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# **Level IV Data Package**

MWH Group 212470

**Method: 314 CLO4**

Sample No.:

2708070418  
2708070422  
2708070423  
2708070424  
2708070425  
2708070426  
2708070427  
2708070428  
2708070429  
2708070430  
2708070431  
2708070432  
2708070433  
2708070434  
2708070437  
2708070439  
2708070440  
2708070441  
2708070442

# Perchlorate QC Checklist

rev: 27 Mar 03

Analysis Date: 8/14/07 Analyst: JL

QC'd by JK Date 15 Aug 07

Instrument: (C1)

Calculated MCT Level: 3155 umhos/cm

Original IPC conductance: 3102 umhos/cm

Daily IPC conductance: 3102 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 (MBLANK, MRL, ICCSCV, IPC) to be analyzed with every batch (up to 20 samples) or part thereof

- MBLANK is analyzed before samples. Perchlorate, if present, is < or = half of the MRL.
- L-ClO<sub>4</sub> only: ICCSCV at 2ppb is within 50%-150% (1-3ppb)
- ClO<sub>4</sub> only: MRL at 4ppb is within 75%-125% (3-5ppb)
- 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

$$PDA/H = 2.6 \checkmark$$

## 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 ~~4(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) ~~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

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

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

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

QIR needed for failed QC

QIR needed for samples analyzed outside of hold time

Sample No.	Sample Name	Dil.Fac.	Comment	Time	Amount
					CLO4 CD_1
1	WASH	1.0	0	08.10.07 11:05	n.a.
2	WASH	1.0	0	08.10.07 11:27	n.a.
3	WASH	1.0	0	08.10.07 11:50	n.a.
4	autocal1	1.0	0	08.10.07 12:12	n.a.
5	autocal2	1.0	2	08.10.07 12:34	2.5852
6	autocal3	1.0	4	08.10.07 12:57	3.9662
7	autocal4	1.0	10	08.10.07 13:19	9.4891
8	autocal5	1.0	25	08.10.07 13:42	24.5774
9	autocal6	1.0	50	08.10.07 14:04	50.4728
10	autocal7	1.0	100	08.10.07 14:26	99.9098
11	QCS	1.0	20	08.10.07 14:49	18.6814
12	IPC	1.0	25	08.10.07 15:11	21.4628
13	-MBLK	1.0		08.10.07 15:34	n.a.
14	-MRLCHK-2	1.0	2	08.10.07 17:07	2.0031
15	-MRLCHK-4	1.0	4	08.10.07 17:29	✓ 4.3482
16	-LCS1	1.0	25	08.10.07 17:52	✓ 23.5836
17	-LCS2	1.0	25	08.10.07 18:14	✓ 24.1687
18	2708070418_1/5 DNR	5.0		08.10.07 18:36	176.7640
19	2708070422_1/2500 ✓	2500.0		08.10.07 18:59	✓ 78546.1444
20	2708070423_1/10000 ✓	10000.0		08.10.07 19:21	✓ 327122.7798
21	2708070424_1/10000 ✓	10000.0		08.10.07 19:43	✓ 294562.0546
22	2708070425_1/5000 ✓	5000.0		08.10.07 20:06	✓ 82342.3120
23	2708070426_1/5000 ✓	5000.0		08.10.07 20:28	✓ 129574.7463
24	2708070427_1/10000 DNR	10000.0		08.10.07 20:51	317078.7909
25	2708070428_1/500 ✓	500.0		08.10.07 21:13	✓ 11443.2161
26	2708070429_1/500 ✓	500.0		08.10.07 21:36	✓ 10603.6993
27	2708070430_1/500 ✓	500.0		08.10.07 21:58	✓ 7881.0937
28	2708070430-MS	500.0	25	08.10.07 22:21	✓ 21207.9148
29	2708070430-MSD	500.0	25	08.10.07 22:43	✓ 20324.1481
30	CCV	1.0	25	08.10.07 23:05	23.3436
31	2708070431_1/100 DNR	100.0		08.10.07 23:28	n.a.
32	2708070432_1/5 DNR	5.0		08.10.07 23:50	11.4006
33	2708070433_1/100 ✓	100.0		08.11.07 00:13	✓ 2832.5546
34	2708070434_1/200 ✓	200.0		08.11.07 00:35	✓ 9275.3096
35	2708070437_1/100 DNR	100.0		08.11.07 00:58	4404.7626
36	2708070439_1/100 ✓	100.0		08.11.07 01:20	✓ 2018.6001
37	2708070440_1/100 ✓	100.0		08.11.07 01:42	✓ 1317.1205
38	2708070441_1/100 ✓	100.0		08.11.07 02:04	✓ 3737.7052
39	2708070442_1/10000 ✓	10000.0		08.11.07 02:27	✓ 339459.6474
40	2708070591_1/5	5.0		08.11.07 02:49	/ n.a.
41	HCV	1.0	100	08.11.07 03:11	100.6772
42	IPC	1.0	25	08.11.07 03:34	21.6242
43	-MBLK	1.0		08.11.07 03:56	n.a.
44	-MRLCHK-2	1.0	2	08.11.07 04:19	1.9810

45	-MRLCHK-4	1.0	4	08.11.07 04:41	3.3921
46	-LCS1	1.0	25	08.11.07 05:03	25.7233
47	-LCS2	1.0	25	08.11.07 05:26	27.3664
48	2708040008_1/50000 DNR	50000.0	RR	08.11.07 05:48	791538.7316
49	2708070254 DNR	1.0	RR	08.11.07 06:11	19.5317
50	2708070254-MS DNR	1.0	25	08.11.07 06:33	24.6021
51	2708070254-MSD DNR	1.0	25	08.11.07 06:55	8.8126
52	2708060473_1/2 DNR	2.0	RR	08.11.07 07:18	n.a.
53	2708060474_1/2 DNR	2.0	RR	08.11.07 07:40	3.9226
54	2708060475_1/2 DNR	2.0	RR	08.11.07 08:03	n.a.
55	2708070270_1/10000 DNR	10000.0	RR	08.11.07 08:25	226377.9942
56	2708070595_1/10000 DNR	10000.0		08.11.07 08:47	240558.1866
57	2708030110 DNR	1.0	RR	08.11.07 09:10	n.a.
58	2708070760 DNR	1.0		08.11.07 09:32	4.6564
59	2708080198 DNR	1.0		08.11.07 09:55	n.a.
60	CCV	1.0	25	08.11.07 10:17	26.3500
61	2708080595 DNR	1.0		08.11.07 10:39	n.a.
62	2708080624 DNR	1.0		08.11.07 11:02	n.a.
63	2708080625 DNR	1.0		08.11.07 11:24	5.0107
64	2708080626 DNR	1.0		08.11.07 11:47	n.a.
65	2708080627 DNR	1.0		08.11.07 12:09	n.a.
66	2708090352 DNR	1.0		08.11.07 12:31	9.9328
67	2708090353 DNR	1.0		08.11.07 12:54	n.a.
68	2708090354 DNR	1.0		08.11.07 13:16	4.9468
69	2708090355 DNR	1.0		08.11.07 13:39	n.a.
70	HCV	1.0		08.11.07 14:01	102.5368
71	STOP	1.0		08.11.07 14:46	n.a.

CONDUCTIVITY MW SOP REVISION 5  
SM2510B

Analysis Date: 123 08/10/07

Analyst: CLK

Time of Analysis Start: 1230 End:

Reviewed By:

MRL 2umhos/cm: R# exp of solution:

LIMS Check By:

KCl Std 1412 R# 201668 exp of solution 12/07

Was QC Criteria Met: Y N

TV = 1412  $\mu\text{mho}/\text{cm}$  @ 25°C for 0.0100M

Was QIR Needed: Y N

Reading: 1392

Wear 8/10/07

Instrument: YSI Model 3200 SN:01A0504, Year Acquired 2001 New

Run #	Sample Number	Sample ID	Client	Date Collected	Result					Comments
					Temp °C	pH	Scale ( $\mu\text{mho}/\text{mmho}$ )	Instrument	Reported ( $\mu\text{mho}/\text{cm}$ )	
Bk	Blank				7	7	mS		0.3602	
STD	MRL 2umhos/cm				1	1			—	1-3 $\pm$ 50% of TV
STD	KCl - 1000 mhos/cm								—	950-1050 $\pm$ 5% of TV
1	2708070418	ART1	KM	08/06/07					10000	
2	0422	2							15000	
3	0423	3							10000	
4	0424	4							8800	
5	0425	6							10000	
6	0426	7							14500	
7	0427	8							14600	
8	0428	TC99R2/R3							5900	
9	0429	115R							6200	
10	0430	116R							6200	
DUP		↓	↓	↓					6200	RPD < 5%
11	0431	SEEP SURFACE							5700	
12	0432	ST1							9900	
13	0433	PC117							5300	
14	0434	118							6400	
15	0437	119							5600	
16	0437	120							4600	
17	0440	121							4300	
18	0441	133							5100	
19	0442	ART9							10000	
20	0591	EPT							9500	
DUP		↓	↓	↓					9500	RPD < 5%
STD	KCl - 10 mhos/cm				↓	↓	↓	↓	9.5W	—
					A	A	A	A	9.5W	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: 081007-CLO4-IC11  
Operator: clv

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Printed: 8/13/2007 6:20:55 PM

Title:  
Datasource: Dionex\_USPAS2SDIO2  
Location: IC\IC11\_CLO4\2007AUG  
Timebase: IC11  
#Samples: 71

Created: 8/9/2007 9:45:38 AM by clv  
Last Update: 8/13/2007 2:59:08 PM by clv

No.	Name	Sample ID	Dil. Factor	Type	Comment	Status
1	WASH		1.0000	Unknown	0	Finished
2	WASH		1.0000	Unknown	0	Finished
3	WASH		1.0000	Unknown	0	Finished
4	autocal1		1.0000	Standard	0	Finished
5	autocal2	R201449 EXP 07/28/09	1.0000	Standard	2	Finished
6	autocal3		1.0000	Standard	4	Finished
7	autocal4		1.0000	Standard	10	Finished
8	autocal5		1.0000	Standard	25	Finished
9	autocal6		1.0000	Standard	50	Finished
10	autocal7		1.0000	Standard	100	Finished
11	QCS	R201449 EXP 07/28/09	1.0000	Unknown	20	Finished
12	IPC	EC=3155	1.0000	Unknown	25	Finished
13	-MBLK		1.0000	Unknown		Finished
14	-MRLCHK-2	2	1.0000	Unknown	2	Finished
15	-MRLCHK-4	4	1.0000	Unknown	4	Finished
16	-LCS1	25	1.0000	Unknown	25	Finished
17	-LCS2	25	1.0000	Unknown	25	Finished
18	2708070418_1/5 DNR	KM ART-1	5.0000	Unknown		Finished
19	2708070422_1/2500	KM ART-2	2500.0000	Unknown		Finished
20	2708070423_1/10000	KM ART-3	10000.0000	Unknown		Finished
21	2708070424_1/10000	KM ART-4	10000.0000	Unknown		Finished
22	2708070425_1/5000	KM ART-6	5000.0000	Unknown		Finished
23	2708070426_1/5000	KM ART-7	5000.0000	Unknown		Finished
24	2708070427_1/10000 DNR	KM ART-8	10000.0000	Unknown		Finished
25	2708070428_1/500	KM PC99R2/R3	500.0000	Unknown		Finished
26	2708070429_1/500	KM PC-115R	500.0000	Unknown		Finished
27	2708070430_1/500	KM PC-116R	500.0000	Unknown		Finished
28	2708070430-MS	25	500.0000	Unknown	25	Finished
29	2708070430-MSD	25	500.0000	Unknown	25	Finished
30	CCV	25	1.0000	Unknown	25	Finished
31	2708070431_1/100 DNR	KM SEEP SURFACE	100.0000	Unknown		Finished
32	2708070432_1/5 DNR	KM SF-1	5.0000	Unknown		Finished
33	2708070433_1/100	KM PC-117	100.0000	Unknown		Finished
34	2708070434_1/200	KM PC-118	200.0000	Unknown		Finished
35	2708070437_1/100 DNR	KM PC-119	100.0000	Unknown		Finished
36	2708070439_1/100	KM PC-120	100.0000	Unknown		Finished
37	2708070440_1/100	KM PC-121	100.0000	Unknown		Finished
38	2708070441_1/100	KM PC-133	100.0000	Unknown		Finished
39	2708070442_1/10000	KM ART-9	10000.0000	Unknown		Finished
40	2708070591_1/5	KM EFF	5.0000	Unknown		Finished
41	HCV	100	1.0000	Unknown	100	Finished
42	IPC	EC=3155	1.0000	Unknown	25	Finished

Sequence: 081007-CLO4-IC11  
Operator: clv

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Title:  
Datasource: Dionex\_USPAS2SDIO2  
Location: IC\IC11\_CLO4\2007\AUG  
Timebase: IC11  
#Samples: 71

Created: 8/9/2007 9:45:38 AM by clv  
Last Update: 8/13/2007 2:59:08 PM by clv

No.	Name	Program	Method	Inj. Date/Time	*Analyst
1	WASH	Perchlorate-IC11	IC#4-CLO4-LOW	8/10/2007 11:05:18 AM	clv
2	WASH	Perchlorate-IC11	IC#4-CLO4-LOW	8/10/2007 11:27:41 AM	clv
3	WASH	Perchlorate-IC11	IC#4-CLO4-LOW	8/10/2007 11:50:05 AM	clv
4	autocal1	Perchlorate-IC11	IC#4-CLO4-LOW	8/10/2007 12:12:30 PM	clv
5	autocal2	Perchlorate-IC11	IC#4-CLO4-LOW	8/10/2007 12:34:53 PM	clv
6	autocal3	Perchlorate-IC11	IC#4-CLO4-LOW	8/10/2007 12:57:18 PM	clv
7	autocal4	Perchlorate-IC11	IC#4-CLO4-LOW	8/10/2007 1:19:41 PM	clv
8	autocal5	Perchlorate-IC11	IC#4-CLO4-LOW	8/10/2007 1:42:05 PM	clv
9	autocal6	Perchlorate-IC11	IC#4-CLO4-LOW	8/10/2007 2:04:29 PM	clv
10	autocal7	Perchlorate-IC11	IC#4-CLO4-LOW	8/10/2007 2:26:51 PM	clv
11	QCS	Perchlorate-IC11	IC#4-CLO4-LOW	8/10/2007 2:49:15 PM	clv
12	IPC	Perchlorate-IC11	IC#4-CLO4-LOW	8/10/2007 3:11:39 PM	clv
13	-MBLK	Perchlorate-IC11	IC#4-CLO4-LOW	8/10/2007 3:34:03 PM	clv
14	-MRLCHK-2	Perchlorate-IC11	IC#4-CLO4-LOW	8/10/2007 5:07:17 PM	clv
15	-MRLCHK-4	Perchlorate-IC11	IC#4-CLO4-LOW	8/10/2007 5:29:40 PM	clv
16	-LCS1	Perchlorate-IC11	IC#4-CLO4-LOW	8/10/2007 5:52:04 PM	clv
17	-LCS2	Perchlorate-IC11	IC#4-CLO4-LOW	8/10/2007 6:14:27 PM	clv
18	2708070418_1/5 DNR	Perchlorate-IC11	IC#4-CLO4-LOW	8/10/2007 6:36:50 PM	clv
19	2708070422_1/2500	Perchlorate-IC11	IC#4-CLO4-LOW	8/10/2007 6:59:13 PM	clv
20	2708070423_1/10000	Perchlorate-IC11	IC#4-CLO4-LOW	8/10/2007 7:21:36 PM	clv
21	2708070424_1/10000	Perchlorate-IC11	IC#4-CLO4-LOW	8/10/2007 7:43:59 PM	clv
22	2708070425_1/5000	Perchlorate-IC11	IC#4-CLO4-LOW	8/10/2007 8:06:22 PM	clv
23	2708070426_1/5000	Perchlorate-IC11	IC#4-CLO4-LOW	8/10/2007 8:28:45 PM	clv
24	2708070427_1/10000 DNR	Perchlorate-IC11	IC#4-CLO4-LOW	8/10/2007 8:51:09 PM	clv
25	2708070428_1/500	Perchlorate-IC11	IC#4-CLO4-LOW	8/10/2007 9:13:41 PM	clv
26	2708070429_1/500	Perchlorate-IC11	IC#4-CLO4-LOW	8/10/2007 9:36:08 PM	clv
27	2708070430_1/500	Perchlorate-IC11	IC#4-CLO4-LOW	8/10/2007 9:58:36 PM	clv
28	2708070430-MS	Perchlorate-IC11	IC#4-CLO4-LOW	8/10/2007 10:21:03 PM	clv
29	2708070430-MSD	Perchlorate-IC11	IC#4-CLO4-LOW	8/10/2007 10:43:30 PM	clv
30	CCV	Perchlorate-IC11	IC#4-CLO4-LOW	8/10/2007 11:05:57 PM	clv
31	2708070431_1/100 DNR	Perchlorate-IC11	IC#4-CLO4-LOW	8/10/2007 11:28:24 PM	clv
32	2708070432_1/5 DNR	Perchlorate-IC11	IC#4-CLO4-LOW	8/10/2007 11:50:51 PM	clv
33	2708070433_1/100	Perchlorate-IC11	IC#4-CLO4-LOW	8/11/2007 12:13:18 AM	clv
34	2708070434_1/200	Perchlorate-IC11	IC#4-CLO4-LOW	8/11/2007 12:35:46 AM	clv
35	2708070437_1/100 DNR	Perchlorate-IC11	IC#4-CLO4-LOW	8/11/2007 12:58:13 AM	clv
36	2708070439_1/100	Perchlorate-IC11	IC#4-CLO4-LOW	8/11/2007 1:20:40 AM	clv
37	2708070440_1/100	Perchlorate-IC11	IC#4-CLO4-LOW	8/11/2007 1:42:24 AM	clv
38	2708070441_1/100	Perchlorate-IC11	IC#4-CLO4-LOW	8/11/2007 2:04:44 AM	clv
39	2708070442_1/10000	Perchlorate-IC11	IC#4-CLO4-LOW	8/11/2007 2:27:06 AM	clv
40	2708070591_1/5	Perchlorate-IC11	IC#4-CLO4-LOW	8/11/2007 2:49:27 AM	clv
41	HCV	Perchlorate-IC11	IC#4-CLO4-LOW	8/11/2007 3:11:49 AM	clv
42	IPC	Perchlorate-IC11	IC#4-CLO4-LOW	8/11/2007 3:34:11 AM	clv

Sequence: 081007-CLO4-IC11  
Operator: clv

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Printed: 8/13/2007 6:20:55 PM

Title:  
Datasource: Dionex\_USPAS2SDIO2  
Location: IC\IC11\_CLO4\2007AUG  
Timebase: IC11  
#Samples: 71

Created: 8/9/2007 9:45:38 AM by clv  
Last Update: 8/13/2007 2:59:08 PM by clv

No.	Name	Sample ID	Dil. Factor	Type	Comment	Status
43	-MBLK		1.0000	Unknown		Finished
44	-MRLCHK-2	2	1.0000	Unknown	2	Finished
45	-MRLCHK-4	4	1.0000	Unknown	4	Finished
46	-LCS1	25	1.0000	Unknown	25	Finished
47	-LCS2	25	1.0000	Unknown	25	Finished
48	2708040008_1/50000 DNR	KM M-89	50000.0000	Unknown	RR	Finished
49	2708070254 DNR	CALWATER 678	1.0000	Unknown	RR	Finished
50	2708070254-MS DNR	25	1.0000	Unknown	25	Finished
51	2708070254-MSD DNR	25	1.0000	Unknown	25	Finished
52	2708060473_1/2 DNR	IEUA CUCAMONGA CRK	2.0000	Unknown	RR	Finished
53	2708060474_1/2 DNR	IEUA CUCAMONGA CRK	2.0000	Unknown	RR	Finished
54	2708060475_1/2 DNR	IEUA SAN ANTONIO CRK	2.0000	Unknown	RR	Finished
55	2708070270_1/10000 DNR	KM INF-COMP	10000.0000	Unknown	RR	Finished
56	2708070595_1/10000 DNR	KM INF	10000.0000	Unknown		Finished
57	2708030110 DNR	TUCSON 112	1.0000	Unknown	RR	Finished
58	2708070760 DNR	IEUA RP3	1.0000	Unknown		Finished
59	2708080198 DNR	VALEYWA W1+4	1.0000	Unknown		Finished
60	CCV	25	1.0000	Unknown	25	Finished
61	2708080595 DNR	FOOTHILL MWD A	1.0000	Unknown		Finished
62	2708080624 DNR	VALENCIA W6	1.0000	Unknown		Finished
63	2708080625 DNR	VALENCIA W2 SOURCE	1.0000	Unknown		Finished
64	2708080626 DNR	VALENCIA W2 LEAD	1.0000	Unknown		Finished
65	2708080627 DNR	VALENCIA W2 LAG	1.0000	Unknown		Finished
66	2708090352 DNR	CALWATER 344	1.0000	Unknown		Finished
67	2708090353 DNR	CALWATER 345	1.0000	Unknown		Finished
68	2708090354 DNR	CALWATER 346	1.0000	Unknown		Finished
69	2708090355 DNR	CALWATER 347	1.0000	Unknown		Finished
70	HCV	100	1.0000	Unknown		Finished
71	STOP		1.0000	Unknown		Interrupted

Sequence: 081007-CLO4-IC11  
Operator: clv

Page 4 of 4  
Printed: 8/13/2007 6:20:55 PM

Title:  
Datasource: Dionex\_USPAS2SDIO2  
Location: IC\IC11\_CLO4\2007AUG  
Timebase: IC11  
#Samples: 71

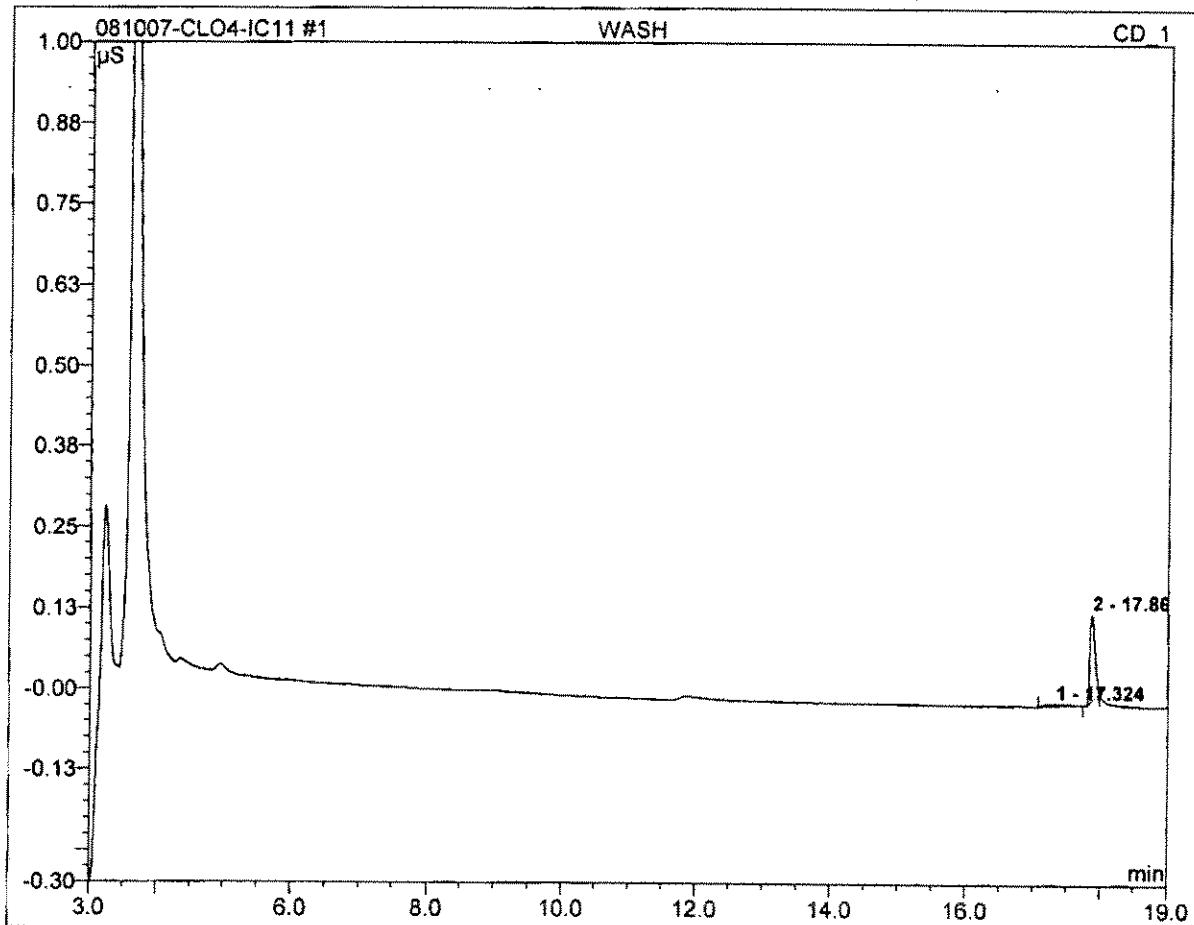
Created: 8/9/2007 9:45:38 AM by clv  
Last Update: 8/13/2007 2:59:08 PM by clv

No.	Name	Program	Method	Inj. Date/Time	*Analyst
43	-MBLK	Perchlorate-IC11	IC#4-CLO4-LOW	8/11/2007 3:56:46 AM	clv
44	-MRLCHK-2	Perchlorate-IC11	IC#4-CLO4-LOW	8/11/2007 4:19:09 AM	clv
45	-MRLCHK-4	Perchlorate-IC11	IC#4-CLO4-LOW	8/11/2007 4:41:31 AM	clv
46	-LCS1	Perchlorate-IC11	IC#4-CLO4-LOW	8/11/2007 5:03:54 AM	clv
47	-LCS2	Perchlorate-IC11	IC#4-CLO4-LOW	8/11/2007 5:26:16 AM	clv
48	2708040008_1/50000 DNR	Perchlorate-IC11	IC#4-CLO4-LOW	8/11/2007 5:48:39 AM	clv
49	2708070254 DNR	Perchlorate-IC11	IC#4-CLO4-LOW	8/11/2007 6:11:09 AM	clv
50	2708070254-MS DNR	Perchlorate-IC11	IC#4-CLO4-LOW	8/11/2007 6:33:33 AM	clv
51	2708070254-MSD DNR	Perchlorate-IC11	IC#4-CLO4-LOW	8/11/2007 6:55:56 AM	clv
52	2708060473_1/2 DNR	Perchlorate-IC11	IC#4-CLO4-LOW	8/11/2007 7:18:19 AM	clv
53	2708060474_1/2 DNR	Perchlorate-IC11	IC#4-CLO4-LOW	8/11/2007 7:40:42 AM	clv
54	2708060475_1/2 DNR	Perchlorate-IC11	IC#4-CLO4-LOW	8/11/2007 8:03:05 AM	clv
55	2708070270_1/10000 DNR	Perchlorate-IC11	IC#4-CLO4-LOW	8/11/2007 8:25:33 AM	clv
56	2708070595_1/10000 DNR	Perchlorate-IC11	IC#4-CLO4-LOW	8/11/2007 8:47:56 AM	clv
57	2708030110 DNR	Perchlorate-IC11	IC#4-CLO4-LOW	8/11/2007 9:10:20 AM	clv
58	2708070760 DNR	Perchlorate-IC11	IC#4-CLO4-LOW	8/11/2007 9:32:43 AM	clv
59	2708080198 DNR	Perchlorate-IC11	IC#4-CLO4-LOW	8/11/2007 9:55:07 AM	clv
60	CCV	Perchlorate-IC11	IC#4-CLO4-LOW	8/11/2007 10:17:30 AM	clv
61	2708080595 DNR	Perchlorate-IC11	IC#4-CLO4-LOW	8/11/2007 10:39:56 AM	clv
62	2708080624 DNR	Perchlorate-IC11	IC#4-CLO4-LOW	8/11/2007 11:02:20 AM	clv
63	2708080625 DNR	Perchlorate-IC11	IC#4-CLO4-LOW	8/11/2007 11:24:43 AM	clv
64	2708080626 DNR	Perchlorate-IC11	IC#4-CLO4-LOW	8/11/2007 11:47:07 AM	clv
65	2708080627 DNR	Perchlorate-IC11	IC#4-CLO4-LOW	8/11/2007 12:09:31 PM	clv
66	2708090352 DNR	Perchlorate-IC11	IC#4-CLO4-LOW	8/11/2007 12:31:54 PM	clv
67	2708090353 DNR	Perchlorate-IC11	IC#4-CLO4-LOW	8/11/2007 12:54:19 PM	clv
68	2708090354 DNR	Perchlorate-IC11	IC#4-CLO4-LOW	8/11/2007 1:16:42 PM	clv
69	2708090355 DNR	Perchlorate-IC11	IC#4-CLO4-LOW	8/11/2007 1:39:06 PM	clv
70	HCV	Perchlorate-IC11	IC#4-CLO4-LOW	8/11/2007 2:01:30 PM	clv
71	STOP	IC11 Stop	IC#4-CLO4-LOW	8/11/2007 2:46:18 PM	clv

**1 WASH**

0

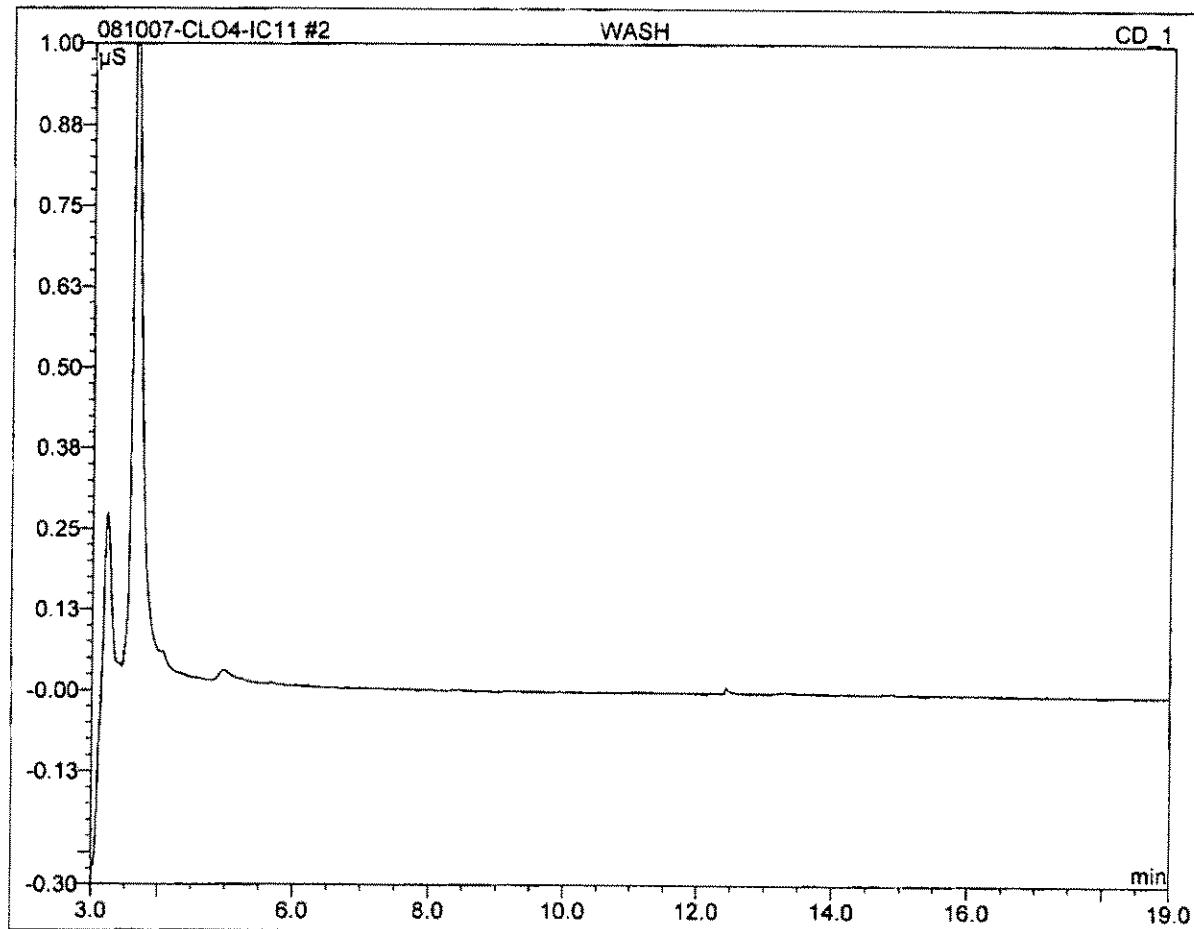
<b>Sample Name:</b>	<b>WASH</b>	<b>Channel:</b>	<b>CD_1</b>
<b>Sample Type:</b>	<b>unknown</b>	<b>Control Program:</b>	<b>Perchlorate-IC11</b>
<b>Recording Time:</b>	<b>08/10/2007 11:05</b>	<b>Quantif. Method:</b>	<b>IC#4-CLO4-LOW</b>
<b>Analyst:</b>	<b>clv</b>	<b>Dilution Factor:</b>	<b>1.0000</b>



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 WASH****0**

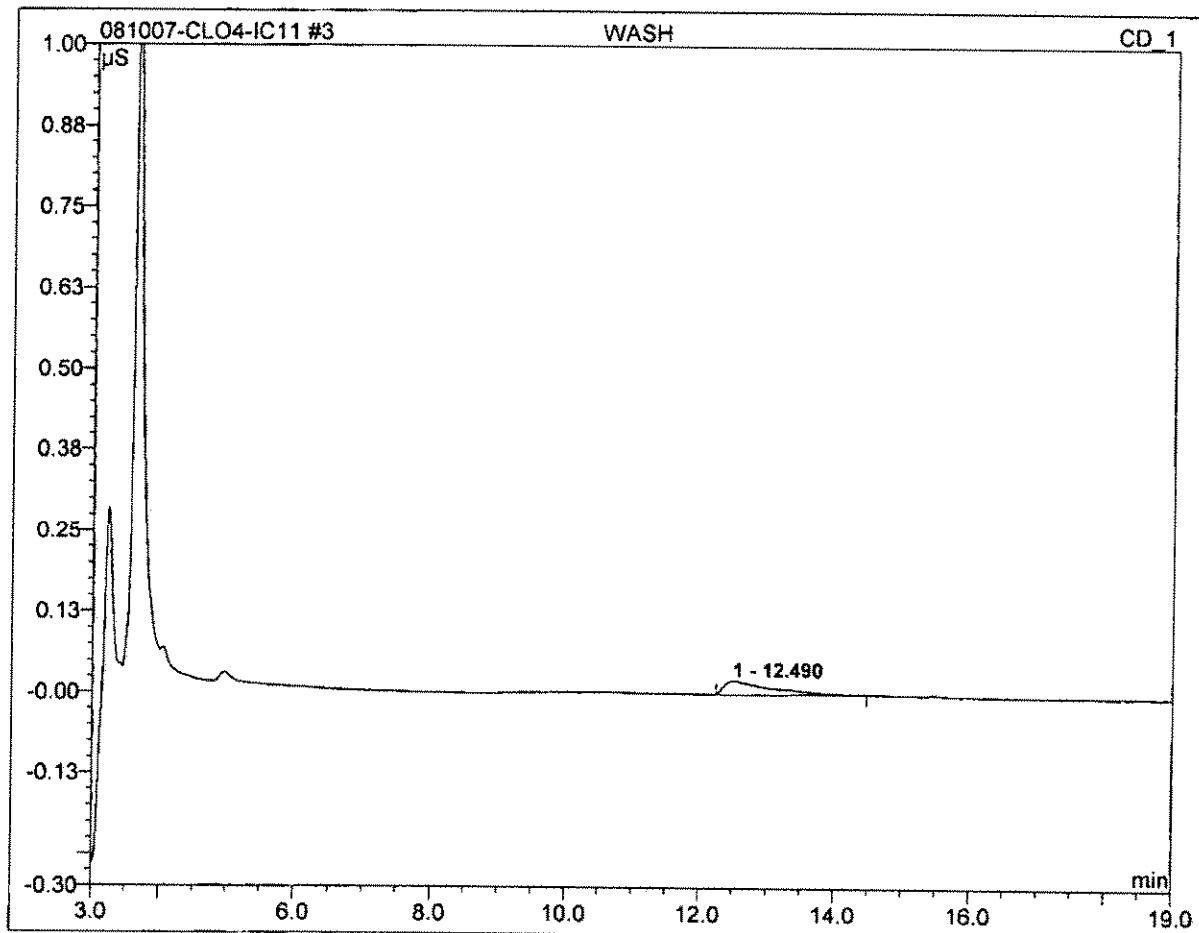
Sample Name:	WASH	Channel:	CD_1
Sample Type:	unknown	Control Program:	Perchlorate-IC11
Recording Time:	08/10/2007 11:27	Quantif. Method:	IC#4-CLO4-LOW
Analyst:	clv	Dilution Factor:	1.0000



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

**3 WASH****0**

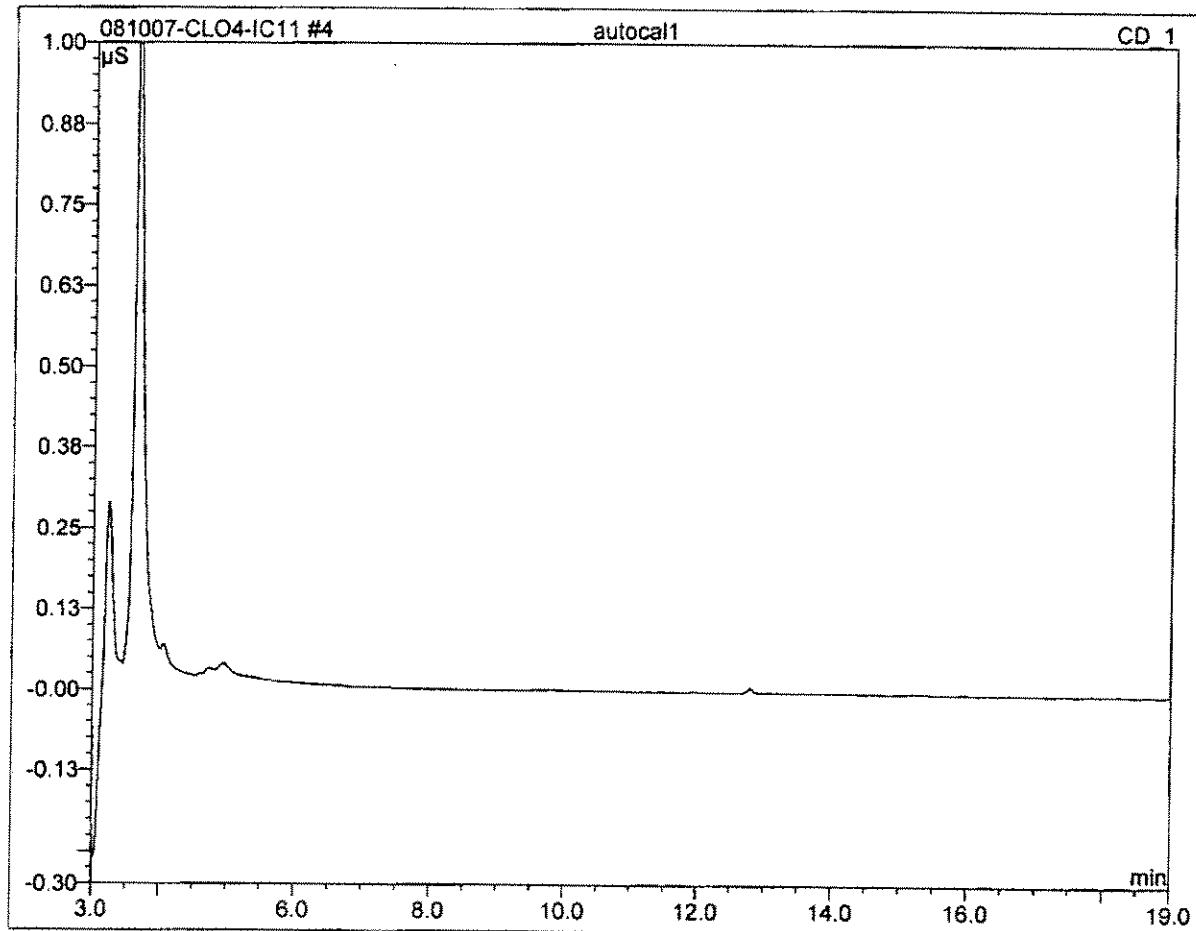
<b>Sample Name:</b>	<b>WASH</b>	<b>Channel:</b>	<b>CD_1</b>
<b>Sample Type:</b>	<b>unknown</b>	<b>Control Program:</b>	<b>Perchlorate-IC11</b>
<b>Recording Time:</b>	<b>08/10/2007 11:50</b>	<b>Quantif. Method:</b>	<b>IC#4-CLO4-LOW</b>
<b>Analyst:</b>	<b>clv</b>	<b>Dilution Factor:</b>	<b>1.0000</b>



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

**4 autocal1****0**

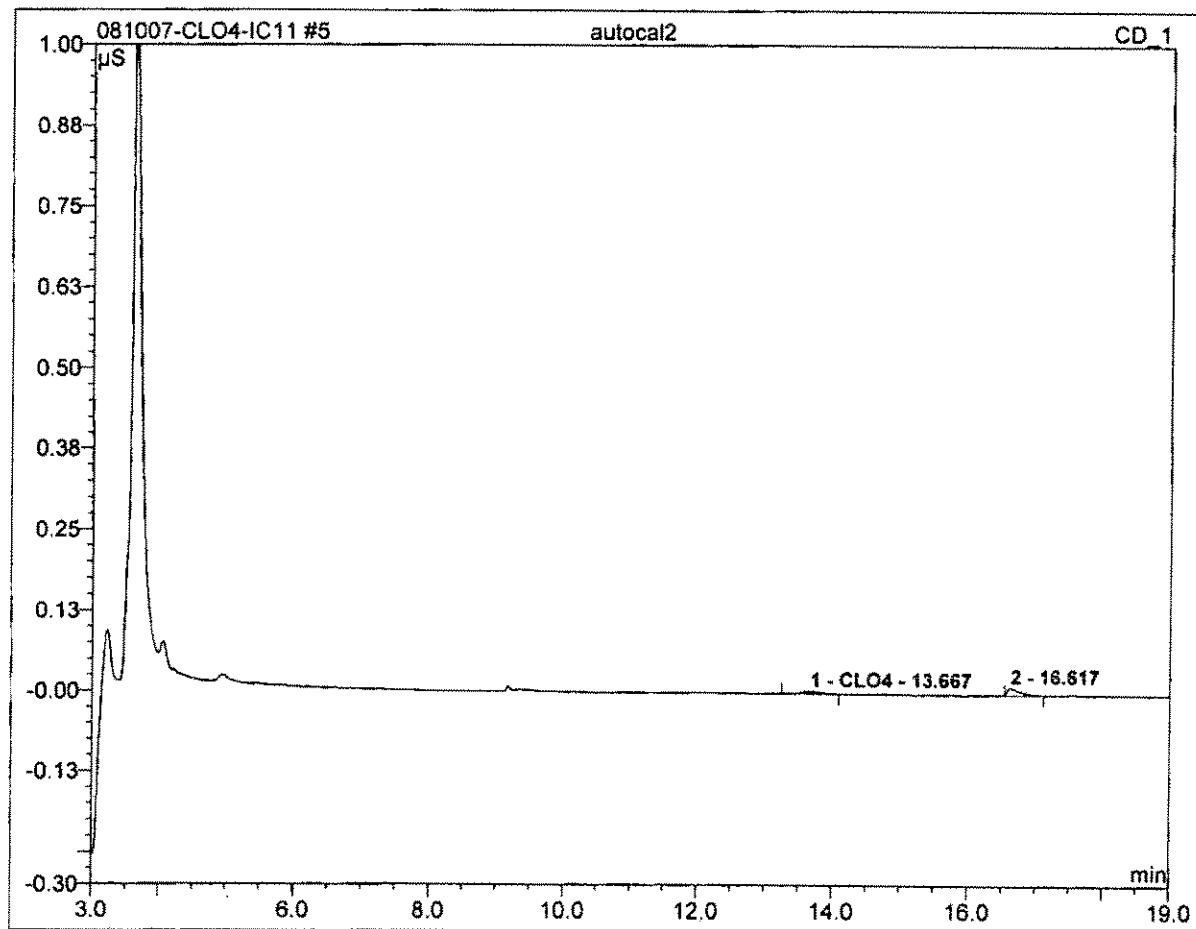
<b>Sample Name:</b>	<b>autocal1</b>	<b>Channel:</b>	<b>CD_1</b>
<b>Sample Type:</b>	<b>standard</b>	<b>Control Program:</b>	<b>Perchlorate-IC11</b>
<b>Recording Time:</b>	<b>08/10/2007 12:12</b>	<b>Quantif. Method:</b>	<b>IC#4-CLO4-LOW</b>
<b>Analyst:</b>	<b>civ</b>	<b>Dilution Factor:</b>	<b>1.0000</b>



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

**5 autocal2****2**

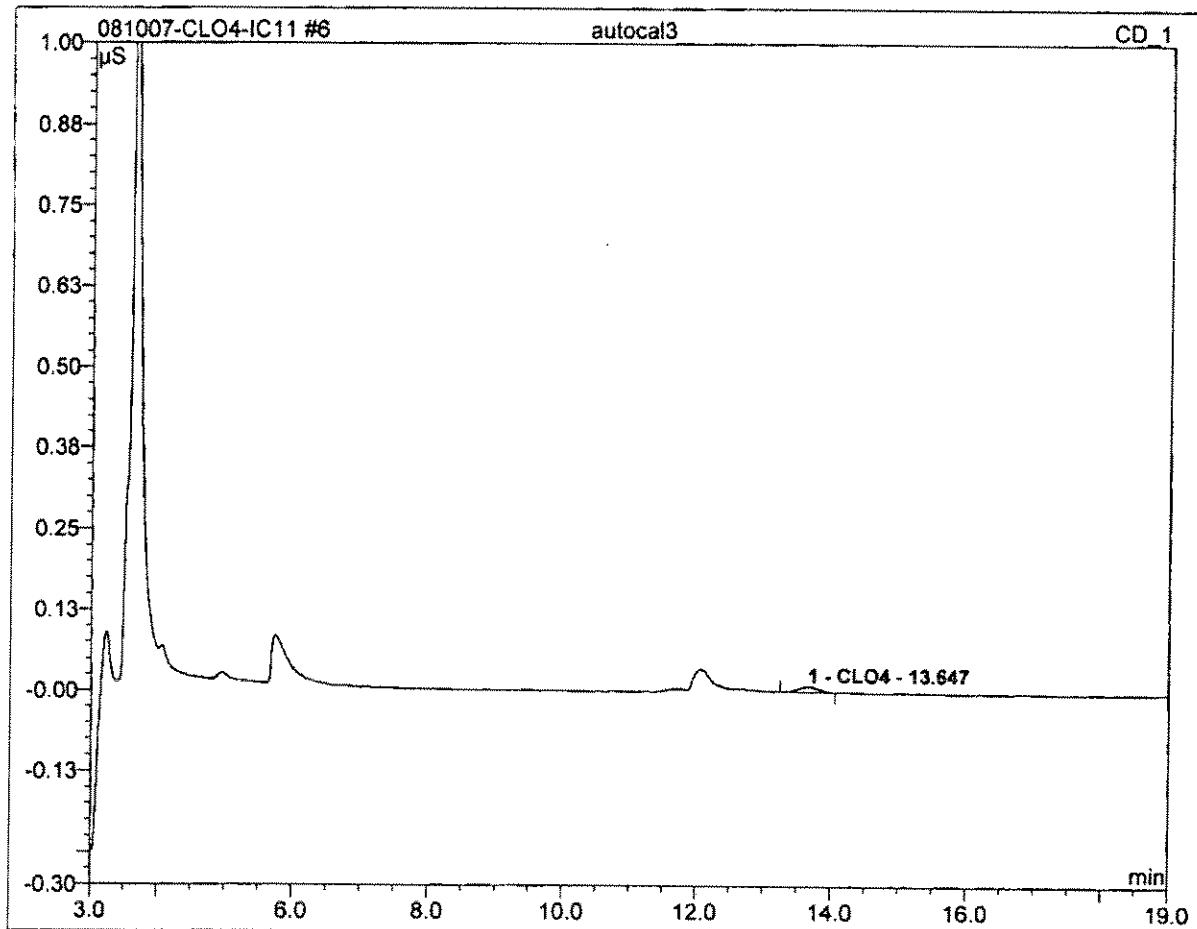
Sample Name:	autocal2	Channel:	CD_1
Sample Type:	standard	Control Program:	Perchlorate-IC11
Recording Time:	08/10/2007 12:34	Quantif. Method:	IC#4-CLO4-LOW
Analyst:	clv	Dilution Factor:	1.0000



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	13.67	CLO4	0.004	0.002	39.05	2.585	BMB
Total:			0.004	0.002	39.05	2.585	

**6 autocal3****4**

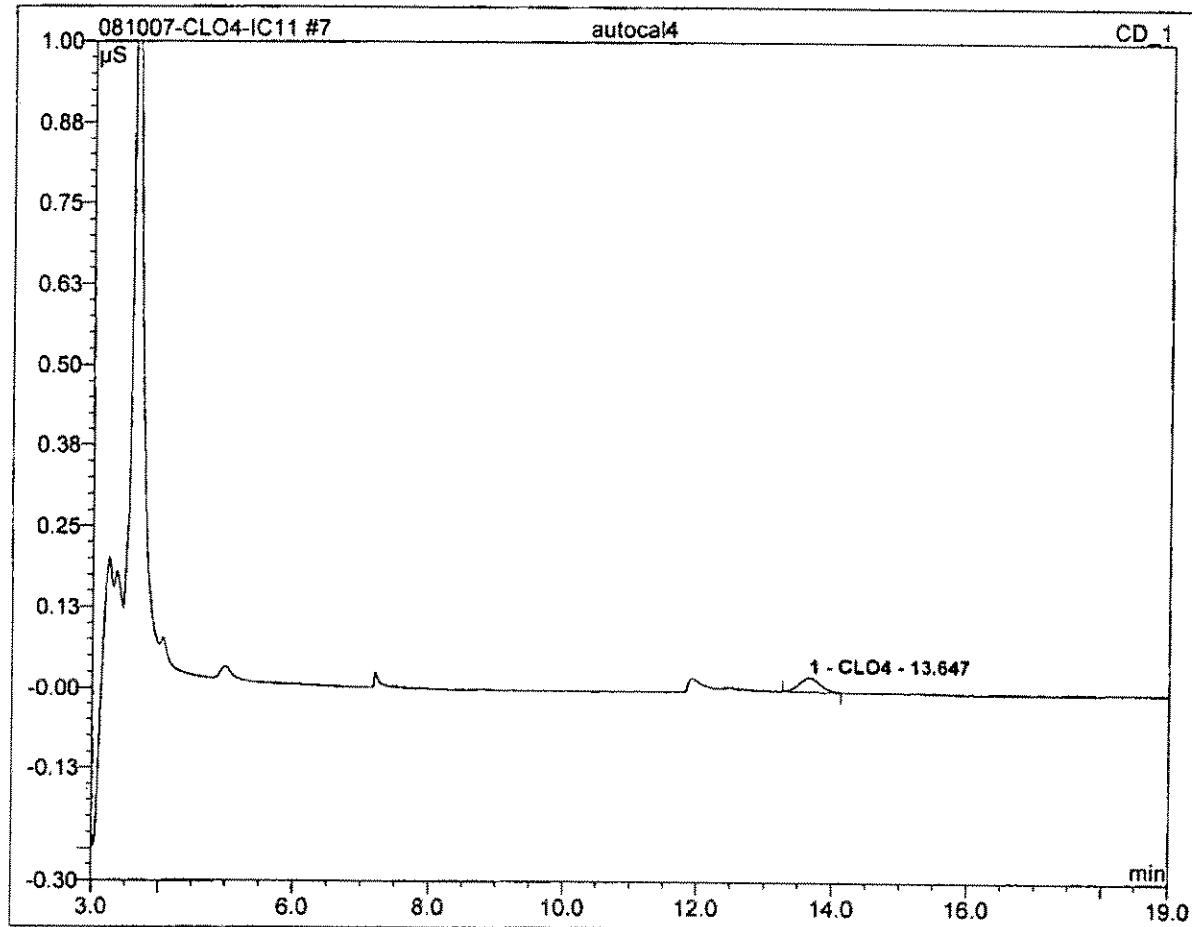
<b>Sample Name:</b>	autocal3	<b>Channel:</b>	CD_1
<b>Sample Type:</b>	standard	<b>Control Program:</b>	Perchlorate-IC11
<b>Recording Time:</b>	08/10/2007 12:57	<b>Quantif. Method:</b>	IC#4-CLO4-LOW
<b>Analyst:</b>	clv	<b>Dilution Factor:</b>	1.0000



No.	Ret.Time min	Peak Name	Height μS	Area μS*min	Rel.Area %	Amount	Type
1	13.65	CLO4	0.008	0.003	100.00	3.966	BMB
<b>Total:</b>			0.008	0.003	100.00	3.966	

**7 autocal4****10**

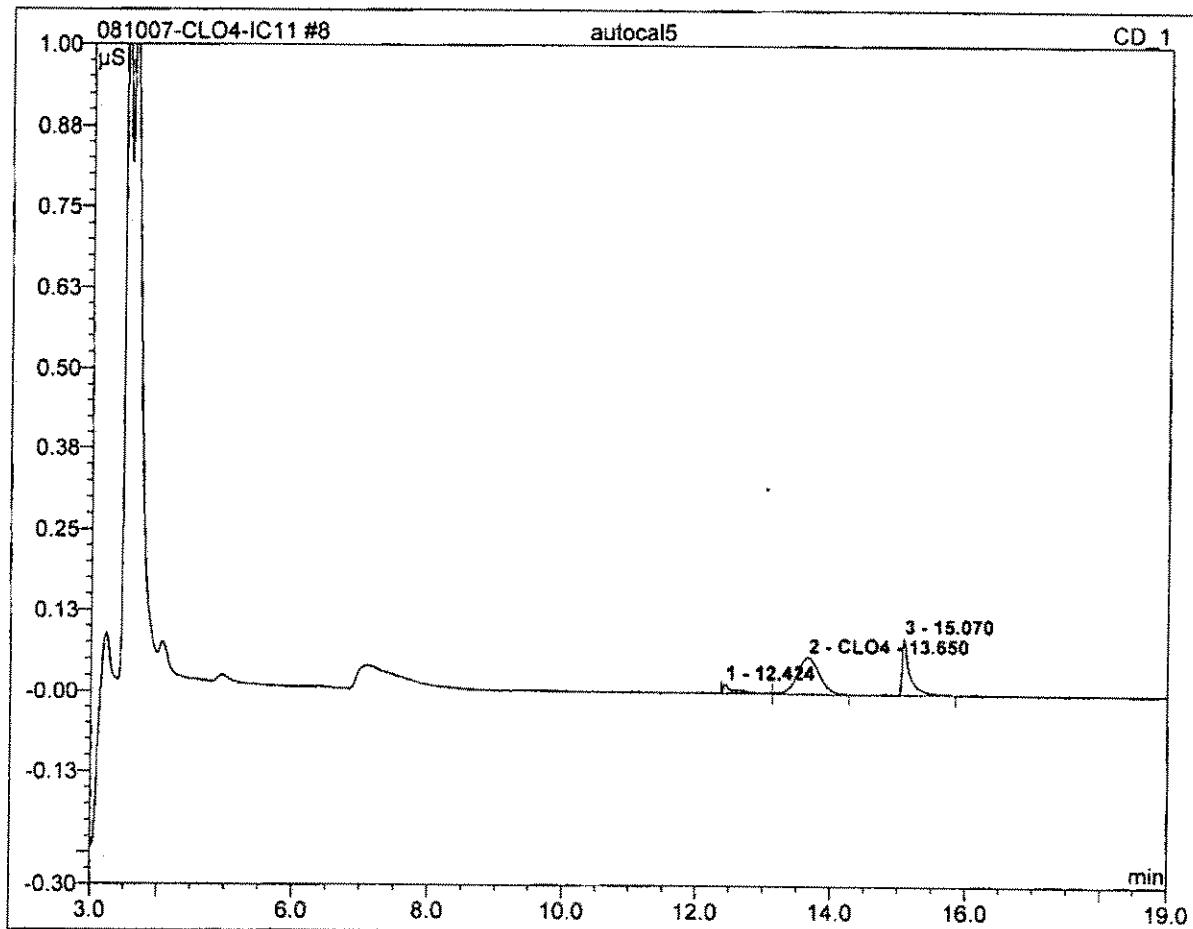
Sample Name:	autocal4	Channel:	CD_1
Sample Type:	standard	Control Program:	Perchlorate-IC11
Recording Time:	08/10/2007 13:19	Quantif. Method:	IC#4-CLO4-LOW
Analyst:	clv	Dilution Factor:	1.0000



