36 PM	Raja
18	2705010127_1/10000	IC#4-CLO4-LOW	5/7/2007 11:27:00 PM	Raja
19	2705010128_1/10000	IC#4-CLO4-LOW	5/7/2007 11:49:23 PM	Raja
20	2705010710_1/10-DNR	IC#4-CLO4-LOW	5/8/2007 12:11:47 AM	Raja
21	2705010712_1/100	IC#4-CLO4-LOW	5/8/2007 12:34:11 AM	Raja
22	2705010716_1/5-DNR	IC#4-CLO4-LOW	5/8/2007 12:56:34 AM	Raja
23	2705010717_1/2	IC#4-CLO4-LOW	5/8/2007 1:18:58 AM	Raja
24	2705010734_1/5	IC#4-CLO4-LOW	5/8/2007 1:41:21 AM	Raja
25	2705010735_1/5000	IC#4-CLO4-LOW	5/8/2007 2:03:45 AM	Raja
26	CCV	IC#4-CLO4-LOW	5/8/2007 2:26:08 AM	Raja
27	2705010736_1/10000	IC#4-CLO4-LOW	5/8/2007 2:48:32 AM	Raja
28	2705010736MS	IC#4-CLO4-LOW	5/8/2007 3:10:56 AM	Raja
29	2705010736MSD	IC#4-CLO4-LOW	5/8/2007 3:33:19 AM	Raja
30	2705010737_1/10000	IC#4-CLO4-LOW	5/8/2007 3:55:43 AM	Raja
31	2705010738_1/5000-DNR	IC#4-CLO4-LOW	5/8/2007 4:18:07 AM	Raja
32	2705010739_1/5000	IC#4-CLO4-LOW	5/8/2007 4:40:30 AM	Raja
33	2705010740_1/10000	IC#4-CLO4-LOW	5/8/2007 5:02:54 AM	Raja
34	2705010089_1/1000	IC#4-CLO4-LOW	5/8/2007 5:25:17 AM	Raja
35	2705010700_1/10	IC#4-CLO4-LOW	5/8/2007 5:47:41 AM	Raja
36	2705010709_1/50	IC#4-CLO4-LOW	5/8/2007 6:10:05 AM	Raja
37	2705010743_1/500	IC#4-CLO4-LOW	5/8/2007 6:32:29 AM	Raja
38	2705010744_1/500	IC#4-CLO4-LOW	5/8/2007 6:54:52 AM	Raja
39	HCV	IC#4-CLO4-LOW	5/8/2007 7:17:16 AM	Raja

1 autocal1			
Sample Name:	autocal1	Channel:	CD_1
Sample Type:	standard	Control Program:	Perchlorate-IC11
Recording Time:	05/07/2007 17:06	Quantif. Method:	IC#4-CLO4-LOW
Analyst:	Raja	Dilution Factor:	1.0000



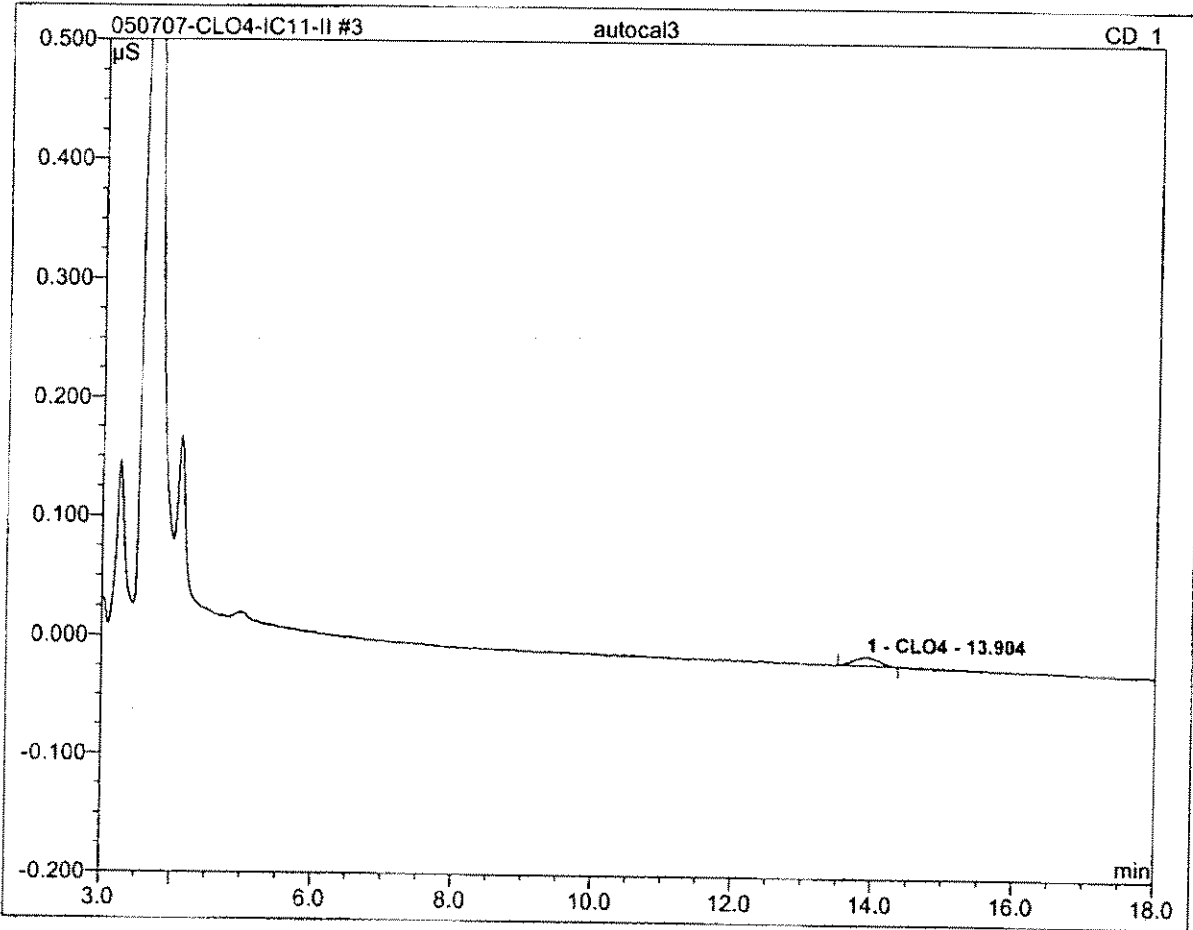
No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
Total:			0.000	0.000	0.00	0.000	

2 autocal2			
RAJA060913-2			
Sample Name:	autocal2	Channel:	CD_1
Sample Type:	standard	Control Program:	Perchlorate-IC11
Recording Time:	05/07/2007 17:28	Quantif. Method:	IC#4-CLO4-LOW
Analyst:	Raja	Dilution Factor:	1.0000



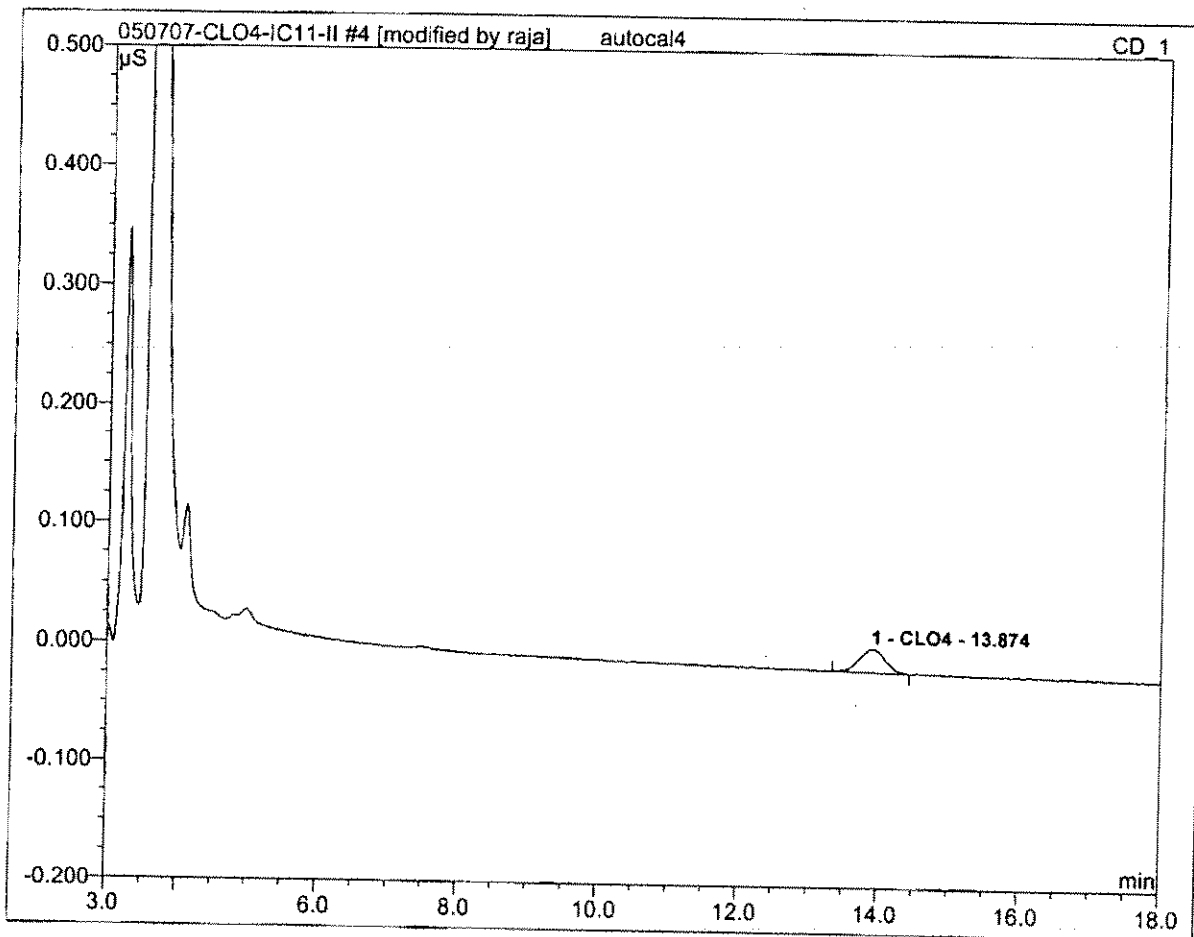
No.	Ret.Time min	Peak Name	Height μS	Area $\mu\text{S}\cdot\text{min}$	Rel.Area %	Amount	Type
1	13.89	CLO4	0.004	0.001	100.00	1.797	BMB*
Total:			0.004	0.001	100.00	1.797	

3 autocal3			
RAJA060913-3			
Sample Name:	autocal3	Channel:	CD_1
Sample Type:	standard	Control Program:	Perchlorate-IC11
Recording Time:	05/07/2007 17:51	Quantif. Method:	IC#4-CLO4-LOW
Analyst:	Raja	Dilution Factor:	1.0000



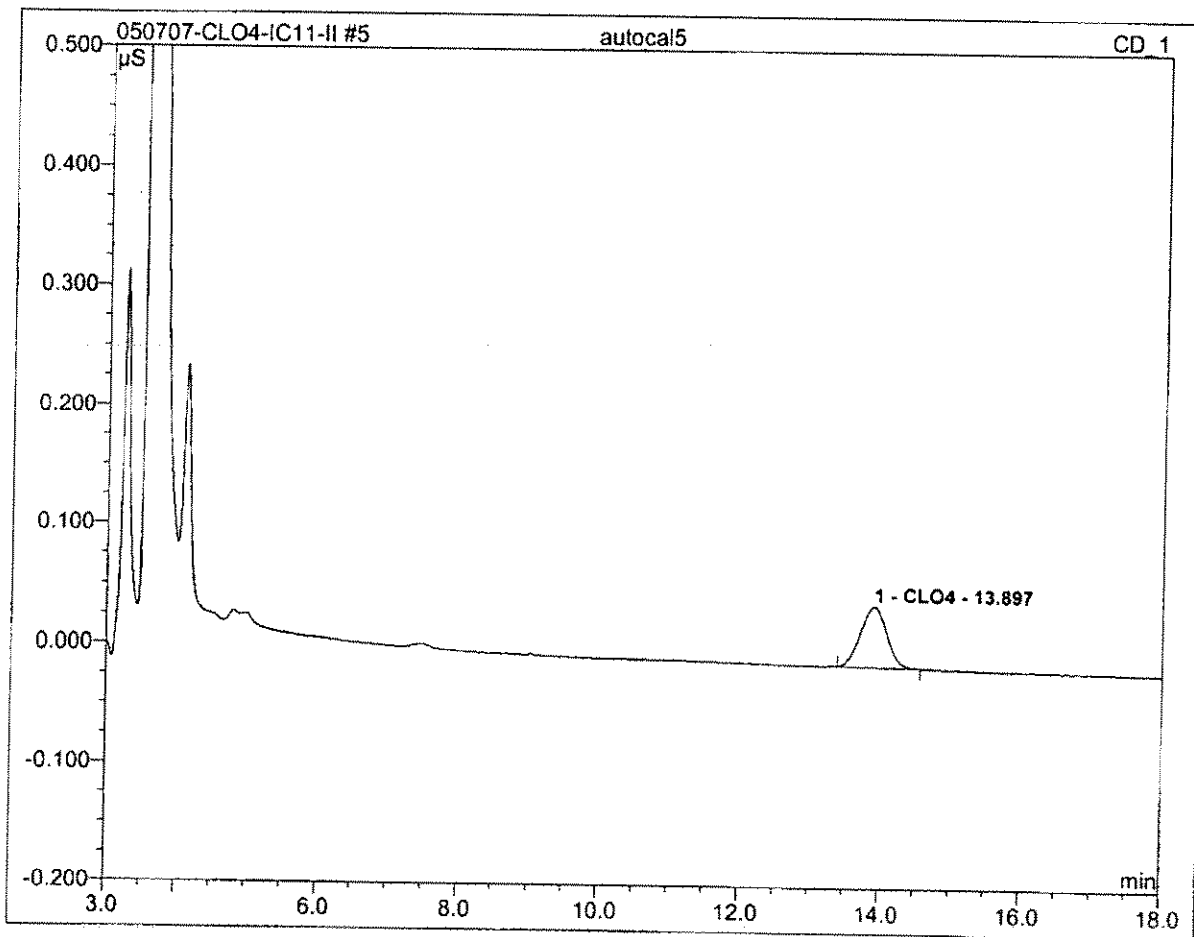
No.	Ret.Time min	Peak Name	Height μS	Area μS*min	Rel.Area %	Amount	Type
1	13.90	CLO4	0.007	0.003	100.00	3.728	BMB
Total:			0.007	0.003	100.00	3.728	

4 autocal4			
RAJA060913-4			
Sample Name:	autocal4	Channel:	CD_1
Sample Type:	standard	Control Program:	Perchlorate-IC11
Recording Time:	05/07/2007 18:13	Quantif. Method:	IC#4-CLO4-LOW
Analyst:	Raja	Dilution Factor:	1.0000



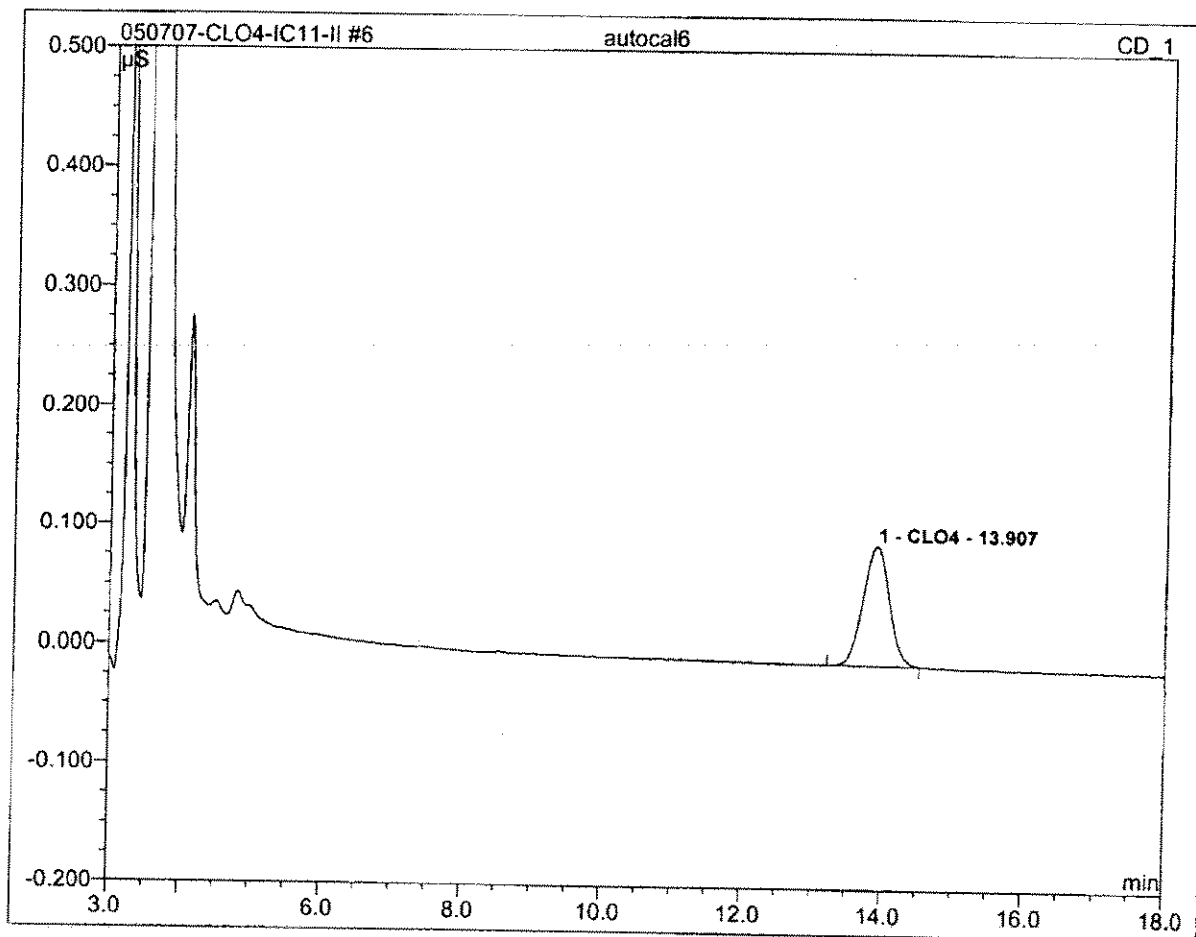
No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	13.87	CLO4	0.019	0.008	100.00	10.018	BMB*
Total:			0.019	0.008	100.00	10.018	

5 autocal5			
RAJA060913-5			
Sample Name:	autocal5	Channel:	CD_1
Sample Type:	standard	Control Program:	Perchlorate-IC11
Recording Time:	05/07/2007 18:35	Quantif. Method:	IC#4-CLO4-LOW
Analyst:	Raja	Dilution Factor:	1.0000



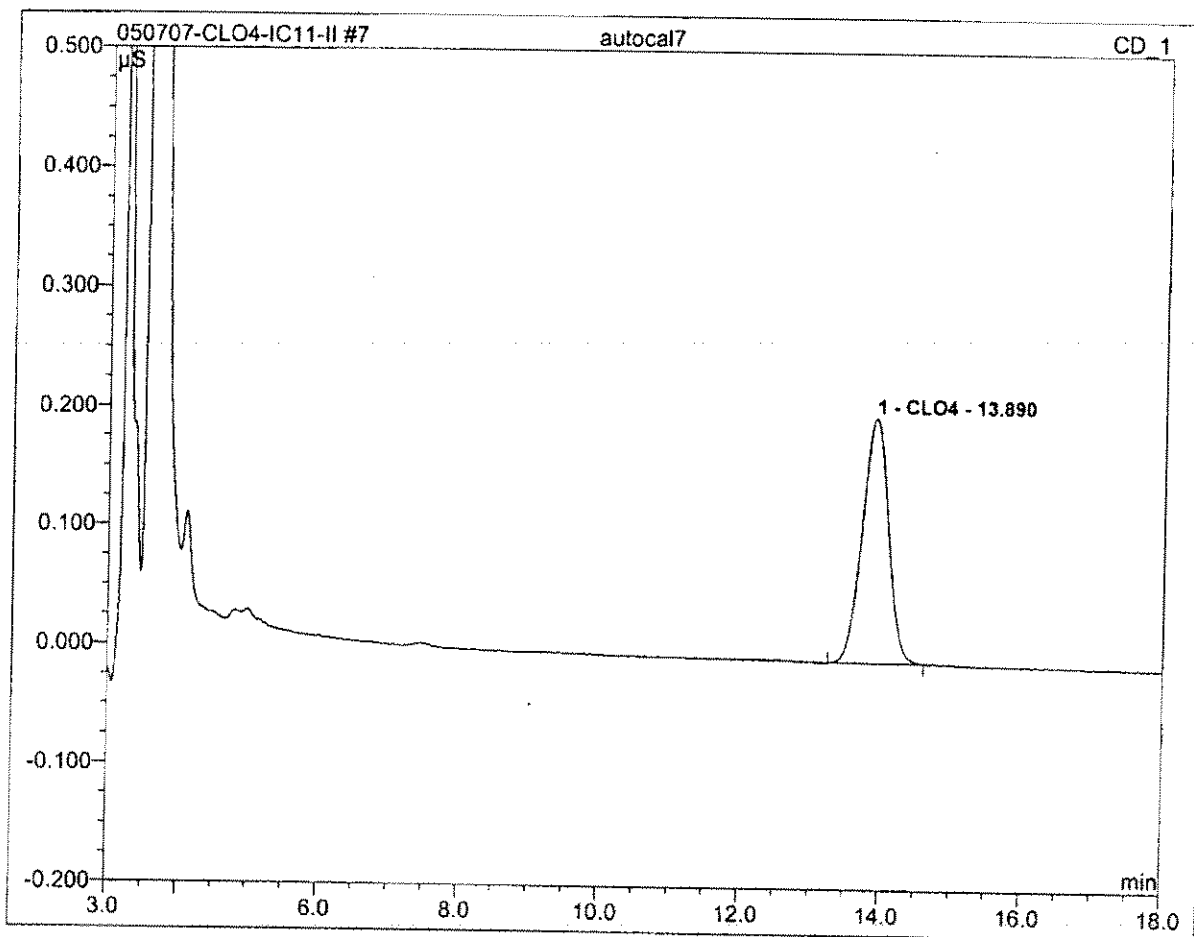
No.	Ret. Time min	Peak Name	Height µS	Area µS*min	Rel. Area %	Amount	Type
1	13.90	CLO4	0.050	0.022	100.00	25.389	BMB
Total:			0.050	0.022	100.00	25.389	

6 autocal6			
RAJA060913-6			
Sample Name:	autocal6	Channel:	CD_1
Sample Type:	standard	Control Program:	Perchlorate-IC11
Recording Time:	05/07/2007 18:58	Quantif. Method:	IC#4-CLO4-LOW
Analyst:	Raja	Dilution Factor:	1.0000



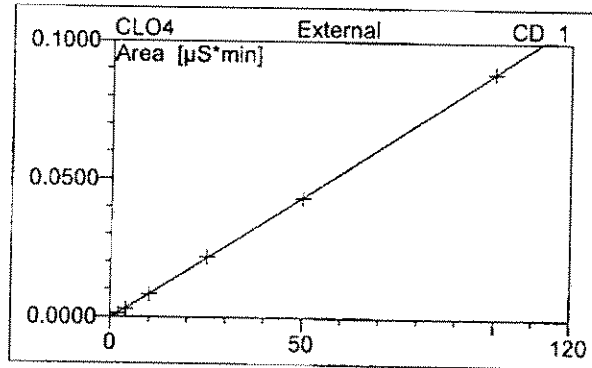
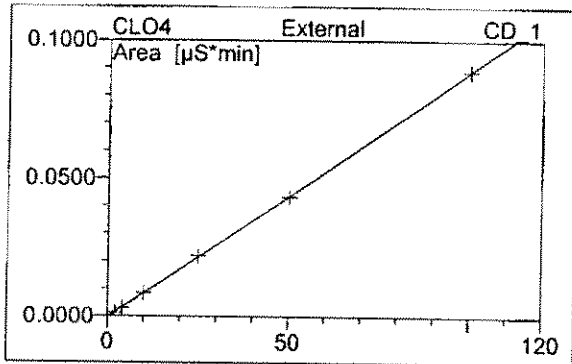
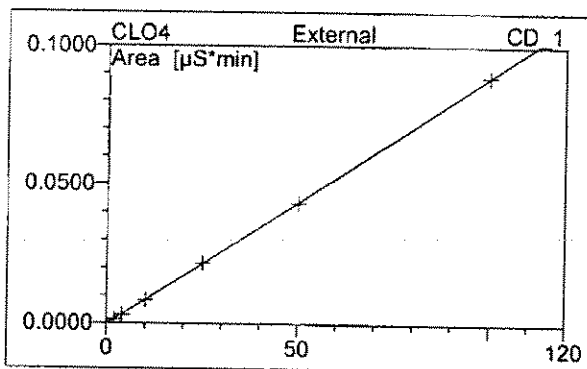
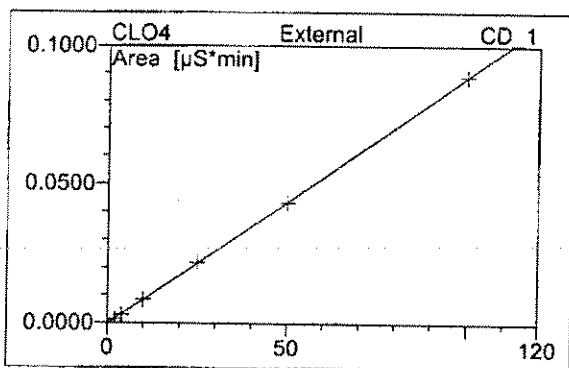
No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	13.91	CLO4	0.100	0.043	100.00	49.763	BMB
Total:			0.100	0.043	100.00	49.763	

7 autocal7			
RAJA060913-7			
Sample Name:	autocal7	Channel:	CD_1
Sample Type:	standard	Control Program:	Perchlorate-IC11
Recording Time:	05/07/2007 19:20	Quantif. Method:	IC#4-CLO4-LOW
Analyst:	Raja	Dilution Factor:	1.0000



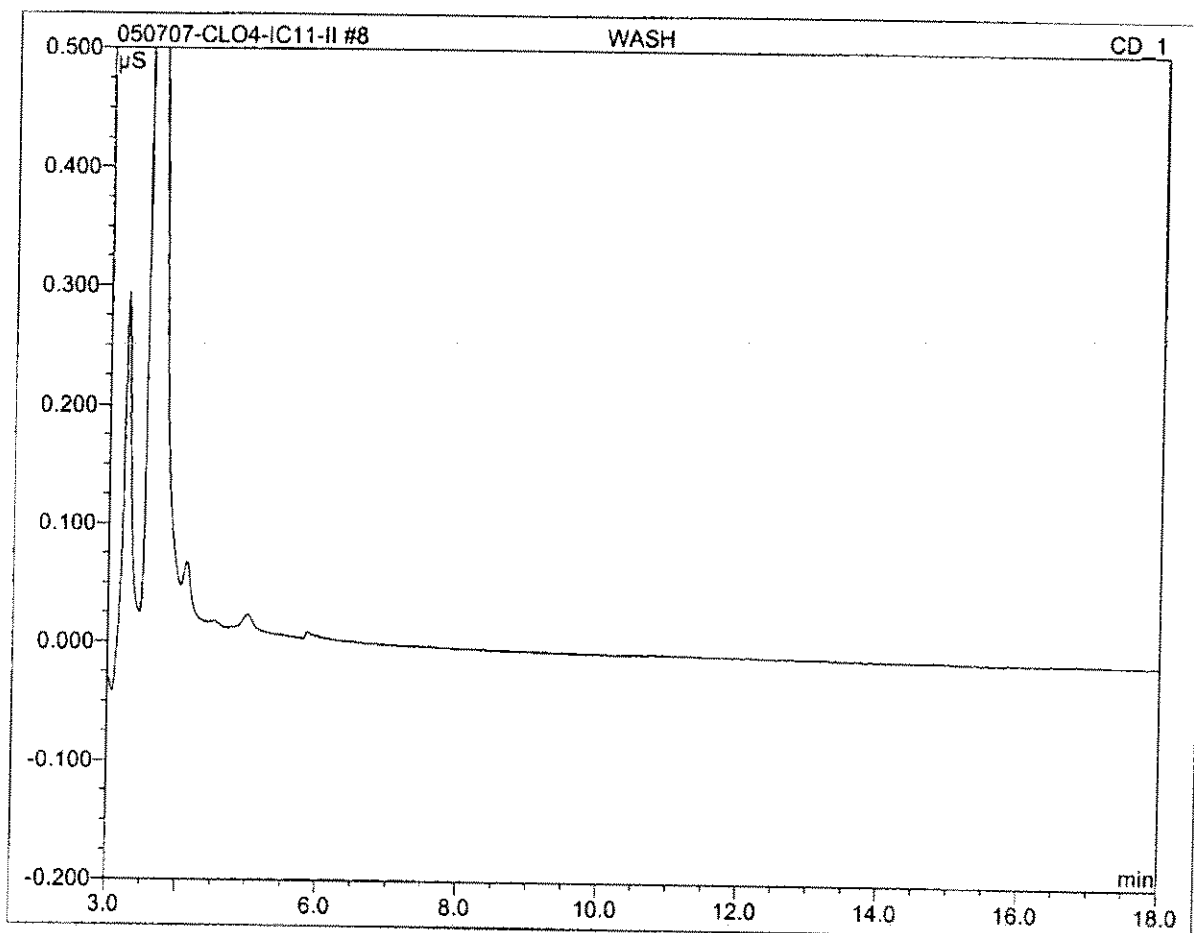
No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	13.89	CLO4	0.206	0.089	100.00	100.035	BMB
Total:			0.206	0.089	100.00	100.035	

