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Level IV Data Package

MWH Group 229554

Method: EPA 218.6

2802050696

2802050697

No.	Sample Name	Time	Dil.Fac.	Amount	Comment	Analyst:	tlh
					CRVI-LOW		
					UV VIS 1	Criteria	
1,	Standard 1 - 0.1 ppb	12/31/07 07:17,	1.0,	0.091	Diluted from Std. 3		
2,	Standard 2 - 0.2ppb	12/31/07 07:25,	1.0,	0.208	TLH071018-4		
3,	Standard 3 - 2.0 ppb	12/31/07 07:33,	1.0,	1.972	TLH071018-5		
4,	Standard 4 - 10 ppb	12/31/07 07:41,	1.0,	9.960	TLH071018-6		
5,	Standard 5 - 20 ppb	12/31/07 07:49,	1.0,	20.128	TLH071018-7		
6,	Standard 6 - 50ppb	12/31/07 07:57,	1.0,	49.958	TLH071018-8		
7,	IPC 20	02/05/08 09:19,	1.0,	19.463			
8,	LRB	02/05/08 09:28,	1.0,	n.a.			
9,	LRB BUFFER	02/05/08 09:36,	1.0,	n.a.			
10,	MRL 0.1ppb	02/05/08 09:44,	1.0,	0.093			
11,	LCS 2.0ppb	02/05/08 09:52,	1.0,	1.991			
12,	LCS 2.0ppb Dup	02/05/08 10:00,	1.0,	1.984			
13,	2802040273	02/05/08 10:19,	1.0,	0.103			
14,	2802040273_MS	02/05/08 10:27,	1.0,	2.062	1.96 - 98.0% recovery		
15,	2802040273_MSD	02/05/08 10:35,	1.0,	2.061	1.96 - 97.9% recovery		
16,	IPC 20	02/05/08 10:43,	1.0,	19.488			
17,	LRB	02/05/08 10:51,	1.0,	n.a.			
18,	LRB	02/05/08 11:25,	1.0,	n.a.			
19,	2802050696	02/05/08 11:33,	1.0,	n.a.			
20,	2802050697	02/05/08 11:41,	1.0,	20.855			
21,	2802050386	02/05/08 11:49,	1.0,	6.914			
22,	2802050666 (1:5)	02/05/08 11:57,	5.0,	41.170			
23,	IPC 20	02/05/08 12:05,	1.0,	19.716			
24,	LRB	02/05/08 12:13,	1.0,	n.a.			
25,	2802050507	02/05/08 15:58,	1.0,	0.417			
26,	2802050505	02/05/08 16:06,	1.0,	90.339	DILUTE AND RERUN		
27,	2802050506	02/05/08 16:14,	1.0,	1.176		MRL 50%-150%	
28,	2802050511	02/05/08 16:22,	1.0,	0.686		0.05 - 0.15ppb	
29,	2802050509	02/05/08 16:30,	1.0,	94.271	DILUTE AND RERUN	LCS 90%-110%	
30,	IPC 20	02/05/08 16:38,	1.0,	19.410		Range: 1.80 - 2.20	
31,	LRB	02/05/08 16:47,	1.0,	0.004		MS/MSD 90%-110%	
32,	2802050508	02/05/08 16:55,	1.0,	0.178		True Value = 2.0	
33,	2802050508_MS	02/05/08 17:03,	1.0,	2.169	1.99 - 99.6% recovery	IPC 95%-105%	
34,	2802050510	02/05/08 17:11,	1.0,	0.720		20ppb - 19-21ppb	
35,	2802050505 (1:5)	02/05/08 17:19,	5.0,	89.957		10ppb - 9.5-10.5 ppb	
36,	2802050509 (1:5)	02/05/08 17:27,	5.0,	93.943			
37,	IPC 20	02/05/08 17:35,	1.0,	19.471			
38,	LRB	02/05/08 17:43,	1.0,	n.a.			

Rev: in 9 Feb 08

Sequence: 020508-IC5-CRVI
Operator: tih

Page 1 of 2
Printed: 2/6/2008 11:15:08 AM

Title: CRVI-LOW
Datatype: Dionex_USPAS2SDIO2
Location: IC\IC5_ CRVI-LOW\2008\February
Timebase: IC-#5
#Samples: 38

Created: 2/5/2008 9:19:26 AM by tih
(Modified, not saved)

No.	Name	Dil. Factor	Type	Comment	Pos.	Inj. Vol.	Program	Method
1	Standard 1 - 0.1 ppb	1.0000	Standard	Diluted from Std. 3	841	1.0	CRVI-LOW-loop	1-IC#5-CRVI
2	Standard 2 - 0.2ppb	1.0000	Standard	TLH071018-4	842	1.0	CRVI-LOW-loop	1-IC#5-CRVI
3	Standard 3 - 2.0 ppb	1.0000	Standard	TLH071018-5	843	1.0	CRVI-LOW-loop	1-IC#5-CRVI
4	Standard 4 - 10 ppb	1.0000	Standard	TLH071018-6	844	1.0	CRVI-LOW-loop	1-IC#5-CRVI
5	Standard 5 - 20 ppb	1.0000	Standard	TLH071018-7	845	1.0	CRVI-LOW-loop	1-IC#5-CRVI
6	Standard 6 - 50ppb	1.0000	Standard	TLH071018-8	846	1.0	CRVI-LOW-loop	1-IC#5-CRVI
7	IPC 20	1.0000	Unknown		856	1.0	CRVI-LOW-loop	1-IC#5-CRVI
8	LRB	1.0000	Unknown		856	1.0	CRVI-LOW-loop	1-IC#5-CRVI
9	LRB BUFFER	1.0000	Unknown		856	1.0	CRVI-LOW-loop	1-IC#5-CRVI
10	MRL 0.1ppb	1.0000	Unknown		856	1.0	CRVI-LOW-loop	1-IC#5-CRVI
11	LCS 2.0ppb	1.0000	Unknown		877	1.0	CRVI-LOW-loop	1-IC#5-CRVI
12	LCS 2.0ppb Dup	1.0000	Unknown		877	1.0	CRVI-LOW-loop	1-IC#5-CRVI
13	2802040273	1.0000	Unknown		878	1.0	CRVI-LOW-loop	1-IC#5-CRVI
14	2802040273_MS	1.0000	Unknown	1.96 - 98.0% recovery	879	1.0	CRVI-LOW-loop	1-IC#5-CRVI
15	2802040273_MSD	1.0000	Unknown	1.96 - 97.9% recovery	880	1.0	CRVI-LOW-loop	1-IC#5-CRVI
16	IPC 20	1.0000	Unknown		881	1.0	CRVI-LOW-loop	1-IC#5-CRVI
17	LRB	1.0000	Unknown		882	1.0	CRVI-LOW-loop	1-IC#5-CRVI
18	LRB	1.0000	Unknown		883	1.0	CRVI-LOW-loop	1-IC#5-CRVI
19	2802050696	1.0000	Unknown		884	1.0	CRVI-LOW-loop	1-IC#5-CRVI
20	2802050697	1.0000	Unknown		885	1.0	CRVI-LOW-loop	1-IC#5-CRVI
21	2802050386	1.0000	Unknown		886	1.0	CRVI-LOW-loop	1-IC#5-CRVI
22	2802050666 (1:5)	5.0000	Unknown		887	1.0	CRVI-LOW-loop	1-IC#5-CRVI
23	IPC 20	1.0000	Unknown		888	1.0	CRVI-LOW-loop	1-IC#5-CRVI
24	LRB	1.0000	Unknown		889	1.0	CRVI-LOW-loop	1-IC#5-CRVI
25	2802050507	1.0000	Unknown		890	1.0	CRVI-LOW-loop	1-IC#5-CRVI
26	2802050505	1.0000	Unknown	DILUTE AND RERUN	891	1.0	CRVI-LOW-loop	1-IC#5-CRVI
27	2802050506	1.0000	Unknown		892	1.0	CRVI-LOW-loop	1-IC#5-CRVI
28	2802050511	1.0000	Unknown		893	1.0	CRVI-LOW-loop	1-IC#5-CRVI
29	2802050509	1.0000	Unknown	DILUTE AND RERUN	894	1.0	CRVI-LOW-loop	1-IC#5-CRVI
30	IPC 20	1.0000	Unknown		895	1.0	CRVI-LOW-loop	1-IC#5-CRVI
31	LRB	1.0000	Unknown		896	1.0	CRVI-LOW-loop	1-IC#5-CRVI
32	2802050508	1.0000	Unknown		897	1.0	CRVI-LOW-loop	1-IC#5-CRVI
33	2802050508_MS	1.0000	Unknown	1.99 - 99.6% recovery	898	1.0	CRVI-LOW-loop	1-IC#5-CRVI
34	2802050510	1.0000	Unknown		899	1.0	CRVI-LOW-loop	1-IC#5-CRVI
35	2802050505 (1:5)	5.0000	Unknown		900	1.0	CRVI-LOW-loop	1-IC#5-CRVI
36	2802050509 (1:5)	5.0000	Unknown		900	1.0	CRVI-LOW-loop	1-IC#5-CRVI
37	IPC 20	1.0000	Unknown		900	1.0	CRVI-LOW-loop	1-IC#5-CRVI
38	LRB	1.0000	Unknown		901	1.0	CRVI-LOW-loop	1-IC#5-CRVI

Sequence: 020508-IC5-CRVI
Operator: tlh

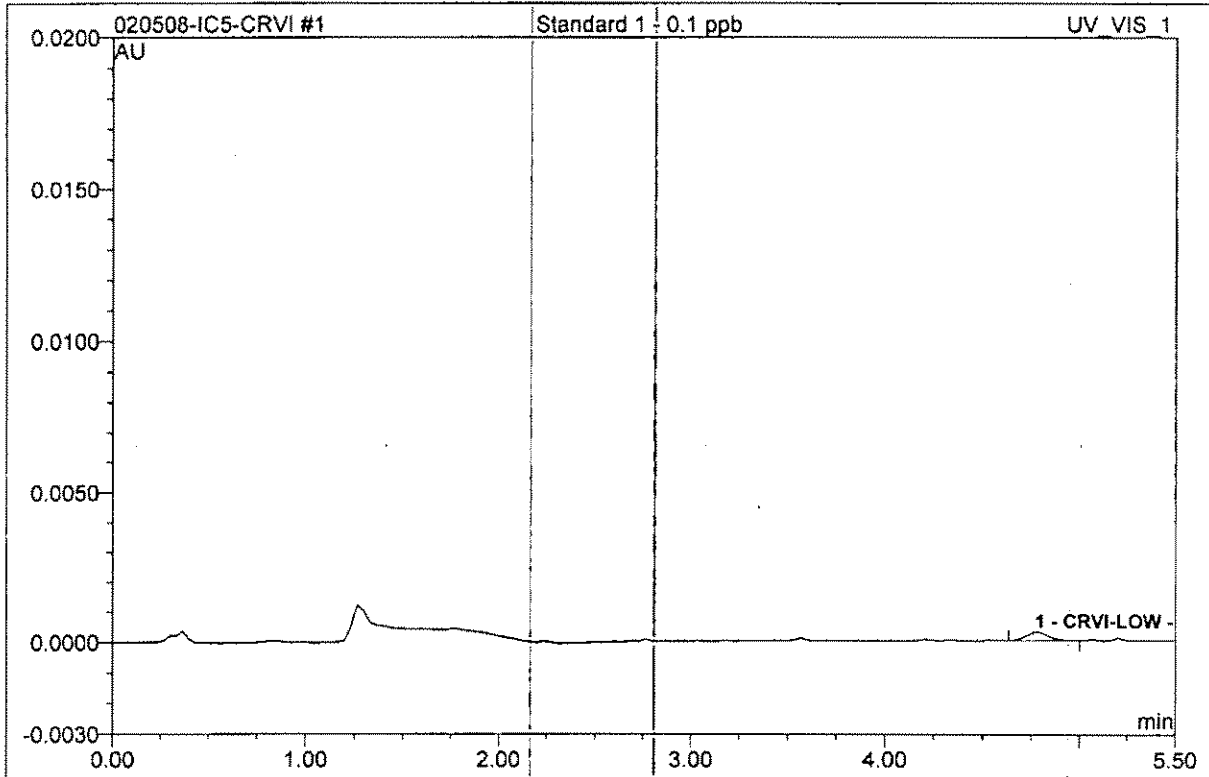
Page 2 of 2
Printed: 2/6/2008 11:15:08 AM

Title: CRVI-LOW
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Timebase: IC-#5
#Samples: 38