No.	Ret.Time min	Peak Name	Height μS	Area μS*min	Rel.Area %	Amount	Type
1	13.65	CLO4	0.021	0.008	100.00	9.489	BMB
<b>Total:</b>			0.021	0.008	100.00	9.489	

**8 autocal5****25**

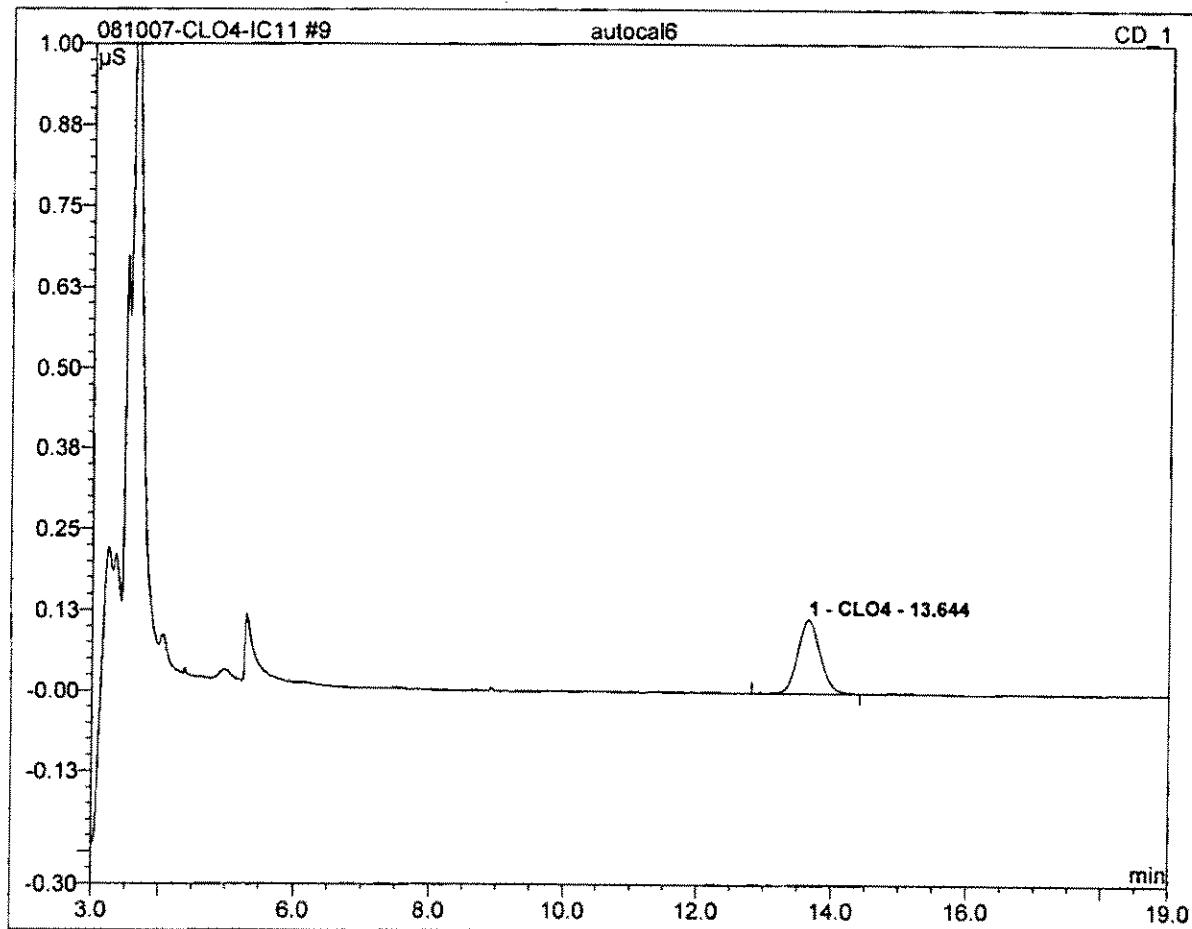
<b>Sample Name:</b>	<b>autocal5</b>	<b>Channel:</b>	<b>CD_1</b>
<b>Sample Type:</b>	<b>standard</b>	<b>Control Program:</b>	<b>Perchlorate-IC11</b>
<b>Recording Time:</b>	<b>08/10/2007 13:42</b>	<b>Quantif. Method:</b>	<b>IC#4-CLO4-LOW</b>
<b>Analyst:</b>	<b>clv</b>	<b>Dilution Factor:</b>	<b>1.0000</b>



No.	Ret.Time min	Peak Name	Height μS	Area μS*min	Rel.Area %	Amount	Type
2	13.65	CLO4	0.056	0.021	61.11	24.577	MB
<b>Total:</b>			0.056	0.021	61.11	24.577	

**9 autocal6****50**

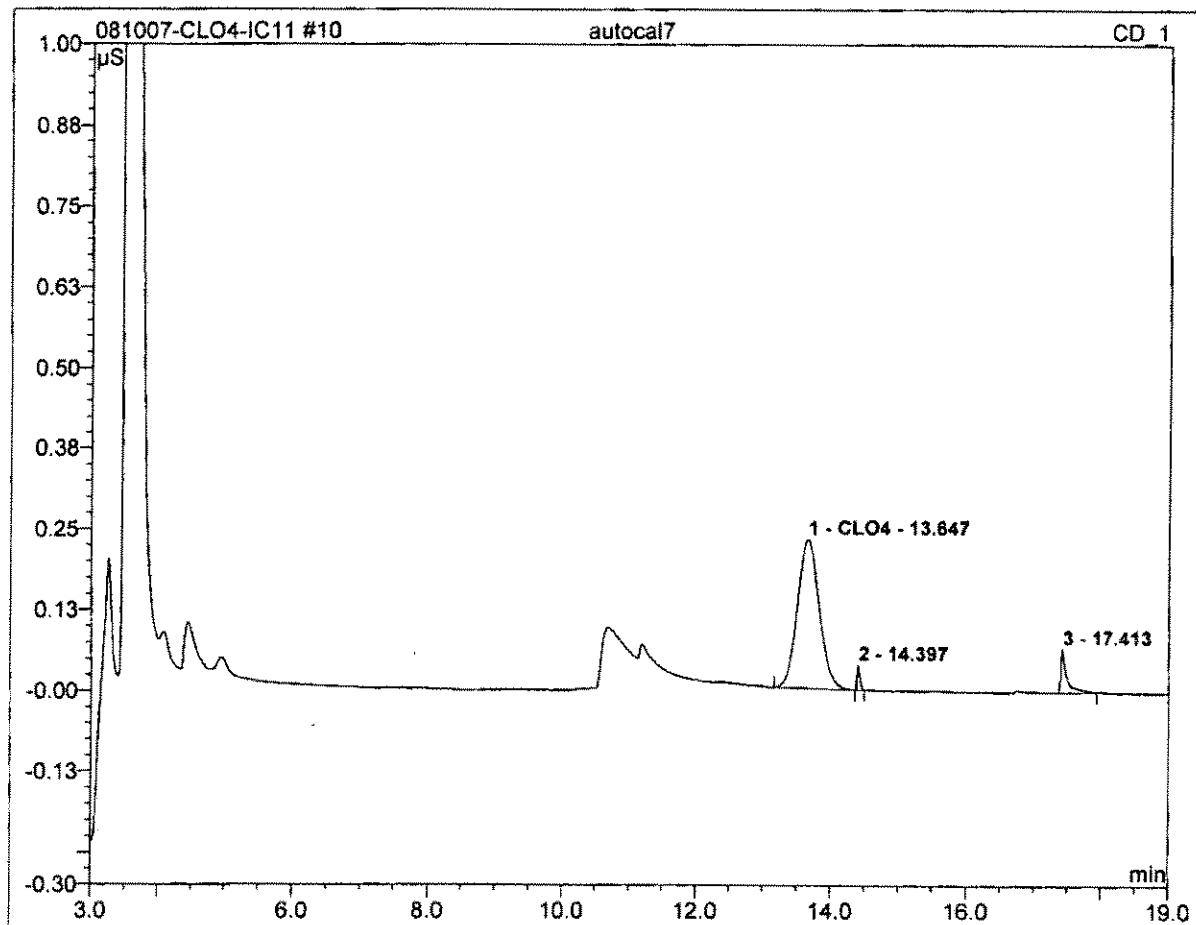
<b>Sample Name:</b>	<b>autocal6</b>	<b>Channel:</b>	<b>CD_1</b>
<b>Sample Type:</b>	<b>standard</b>	<b>Control Program:</b>	<b>Perchlorate-IC11</b>
<b>Recording Time:</b>	<b>08/10/2007 14:04</b>	<b>Quantif. Method:</b>	<b>IC#4-CLO4-LOW</b>
<b>Analyst:</b>	<b>clv</b>	<b>Dilution Factor:</b>	<b>1.0000</b>



No.	Ret.Time min	Peak Name	Height μS	Area μS*min	Rel.Area %	Amount	Type
1	13.64	CLO4	0.114	0.044	100.00	50.473	BMB
<b>Total:</b>			0.114	0.044	100.00	50.473	

**10. autocal7****100**

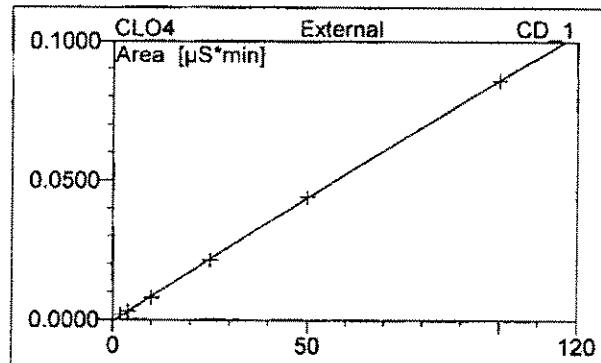
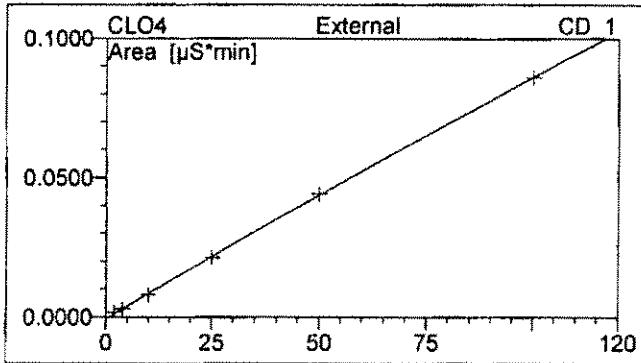
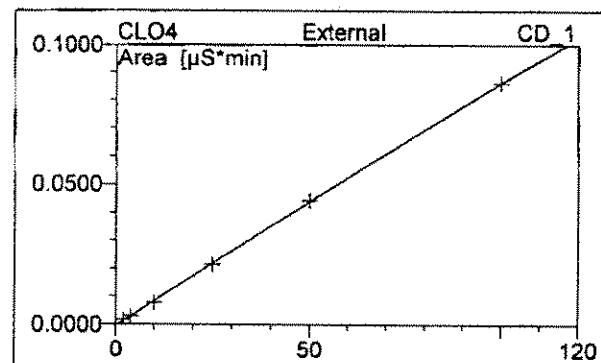
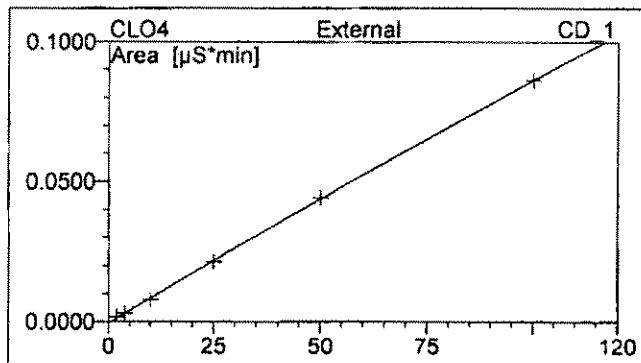
Sample Name:	autocal7	Channel:	CD_1
Sample Type:	standard	Control Program:	Perchlorate-IC11
Recording Time:	08/10/2007 14:26	Quantif. Method:	IC#4-CLO4-LOW
Analyst:	clv	Dilution Factor:	1.0000



No.	Ret.Time min	Peak Name	Height $\mu\text{S}$	Area $\mu\text{S}^*\text{min}$	Ret.Area %	Amount	Type
1	13.65	CLO4	0.230	0.086	90.78	99.910	BMB
Total:			0.230	0.086	90.78	99.910	

**10 autocal7****100**

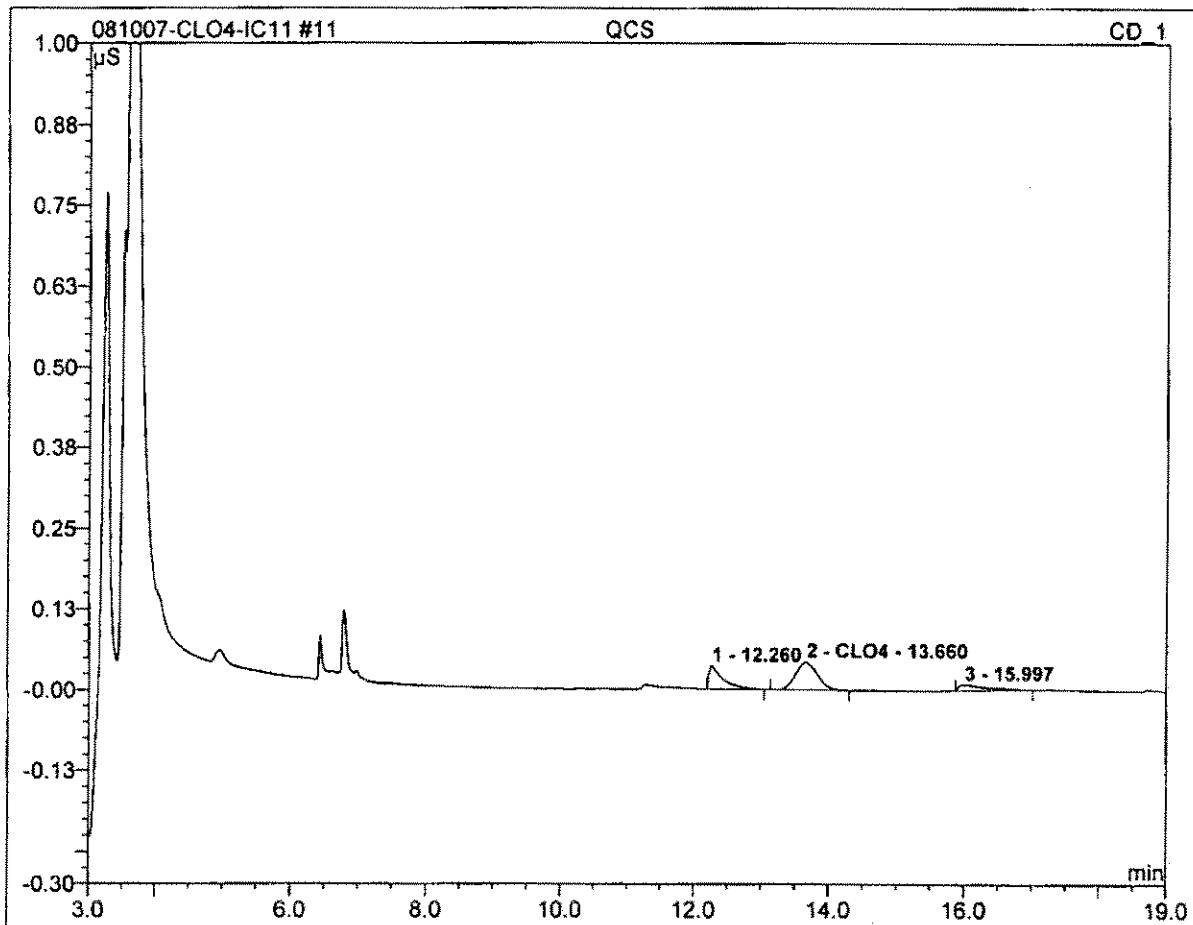
<b>Sample Name:</b>	autocal7	<b>Injection Volume:</b>	20.0
<b>Vial Number:</b>	109	<b>Channel:</b>	CD_1
<b>Sample Type:</b>	standard	<b>Wavelength:</b>	n.a.
<b>Control Program:</b>	Perchlorate-IC11	<b>Bandwidth:</b>	n.a.
<b>Quantif. Method:</b>	IC#4-CLO4-LOW	<b>Dilution Factor:</b>	1.0000
<b>Recording Time:</b>	8/10/2007 14:26	<b>Sample Weight:</b>	1.0000
<b>Run Time (min):</b>	20.00	<b>Sample Amount:</b>	1.0000



No.	Ret.Time min	Peak Name	Cal.Type	Points	Corr.Coeff. %	Offset	Slope	Curve
1	13.65	CLO4	QOff	6	99.9849	-0.0007	0.0009	0.0000
2	14.40	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
3	17.41	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
<b>Average:</b>					99.9849	-0.0007	0.0009	0.0000

**11 QCS****20**

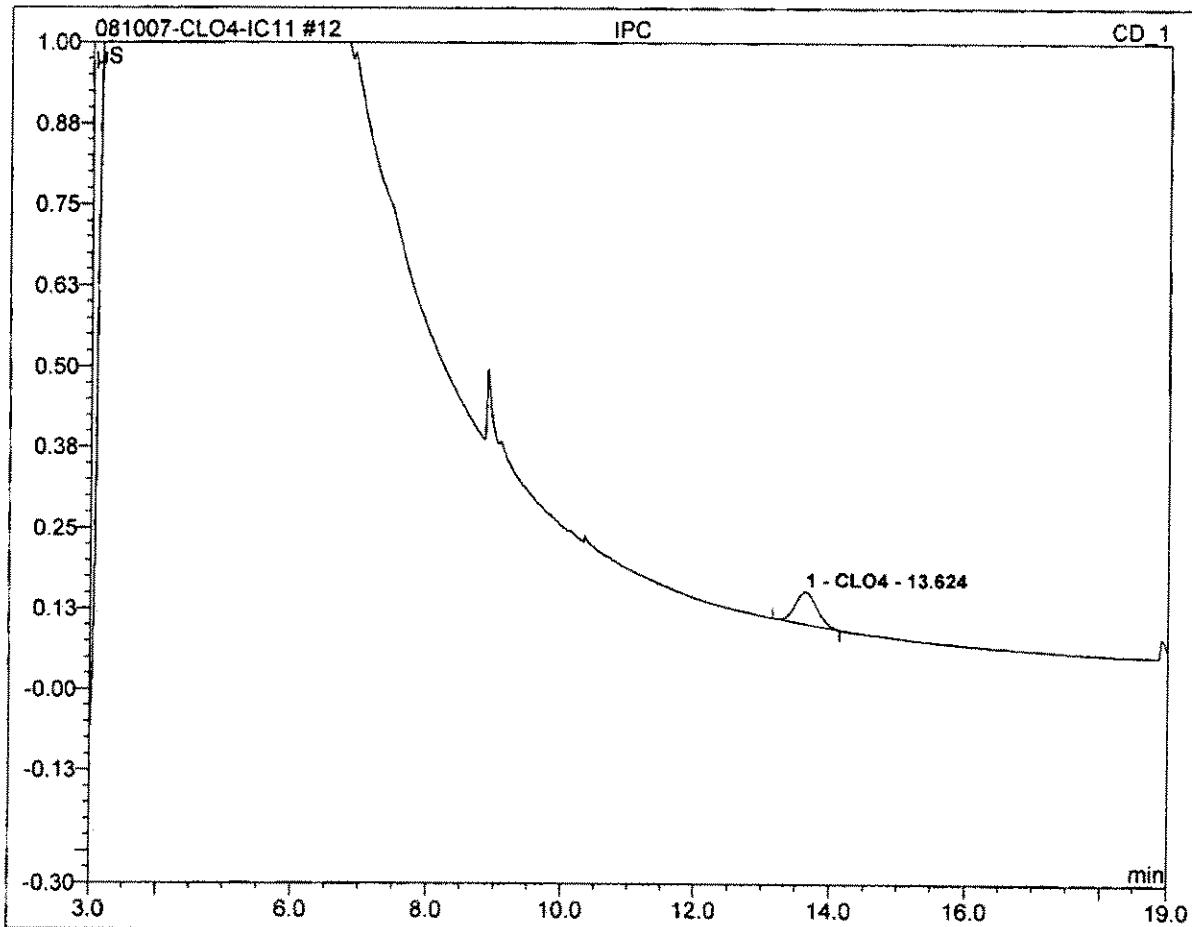
<i>Sample Name:</i>	QCS	<i>Channel:</i>	CD_1
<i>Sample Type:</i>	unknown	<i>Control Program:</i>	Perchlorate-IC11
<i>Recording Time:</i>	08/10/2007 14:49	<i>Quantif. Method:</i>	IC#4-CLO4-LOW
<i>Analyst:</i>	clv	<i>Dilution Factor:</i>	1.0000



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
2	13.66	CLO4	0.042	0.016	56.00	18.681	BMB
Total:			0.042	0.016	56.00	18.681	

**12 IPC****25**

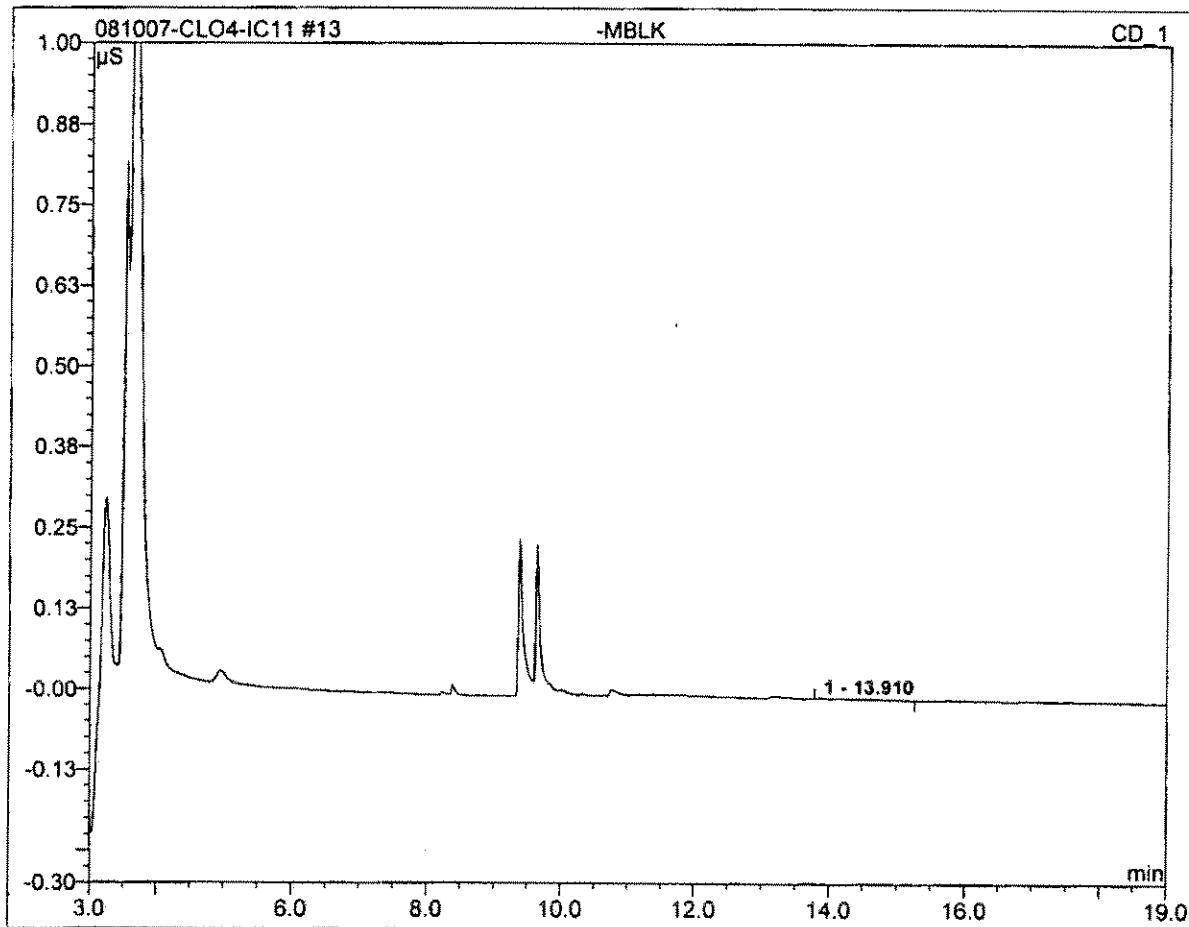
<b>Sample Name:</b>	<b>IPC</b>	<b>Channel:</b>	<b>CD_1</b>
<b>Sample Type:</b>	<b>unknown</b>	<b>Control Program:</b>	<b>Perchlorate-IC11</b>
<b>Recording Time:</b>	<b>08/10/2007 15:11</b>	<b>Quantif. Method:</b>	<b>IC#4-CLO4-LOW</b>
<b>Analyst:</b>	<b>clv</b>	<b>Dilution Factor:</b>	<b>1.0000</b>



No.	Ret.Time min	Peak Name	Height μS	Area μS*min	Rel.Area %	Amount	Type
1	13.62	CLO4	0.050	0.019	100.00	21.463	BMB
<b>Total:</b>			0.050	0.019	100.00	21.463	

**13 -MBLK**

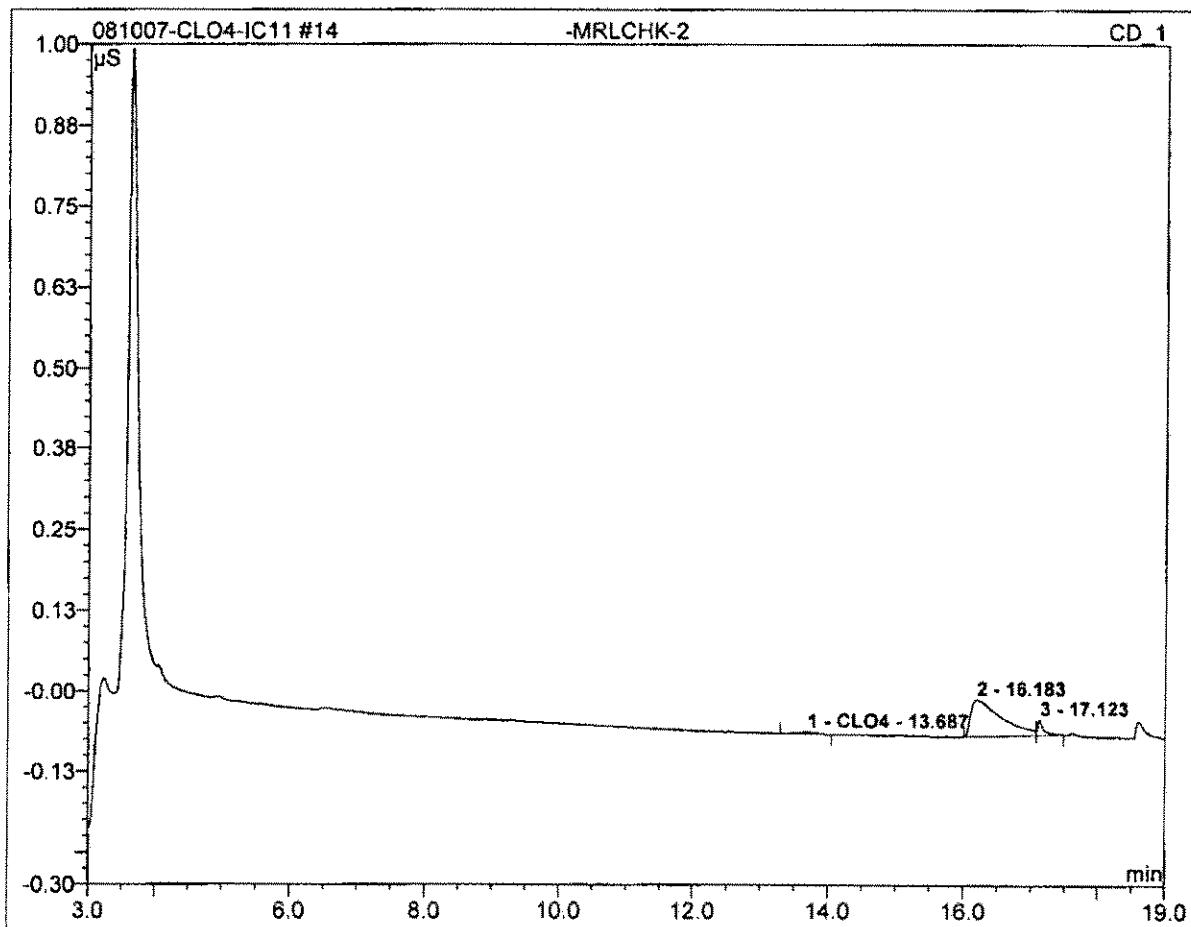
<b>Sample Name:</b>	-MBLK	<b>Channel:</b>	CD_1
<b>Sample Type:</b>	unknown	<b>Control Program:</b>	Perchlorate-IC11
<b>Recording Time:</b>	08/10/2007 15:34	<b>Quantif. Method:</b>	IC#4-CLO4-LOW
<b>Analyst:</b>	clv	<b>Dilution Factor:</b>	1.0000



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

**14 -MRLCHK-2****2**

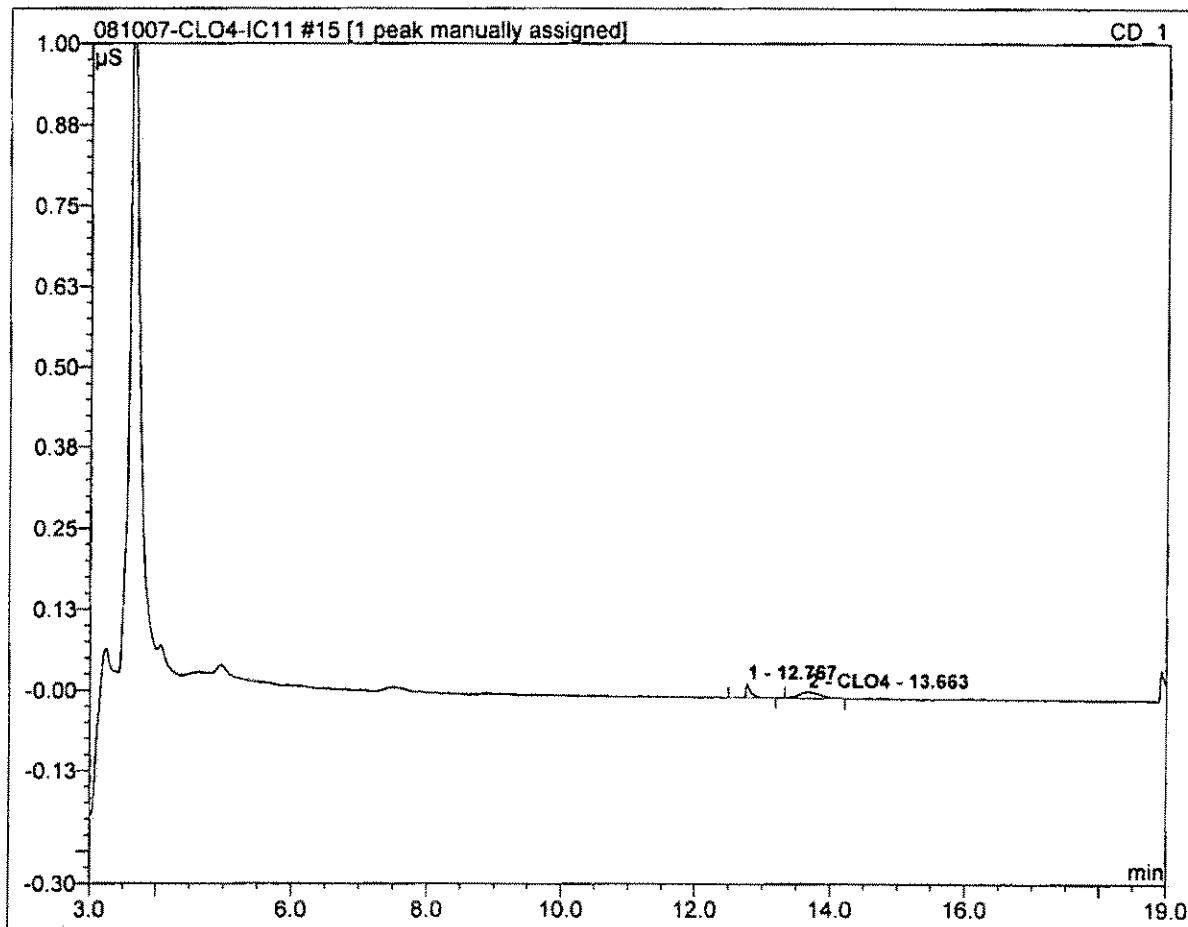
<i>Sample Name:</i>	<b>-MRLCHK-2</b>	<i>Channel:</i>	<b>CD_1</b>
<i>Sample Type:</i>	<b>unknown</b>	<i>Control Program:</i>	<b>Perchlorate-IC11</b>
<i>Recording Time:</i>	<b>08/10/2007 17:07</b>	<i>Quantif. Method:</i>	<b>IC#4-CLO4-LOW</b>
<i>Analyst:</i>	<b>clv</b>	<i>Dilution Factor:</i>	<b>1.0000</b>



No.	Ret.Time min	Peak Name	Height $\mu\text{S}$	Area $\mu\text{S} \cdot \text{min}$	Rel.Area %	Amount	Type
1	13.69	CLO4	0.003	0.001	3.31	2.003	BMB
<b>Total:</b>			0.003	0.001	3.31	2.003	

**15 -MRLCHK-4****4**

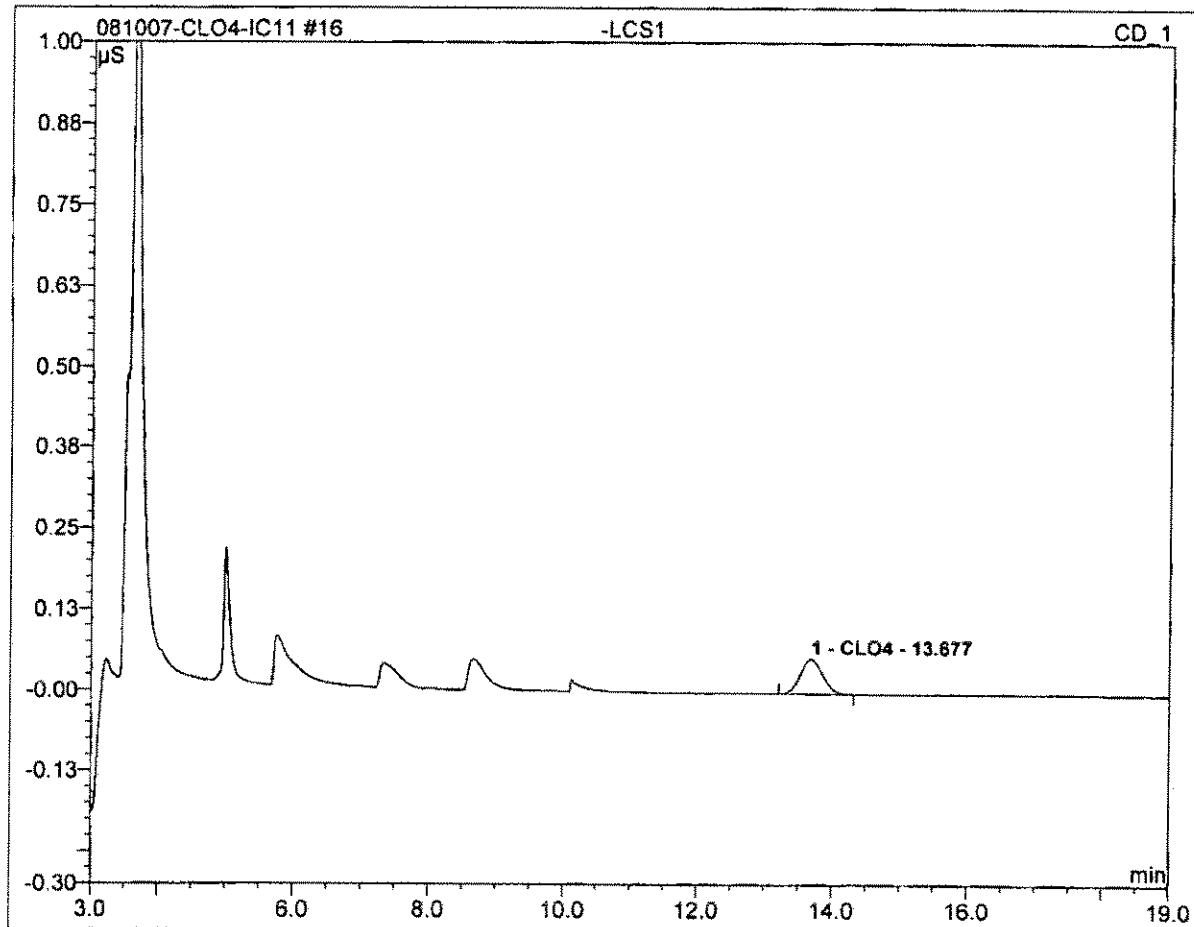
<i>Sample Name:</i>	<b>-MRLCHK-4</b>	<i>Channel:</i>	<b>CD_1</b>
<i>Sample Type:</i>	<b>unknown</b>	<i>Control Program:</i>	<b>Perchlorate-IC11</b>
<i>Recording Time:</i>	<b>08/10/2007 17:29</b>	<i>Quantif. Method:</i>	<b>IC#4-CLO4-LOW</b>
<i>Analyst:</i>	<b>clv</b>	<i>Dilution Factor:</i>	<b>1.0000</b>



No.	Ret.Time min	Peak Name	Height μS	Area μS*min	Rel.Area %	Amount	Type
2	13.66	CLO4	0.009	0.003	63.69	4.348	BMB^
Total:			0.009	0.003	63.69	4.348	

**16 -LCS1****25**

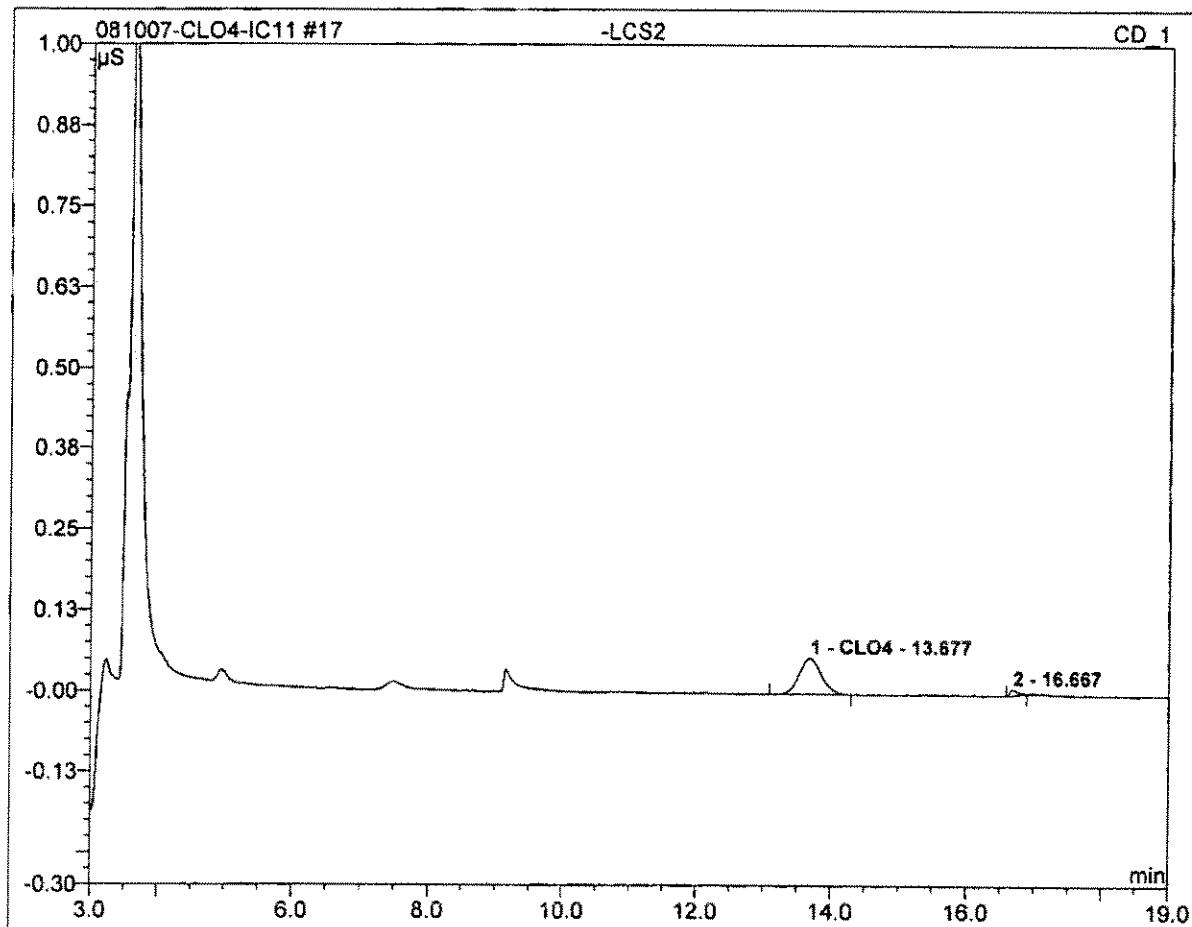
<b>Sample Name:</b>	-LCS1	<b>Channel:</b>	CD_1
<b>Sample Type:</b>	unknown	<b>Control Program:</b>	Perchlorate-IC11
<b>Recording Time:</b>	08/10/2007 17:52	<b>Quantif. Method:</b>	IC#4-CLO4-LOW
<b>Analyst:</b>	clv	<b>Dilution Factor:</b>	1.0000



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	13.68	CLO4	0.054	0.020	100.00	23.584	BMB
<b>Total:</b>			0.054	0.020	100.00	23.584	

**17 -LCS2****25**

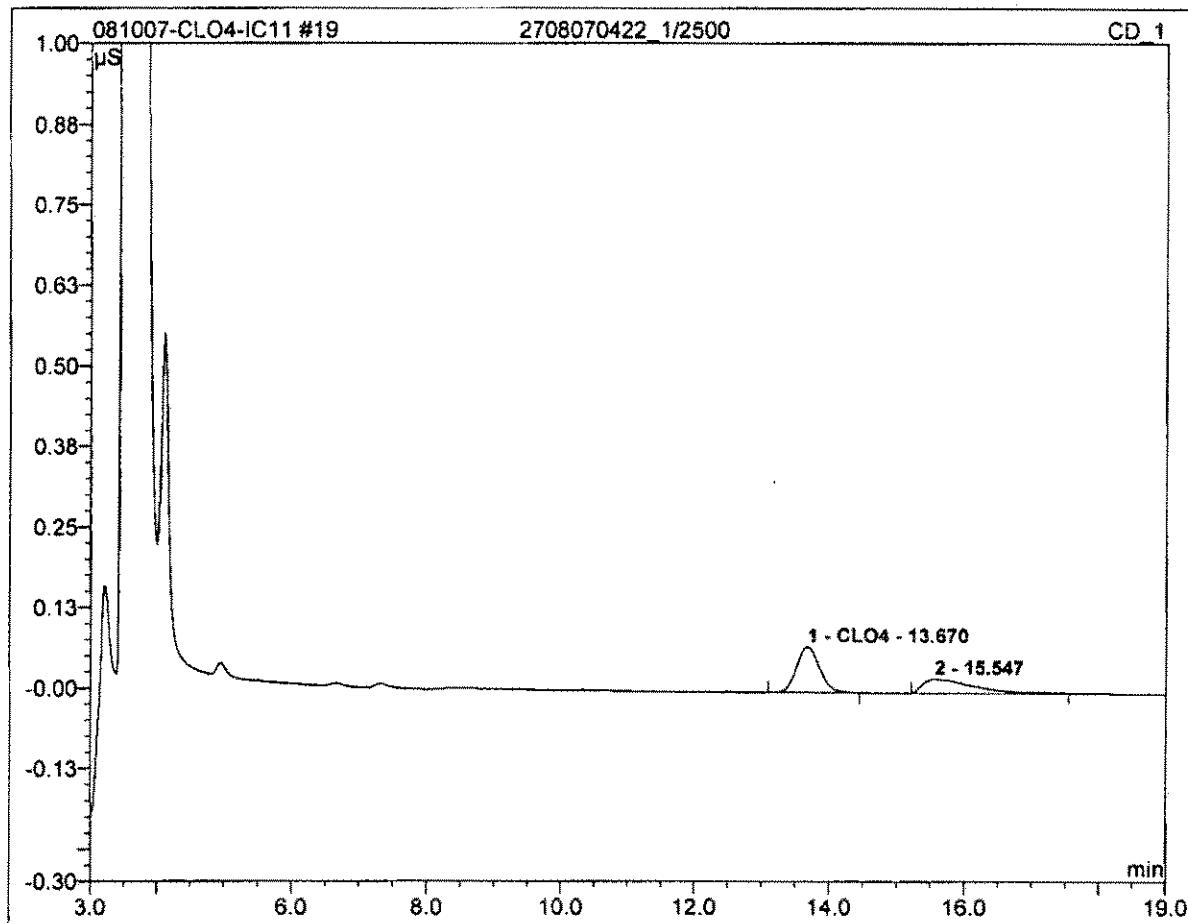
<b>Sample Name:</b>	<b>-LCS2</b>	<b>Channel:</b>	<b>CD_1</b>
<b>Sample Type:</b>	<b>unknown</b>	<b>Control Program:</b>	<b>Perchlorate-IC11</b>
<b>Recording Time:</b>	<b>08/10/2007 18:14</b>	<b>Quantif. Method:</b>	<b>IC#4-CLO4-LOW</b>
<b>Analyst:</b>	<b>clv</b>	<b>Dilution Factor:</b>	<b>1.0000</b>



No.	Ret.Time min	Peak Name	Height μS	Area μS*min	Rel.Area %	Amount	Type
1	13.68	CLO4	0.055	0.021	94.12	24.169	BMB
Total:			0.055	0.021	94.12	24.169	

**19 2708070422\_1/2500**

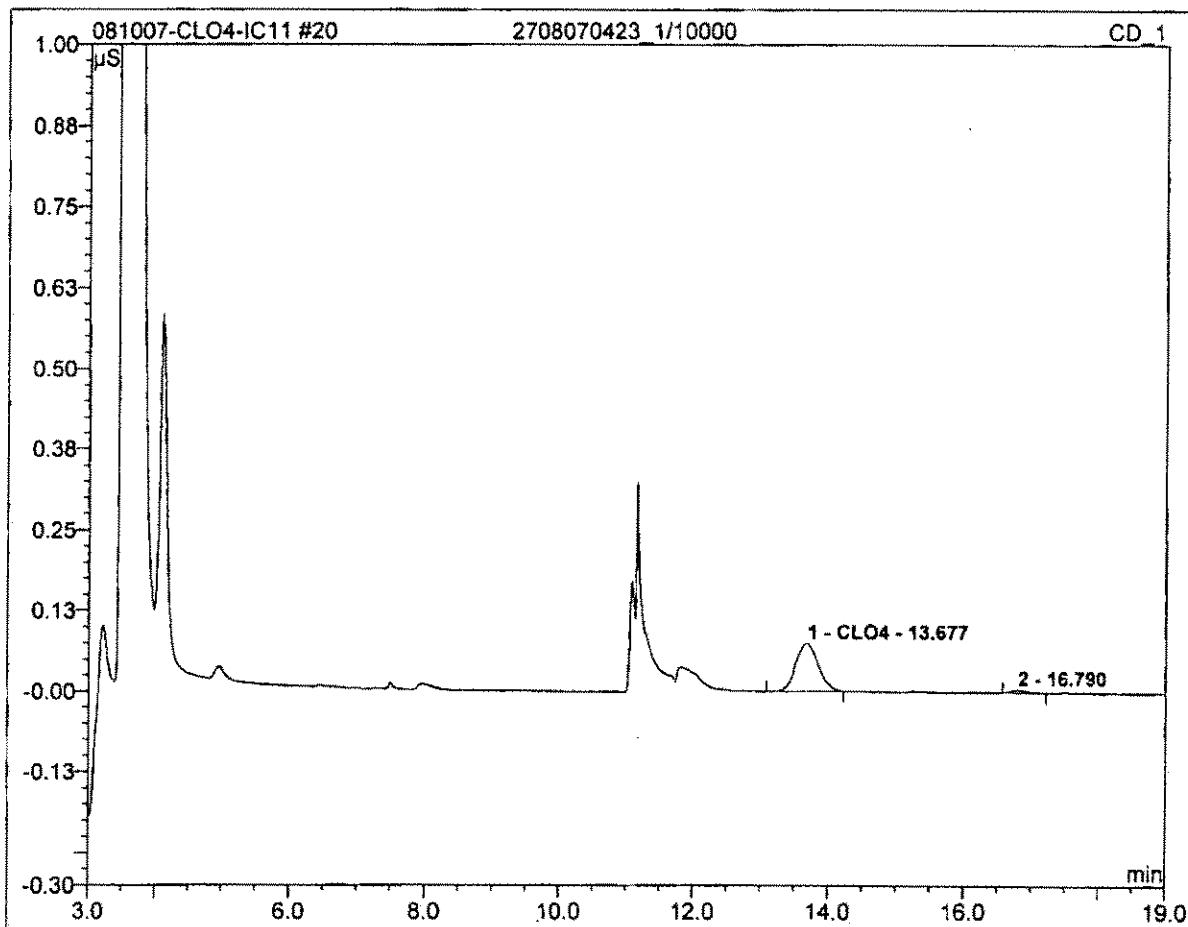
Sample Name:	2708070422_1/2500	Channel:	CD_1
Sample Type:	unknown	Control Program:	Perchlorate-IC11
Recording Time:	08/10/2007 18:59	Quantif. Method:	IC#4-CLO4-LOW
Analyst:	clv	Dilution Factor:	2500.0000



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	13.67	CLO4	0.071	0.027	59.29	78546.144	BMB
Total:			0.071	0.027	59.29	78546.144	

**20 2708070423\_1/10000**

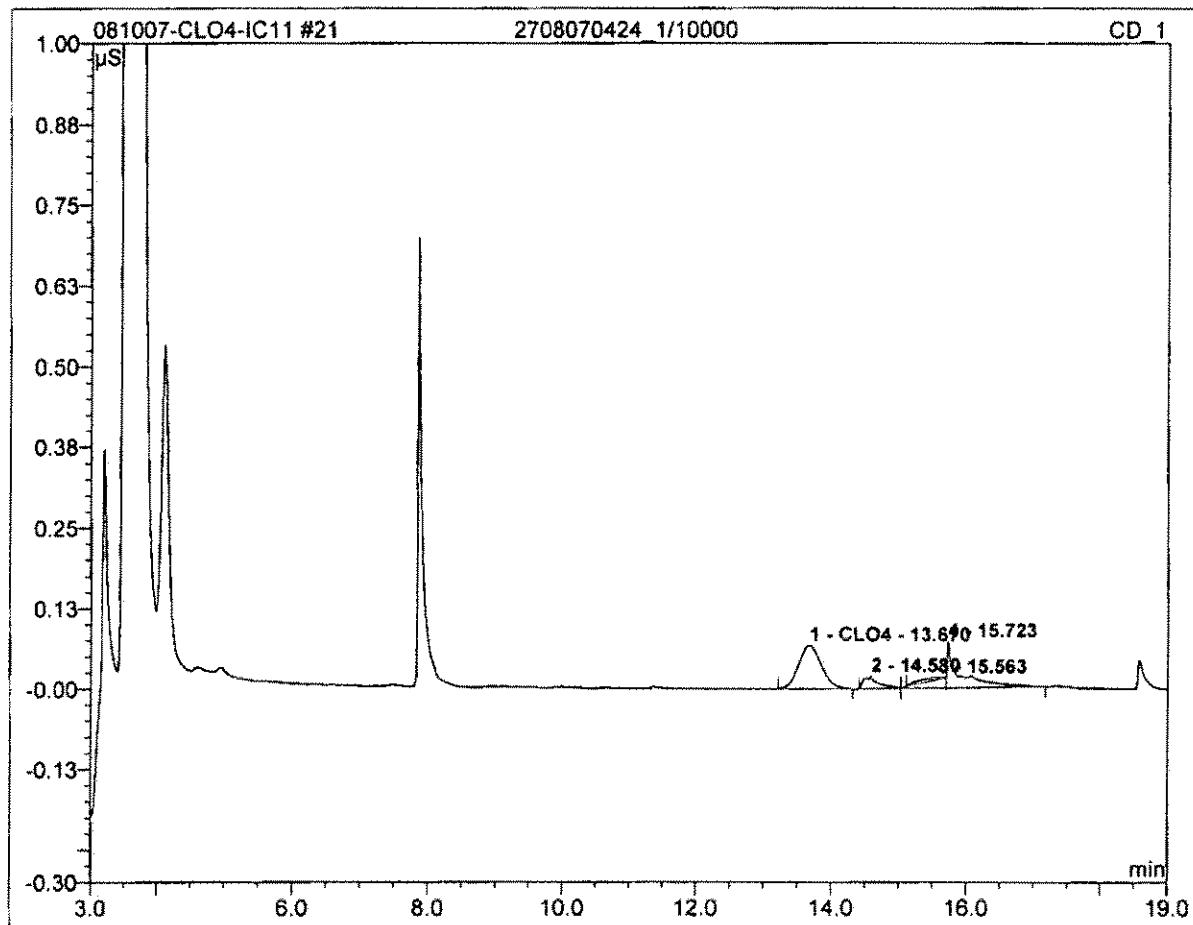
<i>Sample Name:</i>	2708070423_1/10000	<i>Channel:</i>	CD_1
<i>Sample Type:</i>	unknown	<i>Control Program:</i>	Perchlorate-IC11
<i>Recording Time:</i>	08/10/2007 19:21	<i>Quantif. Method:</i>	IC#4-CLO4-LOW
<i>Analyst:</i>	clv	<i>Dilution Factor:</i>	10000.0000



No.	Ret.Time min	Peak Name	Height μS	Area μS*min	Rel.Area %	Amount	Type
1	13.68	CLO4	0.074	0.029	95.47	327122.780	BMB
Total:			0.074	0.029	95.47	327122.780	