7 autocal7	
RAJA060913-7	
Sample Name: autocal7	Injection Volume: 20.0
Vial Number: 109	Channel: CD_1
Sample Type: standard	Wavelength: n.a.
Control Program: Perchlorate-IC11	Bandwidth: n.a.
Quantif. Method: IC#4-CLO4-LOW	Dilution Factor: 1.0000
Recording Time: 5/7/2007 19:20	Sample Weight: 1.0000
Run Time (min): 20.00	Sample Amount: 1.0000



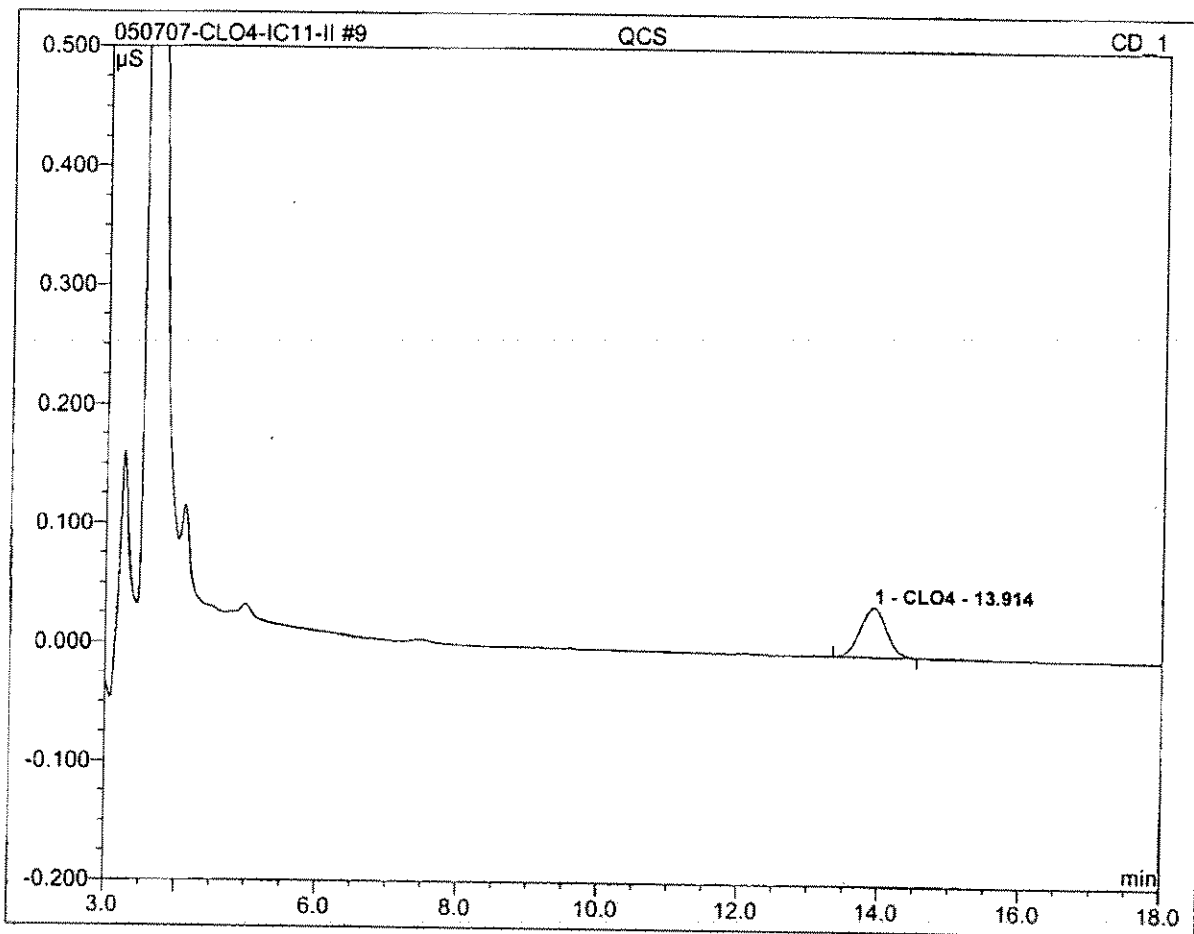
No.	Ret.Time min	Peak Name	Cal.Type	Points	Corr.Coeff. %	Offset	Slope	Curve
1	13.89	CLO4	0QOff	6	99.9950	-0.0002	0.0009	0.0000
Average:					99.9950	-0.0002	0.0009	0.0000

8 WASH			
Sample Name:	WASH	Channel:	CD_1
Sample Type:	unknown	Control Program:	Perchlorate-IC11
Recording Time:	05/07/2007 19:43	Quantif. Method:	IC#4-CLO4-LOW
Analyst:	Raja	Dilution Factor:	1.0000



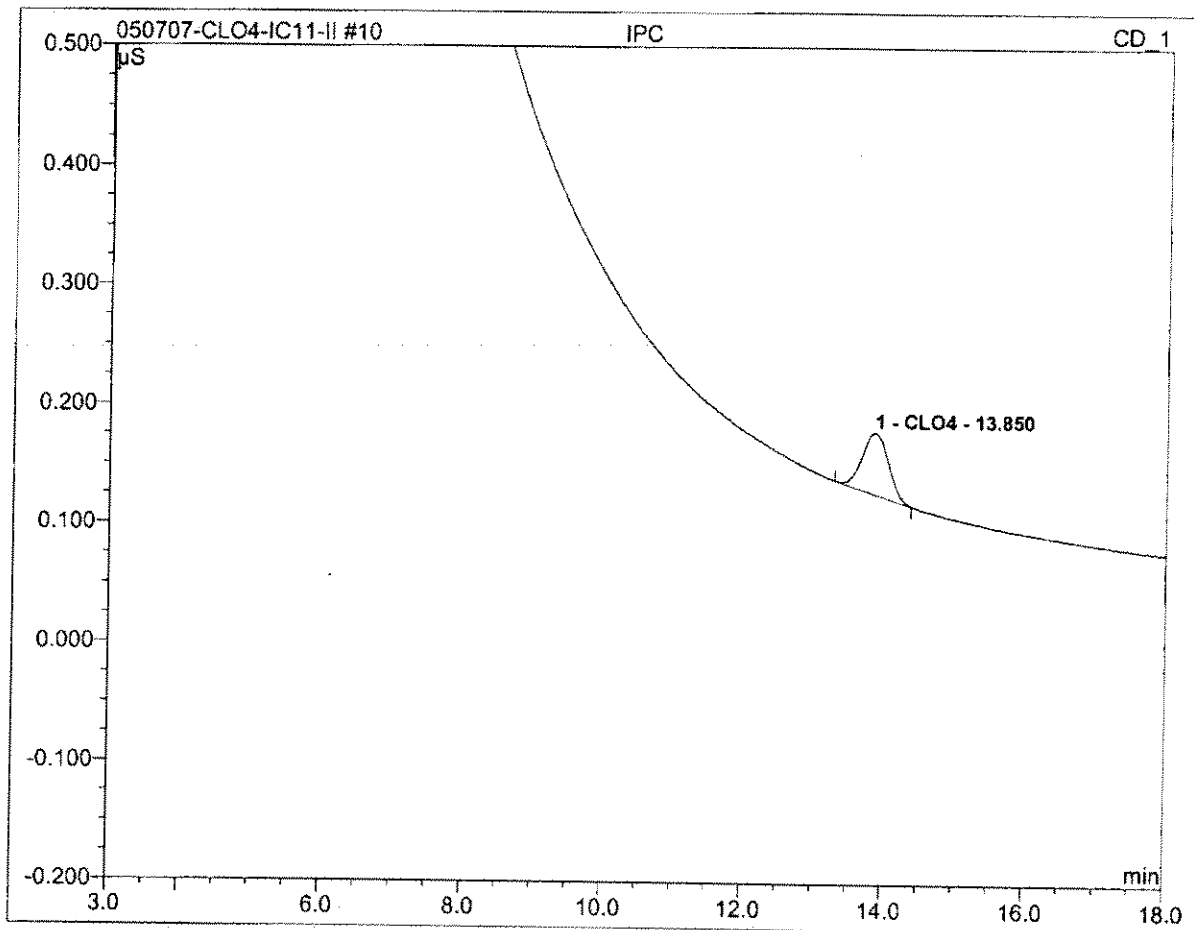
No.	Ret.Time min	Peak Name	Height μS	Area $\mu\text{S}\cdot\text{min}$	Rel.Area %	Amount	Type
Total:			0.000	0.000	0.00	0.000	

9 QCS			
Sample Name:	QCS	Channel:	CD_1
Sample Type:	unknown	Control Program:	Perchlorate-IC11
Recording Time:	05/07/2007 20:05	Quantif. Method:	IC#4-CLO4-LOW
Analyst:	Raja	Dilution Factor:	1.0000



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	13.91	CLO4	0.042	0.018	100.00	21.190	BMB
Total:			0.042	0.018	100.00	21.190	

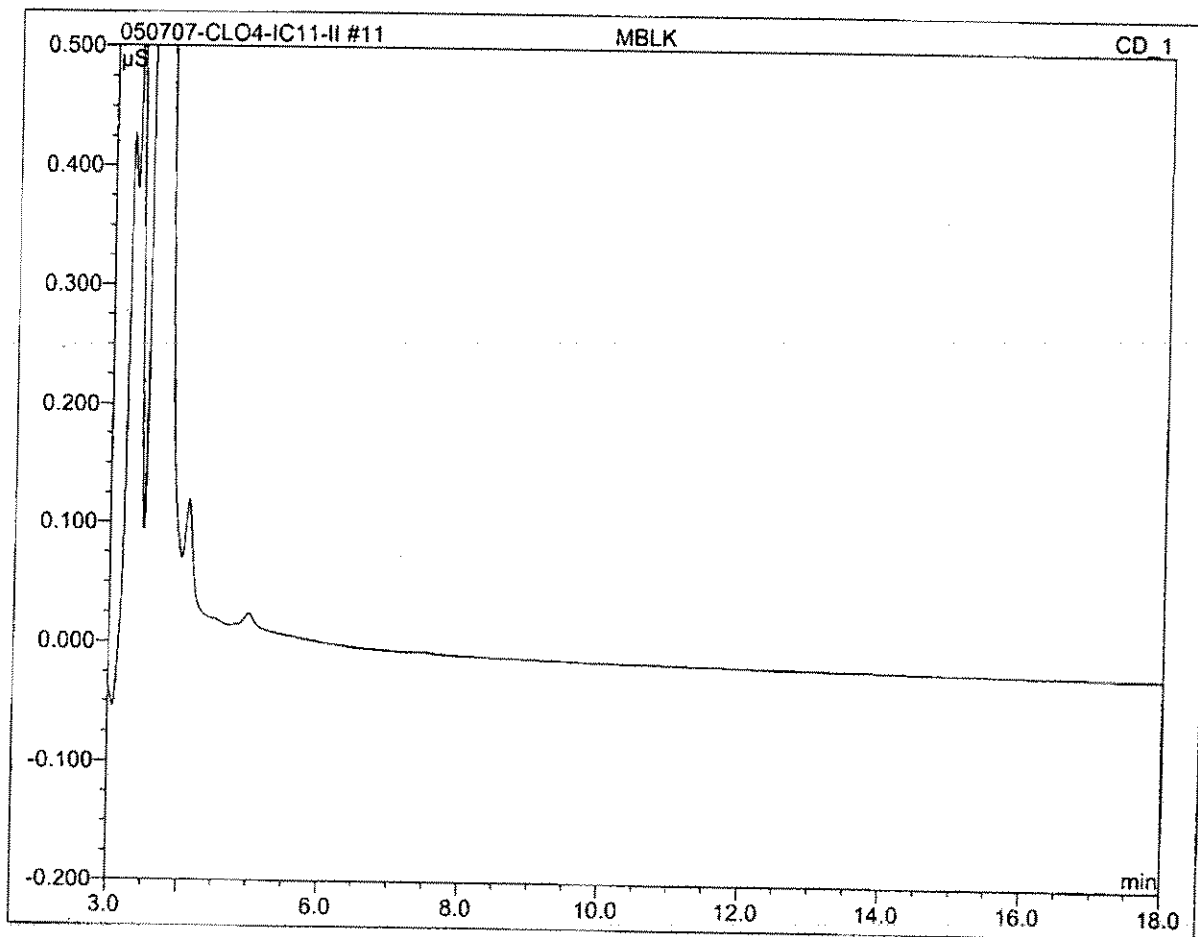
10 IPC			
Sample Name:	IPC	Channel:	CD_1
Sample Type:	unknown	Control Program:	Perchlorate-IC11
Recording Time:	05/07/2007 20:27	Quantif. Method:	IC#4-CLO4-LOW
Analyst:	Raja	Dilution Factor:	1.0000



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	13.85	CLO4	0.052	0.022	100.00	26.139	BMB
Total:			0.052	0.022	100.00	26.139	

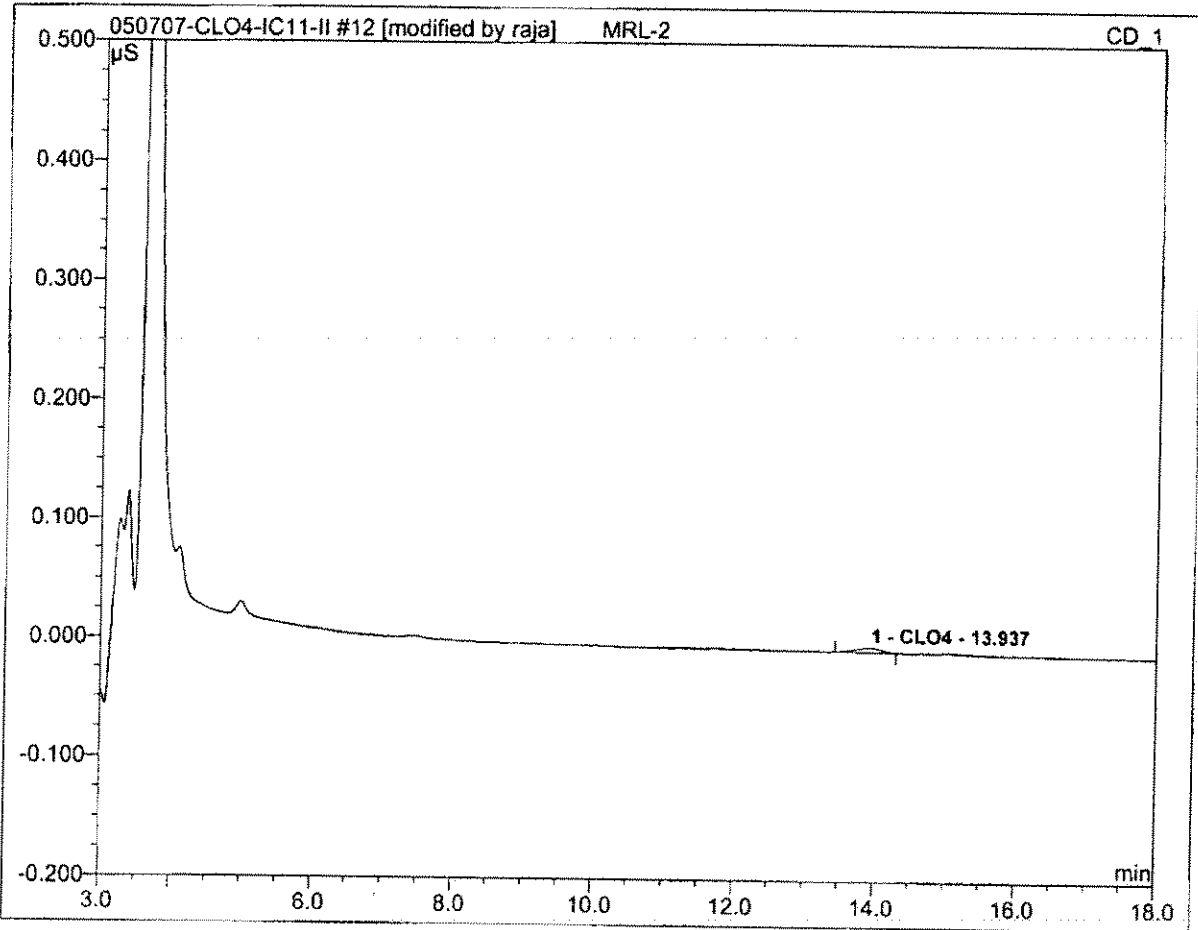
11 MBLK

Sample Name:	MBLK	Channel:	CD_1
Sample Type:	unknown	Control Program:	Perchlorate-IC11
Recording Time:	05/07/2007 20:50	Quantif. Method:	IC#4-CLO4-LOW
Analyst:	Raja	Dilution Factor:	1.0000



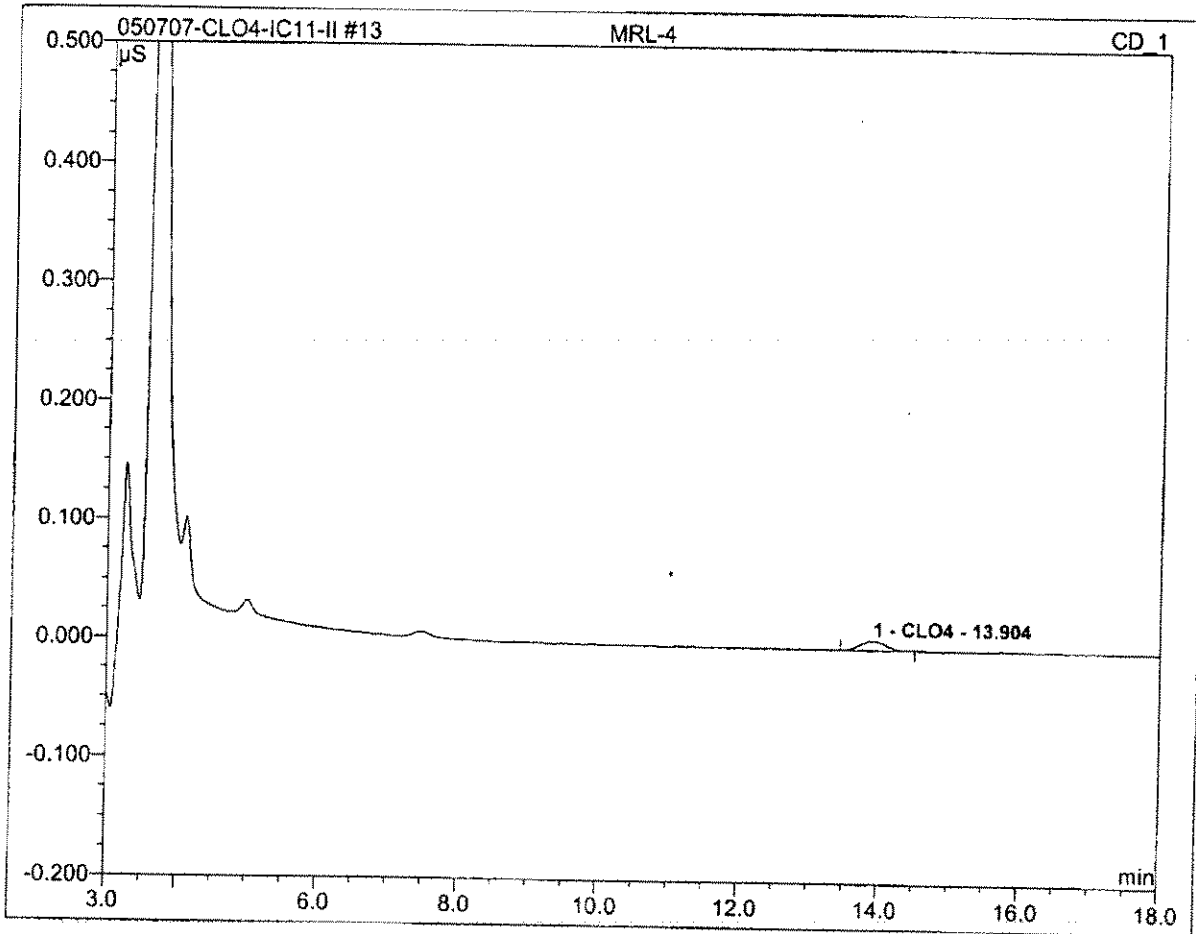
No.	Ret.Time min	Peak Name	Height μS	Area μS*min	Rel.Area %	Amount	Type
Total:			0.000	0.000	0.00	0.000	

12 MRL-2			
Sample Name:	MRL-2	Channel:	CD_1
Sample Type:	unknown	Control Program:	Perchlorate-IC11
Recording Time:	05/07/2007 21:12	Quantif. Method:	IC#4-CLO4-LOW
Analyst:	Raja	Dilution Factor:	1.0000



No.	Ret.Time min	Peak Name	Height μS	Area μS*min	Rel.Area %	Amount	Type
1	13.94	CLO4	0.004	0.002	100.00	2.300	BMB*
Total:			0.004	0.002	100.00	2.300	

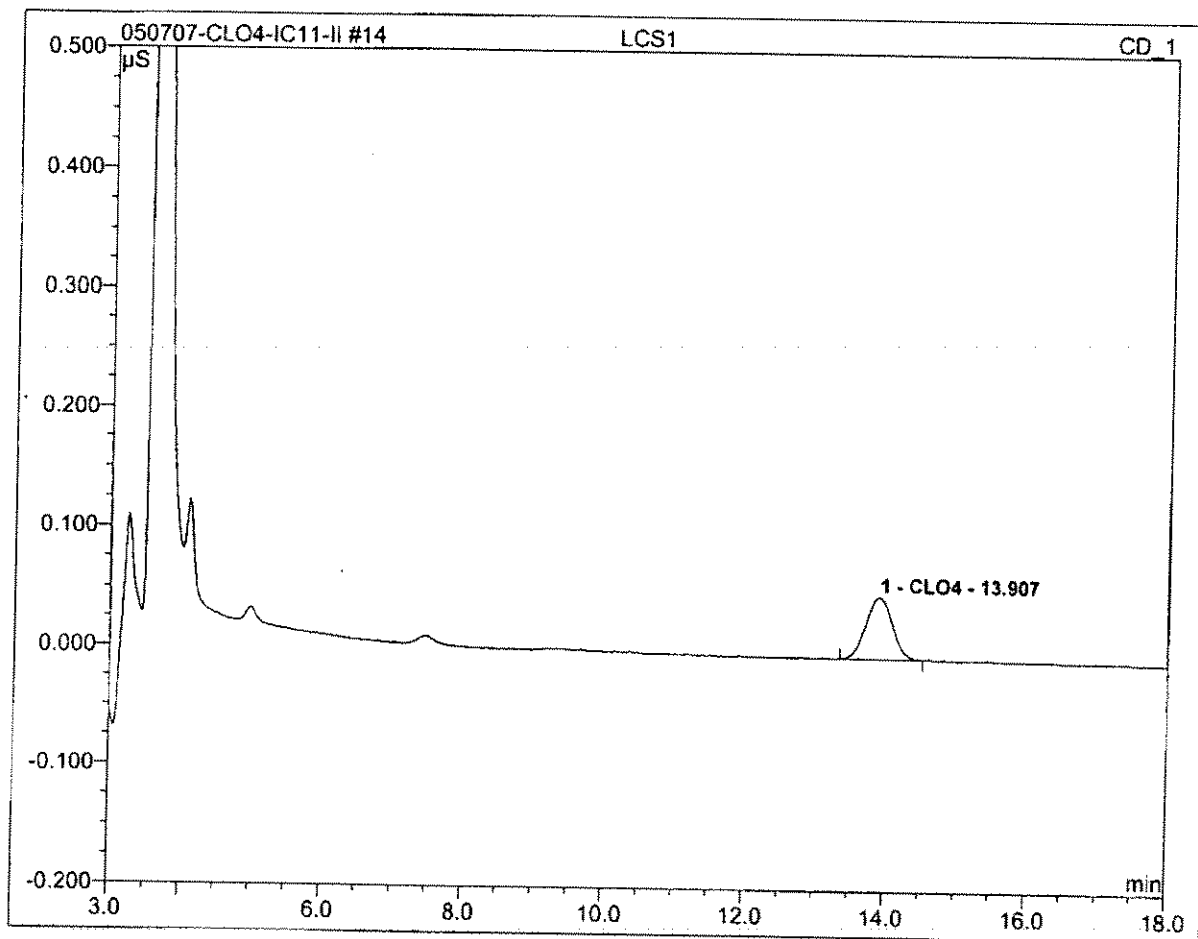
13 MRL-4			
Sample Name:	MRL-4	Channel:	CD_1
Sample Type:	unknown	Control Program:	Perchlorate-IC11
Recording Time:	05/07/2007 21:35	Quantif. Method:	IC#4-CLO4-LOW
Analyst:	Raja	Dilution Factor:	1.0000



No.	Ret.Time min	Peak Name	Height μS	Area μS*min	Rel.Area %	Amount	Type
1	13.90	CLO4	0.008	0.004	100.00	4.374	BMB
Total:			0.008	0.004	100.00	4.374	

14 LCS1

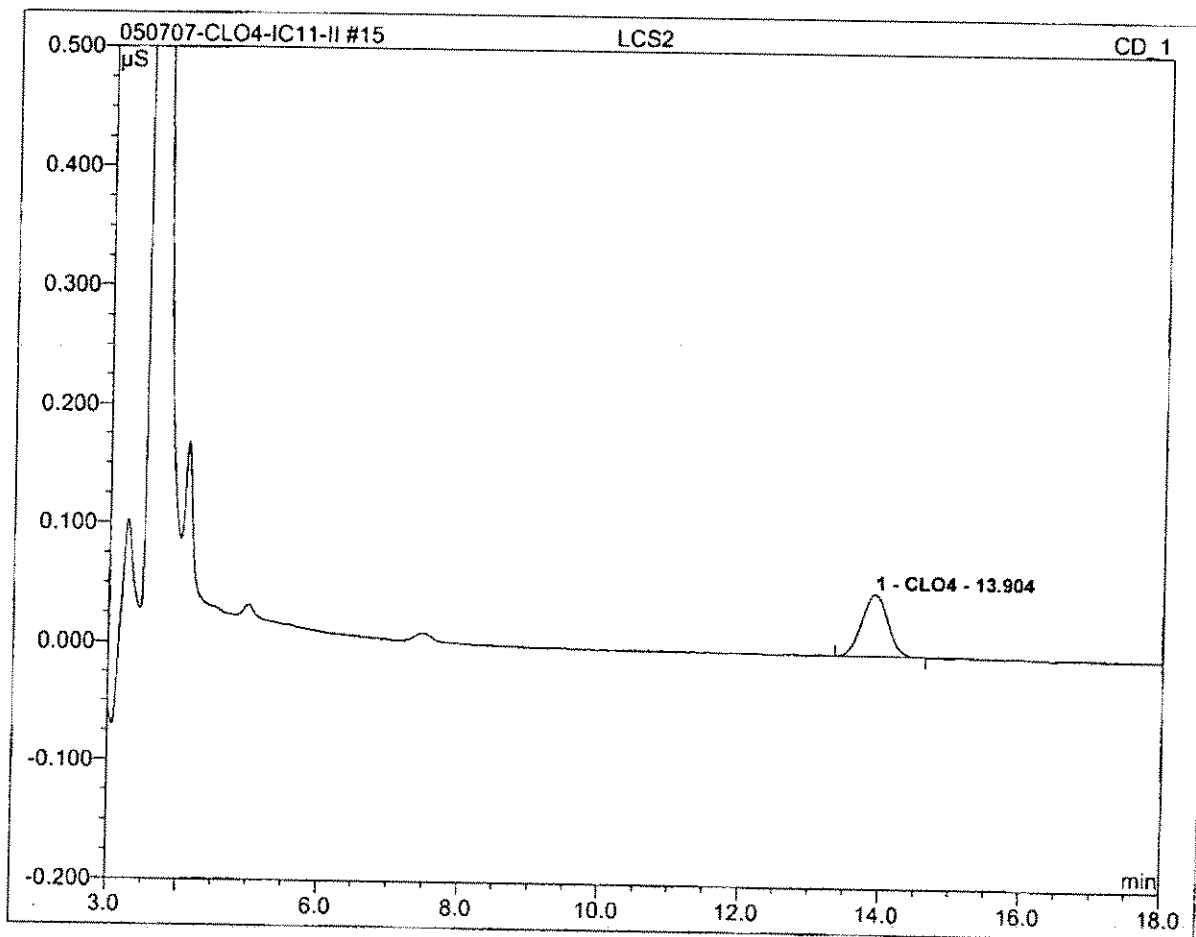
Sample Name:	LCS1	Channel:	CD_1
Sample Type:	unknown	Control Program:	Perchlorate-IC11
Recording Time:	05/07/2007 21:57	Quantif. Method:	IC#4-CLO4-LOW
Analyst:	Raja	Dilution Factor:	1.0000



No.	Ret.Time min	Peak Name	Height μS	Area μS*min	Rel.Area %	Amount	Type
1	13.91	CLO4	0.052	0.023	100.00	26.378	BMB
Total:			0.052	0.023	100.00	26.378	