Created: 2/5/2008 9:19:26 AM by tlh
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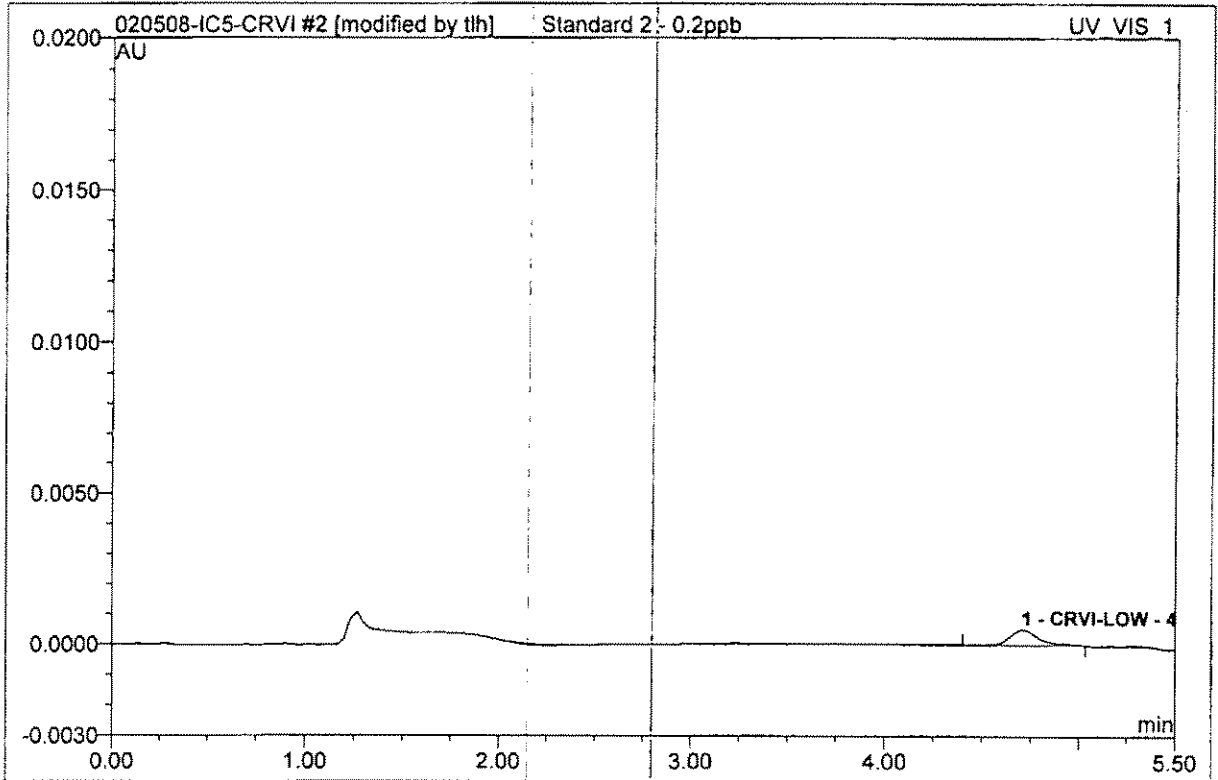
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1	Finished	12/31/2007 7:17:16 AM	tlh
2	Finished	12/31/2007 7:25:21 AM	tlh
3	Finished	12/31/2007 7:33:27 AM	tlh
4	Finished	12/31/2007 7:41:33 AM	tlh
5	Finished	12/31/2007 7:49:39 AM	tlh
6	Finished	12/31/2007 7:57:45 AM	tlh
7	Finished	2/5/2008 9:19:57 AM	tlh
8	Finished	2/5/2008 9:28:03 AM	tlh
9	Finished	2/5/2008 9:36:09 AM	tlh
10	Finished	2/5/2008 9:44:15 AM	tlh
11	Finished	2/5/2008 9:52:21 AM	tlh
12	Finished	2/5/2008 10:00:27 AM	tlh
13	Finished	2/5/2008 10:19:06 AM	tlh
14	Finished	2/5/2008 10:27:11 AM	tlh
15	Finished	2/5/2008 10:35:17 AM	tlh
16	Finished	2/5/2008 10:43:23 AM	tlh
17	Finished	2/5/2008 10:51:29 AM	tlh
18	Finished	2/5/2008 11:25:00 AM	tlh
19	Finished	2/5/2008 11:33:07 AM	tlh
20	Finished	2/5/2008 11:41:13 AM	tlh
21	Finished	2/5/2008 11:49:19 AM	tlh
22	Finished	2/5/2008 11:57:24 AM	tlh
23	Finished	2/5/2008 12:05:31 PM	tlh
24	Finished	2/5/2008 12:13:37 PM	tlh
25	Finished	2/5/2008 3:58:25 PM	tlh
26	Finished	2/5/2008 4:06:31 PM	tlh
27	Finished	2/5/2008 4:14:37 PM	tlh
28	Finished	2/5/2008 4:22:43 PM	tlh
29	Finished	2/5/2008 4:30:49 PM	tlh
30	Finished	2/5/2008 4:38:55 PM	tlh
31	Finished	2/5/2008 4:47:01 PM	tlh
32	Finished	2/5/2008 4:55:06 PM	tlh
33	Finished	2/5/2008 5:03:13 PM	tlh
34	Finished	2/5/2008 5:11:19 PM	tlh
35	Finished	2/5/2008 5:19:25 PM	tlh
36	Finished	2/5/2008 5:27:31 PM	tlh
37	Finished	2/5/2008 5:35:37 PM	tlh
38	Finished	2/5/2008 5:43:42 PM	tlh

1 Standard 1 - 0.1 ppb			
Sample Name:	Standard 1 - 0.1 ppb	Control Program:	CRVI-LOW-loop
Dilution Factor:	1.0000	Quantif. Method:	1-IC#5-CRVI
Sample Type:	standard	Recording Time:	12/31/2007 7:17
Analyst:	tlh	Channel:	UV_VIS_1



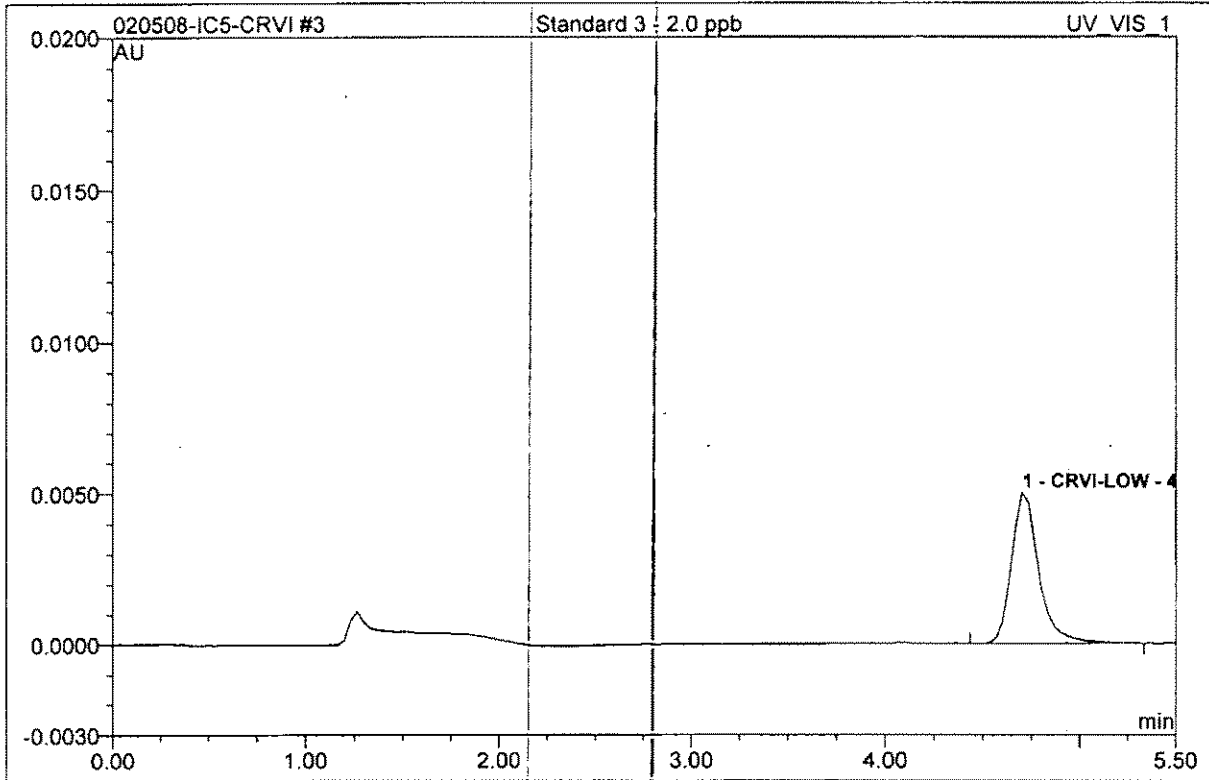
No.	Ret.Time min	Peak Name	Height AU	Area AU*min	Rel.Area %	Amount	Type
1	4.77	CRVI-LOW	0.000	0.0000380	100.00	0.091	BMB
Total:			0.000	0.000	100.00	0.091	

2 Standard 2 - 0.2ppb			
Sample Name:	Standard 2 - 0.2ppb	Control Program:	CRVI-LOW-loop
Dilution Factor:	1.0000	Quantif. Method:	1-IC#5-CRVI
Sample Type:	standard	Recording Time:	12/31/2007 7:25
Analyst:	tlh	Channel:	UV_VIS_1



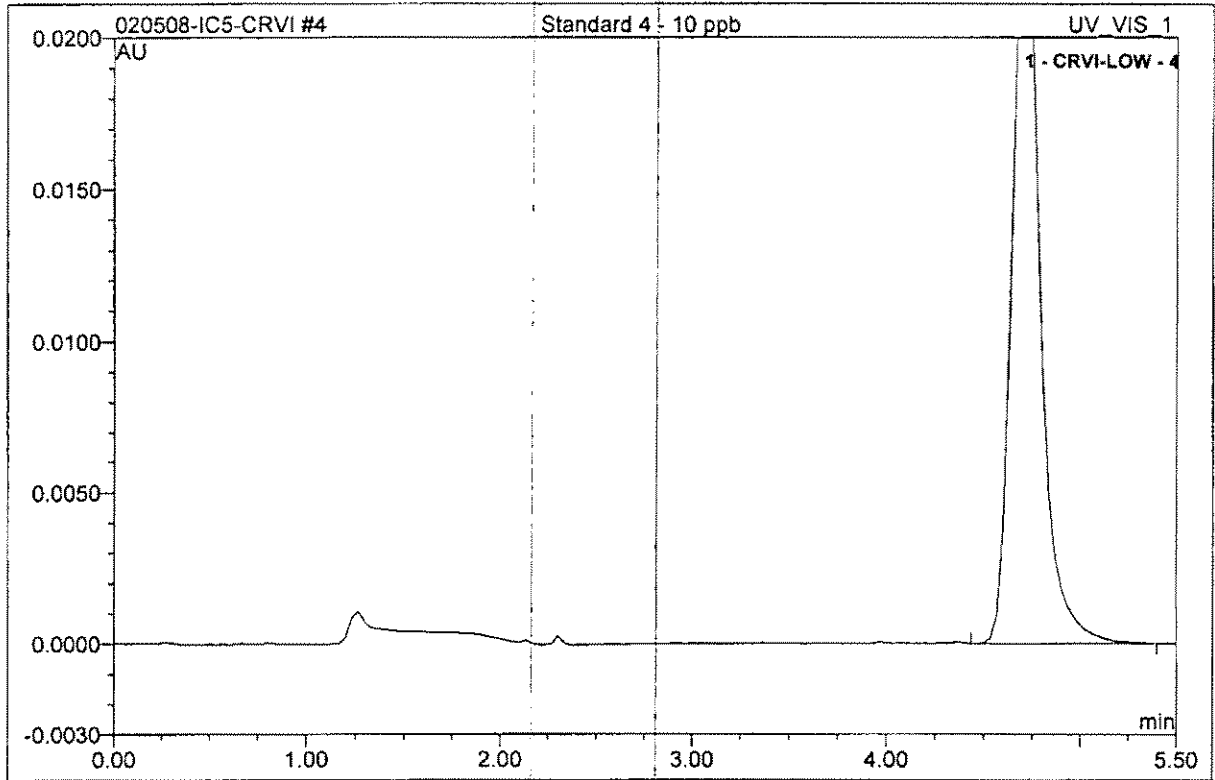
No.	Ret.Time min	Peak Name	Height AU	Area AU*min	Rel.Area %	Amount	Type
1	4.70	CRVI-LOW	0.001	0.0000865	100.00	0.208	BMB*
Total:			0.001	0.000	100.00	0.208	

3 Standard 3 - 2.0 ppb		
Sample Name:	Standard 3 - 2.0 ppb	Control Program: CRVI-LOW-loop
Dilution Factor:	1.0000	Quantif. Method: 1-IC#5-CRVI
Sample Type:	standard	Recording Time: 12/31/2007 7:33
Analyst:	tlh	Channel: UV_VIS_1



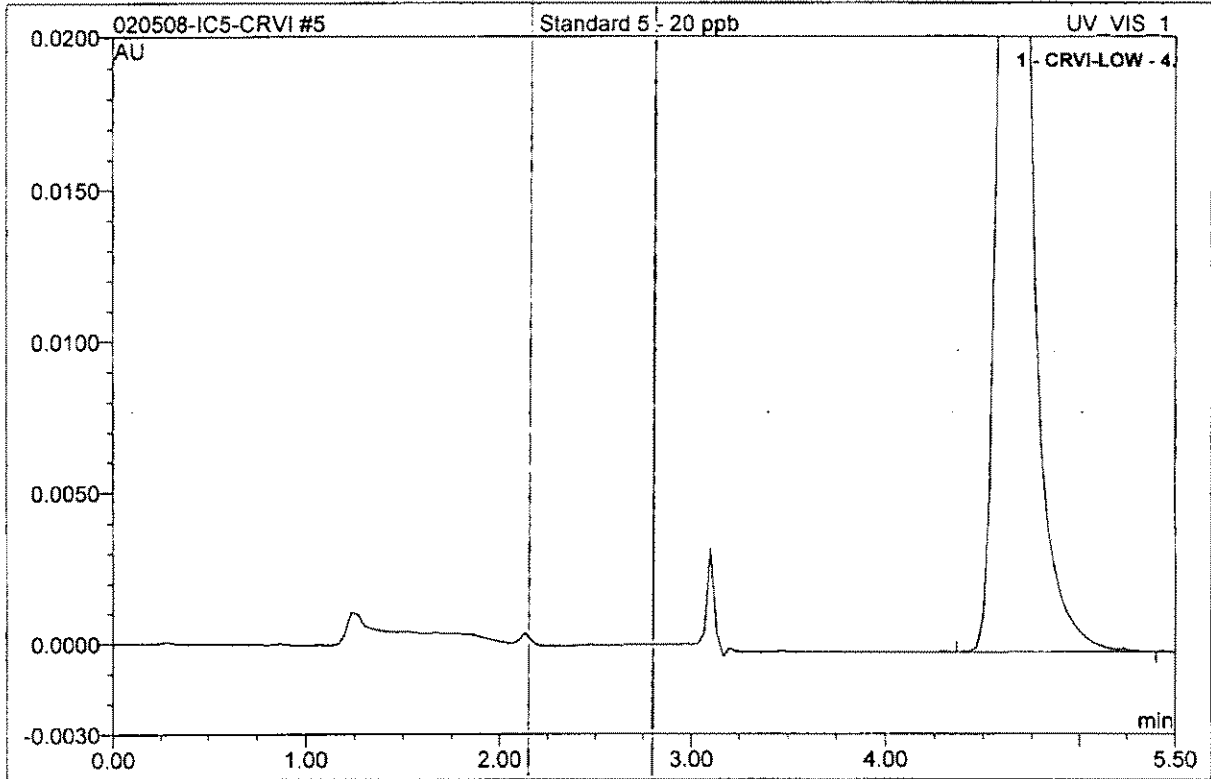
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1	4.70	CRVI-LOW	0.005	0.0008211	100.00	1.972	BMB
Total:			0.005	0.001	100.00	1.972	

4 Standard 4 - 10 ppb			
Sample Name:	Standard 4 - 10 ppb	Control Program:	CRVI-LOW-loop
Dilution Factor:	1.0000	Quantif. Method:	1-IC#5-CRVI
Sample Type:	standard	Recording Time:	12/31/2007 7:41
Analyst:	tlh	Channel:	UV_VIS_1



