BROOKSRAND
TRACE METALS ANALYSIS & PRODUCTS

REPORT OF BIOTA ANALYSIS: INORGANIC ARSENIC

Client Project Number: 04-08-06-22

For Samples Received on December 9, 2004

Report Date:

January 21, 2005

Prepared for:

Susan McGroddy
Windward Environmental LLC
200 West Mercer Street
Seattle, WA 98119

Brooks Rand
Project #: WIN001
Report #: 05BR0023

3958 6th Avenue NW
Seattle, WA 98103
www.brooksrand.com
Phone: 206-632-6206
Fax: 206-632-6017
Email: brl@brooksrand.com

BROOKS RAND LLC

For
Windward Environmental LLC
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Client Project ID: 04-08-06-22

BROOKS RAND LLC

For
Windward Environmental LLC
CASE NARRATIVE

Client Project ID: 04-08-06-22

All samples were received, stored, prepared and analyzed according to Brooks Rand LLC Standard Operating Procedures and EPA Methodology.

Shipping and Receiving
Tracking # 05BR0023
Eighty-seven (87) previously homogenized biota samples were received at 9:00 AM on 12/09/04. The samples arrived in a cooler with dry ice at a temperature of < 0 °C. The requested analysis was total inorganic arsenic. The samples were assigned the internal tracking # 05BR0023. Samples were placed in a locked sample storage freezer at < -10 °C until further processing.

Preservation & Holding Time
All method requirements for preservation and holding time were satisfied.

Dry Weight/% Solids Correction
Final results have not been dry weight corrected.

Blank Correction
Final results have not been blank corrected. The Guru 3.0 software that is used for this analysis automatically blank corrects all data. To prevent the blank correction, the analyst must "reject" the calibration/method blank. Unless otherwise noted in the batch-specific narrative, the client should assume that the blanks meet all method criteria.

Inorganic Arsenic
All samples were prepared and analyzed by modified EPA Draft Method 1632. Samples are prepared by hydrochloric acid (HCl) extraction. Samples are adjusted to a pH of 1.5 and then analyzed by hydride generation with sodium borohydride ($NaBH_4$) reduction and cryogenic trap precollection. The trapped arsines are thermally desorbed, in order of increasing boiling points, into an inert gas stream that carries them into the quartz furnace of an atomic absorption spectrophotometer for detection.

Batch # 04-1027
Preparation: The samples were prepared on 12/22/04.

Analysis: The samples were analyzed on 1/10/05.

Calibration: The system was calibrated on 1/10/05 and verified prior to analysis.

Quality Assurance: Please refer to the QA report for QA details. All QA criteria were met. Sample results below the method detection limit (MDL) are qualified "U" for non-detect and are reported at the MDL. Sample results above the MDL and below the practical quantitation limit (PQL) are qualified "B" and should be considered an estimate. No additional qualification of the data was required.

Comments: A method duplicate analysis was performed on sample 05BR0023-15 (EP-SS-WB-comp-1) yielding results of 0.0364 µg/g (mg/Kg) and 0.0327 µg/g (mg/Kg) with a relative percent difference of 53.7%. The results are less than 5 times the PQL and the difference between the two results is less than 2 times the PQL of each other, meeting all method criteria.

Batch # 04-1028
Preparation: The samples were prepared on 12/23/04.

Analysis: The samples were analyzed on 1/11/05.

Calibration: The system was calibrated on 1/10/05 and verified prior to analysis.

Quality Assurance: Please refer to the QA report for QA details. All QA criteria were met. Sample results below the method detection limit (MDL) are qualified "U" for non-detect and are reported at the MDL. Sample results above the MDL and below the practical quantitation limit (PQL) are qualified "B" and should be considered an estimate. No additional qualification of the data was required.

Batch # 04-1029
Preparation: The samples were prepared on 12/27/04.

Analysis: The samples were analyzed on 1/14/05.

Calibration: The system was calibrated on 1/14/05 and verified prior to analysis.

Quality Assurance: Please refer to the QA report for QA details. All QA criteria were met. Sample results below the method detection limit (MDL) are qualified "U" for non-detect and are reported at the MDL. Sample results above the MDL and below the practical quantitation limit (PQL) are qualified "B" and should be considered an estimate. No additional qualification of the data was required.

Batch # 04-1030-1
Preparation: The samples were prepared on 1/18/05.

Analysis: The samples were analyzed on 1/19/05.

Calibration: The system was calibrated on 1/19/05 and verified prior to analysis.

Quality Assurance: Please refer to the QA report for QA details. All QA criteria were met. No qualification of the data was required.

Batch # 04-1046
Preparation: The samples were prepared on 12/27/04.

Analysis: The samples were analyzed on 1/14/05.

Calibration: The system was calibrated on 1/14/05 and verified prior to analysis.

Quality Assurance: Please refer to the QA report for QA details. All QA criteria were met. Sample results above the MDL and below the practical quantitation limit (PQL) are qualified "B" and should be considered an estimate. No additional qualification of the data was required.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. In addition, I certify that to the best of my knowledge and belief, the data as reported are true and accurate. The Laboratory Director or his designee, as verified by the following signature has authorized release of the data contained in this data package.

Elizabeth Madonick
Project Manager

Reported by
Brooks Rand LLC
Contact: Elizabeth Madonick
3958 6th Avenue NW
Seattle, WA 98107
Tel: 206-632-6206 Fax: 206-632-6017

Summary of Results for
Windward Environmental
Contact: Susan McGroddy
200 West Mercer, Suite 401
Seattle WA 98119
Tel: 206-577-1292

Lab Project # WIN001
Lab Tracking # 05BR0023

Quote 091404WIN001

Sample/Sampling/Receiving Info

Windward Environmental — *BRL*

Sample Identification	Sampling Date	Sample Number	Receiving Date
LDW-T1-A-SS-WB-comp-1	08/02/04	05BR0023 - 1	12/9/2004
LDW-T1-B-SS-WB-comp-1	08/02/04	05BR0023 - 2	12/9/2004
LDW-T2-A-SS-WB-comp-1	08/03/04	05BR0023 - 3	12/9/2004
LDW-T2-B-SS-WB-comp-1	08/03/04	05BR0023 - 4	12/9/2004
LDW-T3-A-SS-WB-comp-1	08/02/04	05BR0023 - 5	12/9/2004
LDW-T3-B-SS-WB-comp-1	08/03/04	05BR0023 - 6	12/9/2004
LDW-T4-A-SS-WB-comp-1	08/04/04	05BR0023 - 7	12/9/2004
LDW-T4-B-SS-WB-comp-1	08/04/04	05BR0023 - 8	12/9/2004
BL-SS-WB-comp-1	09/14/04	05BR0023 - 9	12/9/2004
BL-SS-WB-comp-2	09/14/04	05BR0023 - 10	12/9/2004
BL-SS-WB-comp-3	09/14/04	05BR0023 - 11	12/9/2004
BL-SS-WB-comp-4	09/14/04	05BR0023 - 12	12/9/2004
BL-SS-WB-comp-5	09/14/04	05BR0023 - 13	12/9/2004
BL-SS-WB-comp-6	09/14/04	05BR0023 - 14	12/9/2004
EP-SS-WB-comp-1	09/16/04	05BR0023 - 15	12/9/2004
EP-SS-WB-comp-2	09/16/04	05BR0023 - 16	12/9/2004
EP-SS-WB-comp-3	09/16/04	05BR0023 - 17	12/9/2004
LDW-M-M-PP-FL-comp-1	08/03/04	05BR0023 - 18	12/9/2004
LDW-M-M-SP-FL-comp-1	08/04/04	05BR0023 - 19	12/9/2004
BL-ES-FL-comp-1	09/14/04	05BR0023 - 20	12/9/2004
BL-ES-FL-comp-2	09/14/04	05BR0023 - 21	12/9/2004
BL-ES-FL-comp-3	09/14/04	05BR0023 - 22	12/9/2004
BL-ES-FL-comp-4	09/14/04	05BR0023 - 23	12/9/2004
BL-ES-FL-comp-5	09/14/04	05BR0023 - 24	12/9/2004
BL-ES-FL-comp-6	09/14/04	05BR0023 - 25	12/9/2004
EP-ES-FL-comp-1	09/16/04	05BR0023 - 26	12/9/2004
EP-ES-FL-comp-2	09/16/04	05BR0023 - 27	12/9/2004
EP-ES-FL-comp-3	09/16/04	05BR0023 - 28	12/9/2004
EP-ES-FL-comp-4	09/16/04	05BR0023 - 29	12/9/2004
EP-ES-FL-comp-5	09/16/04	05BR0023 - 30	12/9/2004
EP-ES-FL-comp-6	09/16/04	05BR0023 - 31	12/9/2004
LDW-T1-M-ES-FL-comp-1	08/02/04	05BR0023 - 32	12/9/2004
LDW-T1-M-ES-FL-comp-2	08/02/04	05BR0023 - 33	12/9/2004
LDW-T2-M-ES-FL-comp-1	08/03/04	05BR0023 - 34	12/9/2004
LDW-T2-M-ES-FL-comp-2	08/03/04	05BR0023 - 35	12/9/2004
LDW-T3-M-ES-FL-comp-1	08/03/04	05BR0023 - 36	12/9/2004
LDW-T3-M-ES-FL-comp-2	08/03/04	05BR0023 - 37	12/9/2004
LDW-T4-M-ES-FL-comp-1	09/02/04	05BR0023 - 38	12/9/2004
BL-ES-WB-comp-1	09/14/04	05BR0023 - 39	12/9/2004
BL-ES-WB-comp-2	09/14/04	05BR0023 - 40	12/9/2004
BL-ES-WB-comp-3	09/14/04	05BR0023 - 41	12/9/2004
BL-ES-WB-comp-4	09/14/04	05BR0023 - 42	12/9/2004
BL-ES-WB-comp-5	09/14/04	05BR0023 - 43	12/9/2004
BL-ES-WB-comp-6	09/14/04	05BR0023 - 44	12/9/2004
EP-ES-WB-comp-1	09/16/04	05BR0023 - 45	12/9/2004
EP-ES-WB-comp-2	09/16/04	05BR0023 - 46	12/9/2004
EP-ES-WB-comp-3	09/16/04	05BR0023 - 47	12/9/2004
EP-ES-WB-comp-4	09/16/04	05BR0023 - 48	12/9/2004
EP-ES-WB-comp-5	09/16/04	05BR0023 - 49	12/9/2004
EP-ES-WB-comp-6	09/16/04	05BR0023 - 50	12/9/2004
LDW-T1-M-ES-WB-comp-1	08/02/04	05BR0023 - 51	12/9/2004
LDW-T1-M-ES-WB-comp-2	08/05/04	05BR0023 - 52	12/9/2004
LDW-T2-M-ES-WB-comp-1	08/03/04	05BR0023 - 53	12/9/2004

Friday, January 21, 2005

Elizabeth L. Madonick
Project Manager

Reported by
Brooks Rand LLC
Contact: Elizabeth Madonick
3958 6th Avenue NW
Seattle, WA 98107
Tel: 206-632-6206 *Fax: 206-632-6017*

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Windward Environmental
Contact: Susan McGroddy
200 West Mercer, Suite 401
Seattle WA 98119
Tel: 206-577-1292

Lab Project # WIN001
Lab Tracking # 05BR0023

Quote 091404WIN001

Sample/Sampling/Receiving Info

Sample Identification	Sampling Date	Sample Number	Receiving Date
LDW-T2-M-ES-WB-comp-2	08/03/04	05BR0023 - 54	12/9/2004
LDW-T3-M-ES-WB-comp-1	08/03/04	05BR0023 - 55	12/9/2004
LDW-T3-M-ES-WB-comp-2	08/03/04	05BR0023 - 56	12/9/2004
LDW-T4-M-ES-WB-comp-1	09/02/04	05BR0023 - 57	12/9/2004
LDW-T4-M-SF-WB-comp-1	08/04/04	05BR0023 - 58	12/9/2004
LDW-T4-M-SF-FL-comp-1	08/30/04	05BR0023 - 59	12/9/2004
BL-SC-EM-comp-1	09/14/04	05BR0023 - 60	12/9/2004
BL-SC-EM-comp-2	09/14/04	05BR0023 - 61	12/9/2004
BL-SC-EM-comp-3	09/14/04	05BR0023 - 62	12/9/2004
BL-SC-HP-comp-1	09/14/04	05BR0023 - 63	12/9/2004
EP-SC-EM-comp-1	09/16/04	05BR0023 - 64	12/9/2004
EP-SC-EM-comp-2	09/16/04	05BR0023 - 65	12/9/2004
EP-SC-EM-comp-3	09/16/04	05BR0023 - 66	12/9/2004
EP-SC-HP-comp-1	09/16/04	05BR0023 - 67	12/9/2004
LDW-T1-M-SC-EM-comp-1	08/30/04	05BR0023 - 68	12/9/2004
LDW-T1-M-SC-HP-comp-1	08/30/04	05BR0023 - 69	12/9/2004
LDW-T2-M-SC-EM-comp-1	08/31/04	05BR0023 - 70	12/9/2004
LDW-T2-M-SC-EM-comp-2	08/31/04	05BR0023 - 71	12/9/2004
LDW-T2-M-SC-HP-comp-1	08/31/04	05BR0023 - 72	12/9/2004
LDW-T2-M-SC-HP-comp-2	08/31/04	05BR0023 - 73	12/9/2004
LDW-T3-M-SC-EM-comp-1	09/03/04	05BR0023 - 74	12/9/2004
LDW-T3-M-SC-HP-comp-1	09/03/04	05BR0023 - 75	12/9/2004
BL-DC-EM-comp-1	09/14/04	05BR0023 - 76	12/9/2004
BL-DC-EM-comp-2	09/14/04	05BR0023 - 77	12/9/2004
BL-DC-EM-comp-3	09/14/04	05BR0023 - 78	12/9/2004
BL-DC-HP-comp-1	09/14/04	05BR0023 - 79	12/9/2004
EP-DC-EM-comp-1	09/16/04	05BR0023 - 80	12/9/2004
EP-DC-EM-comp-2	09/16/04	05BR0023 - 81	12/9/2004
EP-DC-EM-comp-3	09/16/04	05BR0023 - 82	12/9/2004
EP-DC-HP-comp-1	09/16/04	05BR0023 - 83	12/9/2004
LDW-T1-M-DC-EM-comp-1	08/30/04	05BR0023 - 84	12/9/2004
LDW-T1-M-DC-HP-comp-1	08/30/04	05BR0023 - 85	12/9/2004
LDW-T3-M-DC-EM-comp-1	08/30/04	05BR0023 - 86	12/9/2004
LDW-T3-M-DC-HP-comp-1	08/30/04	05BR0023 - 87	12/9/2004

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Project Manager

Reported by
Brooks Rand LLC
Contact: Elizabeth Madonick
3958 6th Avenue NW
Seattle, WA 98107
Tel: 206-632-6206 Fax: 206-632-6017

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Windward Environmental
Contact: Susan McGroddy
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As(Inorganic)

Sample Identification	BRL Number	Preparation date	Analysis date	Batch #	Result	Units	Qualifier (Q)
LDW-T1-A-SS-WB-comp-1	05BR0023 - 1	12/22/2004	1/10/2005	04-1027	0.029	µg/g	
LDW-T1-B-SS-WB-comp-1	05BR0023 - 2	12/22/2004	1/10/2005	04-1027	0.023	µg/g	
LDW-T2-A-SS-WB-comp-1	05BR0023 - 3	12/22/2004	1/10/2005	04-1027	0.167	µg/g	
LDW-T2-B-SS-WB-comp-1	05BR0023 - 4	12/22/2004	1/10/2005	04-1027	0.049	µg/g	
LDW-T3-A-SS-WB-comp-1	05BR0023 - 5	12/22/2004	1/10/2005	04-1027	0.082	µg/g	
LDW-T3-B-SS-WB-comp-1	05BR0023 - 6	12/22/2004	1/10/2005	04-1027	0.103	µg/g	
LDW-T4-A-SS-WB-comp-1	05BR0023 - 7	12/22/2004	1/10/2005	04-1027	0.053	µg/g	
LDW-T4-B-SS-WB-comp-1	05BR0023 - 8	12/22/2004	1/10/2005	04-1027	0.093	µg/g	
BL-SS-WB-comp-1	05BR0023 - 9	12/22/2004	1/10/2005	04-1027	0.024	µg/g	
BL-SS-WB-comp-2	05BR0023 - 10	12/22/2004	1/10/2005	04-1027	0.028	µg/g	
BL-SS-WB-comp-3	05BR0023 - 11	12/22/2004	1/10/2005	04-1027	0.036	µg/g	
BL-SS-WB-comp-4	05BR0023 - 12	12/22/2004	1/10/2005	04-1027	0.026	µg/g	
BL-SS-WB-comp-5	05BR0023 - 13	12/22/2004	1/10/2005	04-1027	0.022	µg/g	
BL-SS-WB-comp-6	05BR0023 - 14	12/22/2004	1/10/2005	04-1027	0.018	µg/g	
EP-SS-WB-comp-1	05BR0023 - 15	12/22/2004	1/10/2005	04-1027	0.008	µg/g	B
EP-SS-WB-comp-2	05BR0023 - 16	12/22/2004	1/10/2005	04-1027	0.010	µg/g	U
EP-SS-WB-comp-3	05BR0023 - 17	12/22/2004	1/10/2005	04-1027	0.011	µg/g	B
LDW-M-M-PP-FL-comp-1	05BR0023 - 18	12/22/2004	1/10/2005	04-1027	0.010	µg/g	U
LDW-M-M-SP-FL-comp-1	05BR0023 - 19	12/22/2004	1/10/2005	04-1027	0.010	µg/g	U
BL-ES-FL-comp-1	05BR0023 - 20	12/22/2004	1/10/2005	04-1027	0.010	µg/g	U
BL-ES-FL-comp-2	05BR0023 - 21	12/23/2004	1/11/2005	04-1028	0.004	µg/g	B
BL-ES-FL-comp-3	05BR0023 - 22	12/23/2004	1/11/2005	04-1028	0.003	µg/g	U
BL-ES-FL-comp-4	05BR0023 - 23	12/23/2004	1/11/2005	04-1028	0.003	µg/g	U
BL-ES-FL-comp-5	05BR0023 - 24	12/23/2004	1/11/2005	04-1028	0.003	µg/g	U
BL-ES-FL-comp-6	05BR0023 - 25	12/23/2004	1/11/2005	04-1028	0.003	µg/g	U
EP-ES-FL-comp-1	05BR0023 - 26	12/23/2004	1/11/2005	04-1028	0.003	µg/g	U
EP-ES-FL-comp-2	05BR0023 - 27	12/23/2004	1/11/2005	04-1028	0.004	µg/g	B
EP-ES-FL-comp-3	05BR0023 - 28	12/23/2004	1/11/2005	04-1028	0.003	µg/g	U
EP-ES-FL-comp-4	05BR0023 - 29	12/23/2004	1/11/2005	04-1028	0.003	µg/g	U
EP-ES-FL-comp-5	05BR0023 - 30	12/23/2004	1/11/2005	04-1028	0.003	µg/g	U
EP-ES-FL-comp-6	05BR0023 - 31	12/23/2004	1/11/2005	04-1028	0.003	µg/g	U
LDW-T1-M-ES-FL-comp-1	05BR0023 - 32	12/23/2004	1/11/2005	04-1028	0.003	µg/g	U
LDW-T1-M-ES-FL-comp-2	05BR0023 - 33	12/23/2004	1/11/2005	04-1028	0.004	µg/g	B
LDW-T2-M-ES-FL-comp-1	05BR0023 - 34	12/23/2004	1/11/2005	04-1028	0.003	µg/g	U
LDW-T2-M-ES-FL-comp-2	05BR0023 - 35	12/23/2004	1/11/2005	04-1028	0.004	µg/g	B
LDW-T3-M-ES-FL-comp-1	05BR0023 - 36	12/23/2004	1/11/2005	04-1028	0.006	µg/g	B
LDW-T3-M-ES-FL-comp-2	05BR0023 - 37	12/23/2004	1/11/2005	04-1028	0.005	µg/g	B
LDW-T4-M-ES-FL-comp-1	05BR0023 - 38	12/23/2004	1/11/2005	04-1028	0.005	µg/g	B
BL-ES-WB-comp-1	05BR0023 - 39	12/23/2004	1/11/2005	04-1028	0.020	µg/g	
BL-ES-WB-comp-2	05BR0023 - 40	12/23/2004	1/11/2005	04-1028	0.021	µg/g	
BL-ES-WB-comp-3	05BR0023 - 41	12/27/2004	1/14/2005	04-1029	0.014	ng/g	
BL-ES-WB-comp-4	05BR0023 - 42	12/27/2004	1/14/2005	04-1029	0.023	ng/g	
BL-ES-WB-comp-5	05BR0023 - 43	12/27/2004	1/14/2005	04-1029	0.017	ng/g	
BL-ES-WB-comp-6	05BR0023 - 44	12/27/2004	1/14/2005	04-1029	0.034	ng/g	

Friday, January 21, 2005

Elizabeth M-donick
Project Manager

Reported by
Brooks Rand LLC
Contact: Elizabeth Madonick
3958 6th Avenue NW
Seattle, WA 98107
Tel: 206-632-6206 *Fax: 206-632-6017*

Summary of Results for
Windward Environmental
Contact: Susan McGroddy
200 West Mercer, Suite 401
Seattle WA 98119
Tel: 206-577-1292

Lab Project # WIN001
Lab Tracking # 05BR0023

Quote 091404WIN001

As(Inorganic)

Sample Identification	BRL Number	Preparation date	Analysis date	Batch #	Result	Units	Qualifier (Q)
EP-ES-WB-comp-1	05BR0023 - 45	12/27/2004	1/14/2005	04-1029	0.011	ng/g	
EP-ES-WB-comp-2	05BR0023 - 46	12/27/2004	1/14/2005	04-1029	0.015	ng/g	
EP-ES-WB-comp-3	05BR0023 - 47	12/27/2004	1/14/2005	04-1029	0.014	ng/g	
EP-ES-WB-comp-4	05BR0023 - 48	12/27/2004	1/14/2005	04-1029	0.021	ng/g	
EP-ES-WB-comp-5	05BR0023 - 49	12/27/2004	1/14/2005	04-1029	0.017	ng/g	
EP-ES-WB-comp-6	05BR0023 - 50	12/27/2004	1/14/2005	04-1029	0.007	ng/g	B
LDW-T1-M-ES-WB-comp-1	05BR0023 - 51	12/27/2004	1/14/2005	04-1029	0.098	ng/g	
LDW-T1-M-ES-WB-comp-2	05BR0023 - 52	12/27/2004	1/14/2005	04-1029	0.022	ng/g	
LDW-T2-M-ES-WB-comp-1	05BR0023 - 53	12/27/2004	1/14/2005	04-1029	0.072	ng/g	
LDW-T2-M-ES-WB-comp-2	05BR0023 - 54	12/27/2004	1/14/2005	04-1029	0.046	ng/g	
LDW-T3-M-ES-WB-comp-1	05BR0023 - 55	12/27/2004	1/14/2005	04-1029	0.045	ng/g	
LDW-T3-M-ES-WB-comp-2	05BR0023 - 56	12/27/2004	1/14/2005	04-1029	0.072	ng/g	
LDW-T4-M-ES-WB-comp-1	05BR0023 - 57	12/27/2004	1/14/2005	04-1029	0.061	ng/g	
LDW-T4-M-SF-WB-comp-1	05BR0023 - 58	12/27/2004	1/14/2005	04-1029	0.092	ng/g	
LDW-T4-M-SF-FL-comp-1	05BR0023 - 59	12/27/2004	1/14/2005	04-1029	0.003	ng/g	U
BL-SC-EM-comp-1	05BR0023 - 60	12/27/2004	1/14/2005	04-1029	0.023	ng/g	
BL-SC-EM-comp-2	05BR0023 - 61	1/18/2005	1/19/2005	04-1030-1	0.028	µg/g	
BL-SC-EM-comp-3	05BR0023 - 62	1/18/2005	1/19/2005	04-1030-1	0.039	µg/g	
BL-SC-HP-comp-1	05BR0023 - 63	1/18/2005	1/19/2005	04-1030-1	0.277	µg/g	
EP-SC-EM-comp-1	05BR0023 - 64	1/18/2005	1/19/2005	04-1030-1	0.023	µg/g	
EP-SC-EM-comp-2	05BR0023 - 65	1/18/2005	1/19/2005	04-1030-1	0.021	µg/g	
EP-SC-EM-comp-3	05BR0023 - 66	1/18/2005	1/19/2005	04-1030-1	0.019	µg/g	
EP-SC-HP-comp-1	05BR0023 - 67	1/18/2005	1/19/2005	04-1030-1	0.087	µg/g	
LDW-T1-M-SC-EM-comp-1	05BR0023 - 68	1/18/2005	1/19/2005	04-1030-1	0.033	µg/g	
LDW-T1-M-SC-HP-comp-1	05BR0023 - 69	1/18/2005	1/19/2005	04-1030-1	0.089	µg/g	
LDW-T2-M-SC-EM-comp-1	05BR0023 - 70	1/18/2005	1/19/2005	04-1030-1	0.037	µg/g	
LDW-T2-M-SC-EM-comp-2	05BR0023 - 71	1/18/2005	1/19/2005	04-1030-1	0.030	µg/g	
LDW-T2-M-SC-HP-comp-1	05BR0023 - 72	1/18/2005	1/19/2005	04-1030-1	0.295	µg/g	
LDW-T2-M-SC-HP-comp-2	05BR0023 - 73	1/18/2005	1/19/2005	04-1030-1	0.258	µg/g	
LDW-T3-M-SC-EM-comp-1	05BR0023 - 74	1/18/2005	1/19/2005	04-1030-1	0.033	µg/g	
LDW-T3-M-SC-HP-comp-1	05BR0023 - 75	1/18/2005	1/19/2005	04-1030-1	0.336	µg/g	
BL-DC-EM-comp-1	05BR0023 - 76	1/18/2005	1/19/2005	04-1030-1	0.032	µg/g	
BL-DC-EM-comp-2	05BR0023 - 77	1/18/2005	1/19/2005	04-1030-1	0.020	µg/g	
BL-DC-EM-comp-3	05BR0023 - 78	1/18/2005	1/19/2005	04-1030-1	0.028	µg/g	
BL-DC-HP-comp-1	05BR0023 - 79	1/18/2005	1/19/2005	04-1030-1	0.342	µg/g	
EP-DC-EM-comp-1	05BR0023 - 80	1/18/2005	1/19/2005	04-1030-1	0.016	µg/g	
EP-DC-EM-comp-2	05BR0023 - 81	12/27/2004	1/14/2005	04-1046	0.015	ng/g	
EP-DC-EM-comp-3	05BR0023 - 82	12/27/2004	1/14/2005	04-1046	0.010	ng/g	B
EP-DC-HP-comp-1	05BR0023 - 83	12/27/2004	1/14/2005	04-1046	0.083	ng/g	
LDW-T1-M-DC-EM-comp-1	05BR0023 - 84	12/27/2004	1/14/2005	04-1046	0.010	ng/g	B
LDW-T1-M-DC-HP-comp-1	05BR0023 - 85	12/27/2004	1/14/2005	04-1046	0.051	ng/g	
LDW-T3-M-DC-EM-comp-1	05BR0023 - 86	12/27/2004	1/14/2005	04-1046	0.018	ng/g	
LDW-T3-M-DC-HP-comp-1	05BR0023 - 87	12/27/2004	1/14/2005	04-1046	0.091	ng/g	

Friday, January 21, 2005

Elizabeth M. Madonick
Project Manager

Reported by
Brooks Rand LLC
Contact: Elizabeth Madonick
3958 6th Avenue NW
Seattle, WA 98107
Tel: 206-632-6206 *Fax: 206-632-6017*

Summary of Results for
Windward Environmental
Contact: Susan McGroddy
200 West Mercer, Suite 401
Seattle WA 98119
Tel: 206-577-1292

Lab Project # WIN001
Lab Tracking # 05BR0023

Quote 091404WIN001

% Solids

Sample Identification	BRL Number	Preparation date	Analysis date	Batch #	Result	Units	Qualifier (Q)
LDW-T1-A-SS-WB-comp-1	05BR0023 - 1	12/22/2004	12/23/2004	04-1031	25.950	% Solids	
LDW-T1-B-SS-WB-comp-1	05BR0023 - 2	12/22/2004	12/23/2004	04-1031	23.320	% Solids	
LDW-T2-A-SS-WB-comp-1	05BR0023 - 3	12/22/2004	12/23/2004	04-1031	25.180	% Solids	
LDW-T2-B-SS-WB-comp-1	05BR0023 - 4	12/22/2004	12/23/2004	04-1031	23.610	% Solids	
LDW-T3-A-SS-WB-comp-1	05BR0023 - 5	12/22/2004	12/23/2004	04-1031	25.610	% Solids	
LDW-T3-B-SS-WB-comp-1	05BR0023 - 6	12/22/2004	12/23/2004	04-1031	27.810	% Solids	
LDW-T4-A-SS-WB-comp-1	05BR0023 - 7	12/22/2004	12/23/2004	04-1031	25.780	% Solids	
LDW-T4-B-SS-WB-comp-1	05BR0023 - 8	12/22/2004	12/23/2004	04-1031	23.930	% Solids	
BL-SS-WB-comp-1	05BR0023 - 9	12/22/2004	12/23/2004	04-1031	29.900	% Solids	
BL-SS-WB-comp-2	05BR0023 - 10	12/22/2004	12/23/2004	04-1031	30.400	% Solids	
BL-SS-WB-comp-3	05BR0023 - 11	12/22/2004	12/23/2004	04-1031	29.830	% Solids	
BL-SS-WB-comp-4	05BR0023 - 12	12/22/2004	12/23/2004	04-1031	29.580	% Solids	
BL-SS-WB-comp-5	05BR0023 - 13	12/22/2004	12/23/2004	04-1031	30.170	% Solids	
BL-SS-WB-comp-6	05BR0023 - 14	12/22/2004	12/23/2004	04-1031	30.520	% Solids	
EP-SS-WB-comp-1	05BR0023 - 15	12/22/2004	12/23/2004	04-1031	27.150	% Solids	
EP-SS-WB-comp-2	05BR0023 - 16	12/22/2004	12/23/2004	04-1031	28.580	% Solids	
EP-SS-WB-comp-3	05BR0023 - 17	12/22/2004	12/23/2004	04-1031	26.150	% Solids	
LDW-M-M-PP-FL-comp-1	05BR0023 - 18	12/22/2004	12/23/2004	04-1031	23.470	% Solids	
LDW-M-M-SP-FL-comp-1	05BR0023 - 19	12/22/2004	12/23/2004	04-1031	22.810	% Solids	
BL-ES-FL-comp-1	05BR0023 - 20	12/22/2004	12/23/2004	04-1031	21.580	% Solids	
BL-ES-FL-comp-2	05BR0023 - 21	12/23/2004	12/28/2004	04-1032	22.200	% Solids	
BL-ES-FL-comp-3	05BR0023 - 22	12/23/2004	12/28/2004	04-1032	19.540	% Solids	
BL-ES-FL-comp-4	05BR0023 - 23	12/23/2004	12/28/2004	04-1032	22.540	% Solids	
BL-ES-FL-comp-5	05BR0023 - 24	12/23/2004	12/28/2004	04-1032	20.530	% Solids	
BL-ES-FL-comp-6	05BR0023 - 25	12/23/2004	12/28/2004	04-1032	19.860	% Solids	
EP-ES-FL-comp-1	05BR0023 - 26	12/23/2004	12/28/2004	04-1032	22.250	% Solids	
EP-ES-FL-comp-2	05BR0023 - 27	12/23/2004	12/28/2004	04-1032	22.930	% Solids	
EP-ES-FL-comp-3	05BR0023 - 28	12/23/2004	12/28/2004	04-1032	21.520	% Solids	
EP-ES-FL-comp-4	05BR0023 - 29	12/23/2004	12/28/2004	04-1032	20.760	% Solids	
EP-ES-FL-comp-5	05BR0023 - 30	12/23/2004	12/28/2004	04-1032	22.200	% Solids	
EP-ES-FL-comp-6	05BR0023 - 31	12/23/2004	12/28/2004	04-1032	21.700	% Solids	
LDW-T1-M-ES-FL-comp-1	05BR0023 - 32	12/23/2004	12/28/2004	04-1032	24.780	% Solids	
LDW-T1-M-ES-FL-comp-2	05BR0023 - 33	12/23/2004	12/28/2004	04-1032	19.640	% Solids	
LDW-T2-M-ES-FL-comp-1	05BR0023 - 34	12/23/2004	12/28/2004	04-1032	22.680	% Solids	
LDW-T2-M-ES-FL-comp-2	05BR0023 - 35	12/23/2004	12/28/2004	04-1032	23.170	% Solids	
LDW-T3-M-ES-FL-comp-1	05BR0023 - 36	12/23/2004	12/28/2004	04-1032	20.950	% Solids	
LDW-T3-M-ES-FL-comp-2	05BR0023 - 37	12/23/2004	12/28/2004	04-1032	23.730	% Solids	
LDW-T4-M-ES-FL-comp-1	05BR0023 - 38	12/23/2004	12/28/2004	04-1032	20.760	% Solids	
BL-ES-WB-comp-1	05BR0023 - 39	12/23/2004	12/28/2004	04-1032	46.900	% Solids	
BL-ES-WB-comp-2	05BR0023 - 40	12/23/2004	12/28/2004	04-1032	23.940	% Solids	
BL-ES-WB-comp-3	05BR0023 - 41	12/27/2004	12/28/2004	04-1033	22.410	% Solids	
BL-ES-WB-comp-4	05BR0023 - 42	12/27/2004	12/28/2004	04-1033	22.600	% Solids	
BL-ES-WB-comp-5	05BR0023 - 43	12/27/2004	12/28/2004	04-1033	22.390	% Solids	
BL-ES-WB-comp-6	05BR0023 - 44	12/27/2004	12/28/2004	04-1033	24.770	% Solids	

Friday, January 21, 2005

Elizabeth L. Madonick
Project Manager

Reported by
Brooks Rand LLC
Contact: Elizabeth Madonick
3958 6th Avenue NW
Seattle, WA 98107
Tel: 206-632-6206 *Fax: 206-632-6017*

Summary of Results for
Windward Environmental
Contact: Susan McGroddy
200 West Mercer, Suite 401
Seattle WA 98119
Tel: 206-577-1292

Lab Project # WIN001
Lab Tracking # 05BR0023

Quote 091404WIN001

% Solids

Sample Identification	BRL Number	Preparation date	Analysis date	Batch #	Result	Units	Qualifier (Q)
EP-ES-WB-comp-1	05BR0023 - 45	12/27/2004	12/28/2004	04-1033	24.450	% Solids	
EP-ES-WB-comp-2	05BR0023 - 46	12/27/2004	12/28/2004	04-1033	23.010	% Solids	
EP-ES-WB-comp-3	05BR0023 - 47	12/27/2004	12/28/2004	04-1033	23.500	% Solids	
EP-ES-WB-comp-4	05BR0023 - 48	12/27/2004	12/28/2004	04-1033	22.680	% Solids	
EP-ES-WB-comp-5	05BR0023 - 49	12/27/2004	12/28/2004	04-1033	25.620	% Solids	
EP-ES-WB-comp-6	05BR0023 - 50	12/27/2004	12/28/2004	04-1033	21.420	% Solids	
LDW-T1-M-ES-WB-comp-1	05BR0023 - 51	12/27/2004	12/28/2004	04-1033	22.340	% Solids	
LDW-T1-M-ES-WB-comp-2	05BR0023 - 52	12/27/2004	12/28/2004	04-1033	23.880	% Solids	
LDW-T2-M-ES-WB-comp-1	05BR0023 - 53	12/27/2004	12/28/2004	04-1033	26.840	% Solids	
LDW-T2-M-ES-WB-comp-2	05BR0023 - 54	12/27/2004	12/28/2004	04-1033	25.370	% Solids	
LDW-T3-M-ES-WB-comp-1	05BR0023 - 55	12/27/2004	12/28/2004	04-1033	26.530	% Solids	
LDW-T3-M-ES-WB-comp-2	05BR0023 - 56	12/27/2004	12/28/2004	04-1033	23.160	% Solids	
LDW-T4-M-ES-WB-comp-1	05BR0023 - 57	12/27/2004	12/28/2004	04-1033	26.560	% Solids	
LDW-T4-M-SF-WB-comp-1	05BR0023 - 58	12/27/2004	12/28/2004	04-1033	20.930	% Solids	
LDW-T4-M-SF-FL-comp-1	05BR0023 - 59	12/27/2004	12/28/2004	04-1033	22.170	% Solids	
BL-SC-EM-comp-1	05BR0023 - 60	12/27/2004	12/28/2004	04-1033	18.930	% Solids	
BL-SC-EM-comp-2	05BR0023 - 61	12/28/2004	12/29/2004	04-1034	21.570	% Solids	
BL-SC-EM-comp-3	05BR0023 - 62	12/28/2004	12/29/2004	04-1034	20.350	% Solids	
BL-SC-HP-comp-1	05BR0023 - 63	12/28/2004	12/29/2004	04-1034	13.330	% Solids	
EP-SC-EM-comp-1	05BR0023 - 64	12/28/2004	12/29/2004	04-1034	18.090	% Solids	
EP-SC-EM-comp-2	05BR0023 - 65	12/28/2004	12/29/2004	04-1034	18.520	% Solids	
EP-SC-EM-comp-3	05BR0023 - 66	12/28/2004	12/29/2004	04-1034	18.310	% Solids	
EP-SC-HP-comp-1	05BR0023 - 67	12/28/2004	12/29/2004	04-1034	12.570	% Solids	
LDW-T1-M-SC-EM-comp-1	05BR0023 - 68	12/28/2004	12/29/2004	04-1034	18.170	% Solids	
LDW-T1-M-SC-HP-comp-1	05BR0023 - 69	12/28/2004	12/29/2004	04-1034	12.490	% Solids	
LDW-T2-M-SC-EM-comp-1	05BR0023 - 70	12/28/2004	12/29/2004	04-1034	18.940	% Solids	
LDW-T2-M-SC-EM-comp-2	05BR0023 - 71	12/28/2004	12/29/2004	04-1034	19.790	% Solids	
LDW-T2-M-SC-HP-comp-1	05BR0023 - 72	12/28/2004	12/29/2004	04-1034	12.020	% Solids	
LDW-T2-M-SC-HP-comp-2	05BR0023 - 73	12/28/2004	12/29/2004	04-1034	13.770	% Solids	
LDW-T3-M-SC-EM-comp-1	05BR0023 - 74	12/28/2004	12/29/2004	04-1034	19.330	% Solids	
LDW-T3-M-SC-HP-comp-1	05BR0023 - 75	12/28/2004	12/29/2004	04-1034	12.140	% Solids	
BL-DC-EM-comp-1	05BR0023 - 76	12/28/2004	12/29/2004	04-1034	16.590	% Solids	
BL-DC-EM-comp-2	05BR0023 - 77	12/28/2004	12/29/2004	04-1034	19.080	% Solids	
BL-DC-EM-comp-3	05BR0023 - 78	12/28/2004	12/29/2004	04-1034	21.050	% Solids	
BL-DC-HP-comp-1	05BR0023 - 79	12/28/2004	12/29/2004	04-1034	21.460	% Solids	
EP-DC-EM-comp-1	05BR0023 - 80	12/28/2004	12/29/2004	04-1034	21.930	% Solids	
EP-DC-EM-comp-2	05BR0023 - 81	1/7/2005	1/10/2005	04-1052	19.960	% Solids	
EP-DC-EM-comp-3	05BR0023 - 82	1/7/2005	1/10/2005	04-1052	20.100	% Solids	
EP-DC-HP-comp-1	05BR0023 - 83	1/7/2005	1/10/2005	04-1052	31.090	% Solids	
LDW-T1-M-DC-EM-comp-1	05BR0023 - 84	1/7/2005	1/10/2005	04-1052	14.150	% Solids	
LDW-T1-M-DC-HP-comp-1	05BR0023 - 85	1/7/2005	1/10/2005	04-1052	17.340	% Solids	
LDW-T3-M-DC-EM-comp-1	05BR0023 - 86	1/7/2005	1/10/2005	04-1052	18.710	% Solids	
LDW-T3-M-DC-HP-comp-1	05BR0023 - 87	1/7/2005	1/10/2005	04-1052	19.950	% Solids	

Friday, January 21, 2005

Elizabeth Madonick
Project Manager

BROOKS RAND LLC

DATA QUALIFIERS and their DEFINITIONS
(Effective 11/02/98)

B - Detected by the instrument, above MDL but less than the PQL (ML). Measured result is reported and considered an estimate.

E - An estimated value due to the presence of interferences. A full explanation will be presented in the case narrative.

H - Holding time and/or preservation requirements not met. Results are estimated.

J – Estimated value.

M -Duplicate precision (RPD) was not within acceptance criteria.

N - Spike recovery was not within acceptance criteria.

R - Rejected, unusable value. A full explanation will be presented in the QA Report.

U - Sample results < IDL/MDL. Possible MDL/PQL elevation dependent upon analyzed masses, volumes and/or dilution volumes.

These qualifiers are based on those previously utilized by Brooks Rand, Ltd., those found in the EPA SOW ILM03.0, Exhibit B, Section III, pg. B-18 and the Laboratory Data Validation Functional Guidelines for Evaluating Inorganic Analyses; USEPA; July 1988. These supercede all previous qualifiers ever employed by BRL.

Batch Number: 04-1027 *Brooks Rand Report #05BR0023*
Method Number: EPA 1632

Project Number(s): WIN001
Instrument ID: HGAA 1

Date Analyzed: 1/10/05
Analyst Name: ETS

Bias and Precision

Run Type	Name/ID	Final Result	Units	Spike Level	Source Result	% REC	% REC Limit	RPD	RPD Limit	Notes
MS	05BR0023-11R	2.04	mg/Kg	2.061	0.0364	97.1	50-150			accept
	05BR0023-15R	1.89	mg/Kg	1.916	0.00814	98.2	50-150			accept
MSD	05BR0023-11R	1.92	mg/Kg	2.037	0.0364	92.7	50-150	5.74	< 35	accept
	05BR0023-15R	1.99	mg/Kg	1.908	0.00814	104	50-150	5.03	< 35	accept
IPR	LFB-1	4.71	ng	5		94.2	50-150			accept
	LFB-2	4.86	ng	5		97.2	50-150			accept
OPR	CCV 5ng	5.28	ng	5		106	80-120			accept
	CCV 5ng	5.33	ng	5		107	80-120			accept
	CCV 5ng	5.12	ng	5		102	80-120			accept
QCS	ICV 5ng	5.06	ng	5		101	80-120			accept
MD	05BR0023-11R	0.0327	mg/Kg		0.0364	* TPF 1.12.05	10.8% ~~5.74~~		< 35	accept
	05BR0023-15R	0.0141	mg/Kg		0.00814		53.7% ~~5.03~~		< 35	~~reject~~ accept

Calibration

QA Sample Type	Name/ID	Analyzed Result	Units	Spike Level	% REC	% REC Limit	RSD	RSD Limit	Notes
Calibration	0.5ng	0.550	ng	0.5	110	65-135			accept
	2ng	2.02	ng	2	101	65-135			accept
	10ng	9.89	ng	10	98.9	65-135			accept
	30ng	27.5	ng	30	91.6	65-135			accept
Calibration Factor		0.00000376	ng/PA				7.47	< 20	accept
Calibration Date		1/10/05							

* See Comments p. 2

Batch Number: 04-1027
Method Number: EPA 1632

Project Number(s): WIN001
Instrument ID: HGAA 1

Date Analyzed: 1/10/05
Analyst Name: ETS

Blank Summary

QA Sample Type	Name/ID	Analyzed Result	Units	Criteria	StDev	StDev Limit	Notes
CB	Cal blk-1	0.0304	ng	< 0.15			reject**
	Cal blk-2	0.0296	ng	< 0.15			reject**
Average		0.00	ng	< 3,000	0.00	< 10	accept
MBA	MB-1	0.00304	mg/Kg	< 0.006			accept
	MB-2	0.00208	mg/Kg	< 0.006			accept
	MB-3	0.00249	mg/Kg	< 0.006			accept
Average		0.00254	mg/Kg		0.000482		

Comments

MDL=0.003 mg*kg-1
PQL=0.01 mg*kg-1

Method Blank Criteria: Average less than or equal to 2x the MDL and StDev less than or equal to 0.67x the MDL OR highest blank less than 0.1x the sample results.

Method Duplicate Criteria: RPD less than or equal to 35% OR results within 2x the PQL of each other if the results are less than 5x the PQL.

* Due to a software error, the MS-MSD RPD has been reported as the MD RPD. The correct RPD values have been hand written in the QA Summary Report.

** All Calibration Blank data associated with the analytical run met the acceptance criteria. Calibration Blank results were manually rejected to prevent the software from blank correcting the instrument calibration and the sample results.

BROOKS RAND, LLC
3958 6th Avenue, NW Seattle, WA 98107 U.S.A. 206.632.6206

QUALITY ASSURANCE REPORT

Batch:	04-1027
Analysis:	Arsenic (Inorganic) by EPA 1632 (HGAA)
Tracking:	05BR0023
Project:	WIN001
Matrix:	Biota
Batch Size:	20 Samples
Analysis Date:	January 10, 2005
Calibration Date:	January 10, 2005

1 **SAMPLE PREPARATION** – Acceptable

2 **CALIBRATION** – Acceptable

3 **CALIBRATION VERIFICATION** – Acceptable

4 **QUALITY CONTROL SAMPLES (QCS)** – Acceptable

5 **BLANKS** – Acceptable

6 **METHOD DUPLICATE ANALYSIS** - Due to software error, the MS/MSD RPD has been reported as the MD RPD. The correct RPD value has been manually added to the QA Summary Report.

7 **SPIKE / SPIKE DUPLICATE ANALYSIS** – Acceptable

8 **LIMITS OF DETECTION** – Acceptable

9 **OVERALL DATA QUALITY** – Acceptable

No qualification of the data was required based on this review.

I certify that, to the best of my knowledge and belief, the data are reported as true and accurate. The Laboratory Director, or his designee, has authorized release of data contained in this Quality Assurance Report as verified by the following signature(s).

1.12.05

Tressa K. Pearson-Franks
Quality Assurance Associate

SAMPLE PROCESSING FORM

Batch #: 04-1027 Analysis: As(Inorganic) Method: EPA 1632 (HGAA)

Tracking #	Lab ID	Project Ref #	Data Due Date	Matrix	Comments
QA: Full					
05BR0023	1	WIN001	1/3/2005	Biota	
05BR0023	2	WIN001	1/3/2005	Biota	
05BR0023	3	WIN001	1/3/2005	Biota	
05BR0023	4	WIN001	1/3/2005	Biota	
05BR0023	5	WIN001	1/3/2005	Biota	
05BR0023	6	WIN001	1/3/2005	Biota	
05BR0023	7	WIN001	1/3/2005	Biota	
05BR0023	8	WIN001	1/3/2005	Biota	
05BR0023	9	WIN001	1/3/2005	Biota	
05BR0023	10	WIN001	1/3/2005	Biota	
•05BR0023	11	WIN001	1/3/2005	Biota	
05BR0023	12	WIN001	1/3/2005	Biota	
05BR0023	13	WIN001	1/3/2005	Biota	
05BR0023	14	WIN001	1/3/2005	Biota	
•05BR0023	15	WIN001	1/3/2005	Biota	
05BR0023	16	WIN001	1/3/2005	Biota	
05BR0023	17	WIN001	1/3/2005	Biota	
05BR0023	18	WIN001	1/3/2005	Biota	
05BR0023	19	WIN001	1/3/2005	Biota	
05BR0023	20	WIN001	1/3/2005	Biota	

Tracking #	See SOW	See Memo	See Proj Mgr	Consult MSDS	See Contract Info	See Lab Mgr
05BR0023	No	No	No	No	No	No

QA Comments: Report on a WET weight basis.

Batched By _____ Date: 12/15/04

Prepared By: _____ Date: 12/22/04

Comments: _____

Analyzed By: _____ Date: 1/10/05

Comments: _____

Data Entry By _____ Date: 1/10/05

Comments: _____

Primary Data Review By _____ Date: 1/10/05

Comments: _____

Final Review By: _____ Date: ~~1.10.05~~ 1.12.05

Comments: _____

	Analyst:	ETS	*Project:*	WIN001	*Matrix:*	Biota	*Analysis:*	As (In)	*Date:*	1/10/2005	
SAMPLE CALCULATIONS											
			Sample	Dilution	Analyzed		Uncorrected				
			weight	Volume	Vol.			Result			
Run	Tracking #	ID #	(mg)	(mL)	(mL)	PA	ng	µg/g			
15	05BR0023	11	479	10.0	0.100	57	0.214	*0.045*	*		
16	05BR0023	11R	479	10.0	1.00	464	1.74	0.036			
17	05BR0023	11MD	507	10.0	1.00	441	1.66	0.033			
18	05BR0023	11MS	461	10.0	0.050	1250	4.70	2.04			
19	05BR0023	11MSD	491	10.0	0.050	1257	4.72	1.92			
20	05BR0023	15	592	10.0	0.100	15	0.056	*0.010*	*		
21	05BR0023	15R	592	10.0	1.00	128	0.481	0.008			
22	05BR0023	15MD	480	10.0	1.00	180	0.677	0.014			
23	05BR0023	15MS	522	10.0	0.050	1313	4.94	1.89			
24	05BR0023	15MSD	524	10.0	0.050	1386	5.21	1.99			
25	05BR0023	1	555	10.0	1.00	433	1.63	0.029			
26	05BR0023	2	537	10.0	1.00	330	1.24	0.023			
27	05BR0023	3	585	10.0	1.00	2596	9.76	0.167			
28	05BR0023	4	644	10.0	1.00	832	3.13	0.049			
29	05BR0023	5	460	10.0	1.00	998	3.75	0.082			
30	05BR0023	6	469	10.0	1.00	1284	4.83	0.103			
31	05BR0023	7	487	10.0	1.00	690	2.59	0.053			
32	05BR0023	8	542	10.0	1.00	1345	5.06	0.093			
35	05BR0023	9	514	10.0	1.00	323	1.21	0.024			
36	05BR0023	10	531	10.0	1.00	399	1.50	0.028			
37	05BR0023	12	548	10.0	1.00	374	1.41	0.026			
38	05BR0023	13	512	10.0	1.00	294	1.11	0.022			
39	05BR0023	14	587	10.0	1.00	279	1.05	0.018			
40	05BR0023	16	522	10.0	1.00	122	0.459	0.009			
41	05BR0023	17	521	10.0	1.00	152	0.571	0.011			
42	05BR0023	18	554	10.0	1.00	39	0.147	0.003			
43	05BR0023	19	573	10.0	1.00	46	0.173	0.003			
44	05BR0023	20	571	10.0	1.00	47	0.177	0.003			
*Under calibration.											

Calibration Results - 1/10/05 HGAA System 1 by As(In)

Instrument Calibration						**Calibration Blanks**				
Run	ml std used	ng	PA	Calibration Coefficient		Run	PA	ng	ug/L	
3	0.05	0.5	146	0.003425	109.8%	1	8	0.030	0.002	
4	0.20	2.0	539	0.003711		2	8	0.030	0.002	
5	1.00	10.0	2631	0.003801		**Average:**	8.0	0.030	0.002	
6	3.00	30.0	7318	0.004099		**St Dev:**	0	0.000	0.000	
R:		0.9997	**Avg:**	0.003759						
			RSD:	7.4%						

QC CALCULATIONS (continued)

Calibration Checks

Mid level standards

Run	ng	PA	ng	%	
7	5.00	1347	5.06	101.3%	*
8	5.00	1405	5.28	105.6%	
33	5.00	1419	5.33	106.7%	
45	5.00	1362	5.12	102.4%	

* Independent Calibration Verification.

Calibration Blank Checks

Run	PA	ng	ug/L
9	16	0.060	0.003
34	17	0.064	0.003
46	24	0.090	0.005

Method Blanks

Run	ID #	weight (mg)	Dilution Volume (mL)	Analyzed Volume (mL)	PA	measured ng	total ng	Result conc. µg/g
10	MB-1	500	10.00	1.00	41	0.154	1.54	0.003
11	MB-2	500	10.00	1.00	28	0.105	1.05	0.002
12	MB-3	500	10.00	1.00	33	0.124	1.24	0.002
					Average:	0.128	1.28	0.003
					StDev:	0.025	0.246	0.000

Precision

Summary of Duplicate Sample Analysis

Run	Tracking #	ID #	Uncorr. Result ng/g
16	05BR0023	11R	0.036
17	05BR0023	11MD	0.033
		Average:	0.035
		RPD:	10.8%
21	05BR0023	15R	0.008
22	05BR0023	15MD	0.014
		Average:	0.011
		RPD:	53.7%

Sample and duplicate are near the PQL.

BIAS

Spiked Sample (Note that MS recovery was calculated using uncorrected results)

Run	Tracking #	ID #	Spike (ng)	Sample Weight (mg)	expected µg/g	spike + sample measured µg/g	sample measured µg/g	spike measured µg/g	% Rec.	RPD	
18	05BR0023	11MS	1000	461	2.17	2.04	0.036	2.00	92.3%		
19	05BR0023	11MSD	1000	491	2.04	1.92	0.036	1.89	92.7%	5.74%	
23	05BR0023	15MS	1000	522	1.92	1.89	0.008	1.88	98.3%		
24	05BR0023	15MSD	1000	524	1.91	1.99	0.008	1.98	103.8%	5.03%	

Summary of Laboratory Fortified Blank Recoveries

Run	ID #	Spike ng	Sample Volume (mL)	Spike Conc. ng/L	Dilution Volume (mL)	Analyzed Vol. (mL)	PA	ng	Result ng/L	% Rec.	
13	LFB-1	1000	10.00	100	10.00	0.050	1254	4.71	94.27	94.3%	*
14	LFB-2	1000	10.00	100	10.00	0.050	1200	4.51	90.21	90.2%	**

* Spiked with As(III) standard.

** Spiked with As(V) standard.

As-T / As Species As(In) / Se-T / Se Species —
Methods BR-0020 (~~HGAAS~~) & EPA 1632 (HGAAS)

Matrix: Water / Sediment / Biota / Other _____

Batch #: 04-1027 Preparation Date: ~~10/~~ 12/22/04

Tracking #(s): 05BR0023 Prepared By: F. McFarland

Project #(s): WIN001 Page 1 of 2

Flask #	Sample I.D.	Sample Wt. / Vol. (g) / ~~(mg)~~ / (mL)	Flask #	Sample I.D.	Sample Wt. / Vol. (g) / ~~(mg)~~ / (mL)
	MB-1	-		05BR0023-11MS	0.461 950
	MB-2	-		-11MSD	0.491
	MB-3	-		-12	0.548
	LFB-1 (As^{3+})	-.500 mg		-13	0.512
	LFB-2 (As^{5+})	-.500 "		-14	0.587
	05BR0023-1	0.555		-15	0.592
	-2	0.537		-15MD	0.480
	-3	0.585		-15MS	0.522
	-4	0.644		-15MSD	0.524
	-5	0.460		-16	0.522
	-6	0.469		-17	0.521
	-7	0.487		-18	0.554
	-8	0.542		-19	0.573
	-9	0.514		-20	0.571
	-10	0.531			
	-11	0.479			
	-11MD	0.507			

Matrix Spike/Matrix Spike Duplicate

Sample I.D.	Spike I.D.	Spike std. Conc.	Spike Vol. (mL)	Spike Conc. (µg/g) / (µg/L)
LFB-1	04-345-As^{3+}	10 mg/mL	0.100	2 mg/g
LFB-2	04-345-As^{5+}		0.100	2 mg/g
05BR0023-11MS	04-345-As^{3+}		0.095	2.061 mg/g
-11MSD			0.100	2.037 mg/g
-15MS			0.100	1.916 mg/g
-15MSD			0.100	1.908 mg/g

DMS 22 Dec 2004

As-T / As Species As(T) / Se-T / Se Species —
Methods BR-0020 ~~(HGAAS)~~ & EPA 1632 (HGAAS)

Matrix: Water / Sediment / Biota / Other _____

Batch #: 04-1027 Preparation Date: 12/22/04

Prepared By: F. McFarland Page 2 of 2

Ongoing Precision and Recovery Sample (OPR) or Certified reference Material (CRM)

OPR / CRM I.D.	Certified Conc. (µg/g) / (µg/L)	Source I.D. (for OPR)
See LFB Info on p. 1		

REAGENTS: *Volume & ID #*

HNO_3: —

$HClO_4$: —

H_2SO_4: —

HCl: 2M HCl made w/ 04-351-6 HCl (Lot#4104090), 10 mL

$H_3PO_4/NH_2OH{\cdot}HCl$: —

DIGESTION:

Temperature	Time
80°C	16 HRS

(13:30; 12/22/04 to 05:30; 12/23/04)

DILUTION INFORMATION:

Final Volume of Preparation: 10mL

Volume of Prep Subsampled: 10mL

Dilution Media: None

Final Dilution Volume: 10mL

ADDITIONAL COMMENTS: _____

(In) As ☑ Se ☐ Analysis Sheet

Batch: 04-1027 Matrix: BIOTA

Analyst: ETS Calibration Blank $\bar{X}$: 8.0 PA Blank Corr. Calib. Coef. $\bar{X}$: 0.003759

Date: 10 JAN 2005 Method Blank $\bar{X}$: 0.003 ng/g RSD: 7.4%

Standards: Cal Std 10 ng /mL: 05-010-02AS 30% NH_2OHHCl: — N=: 4

QA: Full☑ Standard☐ ICV Std: 05-006-02AS 4% $NaBH_4$: 05-010-$NaBH_4$ r: 0.9997

Noise: 2442 4% $NaBH_4$ add. & purge time (m:s) 2:00

Run #	Trap #	Sample ID	Analyzed volume (mL)	PA	Sample Specific Notes
1	C_8	Cal blk-1	—	8	
2	N_1	" -2	—	8	
3	C_8	0.5 ng	0.050	146	
4	N_1	2.0 ng	0.200	539	
5	C_8	10.0 ng	1.00	2631	
6	N_1	30.0 ng	3.00	7318	
7	C_8	ICV 5 ng	0.050	1347	
8	N_1	CCV 5 ng	0.500	1405	
9	C_8	CCB	—	16	
10	N_1	MB-1	1.00	41	
11	C_8	" -2	"	28	
12	N_1	" -3	"	33	
13	C_8	LFB-1 (As^{III})	0.050	1254	
14	N_1	" -2 (As^V)	"	1293	
15	C_8	05BR0023-11	0.100	57	UNDER CALIBRATION
16	N_1	" -11R	1.00	464	
17	C_8	-11MD	"	441	
18	N_1	-11MS	0.050	1250	
19	C_8	-11MSD	"	1257	
20	N_1	-15	0.100	15	UNDER CALIBRATION
21	C_8	-15R	1.00	128	
22	N_1	-15MD	1.00	~~178~~ 180	
23	C_8	-15MS	0.050	1313	
24	N_1	" -15MSD	"	1386	

Comments: SAMPLE SPECTRA SHOW EVIDENCE OF MMA peaks at ~1 min. r.t.

Method SRM: LFB-1 As^{III} 04-345-As^{III}

" -2 As^V 04-345-As^V

(In)
As ☑ Se ☐ Analysis Sheet

Batch: 05-0027 Matrix: BIOTA

Analyst: EJS Date: 10 JAN 2005

Run #	Trap #	Sample ID	Analyzed volume (mL)	PA	Sample Specific Notes
25	C_8	05BR0023-1	1.00	433	
26	N_1	-2		330	
27	C_8	-3		2596	
28	N_1	-4		832	
29	C_8	-5		998	
30	N_1	-6		1284	
31	C_8	-7		690	
32	N_1	-8		1345	
33	C_8	CCV 5ng	0.500	1419	
34	N_1	CCB	—	17	
35	C_8	05BR0023-9	1.00	~~399~~ 323 ejs	
36	N_1	-10		399	
37	C_8	-12		374	
38	N_1	-13		294	
39	C_8	-14		279	
40	N_1	-16		122	
41	C_8	-17		152	
42	N_1	-18		39	
43	C_8	-19		41	
44	N_1	-20		47	
45	C_8	CCV 5ng	0.500	1362	
46	N_1	CCB	—	24	

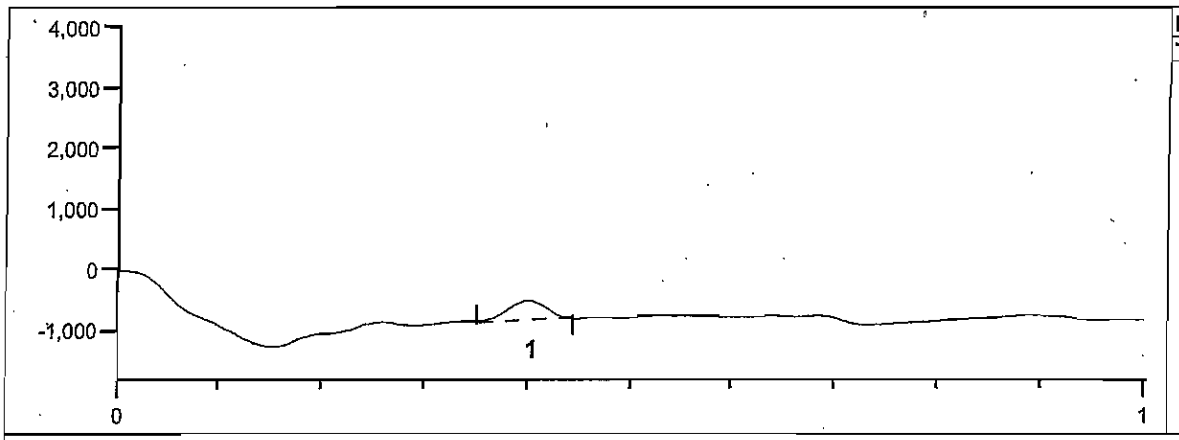
ejs 10 JAN 2005

Comments:

Batch Number: 04-1027
Method Number: 1632

Project Number(s): WIN001
Instrument ID: HGAA 1

Date Analyzed: 1/10/05
Analyst Name: ETS

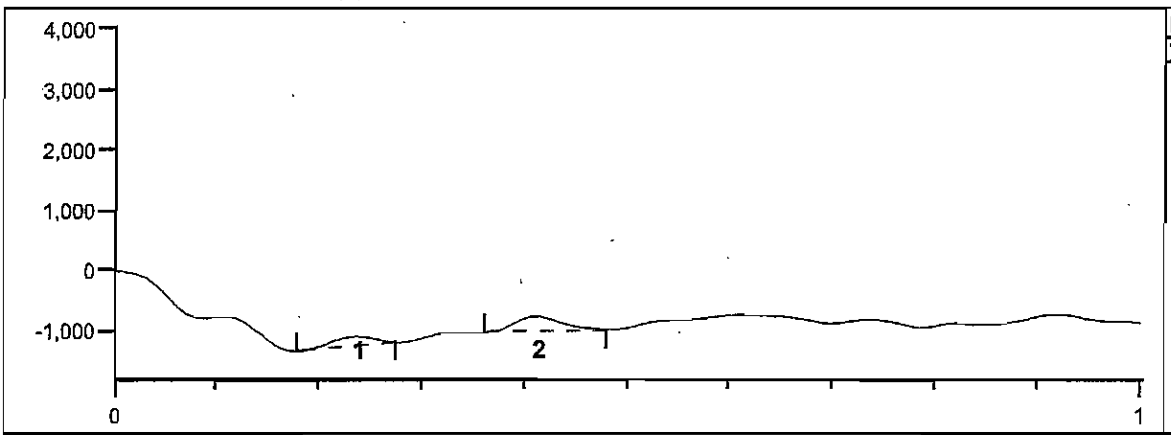


Date: 1/10/05
Time: 5:15 PM

Peak	rt	Area
1	0.40	8,080

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
1	CB	Cal blk-1		1	8,080	0.0304		0.0304	< 0.15	reject

Notes:

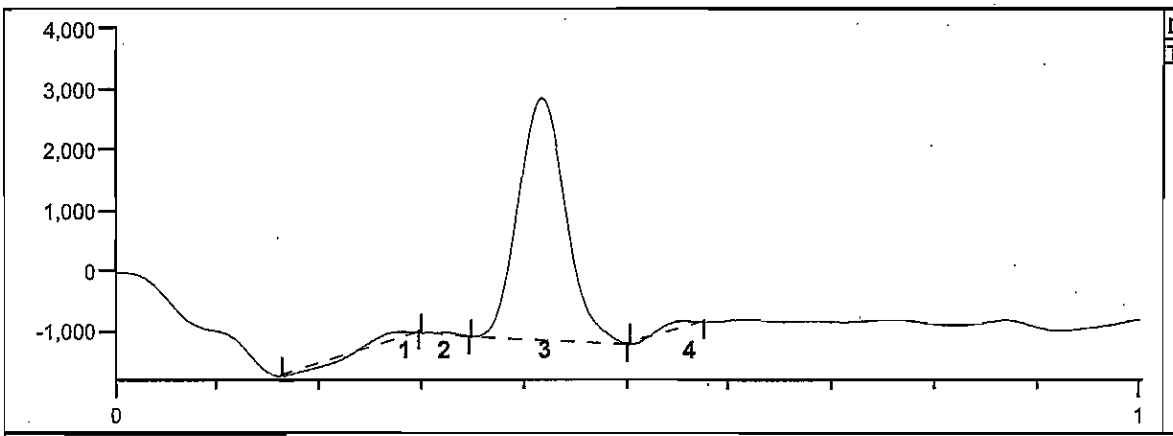


Date: 1/10/05
Time: 5:19 PM

Peak	rt	Area
1	0.23	4,974
2	0.41	7,879

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
2	CB	Cal blk-2		2	7,879	0.0296		0.0296	< 0.15	reject

Notes:



Date: 1/10/05
Time: 5:24 PM

Peak	rt	Area
1	0.28	24,110
2	0.32	13,114
3	0.41	146,305
4	0.56	4,227

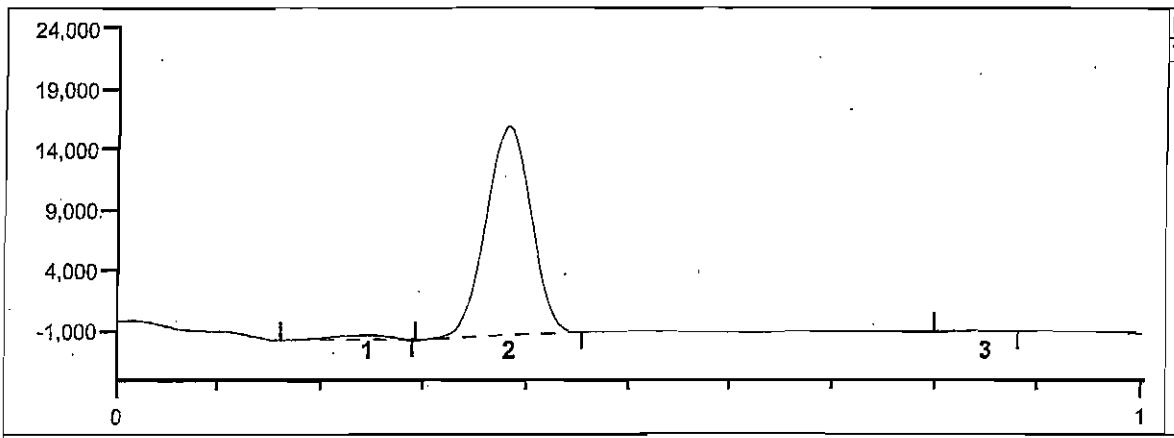
Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
3	STD	0.5ng		3	146,305	0.550		110	65-135	accept

Notes:

Batch Number: 04-1027
Method Number: 1632

Project Number(s): WIN001
Instrument ID: HGAA 1

Date Analyzed: 1/10/05
Analyst Name: ETS

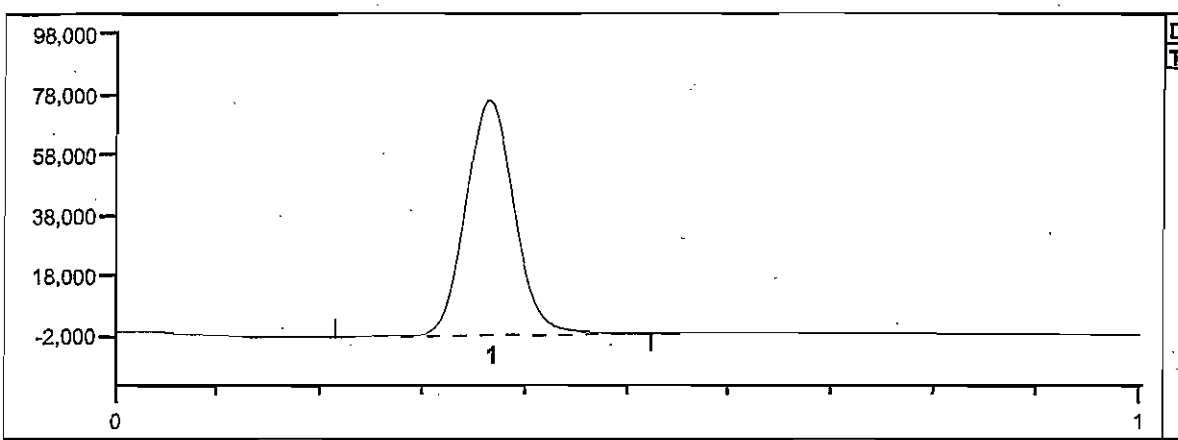


Date: 1/10/05
Time: 5:29 PM

Peak	rt	Area
1	0.24	15,733
2	0.38	538,925
3	0.84	5,432

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
4	STD	2ng		2	538,925	2.02		101	65-135	accept

Notes:

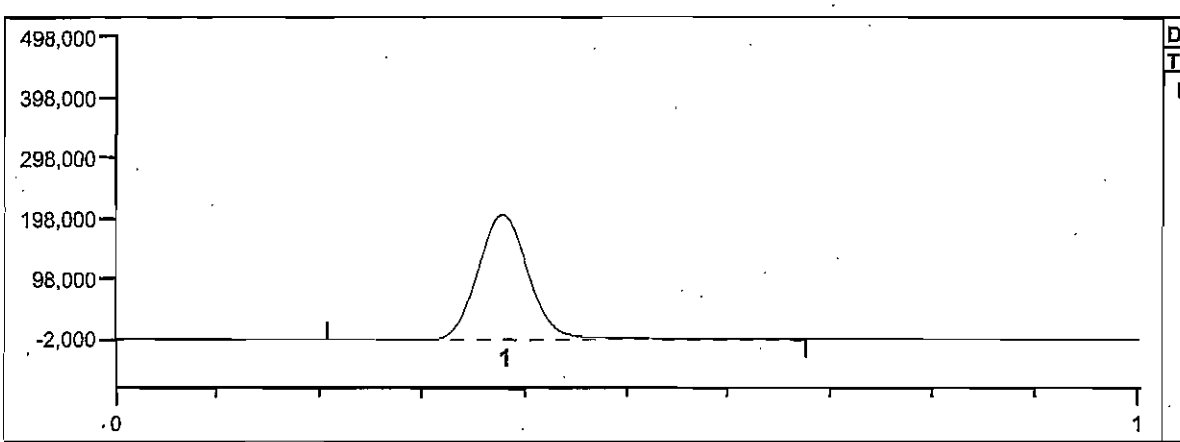


Date: 1/10/05
Time: 5:33 PM

Peak	rt	Area
1	0.36	2,631,377

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
5	STD	10ng		1	2,631,377	9.89		98.9	65-135	accept

Notes:



Date: 1/10/05
Time: 5:37 PM

Peak	rt	Area
1	0.38	7,318,122

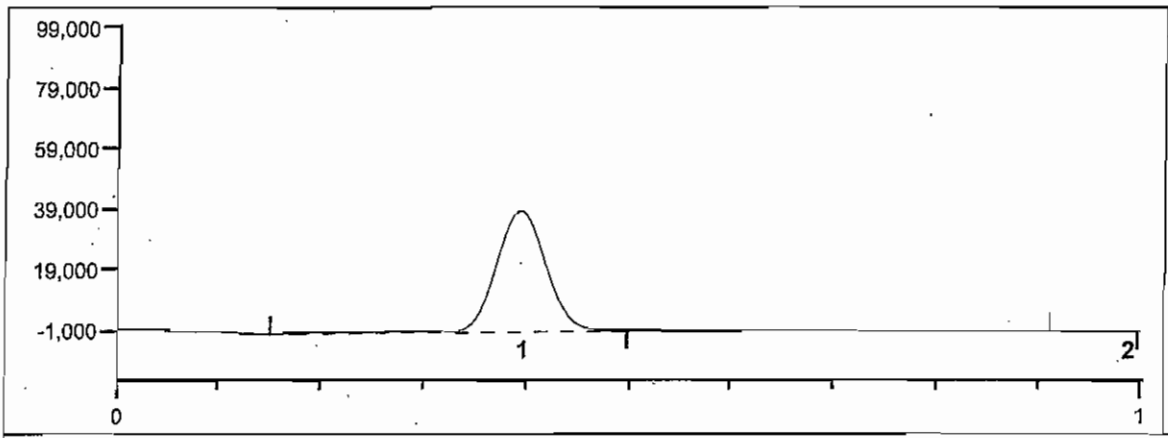
Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
6	STD	30ng		1	7,318,122	27.5		91.6	65-135	accept

Notes:

Batch Number: 04-1027
Method Number: 1632

Project Number(s): WIN001
Instrument ID: HGAA 1

Date Analyzed: 1/10/05
Analyst Name: ETS

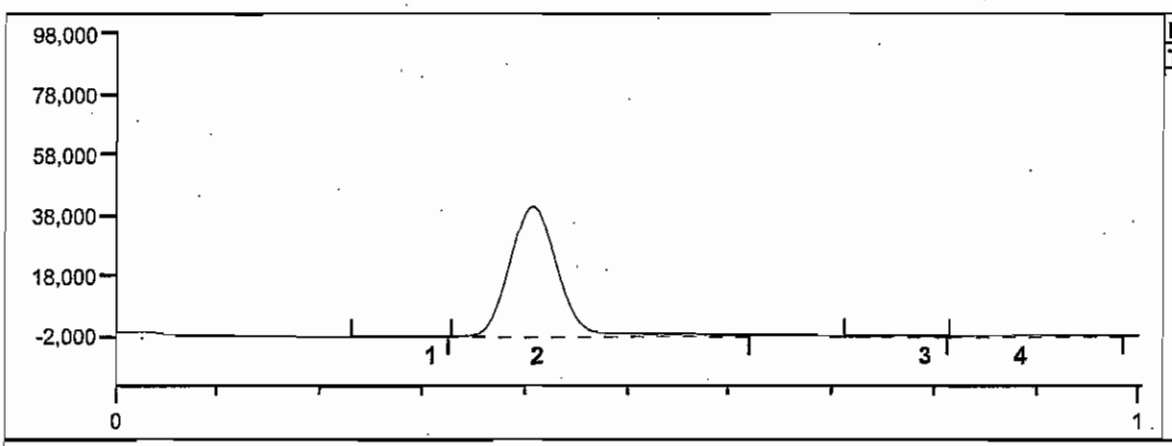


Date: 1/10/05
Time: 5:42 PM

Peak	rt	Area
1	0.39	1,347,093
2	0.98	4,131

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
7	QCS	ICV 5ng		1	1,347,093	5.06		101	80-120	accept