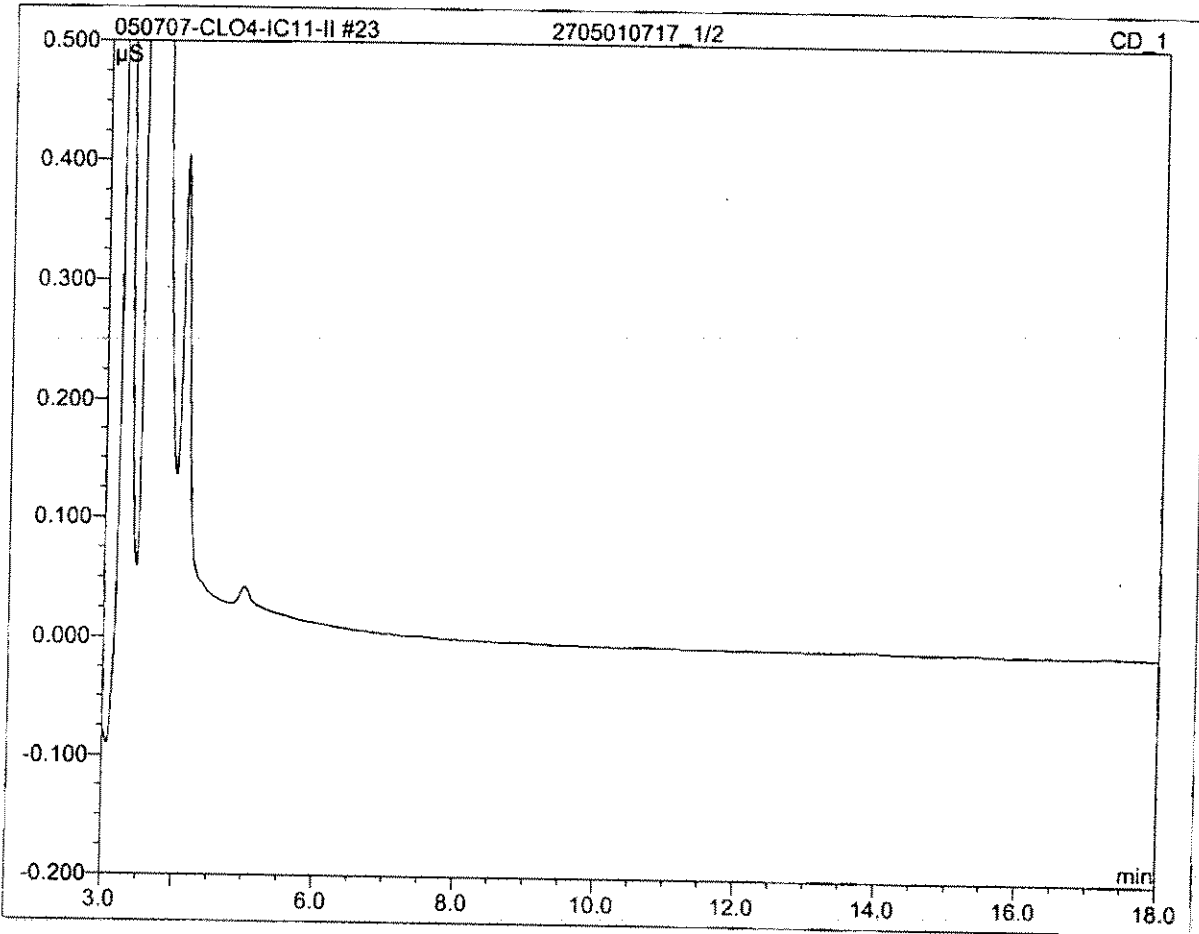
15 LCS2

Sample Name:	LCS2	Channel:	CD_1
Sample Type:	unknown	Control Program:	Perchlorate-IC11
Recording Time:	05/07/2007 22:19	Quantif. Method:	IC#4-CLO4-LOW
Analyst:	Raja	Dilution Factor:	1.0000



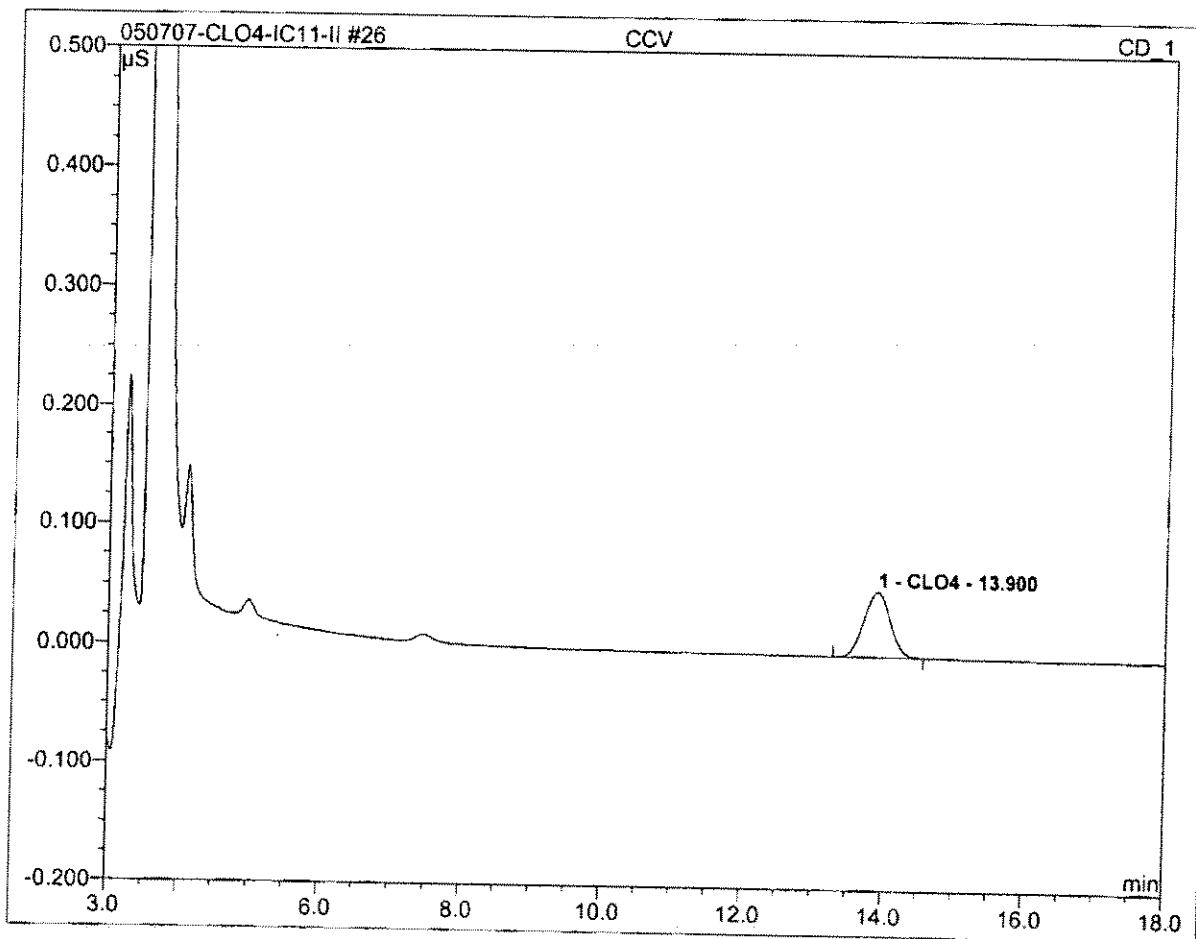
No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	13.90	CLO4	0.052	0.023	100.00	26.375	BMB
Total:			0.052	0.023	100.00	26.375	

23 2705010717_1/2			
Sample Name:	2705010717_1/2	Channel:	CD_1
Sample Type:	unknown	Control Program:	Perchlorate-IC11
Recording Time:	05/08/2007 01:18	Quantif. Method:	IC#4-CLO4-LOW
Analyst:	Raja	Dilution Factor:	2.0000



No.	Ret.Time min	Peak Name	Height μS	Area μS*min	Rel.Area %	Amount	Type
Total:			0.000	0.000	0.00	0.000	

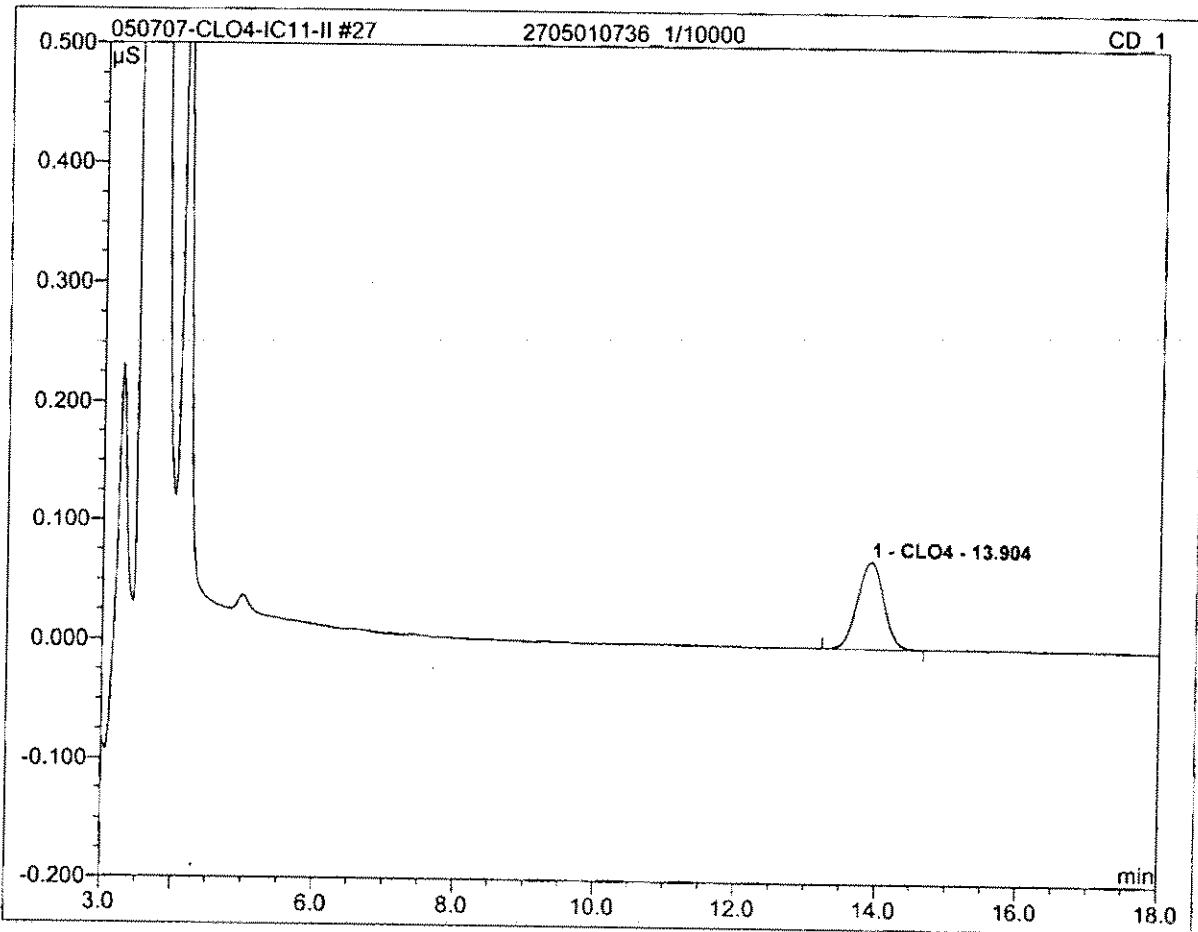
26 CCV			
Sample Name:	CCV	Channel:	CD_1
Sample Type:	unknown	Control Program:	Perchlorate-IC11
Recording Time:	05/08/2007 02:26	Quantif. Method:	IC#4-CLO4-LOW
Analyst:	Raja	Dilution Factor:	1.0000



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	13.90	CLO4	0.054	0.024	100.00	27.474	BMB
Total:			0.054	0.024	100.00	27.474	

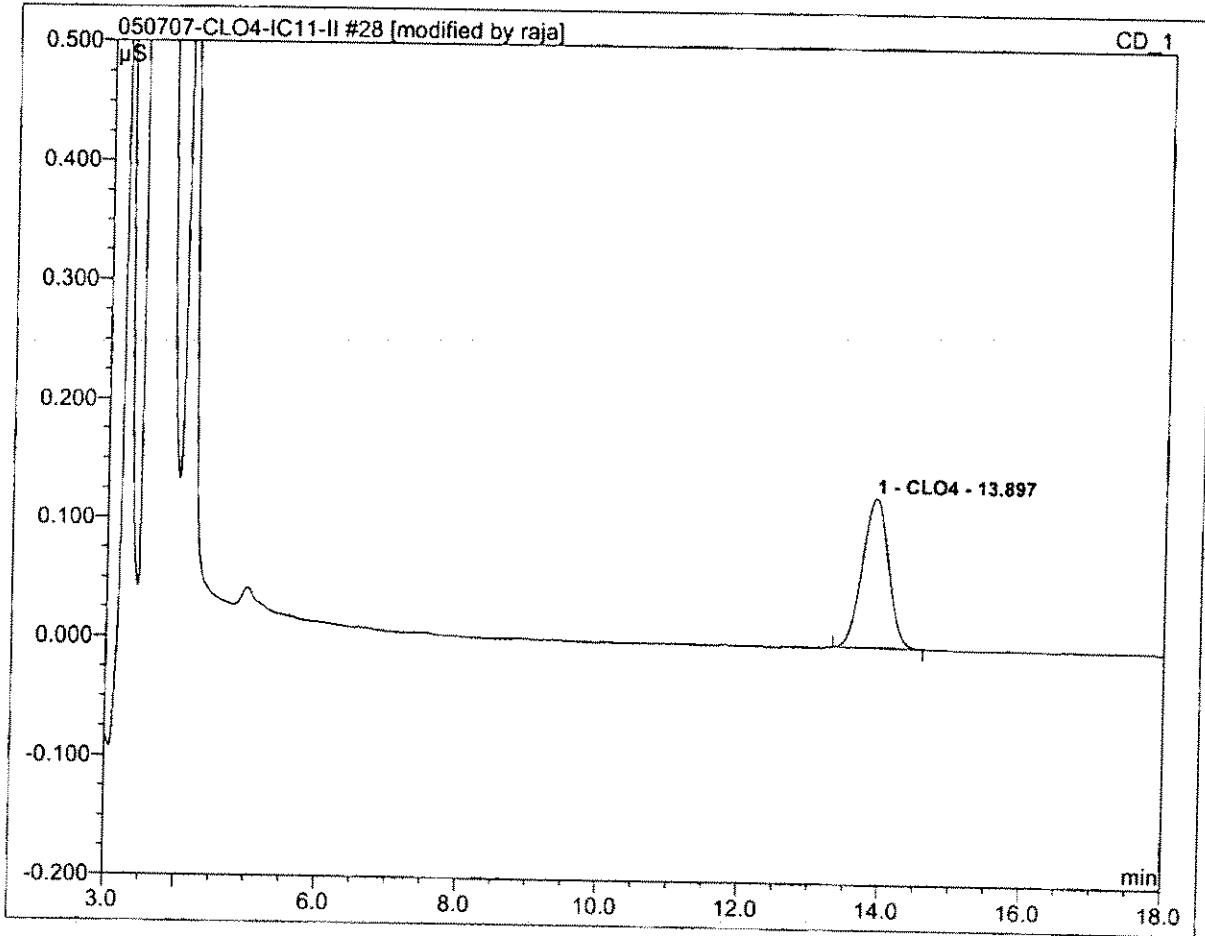
27 2705010736_1/10000

Sample Name:	2705010736_1/10000	Channel:	CD_1
Sample Type:	unknown	Control Program:	Perchlorate-IC11
Recording Time:	05/08/2007 02:48	Quantif. Method:	IC#4-CLO4-LOW
Analyst:	Raja	Dilution Factor:	10000.0000



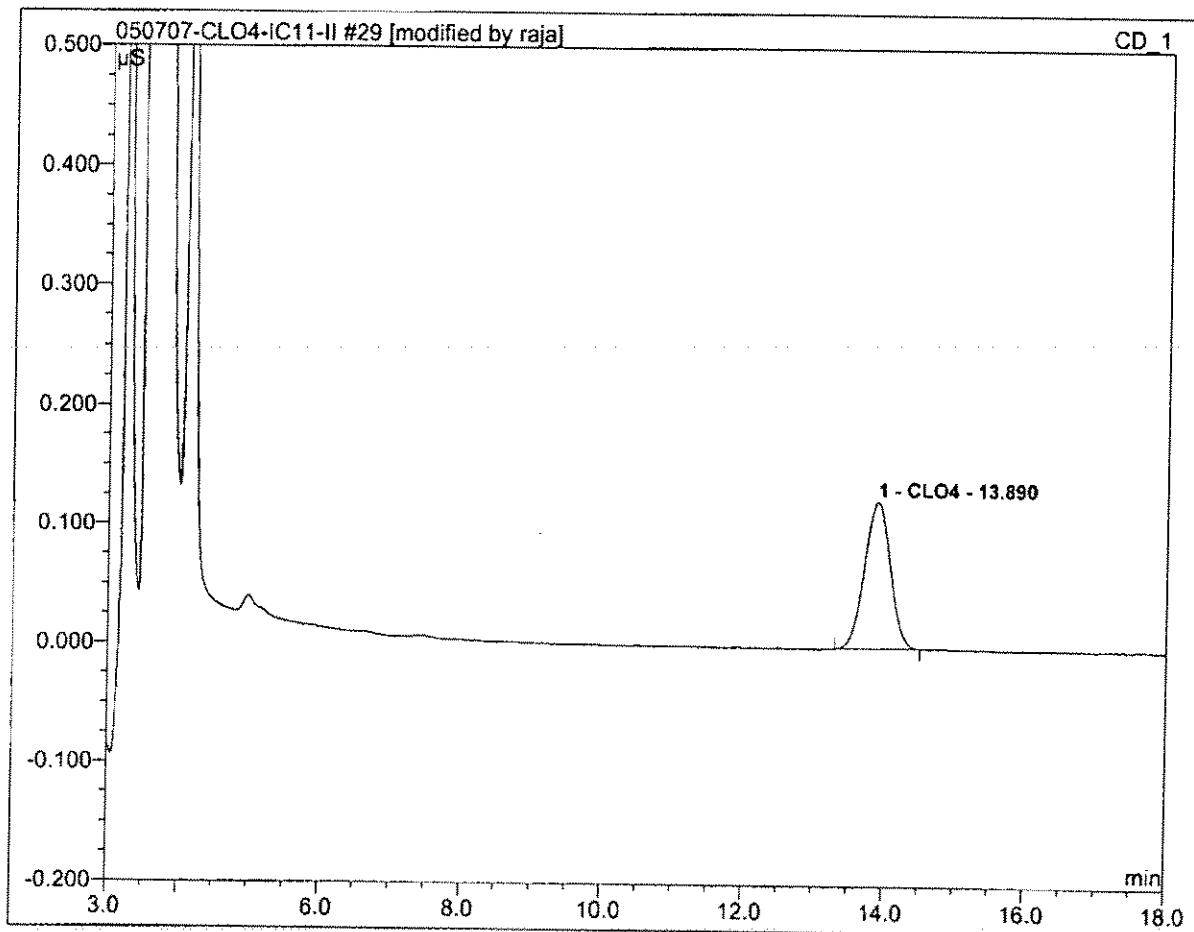
No.	Ret.Time min	Peak Name	Height μS	Area μS*min	Rel.Area %	Amount	Type
1	13.90	CLO4	0.073	0.032	100.00	365669.195	BMB
Total:			0.073	0.032	100.00	365669.195	

28 2705010736MS			
Sample Name:	2705010736MS	Channel:	CD_1
Sample Type:	unknown	Control Program:	Perchlorate-IC11
Recording Time:	05/08/2007 03:10	Quantif. Method:	IC#4-CLO4-LOW
Analyst:	Raja	Dilution Factor:	1.0000



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	13.90	CLO4	0.126	0.054	100.00	61.424	BMB*
Total:			0.126	0.054	100.00	61.424	

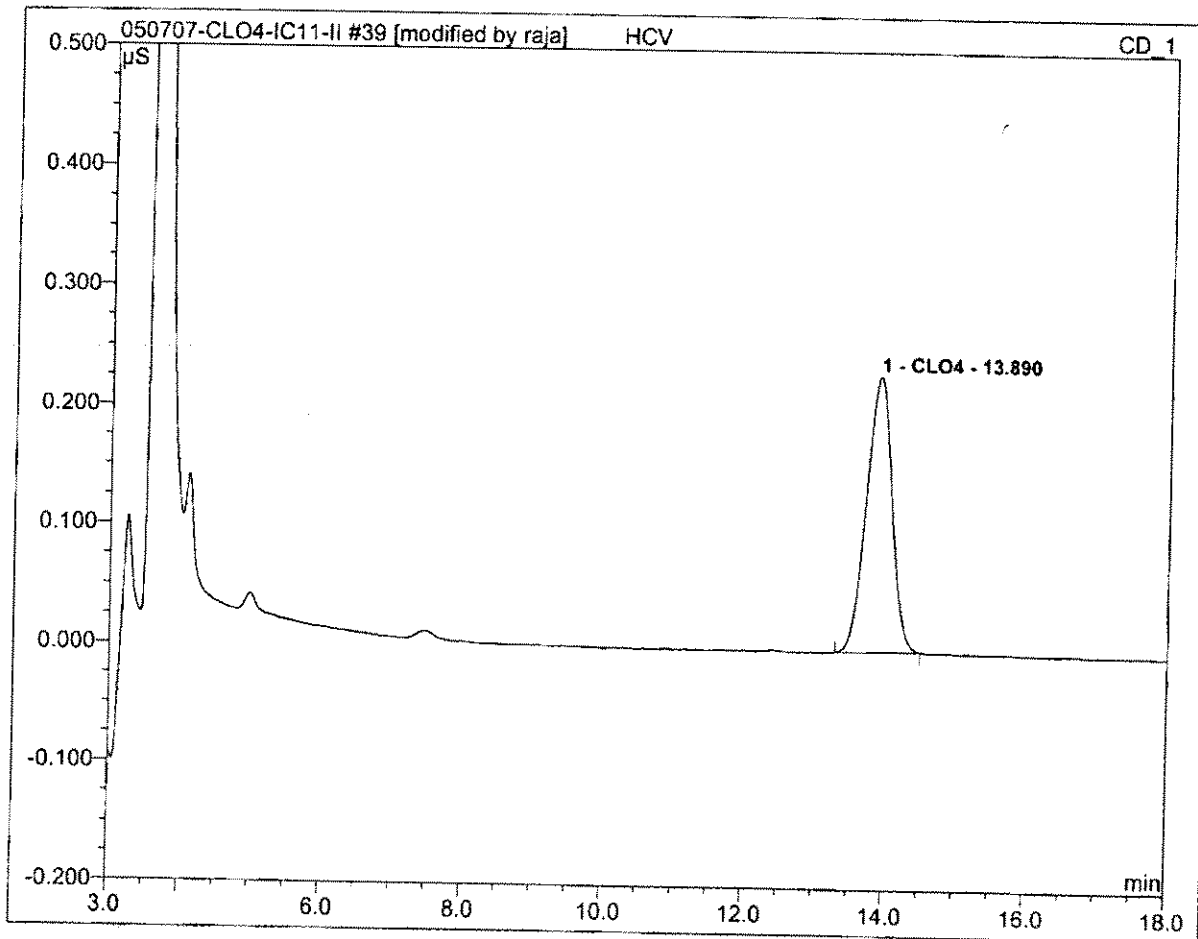
29 2705010736MSD			
Sample Name:	2705010736MSD	Channel:	CD_1
Sample Type:	unknown	Control Program:	Perchlorate-IC11
Recording Time:	05/08/2007 03:33	Quantif. Method:	IC#4-CLO4-LOW
Analyst:	Raja	Dilution Factor:	1.0000



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	13.89	CLO4	0.124	0.053	100.00	60.535	BMB*
Total:			0.124	0.053	100.00	60.535	

39 HCV

Sample Name:	HCV	Channel:	CD_1
Sample Type:	unknown	Control Program:	Perchlorate-IC11
Recording Time:	05/08/2007 07:17	Quantif. Method:	IC#4-CLO4-LOW
Analyst:	Raja	Dilution Factor:	1.0000



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	13.89	CLO4	0.231	0.098	100.00	110.276	BMB*
Total:			0.231	0.098	100.00	110.276	

Perchlorate QC Checklist

BATCH 3

FOR GROUP
rev. 27 Mar 03

Analysis Date: 5-01-07 Analyst: Paja

QC'd by M Date 16 May 07

Instrument: IC 11 Calculated MCT Level: 3155 umhos/cm

Original IPC conductance: 3109 umhos/cm Daily IPC conductance: 3091 umhos/cm

Batch #2 of Run

Calibration including QCS

- QCS (20ppb) recovery is within 90% - 110% (18-22ppb) to verify that the calibration curve (minimum 5 points) still holds.
- Calibration curve is reanalyzed if QCS fails. Correlation Coefficient is 0.995 or better.

Initial QC Check Samples (MLBLANK, MRL, ICCSCV, IPC) to be analyzed with every batch (up to 20 samples) or part thereof

MLBLANK is analyzed before samples. Perchlorate, if present, is < or = half of the MRL.

~~N/A~~ L-ClO4 only: ICCSCV at 2ppb is within 50%-150% (1-3ppb)

ClO4 only: MRL at 4ppb is within 75%-125% (3-5ppb)

$PDA/H = 0.58\% \checkmark$

IPC (25ppb) recovery is between 80%-120% (20-30ppb)

IPC retention time is within 5% of the retention time of the standards

IPC Conductance level is within 10% of the original

LCS/LCSD (25ppb)

Recoveries are between 90%-110% (22.5 - 27.5ppb)

One pair is analyzed per batch (up to 20 samples) or part thereof

MS/MSD (25ppb) NOTE: For UCMR, MS/MSD concentrations alternate between 4ppb and 25ppb

Recoveries are within 80%-120% (20-30ppb) for 25ppb spike ~~N/A~~ (3.2-4.8ppb) for 4ppb spike

One pair is analyzed per batch (up to 20 samples) or part thereof

RPD between MS and MSD is within 15%.

Continuing Calibration Verification (MCV, HCV) NOTE: For UCMR ECV and MCV are required

Verification Checks alternate between mid- and high-level during the analysis (low- and mid-level for UCMR)

MCV (25ppb) recovery is between 85%-115% (21.25 - 28.75ppb)

HCV (100ppb) recovery is between 85%-115% (85-115ppb) ~~N/A~~ ECV (4ppb) recovery is between 75%-125% (3.0-5.0)

Pretreat and include the following QC parameters for any batch or part thereof containing samples requiring pretreatment

~~N/A~~ One Laboratory Reagent Blank (LRB). Perchlorate is < or = half of MRL.

~~N/A~~ One pair of Laboratory Control Samples (LCS/LCSD). Recovery of perchlorate is between 85%-115%.

~~N/A~~ One Pair of Laboratory Fortified Matrices (MS/MSD). Recoveries are between 80%-120%

Samples

All samples are analyzed within 28 days of collection.

All samples are analyzed within MCT Conductance limit.