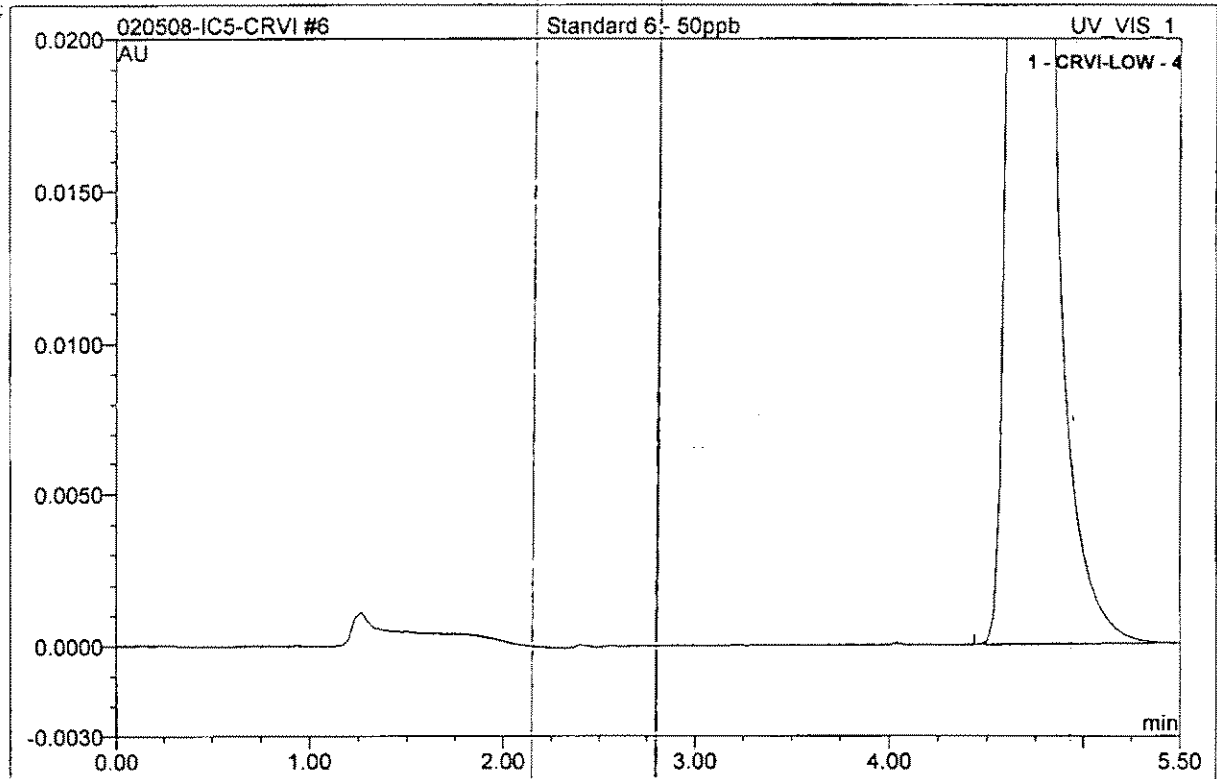
No.	Ret.Time min	Peak Name	Height AU	Area AU*min	Rel.Area %	Amount	Type
1	4.70	CRVI-LOW	0.026	0.0041471	100.00	9.960	BMB
Total:			0.026	0.004	100.00	9.960	

5 Standard 5 - 20 ppb		
Sample Name:	Standard 5 - 20 ppb	Control Program: CRVI-LOW-loop
Dilution Factor:	1.0000	Quantif. Method: 1-IC#5-CRVI
Sample Type:	standard	Recording Time: 12/31/2007 7:49
Analyst:	tlh	Channel: UV_VIS_1



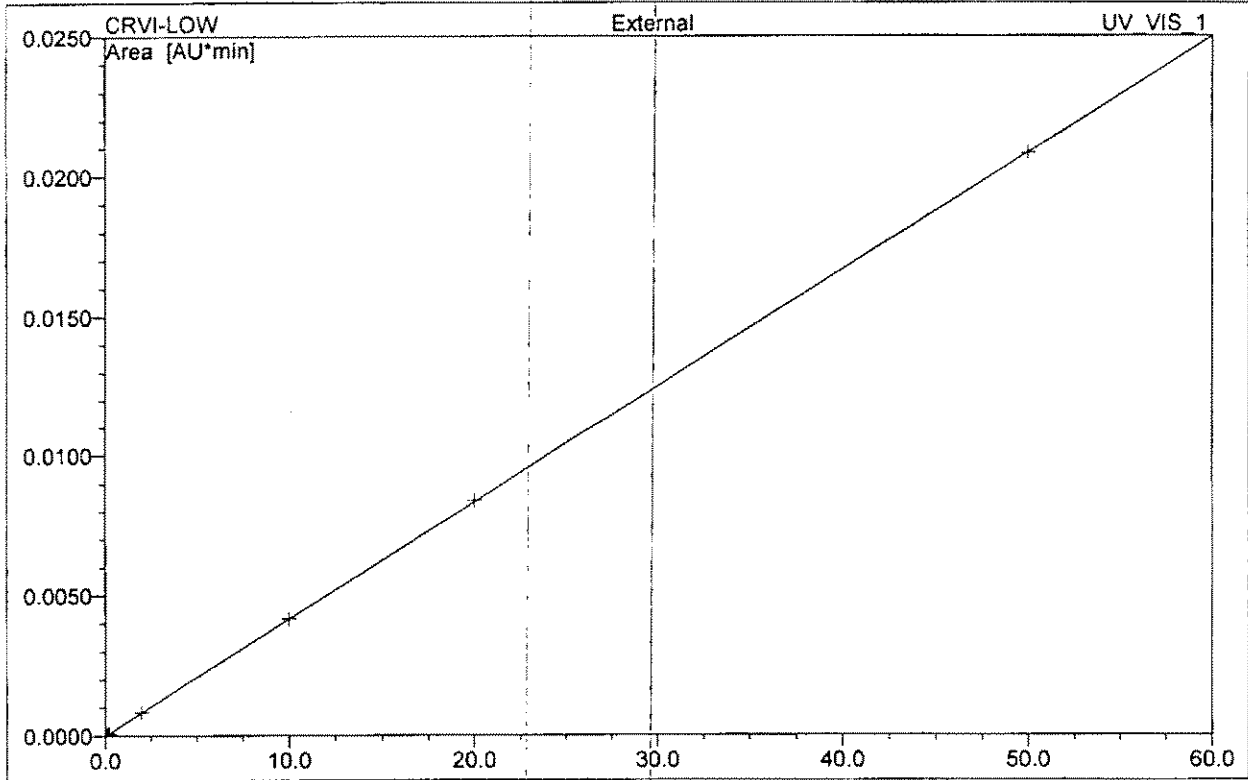
No.	Ret.Time min	Peak Name	Height AU	Area AU*min	Rel.Area %	Amount	Type
1	4.67	CRVI-LOW	0.050	0.0083805	100.00	20.128	BMB
Total:			0.050	0.008	100.00	20.128	

6 Standard 6 - 50ppb			
Sample Name:	Standard 6 - 50ppb	Control Program:	CRVI-LOW-loop
Dilution Factor:	1.0000	Quantif. Method:	1-IC#5-CRVI
Sample Type:	standard	Recording Time:	12/31/2007 7:57
Analyst:	tlh	Channel:	UV_VIS_1



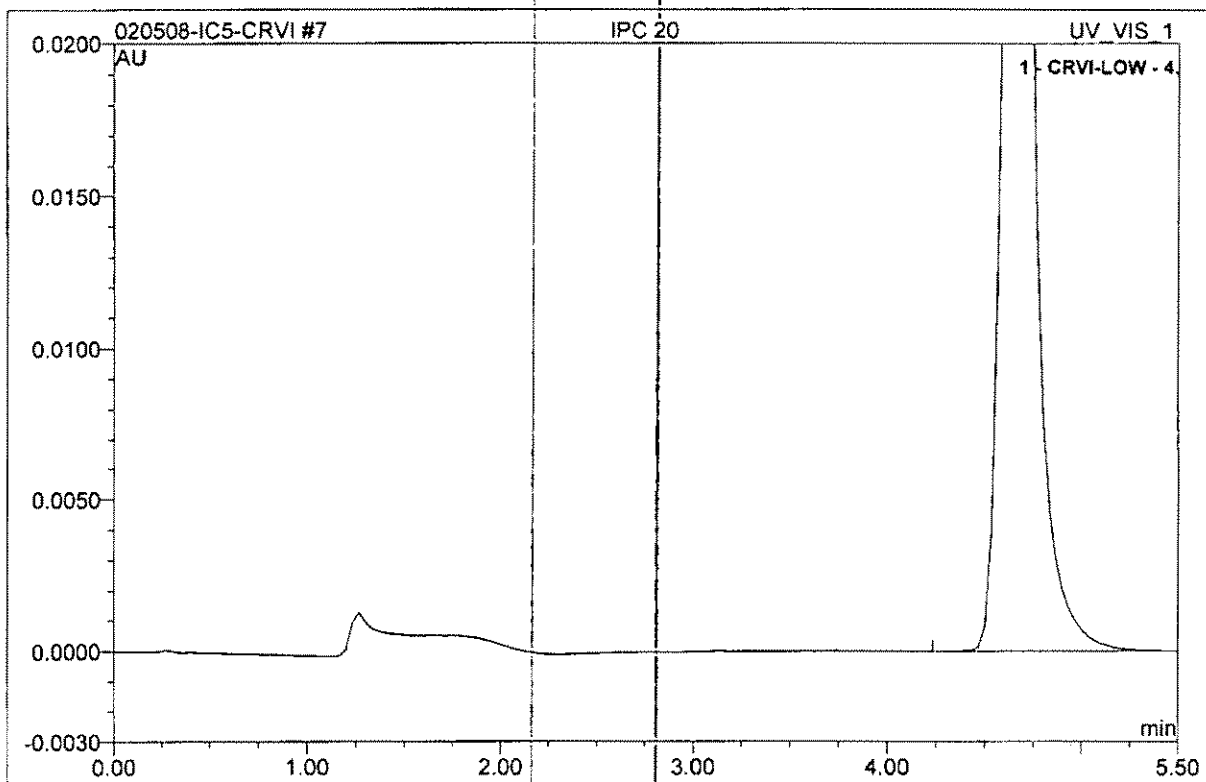
No.	Ret.Time min	Peak Name	Height AU	Area AU*min	Rel.Area %	Amount	Type
1	4.70	CRVI-LOW	0.129	0.0208007	100.00	49.958	BMB
Total:			0.129	0.021	100.00	49.958	

6 Standard 6 - 50ppb			
Sample Name:	Standard 6 - 50ppb	Control Program:	CRVI-LOW-loop
Sample Type:	standard	Quantif. Method:	1-IC#5-CRVI
Recording Time:	12/31/2007 7:57	Channel:	UV_VIS_1



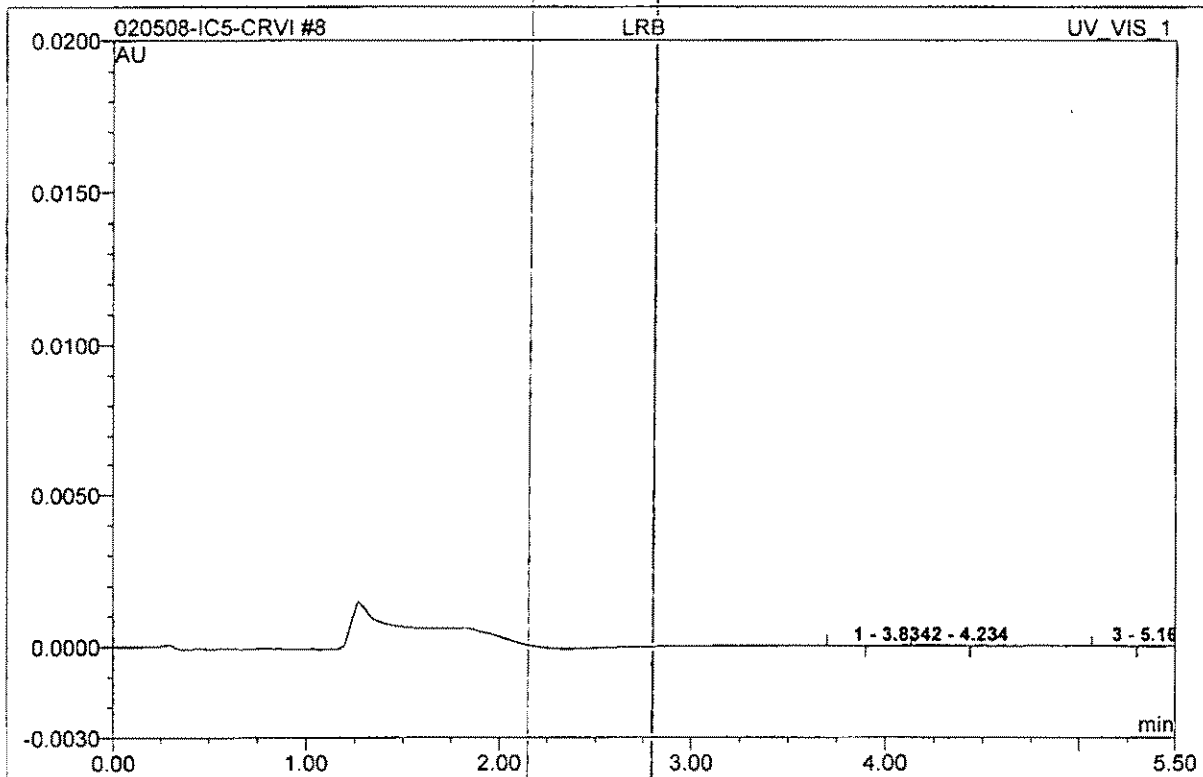
No.	Ret.Time min	Peak Name	Cal.Type	Points	Corr.Coeff. %	Offset	Slope	Curve
1	4.70	CRVI-LOW	Lin	6	99.9995	0.0000	0.0004164	0.0000
Average:					99.9995	0.0000	0.0004	0.0000

7 IPC 20			
Sample Name:	IPC 20	Control Program:	CRVI-LOW-loop
Dilution Factor:	1.0000	Quantif. Method:	1-IC#5-CRVI
Sample Type:	unknown	Recording Time:	2/5/2008 9:19
Analyst:	tlh	Channel:	UV_VIS_1



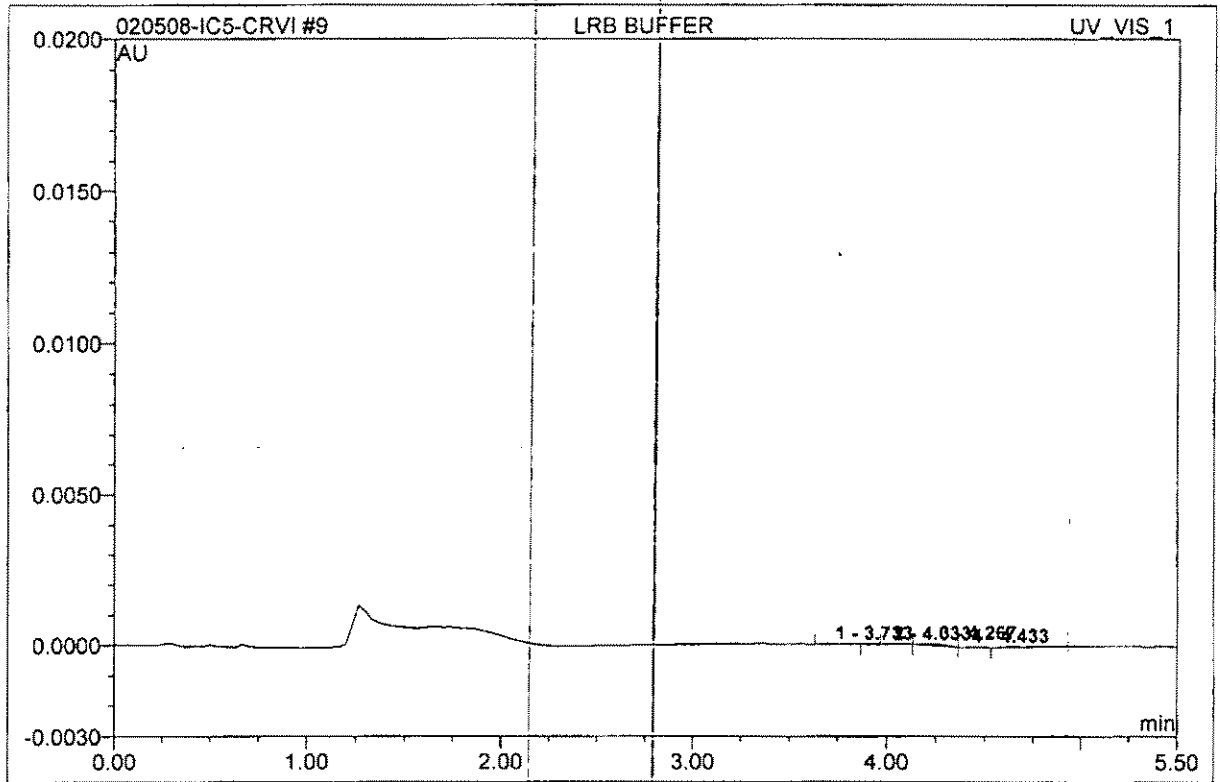
No.	Ret.Time min	Peak Name	Height AU	Area AU*min	Rel.Area %	Amount	Type
1	4.67	CRVI-LOW	0.049	0.0081038	100.00	19.463	BMB
Total:			0.049	0.008	100.00	19.463	