Notes:

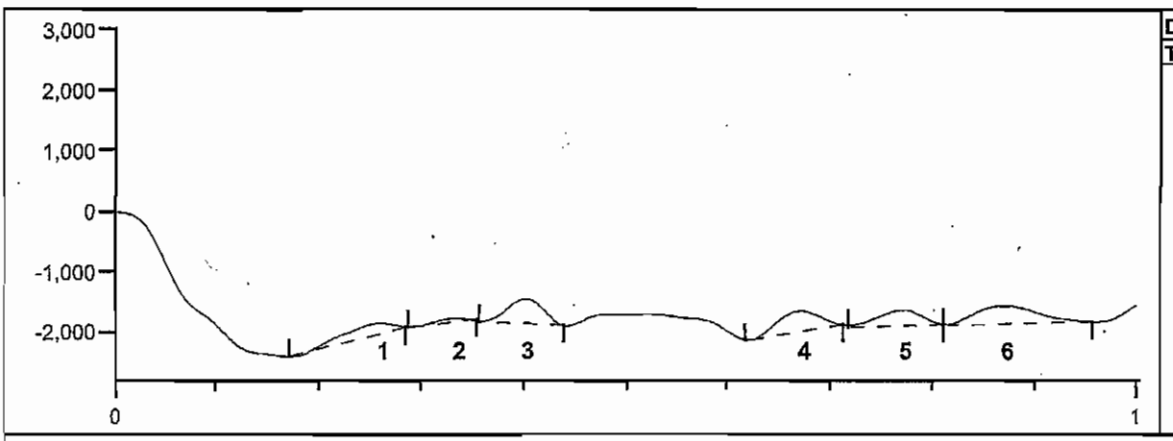


Date: 1/10/05
Time: 5:47 PM

Peak	rt	Area
1	0.30	13,188
2	0.40	1,404,618
3	0.78	19,547
4	0.88	32,276

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
8	OPR	CCV 5ng		2	1,404,618	5.28		106	80-120	accept

Notes:



Date: 1/10/05
Time: 5:52 PM

Peak	rt	Area
1	0.26	17,566
2	0.33	12,575
3	0.40	16,053
4	0.67	15,795
5	0.77	14,499
6	0.87	17,233

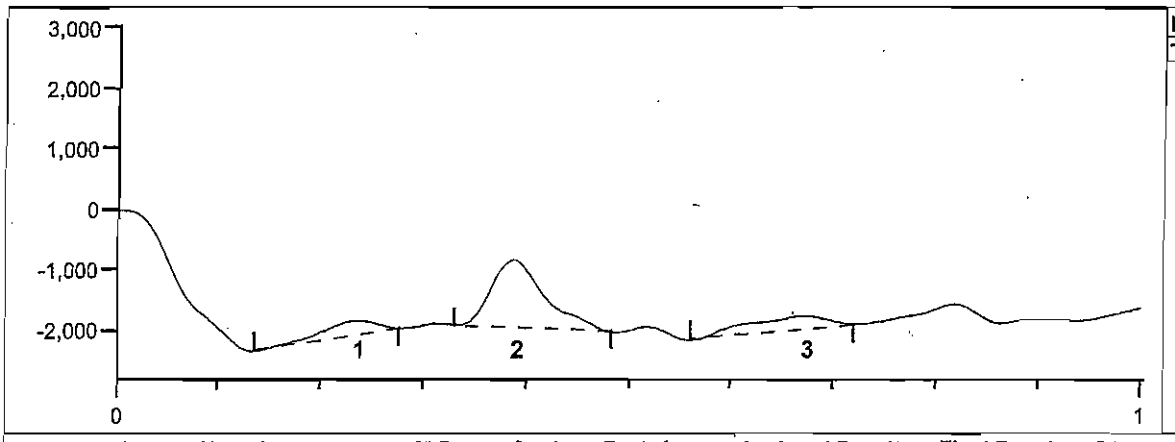
Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
9	CCB	CCB		3	16,053	0.0603			< 0.15	accept

Notes:

Batch Number: 04-1027
Method Number: 1632

Project Number(s): WIN001
Instrument ID: HGAA 1

Date Analyzed: 1/10/05
Analyst Name: ETS

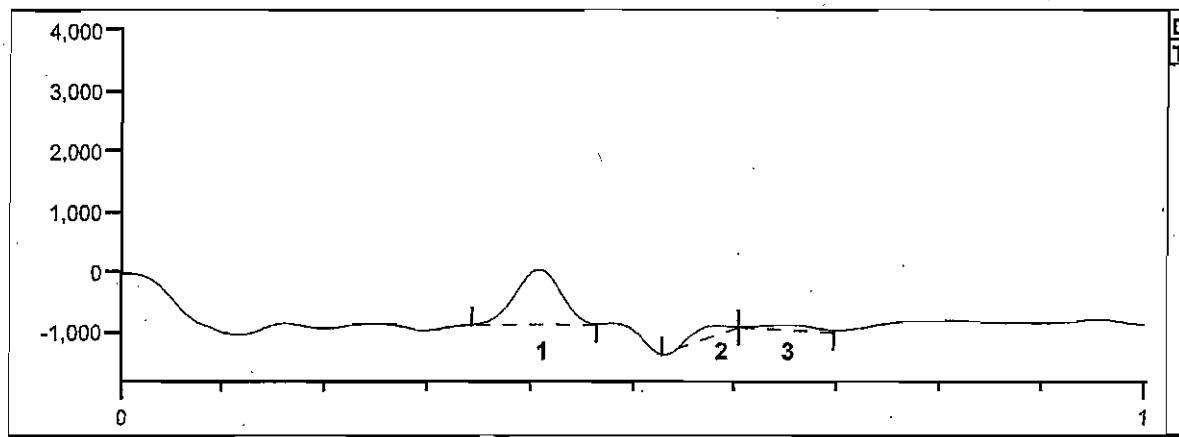


Date: 1/10/05
Time: 5:58 PM

Peak	rt	Area
1	0.23	10,304
2	0.38	40,503
3	0.67	14,070

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
10	MBA	MB-1		2	40,503	0.152	0.00304	0.00304	< 0.006	accept

Notes:

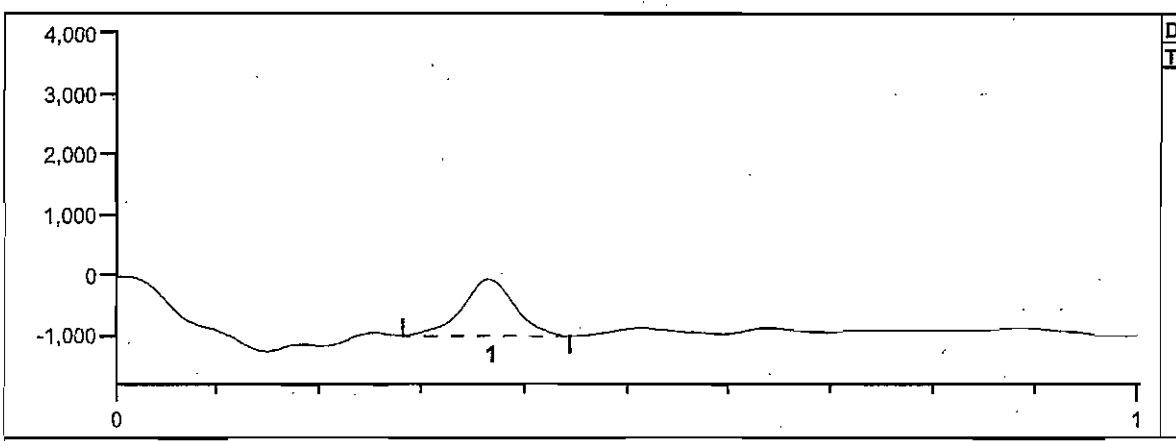


Date: 1/10/05
Time: 6:05 PM

Peak	rt	Area
1	0.40	27,624
2	0.58	11,732
3	0.65	10,231

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
11	MBA	MB-2		1	27,624	0.104	0.00208	0.00208	< 0.006	accept

Notes:



Date: 1/10/05
Time: 6:10 PM

Peak	rt	Area
1	0.36	33,090

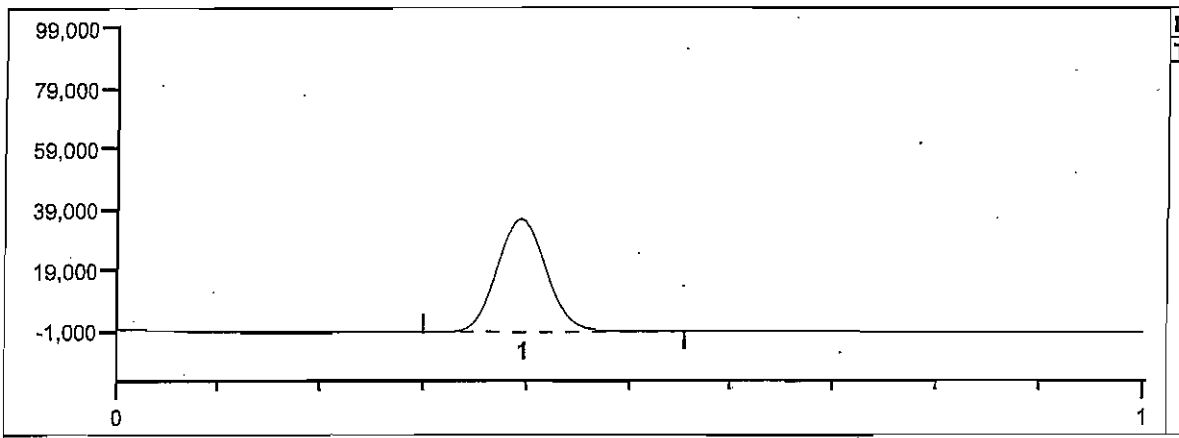
Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
12	MBA	MB-3		1	33,090	0.124	0.00249	0.00249	< 0.006	accept

Notes:

Batch Number: 04-1027
Method Number: 1632

Project Number(s): WIN001
Instrument ID: HGAA 1

Date Analyzed: 1/10/05
Analyst Name: ETS

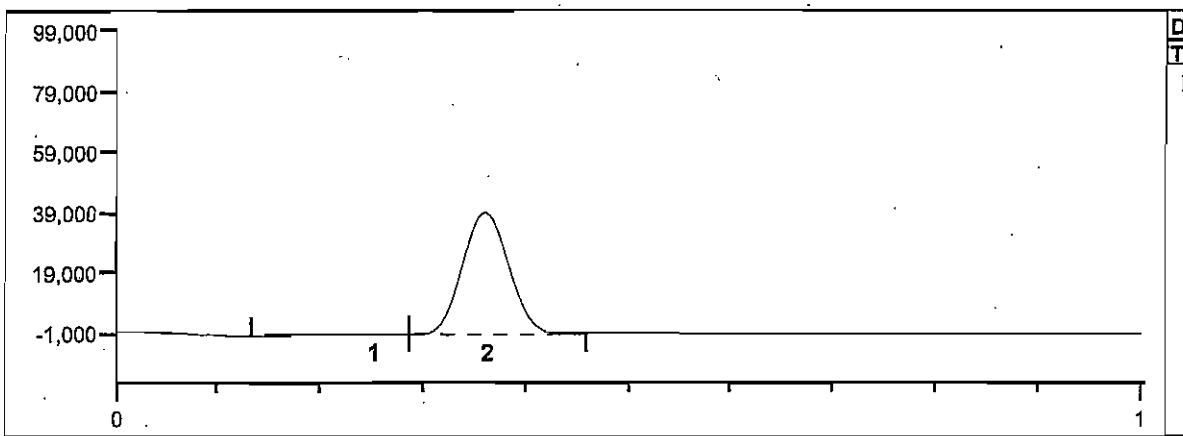


Date: 1/10/05
Time: 6:16 PM

Peak	rt	Area
1	0.39	1,253,990

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
13	IPR	LFB-1		1	1,253,990	4.71		94.2	50-150	accept

Notes:

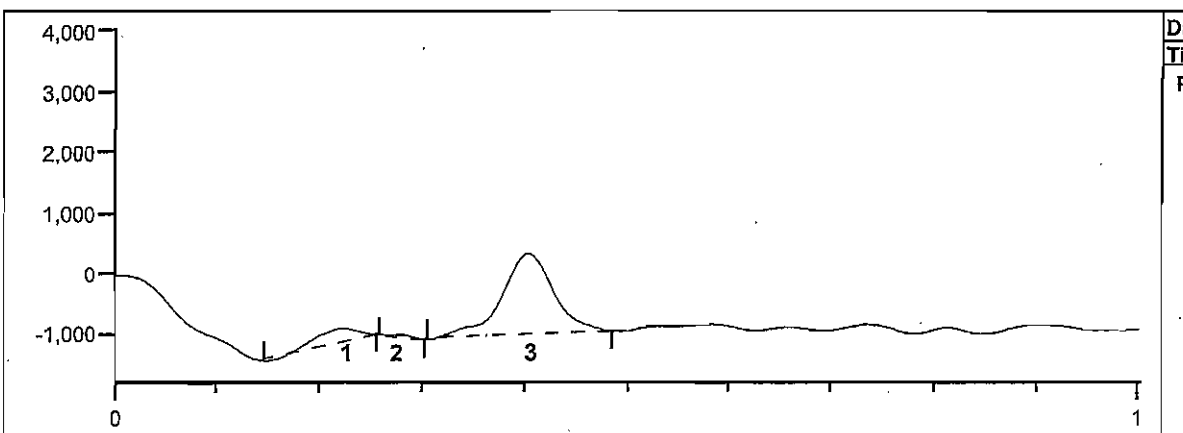


Date: 1/10/05
Time: 6:21 PM

Peak	rt	Area
1	0.24	21,611
2	0.36	1,292,992

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
14	IPR	LFB-2		2	1,292,992	4.86		97.2	50-150	accept

Notes:



Date: 1/10/05
Time: 6:27 PM

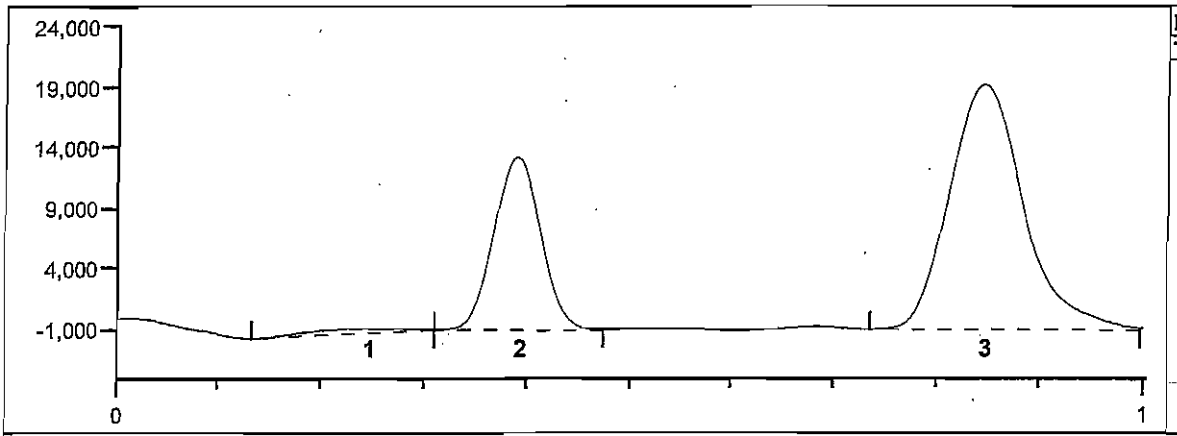
Peak	rt	Area
1	0.22	17,965
2	0.27	6,174
3	0.40	56,828

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
15	S	05BR0023-11		3	56,828	0.214	0.0446		< HS	accept

Notes:

Project Number(s): WIN001
Instrument ID: HGAA 1

Date Analyzed: 1/10/05
Analyst Name: ETS

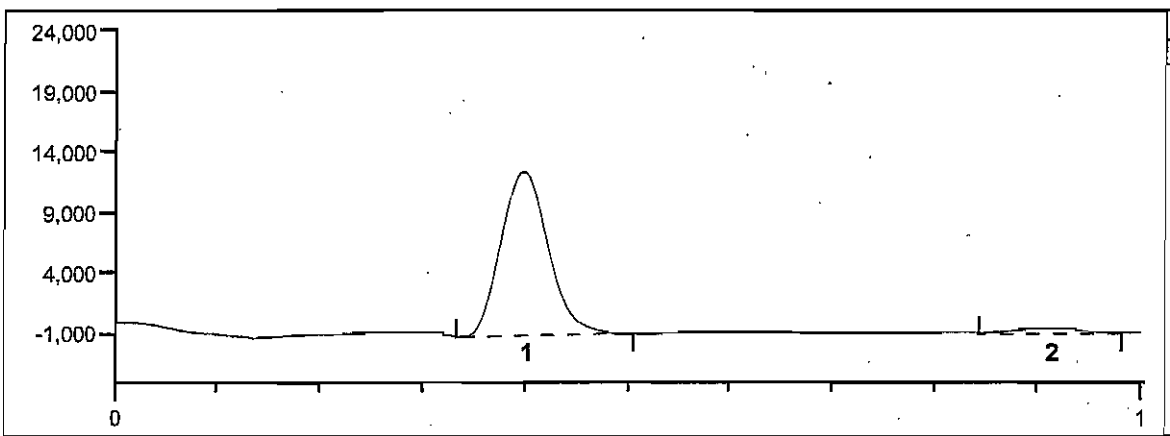


Date: 1/10/05
Time: 6:33 PM

Peak	rt	Area
1	0.24	43,547
2	0.39	463,780
3	0.84	1,000,142

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
16	S	05BR0023-11R		2	463,780	1.74	0.0364		< HS	accept

Notes:

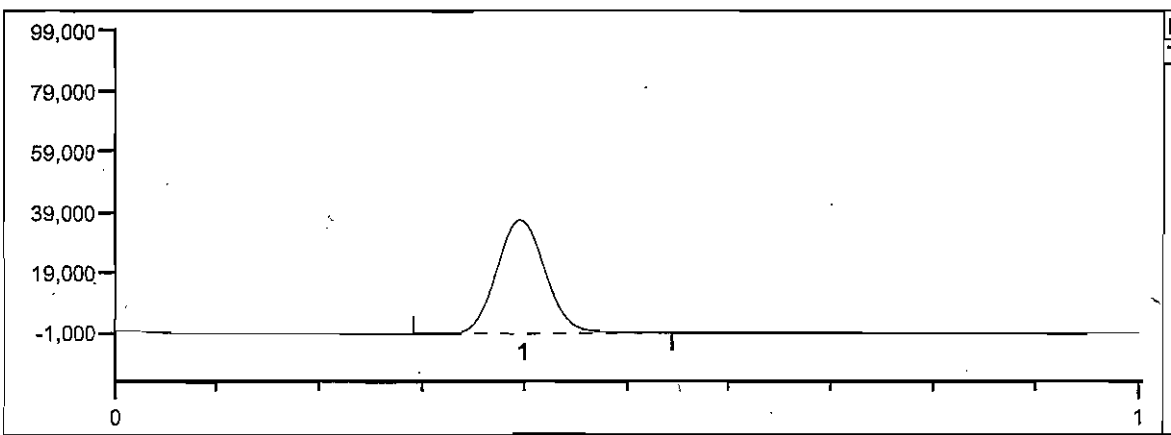


Date: 1/10/05
Time: 6:38 PM

Peak	rt	Area
1	0.40	441,085
2	0.91	13,256

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
17	MD	05BR0023-11R		1	441,085	1.66	0.0327	10.7	< 35	accept

Notes:



Date: 1/10/05
Time: 6:45 PM

Peak	rt	Area
1	0.39	1,250,130

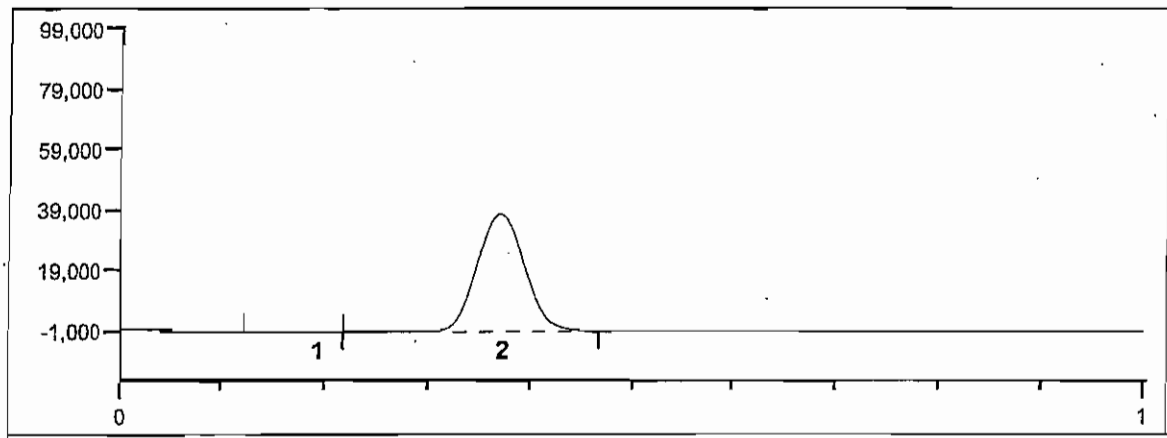
Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
18	MS	05BR0023-11R		1	1,250,130	4.70	2.04	97.1	50-150	accept

Notes:

Batch Number: 04-1027
Method Number: 1632

Project Number(s): WIN001
Instrument ID: HGAA 1

Date Analyzed: 1/10/05
Analyst Name: ETS

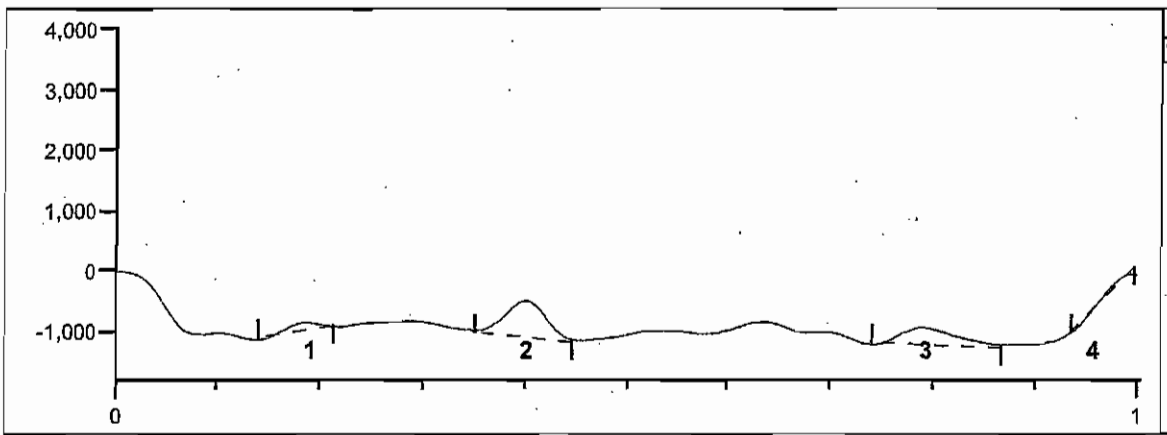


Date: 1/10/05
Time: 6:50 PM

Peak	rt	Area
1	0.19	16,351
2	0.37	1,257,188

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
19	MSD	05BR0023-11R		2	1,257,188	4.72	1.92	92.7	50-150	accept

Notes:

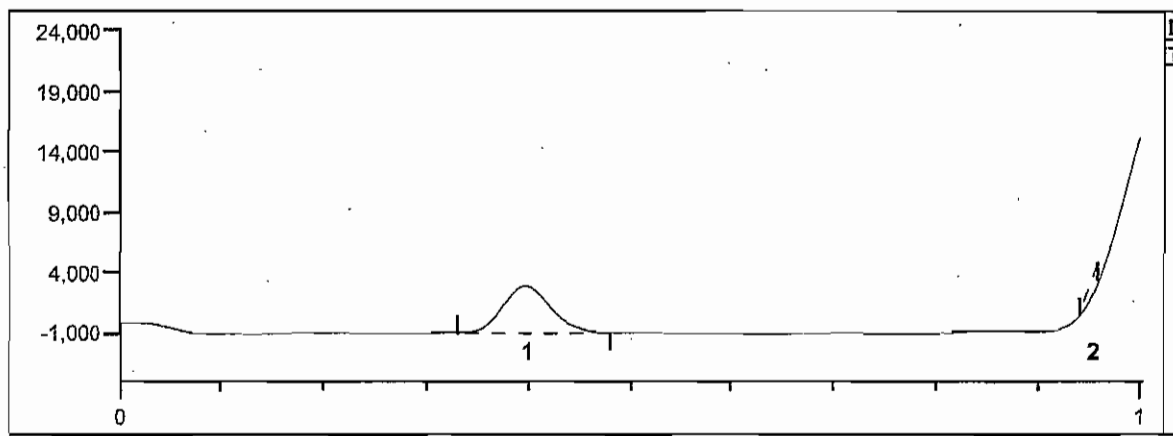


Date: 1/10/05
Time: 7:03 PM

Peak	rt	Area
1	0.18	3,613
2	0.40	15,312
3	0.79	10,545
4	0.95	4,292

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
20	S	05BR0023-15		2	15,312	0.0575	0.00972		< HS	accept

Notes:



Date: 1/10/05
Time: 7:08 PM

Peak	rt	Area
1	0.39	128,203
2	0.95	-2,506

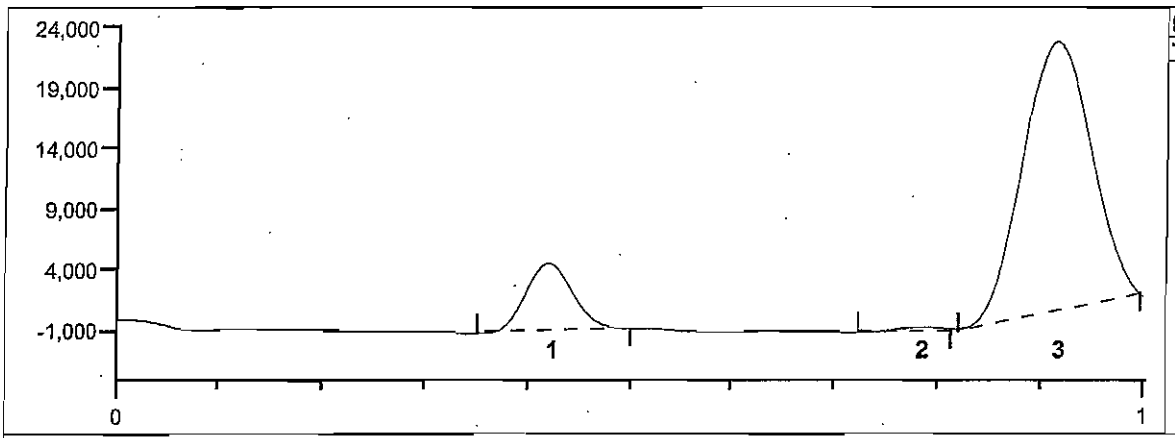
Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
21	S	05BR0023-15R		1	128,203	0.482	0.00814		< HS	accept

Notes:

Batch Number: 04-1027
Method Number: 1632

Project Number(s): WIN001
Instrument ID: HGAA 1

Date Analyzed: 1/10/05
Analyst Name: ETS

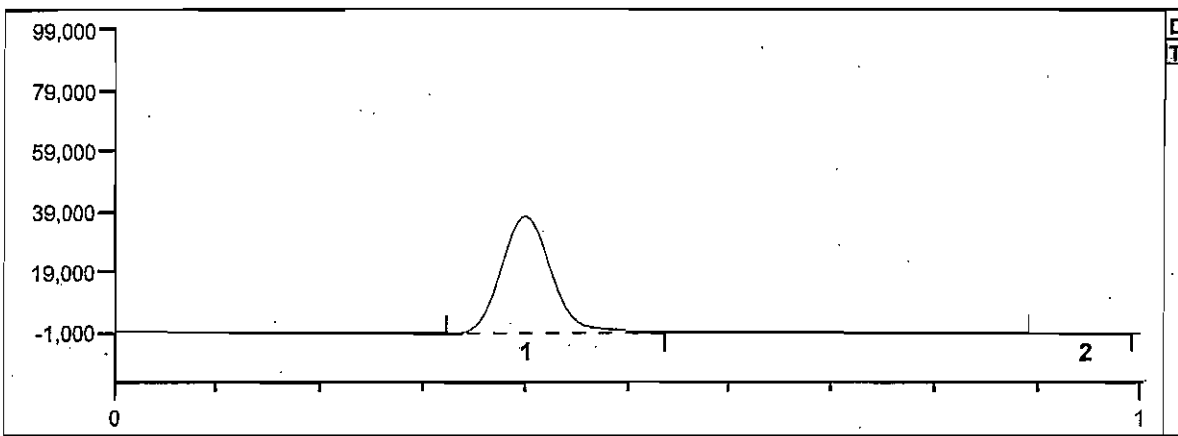


Date: 1/10/05
Time: 7:13 PM

Peak	rt	Area
1	0.42	179,827
2	0.78	8,744
3	0.91	1,022,631

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
22	MD	05BR0023-15R		1	179,827	0.676	0.0141	53.5	< 35	reject

Notes:

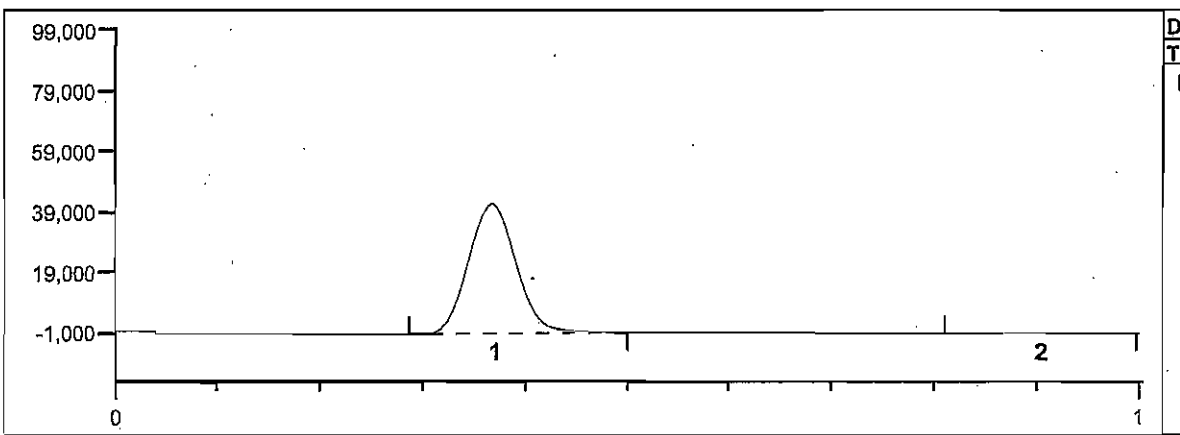


Date: 1/10/05
Time: 7:22 PM

Peak	rt	Area
1	0.40	1,312,737
2	0.94	8,277

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
23	MS	05BR0023-15R		1	1,312,737	4.93	1.89	98.2	50-150	accept

Notes:



Date: 1/10/05
Time: 7:28 PM

Peak	rt	Area
1	0.36	1,385,738
2	0.90	31,361

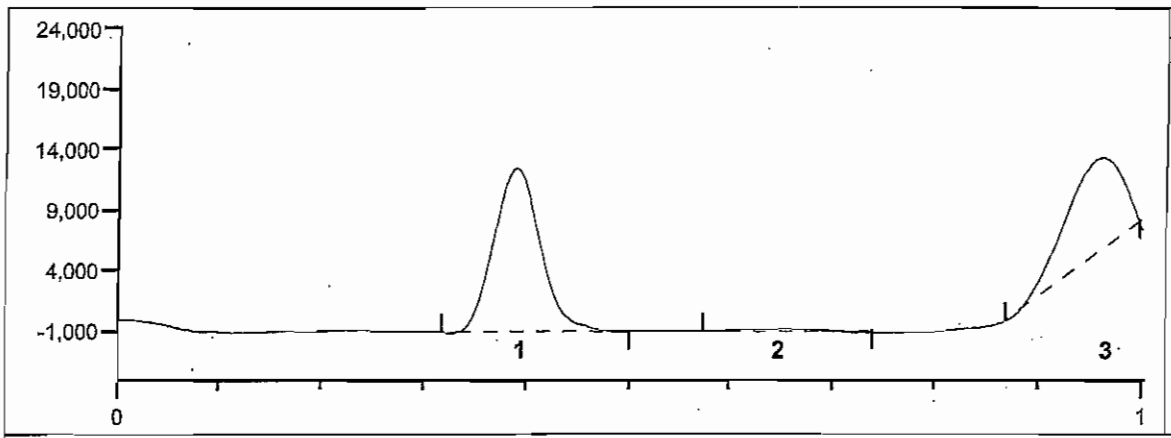
Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
24	MSD	05BR0023-15R		1	1,385,738	5.21	1.99	104	50-150	accept

Notes:

Batch Number: 04-1027
Method Number: 1632

Project Number(s): WIN001
Instrument ID: HGAA 1

Date Analyzed: 1/10/05
Analyst Name: ETS

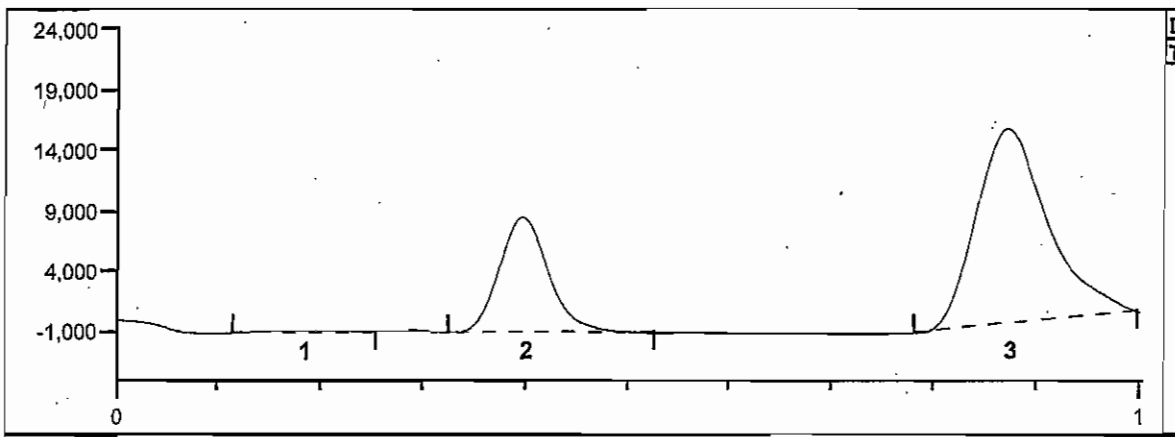


Date: 1/10/05
Time: 7:33 PM

Peak	rt	Area
1	0.39	433,118
2	0.64	19,740
3	0.96	339,213

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
25	S	05BR0023-1		1	433,118	1.63	0.0293		< HS	accept

Notes:

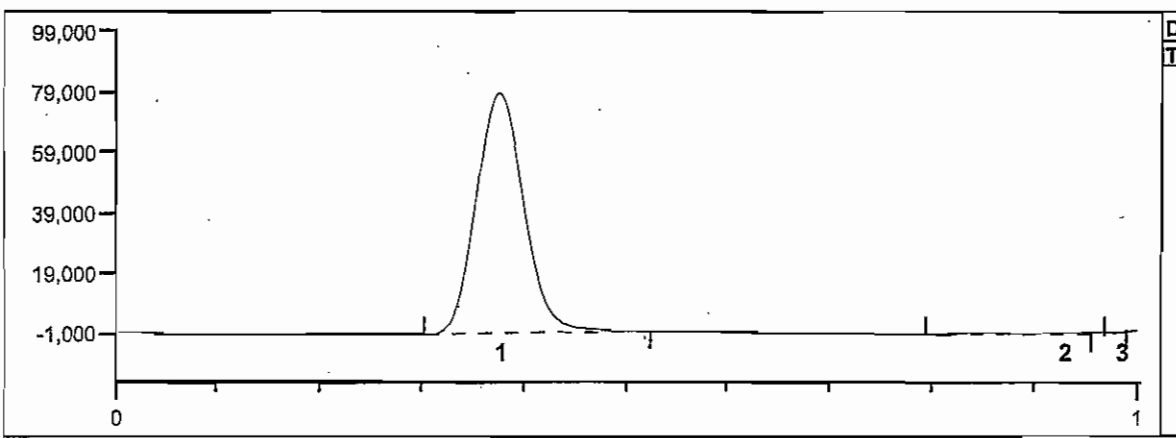


Date: 1/10/05
Time: 7:37 PM

Peak	rt	Area
1	0.18	12,169
2	0.40	329,707
3	0.87	795,960

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
26	S	05BR0023-2		2	329,707	1.24	0.0231		< HS	accept

Notes:



Date: 1/10/05
Time: 7:42 PM

Peak	rt	Area
1	0.37	2,595,608
2	0.92	17,683
3	0.98	-658

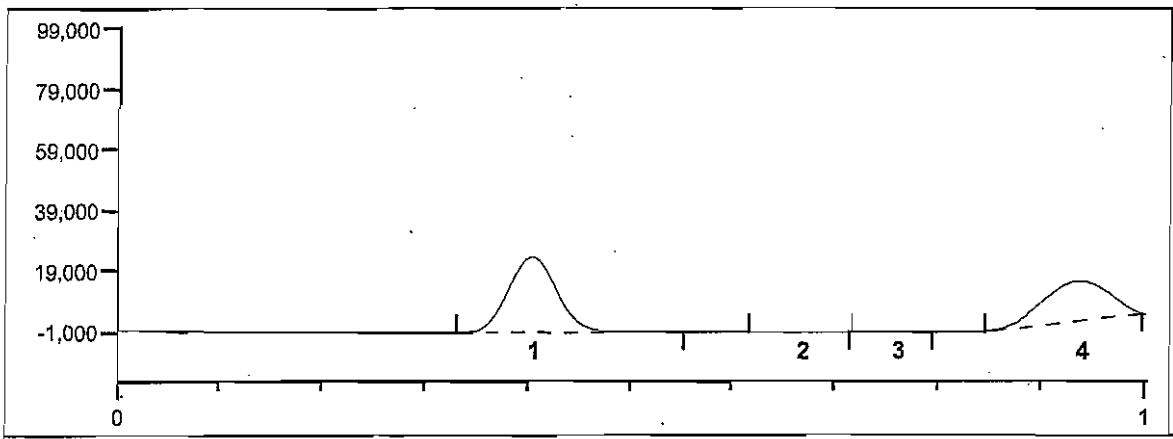
Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
27	S	05BR0023-3		1	2,595,608	9.75	0.167		< HS	accept

Notes:

Batch Number: 04-1027
Method Number: 1632

Project Number(s): WIN001
Instrument ID: HGAA 1

Date Analyzed: 1/10/05
Analyst Name: ETS

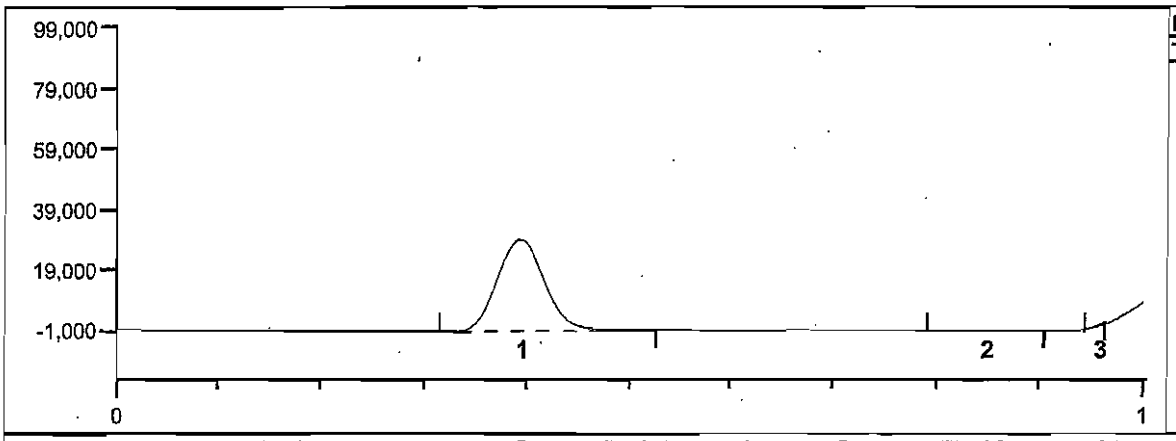


Date: 1/10/05
Time: 7:48 PM

Peak	rt	Area
1	0.40	832,314
2	0.66	10,533
3	0.76	6,338
4	0.93	592,918

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
28	S	05BR0023-4		1	832,314	3.13	0.0486		< HS	accept

Notes:

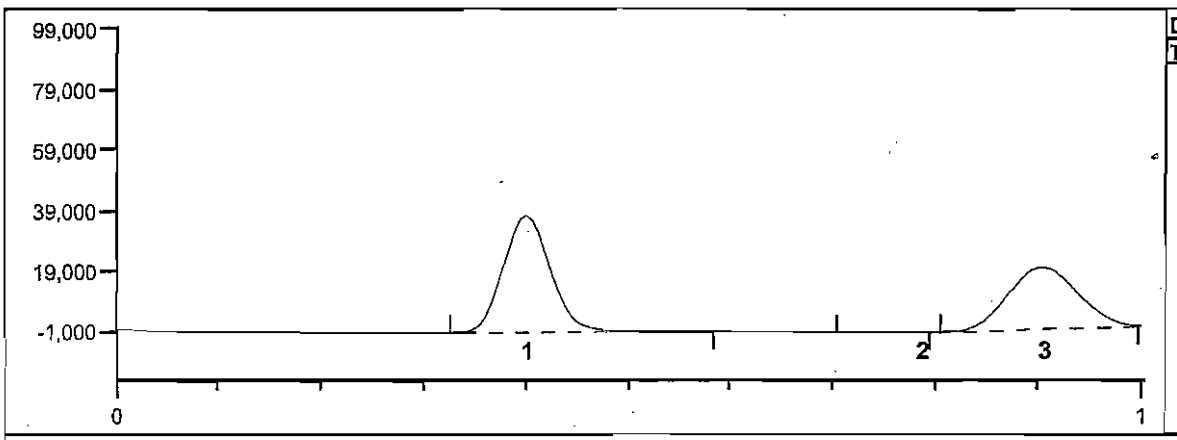


Date: 1/10/05
Time: 7:53 PM

Peak	rt	Area
1	0.39	998,137
2	0.84	10,593
3	0.95	-1,573

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
29	S	05BR0023-5		1	998,137	3.75	0.0815		< HS	accept

Notes:



Date: 1/10/05
Time: 7:59 PM

Peak	rt	Area
1	0.40	1,284,421
2	0.78	3,089
3	0.90	966,361

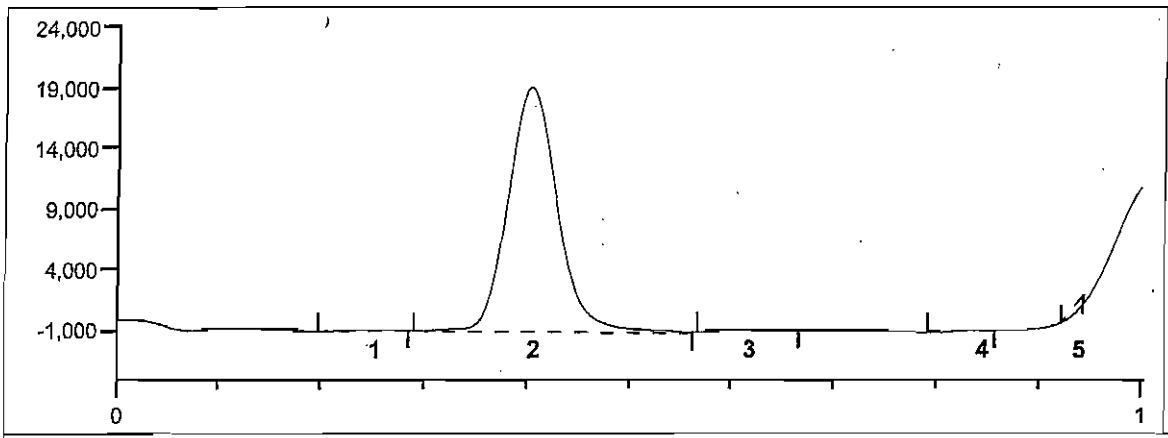
Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
30	S	05BR0023-6		1	1,284,421	4.83	0.103		< HS	accept

Notes:

Batch Number: 04-1027
Method Number: 1632

Project Number(s): WIN001
Instrument ID: HGAA 1

Date Analyzed: 1/10/05
Analyst Name: ETS

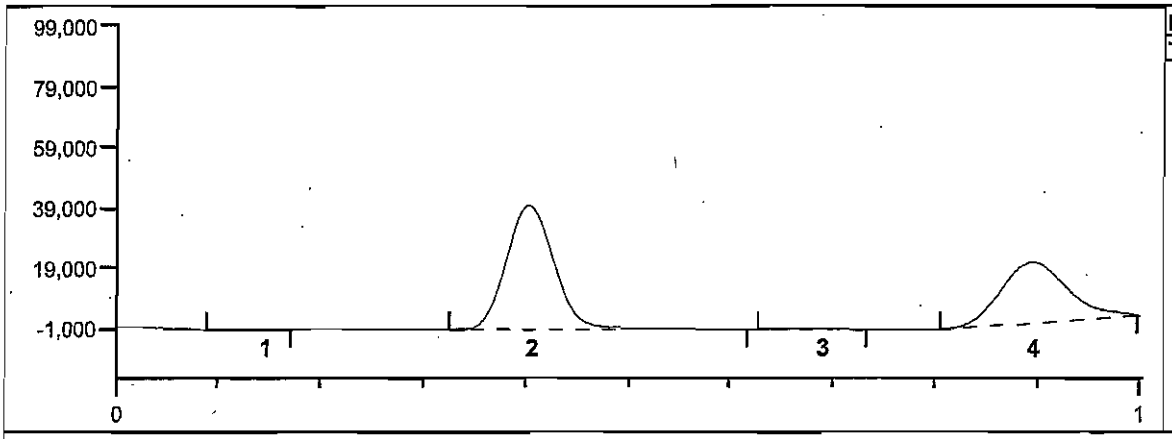


Date: 1/10/05
Time: 8:04 PM

Peak	rt	Area
1	0.24	8,887
2	0.40	689,529
3	0.61	5,424
4	0.84	1,927
5	0.93	-1,396

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
31	S	05BR0023-7		2	689,529	2.59	0.0532		< HS	accept

Notes:

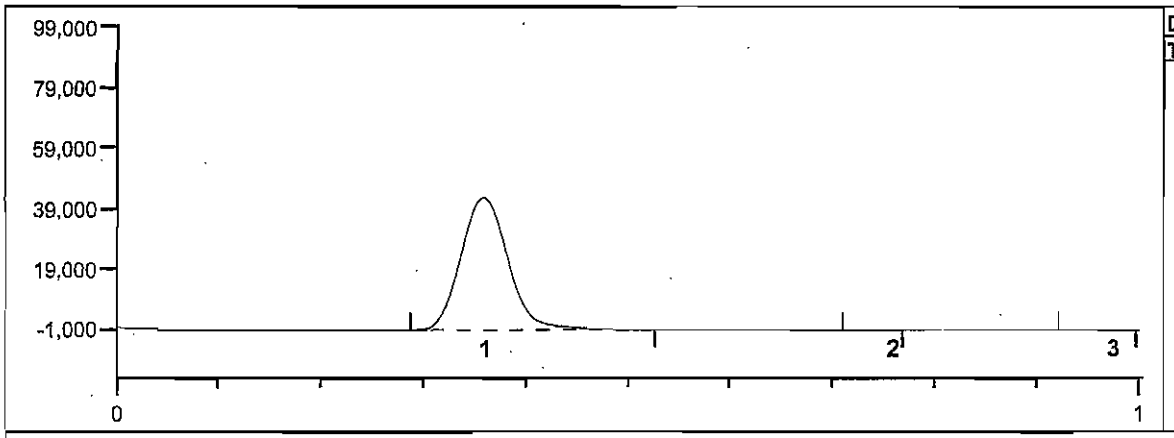


Date: 1/10/05
Time: 8:09 PM

Peak	rt	Area
1	0.14	4,615
2	0.40	1,345,482
3	0.68	8,830
4	0.89	928,529

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
32	S	05BR0023-8		2	1,345,482	5.06	0.0933		< HS	accept

Notes:



Date: 1/10/05
Time: 8:14 PM

Peak	rt	Area
1	0.36	1,419,085
2	0.75	2,406
3	0.97	4,941

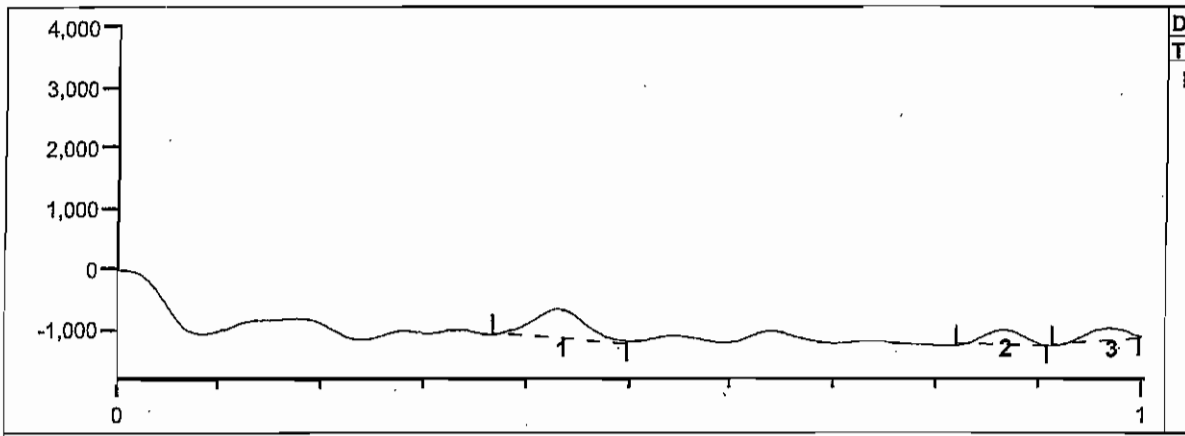
Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
33	OPR	CCV 5ng		1	1,419,085	5.33		107	80-120	accept

Notes:

Batch Number: 04-1027
Method Number: 1632

Project Number(s): WIN001
Instrument ID: HGAA 1

Date Analyzed: 1/10/05
Analyst Name: ETS

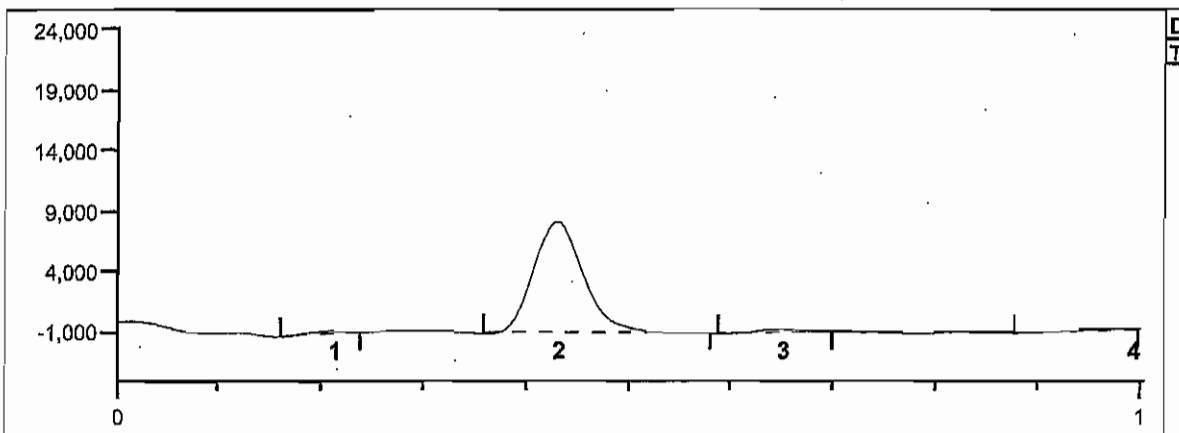


Date: 1/10/05
Time: 8:19 PM

Peak	rt	Area
1	0.43	16,715
2	0.86	6,443
3	0.96	5,717

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
34	CCB	CCB		1	16,715	0.0628			< 0.15	accept

Notes:

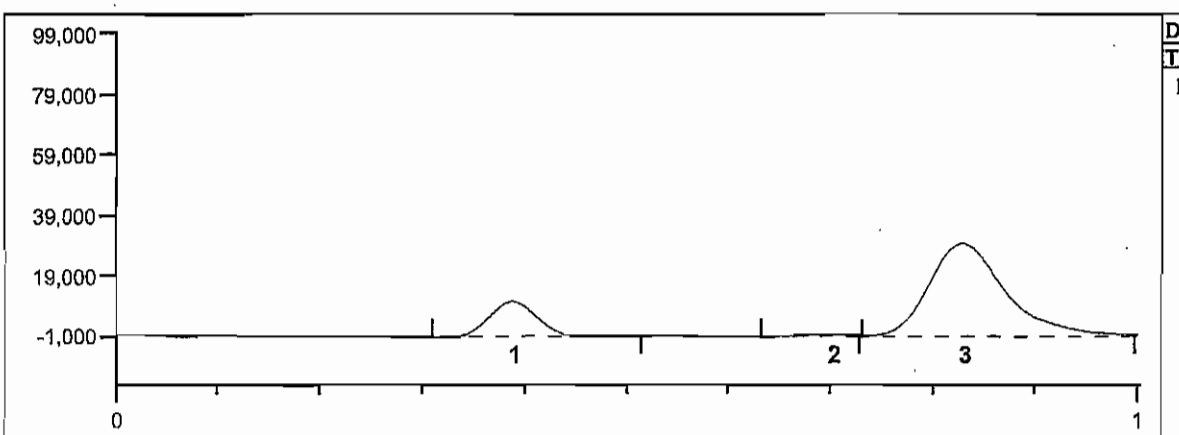


Date: 1/10/05
Time: 9:31 PM

Peak	rt	Area
1	0.21	6,643
2	0.43	323,289
3	0.65	11,749
4	0.99	4,061

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
35	S	05BR0023-9		2	323,289	1.21	0.0236		< HS	accept

Notes:



Date: 1/10/05
Time: 9:36 PM

Peak	rt	Area
1	0.38	399,433
2	0.70	20,664
3	0.83	1,598,246

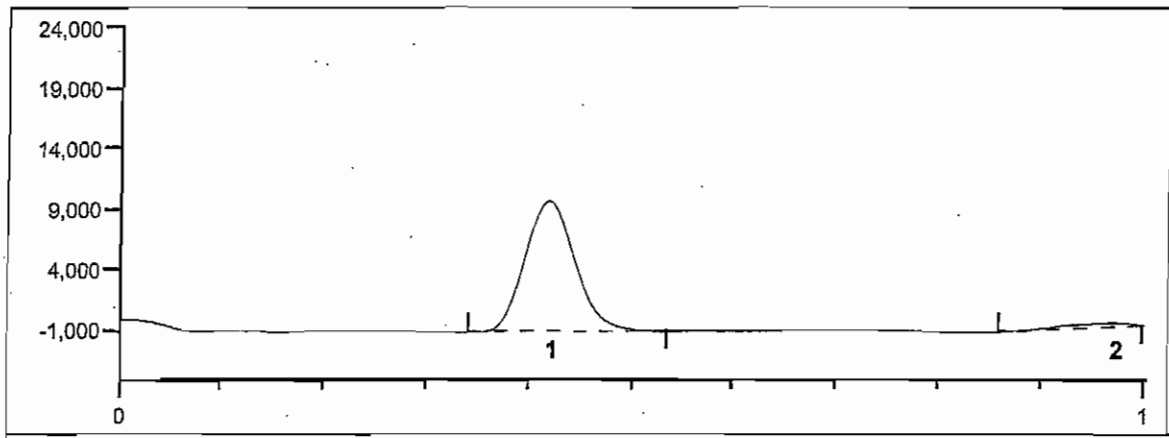
Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
36	S	05BR0023-10		1	399,433	1.50	0.0283		< HS	accept

Notes:

Batch Number: 04-1027
Method Number: 1632

Project Number(s): WIN001
Instrument ID: HGAA 1

Date Analyzed: 1/10/05
Analyst Name: ETS

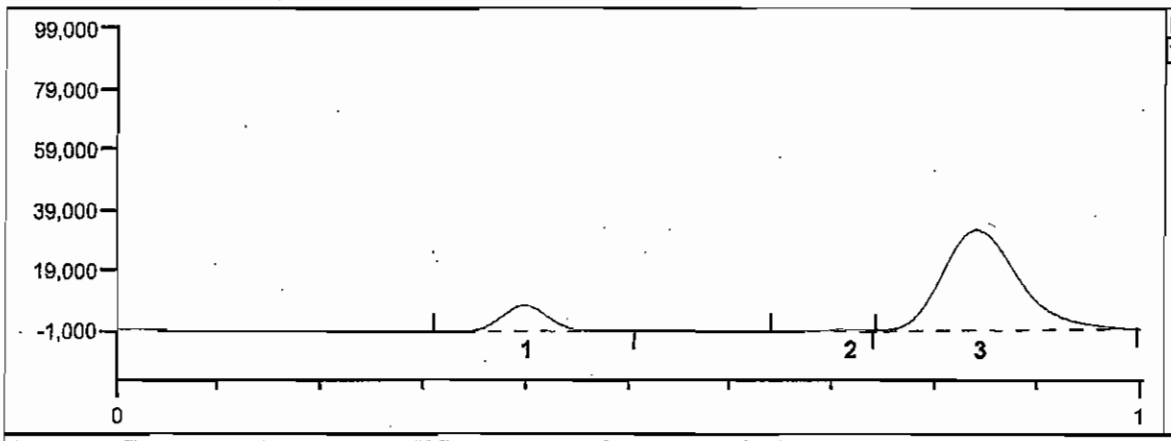


Date: 1/10/05
Time: 9:41 PM

Peak	rt	Area
1	0.42	373,525
2	0.96	19,950

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
37	S	05BR0023-12		1	373,525	1.40	0.0256		< HS	accept

Notes:

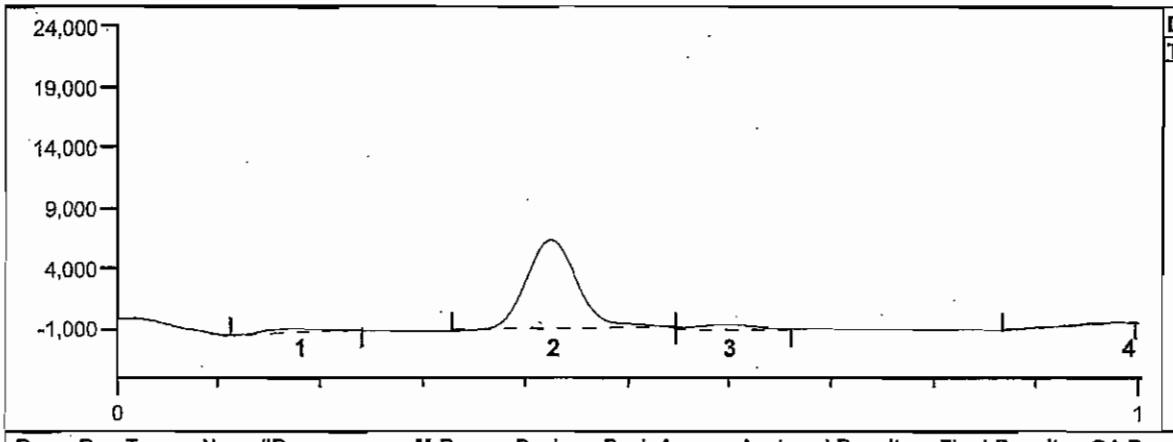


Date: 1/10/05
Time: 9:47 PM

Peak	rt	Area
1	0.40	293,892
2	0.71	23,074
3	0.84	1,727,394

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
38	S	05BR0023-13		1	293,892	1.10	0.0216		< HS	accept

Notes:



Date: 1/10/05
Time: 9:52 PM

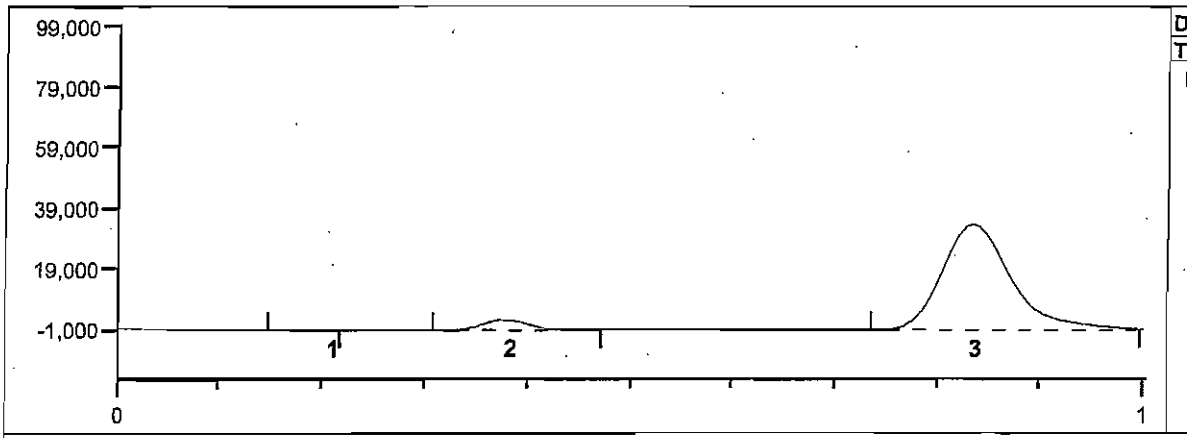
Peak	rt	Area
1	0.17	20,521
2	0.42	279,193
3	0.59	17,023
4	0.98	4,309

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
39	S	05BR0023-14		2	279,193	1.05	0.0179		< HS	accept

Notes:

Project Number(s): WIN001
Instrument ID: HGAA 1

Date Analyzed: 1/10/05
Analyst Name: ETS

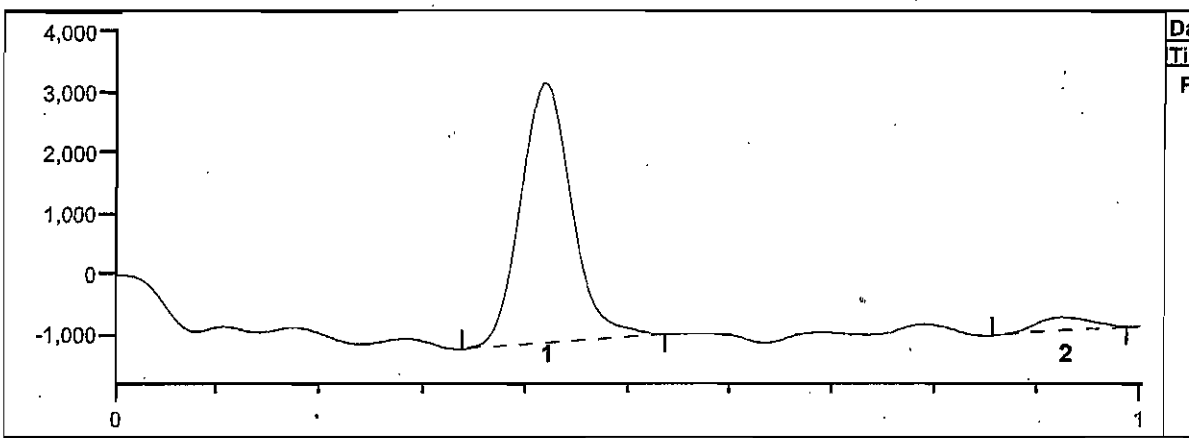


Date: 1/10/05
Time: 9:56 PM

Peak	rt	Area
1	0.20	2,938
2	0.38	121,960
3	0.83	1,600,572

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
40	S	05BR0023-16		2	121,960	0.458	0.00878		< HS	accept

Notes:

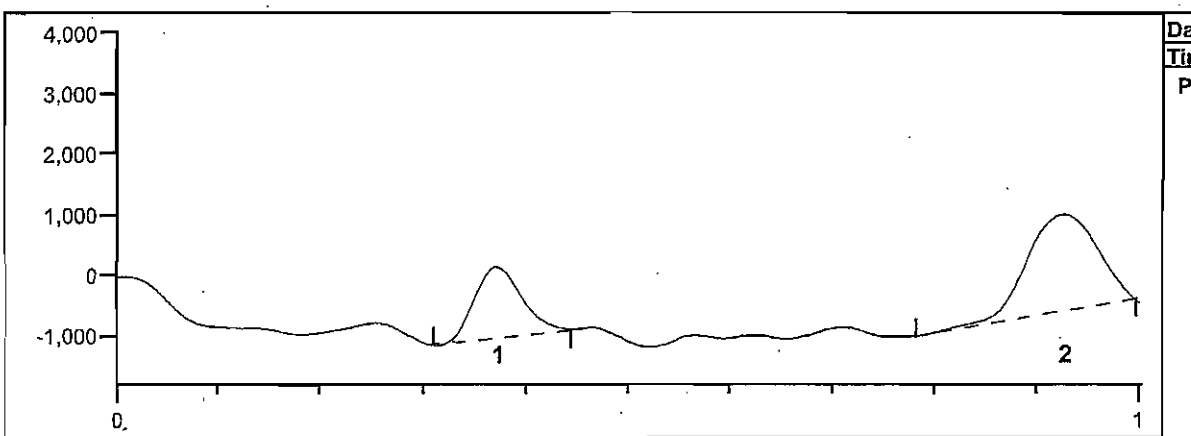


Date: 1/10/05
Time: 10:08 PM

Peak	rt	Area
1	0.42	151,807
2	0.92	8,930

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
41	S	05BR0023-17		1	151,807	0.570	0.0109		< HS	accept

Notes:



Date: 1/10/05
Time: 11:00 PM

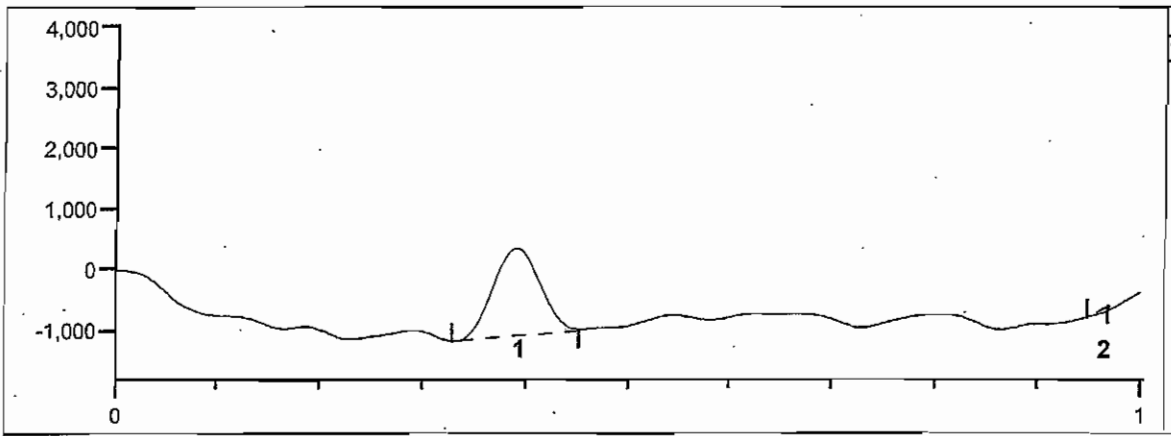
Peak	rt	Area
1	0.37	39,449
2	0.92	81,185

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
42	S	05BR0023-18		1	39,449	0.148	0.00268		< HS	accept

Notes:

Project Number(s): WIN001
Instrument ID: HGAA 1

Date Analyzed: 1/10/05
Analyst Name: ETS

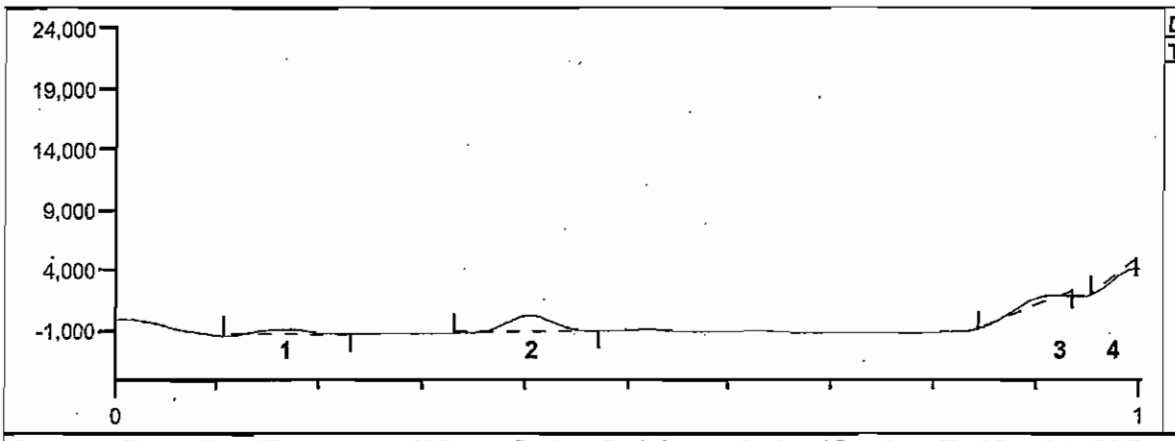


Date: 1/10/05
Time: 11:04 PM

Peak	rt	Area
1	0.39	45,693
2	0.96	-79

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
43	S	05BR0023-19		1	45,693	0.172	0.00300		< HS	accept

Notes:

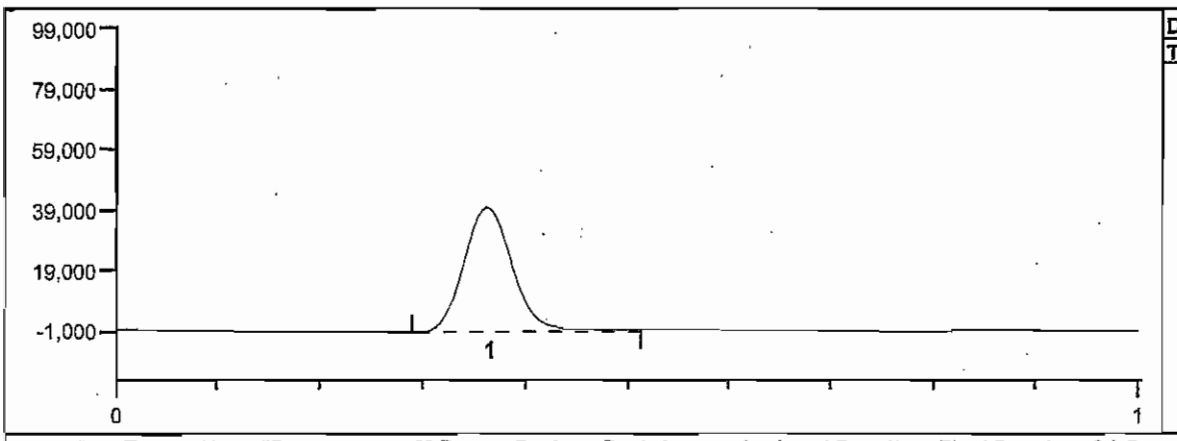


Date: 1/10/05
Time: 11:08 PM

Peak	rt	Area
1	0.16	17,541
2	0.40	47,114
3	0.92	25,227
4	0.97	5,896

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
44	S	05BR0023-20		2	47,114	0.177	0.00310		< HS	accept

Notes:



Date: 1/10/05
Time: 11:13 PM

Peak	rt	Area
1	0.36	1,361,625

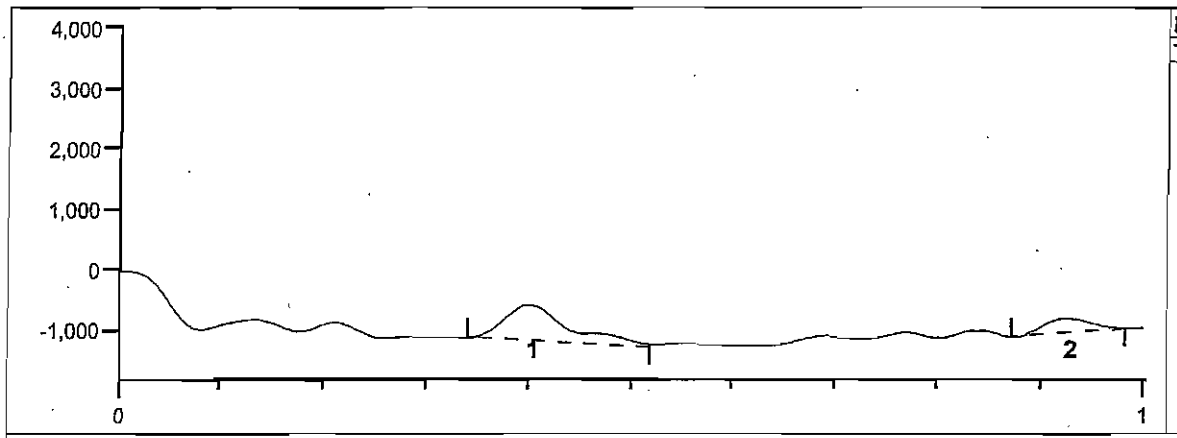
Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
45	OPR	CCV 5ng		1	1,361,625	5.12		102	80-120	accept

Notes:

Batch Number: 04-1027
Method Number: 1632

Project Number(s): WIN001
Instrument ID: HGAA 1

Date Analyzed: 1/10/05
Analyst Name: ETS



Date: 1/10/05
Time: 11:17 PM

Peak	rt	Area
1	0.40	24,359
2	0.92	7,625

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
46	CCB	CCB		1	24,359	0.0915			< 0.15	accept

Notes:

Batch Number: 04-1028
Method Number: BR-0020

Project Number(s): WIN001
Instrument ID: HGAA 1

Date Analyzed: 1/11/05
Analyst Name: ABN

Bias and Precision

Run Type	Name/ID	Final Result	Units	Spike Level	Source Result	% REC	% REC Limit	RPD	RPD Limit	Notes
MS	05BR0023-22	1.84	mg/Kg	2.169	0.00231	84.7	50-150			accept
	05BR0023-32	1.81	mg/Kg	1.916	0.00330	94.1	50-150			accept
MSD	05BR0023-22	1.75	mg/Kg	2.137	0.00231	81.6	50-150	5.17	< 35	accept
	05BR0023-32	1.89	mg/Kg	1.908	0.00330	99.1	50-150	4.75	< 35	accept
IPR	LFB-1	1.92	mg/Kg	2		95.8	50-150			accept
	LFB-2	1.54	mg/Kg	2		77.1	50-150			accept
OPR	ICV 5.0 ng	5.27	ng	5		105	80-120			accept
	CCV 5.0 ng	5.26	ng	5		105	80-120			accept
	CCV 5.0 ng	4.75	ng	5		95.0	80-120			accept
	CCV 5 ng	4.31	ng	5		86.1	80-120			accept
	CCV 5.0 ng	5.06	ng	5		101	80-120			accept
	CCV 5.0 ng	4.76	ng	5		95.2	80-120			accept
MD	05BR0023-22	0.00189	mg/Kg		0.00231	*	20.4% ~~5.17~~	TTF 1.12.05	< 35	accept
	05BR0023-32	0.00332	mg/Kg		0.00330		0.8% ~~4.75~~		< 35	~~reject~~ accept

* See comments p.3

Batch Number: 04-1028
Method Number: BR-0020

Project Number(s): WIN001
Instrument ID: HGAA 1

Date Analyzed: 1/11/05
Analyst Name: ABN

Calibration

QA Sample Type	Name/ID	Analyzed Result	Units	Spike Level	% REC	% REC Limit	RSD	RSD Limit	Notes
Calibration	0.5 ng	0.665	ng	0.5	133	80-120			reject
	0.5 ng	0.671	ng	0.5	134	80-120			reject
	2.0 ng	2.14	ng	2	107	80-120			accept
	10.0 ng	10.4	ng	10	104	80-120			accept
	30.0 ng	25.7	ng	30	85.7	80-120			accept
	0.5 ng	0.532	ng	0.5	106	80-120			accept
Calibration Factor		0.00000357	ng/PA				11.2	< 20	accept
Calibration Date		1/11/05							

Blank Summary

QA Sample Type	Name/ID	Analyzed Result	Units	Criteria	StDev	StDev Limit	Notes
CB	CAL BLK-1	0.153	ng	< 0.15	**		accept ~~reject~~
	CAL BLK-2	0.144	ng	< 0.15			accept ~~reject~~ per 1.13.05
Average		0.00	ng	< 3,000	0.00	< 10	accept
MBA	MB-1	0.00218	mg/Kg	< 0.003			reject
	MB-2	0.00113	mg/Kg	< 0.003			accept
	MB-3	0.000967	mg/Kg	< 0.003			accept
	MB-1	0.00104	mg/Kg	< 0.003			accept
Average		0.00133	mg/Kg		0.000571		

** See comments p. 3

Batch Number: 04-1028
Method Number: BR-0020

Project Number(s): WIN001
Instrument ID: HGAA 1

Date Analyzed: 1/11/05
Analyst Name: ABN

Comments
MDL=0.003 mg*kg-1 PQL=0.01 mg*kg-1 Method Blank Criteria: Average less than or equal to 2x the MDL and StDev less than or equal to 0.67x the MDL OR highest blank less than 0.1x the sample results. Method Duplicate Criteria: RPD less than or equal to 35% OR results within 2x the PQL of each other if the results are less than 5x the PQL. * Due to a software error, the MS-MSD RPD has been reported as the MD RPD. The correct RPD values have been hand written in the QA Summary Report. ** All Calibration Blank data associated with the analytical run met the acceptance criteria. Calibration Blank results were manually rejected to prevent the software from blank correcting the instrument calibration and the sample results.