QIR

~~N/A~~ QIR needed for failed QC

~~N/A~~ QIR needed for samples analyzed outside of hold time

Sample No.	Sample Name	Dil.Fac.	Comment	Time	Amount	CLO4 CD_1
1	autocal1	1.0		05.08.07 09:46		n.a.
2	autocal2	1.0	RAJA060913-2	05.08.07 10:09		2.1473
3	autocal3	1.0	RAJA060913-3	05.08.07 10:31		4.1725
4	autocal4	1.0	RAJA060913-4	05.08.07 10:53		9.6924
5	autocal5	1.0	RAJA060913-5	05.08.07 11:16		24.5749
6	autocal6	1.0	RAJA060913-6	05.08.07 11:38		50.3783
7	autocal7	1.0	RAJA060913-7	05.08.07 12:01		99.9376
8	WASH	1.0		05.08.07 12:23		n.a.
9	QCS	1.0		05.08.07 12:45		20.9865
10	IPC	1.0		05.08.07 13:08		24.8483
11	MBLK	1.0		05.08.07 13:30		n.a.
12	MRL-2	1.0		05.08.07 13:53		1.7505
13	MRL-4	1.0		05.08.07 14:15		4.3385
14	LCS1	1.0		05.08.07 14:37		√26.3754
15	LCS2	1.0		05.08.07 15:00		√26.3065
16	2705010745_1/500	500.0		05.08.07 15:22		√13888.3879
17	2705010745MS	1.0		05.08.07 15:45		√51.4624
18	2705010745MSD	1.0		05.08.07 16:07		√50.6618
19	2705010746_1/50	50.0		05.08.07 16:29		√677.2692
20	2705010747_1/5-DNR	5.0		05.08.07 16:52		12406.1832
21	2705010748_1/200	200.0		05.08.07 17:14		√4170.9537
22	2705010749_1/200	200.0		05.08.07 17:36		√10765.8546
23	2705010750_1/200	200.0		05.08.07 17:59		√13960.7539
24	2705010751_1/100	100.0		05.08.07 18:21		√1644.3187
25	2705010752_1/100	100.0		05.08.07 18:44		√1606.2272
26	2705010753_1/100	100.0		05.08.07 19:06		√7384.7157
27	2705010754_1/5000	5000.0		05.08.07 19:28		√314716.4451
28	CCV	1.0		05.08.07 19:51		~25.8499
29	2705020799_1/2-DNR	2.0		05.08.07 20:13		~4495.6802
30	2705020800_1/100	100.0		05.08.07 20:36		√3742.8537
31	2705020801_1/100	100.0		05.08.07 20:58		√3338.6807
32	2705020802_1/50-DNR	50.0		05.08.07 21:20		n.a.
33	2705020803_1/100	100.0		05.08.07 21:43		√1737.2040
34	2705020804_1/500	500.0		05.08.07 22:05		√22160.0971
35	2705020806_1/5-DNR	5.0		05.08.07 22:28		~2711.2067
36	2705020807_1/5-DNR	5.0		05.08.07 22:50		~2297.5494
37	2705020808_1/5-DNR	5.0		05.08.07 23:12		~5795.3404
38	2705020809_1/500	500.0		05.08.07 23:35		√41860.2742
39	HCV	1.0		05.08.07 23:57		100.6763
40	WASH	1.0		05.09.07 00:20		n.a.
41	QCS	1.0		05.09.07 00:42		21.5733
42	IPC	1.0		05.09.07 01:04		25.3663
43	MBLK	1.0		05.09.07 01:27		√n.a.
44	MRL-2	1.0		05.09.07 01:49		1.7593

105%
99.4%
87.5%
108%
106%
105%
23.7-94.8%
22.9-91.6%
103%
101%
108%
101%
88.0%

BATCH 2

45	MRL-4	1.0	05.09.07 02:12	✓ 4.1849	105%
46	LCS1	1.0	05.09.07 02:34	✓ 24.0464	96.2%
47	LCS2	1.0	05.09.07 02:56	✓ 25.5974	102%
48	2705010710_1/2 ✓	2.0	05.09.07 03:19	✓ 38.9605	
49	2705010716_1/100 ✓	100.0	05.09.07 03:41	✓ 7049.7485	
50	2705010738_1/5000	5000.0	05.09.07 04:03	✓ 81054.6241	
51	2705020813	1.0	05.09.07 04:26	↓ 4.0755	
52	2705020813MS	1.0	05.09.07 04:48	✓ 27.0076	22.9-91.6%
53	2705020813MSD	1.0	05.09.07 05:11	✓ 27.5395	23.4-93.6%
54	2705020854_1/50000	50000.0	05.09.07 05:33	✓ 931501.7371	
55	2705020855_1/50000-DNR	50000.0	05.09.07 05:55	550646.5505	
56	2705020856_1/500	500.0	05.09.07 06:18	✓ 14738.7359	
57	2705020857_1/1000	1000.0	05.09.07 06:41	✓ 17334.1283	
58	2705020858_1/50000	50000.0	05.09.07 07:03	✓ 756269.7352	
59	2705020859_1/500	500.0	05.09.07 07:26	✓ 20369.5965	
60	CCV	1.0	05.09.07 07:48	25.5406	102%
61	2705020860_1/10000	10000.0	05.09.07 08:10	✓ 495388.1720	
62	2705020861	1.0	05.09.07 08:33	✓ 2.4292	
63	2705020862_1/500	500.0	05.09.07 08:55	✓ 25596.9042	
64	2705020863_1/10000-DNR	10000.0	05.09.07 09:18	24578.4845	
65	2705020864_1/50000	50000.0	05.09.07 09:40	✓ 3308482.8387	
66	2705040128	1.0	05.09.07 10:03	✓ 3.3432	
67	2705040129	1.0	05.09.07 10:25	✓ n.a.	
68	2705070404	1.0	05.09.07 10:48	✓ n.a.	
69	2705070448	1.0	05.09.07 11:10	✓ n.a.	
70	2705070449	1.0	05.09.07 11:32	✓ n.a.	
71	HCV	1.0	05.09.07 11:55	100.9262	101%

✓ B: NM 5/10/07

CONDUCTIVITY MW SOP REVISION 5
SM2510B

Analysis Date: 5-08-07
Analyst: Raja
Reviewed By: _____
LIMS Check By: _____

Time of Analysis Start: _____ End: _____

MRL 2umhos/cm: R# _____ exp of solution: _____
KCl Std 1412 R# 201556 exp of solution 08/07
TV = 1412 umho/cm @ 25°C for 0.0100M
Reading: 1424
Instrument: YSI Model 3200 SN:Q1A0504 Year Acquired 2001 New

Was QC Criteria Met: Y N
Was QIR Needed: Y N

Run #	Sample Number	Sample ID	Client	Date Collected	Temp °C	pH	Scale (umho/mmho)	Result		Comments
								Instrument	Reported (umho/cm)	
BIN	Blank						AS	0.408		
STD	MRL 2umhos/cm							N/A		
STD	KCl - 1000 mhos/cm							995		1-3—250% of TV 950-1050—25% of TV
1	2705010745	PC-116R	Ketnaga	04-30-07				7469		
2	746	Seep						5578		
3	747	SF-1						9876		
4	748	PC-117						5676		
5	749	-118						6469		
6	750	-119						5968		
7	751	-120						4380		
8	752	-121						4271		
9	753	↓ -133						6142		
10	754	Art-9						5805		
DUP	↓ ↓ ↓			↓				5805		
11	2705020791	PC1		05-01-07				9043		RPD < 5%
12	800	12						7330		
13	801	20						7748		
14	802	108						3958		
15	803	62						4886		
16	804	↓ 107						5651		
17	806	HSW-1						6380		
18	807	HM2						5756		
19	808	LK3					ms	14.52		
20	809	PC67						11.86		
DUP	↓ ↓ ↓			↓				11.86		
STD	KCl - 10 mhos/cm							N/A		8-12—RPD < 20% of TV

$$\% \text{ RPD} = \frac{|S1 - S2|}{(S1 + S2)/2} * 100$$

S1 = reading of 1st sample
S2 = reading of 2nd sample

CONDUCTIVITY MW SOP REVISION 5
SM2510B

Analysis Date: 05-08-07

Analyst: Raja

Reviewed By: _____

LIMS Check By: _____

Was QC Criteria Met: Y N

Was QIR Needed: Y N

Time of Analysis Start: _____ End: _____

MRL $\mu\text{mhos/cm}$: R# _____ exp of solution: _____
 KCl Std 1412 R# 201556 exp of solution: 08/07
 TV = 1412 $\mu\text{mhos/cm}$ @ 25°C for 0.0100M
 Reading: 1424
 Instrument: YSI Model 3200 SN:01A0504, Year Acquired 2001 New

Run #	Sample Number	Sample ID	Client	Date Collected	Temp °C	pH	Scale ($\mu\text{mho/mmho}$)	Result		Comments
								Instrument	Reported ($\mu\text{mho/cm}$)	
	Blank						MS	0.6108		
STD	MRL $\mu\text{mhos/cm}$							N/A		1-3—±50% of TV
STD	KCl - 1000 mhos/cm							995		950-1050—±5% of TV
1	2705020813	2D05607	Kennecott	05-01-07				88		
2	854	I-T					MS	12.16		
3	855	M-69					MS	6216		
4	856	-79						1942		
5	857	-98						5741		
6	858	-99						7680		
7	859	-57A						4479		
8	860	↓ -25						9999		
9	861	EB-1						143		
10	862	M-10						4366		
DUP	↓	↓						4366		RPD < 5%
11	863	MD-4						4530		
12	↓	864	M-37					8861		
13	2705040128	SDCWA 4	Packets	05-03-07				844		
14	↓	129	↓ 6	↓				838		
15	2705070404	371004-6	Ocean side	05-07-07				817		
16	↓	448	↓ -2	↓				754		
17	↓	449	↓ -7	↓				875		
18										
19										
20										
DUP	2705070449	371004-07	Ocean side	05-07-07				875		RPD < 5%
STD	KCl - 10 mhos/cm							N/A		8-12—RPD < 20% of TV

$$\% \text{ RPD} = \frac{|S1 - S2|}{(S1 + S2)/2} * 100$$

S1 = reading of 1st sample
S2 = reading of 2nd sample

Sequence: 050807-CLO4-IC11-II
Operator: raja

Page 1 of 4
Printed: 5/10/2007 12:37:47 PM

Title:

Datasource: IC-SERVER_local
Location: IC11\2007\MAY
Timebase: IC11
#Samples: 71

Created: 5/8/2007 9:31:45 AM by raja
Last Update: 5/9/2007 4:06:39 PM by raja

No.	Name	Dil. Factor	Type	Comment	Status	Program
1	autocal1	1.0000	Standard	/	Finished	Perchlorate-IC11
2	autocal2	1.0000	Standard	RAJA060913-2	Finished	Perchlorate-IC11
3	autocal3	1.0000	Standard	RAJA060913-3	Finished	Perchlorate-IC11
4	autocal4	1.0000	Standard	RAJA060913-4	Finished	Perchlorate-IC11
5	autocal5	1.0000	Standard	RAJA060913-5	Finished	Perchlorate-IC11
6	autocal6	1.0000	Standard	RAJA060913-6	Finished	Perchlorate-IC11
7	autocal7	1.0000	Standard	RAJA060913-7	Finished	Perchlorate-IC11
8	WASH	1.0000	Unknown		Finished	Perchlorate-IC11
9	QCS	1.0000	Unknown		Finished	Perchlorate-IC11
10	IPC	1.0000	Unknown		Finished	Perchlorate-IC11
11	MBLK	1.0000	Unknown		Finished	Perchlorate-IC11
12	MRL-2	1.0000	Unknown		Finished	Perchlorate-IC11
13	MRL-4	1.0000	Unknown		Finished	Perchlorate-IC11
14	LCS1	1.0000	Unknown		Finished	Perchlorate-IC11
15	LCS2	1.0000	Unknown		Finished	Perchlorate-IC11
16	2705010745_1/500	500.0000	Unknown		Finished	Perchlorate-IC11
17	2705010745MS	1.0000	Unknown		Finished	Perchlorate-IC11
18	2705010745MSD	1.0000	Unknown		Finished	Perchlorate-IC11
19	2705010746_1/50	50.0000	Unknown		Finished	Perchlorate-IC11
20	2705010747_1/5-DNR	5.0000	Unknown		Finished	Perchlorate-IC11
21	2705010748_1/200	200.0000	Unknown		Finished	Perchlorate-IC11
22	2705010749_1/200	200.0000	Unknown		Finished	Perchlorate-IC11
23	2705010750_1/200	200.0000	Unknown		Finished	Perchlorate-IC11
24	2705010751_1/100	100.0000	Unknown		Finished	Perchlorate-IC11
25	2705010752_1/100	100.0000	Unknown		Finished	Perchlorate-IC11
26	2705010753_1/100	100.0000	Unknown		Finished	Perchlorate-IC11
27	2705010754_1/5000	5000.0000	Unknown		Finished	Perchlorate-IC11
28	CCV	1.0000	Unknown		Finished	Perchlorate-IC11
29	2705020799_1/2-DNR	2.0000	Unknown		Finished	Perchlorate-IC11
30	2705020800_1/100	100.0000	Unknown		Finished	Perchlorate-IC11
31	2705020801_1/100	100.0000	Unknown		Finished	Perchlorate-IC11
32	2705020802_1/50-DNR	50.0000	Unknown		Finished	Perchlorate-IC11
33	2705020803_1/100	100.0000	Unknown		Finished	Perchlorate-IC11
34	2705020804_1/500	500.0000	Unknown		Finished	Perchlorate-IC11
35	2705020806_1/5-DNR	5.0000	Unknown		Finished	Perchlorate-IC11
36	2705020807_1/5-DNR	5.0000	Unknown		Finished	Perchlorate-IC11
37	2705020808_1/5-DNR	5.0000	Unknown		Finished	Perchlorate-IC11
38	2705020809_1/500	500.0000	Unknown		Finished	Perchlorate-IC11
39	HCV	1.0000	Unknown		Finished	Perchlorate-IC11
40	WASH	1.0000	Unknown		Finished	Perchlorate-IC11
41	QCS	1.0000	Unknown		Finished	Perchlorate-IC11
42	IPC	1.0000	Unknown		Finished	Perchlorate-IC11

Sequence: 050807-CLO4-IC11-II
Operator: raja

Page 2 of 4
Printed: 5/10/2007 12:37:47 PM

Title:
Datasource: IC-SERVER_local
Location: IC11\2007\MAY
Timebase: IC11
#Samples: 71

Created: 5/8/2007 9:31:45 AM by raja
Last Update: 5/9/2007 4:06:39 PM by raja

No.	Name	Method	Inj. Date/Time	*Analyst
1	autocal1	IC#4-CLO4-LOW	5/8/2007 9:46:41 AM	Raja
2	autocal2	IC#4-CLO4-LOW	5/8/2007 10:09:05 AM	Raja
3	autocal3	IC#4-CLO4-LOW	5/8/2007 10:31:28 AM	Raja
4	autocal4	IC#4-CLO4-LOW	5/8/2007 10:53:52 AM	Raja
5	autocal5	IC#4-CLO4-LOW	5/8/2007 11:16:15 AM	Raja
6	autocal6	IC#4-CLO4-LOW	5/8/2007 11:38:39 AM	Raja
7	autocal7	IC#4-CLO4-LOW	5/8/2007 12:01:03 PM	Raja
8	WASH	IC#4-CLO4-LOW	5/8/2007 12:23:27 PM	Raja
9	QCS	IC#4-CLO4-LOW	5/8/2007 12:45:51 PM	Raja
10	IPC	IC#4-CLO4-LOW	5/8/2007 1:08:14 PM	Raja
11	MBLK	IC#4-CLO4-LOW	5/8/2007 1:30:38 PM	Raja
12	MRL-2	IC#4-CLO4-LOW	5/8/2007 1:53:02 PM	Raja
13	MRL-4	IC#4-CLO4-LOW	5/8/2007 2:15:25 PM	Raja
14	LCS1	IC#4-CLO4-LOW	5/8/2007 2:37:49 PM	Raja
15	LCS2	IC#4-CLO4-LOW	5/8/2007 3:00:13 PM	Raja
16	2705010745_1/500	IC#4-CLO4-LOW	5/8/2007 3:22:37 PM	Raja
17	2705010745MS	IC#4-CLO4-LOW	5/8/2007 3:45:00 PM	Raja
18	2705010745MSD	IC#4-CLO4-LOW	5/8/2007 4:07:24 PM	Raja
19	2705010746_1/50	IC#4-CLO4-LOW	5/8/2007 4:29:48 PM	Raja
20	2705010747_1/5-DNR	IC#4-CLO4-LOW	5/8/2007 4:52:12 PM	Raja
21	2705010748_1/200	IC#4-CLO4-LOW	5/8/2007 5:14:36 PM	Raja
22	2705010749_1/200	IC#4-CLO4-LOW	5/8/2007 5:36:59 PM	Raja
23	2705010750_1/200	IC#4-CLO4-LOW	5/8/2007 5:59:23 PM	Raja
24	2705010751_1/100	IC#4-CLO4-LOW	5/8/2007 6:21:47 PM	Raja
25	2705010752_1/100	IC#4-CLO4-LOW	5/8/2007 6:44:11 PM	Raja
26	2705010753_1/100	IC#4-CLO4-LOW	5/8/2007 7:06:34 PM	Raja
27	2705010754_1/5000	IC#4-CLO4-LOW	5/8/2007 7:28:58 PM	Raja
28	CCV	IC#4-CLO4-LOW	5/8/2007 7:51:22 PM	Raja
29	2705020799_1/2-DNR	IC#4-CLO4-LOW	5/8/2007 8:13:46 PM	Raja
30	2705020800_1/100	IC#4-CLO4-LOW	5/8/2007 8:36:09 PM	Raja
31	2705020801_1/100	IC#4-CLO4-LOW	5/8/2007 8:58:32 PM	Raja
32	2705020802_1/50-DNR	IC#4-CLO4-LOW	5/8/2007 9:20:55 PM	Raja
33	2705020803_1/100	IC#4-CLO4-LOW	5/8/2007 9:43:18 PM	Raja
34	2705020804_1/500	IC#4-CLO4-LOW	5/8/2007 10:05:42 PM	Raja
35	2705020806_1/5-DNR	IC#4-CLO4-LOW	5/8/2007 10:28:05 PM	Raja
36	2705020807_1/5-DNR	IC#4-CLO4-LOW	5/8/2007 10:50:29 PM	Raja
37	2705020808_1/5-DNR	IC#4-CLO4-LOW	5/8/2007 11:12:52 PM	Raja
38	2705020809_1/500	IC#4-CLO4-LOW	5/8/2007 11:35:16 PM	Raja
39	HCV	IC#4-CLO4-LOW	5/8/2007 11:57:39 PM	Raja
40	WASH	IC#4-CLO4-LOW	5/9/2007 12:20:03 AM	Raja
41	QCS	IC#4-CLO4-LOW	5/9/2007 12:42:26 AM	Raja
42	IPC	IC#4-CLO4-LOW	5/9/2007 1:04:50 AM	Raja

Sequence: 050807-CLO4-IC11-II
Operator: raja

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Printed: 5/10/2007 12:37:47 PM

Title:

Datasource: IC-SERVER_local
Location: IC11\2007\MAY
Timebase: IC11
#Samples: 71

Created: 5/8/2007 9:31:45 AM by raja
Last Update: 5/9/2007 4:06:39 PM by raja






























No.	Name	Dil. Factor	Type	Comment	Status	Program
43	MBLK	1.0000	Unknown		Finished	Perchlorate-IC11
44	MRL-2	1.0000	Unknown		Finished	Perchlorate-IC11
45	MRL-4	1.0000	Unknown		Finished	Perchlorate-IC11
46	LCS1	1.0000	Unknown		Finished	Perchlorate-IC11
47	LCS2	1.0000	Unknown		Finished	Perchlorate-IC11
48	2705010710_1/2	2.0000	Unknown		Finished	Perchlorate-IC11
49	2705010716_1/100	100.0000	Unknown		Finished	Perchlorate-IC11
50	2705010738_1/5000	5000.0000	Unknown		Finished	Perchlorate-IC11
51	2705020813	1.0000	Unknown		Finished	Perchlorate-IC11
52	2705020813MS	1.0000	Unknown		Finished	Perchlorate-IC11
53	2705020813MSD	1.0000	Unknown		Finished	Perchlorate-IC11
54	2705020854_1/50000	50000.0000	Unknown		Finished	Perchlorate-IC11
55	2705020855_1/50000-DNR	50000.0000	Unknown		Finished	Perchlorate-IC11
56	2705020856_1/500	500.0000	Unknown		Finished	Perchlorate-IC11
57	2705020857_1/1000	1000.0000	Unknown		Finished	Perchlorate-IC11
58	2705020858_1/50000	50000.0000	Unknown		Finished	Perchlorate-IC11
59	2705020859_1/500	500.0000	Unknown		Finished	Perchlorate-IC11
60	CCV	1.0000	Unknown		Finished	Perchlorate-IC11
61	2705020860_1/10000	10000.0000	Unknown		Finished	Perchlorate-IC11
62	2705020861	1.0000	Unknown		Finished	Perchlorate-IC11
63	2705020862_1/500	500.0000	Unknown		Finished	Perchlorate-IC11
64	2705020863_1/10000-DNR	10000.0000	Unknown		Finished	Perchlorate-IC11
65	2705020864_1/50000	50000.0000	Unknown		Finished	Perchlorate-IC11
66	2705040128	1.0000	Unknown		Finished	Perchlorate-IC11
67	2705040129	1.0000	Unknown		Finished	Perchlorate-IC11
68	2705070404	1.0000	Unknown		Finished	Perchlorate-IC11
69	2705070448	1.0000	Unknown		Finished	Perchlorate-IC11
70	2705070449	1.0000	Unknown		Finished	Perchlorate-IC11
71	HCV	1.0000	Unknown		Finished	Perchlorate-IC11

Sequence: 050807-CLO4-IC11-II
Operator: raja

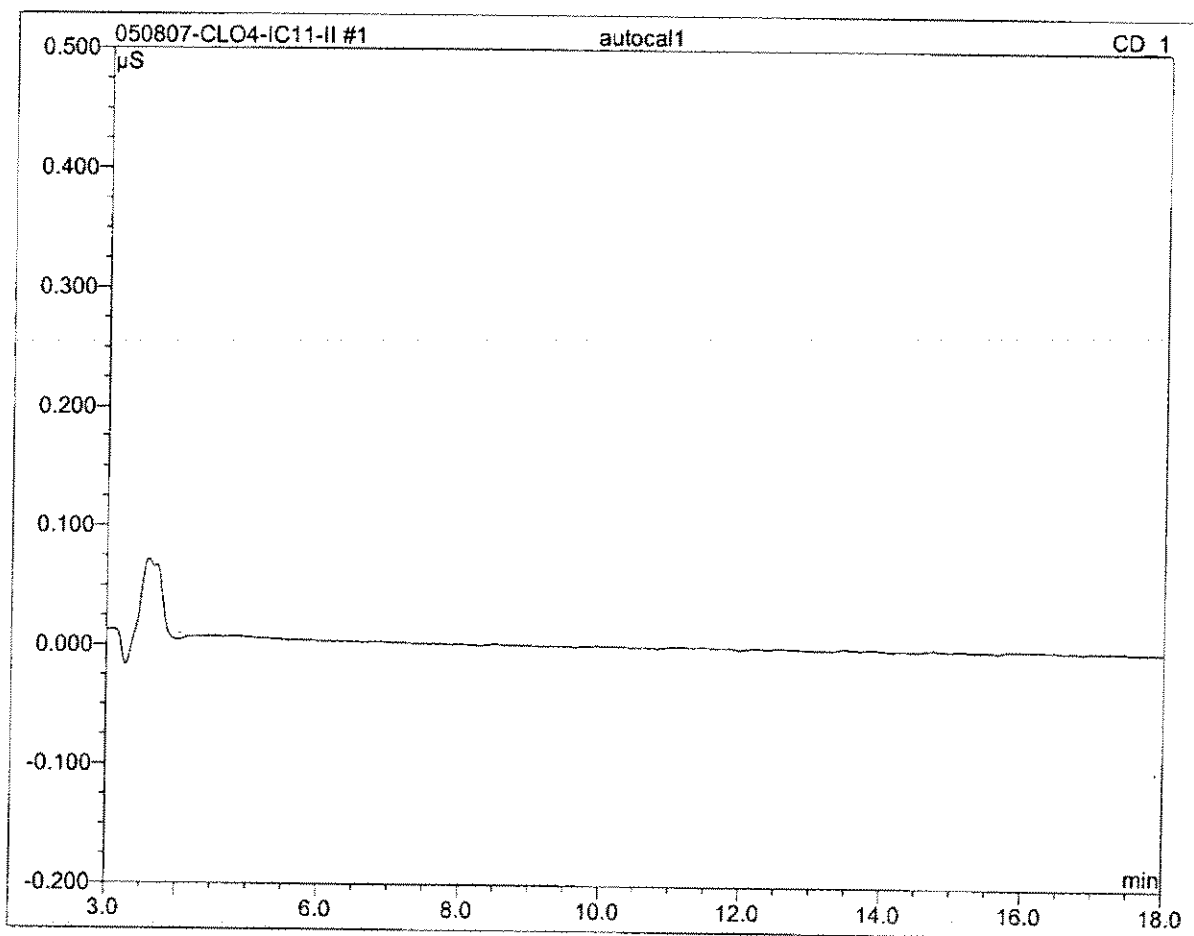
Page 4 of 4
Printed: 5/10/2007 12:37:47 PM

Title:
Datasource: IC-SERVER_local
Location: IC11\2007\MAY
Timebase: IC11
#Samples: 71

Created: 5/8/2007 9:31:45 AM by raja
Last Update: 5/9/2007 4:06:39 PM by raja

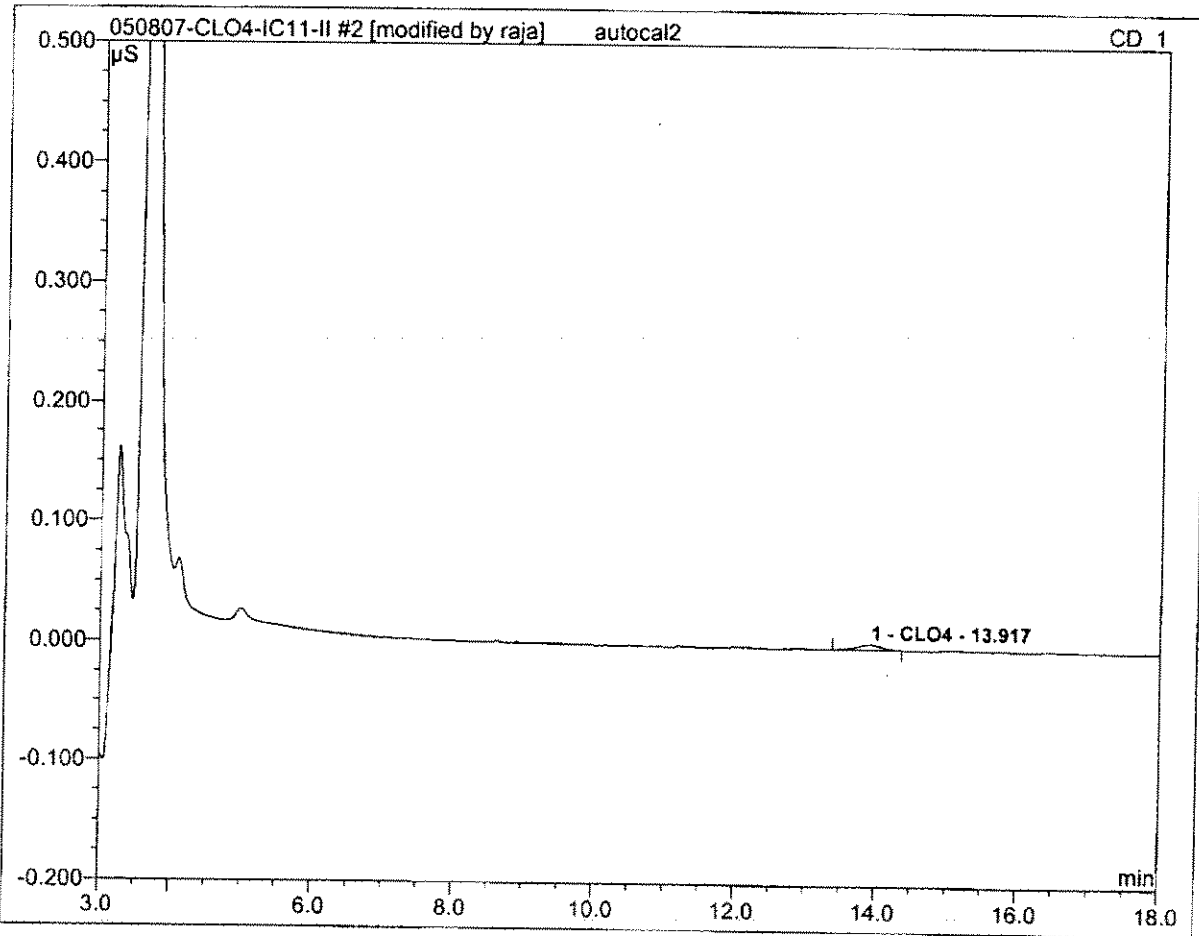
No.	Name	Method	Inj. Date/Time	*Analyst
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44	 MRL-2	IC#4-CLO4-LOW	5/9/2007 1:49:37 AM	Raja
45	 MRL-4	IC#4-CLO4-LOW	5/9/2007 2:12:01 AM	Raja
46	 LCS1	IC#4-CLO4-LOW	5/9/2007 2:34:24 AM	Raja
47	 LCS2	IC#4-CLO4-LOW	5/9/2007 2:56:48 AM	Raja
48	 2705010710_1/2	IC#4-CLO4-LOW	5/9/2007 3:19:11 AM	Raja
49	 2705010716_1/100	IC#4-CLO4-LOW	5/9/2007 3:41:34 AM	Raja
50	 2705010738_1/5000	IC#4-CLO4-LOW	5/9/2007 4:03:58 AM	Raja
51	 2705020813	IC#4-CLO4-LOW	5/9/2007 4:26:21 AM	Raja
52	 2705020813MS	IC#4-CLO4-LOW	5/9/2007 4:48:45 AM	Raja
53	 2705020813MSD	IC#4-CLO4-LOW	5/9/2007 5:11:08 AM	Raja
54	 2705020854_1/50000	IC#4-CLO4-LOW	5/9/2007 5:33:32 AM	Raja
55	 2705020855_1/50000-DNR	IC#4-CLO4-LOW	5/9/2007 5:55:56 AM	Raja
56	 2705020856_1/500	IC#4-CLO4-LOW	5/9/2007 6:18:41 AM	Raja
57	 2705020857_1/1000	IC#4-CLO4-LOW	5/9/2007 6:41:08 AM	Raja
58	 2705020858_1/50000	IC#4-CLO4-LOW	5/9/2007 7:03:35 AM	Raja
59	 2705020859_1/500	IC#4-CLO4-LOW	5/9/2007 7:26:02 AM	Raja
60	 CCV	IC#4-CLO4-LOW	5/9/2007 7:48:29 AM	Raja
61	 2705020860_1/10000	IC#4-CLO4-LOW	5/9/2007 8:10:56 AM	Raja
62	 2705020861	IC#4-CLO4-LOW	5/9/2007 8:33:23 AM	Raja
63	 2705020862_1/500	IC#4-CLO4-LOW	5/9/2007 8:55:50 AM	Raja
64	 2705020863_1/10000-DNR	IC#4-CLO4-LOW	5/9/2007 9:18:17 AM	Raja
65	 2705020864_1/50000	IC#4-CLO4-LOW	5/9/2007 9:40:44 AM	Raja
66	 2705040128	IC#4-CLO4-LOW	5/9/2007 10:03:11 AM	Raja
67	 2705040129	IC#4-CLO4-LOW	5/9/2007 10:25:38 AM	Raja
68	 2705070404	IC#4-CLO4-LOW	5/9/2007 10:48:05 AM	Raja
69	 2705070448	IC#4-CLO4-LOW	5/9/2007 11:10:32 AM	Raja
70	 2705070449	IC#4-CLO4-LOW	5/9/2007 11:32:59 AM	Raja
71	 HCV	IC#4-CLO4-LOW	5/9/2007 11:55:26 AM	Raja

1 autocal1			
Sample Name:	autocal1	Channel:	CD_1
Sample Type:	standard	Control Program:	Perchlorate-IC11
Recording Time:	05/08/2007 09:46	Quantif. Method:	IC#4-CLO4-LOW
Analyst:	Raja	Dilution Factor:	1.0000