## 21 2708070424\_1/10000

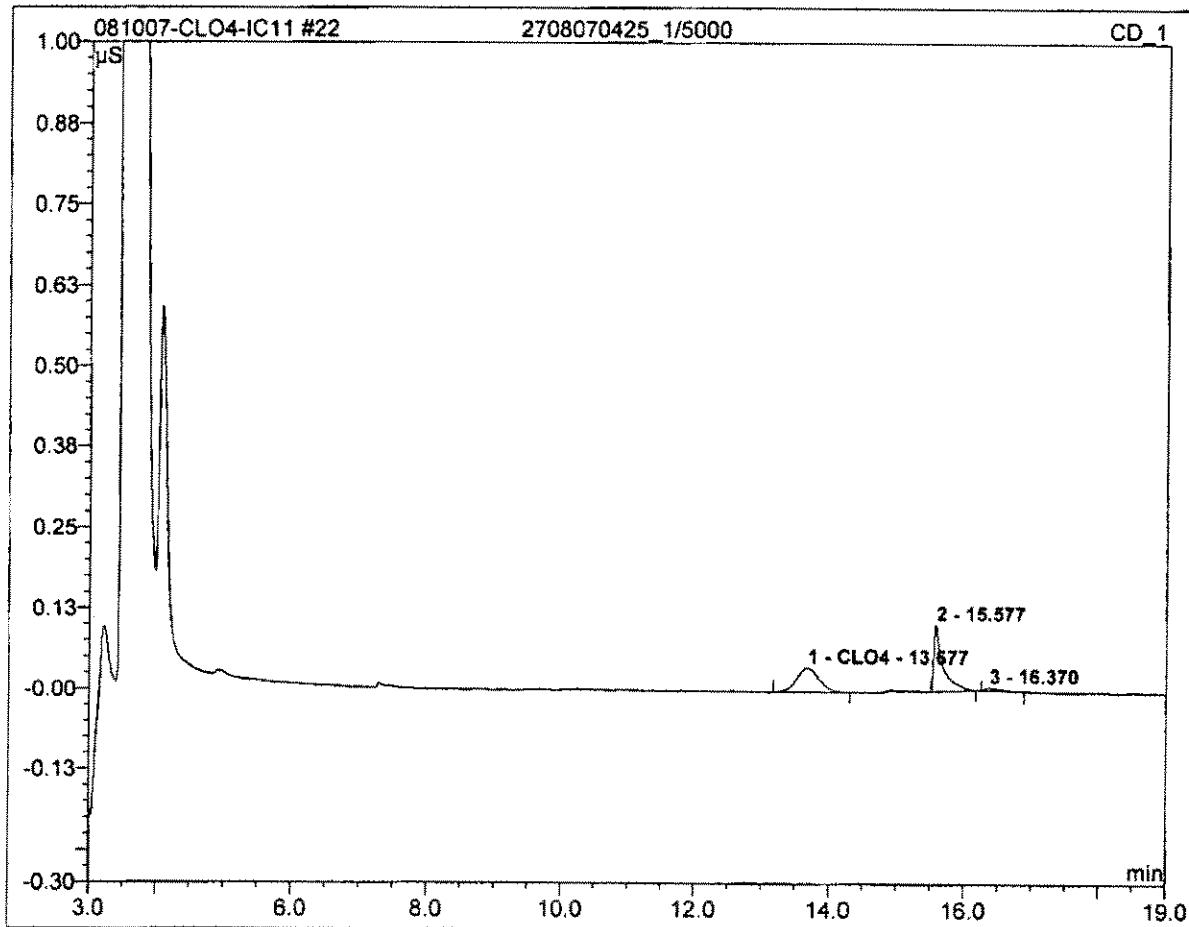
Sample Name:	2708070424_1/10000	Channel:	CD_1
Sample Type:	unknown	Control Program:	Perchlorate-IC11
Recording Time:	08/10/2007 19:43	Quantif. Method:	IC#4-CLO4-LOW
Analyst:	clv	Dilution Factor:	10000.0000



No.	Ret.Time min	Peak Name	Height μS	Area μS·min	Rel.Area %	Amount	Type
1	13.67	CLO4	0.067	0.026	48.70	294562.055	BMB
Total:			0.067	0.026	48.70	294562.055	

**22 2708070425\_1/5000**

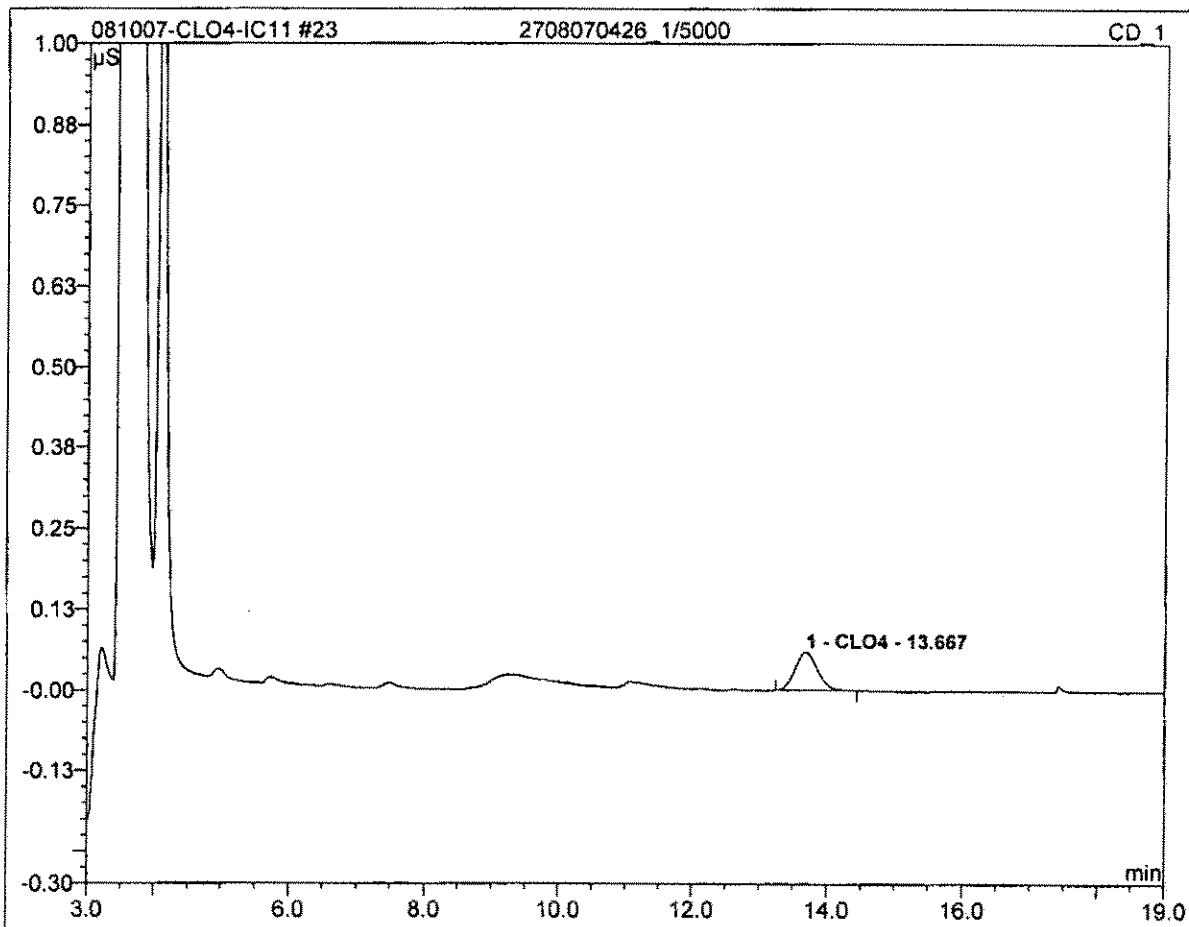
Sample Name:	2708070425_1/5000	Channel:	CD_1
Sample Type:	unknown	Control Program:	Perchlorate-IC11
Recording Time:	08/10/2007 20:06	Quantif. Method:	IC#4-CLO4-LOW
Analyst:	clv	Dilution Factor:	5000.0000



No.	Ret.Time min	Peak Name	Height μS	Area μS*min	Rel.Area %	Amount	Type
1	13.68	CLO4	0.037	0.014	46.01	82342.312	BMB
Total:			0.037	0.014	46.01	82342.312	

**23 2708070426\_1/5000**

<b>Sample Name:</b>	<b>2708070426_1/5000</b>	<b>Channel:</b>	<b>CD_1</b>
<b>Sample Type:</b>	<b>unknown</b>	<b>Control Program:</b>	<b>Perchlorate-IC11</b>
<b>Recording Time:</b>	<b>08/10/2007 20:28</b>	<b>Quantif. Method:</b>	<b>IC#4-CLO4-LOW</b>
<b>Analyst:</b>	<b>clv</b>	<b>Dilution Factor:</b>	<b>5000.0000</b>

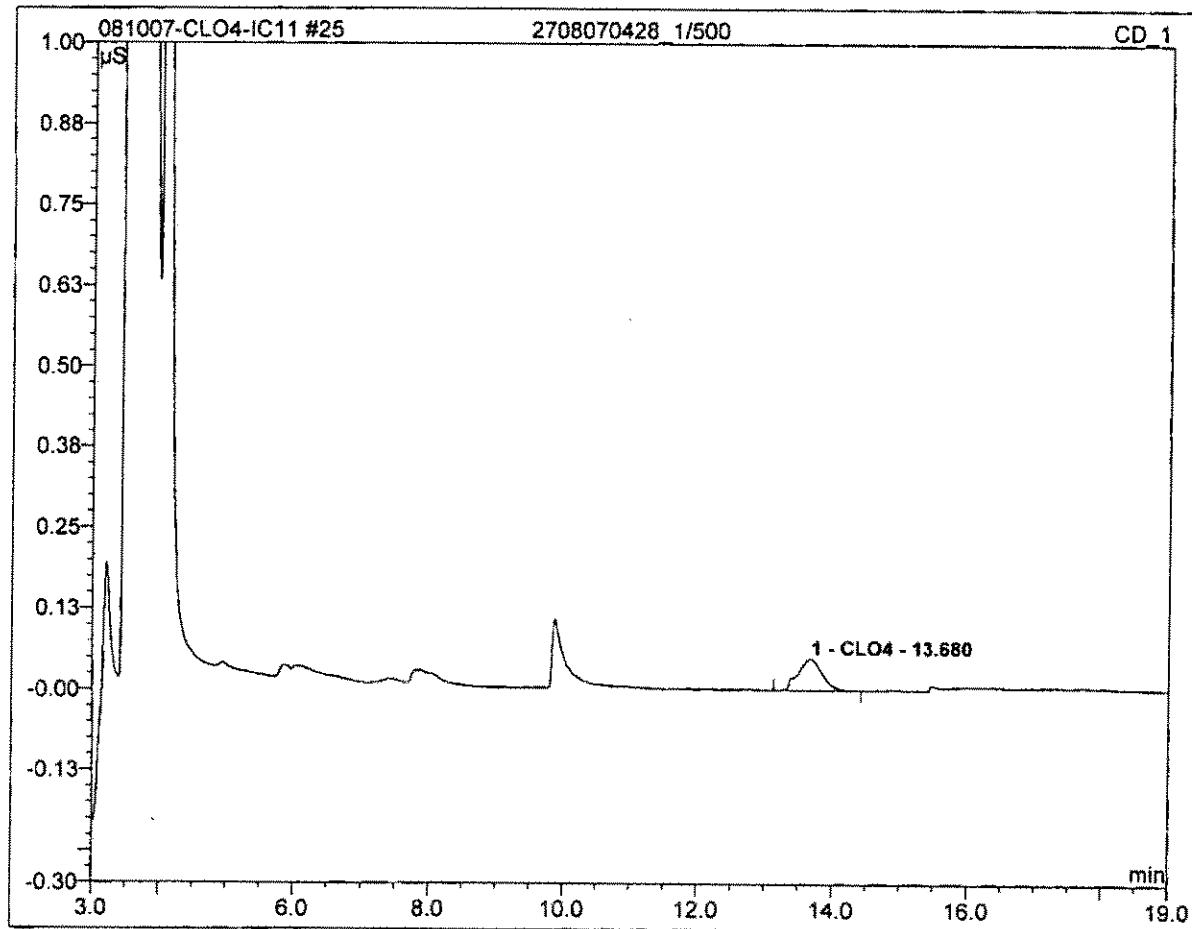


No.	Ret.Time min	Peak Name	Height μS	Area μS*min	Rel.Area %	Amount	Type
1	13.67	CLO4	0.058	0.023	100.00	129574.746	BMB
Total:			0.058	0.023	100.00	129574.746	

25 2708070428\_1/500

MEETS HISTORICAL VALUE

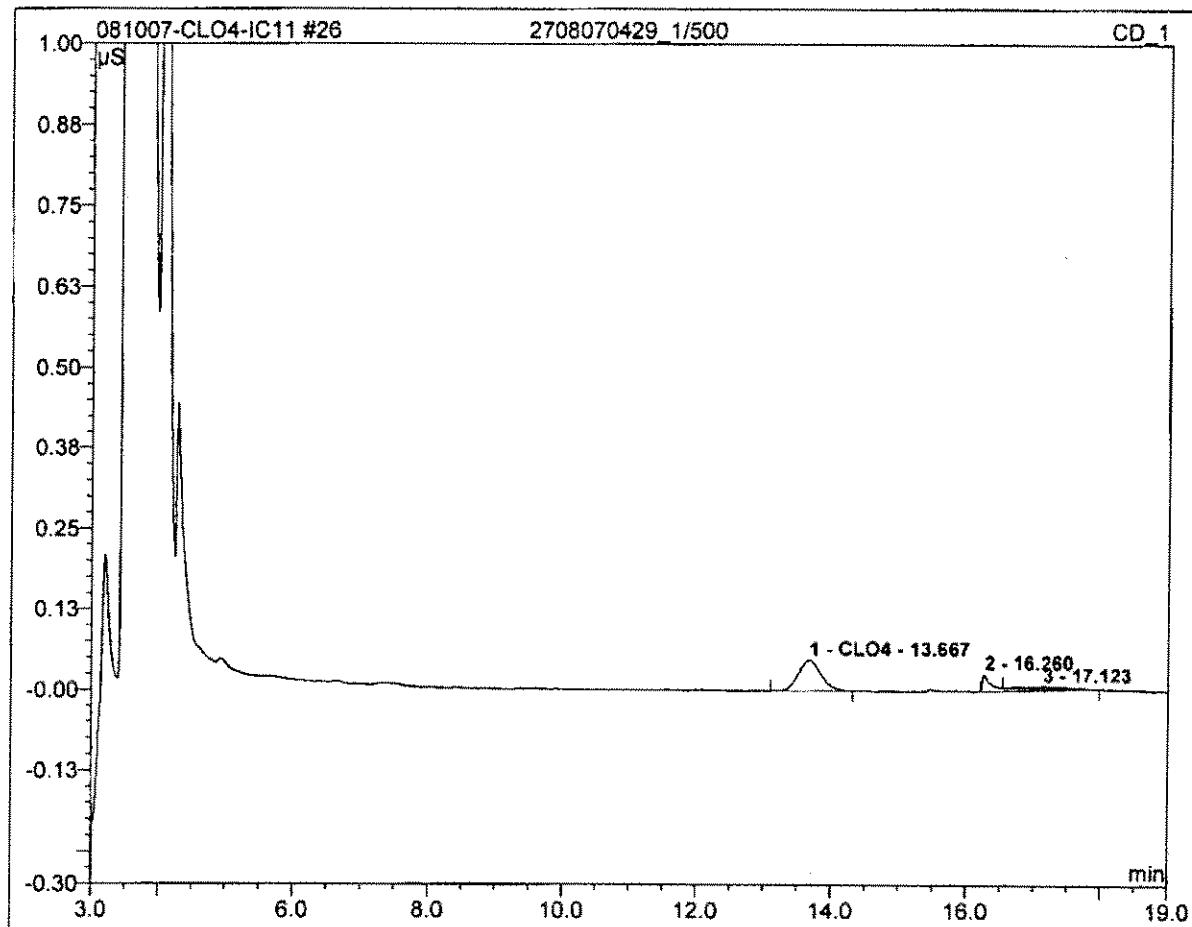
Sample Name:	2708070428_1/500	Channel:	CD_1
Sample Type:	unknown	Control Program:	Perchlorate-IC11
Recording Time:	08/10/2007 21:13	Quantif. Method:	IC#4-CLO4-LOW
Analyst:	clv	Dilution Factor:	500.0000



No.	Ret.Time min	Peak Name	Height μS	Area μS*min	Rel.Area %	Amount	Type
1	13.68	CLO4	0.047	0.020	100.00	11443.216	BMB
Total:			0.047	0.020	100.00	11443.216	

**26 2708070429\_1/500**

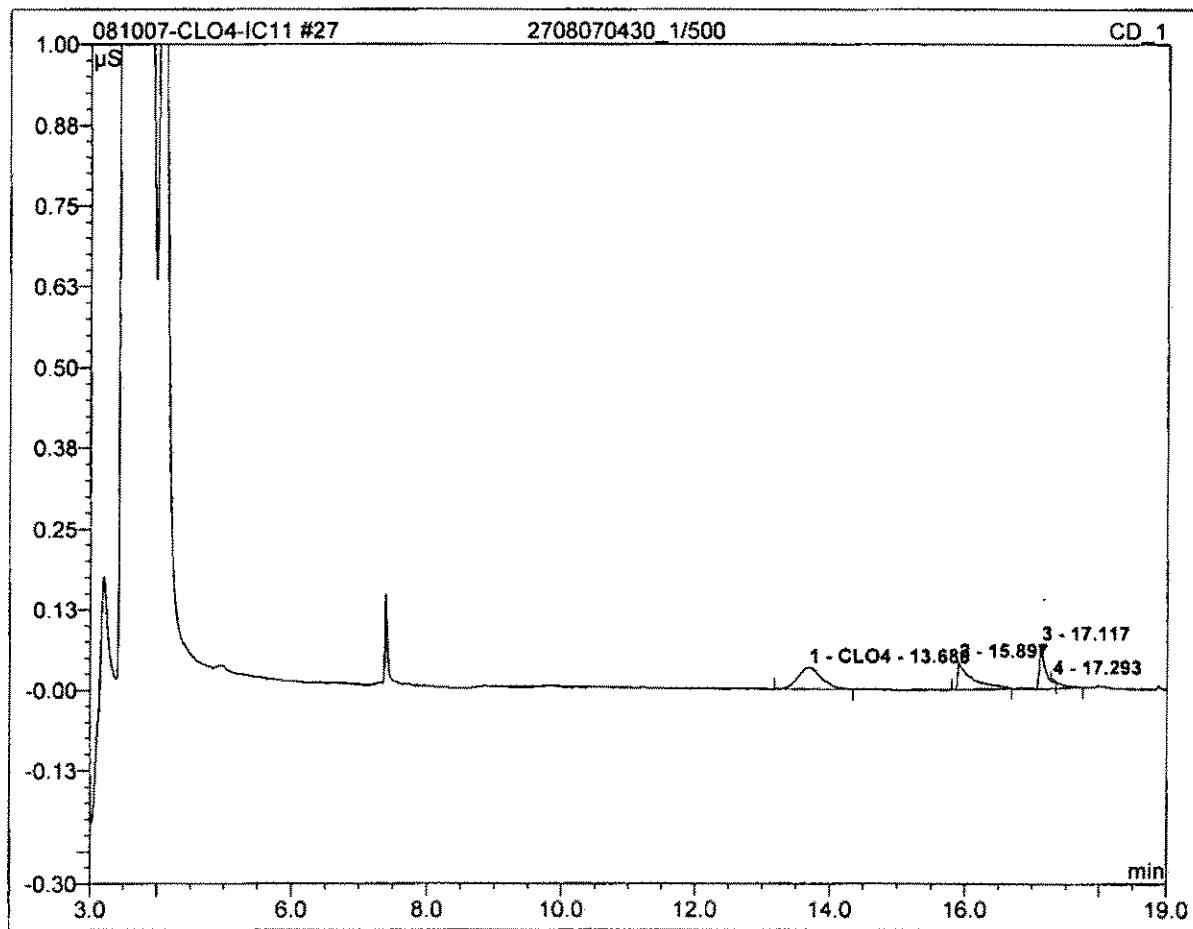
Sample Name:	2708070429_1/500	Channel:	CD_1
Sample Type:	unknown	Control Program:	Perchlorate-IC11
Recording Time:	08/10/2007 21:36	Quantif. Method:	IC#4-CLO4-LOW
Analyst:	clv	Dilution Factor:	500.0000



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	13.67	CLO4	0.047	0.018	66.25	10603.699	BMB
Total:			0.047	0.018	66.25	10603.699	

## 27 2708070430\_1/500

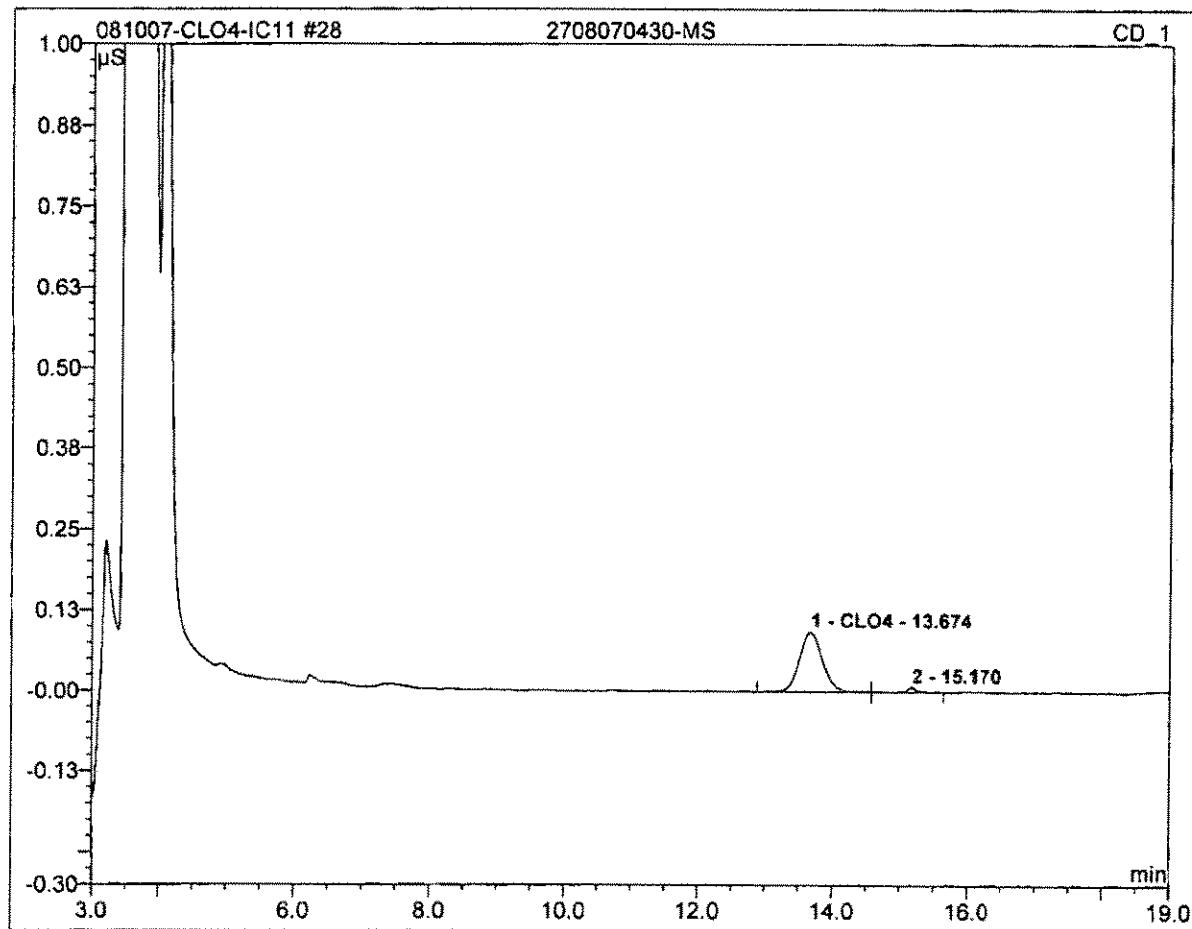
Sample Name:	2708070430_1/500	Channel:	CD_1
Sample Type:	unknown	Control Program:	Perchlorate-IC11
Recording Time:	08/10/2007 21:58	Quantif. Method:	IC#4-CLO4-LOW
Analyst:	clv	Dilution Factor:	500.0000



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	13.68	CLO4	0.034	0.014	41.42	7881.094	BMB
Total:			0.034	0.014	41.42	7881.094	

**28 2708070430-MS****25**

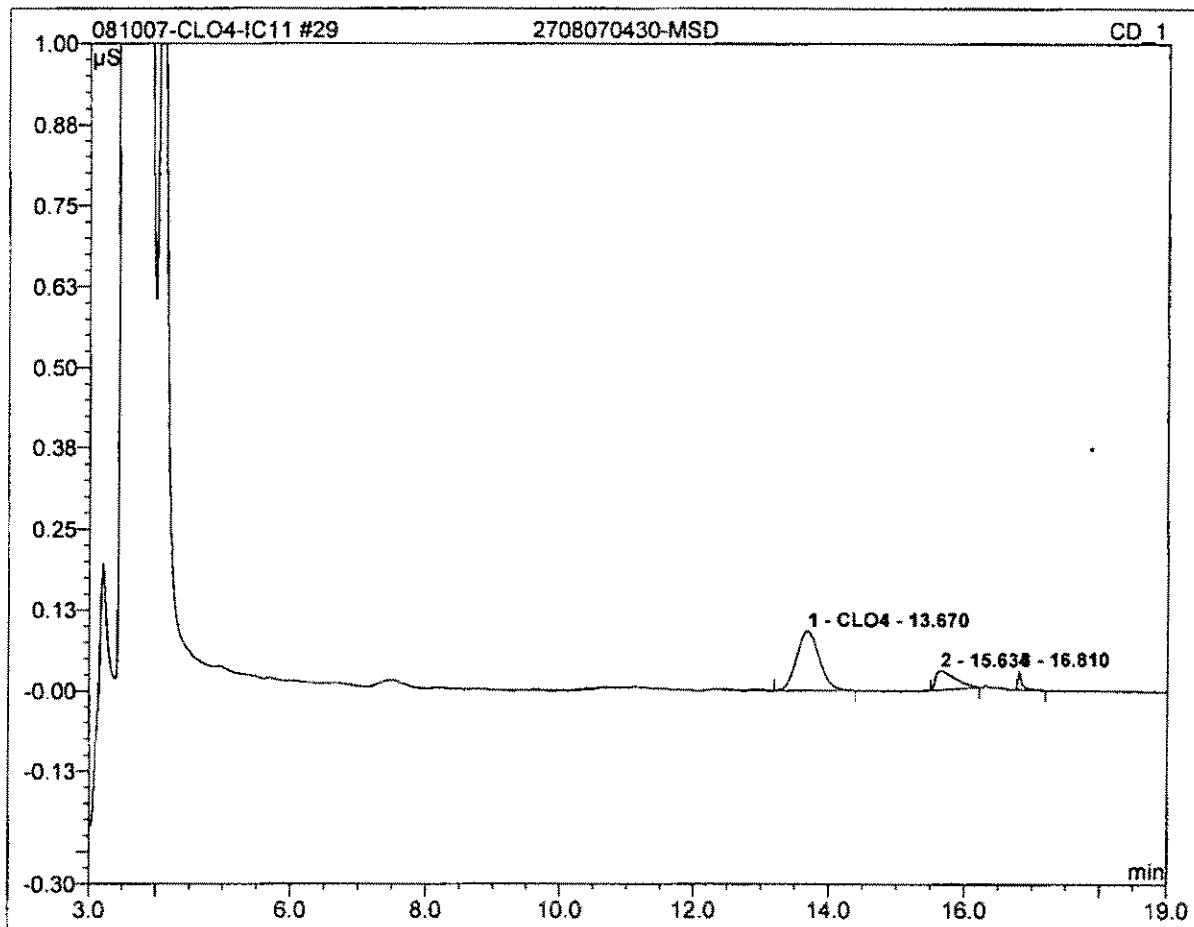
<i>Sample Name:</i>	2708070430-MS	<i>Channel:</i>	CD_1
<i>Sample Type:</i>	unknown	<i>Control Program:</i>	Perchlorate-IC11
<i>Recording Time:</i>	08/10/2007 22:21	<i>Quantif. Method:</i>	IC#4-CLO4-LOW
<i>Analyst:</i>	clv	<i>Dilution Factor:</i>	500.0000



No.	Ret.Time min	Peak Name	Height μS	Area μS*min	Rel.Area %	Amount	Type
1	13.67	CLO4	0.093	0.037	95.33	21207.915	BM
<b>Total:</b>			0.093	0.037	95.33	21207.915	

**29 2708070430-MSD****25**

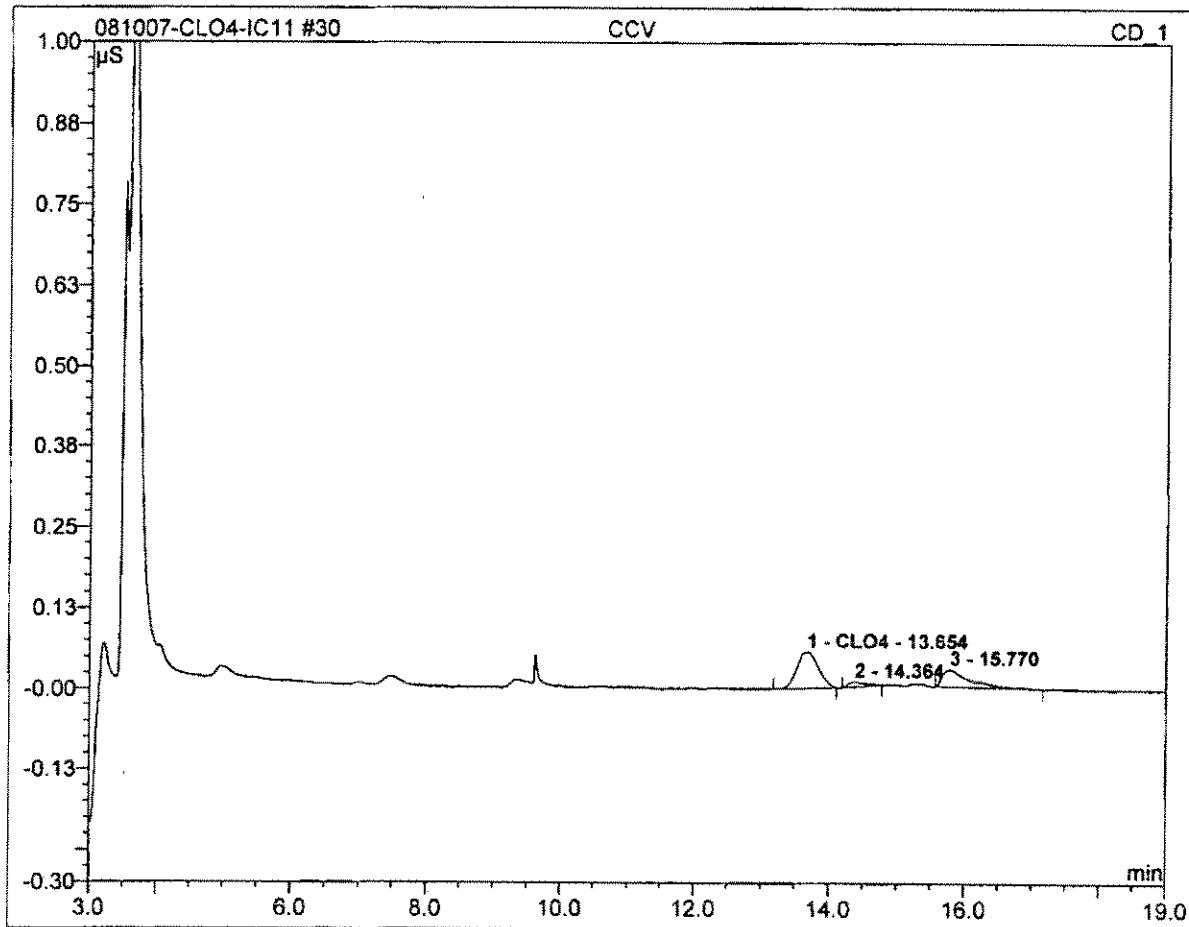
<i>Sample Name:</i>	<b>2708070430-MSD</b>	<i>Channel:</i>	<b>CD_1</b>
<i>Sample Type:</i>	<b>unknown</b>	<i>Control Program:</i>	<b>Perchlorate-IC11</b>
<i>Recording Time:</i>	<b>08/10/2007 22:43</b>	<i>Quantif. Method:</i>	<b>IC#4-CLO4-LOW</b>
<i>Analyst:</i>	<b>clv</b>	<i>Dilution Factor:</i>	<b>500.0000</b>



No.	Ret.Time min	Peak Name	Height $\mu\text{S}$	Area $\mu\text{S} \cdot \text{min}$	Rel.Area %	Amount	Type
1	13.67	CLO4	0.092	0.036	74.43	20324.148	BMB
Total:			0.092	0.036	74.43	20324.148	

**30 CCV****25**

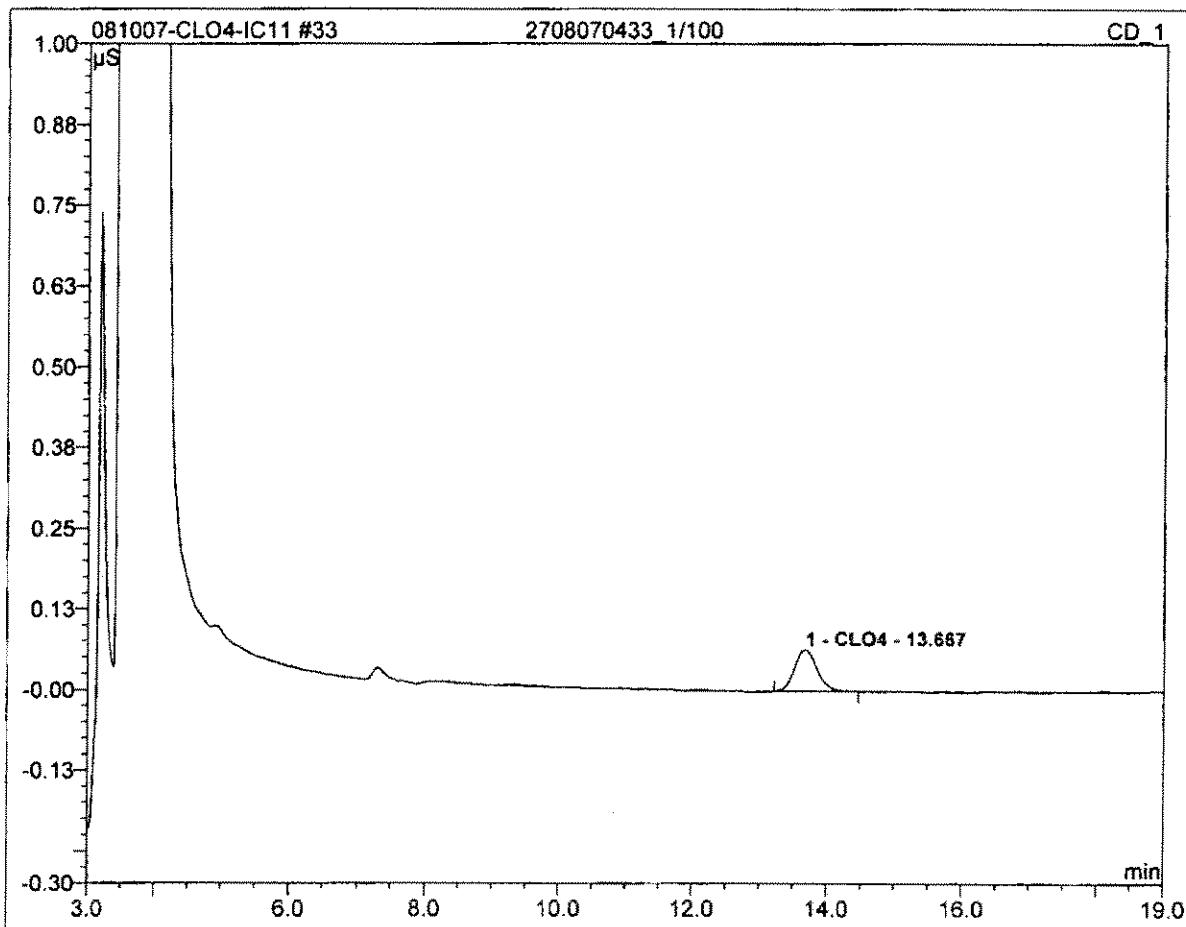
<b>Sample Name:</b>	CCV	<b>Channel:</b>	CD_1
<b>Sample Type:</b>	unknown	<b>Control Program:</b>	Perchlorate-IC11
<b>Recording Time:</b>	08/10/2007 23:05	<b>Quantif. Method:</b>	IC#4-CLO4-LOW
<b>Analyst:</b>	clv	<b>Dilution Factor:</b>	1.0000



No.	Ret.Time min	Peak Name	Height μS	Area μS*min	Rel.Area %	Amount	Type
1	13.65	CLO4	0.056	0.020	56.74	23.344	BMB
<b>Total:</b>			0.056	0.020	56.74	23.344	

**33 2708070433\_1/100**

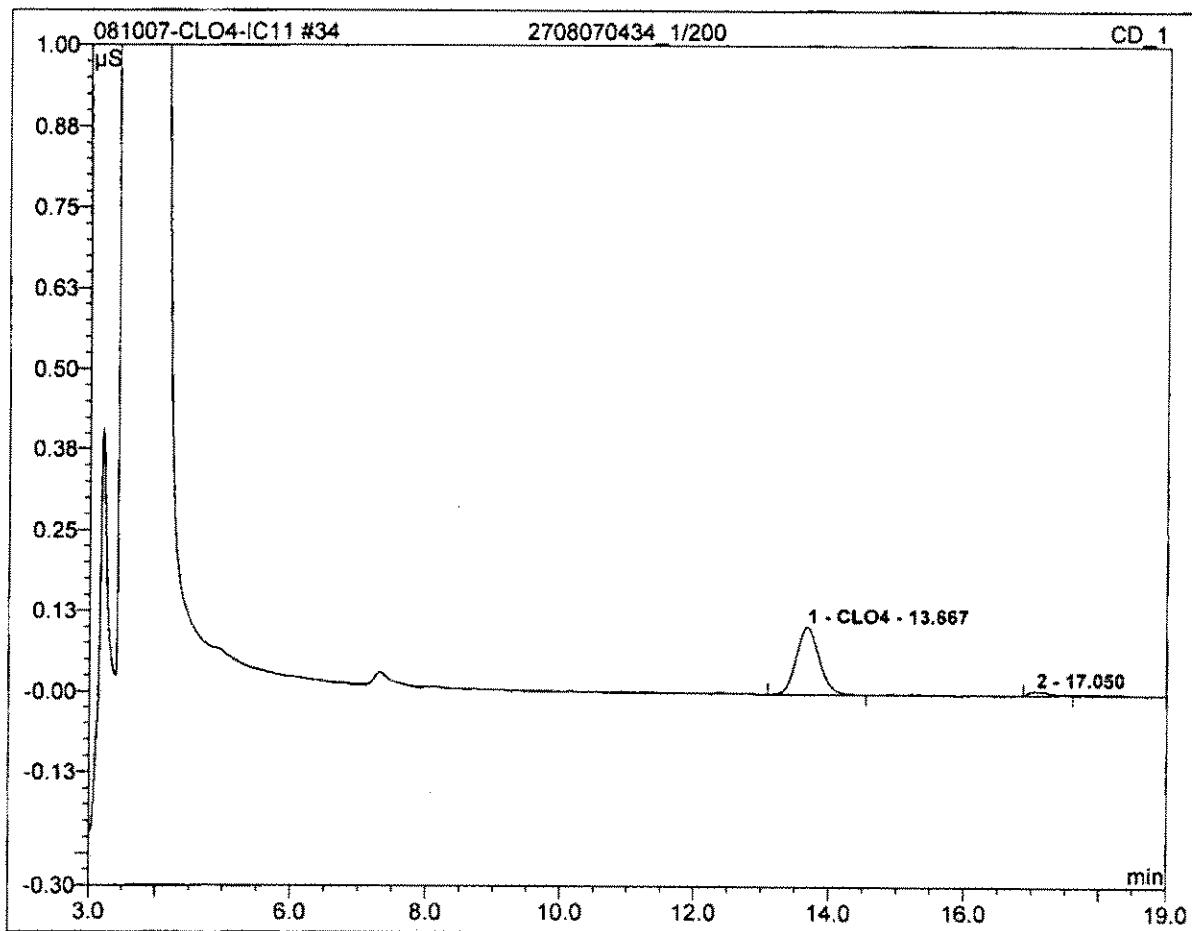
<i>Sample Name:</i>	2708070433_1/100	<i>Channel:</i>	CD_1
<i>Sample Type:</i>	unknown	<i>Control Program:</i>	Perchlorate-IC11
<i>Recording Time:</i>	08/11/2007 00:13	<i>Quantif. Method:</i>	IC#4-CLO4-LOW
<i>Analyst:</i>	clv	<i>Dilution Factor:</i>	100.0000



No.	Ret.Time min	Peak Name	Height μS	Area μS*min	Rel.Area %	Amount	Type
1	13.67	CLO4	0.064	0.025	100.00	2832.555	BMB
<b>Total:</b>			0.064	0.025	100.00	2832.555	

## 34 2708070434\_1/200

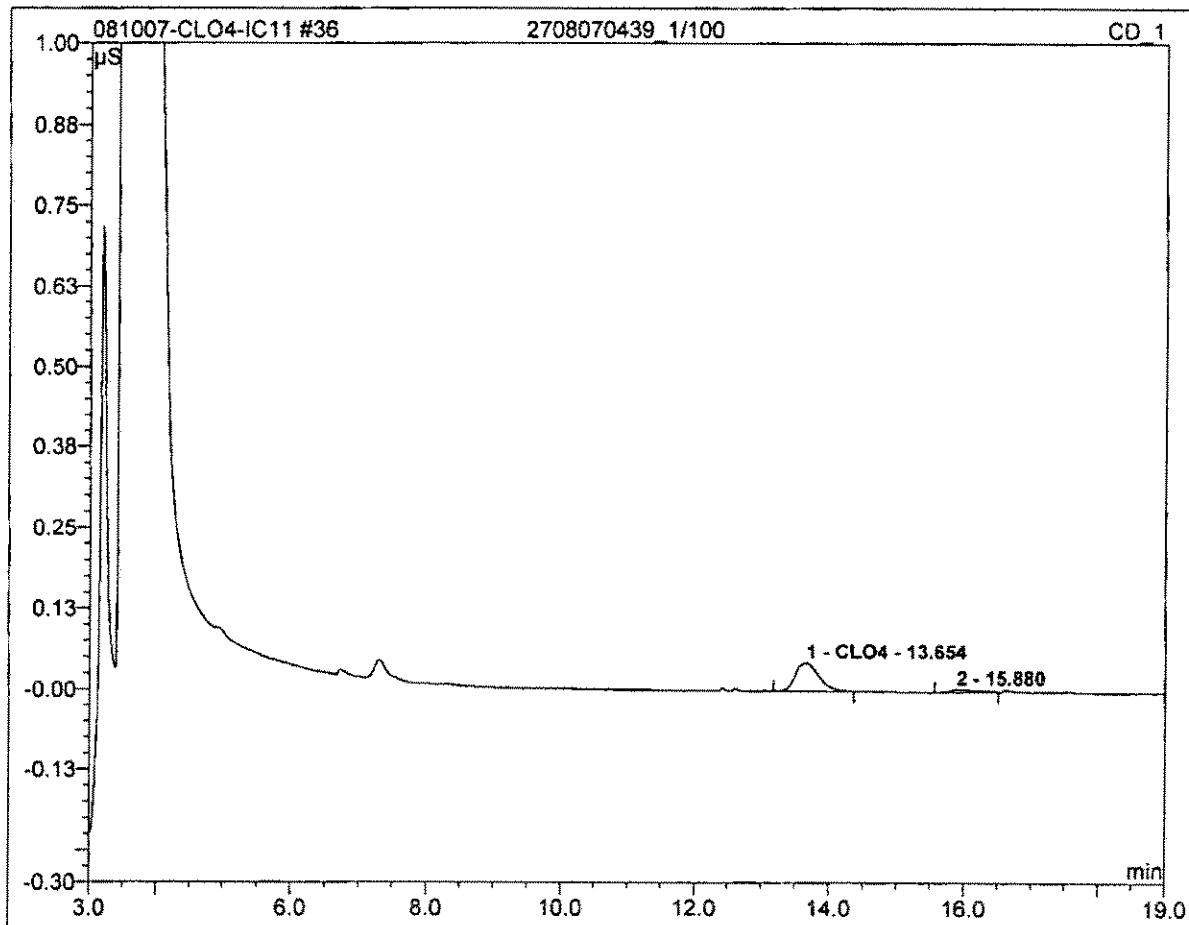
Sample Name:	2708070434_1/200	Channel:	CD_1
Sample Type:	unknown	Control Program:	Perchlorate-IC11
Recording Time:	08/11/2007 00:35	Quantif. Method:	IC#4-CLO4-LOW
Analyst:	clv	Dilution Factor:	200.0000



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	13.67	CLO4	0.104	0.041	95.07	9275.310	BMB
Total:			0.104	0.041	95.07	9275.310	

**36 2708070439\_1/100**

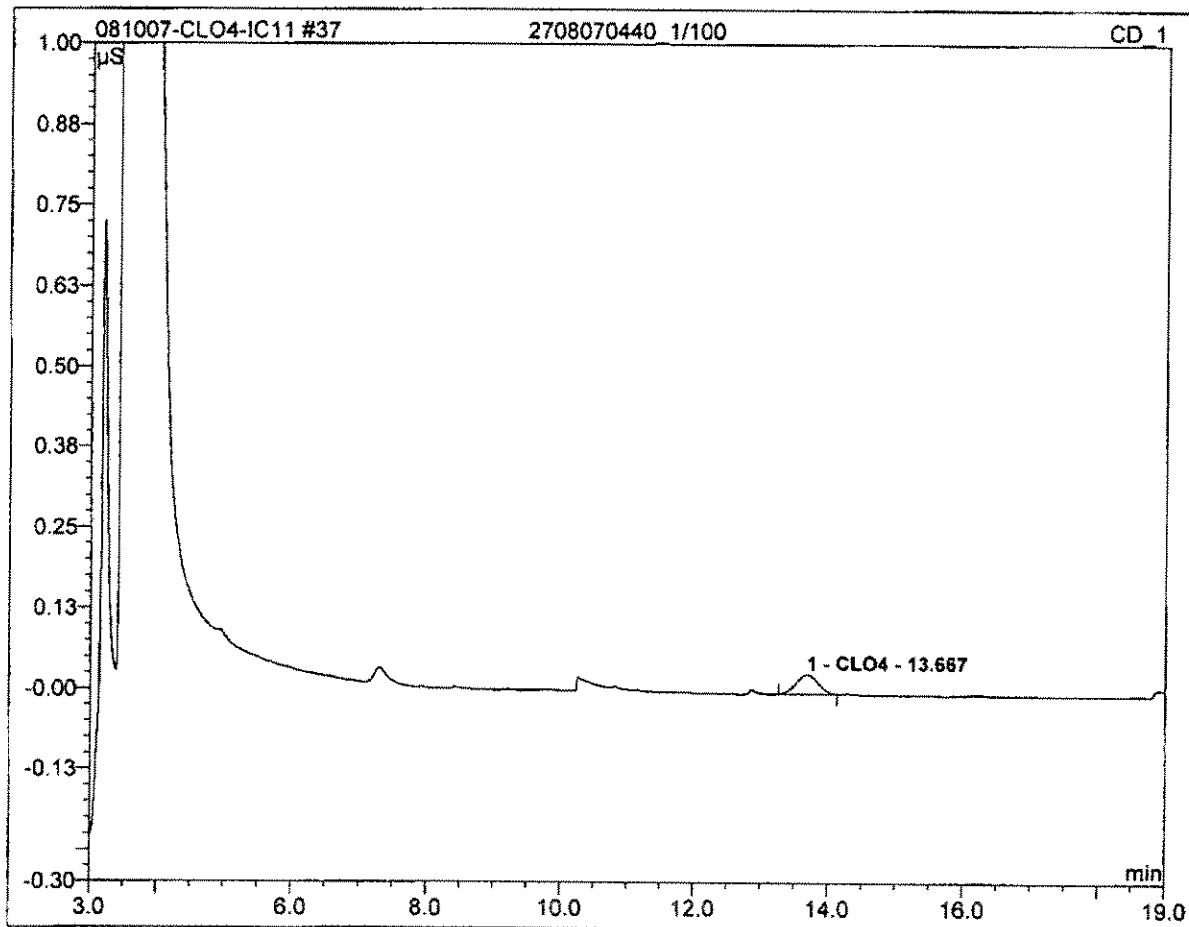
<b>Sample Name:</b>	<b>2708070439_1/100</b>	<b>Channel:</b>	<b>CD_1</b>
<b>Sample Type:</b>	<b>unknown</b>	<b>Control Program:</b>	<b>Perchlorate-IC11</b>
<b>Recording Time:</b>	<b>08/11/2007 01:20</b>	<b>Quantif. Method:</b>	<b>IC#4-CLO4-LOW</b>
<b>Analyst:</b>	<b>clv</b>	<b>Dilution Factor:</b>	<b>100.0000</b>



No.	Ret.Time min	Peak Name	Height μS	Area μS*min	Rel.Area %	Amount	Type
1	13.65	CLO4	0.043	0.017	90.17	2018.600	BMB
<b>Total:</b>			0.043	0.017	90.17	2018.600	

**37 2708070440\_1/100**

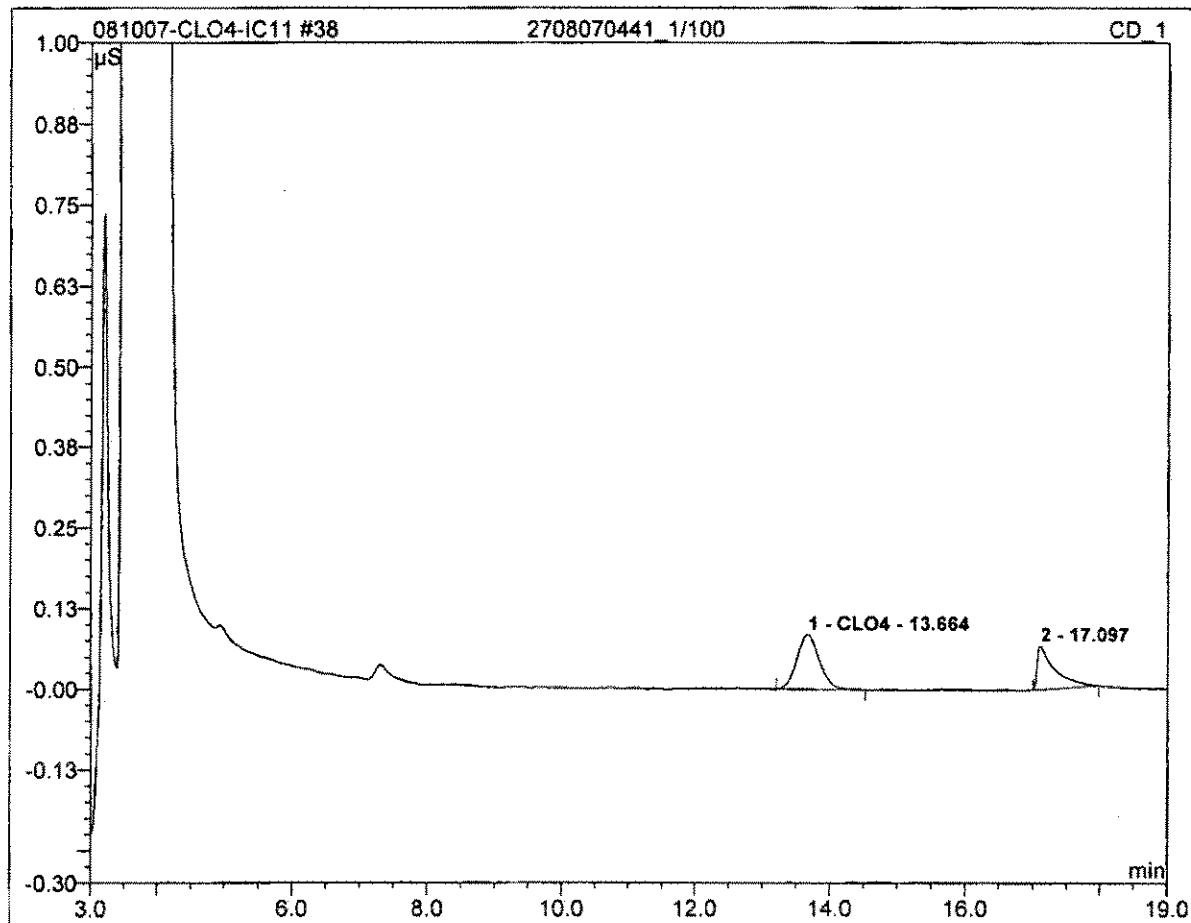
Sample Name:	2708070440_1/100	Channel:	CD_1
Sample Type:	unknown	Control Program:	Perchlorate-IC11
Recording Time:	08/11/2007 01:42	Quantif. Method:	IC#4-CLO4-LOW
Analyst:	clv	Dilution Factor:	100.0000



No.	Ret.Time min	Peak Name	Height $\mu\text{S}$	Area $\mu\text{S} \cdot \text{min}$	Rel.Area %	Amount	Type
1	13.67	CLO4	0.030	0.011	100.00	1317.121	BMB
<b>Total:</b>			0.030	0.011	100.00	1317.121	

**38 2708070441\_1/100**

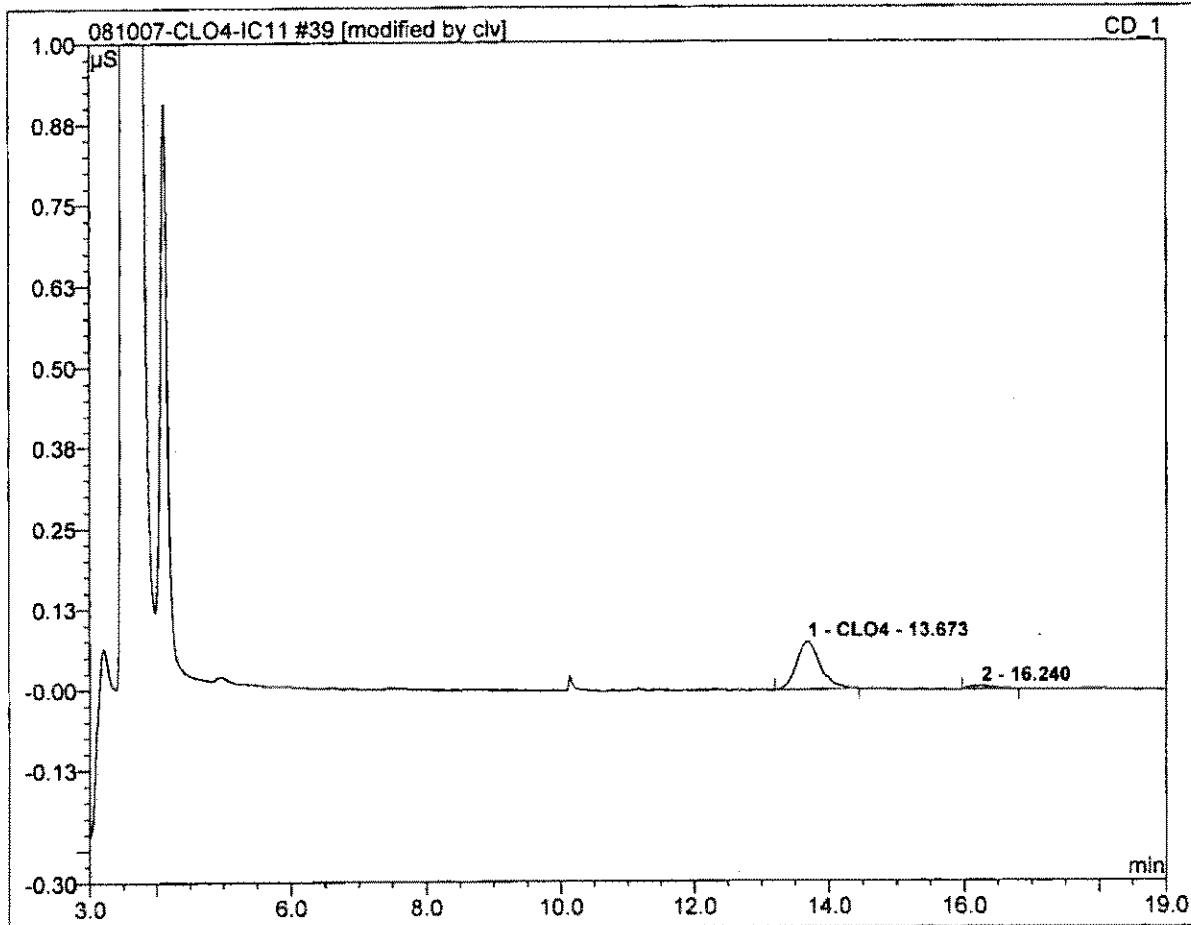
Sample Name:	2708070441_1/100	Channel:	CD_1
Sample Type:	unknown	Control Program:	Perchlorate-IC11
Recording Time:	08/11/2007 02:04	Quantif. Method:	IC#4-CLO4-LOW
Analyst:	clv	Dilution Factor:	100.0000



