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Level IV Data Package

MWH Group 230066

Method: 314 CLO4

2802090001
2802090002
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Perchlorate QC Checklist

rev: 27 Mar 03

Analysis Date: 02/14/08 **Analyst:** JKZ **QC'd by** LM **Date** 2-4 Feb 08

Instrument: IC11 **Calculated MCT Level:** ~~1359~~ 3155 umhos/cm Exact measurement is unknown. Analyst ~3100 to escaped value from earlier data sheet.

Original IPC conductance: ~~1360~~ 3100 umhos/cm **Daily IPC conductance:** ~~1360~~ umhos/cm LMR 29 Mar 08

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-ClO4 only*: ICCSCV at 2ppb is within 50%-150% (1-3ppb)
- ✓ *ClO4 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 = 3.092 ✓

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 ✓ (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

- None 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	02.13.08 10:20	n.a.	
2	autocal1	1.0	0	02.13.08 10:43	n.a.	
3	autocal2	1.0	2	02.13.08 11:05	1.6650	
4	autocal3	1.0	4	02.13.08 11:28	3.4984	
5	autocal4	1.0	10	02.13.08 11:50	10.0853	
6	autocal5	1.0	25	02.13.08 12:13	24.5390	
7	autocal6	1.0	50	02.13.08 12:35	49.4869	
8	autocal7	1.0	100	02.13.08 12:58	96.5897	
9	QCS	1.0	20	02.14.08 14:01	18.2398	91.2%
10	IPC	1.0	25	02.14.08 14:23	21.4700	85.9%
11	-MBLK	1.0		02.14.08 14:46	n.a.	
12	autocal1	1.0	2	02.14.08 15:11	n.a.	
13	autocal2	1.0	2	02.14.08 15:33	1.9030	
14	autocal3	1.0	4	02.14.08 15:56	3.3185	
15	autocal4	1.0	10	02.14.08 16:18	10.5862	
16	autocal5	1.0	25	02.14.08 16:41	22.9973	
17	autocal6	1.0	50	02.14.08 17:03	51.3928	
18	autocal7	1.0	100	02.14.08 17:25	99.7745	
19	QCSDNR	1.0	20	02.14.08 17:48	13.1755	
20	IPC	1.0	25	02.14.08 18:10	22.3487	89.4%
21	QCS	1.0	20	02.14.08 18:33	19.7102	98.5%
22	-MBLK	1.0		02.14.08 18:55	n.a.	
23	-MRLCHK-2	1.0	2	02.14.08 19:17	2.0235	101%
24	-MRLCHK-4	1.0	4	02.14.08 19:40	4.2381	106%
25	-LCS1	1.0	25	02.14.08 20:02	24.8307	99.3%
26	-LCS2	1.0	25	02.14.08 20:25	25.1496	101%
27	2802080254_1/5000	5000.0		02.14.08 20:47	269089.0200	
28	2802080259_1/10000	10000.0		02.14.08 21:09	609023.5810	
29	2802080260_1/1000	1000.0		02.14.08 21:32	38388.2169	
30	2802080261_1/250DNR	250.0		02.14.08 21:54	41034.3908	
31	2802080262_1/25000	25000.0		02.14.08 22:17	883339.1000	
32	2802080263_1/25000	25000.0		02.14.08 22:39	679732.4514	
33	2802080264_1/25000	25000.0		02.14.08 23:01	802047.8284	
34	2802080265_1/25000	25000.0		02.14.08 23:24	889261.6938	
35	2802080267_1/50000	50000.0		02.14.08 23:46	1590549.5343	
36	2802080271_1/500	500.0		02.15.08 00:09	17904.8669	
37	2802080271MS	500.0		02.15.08 00:31	28966.4027	22.1/88.5%
38	2802080271MSD	500.0		02.15.08 00:53	28441.7052	21.1/84.3%
39	CCV	1.0		02.15.08 01:16	23.6866	94.7%
40	2802080272_1/1000	1000.0		02.15.08 01:38	30152.2959	
41	2802080273_1/50000DNR	50000.0	misinjected	02.15.08 02:01	n.a.	
42	2802080274_1/50000	50000.0		02.15.08 02:23	1750064.3125	
43	2802080277_1/25000	25000.0		02.15.08 02:45	798233.2445	
44	2802090001_1/25000	25000.0		02.15.08 03:08	906182.5628	

45	2802090002_1/2500	2500.0		02.15.08 03:30	✓ 92773.0760
46	2802090003_1/2500	2500.0		02.15.08 03:52	✓ 74037.9530
47	2802090004_1/10000	10000.0		02.15.08 04:15	✓ 375007.7948
48	2802090005_1/1000	1000.0		02.15.08 04:37	✓ 32422.5867
49	2802090006_1/1000	1000.0		02.15.08 05:00	✓ 29937.8101
50	HCV	1.0		02.15.08 05:22	102.1345
51	CCB	1.0		02.15.08 05:44	n.a.

VB/MM 2/23/08

MWH Laboratories
750 Royal Oaks Drive, Suite 100
Monrovia, CA 91016-3629

CONDUCTIVITY MW SOP REVISION 5
SM2510B

Analysis Date: 02/14/08
Analyst: NEH
Reviewed By: MBN
LIMS Check By: _____

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

Time of Analyis Start: 15:30 End: 16:10
MRL 2umhos/cm: R# _____ exp of solution: _____
KCl Std 1412 R# 201752 exp of solution 09/30/08
TV = 1412 µmho/cm @ 25°C for 0.0100M
Reading: 1423
Instrument: YSI Model 3200 SN:01A0504, Year Aquired 2001 New

Run #	Sample Number	Sample ID	Client	Date Collected	Temp °C	pH	Scale (µmho/mmho)	Result Instrument	Result Reported (µmho/cm)	Comments
Blk	Blank				21	7	µS		0.5162	
STD	MRL 2umhos/cm									1-3——±50% of TV
STD	KCl - 1000 mhos/cm								999.9	950-1050——±5% of TV
1	2802080254	M-87	Kerr	02/07/08					4332	
2	259	82							5658	
3	260	85							1593	
4	261	83							1770	
5	262	70							9999	
6	263	71							8797	
7	264	72							9303	
8	265	38							15200	
9	267	36							17240	
10	271	84							1436	
DUP	271d	"							1431	RPD < 5%
11	272	M-11							4310	
12	273	MD-2							4296	
13	274	M-22A							16650	
14	277	89							14180	
15	2802090801	17A		02/08/08					15450	
16	002	76							5450	
17	003	75							6272	
18	004	111A							6311	
19	005	115							3906	
20	006	14A							4521	
DUP	006d	"							4495	RPD < 5%
STD	KCl - 10 mhos/cm									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: 021408ACLO4-IC11
Operator: jkz

Title:
Datasource: Dionex_USPAS2SDIO2
Location: IC\IC11_CLO4\2008\FEB
Timebase: IC11
#Samples: 51

Created: 2/14/2008 8:45:31 AM by jkz
Last Update: 2/18/2008 1:22:35 PM by jkz

No.	Name	Sample ID	Dil. Factor	Type	Comment	Status
1	WASH		1.0000	Unknown	0	Finished
2	autocal1		1.0000	Unknown	0	Finished
3	autocal2	R201449 EXP 07/28/09	1.0000	Unknown	2	Finished
4	autocal3		1.0000	Unknown	4	Finished
5	autocal4		1.0000	Unknown	10	Finished
6	autocal5		1.0000	Unknown	25	Finished
7	autocal6		1.0000	Unknown	50	Finished
8	autocal7		1.0000	Unknown	100	Finished
9	QCS	EXP 07/10/09	1.0000	Unknown	20	Finished
10	IPC	EC=3155	1.0000	Unknown	25	Finished
11	-MBLK		1.0000	Unknown		Finished
12	autocal1		1.0000	Standard	2	Finished
13	autocal2	R201449 EXP 07/28/09	1.0000	Standard	2	Finished
14	autocal3		1.0000	Standard	4	Finished
15	autocal4		1.0000	Standard	10	Finished
16	autocal5		1.0000	Standard	25	Finished
17	autocal6		1.0000	Standard	50	Finished
18	autocal7		1.0000	Standard	100	Finished
19	QCSDNR	R201789 EXP 07/10/09	1.0000	Unknown	20	Finished
20	IPC	EC=3155	1.0000	Unknown	25	Finished
21	QCS	EXP 07/10/09	1.0000	Unknown	20	Finished
22	-MBLK		1.0000	Unknown		Finished
23	-MRLCHK-2	2	1.0000	Unknown	2	Finished
24	-MRLCHK-4	4	1.0000	Unknown	4	Finished
25	-LCS1	25	1.0000	Unknown	25	Finished
26	-LCS2	25	1.0000	Unknown	25	Finished
27	2802080254_1/5000	KERR-M-87	5000.0000	Unknown		Finished
28	2802080259_1/10000	KERR-M-86	10000.0000	Unknown		Finished
29	2802080260_1/1000	KERR-M-85	1000.0000	Unknown		Finished
30	2802080261_1/250DNR	KERR-M-83	250.0000	Unknown		Finished
31	2802080262_1/25000	KERR-M-70	25000.0000	Unknown		Finished
32	2802080263_1/25000	KERR-M-71	25000.0000	Unknown		Finished
33	2802080264_1/25000	KERR-M-72	25000.0000	Unknown		Finished
34	2802080265_1/25000	KERR-M-38	25000.0000	Unknown		Finished
35	2802080267_1/50000	KERR-M-36	50000.0000	Unknown		Finished
36	2802080271_1/500	KERR-M-84	500.0000	Unknown		Finished
37	2802080271MS	25	500.0000	Unknown		Finished
38	2802080271MSD	25	500.0000	Unknown		Finished
39	CCV	25	1.0000	Unknown		Finished
40	2802080272_1/1000	KERR-M-11	1000.0000	Unknown		Finished
41	2802080273_1/50000DNR	KERR-MD-2	50000.0000	Unknown	misinjected	Finished
42	2802080274_1/50000	KERR-M-22A	50000.0000	Unknown		Finished

Title:
Datasource: Dionex_USPAS2SDIO2
Location: IC\IC11_CLO4\2008\FEB
Timebase: IC11
#Samples: 51
Created: 2/14/2008 8:45:31 AM by jkz
Last Update: 2/18/2008 1:22:35 PM by jkz

No.	Name	Program	Method	Inj. Date/Time	*Analyst
1	WASH	Perchlorate-IC11	IC#4-CLO4-LOW	2/13/2008 10:20:59 AM	jkz
2	autocal1	Perchlorate-IC11	IC#4-CLO4-LOW	2/13/2008 10:43:23 AM	jkz
3	autocal2	Perchlorate-IC11	IC#4-CLO4-LOW	2/13/2008 11:05:56 AM	jkz
4	autocal3	Perchlorate-IC11	IC#4-CLO4-LOW	2/13/2008 11:28:21 AM	jkz
5	autocal4	Perchlorate-IC11	IC#4-CLO4-LOW	2/13/2008 11:50:47 AM	jkz
6	autocal5	Perchlorate-IC11	IC#4-CLO4-LOW	2/13/2008 12:13:12 PM	jkz
7	autocal6	Perchlorate-IC11	IC#4-CLO4-LOW	2/13/2008 12:35:38 PM	jkz
8	autocal7	Perchlorate-IC11	IC#4-CLO4-LOW	2/13/2008 12:58:04 PM	jkz
9	QCS	Perchlorate-IC11	IC#4-CLO4-LOW	2/14/2008 2:01:15 PM	jkz
10	IPC	Perchlorate-IC11	IC#4-CLO4-LOW	2/14/2008 2:23:36 PM	jkz
11	-MBLK	Perchlorate-IC11	IC#4-CLO4-LOW	2/14/2008 2:46:00 PM	jkz
12	autocal1	Perchlorate-IC11	IC#4-CLO4-LOW	2/14/2008 3:11:30 PM	jkz
13	autocal2	Perchlorate-IC11	IC#4-CLO4-LOW	2/14/2008 3:33:54 PM	jkz
14	autocal3	Perchlorate-IC11	IC#4-CLO4-LOW	2/14/2008 3:56:19 PM	jkz
15	autocal4	Perchlorate-IC11	IC#4-CLO4-LOW	2/14/2008 4:18:43 PM	jkz
16	autocal5	Perchlorate-IC11	IC#4-CLO4-LOW	2/14/2008 4:41:08 PM	jkz
17	autocal6	Perchlorate-IC11	IC#4-CLO4-LOW	2/14/2008 5:03:32 PM	jkz
18	autocal7	Perchlorate-IC11	IC#4-CLO4-LOW	2/14/2008 5:25:57 PM	jkz
19	QCSDNR	Perchlorate-IC11	IC#4-CLO4-LOW	2/14/2008 5:48:21 PM	jkz
20	IPC	Perchlorate-IC11	IC#4-CLO4-LOW	2/14/2008 6:10:45 PM	jkz
21	QCS	Perchlorate-IC11	IC#4-CLO4-LOW	2/14/2008 6:33:04 PM	jkz
22	-MBLK	Perchlorate-IC11	IC#4-CLO4-LOW	2/14/2008 6:55:26 PM	jkz
23	-MRLCHK-2	Perchlorate-IC11	IC#4-CLO4-LOW	2/14/2008 7:17:50 PM	jkz
24	-MRLCHK-4	Perchlorate-IC11	IC#4-CLO4-LOW	2/14/2008 7:40:14 PM	jkz
25	-LCS1	Perchlorate-IC11	IC#4-CLO4-LOW	2/14/2008 8:02:38 PM	jkz
26	-LCS2	Perchlorate-IC11	IC#4-CLO4-LOW	2/14/2008 8:25:02 PM	jkz
27	2802080254_1/5000	Perchlorate-IC11	IC#4-CLO4-LOW	2/14/2008 8:47:26 PM	jkz
28	2802080259_1/10000	Perchlorate-IC11	IC#4-CLO4-LOW	2/14/2008 9:09:51 PM	jkz
29	2802080260_1/1000	Perchlorate-IC11	IC#4-CLO4-LOW	2/14/2008 9:32:15 PM	jkz
30	2802080261_1/250DNR	Perchlorate-IC11	IC#4-CLO4-LOW	2/14/2008 9:54:39 PM	jkz
31	2802080262_1/25000	Perchlorate-IC11	IC#4-CLO4-LOW	2/14/2008 10:17:03 PM	jkz
32	2802080263_1/25000	Perchlorate-IC11	IC#4-CLO4-LOW	2/14/2008 10:39:27 PM	jkz
33	2802080264_1/25000	Perchlorate-IC11	IC#4-CLO4-LOW	2/14/2008 11:01:50 PM	jkz
34	2802080265_1/25000	Perchlorate-IC11	IC#4-CLO4-LOW	2/14/2008 11:24:12 PM	jkz
35	2802080267_1/50000	Perchlorate-IC11	IC#4-CLO4-LOW	2/14/2008 11:46:36 PM	jkz
36	2802080271_1/500	Perchlorate-IC11	IC#4-CLO4-LOW	2/15/2008 12:09:00 AM	jkz
37	2802080271MS	Perchlorate-IC11	IC#4-CLO4-LOW	2/15/2008 12:31:24 AM	jkz
38	2802080271MSD	Perchlorate-IC11	IC#4-CLO4-LOW	2/15/2008 12:53:48 AM	jkz
39	CCV	Perchlorate-IC11	IC#4-CLO4-LOW	2/15/2008 1:16:12 AM	jkz
40	2802080272_1/1000	Perchlorate-IC11	IC#4-CLO4-LOW	2/15/2008 1:38:36 AM	jkz
41	2802080273_1/50000DNR	Perchlorate-IC11	IC#4-CLO4-LOW	2/15/2008 2:01:00 AM	jkz
42	2802080274_1/50000	Perchlorate-IC11	IC#4-CLO4-LOW	2/15/2008 2:23:24 AM	jkz

Title:
Datasource: Dionex_USPAS2SDIO2
Location: IC\IC11_CLO4\2008\FEB
Timebase: IC11
#Samples: 51
Created: 2/14/2008 8:45:31 AM by jkz
Last Update: 2/18/2008 1:22:35 PM by jkz

No.	Name	Sample ID	Dil. Factor	Type	Comment	Status
43	2802080277_1/25000	KERR-M-89	25000.0000	Unknown		Finished
44	2802090001_1/25000	KERR-M-17A	25000.0000	Unknown		Finished
45	2802090002_1/2500	KERR-M-76	2500.0000	Unknown		Finished
46	2802090003_1/2500	KERR-M-75	2500.0000	Unknown		Finished
47	2802090004_1/10000	KERR-M-111A	10000.0000	Unknown		Finished
48	2802090005_1/1000	KERR-M-115	1000.0000	Unknown		Finished
49	2802090006_1/1000	KERR-M-14A	1000.0000	Unknown		Finished
50	HCV		1.0000	Unknown		Finished
51	CCB		1.0000	Unknown		Finished

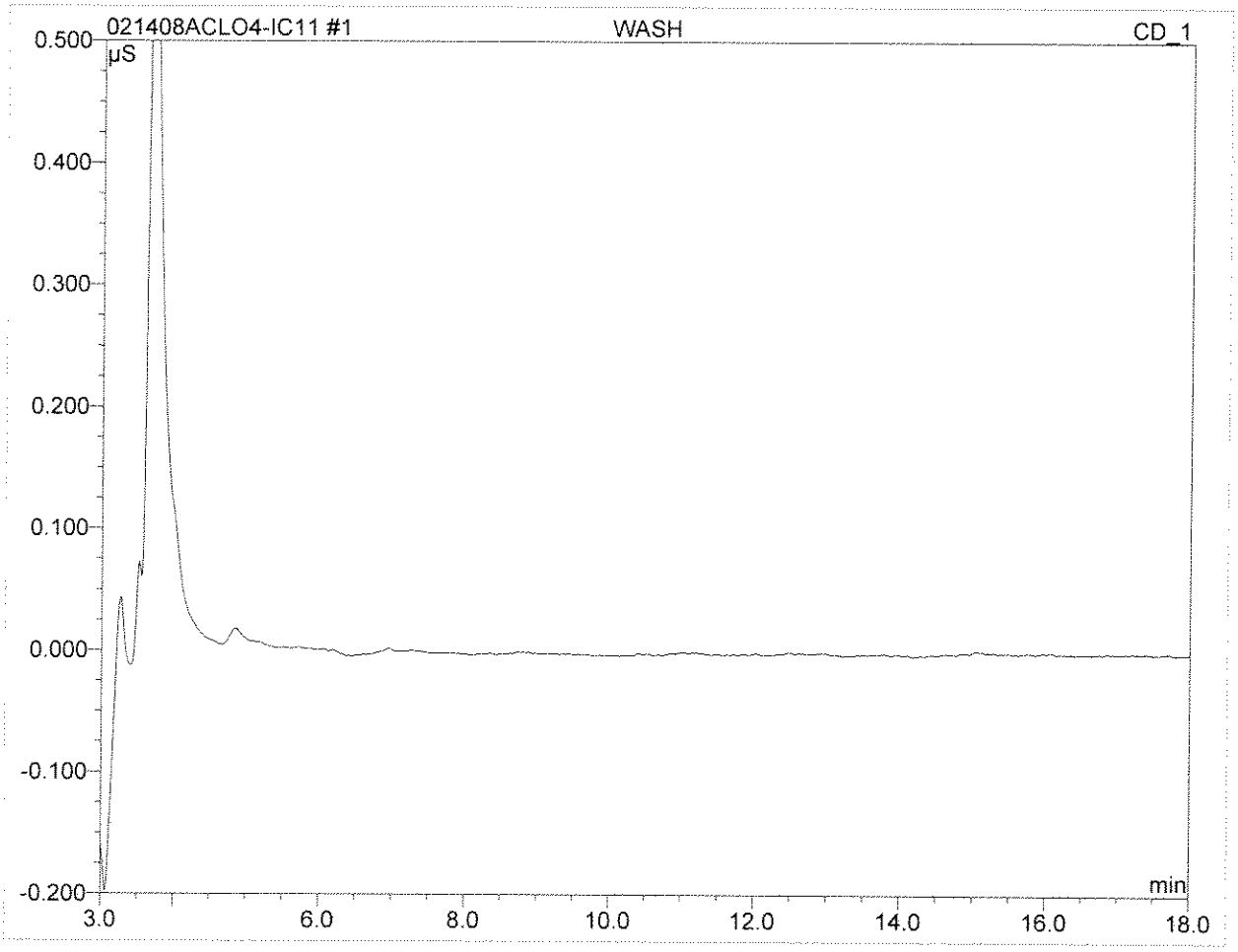
Title:
Datasource: Dionex_USPAS2SDIO2
Location: IC\IC11_CLO4\2008\FEB
Timebase: IC11
#Samples: 51
Created: 2/14/2008 8:45:31 AM by jkz
Last Update: 2/18/2008 1:22:35 PM by jkz

No.	Name	Program	Method	Inj. Date/Time	*Analyst
43	2802080277_1/25000	Perchlorate-IC11	IC#4-CLO4-LOW	2/15/2008 2:45:48 AM	jkz
44	2802090001_1/25000	Perchlorate-IC11	IC#4-CLO4-LOW	2/15/2008 3:08:12 AM	jkz
45	2802090002_1/2500	Perchlorate-IC11	IC#4-CLO4-LOW	2/15/2008 3:30:36 AM	jkz
46	2802090003_1/2500	Perchlorate-IC11	IC#4-CLO4-LOW	2/15/2008 3:52:59 AM	jkz
47	2802090004_1/10000	Perchlorate-IC11	IC#4-CLO4-LOW	2/15/2008 4:15:23 AM	jkz
48	2802090005_1/1000	Perchlorate-IC11	IC#4-CLO4-LOW	2/15/2008 4:37:46 AM	jkz
49	2802090006_1/1000	Perchlorate-IC11	IC#4-CLO4-LOW	2/15/2008 5:00:10 AM	jkz
50	HCV	Perchlorate-IC11	IC#4-CLO4-LOW	2/15/2008 5:22:34 AM	jkz
51	CCB	Perchlorate-IC11	IC#4-CLO4-LOW	2/15/2008 5:44:58 AM	jkz

1 WASH

0

Sample Name:	**WASH**	*Channel:*	**CD_1**
Sample Type:	**unknown**	*Control Program:*	**Perchlorate-IC11**
Recording Time:	**02/13/2008 10:20**	*Quantif. Method:*	**IC#4-CLO4-LOW**
Analyst:	**jkz**	*Dilution Factor:*	**1.0000**

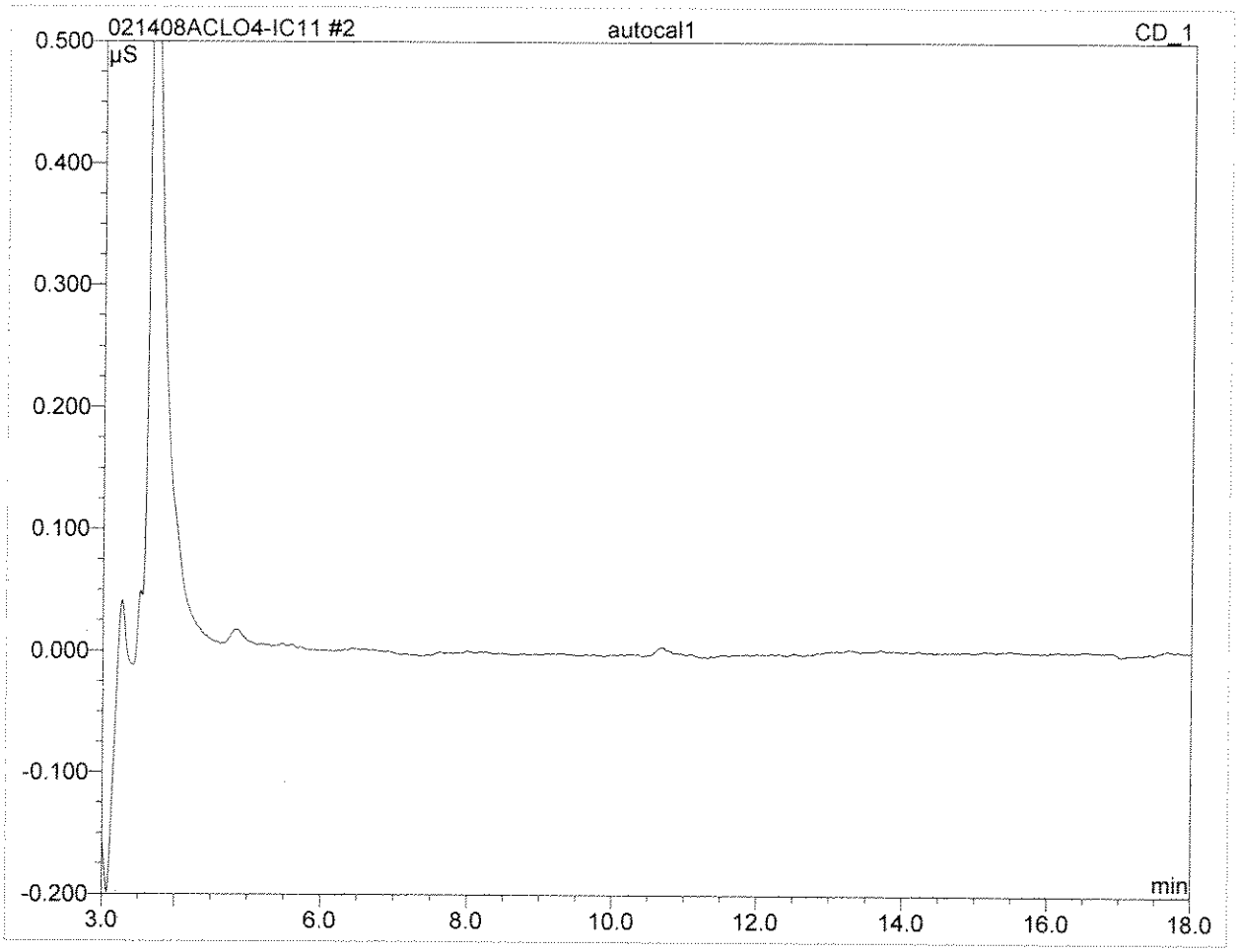


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
Total:			0.000	0.000	0.00	0.000	

2 autocal1

0

Sample Name:	**autocal1**	*Channel:*	**CD_1**
Sample Type:	**unknown**	*Control Program:*	**Perchlorate-IC11**
Recording Time:	**02/13/2008 10:43**	*Quantif. Method:*	**IC#4-CLO4-LOW**
Analyst:	**jkz**	*Dilution Factor:*	**1.0000**

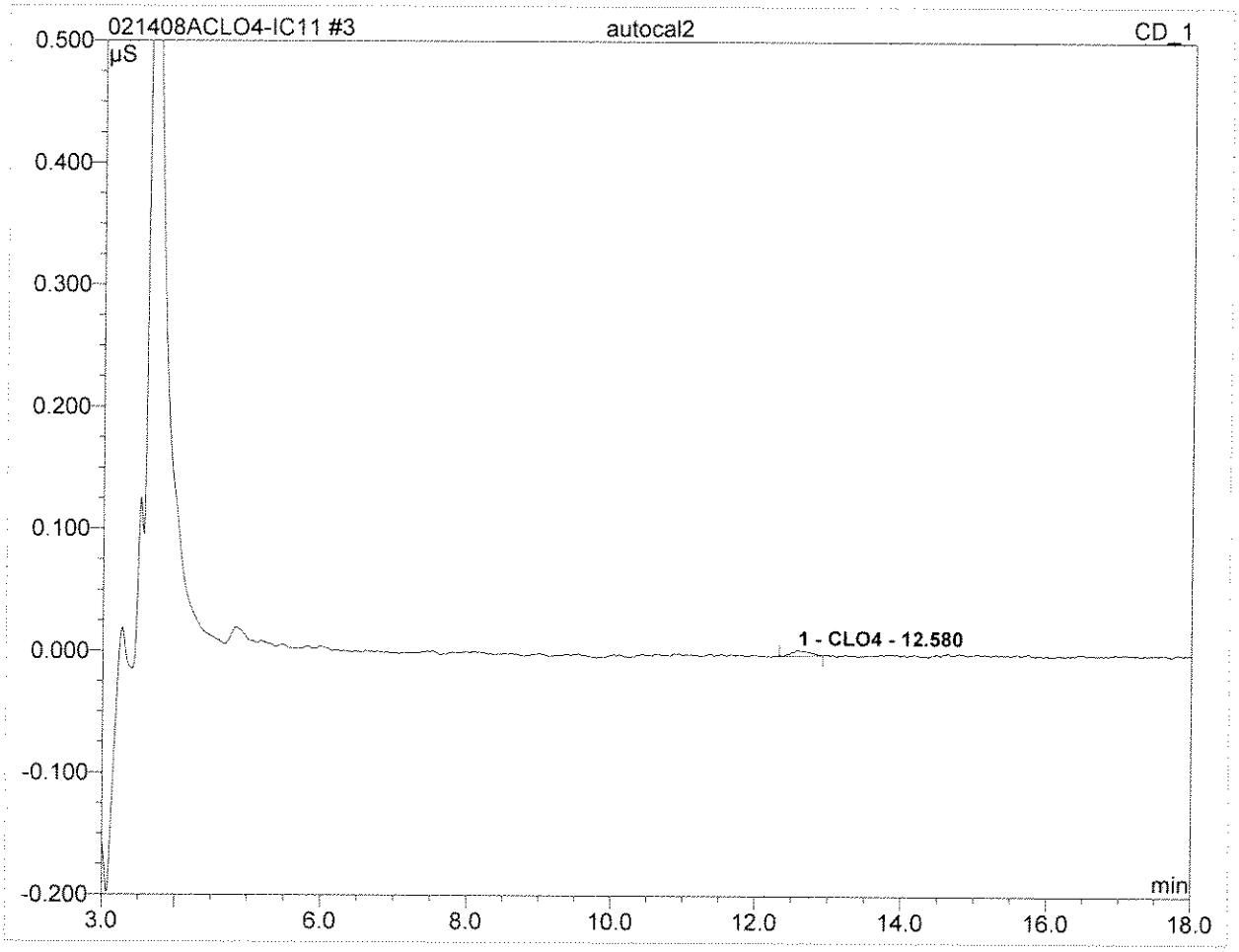


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
Total:			0.000	0.000	0.00	0.000	

3 autocal2

2

Sample Name:	**autocal2**	*Channel:*	**CD_1**
Sample Type:	**unknown**	*Control Program:*	**Perchlorate-IC11**
Recording Time:	**02/13/2008 11:05**	*Quantif. Method:*	**IC#4-CLO4-LOW**
Analyst:	**jkz**	*Dilution Factor:*	**1.0000**

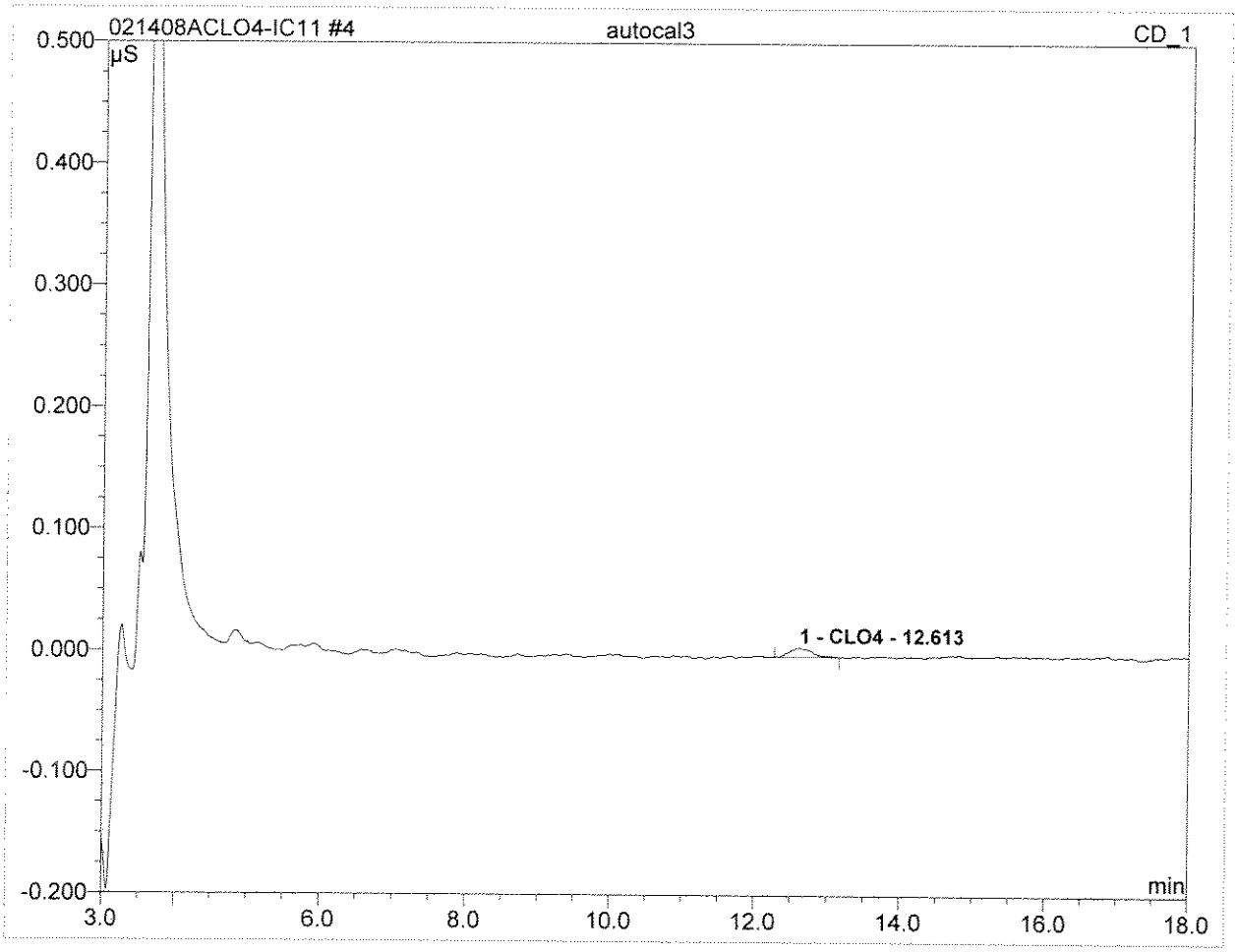


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	12.58	CLO4	0.005	0.001	100.00	1.665	BMB
Total:			0.005	0.001	100.00	1.665	

4 autocal3

4

Sample Name:	**autocal3**	*Channel:*	**CD_1**
Sample Type:	**unknown**	*Control Program:*	**Perchlorate-IC11**
Recording Time:	**02/13/2008 11:28**	*Quantif. Method:*	**IC#4-CLO4-LOW**
Analyst:	**jkz**	*Dilution Factor:*	**1.0000**

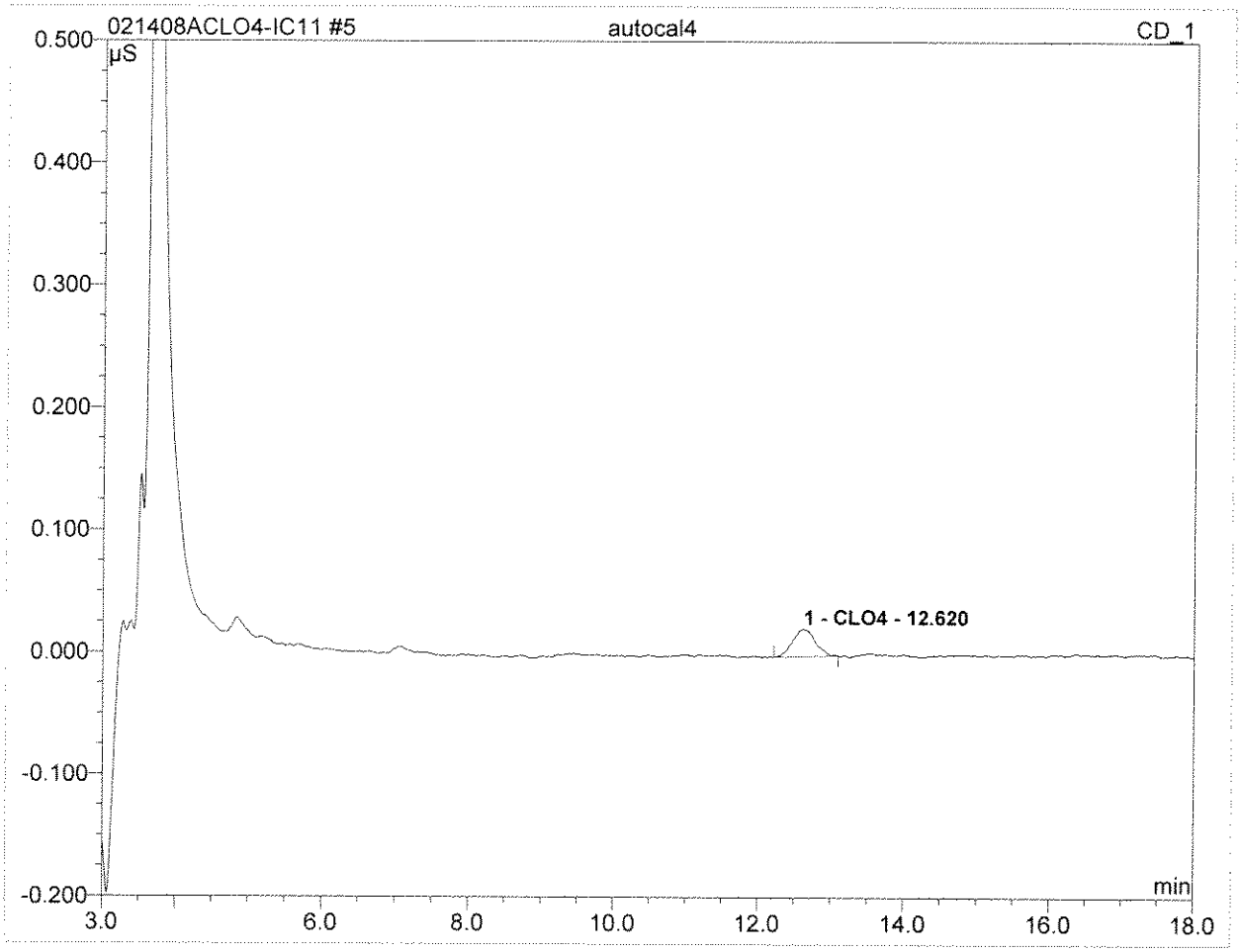


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	12.61	CLO4	0.008	0.003	100.00	3.498	BMB
Total:			0.008	0.003	100.00	3.498	

5 autocal4

10

Sample Name:	**autocal4**	*Channel:*	**CD_1**
Sample Type:	**unknown**	*Control Program:*	**Perchlorate-IC11**
Recording Time:	**02/13/2008 11:50**	*Quantif. Method:*	**IC#4-CLO4-LOW**
Analyst:	**jkz**	*Dilution Factor:*	**1.0000**