BROOKS RAND, LLC
3958 6th Avenue, NW Seattle, WA 98107 U.S.A. 206.632.6206

QUALITY ASSURANCE REPORT

Batch:	04-1028
Analysis:	Arsenic (Inorganic) by EPA 1632 (HGAA)
Tracking:	05BR0023
Project:	WIN001
Matrix:	Biota
Batch Size:	20 Samples
Analysis Date:	January 11, 2005
Calibration Date:	January 10, 2005

1 **SAMPLE PREPARATION** – Acceptable

2 **CALIBRATION** – Acceptable

3 **CALIBRATION VERIFICATION** – Acceptable

4 **QUALITY CONTROL SAMPLES (QCS)** – Acceptable

5 **BLANKS** – Acceptable

6 **METHOD DUPLICATE ANALYSIS** - Due to software error, the MS/MSD RPD has been reported as the MD RPD. The correct RPD value has been manually added to the QA Summary Report.

7 **SPIKE / SPIKE DUPLICATE ANALYSIS** – Acceptable

8 **LIMITS OF DETECTION** – Acceptable

9 **OVERALL DATA QUALITY** – Acceptable

No qualification of the data was required based on this review.

I certify that, to the best of my knowledge and belief, the data are reported as true and accurate. The Laboratory Director, or his designee, has authorized release of data contained in this Quality Assurance Report as verified by the following signature(s).

1.13.05

Tressa K. Pearson-Franks
Quality Assurance Associate

SAMPLE PROCESSING FORM

20

Batch #: 04-1028 Analysis: As(Inorganic) Method: EPA 1632 (HGAA)

Tracking #	Lab ID	Project Ref #	Data Due Date	Matrix	Comments
QA: Full					
05BR0023	21	WIN001	1/3/2005	Biota	
05BR0023	22	WIN001	1/3/2005	Biota	
05BR0023	23	WIN001	1/3/2005	Biota	
05BR0023	24	WIN001	1/3/2005	Biota	
05BR0023	25	WIN001	1/3/2005	Biota	
05BR0023	26	WIN001	1/3/2005	Biota	
05BR0023	27	WIN001	1/3/2005	Biota	
05BR0023	28	WIN001	1/3/2005	Biota	
05BR0023	29	WIN001	1/3/2005	Biota	
05BR0023	30	WIN001	1/3/2005	Biota	
05BR0023	31	WIN001	1/3/2005	Biota	
05BR0023	32	WIN001	1/3/2005	Biota	
05BR0023	33	WIN001	1/3/2005	Biota	
05BR0023	34	WIN001	1/3/2005	Biota	
05BR0023	35	WIN001	1/3/2005	Biota	
05BR0023	36	WIN001	1/3/2005	Biota	
05BR0023	37	WIN001	1/3/2005	Biota	
05BR0023	38	WIN001	1/3/2005	Biota	
05BR0023	39	WIN001	1/3/2005	Biota	
05BR0023	40	WIN001	1/3/2005	Biota	

Tracking #	See SOW	See Memo	See Proj Mgr	Consult MSDS	See Contract Info	See Lab Mgr
05BR0023	No	No	No	No	No	No

QA Comments: Report on a WET weight basis.

Batched By [signature] Date: 12/15/04

Prepared By: B. Holt Date: 12.23.04

Comments:

Analyzed By: [signature] ABH Date: 1-11-05

Comments:

Data Entry By [signature] ABH Date: 1-11-05

Comments:

Primary Data Review By ABH Date: 1-11-05

Comments:

Final Review By: [signature] Date: 1.13.05

Comments:

	Analyst:	ABN	Project:	WIN001	Matrix:	Biota	Analysis:	As (In)	Date:	1/11/2005	
SAMPLE CALCULATIONS											
			Sample	Dilution	Analyzed		Uncorrected				
			weight	Volume	Vol.			Result			
Run	Tracking #	ID #	(mg)	(mL)	(mL)	PA	ng	µg/g			
18	05BR0023	22	527	10.0	2.00	68	0.243	0.002			
19	05BR0023	22MD	523	10.0	2.00	55	0.196	0.002			
20	05BR0023	22MS	512	10.0	0.050	1318	4.71	1.84			
21	05BR0023	22MSD	518	10.0	0.050	1266	4.52	1.75			
22	05BR0023	22MDR	527	10.0	2.00	63	0.225	0.002	*		
23	05BR0023	32	529	10.0	2.00	98	0.350	0.003			
24	05BR0023	32MD	530	10.0	2.00	99	0.353	0.003			
25	05BR0023	32MS	494	10.0	0.050	1249	4.46	1.81			
26	05BR0023	32MSD	491	10.0	0.050	1302	4.65	1.89			
27	05BR0023	21	490	10.0	2.00	112	0.400	0.004			
28	05BR0023	23	507	10.0	2.00	81	0.289	0.003			
29	05BR0023	24	514	10.0	2.00	66	0.236	0.002			
30	05BR0023	25	554	10.0	2.00	84	0.300	0.003			
31	05BR0023	26	548	10.0	2.00	85	0.303	0.003			
32	05BR0023	27	508	10.0	2.00	118	0.421	0.004			
33	05BR0023	28	558	10.0	2.00	76	0.271	0.002			
34	05BR0023	29	590	10.0	2.00	91	0.325	0.003			
37	05BR0023	30	523	10.0	2.00	17	0.061	0.001	**		
38	05BR0023	31	574	10.0	2.00	6	0.021	0.000	**		
39	05BR0023	33	500	10.0	2.00	230	0.821	0.008	**		
40	05BR0023	34	554	10.0	2.00	0	0.000	0.000	**		
41	05BR0023	35	556	10.0	2.00	0	0.000	0.000	**		
44	05BR0023	36	568	10.0	1.00	100	0.357	0.006			
45	05BR0023	37	531	10.0	1.00	79	0.282	0.005			
46	05BR0023	38	547	10.0	1.00	71	0.253	0.005			
47	05BR0023	39	560	10.0	1.00	310	1.11	0.020			
48	05BR0023	40	555	10.0	1.00	327	1.17	0.021			
49	05BR0023	30R	523	10.0	1.00	39	0.139	0.003			
50	05BR0023	31R	574	10.0	1.00	40	0.143	0.002			
51	05BR0023	33R	500	10.0	1.00	55	0.196	0.004			
52	05BR0023	34R	554	10.0	1.00	50	0.179	0.003			
53	05BR0023	35R	556	10.0	1.00	57	0.204	0.004			

* Re-analyzed to confirm previous result.

** Abnormal peak due to moisture in traps. Re-analyze at a lower aliquot to minimize bubbler foaming.

Calibration Results - 1/11/05 HGAA System 1 by As(In)

Instrument Calibration

Run	ml std used	ng	PA	Calibration Coefficient	
8	0.05	0.5	149	0.003356	106.4%
5	0.20	2.0	600	0.003333	
6	1.00	10.0	2920	0.003425	
7	3.00	30.0	7199	0.004167	
R:		0.9973	**Avg:**	0.003570	
			RSD:	11.2%	

Calibration Blanks

Run	PA	ng	ug/L
1	43	0.154	0.008
2	40	0.143	0.007
Average:	41.5	0.148	0.007
St Dev:	2.12	0.008	0.000

QC CALCULATIONS (continued)

Calibration Checks

Mid level standards

Run	ng	PA	ng	%	
9	5.00	1476	5.270	105.4%	*
10	5.00	1472	5.255	105.1%	
35	5.00	1331	4.752	95.0%	
42	5.00	1206	4.306	86.1%	
54	5.00	1417	5.059	101.2%	
55	5.00	1333	4.759	95.2%	**

* Independent Calibration Verification.

Calibration Blank Checks

Run	PA	ng	ug/L
11	35	0.125	0.006
36	0	0.000	0.000
43	30	0.107	0.005
56	31	0.111	0.006

** Not required. Guru selected the wrong peak on previous CCV (Run#54), prompting analyst to re-prep another CCV.

Method Blanks

Run	ID #	weight (mg)	Dilution Volume (mL)	Analyzed Volume (mL)	PA	measured ng	total ng	Result conc. µg/g	
12	MB-1	500	10.00	1.00	61	0.218	2.18	0.004	*
13	MB-2	500	10.00	1.00	32	0.114	1.14	0.002	
14	MB-3	500	10.00	1.00	27	0.096	0.96	0.002	
15	MB-1R	500	10.00	1.00	29	0.104	1.04	0.002	
					Average:	0.105	1.05	0.002	
					StDev:	0.009	0.090	0.000	

* Abnormal peak. Re-analyze to verify.

Precision

Summary of Duplicate Sample Analysis

Run	Tracking #	ID #	Uncorr. Result ng/g	
18	05BR0023	22	0.002	
19	05BR0023	22MD	0.002	
22	05BR0023	22MDR	0.002	* For verification only.
		Average:	0.002	
		RPD:	20.4%	
23	05BR0023	32	0.003	
24	05BR0023	32MD	0.003	
		Average:	0.003	
		RPD:	0.8%	

BIAS

Spiked Sample (Note that MS recovery was calculated using uncorrected results)

Run	Tracking #	ID #	Spike (ng)	Sample Weight (mg)	expected µg/g	spike + sample measured µg/g	sample measured µg/g	spike measured µg/g	% Rec.	RPD
20	05BR0023	22MS	1000	461	2.169	1.838	0.002	1.836	84.6%	
21	05BR0023	22MSD	1000	491	2.037	1.745	0.002	1.743	85.6%	5.19%
25	05BR0023	32MS	1000	522	1.916	1.805	0.003	1.802	94.1%	
26	05BR0023	32MSD	1000	524	1.908	1.893	0.003	1.890	99.0%	4.76%

Summary of Laboratory Fortified Blank Recoveries

Run	ID #	Spike ng	Sample Volume (mL)	Spike Conc. ng/L	Dilution Volume (mL)	Analyzed Vol. (mL)	PA	ng	Result ng/L	% Rec.	
16	LFB-1	1000	10.00	100	10.00	0.050	1341	4.788	95.75	95.8%	*
17	LFB-2	1000	10.00	100	10.00	0.050	1080	3.856	77.12	77.1%	**

* Spiked with As(III) standard.
** Spiked with As(V) standard.

As-T / As Species As (III) Se-T / Se Species —
Methods BR-0020 (HGAAS) & EPA 1632 (HGAAS)
Matrix: Water / Sediment / Biota / Other _____

Batch #: 04-1028 Preparation Date: 12/23/04
Tracking #(s): 05BR0023 Prepared By: B. Hollow
Project #(s): WIN001 Page 1 of 2

Flask #	Sample I.D.	Sample Wt. / Vol. mg ~~(mg)~~ / (mL)
	MB-1	—
	-2	—
	-3	—
	LFB-1 (As^{3+})	—
	LFB-2 (As^{5+})	—
	05BR0023-21	490
	-22	527
	-23	507
	-24	514
	-25	554
	-26	548
	-27	508
	-28	558
	-29	590
	-30	523
	-31	574
	-32	529

Flask #	Sample I.D.	Sample Wt. / Vol. (mg) ~~(mL)~~
	05BR0023-33	500
	-34	554
	-35	556
	-36	568
	-37	531
	-38	547
	-39	560
	-40	555
	-22 MS	512
	-22 MSD	518
	-32 MS	494
	-32 MSD	491
	-22 MD	523
	-32 MD	530

Matrix Spike/Matrix Spike Duplicate

Sample I.D.	Spike I.D.	Spike std. Conc.	Spike Vol. (mL)	Spike Conc. (µg/g) / (µg/L)
LFB-1	04-344-3AS III	10 µg/mL	0.100	2.00
-2	04-358-1AS V			2.00
05BR0023-22MS	04-344-3AS III			2.169
-22 MSD				2.137
-32 MS				1.916
-32 MSD				1.908

MSE 12/23/04

As-T / As Species $As^{(III)}$ / Se-T / Se Species _____
Methods BR-0020 (HGAAS) & EPA 1632 (HGAAS)

Matrix: Water / Sediment / Biota / Other _____

Batch #: 04-1028 Preparation Date: 12.23.04

Prepared By: B.Thlow Page 2 of 2

Ongoing Precision and Recovery Sample (OPR) or Certified reference Material (CRM)

OPR / CRM I.D.	Certified Conc. (µg/g) / (ug/L)	Source I.D. (for OPR)
see page 1		

REAGENTS: *Volume & ID #*

HNO_3: —

$HClO_4$: —

H_2SO_4: —

HCl: 04-351-6 HCl (2M)

$H_3PO_4/NH_2OH{\cdot}HCl$: —

DIGESTION:

Temperature	Time
80°C	16 HRS

12/23/04 4:00 pm
— 12/24/04 8:00 am

DILUTION INFORMATION:

Final Volume of Preparation: _____

Volume of Prep Subsampled: _____

Dilution Media: _____

Final Dilution Volume: 10 mL

ADDITIONAL COMMENTS: 04-358-1 $As^{(V)}$ was made by diluting 0.1ml of High purity As (1000 µg/ml) in 9.9 ml DI water.

As ☒ (III) Se ☐ Analysis Sheet

Batch: 04-1028 Matrix: BIOTA

Analyst: MBN Calibration Blank $\bar{X}$: 41.50 PA Blank Corr. Calib. Coef. $\bar{X}$: 0.00357

Date: 1-11-05 Method Blank $\bar{X}$: 0.002 ng/g RSD: 11.2%

Standards: Cal Std 10 ng /mL: 05-011-01 AS 30% NH_2OHHCl: — N=: 4

QA: Full☒ Standard☐ ICV Std: 05-006-02AS 4% $NaBH_4$: 05-011-NaBH4 r: 0.9973

Noise: 4% $NaBH_4$ add. & purge time (m:s)

Run #	Trap #	Sample ID	Analyzed volume (mL)	PA	Sample Specific Notes
1	C8	Cal Blk-1	—	43	
2	NI	-2	—	40	
3	C8	0.5 ng	0.050	186	} Re-run. %R > control limits
4	NI	0.5 ng	0.050	188	}
5	C8	2.0	0.200	600	
6	NI	10.0	1.00	2920	
7	C8	30.0	3.00	7199	
8	NI	0.5 ng	0.050	149	
9	C8	ICV 5 ng	0.050	1476	
10	NI	CCV 5 ng	0.500	1472	
11	C8	CCB	—	35	
12	NI	MB-1	2.00	61	Abnormal peak. Re-analyze
13	C8	2		32	
14	NI	3		27	
15	C8	~~LFB-1~~ MB-1 RAD	~~2.00~~ 0.050	29	
16	NI	~~LFB-2~~ LFB-1 (As^{III})	0.050	1341	
17	C8	LFB-2 (As^{V})	0.050	1080	
18	NI	05BR0023-22	2.00	68	
19	C8	-22 MD		55	Re-analyze to Confirm. ~~RPD 75%~~
20	NI	-22 MS	0.050	1318	
21	C8	-22 MSD	0.050	1266	
22	NI	-22 MDR	2.00	63	
23	C8	-32		98	
24	NI	-32 MD		99	

Comments:

Method SRM: LFB-1 (As^{III}) (04-344-3 As^{III})
LFB-2 (As^{V}) (04-358-1 As^{V})

(In)

As ☒ Se ☐ Analysis Sheet

Batch: 04-1028 Matrix: Biota

Analyst: ABW Date: 1-11-05

Run #	Trap #	Sample ID	Analyzed volume (mL)	PA	Sample Specific Notes
25	C8	05BR0023-32MS	0.050	1249	
26	N1	-32MSD	↓	1302	
27	C8	-21	2.00	112	
28	N1	-23		81	
29	C8	-24		66	
30	N1	-25		84	
31	C8	-26		85	
32	N1	-27		118	
33	C8	-28		76	
34	N1	-29	↓	91	
35	C8	CCV 50ng	0.500	1331	
36	N1	CCB	—	0	
37	C8	05BR0023-30	2.00	17	Abnormal peak due to moisture in trap. Re-analyze @ a lower aliquot to eliminate bubbler frag.
38	N1	-31		6	
39	C8	-33		230	
40	N1	-34		0	
41	C8	-35	↓	0	
42	N1	CCV 5.0ng	0.500	1206	
43	C8	CCB	—	30	
44	N1	05BR0023-36	1.00	100	
45	C8	-37		79	
46	N1	-38		71	
47	C8	-39		310	
48	N1	-40		327	
49	C8	-30R		~~16~~ 39	1-11-05 ABW
50	N1	-31R		40	
51	C8	1/11/05 ABW ~~-39R~~ 33R		55	
52	N1	1/11/05 ABW ~~-33R~~ 34R	↓	50	

Comments:

As ☐ Se ☐ Analysis Sheet

Batch: 04-1028 Matrix: Biota

Analyst: ABN Date: 1-11-05

Run #	Trap #	Sample ID	Analyzed volume (mL)	PA	Sample Specific Notes
53	C8	05BR0023-35R	1.00	57	
54	N1	CCV 5.0 ng	0.500	1417	
55	C8	~~CCB~~ [illegible] CCVR 5.0 ng	0.500	1333	Do not report. Software selected the wrong peak on previous recal prompting analyst to re-prep and reread.
56	N1	Cl B	—	31	

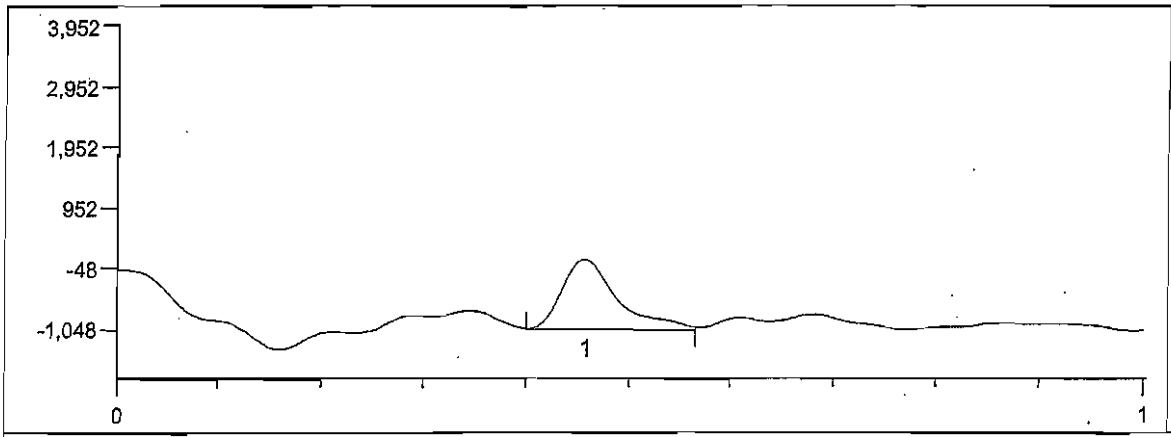
1/11/05 ABN

Comments:

Batch Number: 04-1028
Method Number: BR-0020

Project Number(s): WIN001
Instrument ID: HGAA 1

Date Analyzed: 1/11/05
Analyst Name: ABN

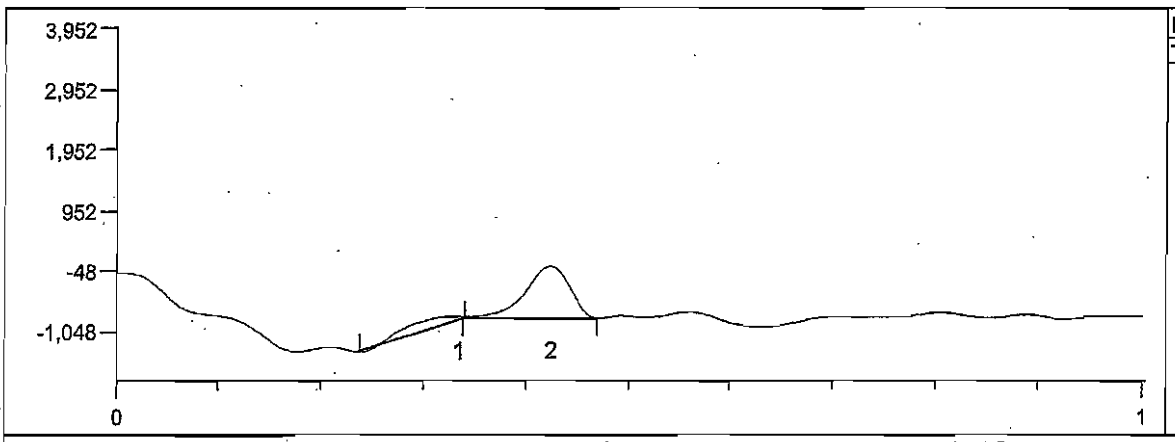


Date: 1/11/05
Time: 5:18 PM

Peak	rt	Area
1	0.45	42,887

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
1	CB	CAL BLK-1		1	42,887	0.153		0.153	< 0.15	reject

Notes:

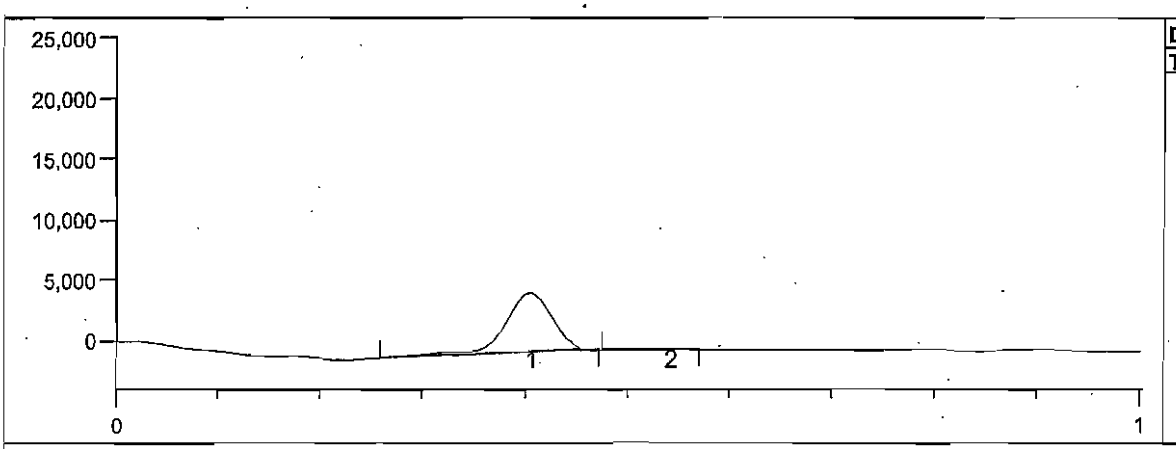


Date: 1/11/05
Time: 5:24 PM

Peak	rt	Area
1	0.33	17,996
2	0.42	40,266

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
2	CB	CAL BLK-2		2	40,266	0.144		0.144	< 0.15	reject

Notes:



Date: 1/11/05
Time: 5:31 PM

Peak	rt	Area
1	0.40	186,197
2	0.54	7,155

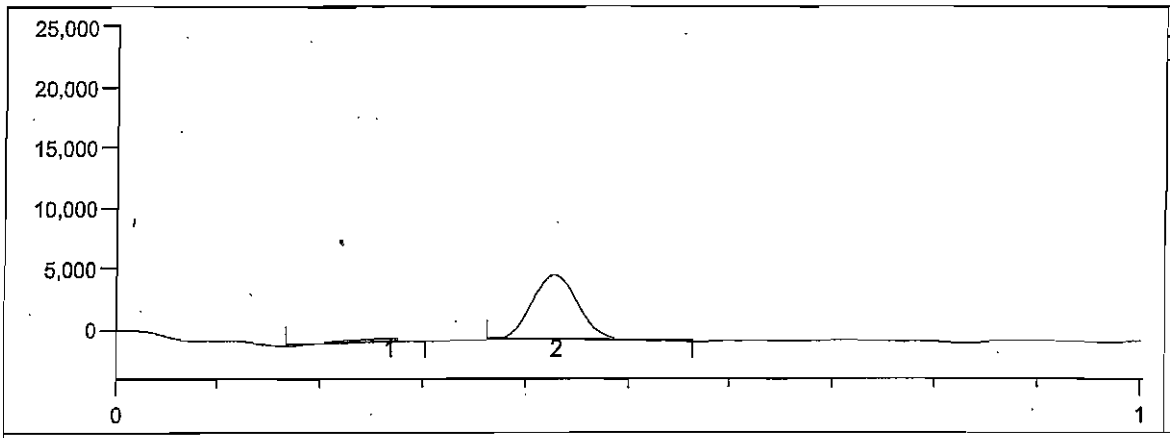
Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
3	STD	0.5 ng		1	186,197	0.665		133	80-120	reject

Notes:

Batch Number: 04-1028
Method Number: BR-0020

Project Number(s): WIN001
Instrument ID: HGAA 1

Date Analyzed: 1/11/05
Analyst Name: ABN

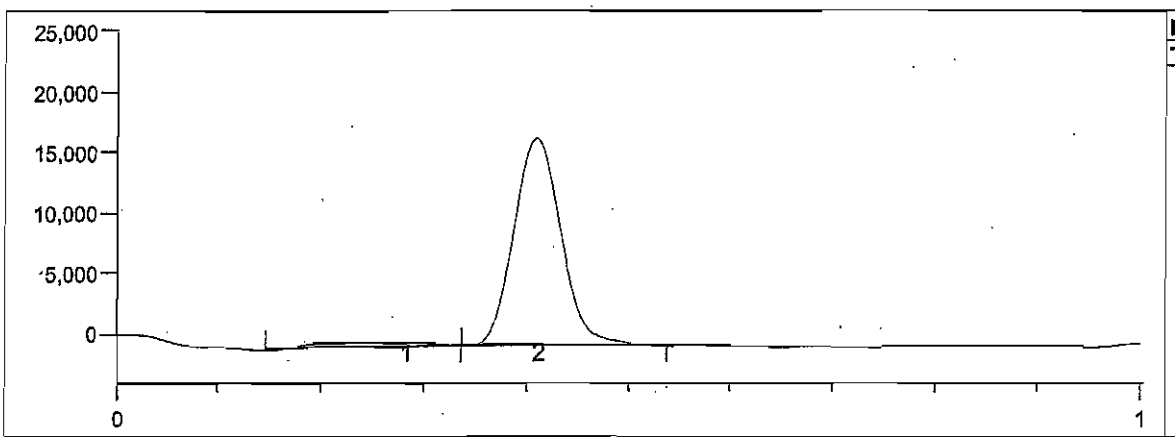


Date: 1/11/05
Time: 6:58 PM

Peak	rt	Area
1	0.26	15,618
2	0.42	187,860

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
4	STD	0.5 ng		2	187,860	0.671		134	80-120	reject

Notes:

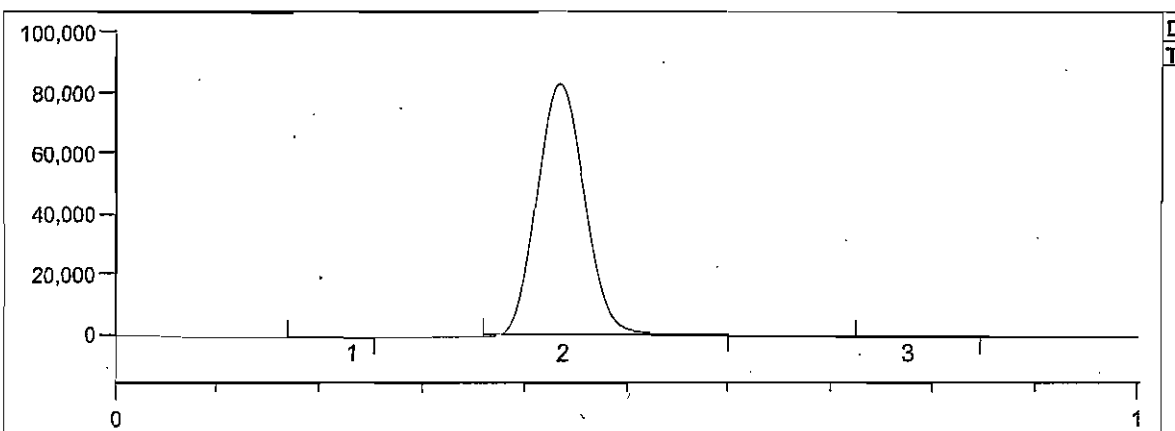


Date: 1/11/05
Time: 7:07 PM

Peak	rt	Area
1	0.28	49,915
2	0.41	599,920

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
5	STD	2.0 ng		2	599,920	2.14		107	80-120	accept

Notes:



Date: 1/11/05
Time: 7:13 PM

Peak	rt	Area
1	0.23	4,721
2	0.43	2,919,606
3	0.77	14,876

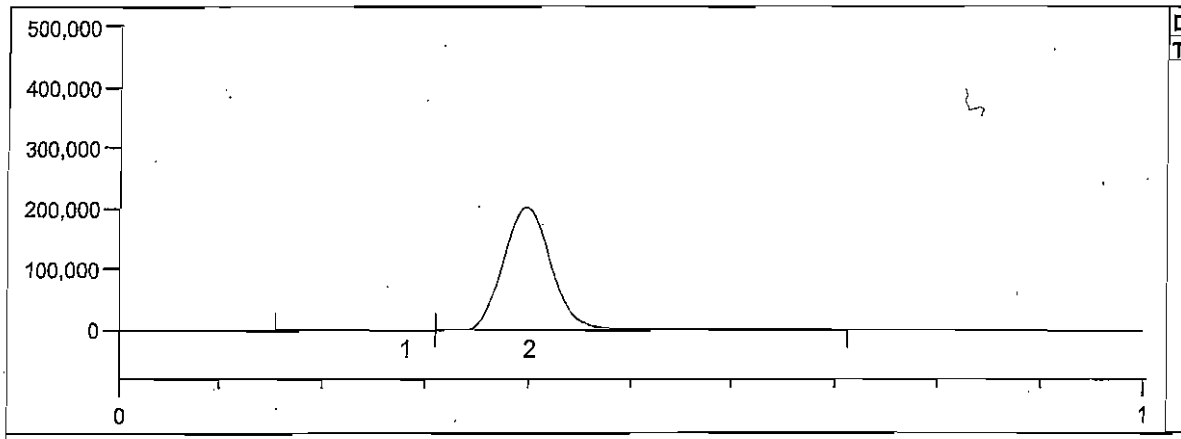
Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
6	STD	10.0 ng		2	2,919,606	10.4		104	80-120	accept

Notes:

Batch Number: 04-1028
Method Number: BR-0020

Project Number(s): WIN001
Instrument ID: HGAA 1

Date Analyzed: 1/11/05
Analyst Name: ABN

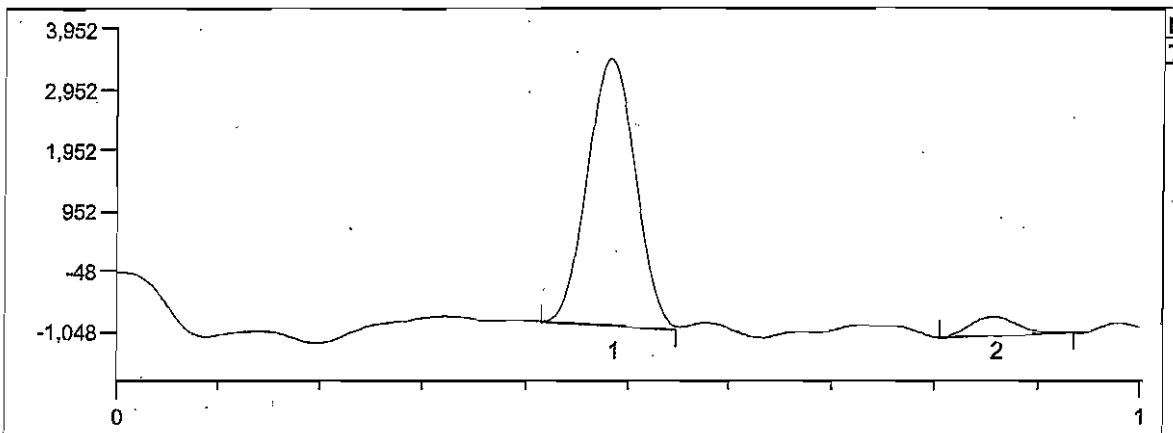


Date: 1/11/05
Time: 7:19 PM

Peak	rt	Area
1	0.27	39,335
2	0.40	7,199,206

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
7	STD	30.0 ng		2	7,199,206	25.7		85.7	80-120	accept

Notes:

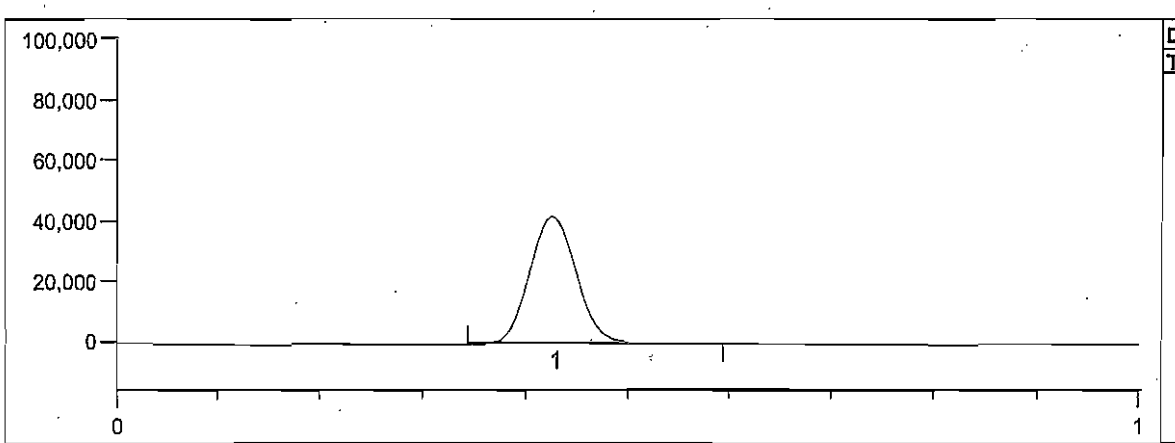


Date: 1/11/05
Time: 7:27 PM

Peak	rt	Area
1	0.48	148,845
2	0.86	11,583

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
8	STD	0.5 ng		1	148,845	0.532		106	80-120	accept

Notes:



Date: 1/11/05
Time: 7:38 PM

Peak	rt	Area
1	0.42	1,475,827

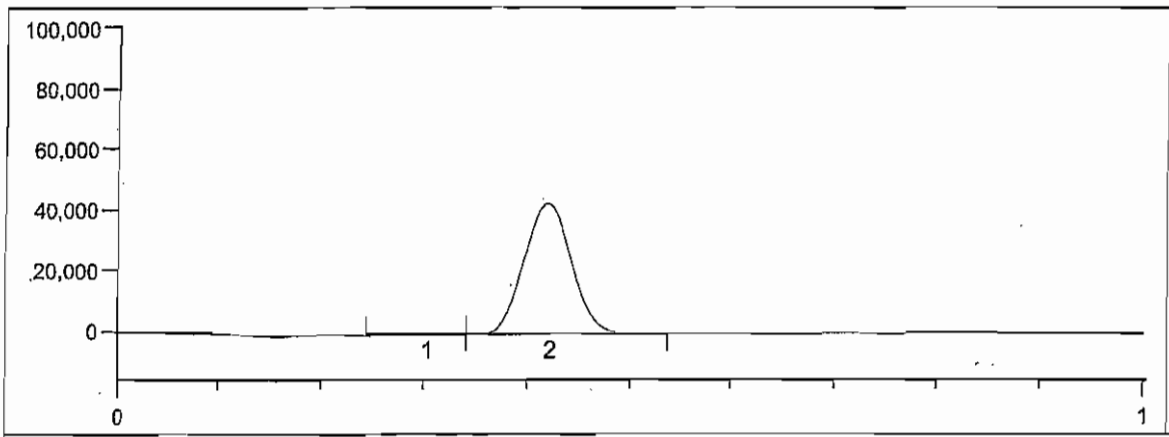
Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
9	OPR	ICV 5.0 ng		1	1,475,827	5.27		105	80-120	accept

Notes:

Batch Number: 04-1028
Method Number: BR-0020

Project Number(s): WIN001
Instrument ID: HGAA 1

Date Analyzed: 1/11/05
Analyst Name: ABN

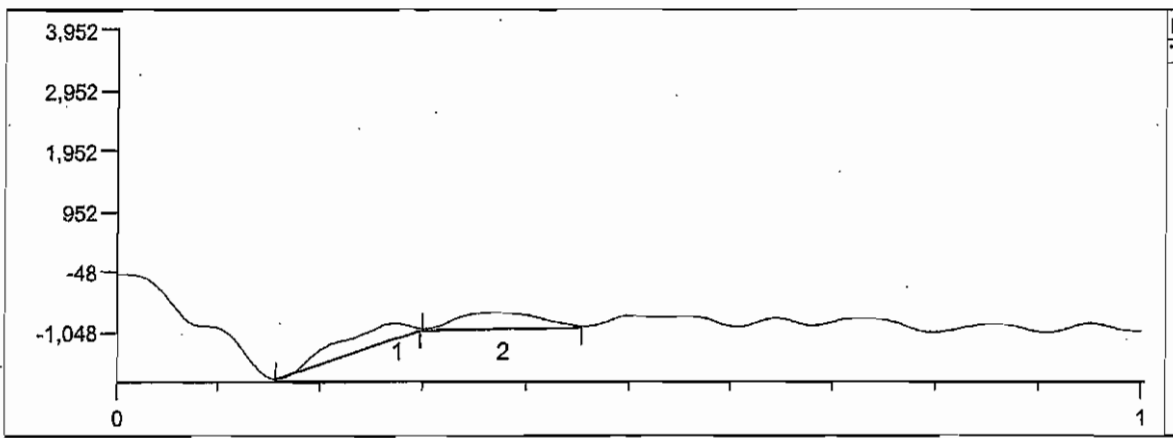


Date: 1/11/05
Time: 7:47 PM

Peak	rt	Area
1	0.30	10,782
2	0.42	1,471,779

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
10	OPR	CCV 5.0 ng		2	1,471,779	5.26		105	80-120	accept

Notes:

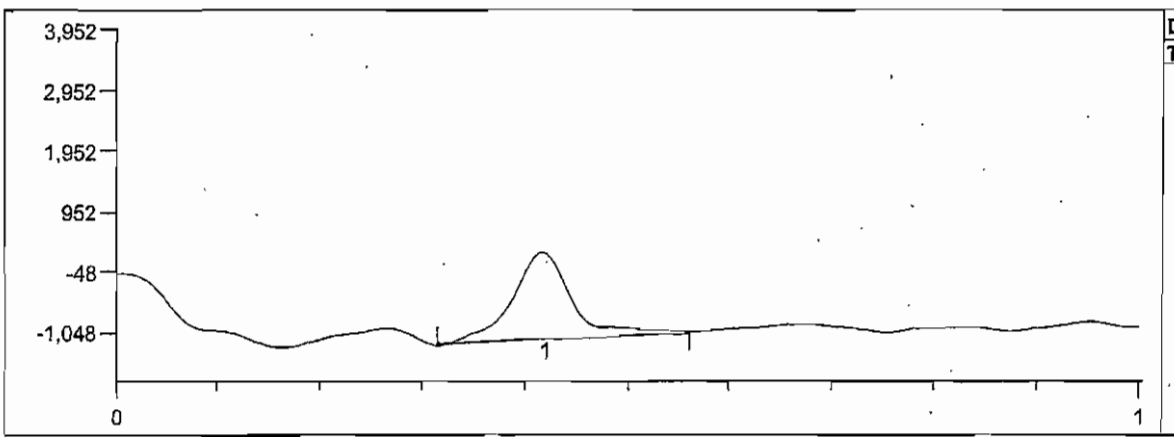


Date: 1/11/05
Time: 7:53 PM

Peak	rt	Area
1	0.27	36,062
2	0.37	34,814

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
11	CCB	CCB		2	34,814	0.124			< 0.15	accept

Notes:



Date: 1/11/05
Time: 8:05 PM

Peak	rt	Area
1	0.41	61,103

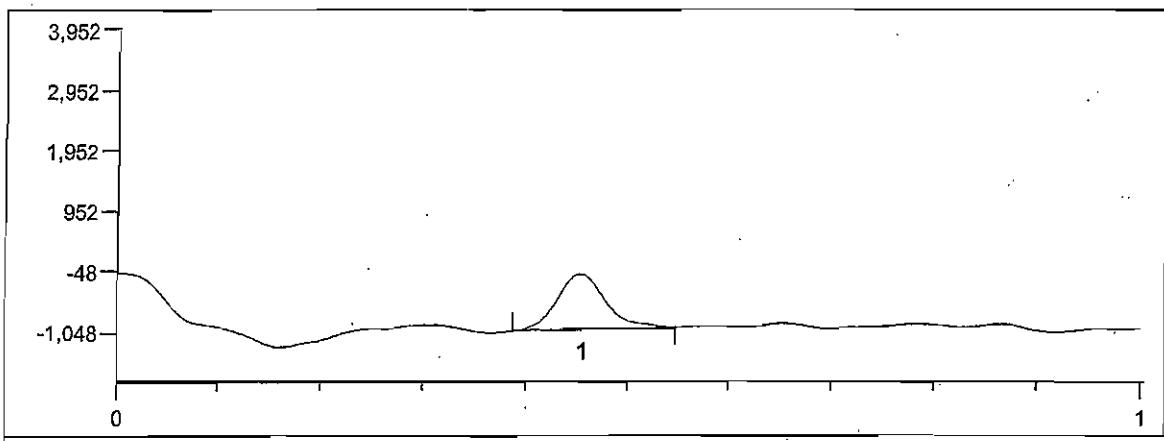
Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
12	MBA	MB-1		1	61,103	0.218	0.00218	0.00218	< 0.003	reject

Notes:

Batch Number: 04-1028
Method Number: BR-0020

Project Number(s): WIN001
Instrument ID: HGAA 1

Date Analyzed: 1/11/05
Analyst Name: ABN

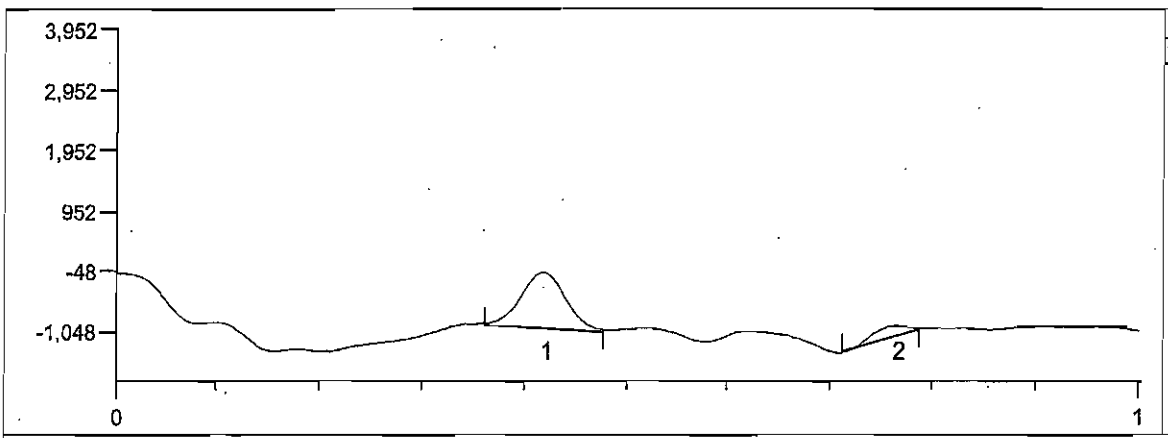


Date: 1/11/05
Time: 8:11 PM

Peak	rt	Area
1	0.45	31,656

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
13	MBA	MB-2		1	31,656	0.113	0.00113	0.00113	< 0.003	accept

Notes:

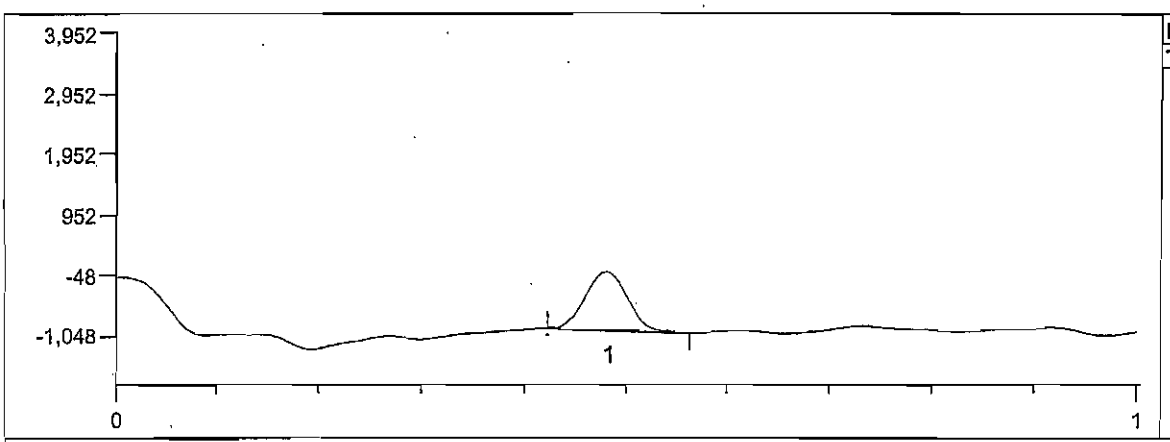


Date: 1/11/05
Time: 8:17 PM

Peak	rt	Area
1	0.42	27,087
2	0.76	5,244

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
14	MBA	MB-3		1	27,087	0.0967	0.000967	0.000967	< 0.003	accept

Notes:



Date: 1/11/05
Time: 8:24 PM

Peak	rt	Area
1	0.48	29,112

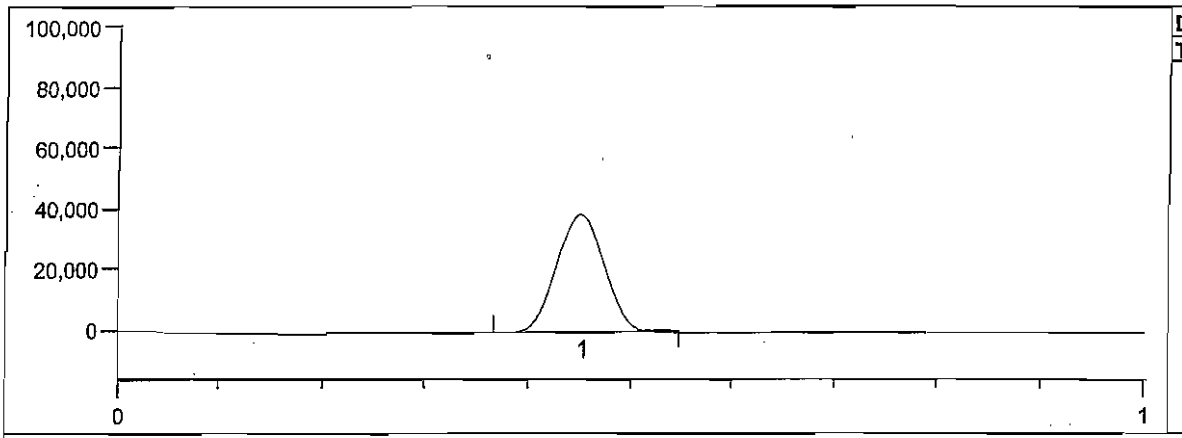
Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
15	MBA	MB-1		1	29,112	0.104	0.00104	0.00104	< 0.003	accept

Notes:

Batch Number: 04-1028
Method Number: BR-0020

Project Number(s): WIN001
Instrument ID: HGAA 1

Date Analyzed: 1/11/05
Analyst Name: ABN

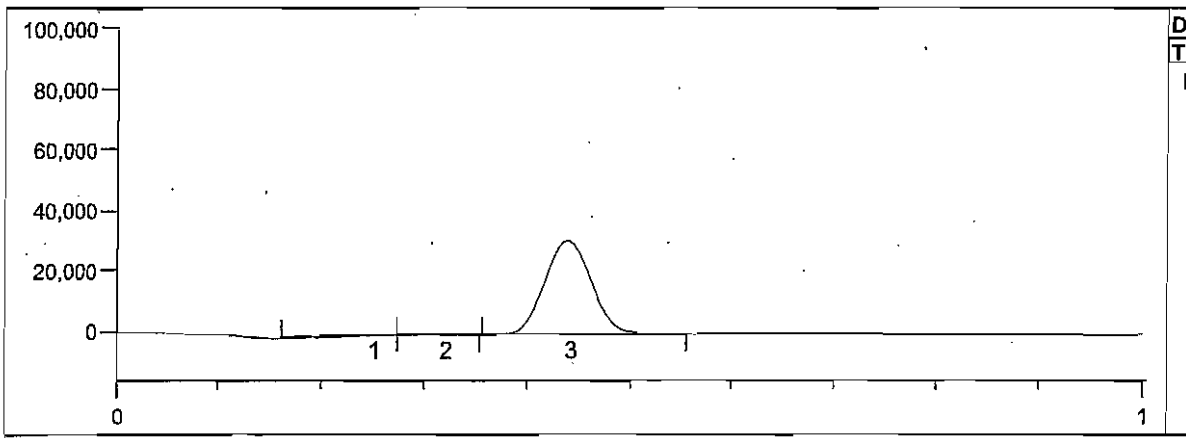


Date: 1/11/05
Time: 8:33 PM

Peak	rt	Area
1	0.45	1,341,193

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
16	IPR	LFB-1	MBA	1	1,341,193	4.79	1.92	95.8	50-150	accept

Notes:

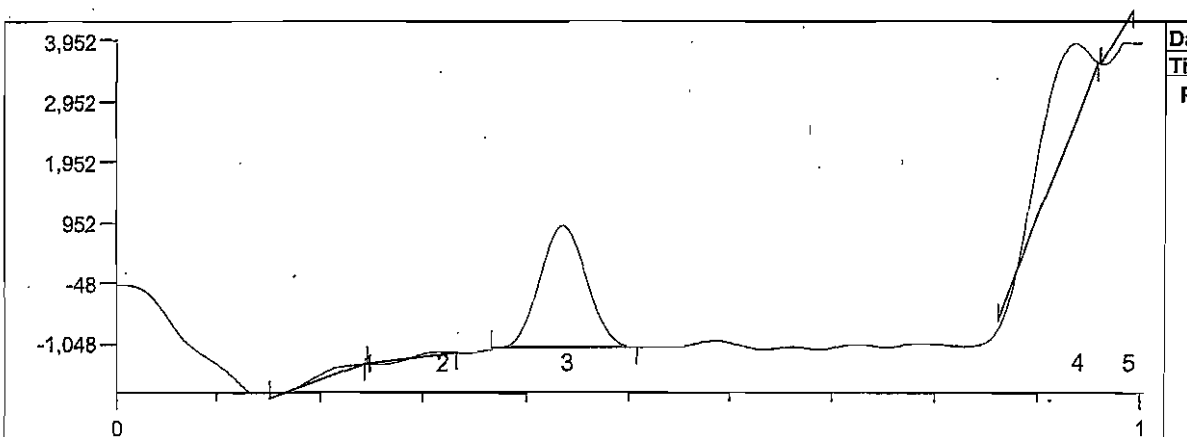


Date: 1/11/05
Time: 8:39 PM

Peak	rt	Area
1	0.25	40,332
2	0.32	35,472
3	0.44	1,079,790

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
17	IPR	LFB-2	MBA	3	1,079,790	3.86	1.54	77.1	50-150	accept

Notes:



Date: 1/11/05
Time: 8:50 PM

Peak	rt	Area
1	0.24	9,773
2	0.31	6,241
3	0.43	68,104
4	0.93	68,173
5	0.98	849

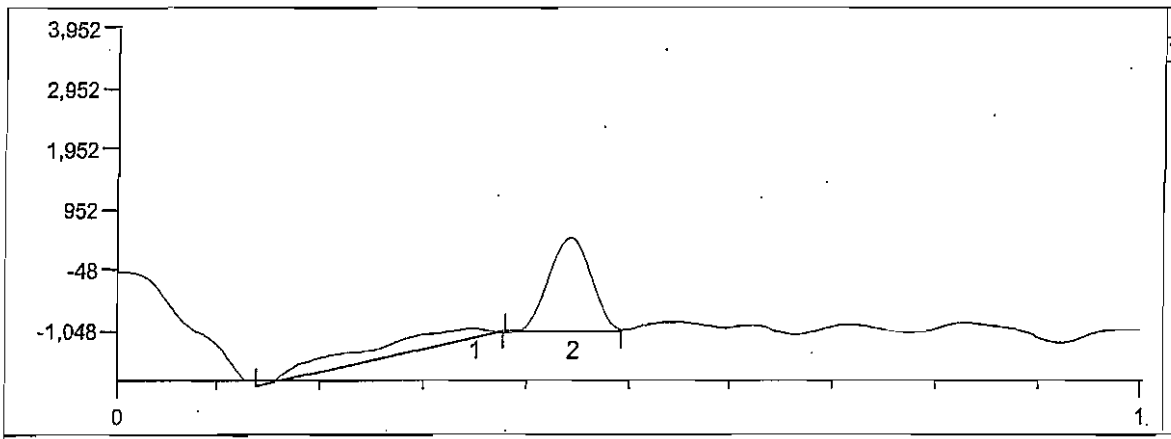
Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
18	S	05BR0023-22	MBA	3	68,104	0.243	0.00231		< HS	accept

Notes:

Batch Number: 04-1028
Method Number: BR-0020

Project Number(s): WIN001
Instrument ID: HGAA 1

Date Analyzed: 1/11/05
Analyst Name: ABN

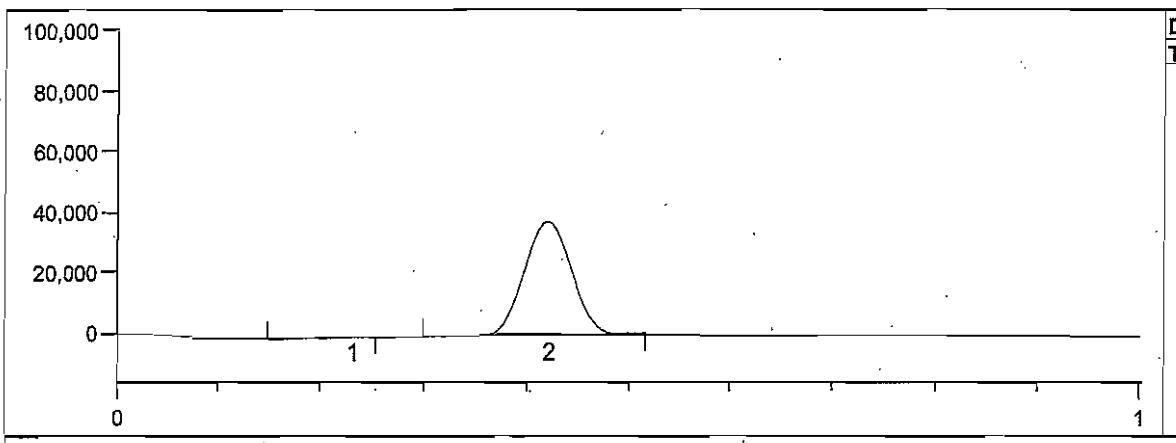


Date: 1/11/05
Time: 8:59 PM

Peak	rt	Area
1	0.34	48,515
2	0.44	55,412

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
19	MD	05BR0023-22	MBA	2	55,412	0.198	0.00189	19.8	< 35	accept

Notes:

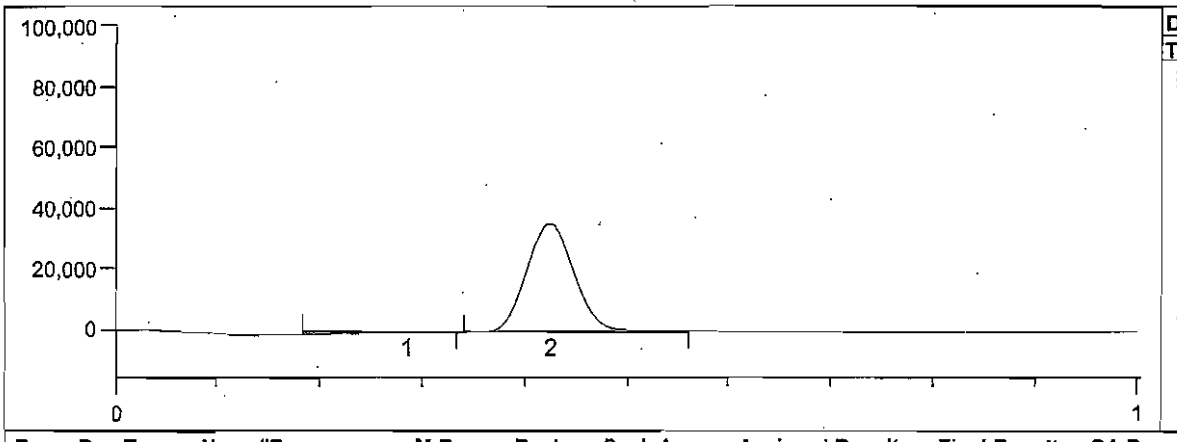


Date: 1/11/05
Time: 9:07 PM

Peak	rt	Area
1	0.23	7,274
2	0.42	1,318,074

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
20	MS	05BR0023-22	MBA	2	1,318,074	4.71	1.84	84.7	50-150	accept

Notes:



Date: 1/11/05
Time: 9:13 PM

Peak	rt	Area
1	0.28	22,846
2	0.42	1,266,257

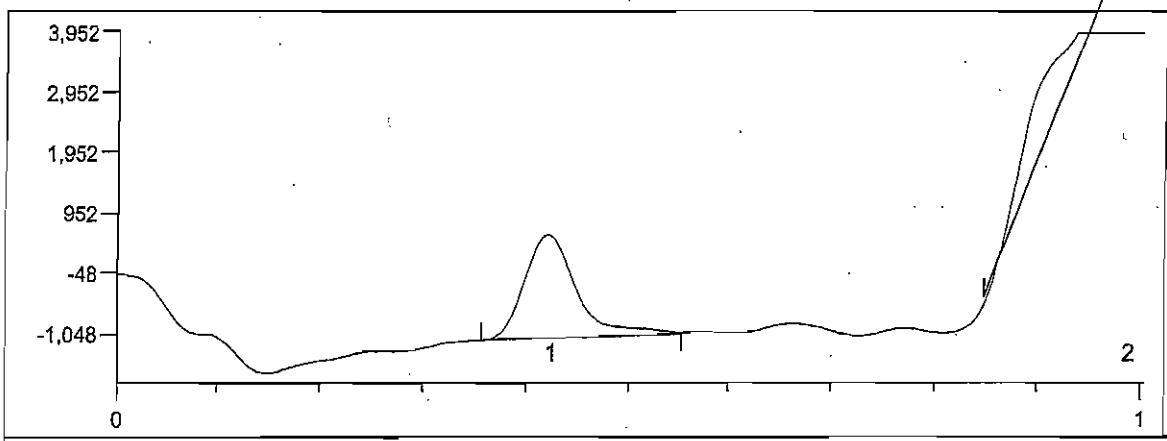
Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
21	MSD	05BR0023-22	MBA	2	1,266,257	4.52	1.75	81.6	50-150	accept

Notes:

Batch Number: 04-1028
Method Number: BR-0020

Project Number(s): WIN001
Instrument ID: HGAA 1

Date Analyzed: 1/11/05
Analyst Name: ABN

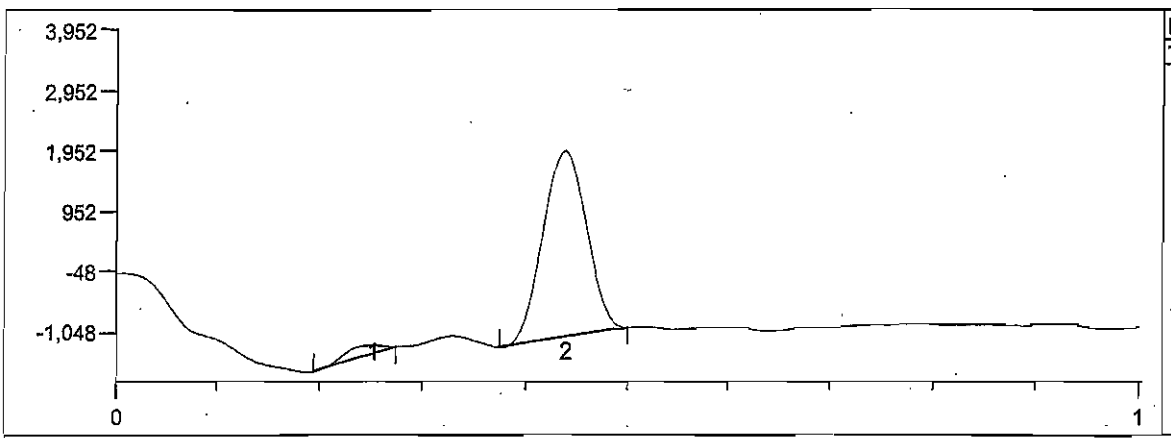


Date: 1/11/05
Time: 9:20 PM

Peak	rt	Area
1	0.42	63,080
2	0.98	83,883

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
22	S	05BR0023-22MDR	MBA	1	63,080	0.225	0.00214	7.66	< HS	reject

Notes:

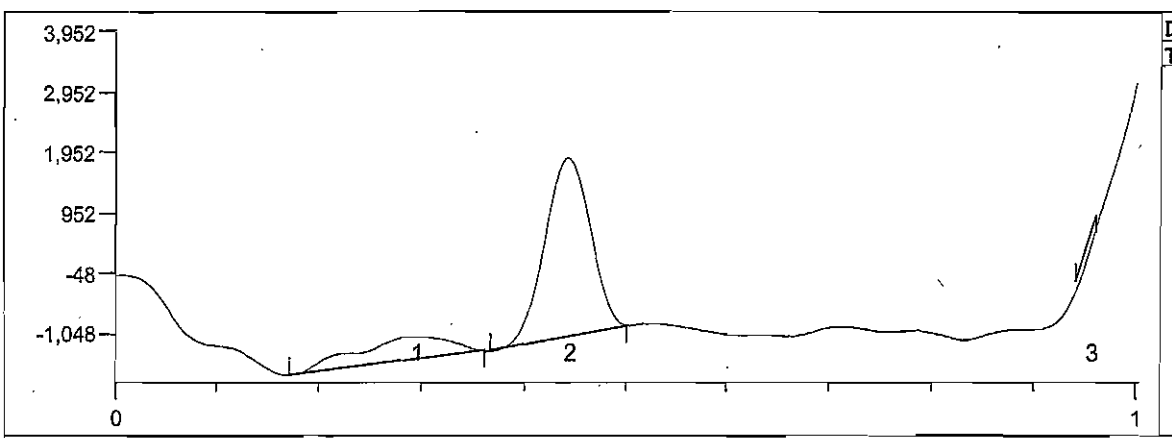


Date: 1/11/05
Time: 9:31 PM

Peak	rt	Area
1	0.25	5,585
2	0.44	97,664

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
23	S	05BR0023-32	MBA	2	97,664	0.349	0.00330		< HS	accept

Notes:



Date: 1/11/05
Time: 9:37 PM

Peak	rt	Area
1	0.29	28,034
2	0.44	98,672
3	0.95	-171

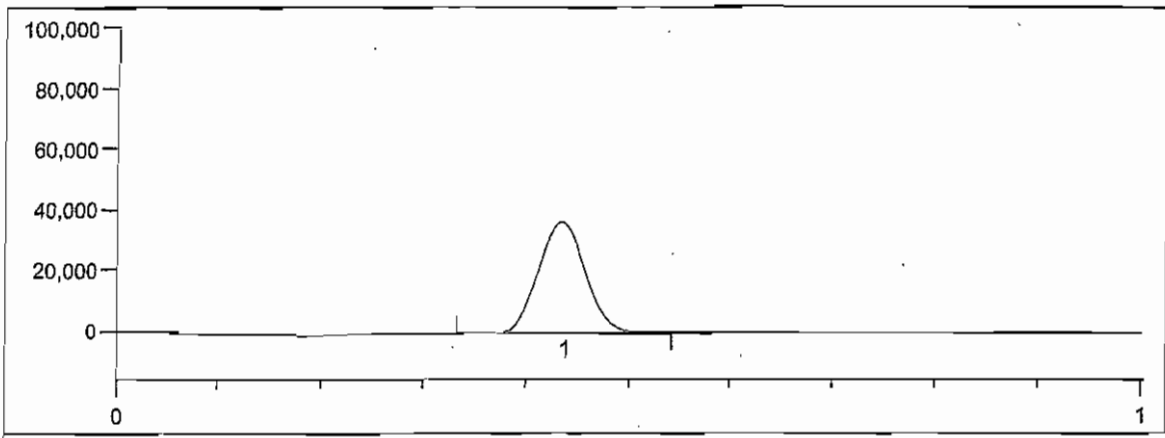
Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
24	MD	05BR0023-32	MBA	2	98,672	0.352	0.00332	0.838	< 35	reject

Notes:

Batch Number: 04-1028
Method Number: BR-0020

Project Number(s): WIN001
Instrument ID: HGAA 1

Date Analyzed: 1/11/05
Analyst Name: ABN

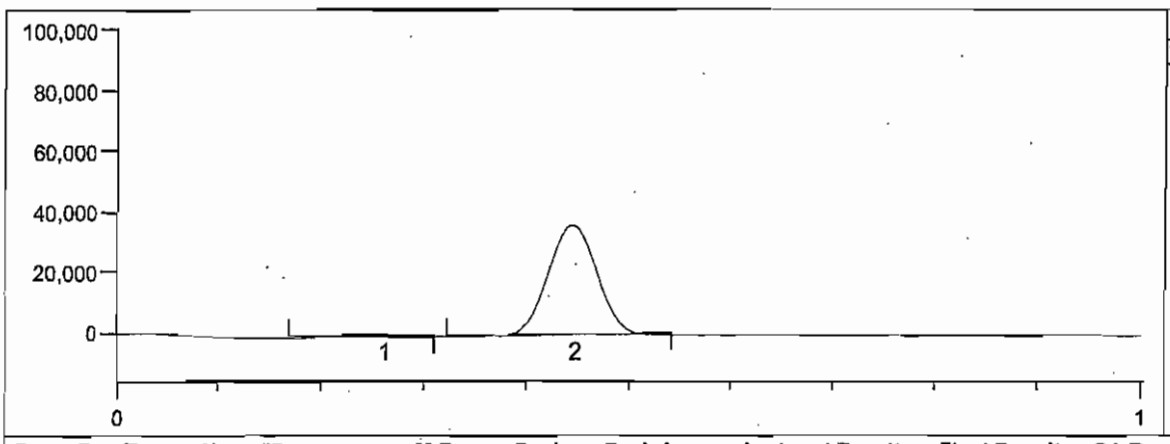


Date:	1/11/05
Time:	9:45 PM

Peak	rt	Area
1	0.43	1,248,684

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
25	MS	05BR0023-32	MBA	1	1,248,684	4.46	1.81	94.1	50-150	accept

Notes:

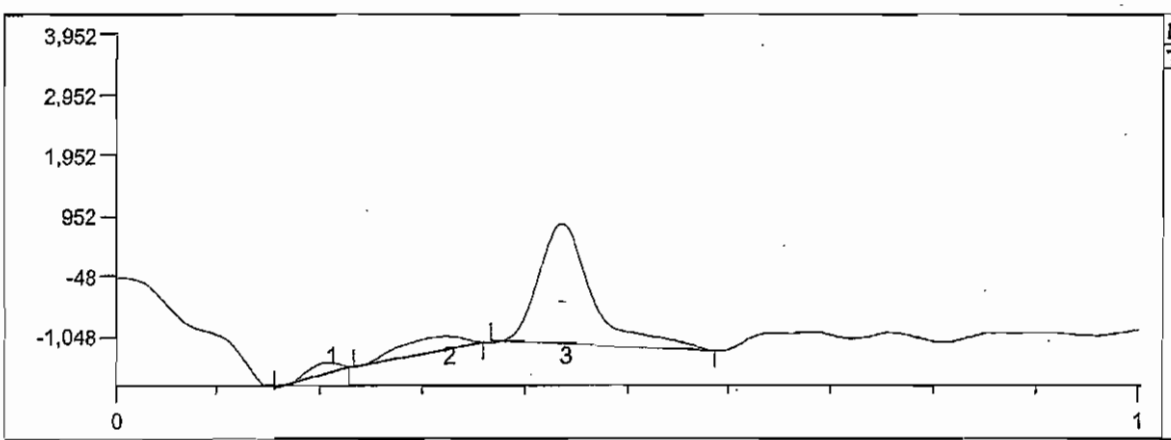


Date:	1/11/05
Time:	9:53 PM

Peak	rt	Area
1	0.26	12,376
2	0.44	1,301,502

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
26	MSD	05BR0023-32	MBA	2	1,301,502	4.65	1.89	99.1	50-150	accept

Notes:



Date:	1/11/05
Time:	10:01 PM

Peak	rt	Area
1	0.20	11,704
2	0.32	42,949
3	0.43	111,741

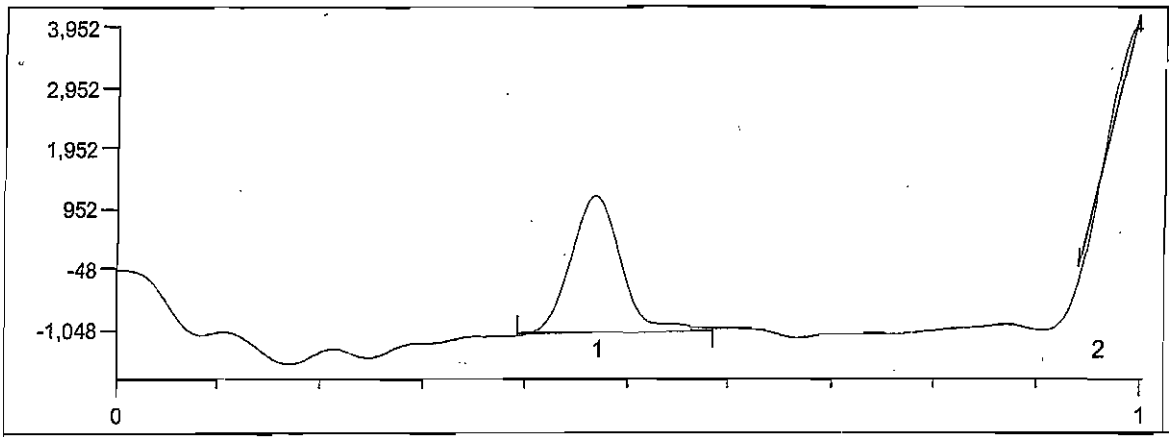
Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
27	S	05BR0023-21	MBA	3	111,741	0.399	0.00407		< HS	accept

Notes:

Batch Number: 04-1028
Method Number: BR-0020

Project Number(s): WIN001
Instrument ID: HGAA 1

Date Analyzed: 1/11/05
Analyst Name: ABN

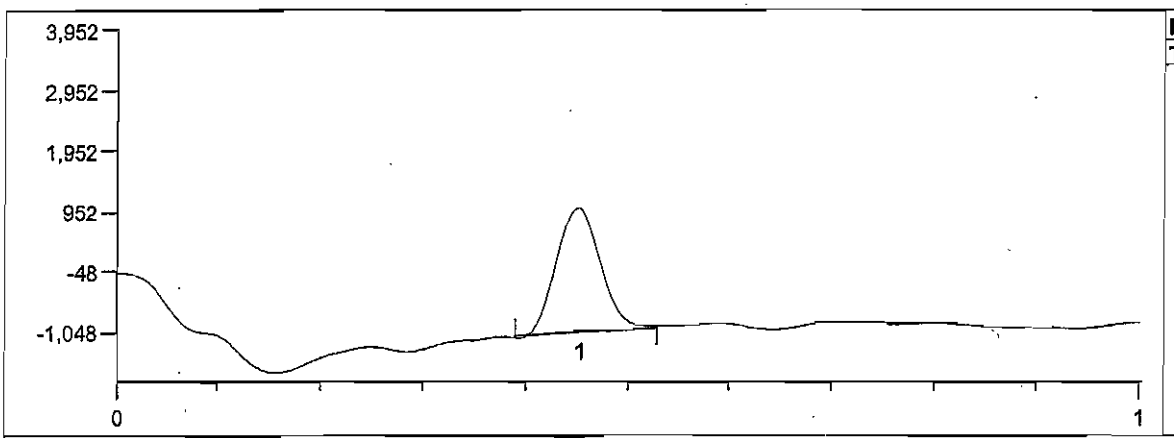


Date:	1/11/05
Time:	10:07 PM

Peak	rt	Area
1	0.46	80,631
2	0.95	12,788

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
28	S	05BR0023-23	MBA	1	80,631	0.288	0.00284		< HS	accept