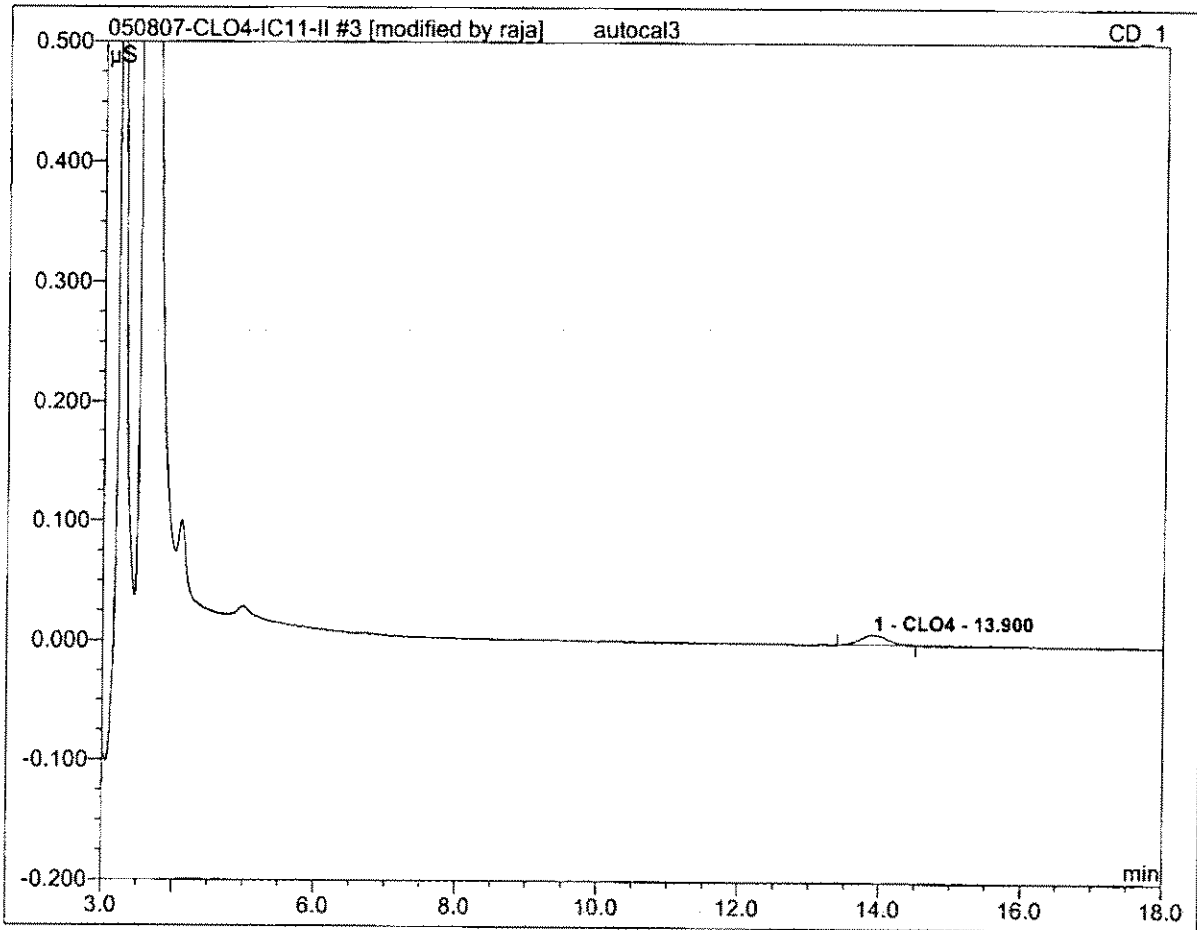
No.	Ret.Time min	Peak Name	Height μS	Area μS*min	Rel.Area %	Amount	Type
Total:			0.000	0.000	0.00	0.000	

2 autocal2			
RAJA060913-2			
Sample Name:	autocal2	Channel:	CD_1
Sample Type:	standard	Control Program:	Perchlorate-IC11
Recording Time:	05/08/2007 10:09	Quantif. Method:	IC#4-CLO4-LOW
Analyst:	Raja	Dilution Factor:	1.0000



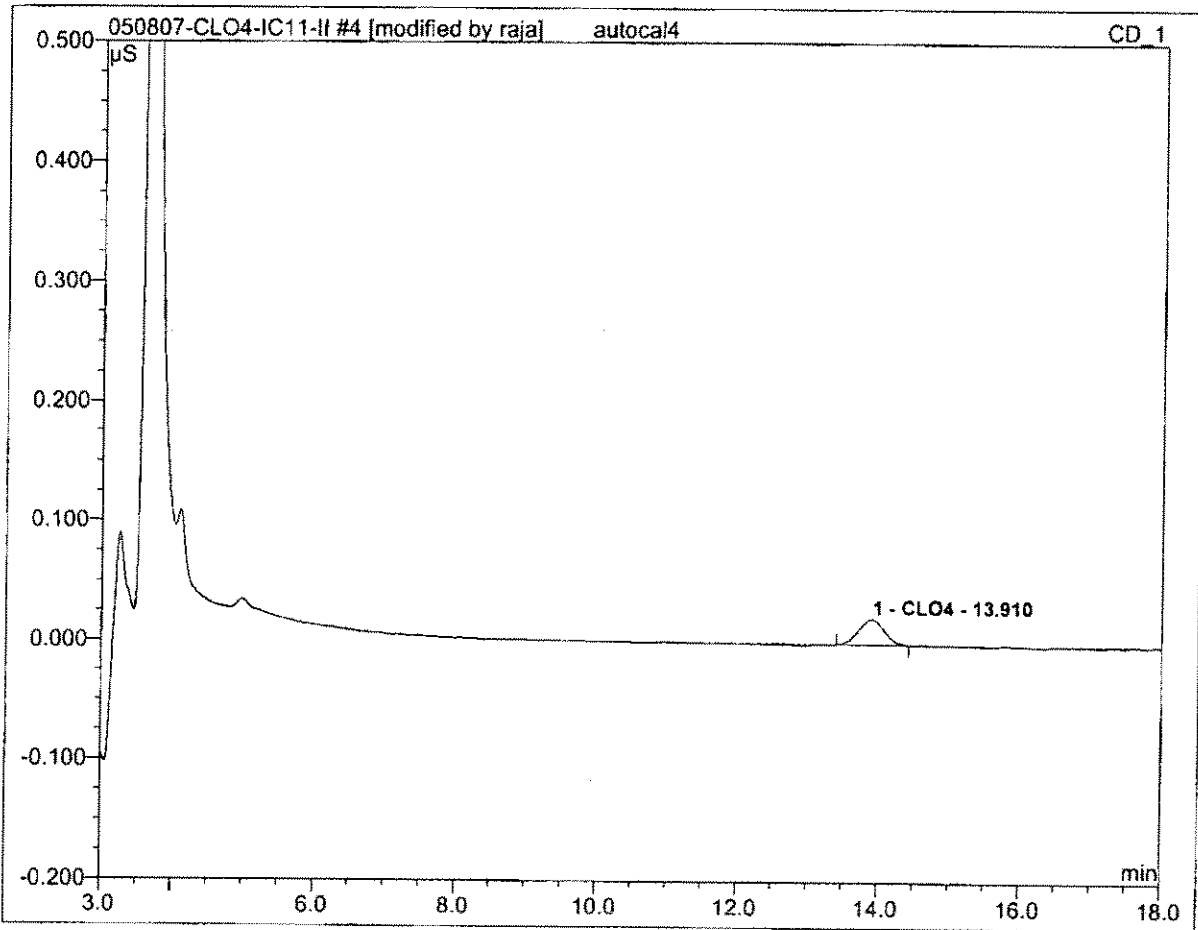
No.	Ret.Time min	Peak Name	Height μS	Area $\mu\text{S}\cdot\text{min}$	Rel.Area %	Amount	Type
1	13.92	CLO4	0.004	0.002	100.00	2.147	BMB*
Total:			0.004	0.002	100.00	2.147	

3 autocal3			
RAJA060913-3			
Sample Name:	autocal3	Channel:	CD_1
Sample Type:	standard	Control Program:	Perchlorate-IC11
Recording Time:	05/08/2007 10:31	Quantif. Method:	IC#4-CLO4-LOW
Analyst:	Raja	Dilution Factor:	1.0000



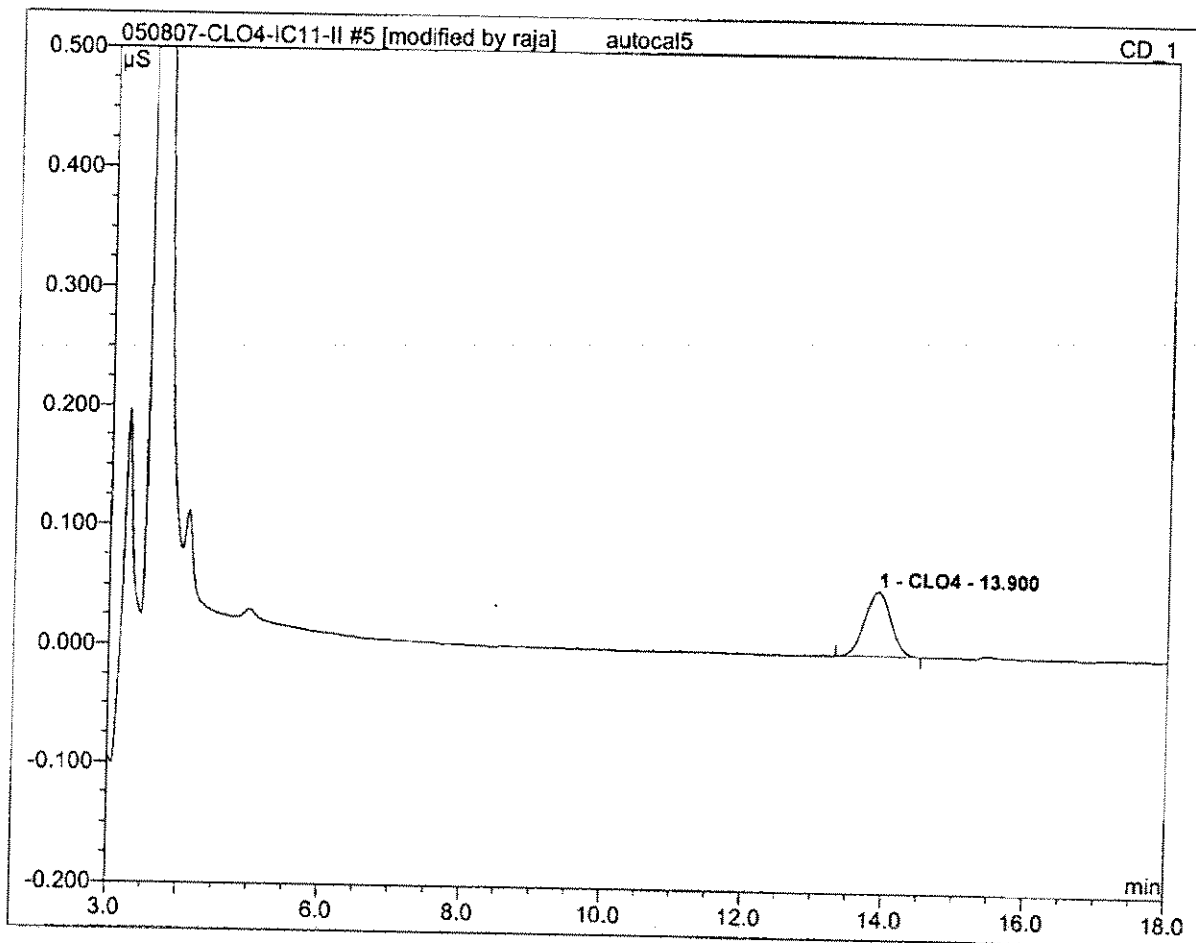
No.	Ret.Time min	Peak Name	Height μS	Area μS*min	Rel.Area %	Amount	Type
1	13.90	CLO4	0.009	0.004	100.00	4.173	BMB*
Total:			0.009	0.004	100.00	4.173	

4 autocal4			
RAJA060913-4			
Sample Name:	autocal4	Channel:	CD_1
Sample Type:	standard	Control Program:	Perchlorate-IC11
Recording Time:	05/08/2007 10:53	Quantif. Method:	IC#4-CLO4-LOW
Analyst:	Raja	Dilution Factor:	1.0000



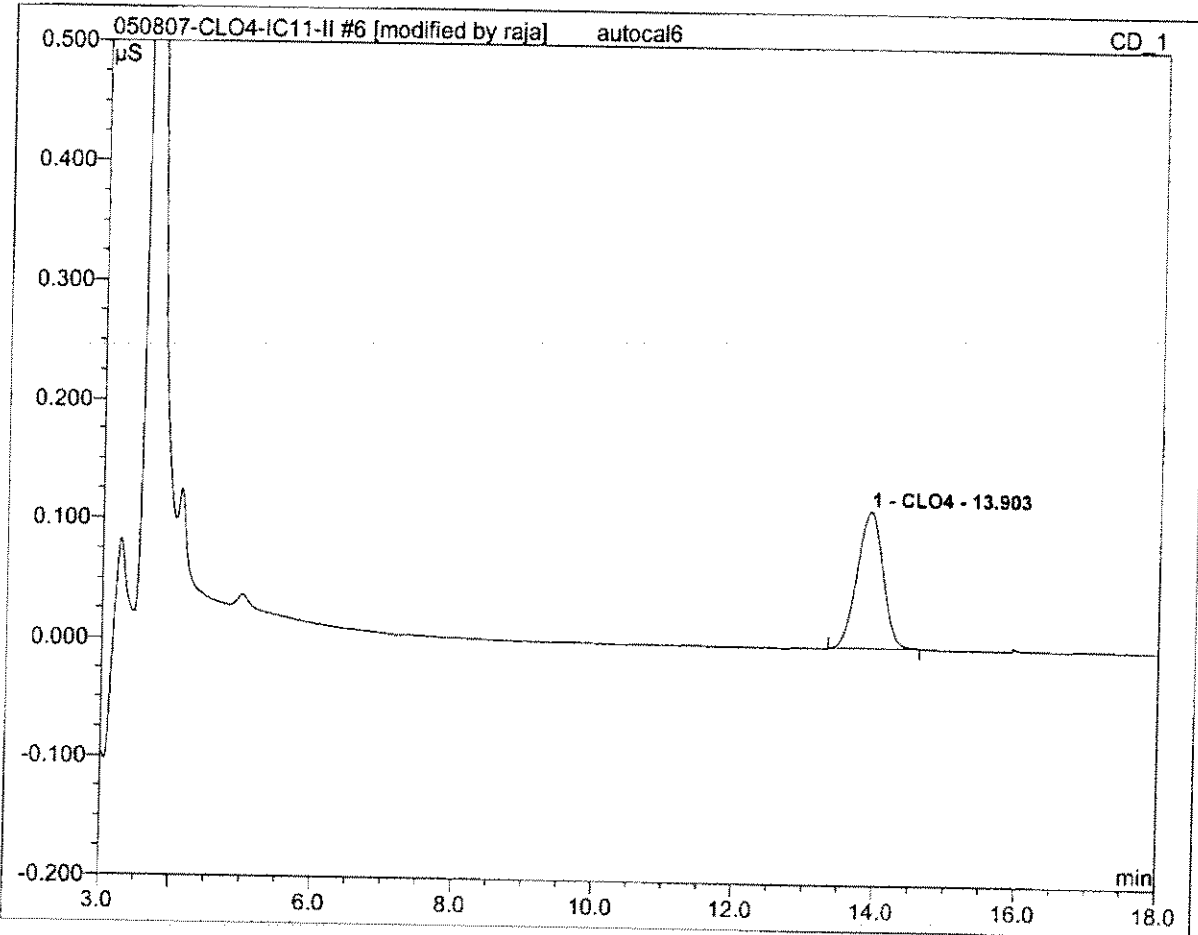
No.	Ret.Time min	Peak Name	Height μ S	Area μ S*min	Rel.Area %	Amount	Type
1	13.91	CLO4	0.021	0.009	100.00	9.692	BMB*
Total:			0.021	0.009	100.00	9.692	

5 autocal5			
RAJA060913-5			
Sample Name:	autocal5	Channel:	CD_1
Sample Type:	standard	Control Program:	Perchlorate-IC11
Recording Time:	05/08/2007 11:16	Quantif. Method:	IC#4-CLO4-LOW
Analyst:	Raja	Dilution Factor:	1.0000



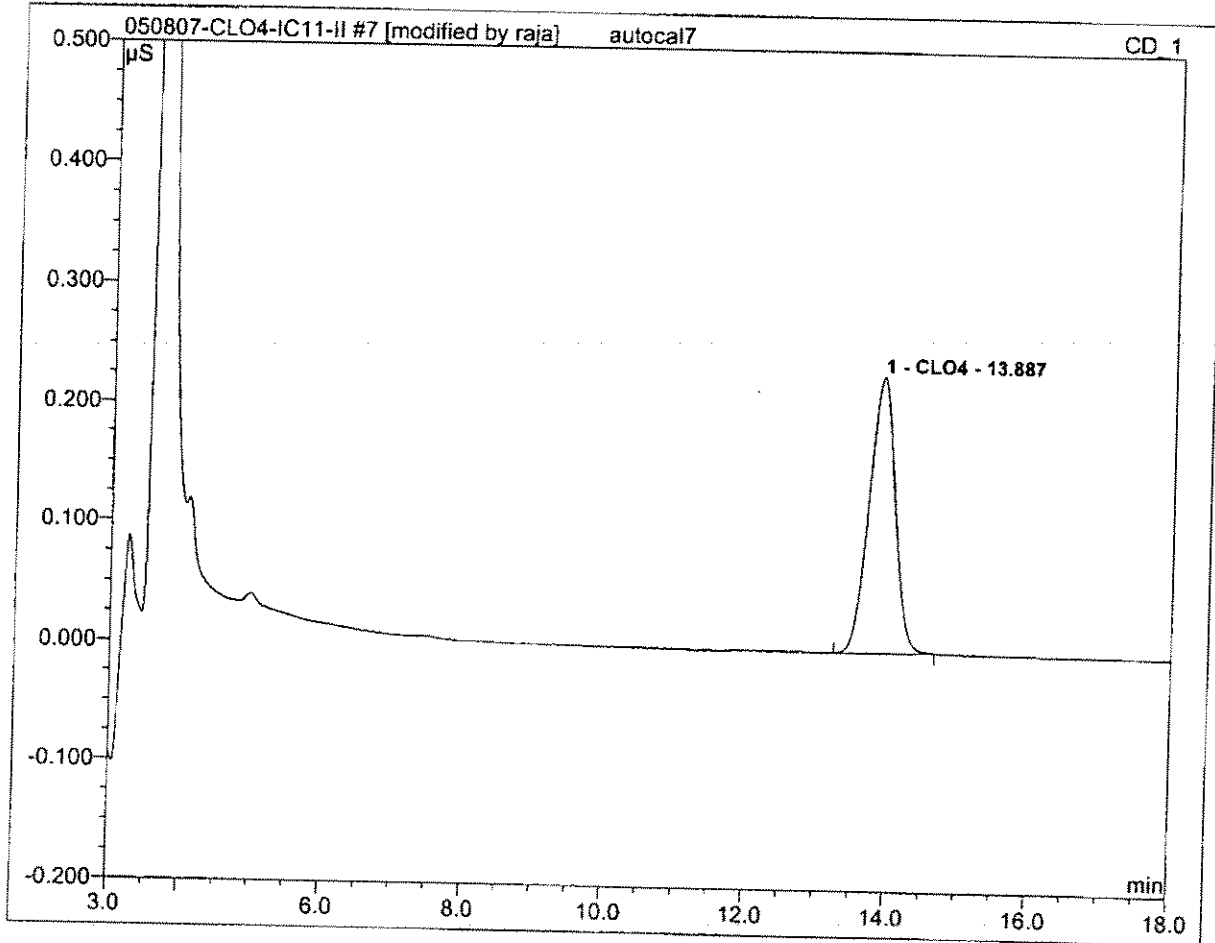
No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	13.90	CLO4	0.054	0.023	100.00	24.575	BMB*
Total:			0.054	0.023	100.00	24.575	

6 autocal6			
RAJA060913-6			
Sample Name:	autocal6	Channel:	CD_1
Sample Type:	standard	Control Program:	Perchlorate-IC11
Recording Time:	05/08/2007 11:38	Quantif. Method:	IC#4-CLO4-LOW
Analyst:	Raja	Dilution Factor:	1.0000



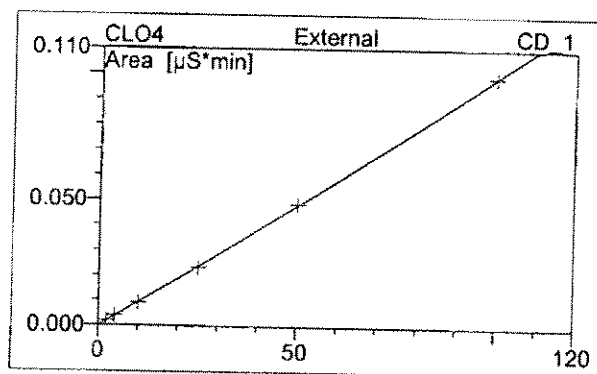
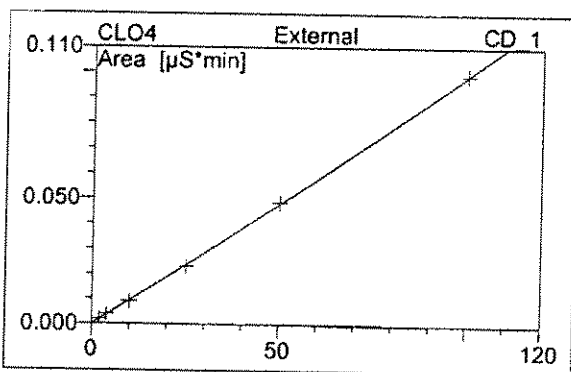
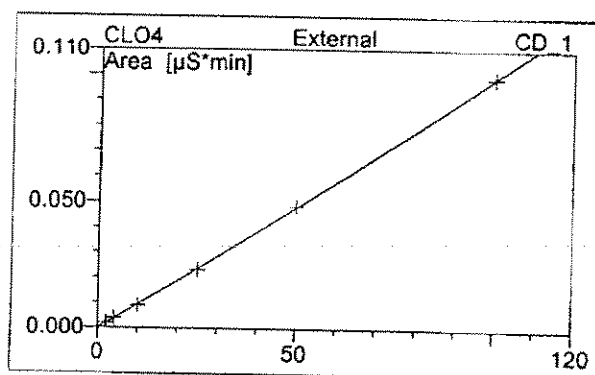
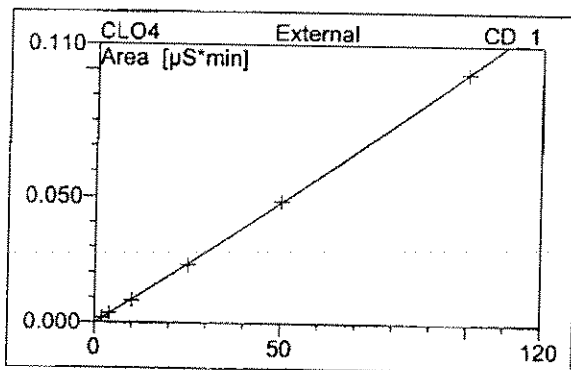
No.	Ret. Time min	Peak Name	Height μS	Area μS*min	Rel. Area %	Amount	Type
1	13.90	CLO4	0.114	0.048	100.00	50.378	BMB*
Total:			0.114	0.048	100.00	50.378	

7 autocal7			
RAJA060913-7			
Sample Name:	autocal7	Channel:	CD_1
Sample Type:	standard	Control Program:	Perchlorate-IC11
Recording Time:	05/08/2007 12:01	Quantif. Method:	IC#4-CLO4-LOW
Analyst:	Raja	Dilution Factor:	1.0000



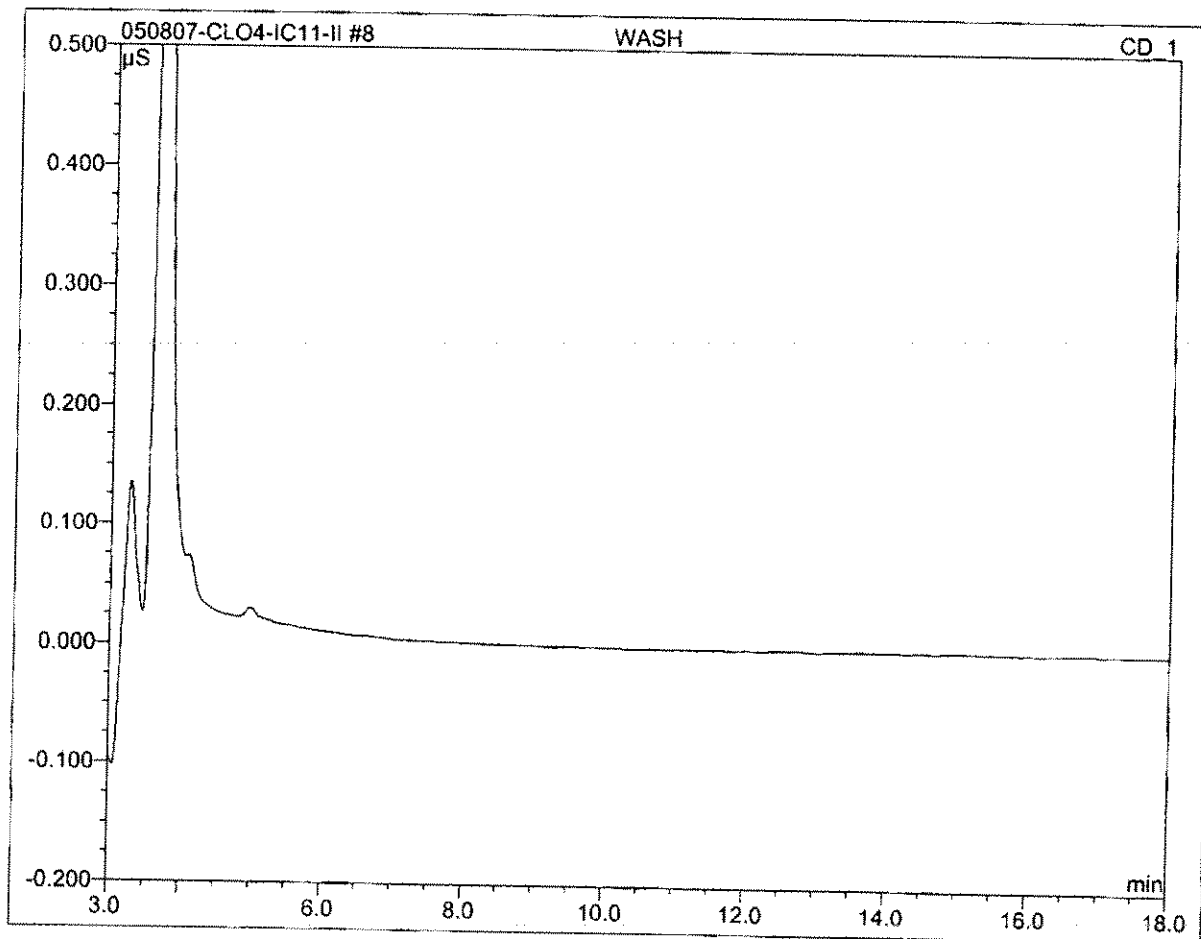
No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	13.89	CLO4	0.231	0.099	100.00	99.938	BMB*
Total:			0.231	0.099	100.00	99.938	

7 autocal7	
RAJA060913-7	
Sample Name: autocal7	Injection Volume: 20.0
Vial Number: 109	Channel: CD_1
Sample Type: standard	Wavelength: n.a.
Control Program: Perchlorate-IC11	Bandwidth: n.a.
Quantif. Method: IC#4-CLO4-LOW	Dilution Factor: 1.0000
Recording Time: 5/8/2007 12:01	Sample Weight: 1.0000
Run Time (min): 20.00	Sample Amount: 1.0000



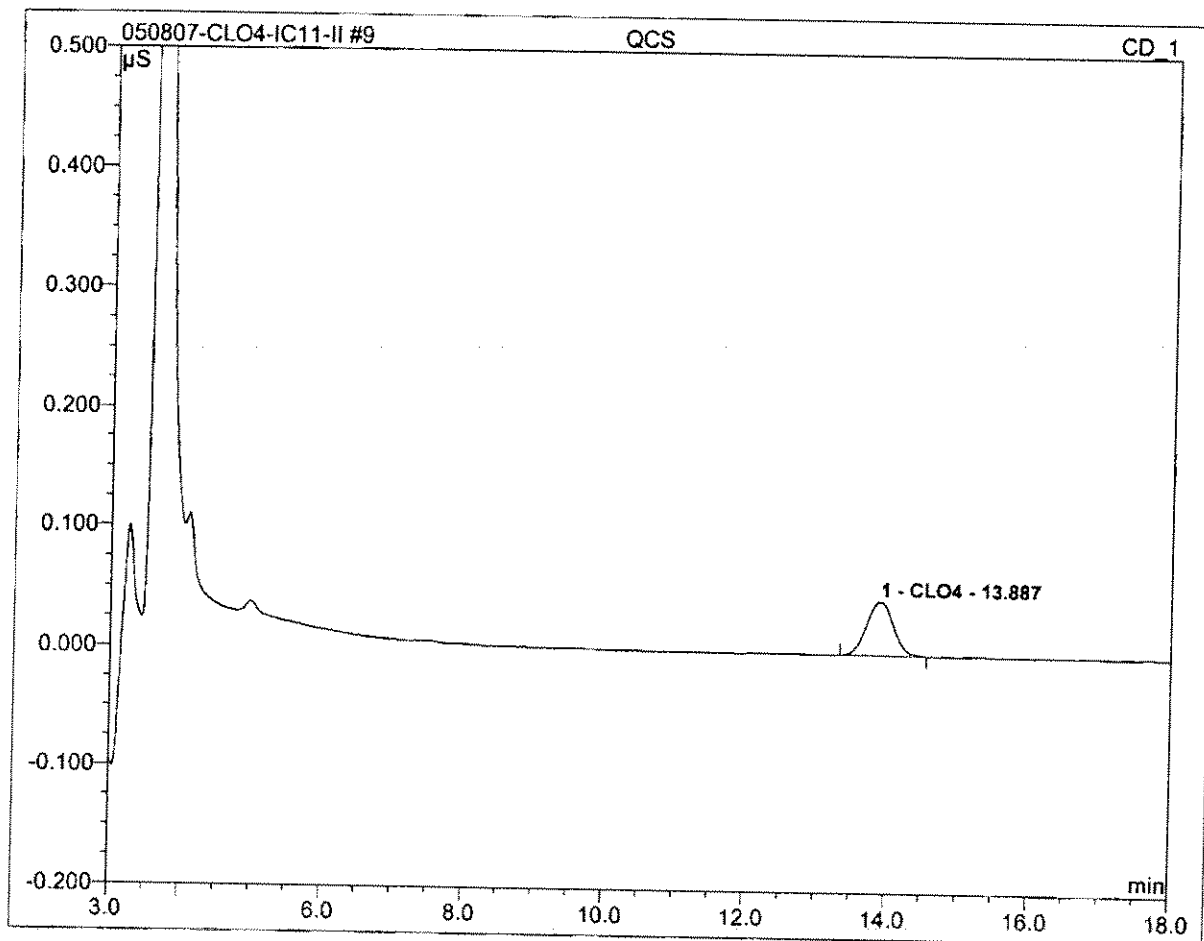
No.	Ret.Time min	Peak Name	Cal.Type	Points	Corr.Coeff. %	Offset	Slope	Curve
1	13.89	CLO4	0QOff	6	99.9845	-0.0001	0.0009	0.0000
Average:					99.9845	-0.0001	0.0009	0.0000