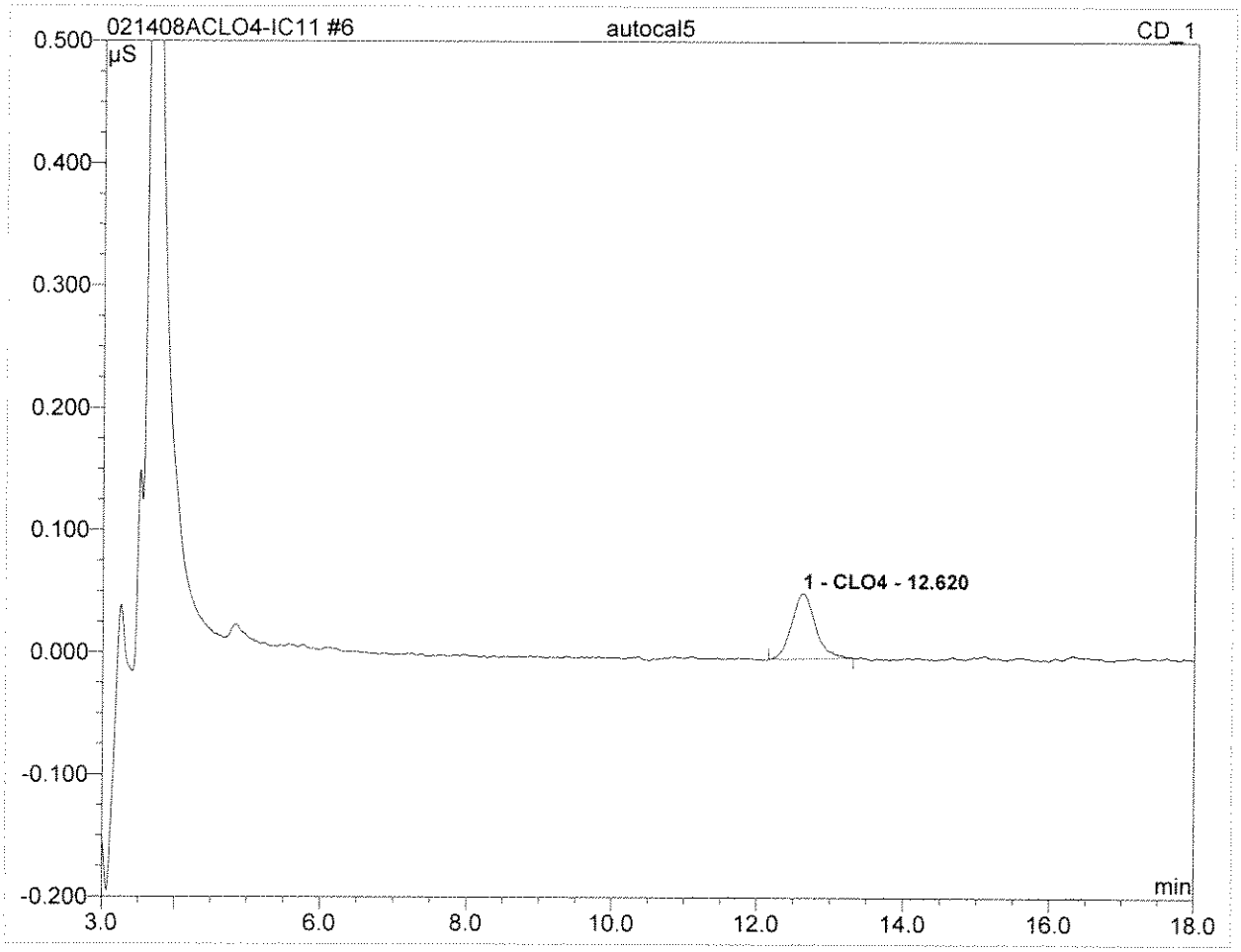


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	12.62	CLO4	0.022	0.008	100.00	10.085	BMB
Total:			0.022	0.008	100.00	10.085	

6 autocal5

25

Sample Name:	**autocal5**	*Channel:*	**CD_1**
Sample Type:	**unknown**	*Control Program:*	**Perchlorate-IC11**
Recording Time:	**02/13/2008 12:13**	*Quantif. Method:*	**IC#4-CLO4-LOW**
Analyst:	**jkz**	*Dilution Factor:*	**1.0000**

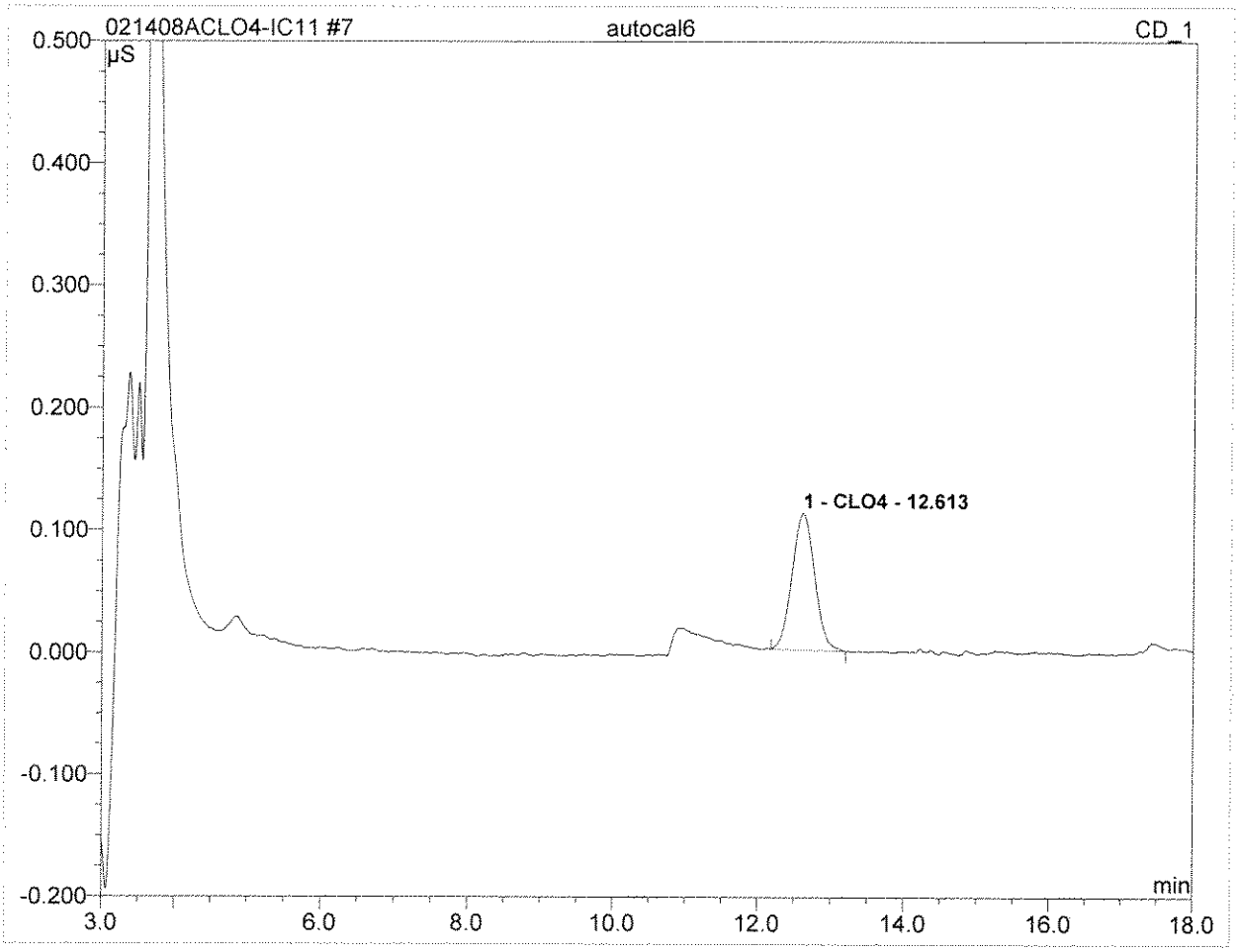


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	12.62	CLO4	0.053	0.020	100.00	24.539	BMB
Total:			0.053	0.020	100.00	24.539	

7 autocal6

50

Sample Name:	**autocal6**	*Channel:*	**CD_1**
Sample Type:	**unknown**	*Control Program:*	**Perchlorate-IC11**
Recording Time:	**02/13/2008 12:35**	*Quantif. Method:*	**IC#4-CLO4-LOW**
Analyst:	**jkz**	*Dilution Factor:*	**1.0000**

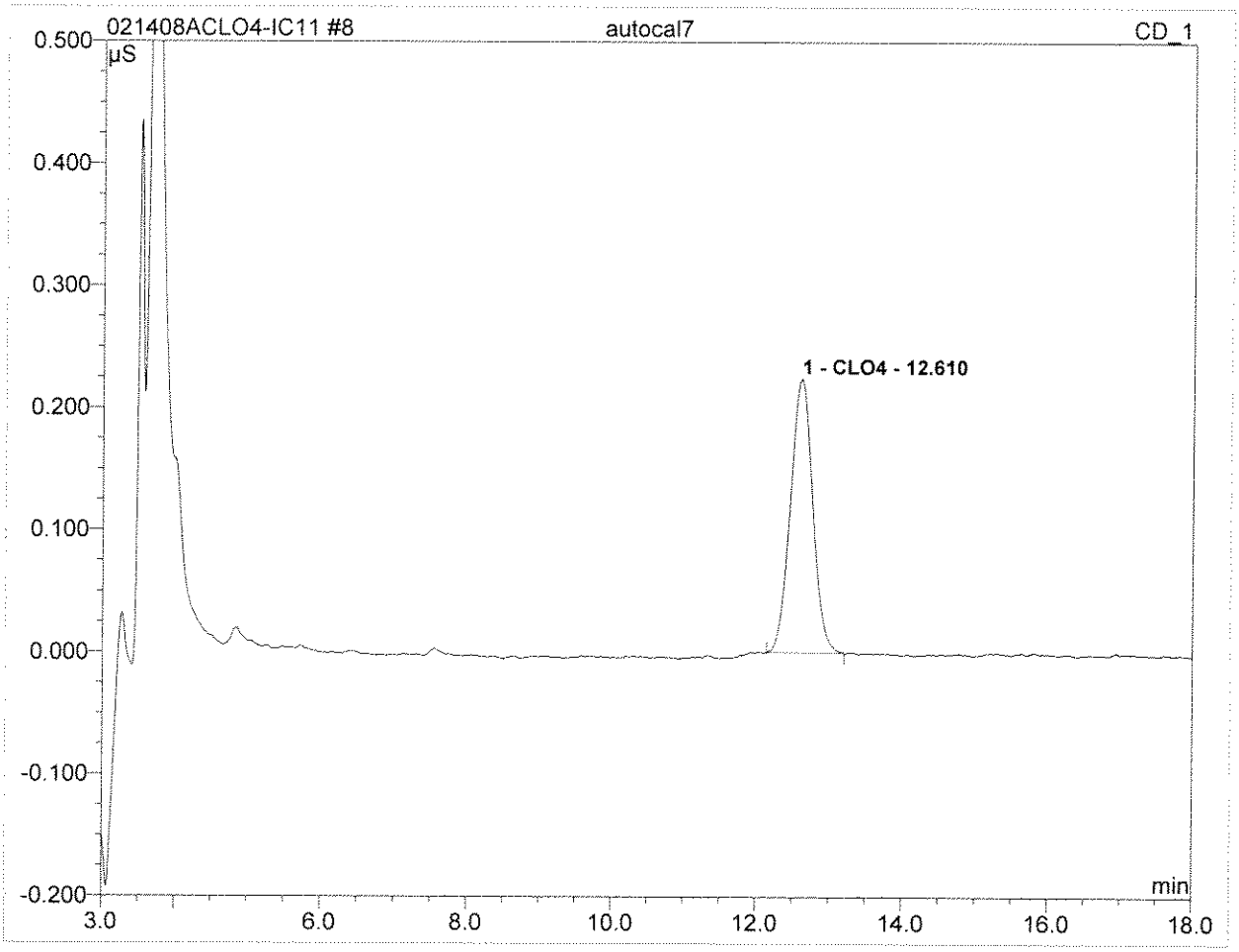


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	12.61	CLO4	0.112	0.040	100.00	49.487	BMB
Total:			0.112	0.040	100.00	49.487	

8 autocal7

100

Sample Name:	**autocal7**	*Channel:*	**CD_1**
Sample Type:	**unknown**	*Control Program:*	**Perchlorate-IC11**
Recording Time:	**02/13/2008 12:58**	*Quantif. Method:*	**IC#4-CLO4-LOW**
Analyst:	**jkz**	*Dilution Factor:*	**1.0000**

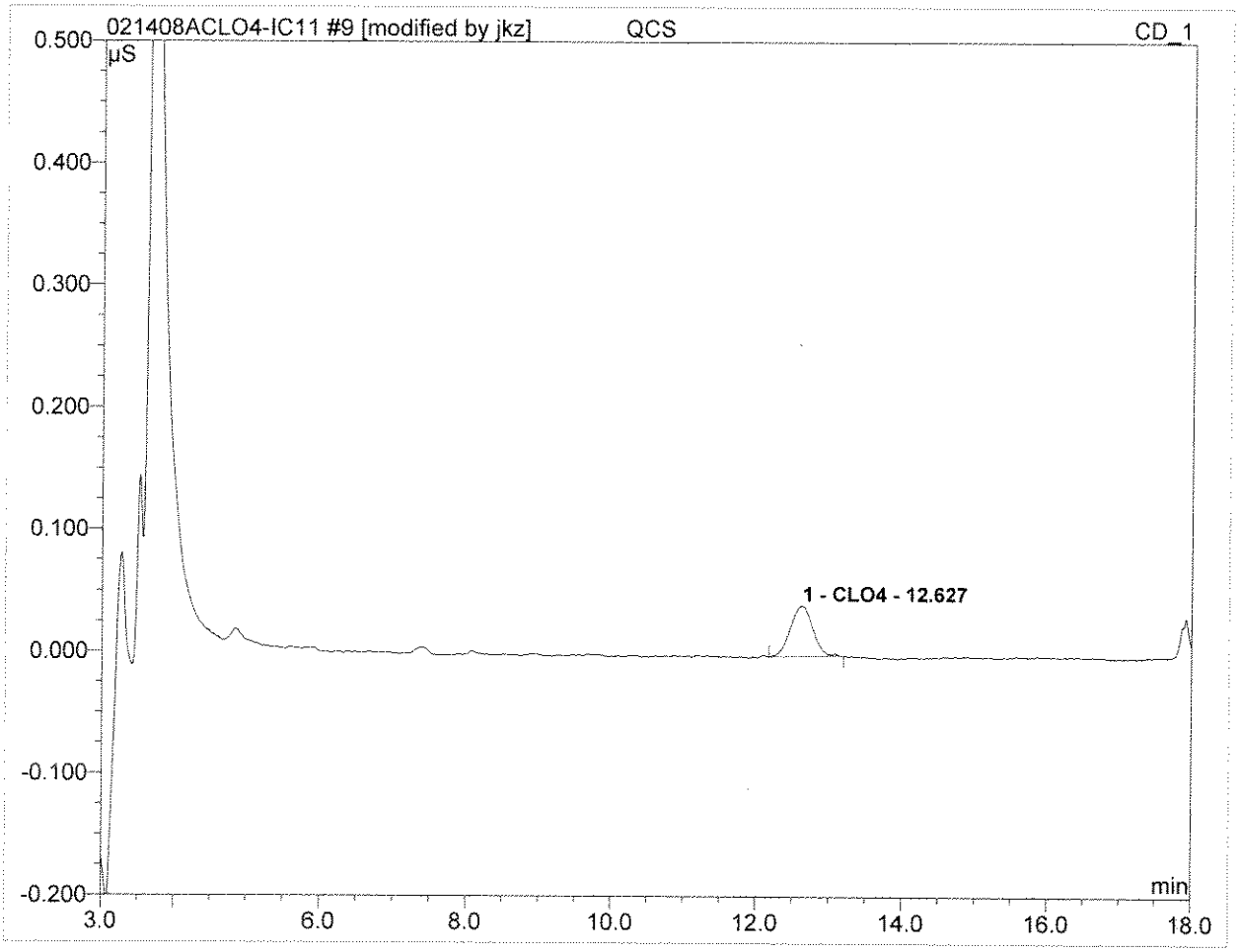


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	12.61	CLO4	0.224	0.079	100.00	96.590	BMB
Total:			0.224	0.079	100.00	96.590	

9 QCS

20

Sample Name:	**QCS**	*Channel:*	**CD_1**
Sample Type:	**unknown**	*Control Program:*	**Perchlorate-IC11**
Recording Time:	**02/14/2008 14:01**	*Quantif. Method:*	**IC#4-CLO4-LOW**
Analyst:	**jkz**	*Dilution Factor:*	**1.0000**

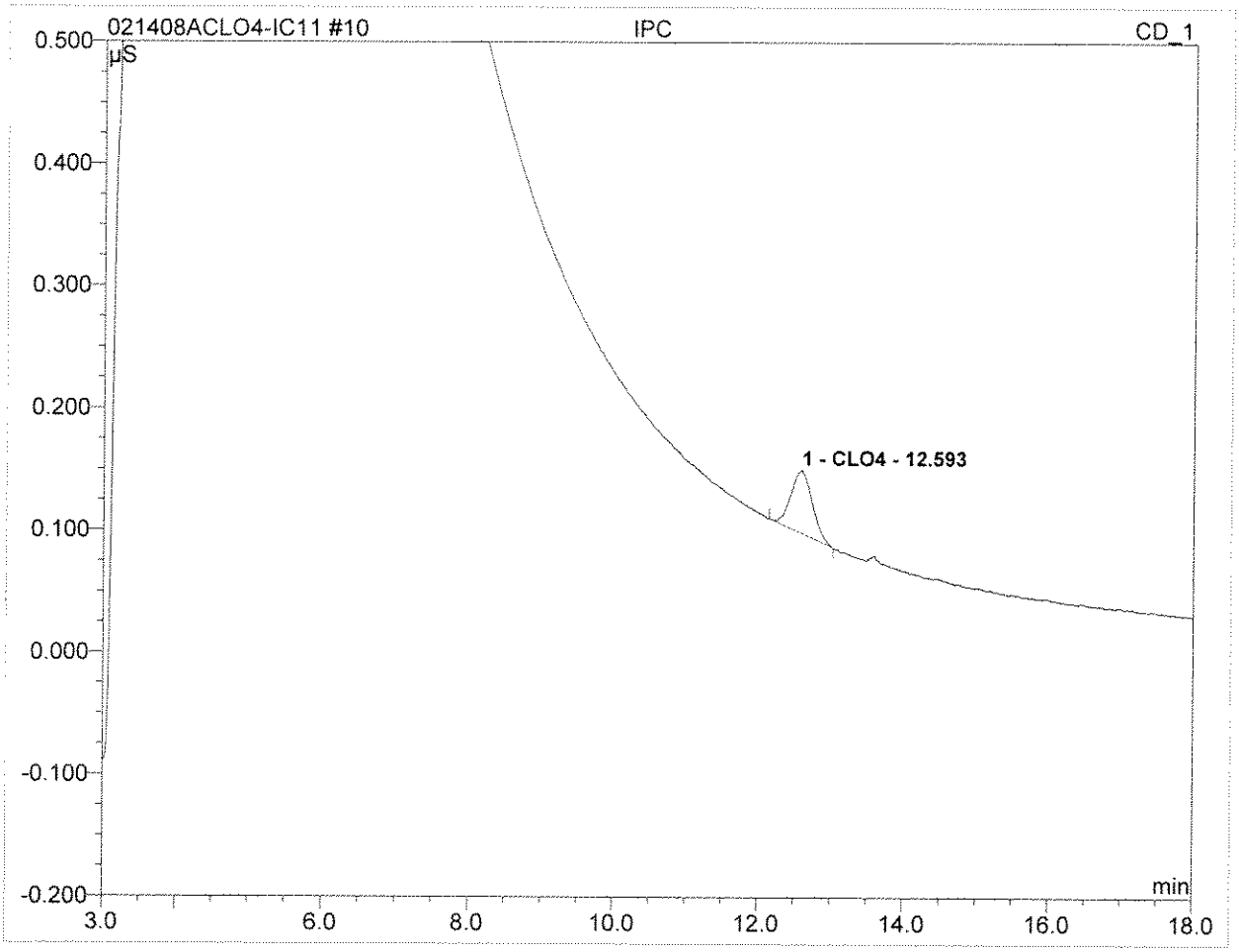


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	12.63	CLO4	0.041	0.015	100.00	18.240	BMB*
Total:			0.041	0.015	100.00	18.240	

10 IPC

25

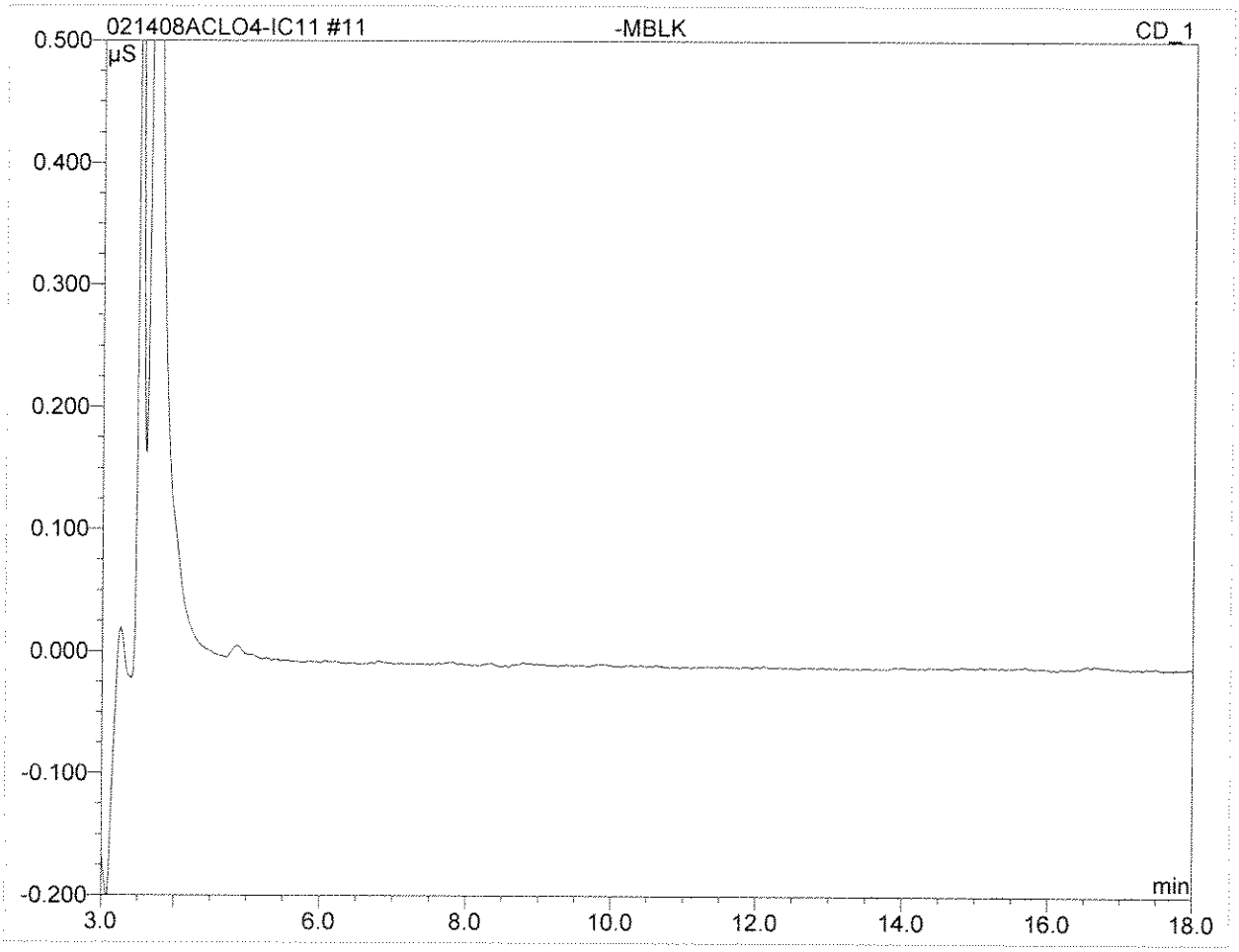
Sample Name:	**IPC**	*Channel:*	**CD_1**
Sample Type:	**unknown**	*Control Program:*	**Perchlorate-IC11**
Recording Time:	**02/14/2008 14:23**	*Quantif. Method:*	**IC#4-CLO4-LOW**
Analyst:	**jkz**	*Dilution Factor:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	12.59	CLO4	0.051	0.017	100.00	21.470	BMB
Total:			0.051	0.017	100.00	21.470	

11 -MBLK

Sample Name:	**-MBLK**	*Channel:*	**CD_1**
Sample Type:	**unknown**	*Control Program:*	**Perchlorate-IC11**
Recording Time:	**02/14/2008 14:46**	*Quantif. Method:*	**IC#4-CLO4-LOW**
Analyst:	**jkz**	*Dilution Factor:*	**1.0000**

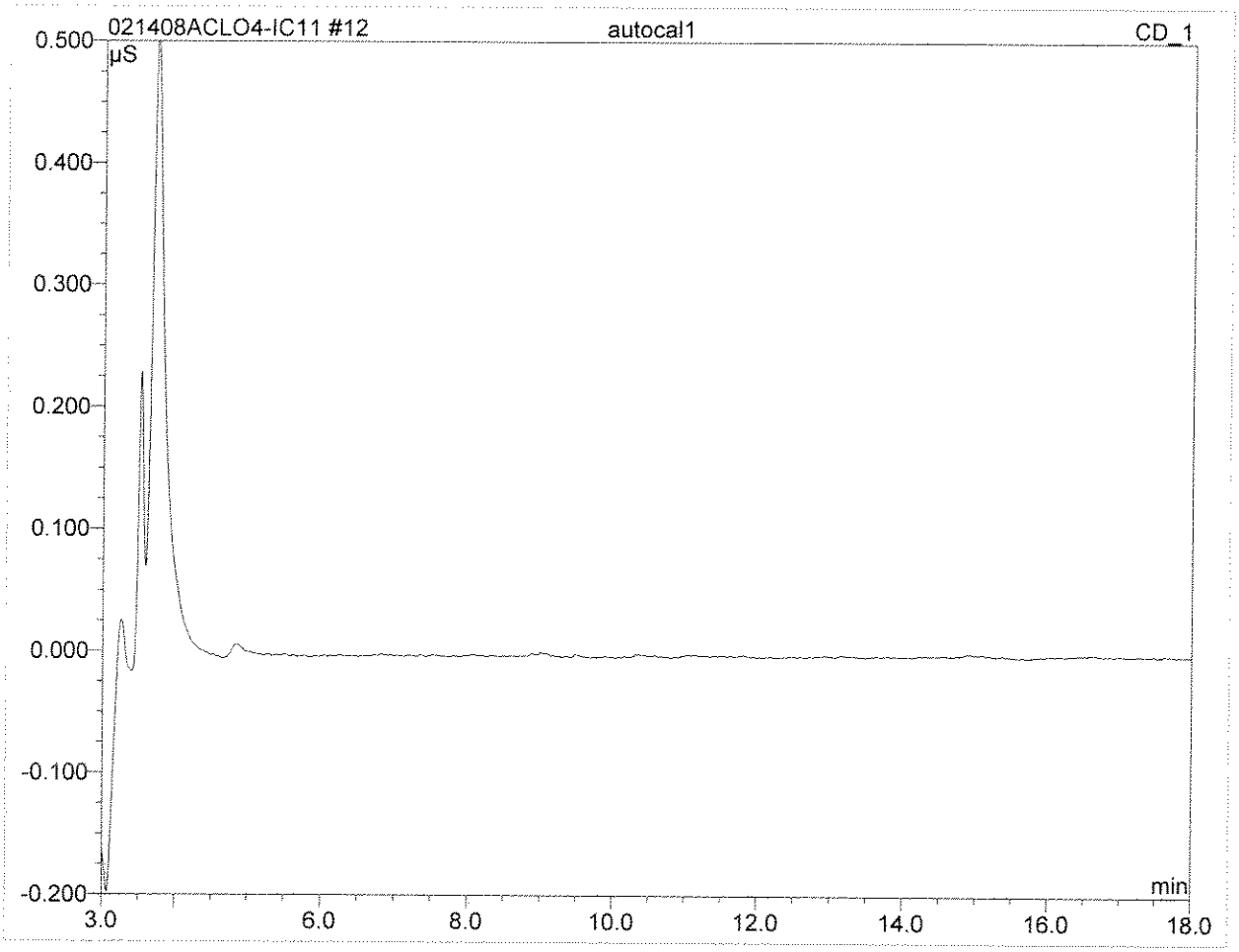


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
Total:			0.000	0.000	0.00	0.000	

12 autocal1

2

Sample Name:	**autocal1**	*Channel:*	**CD_1**
Sample Type:	**standard**	*Control Program:*	**Perchlorate-IC11**
Recording Time:	**02/14/2008 15:11**	*Quantif. Method:*	**IC#4-CLO4-LOW**
Analyst:	**jkz**	*Dilution Factor:*	**1.0000**

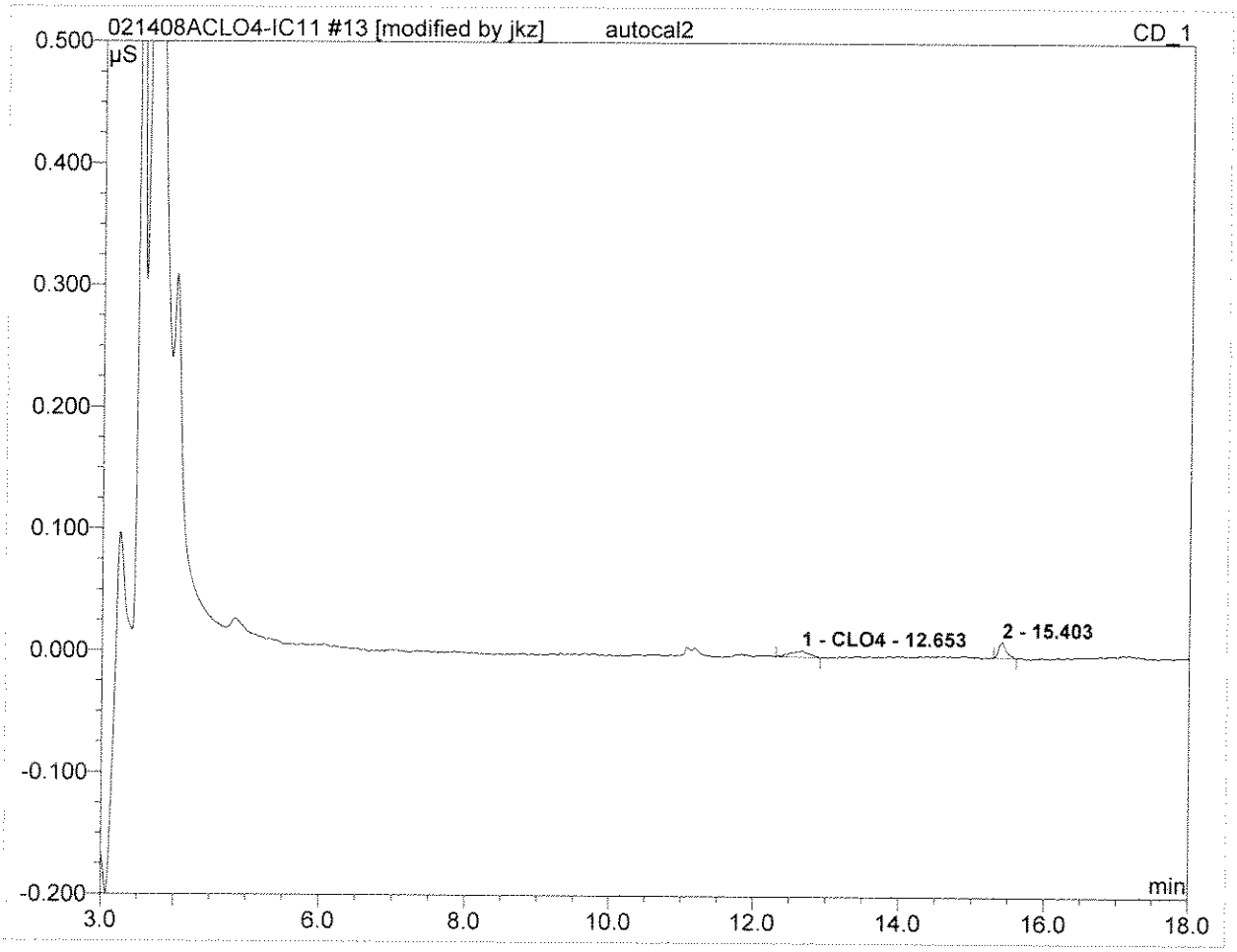


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
Total:			0.000	0.000	0.00	0.000	

13 autocal2

2

Sample Name:	**autocal2**	*Channel:*	**CD_1**
Sample Type:	**standard**	*Control Program:*	**Perchlorate-IC11**
Recording Time:	**02/14/2008 15:33**	*Quantif. Method:*	**IC#4-CLO4-LOW**
Analyst:	**jkz**	*Dilution Factor:*	**1.0000**

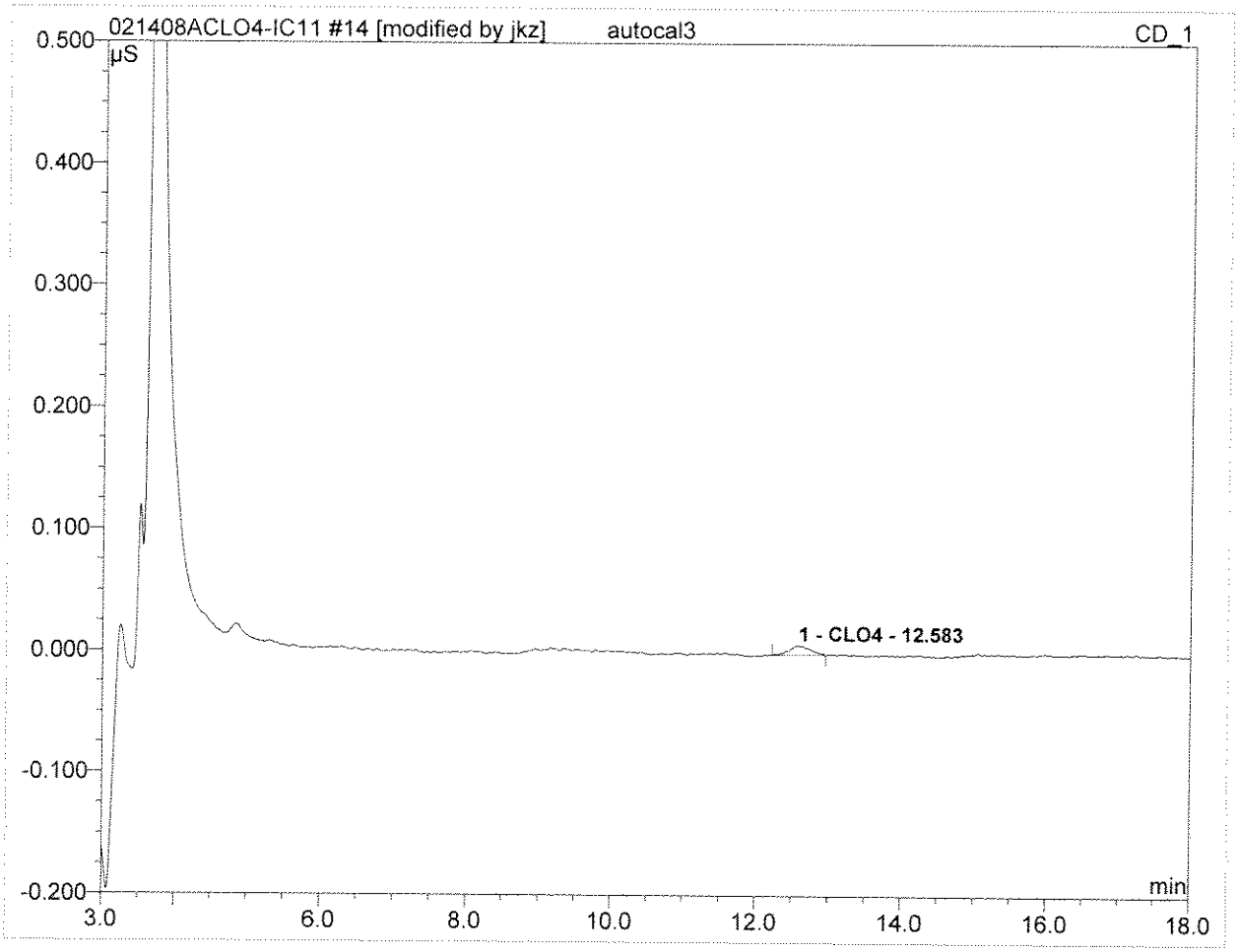


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	12.65	CLO4	0.005	0.002	49.23	1.903	BMB*
Total:			0.005	0.002	49.23	1.903	

14 autocal3

4

Sample Name:	**autocal3**	*Channel:*	**CD_1**
Sample Type:	**standard**	*Control Program:*	**Perchlorate-IC11**
Recording Time:	**02/14/2008 15:56**	*Quantif. Method:*	**IC#4-CLO4-LOW**
Analyst:	**jkz**	*Dilution Factor:*	**1.0000**