No.	Ret.Time min	Peak Name	Height μS	Area μS*min	Rel.Area %	Amount	Type
1	13.66	CLO4	0.084	0.033	61.57	3737.705	BMB
Total:			0.084	0.033	61.57	3737.705	

**39 2708070442\_1/10000**

Sample Name:	2708070442_1/10000	Channel:	CD_1
Sample Type:	unknown	Control Program:	Perchlorate-IC11
Recording Time:	08/11/2007 02:27	Quantif. Method:	IC#4-CLO4-LOW
Analyst:	clv	Dilution Factor:	10000.0000

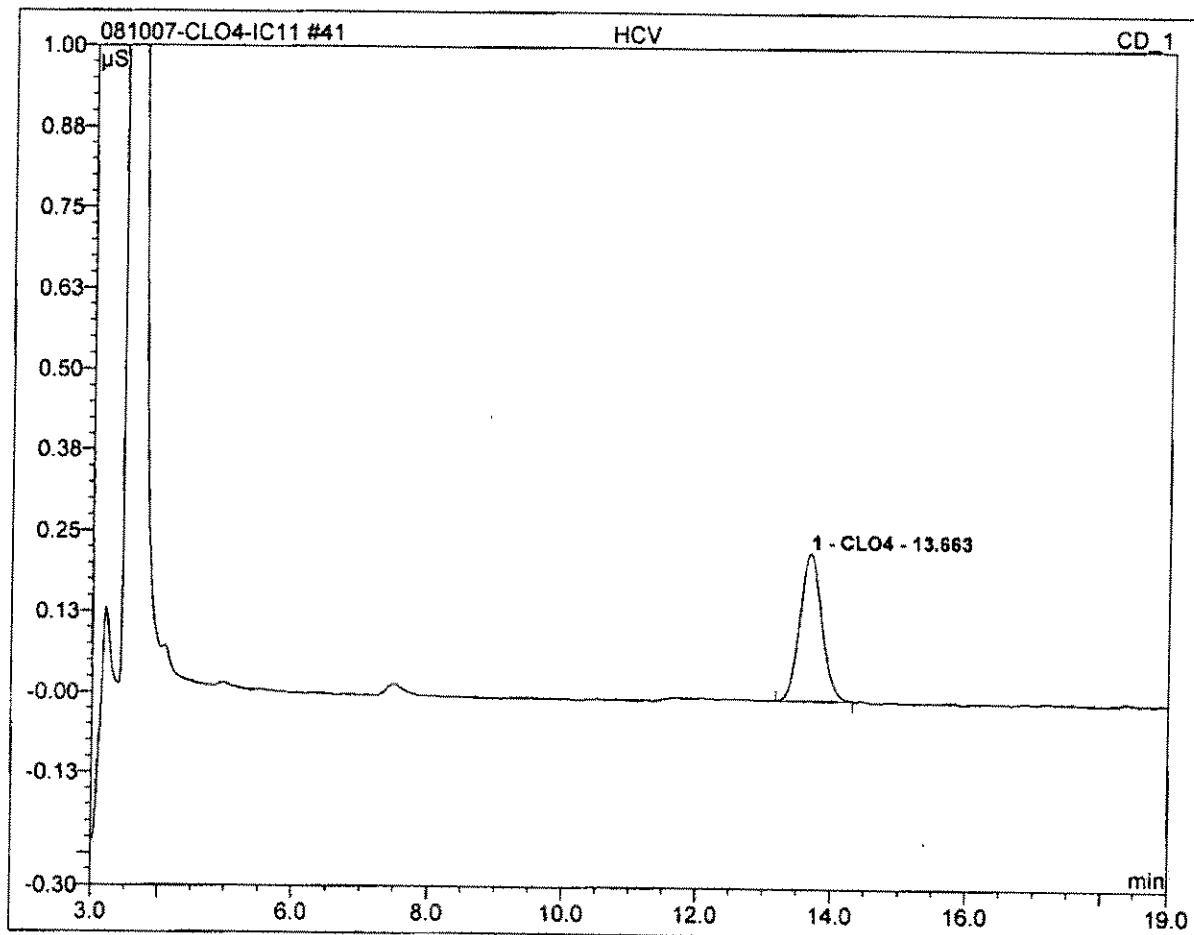


No.	Ret.Time min	Peak Name	Height μS	Area μS*min	Rel.Area %	Amount	Type
1	13.67	CLO4	0.074	0.030	92.67	339459.647	BMB*
Total:			0.074	0.030	92.67	339459.647	

## 41 HCV

100

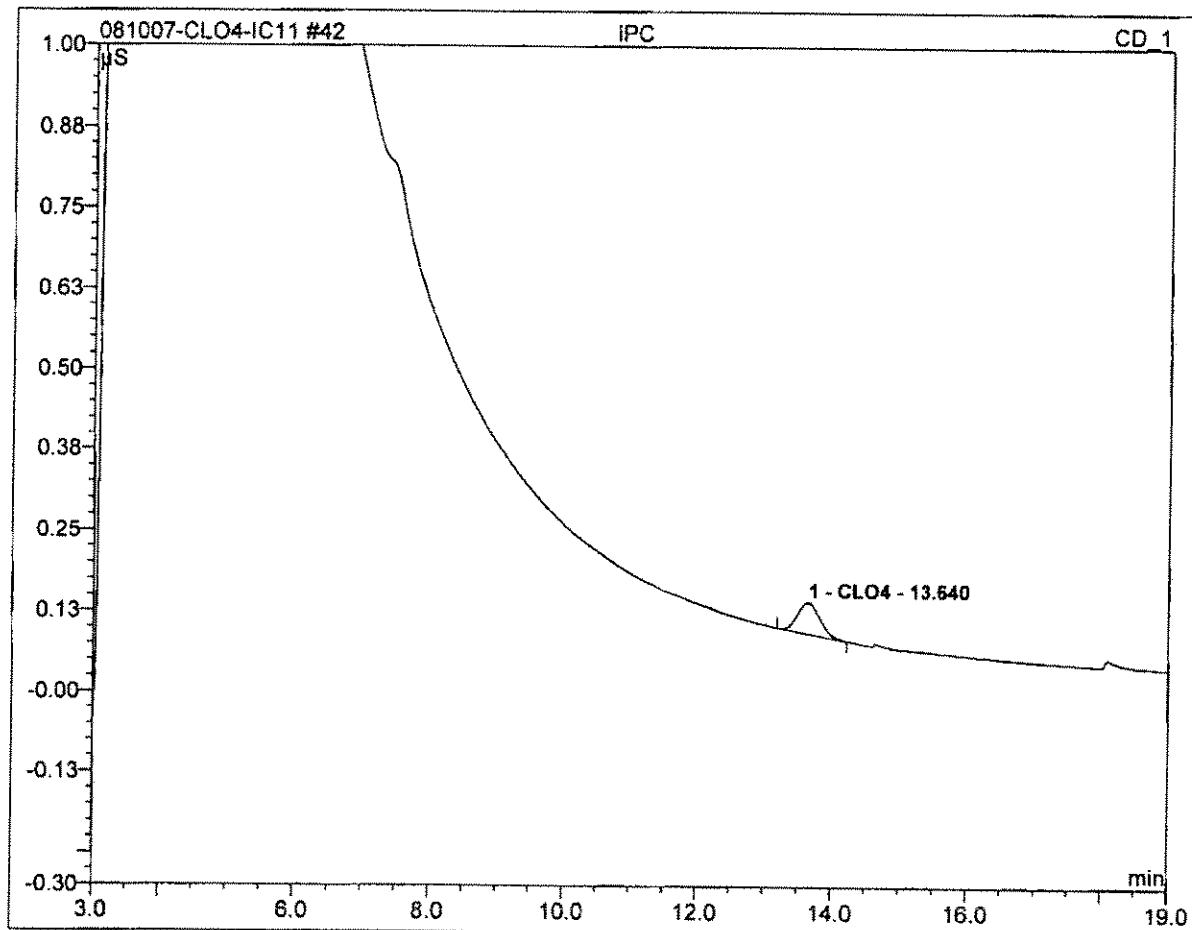
Sample Name:	HCV	Channel:	CD_1
Sample Type:	unknown	Control Program:	Perchlorate-IC11
Recording Time:	08/11/2007 03:11	Quantif. Method:	IC#4-CLO4-LOW
Analyst:	clv	Dilution Factor:	1.0000



No.	Ret.Time min	Peak Name	Height μS	Area μS*min	Rel.Area %	Amount	Type
1	13.66	CLO4	0.228	0.087	100.00	100.677	BMB
Total:			0.228	0.087	100.00	100.677	

**42 IPC****25**

<b>Sample Name:</b>	IPC	<b>Channel:</b>	CD_1
<b>Sample Type:</b>	unknown	<b>Control Program:</b>	Perchlorate-IC11
<b>Recording Time:</b>	08/11/2007 03:34	<b>Quantif. Method:</b>	IC#4-CLO4-LOW
<b>Analyst:</b>	clv	<b>Dilution Factor:</b>	1.0000



No.	Ret.Time min	Peak Name	Height μS	Area μS*min	Rel.Area %	Amount	Type
1	13.64	CLO4	0.049	0.019	100.00	21.624	BMB
<b>Total:</b>			0.049	0.019	100.00	21.624	

## Perchlorate QC Checklist

rev: 27 Mar 03

Analysis Date: 08/15/07 Analyst: clw

QC'd by m Date 25 Aug 07

Instrument: 1011

Calculated MCT Level: 3155 umhos/cm

Original IPC conductance: 3101 umhos/cm

Daily IPC conductance: 3102 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 (MBLANK, MRL, ICCSCV, IPC) to be analyzed with every batch (up to 20 samples) or part thereof

- MBLANK is analyzed before samples. Perchlorate, if present, is < or = half of the MRL.
- L-ClO<sub>4</sub> only: ICCSCV at 2ppb is within 50%-150% (1-3ppb)
- ClO<sub>4</sub> only: MRL at 4ppb is within 75%-125% (3-5ppb)
- 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

$$PDA/H = 1.0 \pm 1\%$$

### 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 ~~for 4ppb spike (3.2-4.8ppb)~~
- 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) ~~for 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  
One Laboratory Reagent Blank (LRB). Perchlorate is < or = half of MRL.

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

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

JIA QIR needed for failed QC

QIR needed for samples analyzed outside of hold time

Sample No.	Sample Name	Dil.Fac.	Comment	Time	Amount
					CLO4 CD_1
1	WASH	1.0	0	08.15.07 17:28	n.a.
2	WASH	1.0	0	08.15.07 17:50	n.a.
3	WASH	1.0	0	08.15.07 18:13	n.a.
4	autocal1	1.0	0	08.15.07 18:35	n.a.
5	autocal2	1.0	2	08.15.07 18:58	2.4457
6	autocal3	1.0	4	08.15.07 19:20	3.3668
7	autocal4	1.0	10	08.15.07 19:42	10.4520
8	autocal5	1.0	25	08.15.07 20:05	24.4855
9	autocal6	1.0	50	08.15.07 20:27	50.3062
10	autocal7	1.0	100	08.15.07 20:50	99.9450
11	QCS	1.0	20	08.15.07 21:12	18.0116 90.1%
12	IPC	1.0	25	08.15.07 21:34	21.3549 85.4%
13	-MBLK	1.0		08.15.07 21:57	n.a. ND<1/2 DNR
14	-MRLCHK-2	1.0	2	08.15.07 22:19	2.1672 108%
15	-MRLCHK-4 DNR	1.0	4	08.15.07 22:42	5.2335 DNR
16	-LCS1	1.0	25	08.15.07 23:04	✓ 24.8699 99.5%
17	-LCS2	1.0	25	08.15.07 23:26	✓ 23.5086 94.0%
18	2708070418_1/5	5.0		08.15.07 23:49	✓ 82.1034
19	2708070427_1/10000	10000.0		08.16.07 00:11	✓ 244791.9998
20	2708070431_1/10 DNR	10.0		08.16.07 00:34	n.a. DNR
21	2708070432_1/5	5.0		08.16.07 00:56	✓ n.a.
22	2708070437_1/100	100.0	CONFIRMED	08.16.07 01:18	✓ 4392.3268
23	2708040008_1/50000	50000.0		08.16.07 01:41	✓ 728370.9966
24	2708070254	1.0		08.16.07 02:03	✓ n.a.
25	2708070254-MS	1.0		08.16.07 02:26	✓ 23.7032
26	2708070254-MSD	1.0		08.16.07 02:48	✓ 24.6522
27	2708060473_1/2	2.0		08.16.07 03:10	✓ n.a.
28	2708060474_1/2	2.0	✓ 25.08/08/08/17	08.16.07 03:33	✓ n.a.
29	2708060475_1/2	2.0	✓ 25	08.16.07 03:55	✓ n.a.
30	CCV	1.0	25	08.16.07 04:18	25.9721 104%
31	2708070270_1/10000	10000.0		08.16.07 04:40	✓ 218840.5923
32	2708070595_1/10000	10000.0		08.16.07 05:02	✓ 236217.1762
33	2708030110	1.0		08.16.07 05:25	✓ n.a.
34	2708070760_1/2	2.0		08.16.07 05:47	✓ n.a.
35	2708080198	1.0		08.16.07 06:10	✓ n.a.
36	2708080595	1.0		08.16.07 06:32	✓ n.a.
37	2708080624	1.0		08.16.07 06:54	✓ n.a.
38	2708080625	1.0		08.16.07 07:17	✓ n.a.
39	2708080626	1.0		08.16.07 07:39	✓ n.a.
40	2708080627	1.0		08.16.07 08:02	✓ n.a.
41	HCV	1.0	100	08.16.07 08:24	107.7401 108%
42	IPC	1.0	25	08.16.07 08:46	21.5699
43	-MRLCHK-4	1.0	25	08.16.07 09:40	✓ 4.1206 103%



CONDUCTIVITY MW SOP REVISION 5  
SM2510B

Analysis Date: 123 08/10/07

Analyst: CLW

Reviewed By: \_\_\_\_\_

LIMS Check By: \_\_\_\_\_

Was QC Criteria Met: Y N

Was QIR Needed: Y N

Run 8/10/07

Time of Analysis Start: 1230 End: \_\_\_\_\_

MRL 2umho/cm: R8 exp of solution:

KCl Std 1412 R8 201668 exp of solution 12/07

TV = 1412  $\mu\text{mho}/\text{cm}$  @ 25°C for 0.0100M

Reading: 1342

Instrument: YSI Model 3200 SN 01A0504 Year Acquired 2001 New

Run #	Sample Number	Sample ID	Client	Date Collected	Temp °C	pH	Scale ( $\mu\text{mho}/\text{mmho}$ )	Instrument	Result	Reported ( $\mu\text{mho}/\text{cm}$ )	Comments
Blk	Blank				7	7	~5			0.3602	
STD	MRL 2umho/cm										1-3 ± 50% of TV
STD	KCl - 1000 mho/cm										850-1050 ± 5% of TV
1	270807G418	ART1	KM	08/06/07							
2	0422	2							10000		
3	0423	3							15000		
4	0429	4							10000		
5	0425	6							8800		
6	0426	7							10000		
7	0427	↓ 8							14500		
8	0428	TC99R2/R3							14600		
9	0429	1158							5900		
10	0430	1162							6200		
DUP	↓	↓ ↓							6200		
11	0431	SEEP SURFACE							6200		RPD < 5%
12	0432	ST1							5700		
13	0433	PC117							9900		
14	0434	118							5300		
15	0437	119							6400		
16	0439	120							5600		
17	0440	121							4600		
18	0441	↓ 133							4300		
19	0442	ART9							5100		
20	0531	EFF							10000		
DUP	↓	↓ ↓							9500		
STD	KCl - 10 mho/cm								9.500		RPD < 5%
											8-12—RPD < 20% of TV

$$\% \text{RPD} = \frac{|S_1 - S_2|}{(S_1 + S_2)/2} \cdot 100$$

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

Sequence: 081507-CLO4-IC11  
Operator: clv

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Printed: 8/16/2007 11:05:53 AM

Title:  
Datasource: Dionex\_USPAS2SDIO2  
Location: IC1C11\_CLO4\2007\AUG  
Timebase: IC11  
#Samples: 43

Created: 8/14/2007 3:55:43 PM by clv  
Last Update: 8/16/2007 10:57:13 AM by clv

No.	Name	Sample ID	Dil. Factor	Type	Comment	Status
1	WASH		1.0000	Unknown	0	Finished
2	WASH		1.0000	Unknown	0	Finished
3	WASH		1.0000	Unknown	0	Finished
4	autocal1		1.0000	Standard	0	Finished
5	autocal2	R201449 EXP 07/28/09	1.0000	Standard	2	Finished
6	autocal3		1.0000	Standard	4	Finished
7	autocal4		1.0000	Standard	10	Finished
8	autocal5		1.0000	Standard	25	Finished
9	autocal6		1.0000	Standard	50	Finished
10	autocal7		1.0000	Standard	100	Finished
11	QCS	R201449 EXP 07/28/09	1.0000	Unknown	20	Finished
12	IPC	EC=3155	1.0000	Unknown	25	Finished
13	-MBLK		1.0000	Unknown		Finished
14	-MRLCHK-2	2	1.0000	Unknown	2	Finished
15	-MRLCHK-4 DNR	4	1.0000	Unknown	4	Finished
16	-LCS1	25	1.0000	Unknown	25	Finished
17	-LCS2	25	1.0000	Unknown	25	Finished
18	2708070418_1/5	KM ART-1	5.0000	Unknown		Finished
19	2708070427_1/10000	KM ART-8	10000.0000	Unknown		Finished
20	2708070431_1/10 DNR	KM SEEP SURFACE	10.0000	Unknown		Finished
21	2708070432_1/5	KM SF-1	5.0000	Unknown		Finished
22	2708070437_1/100	KM PC-119	100.0000	Unknown	CONFIRMED	Finished
23	2708040008_1/50000	KM M-89	50000.0000	Unknown		Finished
24	2708070254	CALWATER 678	1.0000	Unknown		Finished
25	2708070254-MS	25	1.0000	Unknown		Finished
26	2708070254-MSD	25	1.0000	Unknown		Finished
27	2708060473_1/2	IEUA CUCAMONGA CRK	2.0000	Unknown		Finished
28	2708060474_1/2	IEUA CUCAMONGA CRK	2.0000	Unknown	25	Finished
29	2708060475_1/2	IEUA SAN ANTONIO CRK	2.0000	Unknown	25	Finished
30	CCV	25	1.0000	Unknown	25	Finished
31	2708070270_1/10000	KM INF-COMP	10000.0000	Unknown		Finished
32	2708070595_1/10000	KM INF	10000.0000	Unknown		Finished
33	2708030110	TUCSON 112	1.0000	Unknown		Finished
34	2708070760_1/2	IEUA RP3	2.0000	Unknown		Finished
35	2708080198	VALEYWA W1+4	1.0000	Unknown		Finished
36	2708080595	FOOTHILL MWD A	1.0000	Unknown		Finished
37	2708080624	VALENCIA W6	1.0000	Unknown		Finished
38	2708080625	VALENCIA W2 SOURCE	1.0000	Unknown		Finished
39	2708080626	VALENCIA W2 LEAD	1.0000	Unknown		Finished
40	2708080627	VALENCIA W2 LAG	1.0000	Unknown		Finished
41	HCV	100	1.0000	Unknown	100	Finished
42	IPC	EC=3155	1.0000	Unknown	25	Finished

Sequence: 081507-CLO4-IC11  
Operator: clv

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Printed: 8/16/2007 11:05:53 AM

Title:  
Datasource: Dionex\_USPAS2SDIO2  
Location: IC\IC11\_CLO4\2007\AUG  
Timebase: IC11  
#Samples: 43

Created: 8/14/2007 3:55:43 PM by clv  
Last Update: 8/16/2007 10:57:13 AM by clv

No.	Name	Program	Method	Inj. Date/Time	*Analyst
1	WASH	Perchlorate-IC11	IC#4-CLO4-LOW	8/15/2007 5:28:34 PM	clv
2	WASH	Perchlorate-IC11	IC#4-CLO4-LOW	8/15/2007 5:50:58 PM	clv
3	WASH	Perchlorate-IC11	IC#4-CLO4-LOW	8/15/2007 6:13:22 PM	clv
4	autocal1	Perchlorate-IC11	IC#4-CLO4-LOW	8/15/2007 6:35:46 PM	clv
5	autocal2	Perchlorate-IC11	IC#4-CLO4-LOW	8/15/2007 6:58:10 PM	clv
6	autocal3	Perchlorate-IC11	IC#4-CLO4-LOW	8/15/2007 7:20:34 PM	clv
7	autocal4	Perchlorate-IC11	IC#4-CLO4-LOW	8/15/2007 7:42:58 PM	clv
8	autocal5	Perchlorate-IC11	IC#4-CLO4-LOW	8/15/2007 8:05:22 PM	clv
9	autocal6	Perchlorate-IC11	IC#4-CLO4-LOW	8/15/2007 8:27:45 PM	clv
10	autocal7	Perchlorate-IC11	IC#4-CLO4-LOW	8/15/2007 8:50:08 PM	clv
11	QCS	Perchlorate-IC11	IC#4-CLO4-LOW	8/15/2007 9:12:32 PM	clv
12	IPC	Perchlorate-IC11	IC#4-CLO4-LOW	8/15/2007 9:34:56 PM	clv
13	-MBLK	Perchlorate-IC11	IC#4-CLO4-LOW	8/15/2007 9:57:19 PM	clv
14	-MRLCHK-2	Perchlorate-IC11	IC#4-CLO4-LOW	8/15/2007 10:19:43 PM	clv
15	-MRLCHK-4 DNR	Perchlorate-IC11	IC#4-CLO4-LOW	8/15/2007 10:42:07 PM	clv
16	-LCS1	Perchlorate-IC11	IC#4-CLO4-LOW	8/15/2007 11:04:30 PM	clv
17	-LCS2	Perchlorate-IC11	IC#4-CLO4-LOW	8/15/2007 11:26:54 PM	clv
18	2708070418_1/5	Perchlorate-IC11	IC#4-CLO4-LOW	8/15/2007 11:49:18 PM	clv
19	2708070427_1/10000	Perchlorate-IC11	IC#4-CLO4-LOW	8/16/2007 12:11:41 AM	clv
20	2708070431_1/10 DNR	Perchlorate-IC11	IC#4-CLO4-LOW	8/16/2007 12:34:05 AM	clv
21	2708070432_1/5	Perchlorate-IC11	IC#4-CLO4-LOW	8/16/2007 12:56:29 AM	clv
22	2708070437_1/100	Perchlorate-IC11	IC#4-CLO4-LOW	8/16/2007 1:18:52 AM	clv
23	2708040008_1/50000	Perchlorate-IC11	IC#4-CLO4-LOW	8/16/2007 1:41:16 AM	clv
24	2708070254	Perchlorate-IC11	IC#4-CLO4-LOW	8/16/2007 2:03:40 AM	clv
25	2708070254-MS	Perchlorate-IC11	IC#4-CLO4-LOW	8/16/2007 2:26:04 AM	clv
26	2708070254-MSD	Perchlorate-IC11	IC#4-CLO4-LOW	8/16/2007 2:48:27 AM	clv
27	2708060473_1/2	Perchlorate-IC11	IC#4-CLO4-LOW	8/16/2007 3:10:51 AM	clv
28	2708060474_1/2	Perchlorate-IC11	IC#4-CLO4-LOW	8/16/2007 3:33:15 AM	clv
29	2708060475_1/2	Perchlorate-IC11	IC#4-CLO4-LOW	8/16/2007 3:55:38 AM	clv
30	CCV	Perchlorate-IC11	IC#4-CLO4-LOW	8/16/2007 4:18:02 AM	clv
31	2708070270_1/10000	Perchlorate-IC11	IC#4-CLO4-LOW	8/16/2007 4:40:26 AM	clv
32	2708070595_1/10000	Perchlorate-IC11	IC#4-CLO4-LOW	8/16/2007 5:02:49 AM	clv
33	2708030110	Perchlorate-IC11	IC#4-CLO4-LOW	8/16/2007 5:25:17 AM	clv
34	2708070760_1/2	Perchlorate-IC11	IC#4-CLO4-LOW	8/16/2007 5:47:41 AM	clv
35	2708080198	Perchlorate-IC11	IC#4-CLO4-LOW	8/16/2007 6:10:05 AM	clv
36	2708080595	Perchlorate-IC11	IC#4-CLO4-LOW	8/16/2007 6:32:29 AM	clv
37	2708080624	Perchlorate-IC11	IC#4-CLO4-LOW	8/16/2007 6:54:53 AM	clv
38	2708080625	Perchlorate-IC11	IC#4-CLO4-LOW	8/16/2007 7:17:17 AM	clv
39	2708080626	Perchlorate-IC11	IC#4-CLO4-LOW	8/16/2007 7:39:41 AM	clv
40	2708080627	Perchlorate-IC11	IC#4-CLO4-LOW	8/16/2007 8:02:05 AM	clv
41	HCV	Perchlorate-IC11	IC#4-CLO4-LOW	8/16/2007 8:24:28 AM	clv
42	IPC	Perchlorate-IC11	IC#4-CLO4-LOW	8/16/2007 8:46:52 AM	clv

Sequence: 081507-CLO4-IC11  
Operator: clv

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Printed: 8/16/2007 11:05:53 AM

Title:  
Datasource: Dionex\_USPAS2SDIO2  
Location: IC\IC11\_CLO4\2007\AUG  
Timebase: IC11  
#Samples: 43

Created: 8/14/2007 3:55:43 PM by clv  
Last Update: 8/16/2007 10:57:13 AM by clv

No.	Name	Sample ID	Dil. Factor	Type	Comment	Status
43	-MRLCHK-4	4	1.0000	Unknown	25	Finished

Sequence: 081507-CLO4-IC11  
Operator: clv

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Printed: 8/16/2007 11:05:53 AM

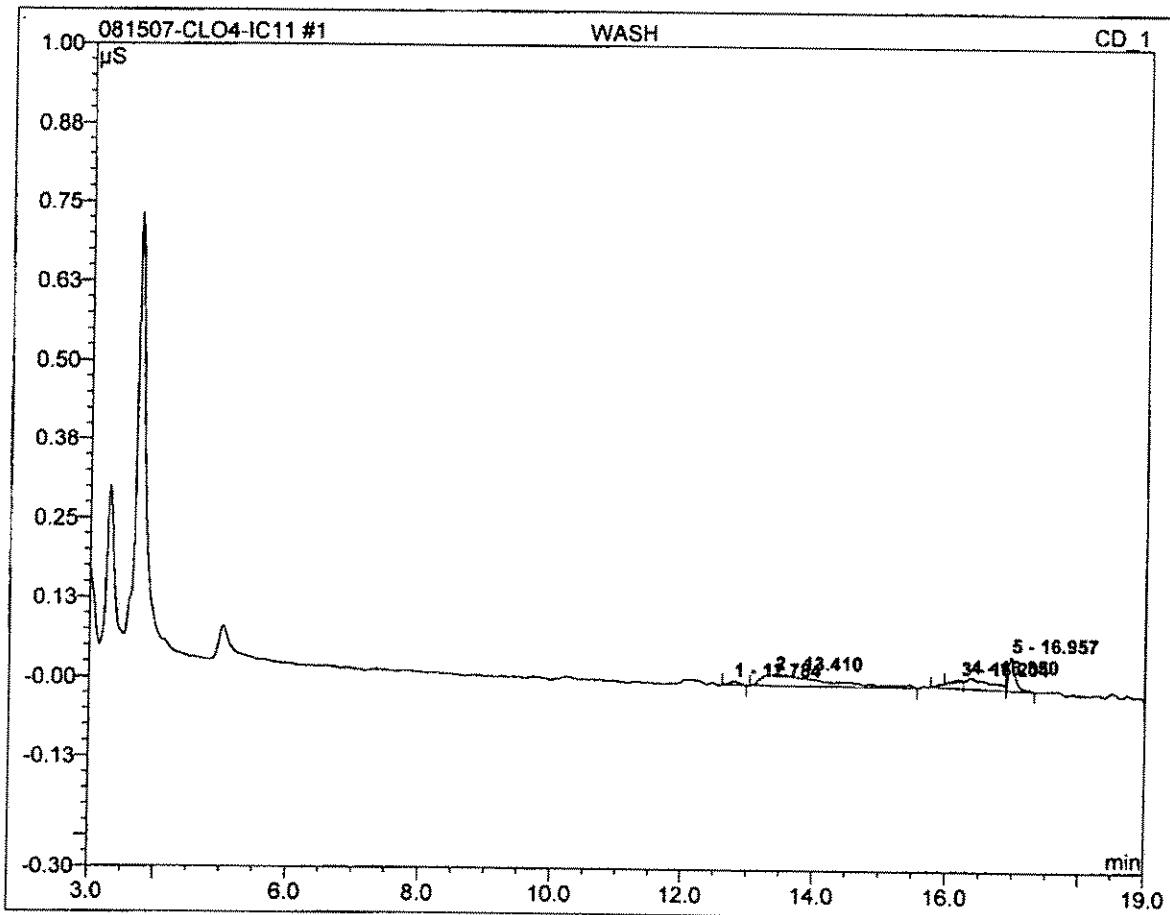
Title:  
Datasource: Dionex\_USPAS2SDIO2  
Location: IC\IC11\_CLO4\2007\AUG  
Timebase: IC11  
#Samples: 43

Created: 8/14/2007 3:55:43 PM by clv  
Last Update: 8/16/2007 10:57:13 AM by clv

No.	Name	Program	Method	Inj. Date/Time	*Analyst
43	-MRLCHK-4	Perchlorate-IC11	IC#4-CLO4-LOW	8/16/2007 9:40:26 AM	clv

**1 WASH****0**

Sample Name:	WASH	Channel:	CD_1
Sample Type:	unknown	Control Program:	Perchlorate-IC11
Recording Time:	08/15/2007 17:28	Quantif. Method:	IC#4-CLO4-LOW
Analyst:	clv	Dilution Factor:	1.0000

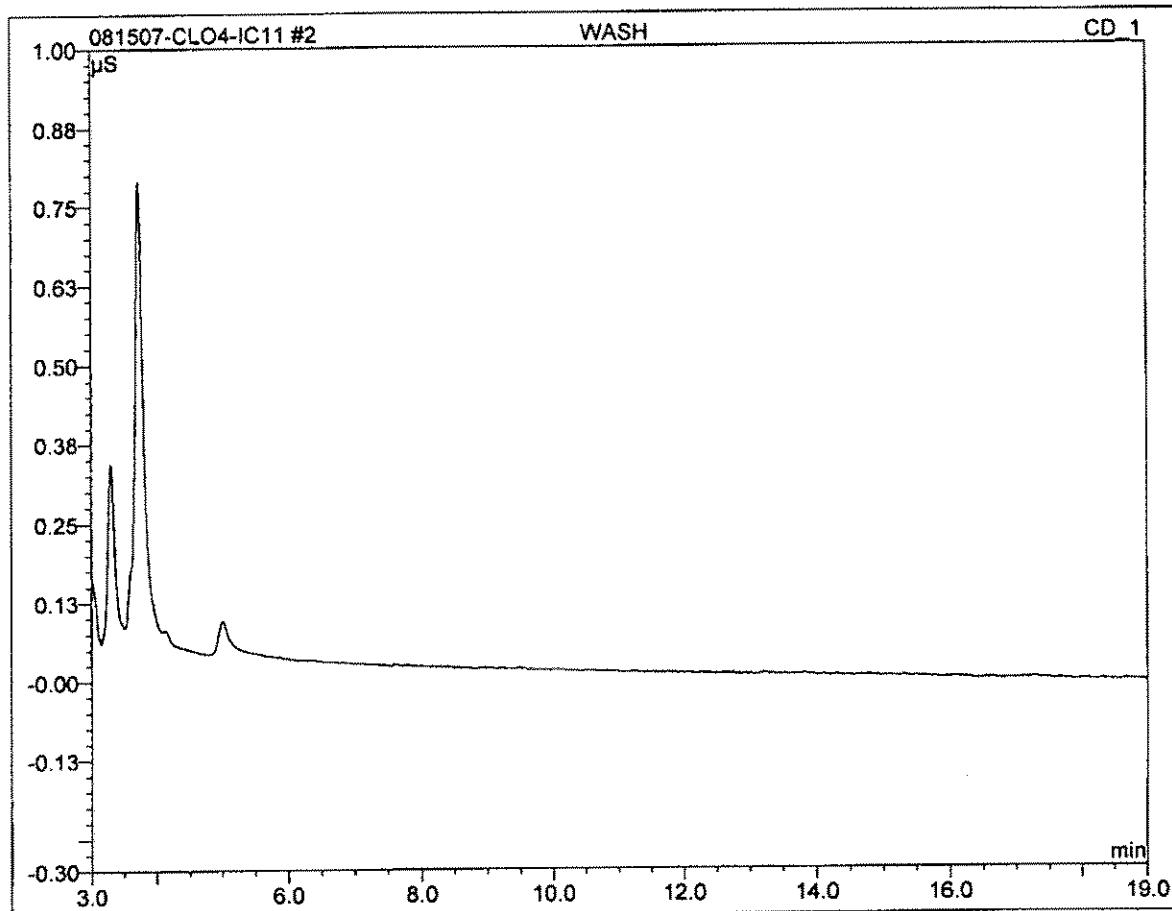


No.	Ret.Time min	Peak Name	Height μS	Area μS*min	Rel.Area %	Amount	Type
Total:			0.000	0.000	0.00	0.000	

**2 WASH**

0

<b>Sample Name:</b>	<b>WASH</b>	<b>Channel:</b>	<b>CD_1</b>
<b>Sample Type:</b>	<b>unknown</b>	<b>Control Program:</b>	<b>Perchlorate-IC11</b>
<b>Recording Time:</b>	<b>08/15/2007 17:50</b>	<b>Quantif. Method:</b>	<b>IC#4-CLO4-LOW</b>
<b>Analyst:</b>	<b>clv</b>	<b>Dilution Factor:</b>	<b>1.0000</b>

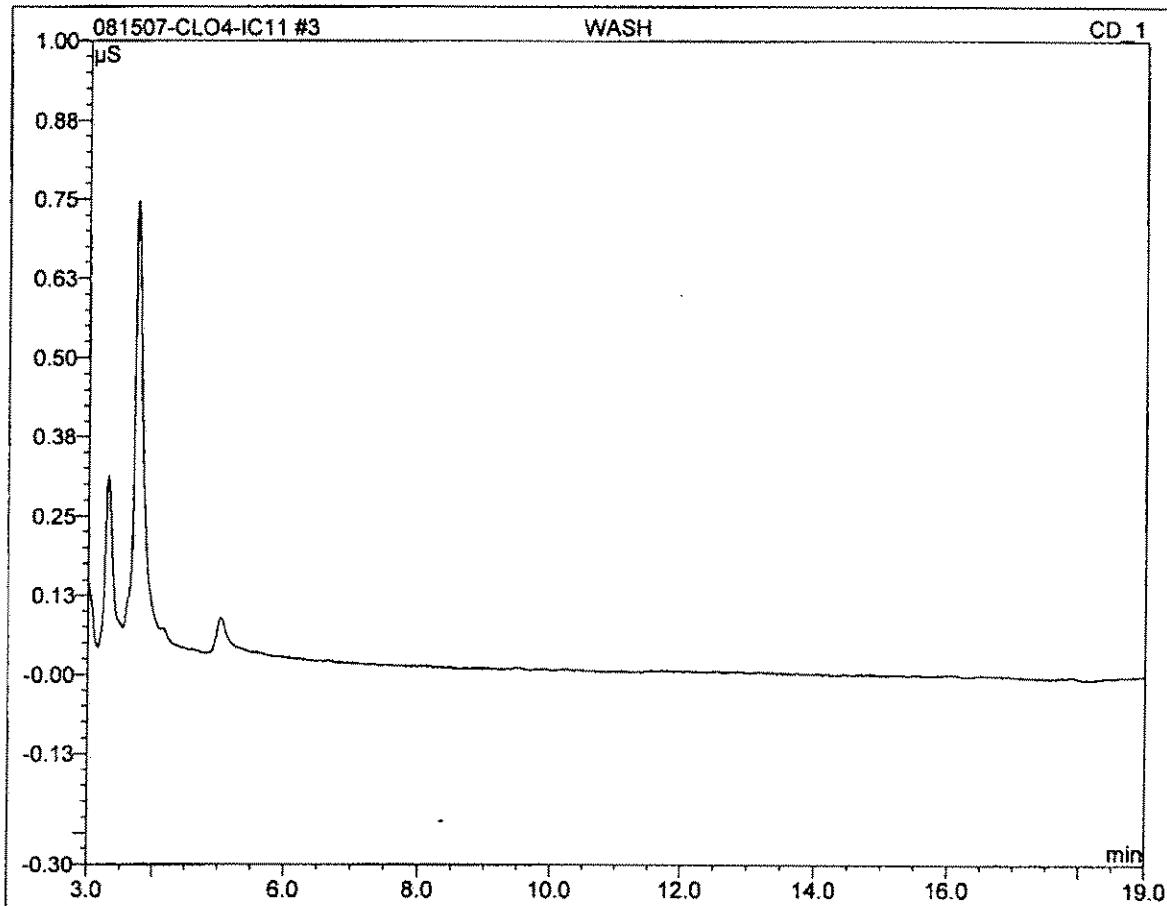


No.	Ret.Time min	Peak Name	Height μS	Area μS*min	Rel.Area %	Amount	Type
Total:			0.000	0.000	0.00	0.000	

**3 WASH**

0

<b>Sample Name:</b>	<b>WASH</b>	<b>Channel:</b>	<b>CD_1</b>
<b>Sample Type:</b>	<b>unknown</b>	<b>Control Program:</b>	<b>Perchlorate-IC11</b>
<b>Recording Time:</b>	<b>08/15/2007 18:13</b>	<b>Quantif. Method:</b>	<b>IC#4-CLO4-LOW</b>
<b>Analyst:</b>	<b>clv</b>	<b>Dilution Factor:</b>	<b>1.0000</b>

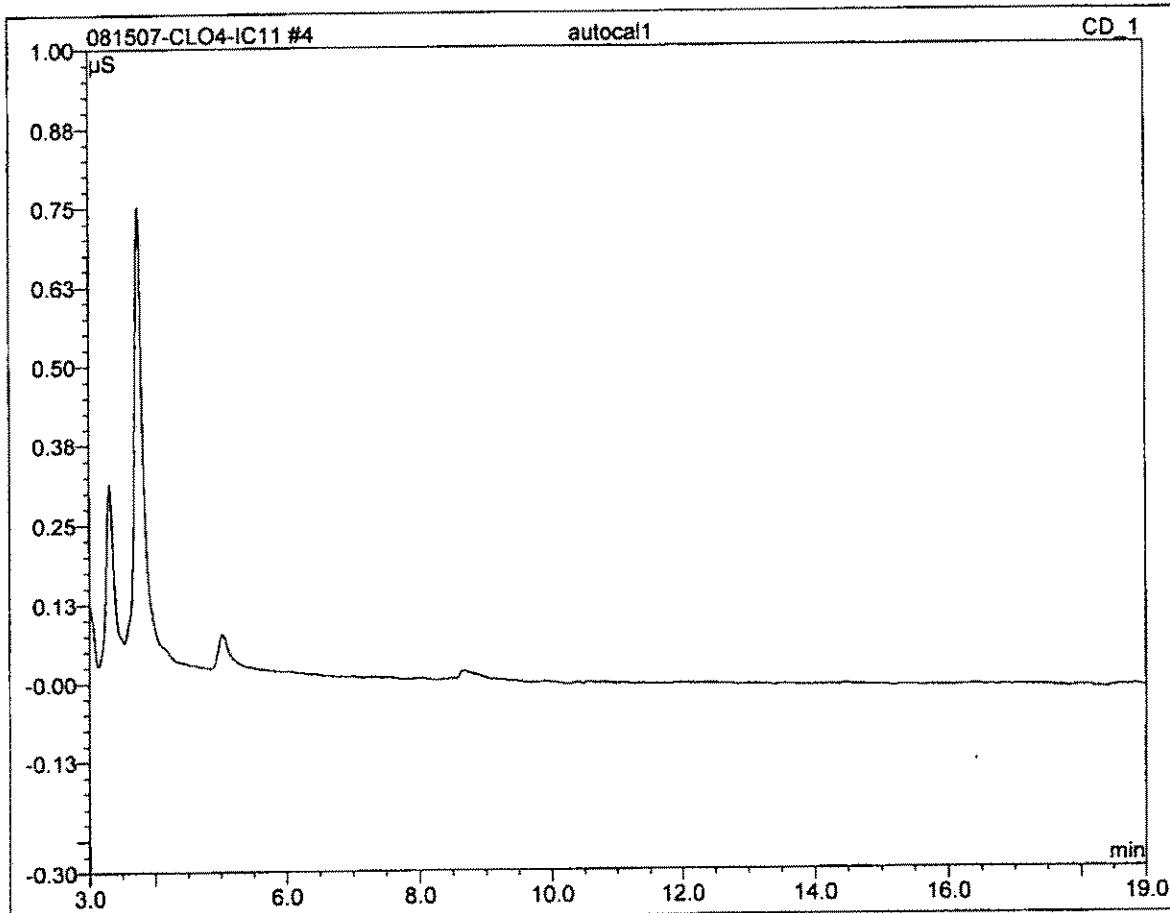


No.	Ret.Time min	Peak Name	Height μS	Area μS*min	Rel.Area %	Amount	Type
Total:			0.000	0.000	0.00	0.000	

**4 autocal1**

0

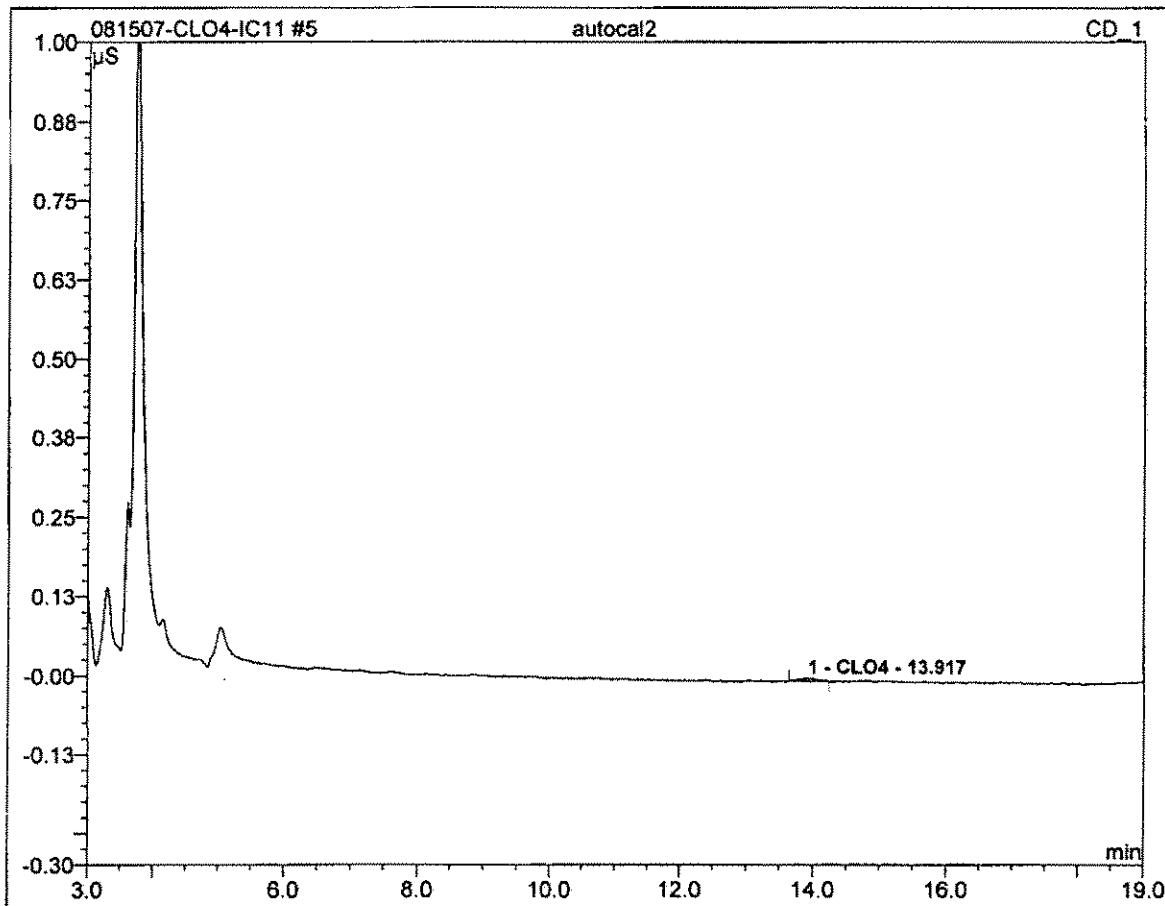
<b>Sample Name:</b>	<b>autocal1</b>	<b>Channel:</b>	<b>CD_1</b>
<b>Sample Type:</b>	<b>standard</b>	<b>Control Program:</b>	<b>Perchlorate-IC11</b>
<b>Recording Time:</b>	<b>08/15/2007 18:35</b>	<b>Quantif. Method:</b>	<b>IC#4-CLO4-LOW</b>
<b>Analyst:</b>	<b>clv</b>	<b>Dilution Factor:</b>	<b>1.0000</b>



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

**5 autocal2****2**

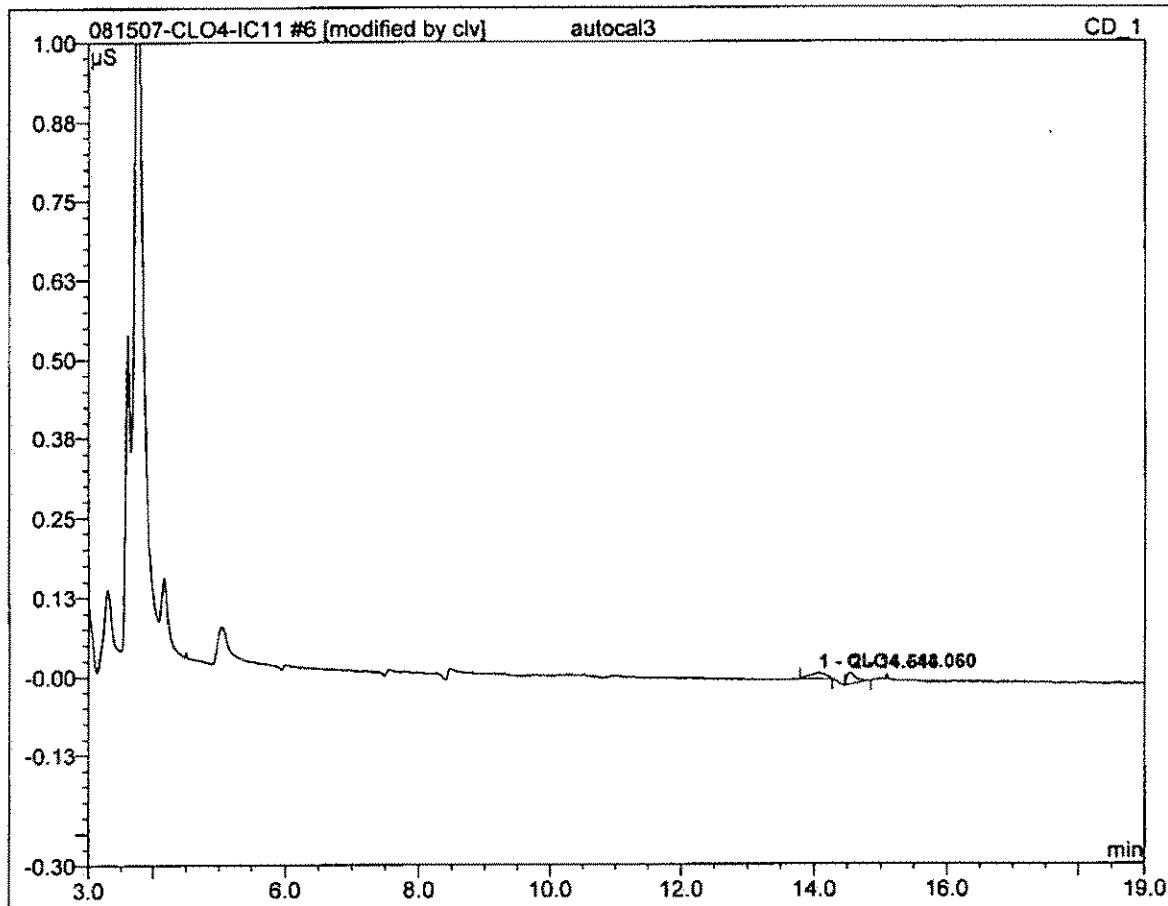
Sample Name:	autocal2	Channel:	CD_1
Sample Type:	standard	Control Program:	Perchlorate-IC11
Recording Time:	08/15/2007 18:58	Quantif. Method:	IC#4-CLO4-LOW
Analyst:	clv	Dilution Factor:	1.0000



No.	Ret.Time min	Peak Name	Height μS	Area μS*min	Rel.Area %	Amount	Type
1	13.92	CLO4	0.005	0.002	100.00	2.446	BMB
Total:			0.005	0.002	100.00	2.446	

**6 autocal3****4**

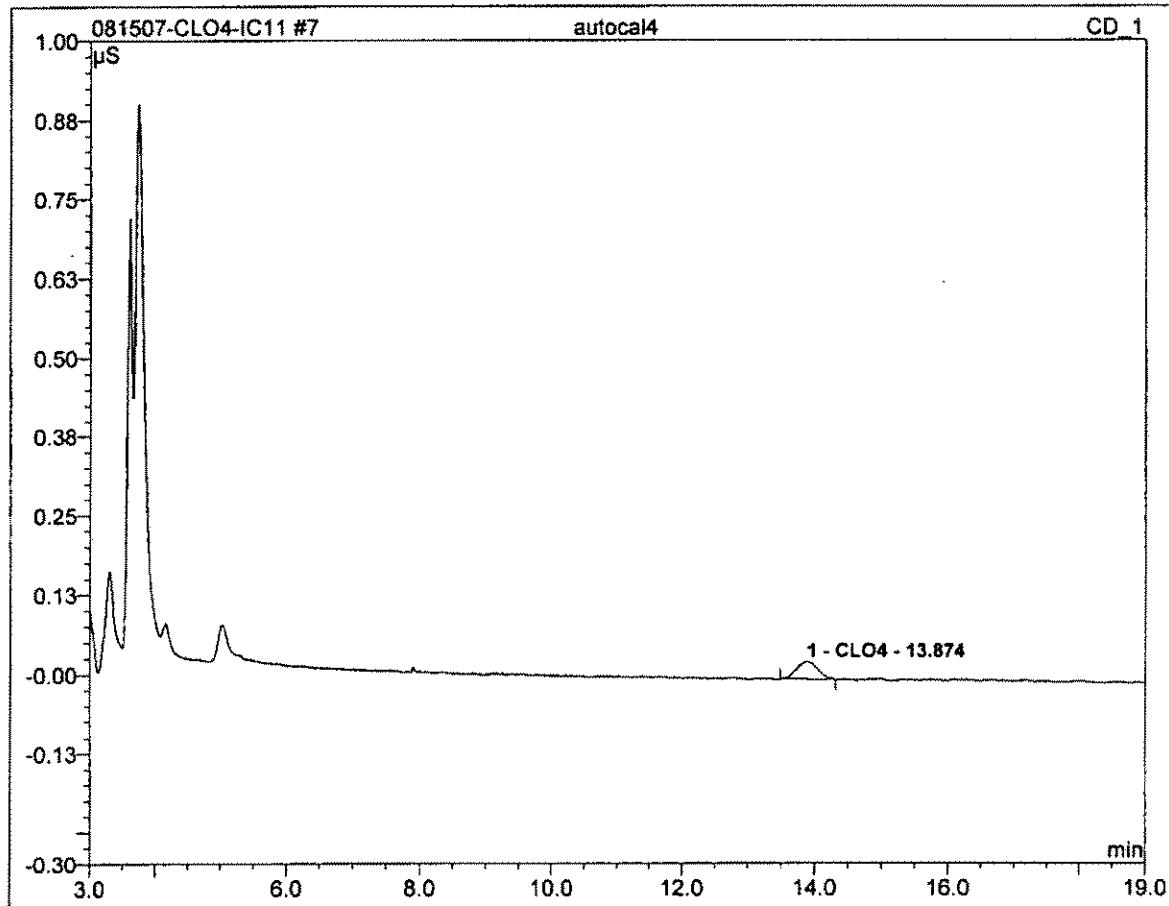
<b>Sample Name:</b>	<b>autocal3</b>	<b>Channel:</b>	<b>CD_1</b>
<b>Sample Type:</b>	<b>standard</b>	<b>Control Program:</b>	<b>Perchlorate-IC11</b>
<b>Recording Time:</b>	<b>08/15/2007 19:20</b>	<b>Quantif. Method:</b>	<b>IC#4-CLO4-LOW</b>
<b>Analyst:</b>	<b>clv</b>	<b>Dilution Factor:</b>	<b>1.0000</b>



No.	Ret.Time min	Peak Name	Height μS	Area μS*min	Rel.Area %	Amount	Type
1	14.06	CLO4	0.010	0.003	47.46	3.367	BMB*
<b>Total:</b>			0.010	0.003	47.46	3.367	

**7 autocal4****10**

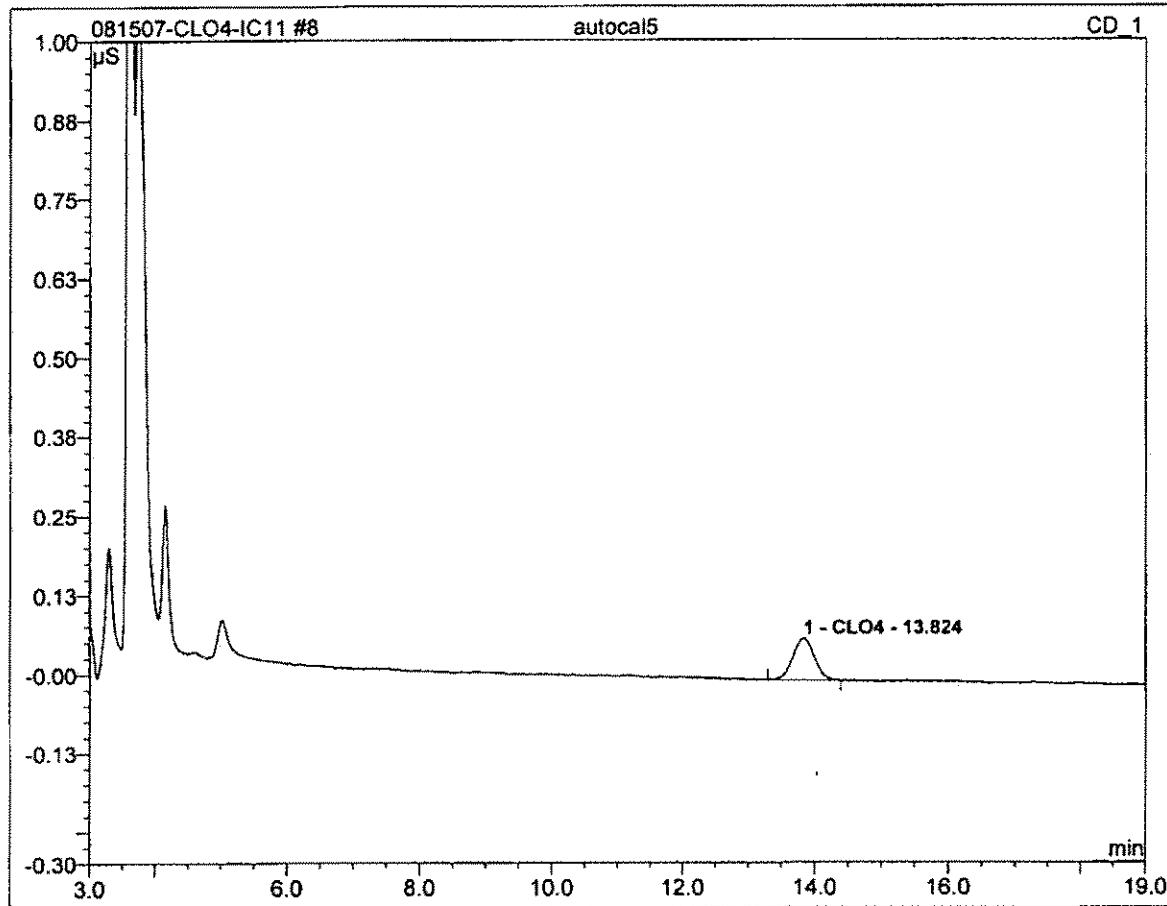
<b>Sample Name:</b>	<b>autocal4</b>	<b>Channel:</b>	<b>CD_1</b>
<b>Sample Type:</b>	<b>standard</b>	<b>Control Program:</b>	<b>Perchlorate-IC11</b>
<b>Recording Time:</b>	<b>08/15/2007 19:42</b>	<b>Quantif. Method:</b>	<b>IC#4-CLO4-LOW</b>
<b>Analyst:</b>	<b>clv</b>	<b>Dilution Factor:</b>	<b>1.0000</b>