8 WASH			
Sample Name:	WASH	Channel:	CD_1
Sample Type:	unknown	Control Program:	Perchlorate-IC11
Recording Time:	05/08/2007 12:23	Quantif. Method:	IC#4-CLO4-LOW
Analyst:	Raja	Dilution Factor:	1.0000



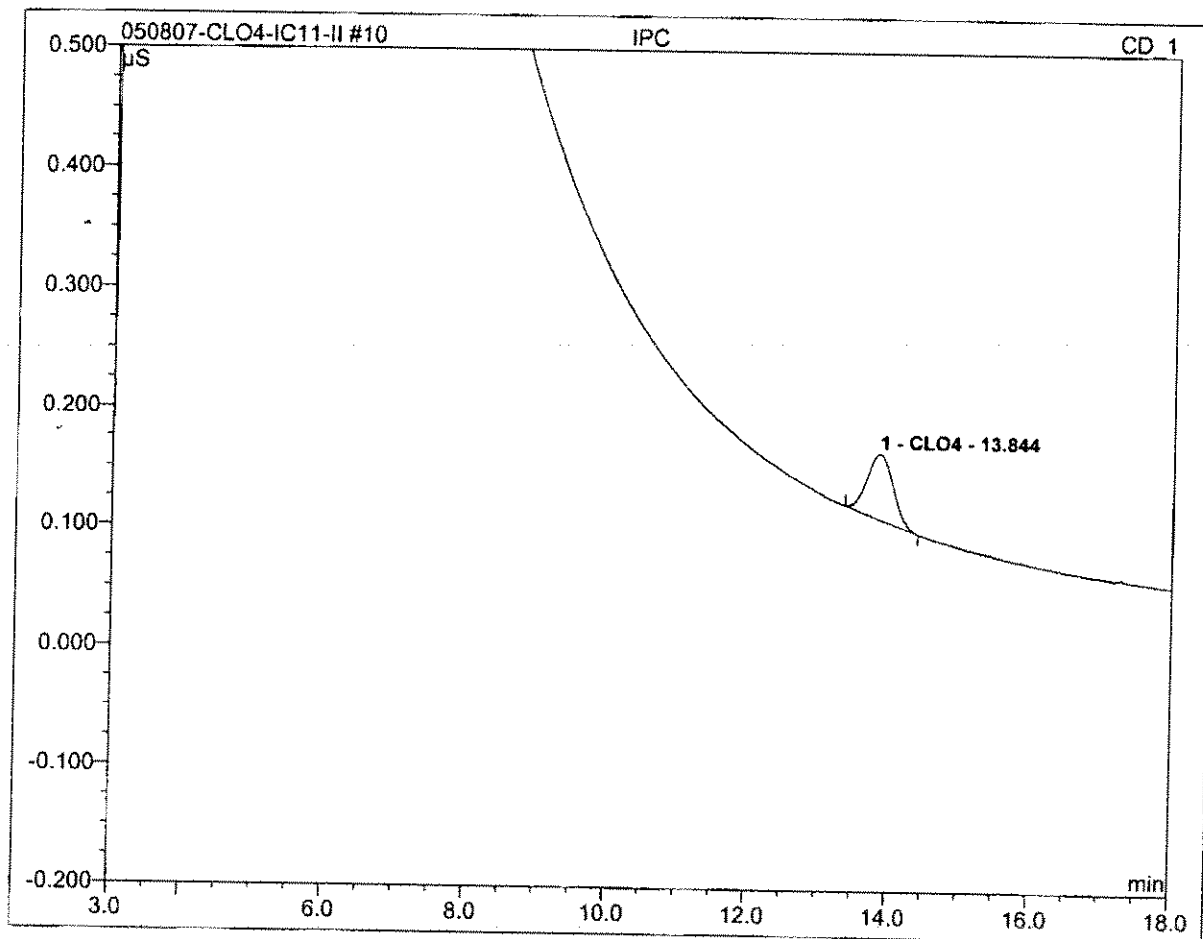
No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
Total:			0.000	0.000	0.00	0.000	

9 QCS			
Sample Name:	QCS	Channel:	CD_1
Sample Type:	unknown	Control Program:	Perchlorate-IC11
Recording Time:	05/08/2007 12:45	Quantif. Method:	IC#4-CLO4-LOW
Analyst:	Raja	Dilution Factor:	1.0000



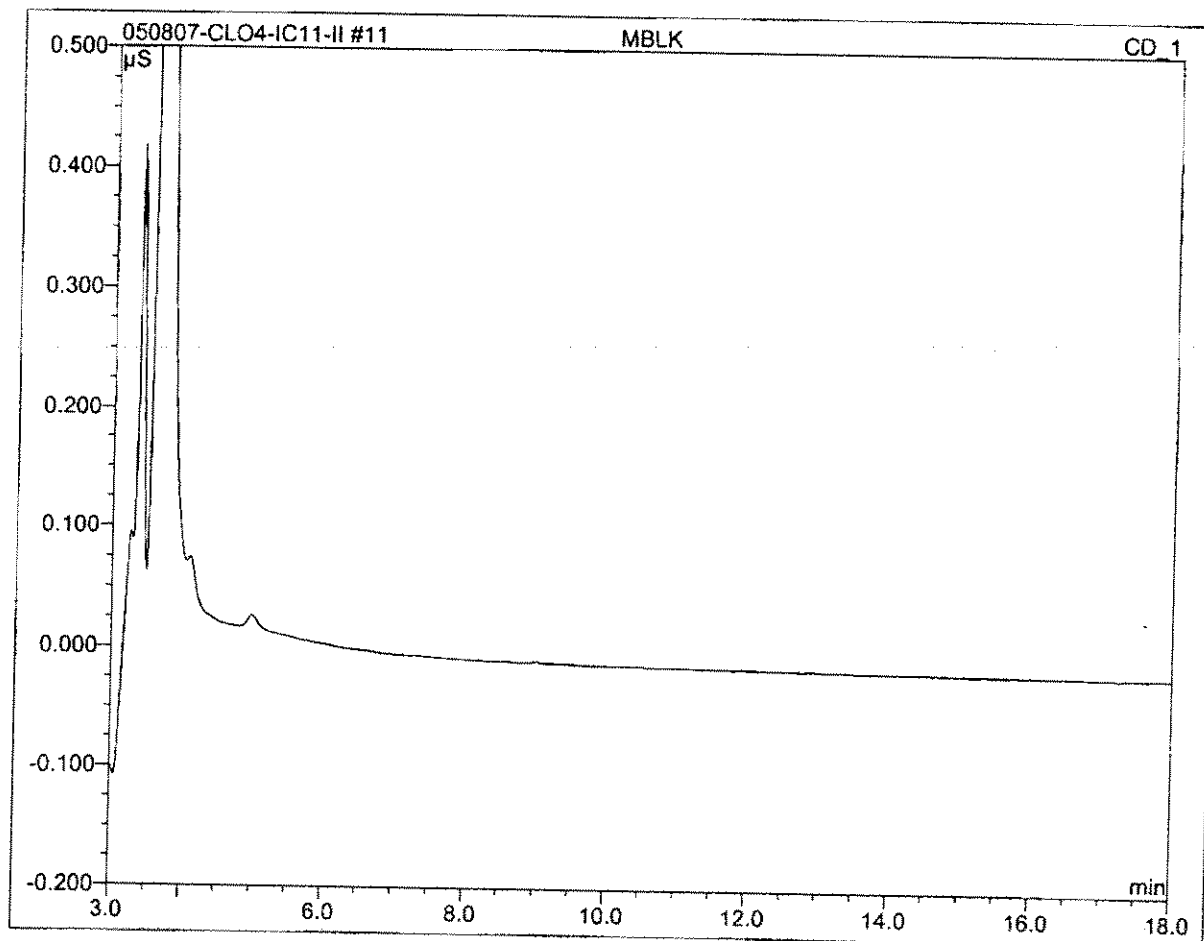
No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	13.89	CLO4	0.045	0.020	100.00	20.986	BMB
Total:			0.045	0.020	100.00	20.986	

10 IPC			
Sample Name:	IPC	Channel:	CD_1
Sample Type:	unknown	Control Program:	Perchlorate-IC11
Recording Time:	05/08/2007 13:08	Quantif. Method:	IC#4-CLO4-LOW
Analyst:	Raja	Dilution Factor:	1.0000



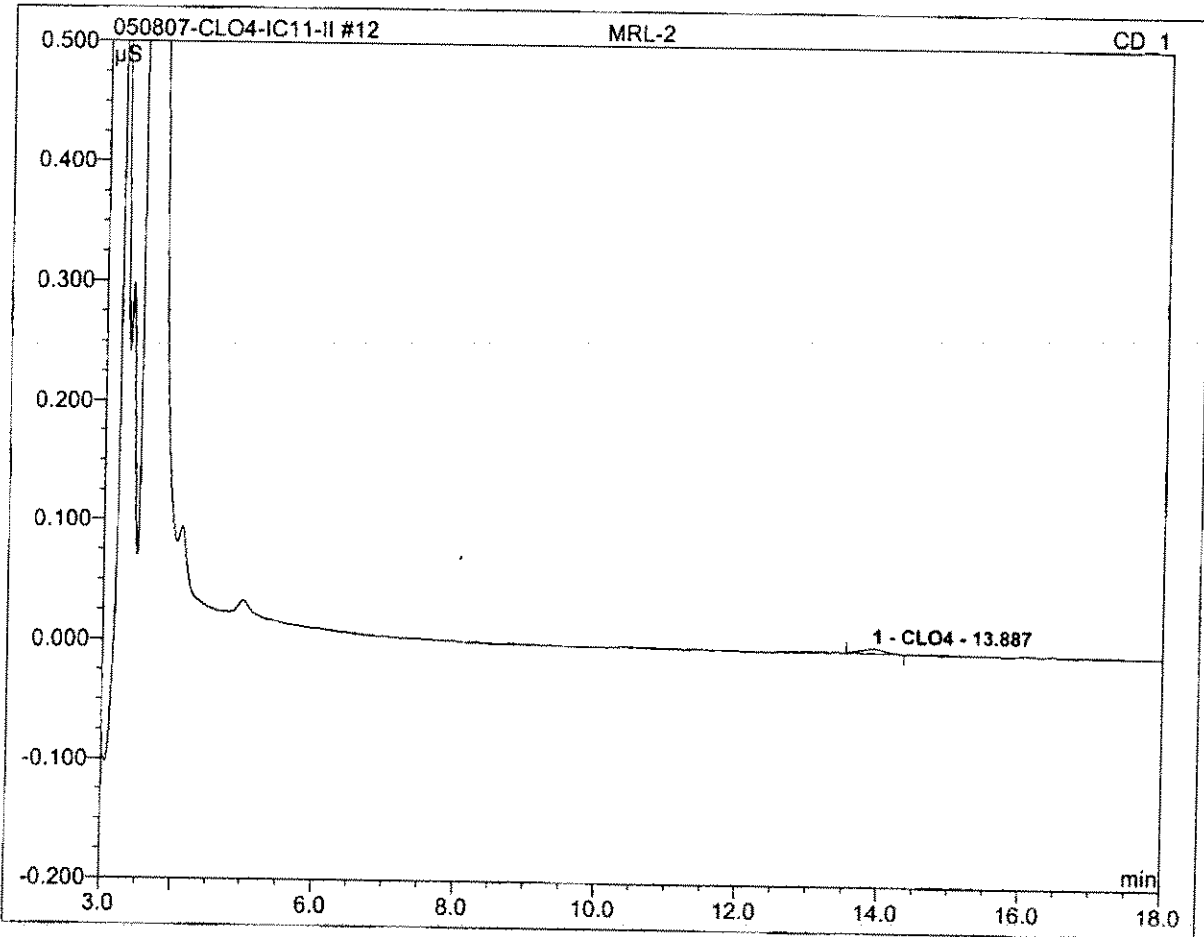
No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	13.84	CLO4	0.054	0.023	100.00	24.848	BMB
Total:			0.054	0.023	100.00	24.848	

11 MBLK			
Sample Name:	MBLK	Channel:	CD_1
Sample Type:	unknown	Control Program:	Perchlorate-IC11
Recording Time:	05/08/2007 13:30	Quantif. Method:	IC#4-CLO4-LOW
Analyst:	Raja	Dilution Factor:	1.0000



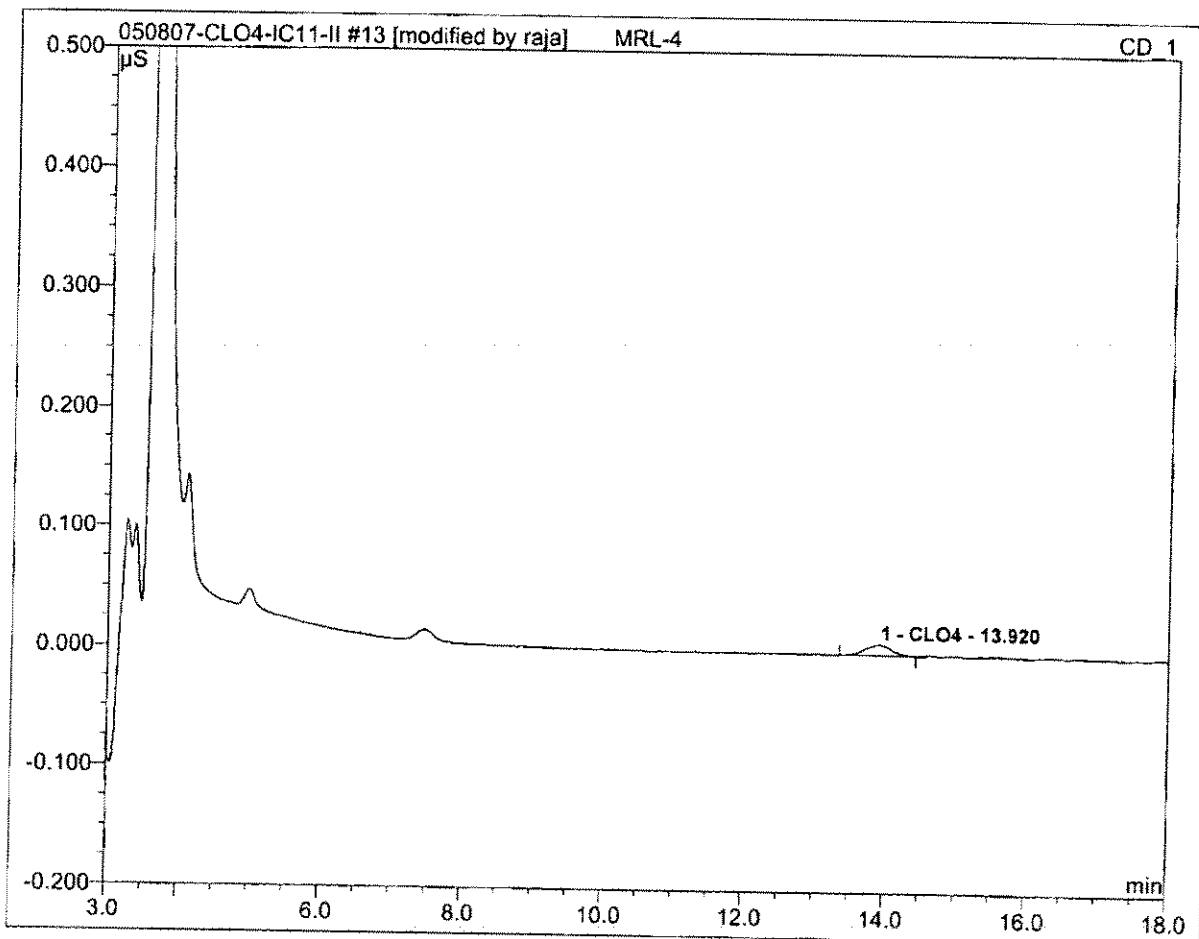
No.	Ret.Time min	Peak Name	Height μS	Area $\mu\text{S}\cdot\text{min}$	Rel.Area %	Amount	Type
Total:			0.000	0.000	0.00	0.000	

12 MRL-2			
Sample Name:	MRL-2	Channel:	CD_1
Sample Type:	unknown	Control Program:	Perchlorate-IC11
Recording Time:	05/08/2007 13:53	Quantif. Method:	IC#4-CLO4-LOW
Analyst:	Raja	Dilution Factor:	1.0000



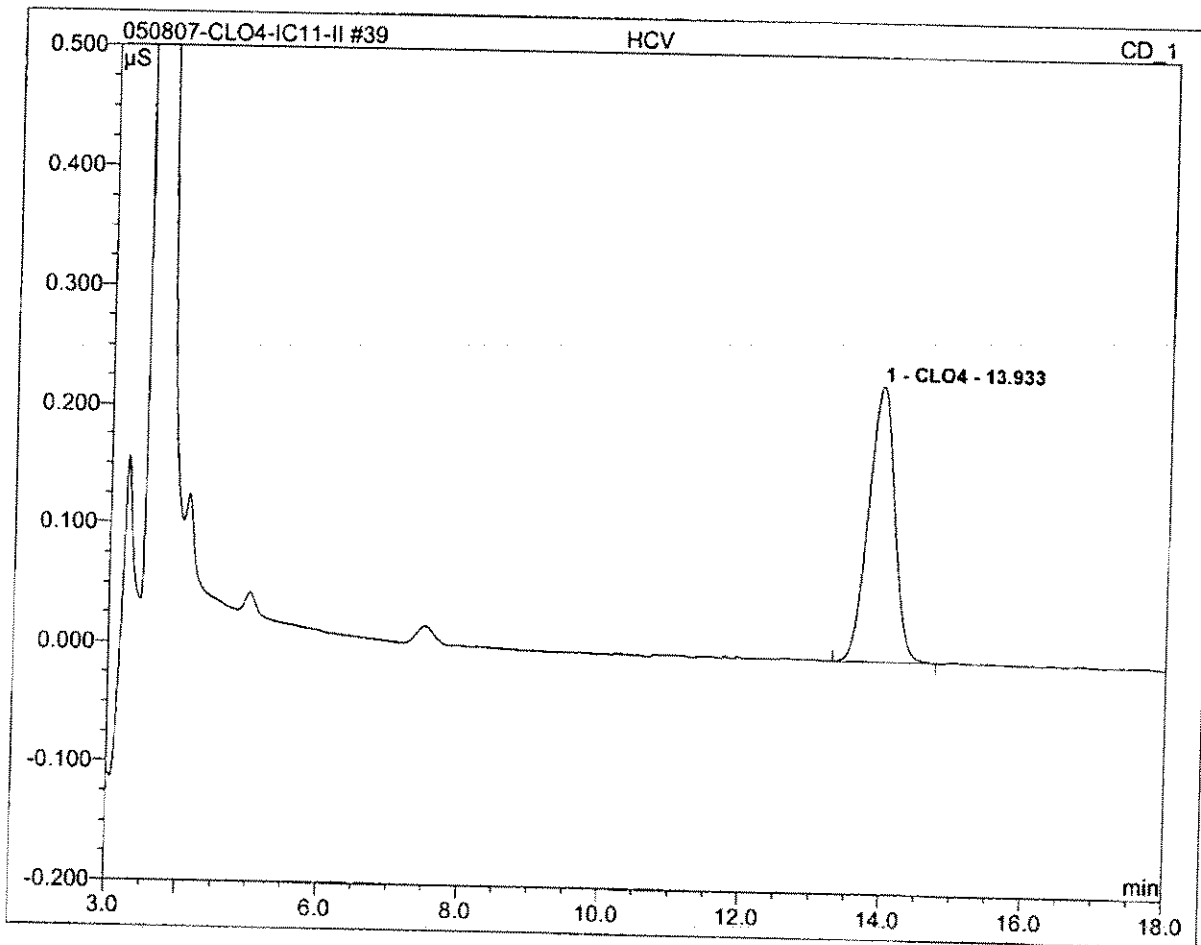
No.	Ret.Time min	Peak Name	Height μS	Area $\mu\text{S}\cdot\text{min}$	Rel.Area %	Amount	Type
1	13.89	CLO4	0.004	0.002	100.00	1.750	BMB
Total:			0.004	0.002	100.00	1.750	

13 MRL-4			
Sample Name:	MRL-4	Channel:	CD_1
Sample Type:	unknown	Control Program:	Perchlorate-IC11
Recording Time:	05/08/2007 14:15	Quantif. Method:	IC#4-CLO4-LOW
Analyst:	Raja	Dilution Factor:	1.0000



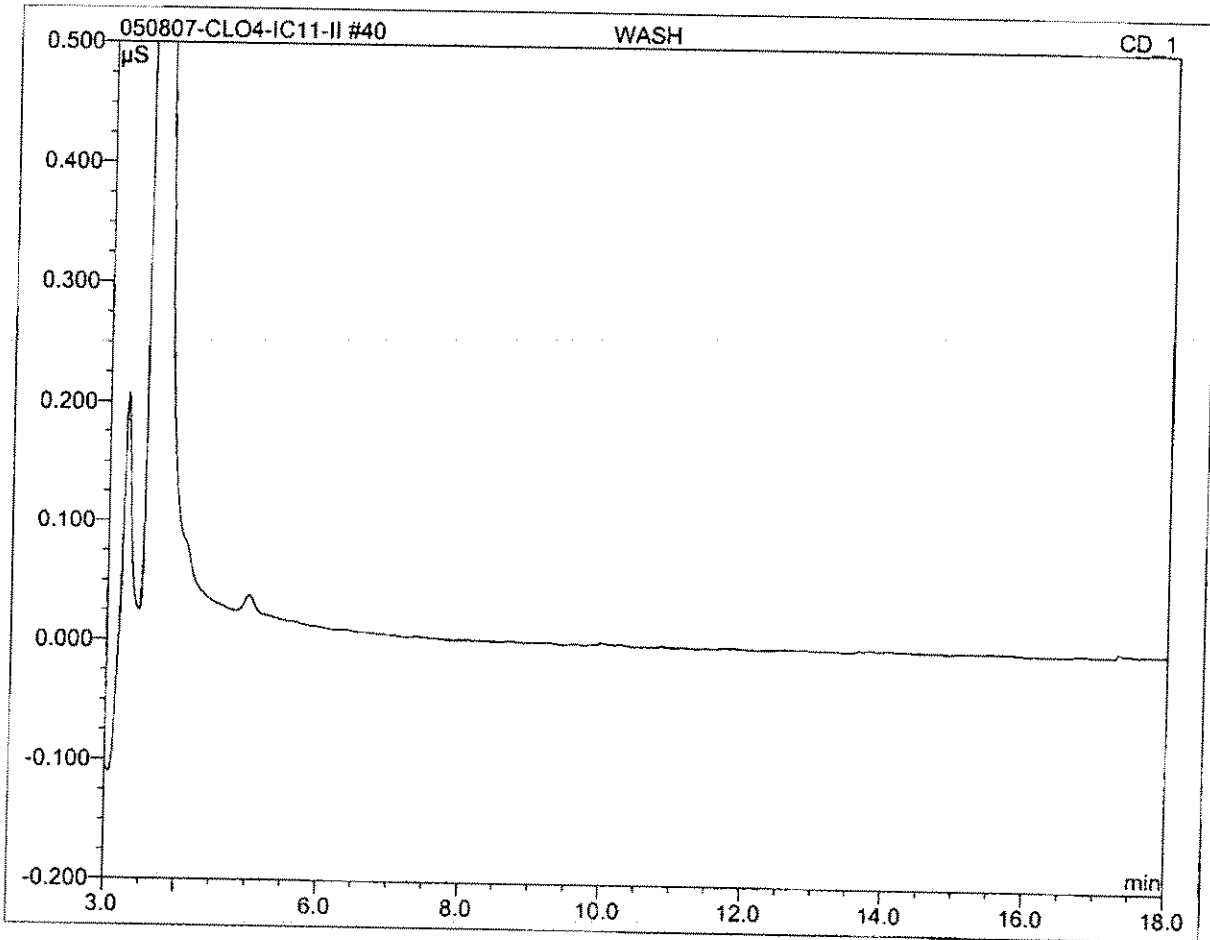
No.	Ret.Time min	Peak Name	Height μS	Area $\mu\text{S}\cdot\text{min}$	Rel.Area %	Amount	Type
1	13.92	CLO4	0.009	0.004	100.00	4.338	BMB*
Total:			0.009	0.004	100.00	4.338	

39 HCV			
Sample Name:	HCV	Channel:	CD_1
Sample Type:	unknown	Control Program:	Perchlorate-IC11
Recording Time:	05/08/2007 23:57	Quantif. Method:	IC#4-CLO4-LOW
Analyst:	Raja	Dilution Factor:	1.0000



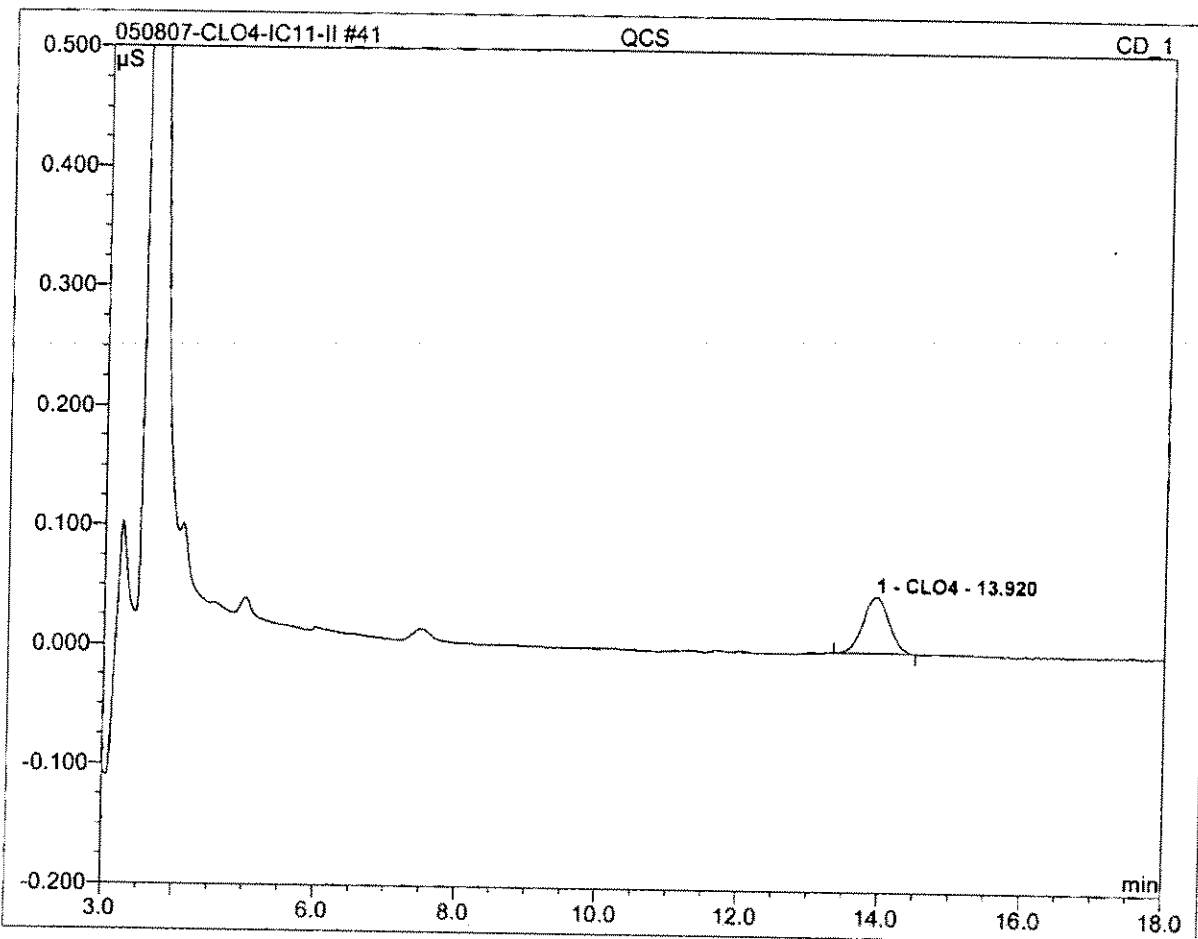
No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	13.93	CLO4	0.232	0.100	100.00	100.676	BMB
Total:			0.232	0.100	100.00	100.676	

40 WASH			
Sample Name:	WASH	Channel:	CD_1
Sample Type:	unknown	Control Program:	Perchlorate-IC11
Recording Time:	05/09/2007 00:20	Quantif. Method:	IC#4-CLO4-LOW
Analyst:	Raja	Dilution Factor:	1.0000