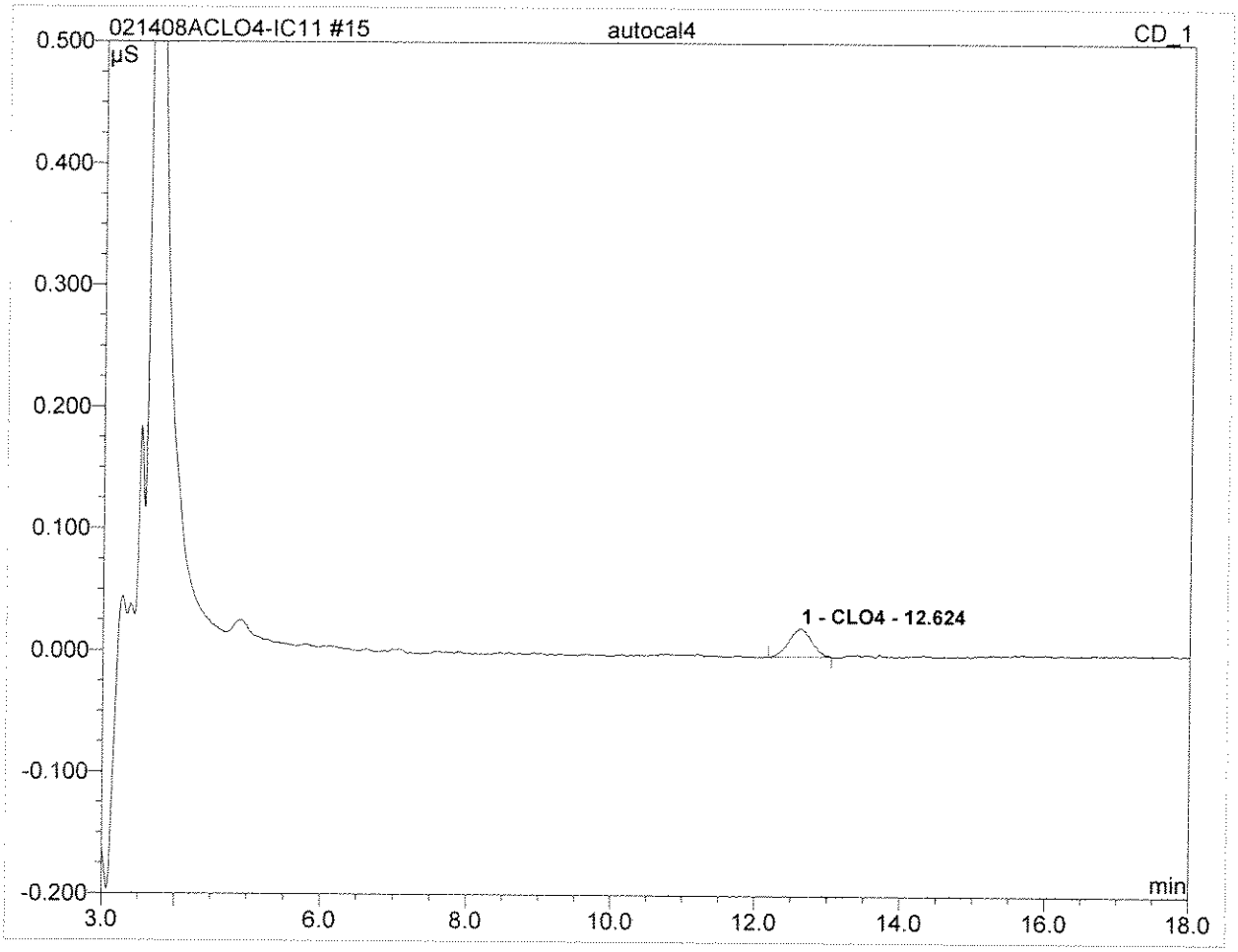


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	12.58	CLO4	0.008	0.003	100.00	3.319	BMB*
Total:			0.008	0.003	100.00	3.319	

15 autocal4

10

Sample Name:	**autocal4**	*Channel:*	**CD_1**
Sample Type:	**standard**	*Control Program:*	**Perchlorate-IC11**
Recording Time:	**02/14/2008 16:18**	*Quantif. Method:*	**IC#4-CLO4-LOW**
Analyst:	**jkz**	*Dilution Factor:*	**1.0000**

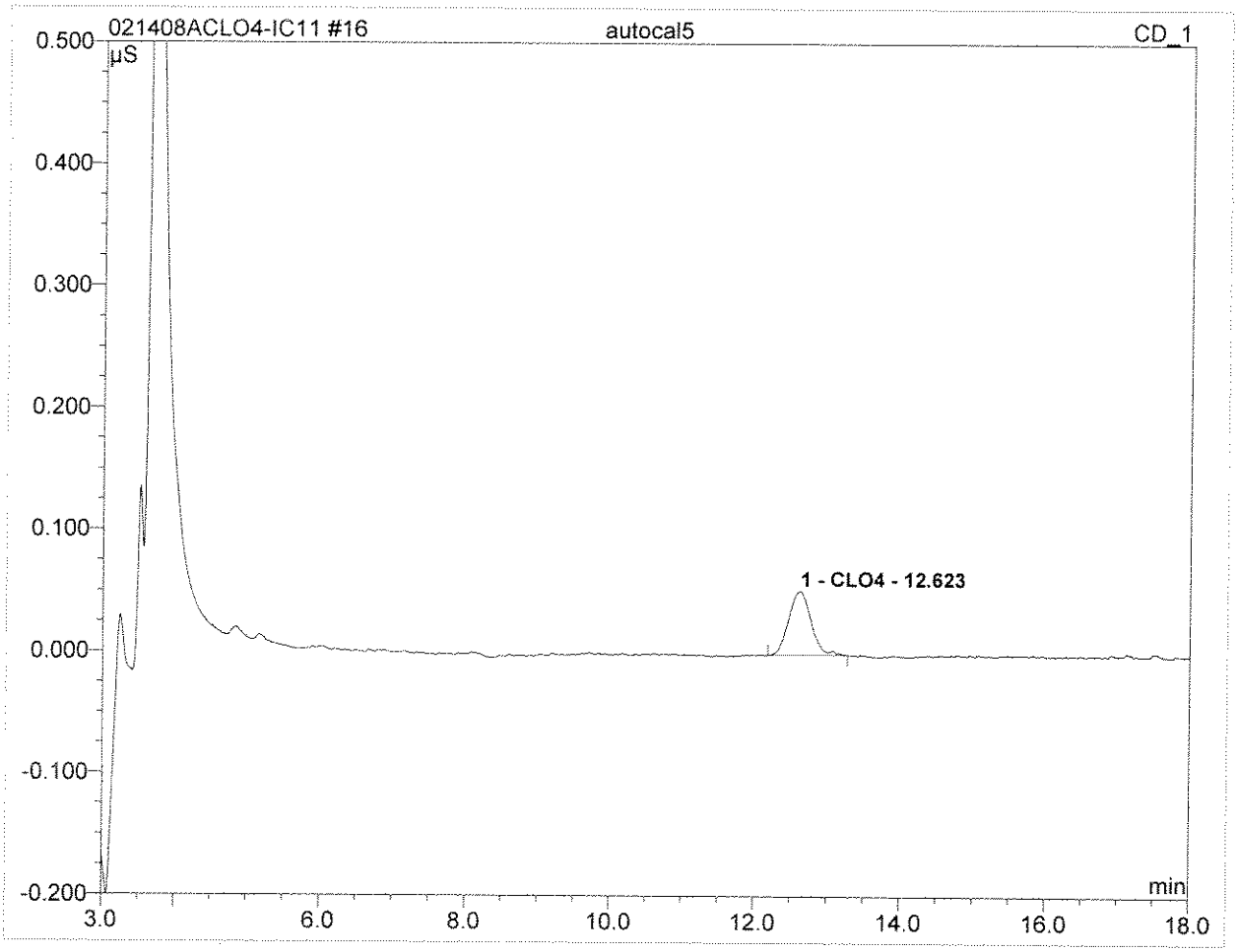


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	12.62	CLO4	0.024	0.009	100.00	10.586	BMB
Total:			0.024	0.009	100.00	10.586	

16 autocal5

25

Sample Name:	**autocal5**	*Channel:*	**CD_1**
Sample Type:	**standard**	*Control Program:*	**Perchlorate-IC11**
Recording Time:	**02/14/2008 16:41**	*Quantif. Method:*	**IC#4-CLO4-LOW**
Analyst:	**jkz**	*Dilution Factor:*	**1.0000**

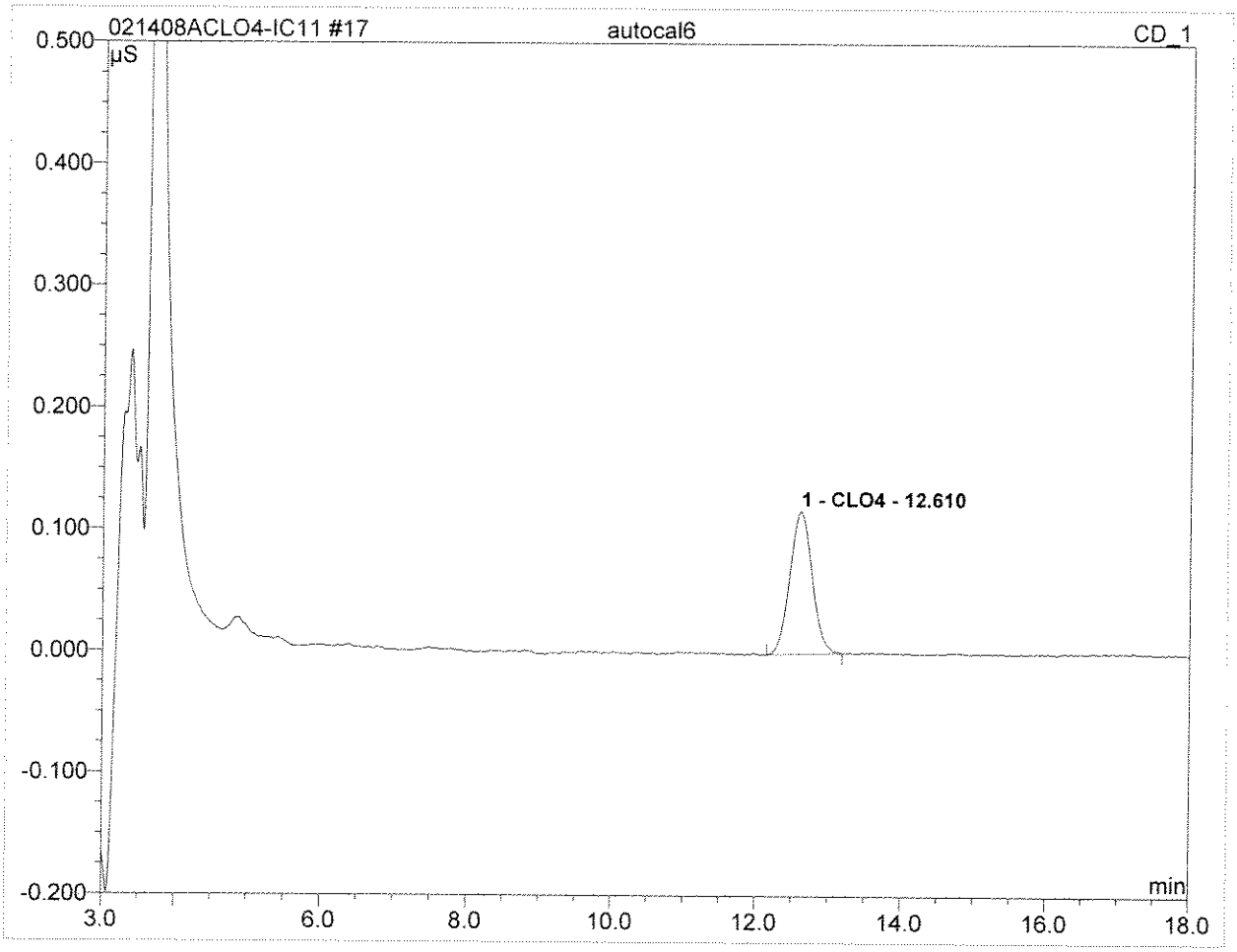


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	12.62	CLO4	0.052	0.019	100.00	22.997	BMB
Total:			0.052	0.019	100.00	22.997	

17 autocal6

50

Sample Name:	**autocal6**	*Channel:*	**CD_1**
Sample Type:	**standard**	*Control Program:*	**Perchlorate-IC11**
Recording Time:	**02/14/2008 17:03**	*Quantif. Method:*	**IC#4-CLO4-LOW**
Analyst:	**jkz**	*Dilution Factor:*	**1.0000**

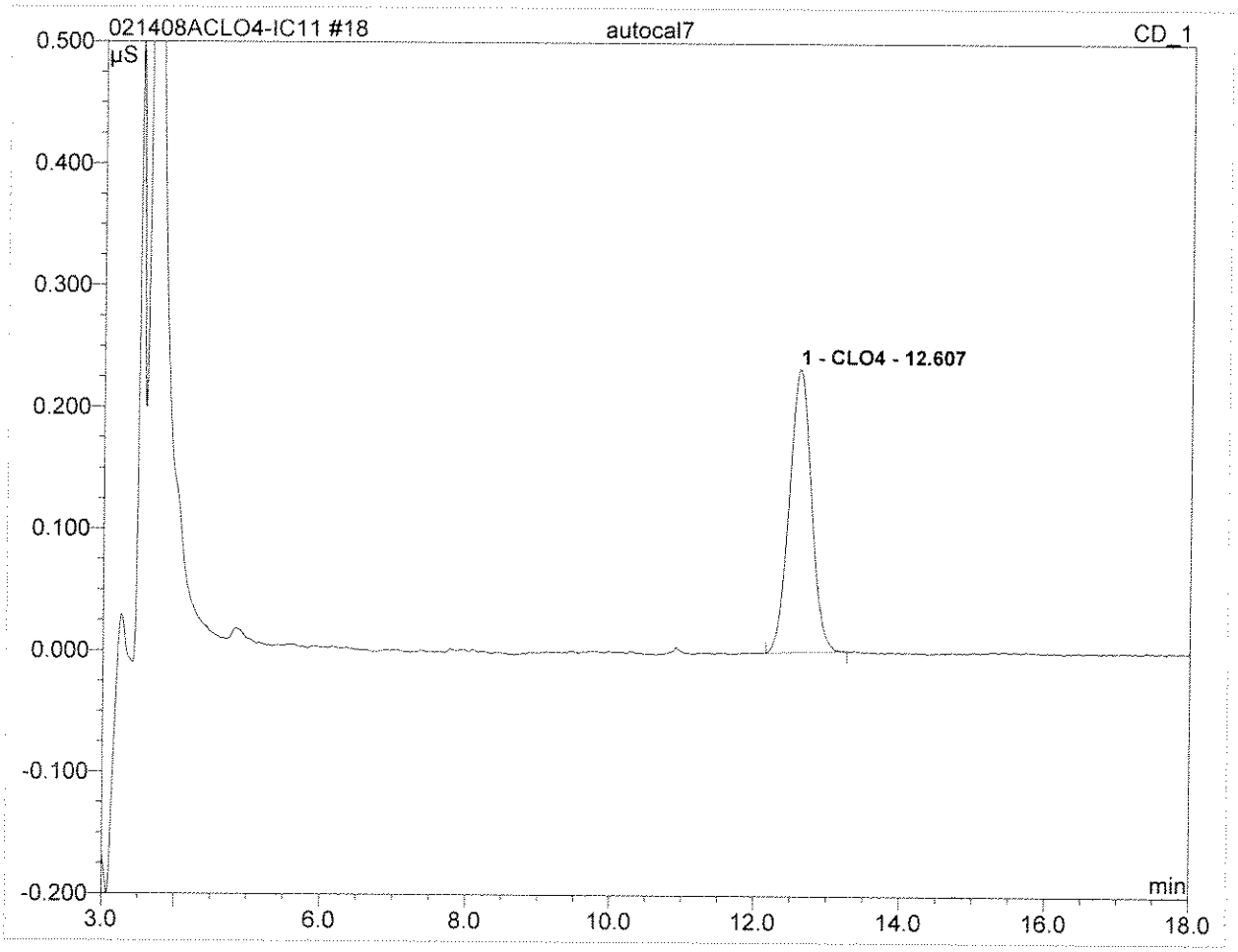


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	12.61	CLO4	0.118	0.042	100.00	51.393	BMB
Total:			0.118	0.042	100.00	51.393	

18 autocal7

100

Sample Name:	**autocal7**	*Channel:*	**CD_1**
Sample Type:	**standard**	*Control Program:*	**Perchlorate-IC11**
Recording Time:	**02/14/2008 17:25**	*Quantif. Method:*	**IC#4-CLO4-LOW**
Analyst:	**jkz**	*Dilution Factor:*	**1.0000**

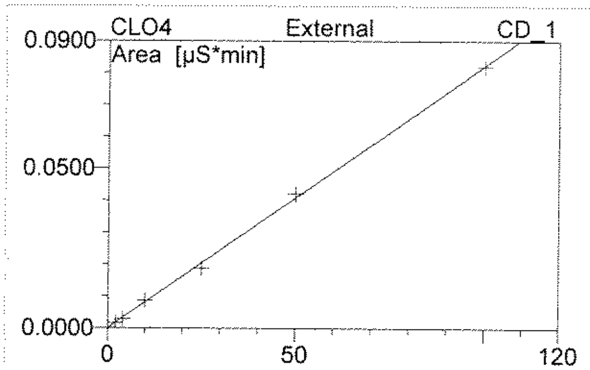


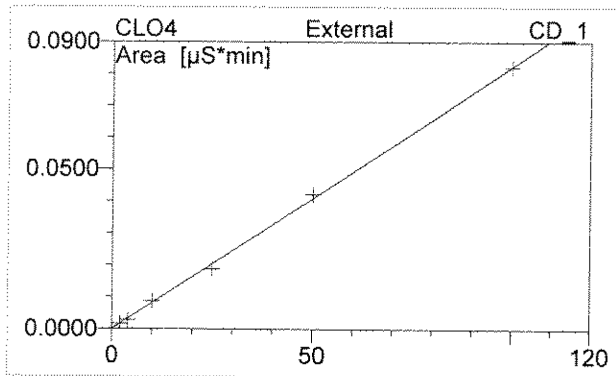
No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	12.61	CLO4	0.233	0.082	100.00	99.774	BMB
Total:			0.233	0.082	100.00	99.774	

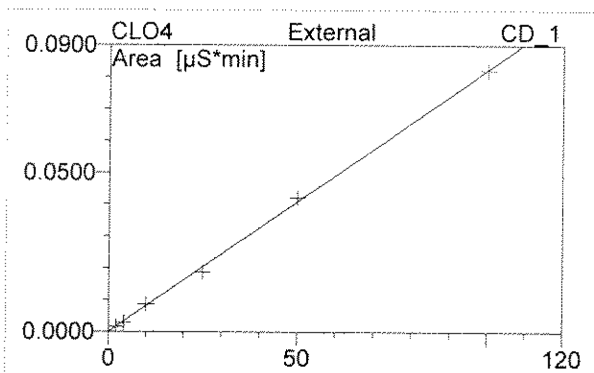
18 autocal7

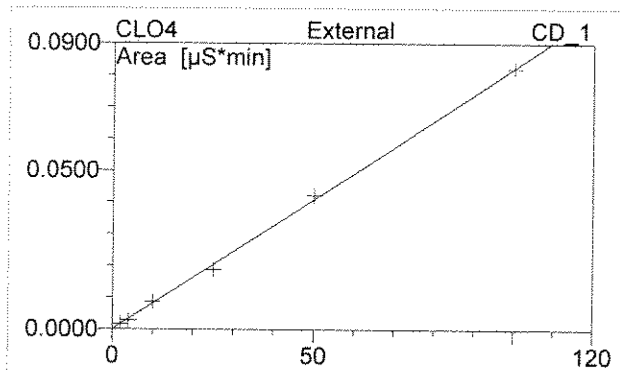
100

Sample Name:	**autocal7**	*Injection Volume:*	**20.0**
Vial Number:	**141**	*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:	**2/14/2008 17:25**	*Sample Weight:*	**1.0000**
Run Time (min):	**20.00**	*Sample Amount:*	**1.0000**







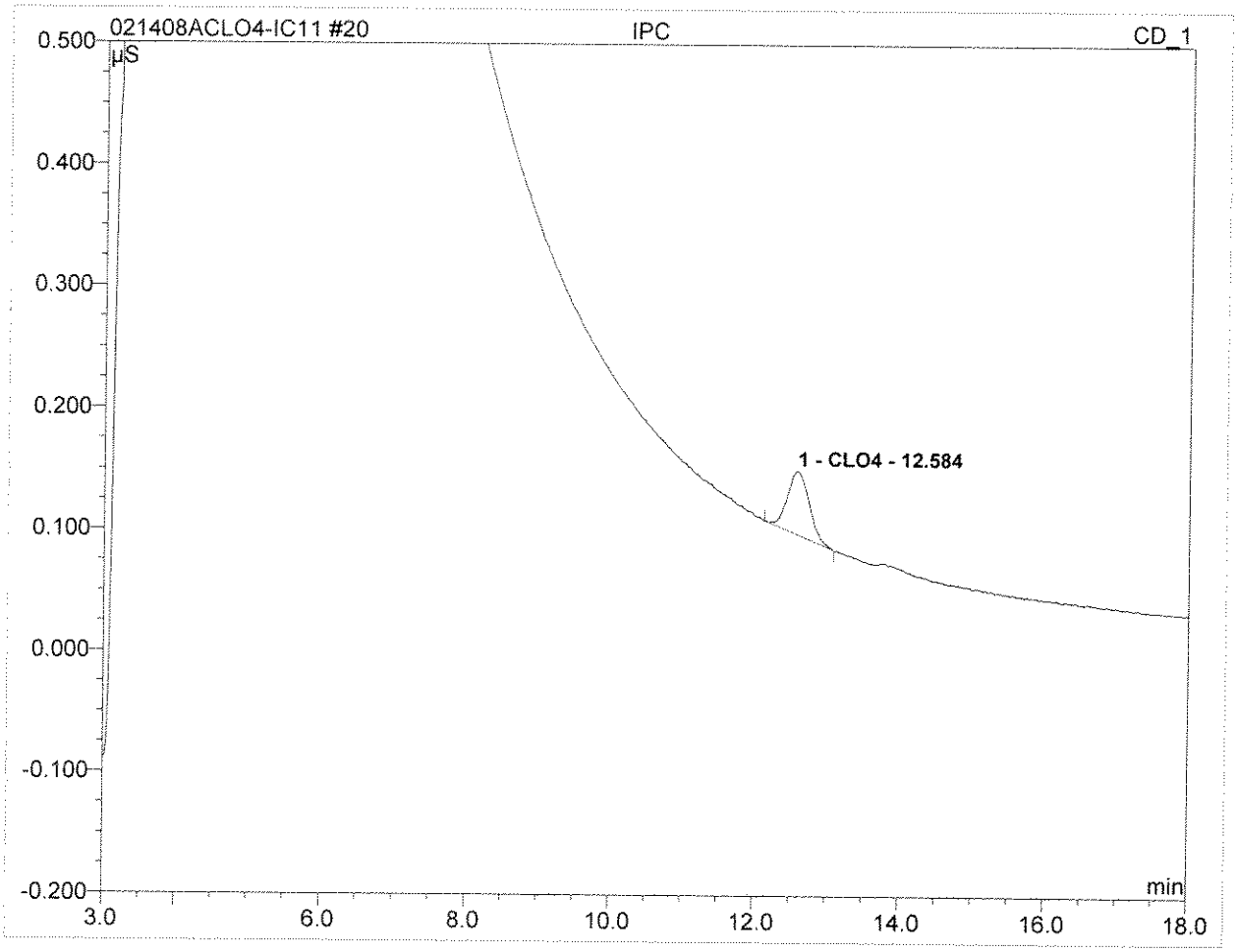


No.	Ret.Time min	Peak Name	Cal.Type	Points	Corr.Coeff. %	Offset	Slope	Curve
1	12.61	CLO4	Quad	6	99.9569	0.0000	0.0008	0.0000
Average:					99.9569	0.0000	0.0008	0.0000

20 IPC

25

Sample Name:	**IPC**	*Channel:*	**CD_1**
Sample Type:	**unknown**	*Control Program:*	**Perchlorate-IC11**
Recording Time:	**02/14/2008 18:10**	*Quantif. Method:*	**IC#4-CLO4-LOW**
Analyst:	**jkz**	*Dilution Factor:*	**1.0000**

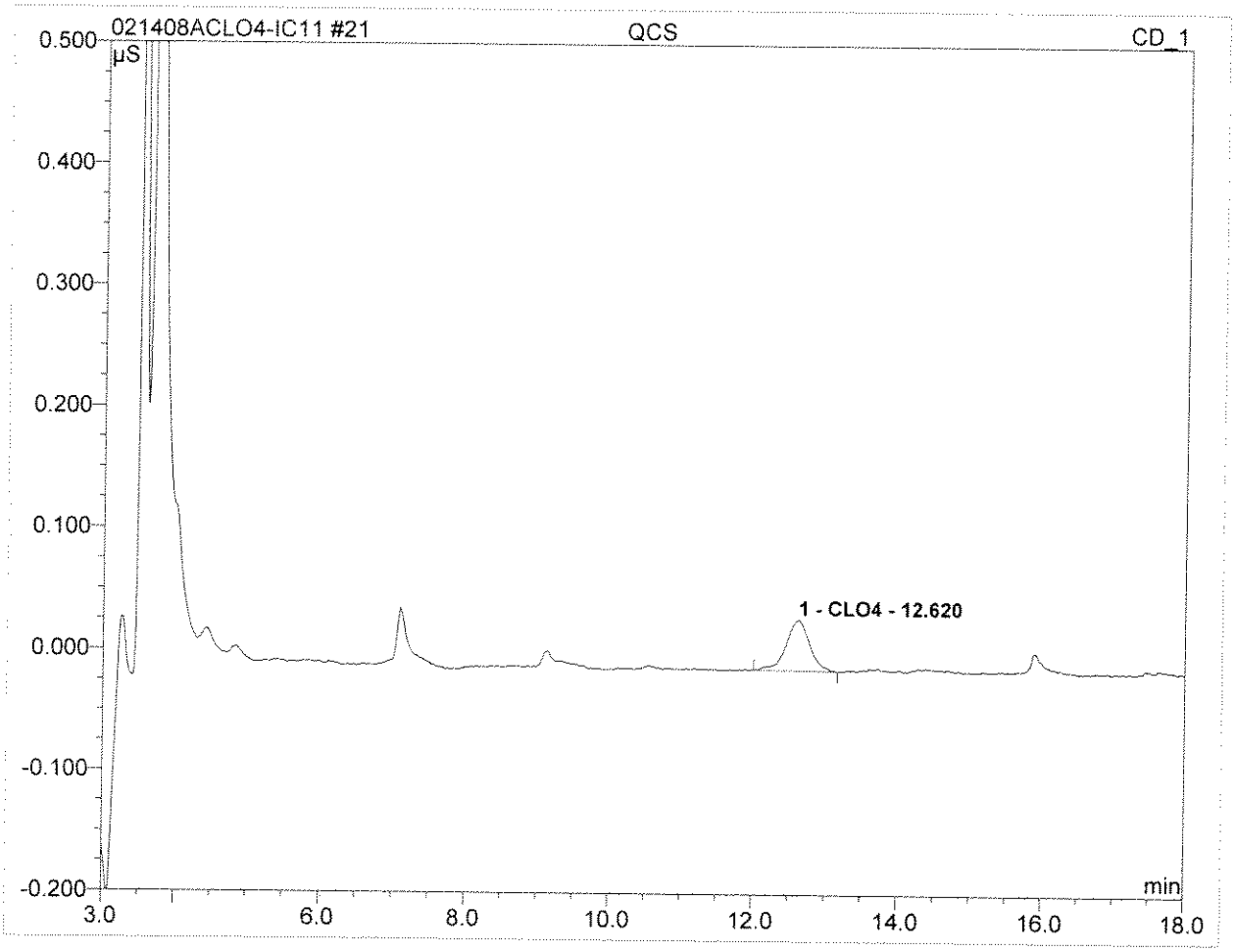


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	12.58	CLO4	0.052	0.018	100.00	22.349	BMB
Total:			0.052	0.018	100.00	22.349	

21 QCS

20

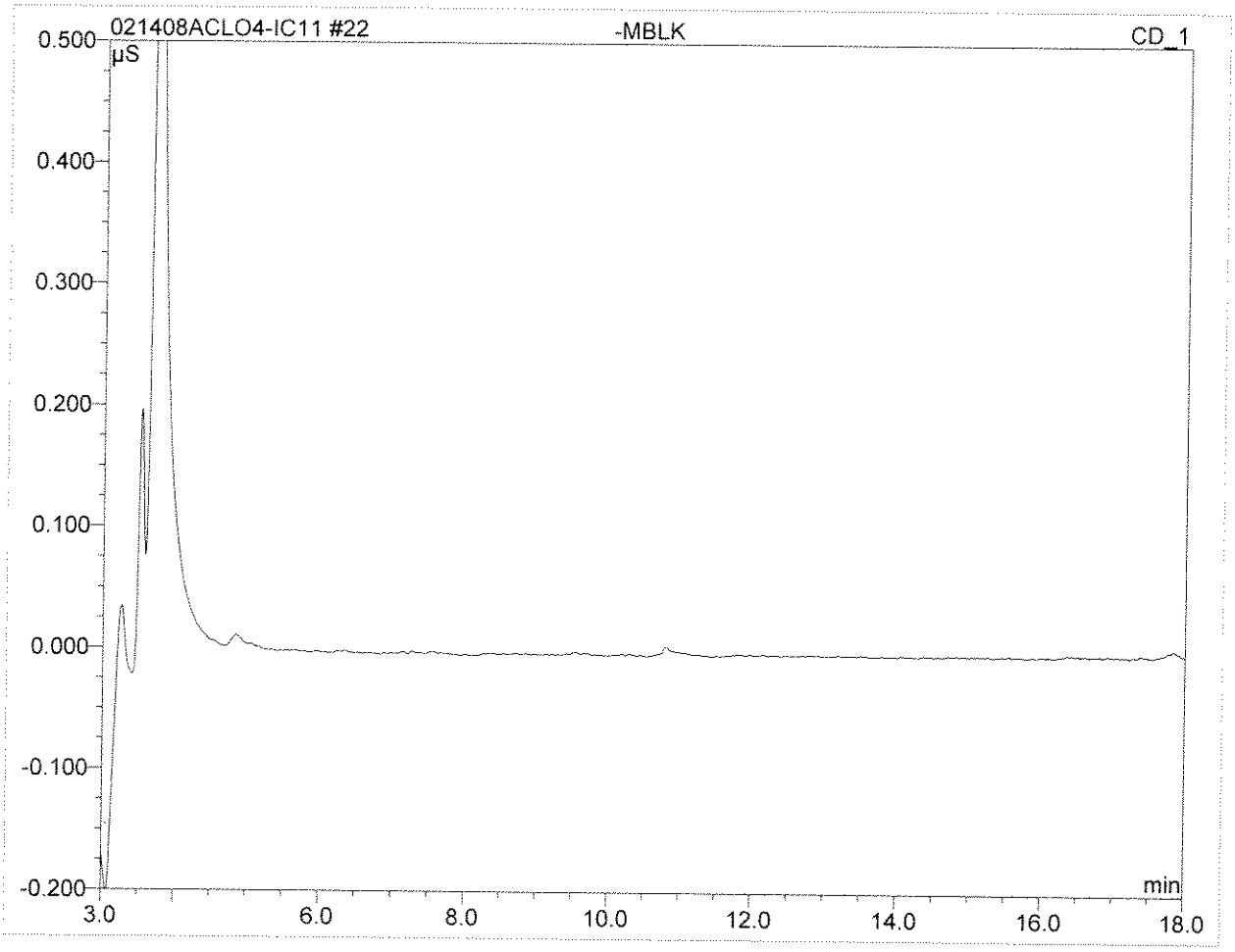
Sample Name:	**QCS**	*Channel:*	**CD_1**
Sample Type:	**unknown**	*Control Program:*	**Perchlorate-IC11**
Recording Time:	**02/14/2008 18:33**	*Quantif. Method:*	**IC#4-CLO4-LOW**
Analyst:	**jkz**	*Dilution Factor:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	12.62	CLO4	0.042	0.016	100.00	19.710	BMB
Total:			0.042	0.016	100.00	19.710	

22 -MBLK

Sample Name:	**-MBLK**	*Channel:*	**CD_1**
Sample Type:	**unknown**	*Control Program:*	**Perchlorate-IC11**
Recording Time:	**02/14/2008 18:55**	*Quantif. Method:*	**IC#4-CLO4-LOW**
Analyst:	**jkz**	*Dilution Factor:*	**1.0000**

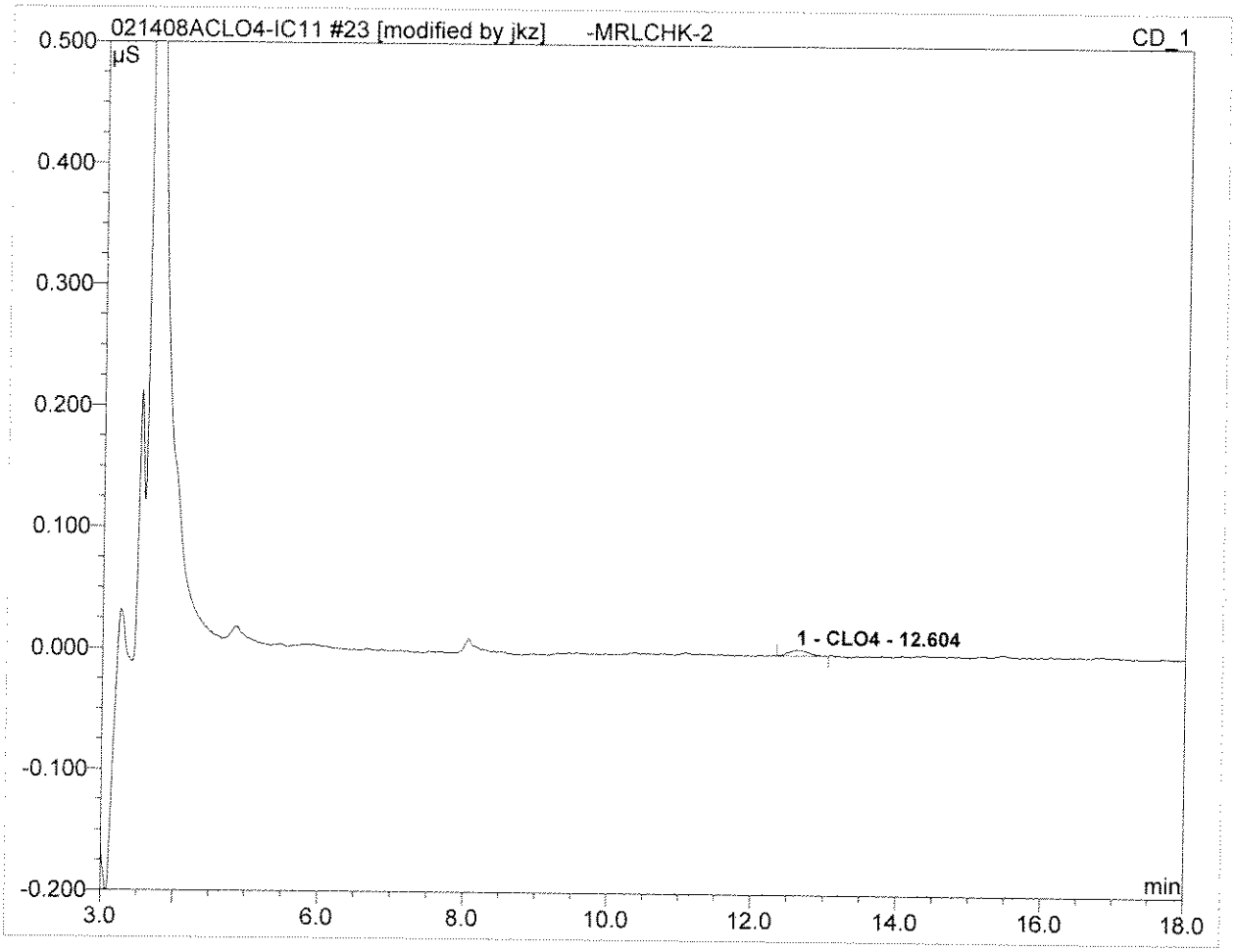


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
Total:			0.000	0.000	0.00	0.000	

23 -MRLCHK-2

2

Sample Name:	**-MRLCHK-2**	*Channel:*	**CD_1**
Sample Type:	**unknown**	*Control Program:*	**Perchlorate-IC11**
Recording Time:	**02/14/2008 19:17**	*Quantif. Method:*	**IC#4-CLO4-LOW**
Analyst:	**jkz**	*Dilution Factor:*	**1.0000**

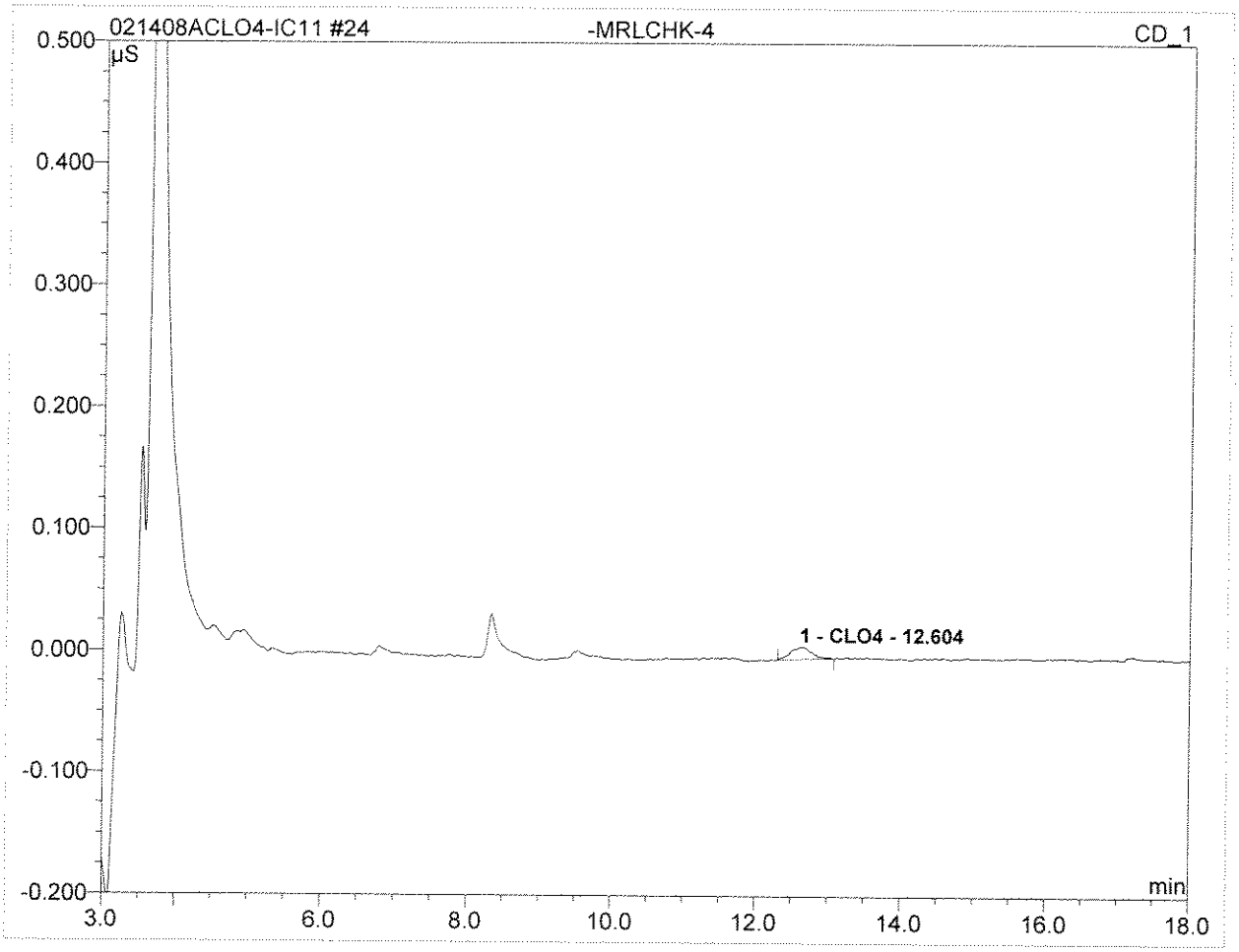


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	12.60	CLO4	0.005	0.002	100.00	2.023	BMB*
Total:			0.005	0.002	100.00	2.023	