Notes:

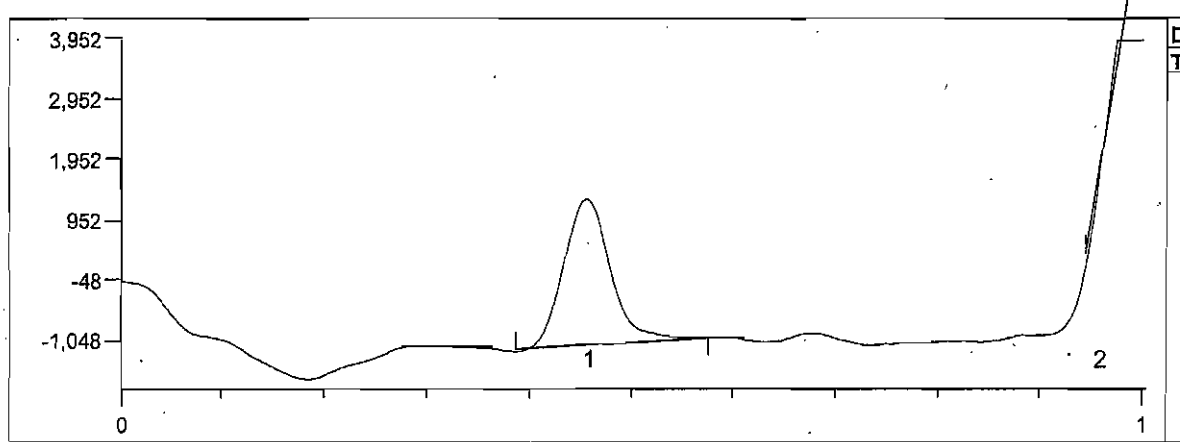


Date:	1/11/05
Time:	10:13 PM

Peak	rt	Area
1	0.45	65,611

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
29	S	05BR0023-24	MBA	1	65,611	0.234	0.00228		< HS	accept

Notes:



Date:	1/11/05
Time:	10:19 PM

Peak	rt	Area
1	0.45	83,556
2	0.95	15,851

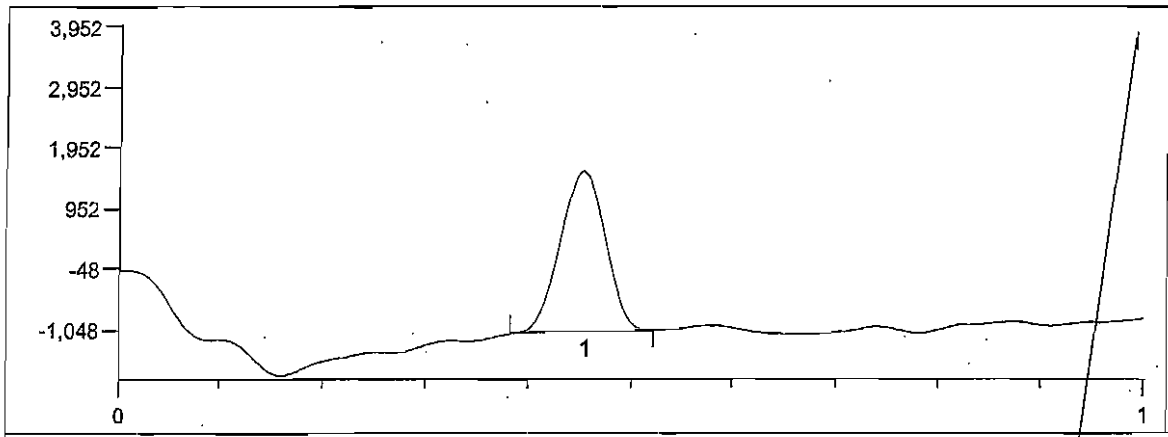
Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
30	S	05BR0023-25	MBA	1	83,556	0.298	0.00269		< HS	accept

Notes:

Batch Number: 04-1028
Method Number: BR-0020

Project Number(s): WIN001
Instrument ID: HGAA 1

Date Analyzed: 1/11/05
Analyst Name: ABN

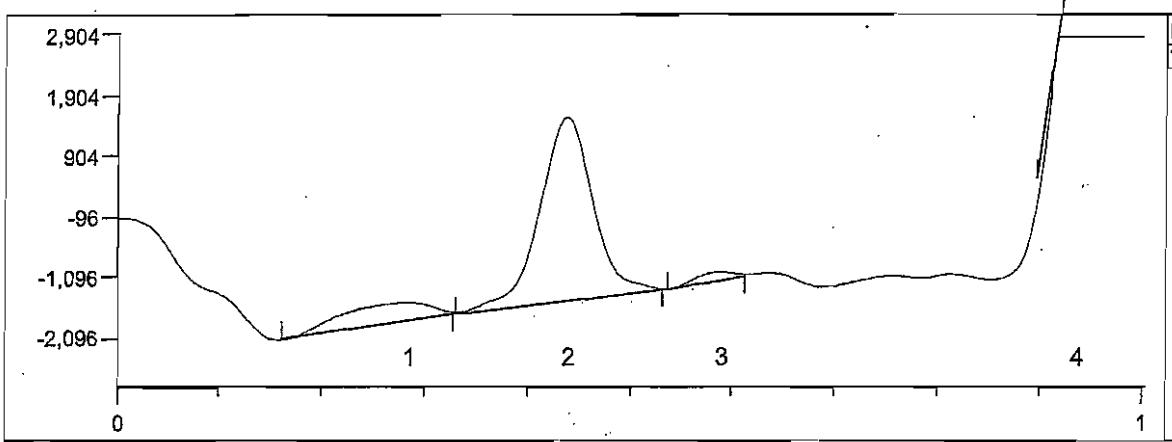


Date: 1/11/05
Time: 10:25 PM

Peak	rt	Area
1	0.45	85,290

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
31	S	05BR0023-26	MBA	1	85,290	0.305	0.00278		< HS	accept

Notes:

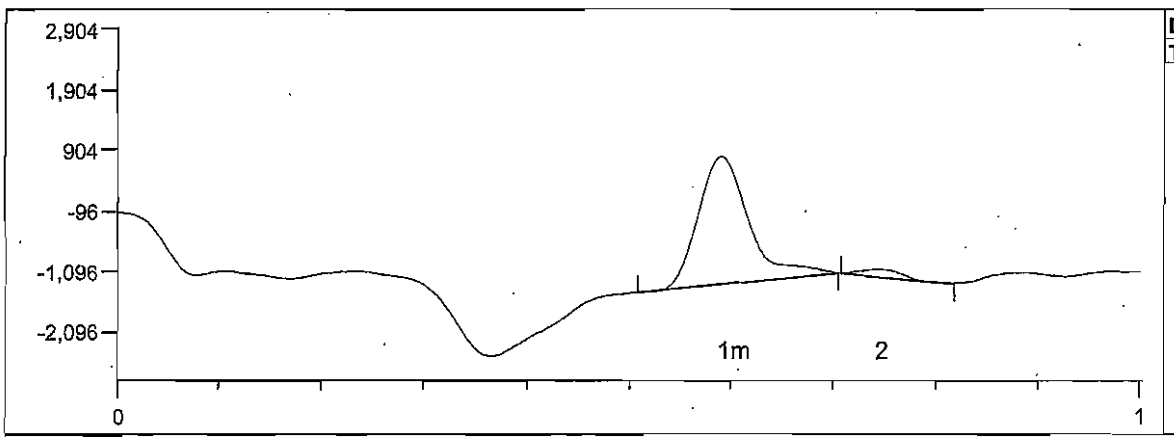


Date: 1/11/05
Time: 10:31 PM

Peak	rt	Area
1	0.28	25,752
2	0.44	118,374
3	0.58	3,592
4	0.93	77,538

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
32	S	05BR0023-27	MBA	2	118,374	0.423	0.00416		< HS	accept

Notes:



Date: 1/11/05
Time: 10:37 PM

Peak	rt	Area
1m	0.59	75,973
2	0.74	19,496

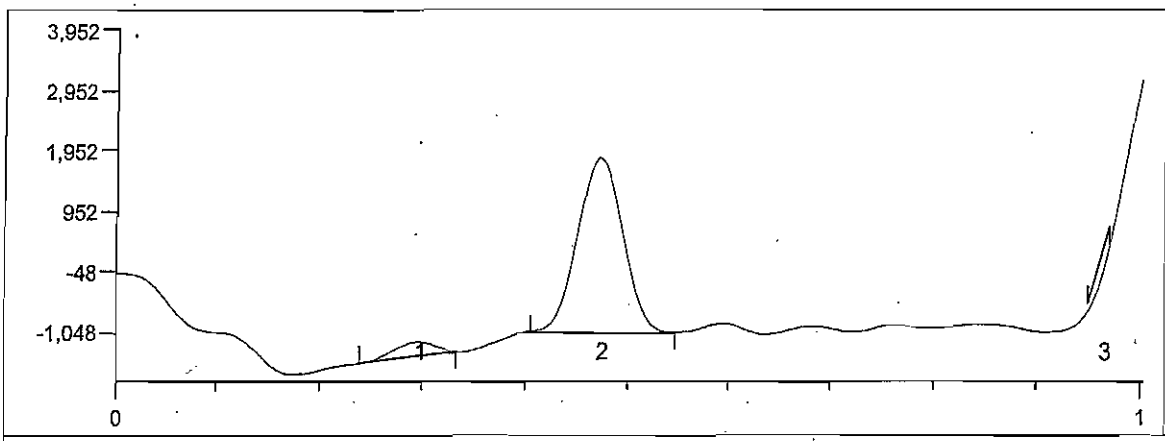
Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
33	S	05BR0023-28	MBA	1m	75,973	0.271	0.00243		< HS	accept

Notes:

Batch Number: 04-1028
Method Number: BR-0020

Project Number(s): WIN001
Instrument ID: HGAA 1

Date Analyzed: 1/11/05
Analyst Name: ABN

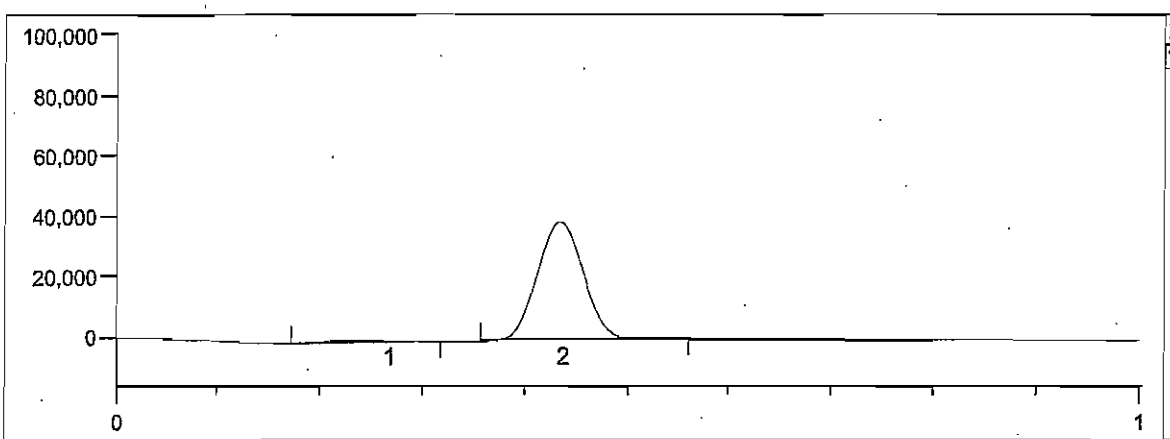


Date: 1/11/05
Time: 10:44 PM

Peak	rt	Area
1	0.29	7,155
2	0.47	91,125
3	0.96	-906

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
34	S	05BR0023-29	MBA	2	91,125	0.325	0.00276		< HS	accept

Notes:

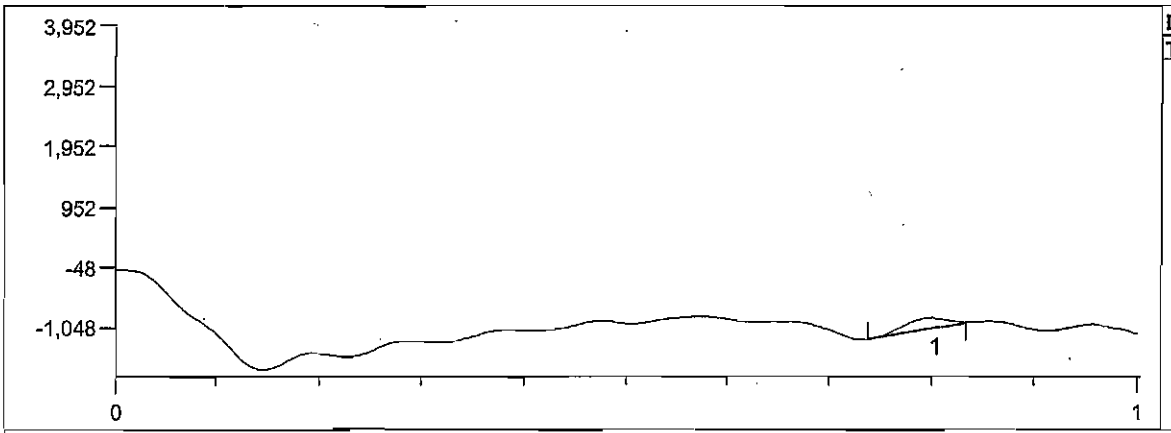


Date: 1/11/05
Time: 10:51 PM

Peak	rt	Area
1	0.26	19,532
2	0.43	1,330,508

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
35	OPR	CCV 5.0 ng		2	1,330,508	4.75		95.0	80-120	accept

Notes:



Date: 1/11/05
Time: 10:56 PM

Peak	rt	Area
1	0.80	6,305

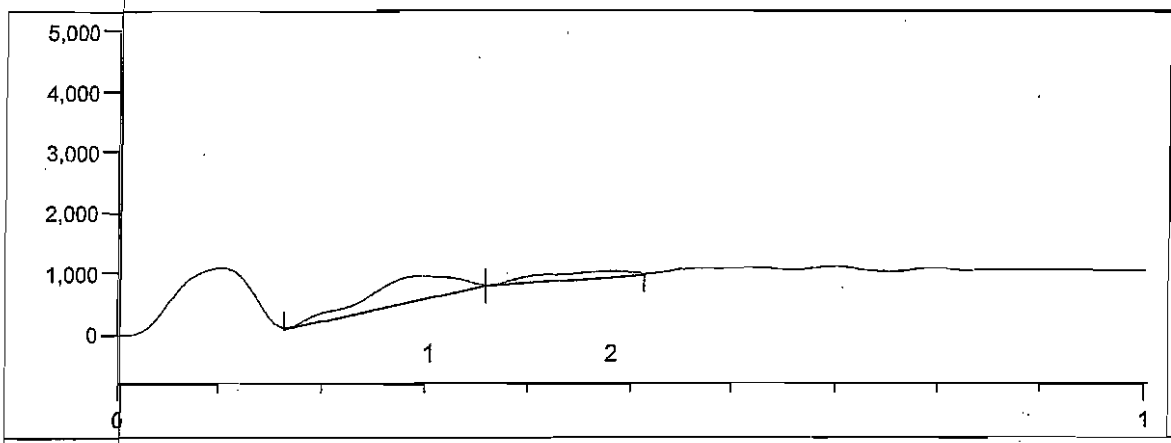
Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
36	CCB	CCB		0	0	0.00			< 0.15	accept

Notes:

Batch Number: 04-1028
Method Number: BR-0020

Project Number(s): WIN001
Instrument ID: HGAA 1

Date Analyzed: 1/11/05
Analyst Name: ABN

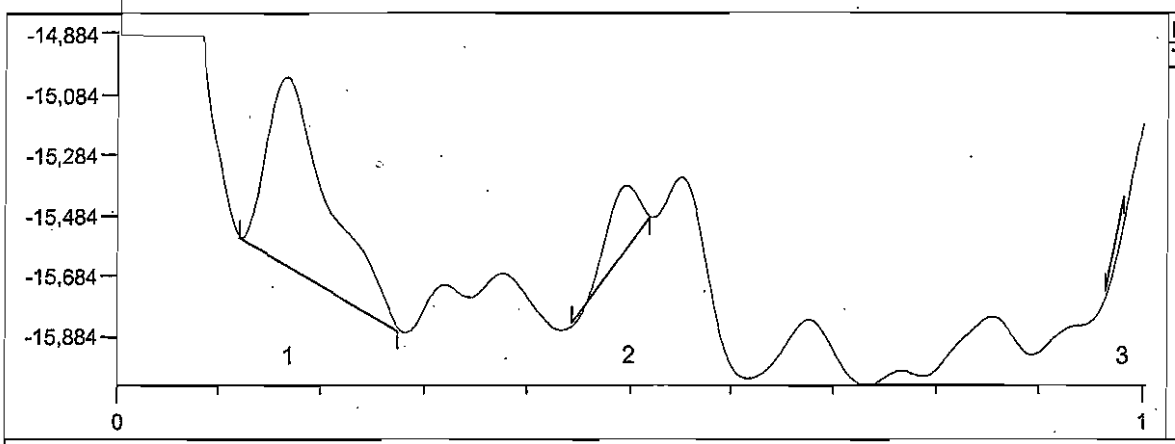


Date: 1/11/05
Time: 11:04 PM

Peak	rt	Area
1	0.30	38,472
2	0.48	17,056

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
37	S	05BR0023-30	MBA	2	17,056	0.0609	0.000582		< HS	reject

Notes:

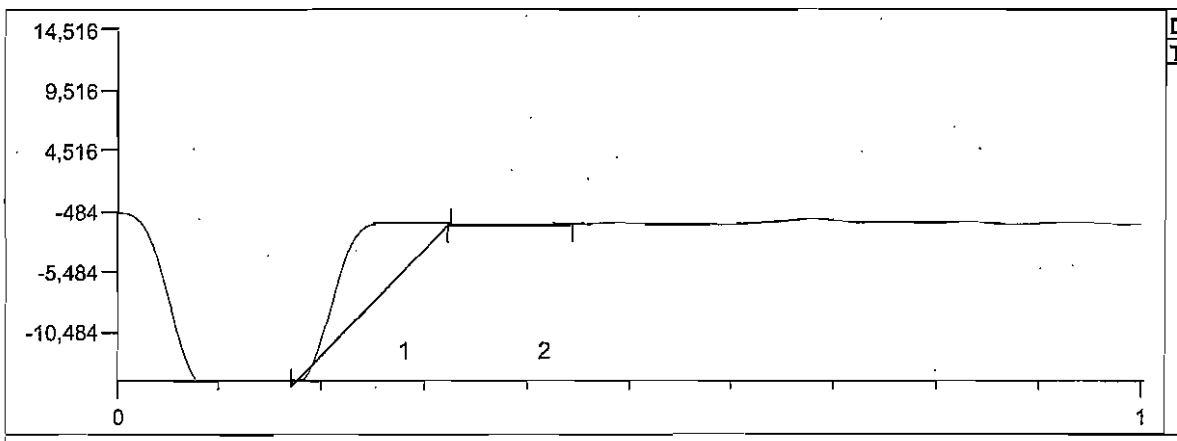


Date: 1/11/05
Time: 11:13 PM

Peak	rt	Area
1	0.16	26,872
2	0.49	5,610
3	0.97	-157

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
38	S	05BR0023-31	MBA	2	5,610	0.0200	0.000175		< HS	reject

Notes:



Date: 1/11/05
Time: 11:22 PM

Peak	rt	Area
1	0.28	644,166
2	0.41	229,756

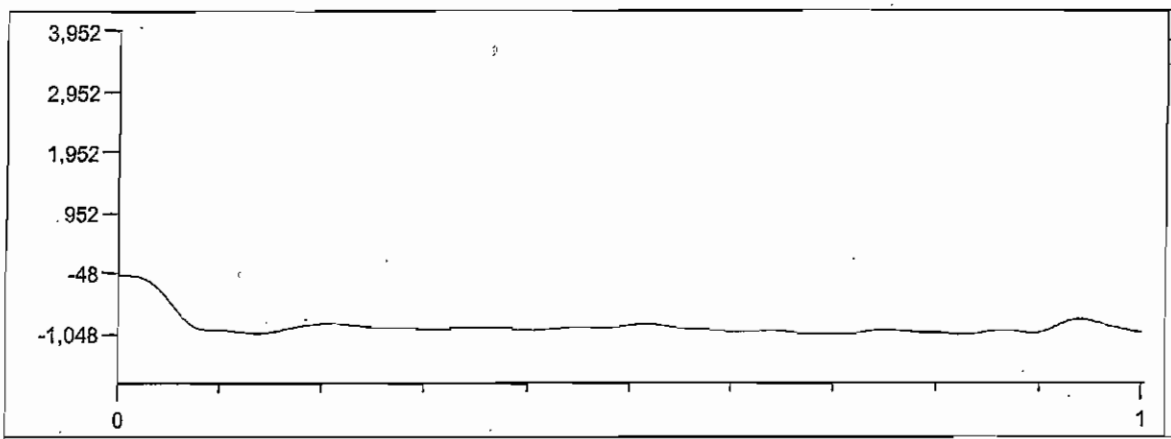
Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
39	S	05BR0023-33	MBA	2	229,756	0.821	0.00821		< HS	reject

Notes:

Batch Number: 04-1028
Method Number: BR-0020

Project Number(s): WIN001
Instrument ID: HGAA 1

Date Analyzed: 1/11/05
Analyst Name: ABN

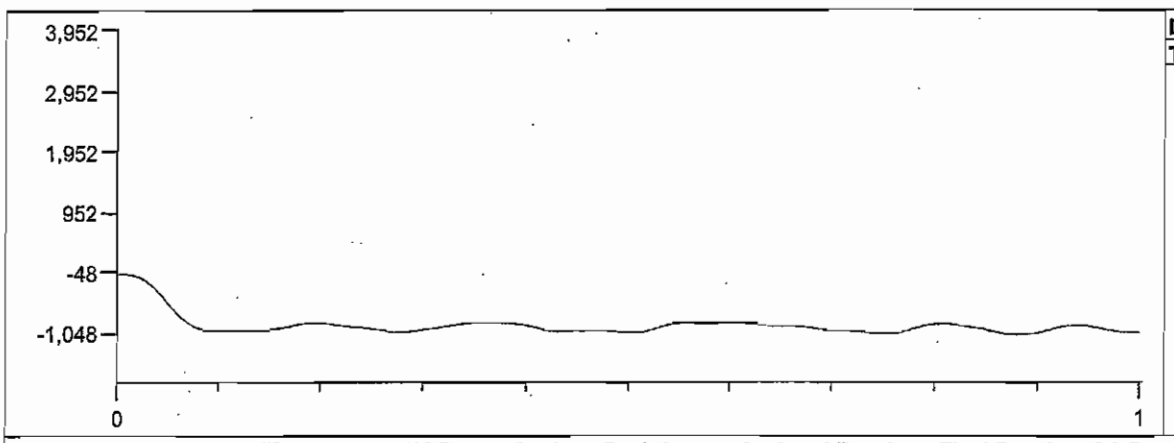


Date: 1/11/05
Time: 11:28 PM

Peak	rt	Area

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
40	S	05BR0023-34	MBA	0	0	0.00	0.00		< HS	reject

Notes:

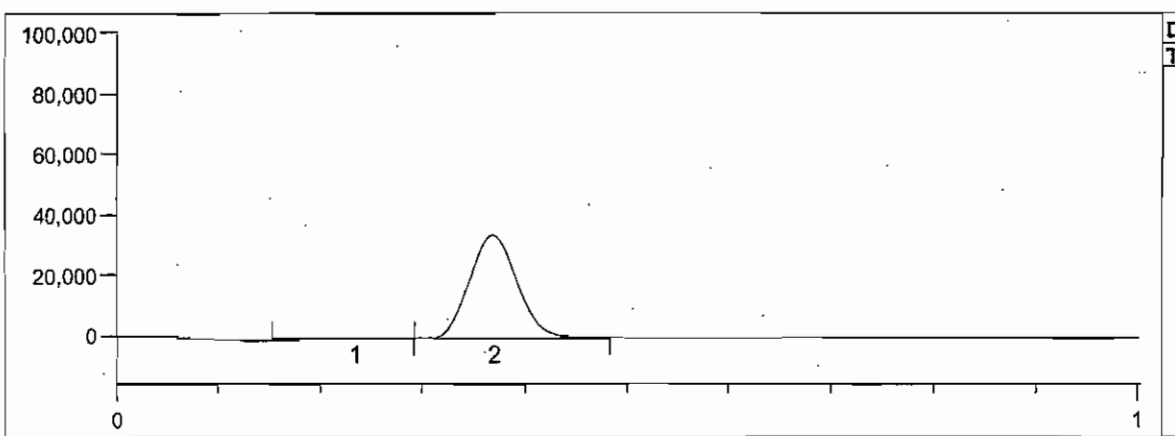


Date: 1/11/05
Time: 11:35 PM

Peak	rt	Area

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
41	S	05BR0023-35	MBA	0	0	0.00	0.00		< HS	reject

Notes:



Date: 1/12/05
Time: 12:29 AM

Peak	rt	Area
1	0.23	16,168
2	0.36	1,205,604

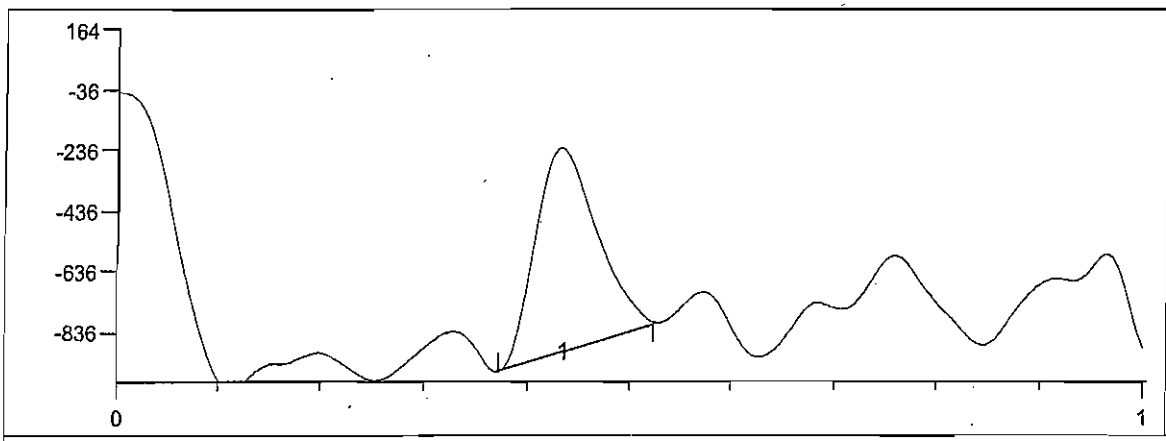
Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
42	OPR	CCV 5 ng		2	1,205,604	4.31		86.1	80-120	accept

Notes:

Batch Number: 04-1028
Method Number: BR-0020

Project Number(s): WIN001
Instrument ID: HGAA 1

Date Analyzed: 1/11/05
Analyst Name: ABN

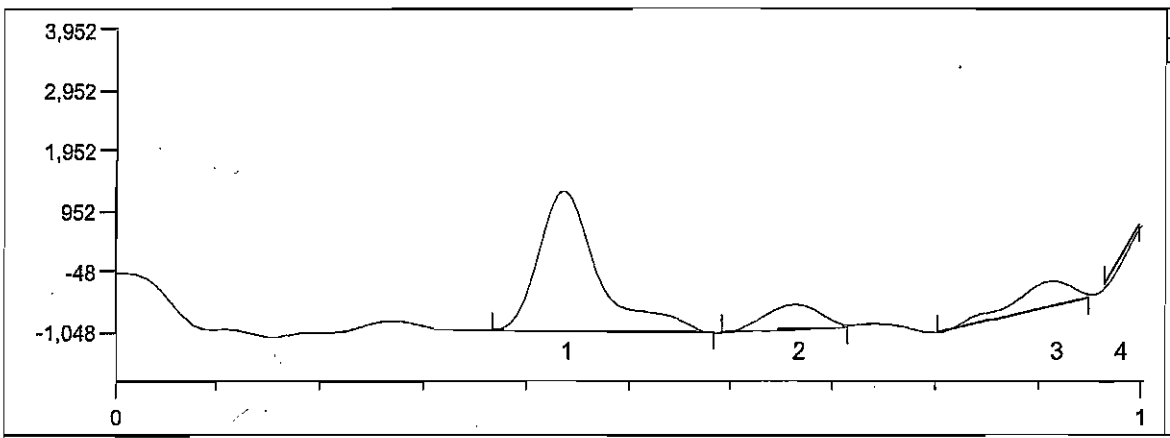


Date:	1/12/05
Time:	12:35 AM

Peak	rt	Area
1	0.43	29,755

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
43	CCB	CCB		1	29,755	0.106			< 0.15	accept

Notes:

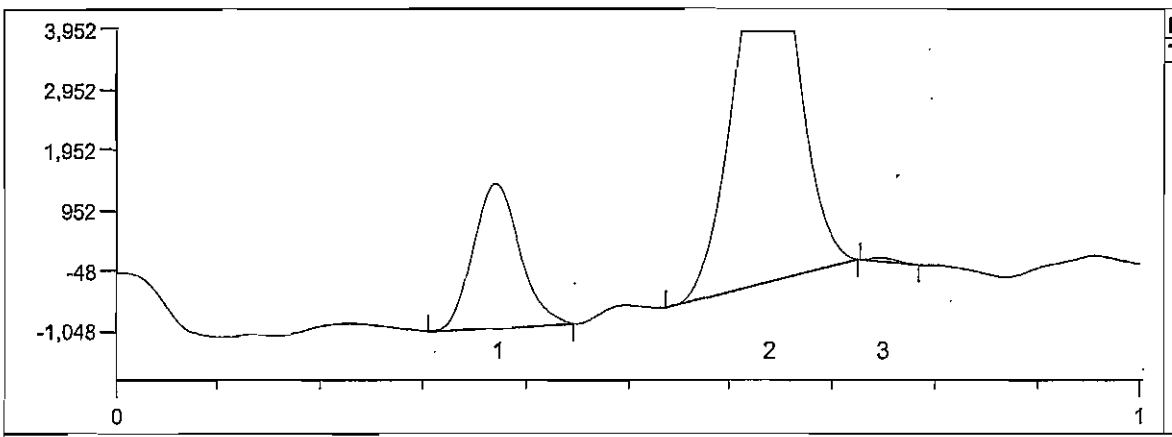


Date:	1/12/05
Time:	12:42 AM

Peak	rt	Area
1	0.43	100,463
2	0.66	16,025
3	0.91	17,000
4	0.97	-62

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
44	S	05BR0023-36	MBA	1	100,463	0.359	0.00632		< HS	accept

Notes:



Date:	1/12/05
Time:	12:47 AM

Peak	rt	Area
1	0.37	79,214
2	0.63	308,063
3	0.74	5,309

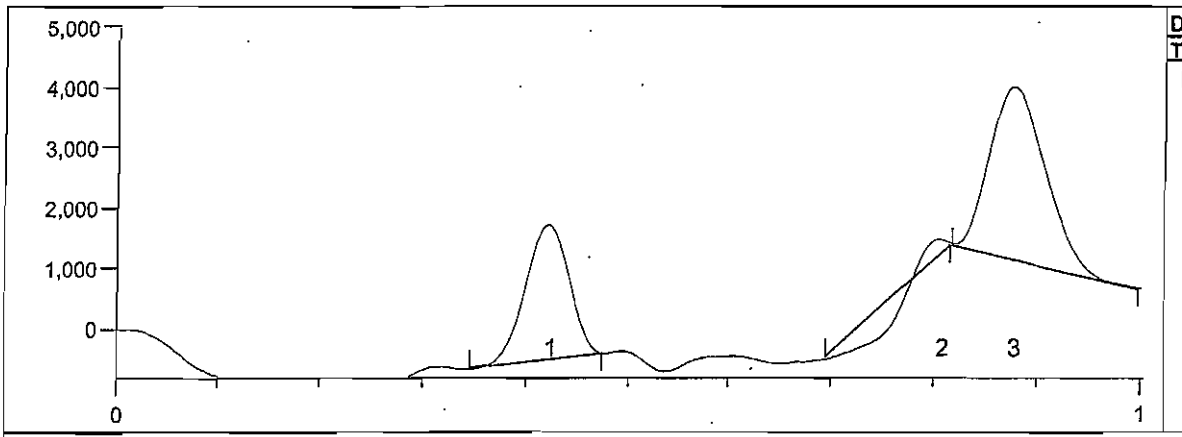
Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
45	S	05BR0023-37	MBA	1	79,214	0.283	0.00533		< HS	accept

Notes:

Batch Number: 04-1028
Method Number: BR-0020

Project Number(s): WIN001
Instrument ID: HGAA 1

Date Analyzed: 1/11/05
Analyst Name: ABN

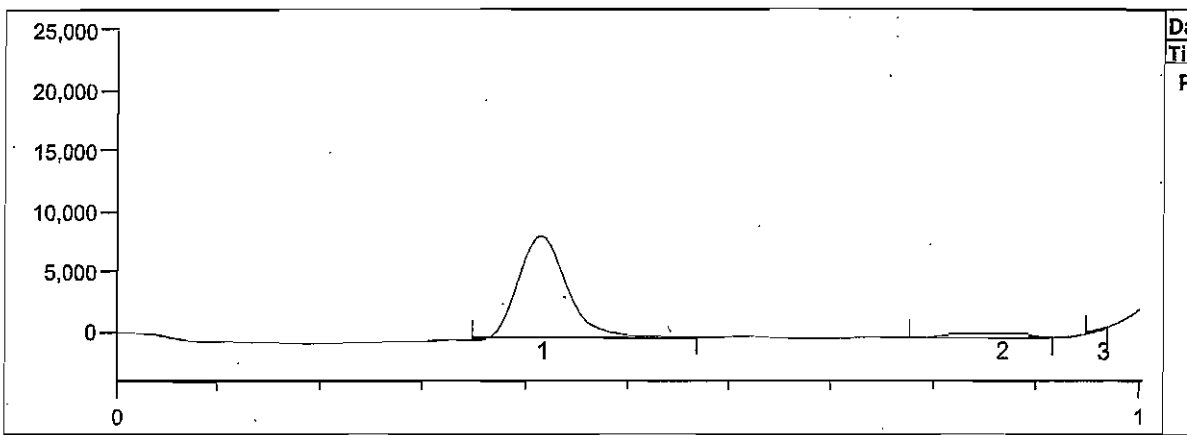


Date: 1/12/05
Time: 12:59 AM

Peak	rt	Area
1	0.42	71,239
2	0.80	48,426
3	0.87	189,540

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
46	S	05BR0023-38	MBA	1	71,239	0.254	0.00465		< HS	accept

Notes:

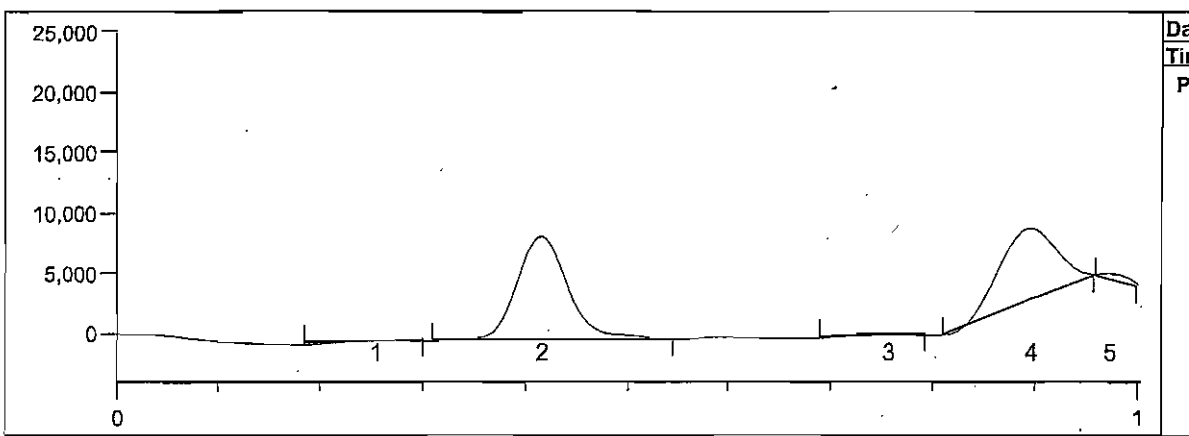


Date: 1/12/05
Time: 1:04 AM

Peak	rt	Area
1	0.41	309,584
2	0.86	20,463
3	0.96	-222

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
47	S	05BR0023-39	MBA	1	309,584	1.11	0.0197		< HS	accept

Notes:



Date: 1/12/05
Time: 1:09 AM

Peak	rt	Area
1	0.25	9,308
2	0.41	327,312
3	0.75	10,329
4	0.89	330,993
5	0.96	31,100

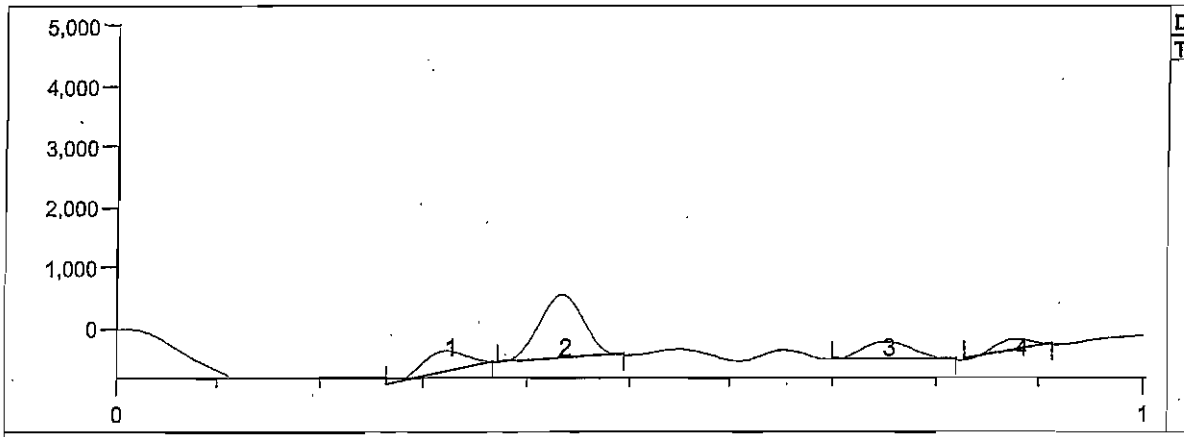
Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
48	S	05BR0023-40	MBA	2	327,312	1.17	0.0211		< HS	accept

Notes:

Batch Number: 04-1028
Method Number: BR-0020

Project Number(s): WIN001
Instrument ID: HGAA 1

Date Analyzed: 1/11/05
Analyst Name: ABN

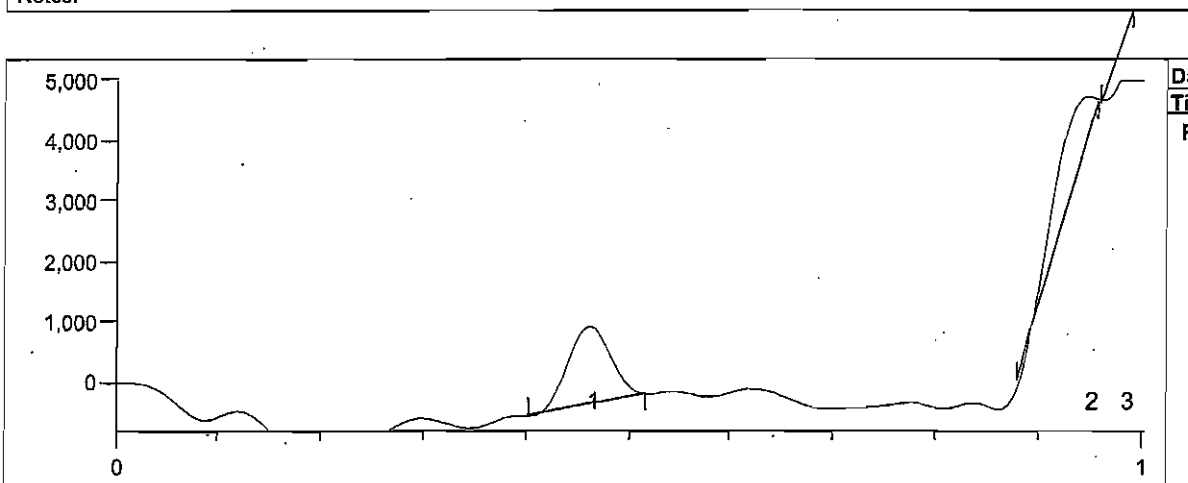


Date: 1/12/05
Time: 1:15 AM

Peak	rt	Area
1	0.32	15,774
2	0.43	39,174
3	0.75	10,959
4	0.88	5,817

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
49	S	05BR0023-30R	MBA	2	39,174	0.140	0.00267		< HS	accept

Notes:

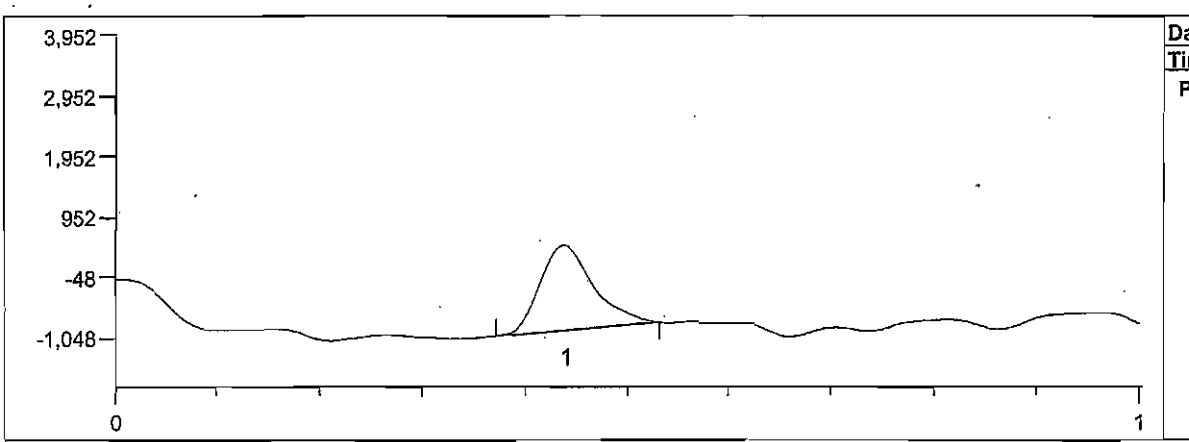


Date: 1/12/05
Time: 1:20 AM

Peak	rt	Area
1	0.46	40,460
2	0.94	45,222
3	0.98	-2,350

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
50	S	05BR0023-31R	MBA	1	40,460	0.144	0.00252		< HS	accept

Notes:



Date: 1/12/05
Time: 1:26 AM

Peak	rt	Area
1	0.44	54,716

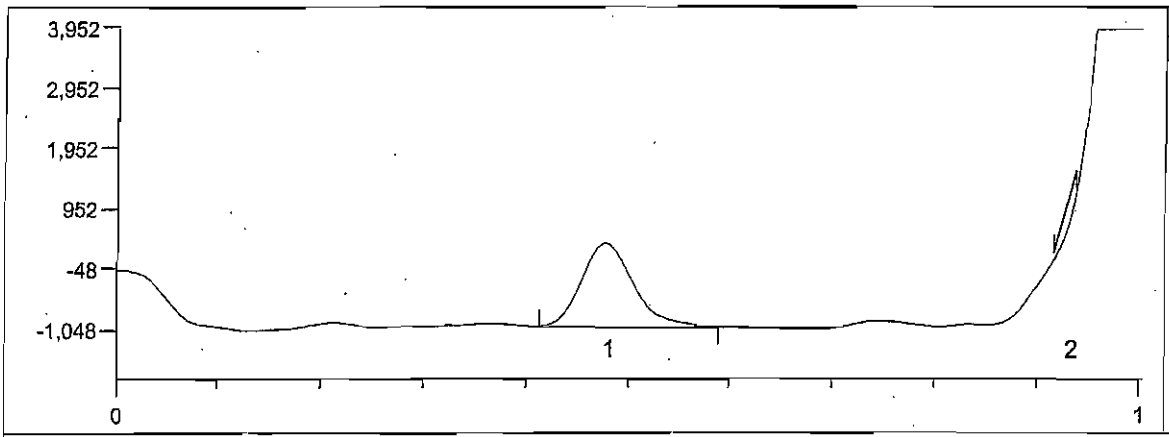
Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
51	S	05BR0023-33R	MBA	1	54,716	0.195	0.00391		< HS	accept

Notes:

Batch Number: 04-1028
Method Number: BR-0020

Project Number(s): WIN001
Instrument ID: HGAA 1

Date Analyzed: 1/11/05
Analyst Name: ABN

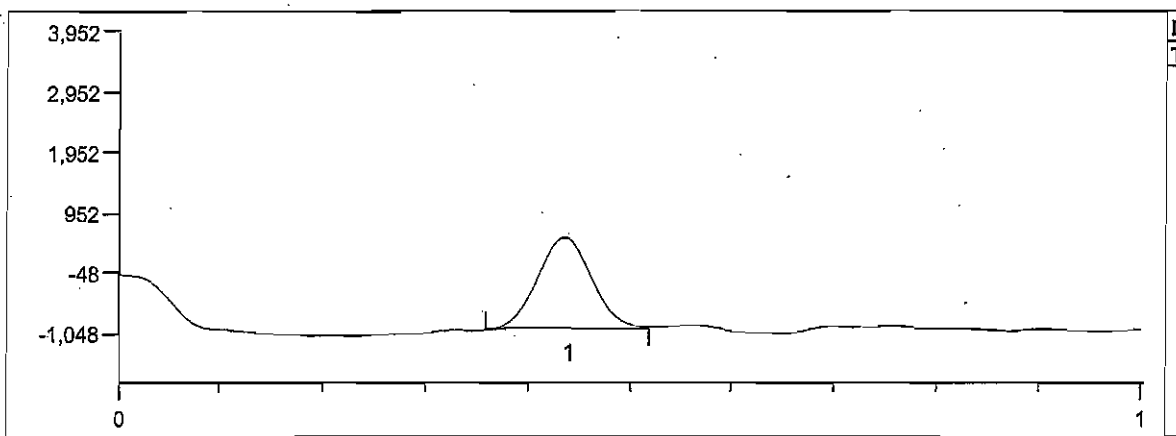


Date: 1/12/05
Time: 1:31 AM

Peak	rt	Area
1	0.48	50,327
2	0.93	-1,669

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
52	S	05BR0023-34R	MBA	1	50,327	0.180	0.00324		< HS	accept

Notes:

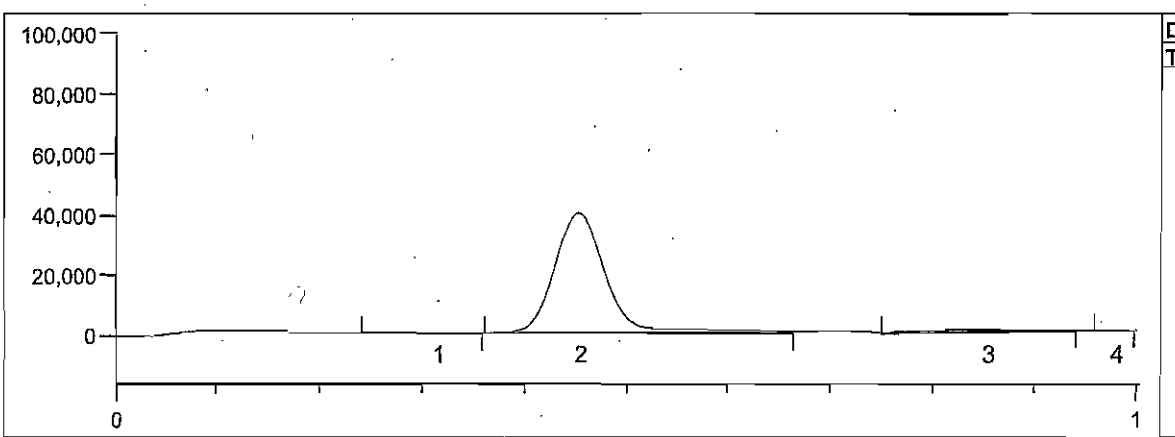


Date: 1/12/05
Time: 1:36 AM

Peak	rt	Area
1	0.43	57,435

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
53	S	05BR0023-35R	MBA	1	57,435	0.205	0.00369		< HS	accept

Notes:



Date: 1/12/05
Time: 1:43 AM

Peak	rt	Area
1	0.31	12,115
2	0.45	1,416,516
3	0.85	29,437
4	0.97	582

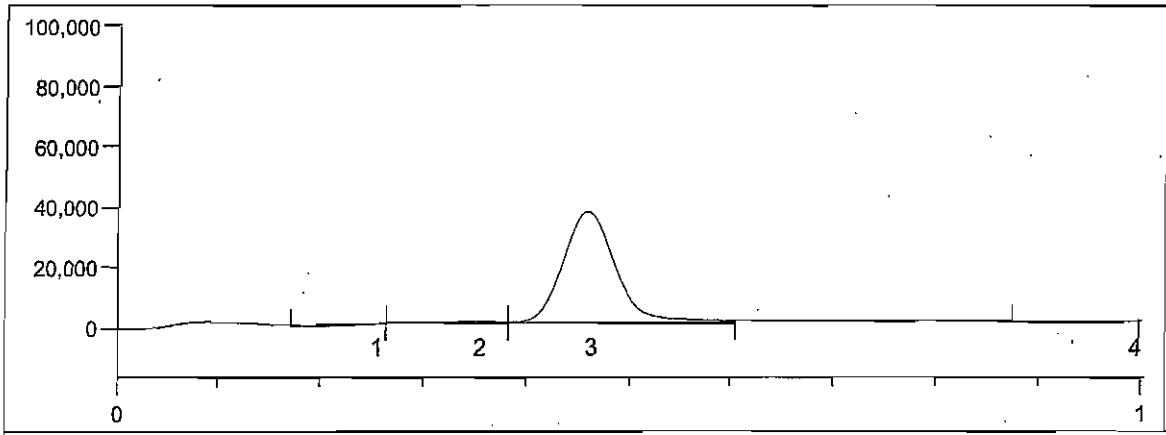
Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
54	OPR	CCV 5.0 ng		2	1,416,516	5.06		101	80-120	accept

Notes:

Batch Number: 04-1028
Method Number: BR-0020

Project Number(s): WIN001
Instrument ID: HGAA 1

Date Analyzed: 1/11/05
Analyst Name: ABN

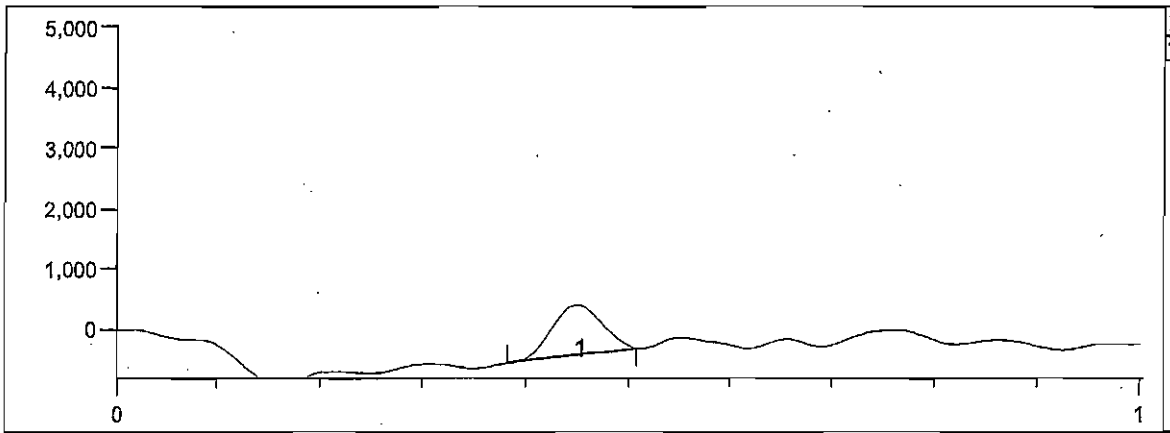


Date: 1/12/05
Time: 1:51 AM

Peak	rt	Area
1	0.25	17,297
2	0.35	38,029
3	0.46	1,333,160
4	0.98	6,718

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
55	OPR	CCV 5.0 ng		3	1,333,160	4.76		95.2	80-120	accept

Notes:



Date: 1/12/05
Time: 1:58 AM

Peak	rt	Area
1	0.45	30,667

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
56	CCB	CCB		1	30,667	0.110			< 0.15	accept

Notes:

Batch Number: 04-1029, 04-1046
Method Number: BR-0021

Project Number(s): WIN001
Instrument ID: HGAA-1

Date Analyzed: 1/14/05
Analyst Name: ABN

Bias and Precision

Run Type	Name/ID	Final Result	Units	Spike Level	Source Result	% REC	% REC Limit	RPD	RPD Limit	Notes
MS	05BR0023-45	8.54	mg/Kg	9.73	0.0113	87.7	65-135			accept
	05BR0023-53	10.5	mg/Kg	9.579	0.0716	109	65-135			accept
	05BR0023-81	1.41	mg/Kg	1.946	0.0149	71.8	65-135			accept
MSD	05BR0023-45	8.70	mg/Kg	10	0.0113	86.9	65-135	1.87	< 35	accept
	05BR0023-53	9.68	mg/Kg	9.542	0.0716	101	65-135	7.97	< 35	accept
	05BR0023-81	1.60	mg/Kg	2	0.0149	79.2	65-135	12.4	< 35	accept
IPR	CRM-1A	17.8	mg/Kg	21.2		83.9	75-125			accept
	CRM-2A	18.1	mg/Kg	21.2		85.5	75-125			accept
	LFB-1B	1.86	mg/Kg	2		93.1	75-125			accept
	LFB-2B	0.879	mg/Kg	1		87.9	75-125			accept
	LFB-2BR	0.838	mg/Kg	1		83.8	75-125			accept
	CRM-1B	19.7	mg/Kg	21.2		93.0	75-125			accept
OPR	CCV 5 ng	4.85	ng	5		97.1	80-120			accept
	CCV 5 ng	4.95	ng	5		98.9	80-120			accept
	CCV 5 ng	4.94	ng	5		98.8	80-120			accept
	CCV 5 ng	4.85	ng	5		97.0	80-120			accept
QCS	ICV 5 ng	5.27	ng	5		105	80-120			accept
MD	05BR0023-45	0.0140	mg/Kg		0.0113		*	22.0 ~~1.87~~	< 35	accept
	05BR0023-53	0.0784	mg/Kg		0.0716		FEM 1/18/05	9.0 ~~7.97~~	< 35	accept
	05BR0023-81	0.0120	mg/Kg		0.0149			21.5 ~~12.4~~	< 35	accept

* See p. 3

Batch Number: 04-1029, 04-1046
Method Number: BR-0021

Project Number(s): WIN001
Instrument ID: HGAA-1

Date Analyzed: 1/14/05
Analyst Name: ABN

Calibration

QA Sample Type	Name/ID	Analyzed Result	Units	Spike Level	% REC	% REC Limit	RSD	RSD Limit	Notes
Calibration	0.5 ng	0.559	ng	0.5	112	80-120			accept
	2 ng	1.85	ng	2	92.4	80-120			accept
	10 ng	10.2	ng	10	102	80-120			accept
	30 ng	28.8	ng	30	95.9	80-120			accept
Calibration Factor		0.00000343	ng/PA				8.18	< 20	accept
Calibration Date		1/14/05							

Blank Summary

QA Sample Type	Name/ID	Analyzed Result	Units	Criteria	StDev	StDev Limit	Notes
CB	CAL BLK-1	0.104	ng	< 0.06	FKM 1/18/05	**	~~accept~~ ~~reject~~
	CAL BLK-2	0.115	ng	< 0.06			accept ~~reject~~
Average		0.00	ng	< 3000	0.00	< 10	accept
MBA	MB-1	0.00212	mg/Kg	< 0.006			accept
	MB-2	0.00226	mg/Kg	< 0.006			accept
	MB-3	0.00135	mg/Kg	< 0.006			accept
Average		0.00191	mg/Kg		0.000490		
MBB	MB-1	0.00307	mg/Kg	< 0.006			accept
	MB-2	0.00268	mg/Kg	< 0.006			accept
	MB-3	0.00468	mg/Kg	< 0.006			accept
Average		0.00348	mg/Kg		0.00106		

** See p. 3

Batch Number: 04-1029, 04-1046
Method Number: BR-0021

Project Number(s): WIN001
Instrument ID: HGAA-1

Date Analyzed: 1/14/05
Analyst Name: ABN

Comments

MDL=0.003 mg*kg-1
PQL=0.01 mg*kg-1

Method Blank Criteria: Average less than or equal to 2x the MDL and StDev less than or equal to 0.67x the MDL OR highest blank less than 0.1x the sample results.

Method Duplicate Criteria: RPD less than or equal to 35% OR results within 2x the PQL of each other if the results are less than 5x the PQL.

* Due to a software error, the MS-MSD RPD has been reported as the MD RPD. The correct RPD values have been hand written in the QA Summary Report.

** All Calibration Blank data associated with the analytical run met the acceptance criteria. Calibration Blank results were manually rejected to prevent the software from blank correcting the instrument calibration and the sample results.

Batches 04-1029 and 04-1046 were run using the same GURU file. The batches were separated with a CCV and a CCB. QC samples from batch 04-1029 have been noted with the suffix A while those from batch 04-1046 have been noted with the suffix B.

BROOKS RAND, LLC
3958 6th Avenue, NW Seattle, WA 98107 U.S.A. 206.632.6206

QUALITY ASSURANCE REPORT

Batch:	04-1029
Analysis:	Arsenic (Inorganic) by EPA 1632 (HGAA)
Tracking:	05BR0023
Project:	WIN001
Matrix:	Biota
Batch Size:	20 Samples
Analysis Date:	January 14, 2005
Calibration Date:	January 14, 2005

1 **SAMPLE PREPARATION** – Acceptable

2 **CALIBRATION** – Acceptable

3 **CALIBRATION VERIFICATION** – Acceptable

4 **QUALITY CONTROL SAMPLES (QCS)** – Acceptable

5 **BLANKS** – Acceptable

6 **METHOD DUPLICATE ANALYSIS** - Due to software error, the MS/MSD RPD has been reported as the MD RPD. The correct RPD value has been manually added to the QA Summary Report.

7 **SPIKE / SPIKE DUPLICATE ANALYSIS** – Acceptable

8 **LIMITS OF DETECTION** – Acceptable

9 **OVERALL DATA QUALITY** – Acceptable

Batches 04-1029 and 04-1046 were run together with appropriate separation of batches with a CCV and CCB. QC samples from batch 04-1029 have been noted "A" while those of 04-1046 have been noted "B".

No qualification of the data was required based on this review.

I certify that, to the best of my knowledge and belief, the data are reported as true and accurate. The Laboratory Director, or his designee, has authorized release of data contained in this Quality Assurance Report as verified by the following signature(s).

1.17.05
Tressa K. Pearson-Franks
Quality Assurance Associate

SAMPLE PROCESSING FORM

Batch #: 04-1029 Analysis: As(Inorganic) Method: EPA 1632 (HGAA)

Tracking #	Lab ID	Project Ref #	Data Due Date	Matrix	Comments
QA: Full					
05BR0023	41	WIN001	1/3/2005	Biota	
05BR0023	42	WIN001	1/3/2005	Biota	
05BR0023	43	WIN001	1/3/2005	Biota	
05BR0023	44	WIN001	1/3/2005	Biota	
05BR0023	45	WIN001	1/3/2005	Biota	
05BR0023	46	WIN001	1/3/2005	Biota	
05BR0023	47	WIN001	1/3/2005	Biota	
05BR0023	48	WIN001	1/3/2005	Biota	
05BR0023	49	WIN001	1/3/2005	Biota	
05BR0023	50	WIN001	1/3/2005	Biota	
05BR0023	51	WIN001	1/3/2005	Biota	
05BR0023	52	WIN001	1/3/2005	Biota	
05BR0023	53	WIN001	1/3/2005	Biota	
05BR0023	54	WIN001	1/3/2005	Biota	
05BR0023	55	WIN001	1/3/2005	Biota	
05BR0023	56	WIN001	1/3/2005	Biota	
05BR0023	57	WIN001	1/3/2005	Biota	
05BR0023	58	WIN001	1/3/2005	Biota	
05BR0023	59	WIN001	1/3/2005	Biota	
05BR0023	60	WIN001	1/3/2005	Biota	

Tracking #	See SOW	See Memo	See Proj Mgr	Consult MSDS	See Contract Info	See Lab Mgr
05BR0023	No	No	No	No	No	No

QA Comments: Report on a WET weight basis.

Batched By: mly Date: 12/15/04

Prepared By: [signature] Date: 12/27/04

Comments: N

Analyzed By: ABN Date: 1/14/05

Comments:

Data Entry By: ABN Date: 1/14/05

Comments:

Primary Data Review By: ABN Date: 1/14/05

Comments:

Final Review By: [signature] Date: 1.17.05

Comments:

	Analyst:	ABN	*Project:*	WIN001	*Matrix:*	Biota	*Analysis:*	As (In)	*Date:*	1/14/2005	
SAMPLE CALCULATIONS											
			Sample	Dilution	Analyzed		Uncorrected				
			weight	Volume	Vol.			Result			
Run	Tracking #	ID #	(mg)	(mL)	(mL)	PA	ng	µg/g			
15	05BR0023	45	504	10.0	2.00	331	1.14	0.0113			
16	05BR0023	45MD	514	10.0	2.00	421	1.44	0.01404			
17	05BR0023	45MS	500	10.0	0.025	3113	10.68	8.54			
18	05BR0023	45MSD	502	10.0	0.025	3185	10.92	8.703			
19	05BR0023	53	500	10.0	2.00	2089	7.164	0.0716			
20	05BR0023	53MD	512	10.0	2.00	2340	8.024	0.0784			
21	05BR0023	53MS	494	10.0	0.025	3777	12.95	10.49			
22	05BR0023	53MSD	507	10.0	0.025	3580	12.28	9.69			
23	05BR0023	41	493	10.0	2.00	411	1.41	0.0143			
24	05BR0023	42	491	10.0	2.00	668	2.29	0.0233			
25	05BR0023	43	523	10.0	2.00	503	1.72	0.0165			
26	05BR0023	44	524	10.0	2.00	1033	3.54	0.0338			
27	05BR0023	46	539	10.0	2.00	457	1.57	0.0145			
28	05BR0023	47	518	10.0	2.00	415	1.42	0.0137			
29	05BR0023	48	523	10.0	2.00	640	2.19	0.0210			
30	05BR0023	49	493	10.0	2.00	488	1.67	0.0170			
33	05BR0023	50	530	10.0	2.00	218	0.75	0.007053			
34	05BR0023	51	516	10.0	2.00	2948	10.11	0.0980			
35	05BR0023	52	528	10.0	2.00	672	2.30	0.0218			
36	05BR0023	54	519	10.0	2.00	1387	4.756	0.0458			
37	05BR0023	55	520	10.0	2.00	1362	4.671	0.0449			
38	05BR0023	56	493	10.0	2.00	2062	7.071	0.0717			
39	05BR0023	57	498	10.0	2.00	1782	6.111	0.0614			
40	05BR0023	58	500	10.0	2.00	2683	9.201	0.0920			
41	05BR0023	59	512	10.0	2.00	83	0.28	0.00278			
42	05BR0023	60	554	10.0	2.00	738	2.53	0.0228			

Calibration Results - 1/14/05 HGAA System 1 by As(In)

Instrument Calibration						**Calibration Blanks**				
				Calibration						
Run	ml std used	ng	PA	Coefficient		Run	PA	ng	ug/L	
3	0.05	0.5	163	0.003067	111.8%	1	30	0.103	0.005	
4	0.20	2.0	539	0.003711		2	34	0.117	0.006	
5	1.00	10.0	2973	0.003364		**Average:**	32.00	0.110	0.005	
6	3.00	30.0	8391	0.003575		**St Dev:**	2.83	0.010	0.000	
R:		0.9997	**Avg:**	0.003429						
			RSD:	8.2%						

QC CALCULATIONS (continued)

Calibration Checks

Mid level standards

Run	ng	PA	ng	%	
7	5.00	1538	5.27	105.5%	*
8	5.00	1415	4.85	97.0%	
31	5.00	1442	4.94	98.9%	
43	5.00	1440	4.94	98.8%	

* Independent Calibration Verification.

Calibration Blank Checks

Run	PA	ng	ug/L
9	17	0.058	0.003
32	0	0.000	0.000
44	0	0.000	0.000

Method Blanks

Run	ID #	weight (mg)	Dilution Volume (mL)	Analyzed Volume (mL)	PA	measured ng	total ng	Result conc. µg/g
10	MB-1	500	10.00	2.00	62	0.213	1.06	0.002
11	MB-2	500	10.00	2.00	66	0.226	1.13	0.002
12	MB-3	500	10.00	2.00	39	0.134	0.67	0.001
					Average:	0.191	0.95	0.002
					StDev:	0.050	0.250	0.000

Precision

Summary of Duplicate Sample Analysis

Run	Tracking #	ID #	Uncorr. Result ng/g
15	05BR0023	45	0.011
16	05BR0023	45MD	0.014
		Average:	0.013
		RPD:	22.0%
19	05BR0023	53	0.072
20	05BR0023	53MD	0.078
		Average:	0.075
		RPD:	9.0%

BIAS

Spiked Sample (Note that MS recovery was calculated using uncorrected results)

Run	Tracking #	ID #	Spike (ng)	Sample Weight (mg)	expected µg/g	spike + sample measured µg/g	sample measured µg/g	spike measured µg/g	% Rec.	RPD
20	05BR0023	45MS	5000	514	9.728	8.540	0.011	8.529	87.7%	
21	05BR0023	45MSD	5000	500	10.00	8.703	0.011	8.692	86.9%	1.9%
25	05BR0023	53MS	5000	522	9.579	10.488	0.072	10.42	108.7%	
26	05BR0023	53MSD	5000	524	9.542	9.686	0.072	9.614	100.8%	8.0%

Method CRMs

Run	CRM ID	Certified Value µg/g	Sample Weight (mg)	Dilution Volume (mL)	Analyzed Vol. (mL)	PA	ng	Recovery µg/g	% Rec.
13	CRM-1	21.20	99	10.0	0.05	2569	8.81	17.797	83.9%
14	CRM-2	21.20	108	10.0	0.05	2855	9.79	18.130	85.5%

*CRM: NRCC MESS-3

As-T / As Species inorganic Se-T / Se Species _____
Methods BR-0020 (HGAAS) & EPA 1632 (HGAAS)

Matrix: Water / Sediment / Biota / Other _____

Batch #: 04-1029 Preparation Date: 12/27/04
Tracking #(s): 05BR0023 Prepared By: MK
Project #(s): UOTN001 Page 1 of 2

Flask #	Sample I.D.	Sample Wt. / Vol. (mg) / (mL)	Flask #	Sample I.D.	Sample Wt. / Vol. (mg) / (mL)
	MB-1	—		05BR0023-50	530
	MB-2	—		51	516
	MB-3	—		52	528
	CRM-1	99		53	500
	CRM-2	108		53MD	512
	05BR0023-41	493		53 MS	494
	42	491		53 MSD	507
	43	523		54	519
	44	524		55	520
	45	504		56	493
	45MD	514		57	498
	45MS	500		58	500
	45MSD	502		59	512
	46	539		60	554
	47	518			
	48	523			
	49	493			

Matrix Spike/Matrix Spike Duplicate

Sample I.D.	Spike I.D.	Spike std. Conc.	Spike Vol. (mL)	Spike Conc. (µg/g) / (µg/L)
05BR0023-45 MS	04-344-3	10 µg/mL	0.500	9.73
45 MSD				10.00
53 MS				9.58
53 MSD				9.54

As-T / As Species ~~inorganic~~ Se-T / Se Species ______
Methods BR-0020 (HGAAS) & EPA 1632 (HGAAS)

Matrix: Water / Sediment / Biota / Other ______

Batch #: 04-1029 Preparation Date: 12/27/04

Prepared By: MK Page 2 of 2

Ongoing Precision and Recovery Sample (OPR) or Certified reference Material (CRM)

OPR / CRM I.D.	Certified Conc. (µg/g) / (µg/L)	Source I.D. (for OPR)
CRM-1	21.2	MESS-3
CRM-2	21.2	↓

REAGENTS: *Volume & ID #*

HNO_3: —

$HClO_4$: —

H_2SO_4: —

ZM HCl: 04-313 (04-362 MB-1 → 45, 53, 49, 50)

$H_3PO_4/NH_2OH{\bullet}HCl$: —

DIGESTION:

Temperature	Time
80°C	16 hrs (timer)

DILUTION INFORMATION:

Final Volume of Preparation: 10 mL

Volume of Prep Subsampled: —

Dilution Media: ______

Final Dilution Volume: ______

ADDITIONAL COMMENTS: CRM-1 is old bottle of MESS-3, CRM-2 is new bottle (opened 12/21/04).