No.	Ret.Time min	Peak Name	Height μS	Area μS*min	Rel.Area %	Amount	Type
1	13.87	CLO4	0.027	0.010	100.00	10.452	BMB
<b>Total:</b>			0.027	0.010	100.00	10.452	

**8 autocal5****25**

<b>Sample Name:</b>	<b>autocal5</b>	<b>Channel:</b>	<b>CD_1</b>
<b>Sample Type:</b>	<b>standard</b>	<b>Control Program:</b>	<b>Perchlorate-IC11</b>
<b>Recording Time:</b>	<b>08/15/2007 20:05</b>	<b>Quantif. Method:</b>	<b>IC#4-CLO4-LOW</b>
<b>Analyst:</b>	<b>clv</b>	<b>Dilution Factor:</b>	<b>1.0000</b>

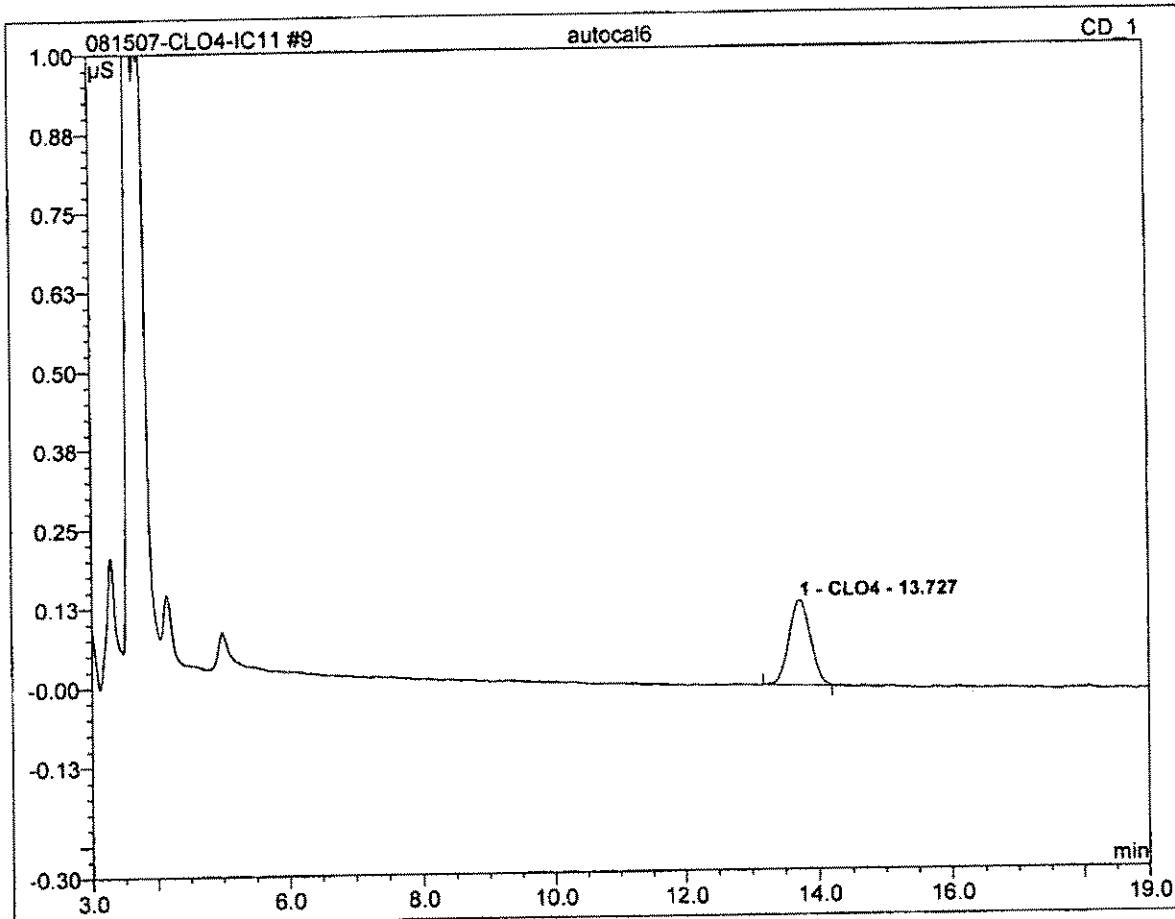


No.	Ret.Time min	Peak Name	Height μS	Area μS*min	Rel.Area %	Amount	Type
1	13.82	CLO4	0.065	0.024	100.00	24.485	BMB
<b>Total:</b>			0.065	0.024	100.00	24.485	

**9 autocal6**

50

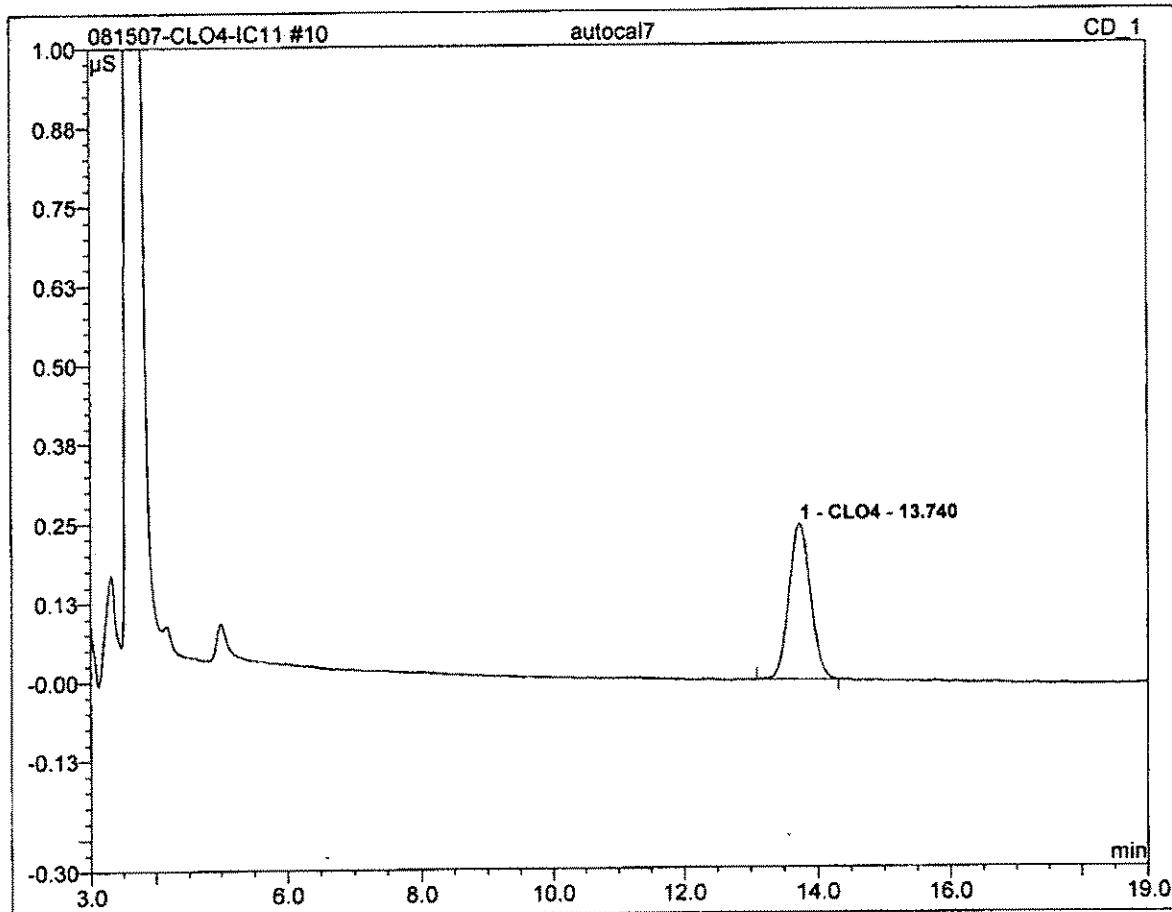
Sample Name:	<b>autocal6</b>	Channel:	<b>CD_1</b>
Sample Type:	<b>standard</b>	Control Program:	<b>Perchlorate-IC11</b>
Recording Time:	<b>08/15/2007 20:27</b>	Quantif. Method:	<b>IC#4-CLO4-LOW</b>
Analyst:	<b>clv</b>	Dilution Factor:	<b>1.0000</b>



No.	Ret.Time min	Peak Name	Height μS	Area μS*min	Rel.Area %	Amount	Type
1	13.73	CLO4	0.133	0.049	100.00	50.306	BMB
<b>Total:</b>			0.133	0.049	100.00	50.306	

**10 autocal7****100**

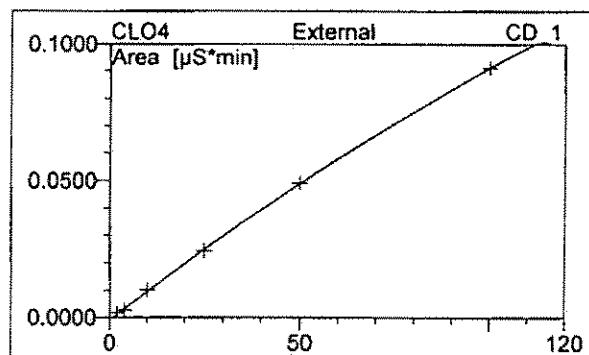
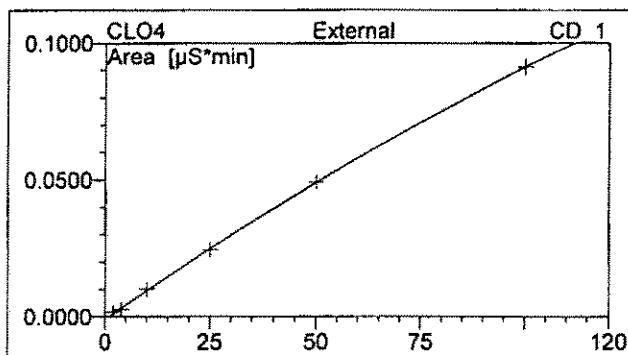
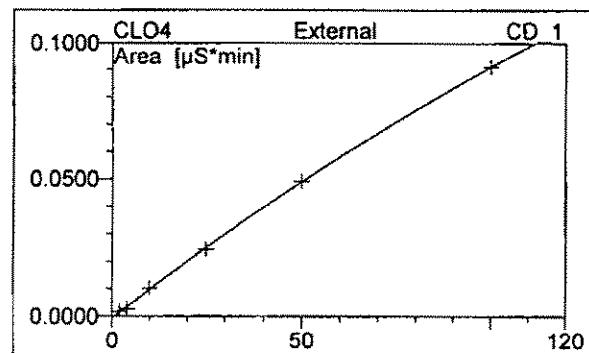
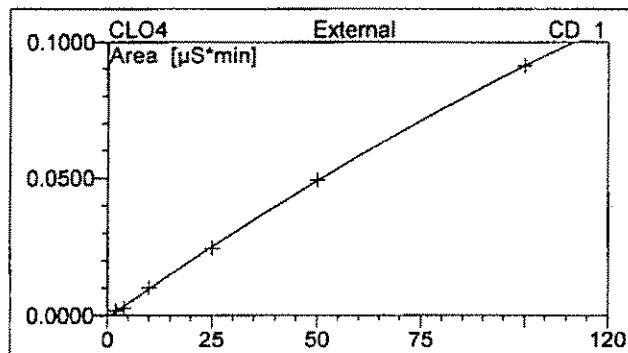
<b>Sample Name:</b>	<b>autocal7</b>	<b>Channel:</b>	<b>CD_1</b>
<b>Sample Type:</b>	<b>standard</b>	<b>Control Program:</b>	<b>Perchlorate-IC11</b>
<b>Recording Time:</b>	<b>08/15/2007 20:50</b>	<b>Quantif. Method:</b>	<b>IC#4-CLO4-LOW</b>
<b>Analyst:</b>	<b>clv</b>	<b>Dilution Factor:</b>	<b>1.0000</b>



No.	Ret.Time min	Peak Name	Height μS	Area μS*min	Rel.Area %	Amount	Type
1	13.74	CLO4	0.246	0.091	100.00	99.945	BMB
<b>Total:</b>			0.246	0.091	100.00	99.945	

**10 autocal7****100**

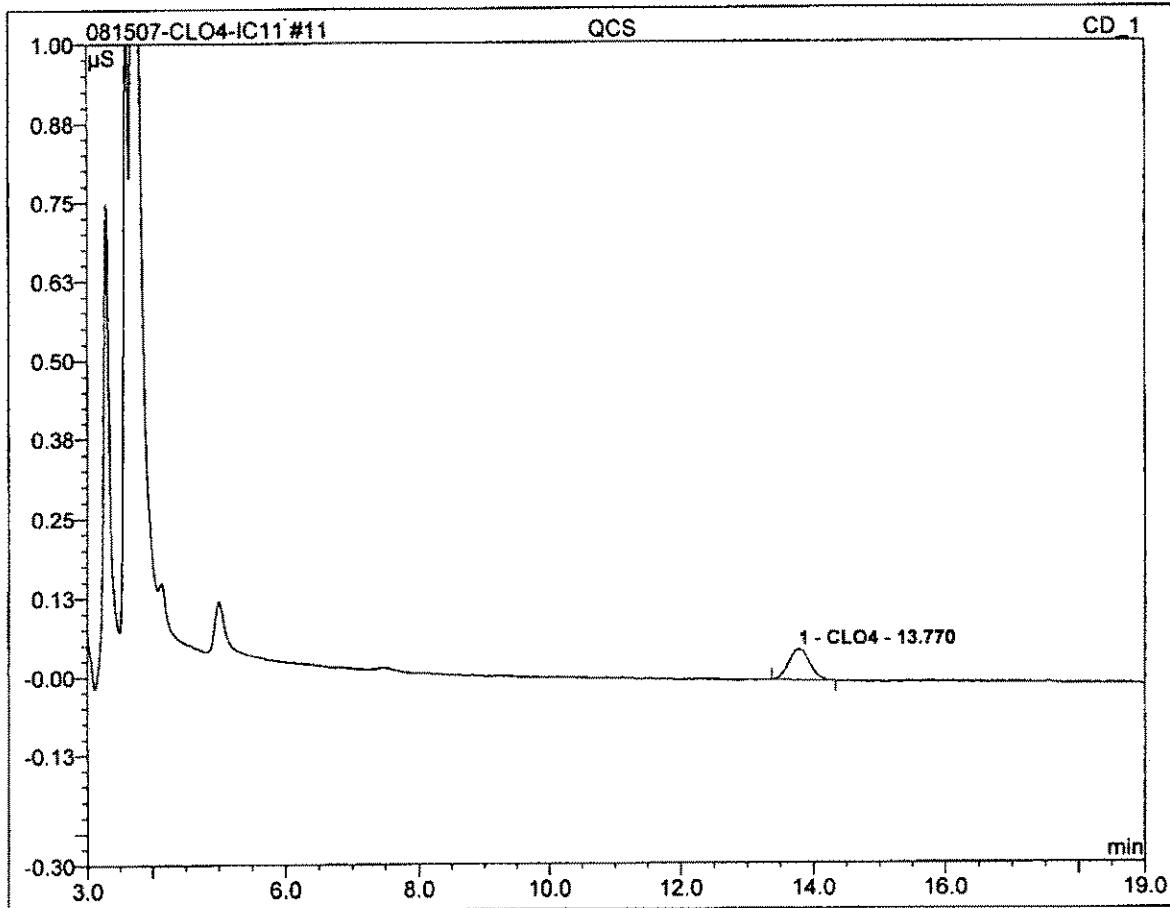
<i>Sample Name:</i>	autocal7	<i>Injection Volume:</i>	20.0
<i>Vial Number:</i>	109	<i>Channel:</i>	CD_1
<i>Sample Type:</i>	standard	<i>Wavelength:</i>	n.a.
<i>Control Program:</i>	Perchlorate-IC11	<i>Bandwidth:</i>	n.a.
<i>Quantif. Method:</i>	IC#4-CLO4-LOW	<i>Dilution Factor:</i>	1.0000
<i>Recording Time:</i>	8/15/2007 20:50	<i>Sample Weight:</i>	1.0000
<i>Run Time (min):</i>	20.00	<i>Sample Amount:</i>	1.0000



No.	Ret.Time min	Peak Name	Cal.Type	Points	Corr.Coeff. %	Offset	Slope	Curve
1	13.74	CLO4	QOff	6	99.8901	-0.0010	0.0011	0.0000
Average:					99.8901	-0.0010	0.0011	0.0000

**11 QCS****20**

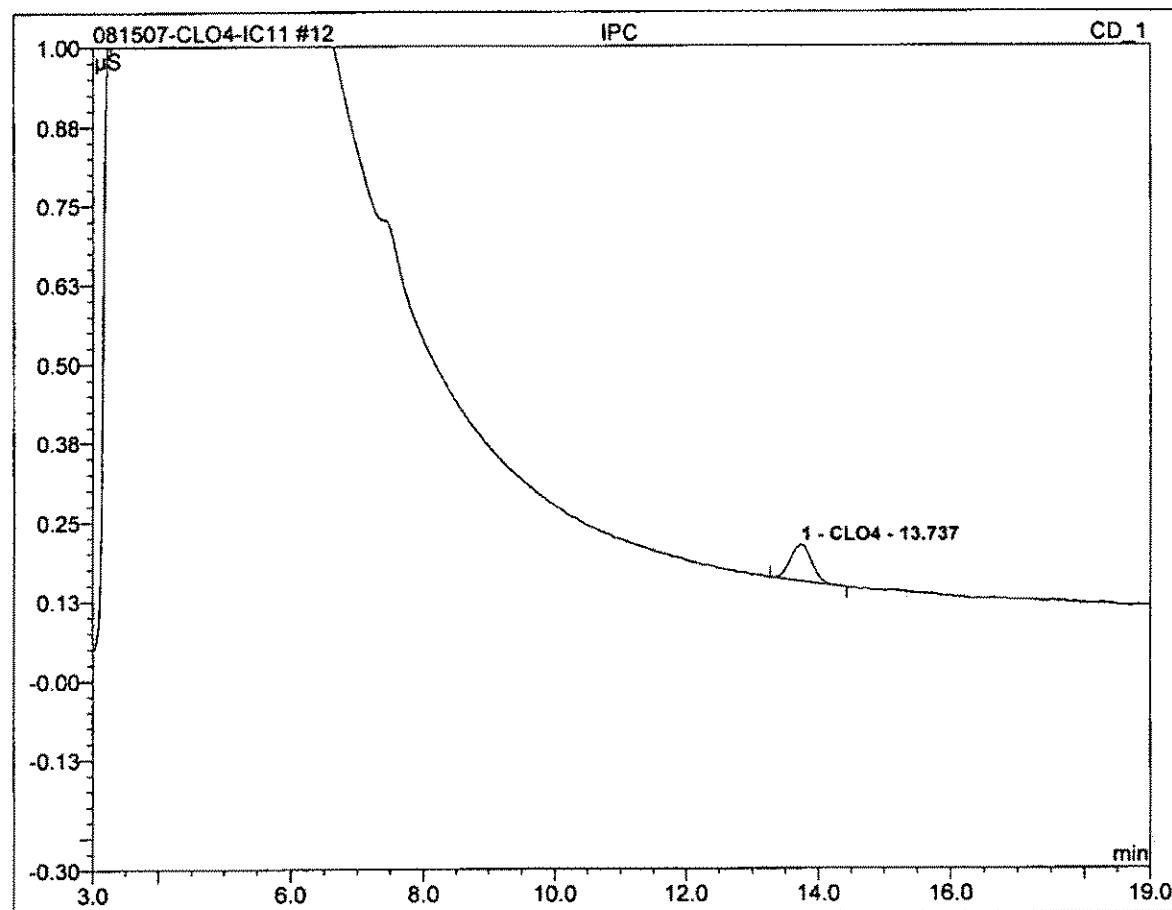
<b>Sample Name:</b>	<b>QCS</b>	<b>Channel:</b>	<b>CD_1</b>
<b>Sample Type:</b>	<b>unknown</b>	<b>Control Program:</b>	<b>Perchlorate-IC11</b>
<b>Recording Time:</b>	<b>08/15/2007 21:12</b>	<b>Quantif. Method:</b>	<b>IC#4-CLO4-LOW</b>
<b>Analyst:</b>	<b>clv</b>	<b>Dilution Factor:</b>	<b>1.0000</b>



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	13.77	CLO4	0.049	0.018	100.00	18.012	BMB
<b>Total:</b>			0.049	0.018	100.00	18.012	

**12 IPC****25**

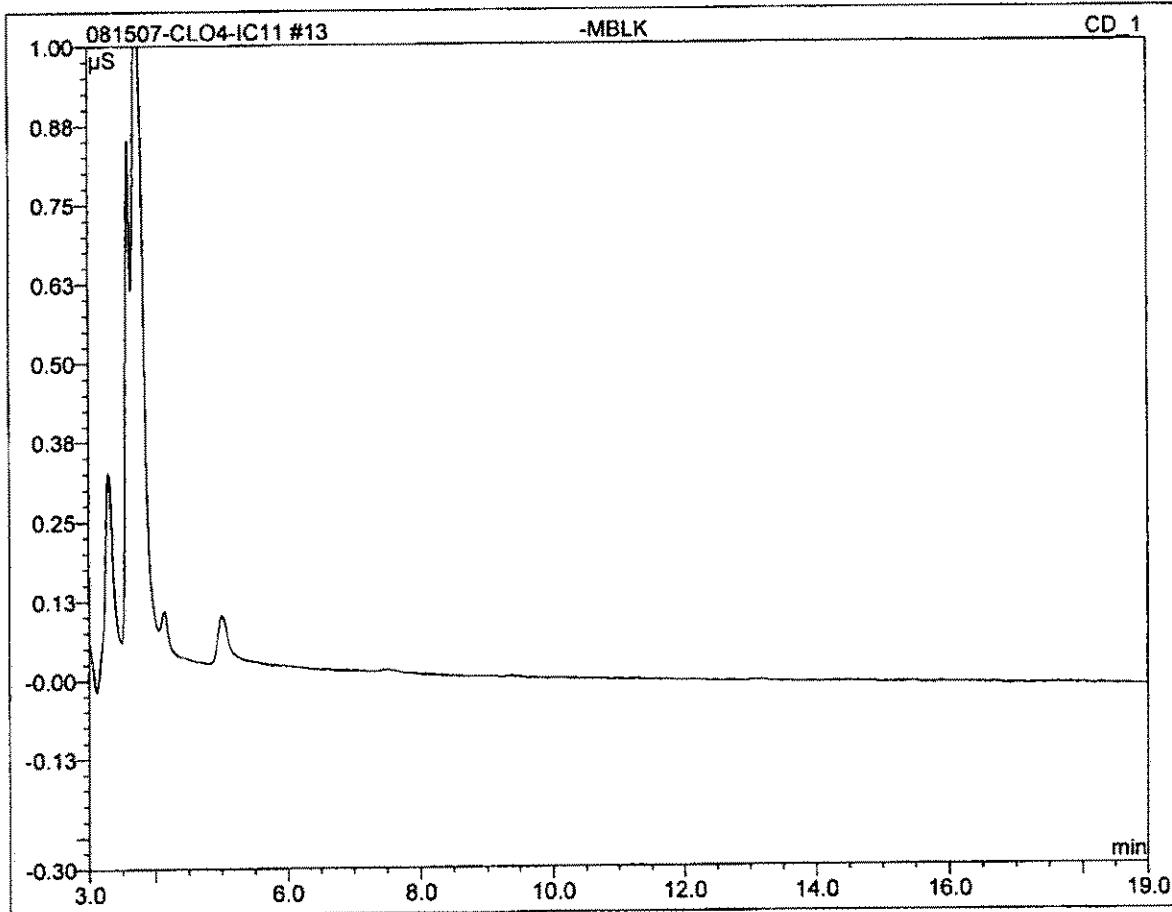
<b>Sample Name:</b>	<b>IPC</b>	<b>Channel:</b>	<b>CD_1</b>
<b>Sample Type:</b>	<b>unknown</b>	<b>Control Program:</b>	<b>Perchlorate-IC11</b>
<b>Recording Time:</b>	<b>08/15/2007 21:34</b>	<b>Quantif. Method:</b>	<b>IC#4-CLO4-LOW</b>
<b>Analyst:</b>	<b>clv</b>	<b>Dilution Factor:</b>	<b>1.0000</b>



No.	Ret.Time min	Peak Name	Height μS	Area μS*min	Rel.Area %	Amount	Type
1	13.74	CLO4	0.056	0.021	100.00	21.355	BMB
<b>Total:</b>			0.056	0.021	100.00	21.355	

**13 -MBLK**

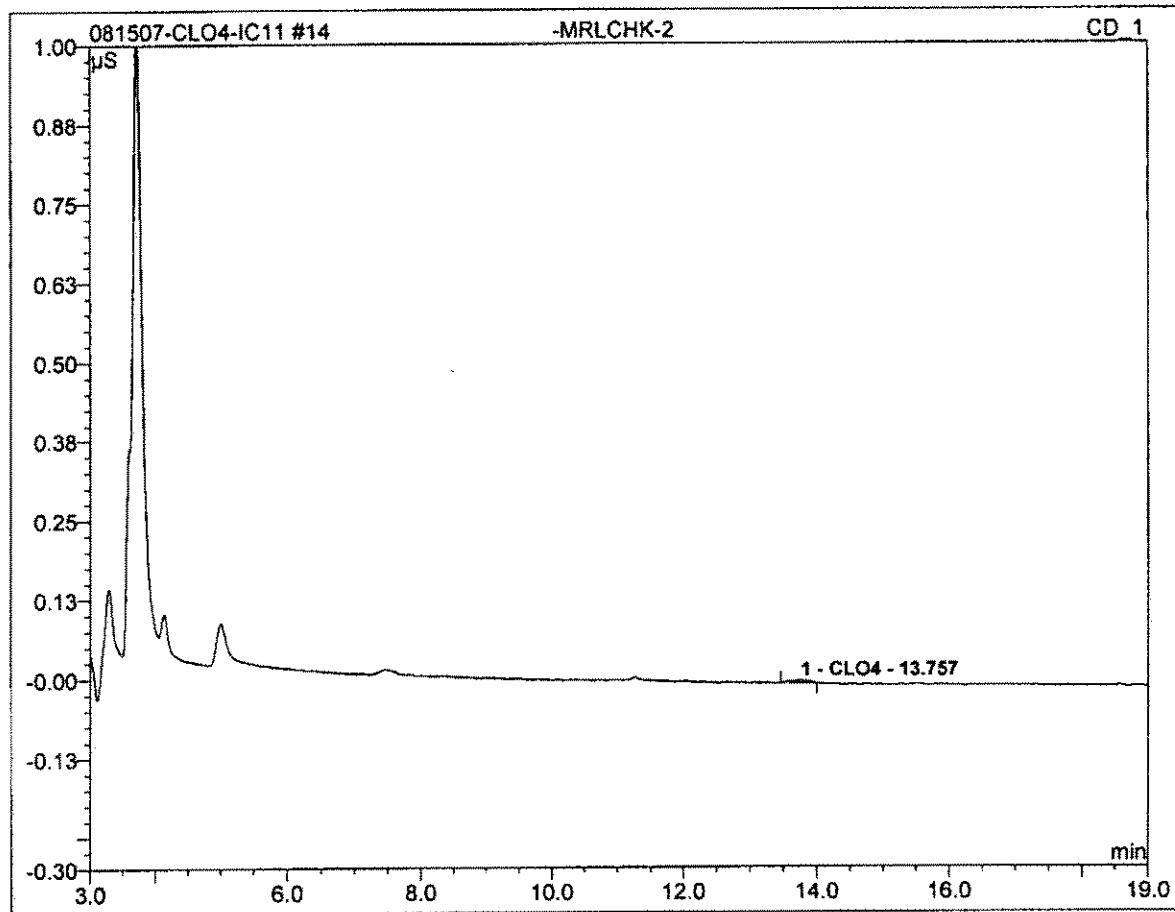
<b>Sample Name:</b>	-MBLK	<b>Channel:</b>	CD_1
<b>Sample Type:</b>	unknown	<b>Control Program:</b>	Perchlorate-IC11
<b>Recording Time:</b>	08/15/2007 21:57	<b>Quantif. Method:</b>	IC#4-CLO4-LOW
<b>Analyst:</b>	c1v	<b>Dilution Factor:</b>	1.0000



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

**14 -MRLCHK-2****2**

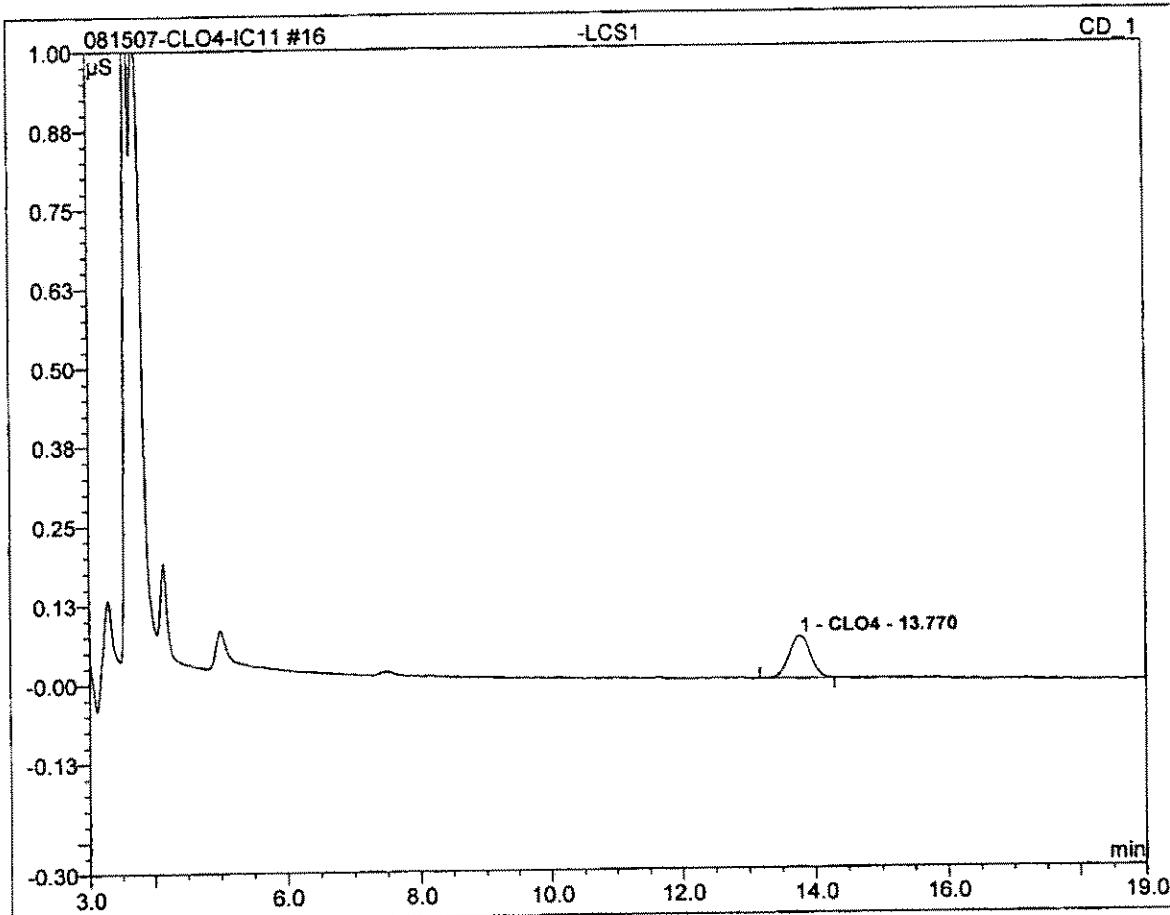
<b>Sample Name:</b>	<b>-MRLCHK-2</b>	<b>Channel:</b>	<b>CD_1</b>
<b>Sample Type:</b>	<b>unknown</b>	<b>Control Program:</b>	<b>Perchlorate-IC11</b>
<b>Recording Time:</b>	<b>08/15/2007 22:19</b>	<b>Quantif. Method:</b>	<b>IC#4-CLO4-LOW</b>
<b>Analyst:</b>	<b>clv</b>	<b>Dilution Factor:</b>	<b>1.0000</b>



No.	Ret.Time min	Peak Name	Height μS	Area μS*min	Rel.Area %	Amount	Type
1	13.76	CLO4	0.004	0.001	100.00	2.167	BMB
<b>Total:</b>			0.004	0.001	100.00	2.167	

**16 -LCS1****25**

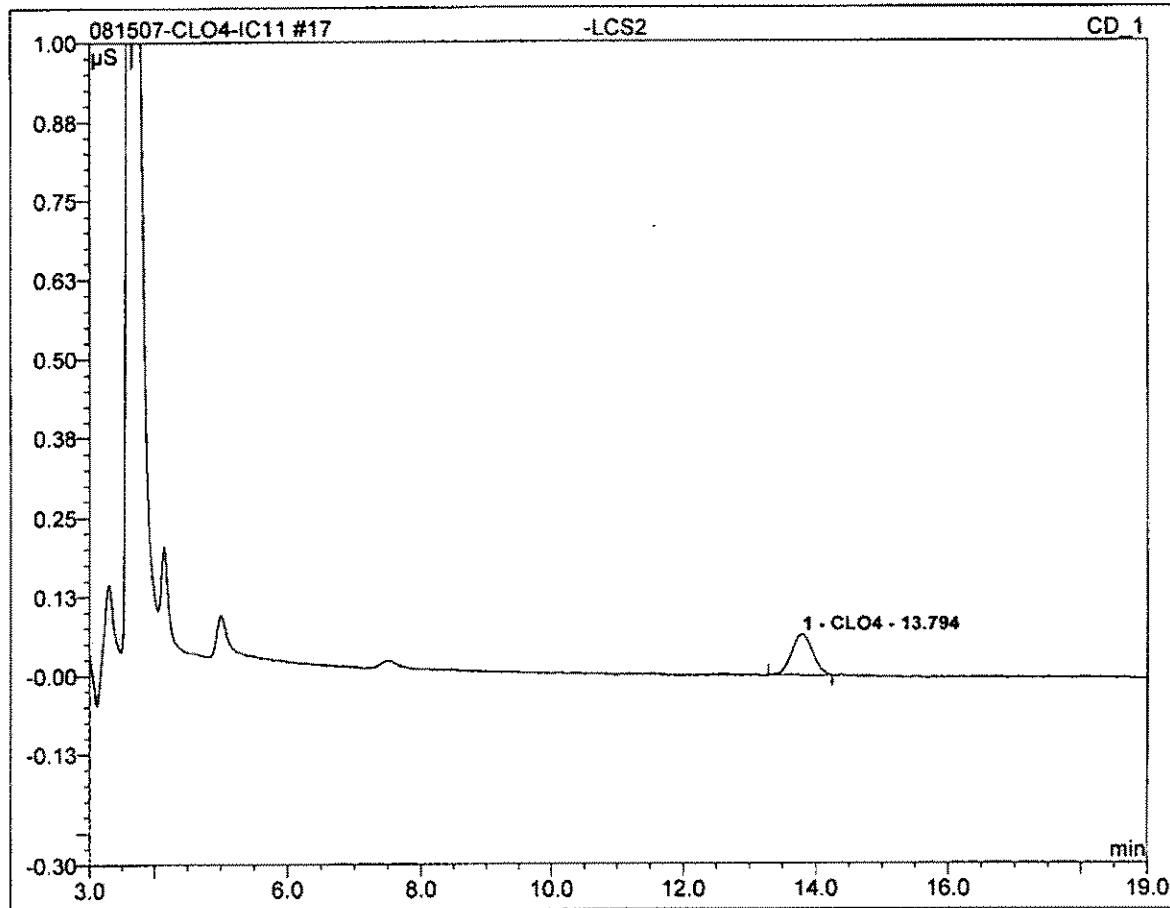
<b>Sample Name:</b>	<b>-LCS1</b>	<b>Channel:</b>	<b>CD_1</b>
<b>Sample Type:</b>	<b>unknown</b>	<b>Control Program:</b>	<b>Perchlorate-IC11</b>
<b>Recording Time:</b>	<b>08/15/2007 23:04</b>	<b>Quantif. Method:</b>	<b>IC#4-CLO4-LOW</b>
<b>Analyst:</b>	<b>clv</b>	<b>Dilution Factor:</b>	<b>1.0000</b>



No.	Ret.Time min	Peak Name	Height μS	Area μS*min	Rel.Area %	Amount	Type
1	13.77	CLO4	0.066	0.025	100.00	24.870	BMB
<b>Total:</b>			0.066	0.025	100.00	24.870	

**17 -LCS2****25**

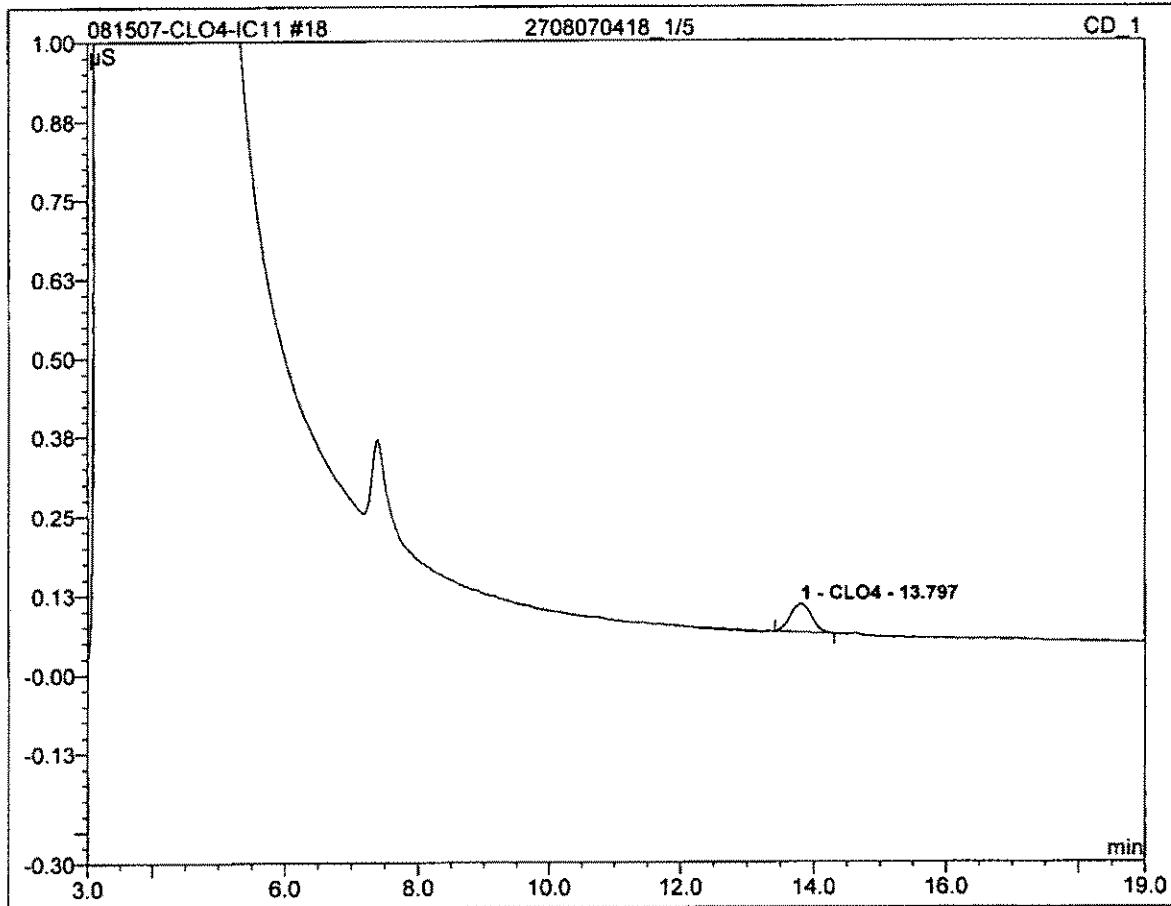
<b>Sample Name:</b>	<b>-LCS2</b>	<b>Channel:</b>	<b>CD_1</b>
<b>Sample Type:</b>	<b>unknown</b>	<b>Control Program:</b>	<b>Perchlorate-IC11</b>
<b>Recording Time:</b>	<b>08/15/2007 23:26</b>	<b>Quantif. Method:</b>	<b>IC#4-CLO4-LOW</b>
<b>Analyst:</b>	<b>clv</b>	<b>Dilution Factor:</b>	<b>1.0000</b>



No.	Ret.Time min	Peak Name	Height μS	Area μS*min	Rel.Area %	Amount	Type
1	13.79	CLO4	0.064	0.023	100.00	23.509	BMB
<b>Total:</b>			0.064	0.023	100.00	23.509	

**18 2708070418\_1/5**

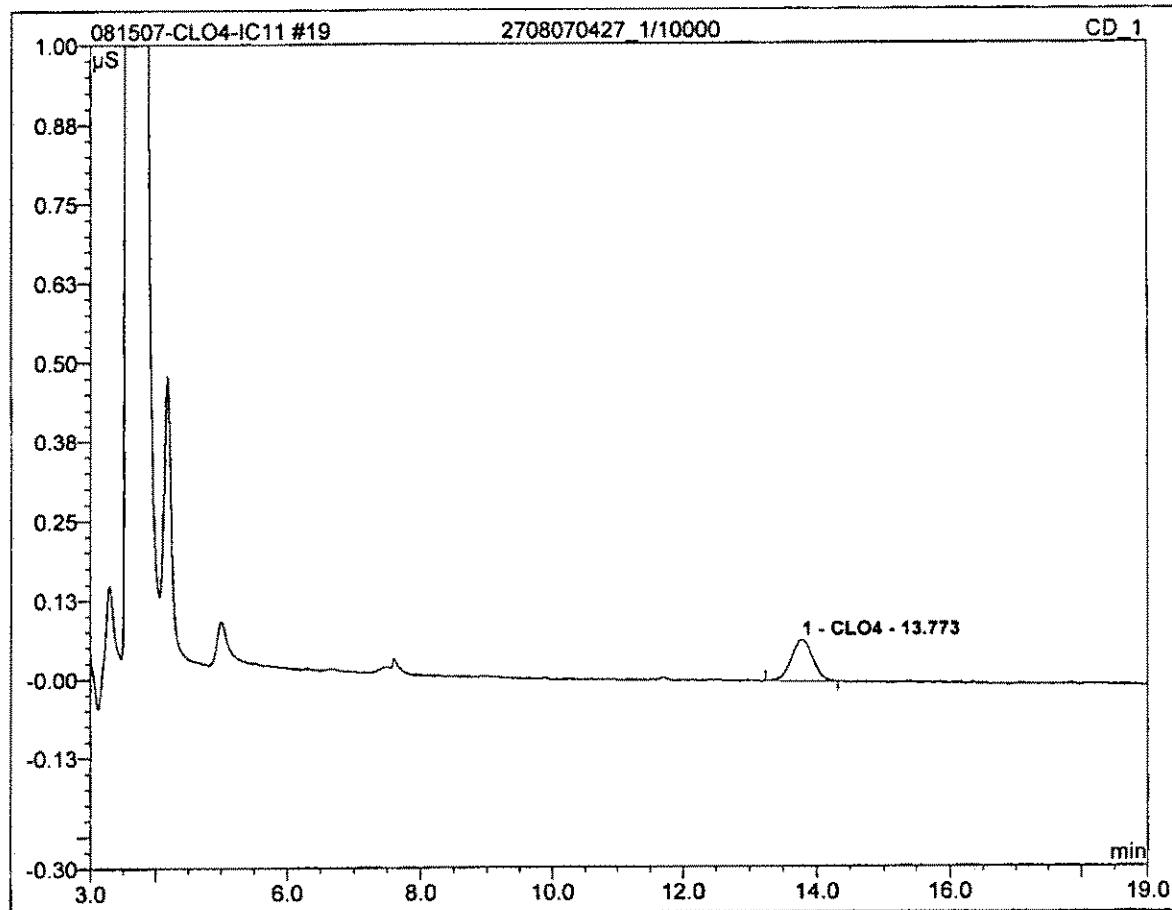
<b>Sample Name:</b>	<b>2708070418_1/5</b>	<b>Channel:</b>	<b>CD_1</b>
<b>Sample Type:</b>	<b>unknown</b>	<b>Control Program:</b>	<b>Perchlorate-IC11</b>
<b>Recording Time:</b>	<b>08/15/2007 23:49</b>	<b>Quantif. Method:</b>	<b>IC#4-CLO4-LOW</b>
<b>Analyst:</b>	<b>clv</b>	<b>Dilution Factor:</b>	<b>5.0000</b>



No.	Ret.Time min	Peak Name	Height μS	Area μS*min	Rel.Area %	Amount	Type
1	13.80	CLO4	0.045	0.016	100.00	82.103	BMB
<b>Total:</b>			0.045	0.016	100.00	82.103	

19 2708070427\_1/10000

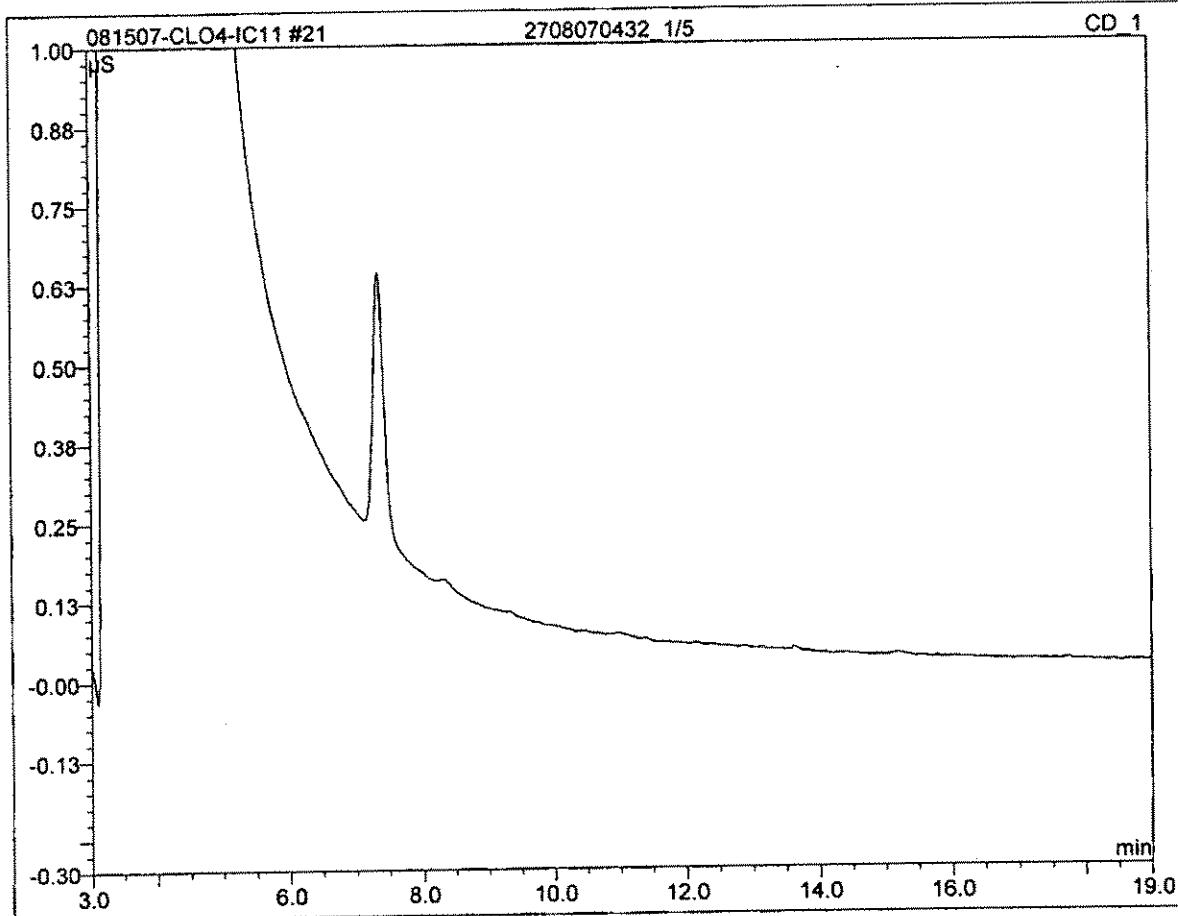
Sample Name:	2708070427_1/10000	Channel:	CD_1
Sample Type:	unknown	Control Program:	Perchlorate-IC11
Recording Time:	08/16/2007 00:11	Quantif. Method:	IC#4-CLO4-LOW
Analyst:	clv	Dilution Factor:	10000.0000



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	13.77	CLO4	0.065	0.024	100.00	244792.000	BMB
<b>Total:</b>			0.065	0.024	100.00	244792.000	

**21 2708070432\_1/5**

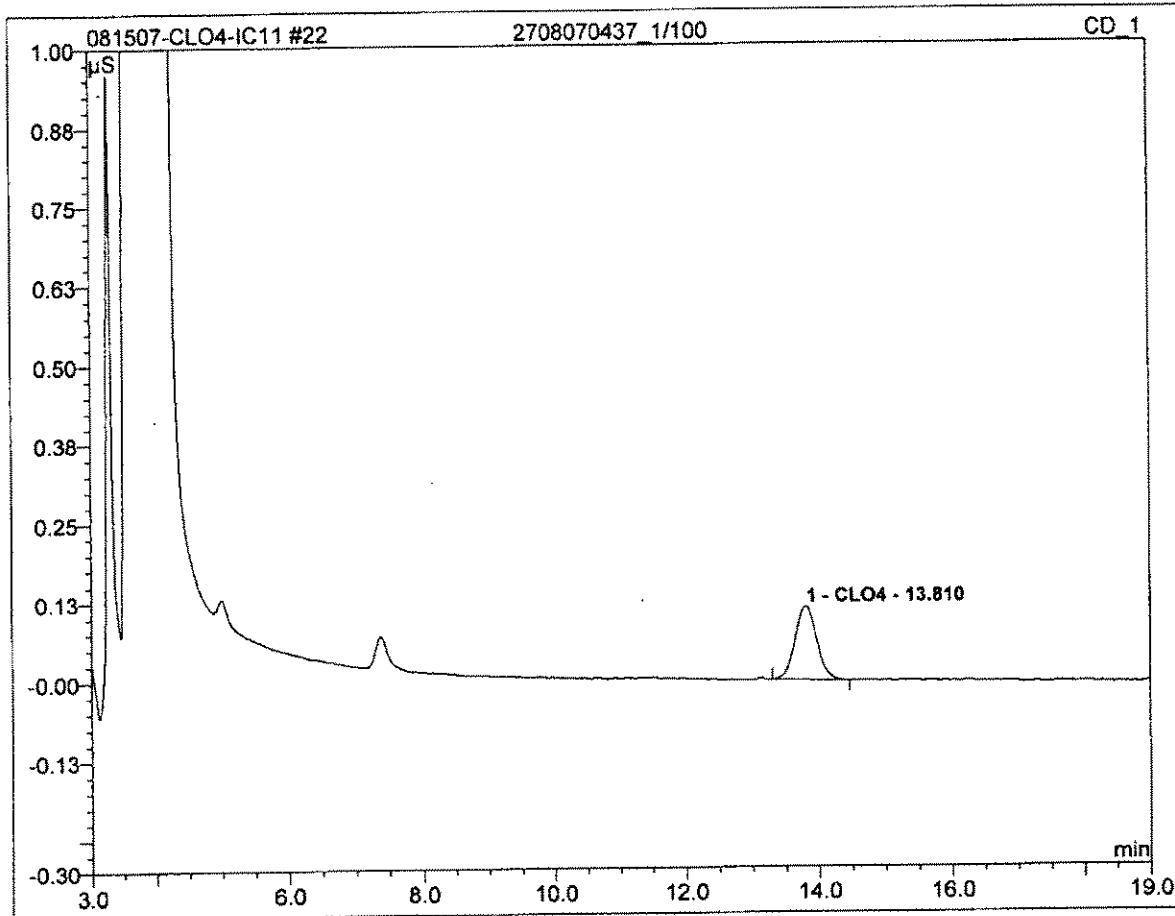
Sample Name:	2708070432_1/5	Channel:	CD_1
Sample Type:	unknown	Control Program:	Perchlorate-IC11
Recording Time:	08/16/2007 00:56	Quantif. Method:	IC#4-CLO4-LOW
Analyst:	clv	Dilution Factor:	5.0000



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

**22 2708070437\_1/100****CONFIRMED**

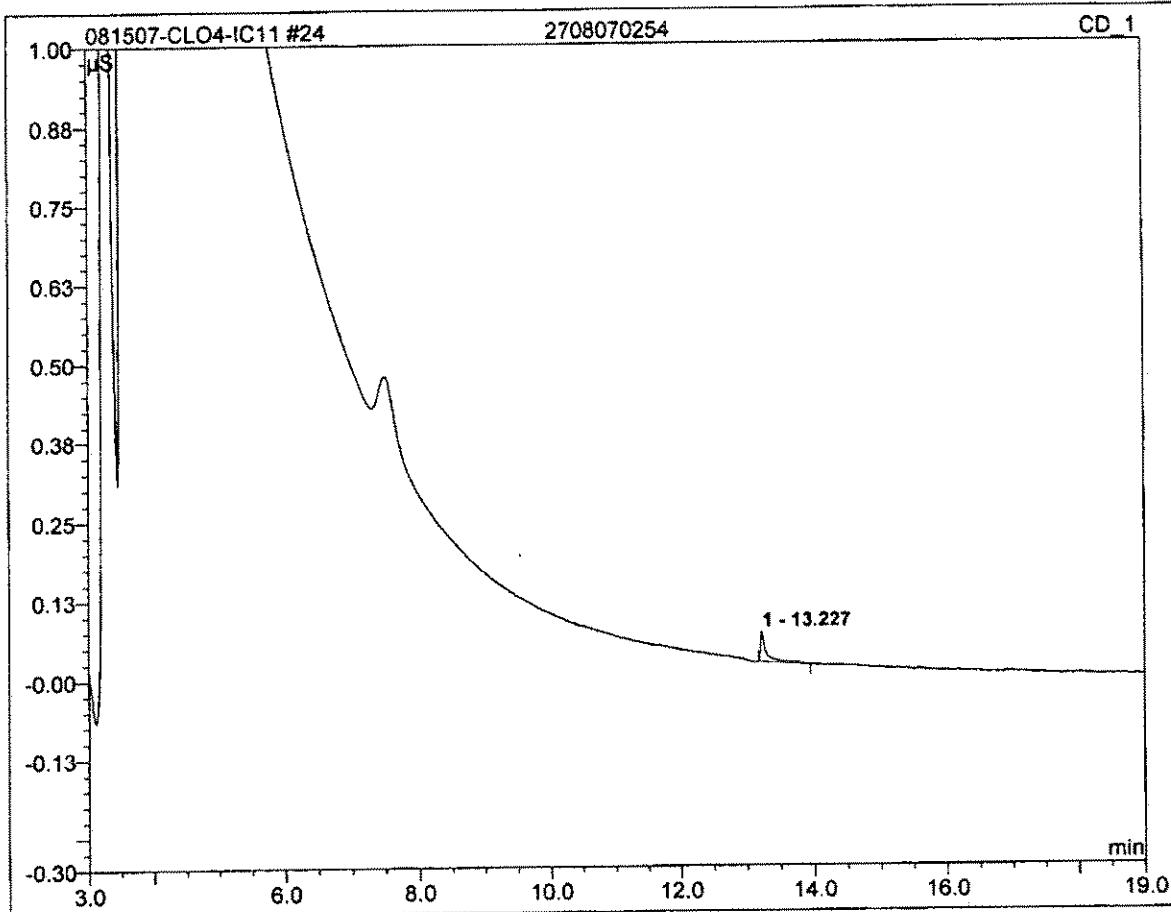
Sample Name:	2708070437_1/100	Channel:	CD_1
Sample Type:	unknown	Control Program:	Perchlorate-IC11
Recording Time:	08/16/2007 01:18	Quantif. Method:	IC#4-CLO4-LOW
Analyst:	clv	Dilution Factor:	100.0000