8 LRB			
Sample Name:	LRB	Control Program:	CRVI-LOW-loop
Dilution Factor:	1.0000	Quantif. Method:	1-IC#5-CRVI
Sample Type:	unknown	Recording Time:	2/5/2008 9:28
Analyst:	tlh	Channel:	UV_VIS_1



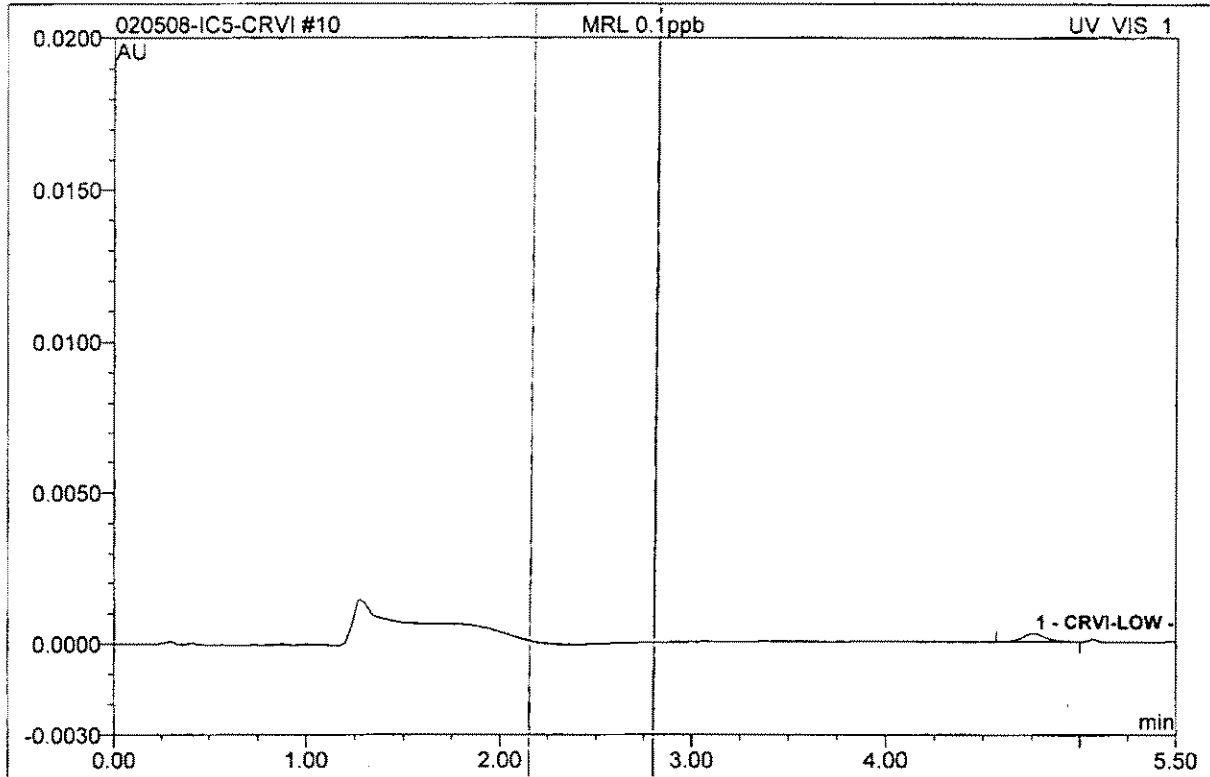
No.	Ret.Time min	Peak Name	Height AU	Area AU*min	Rel.Area %	Amount	Type
1	3.83	n.a.	0.000	0.0000011	26.15	n.a.	BMB
2	4.23	n.a.	0.000	0.0000015	33.85	n.a.	BMB
3	5.17	n.a.	0.000	0.0000017	40.00	n.a.	BMB
Total:			0.000	0.000	100.00	0.000	

9 LRB BUFFER			
Sample Name:	LRB BUFFER	Control Program:	CRVI-LOW-loop
Dilution Factor:	1.0000	Quantif. Method:	1-IC#5-CRVI
Sample Type:	unknown	Recording Time:	2/5/2008 9:36
Analyst:	tlh	Channel:	UV_VIS_1



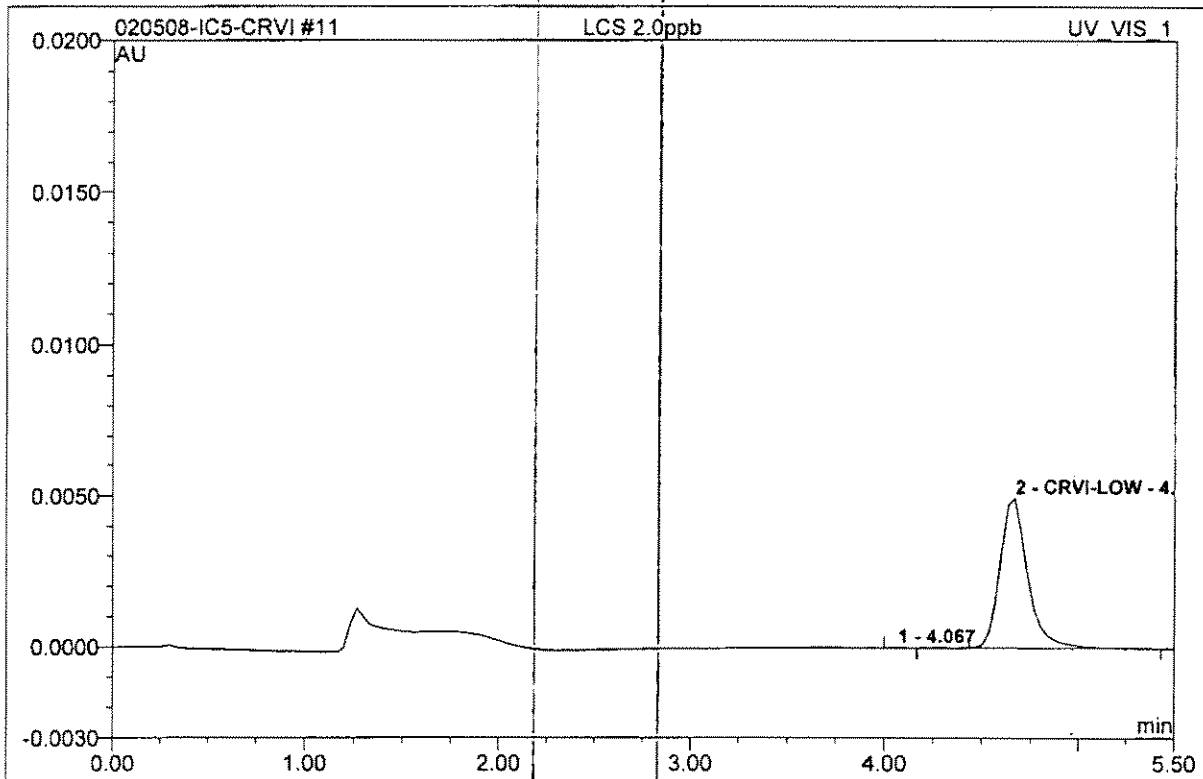
No.	Ret.Time min	Peak Name	Height AU	Area AU*min	Rel.Area %	Amount	Type
1	3.73	n.a.	0.000	0.0000010	7.37	n.a.	BMB
2	4.03	n.a.	0.000	0.0000005	3.93	n.a.	BMb
3	4.27	n.a.	0.000	0.0000088	64.62	n.a.	bMb
4	4.43	n.a.	0.000	0.0000033	24.08	n.a.	bMB
Total:			0.000	0.000	100.00	0.000	

10 MRL 0.1ppb		
Sample Name:	MRL 0.1ppb	Control Program: CRVI-LOW-loop
Dilution Factor:	1.0000	Quantif. Method: 1-IC#5-CRVI
Sample Type:	unknown	Recording Time: 2/5/2008 9:44
Analyst:	tlh	Channel: UV_VIS_1



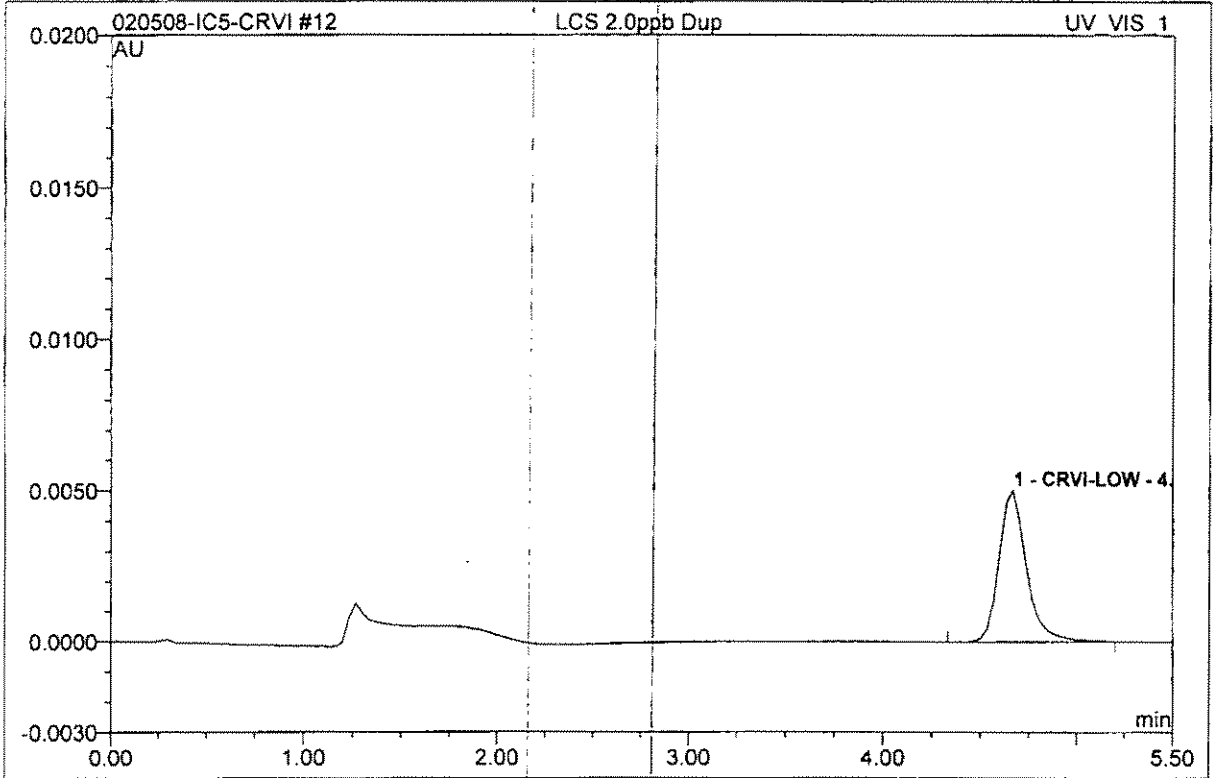
No.	Ret.Time min	Peak Name	Height AU	Area AU*min	Rel.Area %	Amount	Type
1	4.77	CRVI-LOW	0.000	0.0000389	100.00	0.093	BMB
Total:			0.000	0.000	100.00	0.093	

11 LCS 2.0ppb		
Sample Name:	LCS 2.0ppb	Control Program: CRVI-LOW-loop
Dilution Factor:	1.0000	Quantif. Method: 1-IC#5-CRVI
Sample Type:	unknown	Recording Time: 2/5/2008 9:52
Analyst:	tlh	Channel: UV_VIS_1



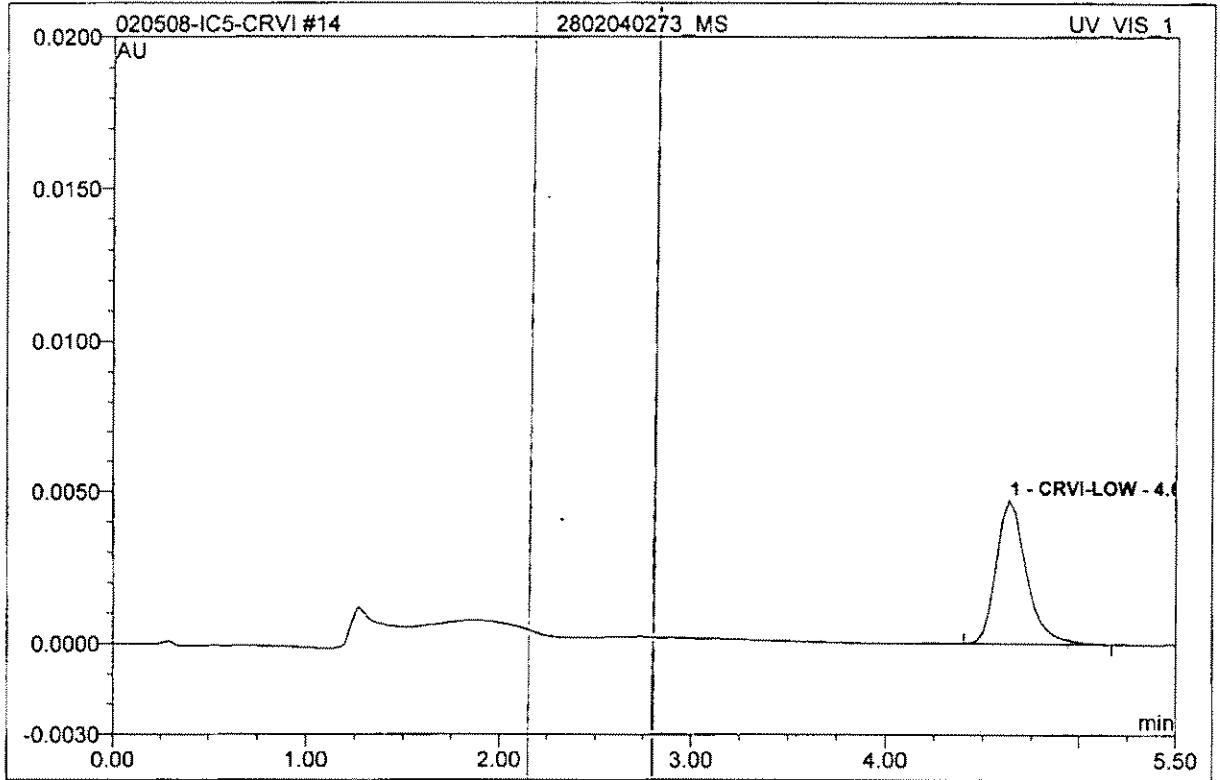
No.	Ret.Time min	Peak Name	Height AU	Area AU*min	Rel.Area %	Amount	Type
1	4.07	n.a.	0.000	0.0000013	0.16	n.a.	BMB
2	4.67	CRVI-LOW	0.005	0.0008288	99.84	1.991	BMB
Total:			0.005	0.001	100.00	1.991	