(In)

As ☒ Se ☐ Analysis Sheet

1/14/05 ABN

Batch: 04-1029 + 04-1046 Matrix: Biota

Analyst: ABN Calibration Blank $\bar{X}$: 32.00 PA Blank Corr. Calib. Coef. $\bar{X}$: 0.003429

Date: 1-14-05 Method Blank $\bar{X}$: 0.002 ng/g RSD: 8.2%

Standards: Cal Std 10 ng /mL: 05-014-01 As 30% NH_2OHHCl: — N=: 4

QA: Full☒ Standard☐ ICV Std: 05-012-02 As 4% $NaBH_4$: 05-014-NaBH4 r: 0.9997

Noise: 4% $NaBH_4$ add. & purge time (m:s) 2 minutes

Run #	Trap #	Sample ID	Analyzed volume (mL)	PA	Sample Specific Notes
1	C8	Cal Blk-1	—	30	
2	N1	↓ -2	—	34	
3	C8	0.5 ng	0.050	163	
4	N1	2	0.200	539	
5	C8	10	1.00	2973	
6	N1	30 ↓	3.00	8391	
7	C8	ICV 5 ng	0.050	1538	
8	N1	CCV 5 ng	0.500	1415	
9	C8	CCB	—	17	
10	N1	MB-1	2.00	62	
11	C8	1 2	↓	66	
12	N1	↓ 3	↓	39	
13	C8	CRM-1	0.050	2569	
14	N1	CRM-2	↓	2855	
15	C8	05BR0023-45	2.00	331	
16	N1	-45MD	↓	421	
17	C8	-45MS	0.025	3113	
18	N1	-45MSD	↓	3185	
19	C8	-53	2.00	2089	
20	N1	-53MD	↓	2341	
21	C8	-53MS	0.025	3777	
22	N1	-53MSD	↓	3580	
23	C8	-41	2.00	411	
24	N1	↓ -42	2.00	668	

Comments:

Method SRM: MESS-3

As ☒ (In) Se ☐ Analysis Sheet

Batch: 04-1029 & 04-1046 Matrix: Biota

Analyst: ABN Date: 1-14-05

Run #	Trap #	Sample ID	Analyzed volume (mL)	PA	Sample Specific Notes
25	C8	05BR0023-43	2.00	503	
26	N1	-44		1033	
27	C8	-~~45~~46		457	1/14/05 ABN
28	N1	-~~46~~47		415	1/14/05 ABN
29	C8	-48		640	
30	N1	-49		488	
31	C8	CCV 5 ng	0.500	1442	
32	N1	CCB	—	0	
33	C8	05BR0023-50	2.00	218	
34	N1	-51		2948	
35	C8	-52		672	
36	N1	-54		1387	
37	C8	-55		1362	
38	N1	-56		2062	
39	C8	-57		1782	
40	N1	-58		2683	
41	C8	-59		83	
42	N1	-60		738	
43	C8	CCV 5 ng	0.500	1440	
44	N1	CCB	~~0~~ —	0	1/14/05 ABN
45	C8	MB-1	2.00	~~8~~90	1/14/05 ABN
46	N1	-2		78	
47	C8	-3		136	
48	N1	LFB-1	0.050	1358	
49	C8	LFB-2		641	
50	N1	LFB-2R	0.050	611	
51	C8	CRM	0.050	2959	
52	N1	05BR0023-8	2.00	446	

Comments: _____

As ☐ Se ☐ Analysis Sheet

Batch: 04-1046 (04-1039 and) Matrix: Biota

Analyst: ABN Date: 1-14-05

Run #	Trap #	Sample ID	Analyzed volume (mL)	PA	Sample Specific Notes
53	C8	05BR0023-81MD	2.00	351	
54	N1	-81MS	0.050	1096	
55	C8	-81MSD	↓	1232	
56	N1	-82	1.00	153	
57	C8	-83		1208	
58	N1	-84		148	
59	C8	-85		764	
60	N1	-86		255	
61	C8	↓ -87	↓	1380	
62	N1	CCV 5ng	0.500	1415	
63	C8	CCB	—	35	

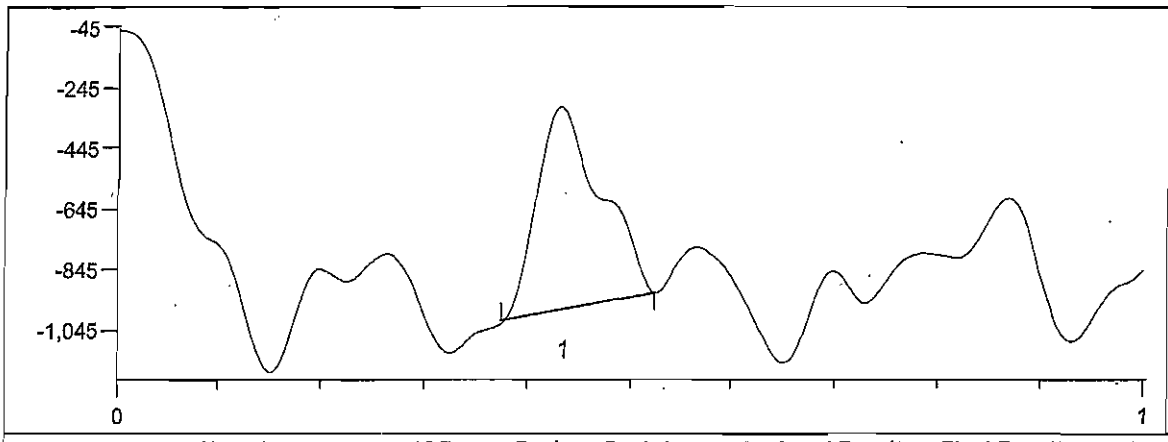
1/14/05 ABN

Comments:

Batch Number: 04-1029, 04-1046
Method Number: BR-0021

Project Number(s): WIN001
Instrument ID: HGAA-1

Date Analyzed: 1/14/05
Analyst Name: ABN

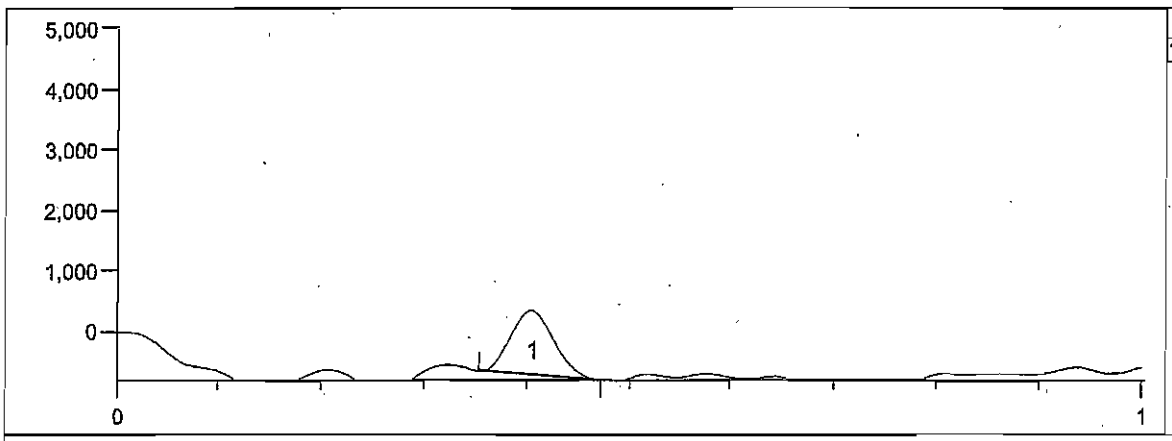


Date: 1/14/05
Time: 4:59 PM

Peak	rt	Area
1	0.43	30,390

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
1	CB	CAL BLK-1		1	30,390	0.104		0.104	< 0.06	reject

Notes:

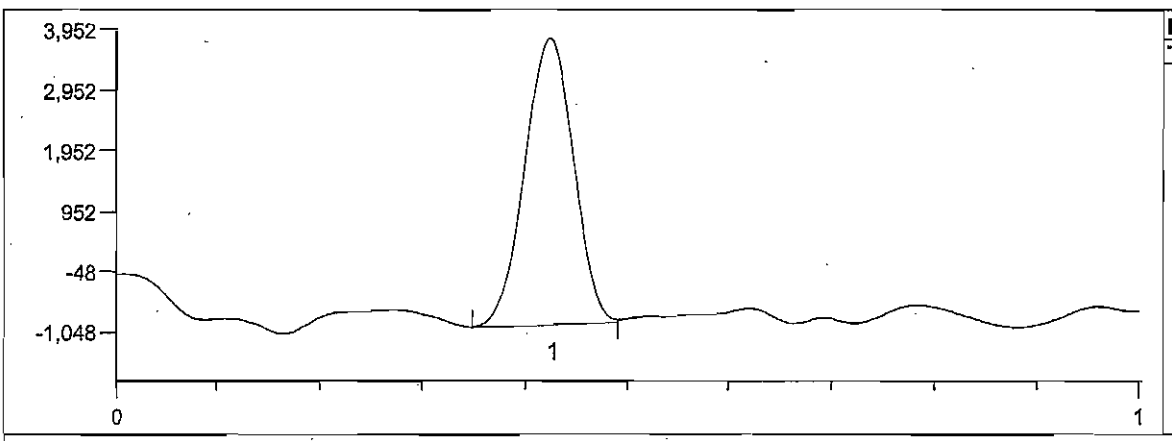


Date: 1/14/05
Time: 5:06 PM

Peak	rt	Area
1	0.40	33,534

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
2	CB	CAL BLK-2		1	33,534	0.115		0.115	< 0.06	reject

Notes:



Date: 1/14/05
Time: 5:12 PM

Peak	rt	Area
1	0.42	163,018

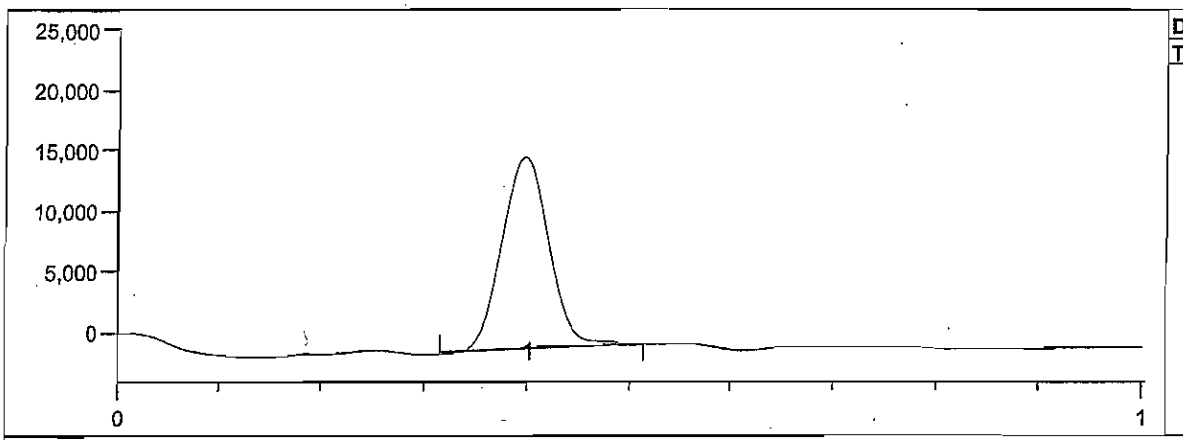
Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
3	STD	0.5 ng		1	163,018	0.559		112	80-120	accept

Notes:

Batch Number: 04-1029, 04-1046
Method Number: BR-0021

Project Number(s): WIN001
Instrument ID: HGAA-1

Date Analyzed: 1/14/05
Analyst Name: ABN

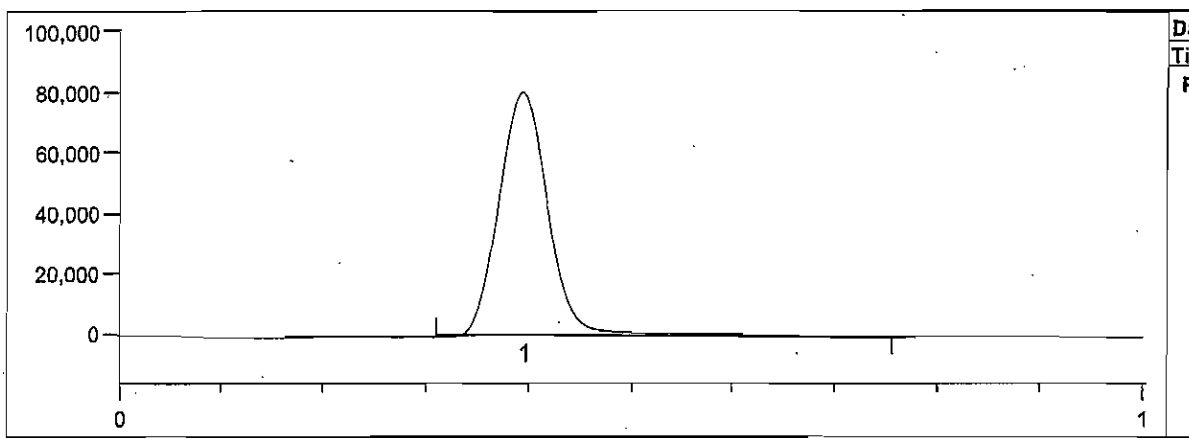


Date: 1/14/05
Time: 5:18 PM

Peak	rt	Area
1	0.40	538,962

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
4	STD	2 ng		1	538,962	1.85		92.4	80-120	accept

Notes:

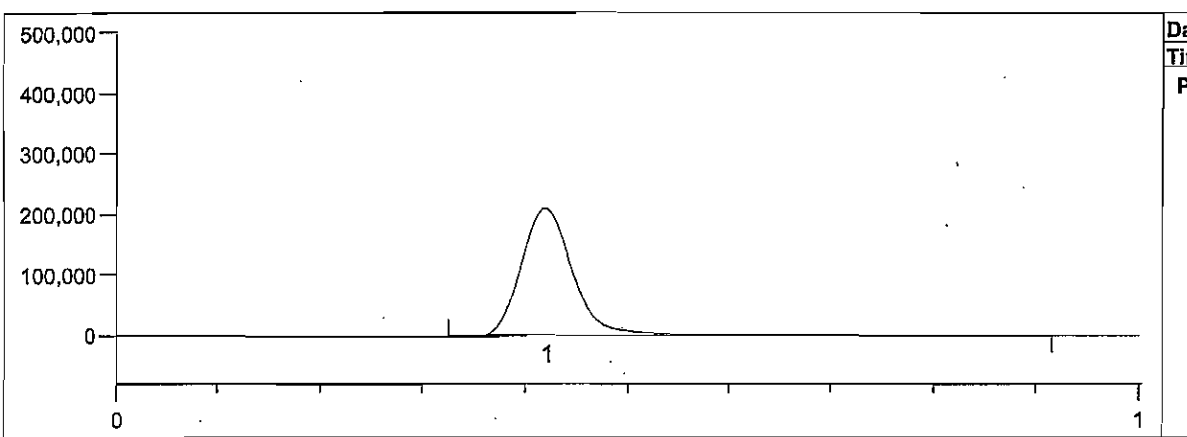


Date: 1/14/05
Time: 5:30 PM

Peak	rt	Area
1	0.39	2,972,977

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
5	STD	10 ng		1	2,972,977	10.2		102	80-120	accept

Notes:



Date: 1/14/05
Time: 5:37 PM

Peak	rt	Area
1	0.42	8,391,194

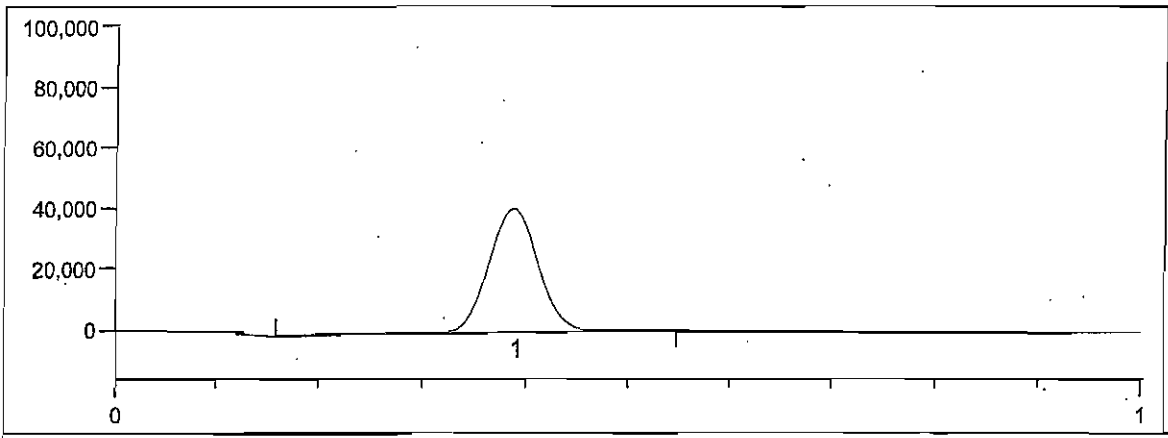
Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
6	STD	30 ng		1	8,391,194	28.8		95.9	80-120	accept

Notes:

Batch Number: 04-1029, 04-1046
Method Number: BR-0021

Project Number(s): WIN001
Instrument ID: HGAA-1

Date Analyzed: 1/14/05
Analyst Name: ABN

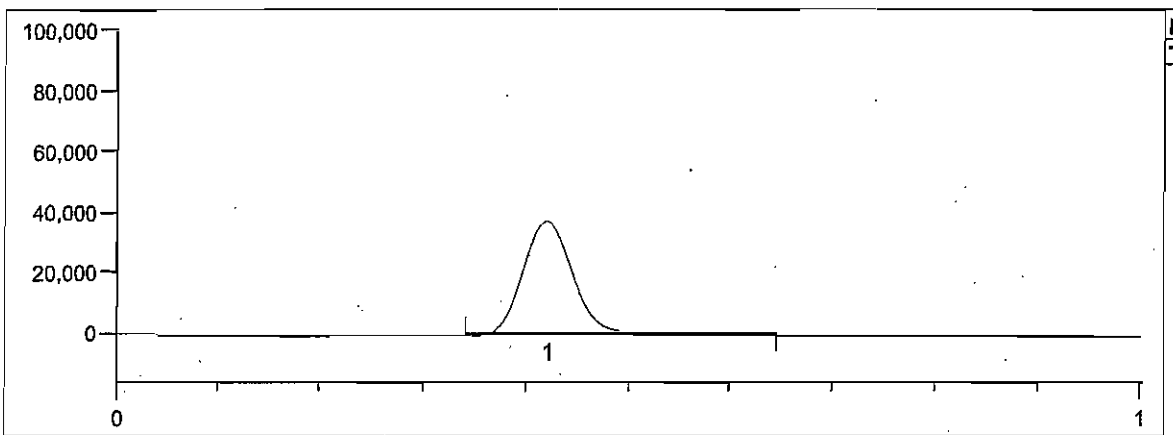


Date: 1/14/05
Time: 5:44 PM

Peak	rt	Area
1	0.38	1,537,885

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
7	QCS	ICV 5 ng		1	1,537,885	5.27		105	80-120	accept

Notes:

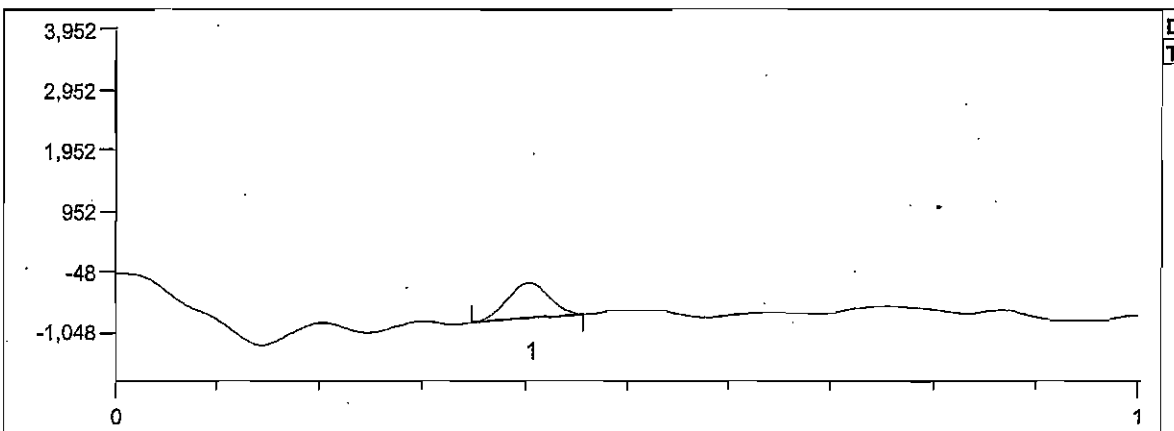


Date: 1/14/05
Time: 5:51 PM

Peak	rt	Area
1	0.42	1,415,064

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
8	OPR	CCV 5 ng		1	1,415,064	4.85		97.1	80-120	accept

Notes:



Date: 1/14/05
Time: 5:56 PM

Peak	rt	Area
1	0.40	17,379

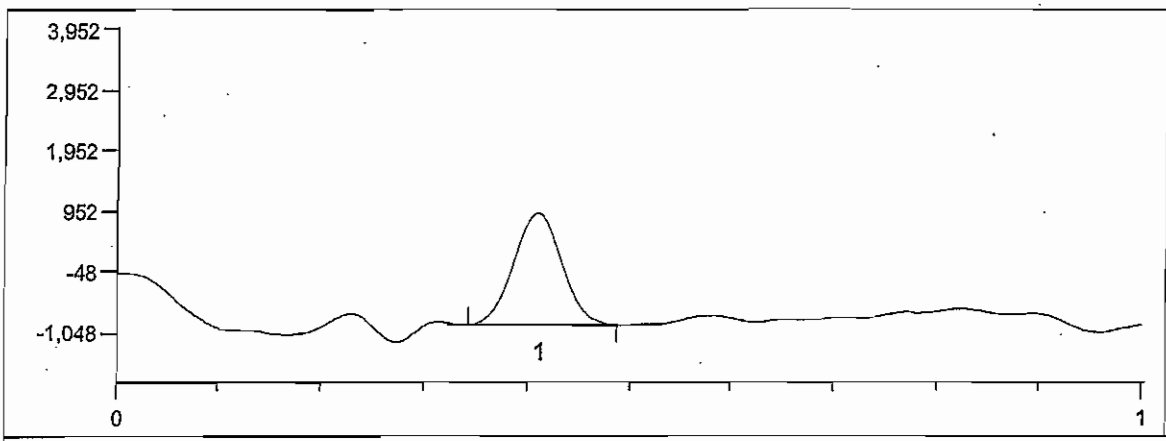
Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
9	CCB	CCB		1	17,379	0.0596			< 0.14	reject

Notes:

Batch Number: 04-1029, 04-1046
Method Number: BR-0021

Project Number(s): WIN001
Instrument ID: HGAA-1

Date Analyzed: 1/14/05
Analyst Name: ABN

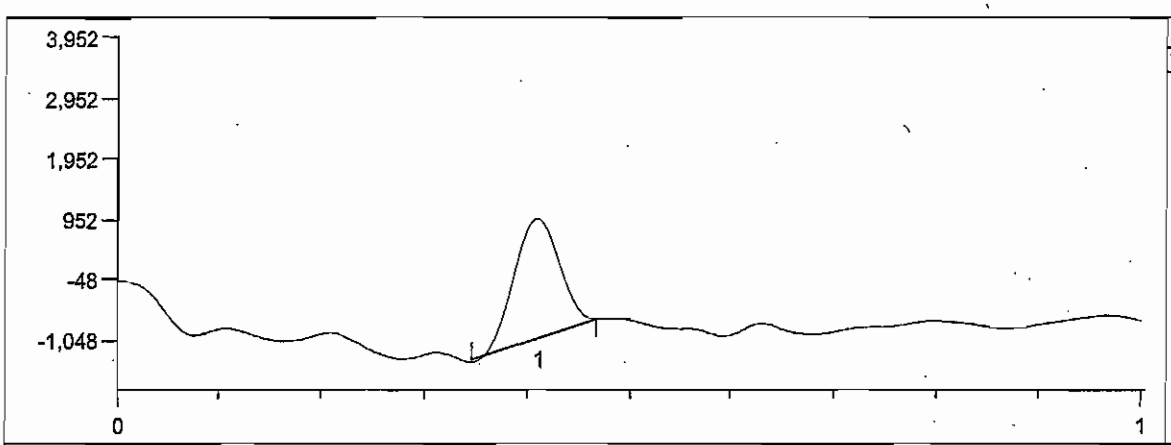


Date: 1/14/05
Time: 6:03 PM

Peak	rt	Area
1	0.41	61,854

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
10	MBA	MB-1		1	61,854	0.212	0.00212	0.00212	< 0.003	accept

Notes:

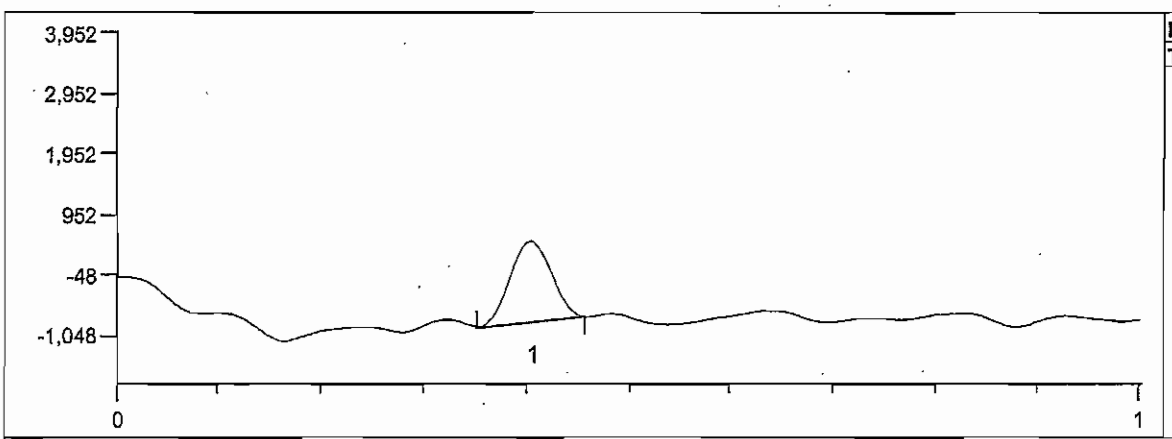


Date: 1/14/05
Time: 6:09 PM

Peak	rt	Area
1	0.41	66,050

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
11	MBA	MB-2		1	66,050	0.226	0.00226	0.00226	< 0.003	accept

Notes:



Date: 1/14/05
Time: 6:15 PM

Peak	rt	Area
1	0.40	39,268

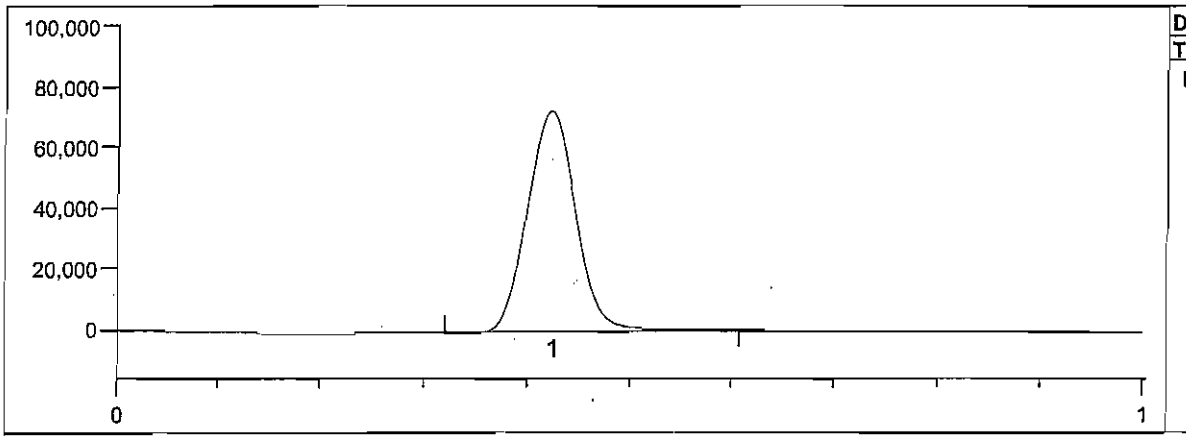
Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
12	MBA	MB-3		1	39,268	0.135	0.00135	0.00135	< 0.003	accept

Notes:

Batch Number: 04-1029, 04-1046
Method Number: BR-0021

Project Number(s): WIN001
Instrument ID: HGAA-1

Date Analyzed: 1/14/05
Analyst Name: ABN

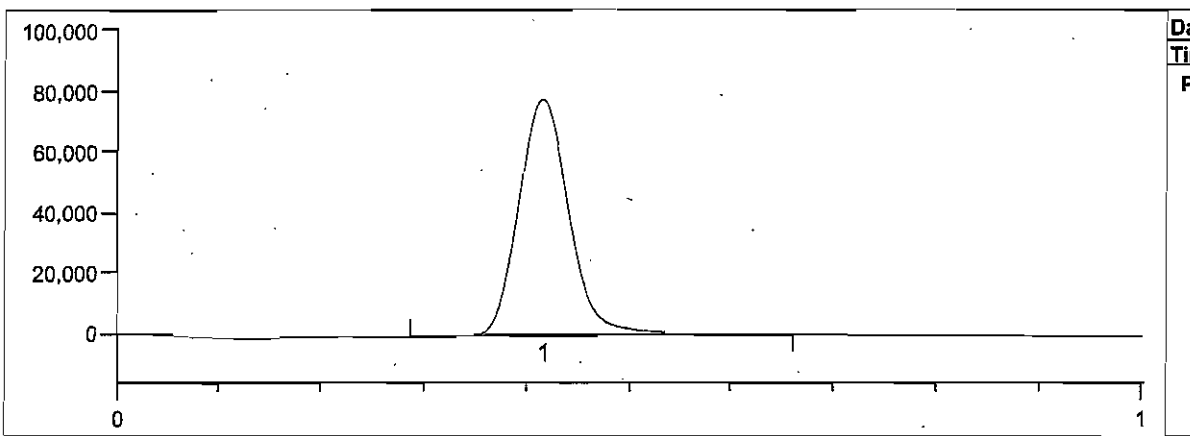


Date: 1/14/05
Time: 6:25 PM

Peak	rt	Area
1	0.42	2,568,830

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
13	IPR	CRM-1A	MBA	1	2,568,830	8.81	17.8	83.9	75-125	accept

Notes:

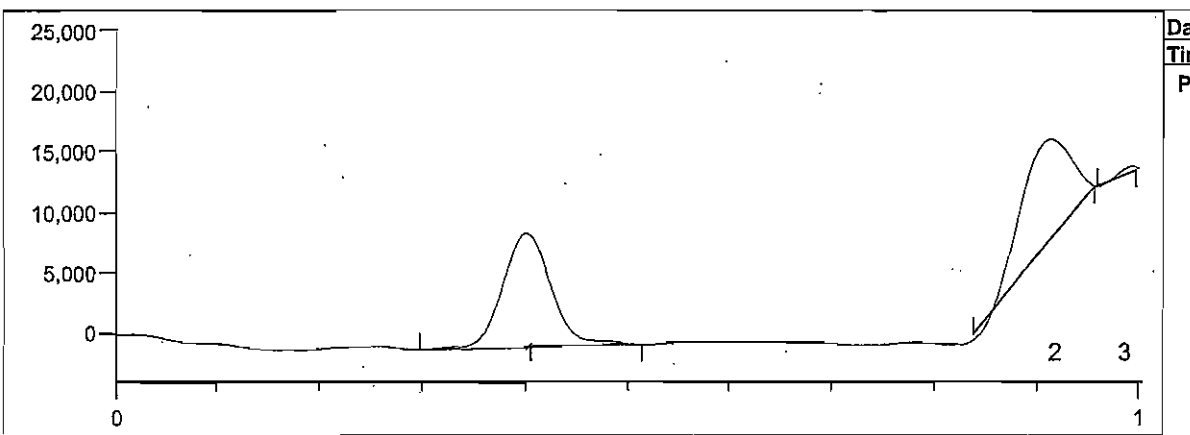


Date: 1/14/05
Time: 6:33 PM

Peak	rt	Area
1	0.41	2,855,381

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
14	IPR	CRM-2A	MBA	1	2,855,381	9.79	18.1	85.5	75-125	accept

Notes:



Date: 1/14/05
Time: 6:39 PM

Peak	rt	Area
1	0.40	331,429
2	0.91	412,255
3	0.98	36,680

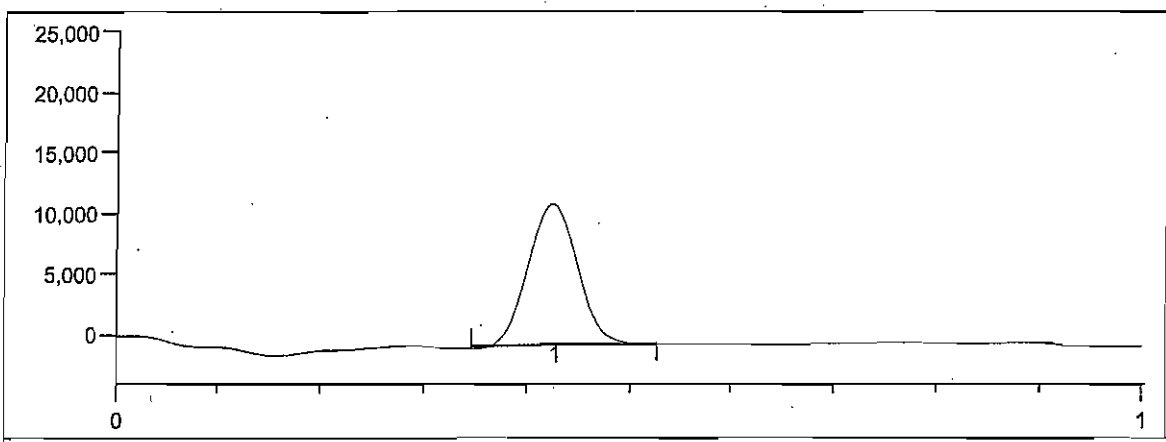
Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
15	S	05BR0023-45	MBA	1	331,429	1.14	0.0113		< HS	accept

Notes:

Batch Number: 04-1029, 04-1046
Method Number: BR-0021

Project Number(s): WIN001
Instrument ID: HGAA-1

Date Analyzed: 1/14/05
Analyst Name: ABN

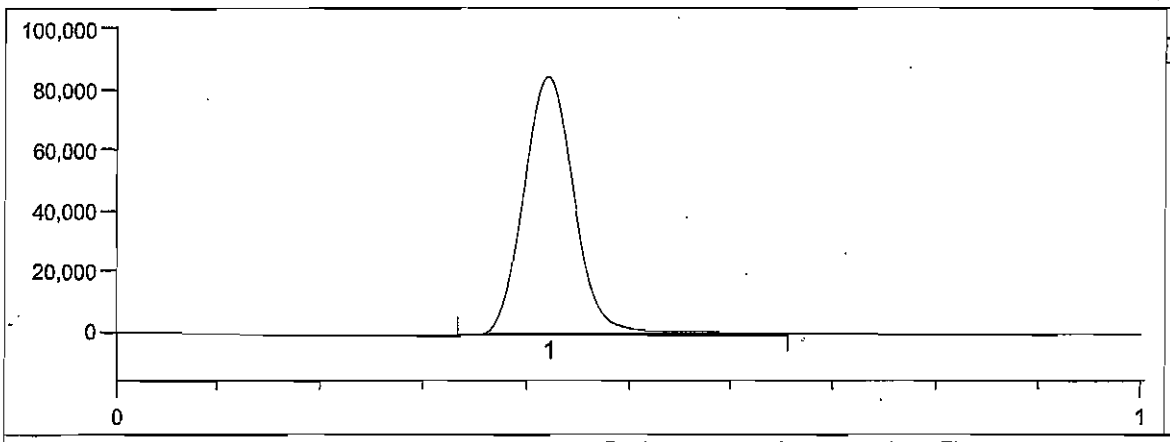


Date: 1/14/05
Time: 6:54 PM

Peak	rt	Area
1	0.42	420,534

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
16	MD	05BR0023-45	MBA	1	420,534	1.44	0.0140	21.8	< 35	accept

Notes:

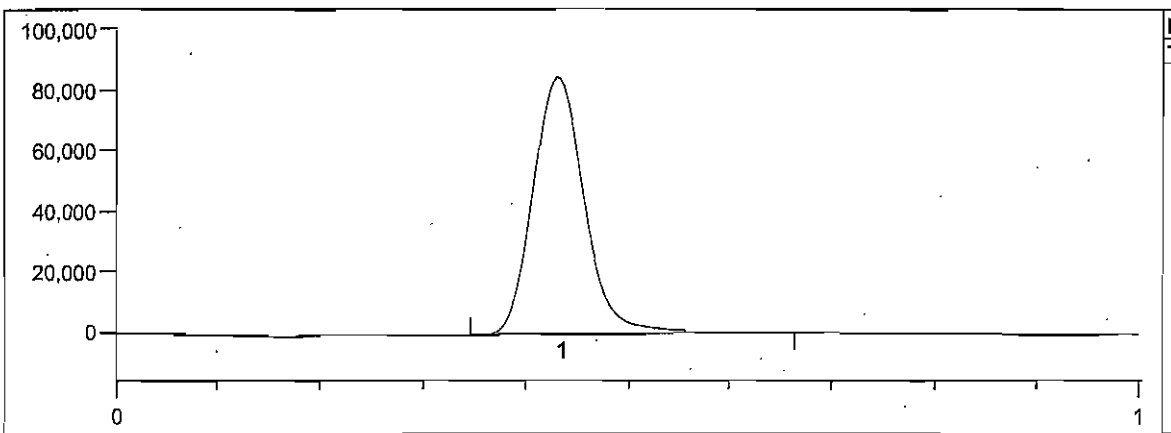


Date: 1/14/05
Time: 7:03 PM

Peak	rt	Area
1	0.42	3,113,307

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
17	MS	05BR0023-45	MBA	1	3,113,307	10.7	8.54	87.7	65-135	accept

Notes:



Date: 1/14/05
Time: 7:09 PM

Peak	rt	Area
1	0.43	3,184,807

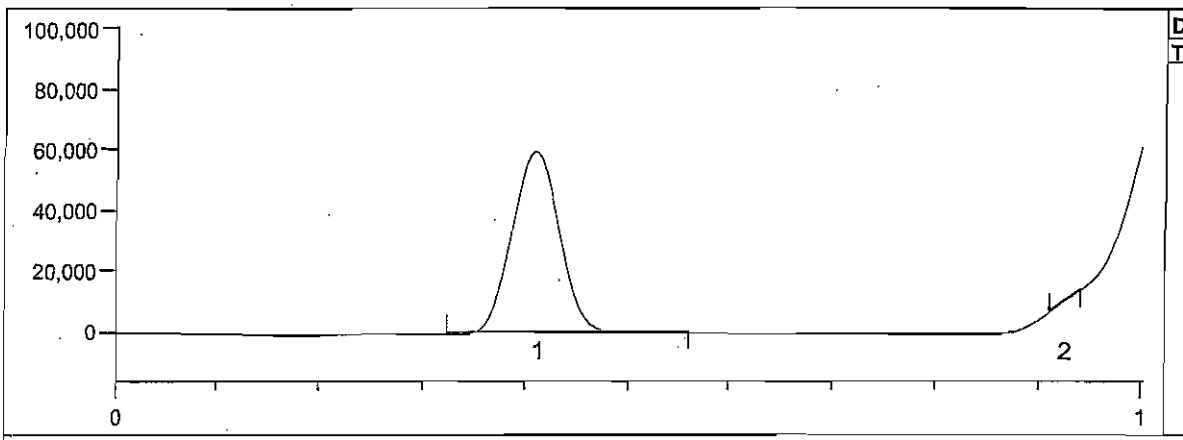
Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
18	MSD	05BR0023-45	MBA	1	3,184,807	10.9	8.70	86.9	65-135	accept

Notes:

Batch Number: 04-1029, 04-1046
Method Number: BR-0021

Project Number(s): WIN001
Instrument ID: HGAA-1

Date Analyzed: 1/14/05
Analyst Name: ABN

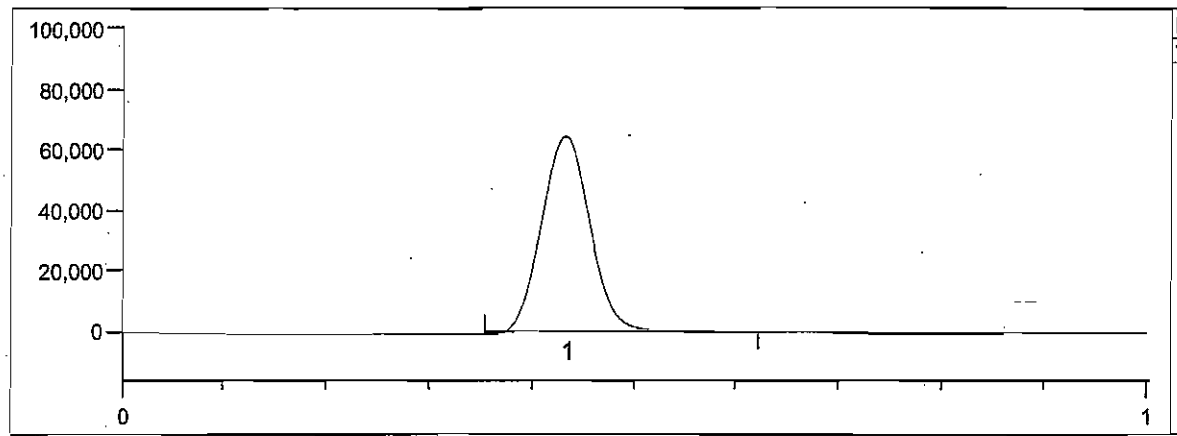


Date: 1/14/05
Time: 7:17 PM

Peak	rt	Area
1	0.41	2,088,870
2	0.92	2,107

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
19	S	05BR0023-53	MBA	1	2,088,870	7.16	0.0716		< HS	accept

Notes:

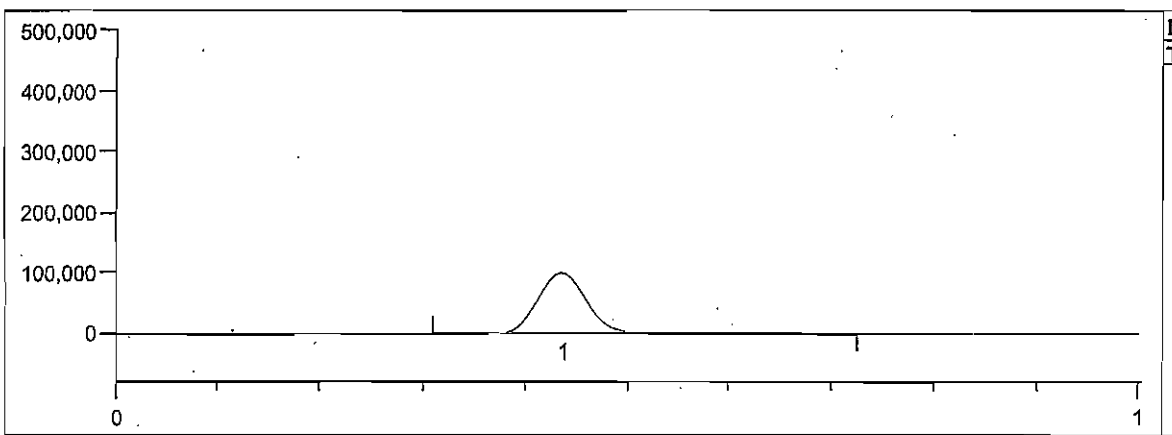


Date: 1/14/05
Time: 7:22 PM

Peak	rt	Area
1	0.43	2,340,775

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
20	MD	05BR0023-53	MBA	1	2,340,775	8.03	0.0784	9.01	< 35	accept

Notes:



Date: 1/14/05
Time: 7:28 PM

Peak	rt	Area
1	0.43	3,777,412

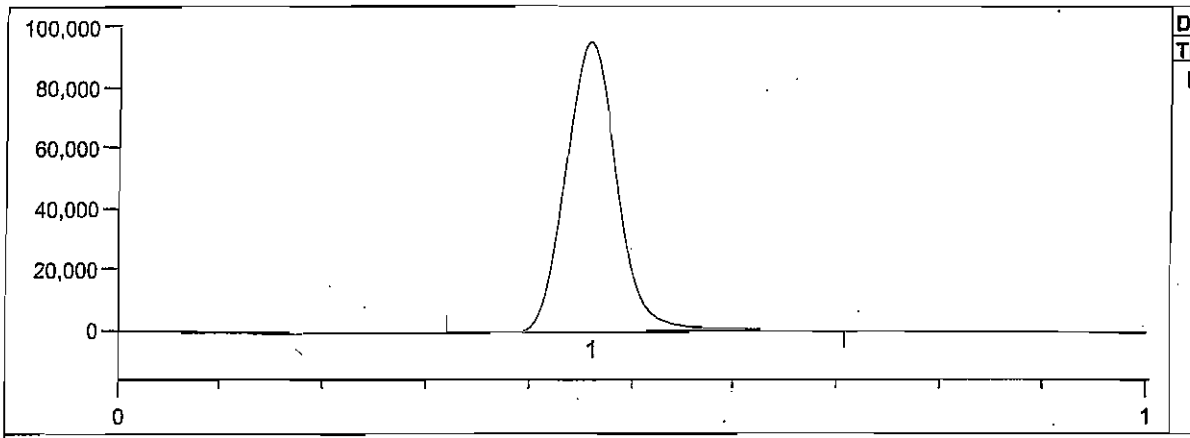
Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
21	MS	05BR0023-53	MBA	1	3,777,412	13.0	10.5	109	65-135	accept

Notes:

Batch Number: 04-1029, 04-1046
Method Number: BR-0021

Project Number(s): WIN001
Instrument ID: HGAA-1

Date Analyzed: 1/14/05
Analyst Name: ABN

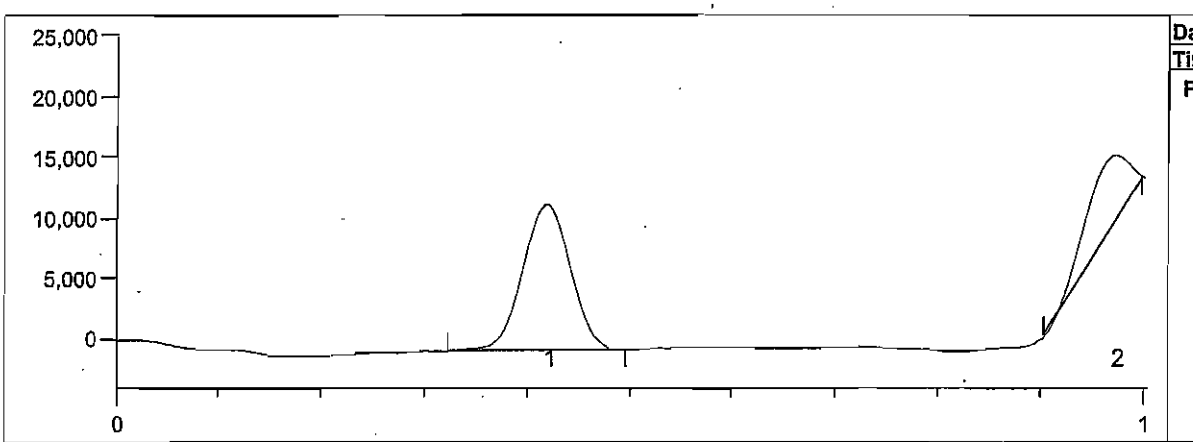


Date: 1/14/05
Time: 7:35 PM

Peak	rt	Area
1	0.46	3,579,662

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
22	MSD	05BR0023-53	MBA	1	3,579,662	12.3	9.68	101	65-135	accept

Notes:

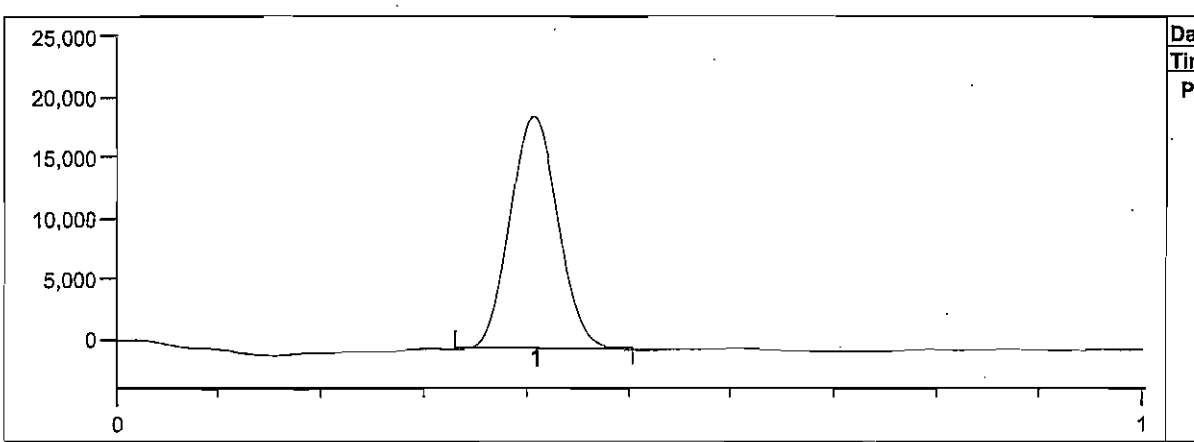


Date: 1/14/05
Time: 7:43 PM

Peak	rt	Area
1	0.42	410,963
2	0.97	201,102

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
23	S	05BR0023-41	MBA	1	410,963	1.41	0.0143		< HS	accept

Notes:



Date: 1/14/05
Time: 7:50 PM

Peak	rt	Area
1	0.40	668,167

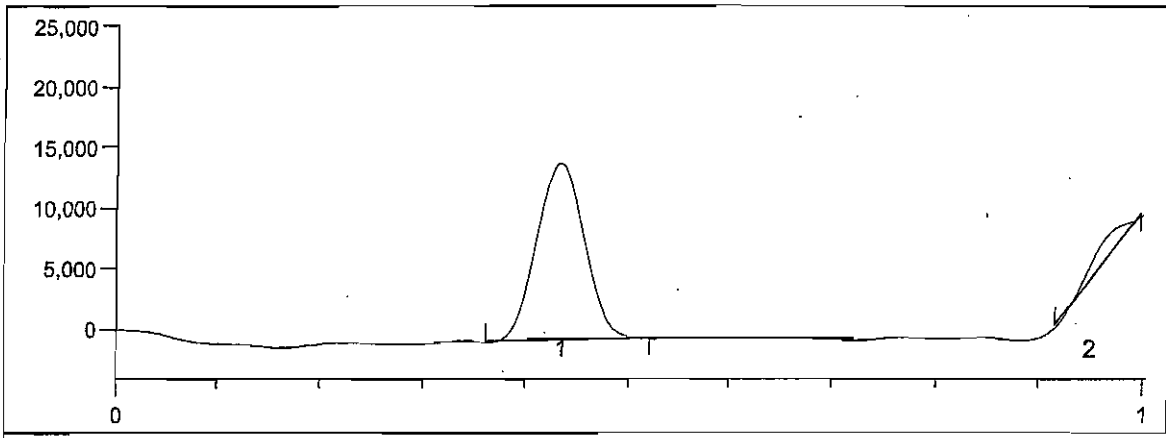
Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
24	S	05BR0023-42	MBA	1	668,167	2.29	0.0233		< HS	accept

Notes:

Batch Number: 04-1029, 04-1046
Method Number: BR-0021

Project Number(s): WIN001
Instrument ID: HGAA-1

Date Analyzed: 1/14/05
Analyst Name: ABN

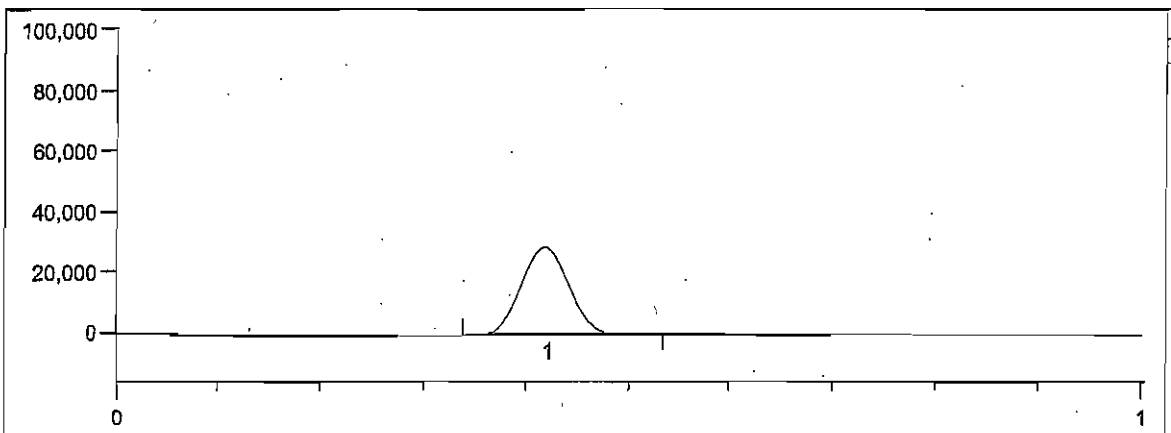


Date: 1/14/05
Time: 7:55 PM

Peak	rt	Area
1	0.43	503,037
2	0.94	55,431

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
25	S	05BR0023-43	MBA	1	503,037	1.73	0.0165		< HS	accept

Notes:

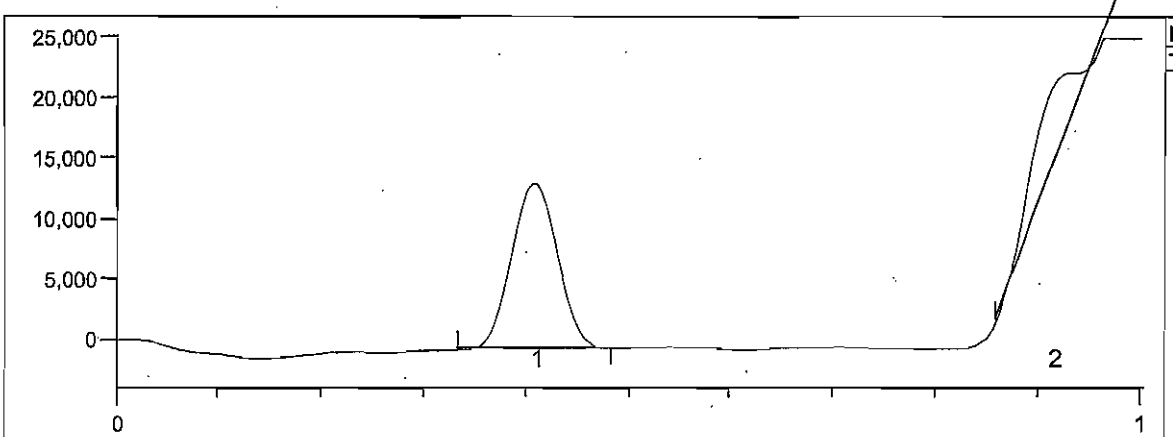


Date: 1/14/05
Time: 8:03 PM

Peak	rt	Area
1	0.42	1,032,959

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
26	S	05BR0023-44	MBA	1	1,032,959	3.54	0.0338		< HS	accept

Notes:



Date: 1/14/05
Time: 8:08 PM

Peak	rt	Area
1	0.40	457,332
2	0.91	231,261

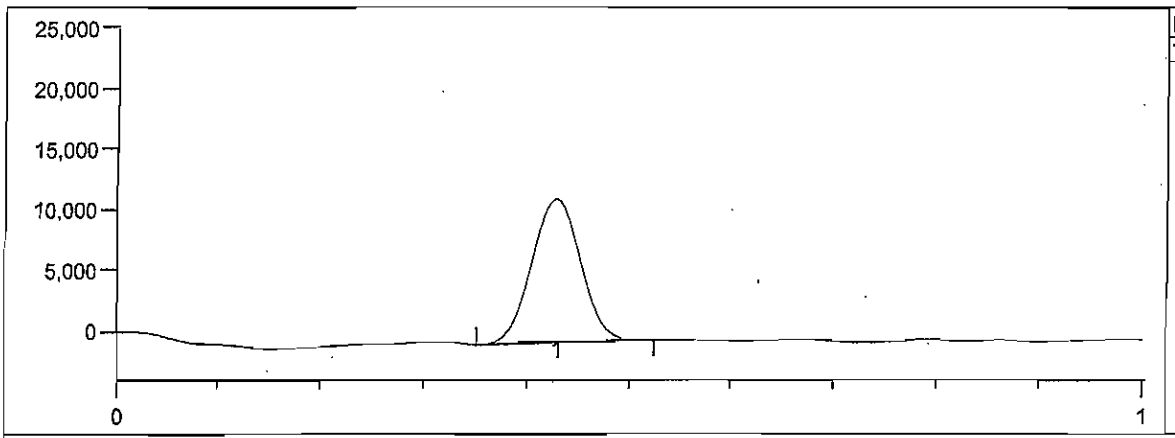
Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
27	S	05BR0023-46	MBA	1	457,332	1.57	0.0145		< HS	accept

Notes:

Batch Number: 04-1029, 04-1046
Method Number: BR-0021

Project Number(s): WIN001
Instrument ID: HGAA-1

Date Analyzed: 1/14/05
Analyst Name: ABN

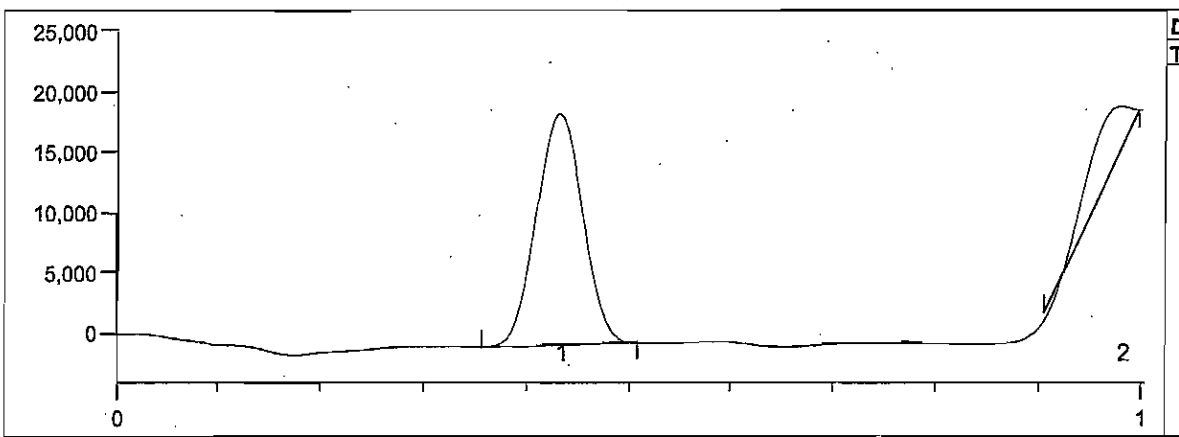


Date: 1/14/05
Time: 8:14 PM

Peak	rt	Area
1	0.42	415,219

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
28	S	05BR0023-47	MBA	1	415,219	1.42	0.0137		< HS	accept

Notes:

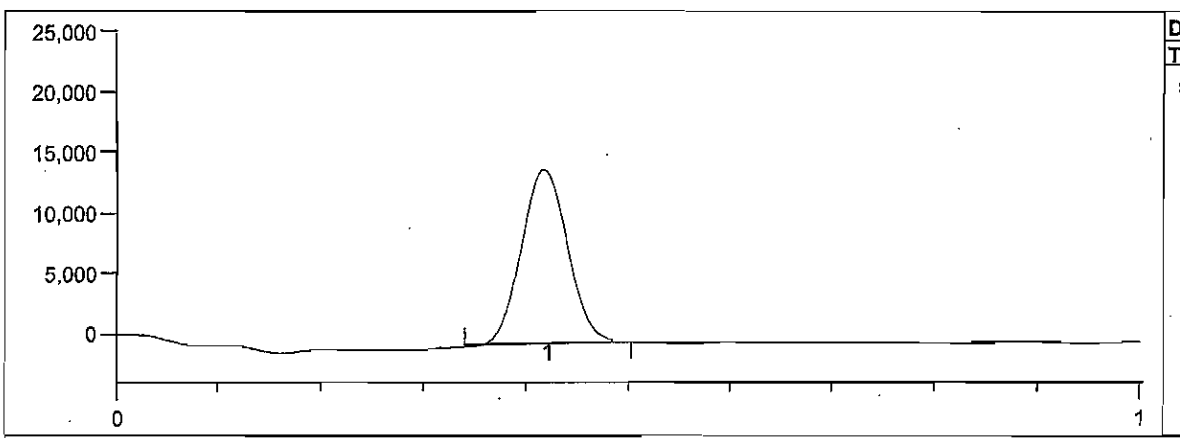


Date: 1/14/05
Time: 8:21 PM

Peak	rt	Area
1	0.43	640,456
2	0.98	183,519

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
29	S	05BR0023-48	MBA	1	640,456	2.20	0.0210		< HS	accept

Notes:



Date: 1/14/05
Time: 8:27 PM

Peak	rt	Area
1	0.42	488,011

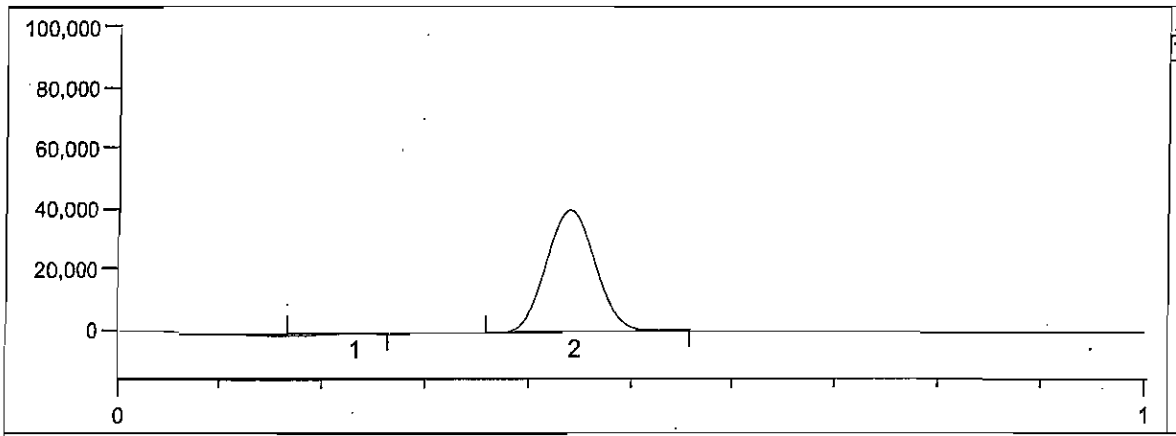
Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
30	S	05BR0023-49	MBA	1	488,011	1.67	0.0170		< HS	accept

Notes:

Batch Number: 04-1029, 04-1046
Method Number: BR-0021

Project Number(s): WIN001
Instrument ID: HGAA-1

Date Analyzed: 1/14/05
Analyst Name: ABN

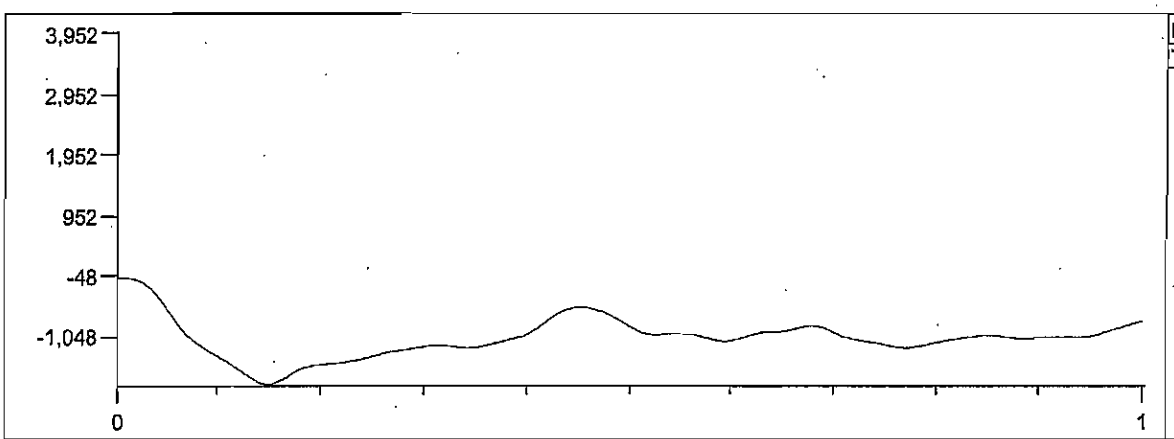


Date: 1/14/05
Time: 8:33 PM

Peak	rt	Area
1	0.23	8,835
2	0.44	1,442,285

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
31	OPR	CCV 5 ng		2	1,442,285	4.95		98.9	80-120	accept

Notes:

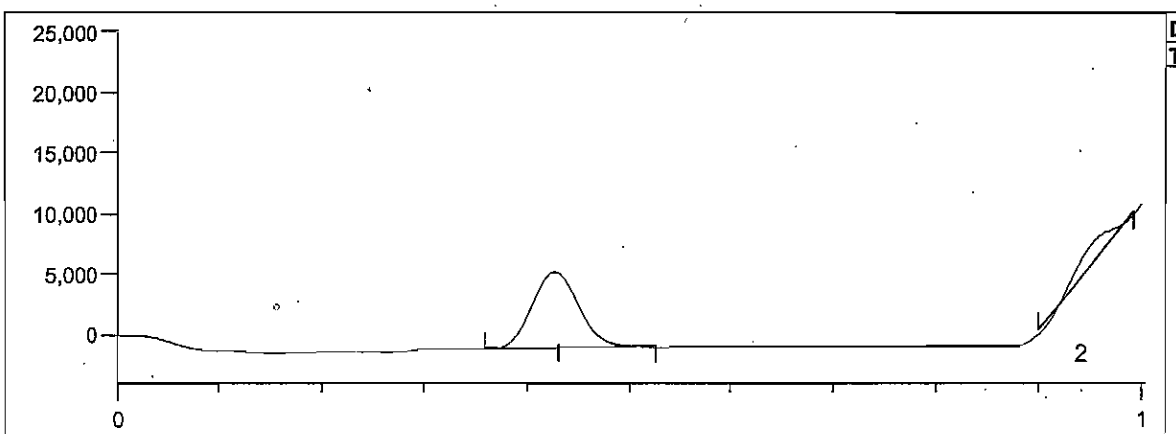


Date: 1/14/05
Time: 8:40 PM

Peak	rt	Area

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
32	CCB	CCB		0	0	0.00			< 0.14	accept

Notes:



Date: 1/14/05
Time: 8:46 PM

Peak	rt	Area
1	0.42	217,709
2	0.93	56,860

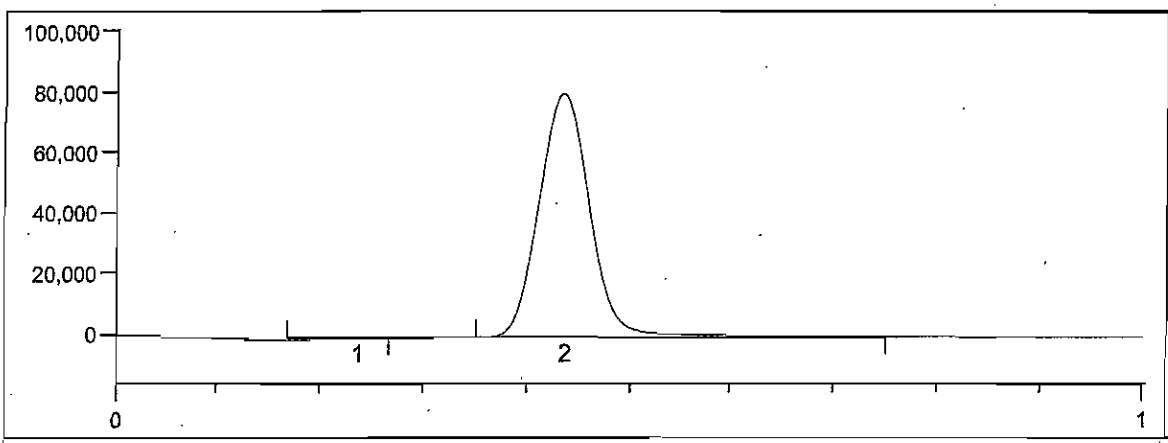
Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
33	S	05BR0023-50	MBA	1	217,709	0.747	0.00704		< HS	accept

Notes:

Batch Number: 04-1029, 04-1046
Method Number: BR-0021

Project Number(s): WIN001
Instrument ID: HGAA-1

Date Analyzed: 1/14/05
Analyst Name: ABN

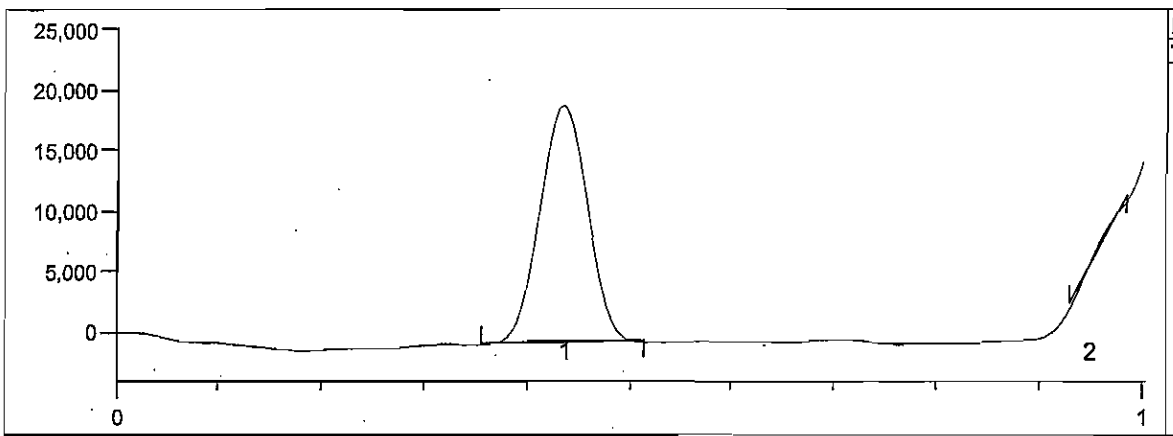


Date: 1/14/05
Time: 8:52 PM

Peak	rt	Area
1	0.23	10,290
2	0.43	2,947,795

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
34	S	05BR0023-51	MBA	2	2,947,795	10.1	0.0980		< HS	accept

Notes:

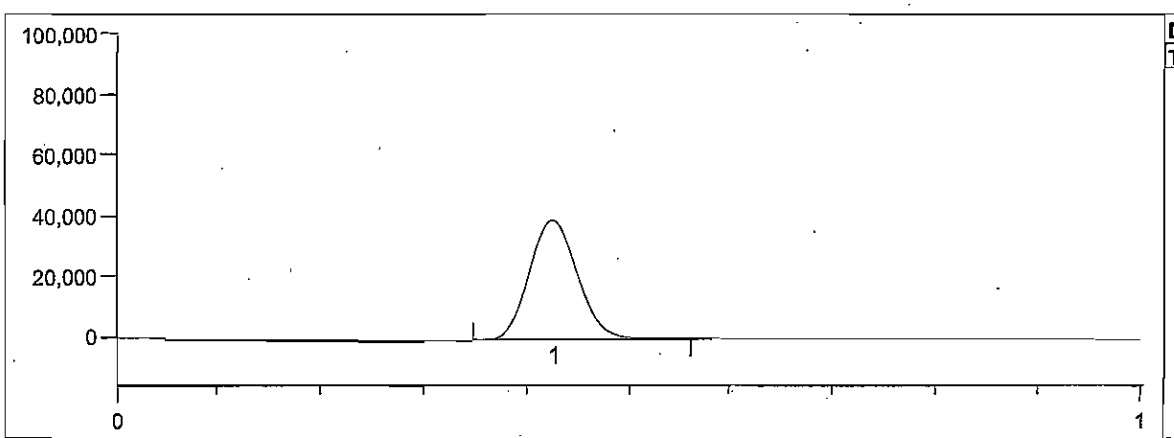


Date: 1/14/05
Time: 8:58 PM

Peak	rt	Area
1	0.43	671,608
2	0.94	15,762

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
35	S	05BR0023-52	MBA	1	671,608	2.30	0.0218		< HS	accept

Notes:



Date: 1/14/05
Time: 9:03 PM

Peak	rt	Area
1	0.42	1,387,454

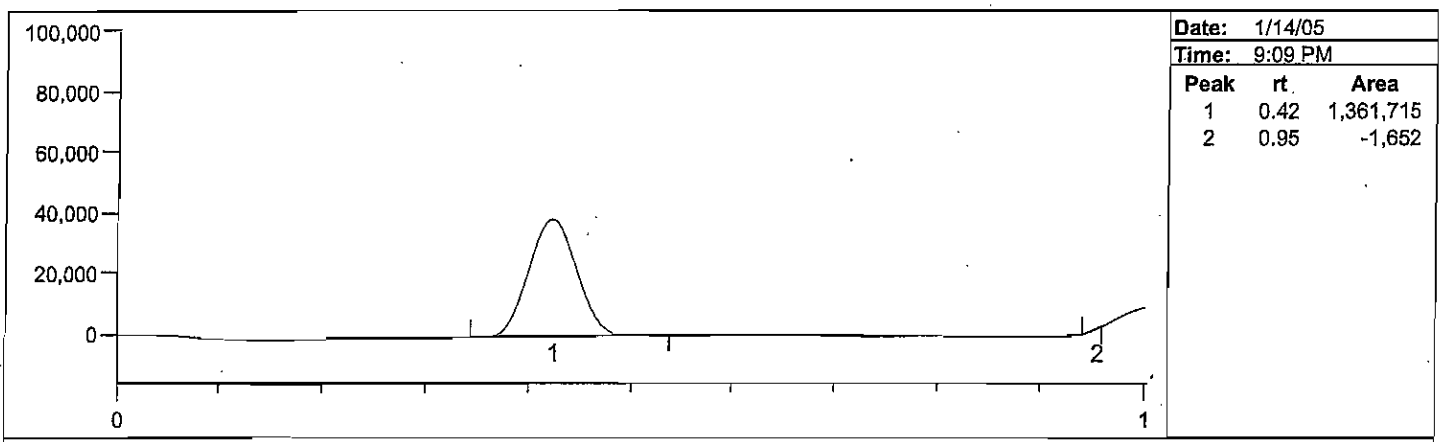
Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
36	S	05BR0023-54	MBA	1	1,387,454	4.76	0.0458		< HS	accept

Notes:

Batch Number: 04-1029, 04-1046
Method Number: BR-0021

Project Number(s): WIN001
Instrument ID: HGAA-1

Date Analyzed: 1/14/05
Analyst Name: ABN

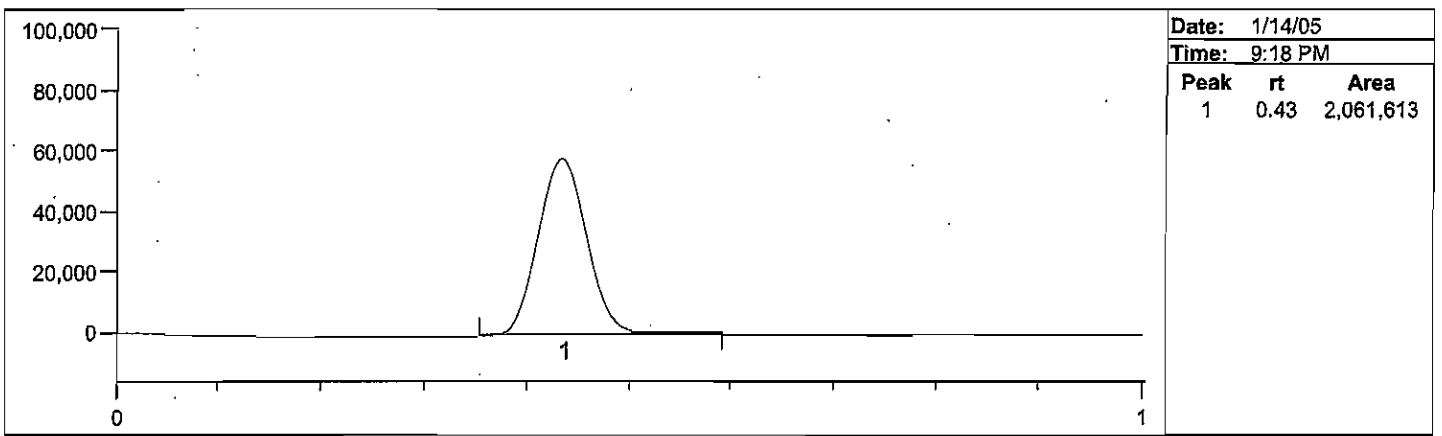


Date: 1/14/05
Time: 9:09 PM

Peak	rt	Area
1	0.42	1,361,715
2	0.95	-1,652

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
37	S	05BR0023-55	MBA	1	1,361,715	4.67	0.0449		< HS	accept

Notes:

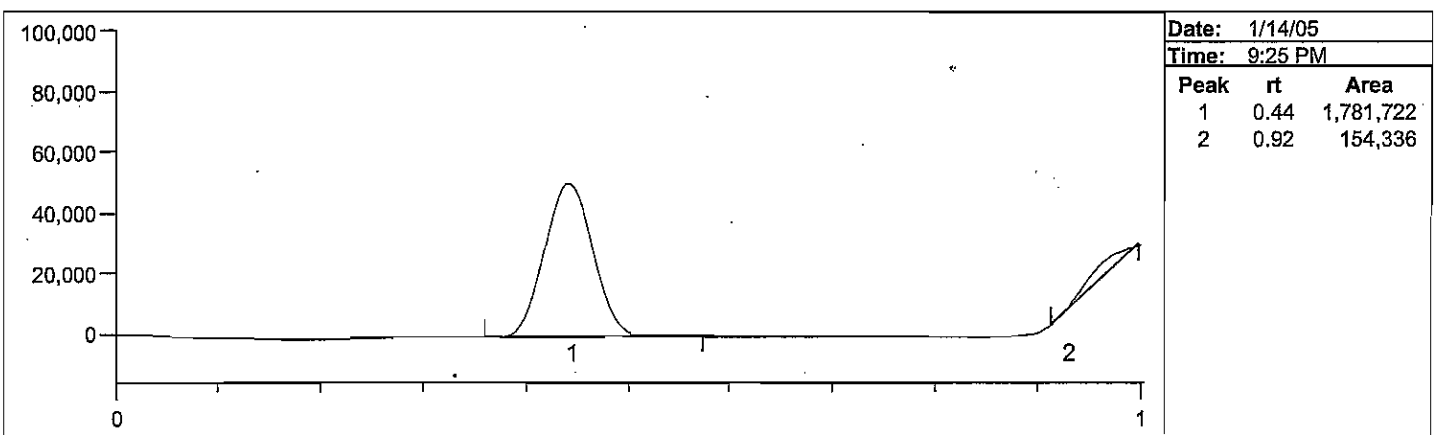


Date: 1/14/05
Time: 9:18 PM

Peak	rt	Area
1	0.43	2,061,613

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
38	S	05BR0023-56	MBA	1	2,061,613	7.07	0.0717		< HS	accept

Notes:



Date: 1/14/05
Time: 9:25 PM

Peak	rt	Area
1	0.44	1,781,722
2	0.92	154,336

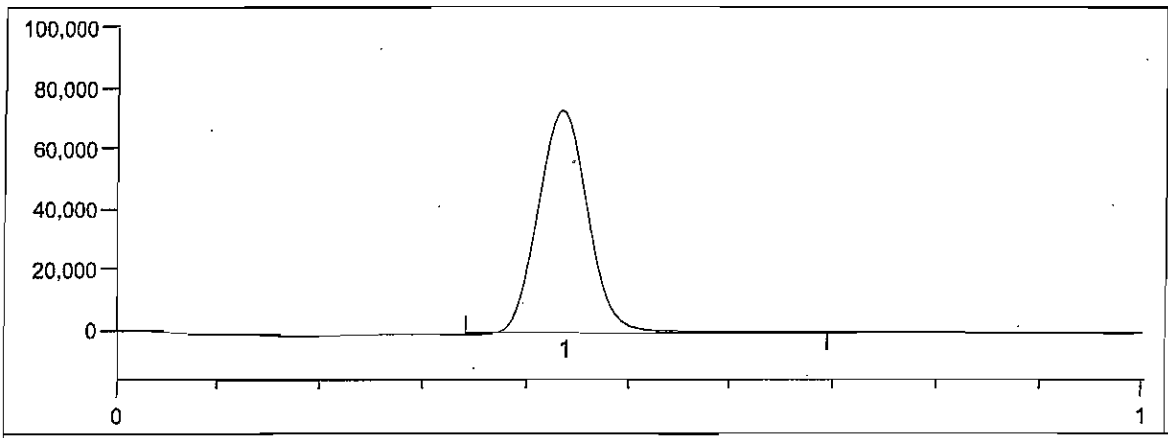
Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
39	S	05BR0023-57	MBA	1	1,781,722	6.11	0.0613		< HS	accept

Notes:

Batch Number: 04-1029, 04-1046
Method Number: BR-0021

Project Number(s): WIN001
Instrument ID: HGAA-1

Date Analyzed: 1/14/05
Analyst Name: ABN

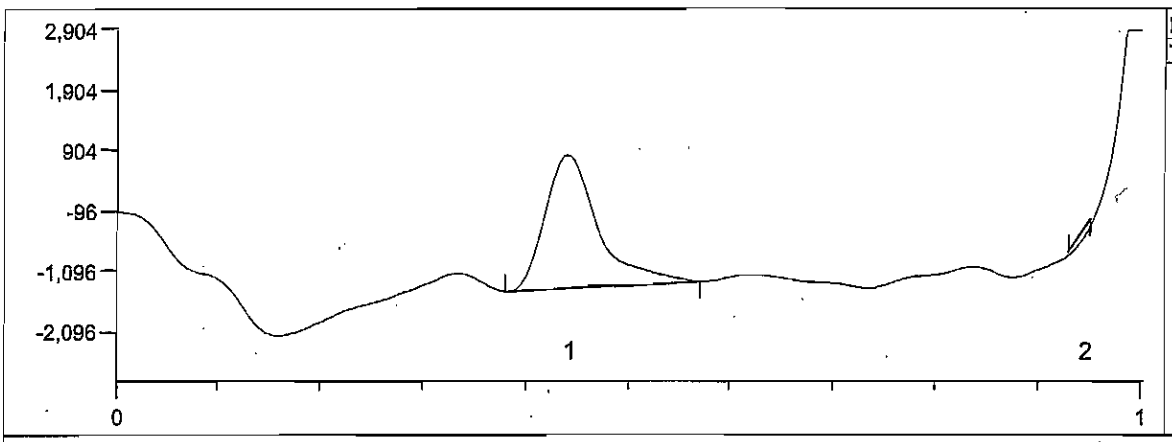


Date:	1/14/05
Time:	9:30 PM

Peak	rt	Area
1	0.43	2,683,058

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
40	S	05BR0023-58	MBA	1	2,683,058	9.20	0.0920		< HS	accept

Notes:

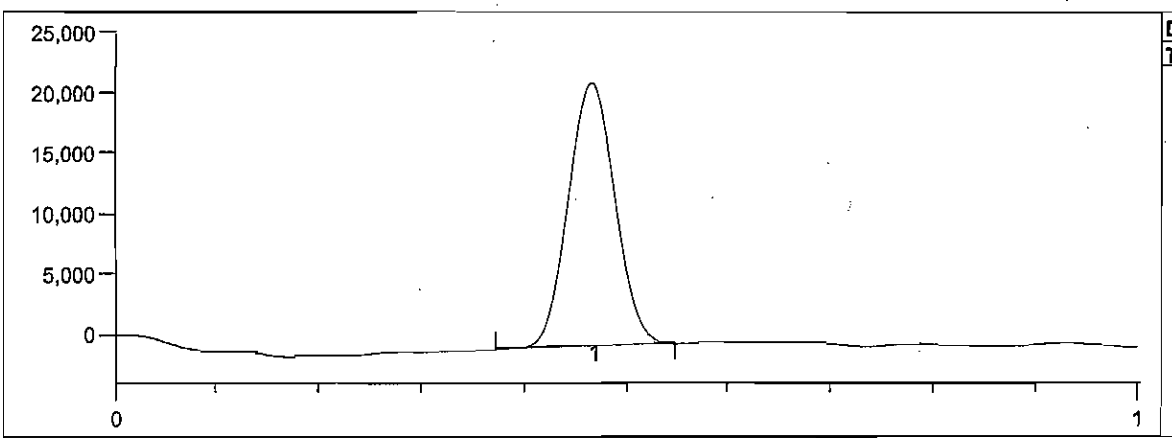


Date:	1/14/05
Time:	9:37 PM

Peak	rt	Area
1	0.44	83,486
2	0.94	-525

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
41	S	05BR0023-59	MBA	1	83,486	0.286	0.00280		< HS	accept

Notes:



Date:	1/14/05
Time:	9:43 PM

Peak	rt	Area
1	0.46	737,769

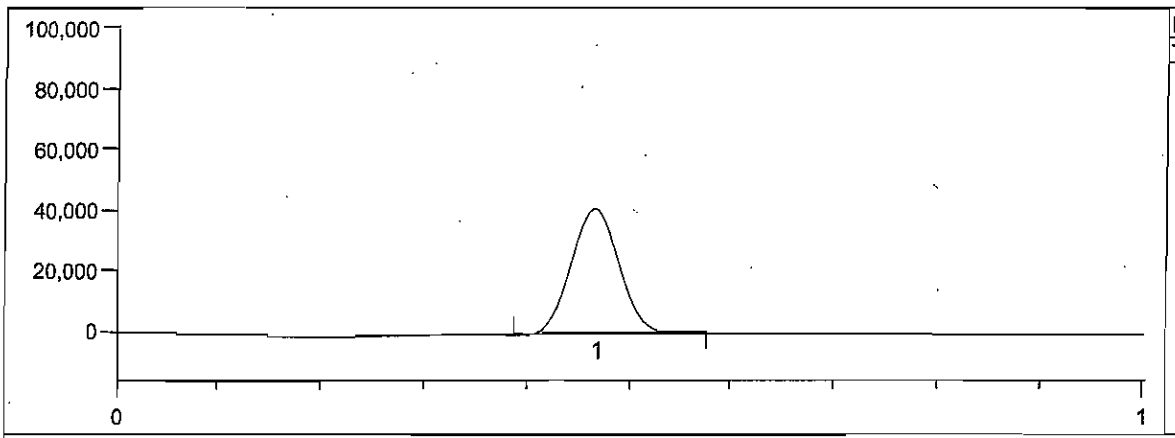
Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
42	S	05BR0023-60	MBA	1	737,769	2.53	0.0228		< HS	accept

Notes:

Batch Number: 04-1029, 04-1046
Method Number: BR-0021

Project Number(s): WIN001
Instrument ID: HGAA-1

Date Analyzed: 1/14/05
Analyst Name: ABN

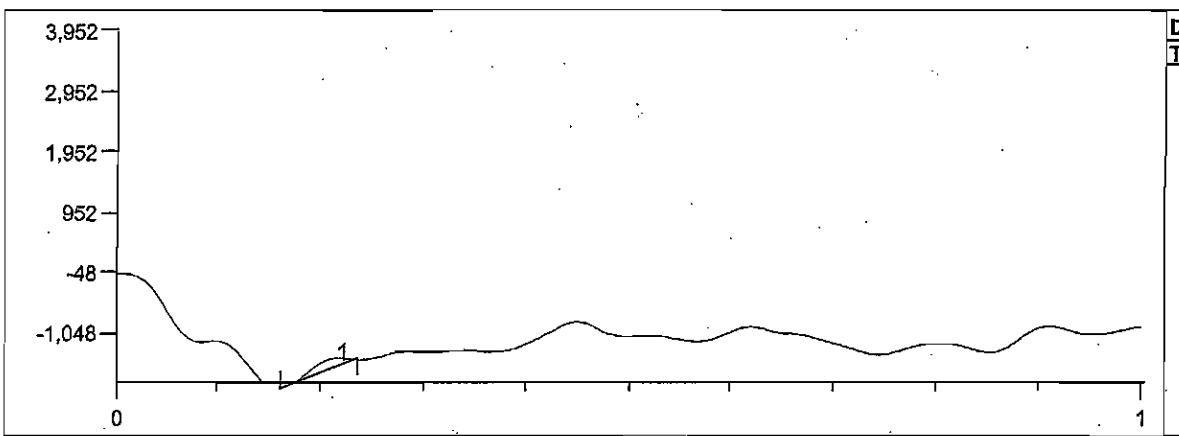


Date: 1/14/05
Time: 9:50 PM

Peak	rt	Area
1	0.46	1,440,258

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
43	OPR	CCV 5 ng		1	1,440,258	4.94		98.8	80-120	accept

Notes:

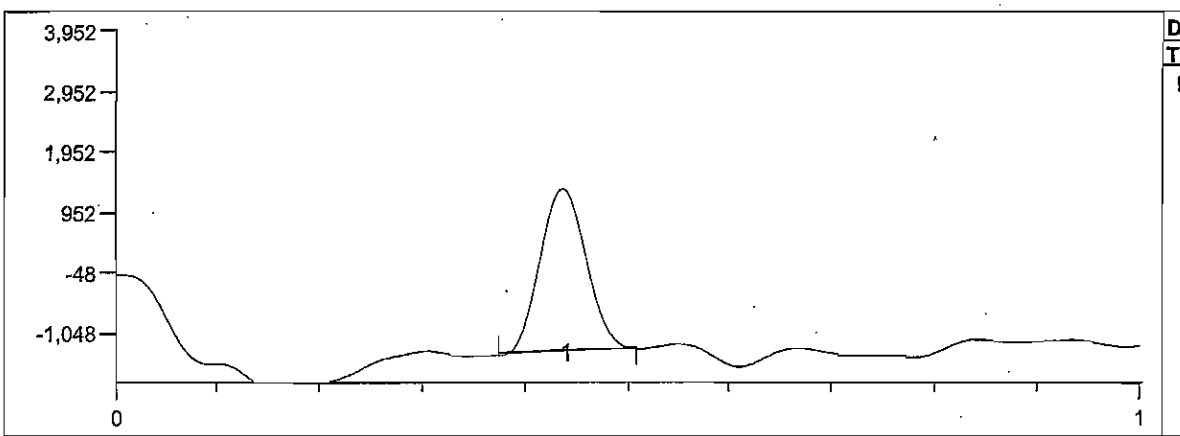


Date: 1/14/05
Time: 9:55 PM

Peak	rt	Area
1	0.22	5,172

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
44	CCB	CCB		0	0	0.00			< 0.14	accept

Notes:



Date: 1/14/05
Time: 10:17 PM

Peak	rt	Area
1	0.43	89,606

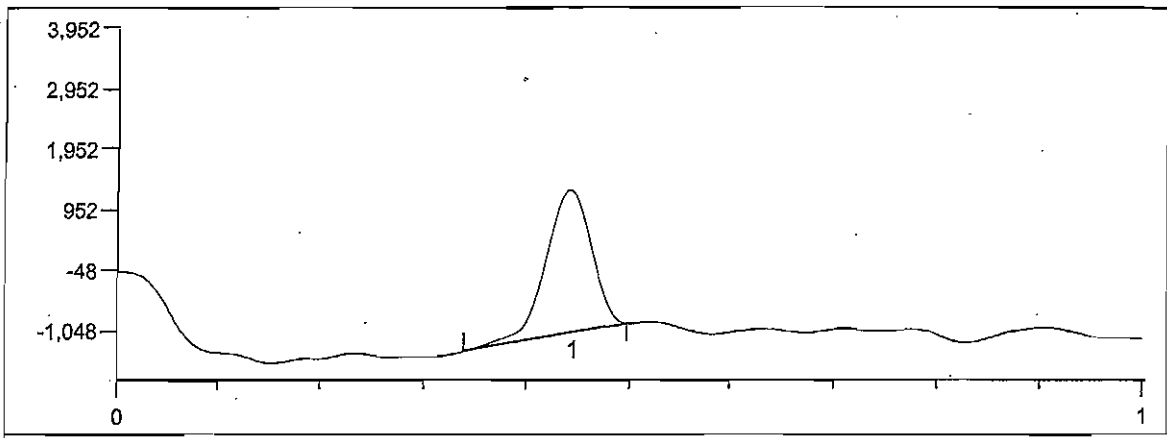
Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
45	MBB	MB-1		1	89,606	0.307	0.00307	0.00307	< 0.003	reject

Notes:

Batch Number: 04-1029, 04-1046
Method Number: BR-0021

Project Number(s): WIN001
Instrument ID: HGAA-1

Date Analyzed: 1/14/05
Analyst Name: ABN

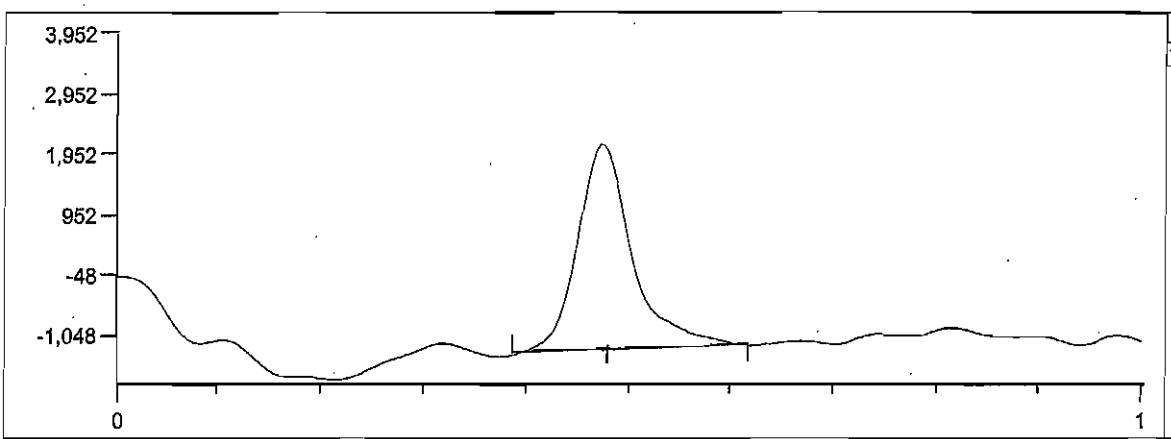


Date: 1/14/05
Time: 10:22 PM

Peak	rt	Area
1	0.44	78,031

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
46	MBB	MB-2		1	78,031	0.268	0.00268	0.00268	< 0.003	accept

Notes:

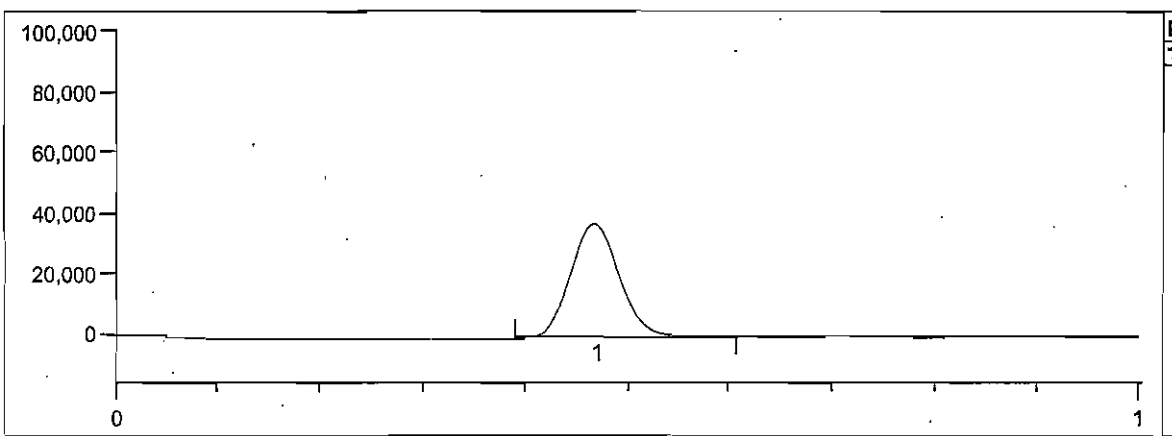


Date: 1/14/05
Time: 10:30 PM

Peak	rt	Area
1	0.47	136,412

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
47	MBB	MB-3		1	136,412	0.468	0.00468	0.00468	< 0.003	reject

Notes:



Date: 1/14/05
Time: 10:39 PM

Peak	rt	Area
1	0.46	1,357,828

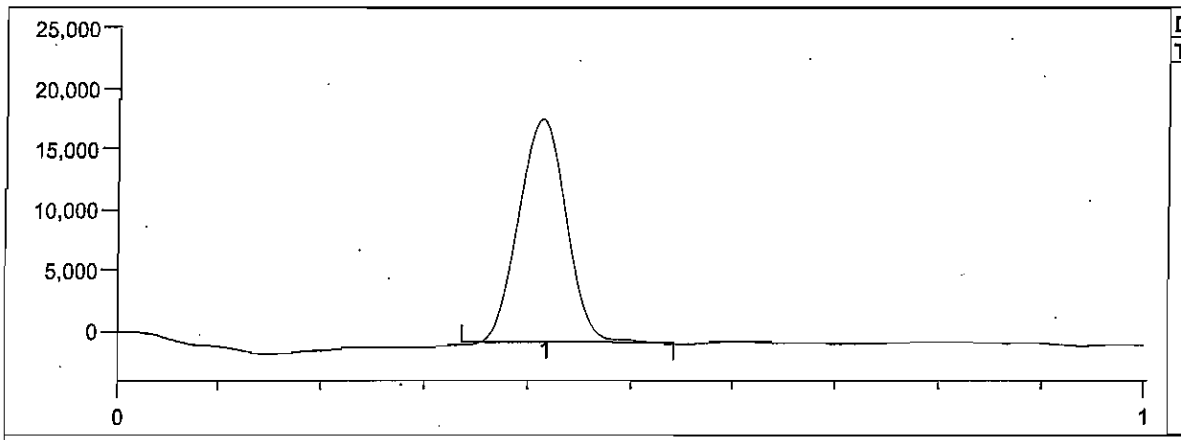
Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
48	IPR	LFB-1B	MBB	1	1,357,828	4.66	1.86	93.1	75-125	accept

Notes:

Batch Number: 04-1029, 04-1046
Method Number: BR-0021

Project Number(s): WIN001
Instrument ID: HGAA-1

Date Analyzed: 1/14/05
Analyst Name: ABN

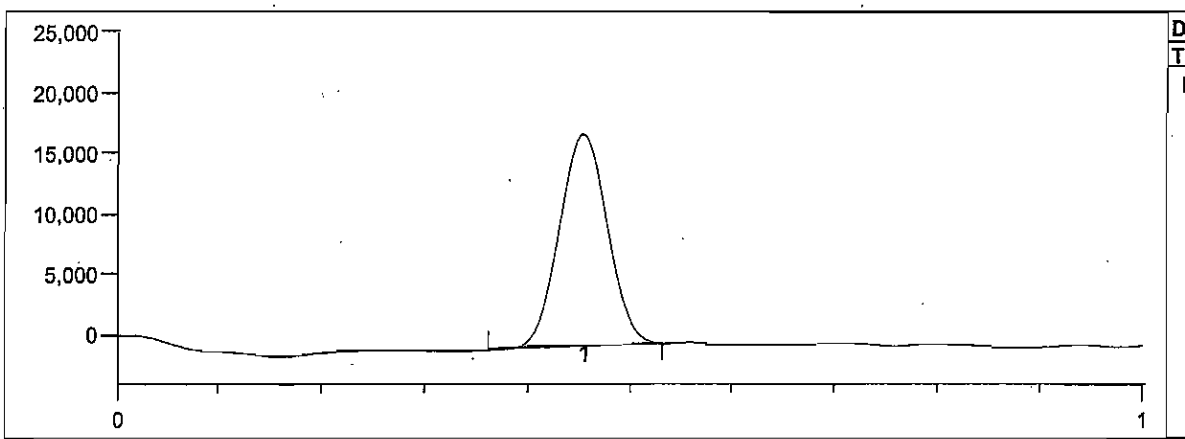


Date: 1/14/05
Time: 10:45 PM

Peak	rt	Area
1	0.41	640,817

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
49	IPR	LFB-2B	MBB	1	640,817	2.20	0.879	87.9	75-125	accept

Notes:

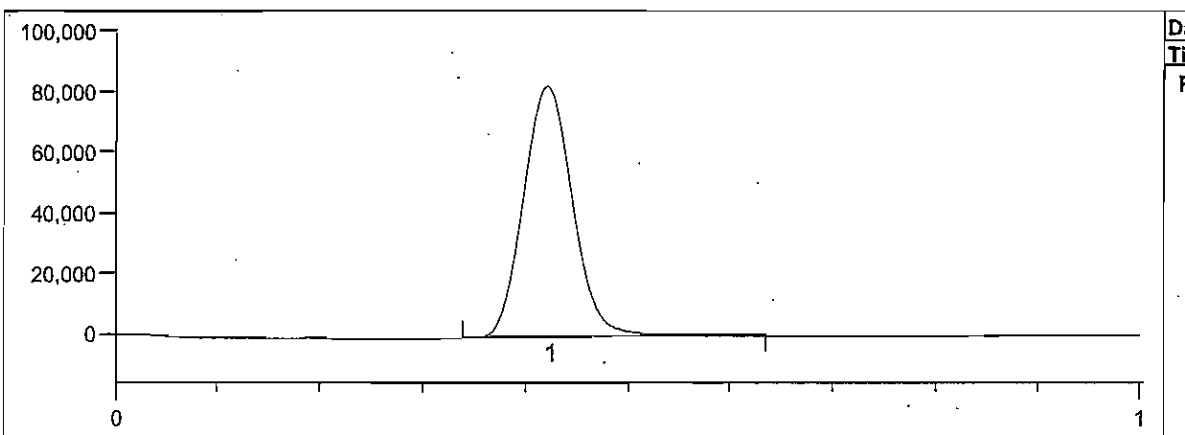


Date: 1/14/05
Time: 10:55 PM

Peak	rt	Area
1	0.45	610,789

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
50	IPR	LFB-2BR	MBB	1	610,789	2.09	0.838	83.8	75-125	accept

Notes:



Date: 1/14/05
Time: 11:03 PM

Peak	rt	Area
1	0.42	2,959,425

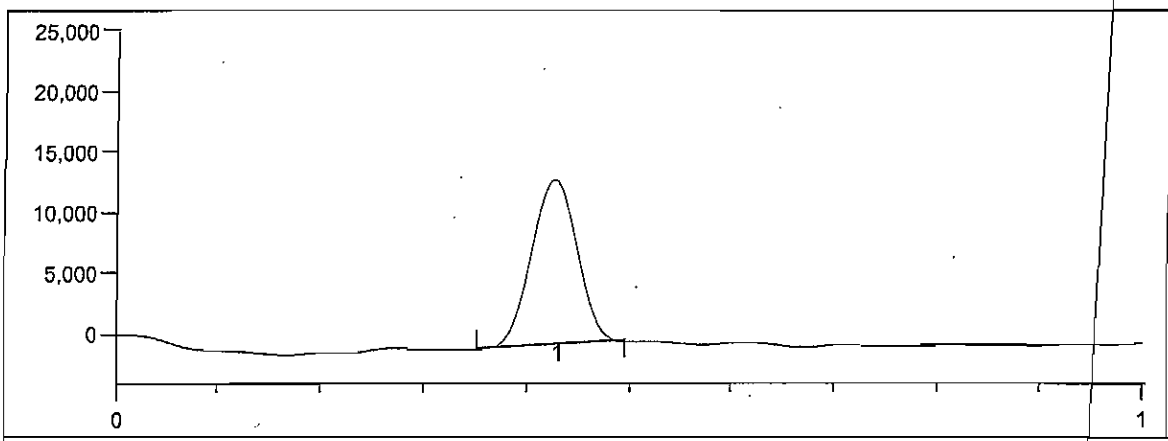
Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
51	IPR	CRM-1B	MBB	1	2,959,425	10.1	19.7	93.0	75-125	accept

Notes:

Batch Number: 04-1029, 04-1046
Method Number: BR-0021

Project Number(s): WIN001
Instrument ID: HGAA-1

Date Analyzed: 1/14/05
Analyst Name: ABN

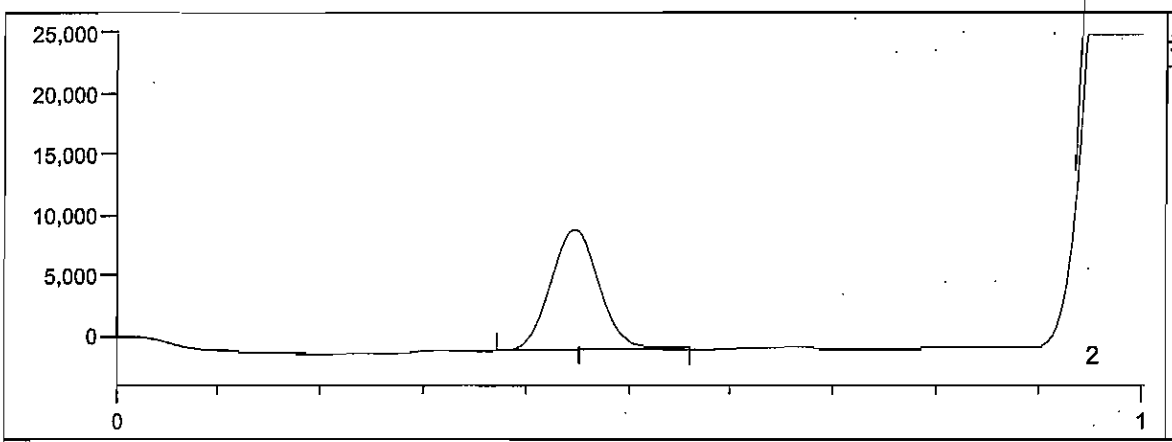


Date: 1/14/05
Time: 11:13 PM

Peak	rt	Area
1	0.42	446,172

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
52	S	05BR0023-81	MBB	1	446,172	1.53	0.0149		< HS	accept

Notes:

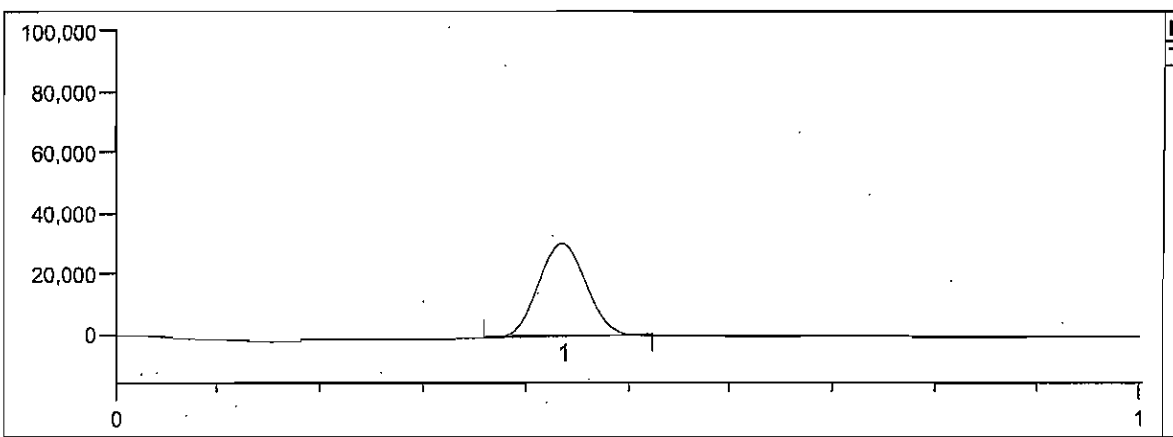


Date: 1/14/05
Time: 11:19 PM

Peak	rt	Area
1	0.44	350,857
2	0.94	326,828

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
53	MD	05BR0023-81	MBB	1	350,857	1.20	0.0120	21.6	< 35	accept

Notes:



Date: 1/14/05
Time: 11:29 PM

Peak	rt	Area
1	0.43	1,095,899

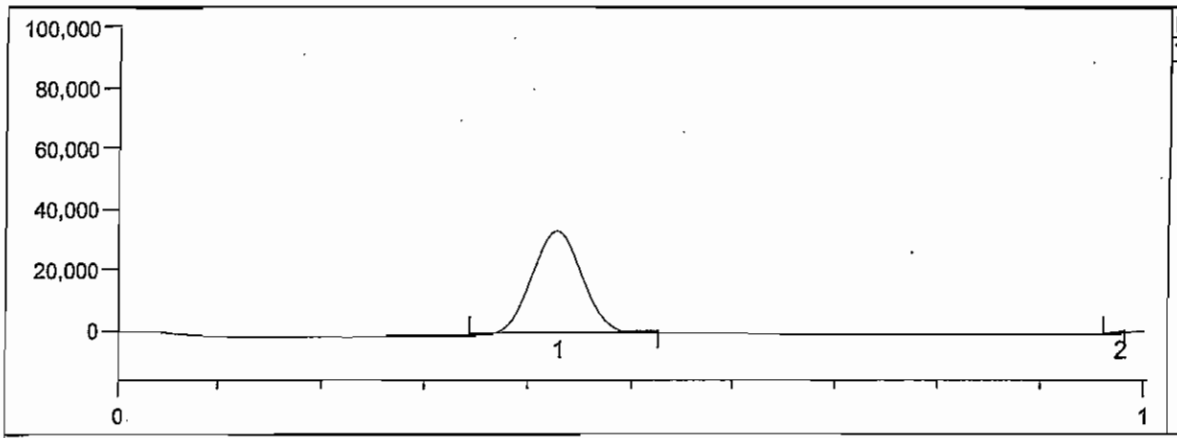
Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
54	MS	05BR0023-81	MBB	1	1,095,899	3.76	1.41	71.8	65-135	accept

Notes:

Batch Number: 04-1029, 04-1046
Method Number: BR-0021

Project Number(s): WIN001
Instrument ID: HGAA-1

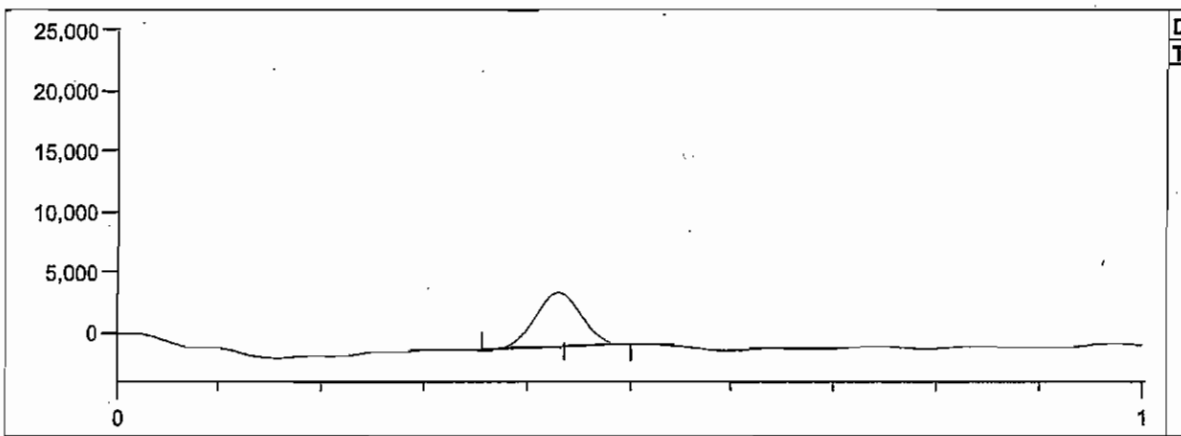
Date Analyzed: 1/14/05
Analyst Name: ABN



Date:	1/14/05	
Time:	11:37 PM	
Peak	rt	Area
1	0.42	1,231,535
2	0.97	-388

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
55	MSD	05BR0023-81	MBB	1	1,231,535	4.22	1.60	79.2	65-135	accept

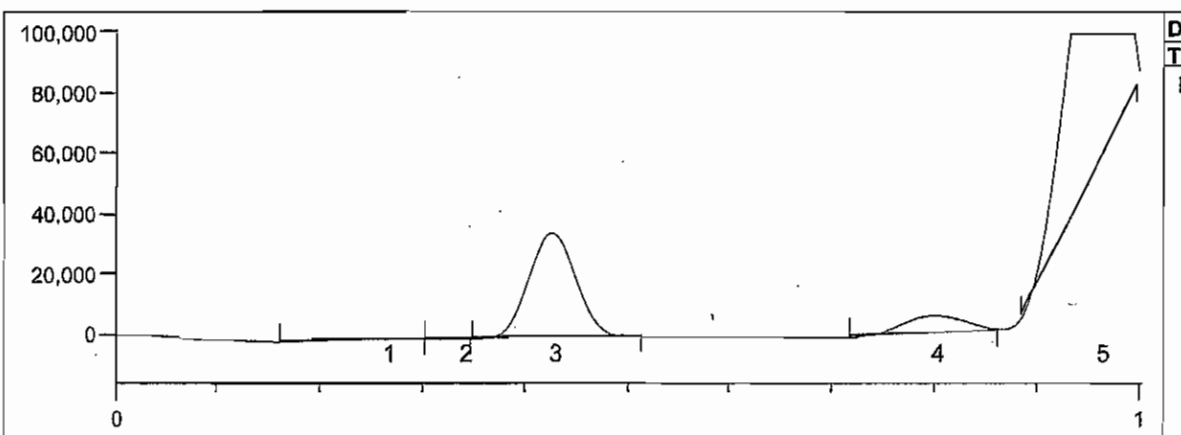
Notes:



Date:	1/14/05	
Time:	11:43 PM	
Peak	rt	Area
1	0.43	153,405

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
56	S	05BR0023-82	MBB	1	153,405	0.526	0.00976		< HS	accept

Notes:



Date:	1/14/05	
Time:	11:49 PM	
Peak	rt	Area
1	0.26	28,725
2	0.34	5,907
3	0.42	1,207,737
4	0.80	267,430
5	0.96	3,661,710

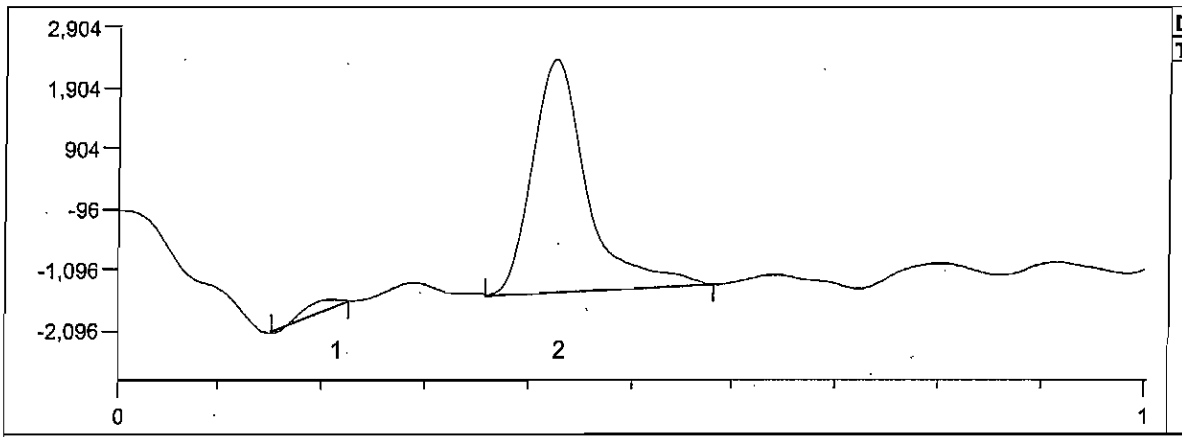
Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
57	S	05BR0023-83	MBB	3	1,207,737	4.14	0.0825		< HS	accept

Notes:

Batch Number: 04-1029, 04-1046
Method Number: BR-0021

Project Number(s): WIN001
Instrument ID: HGAA-1

Date Analyzed: 1/14/05
Analyst Name: ABN

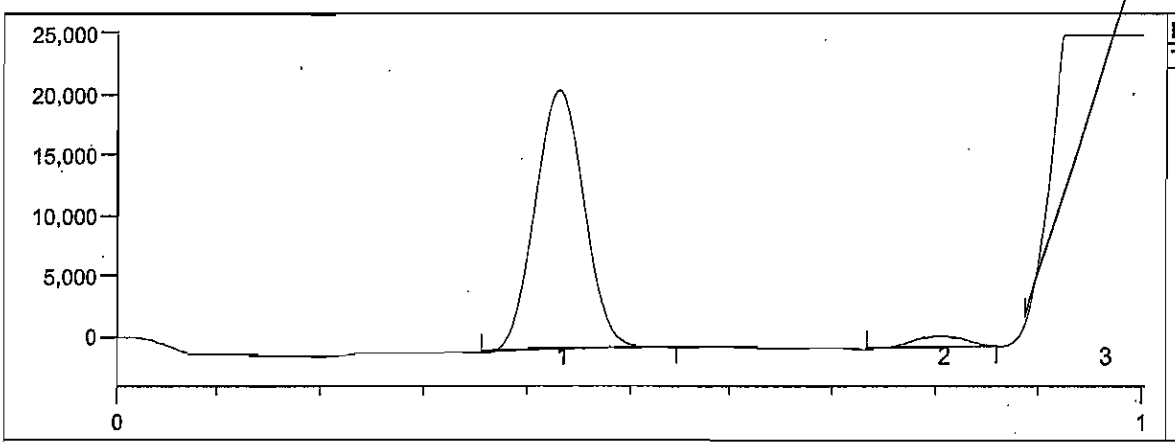


Date: 1/14/05
Time: 11:56 PM

Peak	rt	Area
1	0.21	5,620
2	0.42	148,263

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
58	S	05BR0023-84	MBB	2	148,263	0.508	0.00987		< HS	accept

Notes:

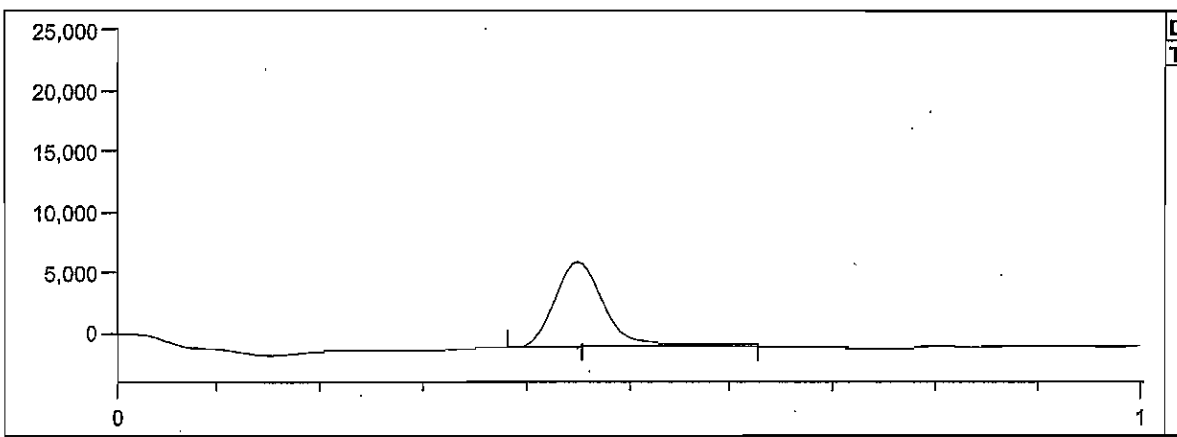


Date: 1/15/05
Time: 12:02 AM

Peak	rt	Area
1	0.43	763,830
2	0.80	40,112
3	0.96	1,348,018

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
59	S	05BR0023-85	MBB	1	763,830	2.62	0.0508		< HS	accept

Notes:



Date: 1/15/05
Time: 12:07 AM

Peak	rt	Area
1	0.45	255,446

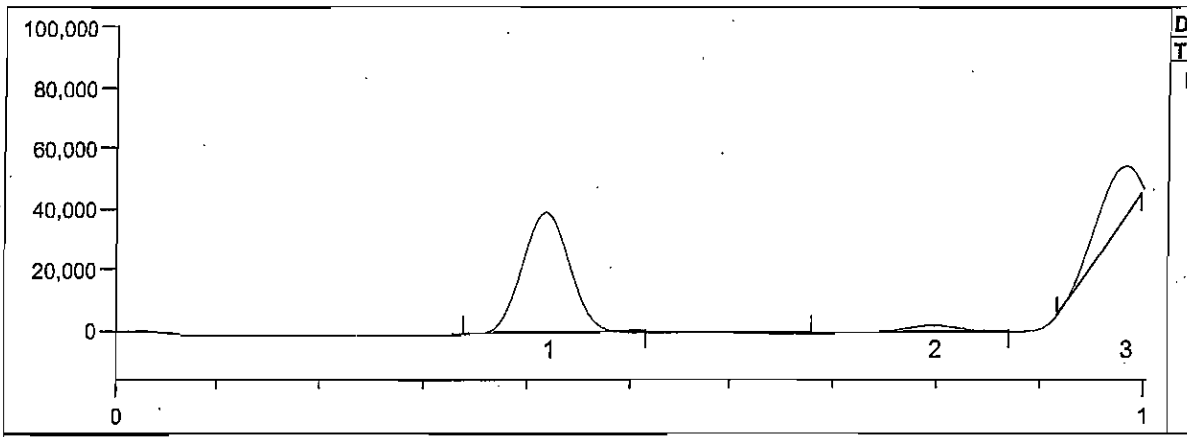
Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
60	S	05BR0023-86	MBB	1	255,446	0.876	0.0177		< HS	accept

Notes:

Batch Number: 04-1029, 04-1046
Method Number: BR-0021

Project Number(s): WIN001
Instrument ID: HGAA-1

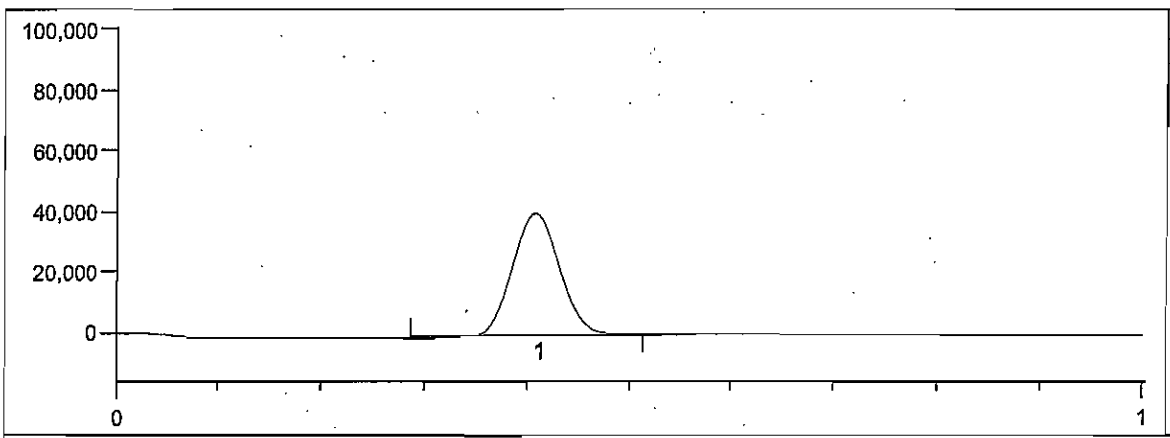
Date Analyzed: 1/14/05
Analyst Name: ABN



Date:	1/15/05	
Time:	12:13 AM	
Peak	rt	Area
1	0.42	1,379,627
2	0.79	110,029
3	0.98	574,653

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
61	S	05BR0023-87	MBB	1	1,379,627	4.73	0.0912		< HS	accept

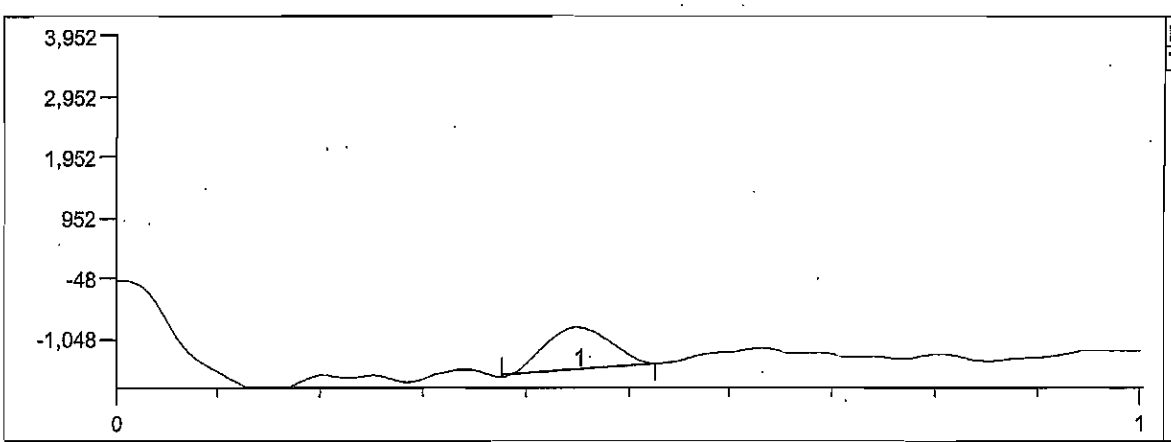
Notes:



Date:	1/15/05	
Time:	12:19 AM	
Peak	rt	Area
1	0.40	1,414,638

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
62	OPR	CCV 5 ng		1	1,414,638	4.85		97.0	80-120	accept

Notes:



Date:	1/15/05	
Time:	12:25 AM	
Peak	rt	Area
1	0.45	34,744

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
63	CCB	CCB		1	34,744	0.119			< 0.14	accept

Notes:

Batch Number: 04-1030-1
Method Number: BR-0021

Project Number(s): WIN001
Instrument ID: HGAA-1

Date Analyzed: 1/19/05
Analyst Name: ABN

Bias and Precision

Run Type	Name/ID	Final Result	Units	Spike Level	Source Result	% REC	% REC Limit	RPD	RPD Limit	Notes
MS	05BR0023-66	0.0774	mg/Kg	0.055	0.0188	107	65-135			accept
	05BR0023-76	0.133	mg/Kg	0.108	0.0316	93.8	65-135			accept
MSD	05BR0023-66	0.0755	mg/Kg	0.056	0.0188	101	65-135	2.38	< 35	accept
	05BR0023-76	0.144	mg/Kg	0.106	0.0316	106	65-135	8.08	< 35	accept
IPR	CRM-1	20.8	mg/Kg	21.2		98.2	65-135			accept
	CRM-2	22.9	mg/Kg	21.2		108	65-135			accept
OPR	CCV 5 ng	4.93	ng	5		98.7	80-120			accept
	CCV 5 ng	4.75	ng	5		95.0	80-120			accept
	CCV 5 ng	3.73	ng	5		74.7	80-120			reject
	CCVR 5 ng	4.96	ng	5		99.2	80-120			accept
QCS	ICV 5 ng	5.00	ng	5		100	80-120			accept
MD	05BR0023-66	0.0152	mg/Kg		0.0188			2.38	< 35	accept
	05BR0023-76	0.0285	mg/Kg		0.0316			8.08	< 35	accept

Calibration

QA Sample Type	Name/ID	Analyzed Result	Units	Spike Level	% REC	% REC Limit	RSD	RSD Limit	Notes
Calibration	0.5 ng	0.600	ng	0.5	120	75-125			accept
	2 ng	2.00	ng	2	99.8	75-125			accept
	10 ng	9.51	ng	10	95.1	75-125			accept
	30 ng	26.9	ng	30	89.8	75-125			accept
Calibration Factor		0.00000346	ng/PA				12.0	< 20	accept
Calibration Date		1/19/05							

Batch Number: 04-1030-1
Method Number: BR-0021

Project Number(s): WIN001
Instrument ID: HGAA-1

Date Analyzed: 1/19/05
Analyst Name: ABN

Blank Summary

QA Sample Type	Name/ID	Analyzed Result	Units	Criteria	StDev	StDev Limit	Notes
CB	CAL BLK-1	0.107	ng	< 0.05			reject
	CAL BLK-2	0.0988	ng	< 0.05			reject
Average		0.00	ng	< 25,000	0.00	< 10	accept
MBA	MB-1	0.00313	mg/Kg	< 0			reject
	MB-2	0.00501	mg/Kg	< 0			reject
	MB-3	0.00349	mg/Kg	< 0			reject
Average		0.00388	mg/Kg		0.000998		

Comments

MDL=0.003 mg*kg-1
PQL=0.01 mg*kg-1

Method Blank Criteria: Average less than or equal to 2x the MDL and StDev less than or equal to 0.67x the MDL OR highest blank less than 0.1x the sample results.

Method Duplicate Criteria: RPD less than or equal to 35% OR results within 2x the PQL of each other if the results are less than 5x the PQL.

* Due to a software error, the MS-MSD RPD has been reported as the MD RPD. The correct RPD values have been hand written in the QA Summary Report.

** All Calibration Blank data associated with the analytical run met the acceptance criteria. Calibration Blank results were manually rejected to prevent the software from blank correcting the instrument calibration and the sample results.

Run#45 CCV 5 ng was discovered to have a loose bubbler cap which prompted the analyst to re-prep and re-analyze another CCV. This occurrence would not have impacted any of the samples associated since this batch demonstrated excessive foaming, thus, the analyst closely supervised each sample bubbler.

BROOKS RAND, LLC
3958 6th Avenue, NW Seattle, WA 98107 U.S.A. 206.632.6206

QUALITY ASSURANCE REPORT

Batch:	04-1030-1
Analysis:	Arsenic (Inorganic) by EPA 1632 (HGAA)
Tracking:	05BR0023
Project:	WIN001
Matrix:	Biota
Batch Size:	20 Samples
Analysis Date:	January 19, 2005
Calibration Date:	January 19, 2005

1 **SAMPLE PREPARATION** – Acceptable

2 **CALIBRATION** – Acceptable

3 **CALIBRATION VERIFICATION** – Acceptable

4 **QUALITY CONTROL SAMPLES (QCS)** – Acceptable

5 **BLANKS** – Acceptable

6 **METHOD DUPLICATE ANALYSIS** - Due to software error, the MS/MSD RPD has been reported as the MD RPD. The correct RPD value has been manually added to the QA Summary Report.

7 **SPIKE / SPIKE DUPLICATE ANALYSIS** – Acceptable

8 **LIMITS OF DETECTION** – Acceptable

9 **OVERALL DATA QUALITY** – Acceptable

No qualification of the data was required based on this review.

I certify that, to the best of my knowledge and belief, the data are reported as true and accurate. The Laboratory Director, or his designee, has authorized release of data contained in this Quality Assurance Report as verified by the following signature(s).

1.21.05

Tressa K. Pearson-Franks
Quality Assurance Associate

SAMPLE PROCESSING FORM

Batch #: 04-1030-1 Analysis: As(Inorganic) Method: EPA 1632 (HGAA)

Tracking #	Lab ID	Project Ref #	Data Due Date	Matrix	Comments
QA: Full					
05BR0023	61	WIN001	1/3/2005	Biota	
05BR0023	62	WIN001	1/3/2005	Biota	
05BR0023	63	WIN001	1/3/2005	Biota	
05BR0023	64	WIN001	1/3/2005	Biota	
05BR0023	65	WIN001	1/3/2005	Biota	
05BR0023	66	WIN001	1/3/2005	Biota	
05BR0023	67	WIN001	1/3/2005	Biota	
05BR0023	68	WIN001	1/3/2005	Biota	
05BR0023	69	WIN001	1/3/2005	Biota	
05BR0023	70	WIN001	1/3/2005	Biota	
05BR0023	71	WIN001	1/3/2005	Biota	
05BR0023	72	WIN001	1/3/2005	Biota	
05BR0023	73	WIN001	1/3/2005	Biota	
05BR0023	74	WIN001	1/3/2005	Biota	
05BR0023	75	WIN001	1/3/2005	Biota	
05BR0023	76	WIN001	1/3/2005	Biota	
05BR0023	77	WIN001	1/3/2005	Biota	
05BR0023	78	WIN001	1/3/2005	Biota	
05BR0023	79	WIN001	1/3/2005	Biota	
05BR0023	80	WIN001	1/3/2005	Biota	

* Review data from 04-1030 to choose appropriate spiking levels.

Tracking #	See SOW	See Memo	See Proj Mgr	Consult MSDS	See Contract Info	See Lab Mgr
05BR0023	No	No	No	No	No	No

QA Comments: Report on a WET weight basis - WIN001.

Batched By MLG Date: 1/17/05

Prepared By: [signature] Date: 1/18/05

Comments: *See Above

Analyzed By: ABW Date: 1/19/05

Comments:

Data Entry By ABW Date: 1/19/05

Comments:

Primary Data Review By ABW Date: 1/19/05

Comments:

Final Review By: [signature] Date: 1.21.05

Comments:

	Analyst:	ABN	*Project:*	WIN001	*Matrix:*	Biota	*Analysis:*	As (In)	*Date:*	1/19/2005

SAMPLE CALCULATIONS

			Sample weight	Dilution Volume	Analyzed Vol.		Uncorrected		
								Result	
Run	Tracking #	ID #	(mg)	(mL)	(mL)	PA	ng	µg/g	
16	05BR0023	66	506	10.0	2.00	469	1.62	0.016	*
17	05BR0023	66MD	491	10.0	1.00	215	0.743	0.015	
18	05BR0023	66MS	542	10.0	0.500	606	2.10	0.077	
19	05BR0023	66MSD	539	10.0	0.500	588	2.03	0.075	
20	05BR0023	66R	506	10.0	1.00	275	0.951	0.019	
21	05BR0023	76	537	10.0	1.00	490	1.69	0.032	
22	05BR0023	76MD	509	10.0	1.00	420	1.45	0.029	
23	05BR0023	76MS	554	10.0	0.500	1064	3.68	0.133	
24	05BR0023	76MSD	566	10.0	0.500	1179	4.08	0.144	
25	05BR0023	61	507	10.0	1.00	417	1.44	0.028	
26	05BR0023	62	544	10.0	1.00	612	2.12	0.039	
27	05BR0023	63	571	10.0	0.50	2290	7.92	0.277	
28	05BR0023	64	488	10.0	1.00	323	1.12	0.023	
29	05BR0023	65	509	10.0	1.00	311	1.08	0.021	
30	05BR0023	67	573	10.0	0.50	723	2.50	0.087	
31	05BR0023	68	500	10.0	1.00	473	1.64	0.033	
32	05BR0023	69	488	10.0	0.50	629	2.18	0.089	
35	05BR0023	70	511	10.0	1.00	552	1.91	0.037	
36	05BR0023	71	592	10.0	1.00	521	1.80	0.030	
37	05BR0023	72	559	10.0	0.25	1192	4.12	0.295	
38	05BR0023	73	534	10.0	0.25	996	3.44	0.258	
39	05BR0023	74	533	10.0	1.00	515	1.78	0.033	
40	05BR0023	75	612	10.0	0.25	1487	5.14	0.336	
41	05BR0023	77	515	10.0	1.00	291	1.01	0.020	
42	05BR0023	78	489	10.0	1.00	401	1.39	0.028	
43	05BR0023	79	643	10.0	0.25	1589	5.49	0.342	
44	05BR0023	80	521	10.0	1.00	239	0.826	0.016	

* Excessive foaming, re-analyze at a lower aliquot.

Calibration Results - 1/19/05 HGAA System 1 by As(In)

Instrument Calibration

Run	ml std used	ng	PA	Calibration Coefficient	
3	0.05	0.5	174	0.00287	120.3%
4	0.20	2.0	577	0.00347	
5	1.00	10.0	2748	0.00364	
6	3.00	30.0	7785	0.00385	
R:		0.9999	**Avg:**	0.00346	
			RSD:	12.2%	

Calibration Blanks

Run	PA	ng	ug/L
1	31	0.107	0.005
2	29	0.100	0.005
Average:	30.0	0.104	0.005
St Dev:	1.41	0.005	0.000

QC CALCULATIONS

Calibration Checks

Mid level standards

Run	ng	PA	ng	%	
7	5.00	1445	5.00	99.9%	*
8	5.00	1426	4.93	98.6%	
33	5.00	1373	4.75	95.0%	
45	5.00	1079	3.73	74.6%	**
46	5.00	1433	4.96	99.1%	

Calibration Blank Checks

Run	PA	ng	ug/L
9	13	0.045	0.002
34	40	0.138	0.007
47	43	0.149	0.007

* Independent Calibration Verification.

** Loose bubbler cap, re-prep and re-anlyze to confirm.

Method Blanks

Run	ID #	weight (mg)	Dilution Volume (mL)	Analyzed Volume (mL)	PA	measured ng	total ng	Result conc. µg/g	
10	MB-1	500	10.00	2.00	68	0.235	1.18	0.002	
11	MB-2	500	10.00	2.00	145	0.501	2.51	0.005	
12	MB-3	500	10.00	2.00	101	0.349	1.75	0.003	
13	MB-2R	500	10.00	2.00	162	0.560	2.80	0.006	*
					Average:	0.362	1.81	0.004	
					StDev:	0.134	0.668	0.001	

* Do not report, re-analyzed for verification only.

Precision

Summary of Duplicate Sample Analysis

Run	Tracking #	ID #	Uncorr. Result ng/g
17	05BR0023	66MD	0.015
20	05BR0023	66R	0.019
		Average:	0.017
		RPD:	21.5%
21	05BR0023	76	0.032
22	05BR0023	76MD	0.029
		Average:	0.030
		RPD:	10.1%

BIAS

Spiked Sample (Note that MS recovery was calculated using uncorrected results)

Run	Tracking #	ID #	Spike (ng)	Sample Weight (mg)	expected µg/g	spike + sample measured µg/g	sample measured µg/g	spike measured µg/g	% Rec.	RPD
18	05BR0023	66MS	30	542	0.055	0.077	0.019	0.059	105.8%	
19	05BR0023	66MSD	30	539	0.056	0.075	0.019	0.057	101.8%	2.5%
23	05BR0023	76MS	60	554	0.108	0.133	0.032	0.101	93.5%	
24	05BR0023	76MSD	60	566	0.106	0.144	0.032	0.113	106.1%	8.1%

Method CRMs

Run	CRM ID	Certified Value µg/g	Sample Weight (mg)	Dilution Volume (mL)	Analyzed Vol. (mL)	PA	ng	Recovery µg/g	% Rec.
14	CRM-1	21.20	118	10.0	0.05	3550	12.28	20.807	98.1%
15	CRM-2	21.20	95	10.0	0.05	3151	10.90	22.940	108.2%

*CRM: NRCC MESS-3

As-T / (As Species ~~inorganic~~) Se-T / Se Species _____
Methods BR-0020 (HGAAS) & EPA 1632 (HGAAS)
Matrix: Water / Sediment / (Biota) / Other _____

Batch #: 04-1030-1 Preparation Date: 1/18/05
Tracking #(s): 05BR0023 Prepared By: MK
Project #(s): WIN001 Page 1 of 2

Flask #	Sample I.D.	Sample Wt. / Vol. (mg) / (mL)	Flask #	Sample I.D.	Sample Wt. / Vol. (mg) / (mL)
	MB-1			05BR0023-70	511
	MB-2			71	592
	MB-3		*	72	559
	CRM-1	118	*	73	534
	CRM-2	95		74	533
	05BR0023-61	507	*	75	612
	62	544		76	537
*	63	571		76 MD	509
	64	488		76 MS	554
	65	509		76 MSD	566
	66	506		77	515
	66 MD	491		78	489
	66 MS	542	*	79	643
	66 MSD	539		80	521
*	67	573			
	68	500			
*	69	488			

Matrix Spike/Matrix Spike Duplicate 100 ng/mL 0.300

Sample I.D.	Spike I.D.	Spike std. Conc.	Spike Vol (mL)	Spike Conc. (µg/g) / (~~µg/L~~)
** 05BR0023-66 MS	04-362-2	~~100 ng/mL~~	~~0.300~~ 0.030	0.055
66 MSD			0.300	0.056
76 MS			0.6000	0.108
76 MSD			0.6000	0.106

ets 1/18/05

** Droplet from pipette tip may have missed vial during spike. (Couldn't see)

* samples were liquidified, &

As-T / As Species ~~Inorganic~~ Se-T / Se Species _____
Methods BR-0020 (HGAAS) & EPA 1632 (HGAAS)

Matrix: Water / Sediment / (Biota) / Other _____

Batch #: 04-1030-1 Preparation Date: 1/18/05

Prepared By: MK Page 2 of 2

Ongoing Precision and Recovery Sample (OPR) or Certified reference Material (CRM)

OPR / CRM I.D.	Certified Conc. (µg/g) / (µg/L)	Source I.D. (for OPR)
CRM-1	21.2	MESS-3
CRM-2	21.2	↓

REAGENTS: *Volume & ID #*

HNO_3: _____

$HClO_4$: _____

H_2SO_4: _____

2M HCl: 05-018-1

$H_3PO_4/NH_2OH{\cdot}HCl$: _____

DIGESTION:

Temperature	Time
80°C	16hrs

DILUTION INFORMATION:

Final Volume of Preparation: _____

Volume of Prep Subsampled: _____

Dilution Media: _____

Final Dilution Volume: 10.0

ADDITIONAL COMMENTS: _____

(In)

As ☒ Se ☐ Analysis Sheet

1/19/05 MN

Batch: 04-1030-1 Matrix: Biota

Analyst: ABN Calibration Blank $\bar{X}$: 30.0 PA Blank Corr. Calib. Coef. $\bar{X}$: 0.003458

Date: 1/19/05 Method Blank $\bar{X}$: 0.004 ng/g RSD: 12.2%

Standards: Cal Std 10 ng /mL: 05-019-01 As 30% NH_2OHHCl: — N=: 4

QA: Full☒ Standard☐ ICV Std: 05-018-03 As 4% $NaBH_4$: 05-019-NaBH4 r: 0.9999

Noise: 4% $NaBH_4$ add. & purge time (m:s) 2 min

Run #	Trap #	Sample ID	Analyzed volume (mL)	PA	Sample Specific Notes
1	C8	Cal Blk-1	—	31	
2	N1	↓ -2	—	29	
3	C8	0.5 ng	0.050	174	
4	N1	2	0.200	577	
5	C8	10	1.00	2748	
6	N1	30 ↓	3.00	7785	
7	C8	ICV 5ng	0.050	1445	
8	N1	CCV 5ng	0.500	1426	
9	C8	CCB	—	13	
10	N1	MB-1	2.00	~~68~~	90 TPF 1.21.05
11	C8	2	↓	145	Re-analyze to verify.
12	N1	↓ 3	↓	101	
13	C8	MB-2R	2.00	162	Do not repeat
14	N1	CRM-1	0.050	3550	
15	C8	CRM-2	0.050	3151	
16	N1	05BR0023-66X	2.00	469	Re-analyze @ a lower aliquant.
17	C8	-66MD	~~1~~ 1.00	215	1/19/05 MN Excessive foaming noted in bubbler.
18	N1	-66MS	0.500	606	
19	C8	-66MSD	↓	588	
20	N1	-66	1.00	275	
21	C8	-76	1.00	490	
22	N1	-76MD	1.00	420	
23	C8	-76MS	0.500	1064	
24	N1	↓ -76MSD	0.500	1179	

Comments:

Method SRM: MESS-3

(In)

As ☒ Se ☐ Analysis Sheet

Batch: 04-1030-1 Matrix: Biota

Analyst: ABW Date: 1/19/05

Run #	Trap #	Sample ID	Analyzed volume (mL)	PA	Sample Specific Notes
25	C8	05BR0023-61	1.00	417	
26	N1	-62	1.00	612	
27	C8	-63	0.500	2290	
28	N1	-64	1.00	323	
29	C8	-65	1.00	311	
30	N1	-67	0.500	723	
31	C8	-68	1.00	473	
32	N1	-69	0.500	629	
33	C8	CCV 5ng	0.500	1373	
34	N1	CCB	—	40	
35	C8	05BR0023-70	1.00	552	
36	N1	-71	1.00	521	
37	C8	-72	0.250	1192	
38	N1	-73	0.250	996	
39	C8	-74	1.00	515	
40	N1	-75	0.250	1487	
41	C8	-77	1.00	291	
42	N1	-78	1.00	401	
43	C8	-79	0.250	1589	
44	N1	-80	1.00	339	
45	C8	CCV 5ng	0.500	1079	
46	N1	CCVR 5ng	0.500	1433	Loose bubbler cap. Re-prep + re-analyze.
47	C8	CCB	—	43	

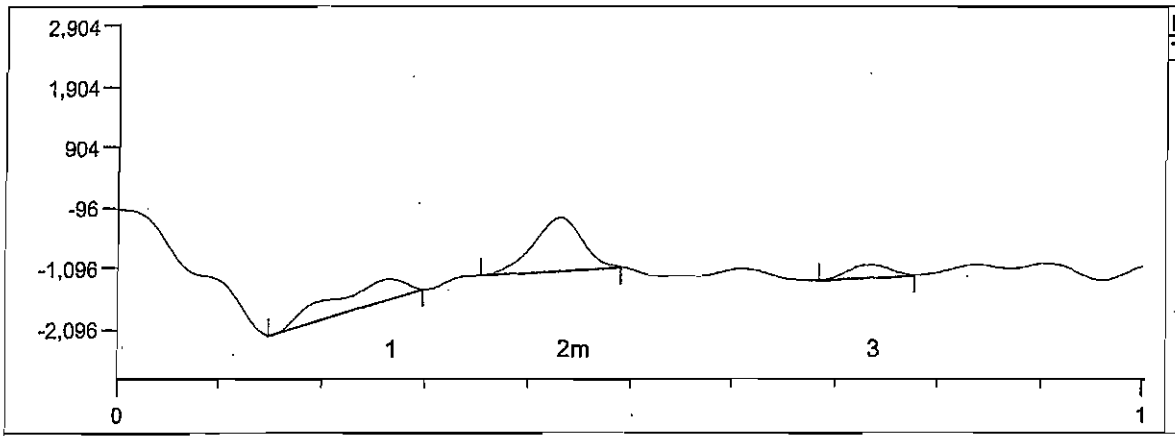
1/19/05 ABW

Comments:

Batch Number: 04-1030-1
Method Number: BR-0021

Project Number(s): WIN001
Instrument ID: HGAA-1

Date Analyzed: 1/19/05
Analyst Name: ABN

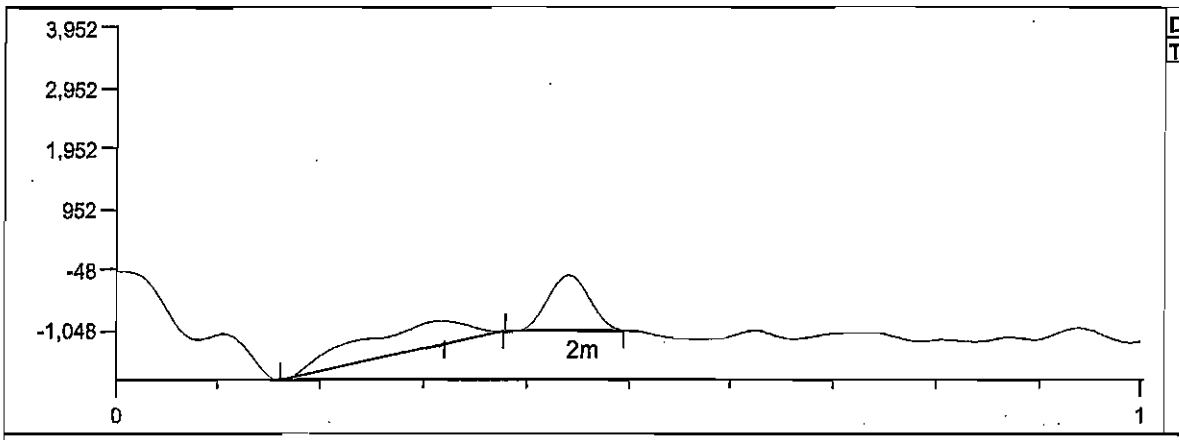


Date: 1/19/05
Time: 5:39 PM

Peak	rt	Area
1	0.26	40,396
2m	0.43	30,939
3	0.73	6,007

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
1	CB	CAL BLK-1		2m	30,939	0.107		0.107	< 50	reject

Notes:

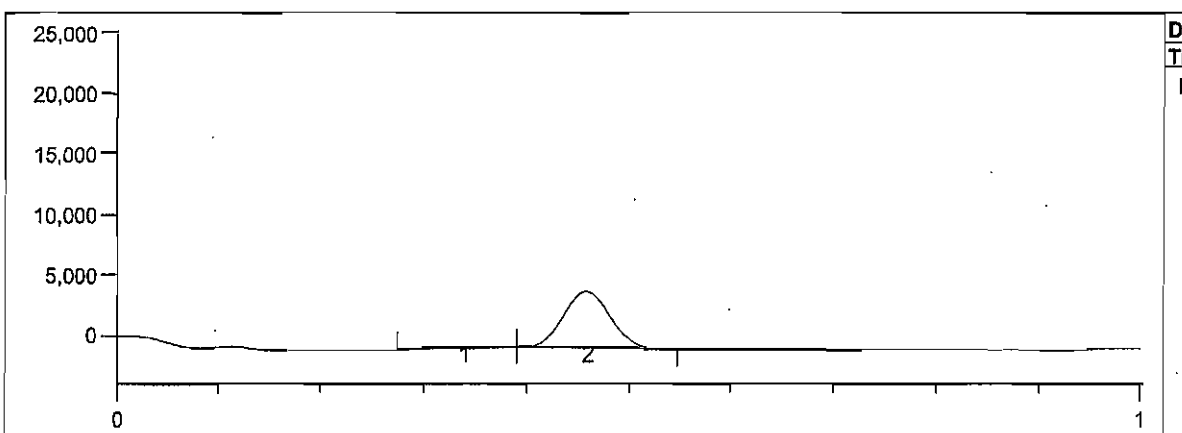


Date: 1/19/05
Time: 5:44 PM

Peak	rt	Area
1	0.31	71,097
2m	0.44	28,548

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
2	CB	CAL BLK-2		2m	28,548	0.0988		0.0988	< 50	reject

Notes:



Date: 1/19/05
Time: 5:52 PM

Peak	rt	Area
1	0.34	16,128
2	0.46	173,503

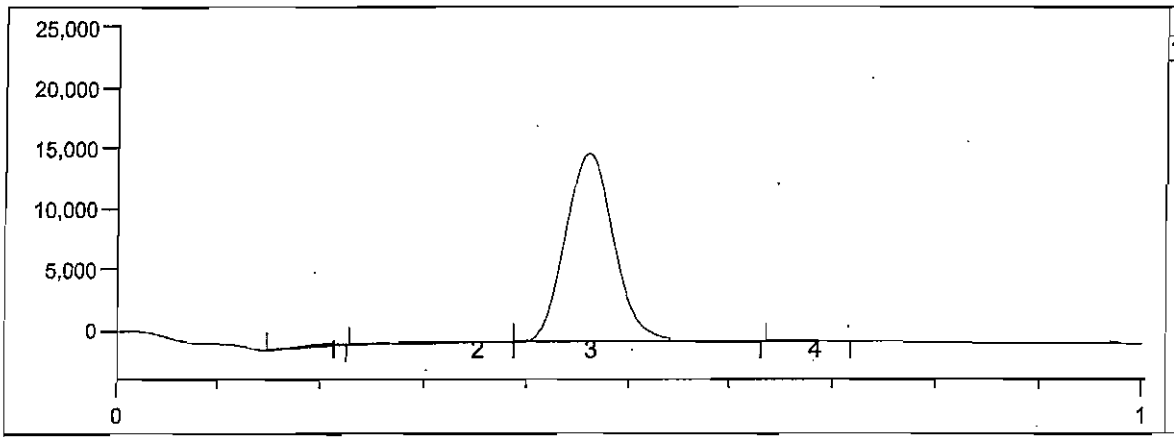
Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
3	STD	0.5 ng		2	173,503	0.600		120	75-125	accept

Notes:

Batch Number: 04-1030-1
Method Number: BR-0021

Project Number(s): WIN001
Instrument ID: HGAA-1

Date Analyzed: 1/19/05
Analyst Name: ABN

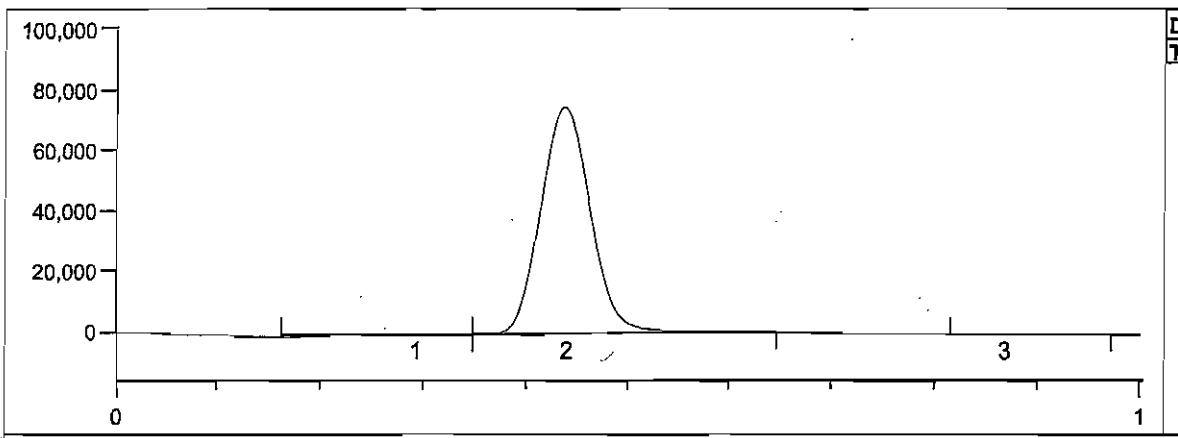


Date: 1/19/05
Time: 5:58 PM

Peak	rt	Area
1	0.20	15,327
2	0.35	44,981
3	0.46	577,103
4	0.68	6,005

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
4	STD	2 ng		3	577,103	2.00		99.8	75-125	accept

Notes:

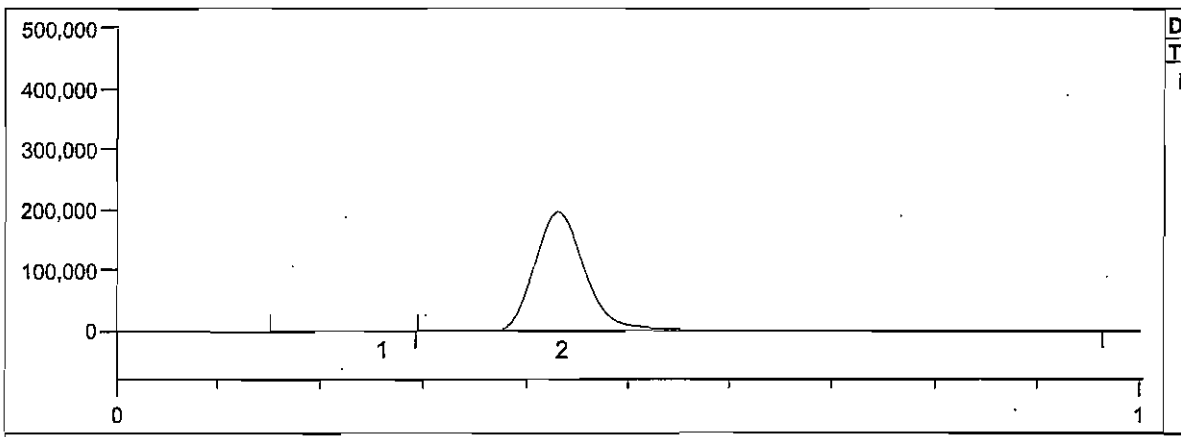


Date: 1/19/05
Time: 6:04 PM

Peak	rt	Area
1	0.29	25,904
2	0.44	2,748,250
3	0.86	11,522

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
5	STD	10 ng		2	2,748,250	9.51		95.1	75-125	accept

Notes:



Date: 1/19/05
Time: 6:10 PM

Peak	rt	Area
1	0.26	19,479
2	0.43	7,784,513

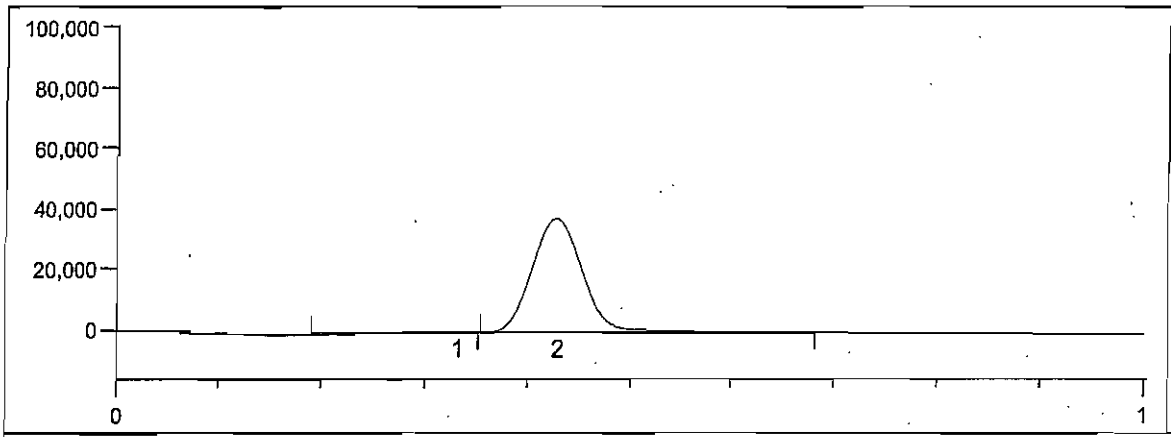
Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
6	STD	30 ng		2	7,784,513	26.9		89.8	75-125	accept

Notes:

Batch Number: 04-1030-1
Method Number: BR-0021

Project Number(s): WIN001
Instrument ID: HGAA-1

Date Analyzed: 1/19/05
Analyst Name: ABN

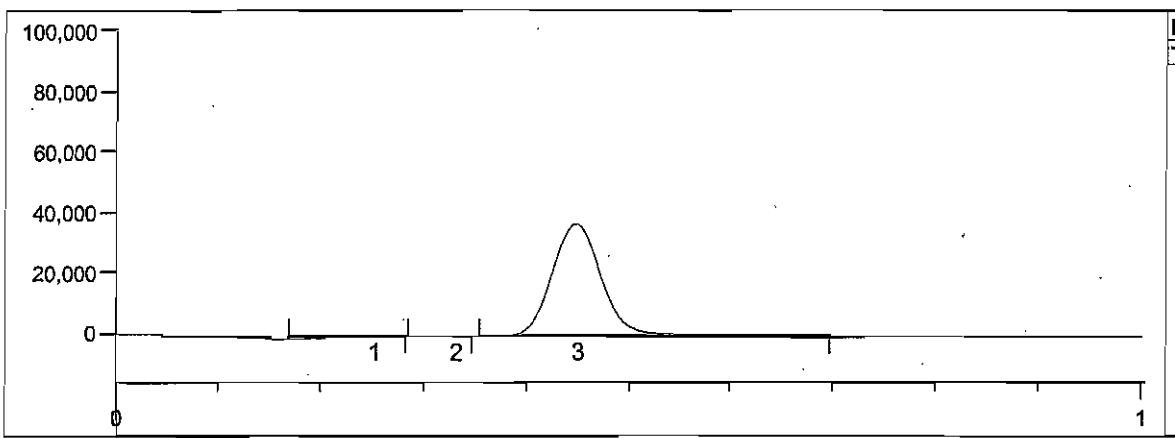


Date: 1/19/05
Time: 6:17 PM

Peak	rt	Area
1	0.33	35,645
2	0.42	1,445,085

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
7	QCS	ICV 5 ng		2	1,445,085	5.00		100	80-120	accept

Notes:

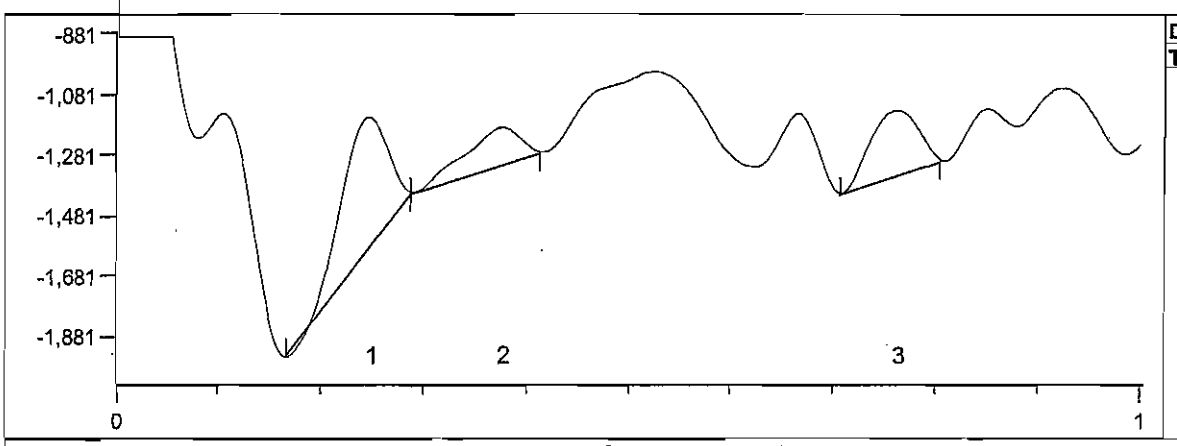


Date: 1/19/05
Time: 6:26 PM

Peak	rt	Area
1	0.24	27,365
2	0.33	19,373
3	0.44	1,426,205

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
8	QPR	CCV 5 ng		3	1,426,205	4.93		98.7	80-120	accept

Notes:



Date: 1/19/05
Time: 6:32 PM

Peak	rt	Area
1	0.24	23,585
2	0.37	13,483
3	0.76	7,536

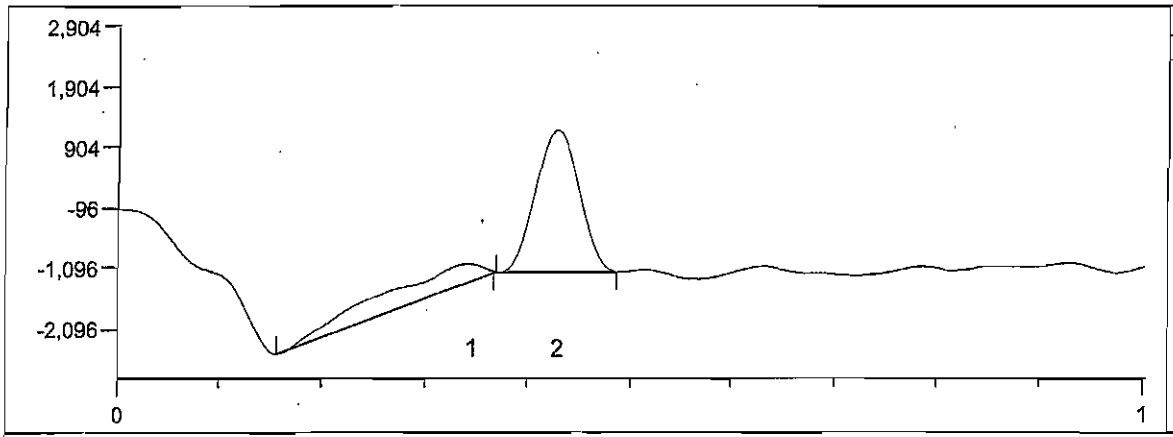
Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
9	CCB	CCB		2	13,483	0.0467			< 0.16	accept

Notes:

Batch Number: 04-1030-1
Method Number: BR-0021

Project Number(s): WIN001
Instrument ID: HGAA-1

Date Analyzed: 1/19/05
Analyst Name: ABN

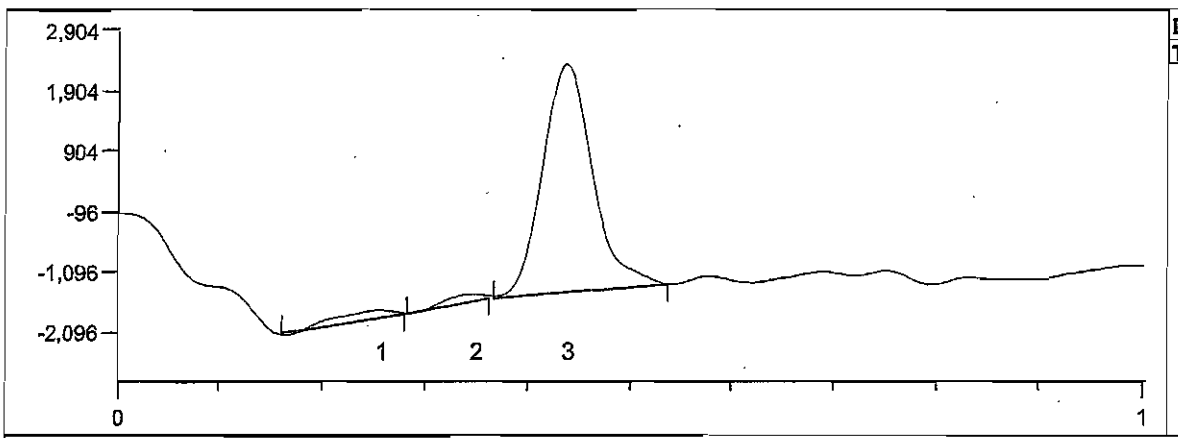


Date:	1/19/05
Time:	6:53 PM

Peak	rt	Area
1	0.34	67,874
2	0.42	90,465

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
10	MBA	MB-1		1	67,874	0.235	0.00235	0.00235	< 0.012	accept

Notes:

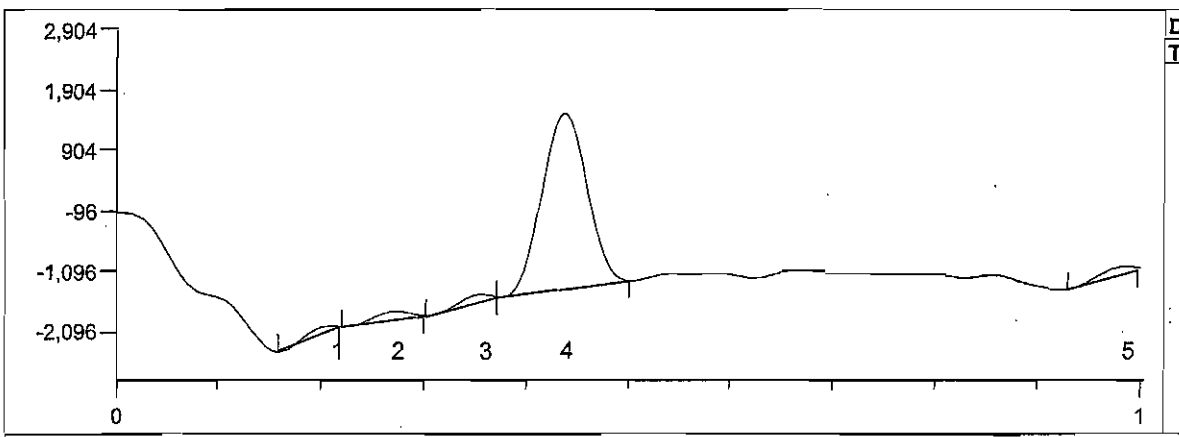


Date:	1/19/05
Time:	6:59 PM

Peak	rt	Area
1	0.25	12,003
2	0.34	11,184
3	0.44	144,942

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
11	MBA	MB-2		3	144,942	0.501	0.00501	0.00501	< 0.012	accept

Notes:



Date:	1/19/05
Time:	7:05 PM

Peak	rt	Area
1	0.21	7,283
2	0.27	12,467
3	0.35	9,662
4	0.44	100,848
5	0.98	3,105

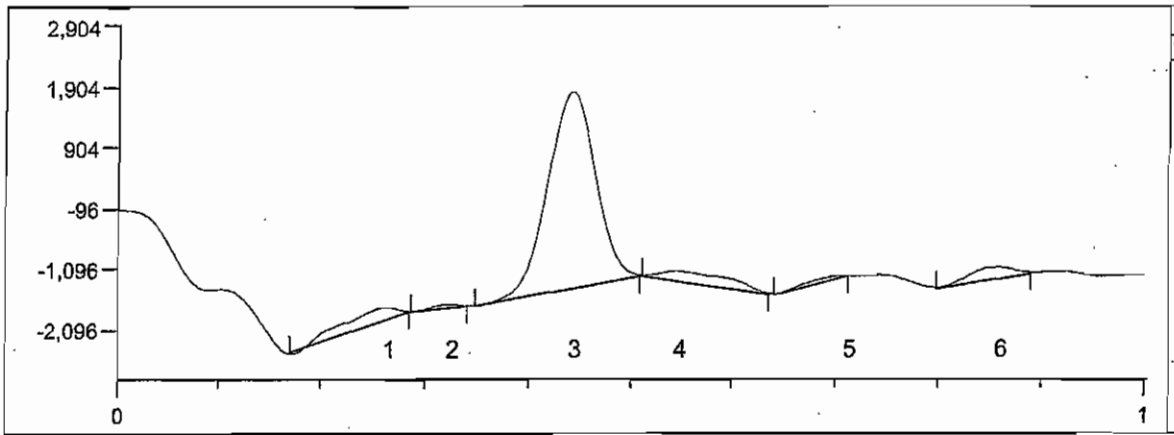
Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
12	MBA	MB-3		4	100,848	0.349	0.00349	0.00349	< 0.012	accept

Notes:

Batch Number: 04-1030-1
Method Number: BR-0021

Project Number(s): WIN001
Instrument ID: HGAA-1

Date Analyzed: 1/19/05
Analyst Name: ABN

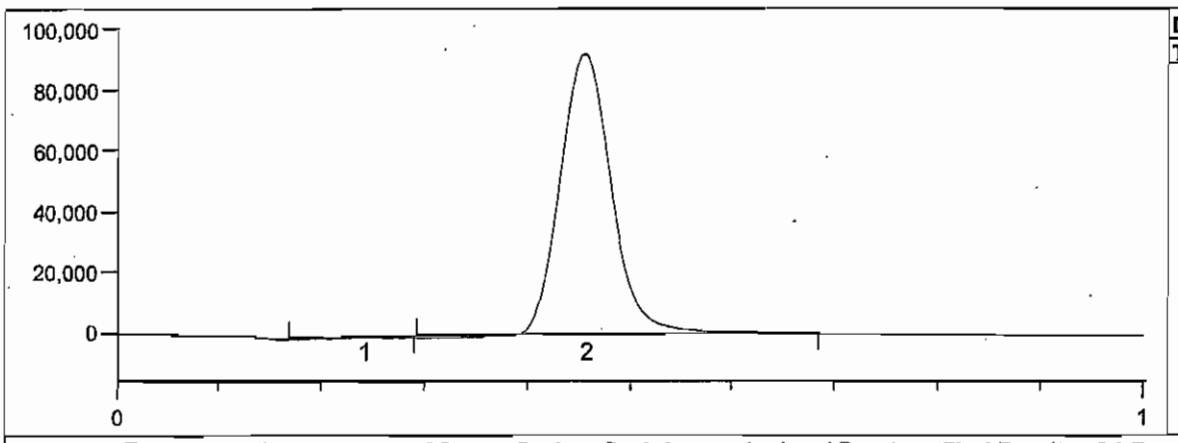


Date: 1/19/05
Time: 7:12 PM

Peak	rt	Area
1	0.26	28,418
2	0.32	16,755
3	0.44	161,535
4	0.54	30,167
5	0.71	2,110
6	0.86	5,698

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
13	MBA	MB-2R		3	161,535	0.559	0.00559	0.00559	< 0.012	reject

Notes:

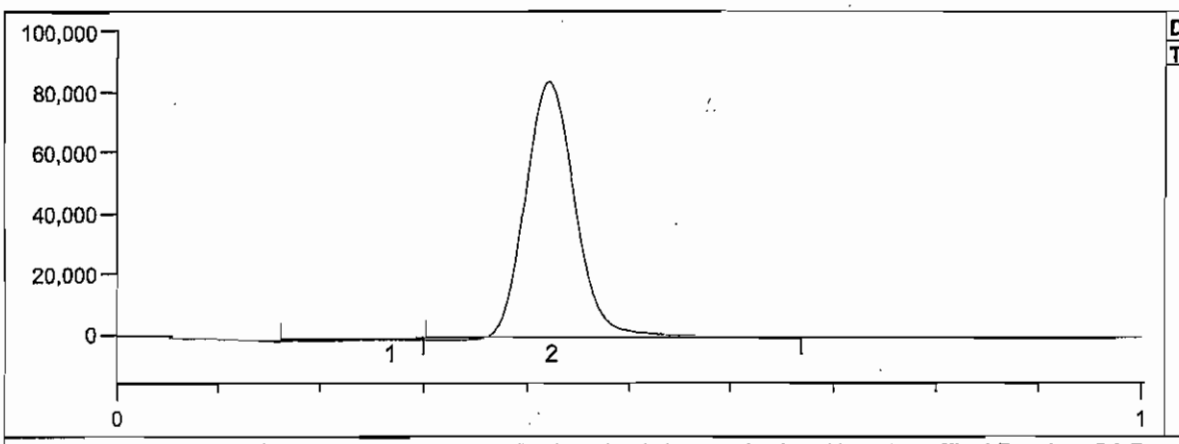


Date: 1/19/05
Time: 7:21 PM

Peak	rt	Area
1	0.24	33,565
2	0.45	3,550,478

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
14	IPR	CRM-1		2	3,550,478	12.3	20.8	98.2	65-135	accept

Notes:



Date: 1/19/05
Time: 7:28 PM

Peak	rt	Area
1	0.26	22,999
2	0.42	3,150,677

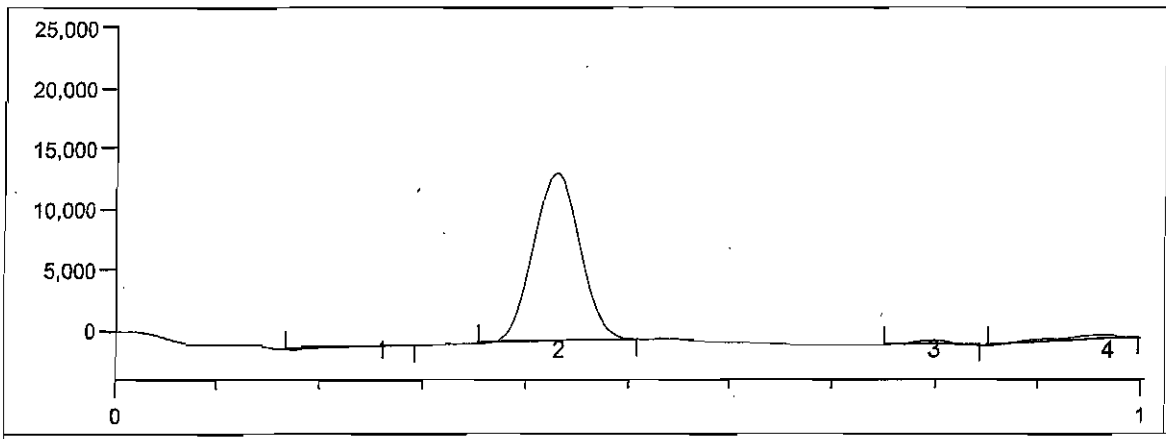
Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
15	IPR	CRM-2		2	3,150,677	10.9	22.9	108	65-135	accept

Notes:

Batch Number: 04-1030-1
Method Number: BR-0021

Project Number(s): WIN001
Instrument ID: HGAA-1

Date Analyzed: 1/19/05
Analyst Name: ABN

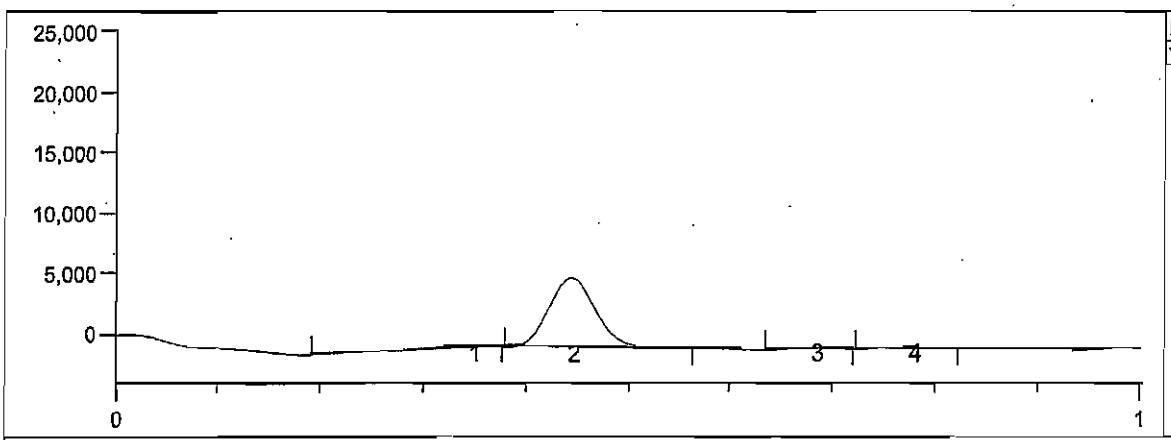


Date: 1/19/05
Time: 7:34 PM

Peak	rt	Area
1	0.25	11,149
2	0.43	468,706
3	0.79	9,267
4	0.96	20,031

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
16	S	05BR0023-66X		2	468,706	1.62	0.0160		< HS	reject

Notes:

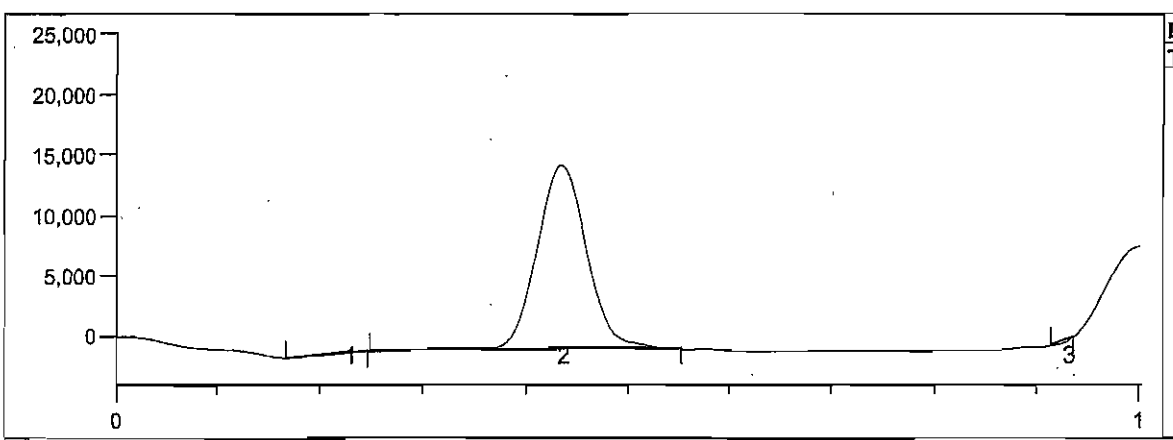


Date: 1/19/05
Time: 7:49 PM

Peak	rt	Area
1	0.34	36,791
2	0.44	215,484
3	0.68	6,255
4	0.77	8,791

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
17	MD	05BR0023-66		2	215,484	0.746	0.0152	21.1	< 35	accept

Notes:



Date: 1/19/05
Time: 7:57 PM

Peak	rt	Area
1	0.22	16,195
2	0.43	605,868
3	0.92	-1,407

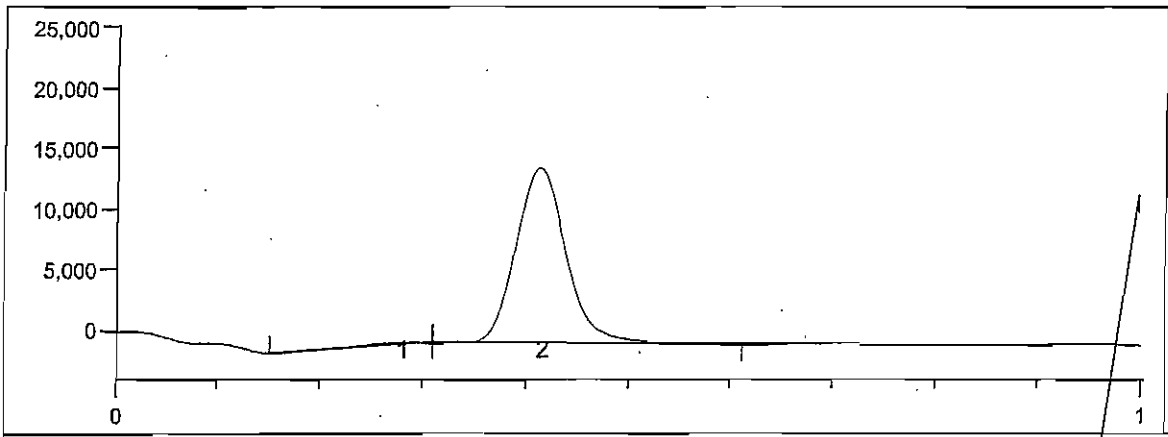
Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
18	MS	05BR0023-66		2	605,868	2.10	0.0774	107	65-135	accept

Notes:

Batch Number: 04-1030-1
Method Number: BR-0021

Project Number(s): WIN001
Instrument ID: HGAA-1

Date Analyzed: 1/19/05
Analyst Name: ABN

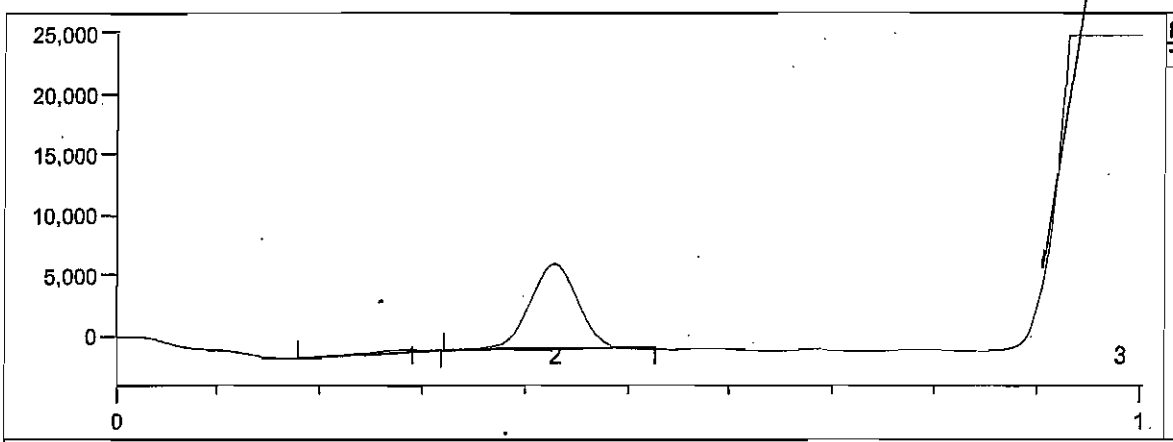


Date: 1/19/05
Time: 8:03 PM

Peak	rt	Area
1	0.28	45,607
2	0.41	588,369

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
19	MSD	05BR0023-66		2	588,369	2.04	0.0755	101	65-135	accept

Notes:

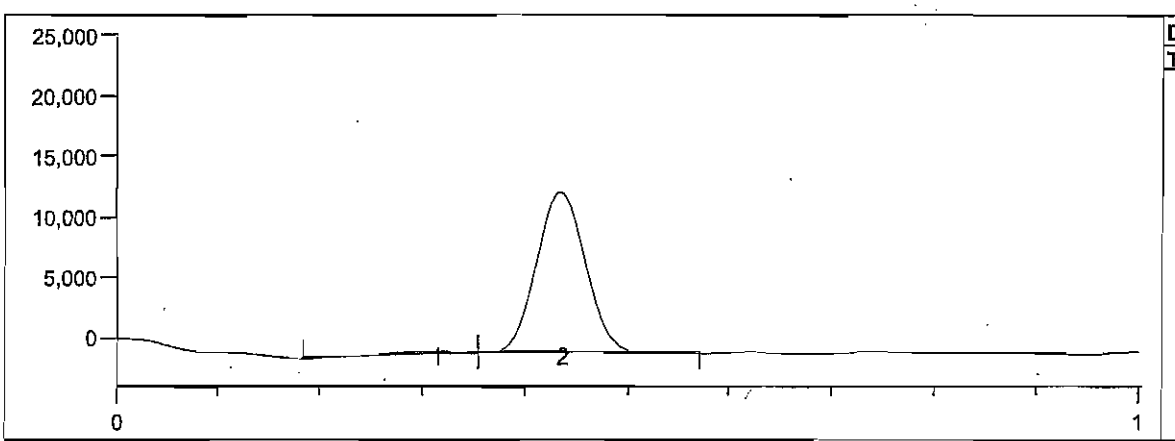


Date: 1/19/05
Time: 8:09 PM

Peak	rt	Area
1	0.28	24,106
2	0.42	274,522
3	0.97	1,106,510

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
20	S	05BR0023-66		2	274,522	0.950	0.0188		< HS	accept

Notes:



Date: 1/19/05
Time: 8:26 PM

Peak	rt	Area
1	0.31	32,061
2	0.43	490,060

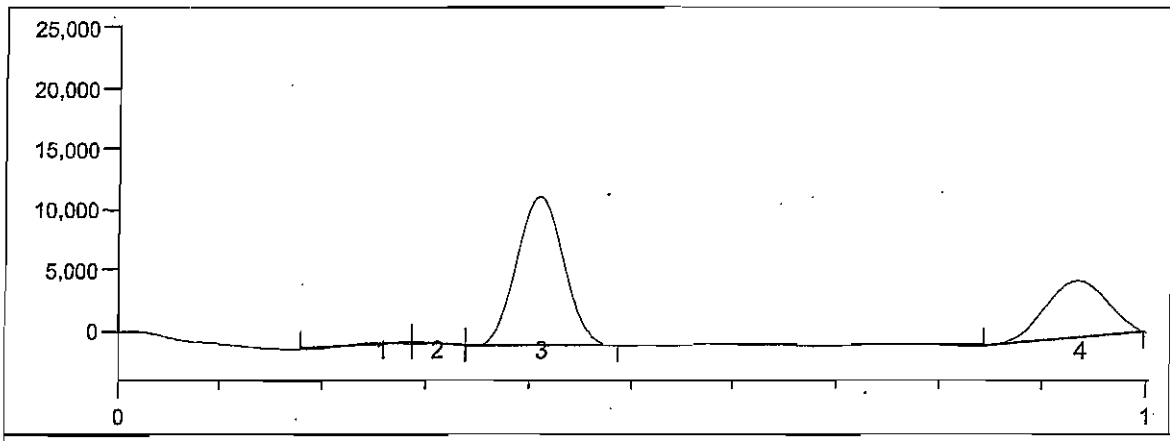
Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
21	S	05BR0023-76		2	490,060	1.70	0.0316		< HS	accept

Notes:

Batch Number: 04-1030-1
Method Number: BR-0021

Project Number(s): WIN001
Instrument ID: HGAA-1

Date Analyzed: 1/19/05
Analyst Name: ABN

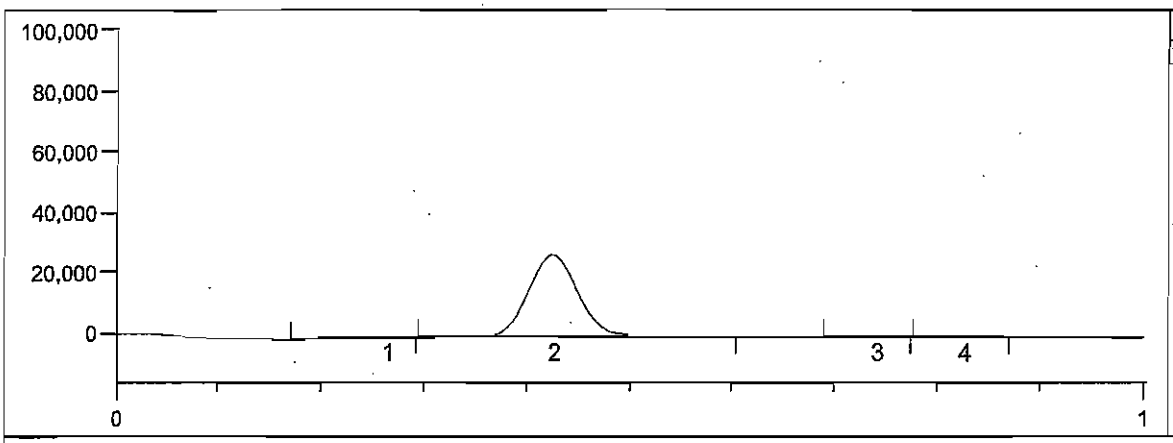


Date: 1/19/05
Time: 8:32 PM

Peak	rt	Area
1	0.25	19,788
2	0.31	9,128
3	0.41	419,537
4	0.93	205,860

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
22	MD	05BR0023-76		3	419,537	1.45	0.0285	10.2	< 35	accept

Notes:

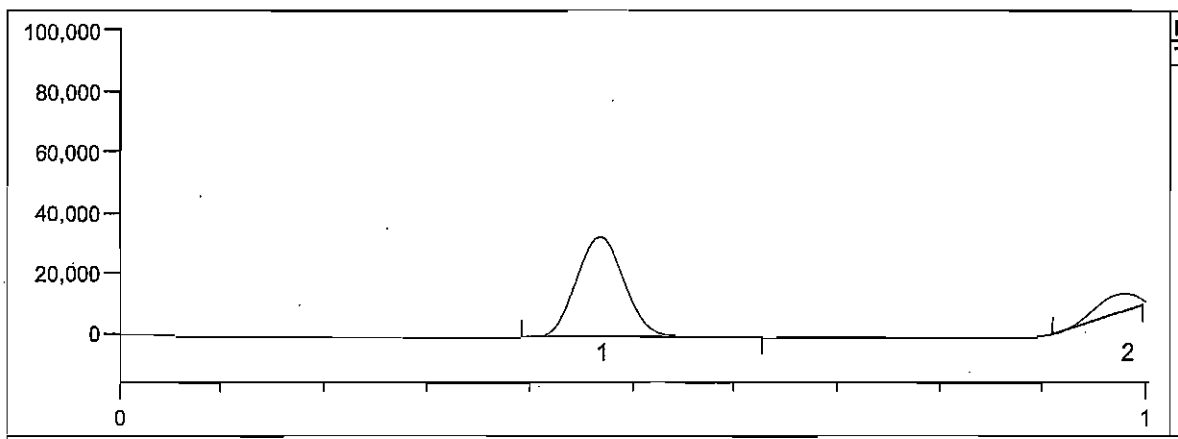


Date: 1/19/05
Time: 8:40 PM

Peak	rt	Area
1	0.26	25,862
2	0.42	1,063,993
3	0.74	5,381
4	0.82	5,902

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
23	MS	05BR0023-76		2	1,063,993	3.68	0.133	93.8	65-135	accept

Notes:



Date: 1/19/05
Time: 8:45 PM

Peak	rt	Area
1	0.46	1,178,517
2	0.98	181,190

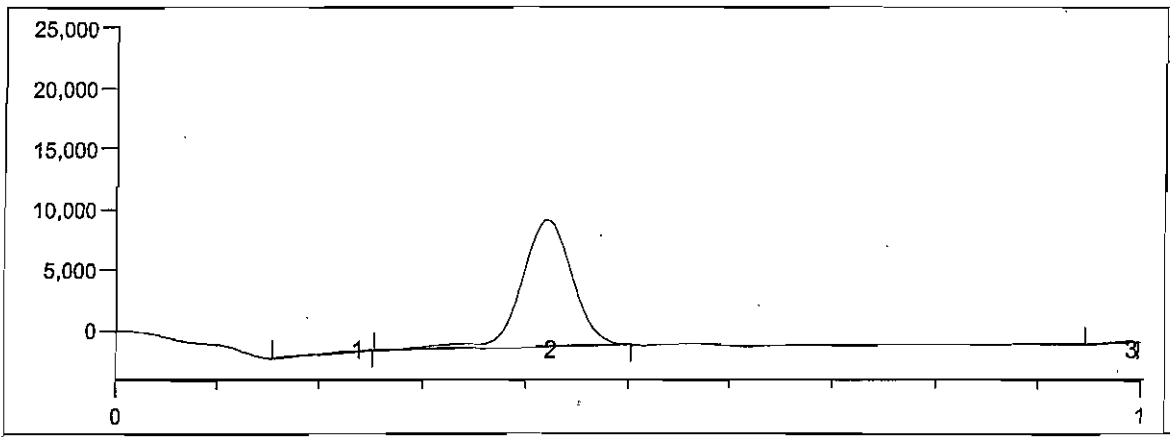
Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
24	MSD	05BR0023-76		1	1,178,517	4.08	0.144	106	65-135	accept

Notes:

Batch Number: 04-1030-1
Method Number: BR-0021

Project Number(s): WIN001
Instrument ID: HGAA-1

Date Analyzed: 1/19/05
Analyst Name: ABN

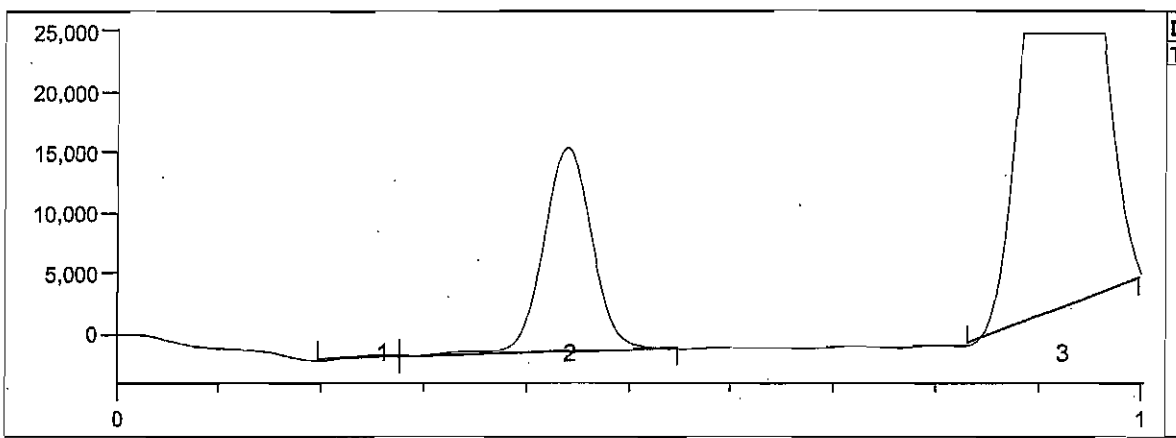


Date: 1/19/05
Time: 8:59 PM

Peak	rt	Area
1	0.23	17,910
2	0.42	417,211
3	0.98	1,827

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
25	S	05BR0023-61		2	417,211	1.44	0.0285		< HS	accept

Notes:

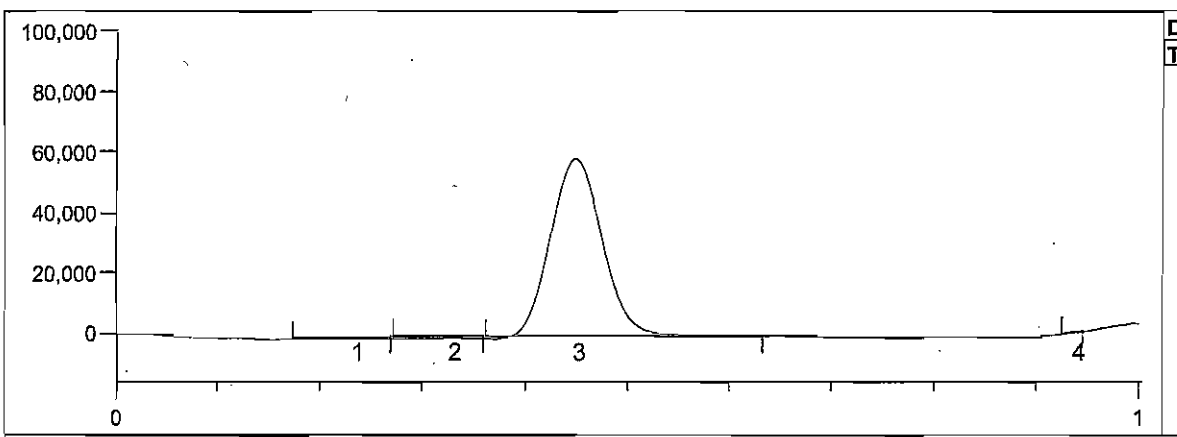


Date: 1/19/05
Time: 9:04 PM

Peak	rt	Area
1	0.25	9,791
2	0.44	611,770
3	0.92	2,534,192

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
26	S	05BR0023-62		2	611,770	2.12	0.0389		< HS	accept

Notes:



Date: 1/19/05
Time: 9:12 PM

Peak	rt	Area
1	0.23	18,015
2	0.32	14,818
3	0.45	2,289,735
4	0.94	-75

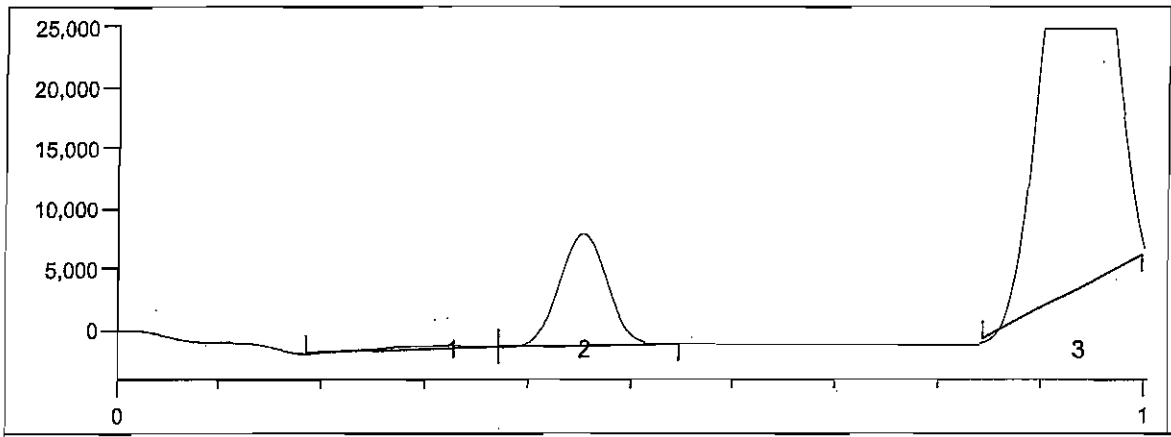
Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
27	S	05BR0023-63		3	2,289,735	7.92	0.277		< HS	accept

Notes:

Batch Number: 04-1030-1
Method Number: BR-0021

Project Number(s): WIN001
Instrument ID: HGAA-1

Date Analyzed: 1/19/05
Analyst Name: ABN

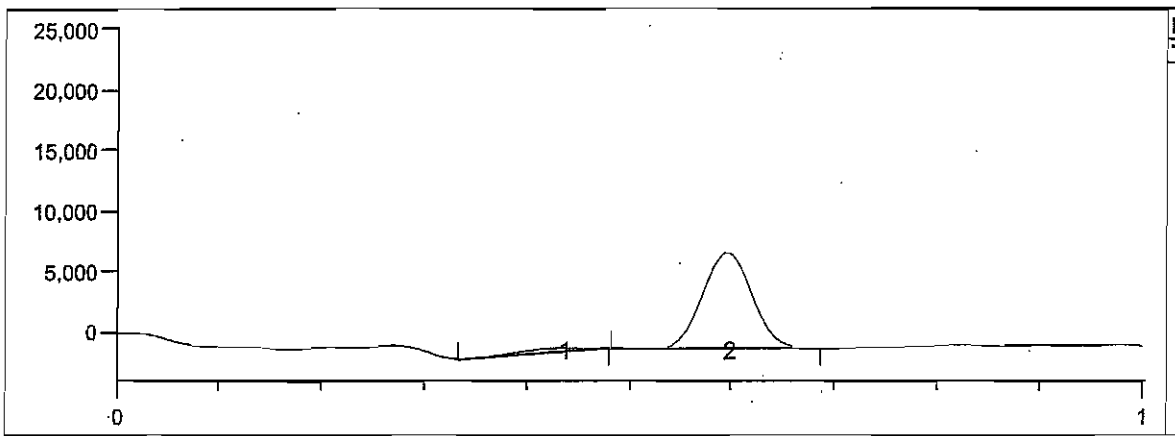


Date: 1/19/05
Time: 9:18 PM

Peak	rt	Area
1	0.32	32,783
2	0.45	323,148
3	0.93	1,871,386

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
28	S	05BR0023-64		2	323,148	1.12	0.0229		< HS	accept

Notes:

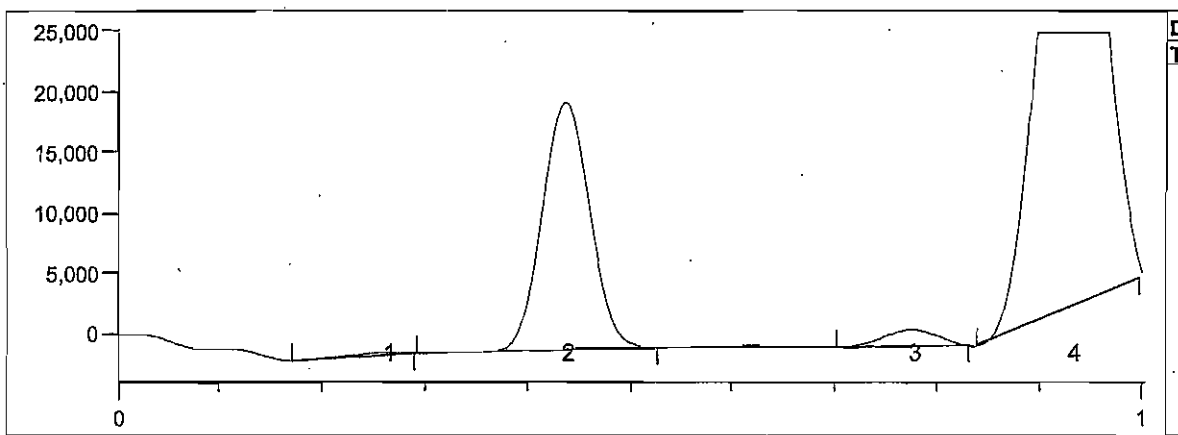


Date: 1/19/05
Time: 9:24 PM

Peak	rt	Area
1	0.43	39,878
2	0.59	311,386

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
29	S	05BR0023-65		2	311,386	1.08	0.0212		< HS	accept

Notes:



Date: 1/19/05
Time: 9:29 PM

Peak	rt	Area
1	0.26	20,113
2	0.43	722,685
3	0.77	57,525
4	0.93	1,991,838

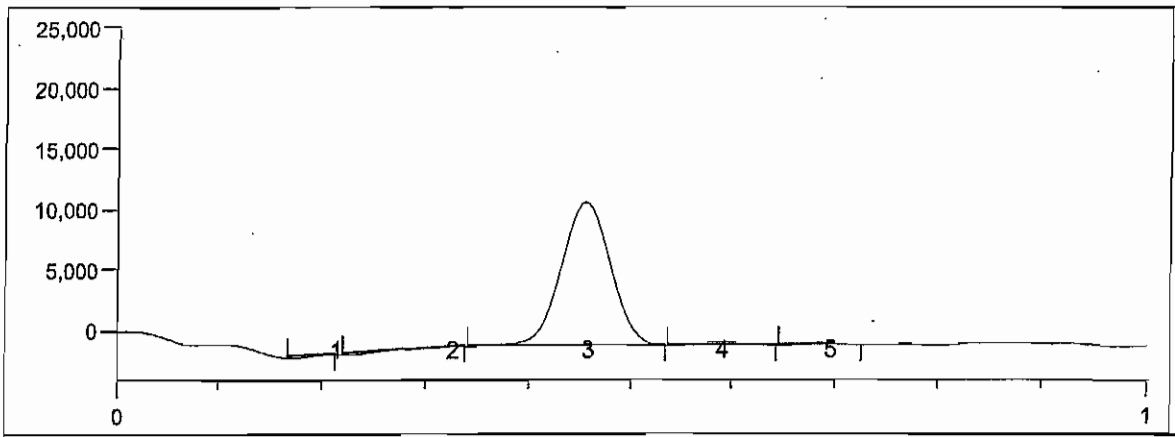
Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
30	S	05BR0023-67		2	722,685	2.50	0.0873		< HS	accept

Notes:

Batch Number: 04-1030-1
Method Number: BR-0021

Project Number(s): WIN001
Instrument ID: HGAA-1

Date Analyzed: 1/19/05
Analyst Name: ABN

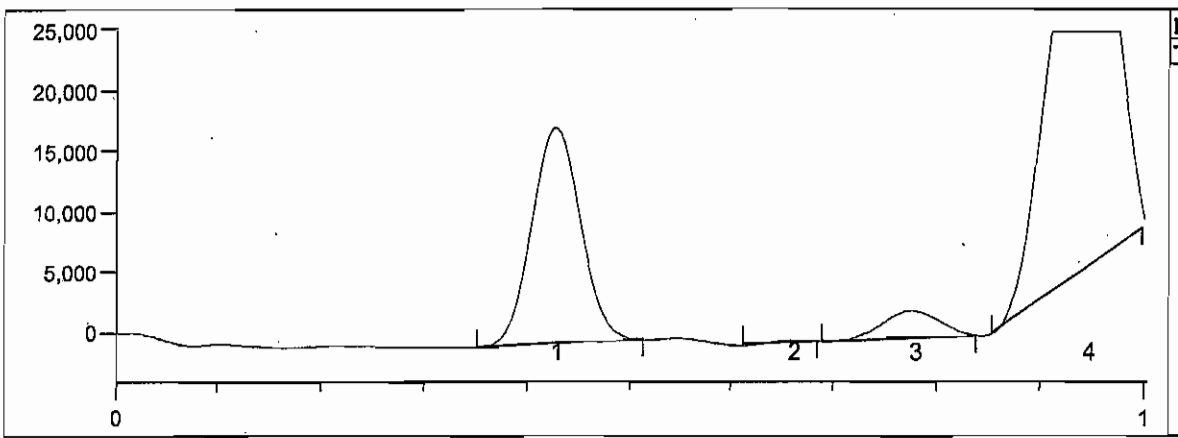


Date: 1/19/05
Time: 9:34 PM

Peak	rt	Area
1	0.21	3,232
2	0.32	35,516
3	0.45	473,103
4	0.58	20,618
5	0.69	5,468

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
31	S	05BR0023-68		3	473,103	1.64	0.0327		< HS	accept

Notes:

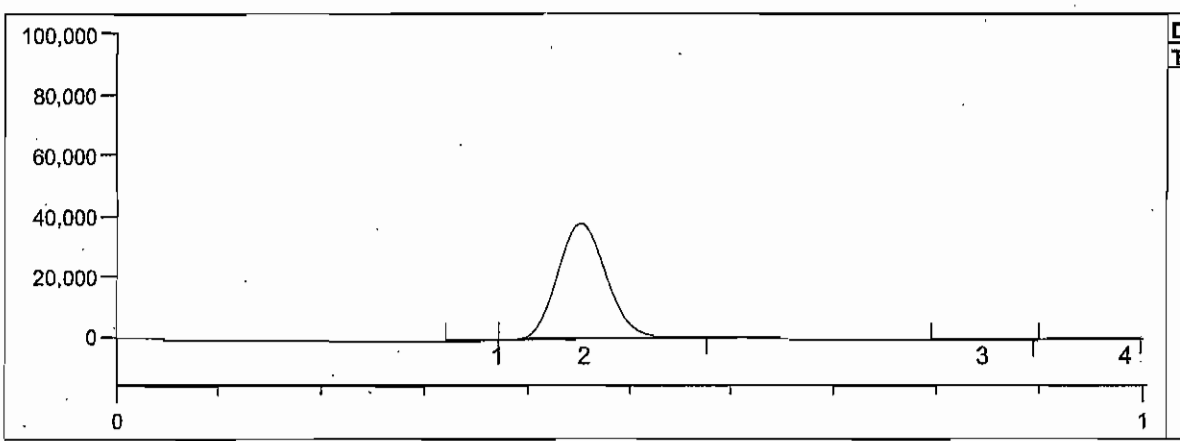


Date: 1/19/05
Time: 9:40 PM

Peak	rt	Area
1	0.42	629,092
2	0.66	7,122
3	0.77	101,914
4	0.94	1,563,992

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
32	S	05BR0023-69		1	629,092	2.18	0.0892		< HS	accept

Notes:



Date: 1/19/05
Time: 9:46 PM

Peak	rt	Area
1	0.36	1,874
2	0.45	1,372,584
3	0.84	17,788
4	0.98	9,238

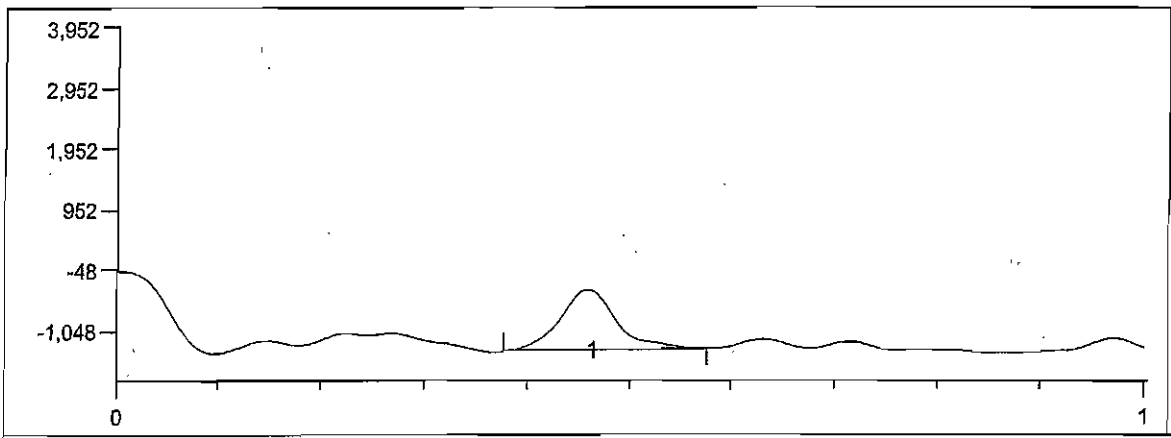
Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
33	OPR	CCV 5 ng		2	1,372,584	4.75		95.0	80-120	accept

Notes:

Batch Number: 04-1030-1
Method Number: BR-0021

Project Number(s): WIN001
Instrument ID: HGAA-1

Date Analyzed: 1/19/05
Analyst Name: ABN

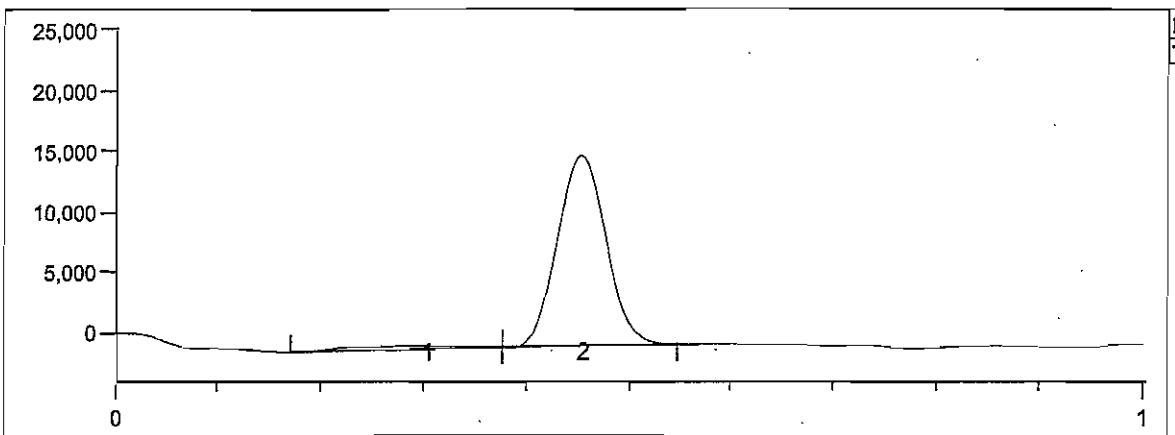


Date: 1/19/05
Time: 9:52 PM

Peak	rt	Area
1	0.46	40,213

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
34	CCB	CCB		1	40,213	0.139			< 0.16	accept

Notes:

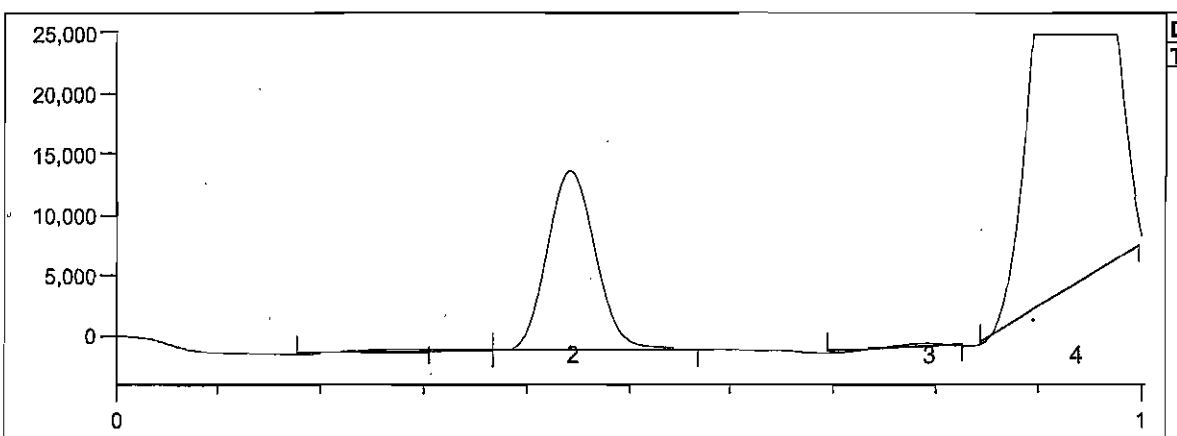


Date: 1/19/05
Time: 10:07 PM

Peak	rt	Area
1	0.30	32,421
2	0.45	552,232

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
35	S	05BR0023-70		2	552,232	1.91	0.0374		< HS	accept

Notes:



Date: 1/19/05
Time: 10:13 PM

Peak	rt	Area
1	0.30	34,167
2	0.44	520,984
3	0.79	17,341
4	0.93	2,382,350

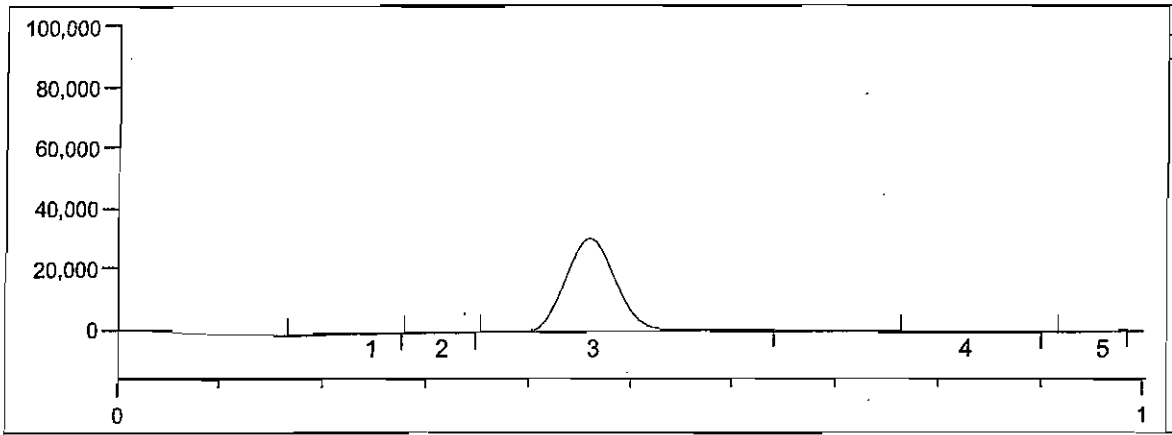
Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
36	S	05BR0023-71		2	520,984	1.80	0.0304		< HS	accept

Notes:

Batch Number: 04-1030-1
Method Number: BR-0021

Project Number(s): WIN001
Instrument ID: HGAA-1

Date Analyzed: 1/19/05
Analyst Name: ABN

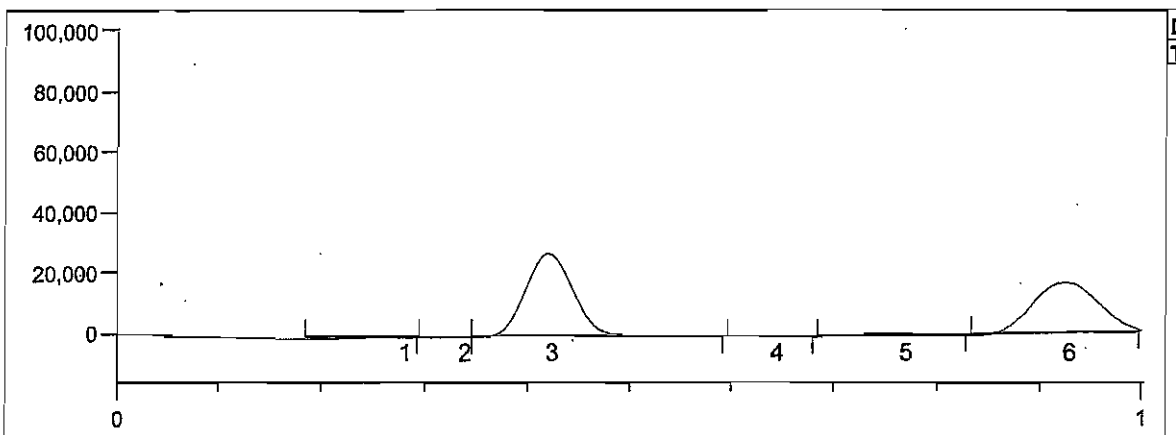


Date: 1/19/05
Time: 10:20 PM

Peak	rt	Area
1	0.24	36,459
2	0.31	22,256
3	0.46	1,191,590
4	0.82	12,452
5	0.95	1,375

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
37	S	05BR0023-72		3	1,191,590	4.12	0.295		< HS	accept

Notes:

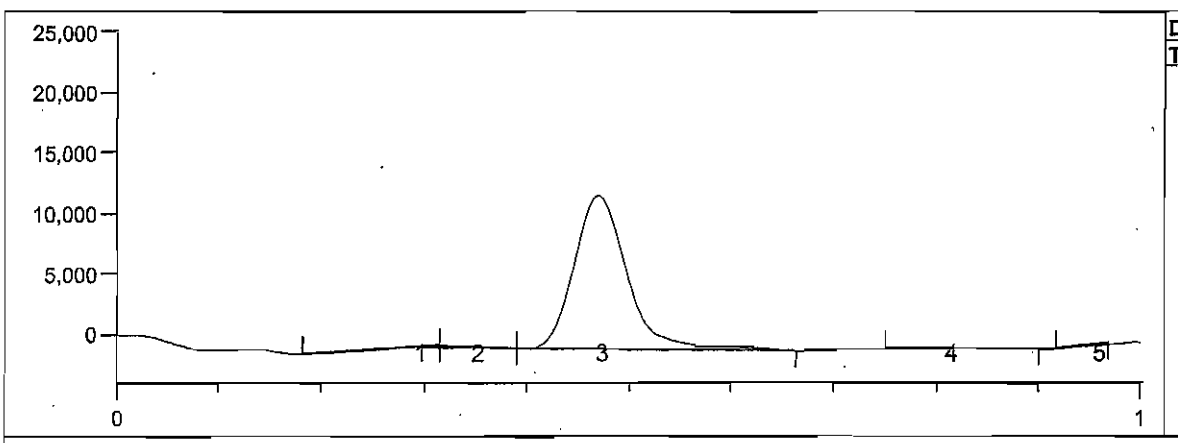


Date: 1/19/05
Time: 10:25 PM

Peak	rt	Area
1	0.27	19,916
2	0.33	13,380
3	0.42	995,701
4	0.64	7,017
5	0.76	59,582
6	0.92	778,580

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
38	S	05BR0023-73		3	995,701	3.45	0.258		< HS	accept

Notes:



Date: 1/19/05
Time: 10:31 PM

Peak	rt	Area
1	0.29	23,899
2	0.35	20,825
3	0.47	515,088
4	0.81	12,308
5	0.95	268

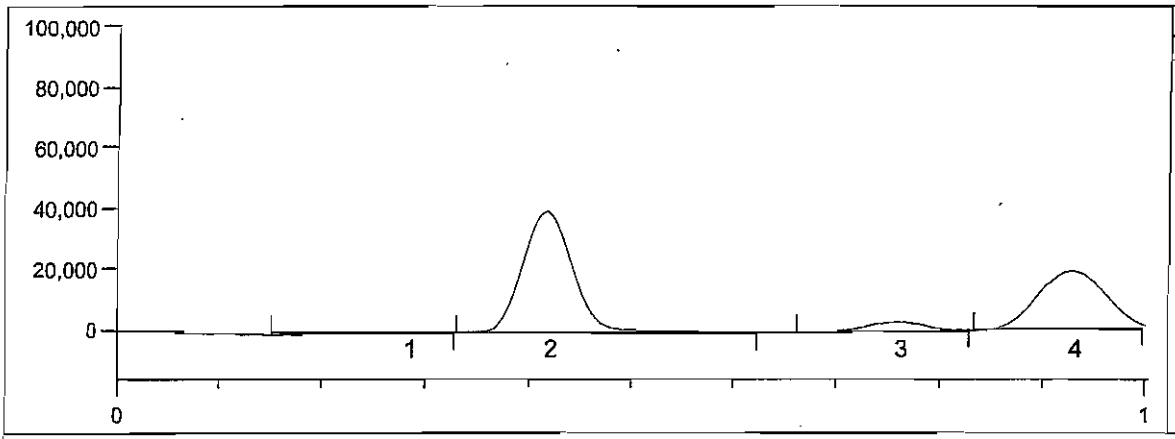
Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
39	S	05BR0023-74		3	515,088	1.78	0.0334		< HS	accept

Notes:

Batch Number: 04-1030-1
Method Number: BR-0021

Project Number(s): WIN001
Instrument ID: HGAA-1

Date Analyzed: 1/19/05
Analyst Name: ABN

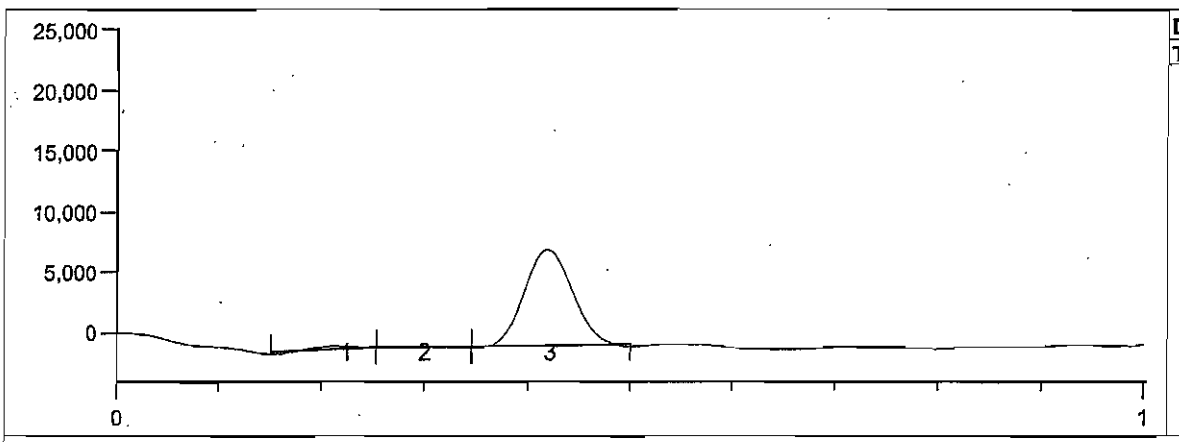


Date: 1/19/05
Time: 10:37 PM

Peak	rt	Area
1	0.28	33,326
2	0.42	1,487,086
3	0.76	149,142
4	0.92	874,784

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
40	S	05BR0023-75		2	1,487,086	5.15	0.336		< HS	accept

Notes:

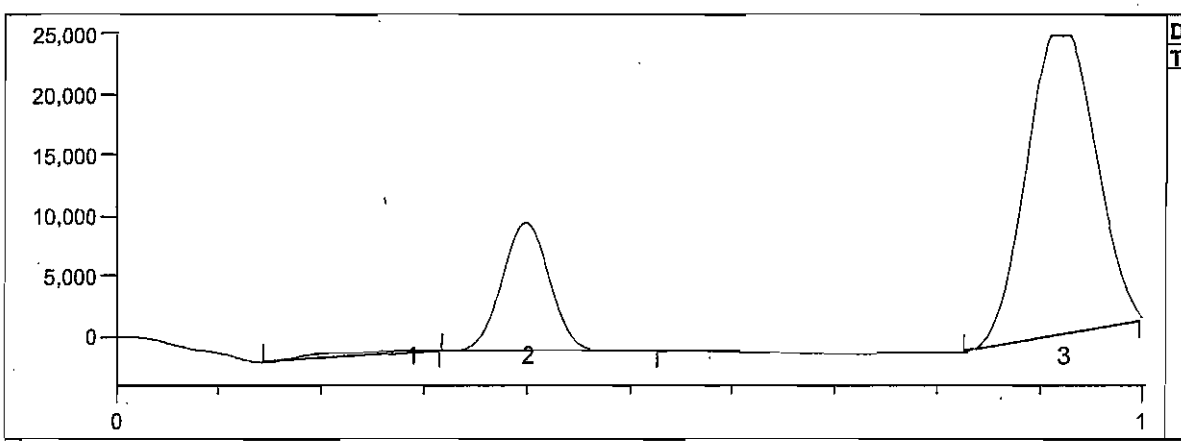


Date: 1/19/05
Time: 10:48 PM

Peak	rt	Area
1	0.22	23,906
2	0.30	20,232
3	0.42	291,118

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
41	S	05BR0023-77		3	291,118	1.01	0.0196		< HS	accept

Notes:



Date: 1/19/05
Time: 10:53 PM

Peak	rt	Area
1	0.28	58,853
2	0.40	400,882
3	0.92	1,219,218

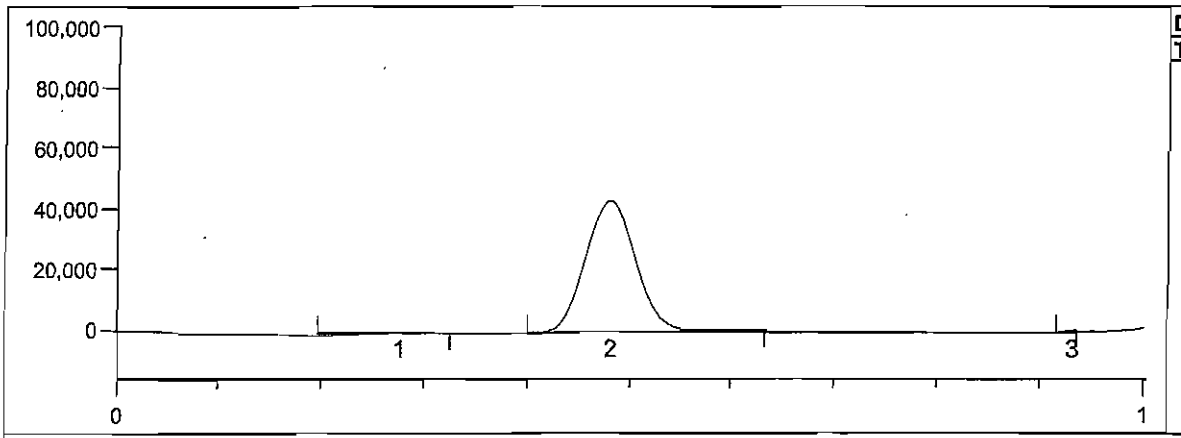
Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
42	S	05BR0023-78		2	400,882	1.39	0.0284		< HS	accept

Notes:

Batch Number: 04-1030-1
Method Number: BR-0021

Project Number(s): WIN001
Instrument ID: HGAA-1

Date Analyzed: 1/19/05
Analyst Name: ABN

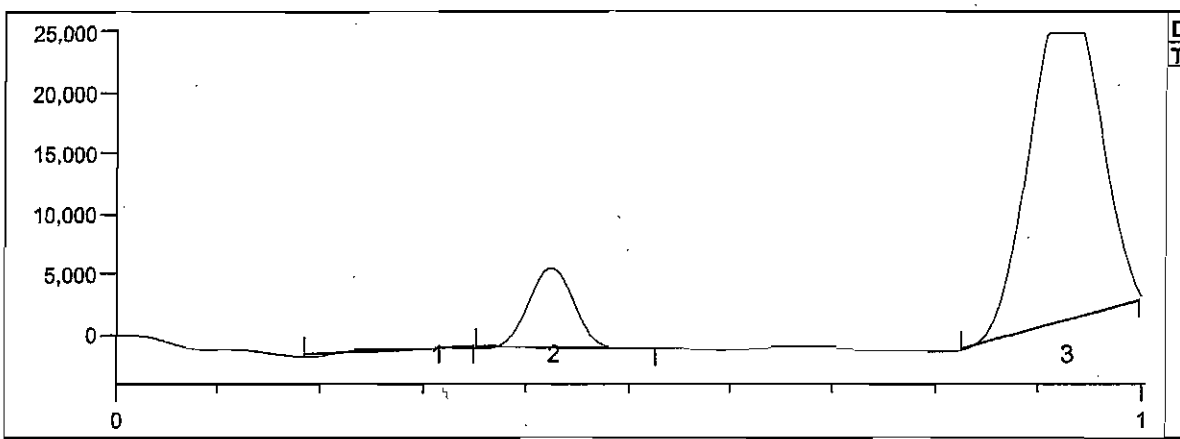


Date:	1/19/05
Time:	10:59 PM

Peak	rt	Area
1	0.27	14,823
2	0.48	1,589,396
3	0.92	-136

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
43	S	05BR0023-79		2	1,589,396	5.50	0.342		< HS	accept

Notes:

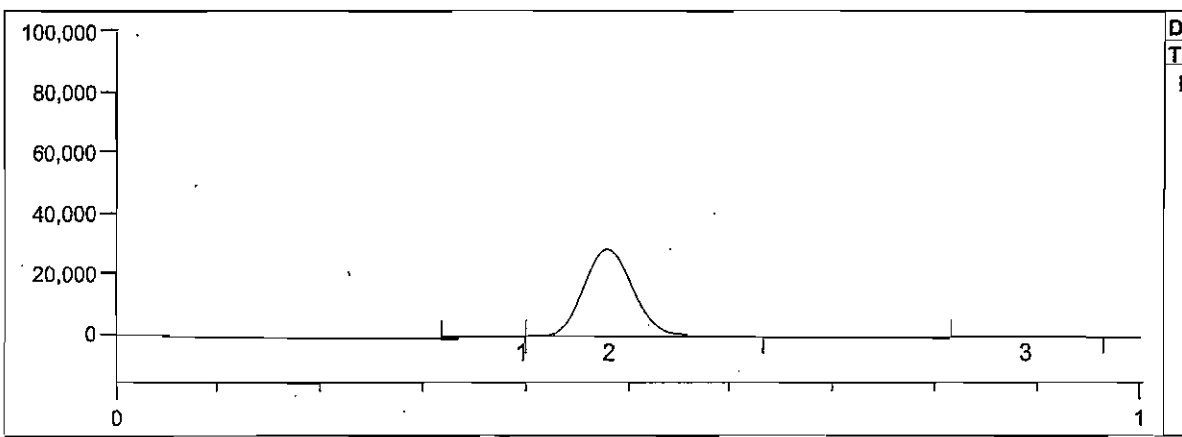


Date:	1/19/05
Time:	11:05 PM

Peak	rt	Area
1	0.31	40,633
2	0.42	238,612
3	0.92	1,293,332

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
44	S	05BR0023-80		2	238,612	0.826	0.0158		< HS	accept

Notes:



Date:	1/19/05
Time:	11:12 PM

Peak	rt	Area
1	0.39	12,570
2	0.48	1,079,181
3	0.88	14,686

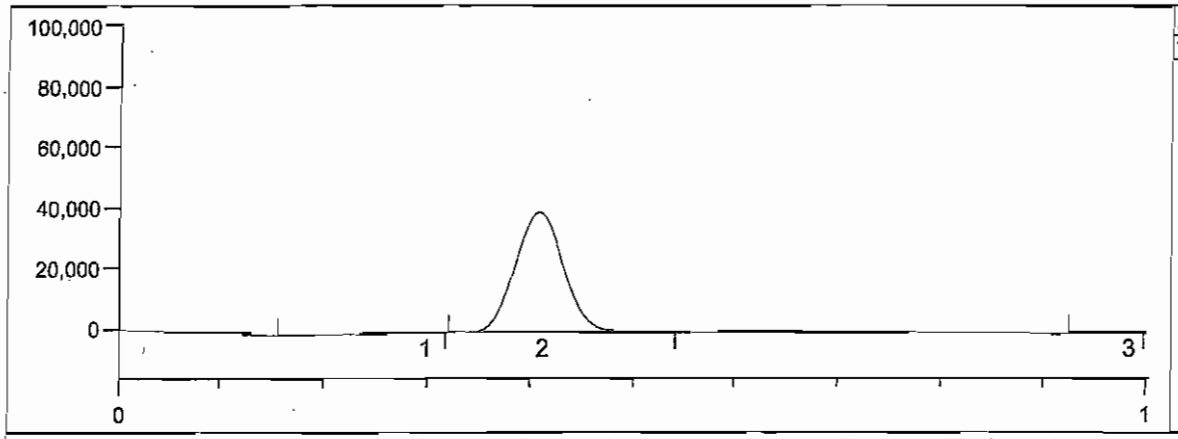
Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
45	OPR	CCV 5 ng		2	1,079,181	3.73		74.7	80-120	reject

Notes:

Batch Number: 04-1030-1
Method Number: BR-0021

Project Number(s): WIN001
Instrument ID: HGAA-1

Date Analyzed: 1/19/05
Analyst Name: ABN

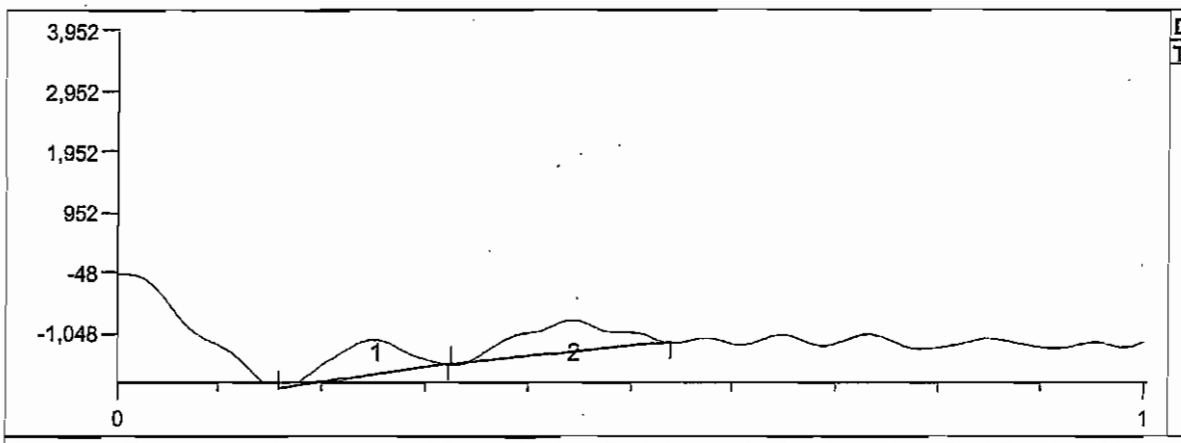


Date: 1/19/05
Time: 11:19 PM

Peak	rt	Area
1	0.29	37,538
2	0.40	1,433,117
3	0.98	3,053

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
46	OPR	CCVR 5 ng		2	1,433,117	4.96		99.2	80-120	accept

Notes:



Date: 1/19/05
Time: 11:25 PM

Peak	rt	Area
1	0.25	35,087
2	0.44	43,435

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
47	CCB	CCB		2	43,435	0.150			< 0.16	accept

Notes:

Batch Number: 04-1029, 04-1046
Method Number: BR-0021

Project Number(s): WIN001
Instrument ID: HGAA-1

Date Analyzed: 1/14/05
Analyst Name: ABN

Bias and Precision

Run Type	Name/ID	Final Result	Units	Spike Level	Source Result	% REC	% REC Limit	RPD	RPD Limit	Notes
MS	05BR0023-45	8.54	mg/Kg	9.73	0.0113	87.7	65-135			accept
	05BR0023-53	10.5	mg/Kg	9.579	0.0716	109	65-135			accept
	05BR0023-81	1.41	mg/Kg	1.946	0.0149	71.8	65-135			accept
MSD	05BR0023-45	8.70	mg/Kg	10	0.0113	86.9	65-135	1.87	< 35	accept
	05BR0023-53	9.68	mg/Kg	9.542	0.0716	101	65-135	7.97	< 35	accept
	05BR0023-81	1.60	mg/Kg	2	0.0149	79.2	65-135	12.4	< 35	accept
IPR	CRM-1A	17.8	mg/Kg	21.2		83.9	75-125			accept
	CRM-2A	18.1	mg/Kg	21.2		85.5	75-125			accept
	LFB-1B	1.86	mg/Kg	2		93.1	75-125			accept
	LFB-2B	0.879	mg/Kg	1		87.9	75-125			accept
	LFB-2BR	0.838	mg/Kg	1		83.8	75-125			accept
	CRM-1B	19.7	mg/Kg	21.2		93.0	75-125			accept
OPR	CCV 5 ng	4.85	ng	5		97.1	80-120			accept
	CCV 5 ng	4.95	ng	5		98.9	80-120			accept
	CCV 5 ng	4.94	ng	5		98.8	80-120			accept
	CCV 5 ng	4.85	ng	5		97.0	80-120			accept
QCS	ICV 5 ng	5.27	ng	5		105	80-120			accept
MD	05BR0023-45	0.0140	mg/Kg		0.0113		*	22.0 ~~1.87~~	< 35	accept
	05BR0023-53	0.0784	mg/Kg		0.0716		FKM 1/19/05	9.0 ~~7.97~~	< 35	accept
	05BR0023-81	0.0120	mg/Kg		0.0149			21.5 ~~12.4~~	< 35	accept

* See p. 3

Batch Number: 04-1029, 04-1046
Method Number: BR-0021

Project Number(s): WIN001
Instrument ID: HGAA-1

Date Analyzed: 1/14/05
Analyst Name: ABN

Calibration

QA Sample Type	Name/ID	Analyzed Result	Units	Spike Level	% REC	% REC Limit	RSD	RSD Limit	Notes
Calibration	0.5 ng	0.559	ng	0.5	112	80-120			accept
	2 ng	1.85	ng	2	92.4	80-120			accept
	10 ng	10.2	ng	10	102	80-120			accept
	30 ng	28.8	ng	30	95.9	80-120			accept
Calibration Factor		0.00000343	ng/PA				8.18	< 20	accept
Calibration Date		1/14/05							

Blank Summary

QA Sample Type	Name/ID	Analyzed Result	Units	Criteria	StDev	StDev Limit	Notes
CB	CAL BLK-1	0.104	ng	< 0.06	FKM 1/18/05	**	accept ~~reject~~
	CAL BLK-2	0.115	ng	< 0.06			accept ~~reject~~
Average		0.00	ng	< 3000	0.00	< 10	accept
MBA	MB-1	0.00212	mg/Kg	< 0.006			accept
	MB-2	0.00226	mg/Kg	< 0.006			accept
	MB-3	0.00135	mg/Kg	< 0.006			accept
Average		0.00191	mg/Kg		0.000490		
MBB	MB-1	0.00307	mg/Kg	< 0.006			accept
	MB-2	0.00268	mg/Kg	< 0.006			accept
	MB-3	0.00468	mg/Kg	< 0.006			accept
Average		0.00348	mg/Kg		0.00106		

** See p.3

Batch Number: 04-1029, 04-1046
Method Number: BR-0021

Project Number(s): WIN001
Instrument ID: HGAA-1

Date Analyzed: 1/14/05
Analyst Name: ABN

Comments

MDL=0.003 mg*kg-1
PQL=0.01 mg*kg-1

Method Blank Criteria: Average less than or equal to 2x the MDL and StDev less than or equal to 0.67x the MDL OR highest blank less than 0.1x the sample results.