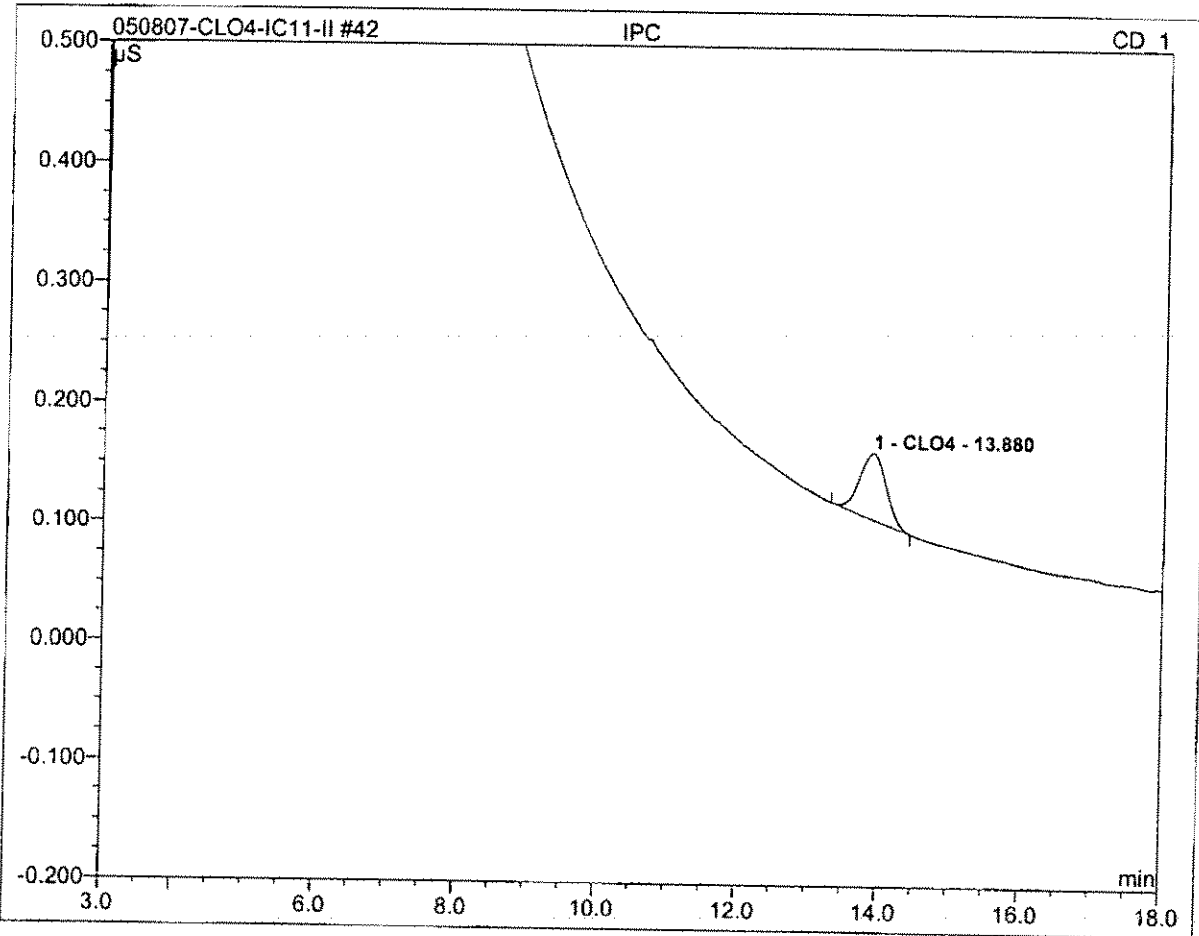
No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
Total:			0.000	0.000	0.00	0.000	

41 QCS			
Sample Name:	QCS	Channel:	CD_1
Sample Type:	unknown	Control Program:	Perchlorate-IC11
Recording Time:	05/09/2007 00:42	Quantif. Method:	IC#4-CLO4-LOW
Analyst:	Raja	Dilution Factor:	1.0000



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	13.92	CLO4	0.047	0.020	100.00	21.573	BMB
Total:			0.047	0.020	100.00	21.573	

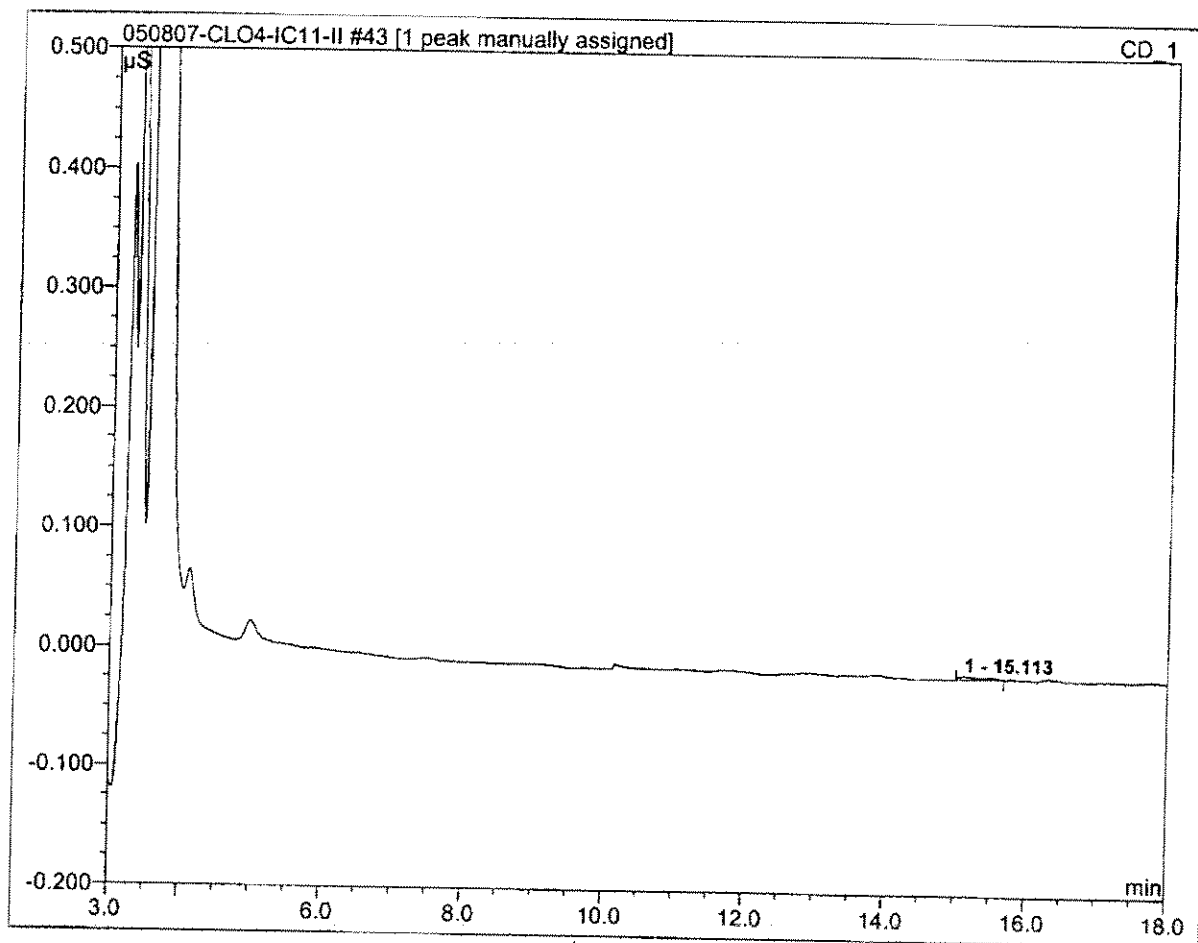
42 IPC			
Sample Name:	IPC	Channel:	CD_1
Sample Type:	unknown	Control Program:	Perchlorate-IC11
Recording Time:	05/09/2007 01:04	Quantif. Method:	IC#4-CLO4-LOW
Analyst:	Raja	Dilution Factor:	1.0000



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	13.88	CLO4	0.055	0.024	100.00	25.366	BMB
Total:			0.055	0.024	100.00	25.366	

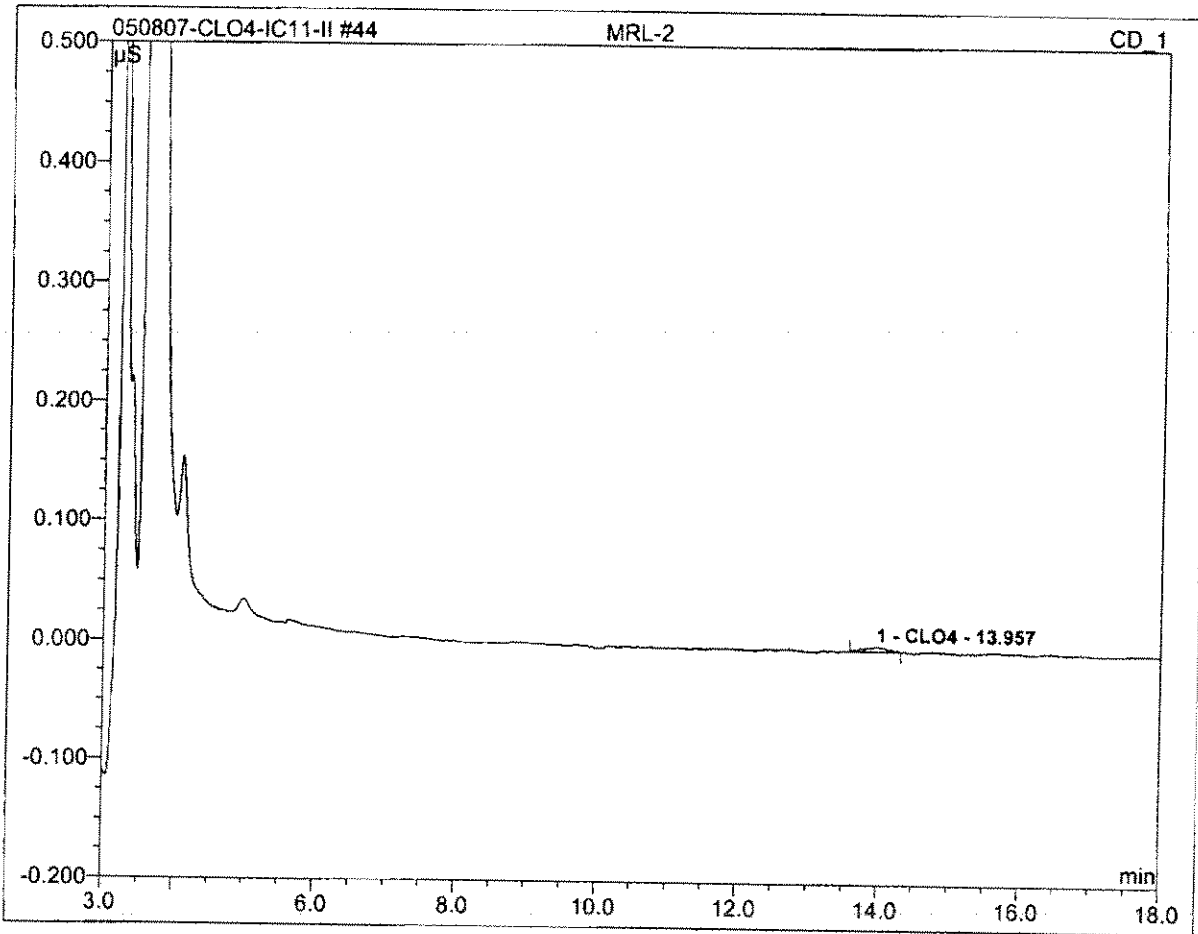
43 MBLK

Sample Name:	MBLK	Channel:	CD_1
Sample Type:	unknown	Control Program:	Perchlorate-IC11
Recording Time:	05/09/2007 01:27	Quantif. Method:	IC#4-CLO4-LOW
Analyst:	Raja	Dilution Factor:	1.0000



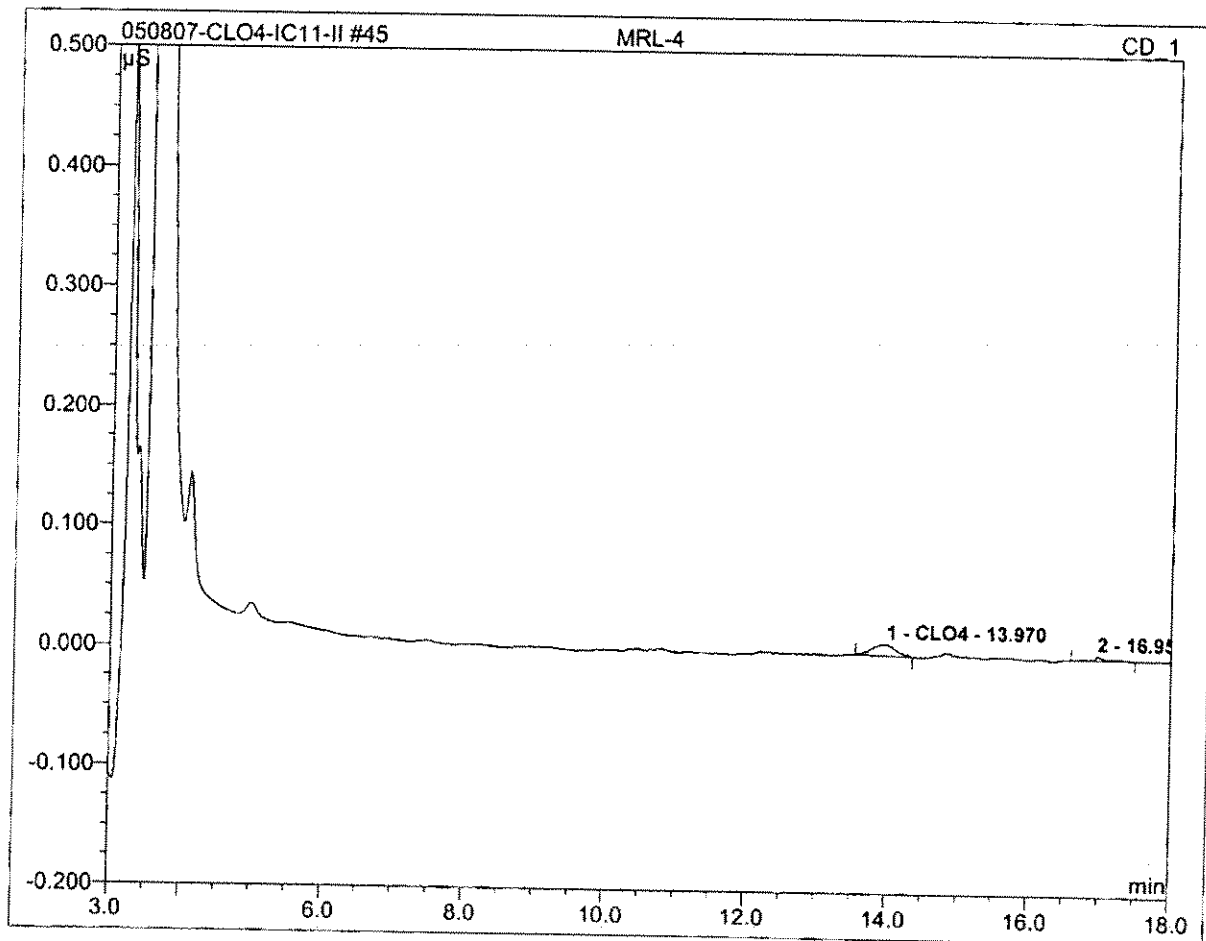
No.	Ret.Time min	Peak Name	Height μS	Area μS*min	Rel.Area %	Amount	Type
Total:			0.000	0.000	0.00	0.000	

44 MRL-2			
Sample Name:	MRL-2	Channel:	CD_1
Sample Type:	unknown	Control Program:	Perchlorate-IC11
Recording Time:	05/09/2007 01:49	Quantif. Method:	IC#4-CLO4-LOW
Analyst:	Raja	Dilution Factor:	1.0000



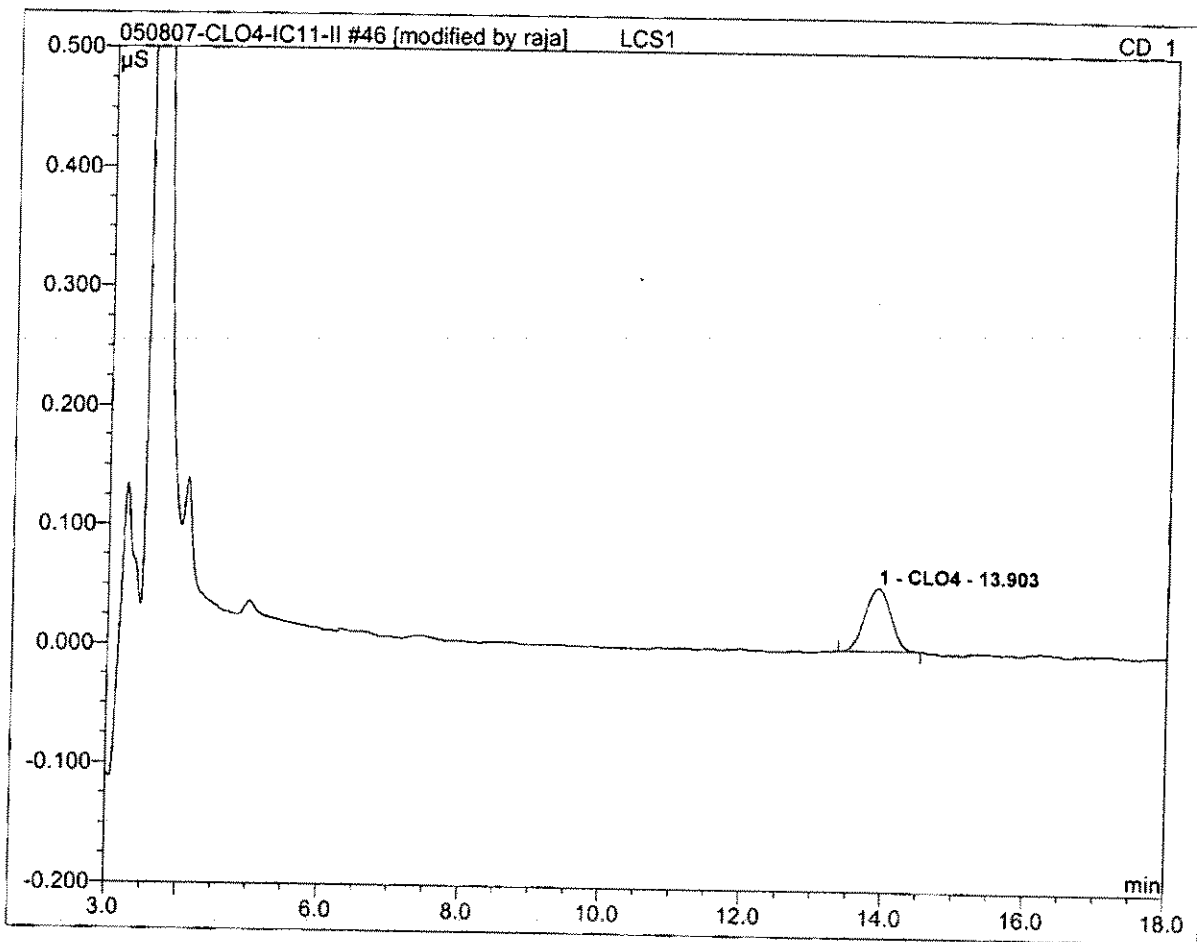
No.	Ret.Time min	Peak Name	Height μS	Area $\mu\text{S}\cdot\text{min}$	Rel.Area %	Amount	Type
1	13.96	CLO4	0.004	0.002	100.00	1.759	BMB
Total:			0.004	0.002	100.00	1.759	

45 MRL-4			
Sample Name:	MRL-4	Channel:	CD_1
Sample Type:	unknown	Control Program:	Perchlorate-IC11
Recording Time:	05/09/2007 02:12	Quantif. Method:	IC#4-CLO4-LOW
Analyst:	Raja	Dilution Factor:	1.0000



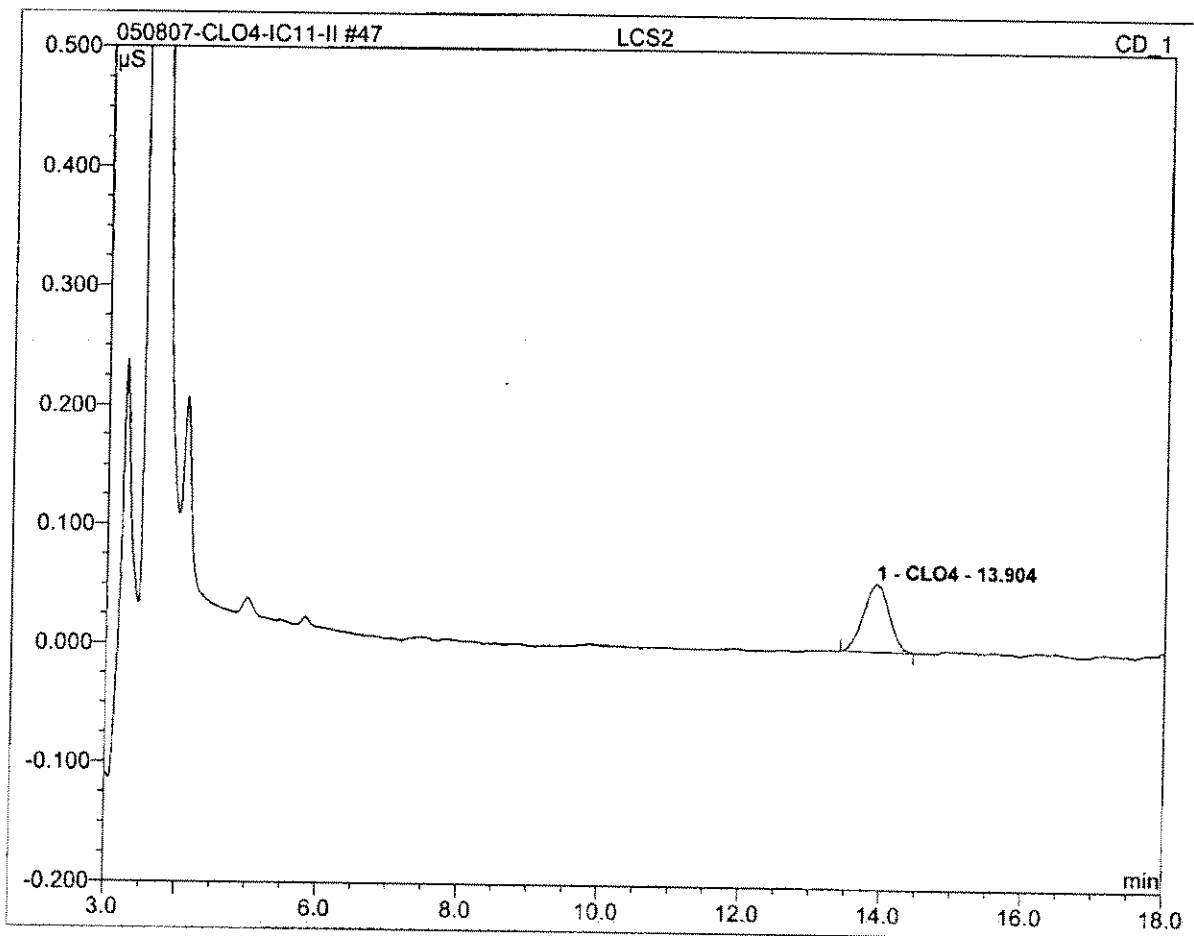
No.	Ret.Time min	Peak Name	Height μS	Area μS*min	Rel.Area %	Amount	Type
1	13.97	CLO4	0.010	0.004	77.44	4.185	BMB
Total:			0.010	0.004	77.44	4.185	

46 LCS1			
Sample Name:	LCS1	Channel:	CD_1
Sample Type:	unknown	Control Program:	Perchlorate-IC11
Recording Time:	05/09/2007 02:34	Quantif. Method:	IC#4-CLO4-LOW
Analyst:	Raja	Dilution Factor:	1.0000



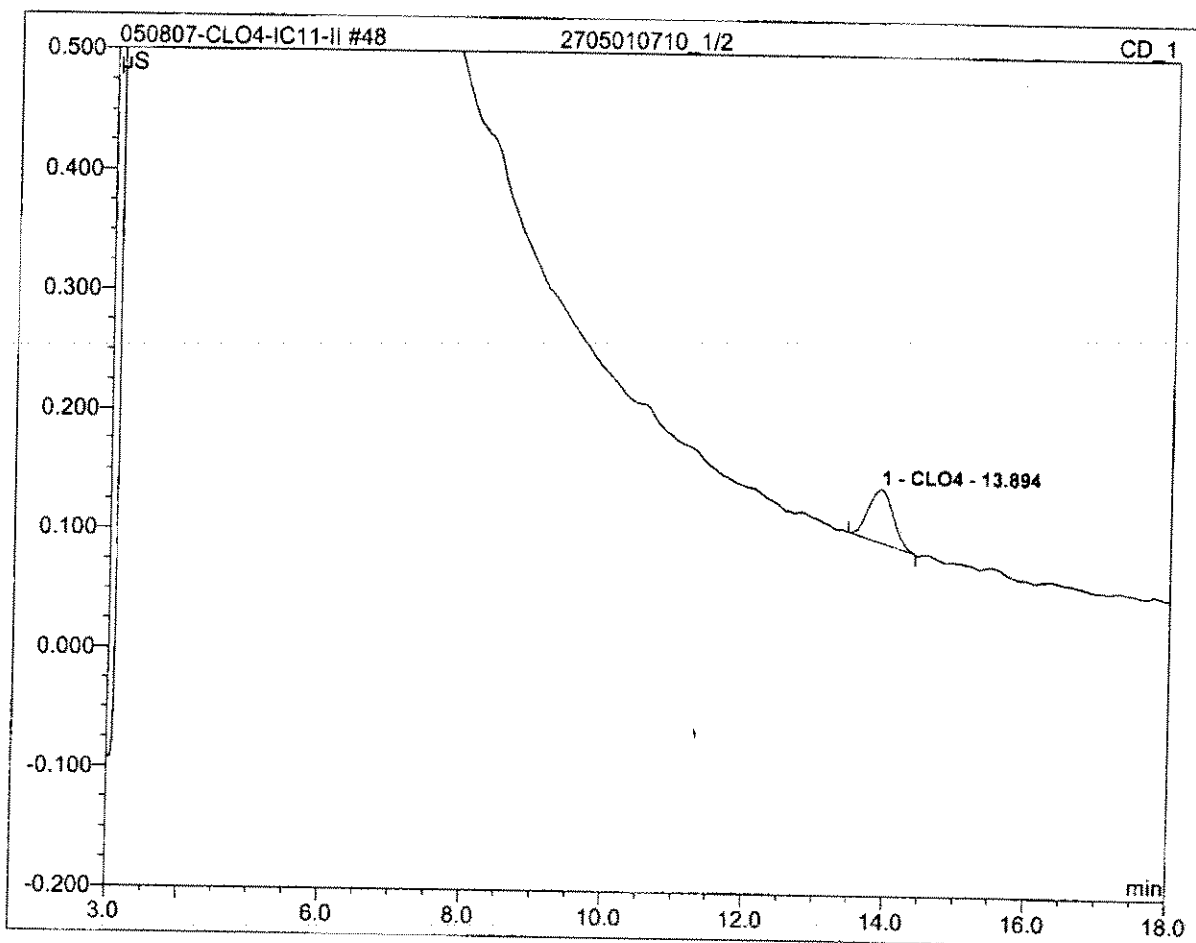
No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	13.90	CLO4	0.053	0.023	100.00	24.046	BMB*
Total:			0.053	0.023	100.00	24.046	

47 LCS2			
Sample Name:	LCS2	Channel:	CD_1
Sample Type:	unknown	Control Program:	Perchlorate-IC11
Recording Time:	05/09/2007 02:56	Quantif. Method:	IC#4-CLO4-LOW
Analyst:	Raja	Dilution Factor:	1.0000



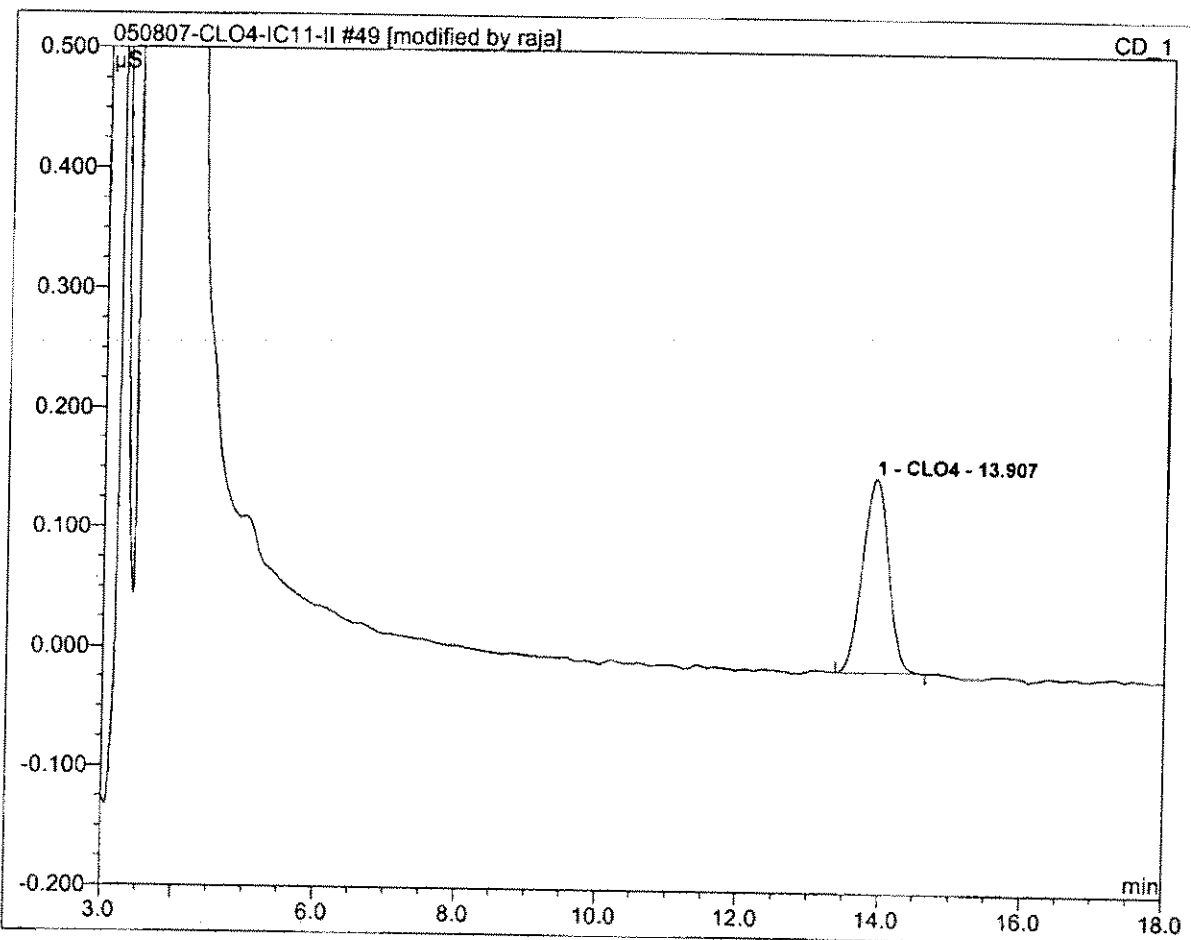
No.	Ret.Time min	Peak Name	Height μS	Area μS*min	Rel.Area %	Amount	Type
1	13.90	CLO4	0.057	0.024	100.00	25.597	BMB
Total:			0.057	0.024	100.00	25.597	