12 LCS 2.0ppb Dup			
Sample Name:	LCS 2.0ppb Dup	Control Program:	CRVI-LOW-loop
Dilution Factor:	1.0000	Quantif. Method:	1-IC#5-CRVI
Sample Type:	unknown	Recording Time:	2/5/2008 10:00
Analyst:	tlh	Channel:	UV_VIS_1



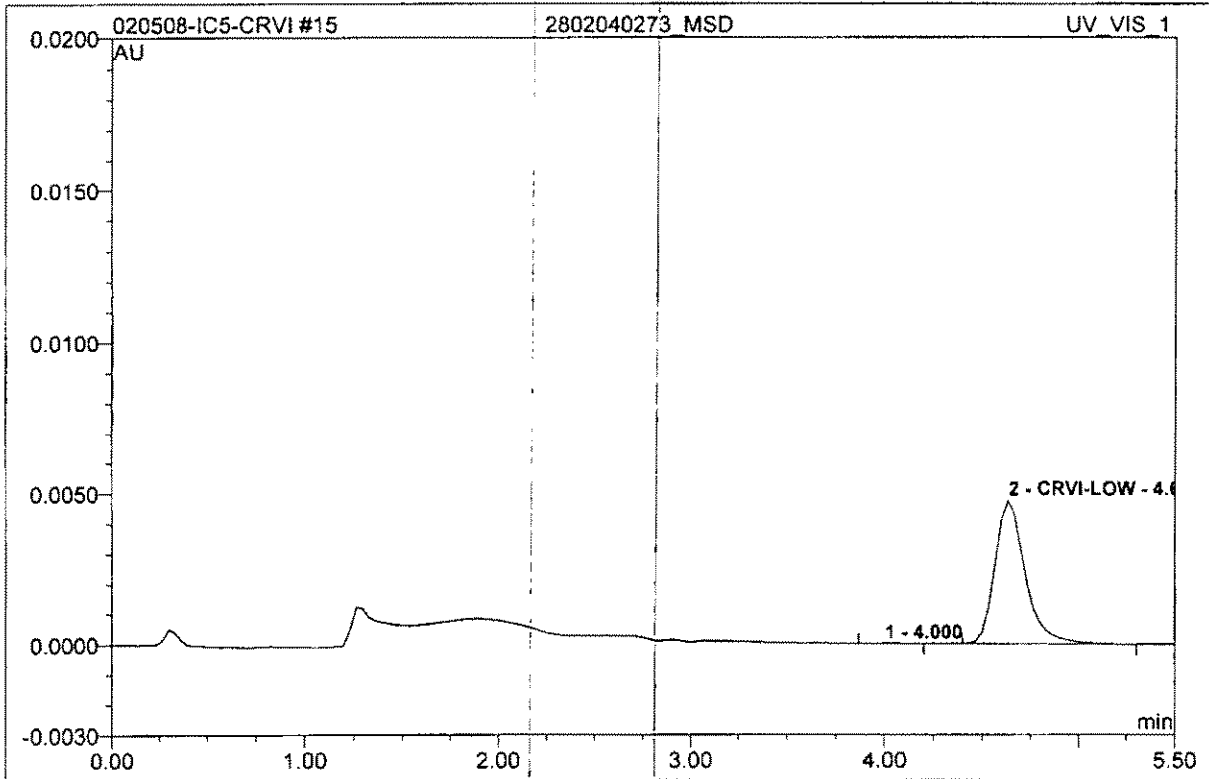
No.	Ret.Time min	Peak Name	Height AU	Area AU*min	Rel.Area %	Amount	Type
1	4.67	CRVI-LOW	0.005	0.0008261	100.00	1.984	BMB
Total:			0.005	0.001	100.00	1.984	

14 2802040273_MS			
Sample Name:	2802040273_MS	Control Program:	CRVI-LOW-loop
Dilution Factor:	1.0000	Quantif. Method:	1-IC#5-CRVI
Sample Type:	unknown	Recording Time:	2/5/2008 10:27
Analyst:	tlh	Channel:	UV_VIS_1



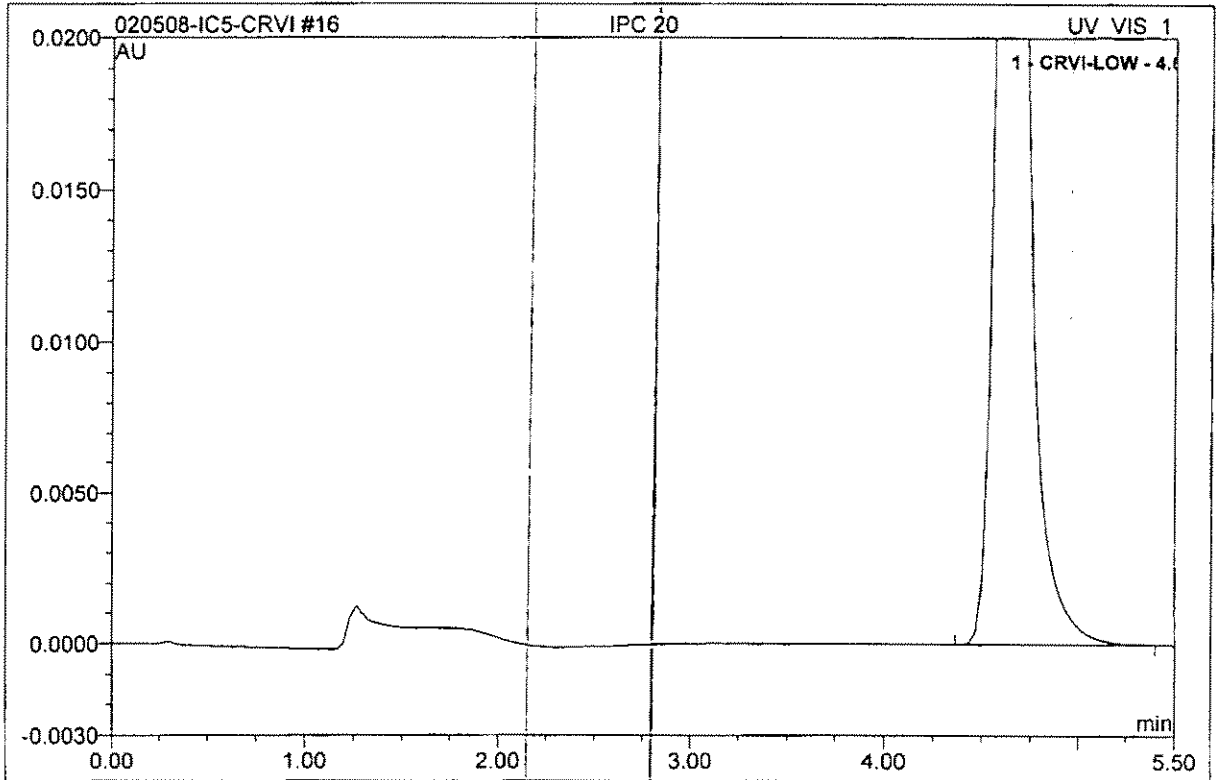
No.	Ret.Time min	Peak Name	Height AU	Area AU*min	Rel.Area %	Amount	Type
1	4.63	CRVI-LOW	0.005	0.0008585	100.00	2.062	BMB
Total:			0.005	0.001	100.00	2.062	

15 2802040273_MSD			
Sample Name:	2802040273_MSD	Control Program:	CRVI-LOW-loop
Dilution Factor:	1.0000	Quantif. Method:	1-IC#5-CRVI
Sample Type:	unknown	Recording Time:	2/5/2008 10:35
Analyst:	tlh	Channel:	UV_VIS_1



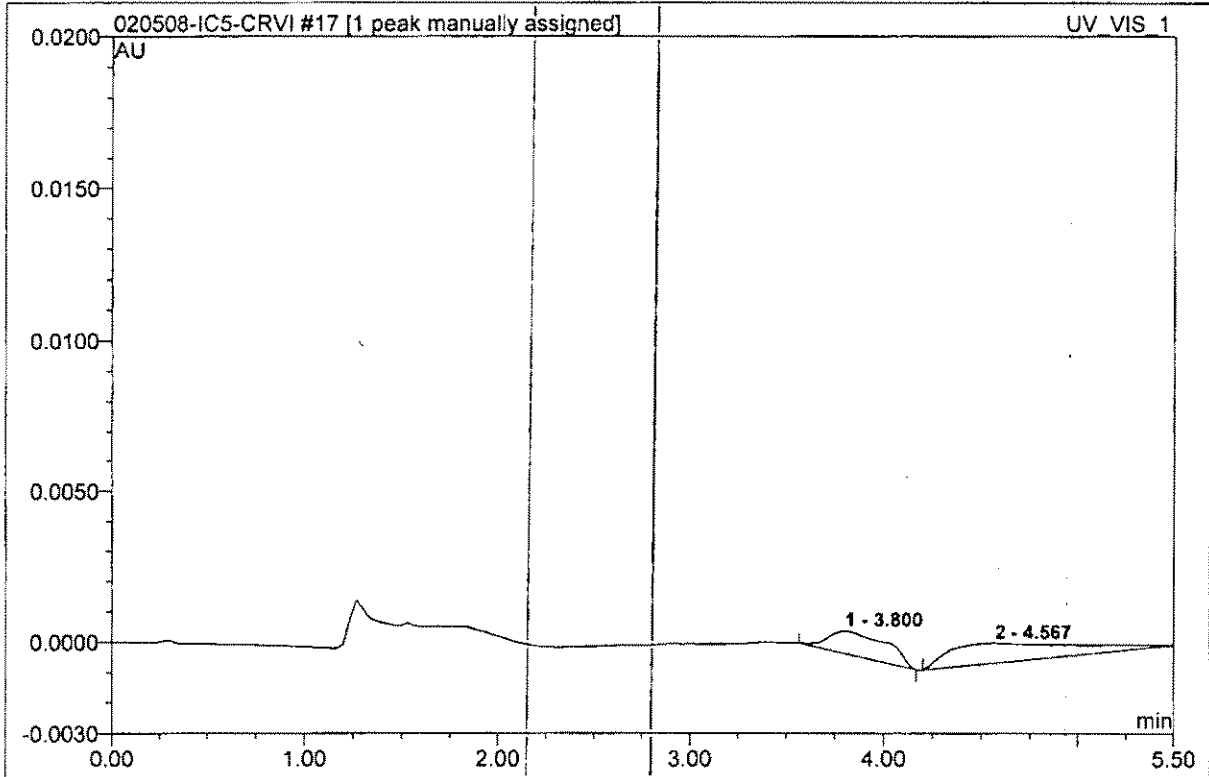
No.	Ret.Time min	Peak Name	Height AU	Area AU*min	Rel.Area %	Amount	Type
1	4.00	n.a.	0.000	0.0000012	0.14	n.a.	BMB
2	4.63	CRVI-LOW	0.005	0.0008579	99.86	2.061	BMB
Total:			0.005	0.001	100.00	2.061	

16 IPC 20			
Sample Name:	IPC 20	Control Program:	CRVI-LOW-loop
Dilution Factor:	1.0000	Quantif. Method:	1-IC#5-CRVI
Sample Type:	unknown	Recording Time:	2/5/2008 10:43
Analyst:	tlh	Channel:	UV_VIS_1



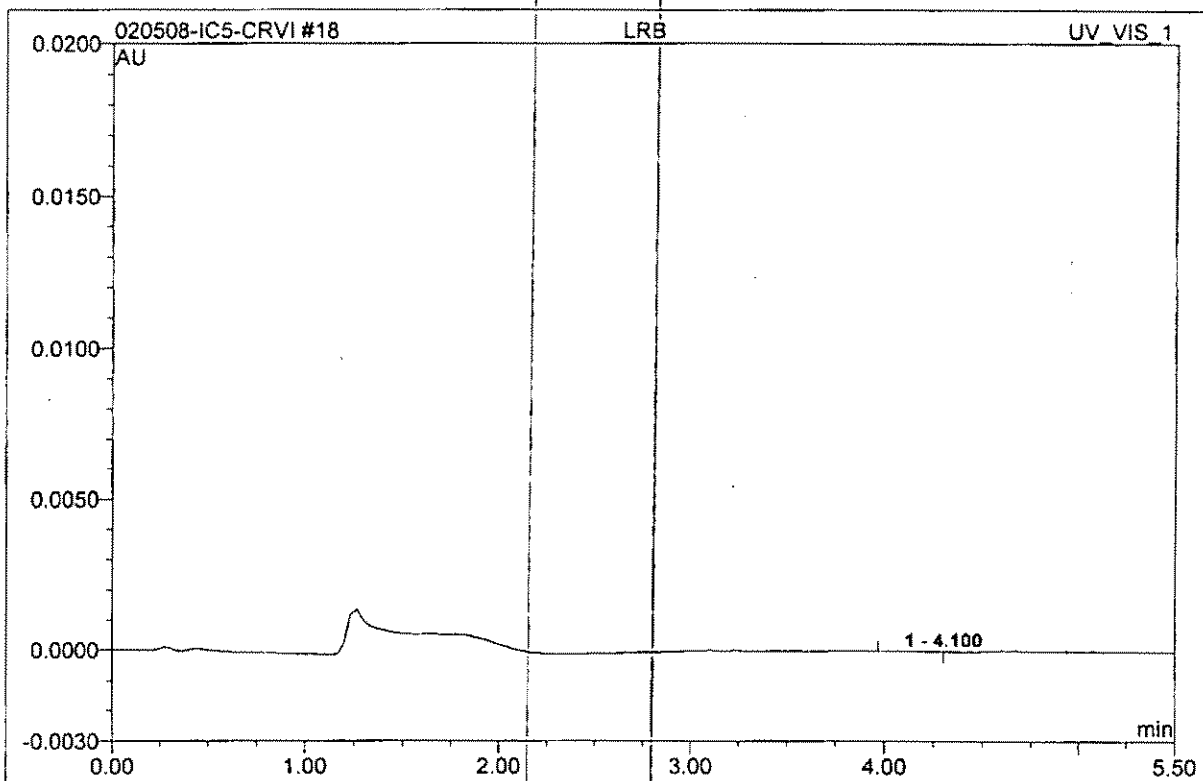
No.	Ret.Time min	Peak Name	Height AU	Area AU*min	Rel.Area %	Amount	Type
1	4.63	CRVI-LOW	0.050	0.0081140	100.00	19.488	BMB
Total:			0.050	0.008	100.00	19.488	