24 -MRLCHK-4

4

Sample Name:	**-MRLCHK-4**	*Channel:*	**CD_1**
Sample Type:	**unknown**	*Control Program:*	**Perchlorate-IC11**
Recording Time:	**02/14/2008 19:40**	*Quantif. Method:*	**IC#4-CLO4-LOW**
Analyst:	**jkz**	*Dilution Factor:*	**1.0000**

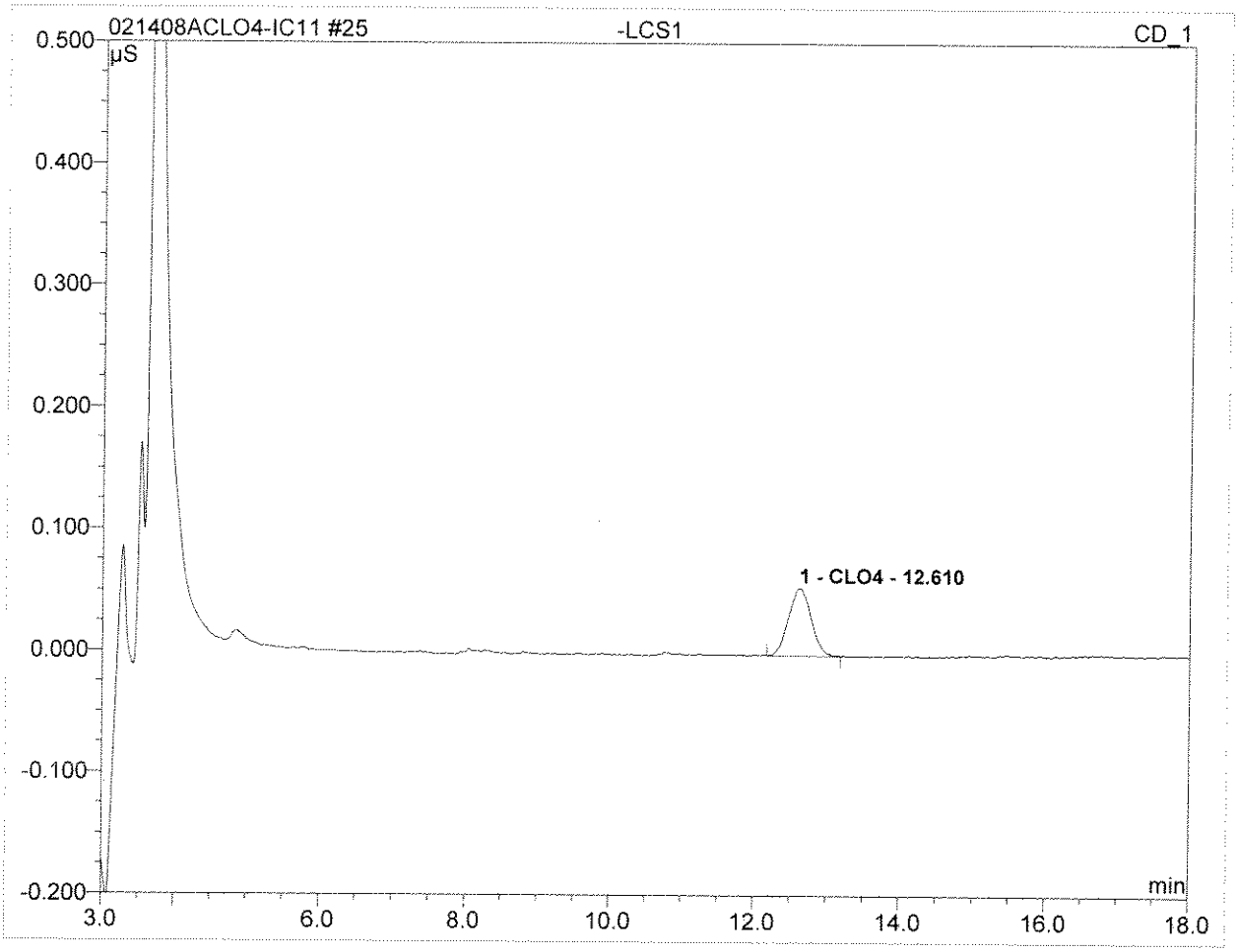


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	12.60	CLO4	0.010	0.003	100.00	4.238	BMB
Total:			0.010	0.003	100.00	4.238	

25 -LCS1

25

Sample Name:	**-LCS1**	*Channel:*	**CD_1**
Sample Type:	**unknown**	*Control Program:*	**Perchlorate-IC11**
Recording Time:	**02/14/2008 20:02**	*Quantif. Method:*	**IC#4-CLO4-LOW**
Analyst:	**jkz**	*Dilution Factor:*	**1.0000**

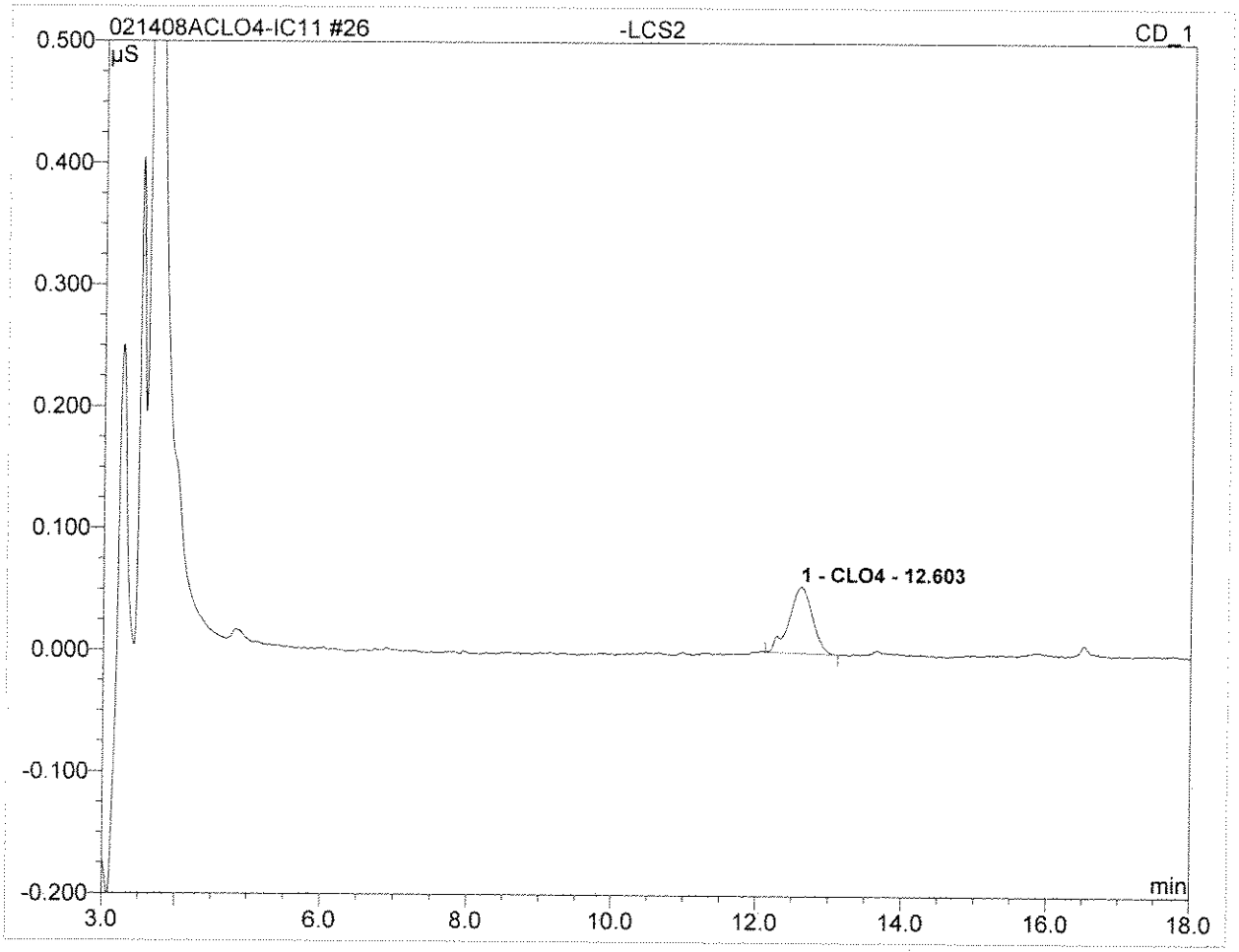


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	12.61	CLO4	0.056	0.020	100.00	24.831	BMB
Total:			0.056	0.020	100.00	24.831	

26 -LCS2

25

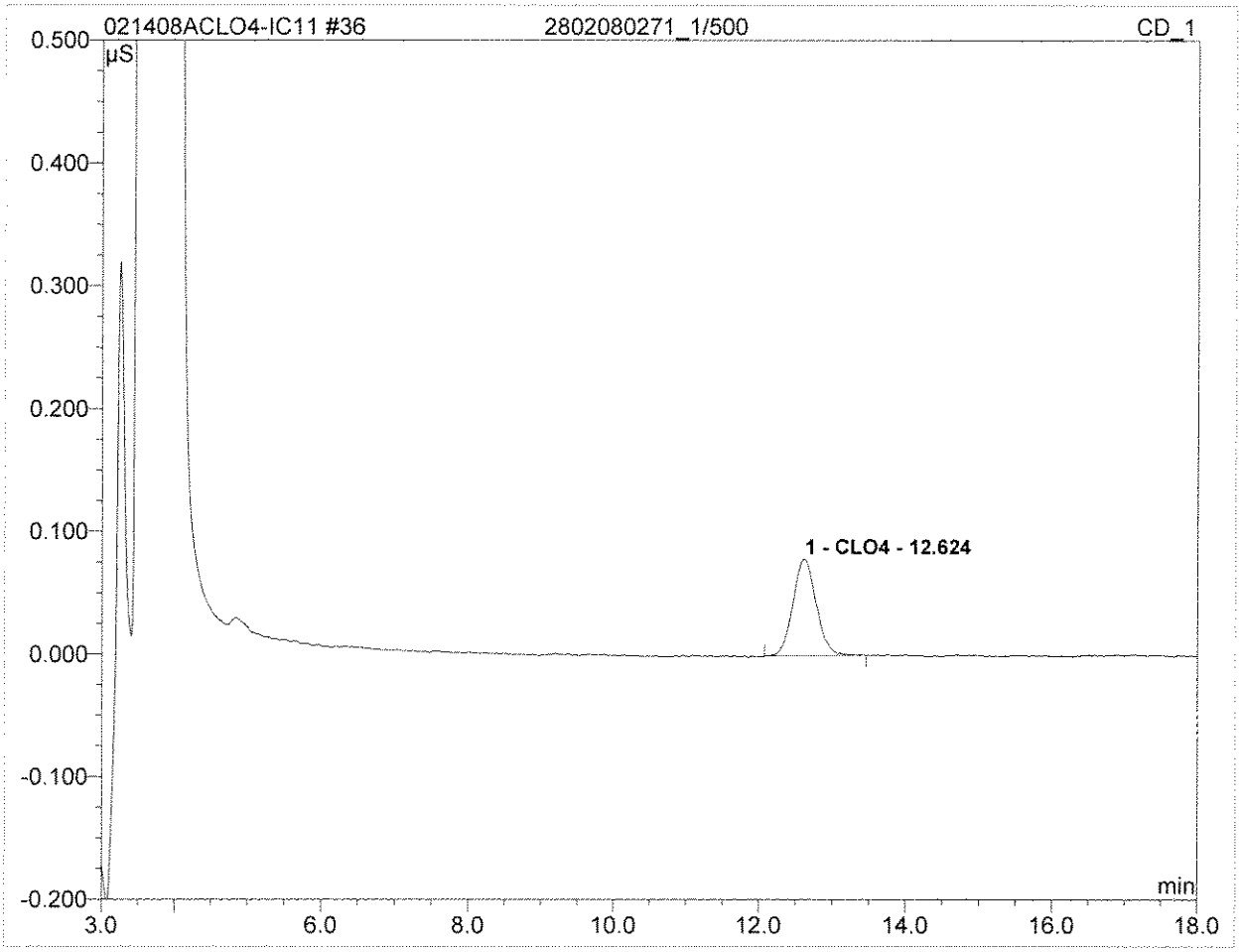
Sample Name:	**-LCS2**	*Channel:*	**CD_1**
Sample Type:	**unknown**	*Control Program:*	**Perchlorate-IC11**
Recording Time:	**02/14/2008 20:25**	*Quantif. Method:*	**IC#4-CLO4-LOW**
Analyst:	**jkz**	*Dilution Factor:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	12.60	CLO4	0.055	0.020	100.00	25.150	BMB
Total:			0.055	0.020	100.00	25.150	

36 2802080271_1/500

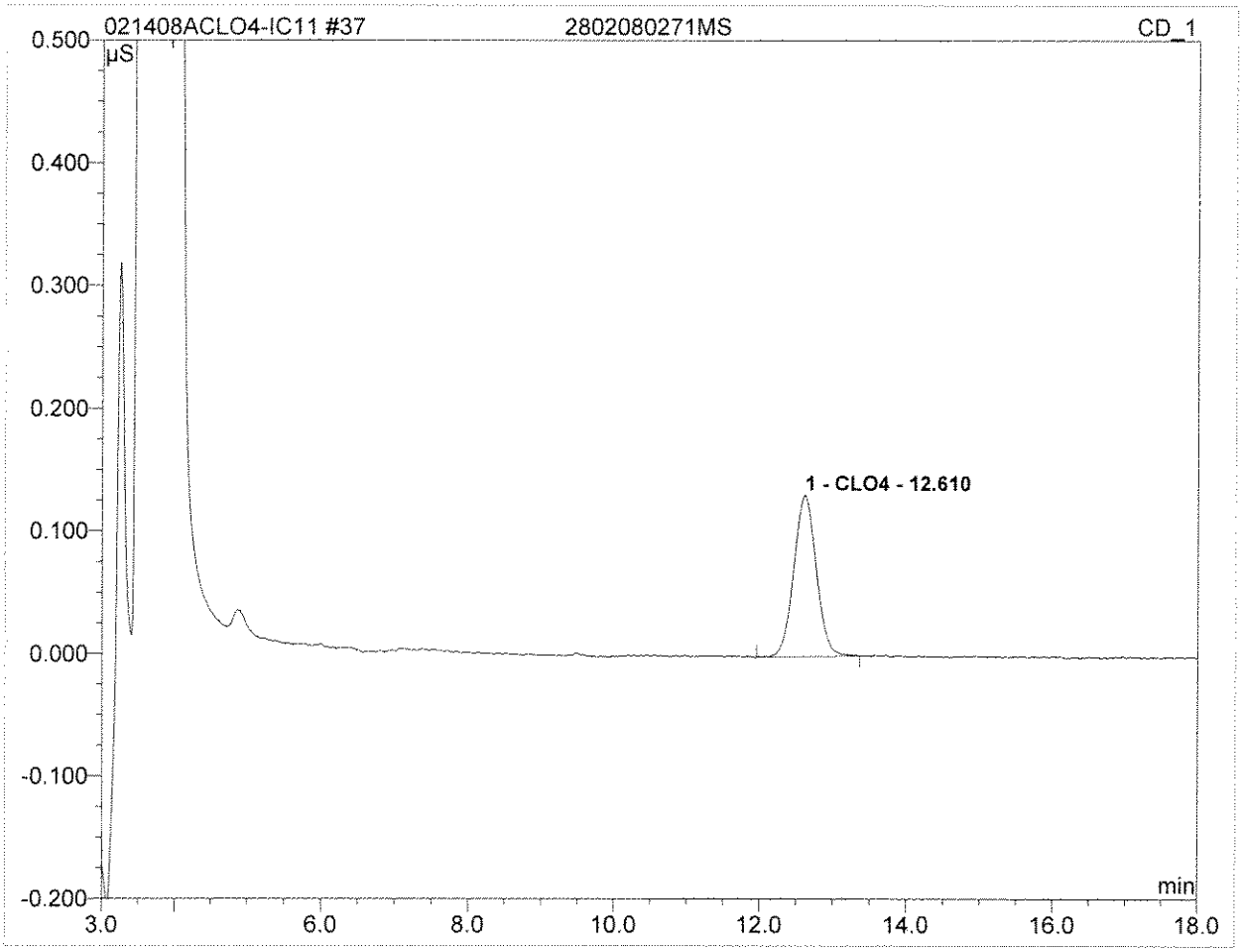
Sample Name:	**2802080271_1/500**	*Channel:*	**CD_1**
Sample Type:	**unknown**	*Control Program:*	**Perchlorate-IC11**
Recording Time:	**02/15/2008 00:09**	*Quantif. Method:*	**IC#4-CLO4-LOW**
Analyst:	**jkz**	*Dilution Factor:*	**500.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	12.62	CLO4	0.079	0.029	100.00	17904.867	BMB
Total:			0.079	0.029	100.00	17904.867	

37 2802080271MS

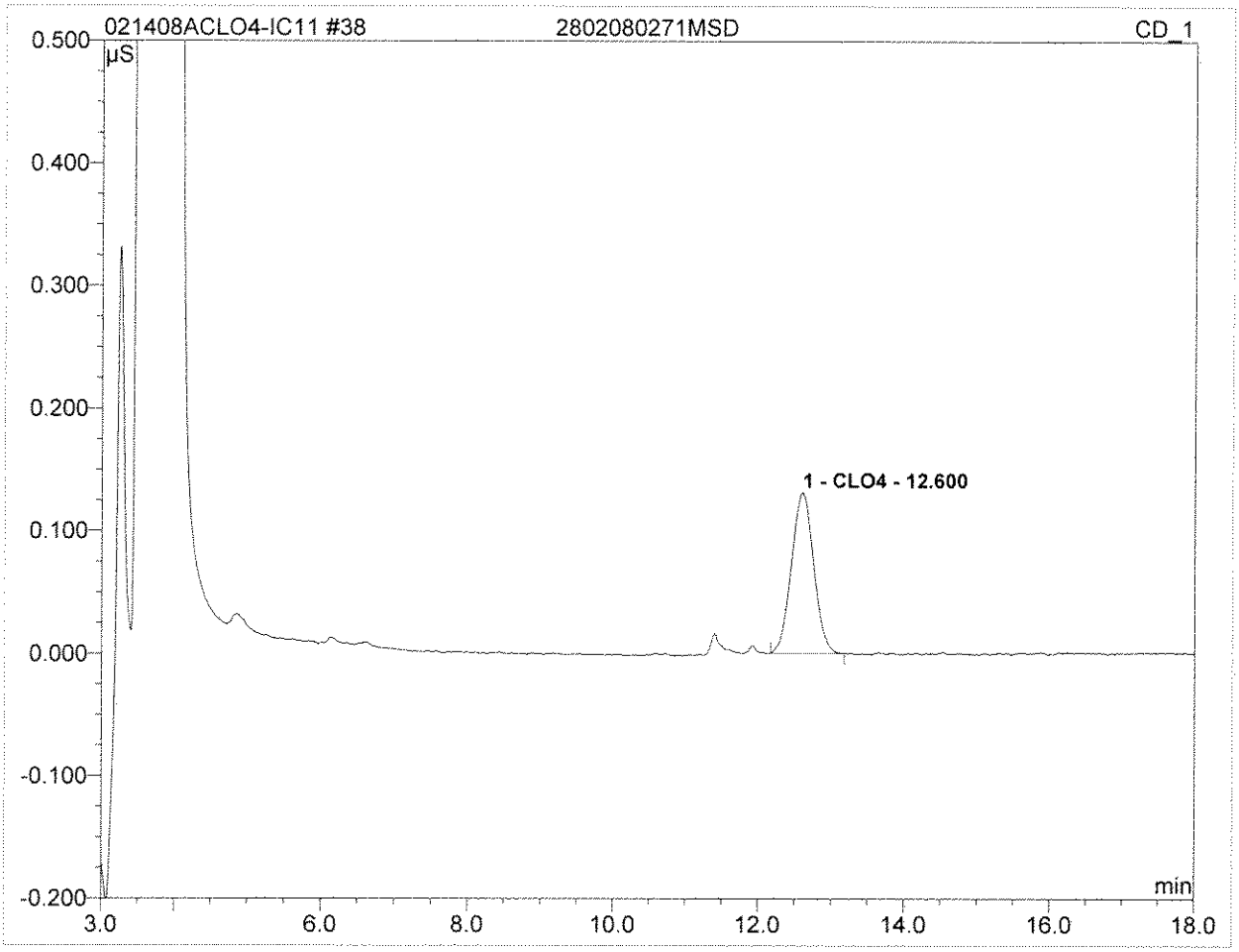
Sample Name:	**2802080271MS**	*Channel:*	**CD_1**
Sample Type:	**unknown**	*Control Program:*	**Perchlorate-IC11**
Recording Time:	**02/15/2008 00:31**	*Quantif. Method:*	**IC#4-CLO4-LOW**
Analyst:	**jkz**	*Dilution Factor:*	**500.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	12.61	CLO4	0.132	0.047	100.00	28966.403	BMB
Total:			0.132	0.047	100.00	28966.403	

38 2802080271MSD

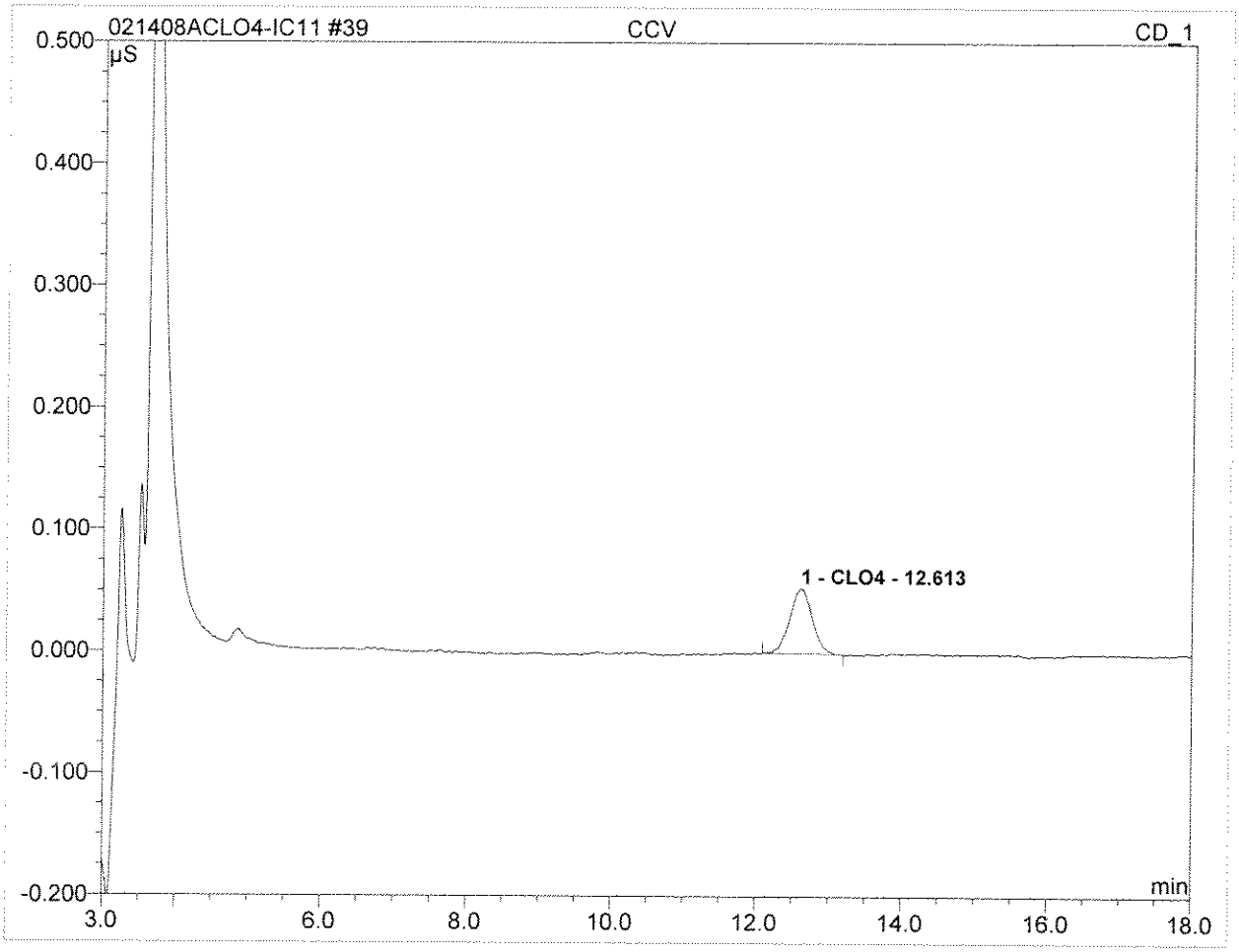
Sample Name:	**2802080271MSD**	*Channel:*	**CD_1**
Sample Type:	**unknown**	*Control Program:*	**Perchlorate-IC11**
Recording Time:	**02/15/2008 00:53**	*Quantif. Method:*	**IC#4-CLO4-LOW**
Analyst:	**jkz**	*Dilution Factor:*	**500.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	12.60	CLO4	0.131	0.047	100.00	28441.705	BMB
Total:			0.131	0.047	100.00	28441.705	

39 CCV

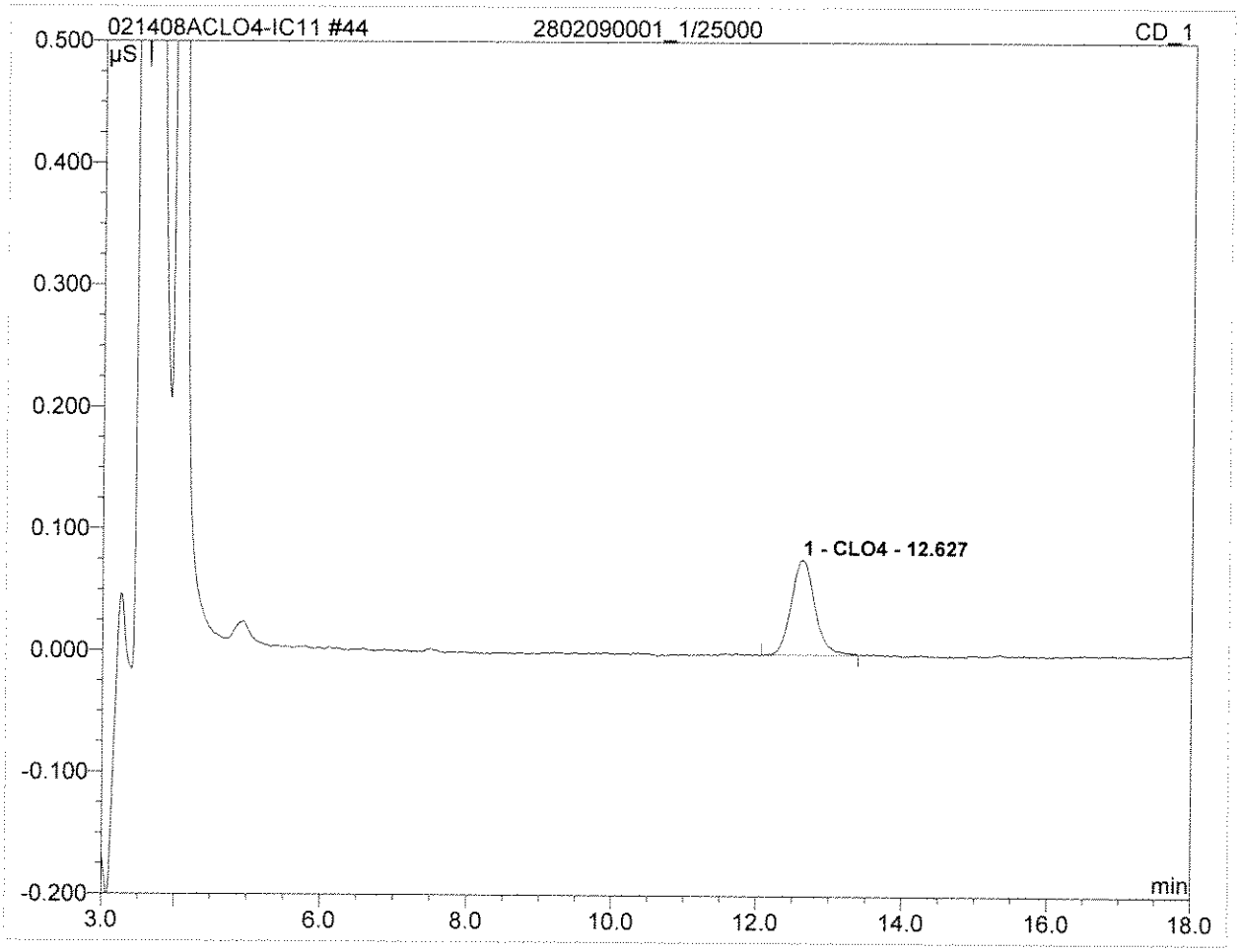
Sample Name:	**CCV**	*Channel:*	**CD_1**
Sample Type:	**unknown**	*Control Program:*	**Perchlorate-IC11**
Recording Time:	**02/15/2008 01:16**	*Quantif. Method:*	**IC#4-CLO4-LOW**
Analyst:	**jkz**	*Dilution Factor:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	12.61	CLO4	0.053	0.019	100.00	23.687	BMB
Total:			0.053	0.019	100.00	23.687	

44 2802090001_1/25000

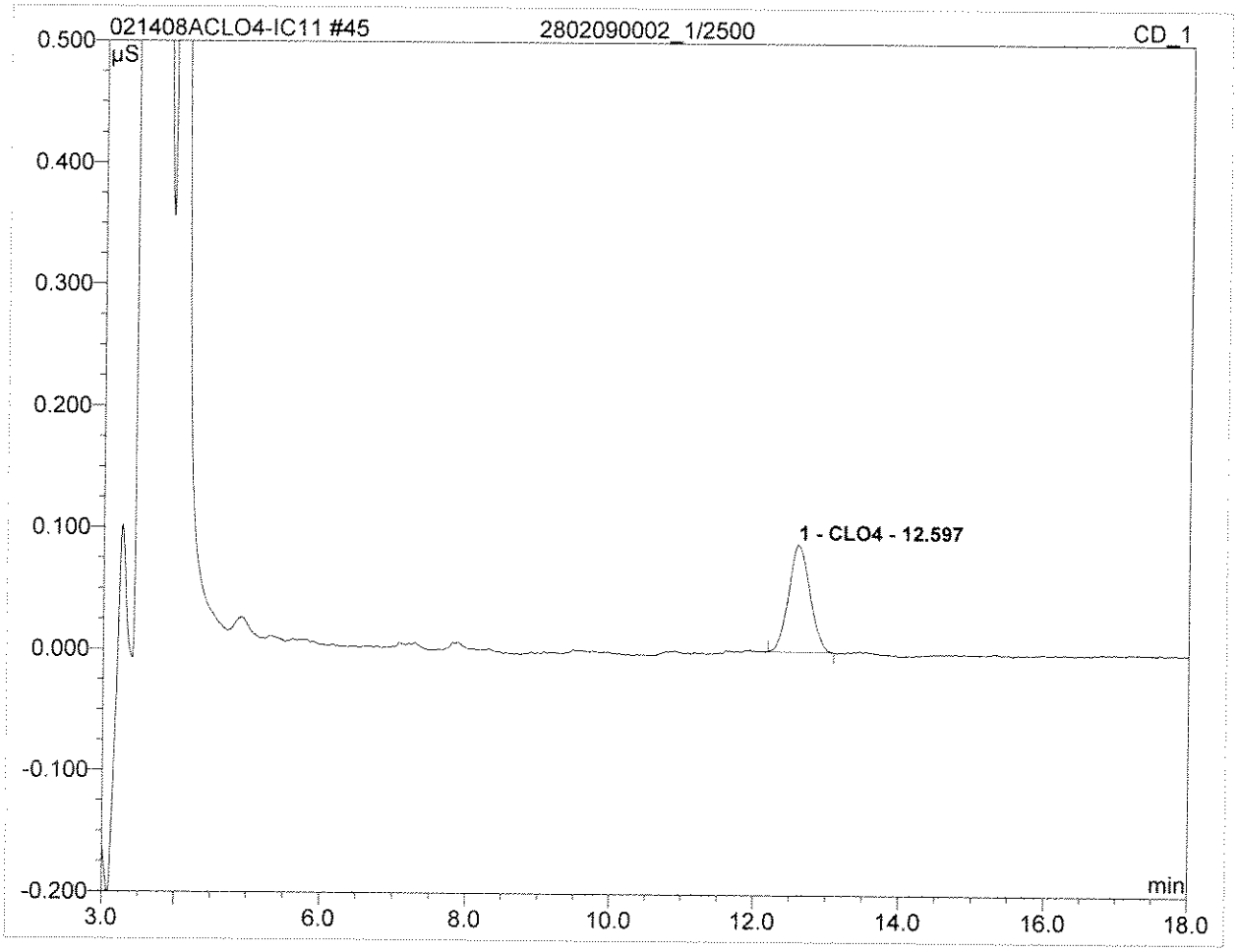
Sample Name:	**2802090001_1/25000**	*Channel:*	**CD_1**
Sample Type:	**unknown**	*Control Program:*	**Perchlorate-IC11**
Recording Time:	**02/15/2008 03:08**	*Quantif. Method:*	**IC#4-CLO4-LOW**
Analyst:	**jkz**	*Dilution Factor:*	**25000.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	12.63	CLO4	0.078	0.030	100.00	906182.563	BMB
Total:			0.078	0.030	100.00	906182.563	

45 2802090002_1/2500

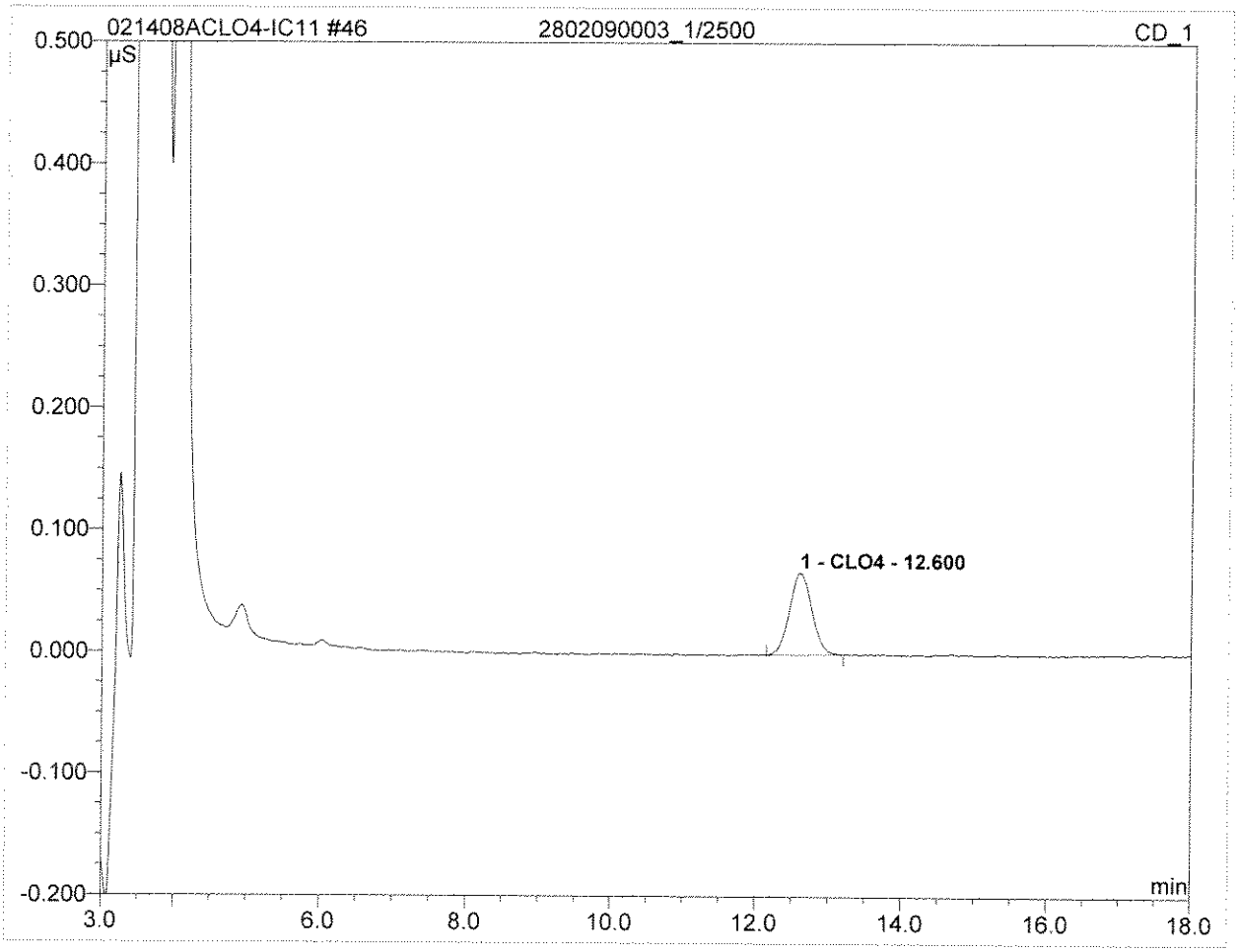
Sample Name:	**2802090002_1/2500**	*Channel:*	**CD_1**
Sample Type:	**unknown**	*Control Program:*	**Perchlorate-IC11**
Recording Time:	**02/15/2008 03:30**	*Quantif. Method:*	**IC#4-CLO4-LOW**
Analyst:	**jkz**	*Dilution Factor:*	**2500.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	12.60	CLO4	0.088	0.030	100.00	92773.076	BMB
Total:			0.088	0.030	100.00	92773.076	