No.	Ret.Time min	Peak Name	Height μS	Area μS*min	Rel.Area %	Amount	Type
1	13.81	CLO4	0.115	0.043	100.00	4392.327	BMB
Total:			0.115	0.043	100.00	4392.327	

**24 2708070254**

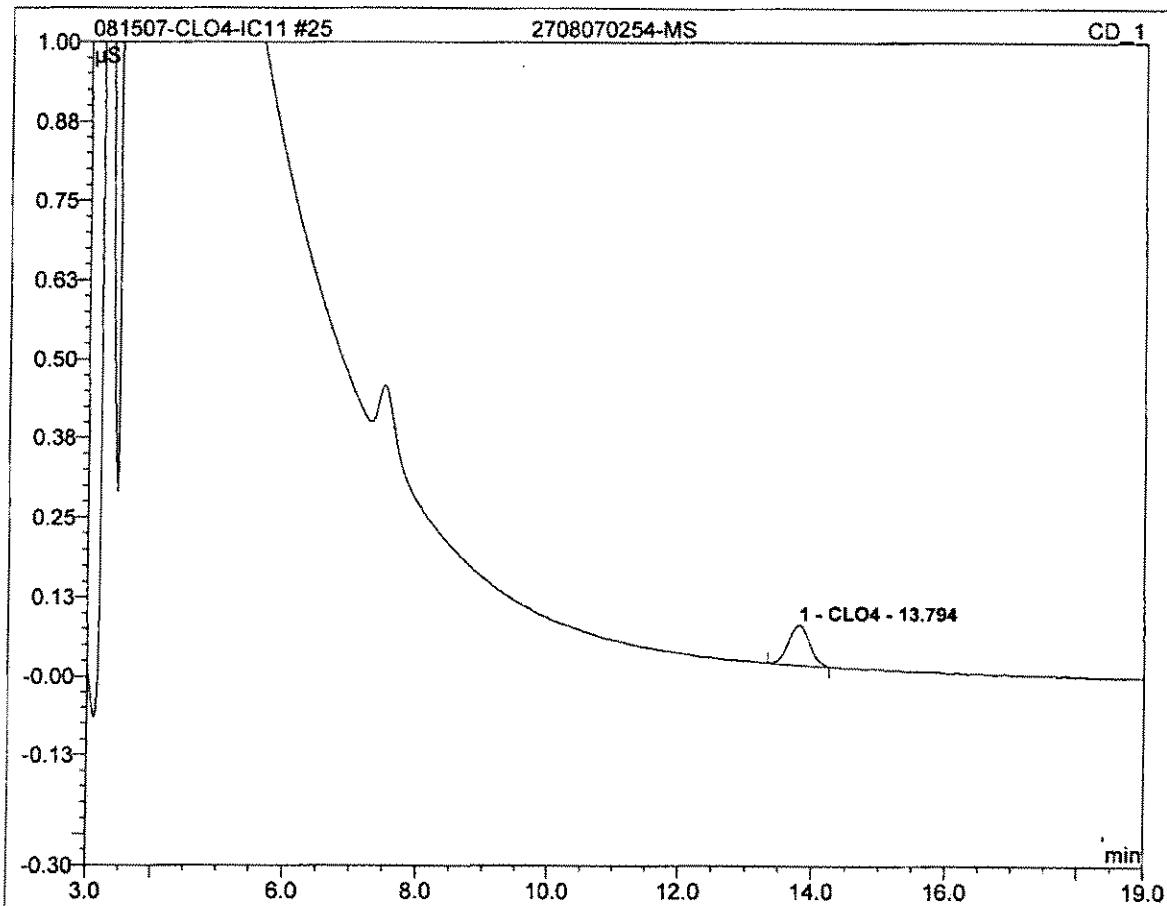
<b>Sample Name:</b>	<b>2708070254</b>	<b>Channel:</b>	<b>CD_1</b>
<b>Sample Type:</b>	<b>unknown</b>	<b>Control Program:</b>	<b>Perchlorate-IC11</b>
<b>Recording Time:</b>	<b>08/16/2007 02:03</b>	<b>Quantif. Method:</b>	<b>IC#4-CLO4-LOW</b>
<b>Analyst:</b>	<b>clv</b>	<b>Dilution Factor:</b>	<b>1.0000</b>



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

**25 2708070254-MS**

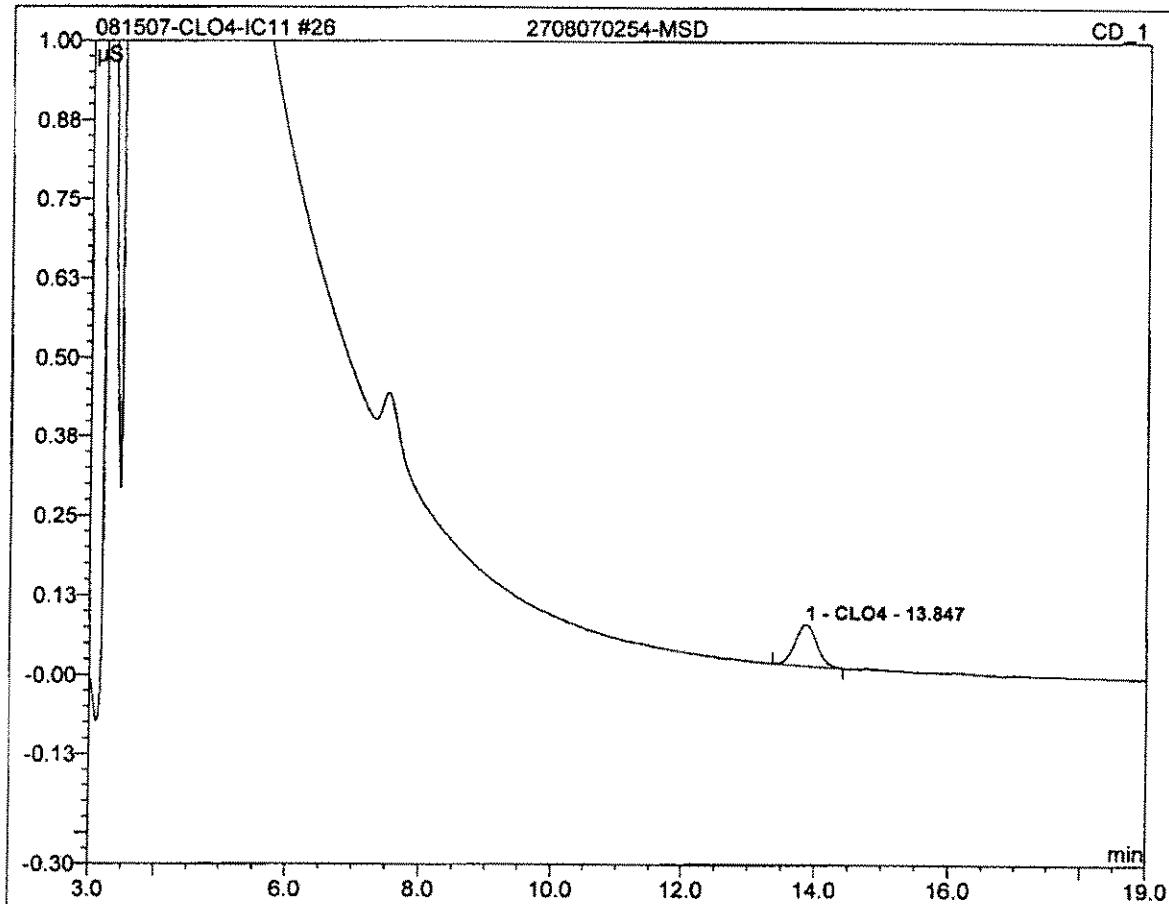
Sample Name:	2708070254-MS	Channel:	CD_1
Sample Type:	unknown	Control Program:	Perchlorate-IC11
Recording Time:	08/16/2007 02:26	Quantif. Method:	IC#4-CLO4-LOW
Analyst:	clv	Dilution Factor:	1.0000



No.	Ret.Time min	Peak Name	Height μS	Area μS*min	Rel.Area %	Amount	Type
1	13.79	CLO4	0.063	0.024	100.00	23.703	BMB
<b>Total:</b>			0.063	0.024	100.00	23.703	

**26 2708070254-MSD**

Sample Name:	2708070254-MSD	Channel:	CD_1
Sample Type:	unknown	Control Program:	Perchlorate-IC11
Recording Time:	08/16/2007 02:48	Quantif. Method:	IC#4-CLO4-LOW
Analyst:	clv	Dilution Factor:	1.0000

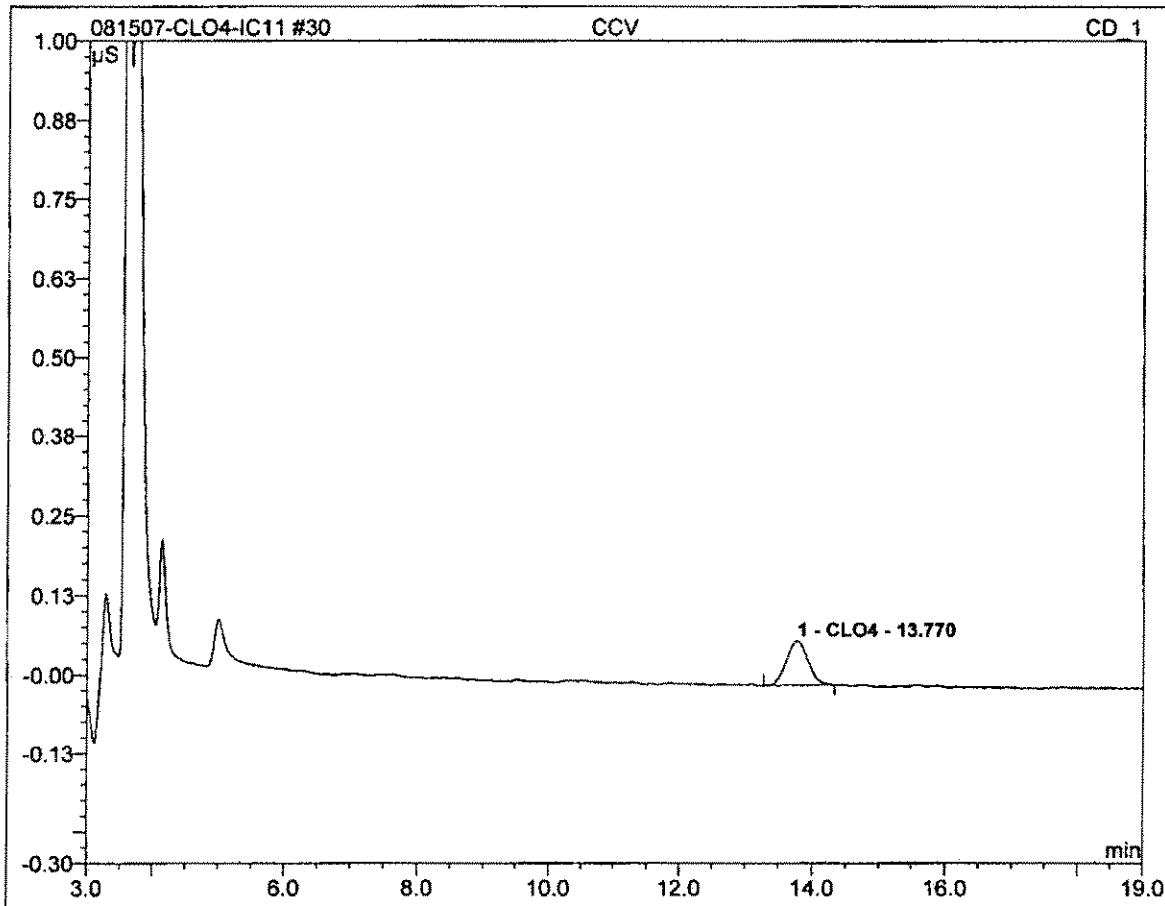


No.	Ret.Time min	Peak Name	Height μS	Area μS*min	Rel.Area %	Amount	Type
1	13.85	CLO4	0.065	0.025	100.00	24.652	BMB
<b>Total:</b>			0.065	0.025	100.00	24.652	

## 30 CCV

25

Sample Name:	CCV	Channel:	CD_1
Sample Type:	unknown	Control Program:	Perchlorate-IC11
Recording Time:	08/16/2007 04:18	Quantif. Method:	IC#4-CLO4-LOW
Analyst:	clv	Dilution Factor:	1.0000



No.	Ret.Time min	Peak Name	Height μS	Area μS*min	Rel.Area %	Amount	Type
1	13.77	CLO4	0.069	0.026	100.00	25.972	BMB
Total:			0.069	0.026	100.00	25.972	

# Perchlorate QC Checklist

rev: 27 Mar 03

Analysis Date: 081607 Analyst: Ch

QC'd by MW Date 8-26-07

Instrument: ICII

Calculated MCT Level: 3155 umhos/cm

Original IPC conductance: 3150 umhos/cm

Daily IPC conductance: 3154 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 (MBLANK, MRL, ICCSCV, IPC) to be analyzed with every batch (up to 20 samples) or part thereof

- ✓ MLBANK is analyzed before samples. Perchlorate, if present, is < or = half of the MRL.
- ✓ L-ClO<sub>4</sub> only: ICCSCV at 2ppb is within 50%-150% (1-3ppb)
- ✓ ClO<sub>4</sub> only: MRL at 4ppb is within 75%-125% (3-5ppb)
- ✓ 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

$$PDA/H = 4.9\%$$

$$PDA = 2.5\%$$

## 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 *SIA* (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) *SIA* 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  
One Laboratory Reagent Blank (LRB). Perchlorate is < or = half of MRL.

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

✓ 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

*SIA* QIR needed for failed QC

*SIA* QIR needed for samples analyzed outside of hold time

CONDUCTIVITY MW SOP REVISION 5  
SM2510B

Analysis Date: 123 08/10/05

Analyst: CLA

Reviewed By:

LIMS Check By:

Was QC Criteria Met: Y N

Was QIR Needed: Y N

Wan 8/10/05

Time of Analysis Start: 1230 End:

MRL 2umhos/cm: R# exp of solution:

KCl Std 1412 R# 201668 exp of solution 12/05

TV = 1412 umhos/cm @ 25°C for 0.0100M

Reading: 1342

Instrument: YSI Model 3200 SN:01A0504, Year Aquired 2001 New

Run #	Sample Number	Sample ID	Client	Date Collected	Temp °C	pH	Scale (umho/mmhho)	Result		Comments
								Instrument	Reported (umho/cm)	
Bk	Blank				71	7	mS			
STD	MRL 2umhos/cm								0.3602	
STD	KCl - 1000 mhos/cm									
1	2708070418	ART1	KM	08/06/07						1-3—±50% of TV
2	0422	2							10000	
3	0423	3							15000	
4	0424	4							10000	
5	0425	6							8800	
6	0426	7							10000	
7	0427	8							14500	
8	0428	TC99R2/R3							14600	
9	0429	115R							5900	
10	0430	116R							6200	
DUP		↓	↓	↓					6200	
11	0431	SEEP SURFACE								RPD < 5%
12	0432	SF1							5700	
13	0433	PC 117							9900	
14	0434	118							5300	
15	0437	119							6400	
16	0437	120							5600	
17	0440	121							4600	
18	0441	133							9300	
19	0442	ART9							5100	
20	0591	EFF							10000	
DUP		↓	↓	↓					9500	
STD	KCl - 10 mhos/cm								9500	RPD < 5%
										8-12—RPD < 20% of TV

$$\% \text{ RPD} = \frac{|S_1 - S_2|}{(S_1 + S_2)/2} * 100$$

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

Sample No.	Sample Name	Dil.Fac.	Comment	Time	Amount
					CLO4 CD_1
1	autocal1	1.0	0	08.16.07 10:33	n.a.
2	autocal2	1.0	2	08.16.07 10:56	2.5027
3	autocal3	1.0	4	08.16.07 11:18	4.0456
4	autocal4	1.0	10	08.16.07 11:40	9.8131
5	autocal5	1.0	25	08.16.07 12:03	23.9166
6	autocal6	1.0	50	08.16.07 12:25	50.9025
7	autocal7	1.0	100	08.16.07 12:48	99.8213
8	QCS	1.0	20	08.16.07 13:10	19.3919
9	IPC DNR	1.0	25	08.16.07 13:32	19.7908
10	-MBLK	1.0		08.16.07 13:55	n.a.
11	IPC	1.0	RR	08.16.07 14:17	23.5418
12	-MRLCHK-2	1.0	2	08.16.07 14:40	2.3534
13	-MRLCHK-4	1.0	4	08.16.07 15:02	✓4.2151
14	-LCS1	1.0	25	08.16.07 15:24	✓24.9306
15	-LCS2	1.0	25	08.16.07 15:47	✓24.8690
16	2708090352	1.0		08.16.07 16:09	✓6.1917
17	2708090353	1.0		08.16.07 16:32	✓6.8034
18	2708090354	1.0		08.16.07 16:54	✓4.1782
19	2708090355	1.0		08.16.07 17:16	✓ n.a.
20	2708090549	1.0		08.16.07 17:39	✓36.6480
21	2708090549-MS	1.0	25	08.16.07 18:01	✓61.1010
22	2708090549-MSD	1.0	25	08.16.07 18:24	✓63.2449
23	2708090550	1.0		08.16.07 18:46	✓46.0572
24	2708090552	1.0		08.16.07 19:08	✓45.5613
25	2708090554	1.0		08.16.07 19:31	✓62.6765
26	2708100342_1/50000	50000.0		08.16.07 19:53	✓2065639.6005
27	2708100343_1/50000	50000.0		08.16.07 20:16	✓1215715.1697
28	CCV	1.0		08.16.07 20:38	23.6557
29	2708100344_1/50000	50000.0		08.16.07 21:00	✓885767.3574
30	2708100363_1/2	2.0		08.16.07 21:23	✓ n.a.
31	2708100364_1/2	2.0		08.16.07 21:45	✓n.a.
32	2708100365_1/2	2.0		08.16.07 22:08	✓n.a.
33	2708100367_1/2	2.0		08.16.07 22:30	✓n.a.
34	2708100368_1/2	2.0		08.16.07 22:52	✓n.a.
35	2708100369_1/2	2.0		08.16.07 23:15	✓n.a.
36	2708100370_1/2	2.0		08.16.07 23:37	✓n.a.
37	2708100371_1/2	2.0		08.16.07 23:59	✓n.a.
38	2708100375_1/2	2.0		08.17.07 00:22	✓n.a.
39	HCV	1.0	100	08.17.07 00:44	104.1333
40	QCS	1.0	20	08.17.07 01:07	20.5924
41	IPC	1.0	25	08.17.07 01:29	20.3765
42	-MBLK	1.0		08.17.07 01:51	n.a.
43	-MRLCHK	1.0	2	08.17.07 02:14	2.5715
44	-MRLCHK	1.0	4	08.17.07 02:36	✓4.3978

45	-LCS	1.0	25	08.17.07 02:59	✓24.3765	97.5%
46	-LCSD	1.0	25	08.17.07 03:21	✓25.8865	104%
47	2708070431_1/5	5.0	RR	08.17.07 03:43	✓ n.a.	
48	2708100378_1/2 DNR	2.0		08.17.07 04:06	- 12.5746	DNR
49	2708100379_1/2	2.0		08.17.07 04:28	✓ 5.5219	
50	2708100380_1/2	2.0		08.17.07 04:51	✓ 3.6977	
51	2708100381_1/2	2.0		08.17.07 05:13	✓ 3.5379	
52	2708100382_1/2	2.0		08.17.07 05:35	✓ n.a.	
53	2708100422_1/2	2.0		08.17.07 05:58	✓ 3.5033	
54	2708130155_1/50000	50000.0		08.17.07 06:20	✓ 4483919.0381	
55	2708130319_1/2	2.0		08.17.07 06:43	✓ n.a.	
56	2708130320_1/2	2.0		08.17.07 07:05	✓ 5.1630	97%
57	2708130320-MS	2.0	25	08.17.07 07:27	✓ 51.8779	46.7% = 23%
58	2708130320-MSD	2.0	25	08.17.07 07:50	✓ 52.3822	23.6 / 94.4%
59	CCV	1.0	25	08.17.07 08:12	✓ 23.4656	93.9%
60	2708130321_1/2	2.0		08.17.07 08:35	✓ 2.8291	
61	2708130322_1/2	2.0		08.17.07 08:57	✓ n.a.	
62	2708130323_1/2	2.0		08.17.07 09:19	✓ n.a.	
63	2708140265_1/5	5.0		08.17.07 09:42	✓ 78.2418	
64	2708140267_1/2500	2500.0		08.17.07 10:04	✓ 69359.3279	
65	2708140268_1/10000	10000.0		08.17.07 10:27	✓ 284101.2138	
66	2708140269_1/10000	10000.0		08.17.07 10:49	✓ 262402.1705	
67	2708140270_1/5000	5000.0		08.17.07 11:11	✓ 74626.5716	
68	2708140271_1/5000	5000.0		08.17.07 11:34	✓ 120069.6432	
69	2708140272_1/10000	10000.0		08.17.07 11:56	✓ 217519.6230	
70	HCV	1.0	100	08.17.07 12:19	95.2596	95.3%

WS-Nano/24/07

Sequence: 081607-CLO4-IC11  
Operator: clv

Page 1 of 4  
Printed: 8/17/2007 1:59:14 PM

Title:  
Datasource: Dionex\_USPAS2SDIO2  
Location: IC1C11\_CLO4\2007\AUG  
Timebase: IC11  
#Samples: 70

Created: 8/14/2007 6:27:03 PM by clv  
Last Update: 8/17/2007 11:08:04 AM by clv

No.	Name	Sample ID	Dil. Factor	Type	Comment	Status	Program
1	autocal1		1.0000	Standard	0	Finished	Perchlorate-IC11
2	autocal2	R201449 EXP 07/28/09	1.0000	Standard	2	Finished	Perchlorate-IC11
3	autocal3		1.0000	Standard	4	Finished	Perchlorate-IC11
4	autocal4		1.0000	Standard	10	Finished	Perchlorate-IC11
5	autocal5		1.0000	Standard	25	Finished	Perchlorate-IC11
6	autocal6		1.0000	Standard	50	Finished	Perchlorate-IC11
7	autocal7		1.0000	Standard	100	Finished	Perchlorate-IC11
8	QCS	R201449 EXP 07/28/09	1.0000	Unknown	20	Finished	Perchlorate-IC11
9	IPC DNR	EC=3155	1.0000	Unknown	25	Finished	Perchlorate-IC11
10	-MBLK		1.0000	Unknown		Finished	Perchlorate-IC11
11	IPC	EC=3155	1.0000	Unknown	RR	Finished	Perchlorate-IC11
12	-MRLCHK-2	2	1.0000	Unknown	2	Finished	Perchlorate-IC11
13	-MRLCHK-4	4	1.0000	Unknown	4	Finished	Perchlorate-IC11
14	-LCS1	25	1.0000	Unknown	25	Finished	Perchlorate-IC11
15	-LCS2	25	1.0000	Unknown	25	Finished	Perchlorate-IC11
16	2708090352	CALWATER 344	1.0000	Unknown		Finished	Perchlorate-IC11
17	2708090353	CALWATER 345	1.0000	Unknown		Finished	Perchlorate-IC11
18	2708090354	CALWATER 346	1.0000	Unknown		Finished	Perchlorate-IC11
19	2708090355	CALWATER 347	1.0000	Unknown		Finished	Perchlorate-IC11
20	2708090549	KM LVW UPGRAIENT	1.0000	Unknown		Finished	Perchlorate-IC11
21	2708090549-MS	25	1.0000	Unknown	25	Finished	Perchlorate-IC11
22	2708090549-MSD	25	1.0000	Unknown	25	Finished	Perchlorate-IC11
23	2708090550	KM LVW 6.05	1.0000	Unknown		Finished	Perchlorate-IC11
24	2708090552	KM LVW 5.5	1.0000	Unknown		Finished	Perchlorate-IC11
25	2708090554	KM LVW 0.55	1.0000	Unknown		Finished	Perchlorate-IC11
26	2708100342_1/50000	KM GWTP DISCHARGE	50000.0000	Unknown		Finished	Perchlorate-IC11
27	2708100343_1/50000	KM GWTP WEST	50000.0000	Unknown		Finished	Perchlorate-IC11
28	CCV		1.0000	Unknown		Finished	Perchlorate-IC11
29	2708100344_1/50000	KM GWTP EAST	50000.0000	Unknown		Finished	Perchlorate-IC11
30	2708100363_1/2	IEUA 1208388	2.0000	Unknown		Finished	Perchlorate-IC11
31	2708100364_1/2	IEUA 1208412	2.0000	Unknown		Finished	Perchlorate-IC11
32	2708100365_1/2	IEUA 1208306	2.0000	Unknown		Finished	Perchlorate-IC11
33	2708100367_1/2	IEUA 1207117	2.0000	Unknown		Finished	Perchlorate-IC11
34	2708100368_1/2	IEUA 1207118	2.0000	Unknown		Finished	Perchlorate-IC11
35	2708100369_1/2	IEUA 1207119	2.0000	Unknown		Finished	Perchlorate-IC11
36	2708100370_1/2	IEUA 1207120	2.0000	Unknown		Finished	Perchlorate-IC11
37	2708100371_1/2	IEUA 1207121	2.0000	Unknown		Finished	Perchlorate-IC11
38	2708100375_1/2	IEUA 1201076	2.0000	Unknown		Finished	Perchlorate-IC11
39	HCV	100	1.0000	Unknown	100	Finished	Perchlorate-IC11
40	QCS	20	1.0000	Unknown	20	Finished	Perchlorate-IC11
41	IPC	EC=3155	1.0000	Unknown	25	Finished	Perchlorate-IC11
42	-MBLK		1.0000	Unknown		Finished	Perchlorate-IC11

Sequence: 081607-CLO4-IC11  
Operator: clv

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Printed: 8/17/2007 1:59:14 PM

Title:  
Datasource: Dionex\_USPAS2SDIO2  
Location: IC\IC11\_CLO42007AUG  
Timebase: IC11  
#Samples: 70

Created: 8/14/2007 6:27:03 PM by clv  
Last Update: 8/17/2007 11:08:04 AM by clv

No.	Name	Method	Inj. Date/Time	*Analyst
1	autocal1	IC#4-CLO4-LOW	8/16/2007 10:33:41 AM	clv
2	autocal2	IC#4-CLO4-LOW	8/16/2007 10:56:05 AM	clv
3	autocal3	IC#4-CLO4-LOW	8/16/2007 11:18:29 AM	clv
4	autocal4	IC#4-CLO4-LOW	8/16/2007 11:40:52 AM	clv
5	autocal5	IC#4-CLO4-LOW	8/16/2007 12:03:16 PM	clv
6	autocal6	IC#4-CLO4-LOW	8/16/2007 12:25:41 PM	clv
7	autocal7	IC#4-CLO4-LOW	8/16/2007 12:48:05 PM	clv
8	QCS	IC#4-CLO4-LOW	8/16/2007 1:10:29 PM	clv
9	IPC DNR	IC#4-CLO4-LOW	8/16/2007 1:32:53 PM	clv
10	-MBLK	IC#4-CLO4-LOW	8/16/2007 1:55:16 PM	clv
11	IPC	IC#4-CLO4-LOW	8/16/2007 2:17:41 PM	clv
12	-MRLCHK-2	IC#4-CLO4-LOW	8/16/2007 2:40:03 PM	clv
13	-MRLCHK-4	IC#4-CLO4-LOW	8/16/2007 3:02:27 PM	clv
14	-LCS1	IC#4-CLO4-LOW	8/16/2007 3:24:50 PM	clv
15	-LCS2	IC#4-CLO4-LOW	8/16/2007 3:47:14 PM	clv
16	2708090352	IC#4-CLO4-LOW	8/16/2007 4:09:38 PM	clv
17	2708090353	IC#4-CLO4-LOW	8/16/2007 4:32:02 PM	clv
18	2708090354	IC#4-CLO4-LOW	8/16/2007 4:54:26 PM	clv
19	2708090355	IC#4-CLO4-LOW	8/16/2007 5:16:50 PM	clv
20	2708090549	IC#4-CLO4-LOW	8/16/2007 5:39:14 PM	clv
21	2708090549-MS	IC#4-CLO4-LOW	8/16/2007 6:01:38 PM	clv
22	2708090549-MSD	IC#4-CLO4-LOW	8/16/2007 6:24:02 PM	clv
23	2708090550	IC#4-CLO4-LOW	8/16/2007 6:46:26 PM	clv
24	2708090552	IC#4-CLO4-LOW	8/16/2007 7:08:49 PM	clv
25	2708090554	IC#4-CLO4-LOW	8/16/2007 7:31:13 PM	clv
26	2708100342_1/50000	IC#4-CLO4-LOW	8/16/2007 7:53:37 PM	clv
27	2708100343_1/50000	IC#4-CLO4-LOW	8/16/2007 8:16:02 PM	clv
28	CCV	IC#4-CLO4-LOW	8/16/2007 8:38:25 PM	clv
29	2708100344_1/50000	IC#4-CLO4-LOW	8/16/2007 9:00:49 PM	clv
30	2708100363_1/2	IC#4-CLO4-LOW	8/16/2007 9:23:13 PM	clv
31	2708100364_1/2	IC#4-CLO4-LOW	8/16/2007 9:45:37 PM	clv
32	2708100365_1/2	IC#4-CLO4-LOW	8/16/2007 10:08:01 PM	clv
33	2708100367_1/2	IC#4-CLO4-LOW	8/16/2007 10:30:25 PM	clv
34	2708100368_1/2	IC#4-CLO4-LOW	8/16/2007 10:52:49 PM	clv
35	2708100369_1/2	IC#4-CLO4-LOW	8/16/2007 11:15:13 PM	clv
36	2708100370_1/2	IC#4-CLO4-LOW	8/16/2007 11:37:35 PM	clv
37	2708100371_1/2	IC#4-CLO4-LOW	8/16/2007 11:59:59 PM	clv
38	2708100375_1/2	IC#4-CLO4-LOW	8/17/2007 12:22:23 AM	clv
39	HCV	IC#4-CLO4-LOW	8/17/2007 12:44:46 AM	clv
40	QCS	IC#4-CLO4-LOW	8/17/2007 1:07:10 AM	clv
41	IPC	IC#4-CLO4-LOW	8/17/2007 1:29:34 AM	clv
42	-MBLK	IC#4-CLO4-LOW	8/17/2007 1:51:58 AM	clv

Title:  
Datasource: Dionex\_USPAS2SDIO2  
Location: IC\IC11\_CLO4\2007\AUG  
Timebase: IC11  
#Samples: 70Created: 8/14/2007 6:27:03 PM by clv  
Last Update: 8/17/2007 11:08:04 AM by clv

No.	Name	Sample ID	Dil. Factor	Type	Comment	Status	Program
43	-MRLCHK	2	1.0000	Unknown	2	Finished	Perchlorate-IC11
44	-MRLCHK	4	1.0000	Unknown	4	Finished	Perchlorate-IC11
45	-LCS	25	1.0000	Unknown	25	Finished	Perchlorate-IC11
46	-LCSD	25	1.0000	Unknown	25	Finished	Perchlorate-IC11
47	2708070431_1/5	KM SEEP SURFACE	5.0000	Unknown	RR	Finished	Perchlorate-IC11
48	2708100378_1/2 DNR	IEUA 1201077	2.0000	Unknown		Finished	Perchlorate-IC11
49	2708100379_1/2	IEUA 1201078	2.0000	Unknown		Finished	Perchlorate-IC11
50	2708100380_1/2	IEUA 1201075	2.0000	Unknown		Finished	Perchlorate-IC11
51	2708100381_1/2	IEUA 1201085	2.0000	Unknown		Finished	Perchlorate-IC11
52	2708100382_1/2	IEUA RP3-1/1	2.0000	Unknown		Finished	Perchlorate-IC11
53	2708100422_1/2	IEUA DC2	2.0000	Unknown		Finished	Perchlorate-IC11
54	2708130155_1/50000	KM GW-11 SW	50000.0000	Unknown		Finished	Perchlorate-IC11
55	2708130319_1/2	IEUA 1002253	2.0000	Unknown		Finished	Perchlorate-IC11
56	2708130320_1/2	IEUA 1002254	2.0000	Unknown		Finished	Perchlorate-IC11
57	2708130320-MS	25	2.0000	Unknown	25	Finished	Perchlorate-IC11
58	2708130320-MSD	25	2.0000	Unknown	25	Finished	Perchlorate-IC11
59	CCV	25	1.0000	Unknown	25	Finished	Perchlorate-IC11
60	2708130321_1/2	IEUA 1002362	2.0000	Unknown		Finished	Perchlorate-IC11
61	2708130322_1/2	IEUA 1002438	2.0000	Unknown		Finished	Perchlorate-IC11
62	2708130323_1/2	IEUA 1003480	2.0000	Unknown		Finished	Perchlorate-IC11
63	2708140265_1/5	KM ART-1	5.0000	Unknown		Finished	Perchlorate-IC11
64	2708140267_1/2500	KM ART-2	2500.0000	Unknown		Finished	Perchlorate-IC11
65	2708140268_1/10000	KM ART-3	10000.0000	Unknown		Finished	Perchlorate-IC11
66	2708140269_1/10000	KM ART-4	10000.0000	Unknown		Finished	Perchlorate-IC11
67	2708140270_1/5000	KM ART-6	5000.0000	Unknown		Finished	Perchlorate-IC11
68	2708140271_1/5000	KM ART-7	5000.0000	Unknown		Finished	Perchlorate-IC11
69	2708140272_1/10000	KM ART-8	10000.0000	Unknown		Finished	Perchlorate-IC11
70	HCV	100	1.0000	Unknown	100	Finished	Perchlorate-IC11

Sequence: 081607-CLO4-IC11  
Operator: clv

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Printed: 8/17/2007 1:59:14 PM

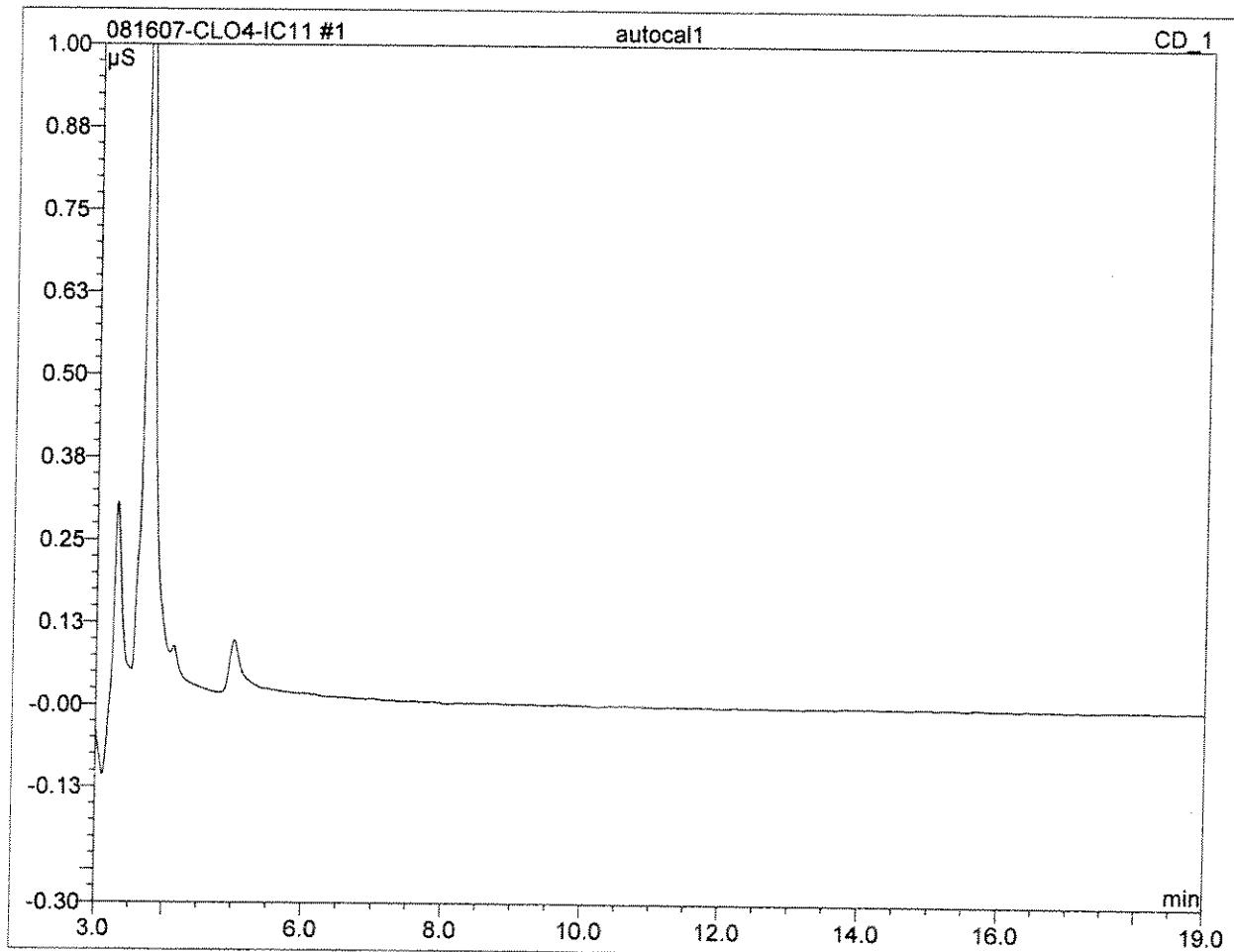
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Location: IC\IC11\_CLO4\2007\AUG  
Timebase: IC11  
#Samples: 70

Created: 8/14/2007 6:27:03 PM by clv  
Last Update: 8/17/2007 11:08:04 AM by clv

No.	Name	Method	Inj. Date/Time	*Analyst
43	-MRLCHK	IC#4-CLO4-LOW	8/17/2007 2:14:21 AM	clv
44	-MRLCHK	IC#4-CLO4-LOW	8/17/2007 2:36:45 AM	clv
45	-LCS	IC#4-CLO4-LOW	8/17/2007 2:59:09 AM	clv
46	-LCSD	IC#4-CLO4-LOW	8/17/2007 3:21:33 AM	clv
47	2708070431_1/5	IC#4-CLO4-LOW	8/17/2007 3:43:57 AM	clv
48	2708100378_1/2 DNR	IC#4-CLO4-LOW	8/17/2007 4:06:21 AM	clv
49	2708100379_1/2	IC#4-CLO4-LOW	8/17/2007 4:28:45 AM	clv
50	2708100380_1/2	IC#4-CLO4-LOW	8/17/2007 4:51:10 AM	clv
51	2708100381_1/2	IC#4-CLO4-LOW	8/17/2007 5:13:32 AM	clv
52	2708100382_1/2	IC#4-CLO4-LOW	8/17/2007 5:35:52 AM	clv
53	2708100422_1/2	IC#4-CLO4-LOW	8/17/2007 5:58:22 AM	clv
54	2708130155_1/50000	IC#4-CLO4-LOW	8/17/2007 6:20:45 AM	clv
55	2708130319_1/2	IC#4-CLO4-LOW	8/17/2007 6:43:09 AM	clv
56	2708130320_1/2	IC#4-CLO4-LOW	8/17/2007 7:05:33 AM	clv
57	2708130320-MS	IC#4-CLO4-LOW	8/17/2007 7:27:56 AM	clv
58	2708130320-MSD	IC#4-CLO4-LOW	8/17/2007 7:50:20 AM	clv
59	CCV	IC#4-CLO4-LOW	8/17/2007 8:12:43 AM	clv
60	2708130321_1/2	IC#4-CLO4-LOW	8/17/2007 8:35:04 AM	clv
61	2708130322_1/2	IC#4-CLO4-LOW	8/17/2007 8:57:26 AM	clv
62	2708130323_1/2	IC#4-CLO4-LOW	8/17/2007 9:19:56 AM	clv
63	2708140265_1/5	IC#4-CLO4-LOW	8/17/2007 9:42:20 AM	clv
64	2708140267_1/2500	IC#4-CLO4-LOW	8/17/2007 10:04:44 AM	clv
65	2708140268_1/10000	IC#4-CLO4-LOW	8/17/2007 10:27:09 AM	clv
66	2708140269_1/10000	IC#4-CLO4-LOW	8/17/2007 10:49:33 AM	clv
67	2708140270_1/5000	IC#4-CLO4-LOW	8/17/2007 11:11:58 AM	clv
68	2708140271_1/5000	IC#4-CLO4-LOW	8/17/2007 11:34:20 AM	clv
69	2708140272_1/10000	IC#4-CLO4-LOW	8/17/2007 11:56:39 AM	clv
70	HCV	IC#4-CLO4-LOW	8/17/2007 12:19:06 PM	clv

**1 autocal1****0**

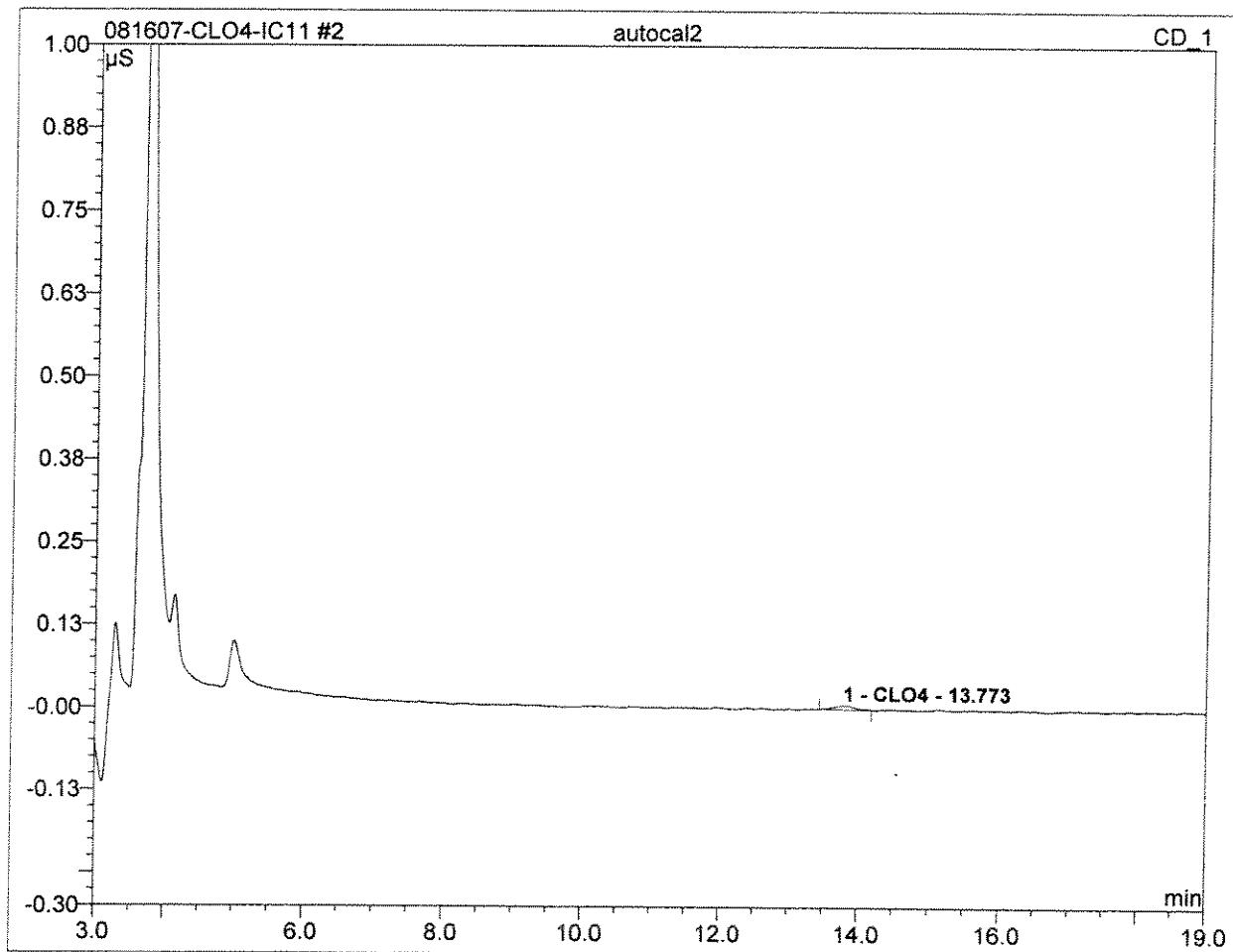
<i>Sample Name:</i>	autocal1	<i>Channel:</i>	CD_1
<i>Sample Type:</i>	standard	<i>Control Program:</i>	Perchlorate-IC11
<i>Recording Time:</i>	08/16/2007 10:33	<i>Quantif. Method:</i>	IC#4-CLO4-LOW
<i>Analyst:</i>	clv	<i>Dilution Factor:</i>	1.0000



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

**2 autocal2****2**

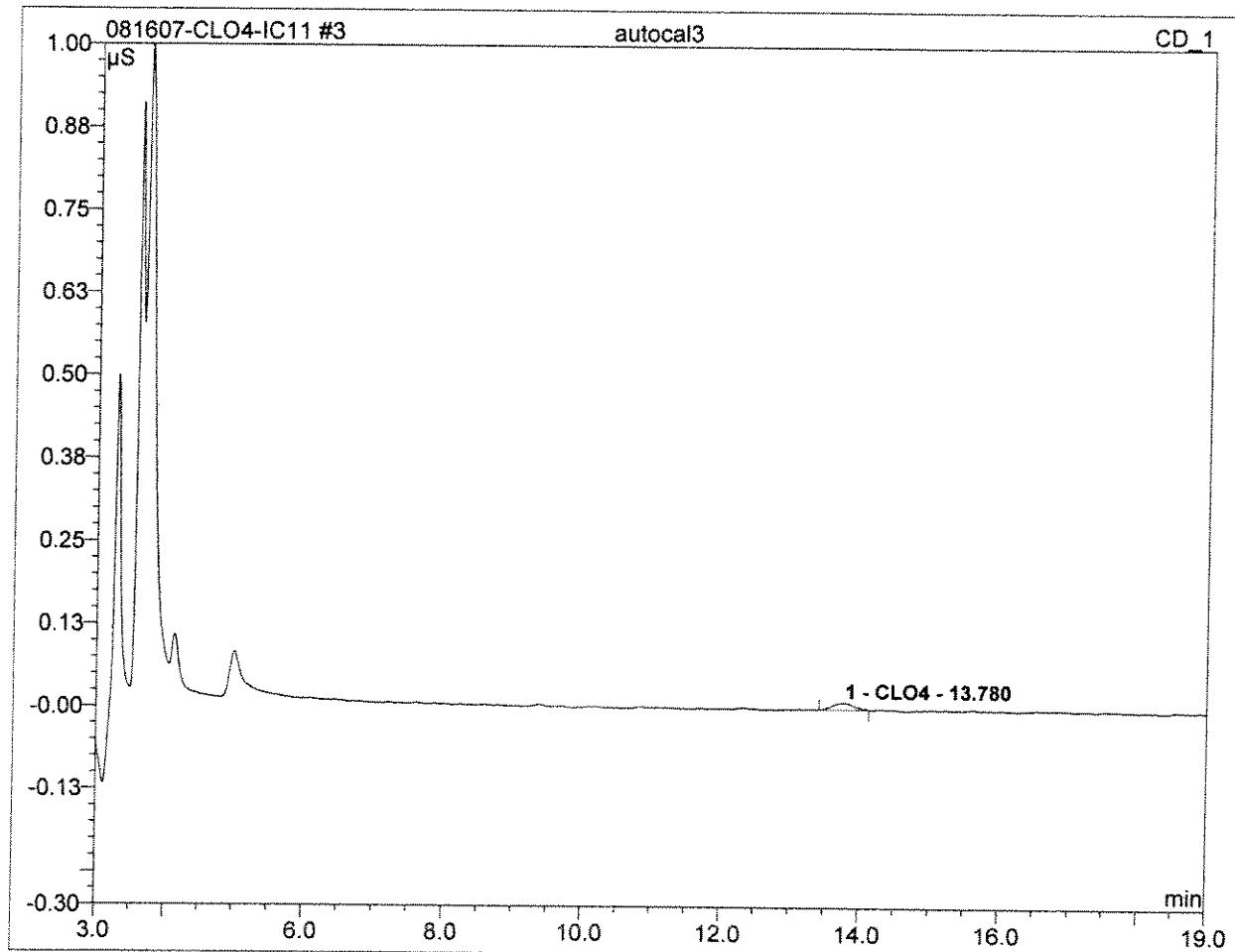
<b>Sample Name:</b>	<b>autocal2</b>	<b>Channel:</b>	<b>CD_1</b>
<b>Sample Type:</b>	<b>standard</b>	<b>Control Program:</b>	<b>Perchlorate-IC11</b>
<b>Recording Time:</b>	<b>08/16/2007 10:56</b>	<b>Quantif. Method:</b>	<b>IC#4-CLO4-LOW</b>
<b>Analyst:</b>	<b>clv</b>	<b>Dilution Factor:</b>	<b>1.0000</b>



No.	Ret.Time min	Peak Name	Height μS	Area μS*min	Rel.Area %	Amount	Type
1	13.77	CLO4	0.006	0.002	100.00	2.503	BMB
<b>Total:</b>			0.006	0.002	100.00	2.503	

**3 autocal3****4**

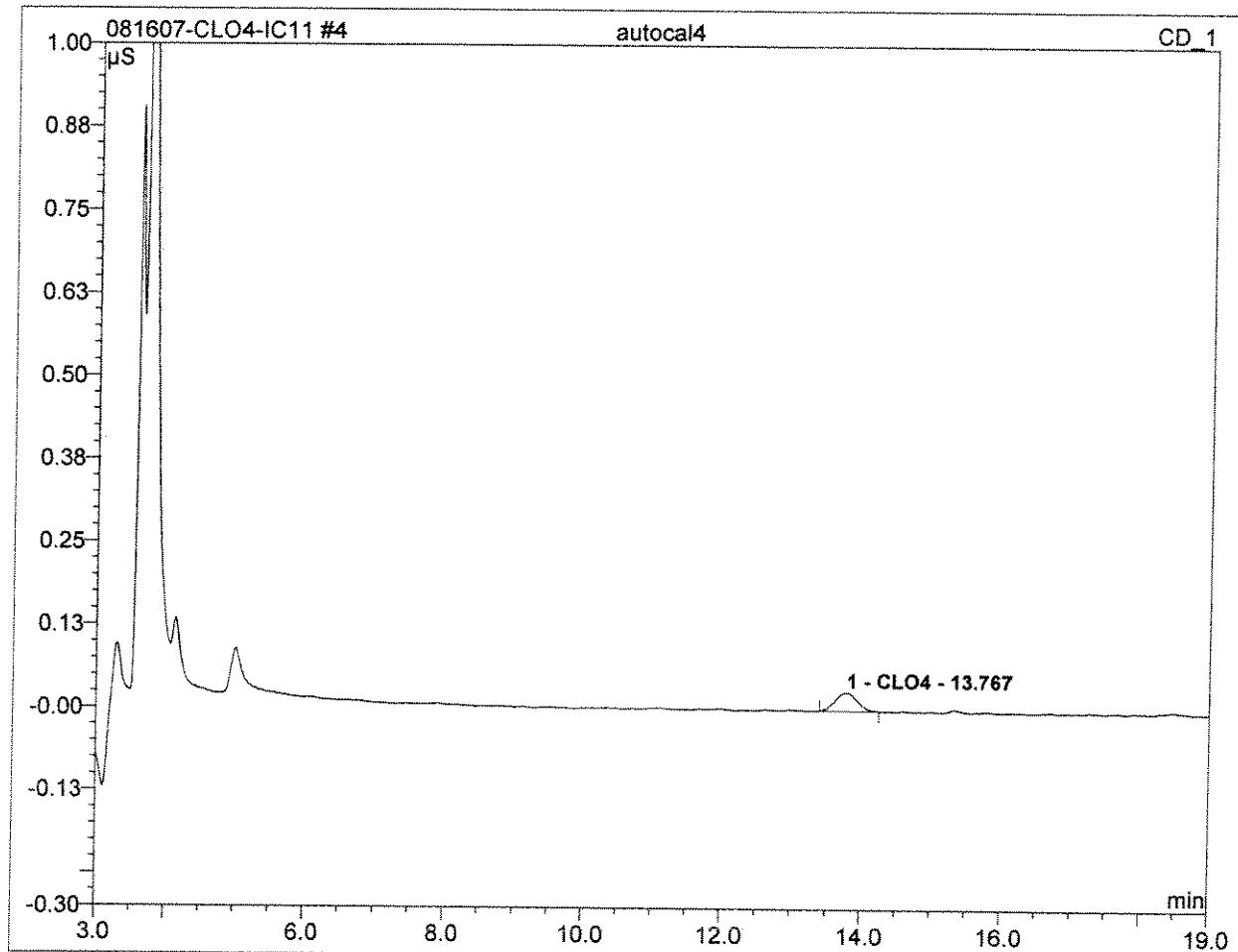
<i>Sample Name:</i>	autocal3	<i>Channel:</i>	CD_1
<i>Sample Type:</i>	standard	<i>Control Program:</i>	Perchlorate-IC11
<i>Recording Time:</i>	08/16/2007 11:18	<i>Quantif. Method:</i>	IC#4-CLO4-LOW
<i>Analyst:</i>	clv	<i>Dilution Factor:</i>	1.0000



No.	Ret.Time min	Peak Name	Height μS	Area μS*min	Rel.Area %	Amount	Type
1	13.78	CLO4	0.010	0.004	100.00	4.046	BMB
<b>Total:</b>			0.010	0.004	100.00	4.046	