17 LRB			
Sample Name:	LRB	Control Program:	CRVI-LOW-loop
Dilution Factor:	1.0000	Quantif. Method:	1-IC#5-CRVI
Sample Type:	unknown	Recording Time:	2/5/2008 10:51
Analyst:	tlh	Channel:	UV_VIS_1



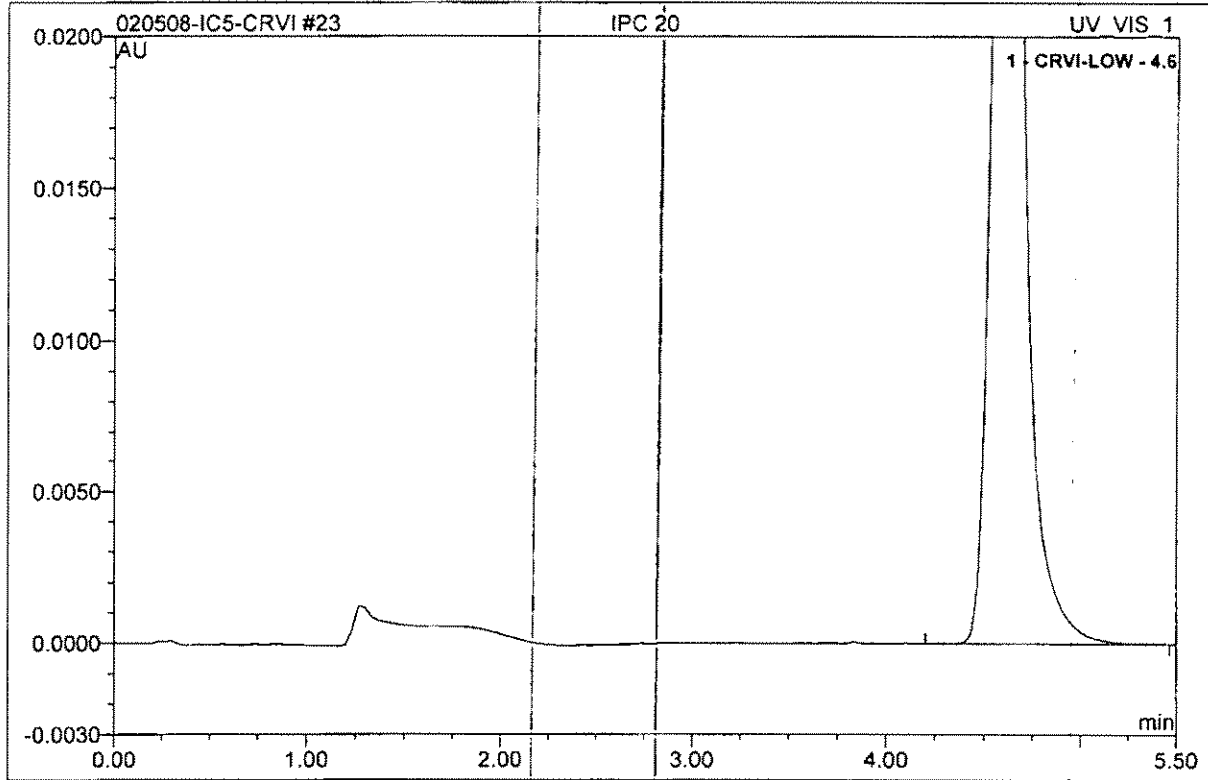
No.	Ret.Time min	Peak Name	Height AU	Area AU*min	Rel.Area %	Amount	Type
1	3.80	n.a.	0.001	0.0002825	37.35	n.a.	BMB
2	4.57	n.a.	0.001	0.0004740	62.65	n.a.	BMB^
Total:			0.001	0.001	100.00	0.000	

18 LRB			
Sample Name:	LRB	Control Program:	CRVI-LOW-loop
Dilution Factor:	1.0000	Quantif. Method:	1-IC#5-CRVI
Sample Type:	unknown	Recording Time:	2/5/2008 11:25
Analyst:	tlh	Channel:	UV_VIS_1



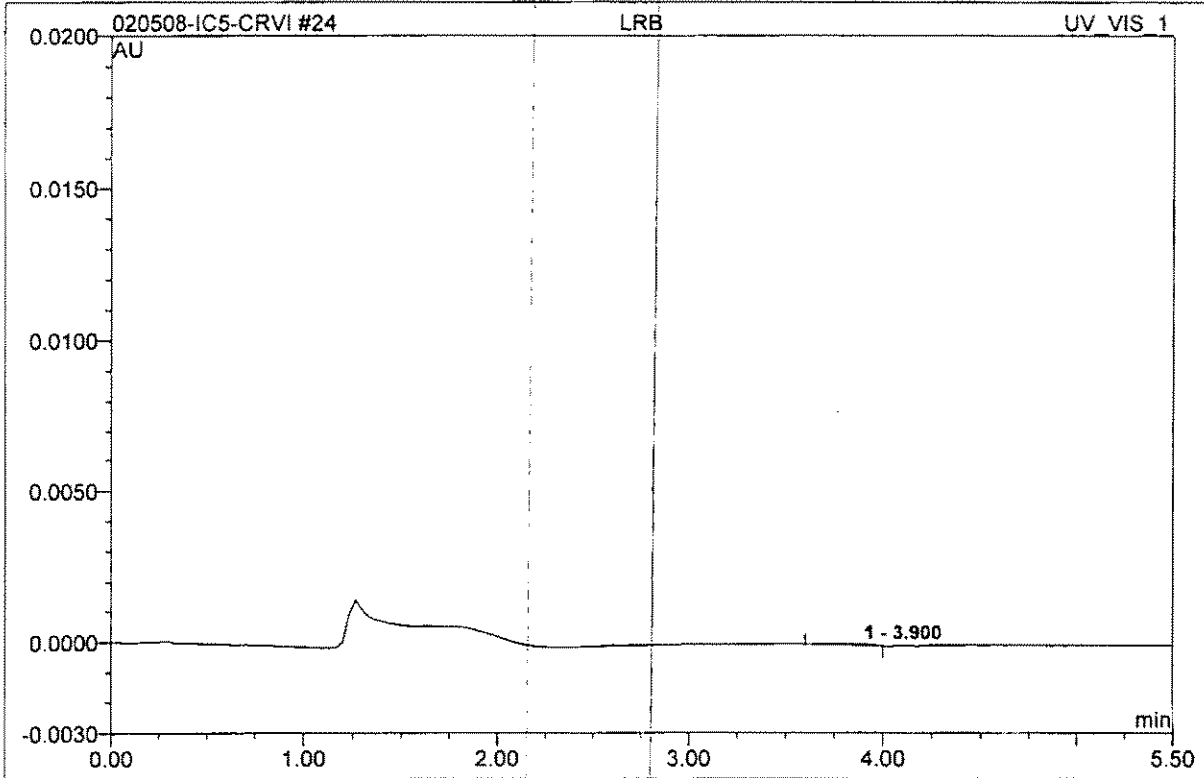
No.	Ret.Time min	Peak Name	Height AU	Area AU*min	Rel.Area %	Amount	Type
1	4.10	n.a.	0.000	0.0000018	100.00	n.a.	BMB
Total:			0.000	0.000	100.00	0.000	

23 IPC 20			
Sample Name:	IPC 20	Control Program:	CRVI-LOW-loop
Dilution Factor:	1.0000	Quantif. Method:	1-IC#5-CRVI
Sample Type:	unknown	Recording Time:	2/5/2008 12:05
Analyst:	tlh	Channel:	UV_VIS_1



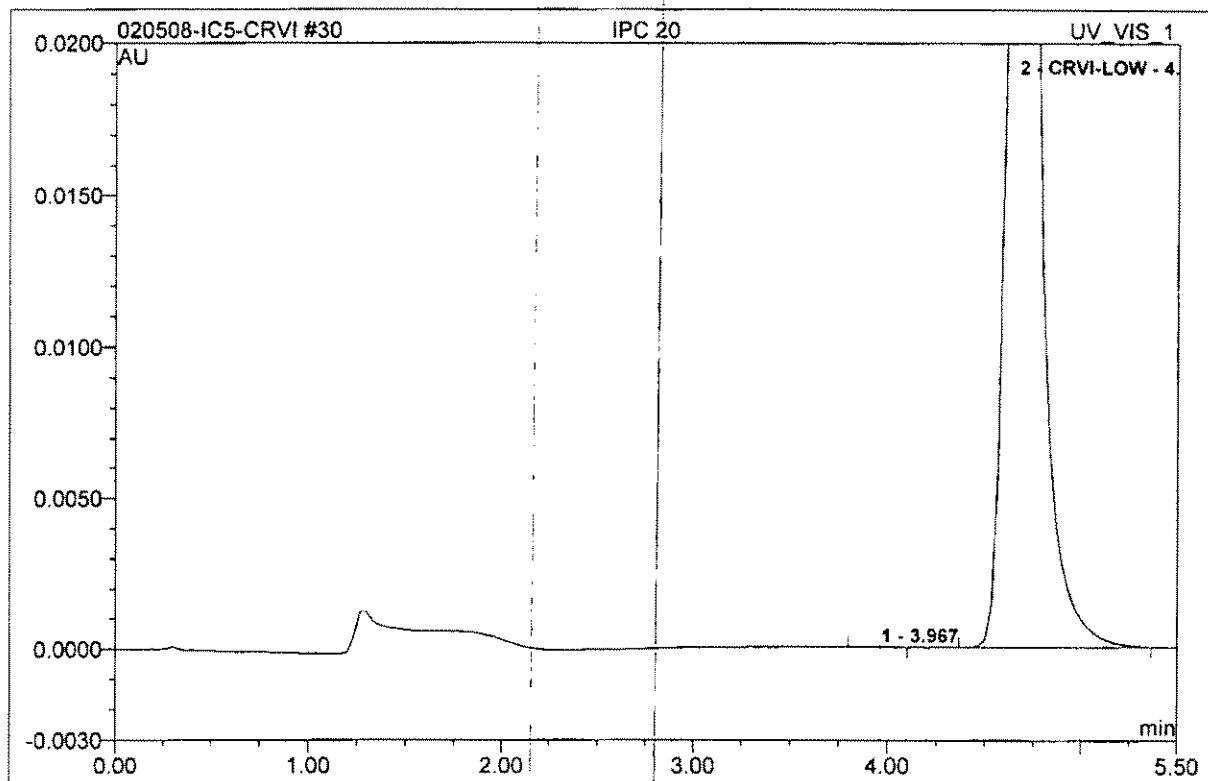
No.	Ret. Time min	Peak Name	Height AU	Area AU*min	Rel. Area %	Amount	Type
1	4.60	CRVI-LOW	0.051	0.0082088	100.00	19.716	BMB
Total:			0.051	0.008	100.00	19.716	

24 LRB			
Sample Name:	LRB	Control Program:	CRVI-LOW-loop
Dilution Factor:	1.0000	Quantif. Method:	1-IC#5-CRVI
Sample Type:	unknown	Recording Time:	2/5/2008 12:13
Analyst:	tlh	Channel:	UV_VIS_1



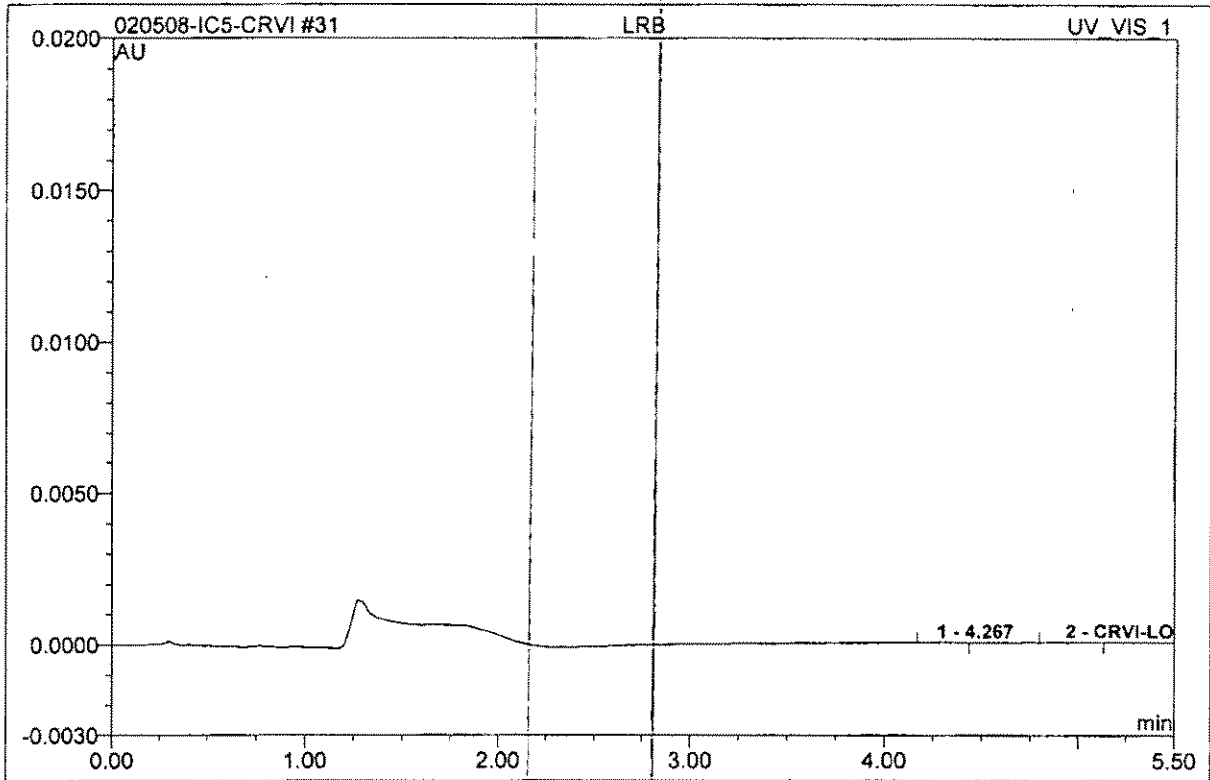
No.	Ret.Time min	Peak Name	Height AU	Area AU*min	Rel.Area %	Amount	Type
1	3.90	n.a.	0.000	0.0000113	100.00	n.a.	BMB
Total:			0.000	0.000	100.00	0.000	

30 IPC 20	
Sample Name: IPC 20	Control Program: CRVI-LOW-loop
Dilution Factor: 1.0000	Quantif. Method: 1-IC#5-CRVI
Sample Type: unknown	Recording Time: 2/5/2008 16:38
Analyst: tlh	Channel: UV_VIS_1