46 2802090003_1/2500

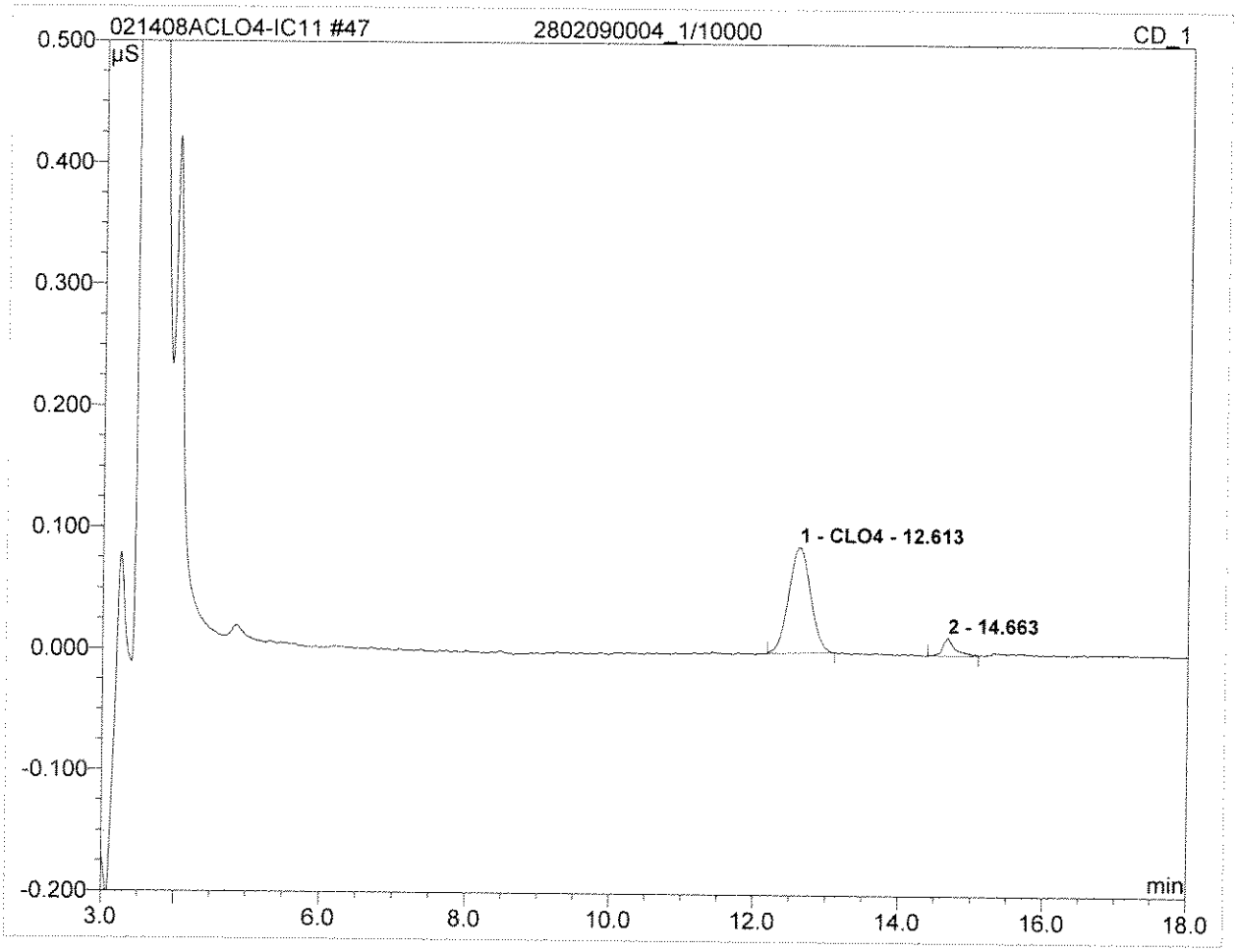
Sample Name:	**2802090003_1/2500**	*Channel:*	**CD_1**
Sample Type:	**unknown**	*Control Program:*	**Perchlorate-IC11**
Recording Time:	**02/15/2008 03:52**	*Quantif. Method:*	**IC#4-CLO4-LOW**
Analyst:	**jkz**	*Dilution Factor:*	**2500.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	12.60	CLO4	0.067	0.024	100.00	74037.953	BMB
Total:			0.067	0.024	100.00	74037.953	

47 2802090004_1/10000

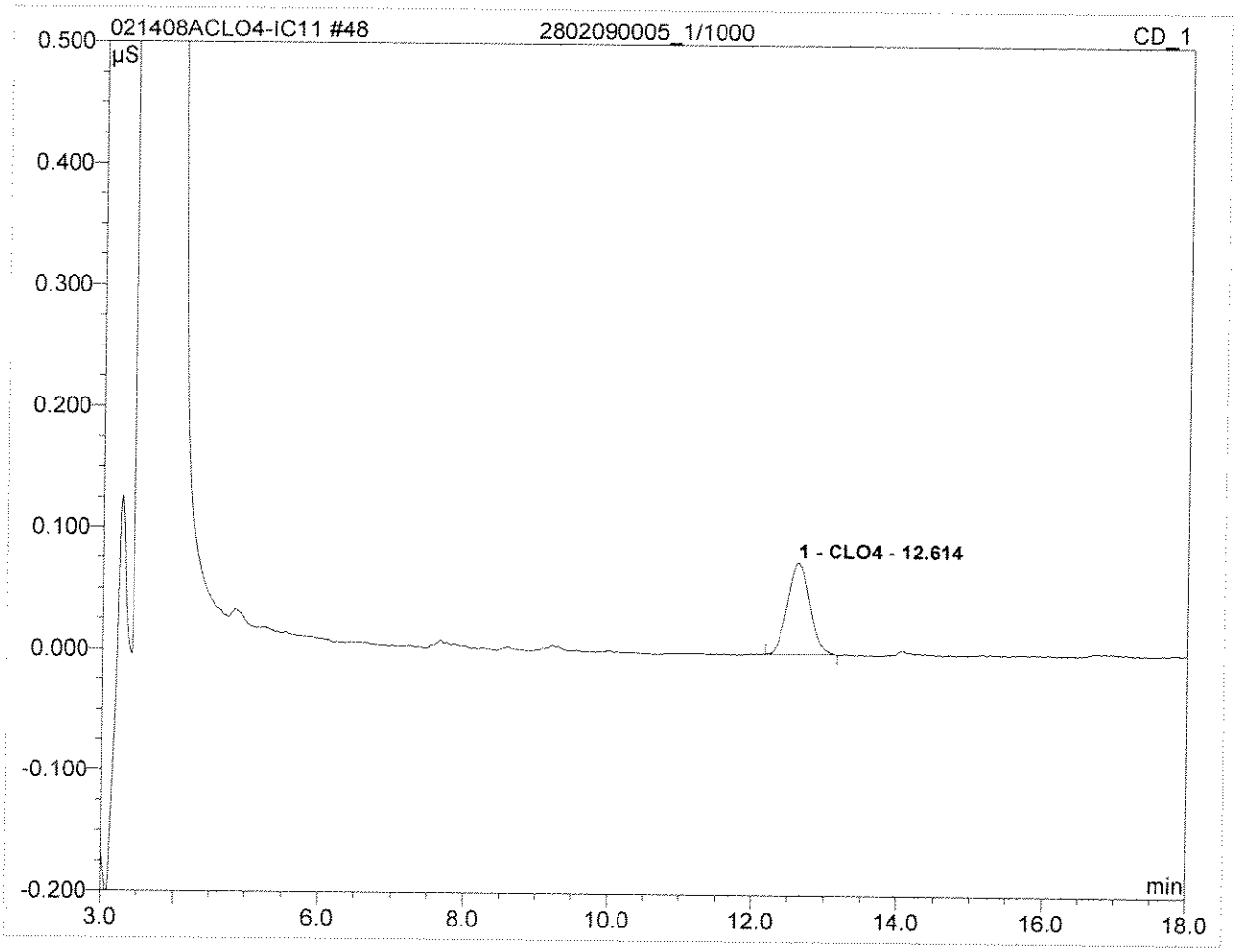
Sample Name:	**2802090004_1/10000**	*Channel:*	**CD_1**
Sample Type:	**unknown**	*Control Program:*	**Perchlorate-IC11**
Recording Time:	**02/15/2008 04:15**	*Quantif. Method:*	**IC#4-CLO4-LOW**
Analyst:	**jkz**	*Dilution Factor:*	**10000.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	12.61	CLO4	0.087	0.031	91.67	375007.795	BMB
Total:			0.087	0.031	91.67	375007.795	

48 2802090005_1/1000

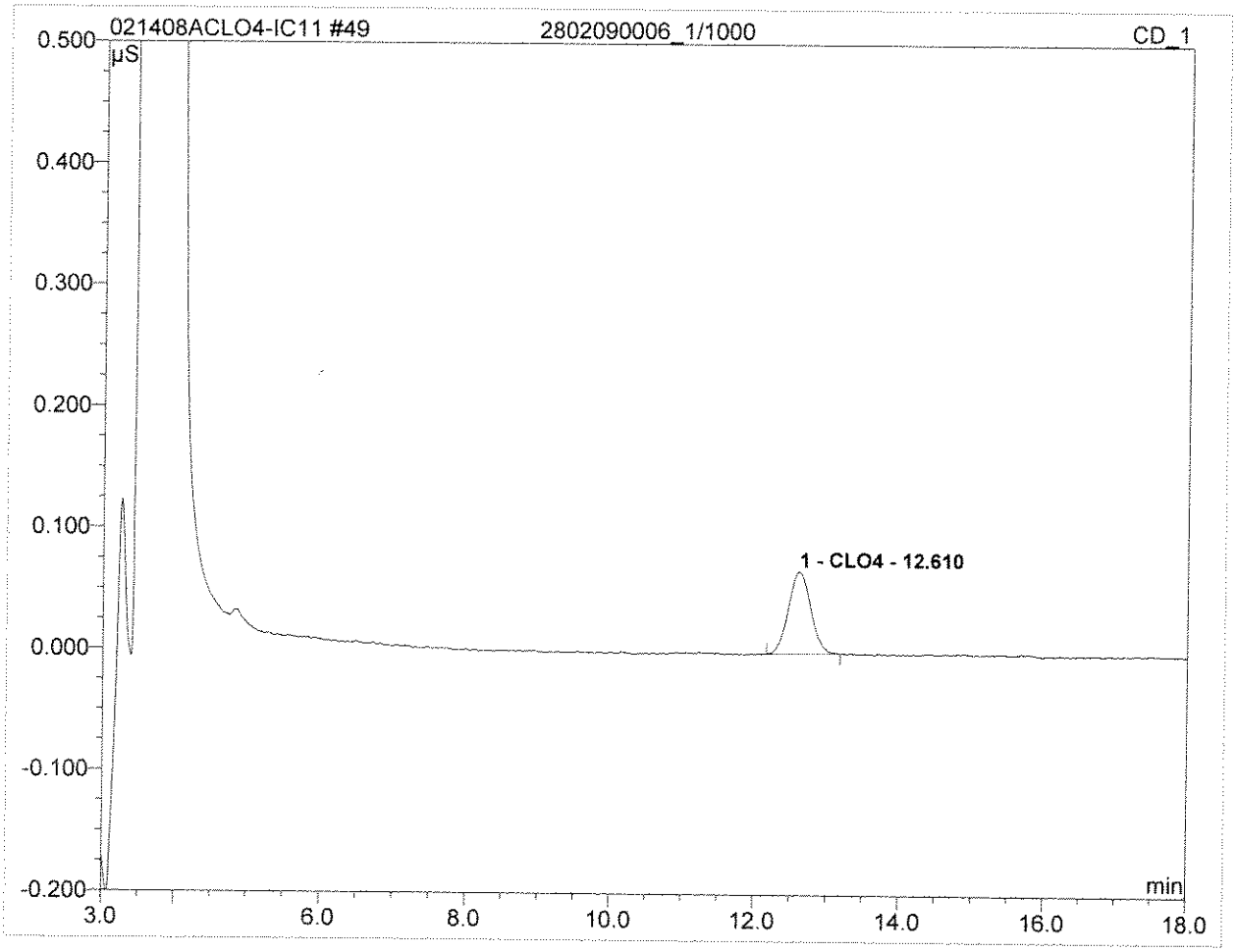
Sample Name:	**2802090005_1/1000**	*Channel:*	**CD_1**
Sample Type:	**unknown**	*Control Program:*	**Perchlorate-IC11**
Recording Time:	**02/15/2008 04:37**	*Quantif. Method:*	**IC#4-CLO4-LOW**
Analyst:	**jkz**	*Dilution Factor:*	**1000.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	12.61	CLO4	0.075	0.026	100.00	32422.587	BMB
Total:			0.075	0.026	100.00	32422.587	

49 2802090006_1/1000

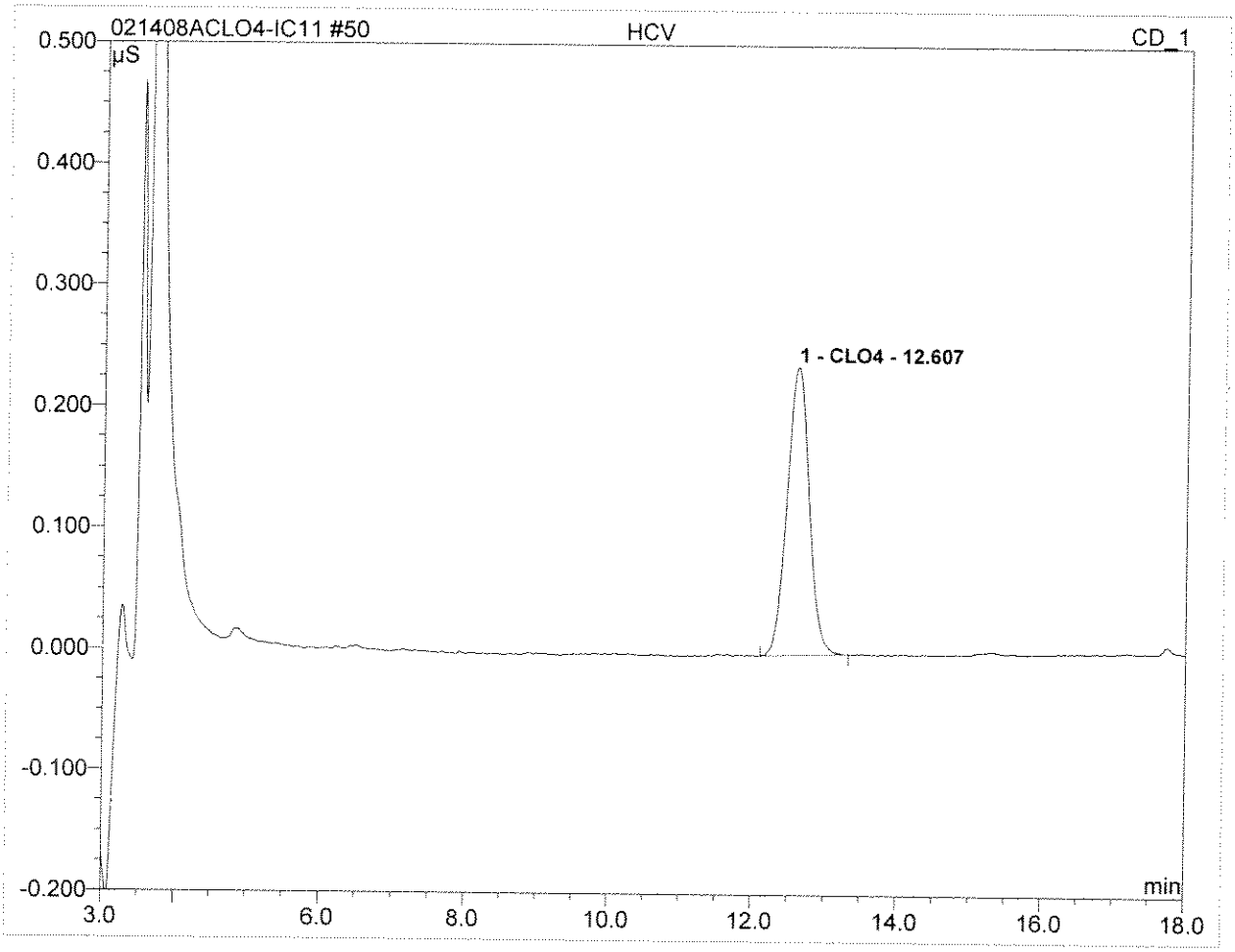
Sample Name:	**2802090006_1/1000**	*Channel:*	**CD_1**
Sample Type:	**unknown**	*Control Program:*	**Perchlorate-IC11**
Recording Time:	**02/15/2008 05:00**	*Quantif. Method:*	**IC#4-CLO4-LOW**
Analyst:	**jkz**	*Dilution Factor:*	**1000.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	12.61	CLO4	0.068	0.024	100.00	29937.810	BMB
Total:			0.068	0.024	100.00	29937.810	

50 HCV

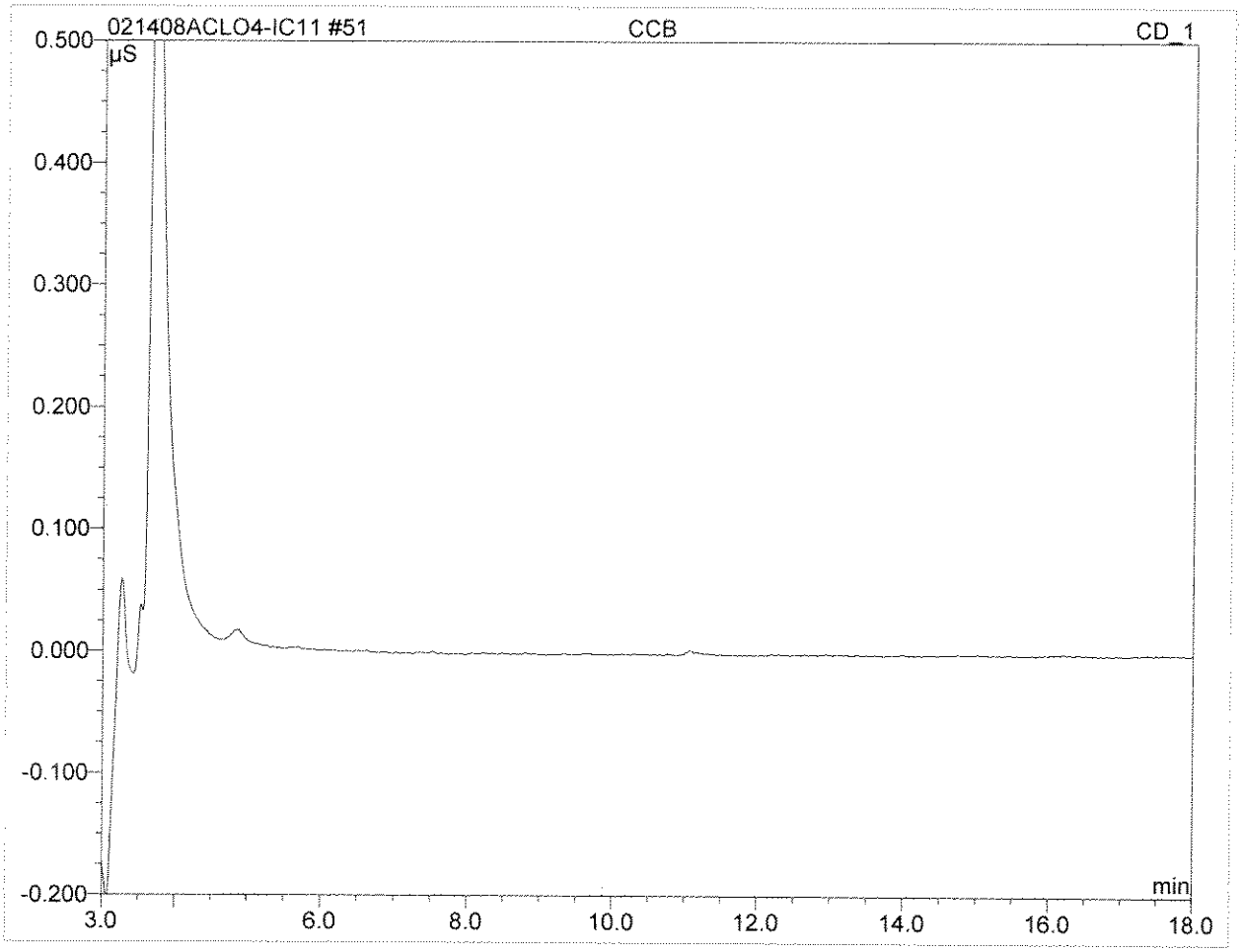
Sample Name:	**HCV**	*Channel:*	**CD_1**
Sample Type:	**unknown**	*Control Program:*	**Perchlorate-IC11**
Recording Time:	**02/15/2008 05:22**	*Quantif. Method:*	**IC#4-CLO4-LOW**
Analyst:	**jkz**	*Dilution Factor:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	12.61	CLO4	0.238	0.084	100.00	102.135	BMB
Total:			0.238	0.084	100.00	102.135	

51 CCB

Sample Name:	**CCB**	*Channel:*	**CD_1**
Sample Type:	**unknown**	*Control Program:*	**Perchlorate-IC11**
Recording Time:	**02/15/2008 05:44**	*Quantif. Method:*	**IC#4-CLO4-LOW**
Analyst:	**jkz**	*Dilution Factor:*	**1.0000**



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

Perchlorate QC Checklist

rev: 27 Mar 03

Analysis Date: 02/15/08 **Analyst:** JKZ

Instrument: IC11 **Calculated MCT Level:** ~~1365~~ 3155 umhos/cm **QC'd by** M **Date** 24 Feb 08

Original IPC conductance: ~~1300~~ 3100 umhos/cm **Daily IPC conductance:** ~~1300~~ ~3100 umhos/cm Analyst mistyped number from an earlier unknown. Measurement was not taken. CMK 29 Mar 08

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-ClO4 only*: ICCSCV at 2ppb is within 50%-150% (1-3ppb)

— *ClO4 only*: MRL at 4ppb is within 75%-125% (3-5ppb) PDA/H = 5.892 /

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

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

— IPC Conductance level is within 10% of the original

LCS/LCSD (25ppb)

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

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

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

— Recoveries are within 80%-120% (20-30ppb) for 25ppb spike ___ (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

NA 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

NA QIR needed for failed QC

— QIR needed for samples analyzed outside of hold time

Possible violation of method.

28 Dec 05; Rev 5
MWH Confidential

24 Feb 08

MWH Laboratories
750 Royal Oaks Drive, Suite 100
Monrovia, CA 91016-3629

02/18/08 JY
~~02/15/08~~ 7
~~2/18/08~~ JY

CONDUCTIVITY MW SOP REVISION 5
SM2510B

Analysis Date: 2/18/08
Analyst: DC
Reviewed By: MVE
LIMS Check By:

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

Time of Analysis Start: 9:33 End: 9:56
MRL 2umhos/cm: R# — exp of solution: —
KCl Std 1412 R# 201752 exp of solution 9/3/08
TV = 1412 µmho/cm @ 25°C for 0.0100M
Reading: 1424
Instrument: YSI Model 3200 SN:01A0504, Year Aquired 2001 New

Run #	Sample Number	Sample ID	Client	Date Collected	Temp °C	pH	Scale (µmho/mmho)	Result: Instrument	Result: Reported (µmho/cm)	Comments
Blk	Blank								.4983	
STD	MRL 2umhos/cm								~~—~~ NA	1-3—±50% of TV
STD	KCl - 1000 mhos/cm								999.9	950-1050—±5% of TV
1	280209 0007	I-N	KENE-MP	2/08/08					12000	
2	280212 0531	ART-1		2/11/08					9999	
3	532	ART-2		2/11/08					14000	
4	533	ART-3		2/11/08					12000	
5	534	ART-4		2/11/08					7842	
6	535	ART-5		2/11/08					2629	
7	536	ART-6		2/11/08					9656	
8	537	ART-7		2/11/08					13000	
9	538	ART-8		2/11/08					13000	
10	539	PC-99R2/R3		2/11/08					7482	7
DUP	539d	PC-99R2/R3		2/11/08					7482	RPD < 5%
11	540	PC-115R		2/11/08					7075	
12	541	PC-116R		2/11/08					6262	
13	542	~~DEEP~~ OVERBANK FLOW		2/11/08					4535	
14	543	SD1		2/11/08					9233	
15	544	PC-117		2/11/08					4469	
16	545	PC-118		2/11/08					6000	
17	546	PC-119		2/11/08					4433	
18	547	PC-120		2/11/08					3856	
19	548	PC-121		2/11/08					3949	
20	754	WELL N	NEWHALL	2/12/08					999.9	
DUP	754d	WELL N	NEWHALL	2/12/08					999.9	RPD < 5%
STD	KCl - 10 mhos/cm								NA	8-12—RPD < 20% of TV

% RPD = |S1-S2| * 100
(S1+S2)/2

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

Sample No.	Sample Name	Dil.Fac.	Comment	Time	Amount CLO4 CD_1	
1	WASH	1.0		02.14.08 14:46	n.a.	
2	autocal1	1.0	2	02.14.08 15:11	n.a.	
3	autocal2	1.0	2	02.14.08 15:33	1.9030	
4	autocal3	1.0	4	02.14.08 15:56	3.3185	
5	autocal4	1.0	10	02.14.08 16:18	10.5862	
6	autocal5	1.0	25	02.14.08 16:41	22.9973	
7	autocal6	1.0	50	02.14.08 17:03	51.3928	
8	autocal7	1.0	100	02.14.08 17:25	99.7745	
9	QCS	1.0	20	02.15.08 18:37	19.3746	96.9%
10	IPC	1.0	25	02.15.08 18:59	21.8161	87.3%
11	-MBLK	1.0		02.15.08 19:21	n.a.	
12	-MRLCHK-2	1.0	2	02.15.08 19:44	n.e. ~~4.4619~~	~~73~~ %
13	-MRLCHK-4	1.0	4	02.15.08 20:06	3.1346	78.4%
14	-LCS1	1.0	25	02.15.08 20:29	25.9203	104%
15	-LCS2	1.0	25	02.15.08 20:51	25.9156	104%
16	2802090007_1/50000	50000.0		02.15.08 21:13	1115069.6799	
17	2802120531_1/5	5.0	dilution not enough for ECD v. MCP	02.15.08 21:36	41.7645	rerun
18	2802120532_1/2500	2500.0		02.15.08 21:58	75268.0427	
19	2802120533_1/10000	10000.0		02.15.08 22:21	322349.9855	
20	2802120534_1/10000	10000.0		02.15.08 22:43	250578.1023	
21	2802120535_1/10000DNR	10000.0		02.15.08 23:05	n.a.	
22	2802120536_1/10000	10000.0		02.15.08 23:28	305097.4965	
23	2802120537_1/5000	5000.0		02.15.08 23:50	128016.7623	
24	2802120538_1/10000	10000.0		02.16.08 00:13	233330.3282	
25	2802120539_1/500	500.0		02.16.08 00:35	13328.9211	
26	2802120539MS	500.0		02.16.08 00:57	24879.3750	23.1/92.4%
27	2802120539MSD	500.0		02.16.08 01:20	24556.2413	22.4/89.8%
28	CCV	1.0		02.16.08 01:42	23.5194	94.1%
29	2802120540_1/500	500.0		02.16.08 02:05	12224.1344	
30	2802120541_1/250	250.0		02.16.08 02:27	9282.9210	
31	2802120542_1/5	5.0		02.16.08 02:49	16.7064	
32	2802120543_1/5	5.0	rerun. Dilution not enough for ECD MCP	02.16.08 03:12	n.a.	DNR
33	2802120545_1/250	250.0		02.16.08 03:34	7973.7344	
34	2802120546_1/100	100.0		02.16.08 03:57	2168.0553	
35	2802120547_1/100	100.0		02.16.08 04:19	734.0749	
36	2802120548_1/100	100.0		02.16.08 04:41	781.6820	
37	2802120754	1.0		02.16.08 05:04	n.a.	
38	HCV	1.0		02.16.08 05:26	103.1347	103%
39	HCV	1.0		02.16.08 05:49	101.5064	
40	CCB	1.0		02.16.08 06:11	n.a.	
41	CCB	1.0		02.16.08 06:33	n.a.	
42	STOP	1.0		02.16.08 06:56	n.a.	

No sample should be reported w/ <2ppb MRL. Peak is not high enough to be above noise. 24 Feb 08

Title:
Datasource: Dionex_USPAS2SDIO2
Location: IC\IC11_CLO4\2008\FEB
Timebase: IC11
#Samples: 42

Created: 2/14/2008 3:47:06 PM by jkz
Last Update: 2/18/2008 2:26:17 PM by jkz

No.	Name	Sample ID	Dil. Factor	Type	Comment	Status
1	WASH		1.0000	Unknown		Finished
2	autocal1		1.0000	Standard	2	Finished
3	autocal2	R201449 EXP 07/28/09	1.0000	Standard	2	Finished
4	autocal3		1.0000	Standard	4	Finished
5	autocal4		1.0000	Standard	10	Finished
6	autocal5		1.0000	Standard	25	Finished
7	autocal6		1.0000	Standard	50	Finished
8	autocal7		1.0000	Standard	100	Finished
9	QCS	R201789 EXP 07/10/09	1.0000	Unknown	20	Finished
10	IPC	EC=3155	1.0000	Unknown	25	Finished
11	-MBLK		1.0000	Unknown		Finished
12	-MRLCHK-2	2	1.0000	Unknown	2	Finished
13	-MRLCHK-4	4	1.0000	Unknown	4	Finished
14	-LCS1	25	1.0000	Unknown	25	Finished
15	-LCS2	25	1.0000	Unknown	25	Finished
16	2802090007_1/50000	KERR-N-1	50000.0000	Unknown		Finished
17	2802120531_1/5	KERR-ART 1	5.0000	Unknown		Finished
18	2802120532_1/2500	KERR-ART 2	2500.0000	Unknown		Finished
19	2802120533_1/10000	KERR-ART 3	10000.0000	Unknown		Finished
20	2802120534_1/10000	KERR-ART 4	10000.0000	Unknown		Finished
21	2802120535_1/10000DNR	KERR-ART 5	10000.0000	Unknown		Finished
22	2802120536_1/10000	KERR-ART 6	10000.0000	Unknown		Finished
23	2802120537_1/5000	KERR-ART 7	5000.0000	Unknown		Finished
24	2802120538_1/10000	KERR-ART 8	10000.0000	Unknown		Finished
25	2802120539_1/500	KERR-P-99R2/R3	500.0000	Unknown		Finished
26	2802120539MS	25	500.0000	Unknown		Finished
27	2802120539MSD	25	500.0000	Unknown		Finished
28	CCV	25	1.0000	Unknown		Finished
29	2802120540_1/500	KERR-PC-115R	500.0000	Unknown		Finished
30	2802120541_1/250	KERR-PC-116R	250.0000	Unknown		Finished
31	2802120542_1/5	KERR-SEEP SURF	5.0000	Unknown		Finished
32	2802120543_1/5	KERR-SF-1	5.0000	Unknown		Finished
33	2802120545_1/250	KERR-PC-118	250.0000	Unknown		Finished
34	2802120546_1/100	KERR-PC-119	100.0000	Unknown		Finished
35	2802120547_1/100	KERR-PC-120	100.0000	Unknown		Finished
36	2802120548_1/100	KERR-PC-121	100.0000	Unknown		Finished
37	2802120754	NEWHALL	1.0000	Unknown		Finished
38	HCV		1.0000	Unknown		Finished
39	HCV		1.0000	Unknown		Finished
40	CCB		1.0000	Unknown		Finished
41	CCB		1.0000	Unknown		Finished
42	STOP		1.0000	Unknown		Interrupted

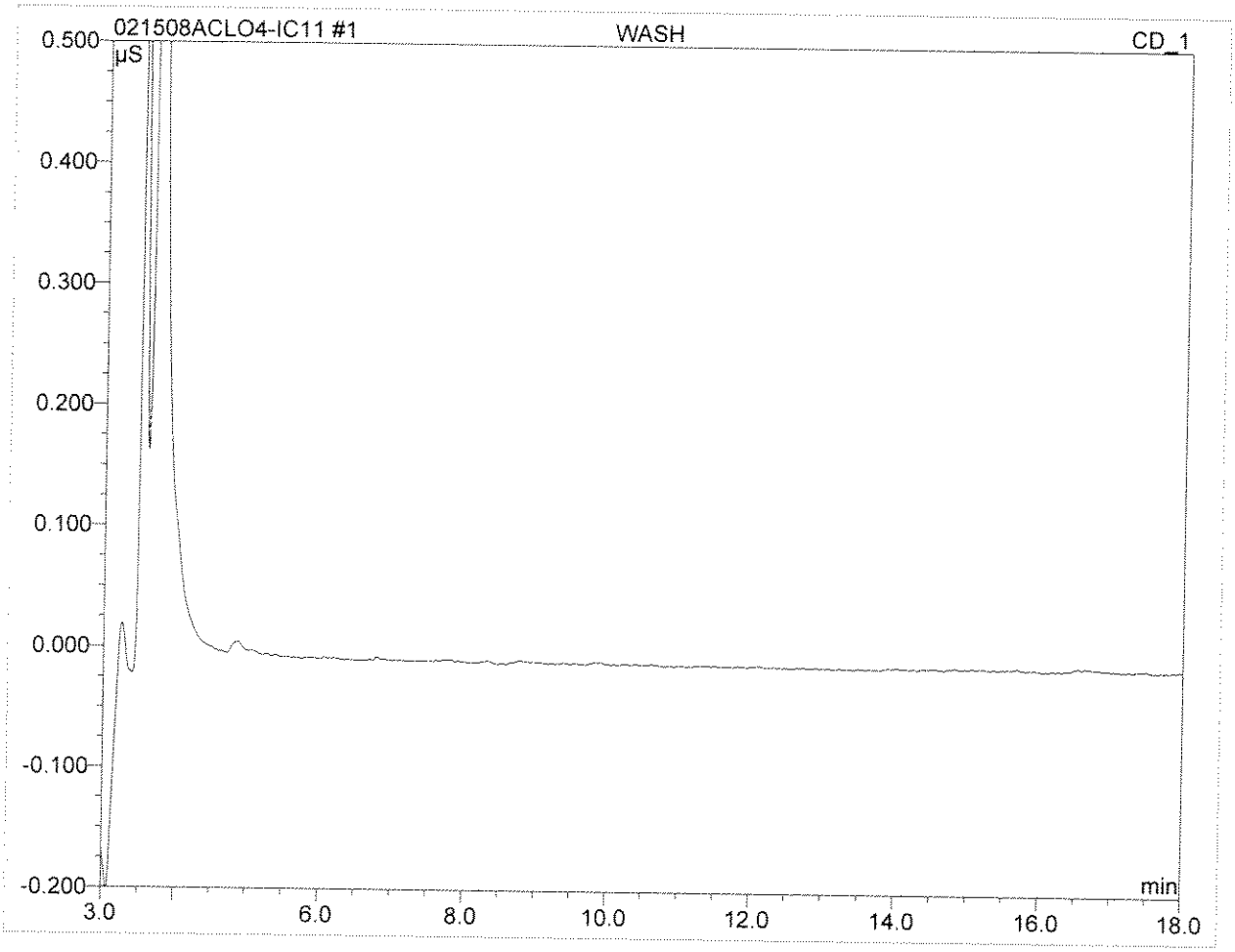
Title:
Datasource: Dionex_USPAS2SDIO2
Location: IC\IC11_CLO4\2008\FEB
Timebase: IC11
#Samples: 42

Created: 2/14/2008 3:47:06 PM by jkz
Last Update: 2/18/2008 2:26:17 PM by jkz

No.	Name	Program	Method	Inj. Date/Time	*Analyst
1	WASH	Perchlorate-IC11	IC#4-CLO4-LOW	2/14/2008 2:46:00 PM	jkz
2	autocal1	Perchlorate-IC11	IC#4-CLO4-LOW	2/14/2008 3:11:30 PM	jkz
3	autocal2	Perchlorate-IC11	IC#4-CLO4-LOW	2/14/2008 3:33:54 PM	jkz
4	autocal3	Perchlorate-IC11	IC#4-CLO4-LOW	2/14/2008 3:56:19 PM	jkz
5	autocal4	Perchlorate-IC11	IC#4-CLO4-LOW	2/14/2008 4:18:43 PM	jkz
6	autocal5	Perchlorate-IC11	IC#4-CLO4-LOW	2/14/2008 4:41:08 PM	jkz
7	autocal6	Perchlorate-IC11	IC#4-CLO4-LOW	2/14/2008 5:03:32 PM	jkz
8	autocal7	Perchlorate-IC11	IC#4-CLO4-LOW	2/14/2008 5:25:57 PM	jkz
9	QCS	Perchlorate-IC11	IC#4-CLO4-LOW	2/15/2008 6:37:11 PM	jkz
10	IPC	Perchlorate-IC11	IC#4-CLO4-LOW	2/15/2008 6:59:35 PM	jkz
11	-MBLK	Perchlorate-IC11	IC#4-CLO4-LOW	2/15/2008 7:21:59 PM	jkz
12	-MRLCHK-2	Perchlorate-IC11	IC#4-CLO4-LOW	2/15/2008 7:44:23 PM	jkz
13	-MRLCHK-4	Perchlorate-IC11	IC#4-CLO4-LOW	2/15/2008 8:06:47 PM	jkz
14	-LCS1	Perchlorate-IC11	IC#4-CLO4-LOW	2/15/2008 8:29:10 PM	jkz
15	-LCS2	Perchlorate-IC11	IC#4-CLO4-LOW	2/15/2008 8:51:34 PM	jkz
16	2802090007_1/50000	Perchlorate-IC11	IC#4-CLO4-LOW	2/15/2008 9:13:58 PM	jkz
17	2802120531_1/5	Perchlorate-IC11	IC#4-CLO4-LOW	2/15/2008 9:36:22 PM	jkz
18	2802120532_1/2500	Perchlorate-IC11	IC#4-CLO4-LOW	2/15/2008 9:58:46 PM	jkz
19	2802120533_1/10000	Perchlorate-IC11	IC#4-CLO4-LOW	2/15/2008 10:21:09 PM	jkz
20	2802120534_1/10000	Perchlorate-IC11	IC#4-CLO4-LOW	2/15/2008 10:43:33 PM	jkz
21	2802120535_1/10000DNR	Perchlorate-IC11	IC#4-CLO4-LOW	2/15/2008 11:05:57 PM	jkz
22	2802120536_1/10000	Perchlorate-IC11	IC#4-CLO4-LOW	2/15/2008 11:28:21 PM	jkz
23	2802120537_1/5000	Perchlorate-IC11	IC#4-CLO4-LOW	2/15/2008 11:50:44 PM	jkz
24	2802120538_1/10000	Perchlorate-IC11	IC#4-CLO4-LOW	2/16/2008 12:13:08 AM	jkz
25	2802120539_1/500	Perchlorate-IC11	IC#4-CLO4-LOW	2/16/2008 12:35:32 AM	jkz
26	2802120539MS	Perchlorate-IC11	IC#4-CLO4-LOW	2/16/2008 12:57:56 AM	jkz
27	2802120539MSD	Perchlorate-IC11	IC#4-CLO4-LOW	2/16/2008 1:20:20 AM	jkz
28	CCV	Perchlorate-IC11	IC#4-CLO4-LOW	2/16/2008 1:42:43 AM	jkz
29	2802120540_1/500	Perchlorate-IC11	IC#4-CLO4-LOW	2/16/2008 2:05:07 AM	jkz
30	2802120541_1/250	Perchlorate-IC11	IC#4-CLO4-LOW	2/16/2008 2:27:31 AM	jkz
31	2802120542_1/5	Perchlorate-IC11	IC#4-CLO4-LOW	2/16/2008 2:49:55 AM	jkz
32	2802120543_1/5	Perchlorate-IC11	IC#4-CLO4-LOW	2/16/2008 3:12:18 AM	jkz
33	2802120545_1/250	Perchlorate-IC11	IC#4-CLO4-LOW	2/16/2008 3:34:42 AM	jkz
34	2802120546_1/100	Perchlorate-IC11	IC#4-CLO4-LOW	2/16/2008 3:57:06 AM	jkz
35	2802120547_1/100	Perchlorate-IC11	IC#4-CLO4-LOW	2/16/2008 4:19:30 AM	jkz
36	2802120548_1/100	Perchlorate-IC11	IC#4-CLO4-LOW	2/16/2008 4:41:53 AM	jkz
37	2802120754	Perchlorate-IC11	IC#4-CLO4-LOW	2/16/2008 5:04:17 AM	jkz
38	HCV	Perchlorate-IC11	IC#4-CLO4-LOW	2/16/2008 5:26:41 AM	jkz
39	HCV	Perchlorate-IC11	IC#4-CLO4-LOW	2/16/2008 5:49:05 AM	jkz
40	CCB	Perchlorate-IC11	IC#4-CLO4-LOW	2/16/2008 6:11:29 AM	jkz
41	CCB	Perchlorate-IC11	IC#4-CLO4-LOW	2/16/2008 6:33:53 AM	jkz
42	STOP	IC11 Stop	IC#4-CLO4-LOW	2/16/2008 6:56:16 AM	jkz