**4 autocal4****10**

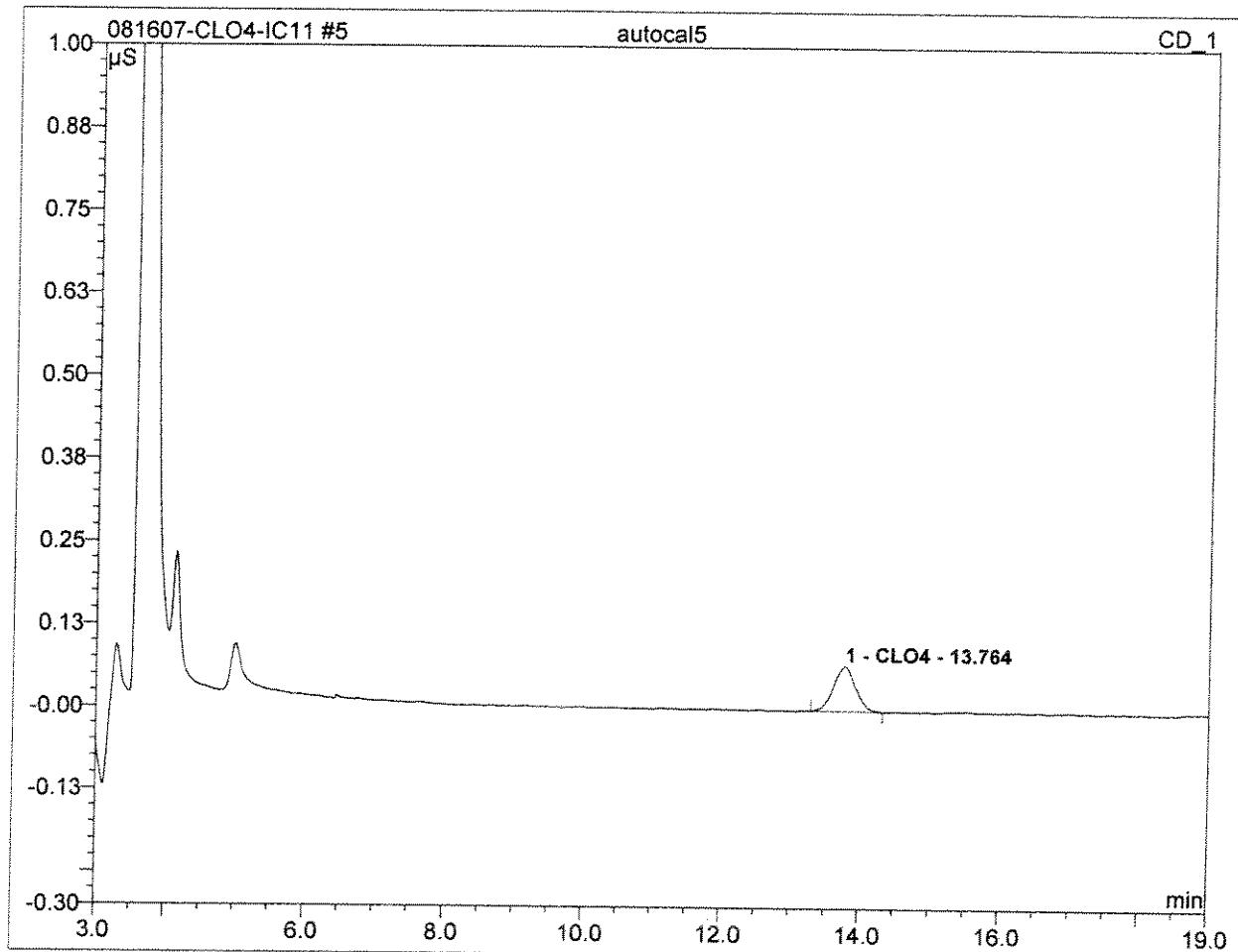
<i>Sample Name:</i>	autocal4	<i>Channel:</i>	CD_1
<i>Sample Type:</i>	standard	<i>Control Program:</i>	Perchlorate-IC11
<i>Recording Time:</i>	08/16/2007 11:40	<i>Quantif. Method:</i>	IC#4-CLO4-LOW
<i>Analyst:</i>	clv	<i>Dilution Factor:</i>	1.0000



No.	Ret.Time min	Peak Name	Height $\mu$ S	Area $\mu$ S*min	Rel.Area %	Amount	Type
1	13.77	CLO4	0.027	0.010	100.00	9.813	BMB
<b>Total:</b>			0.027	0.010	100.00	9.813	

**5 autocal5****25**

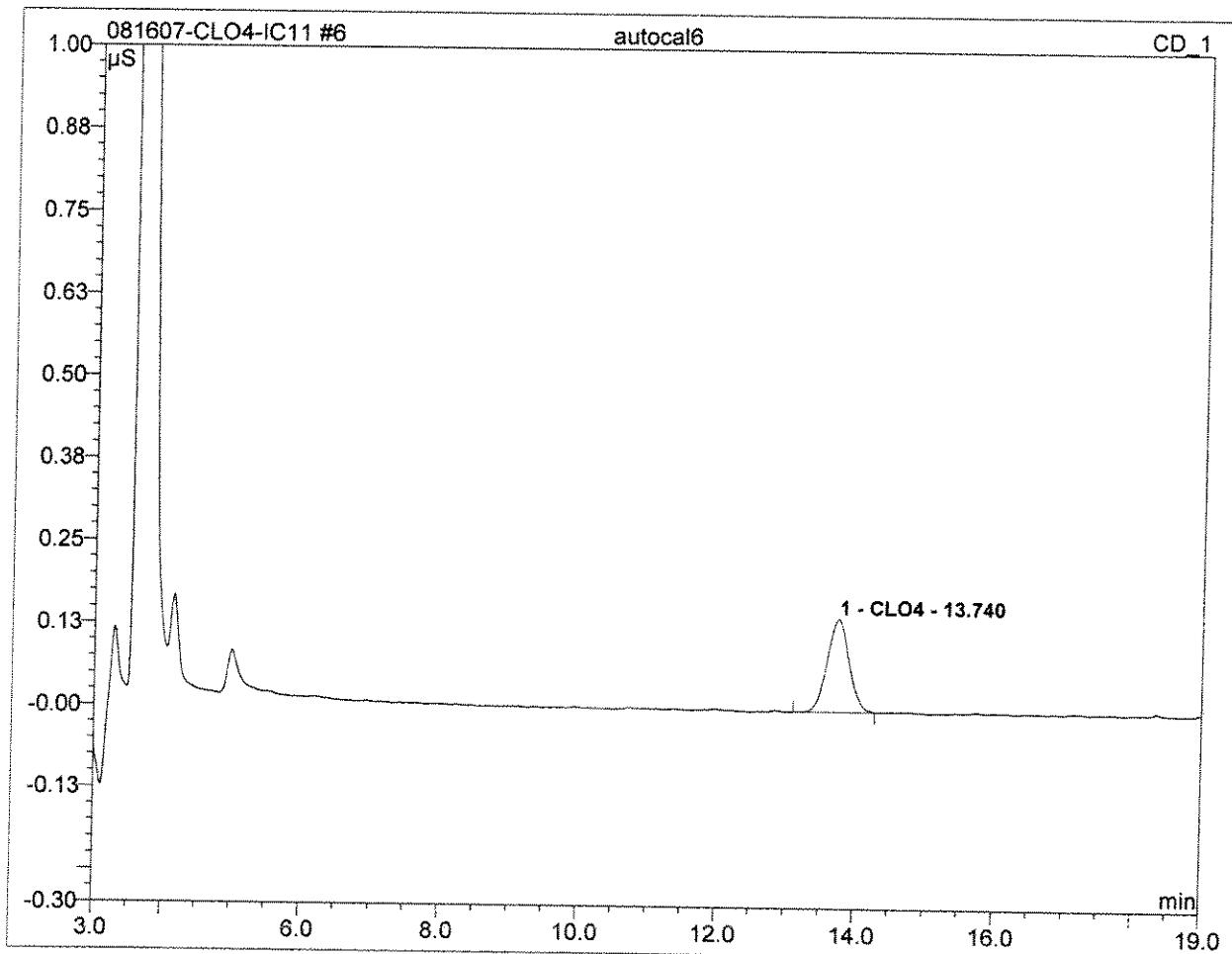
<i>Sample Name:</i>	autocal5	<i>Channel:</i>	CD_1
<i>Sample Type:</i>	standard	<i>Control Program:</i>	Perchlorate-IC11
<i>Recording Time:</i>	08/16/2007 12:03	<i>Quantif. Method:</i>	IC#4-CLO4-LOW
<i>Analyst:</i>	clv	<i>Dilution Factor:</i>	1.0000



No.	Ret.Time min	Peak Name	Height μS	Area μS*min	Rel.Area %	Amount	Type
1	13.76	CLO4	0.068	0.025	100.00	23.917	BMB
<b>Total:</b>			0.068	0.025	100.00	23.917	

**6 autocal6****50**

<i>Sample Name:</i>	autocal6	<i>Channel:</i>	CD_1
<i>Sample Type:</i>	standard	<i>Control Program:</i>	Perchlorate-IC11
<i>Recording Time:</i>	08/16/2007 12:25	<i>Quantif. Method:</i>	IC#4-CLO4-LOW
<i>Analyst:</i>	clv	<i>Dilution Factor:</i>	1.0000

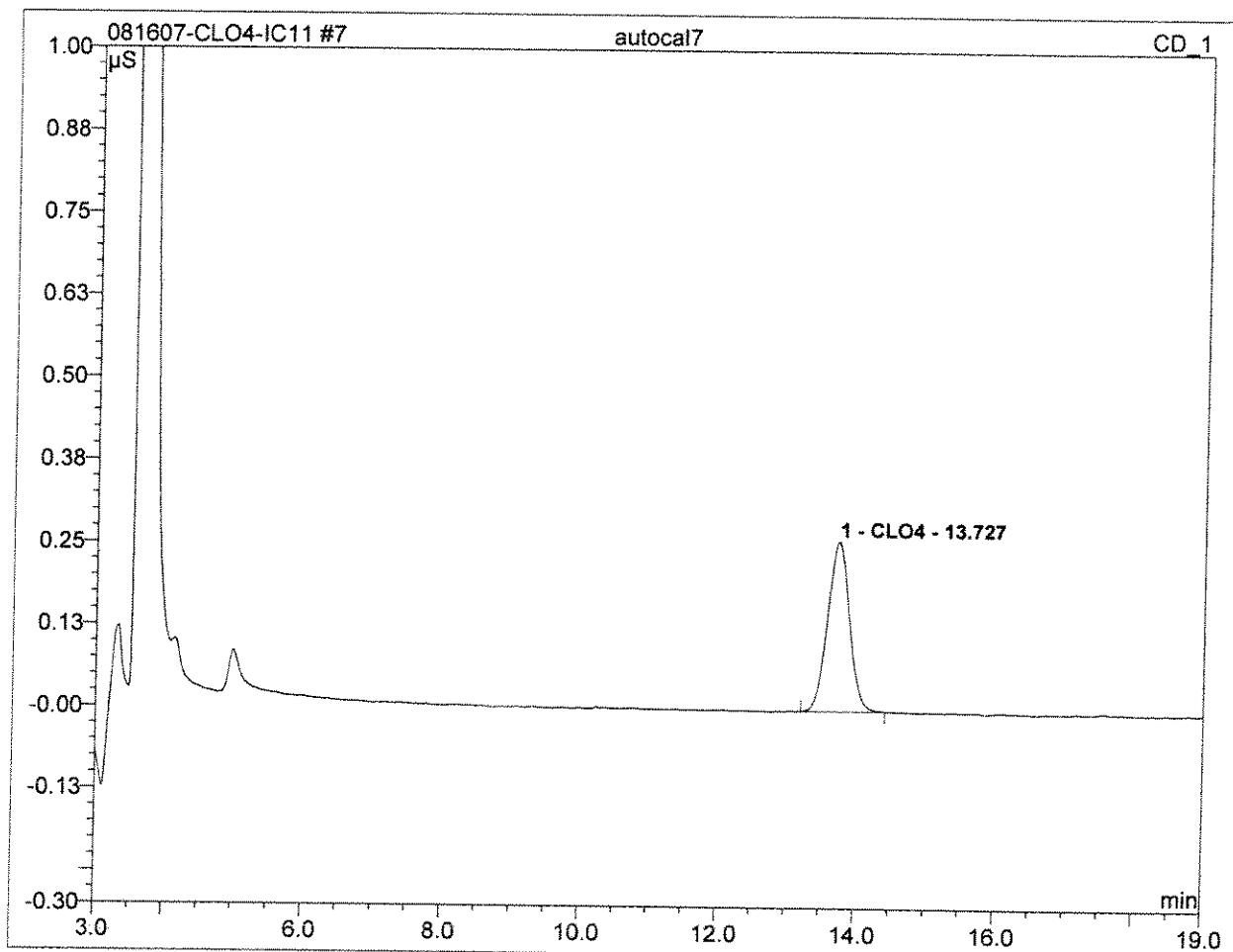


No.	Ret.Time min	Peak Name	Height $\mu\text{S}$	Area $\mu\text{S}^*\text{min}$	Rel.Area %	Amount	Type
1	13.74	CLO4	0.141	0.052	100.00	50.902	BMB
<b>Total:</b>			0.141	0.052	100.00	50.902	

**7 autocal7**

100

Sample Name:	autocal7	Channel:	CD_1
Sample Type:	standard	Control Program:	Perchlorate-IC11
Recording Time:	08/16/2007 12:48	Quantif. Method:	IC#4-CLO4-LOW
Analyst:	clv	Dilution Factor:	1.0000

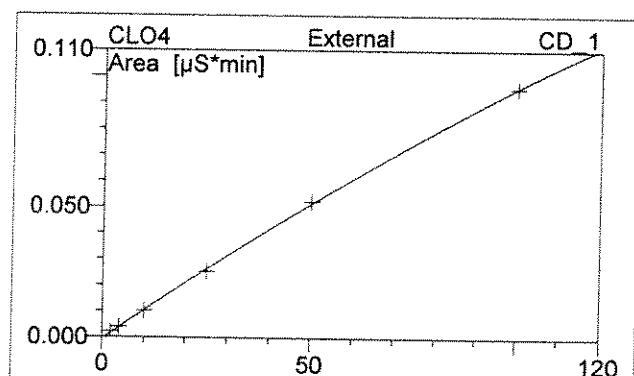
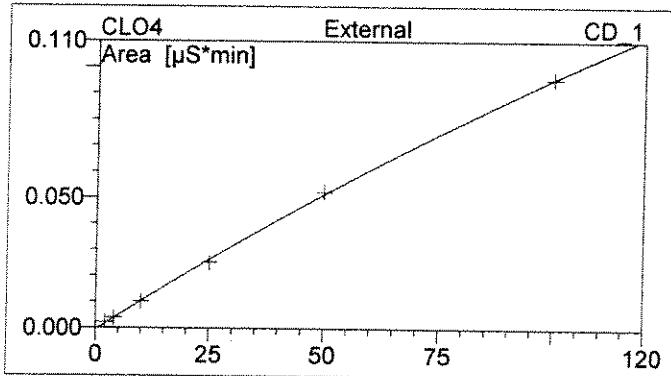
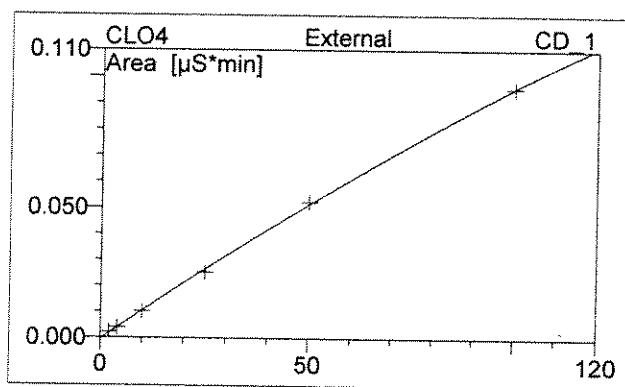
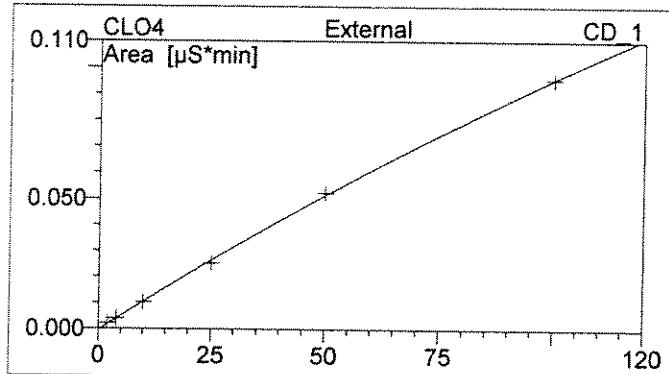


No.	Ret.Time min	Peak Name	Height μS	Area μS*min	Rel.Area %	Amount	Type
1	13.73	CLO4	0.259	0.096	100.00	99.821	BMB
<b>Total:</b>			0.259	0.096	100.00	99.821	

**7 autocal7**

100

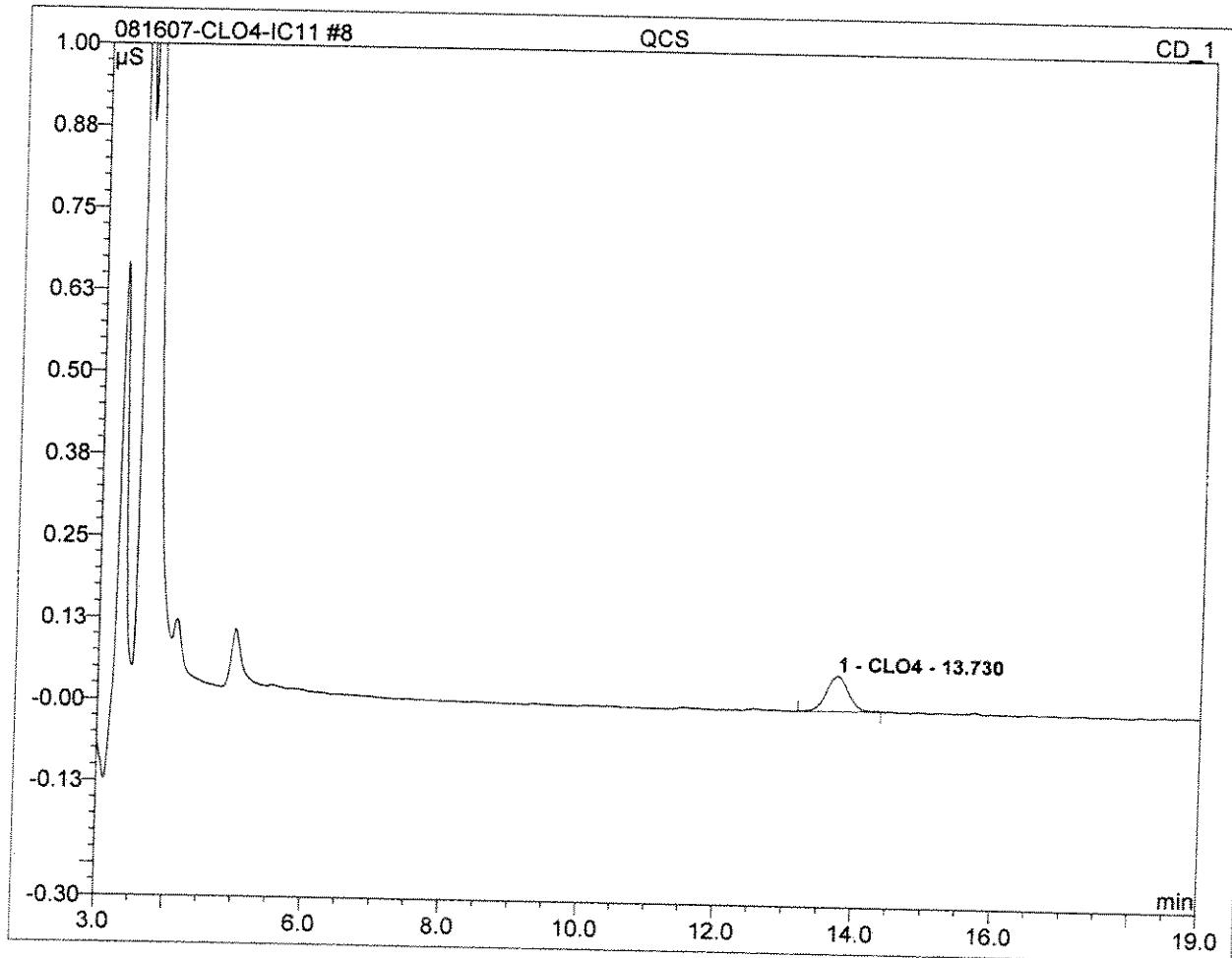
Sample Name:	autocal7	Injection Volume:	20.0
Vial Number:	109	Channel:	CD_1
Sample Type:	standard	Wavelength:	n.a.
Control Program:	Perchlorate-IC11	Bandwidth:	n.a.
Quantif. Method:	IC#4-CLO4-LOW	Dilution Factor:	1.0000
Recording Time:	8/16/2007 12:48	Sample Weight:	1.0000
Run Time (min):	20.00	Sample Amount:	1.0000



No.	Ret.Time min	Peak Name	Cal.Type	Points	Corr.Coeff. %	Offset	Slope	Curve
1	13.73	CLO4	QOff	6	99.8923	-0.0007	0.0011	0.0000
Average:					99.8923	-0.0007	0.0011	0.0000

**8 QCS****20**

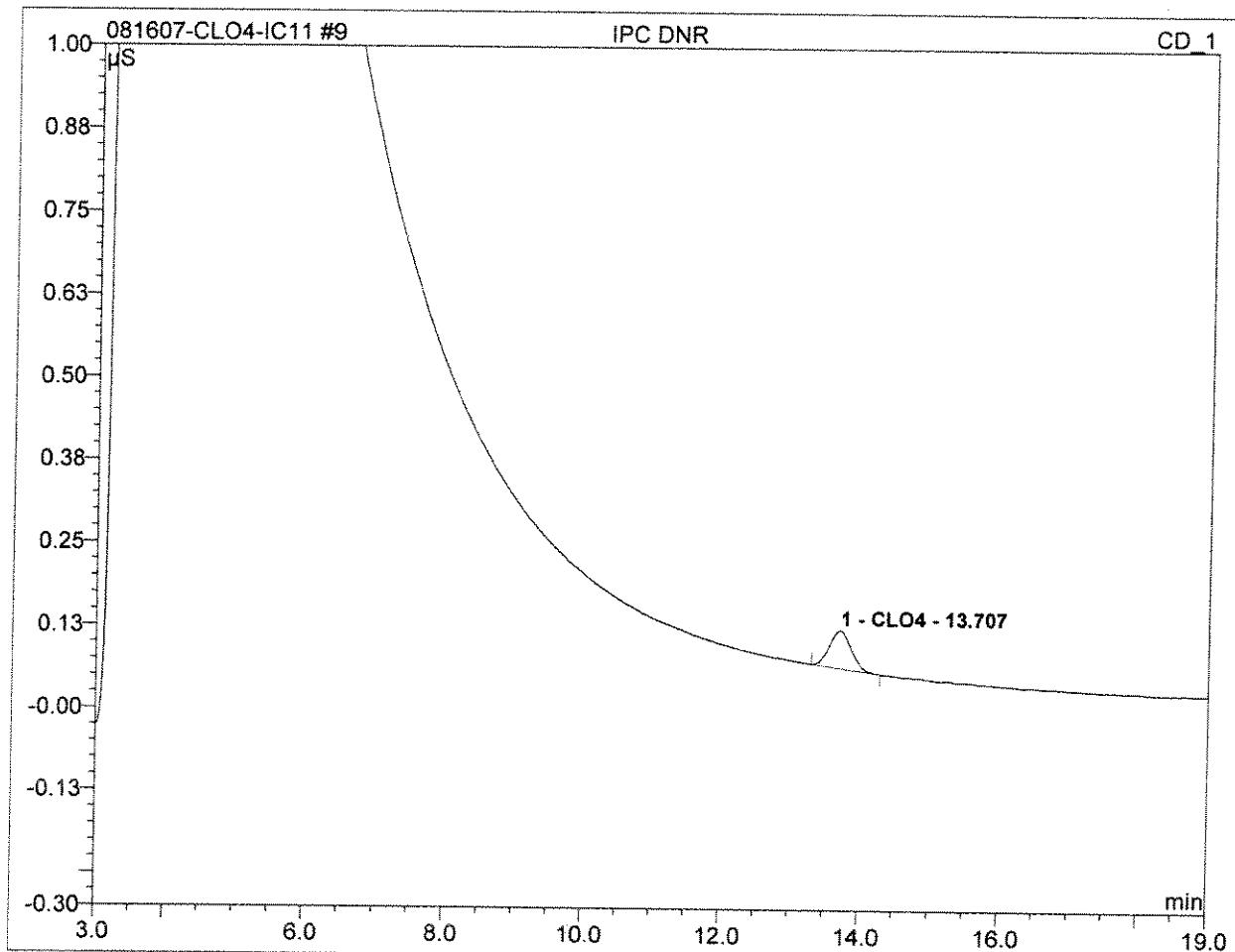
<i>Sample Name:</i>	QCS	<i>Channel:</i>	CD_1
<i>Sample Type:</i>	unknown	<i>Control Program:</i>	Perchlorate-IC11
<i>Recording Time:</i>	08/16/2007 13:10	<i>Quantif. Method:</i>	IC#4-CLO4-LOW
<i>Analyst:</i>	clv	<i>Dilution Factor:</i>	1.0000



No.	Ret.Time min	Peak Name	Height μS	Area μS·min	Rel.Area %	Amount	Type
1	13.73	CLO4	0.054	0.020	100.00	19.392	BMB
<b>Total:</b>			0.054	0.020	100.00	19.392	

**9 IPC DNR****25**

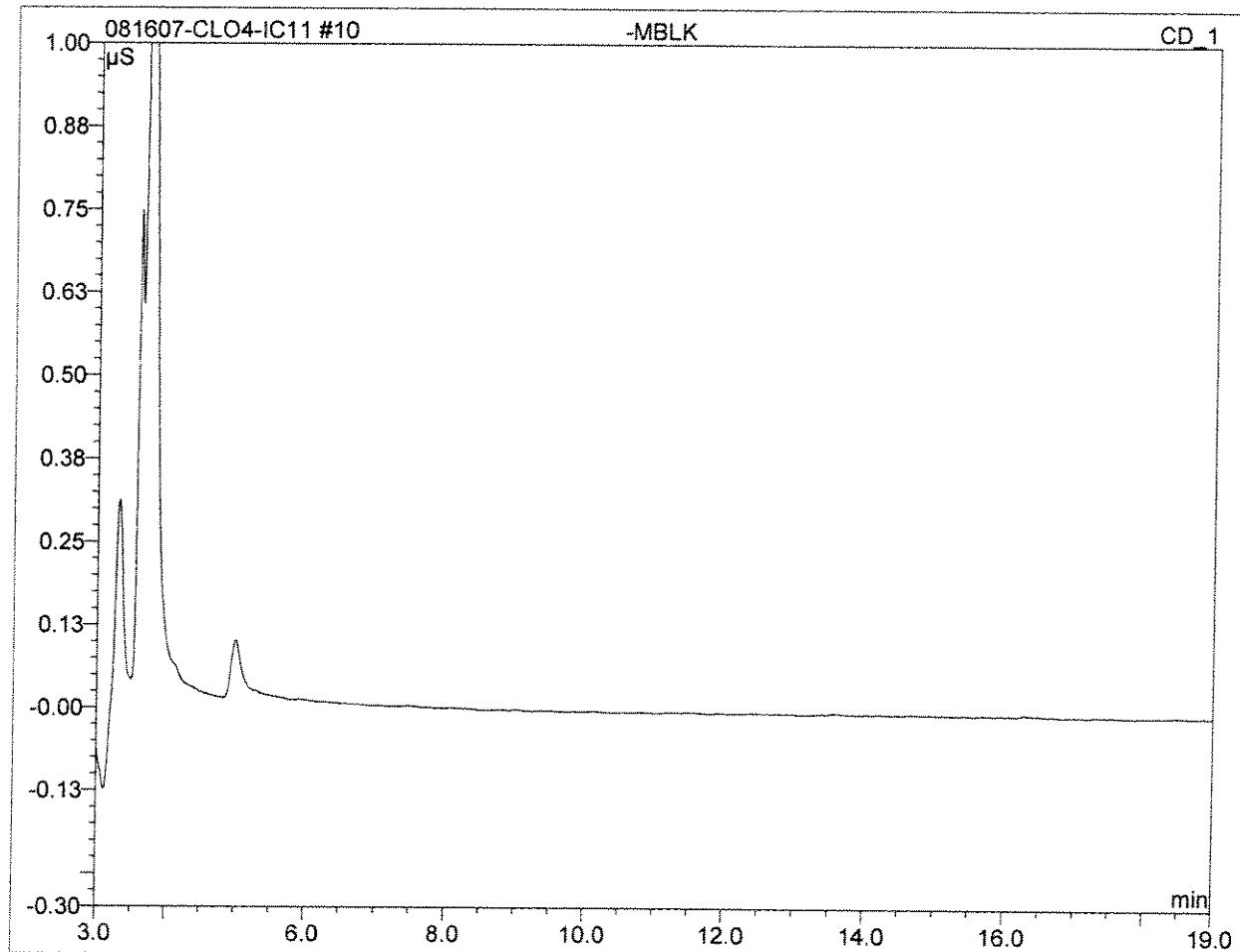
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<i>Sample Type:</i>	unknown	<i>Control Program:</i>	Perchlorate-IC11
<i>Recording Time:</i>	08/16/2007 13:32	<i>Quantif. Method:</i>	IC#4-CLO4-LOW
<i>Analyst:</i>	clv	<i>Dilution Factor:</i>	1.0000



No.	Ret.Time min	Peak Name	Height μS	Area μS*min	Rel.Area %	Amount	Type
1	13.71	CLO4	0.057	0.021	100.00	19.791	BMB
<b>Total:</b>			0.057	0.021	100.00	19.791	

**10 -MBLK**

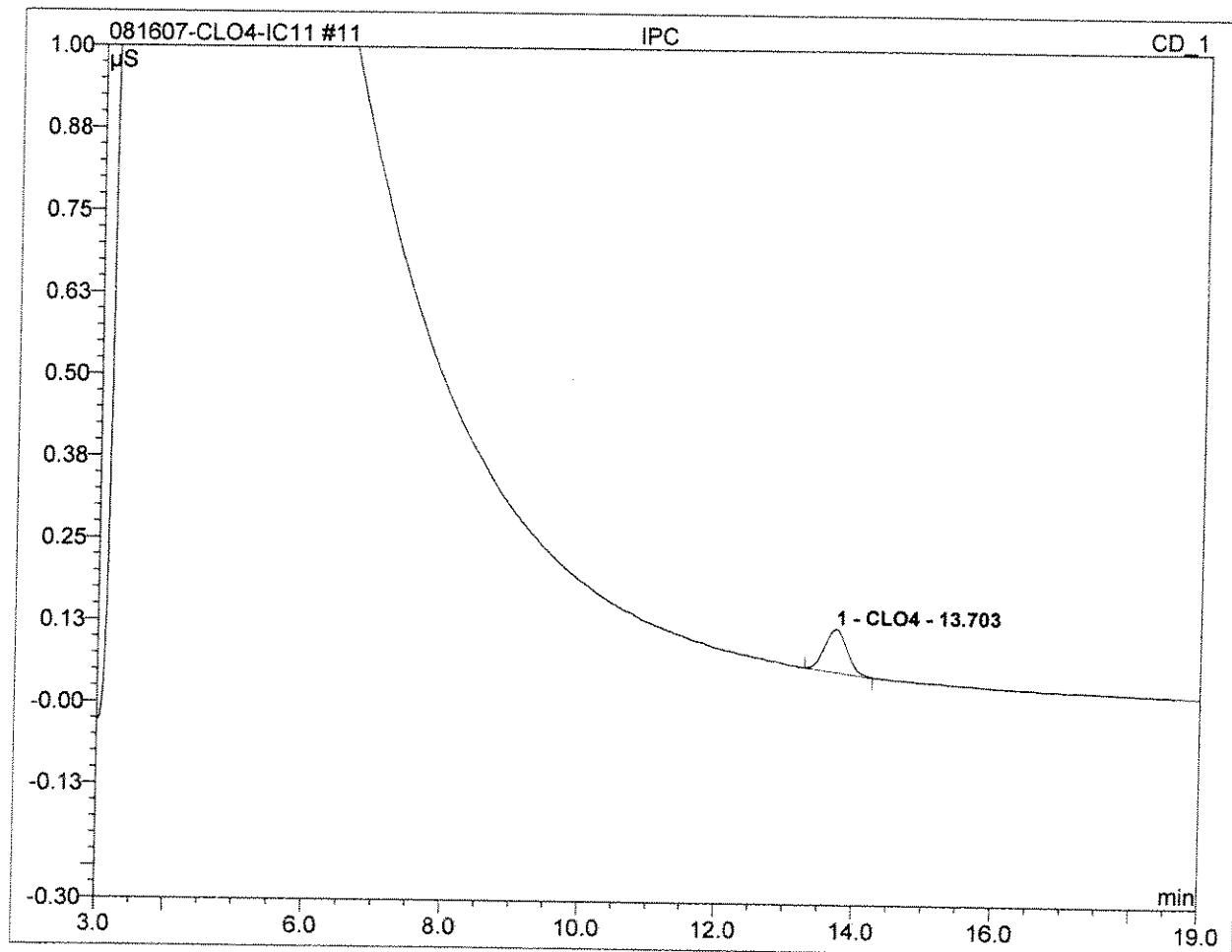
Sample Name:	<b>-MBLK</b>	Channel:	<b>CD_1</b>
Sample Type:	<b>unknown</b>	Control Program:	<b>Perchlorate-IC11</b>
Recording Time:	<b>08/16/2007 13:55</b>	Quantif. Method:	<b>IC#4-CLO4-LOW</b>
Analyst:	<b>clv</b>	Dilution Factor:	<b>1.0000</b>



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

**11 IPC****RR**

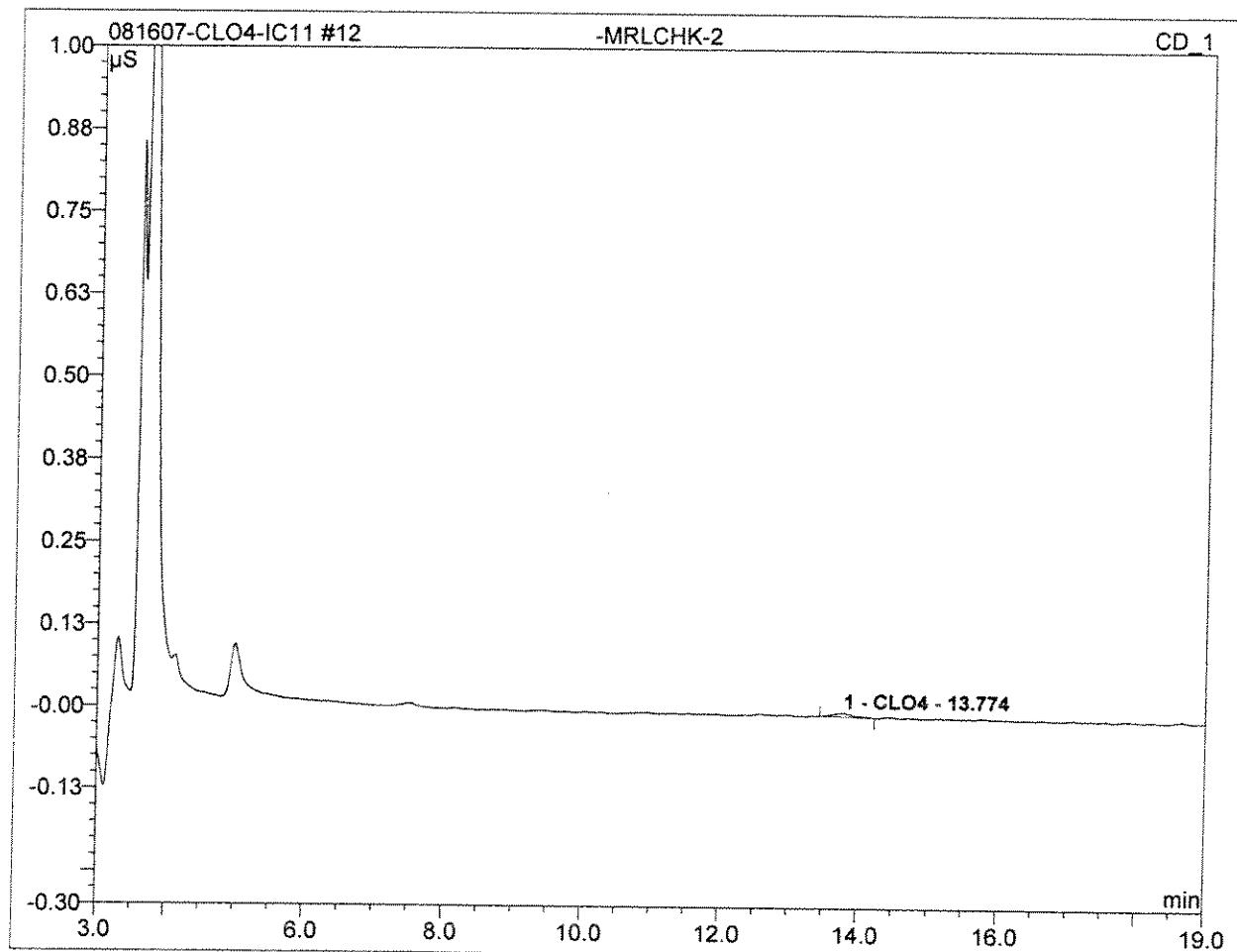
<i>Sample Name:</i>	IPC	<i>Channel:</i>	CD_1
<i>Sample Type:</i>	unknown	<i>Control Program:</i>	Perchlorate-IC11
<i>Recording Time:</i>	08/16/2007 14:17	<i>Quantif. Method:</i>	IC#4-CLO4-LOW
<i>Analyst:</i>	clv	<i>Dilution Factor:</i>	1.0000



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	13.70	CLO4	0.066	0.025	100.00	23.542	BMB
<b>Total:</b>			0.066	0.025	100.00	23.542	

**12 -MRLCHK-2****2**

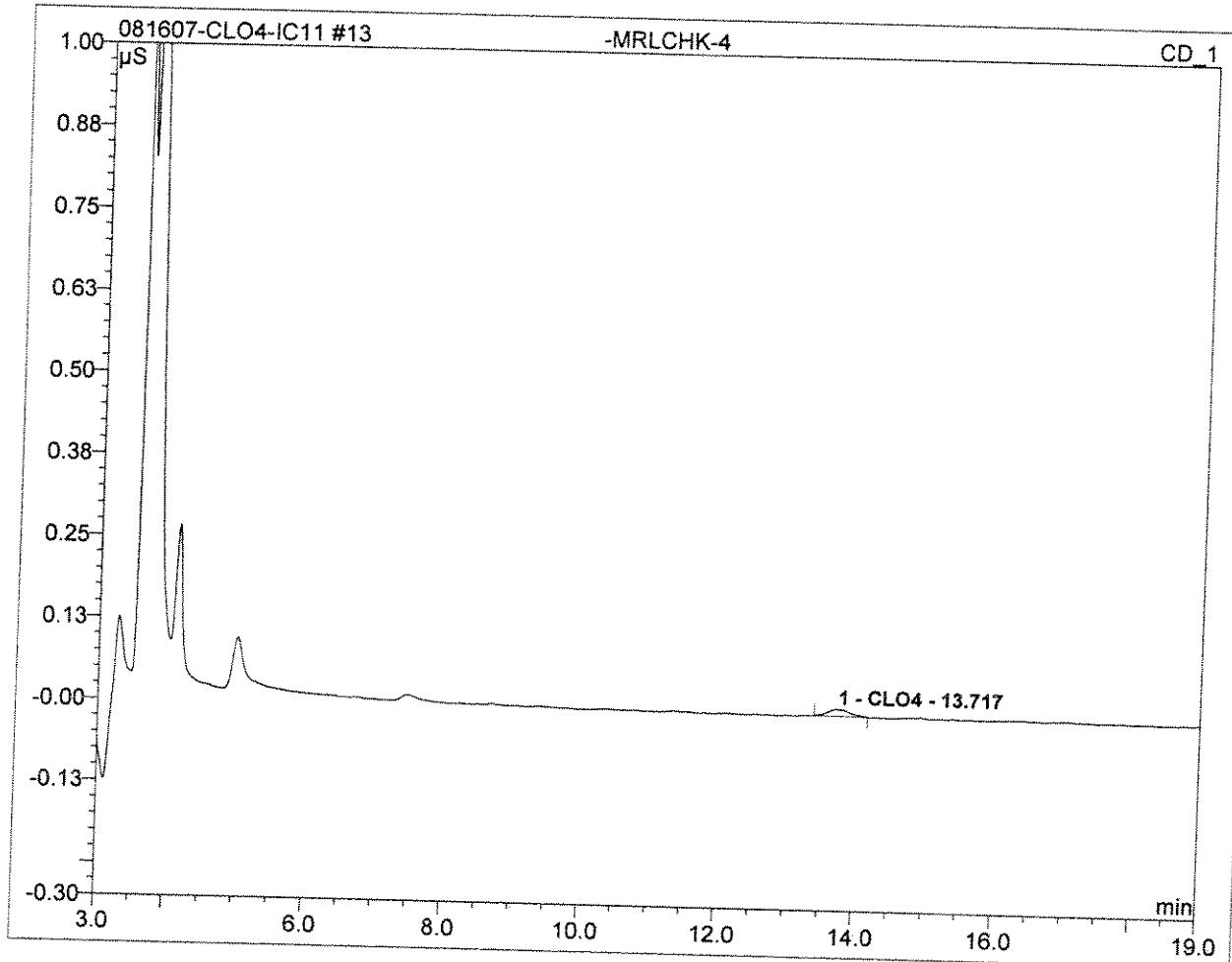
<b>Sample Name:</b>	<b>-MRLCHK-2</b>	<b>Channel:</b>	<b>CD_1</b>
<b>Sample Type:</b>	<b>unknown</b>	<b>Control Program:</b>	<b>Perchlorate-IC11</b>
<b>Recording Time:</b>	<b>08/16/2007 14:40</b>	<b>Quantif. Method:</b>	<b>IC#4-CLO4-LOW</b>
<b>Analyst:</b>	<b>clv</b>	<b>Dilution Factor:</b>	<b>1.0000</b>



No.	Ret.Time min	Peak Name	Height μS	Area μS*min	Rel.Area %	Amount	Type
1	13.77	CLO4	0.006	0.002	100.00	2.353	BMB
<b>Total:</b>			0.006	0.002	100.00	2.353	

**13 -MRLCHK-4****4**

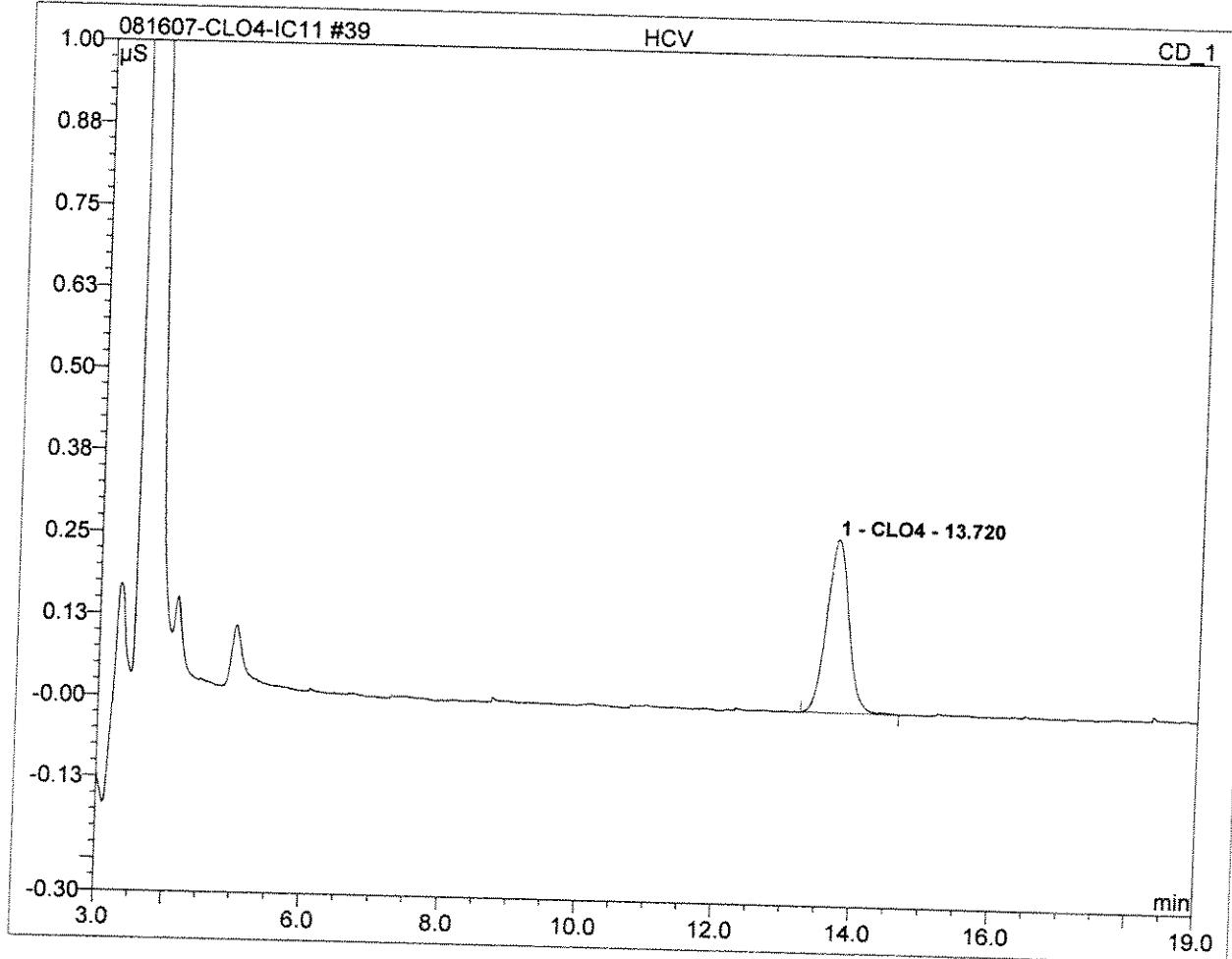
<b>Sample Name:</b>	<b>-MRLCHK-4</b>	<b>Channel:</b>	<b>CD_1</b>
<b>Sample Type:</b>	<b>unknown</b>	<b>Control Program:</b>	<b>Perchlorate-IC11</b>
<b>Recording Time:</b>	<b>08/16/2007 15:02</b>	<b>Quantif. Method:</b>	<b>IC#4-CLO4-LOW</b>
<b>Analyst:</b>	<b>clv</b>	<b>Dilution Factor:</b>	<b>1.0000</b>



No.	Ret.Time min	Peak Name	Height μS	Area μS*min	Rel.Area %	Amount	Type
1	13.72	CLO4	0.011	0.004	100.00	4.215	BMB
<b>Total:</b>			0.011	0.004	100.00	4.215	

**39 HCV****100**

Sample Name:	HCV	Channel:	CD_1
Sample Type:	unknown	Control Program:	Perchlorate-IC11
Recording Time:	08/17/2007 00:44	Quantif. Method:	IC#4-CLO4-LOW
Analyst:	clv	Dilution Factor:	1.0000

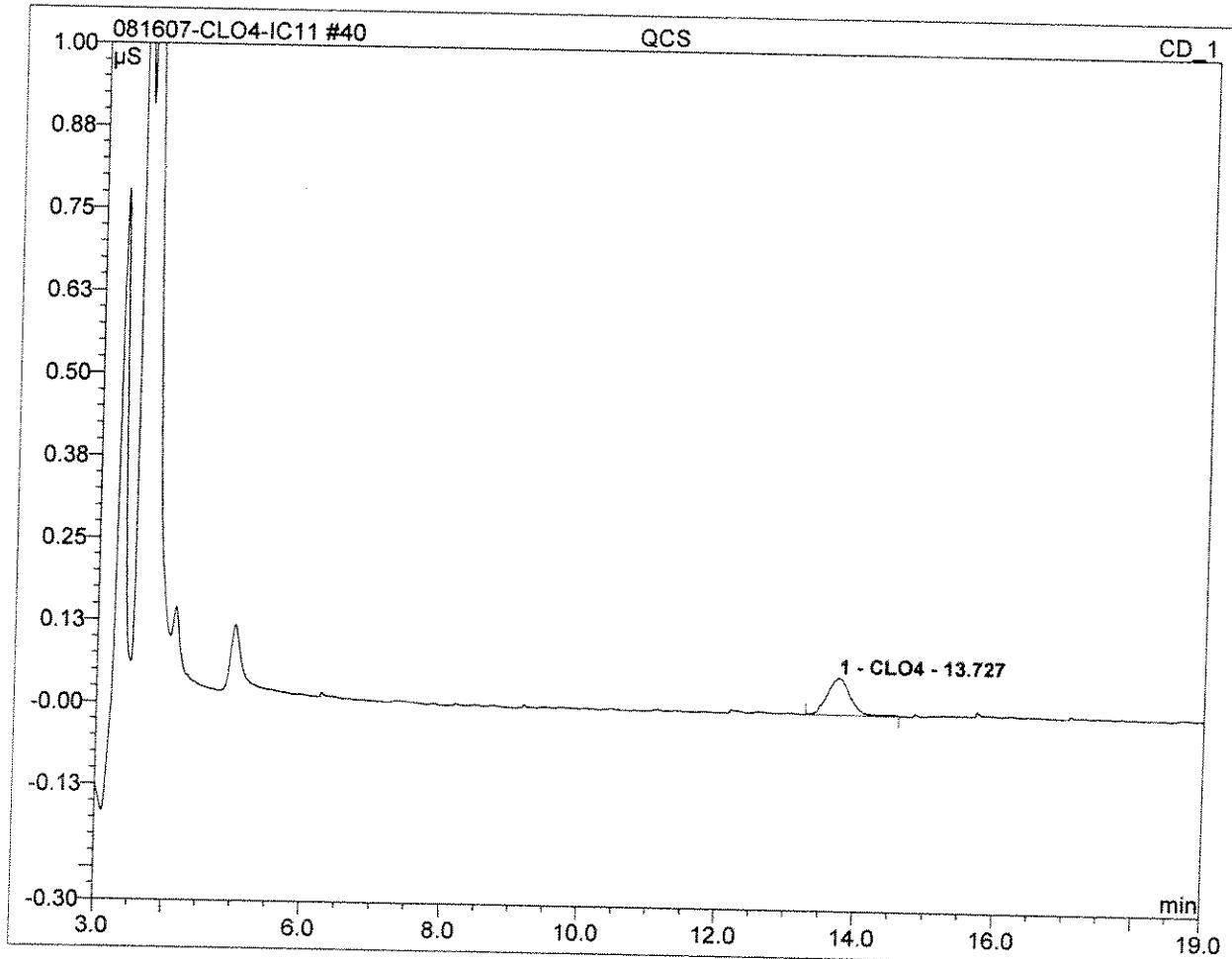


No.	Ret.Time min	Peak Name	Height μS	Area μS*min	Rel.Area %	Amount	Type
1	13.72	CLO4	0.265	0.099	100.00	104.133	BMB
<b>Total:</b>			0.265	0.099	100.00	104.133	

## 40 QCS

20

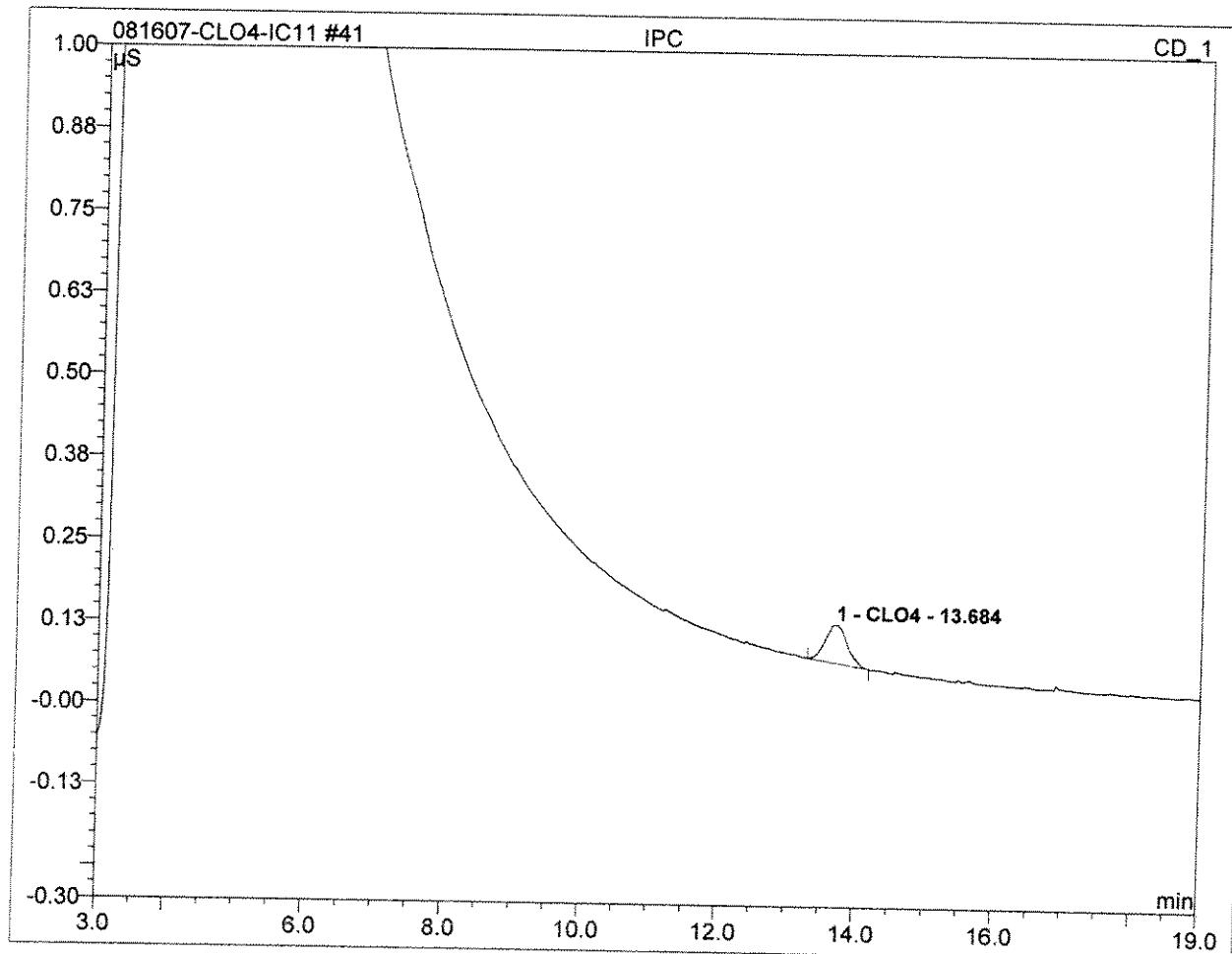
Sample Name:	QCS	Channel:	CD_1
Sample Type:	unknown	Control Program:	Perchlorate-IC11
Recording Time:	08/17/2007 01:07	Quantif. Method:	IC#4-CLO4-LOW
Analyst:	clv	Dilution Factor:	1.0000



No.	Ret.Time min	Peak Name	Height μS	Area μS*min	Rel.Area %	Amount	Type
1	13.73	CLO4	0.056	0.022	100.00	20.592	BMB
Total:			0.056	0.022	100.00	20.592	