48 2705010710_1/2			
Sample Name:	2705010710_1/2	Channel:	CD_1
Sample Type:	unknown	Control Program:	Perchlorate-IC11
Recording Time:	05/09/2007 03:19	Quantif. Method:	IC#4-CLO4-LOW
Analyst:	Raja	Dilution Factor:	2.0000



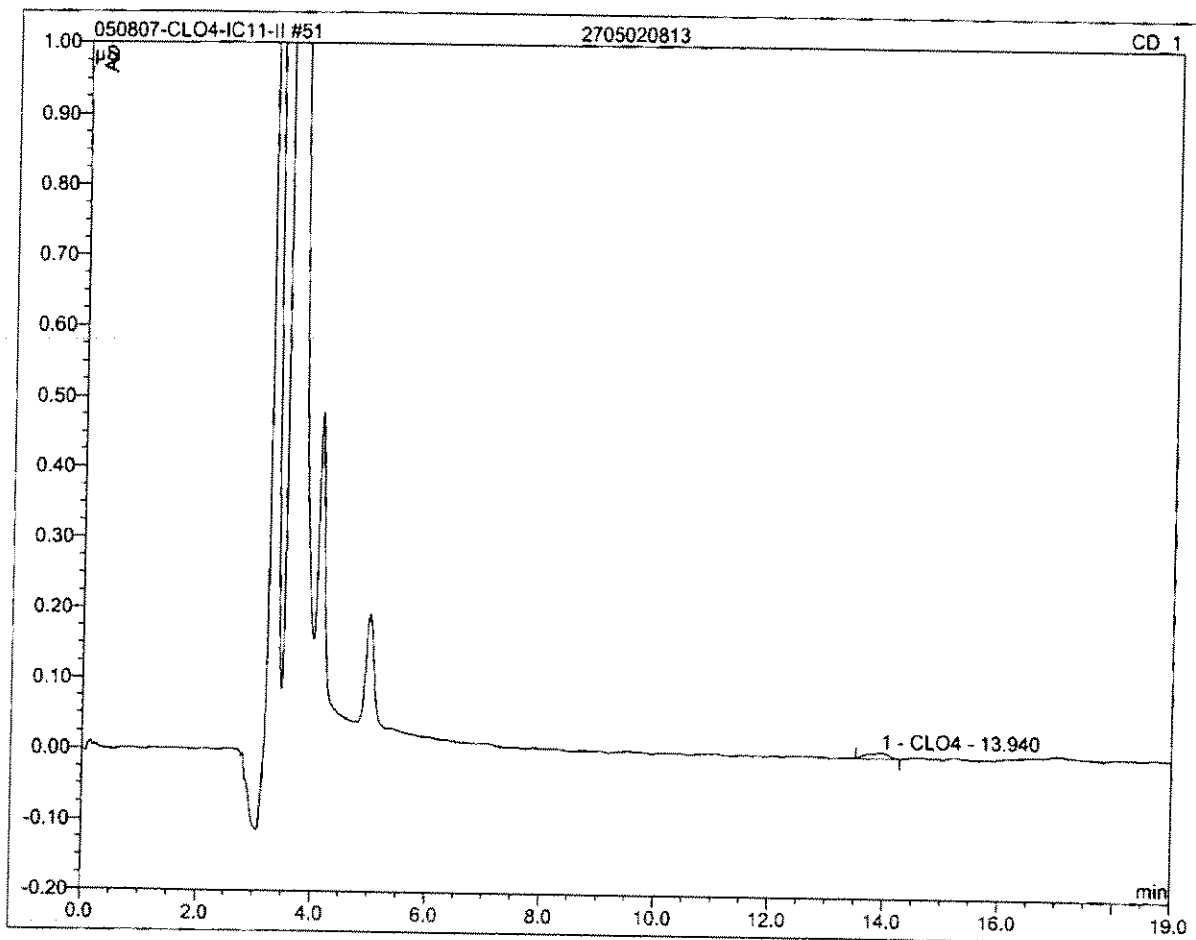
No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	13.89	CLO4	0.045	0.018	100.00	38.960	BMB
Total:			0.045	0.018	100.00	38.960	

49 2705010716_1/100			
Sample Name:	2705010716_1/100	Channel:	CD_1
Sample Type:	unknown	Control Program:	Perchlorate-IC11
Recording Time:	05/09/2007 03:41	Quantif. Method:	IC#4-CLO4-LOW
Analyst:	Raja	Dilution Factor:	100.0000



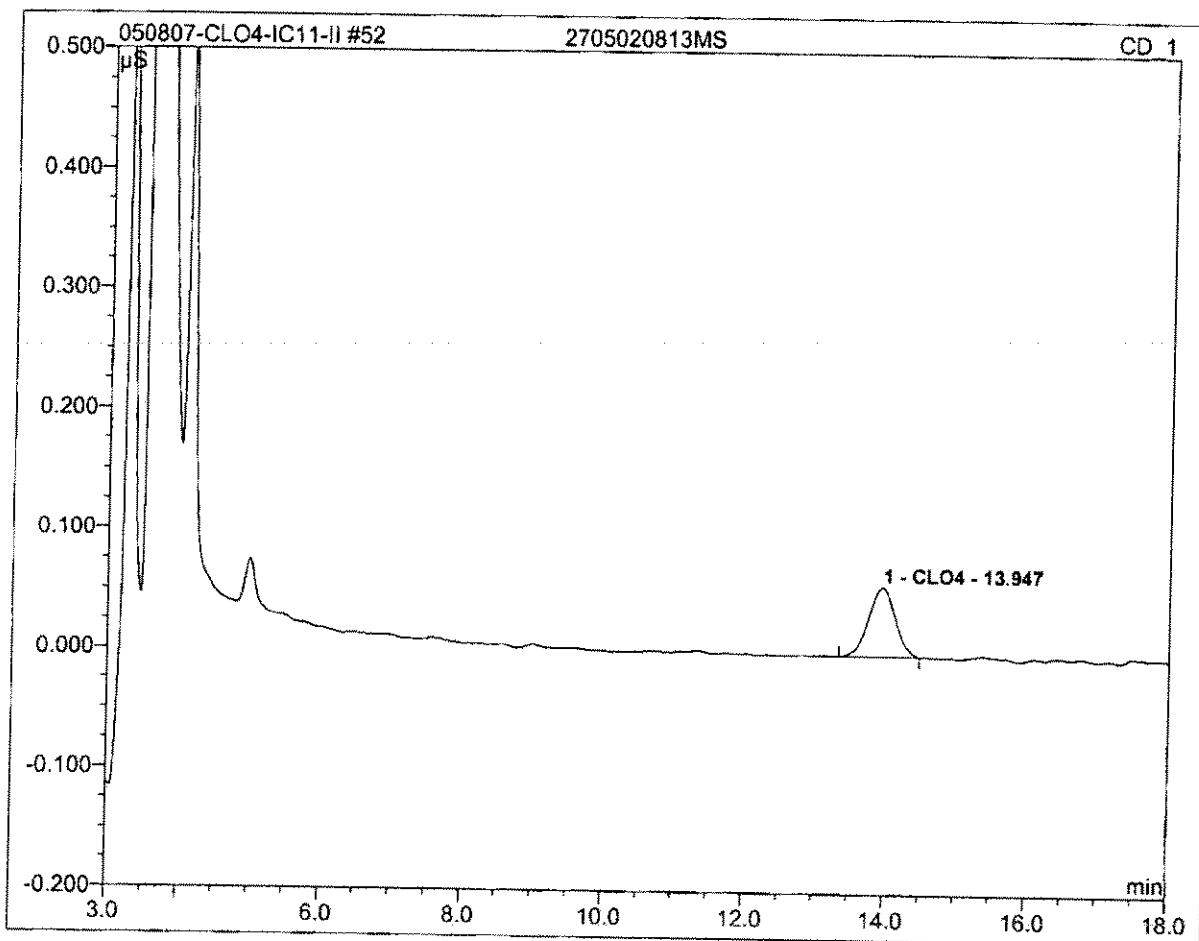
No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	13.91	CLO4	0.162	0.068	100.00	7049.748	BMB*
Total:			0.162	0.068	100.00	7049.748	

51 2705020813			
Sample Name:	2705020813	Channel:	CD_1
Sample Type:	unknown	Control Program:	Perchlorate-IC11
Recording Time:	05/09/2007 04:26	Quantif. Method:	IC#4-CLO4-LOW
Analyst:	Raja	Dilution Factor:	1.0000



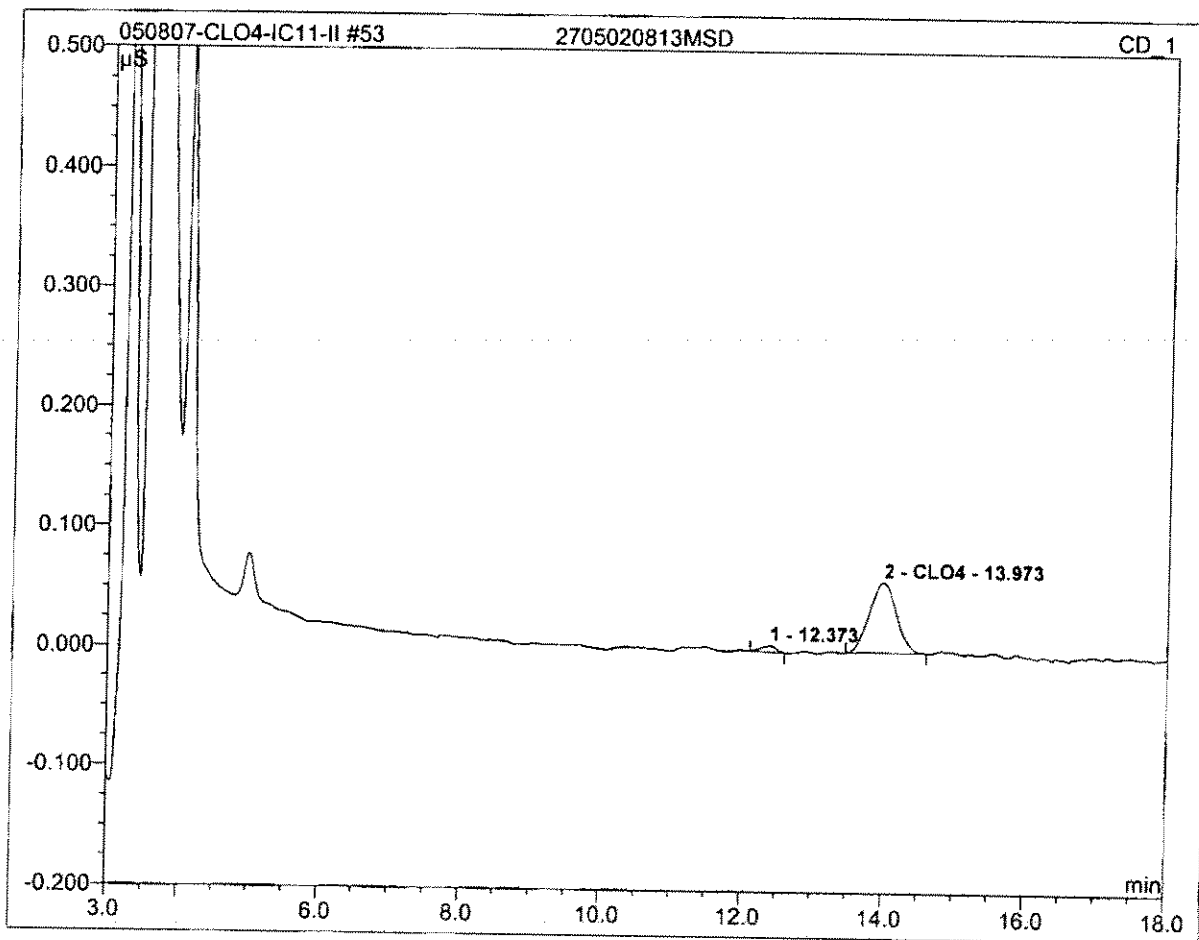
No.	Ret. Time min	Peak Name	Height µS	Area µS*min	Rel. Area %	Amount	Type
1	13.94	CLO4	0.008	0.004	100.00	4.076	BMB
Total:			0.008	0.004	100.00	4.076	

52 2705020813MS			
Sample Name:	2705020813MS	Channel:	CD_1
Sample Type:	unknown	Control Program:	Perchlorate-IC11
Recording Time:	05/09/2007 04:48	Quantif. Method:	IC#4-CLO4-LOW
Analyst:	Raja	Dilution Factor:	1.0000



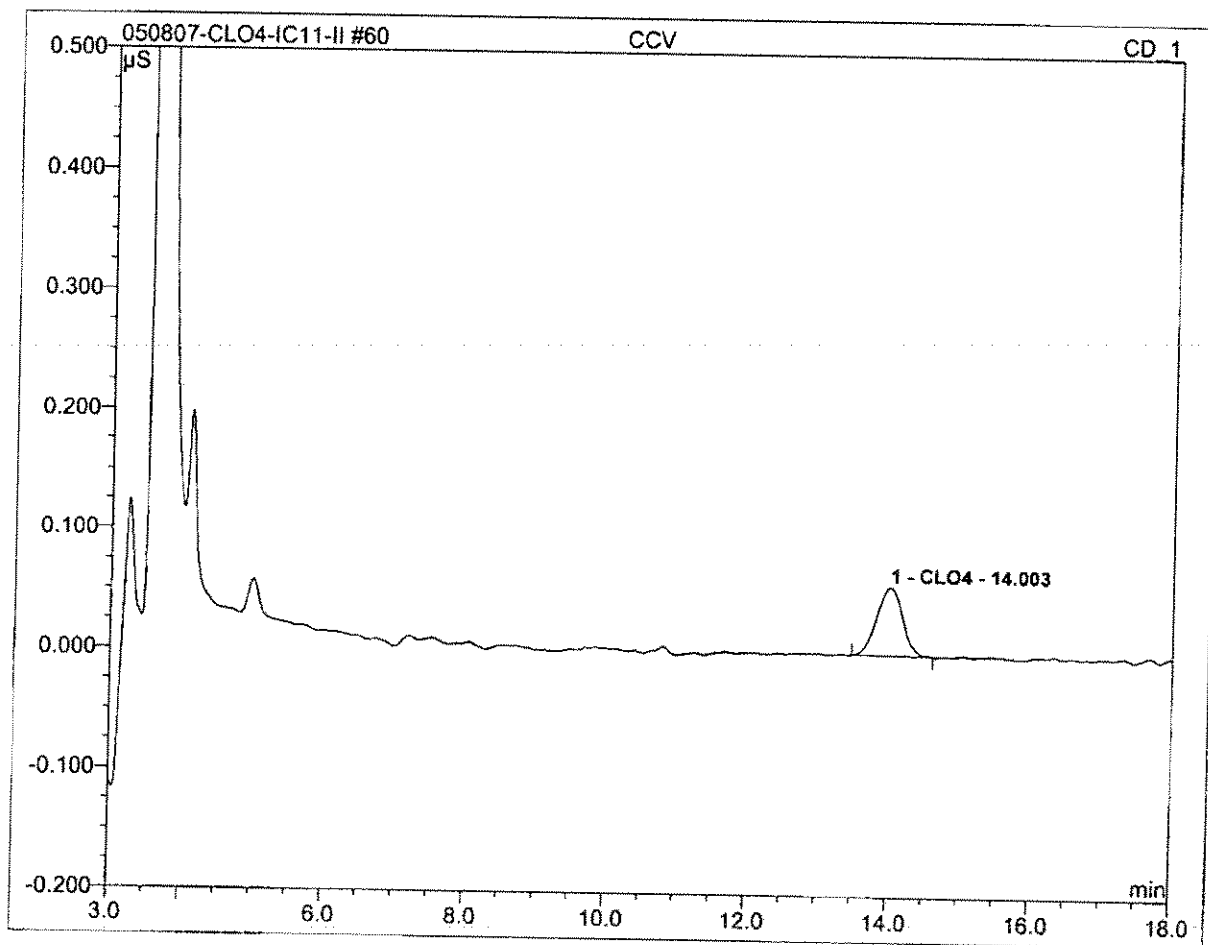
No.	Ret.Time min	Peak Name	Height μS	Area μS*min	Rel.Area %	Amount	Type
1	13.95	CLO4	0.058	0.025	100.00	27.008	BMB
Total:			0.058	0.025	100.00	27.008	

53 2705020813MSD			
Sample Name:	2705020813MSD	Channel:	CD_1
Sample Type:	unknown	Control Program:	Perchlorate-IC11
Recording Time:	05/09/2007 05:11	Quantif. Method:	IC#4-CLO4-LOW
Analyst:	Raja	Dilution Factor:	1.0000



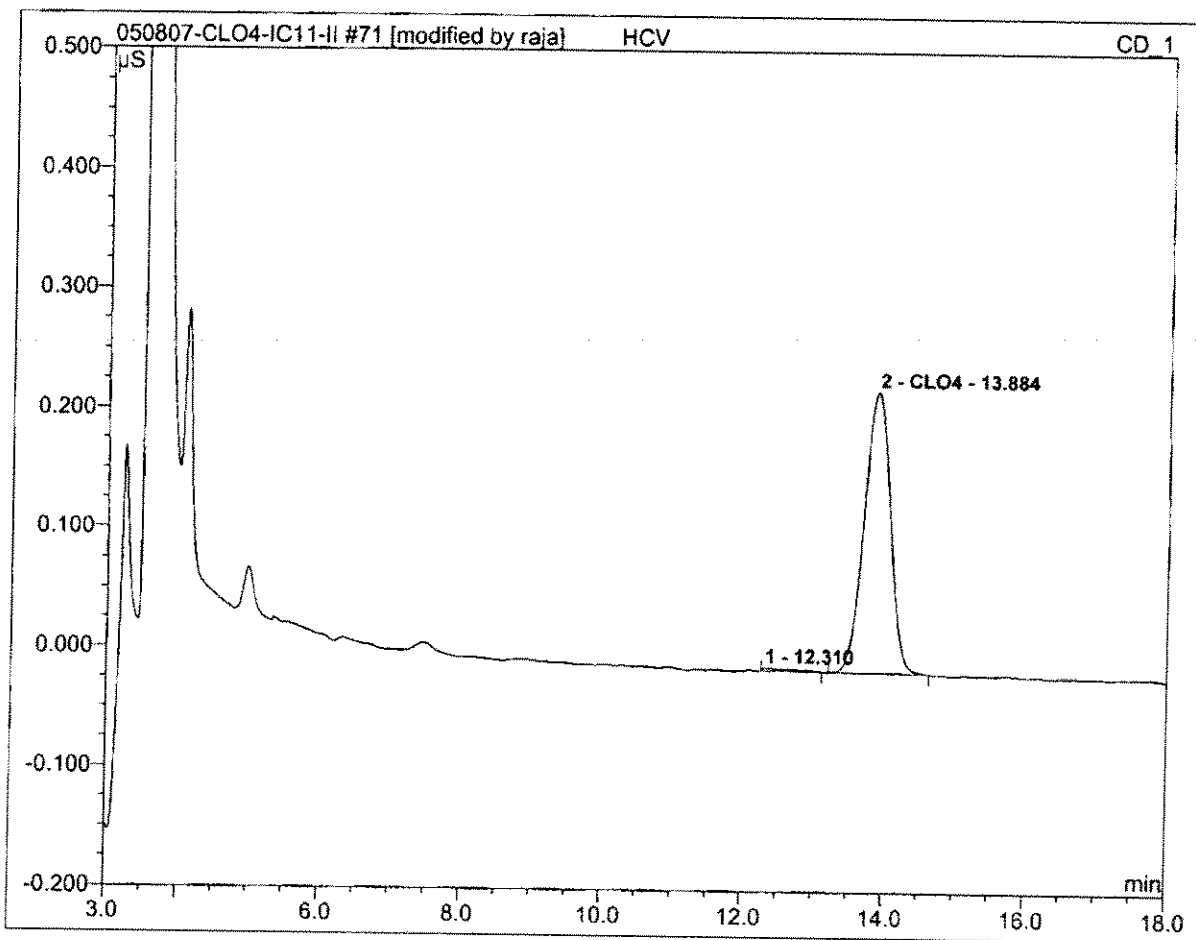
No.	Ret. Time min	Peak Name	Height μS	Area μS*min	Rel. Area %	Amount	Type
2	13.97	CLO4	0.059	0.026	95.38	27.540	BMB
Total:			0.059	0.026	95.38	27.540	

60 CCV			
Sample Name:	CCV	Channel:	CD_1
Sample Type:	unknown	Control Program:	Perchlorate-IC11
Recording Time:	05/09/2007 07:48	Quantif. Method:	IC#4-CLO4-LOW
Analyst:	Raja	Dilution Factor:	1.0000



No.	Ret. Time min	Peak Name	Height μS	Area μS*min	Rel. Area %	Amount	Type
1	14.00	CLO4	0.057	0.024	100.00	25.541	BMB
Total:			0.057	0.024	100.00	25.541	

71 HCV			
Sample Name:	HCV	Channel:	CD_1
Sample Type:	unknown	Control Program:	Perchlorate-IC11
Recording Time:	05/09/2007 11:55	Quantif. Method:	IC#4-CLO4-LOW
Analyst:	Raja	Dilution Factor:	1.0000



No.	Ret.Time min	Peak Name	Height μS	Area μS*min	Rel.Area %	Amount	Type
2	13.88	CLO4	0.235	0.100	98.95	100.926	BMB*
Total:			0.235	0.100	98.95	100.926	

**Standard
Preparation
Worksheet
&
Certificate of
Analysis**

Reagent Preparation Documentation

Reagent: DBP LCS Stock Solution
 Date Received/Prepped: 082706/100106/110106/111606/122006/1610807/1020607
 Date Expired: 092706/110106/120106/121606/1012007/1020807/1030607
 Manufacturer: _____
 Storage Condition: _____

MW #: Raja060827-1
 By: Raja
 Matrix: aq
 Amount: 100ml
 Lot #: _____

Component	Comment	Standard	Concentration
Chlorite 100ppm Exp: -03-24-07	1000 ML ? Add 50ML of EDA (LMR060129-12) the	R 201401	10ppm
Chlorate 1000ppm Exp: -05-31-09	1000 ML dilute to 100 ml with D.I. water	R 201400	10ppm
Bromide Exp: -10-27-07	500 ML	R 201369	5ppm

Comment: _____

Reagent: DBP LCS Solution
 Date Received/Prepped: 082706/100106/110106/111606/122006/1610807/1020607
 Date Expired: 092706/110106/120106/121606/1012007/1020807/1030607
 Manufacturer: _____
 Storage Condition: _____

MW #: Raja060827-2
 By: Raja
 Matrix: aq
 Amount: 100ml
 Lot #: _____

Component	Comment	Standard	Concentration
DBP LCS stock soln	2ml ? Dilute with D.I. water to 100ml	Raja060827-1	ClO ₂ ^- 200ppb
EDA solution	50ML	LMR060129-12	ClO ₂ ^- 200ppb Br^- 100ppb

Comment: Prep: -
Exp: -

Reagent: Perchlorate Calibration Stock Solution
 Date Received/Prepped: 091306/101106/113006/121207/1020607/1022807
 Date Expired: 121306/101107/1023007/1042107/1050607/1052807
 Manufacturer: _____
 Storage Condition: _____

MW #: Raja060913-1
 By: Raja
 Matrix: aq
 Amount: 100ml
 Lot #: _____

Component	Comment	Standard	Concentration
Perchlorate 1000ppm Exp: -072809	100 ML → Dilute with D.I. water to 100ml	R 201449	1000ppb

Comment: 030407/1042107/1051607/1061207/
060407/1072107/1081607/091207/

Reagent Preparation Documentation

Reagent: C104 Calibration Standard #1
Date Received/Prepped: 091306/101106/113006/102107/102207/1022807
Date Expired: 121306/101107/1023007/1042107/1023067/1052807
Manufacturer: _____
Storage Condition: _____

MW #: Raja060913-2
By: Raja
Matrix: ag
Amount: 100ml
Lot #: _____

Component	Comment	Standard	Concentration
C104 Cal. Stock sol'n	200 ML → Dilute to 100ml with D.I. water	Raja060913-1	2.0 ppb

Comment: 030407/042707/051607/061207/060407/072707/081607/091207/

Reagent: C104 Calibration Standard #2
Date Received/Prepped: 091306/101106/113006/102107/102207/1022807
Date Expired: 121306/101107/1023007/1042107/1023067/1052807
Manufacturer: _____
Storage Condition: _____

MW #: Raja060913-3
By: Raja
Matrix: ag
Amount: 100ml
Lot #: _____

Component	Comment	Standard	Concentration
C104 Cal. Stock sol'n	400 ML → Dilute to 100ml with D.I. water	Raja060913-1	4.0 ppb

Comment: 030407/042707/051607/061207/060407/072707/081607/091207/

Reagent: C104 Calibration Standard #3
Date Received/Prepped: 091306/101106/113006/102107/102207/1022807
Date Expired: 121306/101107/1023007/1042107/1023067/1052807
Manufacturer: _____
Storage Condition: _____

MW #: Raja060913-4
By: Raja
Matrix: ag
Amount: 100ml
Lot #: _____

Component	Comment	Standard	Concentration
C104 Cal. Stock sol'n	1ml → Dilute to 100ml with D.I. water	Raja060913-1	10.0 ppb

Comment: 030407/042707/051607/061207/060407/072707/081607/091207/

Reagent Preparation Documentation

Reagent: ClO₄ Calibration Standard #4
Date Received/Prepped: 091306/101106 / 113006 / 012107 / 022807 / 030407
Date Expired: 121306/011107 / 023007 / 042107 / 052807 / 060407
Manufacturer: 023007
Storage Condition: _____

MW #: Raja060913-5
By: Raja
Matrix: aq
Amount: 100ml
Lot #: _____

Component	Comment	Standard	Concentration
ClO ₄ cal. stock sol'n	2.5 ml → Dilute to 100ml with D.I. water	Raja060913-1	25.0 ppb

Comment: 042707 / 051607 / 061207 / 072707 / 081607 / 091207 /

Reagent: ClO₄ Calibration Standard #5
Date Received/Prepped: 091306 / 101106 / 113006 / 012107 / 022807 / 030407
Date Expired: 121306 / 011107 / 023007 / 042107 / 052807 / 060407
Manufacturer: _____
Storage Condition: _____

MW #: Raja060913-6
By: Raja
Matrix: aq
Amount: 100ml
Lot #: _____

Component	Comment	Standard	Concentration
ClO ₄ cal. stock sol'n	5.0 ml → Dilute to 100ml with D.I. water	Raja060913-1	50.0 ppb

Comment: 042707 / 051607 / 072707 / 081607 /

Reagent: ClO₄ Calibration Standard #6
Date Received/Prepped: 091306 / 101106 / 113006 / 012107 / 022807 / 030407
Date Expired: 121306 / 011107 / 023007 / 042107 / 052807 / 060407
Manufacturer: _____
Storage Condition: _____

MW #: Raja060913-7
By: Raja
Matrix: aq
Amount: 100ml
Lot #: _____

Component	Comment	Standard	Concentration
ClO ₄ cal. stock sol'n	10.0 ml → Dilute to 100ml with D.I. water	Raja060913-1	100 ppb

Comment: 042707 / 051607 / 061207 / 072707 / 081607 / 091207 /

CERTIFIED WEIGHT REPORT

Part Number: **57001** Lot # **072806** Solvent(s): **ASTM Type 1 Water**
 Lot Number: **072806**
 Description: **Perchlorate**

R201449

Expiration Date: **072809**
 Nominal Concentration (µg/mL): **1000**

Weight(s) shown below were combined and diluted to (mL): **1000.55** 5E-05 Balance Uncertainty
0.084 Flask Uncertainty

<i>Lawrence Barry</i>	
Formulated By:	Lawrence Barry
<i>Pedro L. Rentas</i>	
Reviewed By:	Pedro L. Rentas
072806	

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Assay (%)	Target Weight(g)	Actual Weight(g)	*Actual Conc. (µg/mL)	Expanded Uncertainty (+/-)	MSDS Information (Solvent Safety Info. On Attached pq.)	NIST
1. Sodium Perchlorate (ClO4)	IN119 AR06730TQ	1000.0	99.0	0.10	81.2	1.2319	1.23216	1000.2	0.00203	07601-89-0	3152a
										N/A	N/A
										LD50	9FM

Method: E300P.M. Column: ASAHIPACK ODP50 (150mm X 4.0mm ID X 5.0µm df). Inj. Volume= 10µL. Flow Rate= 1.5mL/min. Column Temp.= 40°C. Isocratic Analysis using Anion Mobile Phase. Detector: PDA (DAD1, Sig=360,20 REF=266, 10). Analyst: Pedro Rentas.

Peak No.	Name	PDA RT (min.)
1	Sodium Perchlorate	21.78