1 WASH

Sample Name:	**WASH**	*Channel:*	**CD_1**
Sample Type:	**unknown**	*Control Program:*	**Perchlorate-IC11**
Recording Time:	**02/14/2008 14:46**	*Quantif. Method:*	**IC#4-CLO4-LOW**
Analyst:	**jkz**	*Dilution Factor:*	**1.0000**

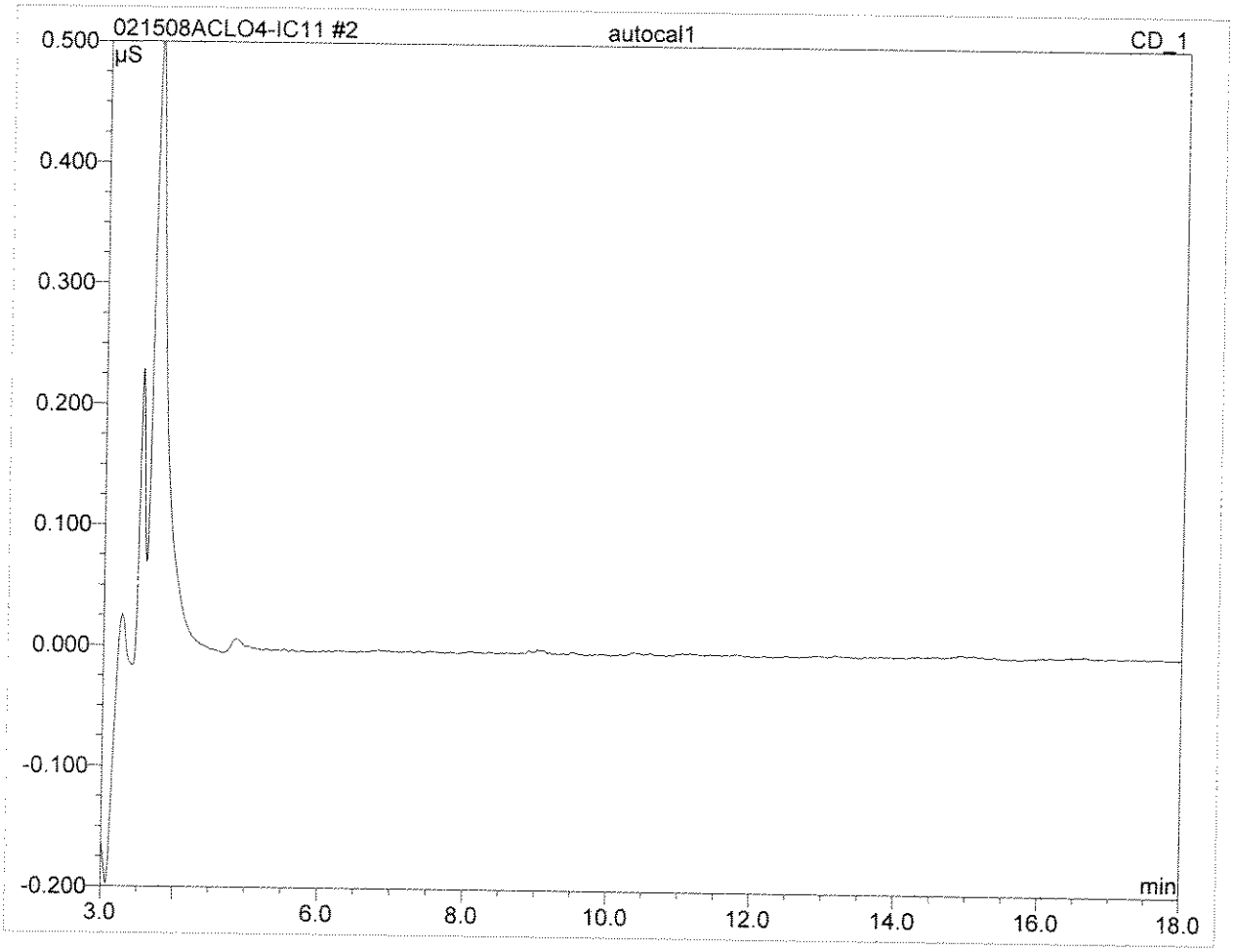


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
Total:			0.000	0.000	0.00	0.000	

2 autocal1

2

Sample Name:	**autocal1**	*Channel:*	**CD_1**
Sample Type:	**standard**	*Control Program:*	**Perchlorate-IC11**
Recording Time:	**02/14/2008 15:11**	*Quantif. Method:*	**IC#4-CLO4-LOW**
Analyst:	**jkz**	*Dilution Factor:*	**1.0000**

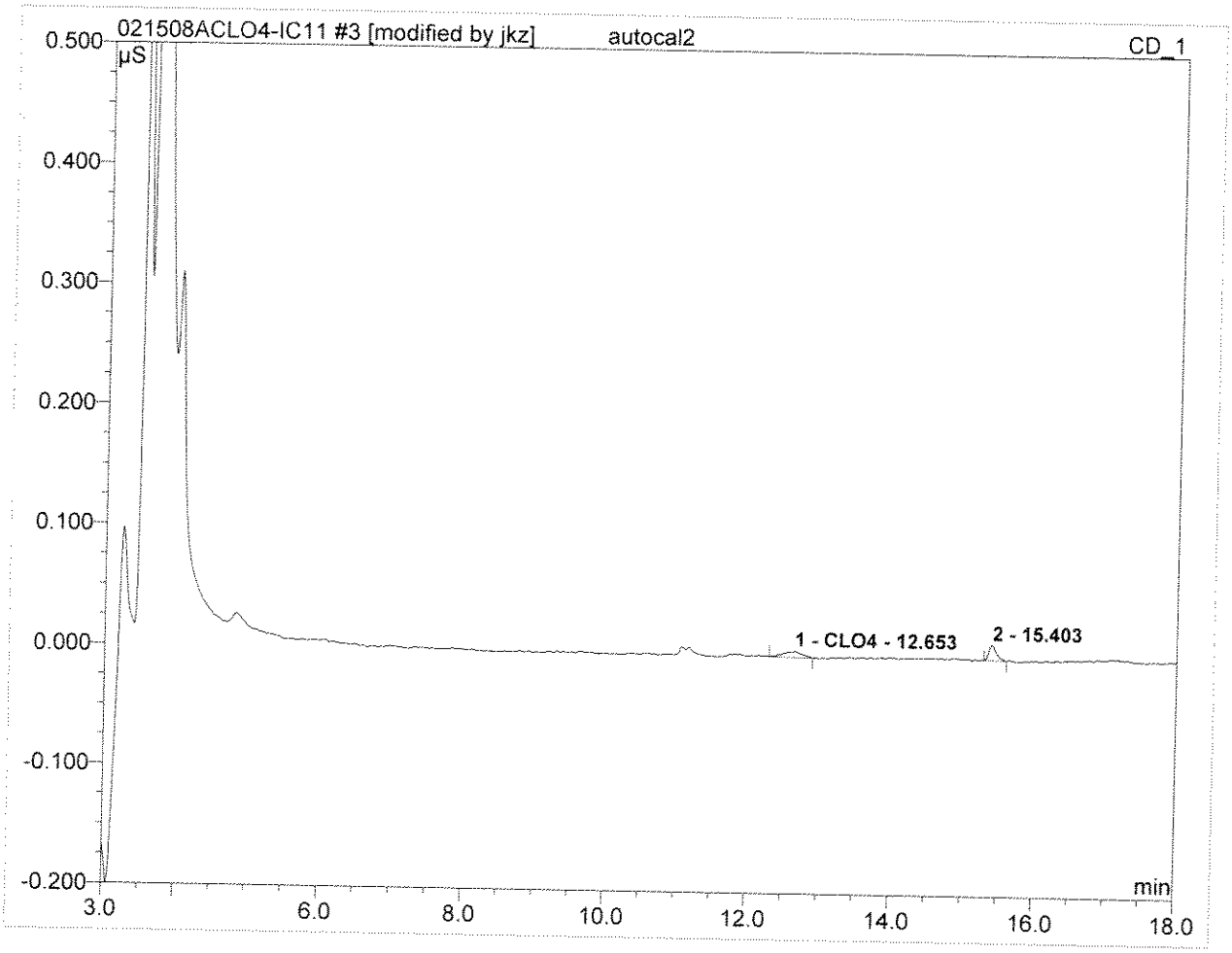


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
Total:			0.000	0.000	0.00	0.000	

3 autocal2

2

Sample Name:	**autocal2**	*Channel:*	**CD_1**
Sample Type:	**standard**	*Control Program:*	**Perchlorate-IC11**
Recording Time:	**02/14/2008 15:33**	*Quantif. Method:*	**IC#4-CLO4-LOW**
Analyst:	**jkz**	*Dilution Factor:*	**1.0000**

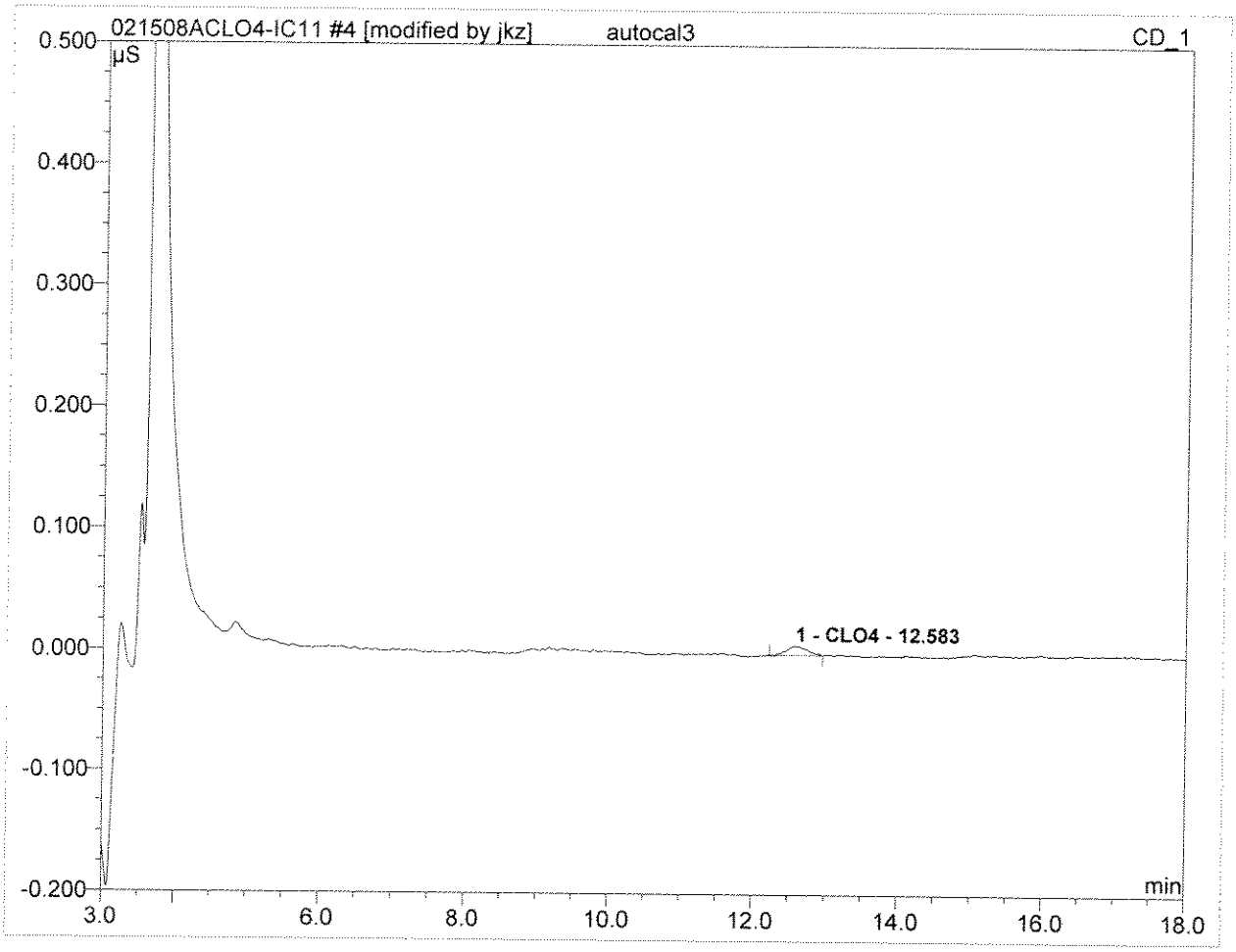


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	12.65	CLO4	0.005	0.002	49.23	1.903	BMB*
Total:			0.005	0.002	49.23	1.903	

4 autocal3

4

Sample Name:	**autocal3**	*Channel:*	**CD_1**
Sample Type:	**standard**	*Control Program:*	**Perchlorate-IC11**
Recording Time:	**02/14/2008 15:56**	*Quantif. Method:*	**IC#4-CLO4-LOW**
Analyst:	**jkz**	*Dilution Factor:*	**1.0000**

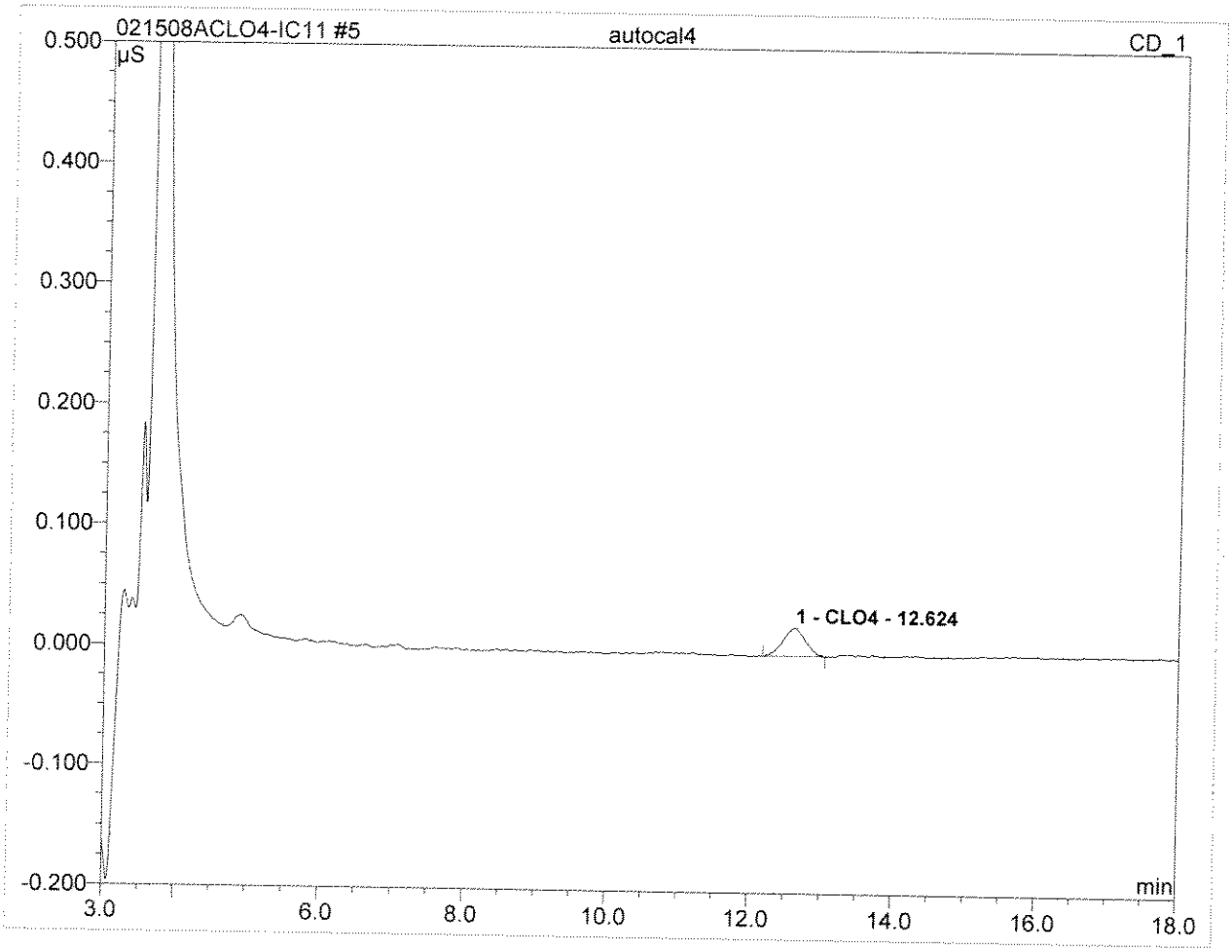


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	12.58	CLO4	0.008	0.003	100.00	3.319	BMB*
Total:			0.008	0.003	100.00	3.319	

5 autocal4

10

Sample Name:	**autocal4**	*Channel:*	**CD_1**
Sample Type:	**standard**	*Control Program:*	**Perchlorate-IC11**
Recording Time:	**02/14/2008 16:18**	*Quantif. Method:*	**IC#4-CLO4-LOW**
Analyst:	**jkz**	*Dilution Factor:*	**1.0000**

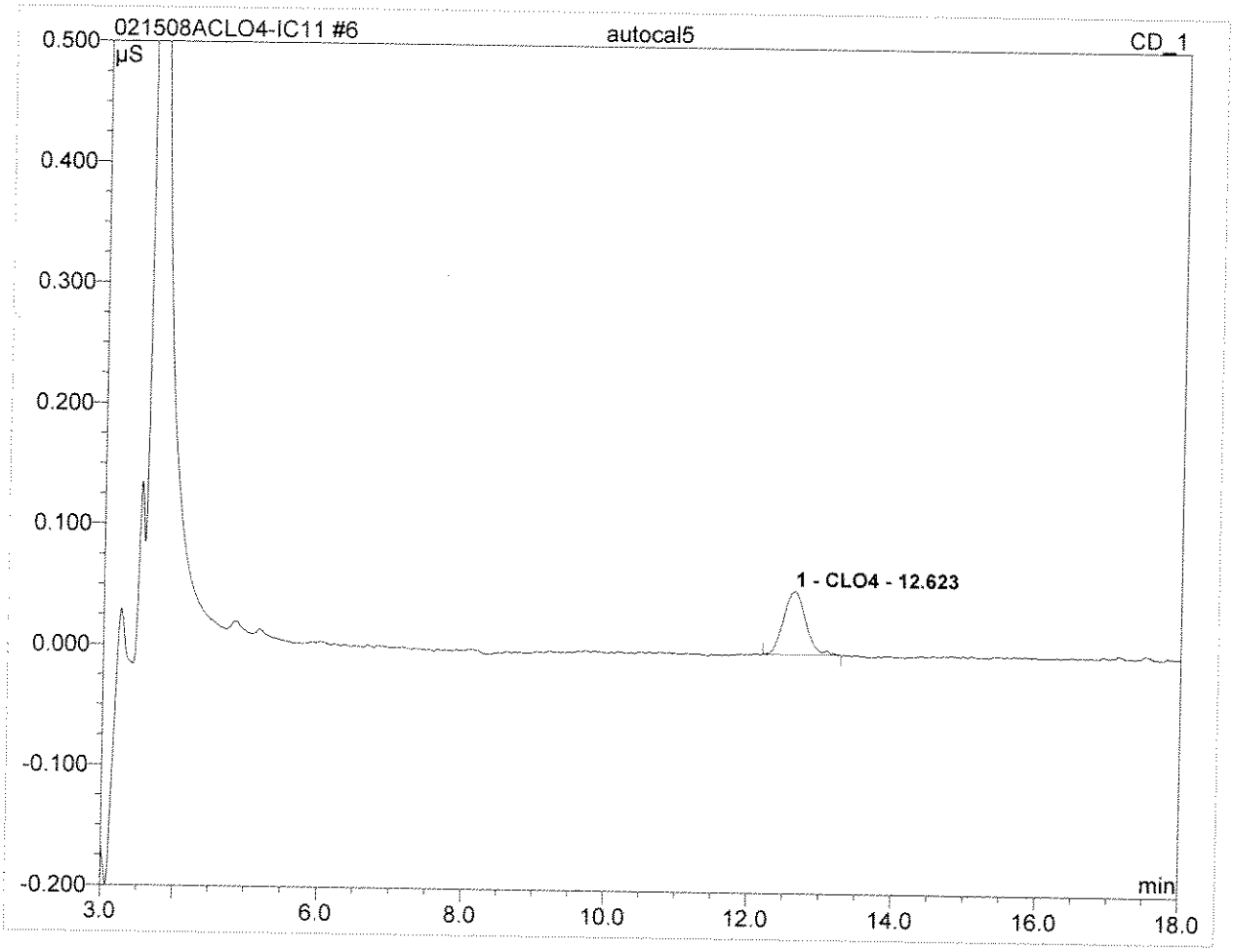


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	12.62	CLO4	0.024	0.009	100.00	10.586	BMB
Total:			0.024	0.009	100.00	10.586	

6 autocal5

25

Sample Name:	**autocal5**	*Channel:*	**CD_1**
Sample Type:	**standard**	*Control Program:*	**Perchlorate-IC11**
Recording Time:	**02/14/2008 16:41**	*Quantif. Method:*	**IC#4-CLO4-LOW**
Analyst:	**jkz**	*Dilution Factor:*	**1.0000**

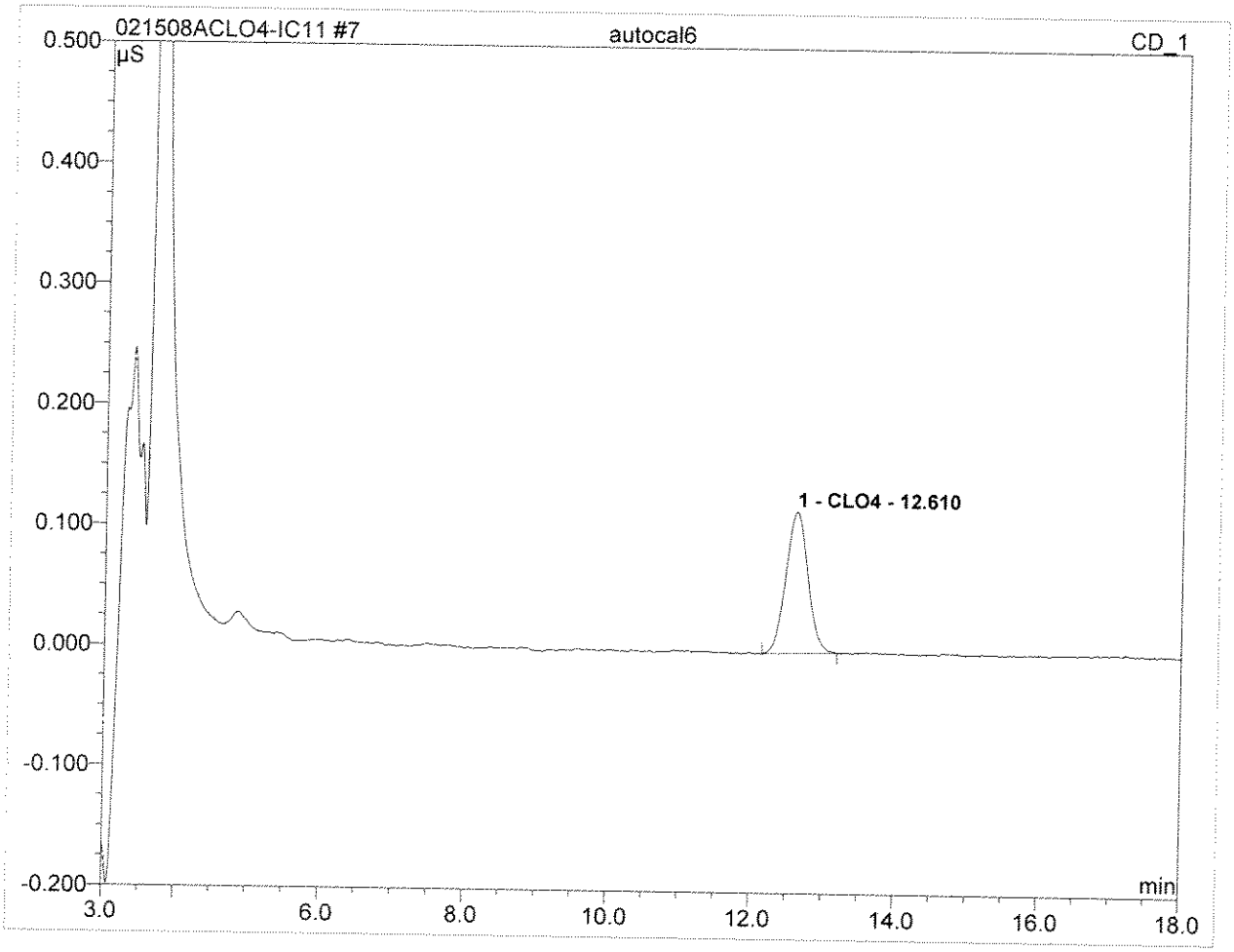


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	12.62	CLO4	0.052	0.019	100.00	22.997	BMB
Total:			0.052	0.019	100.00	22.997	

7 autocal6

50

Sample Name:	**autocal6**	*Channel:*	**CD_1**
Sample Type:	**standard**	*Control Program:*	**Perchlorate-IC11**
Recording Time:	**02/14/2008 17:03**	*Quantif. Method:*	**IC#4-CLO4-LOW**
Analyst:	**jkz**	*Dilution Factor:*	**1.0000**

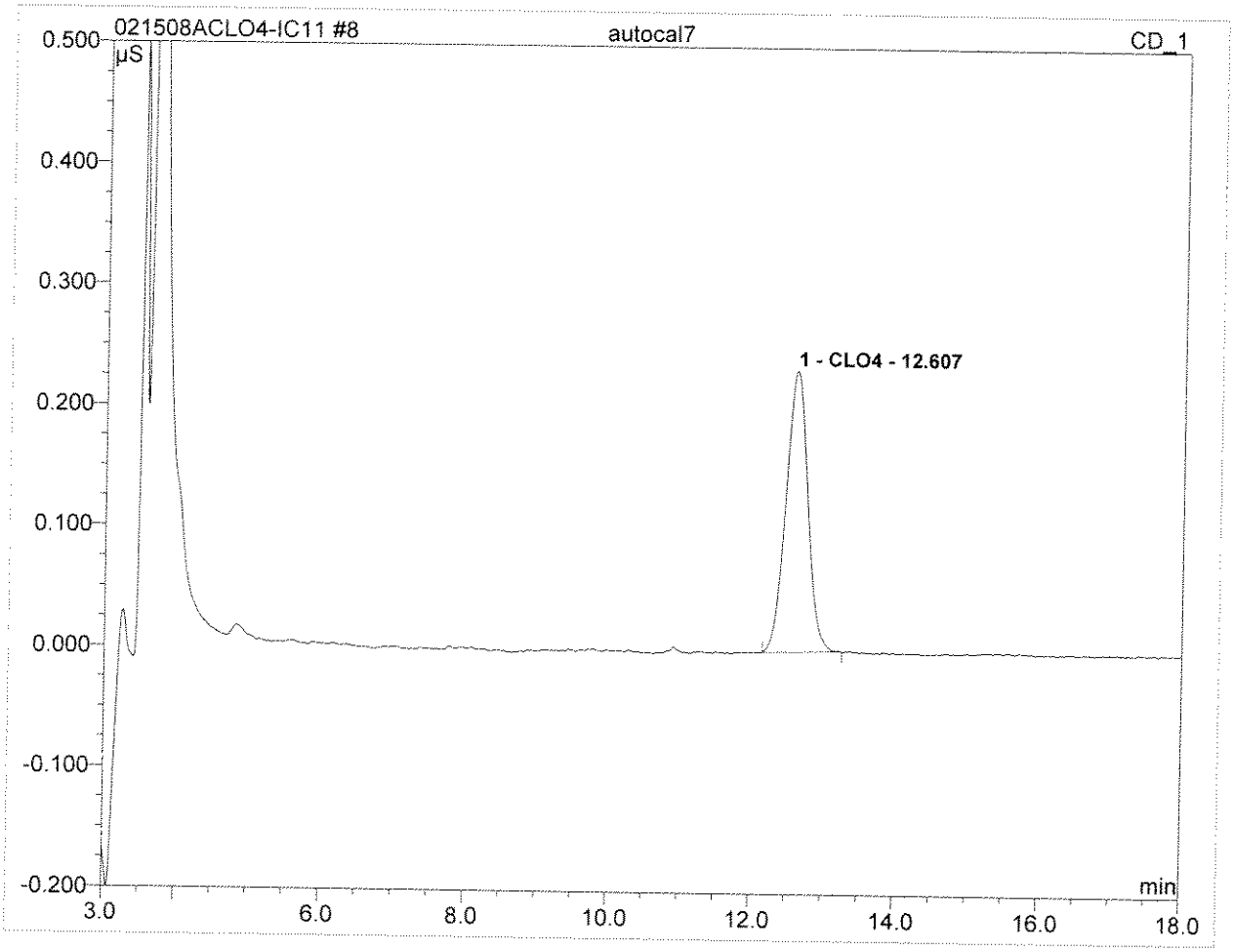


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	12.61	CLO4	0.118	0.042	100.00	51.393	BMB
Total:			0.118	0.042	100.00	51.393	

8 autocal7

100

Sample Name:	**autocal7**	*Channel:*	**CD_1**
Sample Type:	**standard**	*Control Program:*	**Perchlorate-IC11**
Recording Time:	**02/14/2008 17:25**	*Quantif. Method:*	**IC#4-CLO4-LOW**
Analyst:	**jkz**	*Dilution Factor:*	**1.0000**

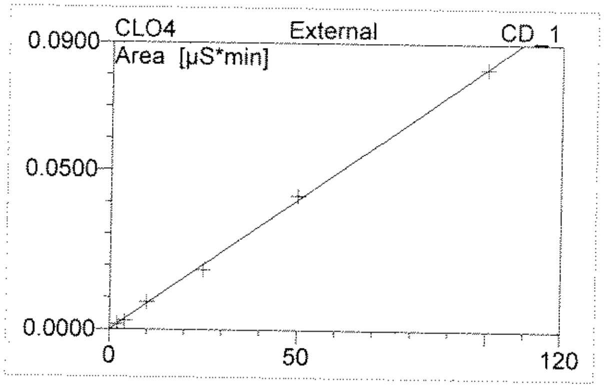


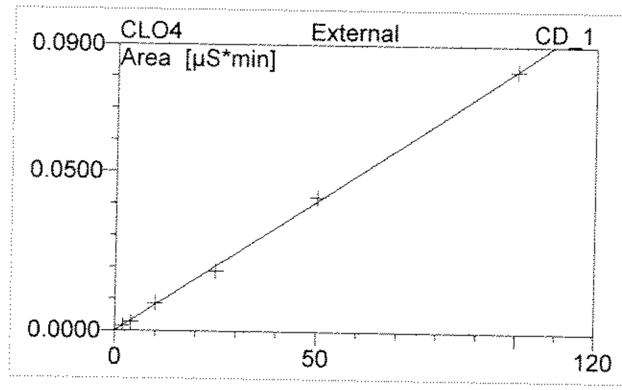
No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	12.61	CLO4	0.233	0.082	100.00	99.774	BMB
Total:			0.233	0.082	100.00	99.774	

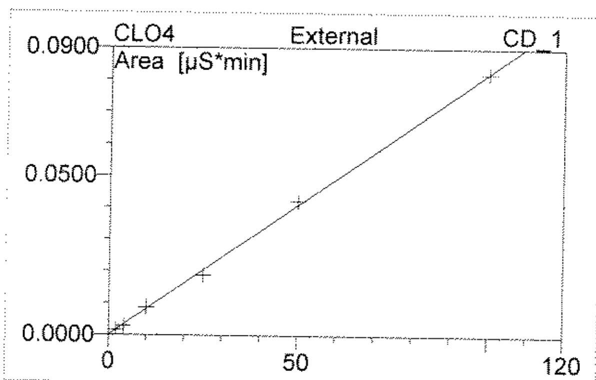
8 autocal7

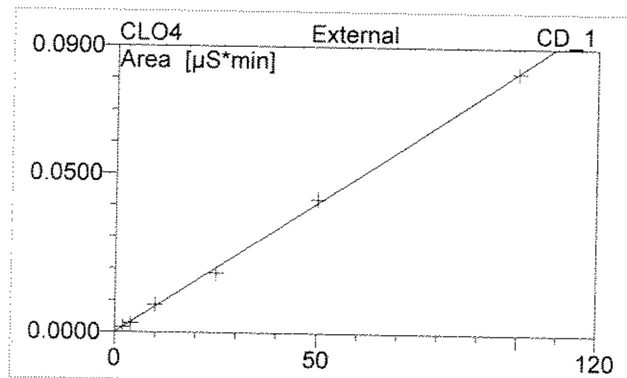
100

Sample Name:	**autocal7**	*Injection Volume:*	**20.0**
Vial Number:	**141**	*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:	**2/14/2008 17:25**	*Sample Weight:*	**1.0000**
Run Time (min):	**20.00**	*Sample Amount:*	**1.0000**







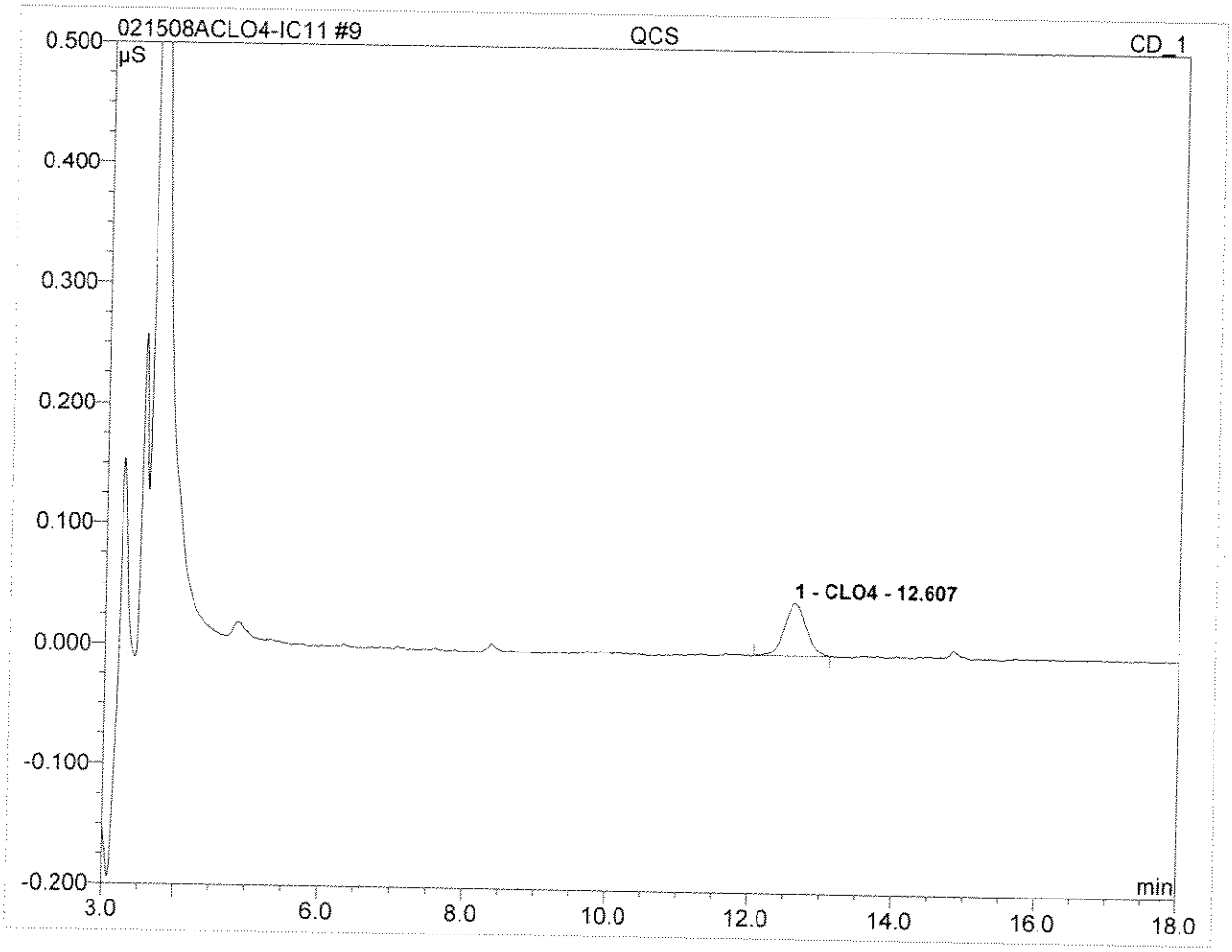


No.	Ret.Time min	Peak Name	Cal.Type	Points	Corr.Coeff. %	Offset	Slope	Curve
1	12.61	CLO4	Quad	6	99.9569	0.0000	0.0008	0.0000
Average:					99.9569	0.0000	0.0008	0.0000

9 QCS

20

Sample Name:	**QCS**	*Channel:*	**CD_1**
Sample Type:	**unknown**	*Control Program:*	**Perchlorate-IC11**
Recording Time:	**02/15/2008 18:37**	*Quantif. Method:*	**IC#4-CLO4-LOW**
Analyst:	**jkz**	*Dilution Factor:*	**1.0000**