**41 IPC****25**

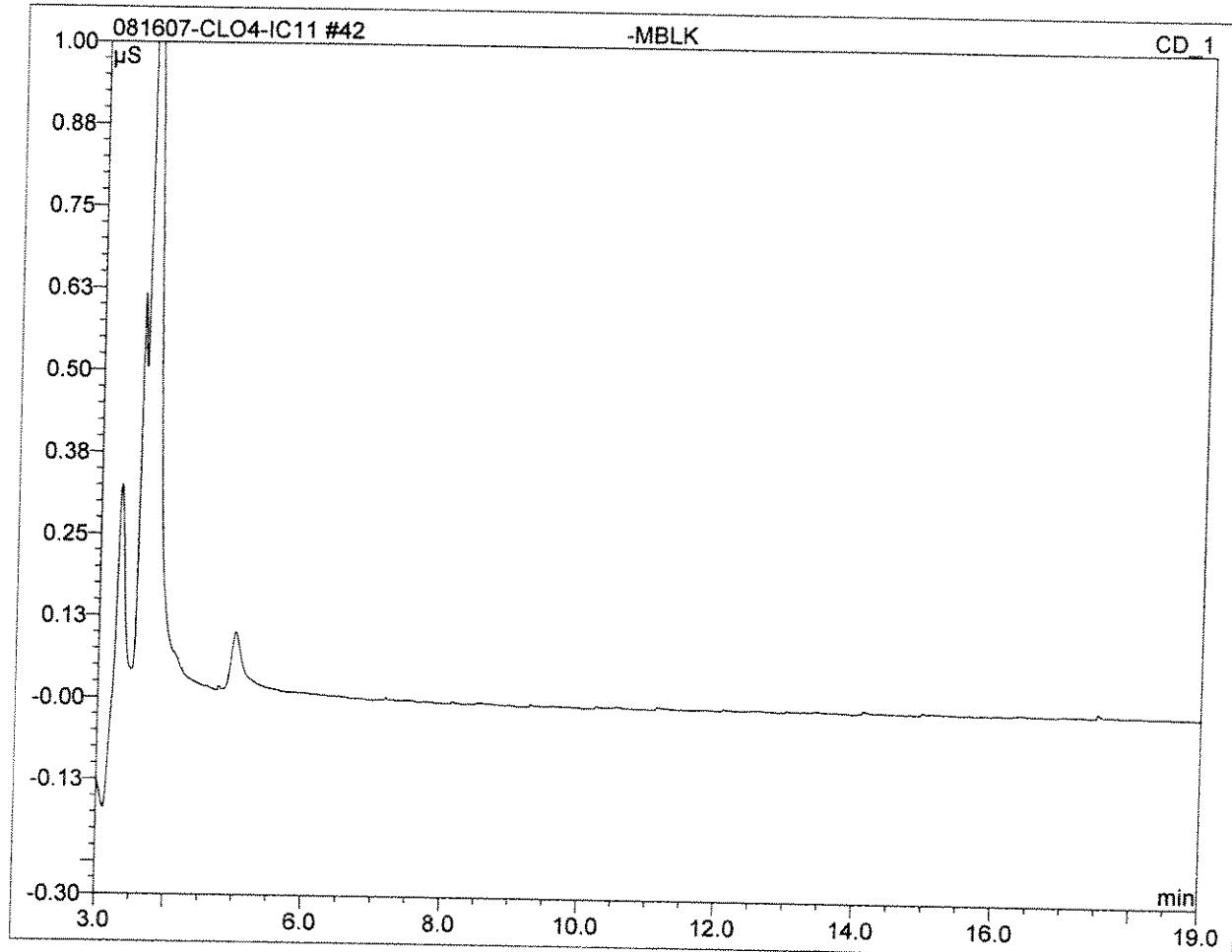
<i>Sample Name:</i>	IPC	<i>Channel:</i>	CD_1
<i>Sample Type:</i>	unknown	<i>Control Program:</i>	Perchlorate-IC11
<i>Recording Time:</i>	08/17/2007 01:29	<i>Quantif. Method:</i>	IC#4-CLO4-LOW
<i>Analyst:</i>	clv	<i>Dilution Factor:</i>	1.0000



No.	Ret.Time min	Peak Name	Height μS	Area μS*min	Rel.Area %	Amount	Type
1	13.68	CLO4	0.058	0.021	100.00	20.376	BMB
<b>Total:</b>			0.058	0.021	100.00	20.376	

**42 -MBLK**

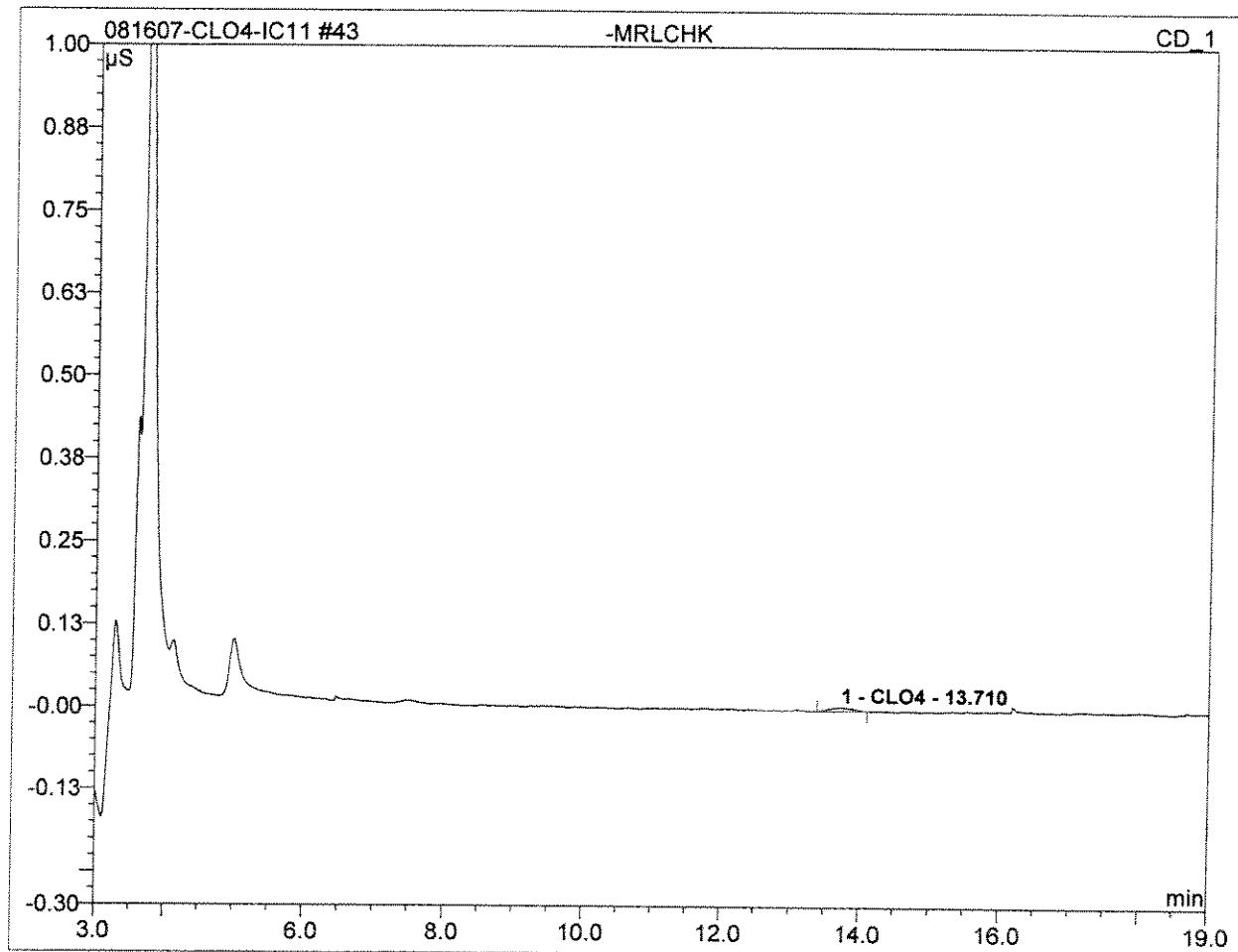
<i>Sample Name:</i>	-MBLK	<i>Channel:</i>	CD_1
<i>Sample Type:</i>	unknown	<i>Control Program:</i>	Perchlorate-IC11
<i>Recording Time:</i>	08/17/2007 01:51	<i>Quantif. Method:</i>	IC#4-CLO4-LOW
<i>Analyst:</i>	clv	<i>Dilution Factor:</i>	1.0000



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

**43 -MRLCHK****2**

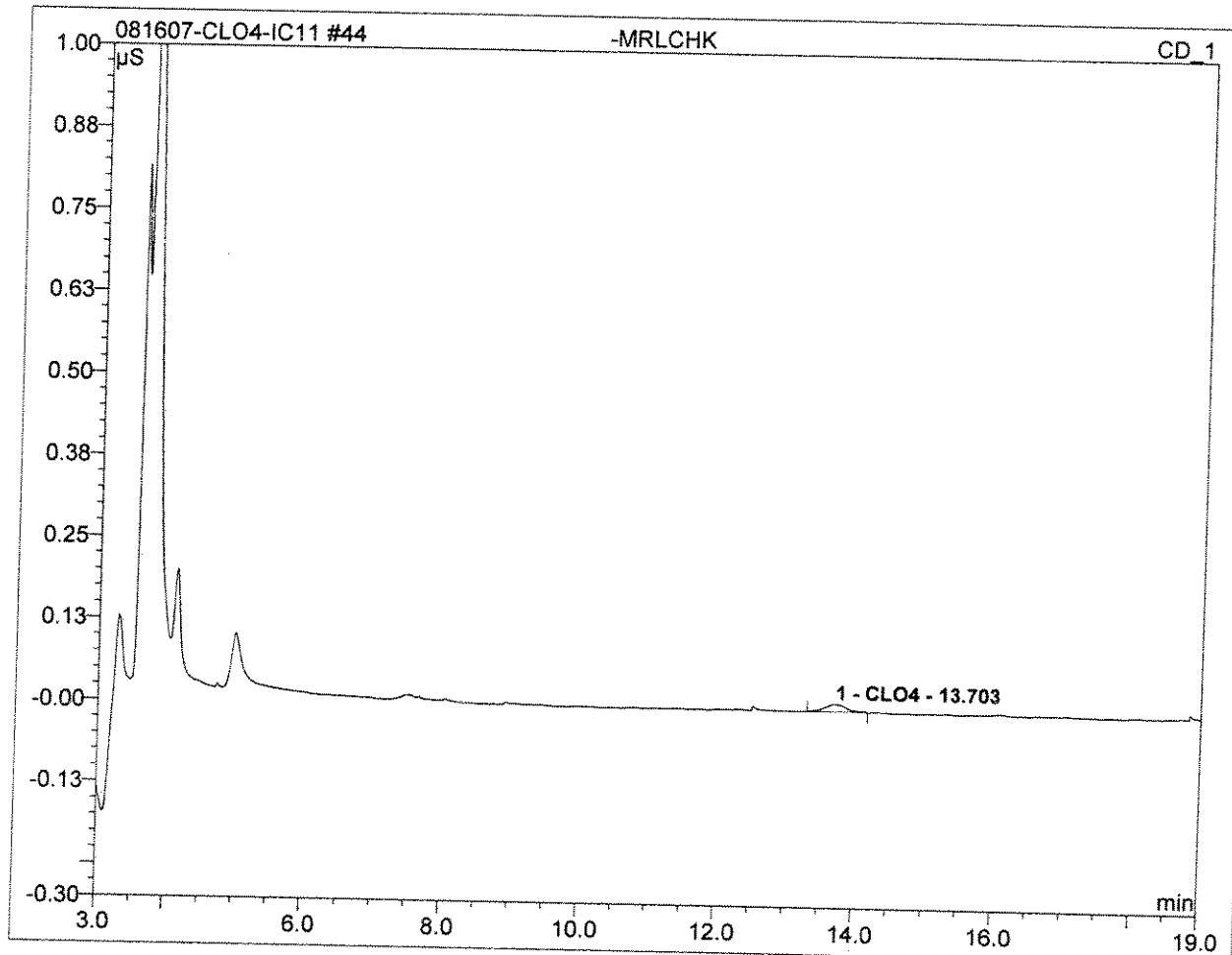
<i>Sample Name:</i>	<b>-MRLCHK</b>	<i>Channel:</i>	<b>CD_1</b>
<i>Sample Type:</i>	<b>unknown</b>	<i>Control Program:</i>	<b>Perchlorate-IC11</b>
<i>Recording Time:</i>	<b>08/17/2007 02:14</b>	<i>Quantif. Method:</i>	<b>IC#4-CLO4-LOW</b>
<i>Analyst:</i>	<b>clv</b>	<i>Dilution Factor:</i>	<b>1.0000</b>



No.	Ret.Time min	Peak Name	Height μS	Area μS*min	Rel.Area %	Amount	Type
1	13.71	CLO4	0.006	0.002	100.00	2.571	BMB
<b>Total:</b>			0.006	0.002	100.00	2.571	

**44 -MRLCHK****4**

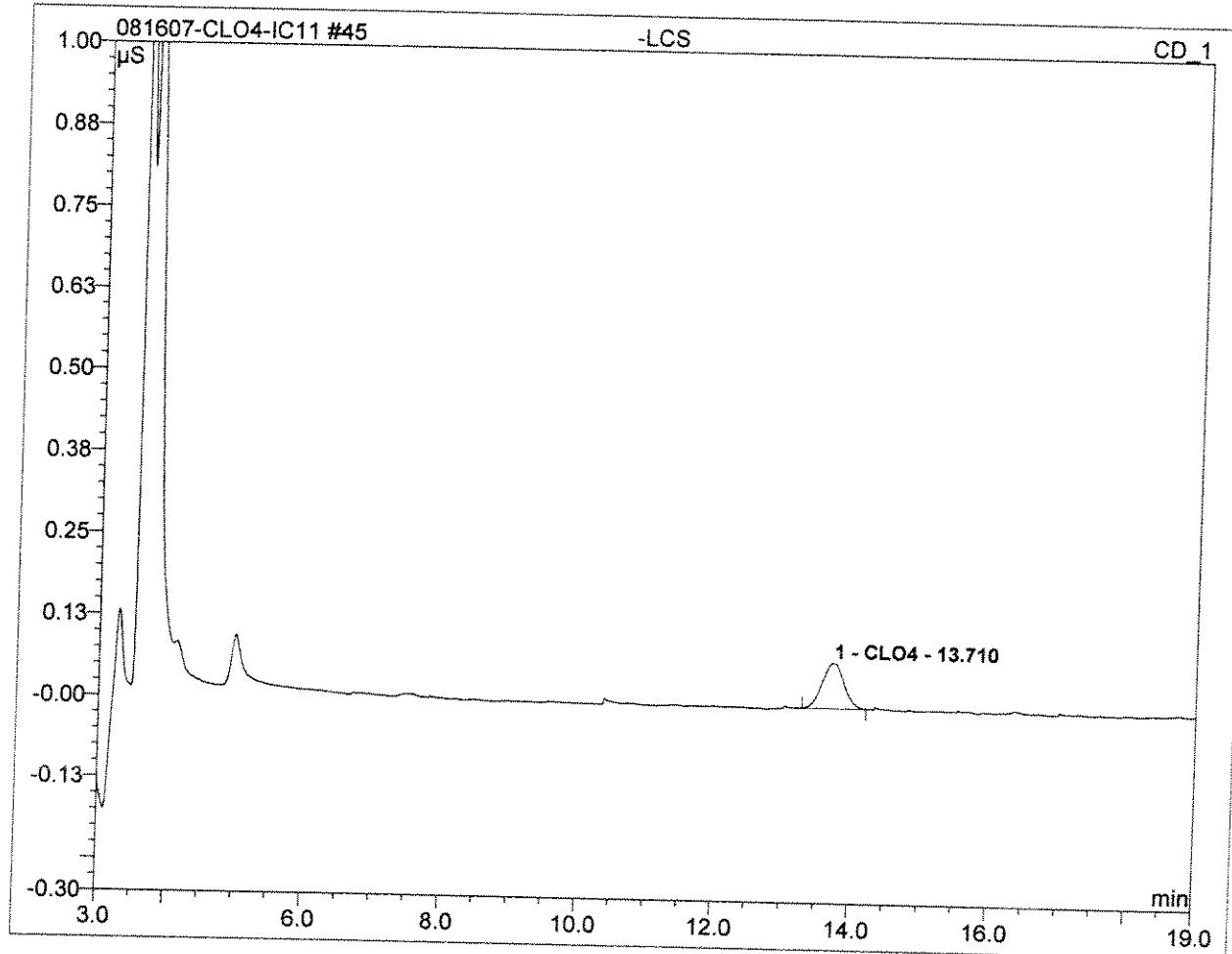
<b>Sample Name:</b>	<b>-MRLCHK</b>	<b>Channel:</b>	<b>CD_1</b>
<b>Sample Type:</b>	<b>unknown</b>	<b>Control Program:</b>	<b>Perchlorate-IC11</b>
<b>Recording Time:</b>	<b>08/17/2007 02:36</b>	<b>Quantif. Method:</b>	<b>IC#4-CLO4-LOW</b>
<b>Analyst:</b>	<b>clv</b>	<b>Dilution Factor:</b>	<b>1.0000</b>



No.	Ret.Time min	Peak Name	Height μS	Area μS*min	Rel.Area %	Amount	Type
1	13.70	CLO4	0.011	0.004	100.00	4.398	BMB
<b>Total:</b>			0.011	0.004	100.00	4.398	

**45 -LCS****25**

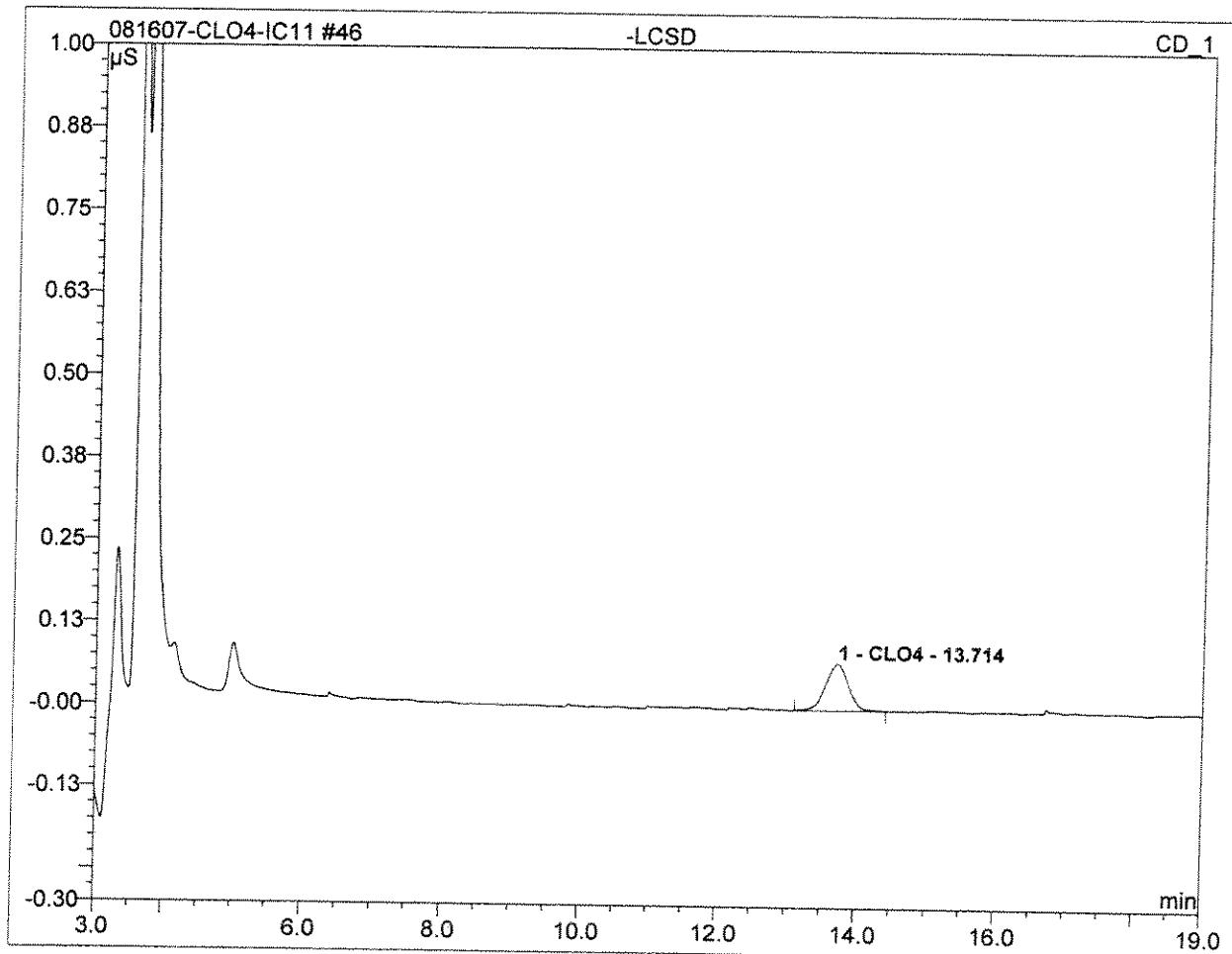
Sample Name:	-LCS	Channel:	CD_1
Sample Type:	unknown	Control Program:	Perchlorate-IC11
Recording Time:	08/17/2007 02:59	Quantif. Method:	IC#4-CLO4-LOW
Analyst:	clv	Dilution Factor:	1.0000



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	13.71	CLO4	0.070	0.026	100.00	24.377	BMB
<b>Total:</b>			0.070	0.026	100.00	24.377	

**46 -LCSD****25**

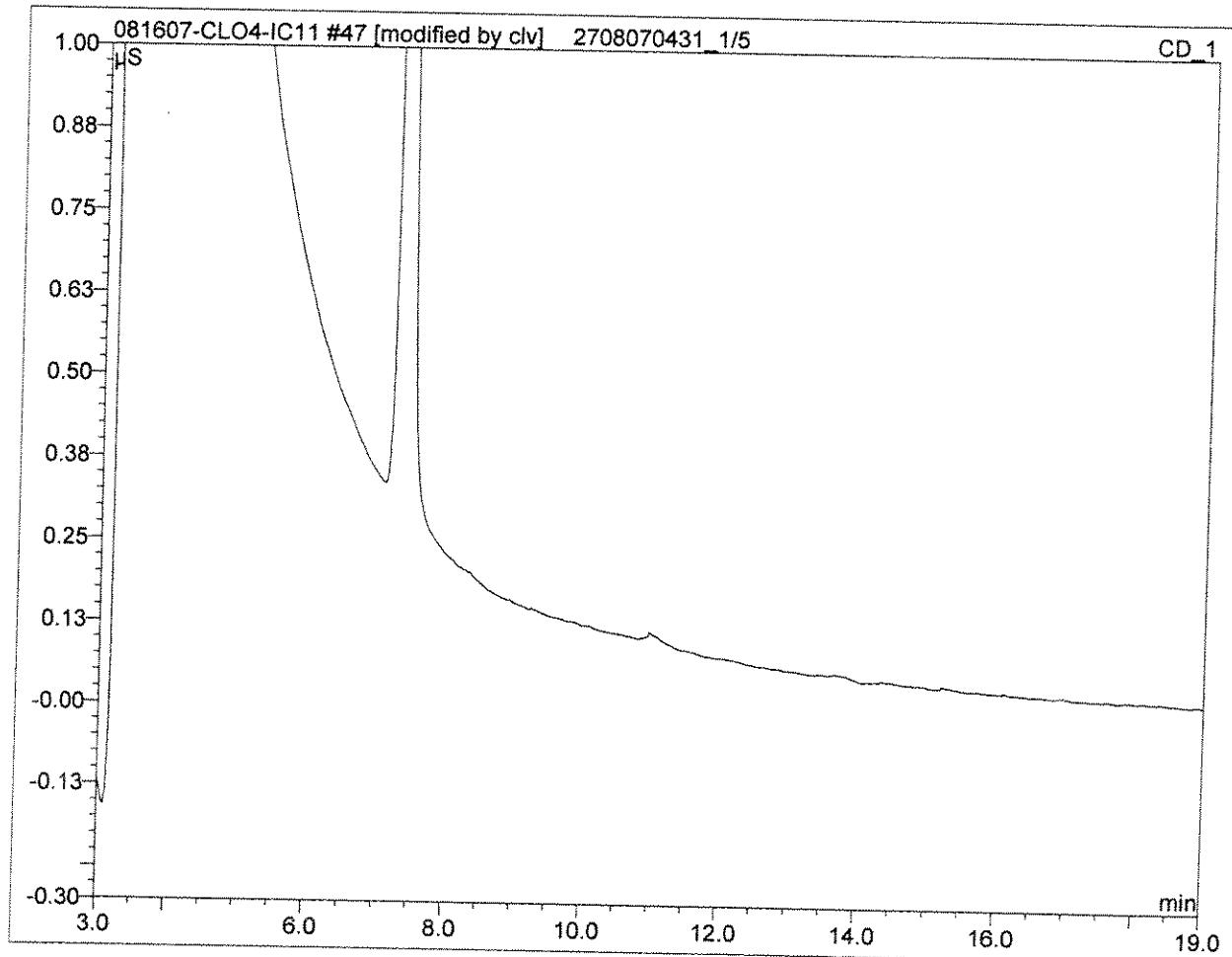
Sample Name:	-LCSD	Channel:	CD_1
Sample Type:	unknown	Control Program:	Perchlorate-IC11
Recording Time:	08/17/2007 03:21	Quantif. Method:	IC#4-CLO4-LOW
Analyst:	clv	Dilution Factor:	1.0000



No.	Ret.Time min	Peak Name	Height $\mu\text{S}$	Area $\mu\text{S}^*\text{min}$	Rel.Area %	Amount	Type
1	13.71	CLO4	0.071	0.027	100.00	25.887	BMB
<b>Total:</b>			0.071	0.027	100.00	25.887	

**47 2708070431\_1/5****RR**

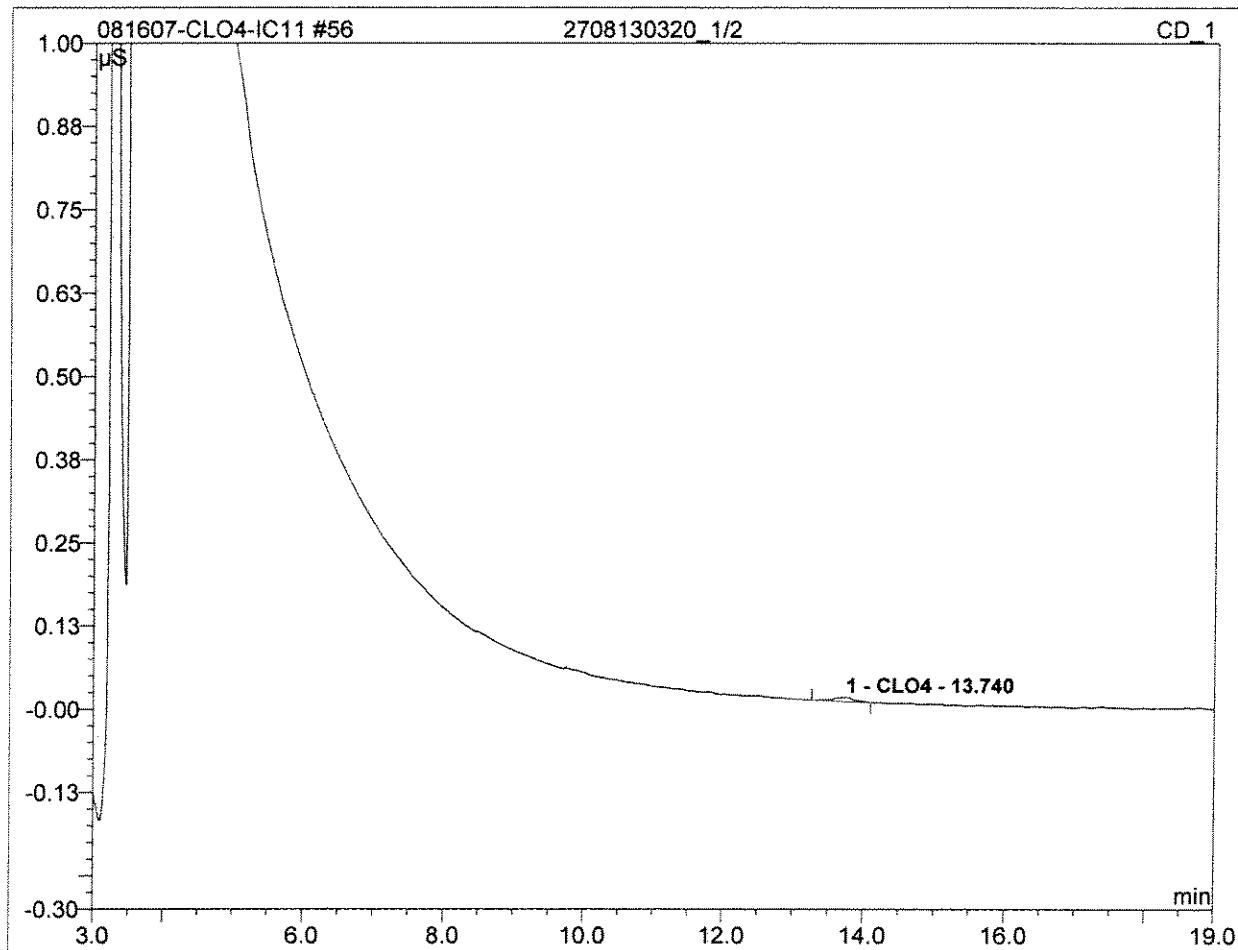
<b>Sample Name:</b>	<b>2708070431_1/5</b>	<b>Channel:</b>	<b>CD_1</b>
<b>Sample Type:</b>	<b>unknown</b>	<b>Control Program:</b>	<b>Perchlorate-IC11</b>
<b>Recording Time:</b>	<b>08/17/2007 03:43</b>	<b>Quantif. Method:</b>	<b>IC#4-CLO4-LOW</b>
<b>Analyst:</b>	<b>clv</b>	<b>Dilution Factor:</b>	<b>5.0000</b>



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

**56 2708130320\_1/2**

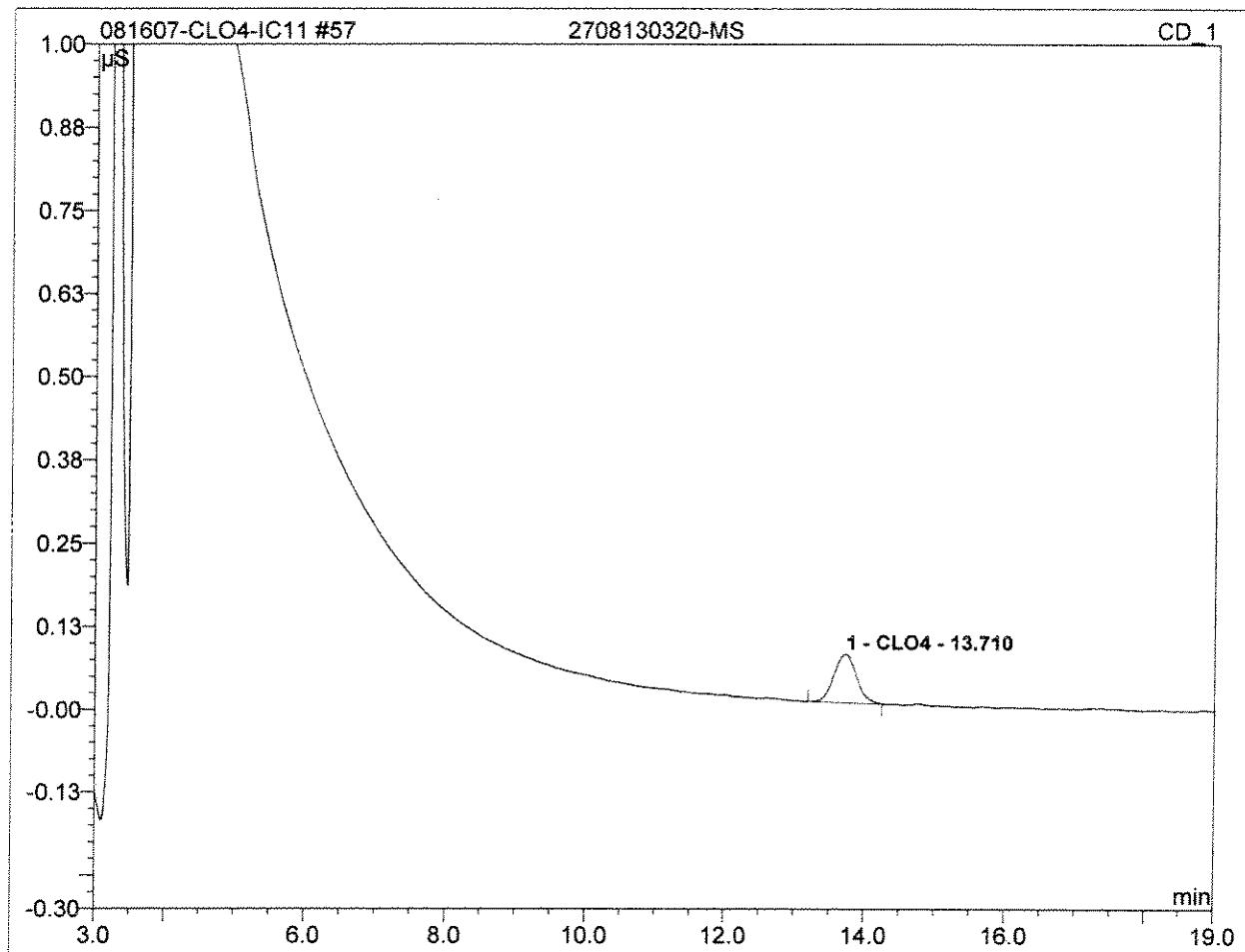
Sample Name:	<b>2708130320_1/2</b>	Channel:	<b>CD_1</b>
Sample Type:	<b>unknown</b>	Control Program:	<b>Perchlorate-IC11</b>
Recording Time:	<b>08/17/2007 07:05</b>	Quantif. Method:	<b>IC#4-CLO4-LOW</b>
Analyst:	<b>clv</b>	Dilution Factor:	<b>2.0000</b>



No.	Ret.Time min	Peak Name	Height $\mu\text{S}$	Area $\mu\text{S}^*\text{min}$	Rel.Area %	Amount	Type
1	13.74	CLO4	0.006	0.002	100.00	5.163	BMB
<b>Total:</b>			0.006	0.002	100.00	5.163	

**57 2708130320-MS****25**

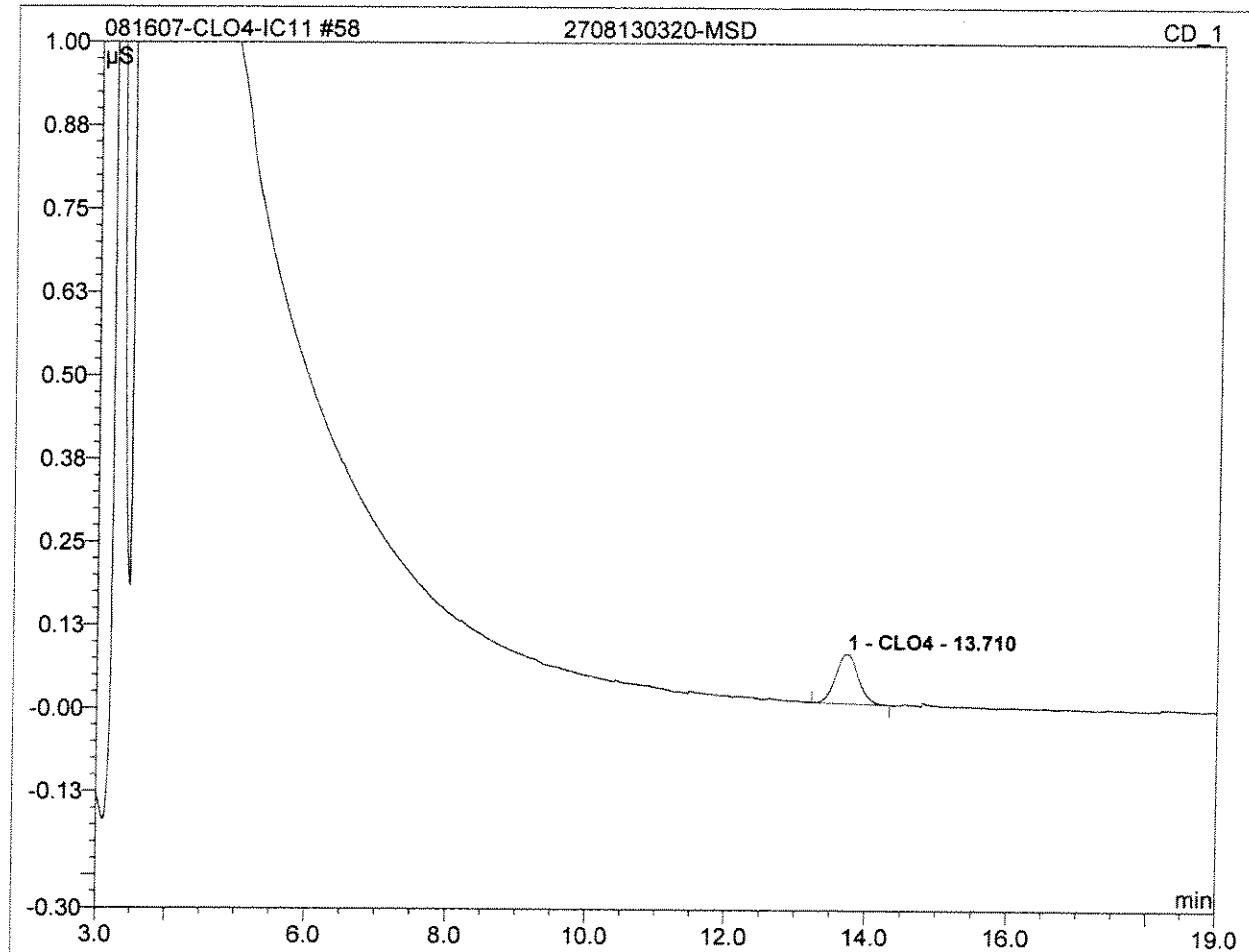
Sample Name:	<b>2708130320-MS</b>	Channel:	<b>CD_1</b>
Sample Type:	<b>unknown</b>	Control Program:	<b>Perchlorate-IC11</b>
Recording Time:	<b>08/17/2007 07:27</b>	Quantif. Method:	<b>IC#4-CLO4-LOW</b>
Analyst:	<b>clv</b>	Dilution Factor:	<b>2.0000</b>



No.	Ret.Time min	Peak Name	Height μS	Area μS*min	Rel.Area %	Amount	Type
1	13.71	CLO4	0.073	0.027	100.00	51.878	BMB
<b>Total:</b>			0.073	0.027	100.00	51.878	

**58 2708130320-MSD****25**

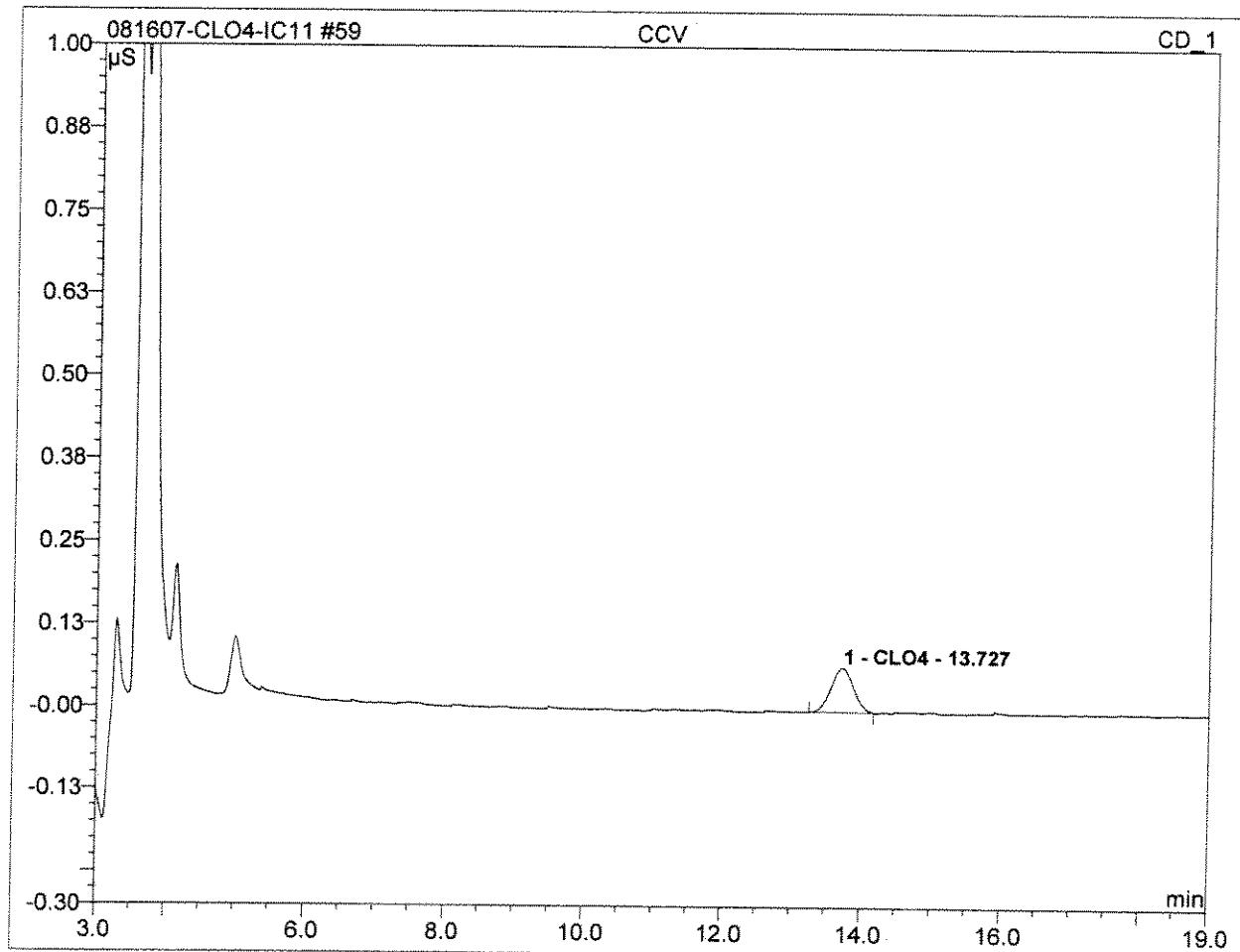
Sample Name:	<b>2708130320-MSD</b>	Channel:	<b>CD_1</b>
Sample Type:	<b>unknown</b>	Control Program:	<b>Perchlorate-IC11</b>
Recording Time:	<b>08/17/2007 07:50</b>	Quantif. Method:	<b>IC#4-CLO4-LOW</b>
Analyst:	<b>clv</b>	Dilution Factor:	<b>2.0000</b>



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	13.71	CLO4	0.074	0.028	100.00	52.382	BMB
<b>Total:</b>			0.074	0.028	100.00	52.382	

**59 CCV****25**

Sample Name:	CCV	Channel:	CD_1
Sample Type:	unknown	Control Program:	Perchlorate-IC11
Recording Time:	08/17/2007 08:12	Quantif. Method:	IC#4-CLO4-LOW
Analyst:	clv	Dilution Factor:	1.0000

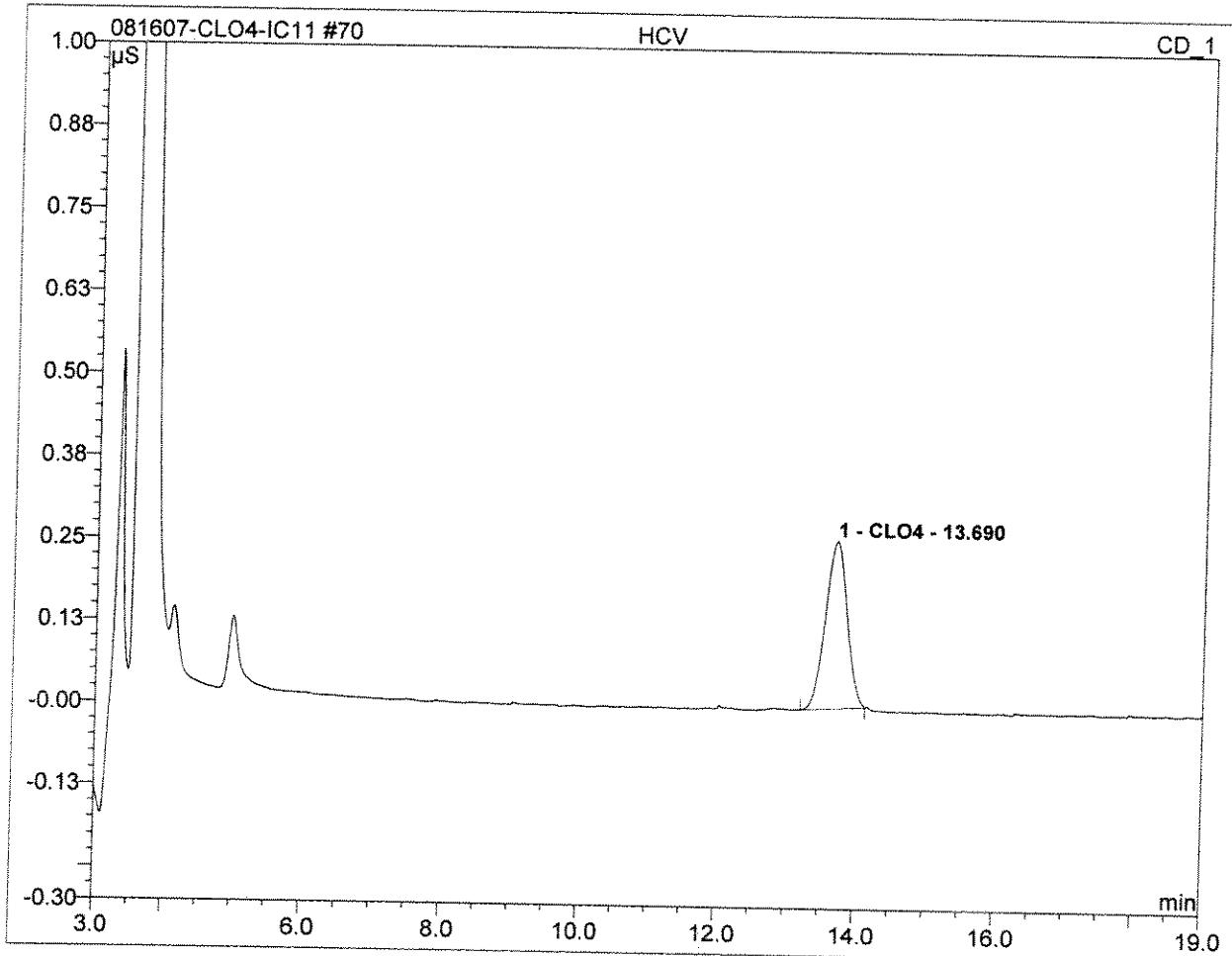


No.	Ret.Time min	Peak Name	Height μS	Area μS*min	Rel.Area %	Amount	Type
1	13.73	CLO4	0.067	0.025	100.00	23.466	BMB
<b>Total:</b>			0.067	0.025	100.00	23.466	

## 70 HCV

100

Sample Name:	HCV	Channel:	CD_1
Sample Type:	unknown	Control Program:	Perchlorate-IC11
Recording Time:	08/17/2007 12:19	Quantif. Method:	IC#4-CLO4-LOW
Analyst:	clv	Dilution Factor:	1.0000



No.	Ret.Time min	Peak Name	Height $\mu\text{S}$	Area $\mu\text{S} \cdot \text{min}$	Rel.Area %	Amount	Type
1.	13.69	CLO4	0.254	0.092	100.00	95.260	BMB
<b>Total:</b>			0.254	0.092	100.00	95.260	

**Standard  
Preparation  
Worksheet  
&  
Certificate of  
Analysis**

# Reagent Preparation Documentation

Page: 12

**Reagent:** DBP LCS Stock Solution  
**Date Received/Prepped:** 082706/100106/10106 /111606 /122006/1010807/1020607  
**Date Expired:** 092706/110106/120106 /121606/1012007/1020807/1030607  
**Manufacturer:**  
**Storage Condition:**

**MW #:** Raja060827-1  
**By:** Raja  
**Matrix:** ag  
**Amount:** 100ml  
**Lot #:**

Component	Comment	Standard	Concentration
Chlorite 1000ppm Exp: 03-24-07	1000UL $\rightarrow$ Add 50UL of EDA (LMR060129-12) then dilute to 100ml with Raja	R 201401	10ppm
Chlorate 1000ppm Exp: 05-31-09	1000UL dilute to 100ml with Raja with D.I. water	R 201400	10ppm
Bromide Exp: 10-27-07	500UL	R 201369	5ppm
<b>Comment:</b>			

**Reagent:** DBP LCS Solution  
**Date Received/Prepped:** 082706/100106/10106 /111606 /122006/1010807/1020607  
**Date Expired:** 092706/<sup>110106</sup>10 Raja /120106/121606/1012007/1020807/1030607  
**Manufacturer:**  
**Storage Condition:**

**MW #:** Raja060827-2  
**By:** Raja  
**Matrix:** ag  
**Amount:** 100ml  
**Lot #:**

Component	Comment	Standard	Concentration
DBP LCS Stock Soln	2ml $\rightarrow$ Dilute with D.I. water to 100ml	Raja060827-1 LMR060129-12	10 <sup>-1</sup> -200ppb Br1-100ppb
EDA Solution	50UL		
<b>Comment:</b> Prep: Expired:			

**Reagent:** Perchlorate Calibration Stock Solution  
**Date Received/Prepped:** 091306/101106/113006/1012007/<sup>28</sup>1022607  
**Date Expired:** 121306/101107/1023007/1042007/<sup>28</sup>1052807  
**Manufacturer:**  
**Storage Condition:**

**MW #:** Raja060913-1  
**By:** Raja  
**Matrix:** ag  
**Amount:** 100ml  
**Lot #:**

Component	Comment	Standard	Concentration
Perchlorate 1000ppm Exp: 072809	100UL $\rightarrow$ Dilute with D.I. water to 100ml	R 201449	1000ppb
<b>Comment:</b> MS/MSD 070407/042707/051607/061207/072707/081107/091207/060407/072707/081107/091207			

# Reagent Preparation Documentation

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**Reagent:**

**Date Received/Prepped:** C1O<sub>4</sub> Calibration Standard #1

**Date Expired:** 09/30/11/01/06/11/30/06/10/10/10/28/07/10/22/07/

**Manufacturer:**

**Storage Condition:**

**MW #:** Raja 060913-2

**By:** Raja

**Matrix:** aq

**Amount:** 100 ml

**Lot #:**

Component	Comment	Standard	Concentration
C1O <sub>4</sub> Cal. Stock Soln	200 uL → Dilute to 100ml with D.I. water	Raja 060913-1	2.0 ppb

**Comment:** 03/04/07/04/27/07/05/16/07/10/6/20/07/  
06/04/07/07/27/07/08/16/07/10/9/20/07/

**Reagent:**

**Date Received/Prepped:** C1O<sub>4</sub> Calibration Standard #2

**Date Expired:** 09/30/11/01/06/11/30/06/10/10/10/28/07/10/22/07/

**Manufacturer:**

**Storage Condition:**

**MW #:** Raja 060913-3

**By:** Raja

**Matrix:** aq

**Amount:** 100 ml

**Lot #:**

Component	Comment	Standard	Concentration
C1O <sub>4</sub> Cal. Stock Soln	400 uL → Dilute to 100ml with D.I. water	Raja 060913-1	4.0 ppb

**Comment:** 03/14/07/04/27/07/05/16/07/10/6/20/07/  
06/04/07/07/27/07/08/16/07/10/9/20/07/

**Reagent:**

**Date Received/Prepped:** C1O<sub>4</sub> Calibration Standard #3

**Date Expired:** 09/30/11/01/06/11/30/06/10/10/10/28/07/10/22/07/

**Manufacturer:** 12/30/06/01/10/10/10/23/07/04/10/10/28/07/10/32/07/

**Storage Condition:**

**MW #:** Raja 060913-4

**By:** Raja

**Matrix:** aq

**Amount:** 100 ml

**Lot #:**

Component	Comment	Standard	Concentration
C1O <sub>4</sub> Cal. Stock Soln	1 ml → Dilute to 100ml with D.I. water	Raja 060913-1	10.0 ppb

**Comment:** 03/04/07/04/27/07/05/16/07/10/6/20/07/  
06/04/07/07/27/07/08/16/07/10/9/20/07/

## Reagent Preparation Documentation

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**Reagent:**

ClO<sub>4</sub> Calibration Standard #4

**Date Received/Prepped:**

09/30/06/10/10/11/13/2006/10/21/07/10/22/07/10/23/07/10/24/07

**Date Expired:**

12/30/06/10/11/07/10/22/07/10/23/07/10/24/07/10/25/07/10/26/07/10/27/07

**Manufacturer:**

CG3001

**Storage Condition:**

**MW #:** Raja060913-5

**By:** Raja

**Matrix:** aq

**Amount:** 10cmL

**Lot #:**

Component	Comment	Standard	Concentration
ClO <sub>4</sub> Cal. Stock	2.5ml → Dilute to 10cmL with Raja060913-1		95.0 ppm
Sol'n	D.I. water		

**Comment:** 042707/051607/061207/  
072707/091607/091207/

**Reagent:**

ClO<sub>4</sub> Calibration Standard #5

**Date Received/Prepped:**

09/30/06/10/10/11/13/2006/10/21/07/10/22/07/10/23/07/10/24/07

**Date Expired:**

12/30/06/10/11/07/10/22/07/10/23/07/10/24/07/10/25/07/10/26/07/10/27/07

**Manufacturer:**

**Storage Condition:**

**MW #:** Raja060913-6

**By:** Raja

**Matrix:** aq

**Amount:** 10cmL

**Lot #:**

Component	Comment	Standard	Concentration
ClO <sub>4</sub> Cal. Stock	5.0ml → Dilute to 10cmL with Raja060913-1		50.0 ppm
Sol'n	D.I. water		

**Comment:** 042707/051607/  
072707/091607/

**Reagent:**

ClO<sub>4</sub> Calibration Standard #6

**Date Received/Prepped:** 09/30/06/10/10/11/13/2006/10/21/07/10/22/07/10/23/07/10/24/07

**Date Expired:**

12/30/06/10/11/07/10/22/07/10/23/07/10/24/07/10/25/07/10/26/07/10/27/07

**Manufacturer:**

**Storage Condition:**

**MW #:** Raja060913-7

**By:** Raja

**Matrix:** aq

**Amount:** 10cmL

**Lot #:**

Component	Comment	Standard	Concentration
ClO <sub>4</sub> Cal. Stock	10cmL → Dilute to 10cmL with Raja060913-1		100 ppm
Sol'n	D.I. water		

**Comment:** 042707/051607/061207/  
072707/091607/091207/

CERTIFIED WEIGHT REPORT

ISO 9001:2000 Quality System Registered  
ISO/IEC Guide 17025 ANSI Z540 Compliant  
DLS ANSI/RAB Accredited

DLS ANSI/RAB Accredited

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

Expiration Date: 072809

Nominal Concentration (µg/mL): 1000

R201449

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

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

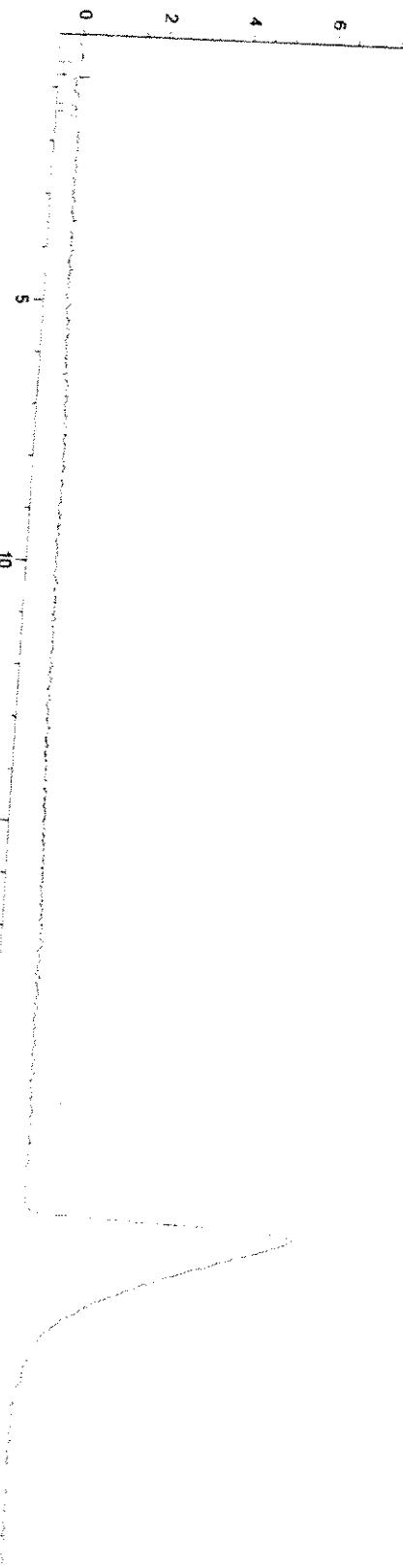
Compound

1. Sodium Perchlorate (ClO<sub>4</sub>) IN119 ARID6730TO Lot: N/A  
Nominal Conc. (µg/mL): 1000.0 Purity: 99.0 Target: \*Actual: Expanded (Solvent Safety Info. On Attached pg.)  
Purity (%): 0.10 Weight(g): 81.2 Weight(g): 1000.2 Uncertainty: CAS# NIST  
Conc. (µg/mL): 1.2319 Conc. (µg/mL): 1.23216 OSHA PEL(TWA): LD50  
(+/-)

Method: E300P.M. Column: ASAHIPACK ODPE50 (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.

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Peak No. Name PDA RT  
1 Sodium Perchlorate 21.78



P#57001 L#072806