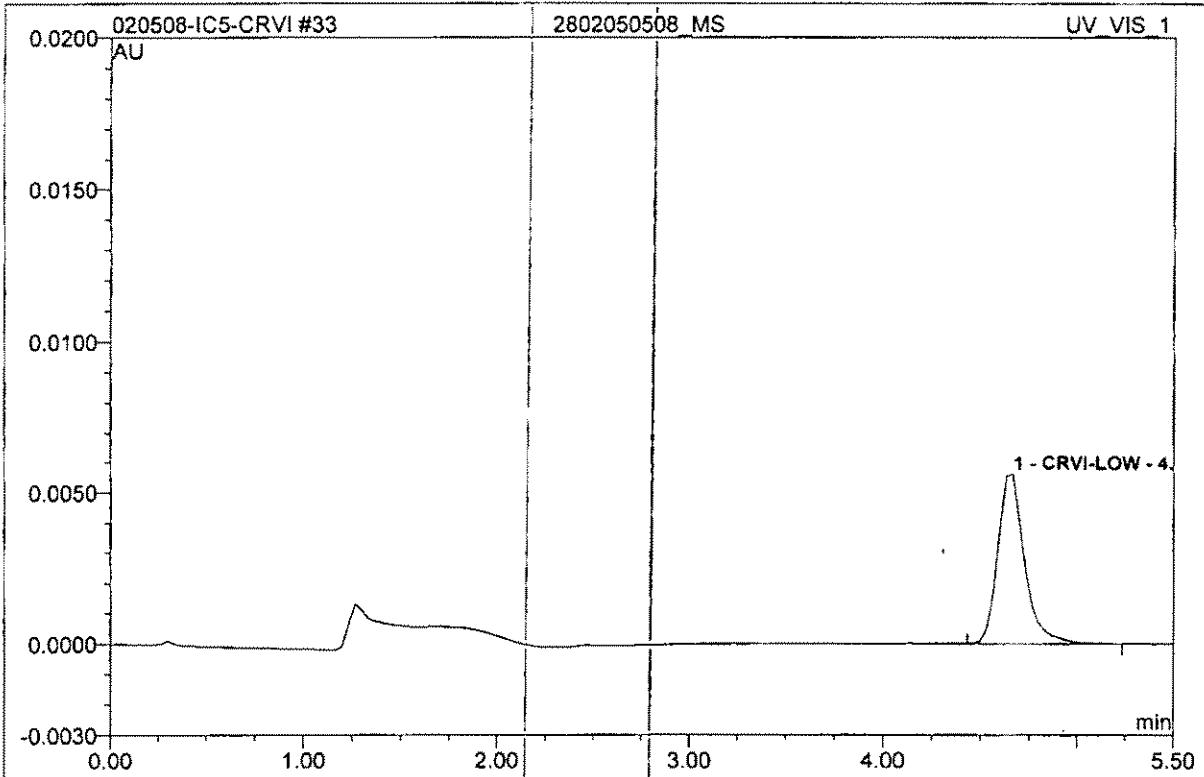
No.	Ret.Time min	Peak Name	Height AU	Area AU*min	Rel.Area %	Amount	Type
1	3.97	n.a.	0.000	0.0000014	0.02	n.a.	BMB
2	4.67	CRVI-LOW	0.047	0.0080817	99.98	19.410	BMB
Total:			0.047	0.008	100.00	19.410	

31 LRB			
Sample Name:	LRB	Control Program:	CRVI-LOW-loop
Dilution Factor:	1.0000	Quantif. Method:	1-IC#5-CRVI
Sample Type:	unknown	Recording Time:	2/5/2008 16:47
Analyst:	tlh	Channel:	UV_VIS_1



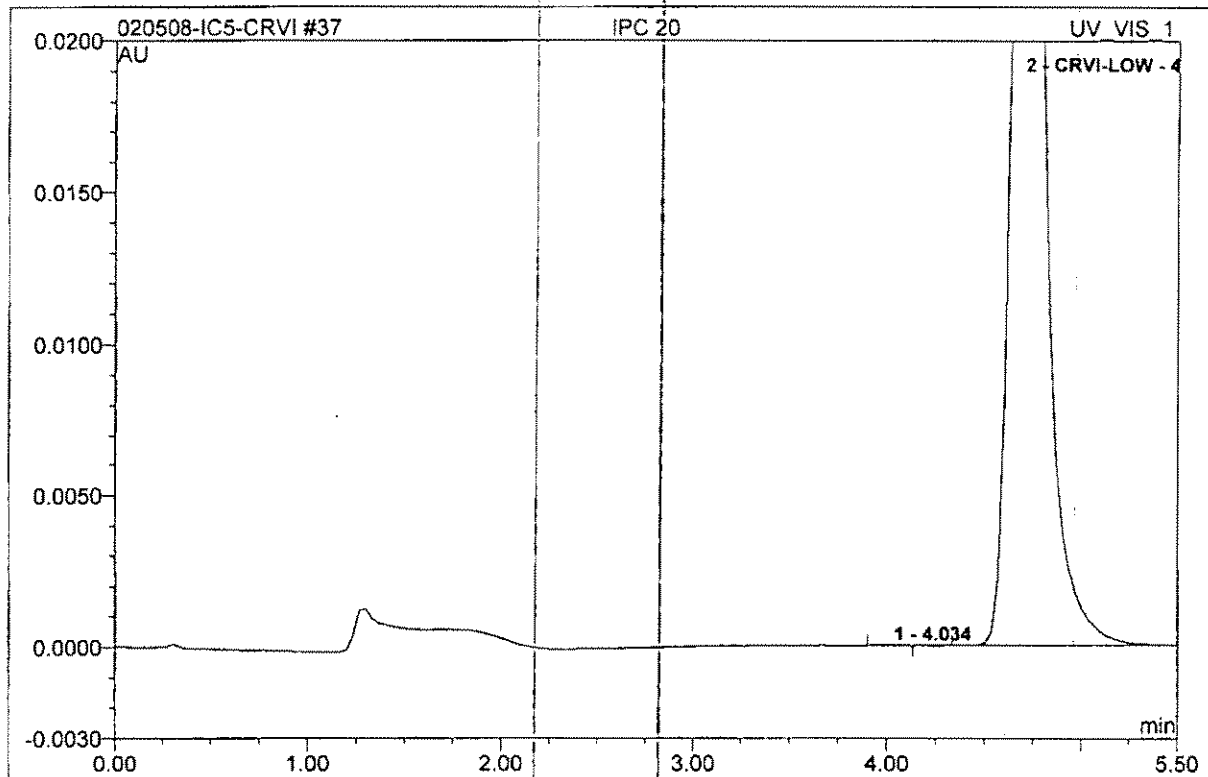
No.	Ret.Time min	Peak Name	Height AU	Area AU*min	Ref.Area %	Amount	Type
1	4.27	n.a.	0.000	0.0000012	45.68	n.a.	BMB
2	4.93	CRVI-LOW	0.000	0.0000015	54.32	0.004	BMB
Total:			0.000	0.000	100.00	0.004	

33 2802050508_MS			
Sample Name:	2802050508_MS	Control Program:	CRVI-LOW-loop
Dilution Factor:	1.0000	Quantif. Method:	1-IC#5-CRVI
Sample Type:	unknown	Recording Time:	2/5/2008 17:03
Analyst:	tlh	Channel:	UV_VIS_1



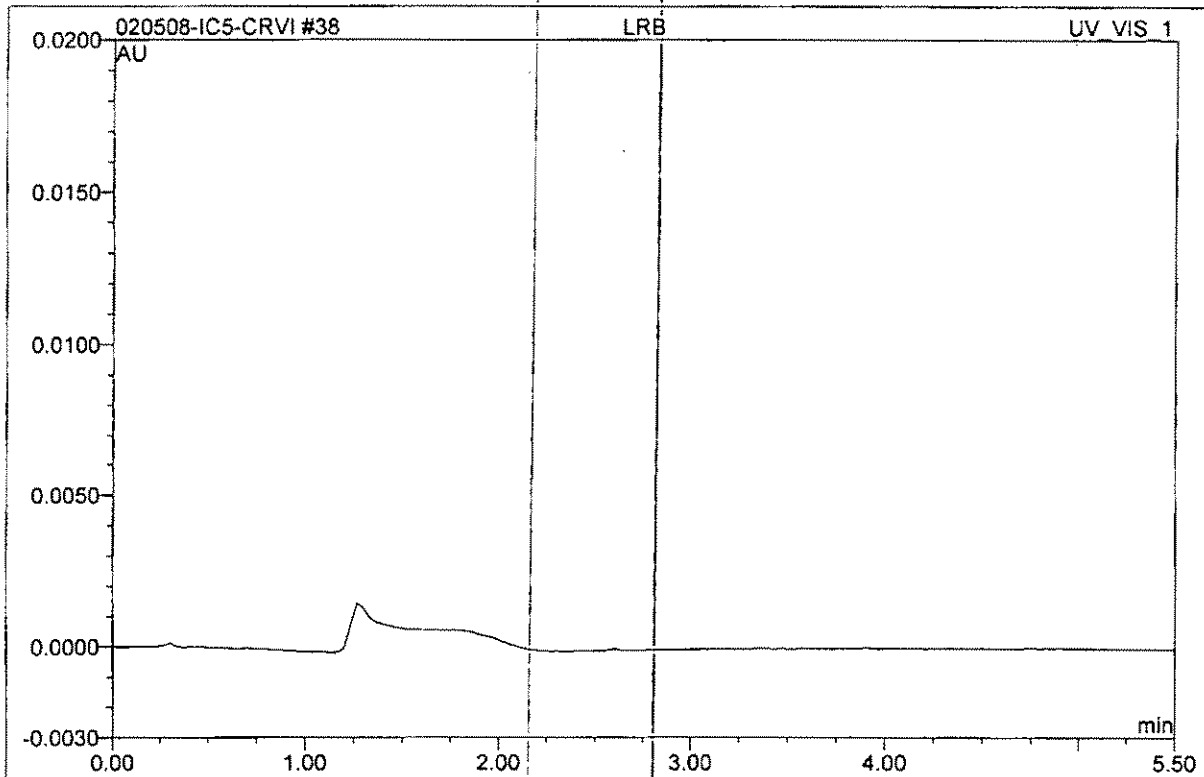
No.	Ret. Time min	Peak Name	Height AU	Area AU*min	Rel. Area %	Amount	Type
1	4.67	CRVI-LOW	0.006	0.0009030	100.00	2.169	BMB
Total:			0.006	0.001	100.00	2.169	

37 IPC 20			
Sample Name:	IPC 20	Control Program:	CRVI-LOW-loop
Dilution Factor:	1.0000	Quantif. Method:	1-IC#5-CRVI
Sample Type:	unknown	Recording Time:	2/5/2008 17:35
Analyst:	tlh	Channel:	UV_VIS_1



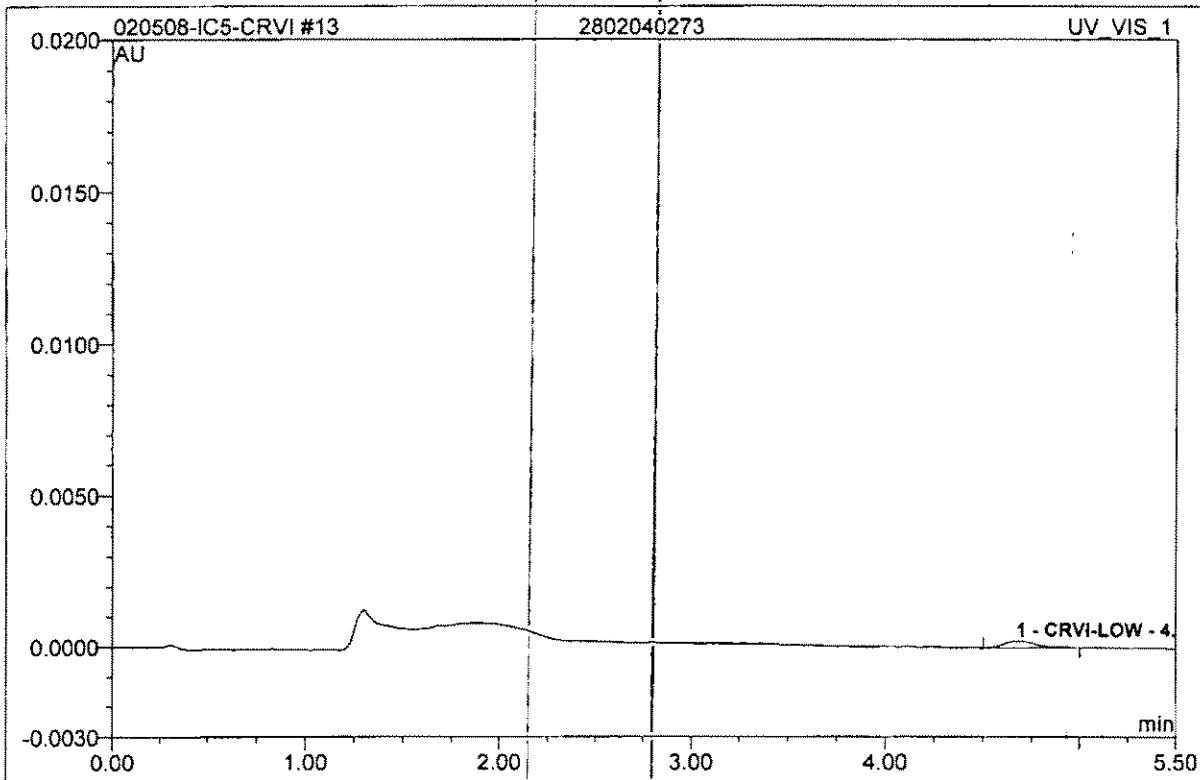
No.	Ret. Time min	Peak Name	Height AU	Area AU*min	Rel. Area %	Amount	Type
1	4.03	n.a.	0.000	0.0000011	0.01	n.a.	BMB
2	4.70	CRVI-LOW	0.048	0.0081070	99.99	19.471	BMB
Total:			0.048	0.008	100.00	19.471	

38 LRB			
Sample Name:	LRB	Control Program:	CRVI-LOW-loop
Dilution Factor:	1.0000	Quantif. Method:	1-IC#5-CRVI
Sample Type:	unknown	Recording Time:	2/5/2008 17:43
Analyst:	tlh	Channel:	UV_VIS_1