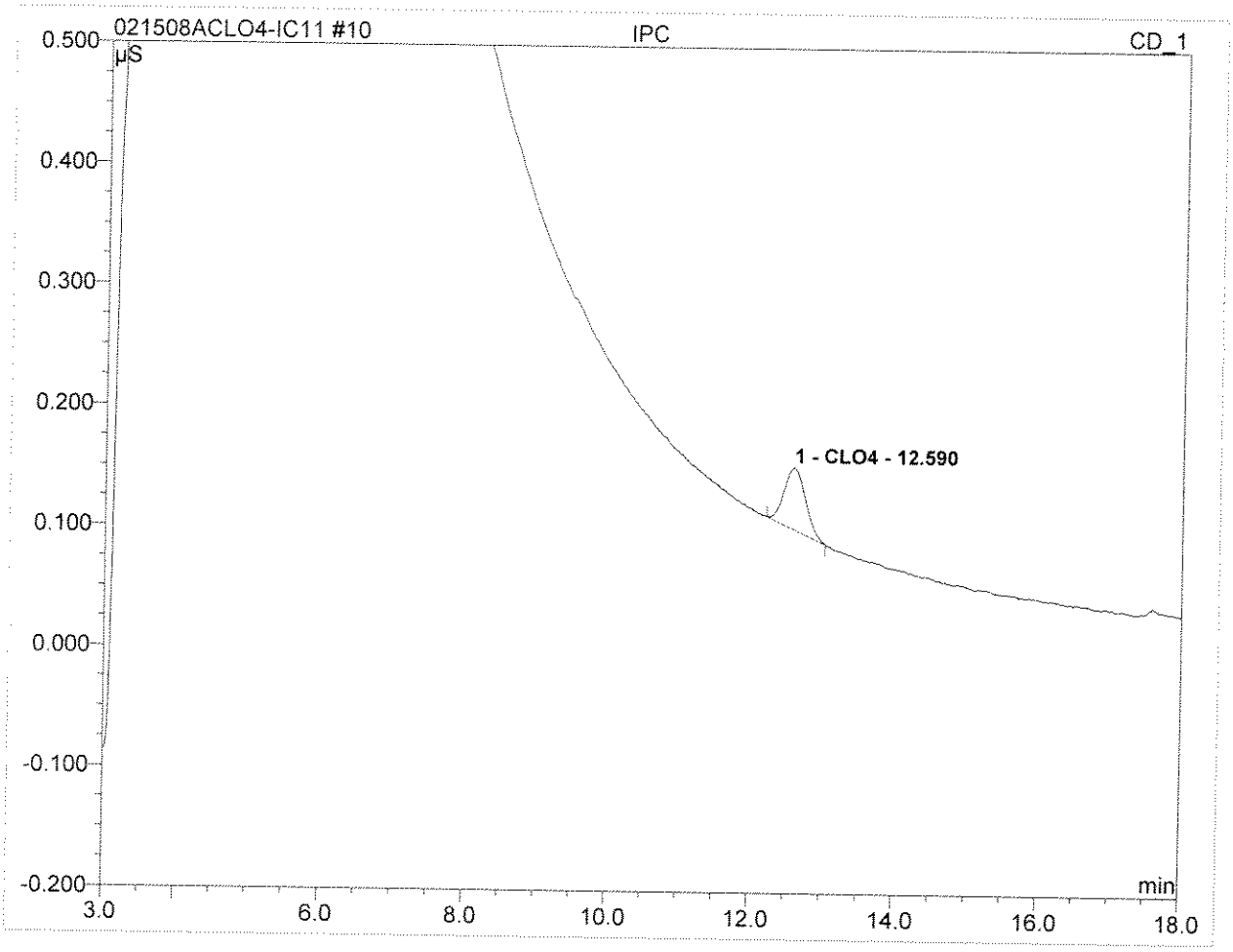


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	12.61	CLO4	0.044	0.016	100.00	19.375	BMB
Total:			0.044	0.016	100.00	19.375	

10 IPC

25

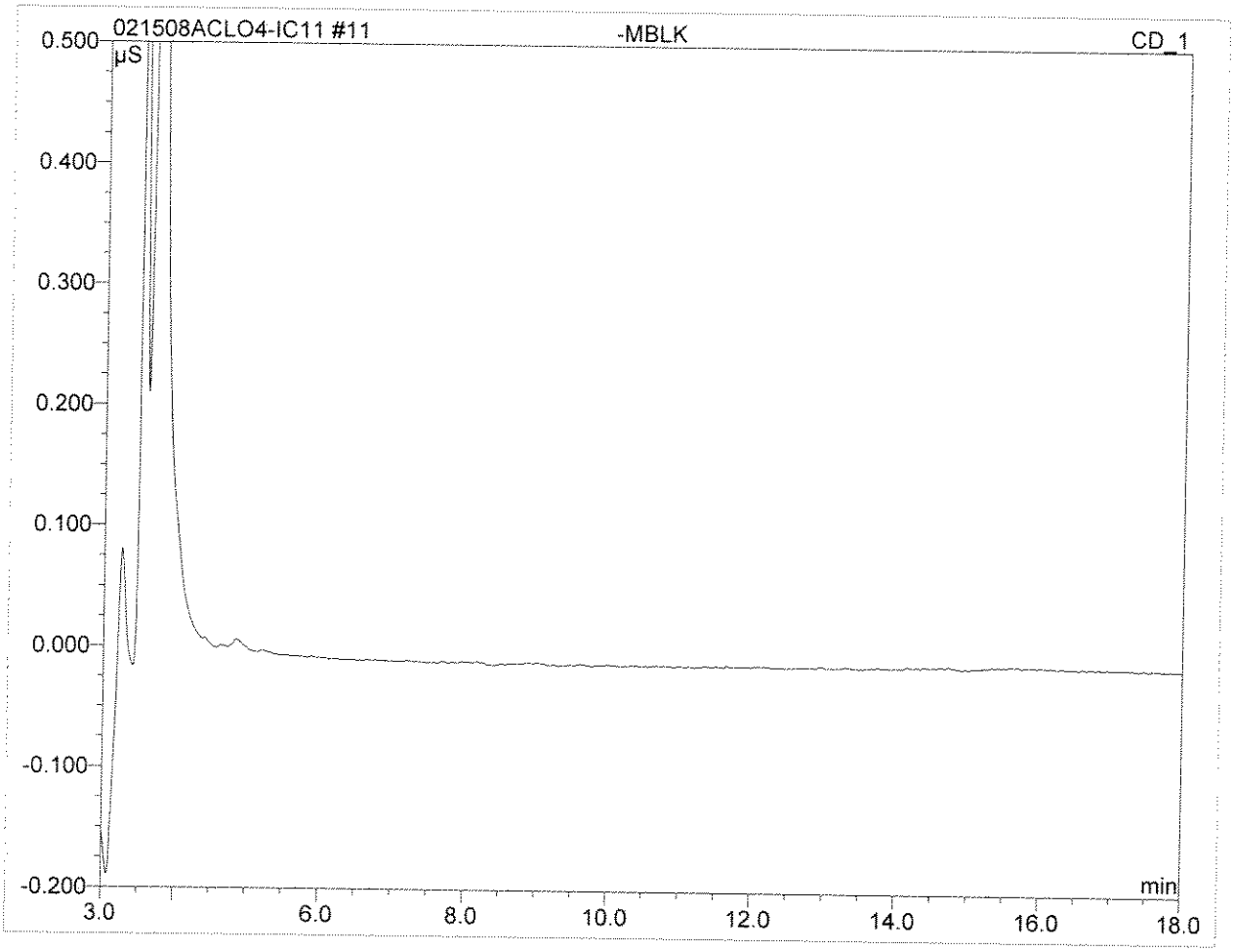
Sample Name:	**IPC**	*Channel:*	**CD_1**
Sample Type:	**unknown**	*Control Program:*	**Perchlorate-IC11**
Recording Time:	**02/15/2008 18:59**	*Quantif. Method:*	**IC#4-CLO4-LOW**
Analyst:	**jkz**	*Dilution Factor:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	12.59	CLO4	0.051	0.018	100.00	21.816	BMB
Total:			0.051	0.018	100.00	21.816	

11 -MBLK

Sample Name:	**-MBLK**	*Channel:*	**CD_1**
Sample Type:	**unknown**	*Control Program:*	**Perchlorate-IC11**
Recording Time:	**02/15/2008 19:21**	*Quantif. Method:*	**IC#4-CLO4-LOW**
Analyst:	**jkz**	*Dilution Factor:*	**1.0000**

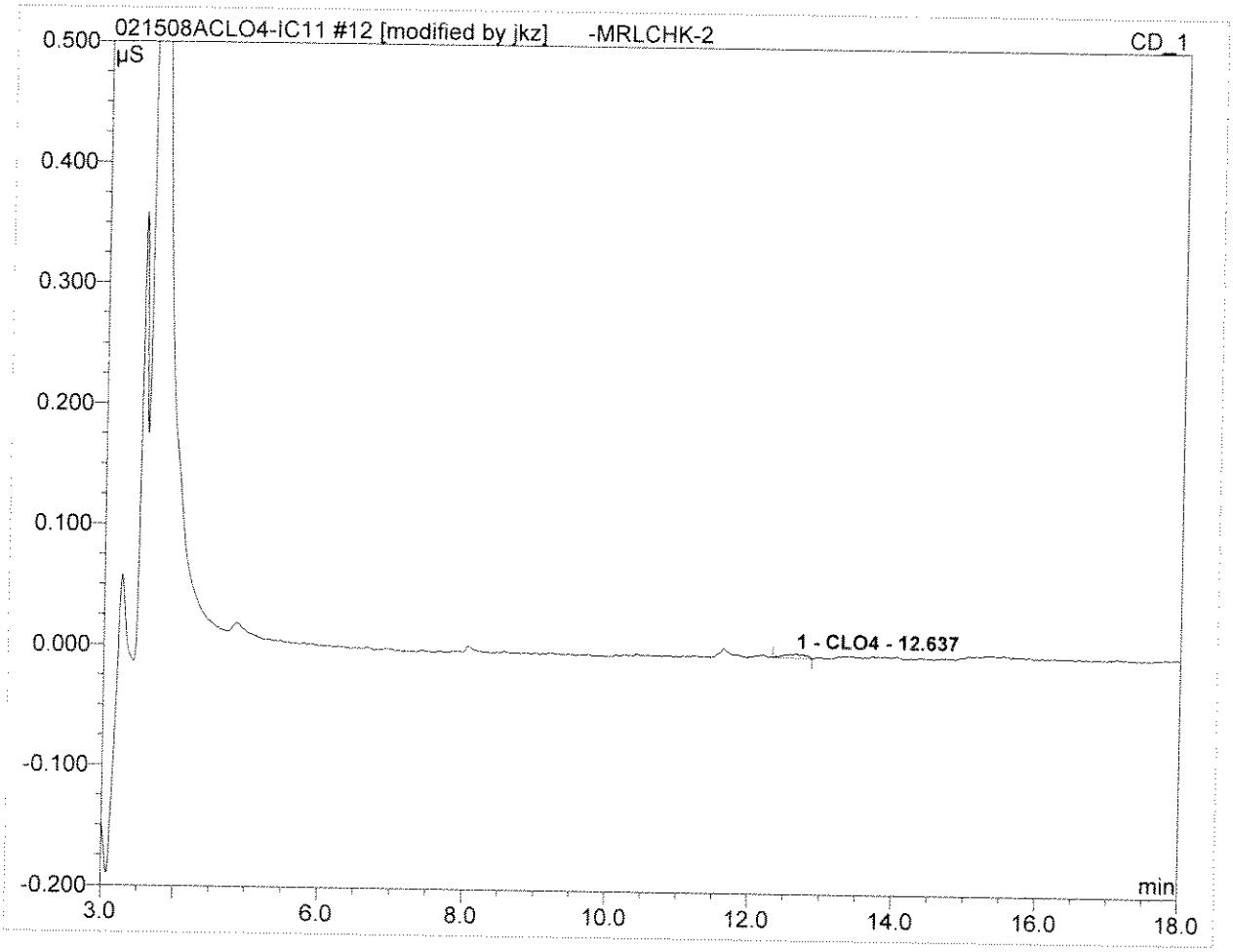


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
Total:			0.000	0.000	0.00	0.000	

12 -MRLCHK-2

2

Sample Name:	**-MRLCHK-2**	*Channel:*	**CD_1**
Sample Type:	**unknown**	*Control Program:*	**Perchlorate-IC11**
Recording Time:	**02/15/2008 19:44**	*Quantif. Method:*	**IC#4-CLO4-LOW**
Analyst:	**jkz**	*Dilution Factor:*	**1.0000**

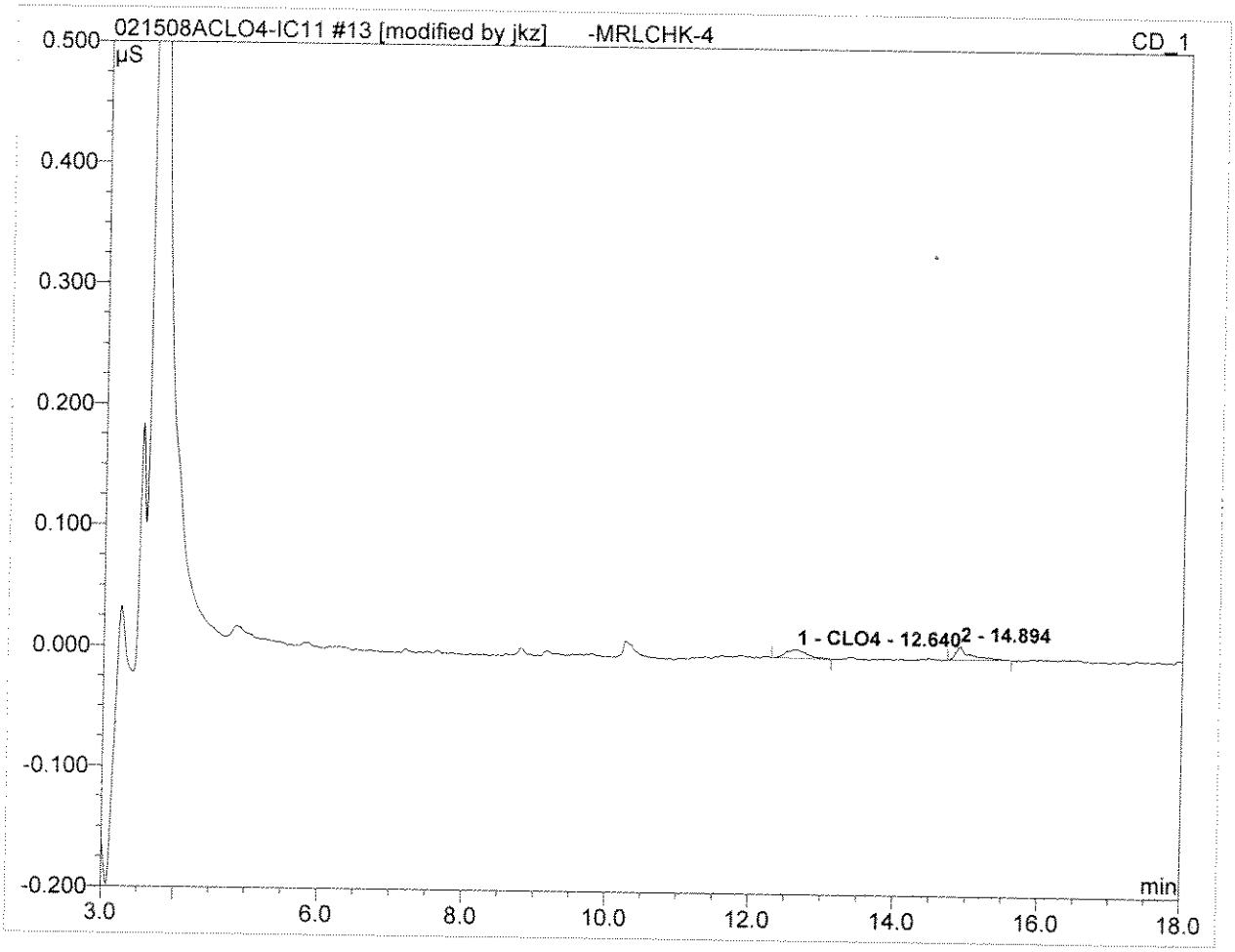


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	12.64	CLO4	0.004	0.001	100.00	1.462	BMB*
Total:			0.004	0.001	100.00	1.462	

13 -MRLCHK-4

4

Sample Name:	**-MRLCHK-4**	*Channel:*	**CD_1**
Sample Type:	**unknown**	*Control Program:*	**Perchlorate-IC11**
Recording Time:	**02/15/2008 20:06**	*Quantif. Method:*	**IC#4-CLO4-LOW**
Analyst:	**jkz**	*Dilution Factor:*	**1.0000**

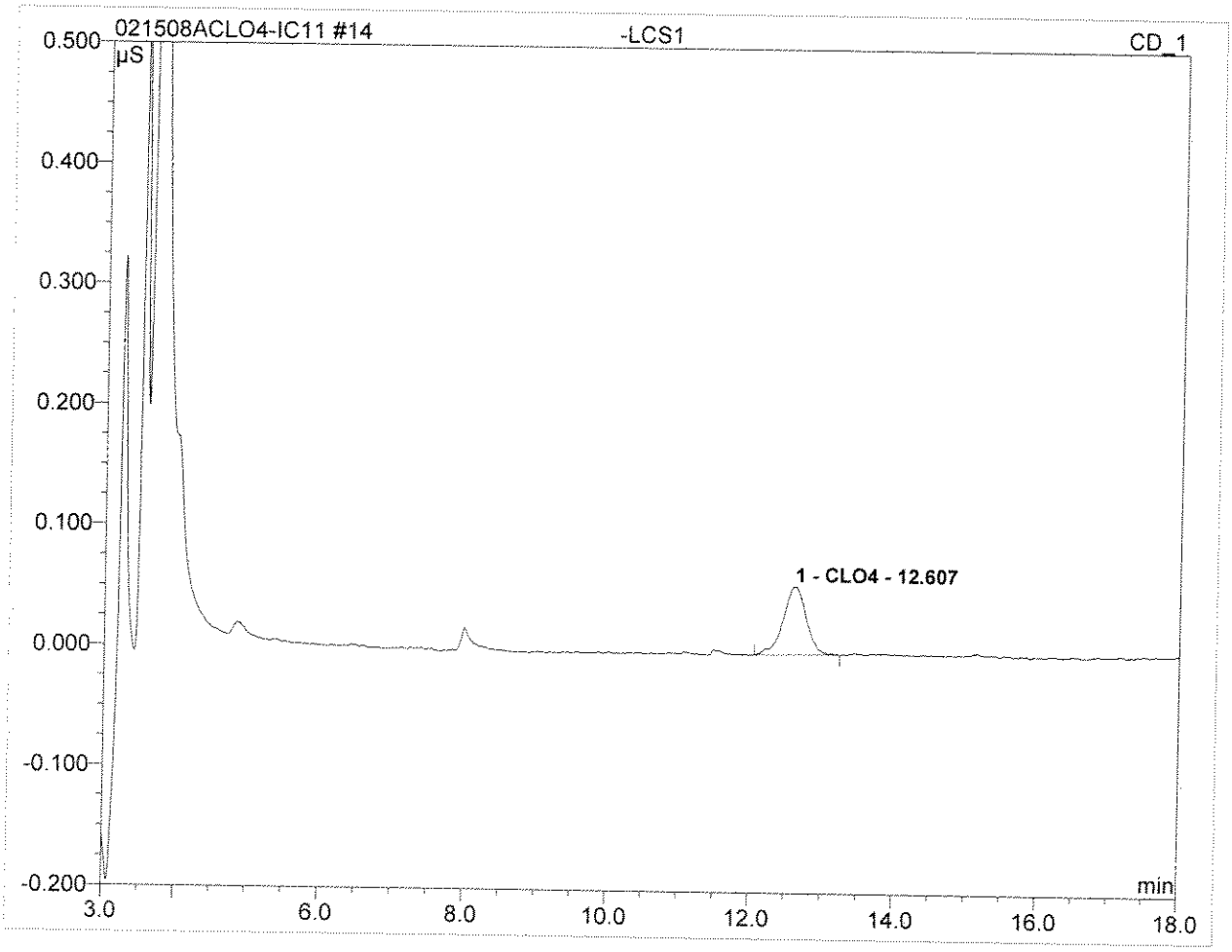


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	12.64	CLO4	0.007	0.003	48.68	3.135	BMB*
Total:			0.007	0.003	48.68	3.135	

14 -LCS1

25

Sample Name:	**-LCS1**	*Channel:*	**CD_1**
Sample Type:	**unknown**	*Control Program:*	**Perchlorate-IC11**
Recording Time:	**02/15/2008 20:29**	*Quantif. Method:*	**IC#4-CLO4-LOW**
Analyst:	**jkz**	*Dilution Factor:*	**1.0000**

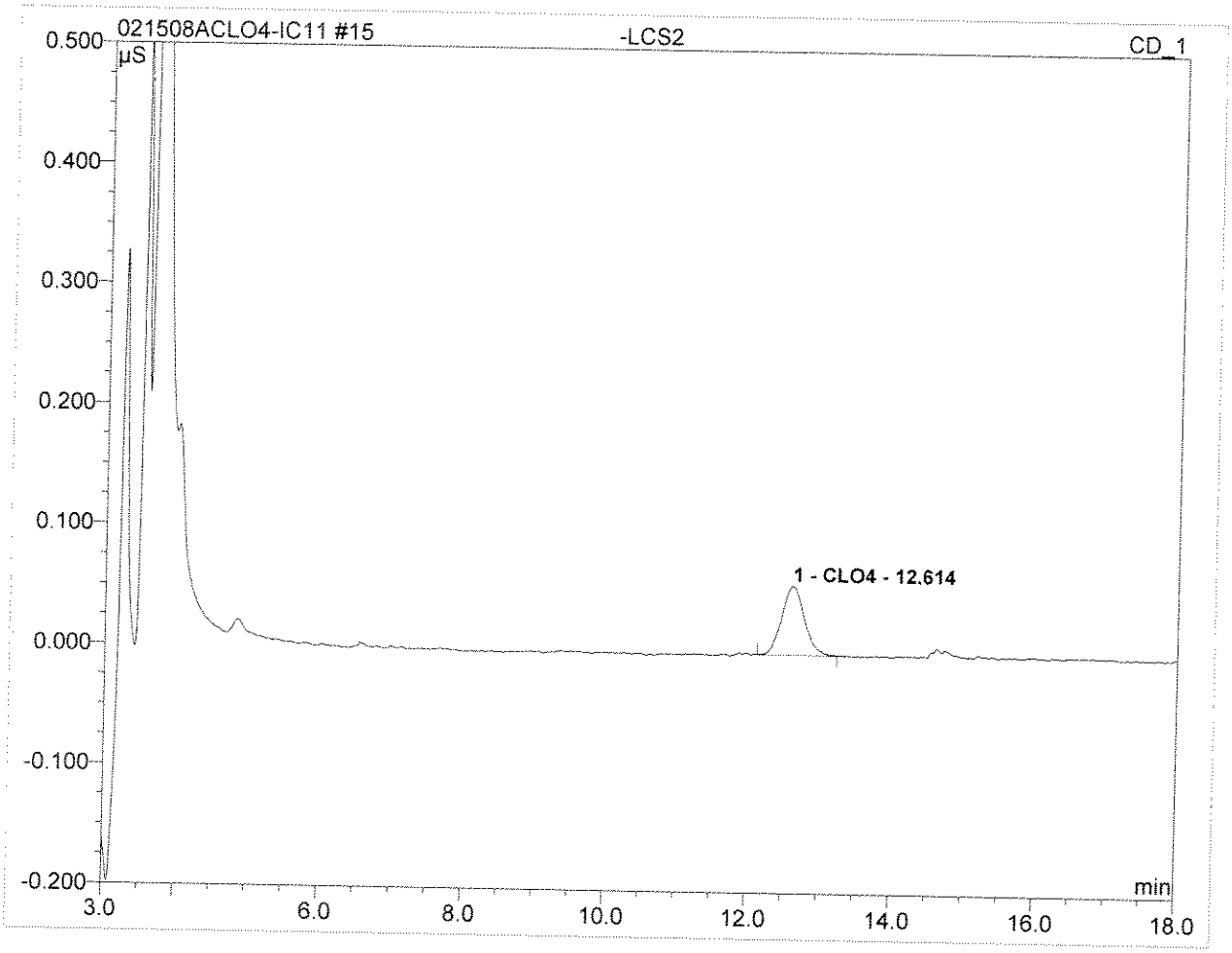


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	12.61	CLO4	0.056	0.021	100.00	25.920	BMB
Total:			0.056	0.021	100.00	25.920	

15 -LCS2

25

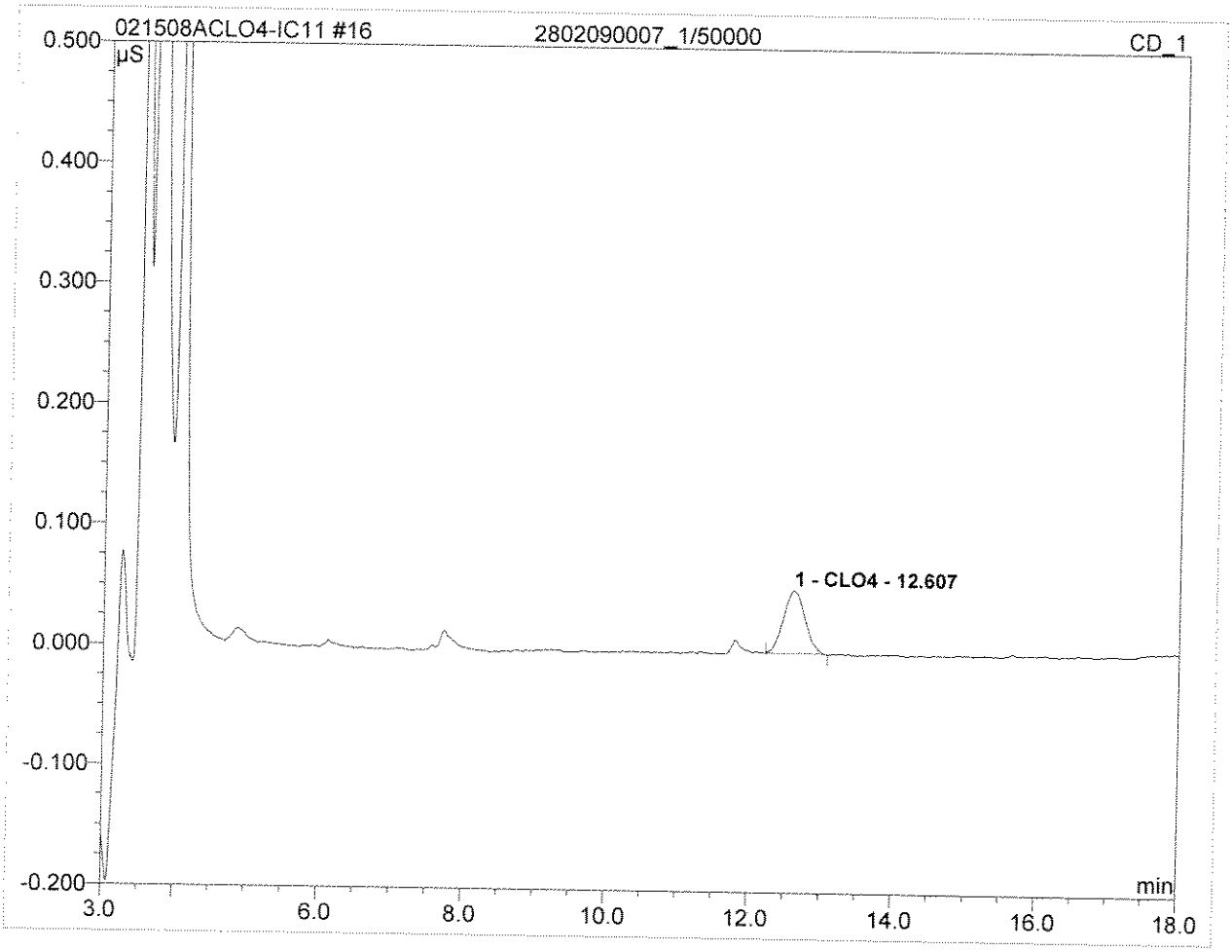
Sample Name:	**-LCS2**	*Channel:*	**CD_1**
Sample Type:	**unknown**	*Control Program:*	**Perchlorate-IC11**
Recording Time:	**02/15/2008 20:51**	*Quantif. Method:*	**IC#4-CLO4-LOW**
Analyst:	**jkz**	*Dilution Factor:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	12.61	CLO4	0.057	0.021	100.00	25.916	BMB
Total:			0.057	0.021	100.00	25.916	

16 2802090007_1/50000

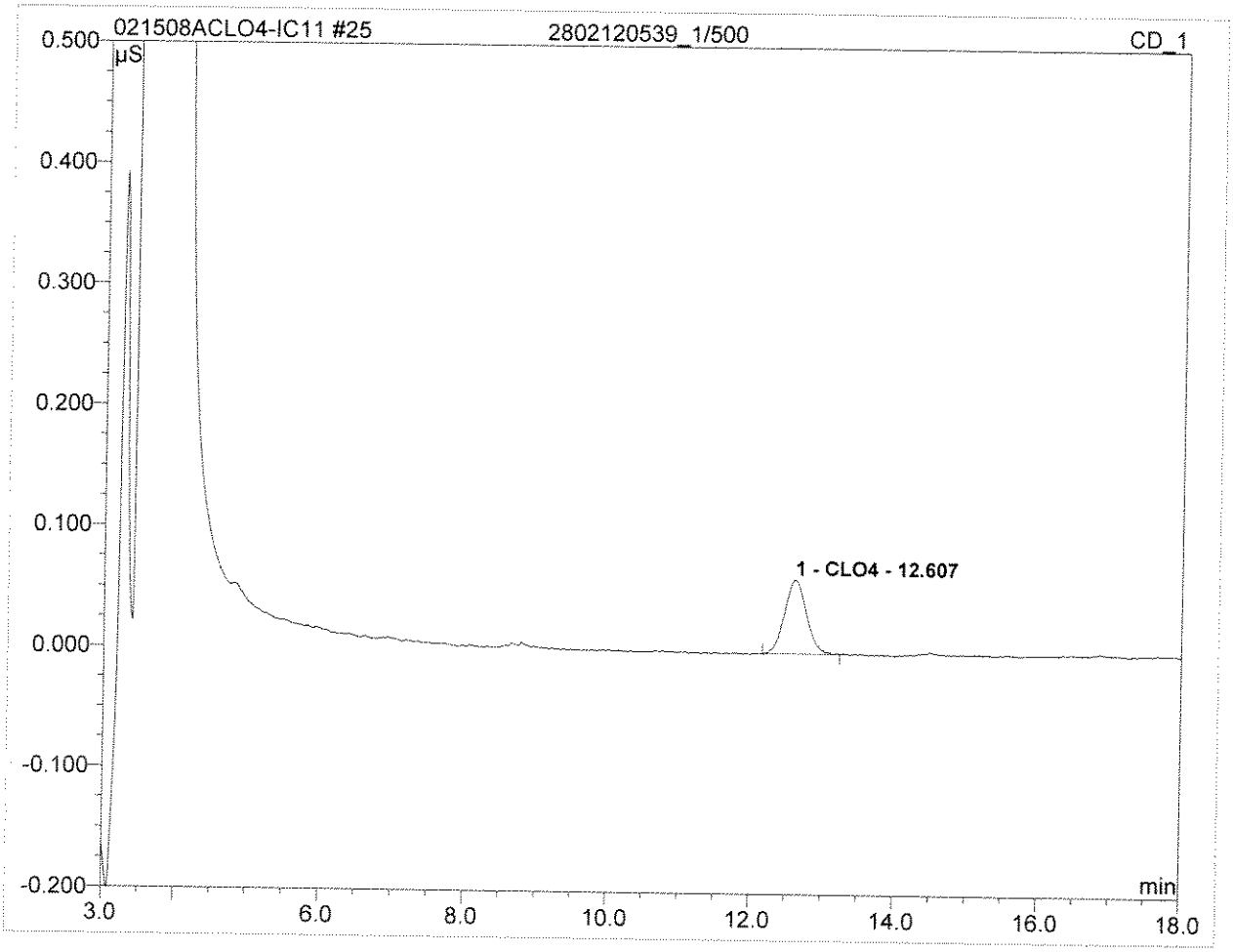
Sample Name:	**2802090007_1/50000**	*Channel:*	**CD_1**
Sample Type:	**unknown**	*Control Program:*	**Perchlorate-IC11**
Recording Time:	**02/15/2008 21:13**	*Quantif. Method:*	**IC#4-CLO4-LOW**
Analyst:	**jkz**	*Dilution Factor:*	**50000.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	12.61	CLO4	0.052	0.018	100.00	1115069.680	BMB
Total:			0.052	0.018	100.00	1115069.680	

25 2802120539_1/500

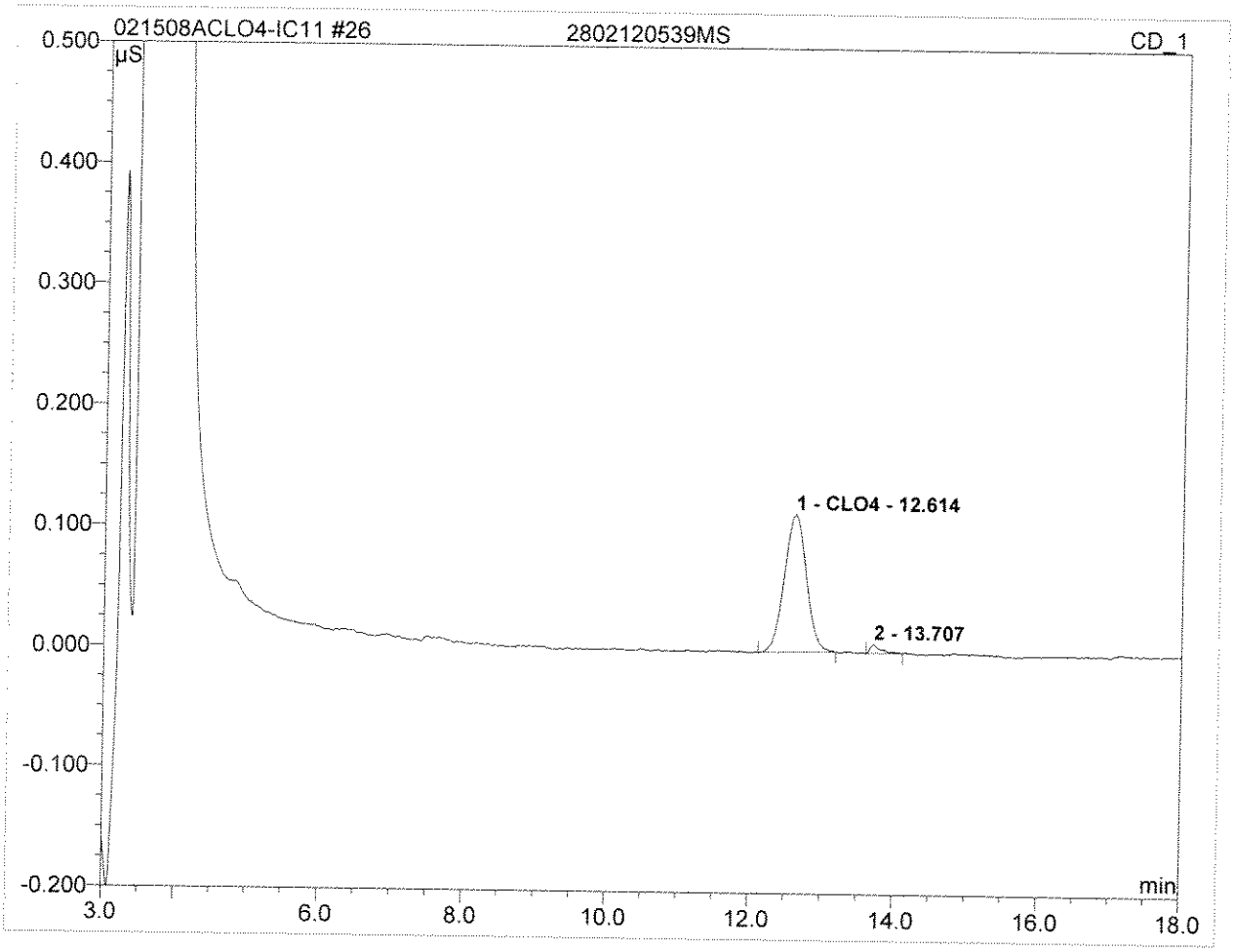
Sample Name:	**2802120539_1/500**	*Channel:*	**CD_1**
Sample Type:	**unknown**	*Control Program:*	**Perchlorate-IC11**
Recording Time:	**02/16/2008 00:35**	*Quantif. Method:*	**IC#4-CLO4-LOW**
Analyst:	**jkz**	*Dilution Factor:*	**500.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	12.61	CLO4	0.061	0.022	100.00	13328.921	BMB
Total:			0.061	0.022	100.00	13328.921	

26 2802120539MS

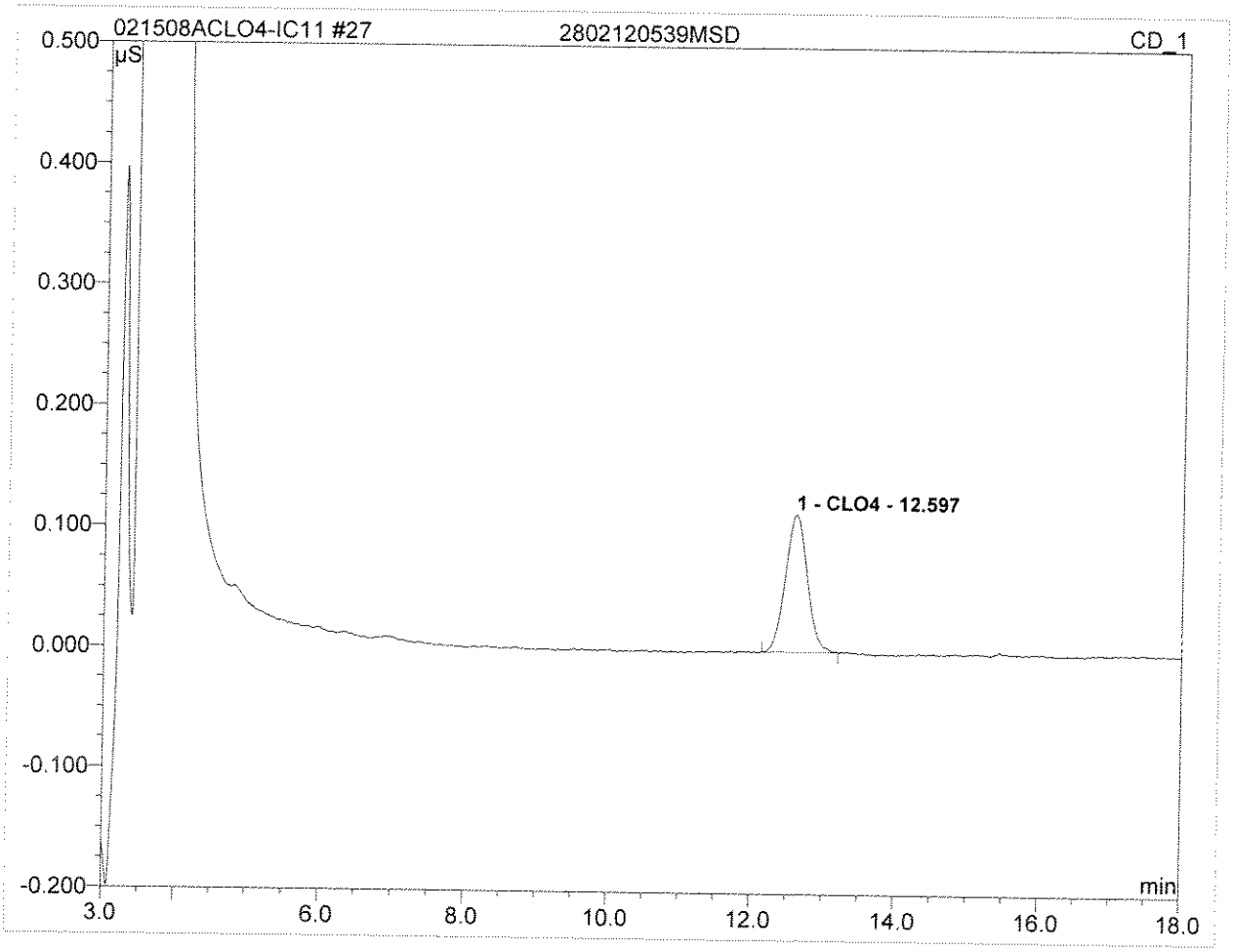
Sample Name:	**2802120539MS**	*Channel:*	**CD_1**
Sample Type:	**unknown**	*Control Program:*	**Perchlorate-IC11**
Recording Time:	**02/16/2008 00:57**	*Quantif. Method:*	**IC#4-CLO4-LOW**
Analyst:	**jkz**	*Dilution Factor:*	**500.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	12.61	CLO4	0.114	0.041	96.73	24879.375	BMB
Total:			0.114	0.041	96.73	24879.375	

27 2802120539MSD

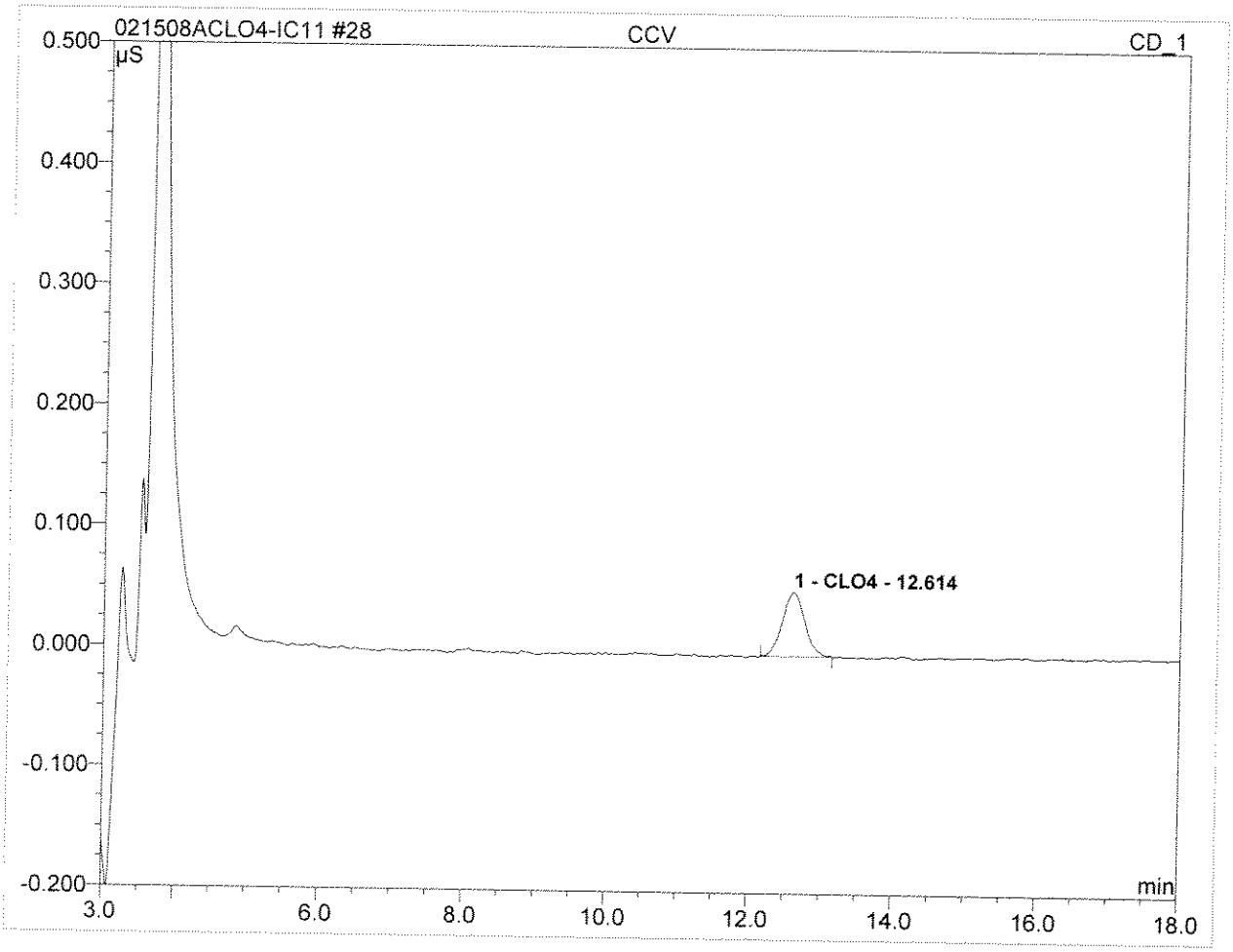
Sample Name:	**2802120539MSD**	*Channel:*	**CD_1**
Sample Type:	**unknown**	*Control Program:*	**Perchlorate-IC11**
Recording Time:	**02/16/2008 01:20**	*Quantif. Method:*	**IC#4-CLO4-LOW**
Analyst:	**jkz**	*Dilution Factor:*	**500.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	12.60	CLO4	0.114	0.040	100.00	24556.241	BMB
Total:			0.114	0.040	100.00	24556.241	

28 CCV

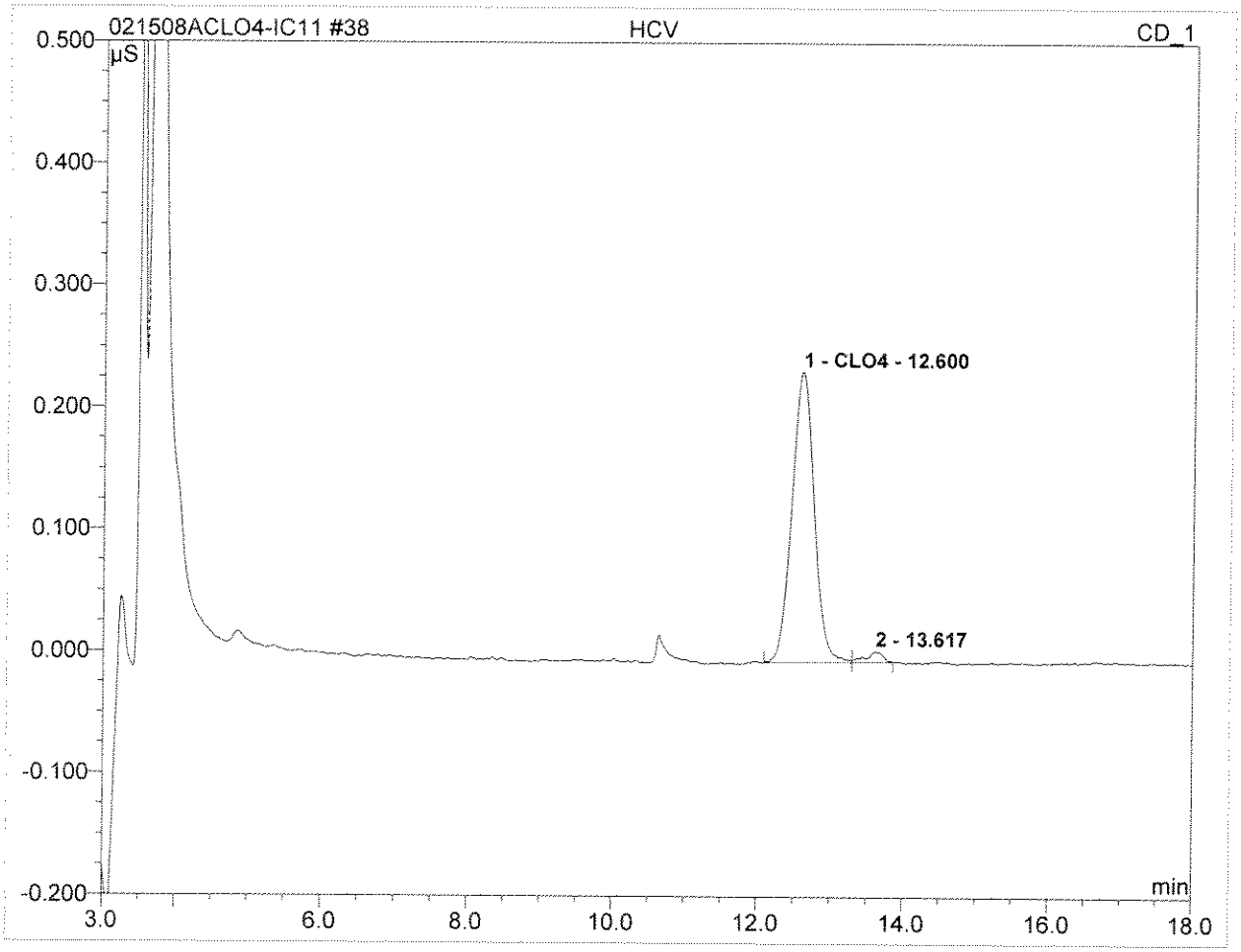
Sample Name:	**CCV**	*Channel:*	**CD_1**
Sample Type:	**unknown**	*Control Program:*	**Perchlorate-IC11**
Recording Time:	**02/16/2008 01:42**	*Quantif. Method:*	**IC#4-CLO4-LOW**
Analyst:	**jkz**	*Dilution Factor:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	12.61	CLO4	0.053	0.019	100.00	23.519	BMB
Total:			0.053	0.019	100.00	23.519	

38 HCV

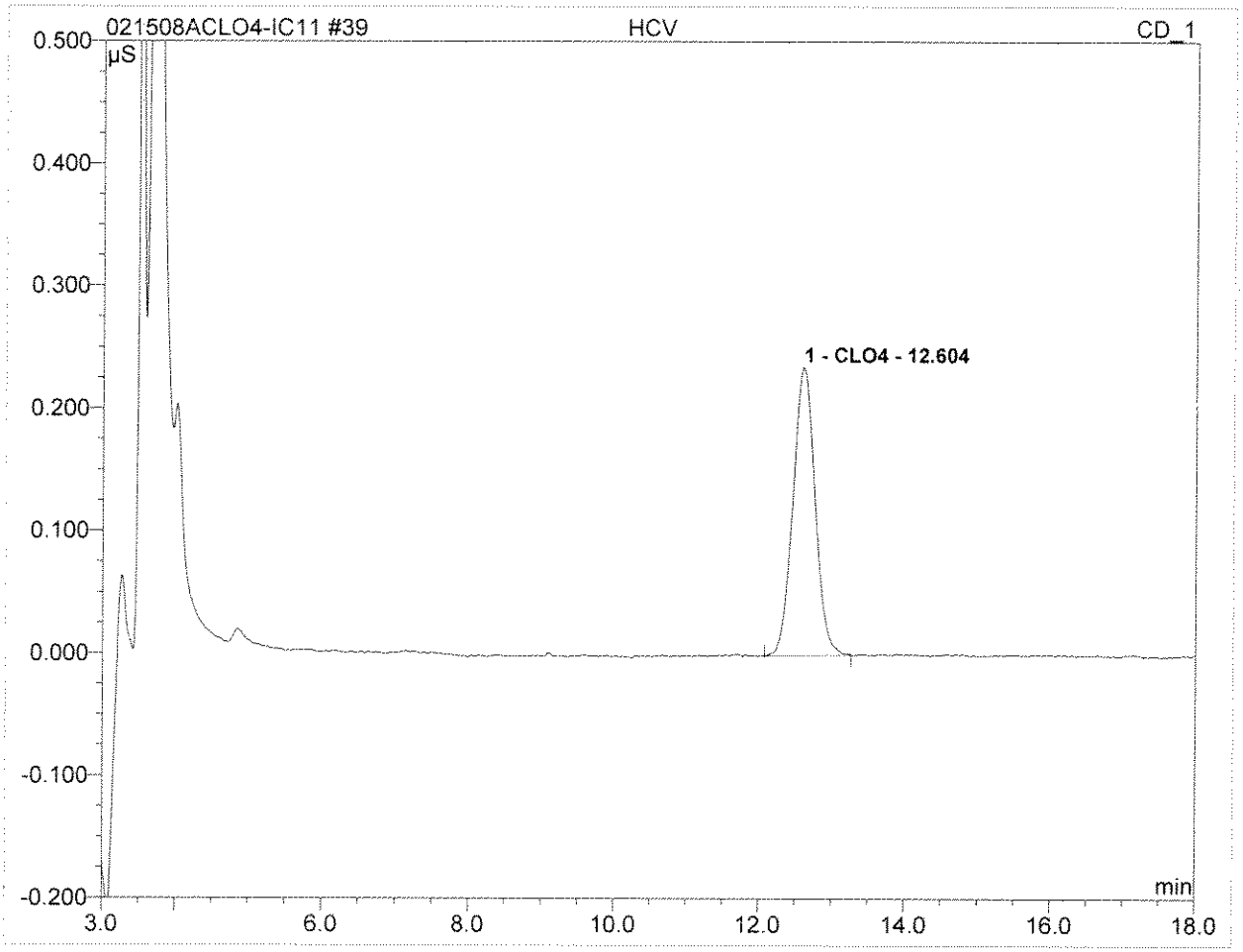
Sample Name:	**HCV**	*Channel:*	**CD_1**
Sample Type:	**unknown**	*Control Program:*	**Perchlorate-IC11**
Recording Time:	**02/16/2008 05:26**	*Quantif. Method:*	**IC#4-CLO4-LOW**
Analyst:	**jkz**	*Dilution Factor:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	12.60	CLO4	0.238	0.085	97.28	103.135	BM
Total:			0.238	0.085	97.28	103.135	

39 HCV

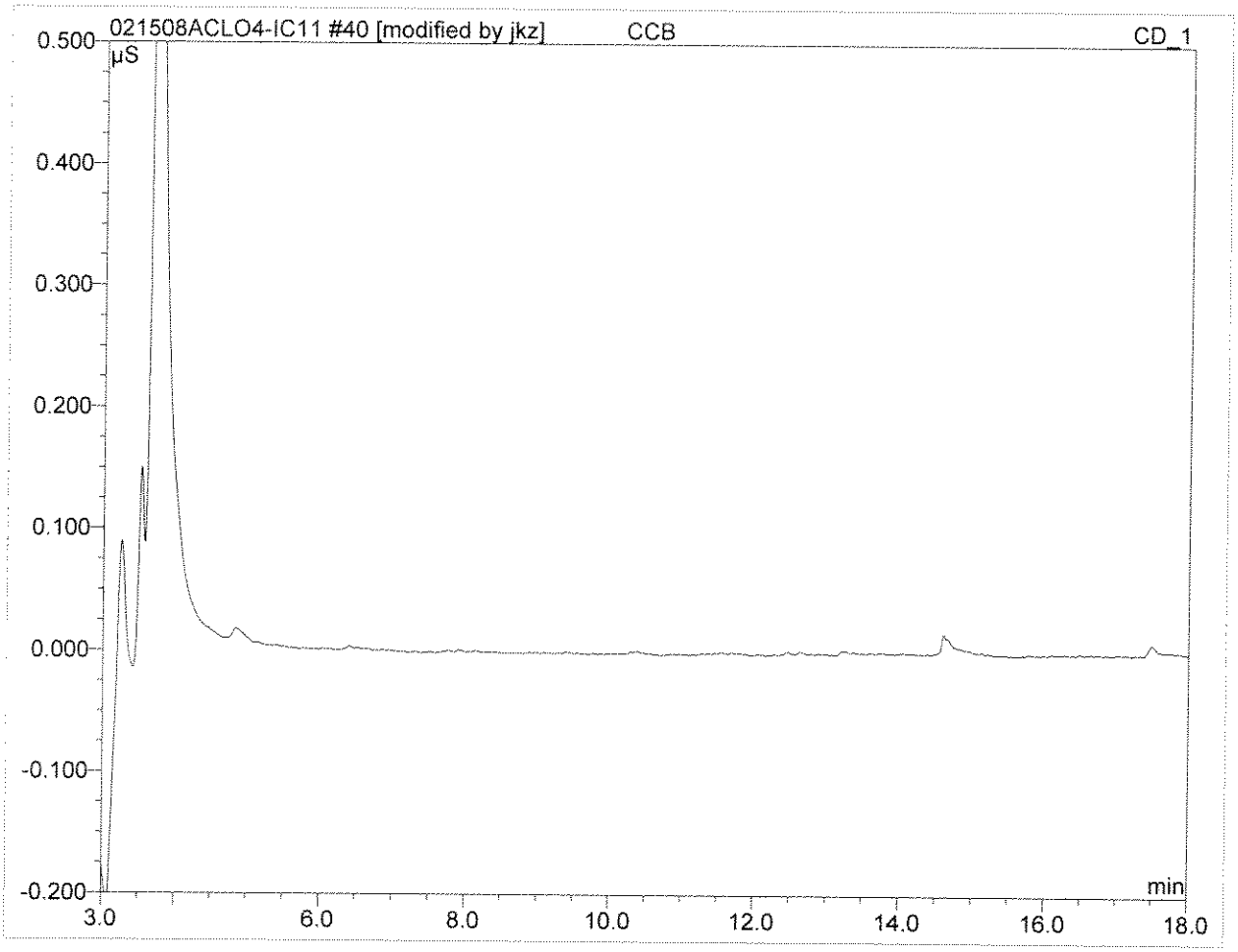
Sample Name:	**HCV**	*Channel:*	**CD_1**
Sample Type:	**unknown**	*Control Program:*	**Perchlorate-IC11**
Recording Time:	**02/16/2008 05:49**	*Quantif. Method:*	**IC#4-CLO4-LOW**
Analyst:	**jkz**	*Dilution Factor:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	12.60	CLO4	0.236	0.084	100.00	101.506	BMB
Total:			0.236	0.084	100.00	101.506	

40 CCB

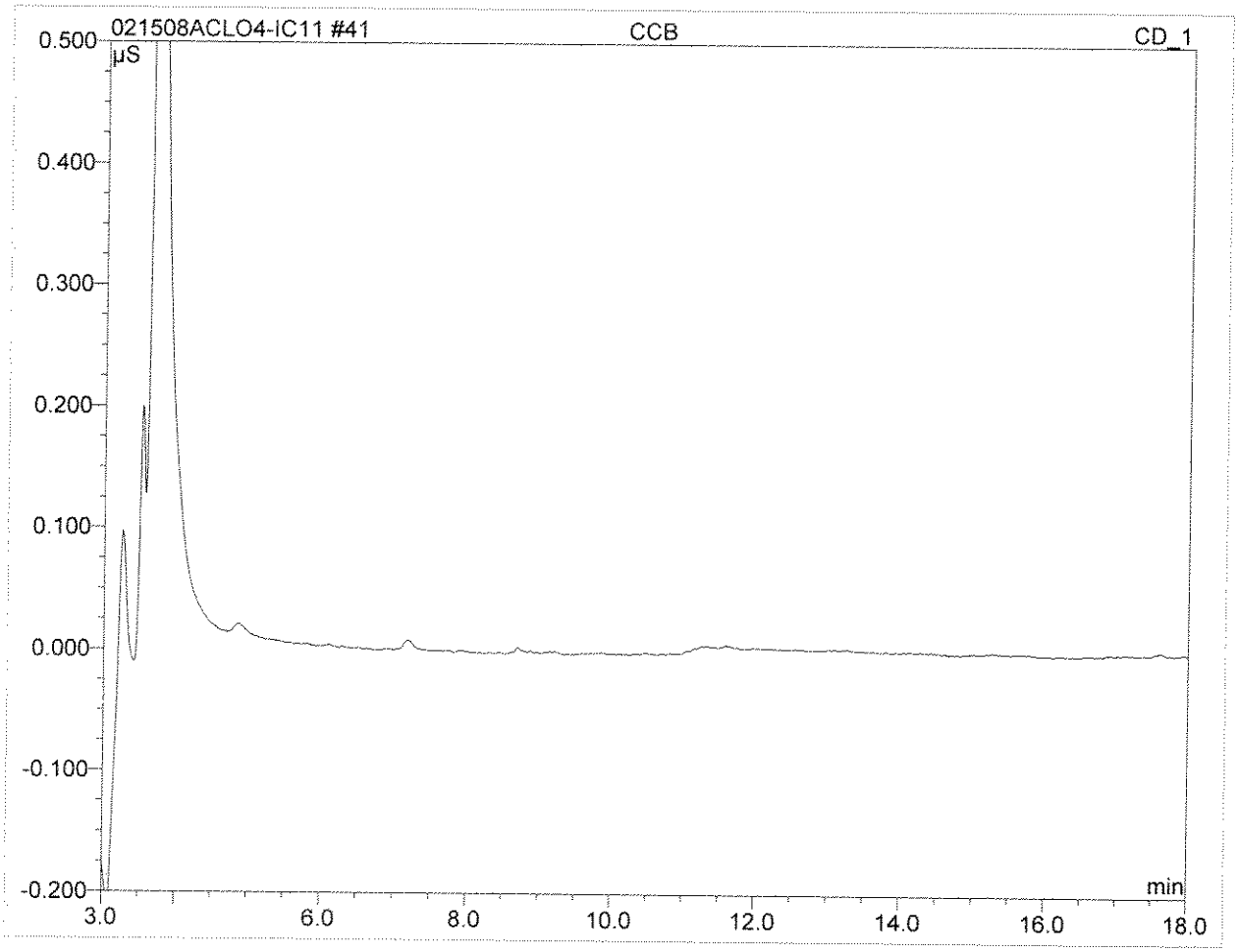
Sample Name:	**CCB**	*Channel:*	**CD_1**
Sample Type:	**unknown**	*Control Program:*	**Perchlorate-IC11**
Recording Time:	**02/16/2008 06:11**	*Quantif. Method:*	**IC#4-CLO4-LOW**
Analyst:	**jkz**	*Dilution Factor:*	**1.0000**



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

41 CCB

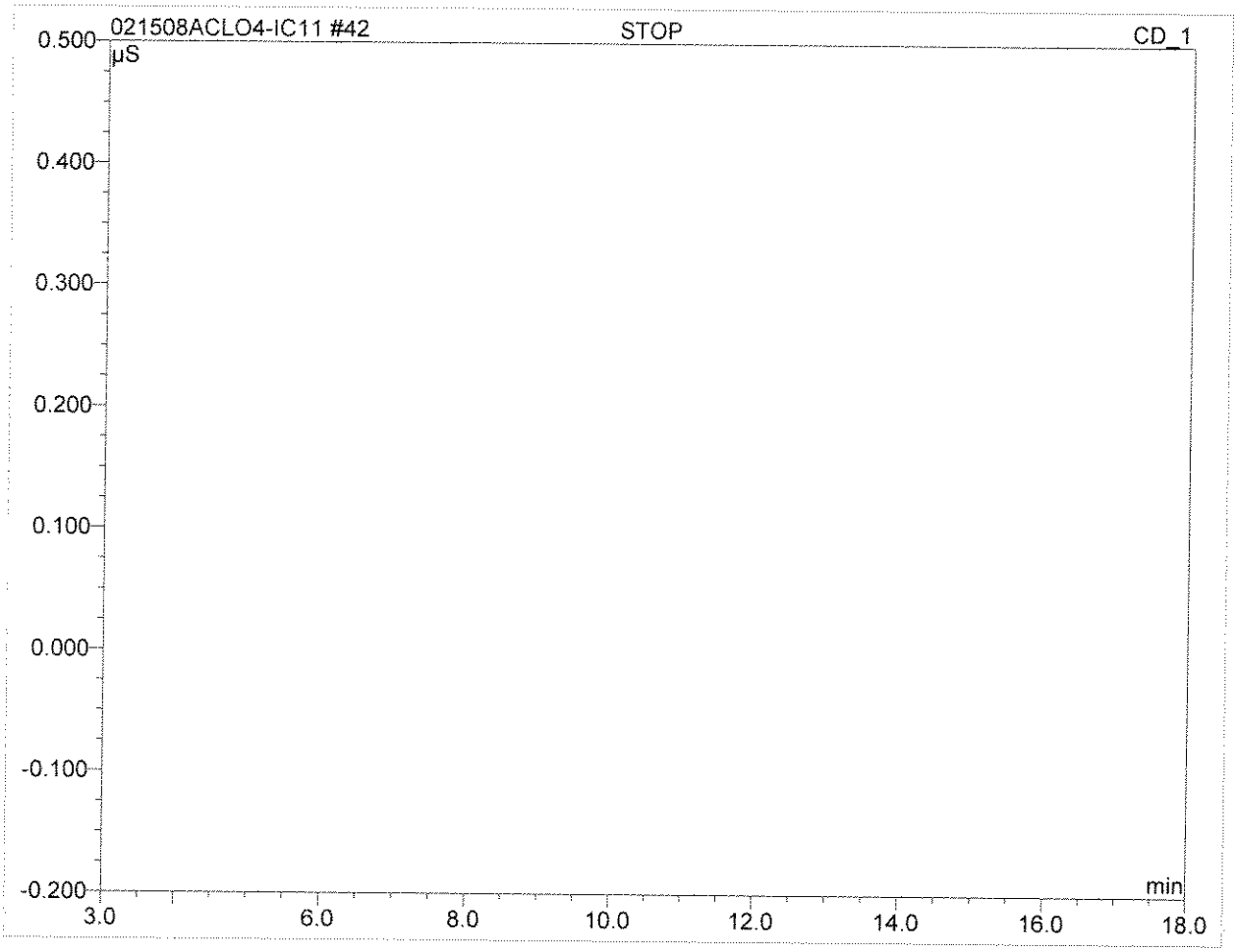
Sample Name:	**CCB**	*Channel:*	**CD_1**
Sample Type:	**unknown**	*Control Program:*	**Perchlorate-IC11**
Recording Time:	**02/16/2008 06:33**	*Quantif. Method:*	**IC#4-CLO4-LOW**
Analyst:	**jkz**	*Dilution Factor:*	**1.0000**



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

42 STOP

Sample Name:	**STOP**	*Channel:*	**CD_1**
Sample Type:	**unknown**	*Control Program:*	**IC11 Stop**
Recording Time:	**02/16/2008 06:56**	*Quantif. Method:*	**IC#4-CLO4-LOW**
Analyst:	**jkz**	*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	

Standard Preparation Worksheet & Certificate of Analysis

Reagent Preparation Documentation

Reagent: Anions LCS/LCSd Stds.
Date Received/Prepped: / / / / /
Date Expired: / / / / /
Manufacturer:
Storage Condition: fresh daily

MW #:
By: JKZ
Matrix: aq
Amount: 100 ml
Lot #: NA

Component	Comment	Standard	Concentration
Solr A	1 ml	R201752A	
Cl = 2500 ppm			Cl = 25 ppm
NO3 = 250	dilute to 1 ml w/ DI H2O		NO3 = 1
SO4 = 500			NO2 = 2.5
Solr B	1 ml	R201752B	SO4 = 50
NO2 100 ppm			

Comment: Stds. expire = 12/01/08

Reagent: ClO4 Init. Cal. Std. 1000 ppb ~~DBL Check 200 ppb~~ JK
Date Received/Prepped: 01/15/08 / / / /
Date Expired: / / / / /
Manufacturer: Absolute Grade
Storage Condition: Room Temp

MW #: JKZ 080115-1
By: JKZ
Matrix: aq
Amount: 100 ml
Lot #: NA

Component	Comment	Standard	Concentration
0.10 ml R201449	→ 100 ml soln Exp. 072809	ClO4	1000 ppb
@ 1000 ppm			

Comment:

Reagent: ClO4 2nd Source 1000 ppb
Date Received/Prepped: 01/15/08 / / / /
Date Expired: / / / / /
Manufacturer:
Storage Condition: Room Temp

MW #: JKZ 080115-2
By: JKZ
Matrix: aq
Amount: 100 ml
Lot #: NA

Component	Comment	Standard	Concentration
0.10 ml	0.10 ml → 100 ml Soln	R201789	100 ppb
1000 ppm ClO4		Exp. 07/10/09	

Comment:

Reagent Preparation Documentation

Page: 22

Reagent: ClO4 LCS/& LCSD 25 ppb
Date Received/Prepped: 01/15/08 | 02/06/08 | 02/15/08 | 02/21/08 | 03/03/08
Date Expired: / / / / /
Manufacturer:
Storage Condition:

MW #: 080115-3
By: JKZ
Matrix: aq
Amount: 100 ml
Lot #:

Component	Comment	Standard	Concentration
1000 ppb ClO4 2nd source	2.5 ml → 100 ml soln	R201789 Exp: 07/10/09	

Comment:

Reagent: ClO4 IPC E.C. = 3155 25 ppb
Date Received/Prepped: 01/15/08 | 02/06/08 | 02/25/08 | / | /
Date Expired: / / / / /
Manufacturer:
Storage Condition:

MW #: 080115-4
By: JKZ
Matrix: aq
Amount: 100 ml
Lot #:

Component	Comment	Standard	Concentration
~~2.5 ml~~ 10000 ppm ClO_4	3.5 ml } dilute to 100 ml w/ DI H_2O	CLV070205-4	
~~2.5~~ 10,000 ppm SO_4	3.5 ml	CLV070205-3	
10,000 ppm Cl	3.5 ml	CLV070205-2	
1000 ppb ClO4 Dnd Cal	2.5 ml		
R201449 Exp. 07/28/09			

Comment:

Reagent: ~~&~~ ClO4 QCSV 20 ppb
Date Received/Prepped: 01/15/08 | 02/12/08 | 02/25/08 | / | /
Date Expired: / / / / /
Manufacturer:
Storage Condition:

MW #: 080115-5
By: JKZ
Matrix: aq
Amount: 100 ml
Lot #:

Component	Comment	Standard	Concentration
1000 ppb ClO4 2nd source	2.0 ml → 100 ml soln	R201789 Exp: 07/10/09	

Comment:

Reagent Preparation Documentation

Page: 23

Reagent: ClO4 CCSV 25 ppb
Date Received/Prepped: 01/15/08 / 02/04/08 / 02/20/08 / 03/03/09 /
Date Expired: / / / / /
Manufacturer:
Storage Condition: Room Temp

MW #: JKZ - 080115-6
By: JKZ
Matrix: Aq
Amount: 100 ml
Lot #:

Component	Comment	Standard	Concentration
1000 ppb ClO4	2.5 ml → 100 ml soln		25 ppb
Drkt Cal Std	R 201449 Exp: 07/28/09		
R201449			
exp. 072809			

Comment:

Reagent: ClO4 matrix 2 ppb
Date Received/Prepped: 01/15/08 / 02/13/08 / 02/25/08 / /
Date Expired: / / / / /
Manufacturer:
Storage Condition: Room temp

MW #: JKZ 080115-7
By: JKZ
Matrix: Aq 100 ml
Amount: 100 ml
Lot #:

Component	Comment	Standard	Concentration
1000 ppb ClO4	0.20 ml → 100 ml soln		2 ppb
Drkt Cal Std			
R201449 exp: 072809			
(60) 5 May 08			

Comment:

Reagent: ClO4 ECSV 4 ppb
Date Received/Prepped: 01/15/08 / 02/13/08 / 02/25/08 / /
Date Expired: / / / / /
Manufacturer:
Storage Condition:

MW #: JKZ 080115-8
By: JKZ
Matrix: Aq
Amount: 100 ml
Lot #:

Component	Comment	Standard	Concentration
1000 ppb ClO4	0.40 ml → 100 ml soln		4 ppb
Drkt Cal. Std			
R201449 exp 072809			
(4) 5 May 08			

Comment:

Reagent Preparation Documentation

Reagent: ClO4 10 ppb cal Std.
Date Received/Prepped: 01/15/08 / / / /
Date Expired: / / / / /
Manufacturer:
Storage Condition: Room Temp

MW #: JKZ080115-9
By: JKZ
Matrix: aq
Amount: 100 ml
Lot #:

Component	Comment	Standard	Concentration
1000 ppb Dil. Cal Std	1.0 ml → 100 ml soln	R201449 exp 072809	10 ppb

Comment:

Reagent: ClO4 50 ppb cal Std
Date Received/Prepped: 01/15/08 / 02/21/08 / / /
Date Expired: / / / / /
Manufacturer:
Storage Condition: Room Temp

MW #: JKZ080115-10
By: JKZ
Matrix: aq
Amount: 100 ml
Lot #:

Component	Comment	Standard	Concentration
1000 ppb Dil. Calib. Std	5.0 ml → 100 ml soln	R201449 exp. 072809	50 ppb

Comment:

Reagent: ClO4 HCV 100 ppb
Date Received/Prepped: 01/15/08 / 02/13/08 / 02/25/08 / / /
Date Expired: / / / / /
Manufacturer:
Storage Condition: Room Temp

MW #: JKZ080115-11
By: JKZ
Matrix: aq
Amount: 10 ml
Lot #:

Component	Comment	Standard	Concentration
1000 ppb Dil Cal. Std.	10 ml → 100 ml soln	R201449 exp. 072809	100 ppb

Comment:

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DLS ANSI/RAB Accredited

CERTIFIED WEIGHT REPORT:

Part Number: 57001
Lot Number: 072806
Description: Perchlorate

R201449

Expiration Date: 072809

Nominal Concentration (µg/mL): 1000

	Lot #	
Solvent(s):	072806	ASTM Type 1 Water

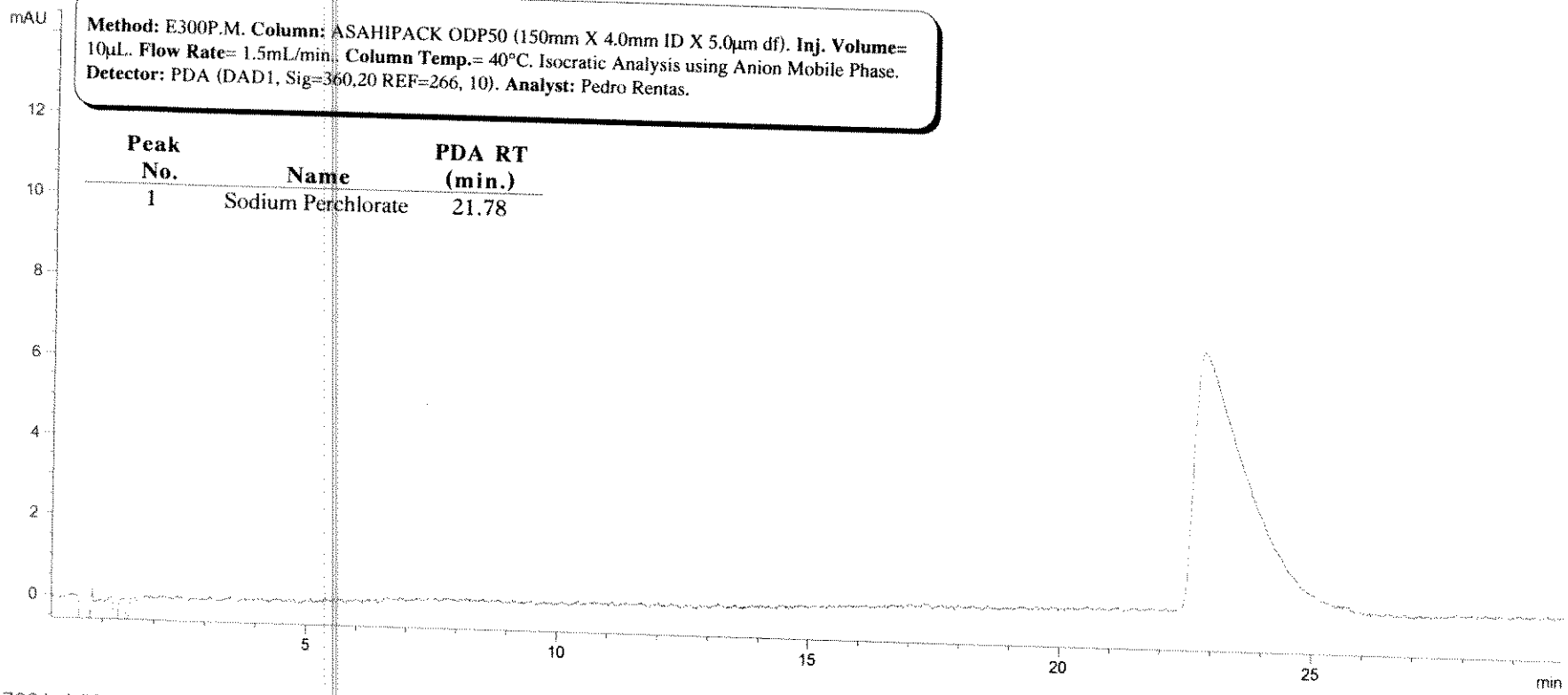
Weight(s) shown below were combined and diluted to (mL): 1000.55 | 5E-05 Balance Uncertainty | 0.084 Flask Uncertainty

Formulated By: Lawrence Barry 072806

Reviewed By: Pedro L. Rentas 072806

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

84



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

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

JUL 10 2009

K201784 rec'd 1-11-08

CPI INTERNATIONAL

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CERTIFICATE OF ANALYSIS

P/N 4400-010177

Ion Chromatography Perchlorate Standard
ClO_4 in H_2O
1000 µg/mL ± 0.5%

Lot # 06L058

Material Source: Sodium Perchlorate ($NaClO_4$)
Source Purity: 98.6%

This standard solution was prepared using a high-purity starting material and 18-megaohm deionized water. The starting material was weighed to five significant figures and diluted in a Class A volumetric glassware calibrated in accordance with National Bureau of Standards Circular 602. All balances are routinely calibrated using Class F NIST traceable weights.

This solution was certified instrumentally against the National Institute of Standards and Technology's SRM 3100 series.

Accuracy and stability are guaranteed to within plus or minus 0.5% of the certified value for 18 months after the date of shipment. The solution should be kept tightly capped and stored under normal laboratory conditions. See attached MSDS for proper handling information.

For questions or comments please call 1-800-878-7654 in the USA or +31 20 638 05 97 in Europe.