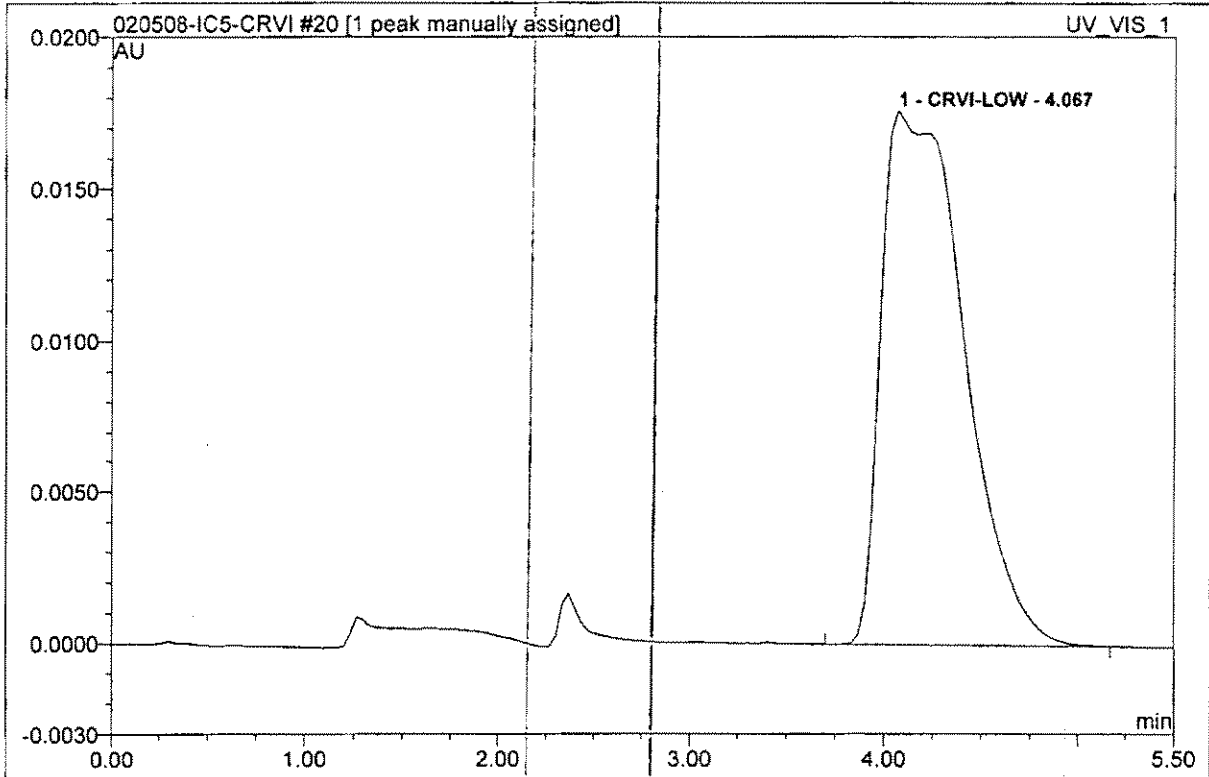
No.	Ret.Time min	Peak Name	Height AU	Area AU*min	Rel.Area %	Amount	Type
Total:			0.000	0.000	0.00	0.000	

13 2802040273			
Sample Name:	2802040273	Control Program:	CRVI-LOW-loop
Dilution Factor:	1.0000	Quantif. Method:	1-IC#5-CRVI
Sample Type:	unknown	Recording Time:	2/5/2008 10:19
Analyst:	tlh	Channel:	UV_VIS_1



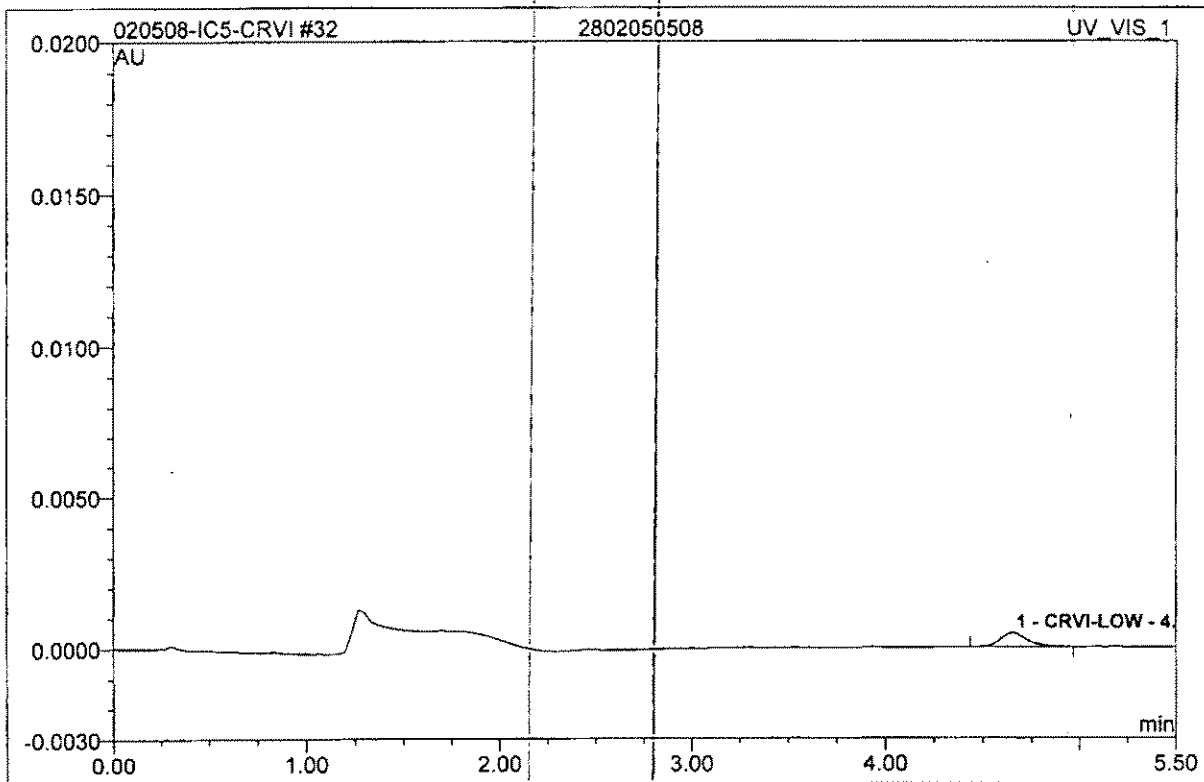
No.	Ret.Time min	Peak Name	Height AU	Area AU*min	Rel.Area %	Amount	Type
1	4.67	CRVI-LOW	0.000	0.0000428	100.00	0.103	BMB
Total:			0.000	0.000	100.00	0.103	

20 2802050697	
Sample Name: 2802050697	Control Program: CRVI-LOW-loop
Dilution Factor: 1.0000	Quantif. Method: 1-IC#5-CRVI
Sample Type: unknown	Recording Time: 2/5/2008 11:41
Analyst: tlh	Channel: UV_VIS_1



No.	Ret.Time min	Peak Name	Height AU	Area AU*min	Rel.Area %	Amount	Type
1	4.07	CRVI-LOW	0.018	0.0086834	100.00	20.855	BMB^
Total:			0.018	0.009	100.00	20.855	

32 2802050508		
Sample Name:	2802050508	Control Program: CRVI-LOW-loop
Dilution Factor:	1.0000	Quantif. Method: 1-IC#5-CRVI
Sample Type:	unknown	Recording Time: 2/5/2008 16:55
Analyst:	tlh	Channel: UV_VIS_1



No.	Ret.Time min	Peak Name	Height AU	Area AU*min	Rel.Area %	Amount	Type
1	4.67	CRVI-LOW	0.000	0.0000740	100.00	0.178	BMB
Total:			0.000	0.000	100.00	0.178	

**Standard
Preparation
Worksheet
&
Certificate of
Analysis**

Reagent Preparation Documentation

Reagent: Cr^{+6} Low LCS Stock Solution - 1ppm
 Date Received/Prepped: 10/18/07 3/17/08 7/30/08 10/20/08 |
 Date Expired: _____ |
 Manufacturer: _____
 Storage Condition: room temperature

MW #: TUHO71018-1
 By: 92H
 Matrix: ag
 Amount: 100mL
 Lot #: _____

Component	Comment	Standard	Concentration
<u>High 1000ppm exp. 10-2010</u>	<u>100ul diluted to 100ml w/ DI H₂O</u>	<u>R201090</u>	<u>1ppm</u>

Comment: _____

Reagent: Cr^{+6} Low LCS Working Std. - 2ppb
 Date Received/Prepped: 10/18/07 11/12/07 11/24/07 12/10/07 12/18/07 1/15/08
~~Date Expired:~~ 1/30/08 2/13/08 2/24/08 3/17/08 3/29/08 4/7/08
 Manufacturer: _____
 Storage Condition: room temperature

MW #: TUHO71018-2
 By: 92H
 Matrix: ag
 Amount: 100mL
 Lot #: _____

Component	Comment	Standard	Concentration
<u>Cr^{+6} Low LCS Stock (TUHO71018-1)</u>	<u>200ul diluted to 100ml w/ DI H₂O</u>	<u>TUHO71018-1</u>	<u>2ppb</u>
<u>Cr^{+6} Buffer Soln</u>	<u>1.0ml added AFTER soln @ final volume</u>	<u>TUHO608-15A</u>	

Comment: 4/21/08 5/2/08 5/15/08 5/28/08 6/11/08 6/23/08 7/8/08 7/21/08 7/30/08
8/12/08 8/25/08 9/8/08 9/23/08 10/7/08 10/20/08 10/31/08

Reagent: Cr^{+6} Low Calibration Stock Soln - 1ppm
 Date Received/Prepped: 10/18/07 3/17/08 |
 Date Expired: _____ |
 Manufacturer: _____
 Storage Condition: room temperature

MW #: TUHO71018-3
 By: 92H
 Matrix: ag
 Amount: 100mL
 Lot #: _____

Component	Comment	Standard	Concentration
<u>Inorganic Ventures 1000ppm exp. 01-10-08 rec'd & opened 5-11-07 Lot # Z-CRC2152</u>	<u>100ul diluted to 100ml w/ DI H₂O</u>	<u>R2011632</u>	<u>1ppm</u>

Comment: _____



An ISO 9001 Certified Company

Certificate of Analysis

Page 1

COMMODITY: Chromium Reference Standard Solution 1000 | 10 mg/L as total Cr
 COMMODITY NUMBER: 14664-42 MANUFACTURE DATE: DATE OF ANALYSIS:
 LOT NUMBER: A5005 12/31/2004 1/4/2005

<i>TEST</i>	<i>SPECIFICATIONS</i>	<i>RESULTS</i>
Hexavalent Chromium Concentration	995 to 1005 ppm	1001.0 ppm
pH of the solution	12 to 14	12.0

The expiration date is Jan 2010

The item 1466442 is traceable to NIST standards SRM 136e Potassium Dichromate LOT N/A.

R 201090

Certified by _____

Paul Kleinwolterink
Analytical Services Chemist

Reagent Documentation

Reagent: Chromium VI Std 1000 ppm
Date Received: 31 Jan 05
Date Expired: Jan '10
Manufacturer: HACH
Storage Condition: roomtemp 10-30°C

Reagent #: 201090
By: LMR
Matrix: ag
Amount: 100 ml
Lot #: A5005

Component	Comment	Standard	Concentration
	<u>HACH cat # 14664-42</u>		

Comment: _____

Reagent: Turbidity Std -20 NTU
Date Received: 3 Feb 05
Date Expired: Jan 2006
Manufacturer: GFS Chemicals
Storage Condition: room temp

Reagent #: 201091
By: LMR
Matrix: ag
Amount: 1-L
Lot #: P460346

Component	Comment	Standard	Concentration
	<u>VWR # 66115-150</u>		

Comment: _____

Reagent: Potassium Phosphate Monobasic
Date Received: 8 Feb 05
Date Expired: Feb '10
Manufacturer: JT Baker
Storage Condition: room temp

Reagent #: 201092
By: LMR
Matrix: solid
Amount: 2 x 500g
Lot #: A38142

Component	Comment	Standard	Concentration
	<u>VWR # JT3246-1</u>		

Comment: _____

Reagent Documentation

Reagent: *Anti-foam B Silicone Emulsion*
 Date Received: *08 May 07*
 Date Expired: *May 2010*
 Manufacturer: *IT Baker*
 Storage Condition: *room temp*

Reagent #: 201630
 By: *GH*
 Matrix: *aq*
 Amount: *125mL*
 Lot #: *C47613*

Component	Comment	Standard	Concentration
	<i>IT Baker # B531-05</i>		

Comment:

Reagent: *Cyanide 1000ug/mL*
 Date Received: *09 May 07*
 Date Expired: *30 April 08*
 Manufacturer: *High Purity Standards*
 Storage Condition: *room temp*

Reagent #: 201631
 By: *GH*
 Matrix: *aq*
 Amount: *125mL*
 Lot #: *629323*

Component	Comment	Standard	Concentration
	<i>HP # 1C-CN-M</i>		

Comment:

Reagent: *Chromium +6 (Cr+6) 1000ppm*
 Date Received: *5/11/07*
 Date Expired: *6/1/08*
 Manufacturer: *Inorganic Ventures*
 Storage Condition:

Reagent #: 201632
 By: *WBH*
 Matrix: *AR*
 Amount: *125mL*
 Lot #: *Z-CR02152*

Component	Comment	Standard	Concentration
<i>Cr+6</i>	<i>PN = CGCR(6)1-1</i>		

Comment:



1.0 INORGANIC VENTURES is an ISO Guide 34:2000 registered Certified Reference Material (CRM) Manufacturer (Certificate #883-02). The certificate is designed and the data is determined in accordance with ISO Guide 31:2000 (Reference Materials-Contents of Certificates and Labels), ISO Guide 34:2000 "Quality System Guidelines for the Production of Reference Materials," and ISO Guide 35:1989 "Certification of Reference Materials - General and Statistical Principals."

2.0 DESCRIPTION OF CRM **1000 µg/mL Chromium (+6) in H2O**

RF# 201632

Catalog Number: CGCR(6)1-1, CGCR(6)1-2, and CGCR(6)1-5
Lot Number: **Z-CR02152**
Starting Material: (NH4)2Cr2O7
Starting Material Purity (%): 99.989259
Starting Material Lot No: F04N14
Matrix: H2O

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Concentration: 1000 ± 3 µg/mL
Certified Density: 0.999 g/mL (measured at 22° C)

The Certified Value is based upon the most precise method used to analyze this CRM. The following equations are used in the calculation of the certified value and the uncertainty:

$\text{Certified Value } (\bar{x}) = \frac{\sum x_i}{n}$	$\bar{x} = \text{mean}$ $x_i = \text{individual results}$ $n = \text{number of measurements}$
$\text{Uncertainty } (\pm) = \frac{2[(\sum s_i)^2]^{1/2}}{(n)^{1/2}}$	$\sum s_i = \text{The summation of all significant estimated errors}$ <p>(Most common are the errors from instrumental measurement, weighing, dilution to volume, and the fixed error reported on the NIST SRM certificate of analysis.)</p>

The independent samples t-test was used to determine if there is agreement between the above assay methods at the 95% confidence interval. Both methods were compared and showed agreement within the stated uncertainties. This agreement is a confirmation of the accuracy of this CRM.

4.0 TRACEABILITY TO NIST AND VALUES OBTAINED BY INDEPENDENT METHODS

· "Property of the result of a measurement or the value of a standard whereby it can be related to stated references, usually national or international standards, through an unbroken chain of comparisons all having stated uncertainties." (ISO VIM, 2nd ed., 1993, definition 6.10)
· This product is Traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRMs are available, the term 'in-house std.' is specified.

4.1 Assay Method #1 **1000 ± 3 µg/mL**
Redox NIST SRM 136e Lot Number: 980702

Assay Method #2 **1001 ± 4 µg/mL**
ICP Assay NIST SRM 3112a Lot Number: 990607