Method Duplicate Criteria: RPD less than or equal to 35% OR results within 2x the PQL of each other if the results are less than 5x the PQL.

* Due to a software error, the MS-MSD RPD has been reported as the MD RPD. The correct RPD values have been hand written in the QA Summary Report.

** All Calibration Blank data associated with the analytical run met the acceptance criteria. Calibration Blank results were manually rejected to prevent the software from blank correcting the instrument calibration and the sample results.

Batches 04-1029 and 04-1046 were run using the same GURU file. The batches were separated with a CCV and a CCB. QC samples from batch 04-1029 have been noted with the suffix A while those from batch 04-1046 have been noted with the suffix B.

BROOKS RAND, LLC
3958 6th Avenue, NW Seattle, WA 98107 U.S.A. 206.632.6206

QUALITY ASSURANCE REPORT

Batch:	04-1046
Analysis:	Arsenic (Inorganic) by EPA 1632 (HGAA)
Tracking:	05BR0023
Project:	WIN001
Matrix:	Biota
Batch Size:	7 Samples
Analysis Date:	January 14, 2005
Calibration Date:	January 14, 2005

1 **SAMPLE PREPARATION** – Acceptable

2 **CALIBRATION** – Acceptable

3 **CALIBRATION VERIFICATION** – Acceptable

4 **QUALITY CONTROL SAMPLES (QCS)** – Acceptable

5 **BLANKS** – Acceptable

6 **METHOD DUPLICATE ANALYSIS** - Due to software error, the MS/MSD RPD has been reported as the MD RPD. The correct RPD value has been manually added to the QA Summary Report.

7 **SPIKE / SPIKE DUPLICATE ANALYSIS** – Acceptable

8 **LIMITS OF DETECTION** – Acceptable

9 **OVERALL DATA QUALITY** – Acceptable

Batches 04-1029 and 04-1046 were run together with appropriate separation of batches with a CCV and CCB. QC samples from batch 04-1029 have been noted "A" while those of 04-1046 have been noted "B".

No qualification of the data was required based on this review.

I certify that, to the best of my knowledge and belief, the data are reported as true and accurate. The Laboratory Director, or his designee, has authorized release of data contained in this Quality Assurance Report as verified by the following signature(s).

F. McFarland 11/18/05
Frank McFarland
Quality Assurance Manager

SAMPLE PROCESSING FORM

Brooks Rand Report #05BR0023 7

Batch #: 04-1046 Analysis: As(Inorganic) Method: EPA 1632 (HGAA)

Tracking #	Lab ID	Project Ref #	Data Due Date	Matrix	Comments
QA: Full					
05BR0023	81	WIN001	1/3/2005	Biota	
05BR0023	82	WIN001	1/3/2005	Biota	
05BR0023	83	WIN001	1/3/2005	Biota	
05BR0023	84	WIN001	1/3/2005	Biota	
05BR0023	85	WIN001	1/3/2005	Biota	
05BR0023	86	WIN001	1/3/2005	Biota	
05BR0023	87	WIN001	1/3/2005	Biota	

Tracking #	See SOW	See Memo	See Proj Mgr	Consult MSDS	See Contract Info	See Lab Mgr
05BR0023	No	No	No	No	No	No

QA Comments: Report on a WET weight basis.

Batched By: [signature] Date: 12/16/04

Prepared By: [signature] Date: 1/7/05

Comments: prep w/ 90TS batch 04-1052

Analyzed By: ABW Date: 1/14/05

Comments:

Data Entry By: ABW Date: 1/14/05

Comments: Excessive bubbles foamy noticed while running 2 mL aliquots. Value analyzed for samples #82-87 reduced to 1 mL.

Primary Data Review By: ABW Date: 1/14/05

Comments:

Final Review By: [signature] Date: 1.17.05

Comments:

As (Inorganic) Analysis Results
Batch #04-1046(1632biota-As(In)), Tracking #05BR0023 *Brooks Rand Report #05BR0023*

	Analyst:	ABN	*Project:*	WIN001	*Matrix:*	Biota	*Analysis:*	As (In)	*Date:*	1/14/2005

SAMPLE CALCULATIONS

Run	Tracking #	ID #	Sample weight (mg)	Dilution Volume (mL)	Analyzed Vol. (mL)	PA	Uncorrected ng	Uncorrected Result µg/g
52	05BR0023	81	512	10.0	2.00	446	1.53	0.015
53	05BR0023	81MD	500	10.0	2.00	351	1.20	0.012
54	05BR0023	81MS	532	10.0	0.050	1096	3.76	1.41
55	05BR0023	81MSD	528	10.0	0.050	1232	4.22	1.60
56	05BR0023	82	539	10.0	1.00	153	0.52	0.010
57	05BR0023	83	502	10.0	1.00	1208	4.14	0.083
58	05BR0023	84	515	10.0	1.00	148	0.51	0.010
59	05BR0023	85	516	10.0	1.00	764	2.62	0.051
60	05BR0023	86	495	10.0	1.00	255	0.87	0.018
61	05BR0023	87	519	10.0	1.00	1380	4.73	0.091

Calibration Results - 1/14/05 HGAA System 1 by As(In)

Instrument Calibration

Run	ml std used	ng	PA	Calibration Coefficient	
3	0.05	0.5	163	0.003067	111.8%
4	0.20	2.0	539	0.003711	
5	1.00	10.0	2973	0.003364	
6	3.00	30.0	8391	0.003575	
R:		0.9997	**Avg:**	0.003429	
			RSD:	8.2%	

Calibration Blanks

Run	PA	ng	ug/L
1	30	0.103	0.005
2	34	0.117	0.006
Average:	32.0	0.110	0.005
St Dev:	2.83	0.010	0.000

QC CALCULATIONS (continued)

Calibration Checks

Mid level standards

Run	ng	PA	ng	%	
7	5.00	1538	5.27	105.5%	*
8	5.00	1415	4.85	97.0%	
31	5.00	1442	4.94	98.9%	
43	5.00	1440	4.94	98.8%	
62	5.00	1415	4.85	97.0%	

* Independent Calibration Verification.

Calibration Blank Checks

Run	PA	ng	ug/L
9	17	0.058	0.003
32	0	0.000	0.000
44	0	0.000	0.000
63	35	0.120	0.006

Method Blanks

Run	ID #	weight (mg)	Dilution Volume (mL)	Analyzed Volume (mL)	PA	measured ng	total ng	Result conc. µg/g
45	MB-1	500	10.00	2.00	90	0.309	1.54	0.003
46	MB-2	500	10.00	2.00	78	0.267	1.34	0.003
47	MB-3	500	10.00	2.00	136	0.466	2.33	0.005
					Average:	0.347	1.74	0.003
					StDev:	0.105	0.525	0.001

Precision

Summary of Duplicate Sample Analysis

Run	Tracking #	ID #	Uncorr. Result ng/g
52	05BR0023	81	0.015
53	05BR0023	81MD	0.012
		Average:	0.013
		RPD:	21.5%

BIAS

Spiked Sample (Note that MS recovery was calculated using uncorrected results)

Run	Tracking #	ID #	Spike (ng)	Sample Weight (mg)	expected µg/g	spike + sample measured µg/g	sample measured µg/g	spike measured µg/g	% Rec.	RPD	
54	05BR0023	81MS	1000	514	1.946	1.413	0.015	1.398	71.9%		*
55	05BR0023	81MSD	1000	500	2.000	1.600	0.015	1.585	79.3%	12.4%	*

* Spiked with As(III) standard.

Summary of Laboratory Fortified Blank Recoveries

Run	ID #	Spike ng	Sample Volume (mL)	Spike Conc. ng/L	Dilution Volume (mL)	Analyzed Vol. (mL)	PA	ng	Result ng/L	% Rec.	
48	LFB-1	1000	10.00	100	10.00	0.050	1358	4.657	93.14	93.1%	*
49	LFB-2	500	10.00	50	10.00	0.050	641	2.198	43.96	87.9%	**
50	LFB-2R	500	10.00	50	10.00	0.050	611	2.095	41.91	83.8%	***

* Spiked with As(III) standard.
** Spiked with As(V) standard.
*** Verification only. A re-prep of the LFB-2 was performed before analyst realized the spiked value differed from that of LFB-1.

Method CRMs

Run	CRM ID	Certified Value µg/g	Sample Weight (mg)	Dilution Volume (mL)	Analyzed Vol. (mL)	PA	ng	Recovery µg/g	% Rec.	
51	CRM-1	21.20	103	10.0	0.05	2959	10.15	19.703	92.9%	

*CRM: NRCC MESS-3

(In)

As ☒ Se ☐ Analysis Sheet

1/14/05 ABN

Batch: 04-1029 & 04-1046 Matrix: Biota

Analyst: ABN Calibration Blank $\bar{X}$: 32.00 PA Blank Corr. Calib. Coef. $\bar{X}$: 0.003429

Date: 1-14-05 Method Blank $\bar{X}$: 0.002 ng/g RSD: 8.2%

Standards: Cal Std 10 ng /mL: 05-014-01 As 30% NH_2OHHCl: — N=: 4

QA: Full ☒ Standard ☐ ICV Std: 05-012-02 As 4% $NaBH_4$: 05-014-$NaBH_4$ r: 0.9997

Noise: 4% $NaBH_4$ add. & purge time (m:s) 2 minutes

Run #	Trap #	Sample ID	Analyzed volume (mL)	PA	Sample Specific Notes
1	C8	Cal Blk-1	—	30	
2	N1	↓ -2	—	34	
3	C8	0.5 ng	0.050	163	
4	N1	2	0.200	539	
5	C8	10	1.00	2973	
6	N1	30 ↓	3.00	8391	
7	C8	ICV 5 ng	0.050	1538	
8	N1	CCV 5 ng	0.500	1415	
9	C8	CCB	—	17	
10	N1	MB-1	2.00	62	
11	C8	↓ 2	↓	66	
12	N1	↓ 3	↓	39	
13	C8	CRM-1	0.050	2569	
14	N1	CRM-2	↓	2855	
15	C8	05BR0023-45	2.00	331	
16	N1	-45MD	↓	421	
17	C8	-45MS	0.025	3113	
18	N1	-45MSD	↓	3185	
19	C8	-53	2.00	2089	
20	N1	-53MD	↓	2341	
21	C8	-53MS	0.025	3777	
22	N1	-53MSD	↓	3580	
23	C8	-41	2.00	411	
24	N1	↓ -42	2.00	668	

Comments:

Method SRM: MESS-3

As ☒ (In) Se ☐ Analysis Sheet

Batch: 04-1029 & 04-1046 Matrix: Biota

Analyst: ABN Date: 1-14-05

Run #	Trap #	Sample ID	Analyzed volume (mL)	PA	Sample Specific Notes
25	C8	OSBR0023-43	2.00	503	
26	N1	-44		1033	
27	C8	-~~45~~46		457	1/14/05 ABN
28	N1	-~~46~~47		415	1/14/05 ABN
29	C8	-48		640	
30	N1	-49		488	
31	C8	CCV 5 ng	0.500	1442	
32	N1	CCB	—	0	
33	C8	OSBR0023-50	2.00	218	
34	N1	-51		2948	
35	C8	-52		672	
36	N1	-54		1387	
37	C8	-55		1362	
38	N1	-56		2062	
39	C8	-57		1782	
40	N1	-58		2683	
41	C8	-59		83	
42	N1	-60		738	
43	C8	CCV 5 ng	0.500	1440	
44	N1	CCB	~~0~~ —	0	1/14/05 ABN
45	C8	MB-1	2.00	~~8~~90	1/14/05 ABN
46	N1	-2		78	
47	C8	-3		136	
48	N1	LFB-1	0.050	1358	
49	C8	LFB-2		641	
50	N1	LFB-2R	0.050	611	
51	C8	CRM	0.050	2959	
52	N1	OSBR0023-81	2.00	446	

Comments:

As ☐ Se ☐ Analysis Sheet

Batch: 04-1089 04-1046 Matrix: Blnk

Analyst: ABN Date: 1-14-05

Run #	Trap #	Sample ID	Analyzed volume (mL)	PA	Sample Specific Notes
53	C8	05BR0023-81MD	2.00	351	
54	N1	-81MS	0.050	1096	
55	C8	-81MSD	↓	1232	
56	N1	-82	1.00	153	
57	C8	-83		1208	
58	N1	-84		148	
59	C8	-85		764	
60	N1	-86		255	
61	C8	↓ -87	↓	1380	
62	N1	CCV 5ng	0.500	1415	
63	C8	CCB	—	35	

1/14/05 ABN

Comments:

As-T / As Species Inorganic Se-T / Se Species _____
Methods ~~BR-0020 (HGAAS)~~ & EPA 1632 (HGAAS)

Matrix: Water / Sediment / Biota / Other _____

Batch #: 04-1046 Preparation Date: 1/7/05
Tracking #(s): 05BR0023 Prepared By: MK
Project #(s): WIN001 Page 1 of 2

Flask #	Sample I.D.	Sample Wt. / Vol. (mg) / (mL)	Flask #	Sample I.D.	Sample Wt. / Vol. (mg) / (mL)
	MB-1	—			
	MB-2	—			
	MB-3	—			
	CRM-1	~~103~~ mg			
	CRM-2				
	05BR0023-81	512			
	81mD	500			
	81ms	532			
	81msD	528			
	82	539			
*	83	502			
	84	515			
*	85	5116			
	86	495			
*	87	519			
	LFB-1				
	LFB-2				

Matrix Spike/Matrix Spike Duplicate

Sample I.D.	Spike I.D.	Spike std. Conc.	Spike Vol. (mL)	Spike Conc. (µg/g) / (µg/L)
05BR0023-81ms	~~04-342~~ 04-344-3	10 µg/mL	0.10	1.946
-81msD	04-344-3			2.00
LFB-1	(As^{III}) 04-344-3			2.00
LFB-2	(As^{V}) ~~05-607-02~~	1 µg/mL	0.500	1.00

ets 1/7/05

As-T / As Species Inor / Se-T / Se Species ____
Methods BR-0020 (HGAAS) & EPA 1632 (HGAAS)

Matrix: Water / Sediment / Biota / Other ____

Batch #: 04-1046 Preparation Date: 1/7/05

Prepared By: MK Page 2 of 2

Ongoing Precision and Recovery Sample (OPR) or Certified reference Material (CRM)

OPR / CRM I.D.	Certified Conc. (µg/g) / (µg/L)	Source I.D. (for OPR)
CRM-1	21.2	MESS-3
~~CRM-2~~		

REAGENTS: *Volume & ID #*

HNO_3: ____

$HClO_4$: ____

H_2SO_4: ____

2M HCl: 05-007-1 (10mL)

$H_3PO_4/NH_2OH \cdot HCl$: ____

DIGESTION:

Temperature	Time
80°C	16 hrs

DILUTION INFORMATION:

Final Volume of Preparation: ____

Volume of Prep Subsampled: ____

Dilution Media: ____

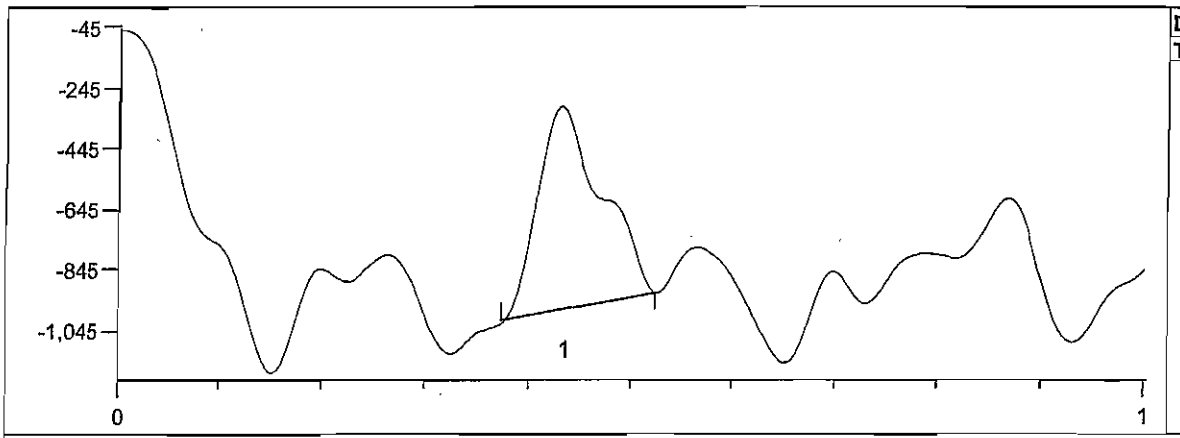
Final Dilution Volume: 10

ADDITIONAL COMMENTS: * - "water-y" sample - stronger smell than other samples (homogenized fish)

Batch Number: 04-1029, 04-1046
Method Number: BR-0021

Project Number(s): WIN001
Instrument ID: HGAA-1

Date Analyzed: 1/14/05
Analyst Name: ABN

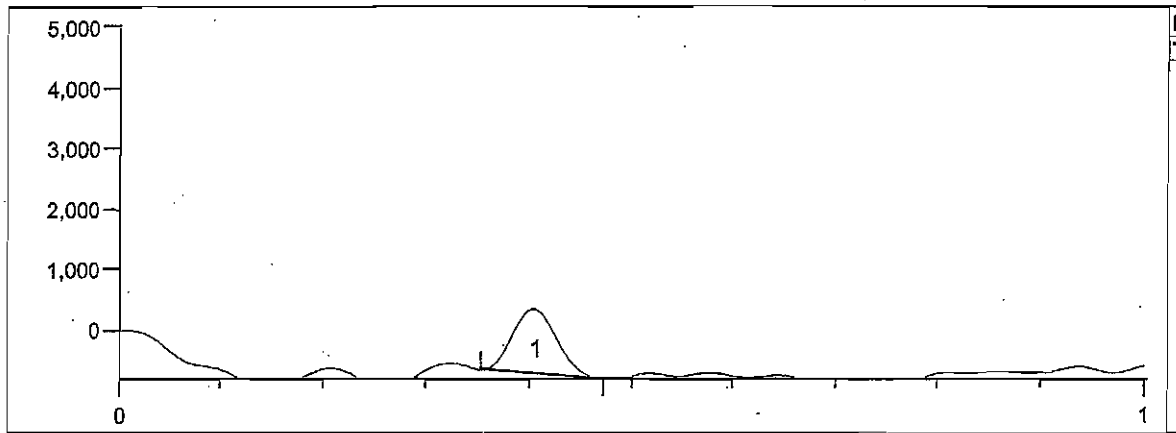


Date: 1/14/05
Time: 4:59 PM

Peak	rt	Area
1	0.43	30,390

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
1	CB	CAL BLK-1		1	30,390	0.104		0.104	< 0.06	reject

Notes:

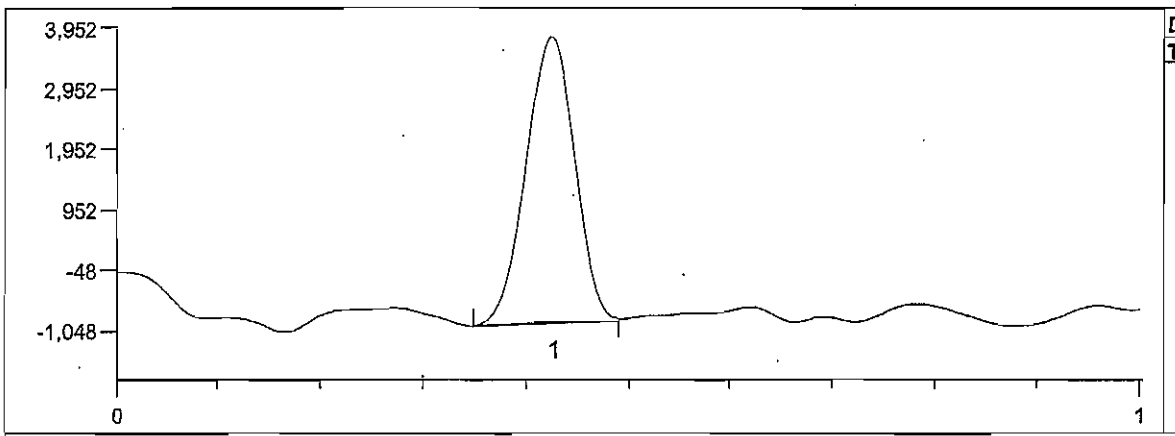


Date: 1/14/05
Time: 5:06 PM

Peak	rt	Area
1	0.40	33,534

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
2	CB	CAL BLK-2		1	33,534	0.115		0.115	< 0.06	reject

Notes:



Date: 1/14/05
Time: 5:12 PM

Peak	rt	Area
1	0.42	163,018

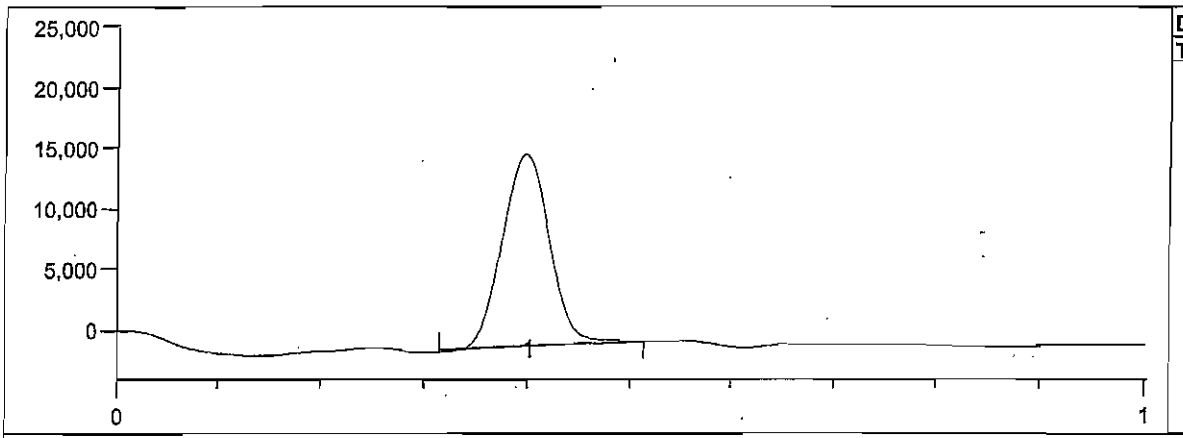
Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
3	STD	0.5 ng		1	163,018	0.559		112	80-120	accept

Notes:

Batch Number: 04-1029, 04-1046
Method Number: BR-0021

Project Number(s): WIN001
Instrument ID: HGAA-1

Date Analyzed: 1/14/05
Analyst Name: ABN

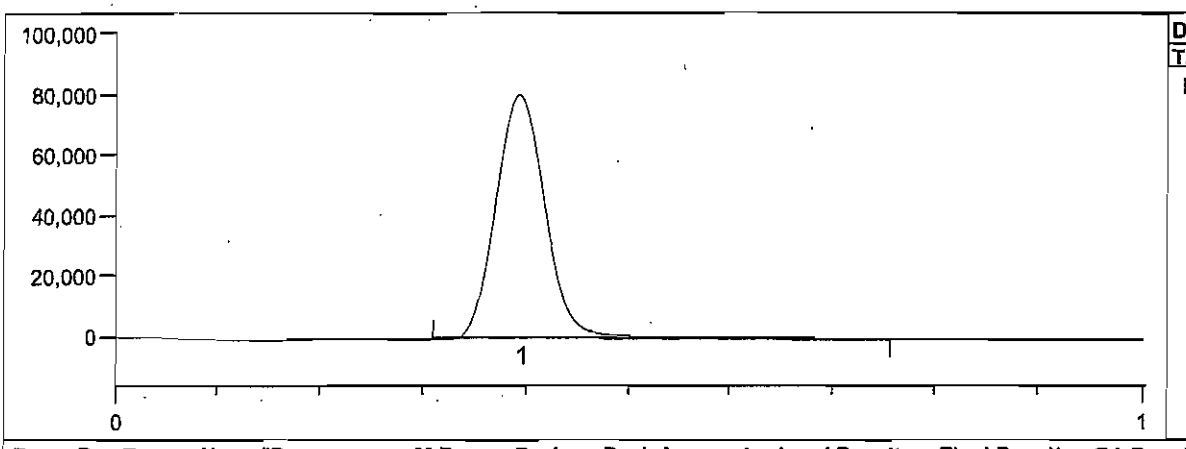


Date:	1/14/05
Time:	5:18 PM

Peak	rt	Area
1	0.40	538,962

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
4	STD	2 ng		1	538,962	1.85		92.4	80-120	accept

Notes:

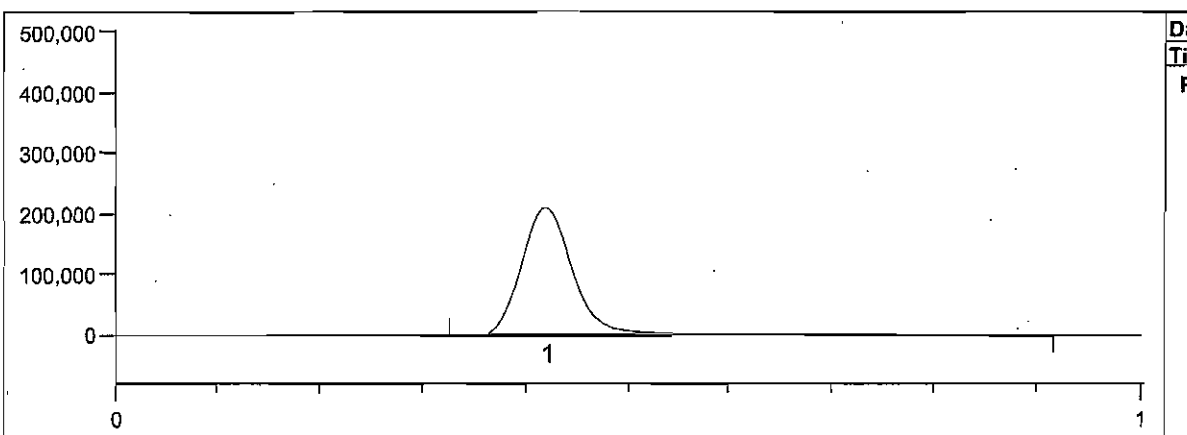


Date:	1/14/05
Time:	5:30 PM

Peak	rt	Area
1	0.39	2,972,977

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
5	STD	10 ng		1	2,972,977	10.2		102	80-120	accept

Notes:



Date:	1/14/05
Time:	5:37 PM

Peak	rt	Area
1	0.42	8,391,194

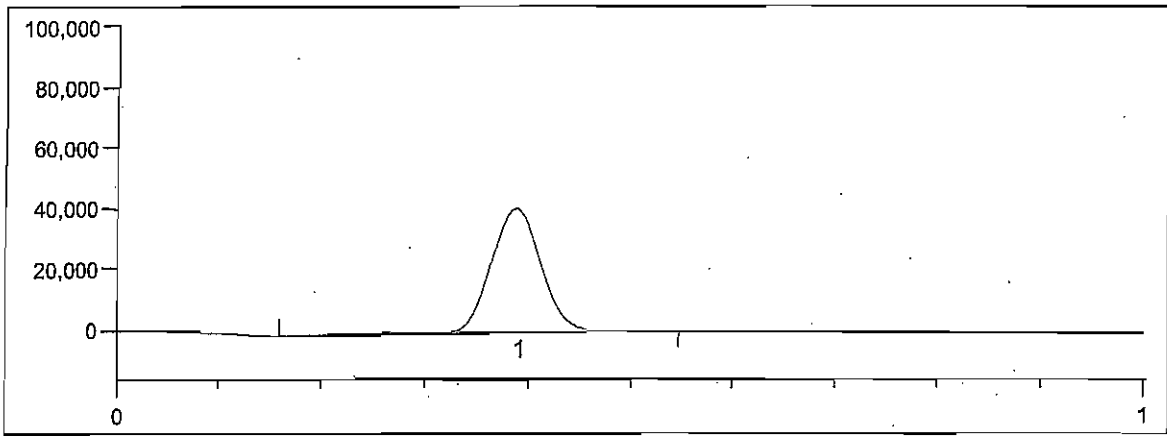
Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
6	STD	30 ng		1	8,391,194	28.8		95.9	80-120	accept

Notes:

Batch Number: 04-1029, 04-1046
Method Number: BR-0021

Project Number(s): WIN001
Instrument ID: HGAA-1

Date Analyzed: 1/14/05
Analyst Name: ABN

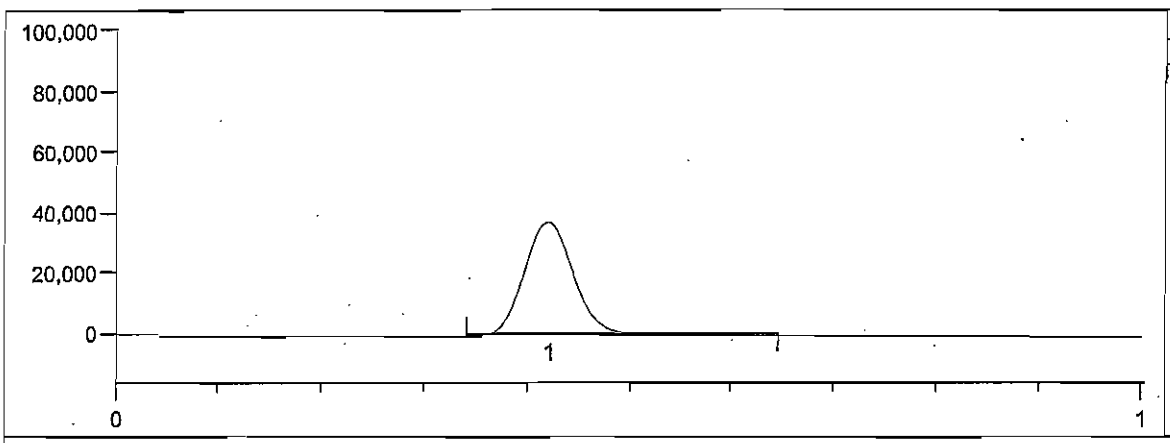


Date: 1/14/05
Time: 5:44 PM

Peak	rt	Area
1	0.38	1,537,885

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
7	QCS	ICV 5 ng		1	1,537,885	5.27		105	80-120	accept

Notes:

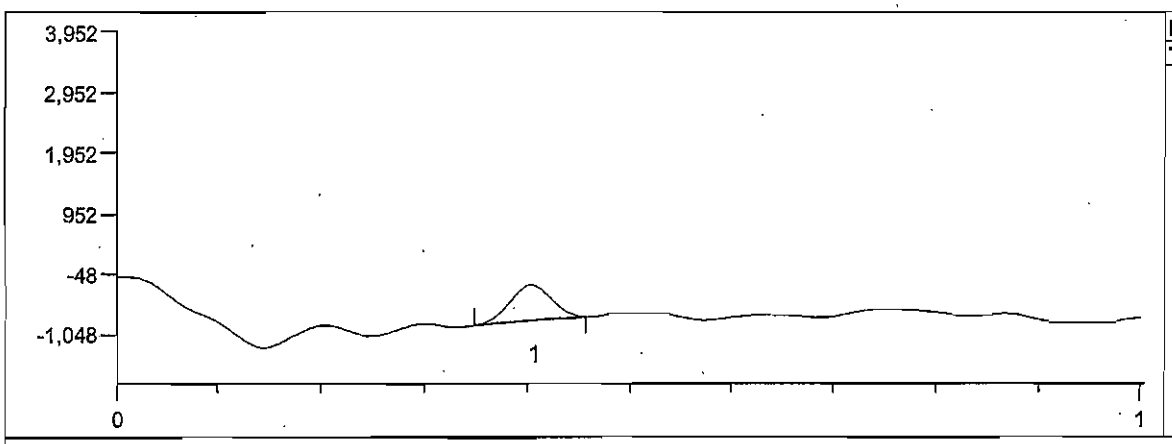


Date: 1/14/05
Time: 5:51 PM

Peak	rt	Area
1	0.42	1,415,064

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
8	OPR	CCV 5 ng		1	1,415,064	4.85		97.1	80-120	accept

Notes:



Date: 1/14/05
Time: 5:56 PM

Peak	rt	Area
1	0.40	17,379

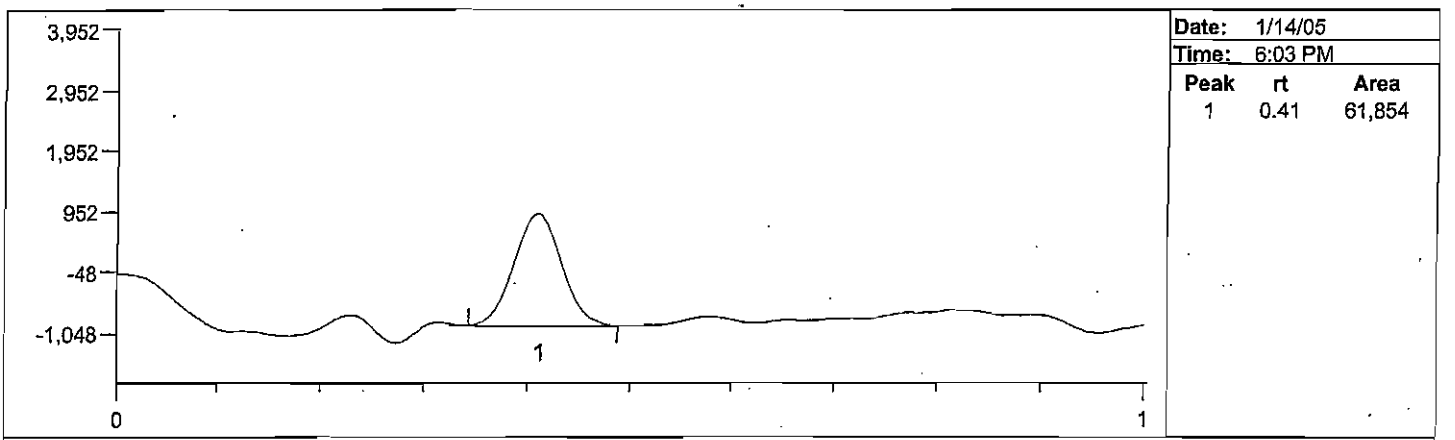
Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
9	CCB	CCB		1	17,379	0.0596			< 0.14	reject

Notes:

Batch Number: 04-1029, 04-1046
Method Number: BR-0021

Project Number(s): WIN001
Instrument ID: HGAA-1

Date Analyzed: 1/14/05
Analyst Name: ABN

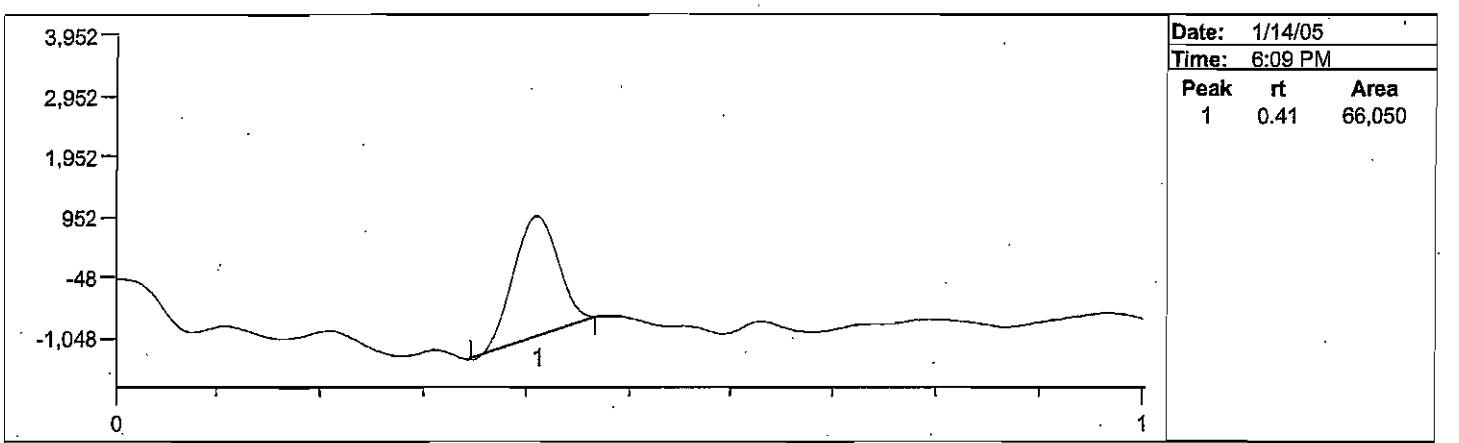


Date: 1/14/05
Time: 6:03 PM

Peak	rt	Area
1	0.41	61,854

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
10	MBA	MB-1		1	61,854	0.212	0.00212	0.00212	< 0.003	accept

Notes:

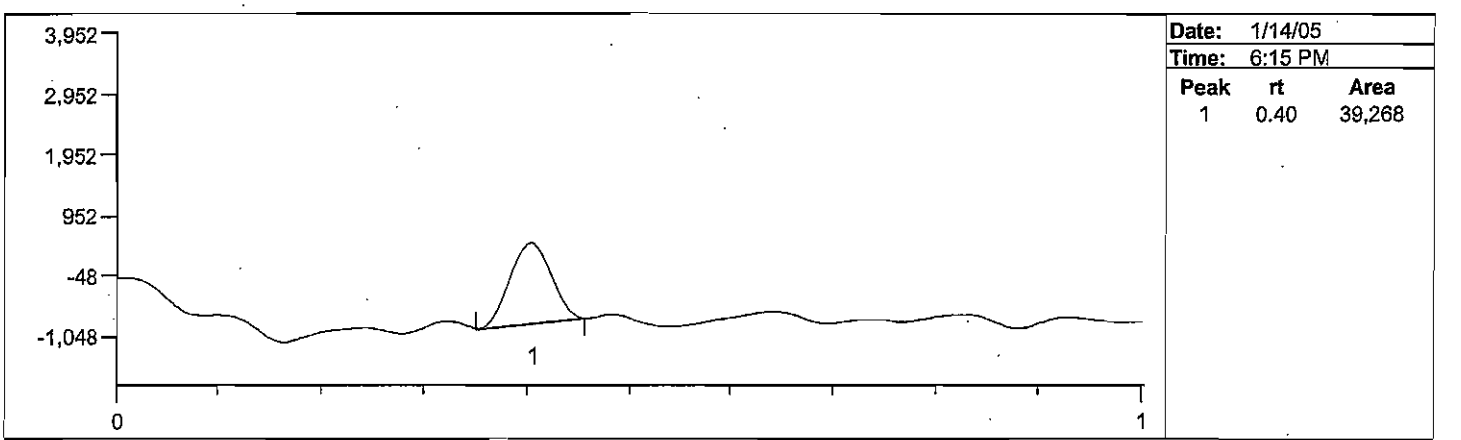


Date: 1/14/05
Time: 6:09 PM

Peak	rt	Area
1	0.41	66,050

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
11	MBA	MB-2		1	66,050	0.226	0.00226	0.00226	< 0.003	accept

Notes:



Date: 1/14/05
Time: 6:15 PM

Peak	rt	Area
1	0.40	39,268

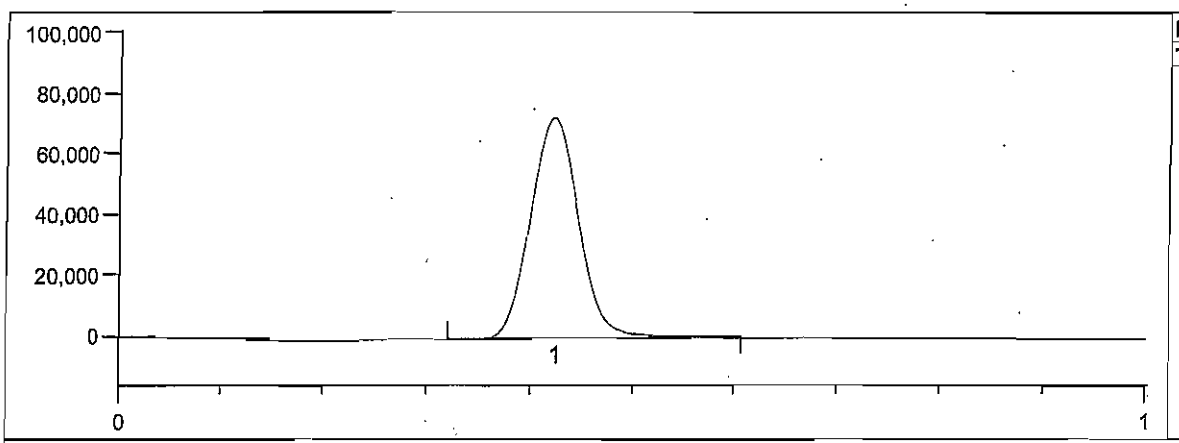
Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
12	MBA	MB-3		1	39,268	0.135	0.00135	0.00135	< 0.003	accept

Notes:

Batch Number: 04-1029, 04-1046
Method Number: BR-0021

Project Number(s): WIN001
Instrument ID: HGAA-1

Date Analyzed: 1/14/05
Analyst Name: ABN

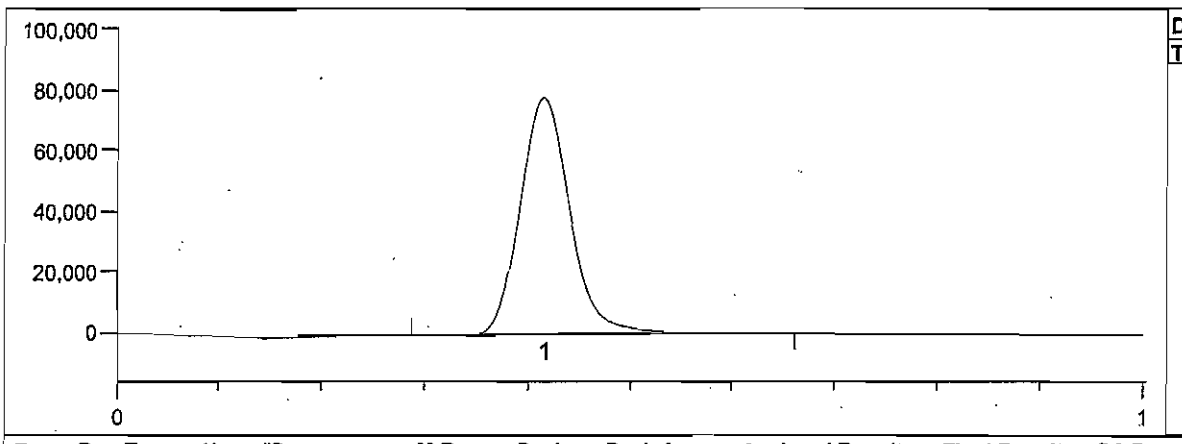


Date: 1/14/05
Time: 6:25 PM

Peak	rt	Area
1	0.42	2,568,830

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
13	IPR	CRM-1A	MBA	1	2,568,830	8.81	17.8	83.9	75-125	accept

Notes:

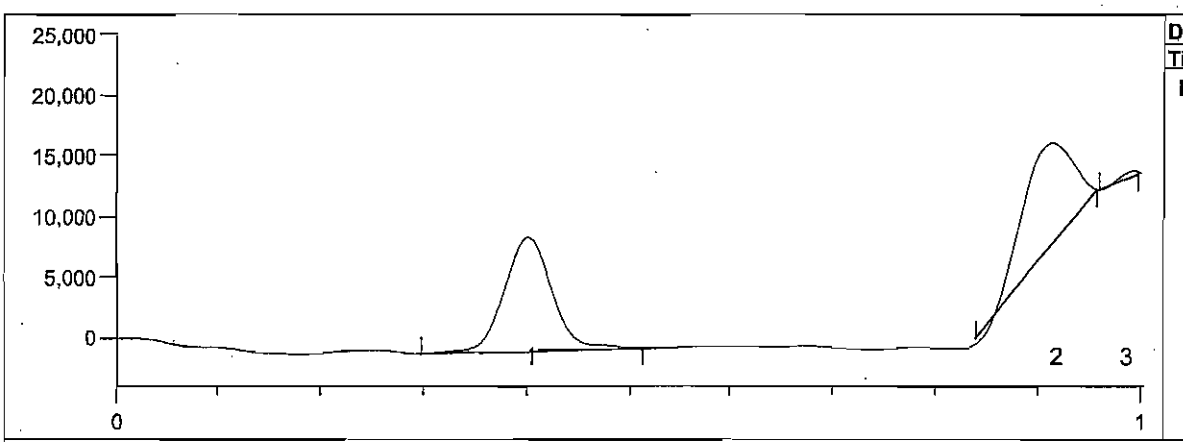


Date: 1/14/05
Time: 6:33 PM

Peak	rt	Area
1	0.41	2,855,381

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
14	IPR	CRM-2A	MBA	1	2,855,381	9.79	18.1	85.5	75-125	accept

Notes:



Date: 1/14/05
Time: 6:39 PM

Peak	rt	Area
1	0.40	331,429
2	0.91	412,255
3	0.98	36,680

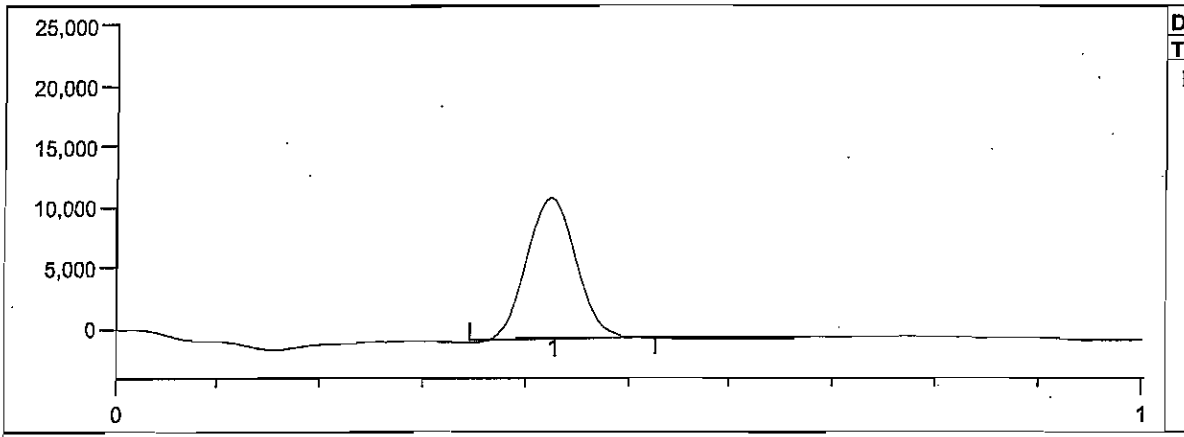
Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
15	S	05BR0023-45	MBA	1	331,429	1.14	0.0113		< HS	accept

Notes:

Batch Number: 04-1029, 04-1046
Method Number: BR-0021

Project Number(s): WIN001
Instrument ID: HGAA-1

Date Analyzed: 1/14/05
Analyst Name: ABN

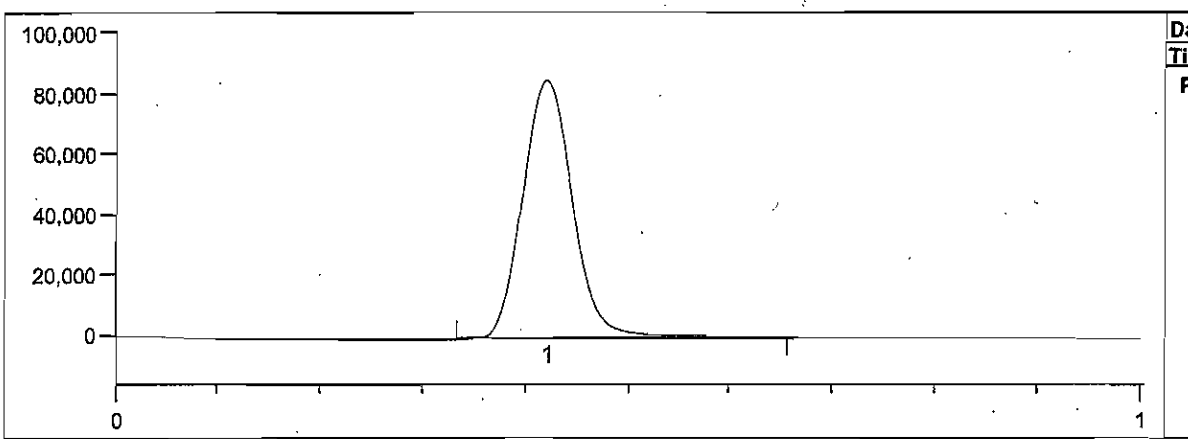


Date:	1/14/05
Time:	6:54 PM

Peak	rt	Area
1	0.42	420,534

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
16	MD	05BR0023-45	MBA	1	420,534	1.44	0.0140	21.8	< 35	accept

Notes:

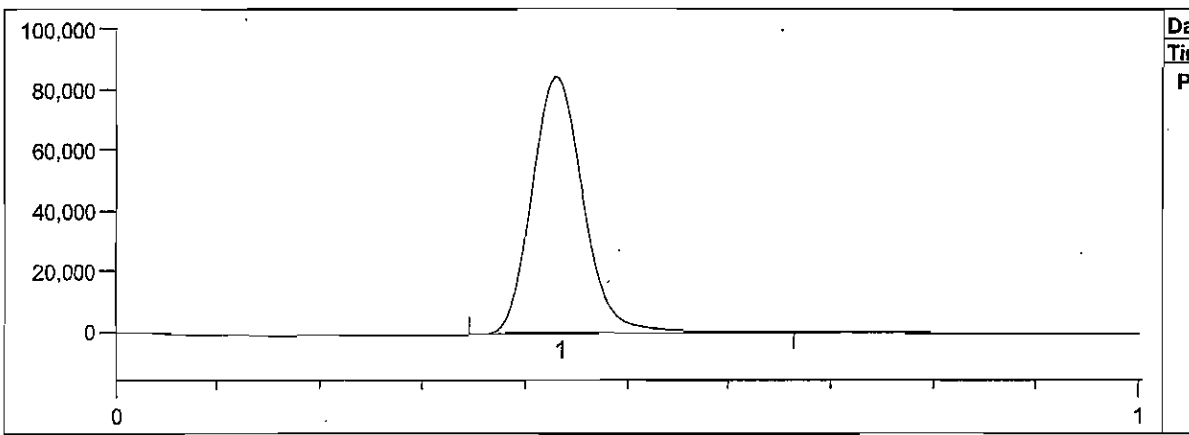


Date:	1/14/05
Time:	7:03 PM

Peak	rt	Area
1	0.42	3,113,307

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
17	MS	05BR0023-45	MBA	1	3,113,307	10.7	8.54	87.7	65-135	accept

Notes:



Date:	1/14/05
Time:	7:09 PM

Peak	rt	Area
1	0.43	3,184,807

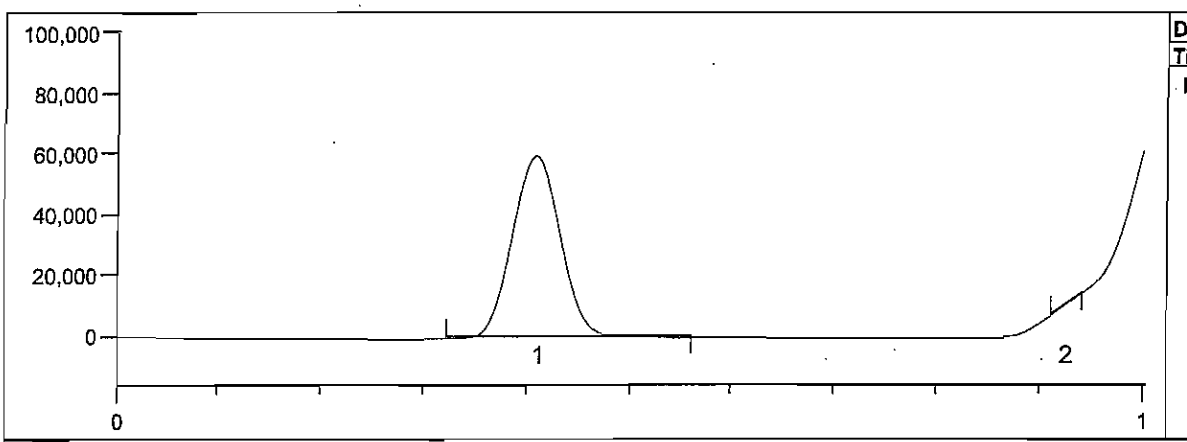
Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
18	MSD	05BR0023-45	MBA	1	3,184,807	10.9	8.70	86.9	65-135	accept

Notes:

Batch Number: 04-1029, 04-1046
Method Number: BR-0021

Project Number(s): WIN001
Instrument ID: HGAA-1

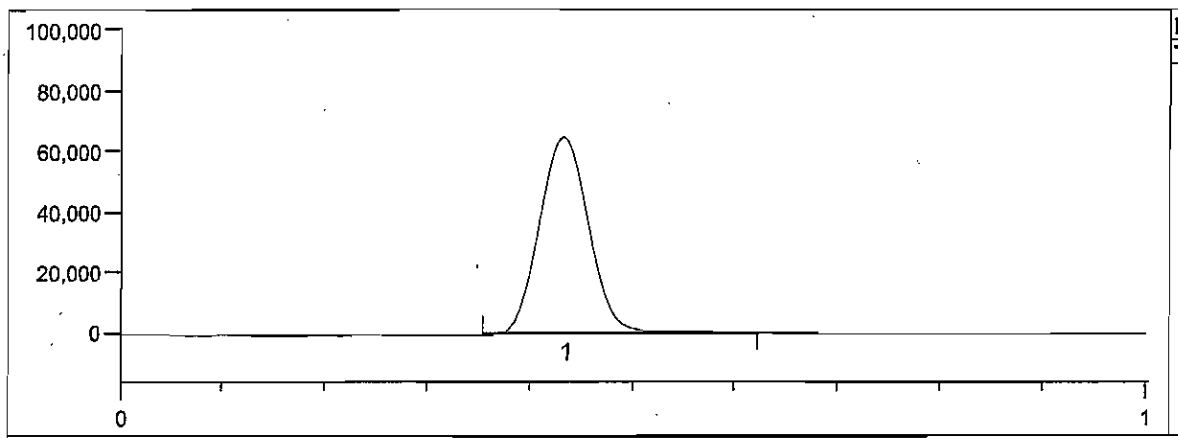
Date Analyzed: 1/14/05
Analyst Name: ABN



Date:	1/14/05	
Time:	7:17 PM	
Peak	rt	Area
1	0.41	2,088,870
2	0.92	2,107

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
19	S	05BR0023-53	MBA	1	2,088,870	7.16	0.0716		< HS	accept

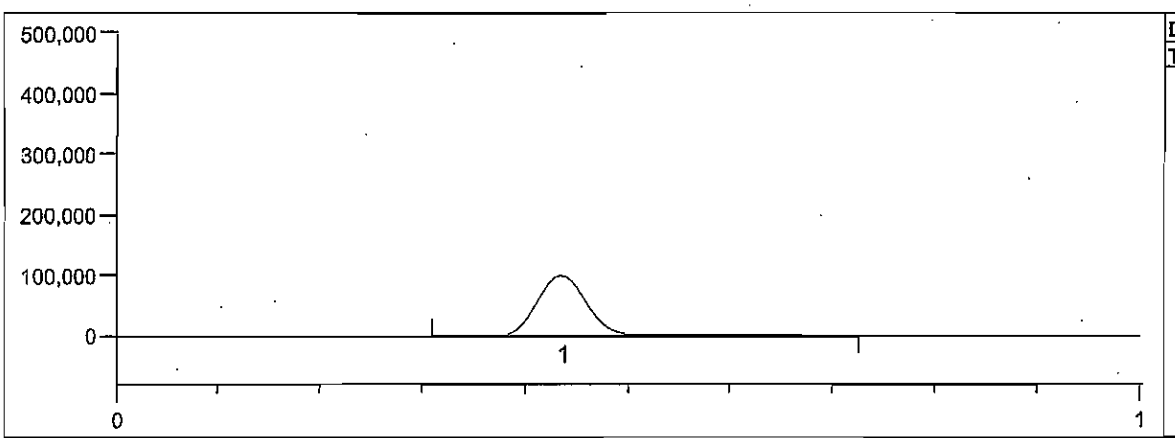
Notes:



Date:	1/14/05	
Time:	7:22 PM	
Peak	rt	Area
1	0.43	2,340,775

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
20	MD	05BR0023-53	MBA	1	2,340,775	8.03	0.0784	9.01	< 35	accept

Notes:



Date:	1/14/05	
Time:	7:28 PM	
Peak	rt	Area
1	0.43	3,777,412

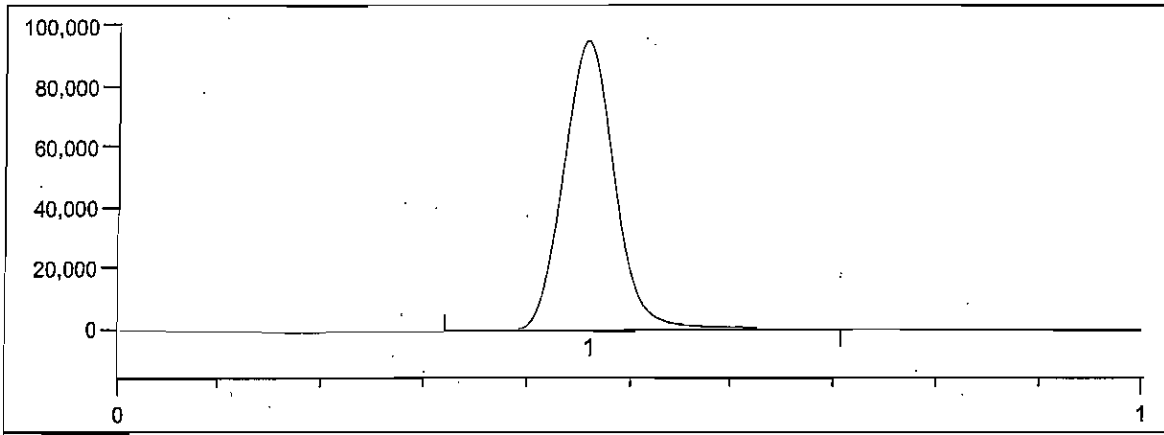
Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
21	MS	05BR0023-53	MBA	1	3,777,412	13.0	10.5	109	65-135	accept

Notes:

Batch Number: 04-1029, 04-1046
Method Number: BR-0021

Project Number(s): WIN001
Instrument ID: HGAA-1

Date Analyzed: 1/14/05
Analyst Name: ABN

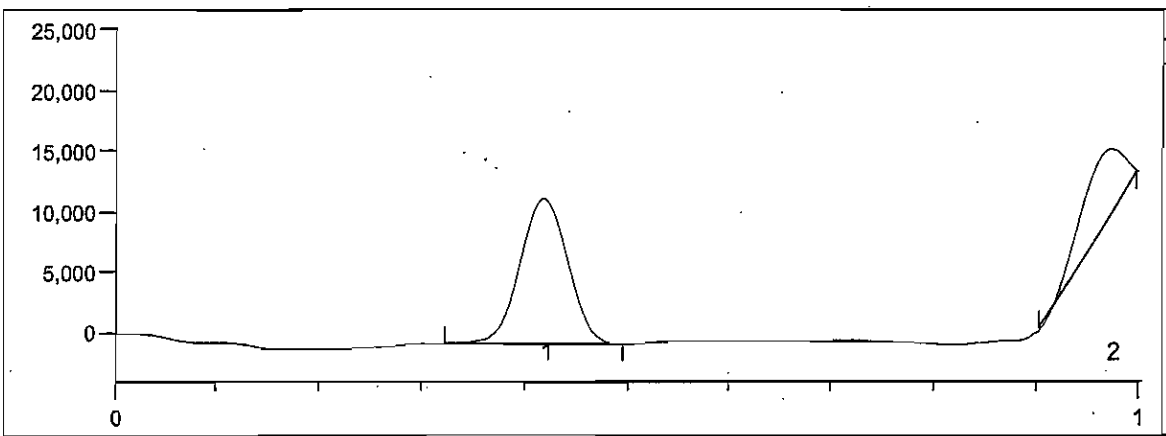


Date: 1/14/05
Time: 7:35 PM

Peak	rt	Area
1	0.46	3,579,662

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
22	MSD	05BR0023-53	MBA	1	3,579,662	12.3	9.68	101	65-135	accept

Notes:

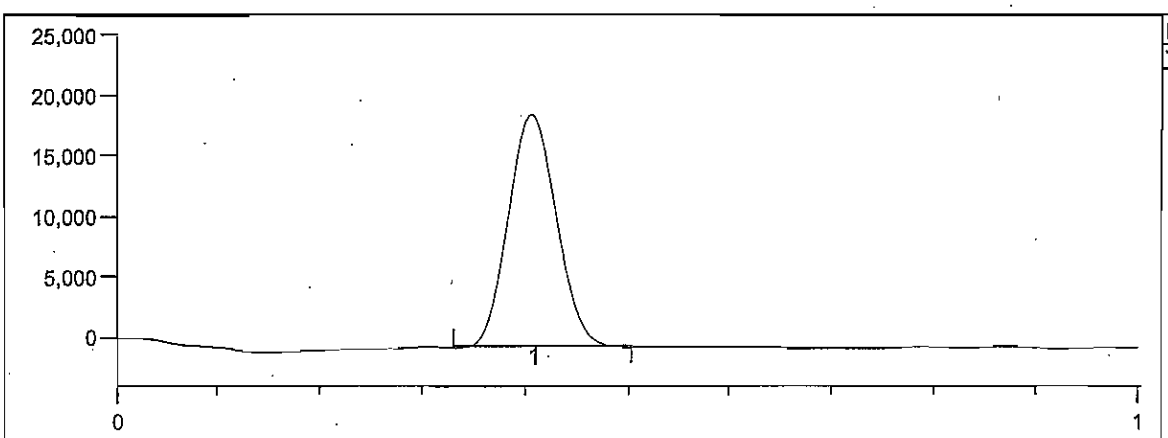


Date: 1/14/05
Time: 7:43 PM

Peak	rt	Area
1	0.42	410,963
2	0.97	201,102

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
23	S	05BR0023-41	MBA	1	410,963	1.41	0.0143		< HS	accept

Notes:



Date: 1/14/05
Time: 7:50 PM

Peak	rt	Area
1	0.40	668,167

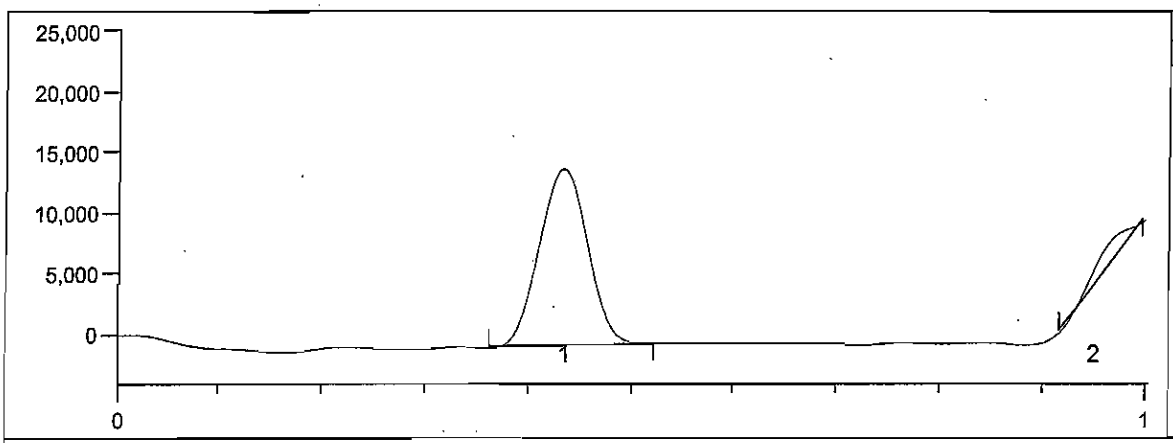
Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
24	S	05BR0023-42	MBA	1	668,167	2.29	0.0233		< HS	accept

Notes:

Batch Number: 04-1029, 04-1046
Method Number: BR-0021

Project Number(s): WIN001
Instrument ID: HGAA-1

Date Analyzed: 1/14/05
Analyst Name: ABN

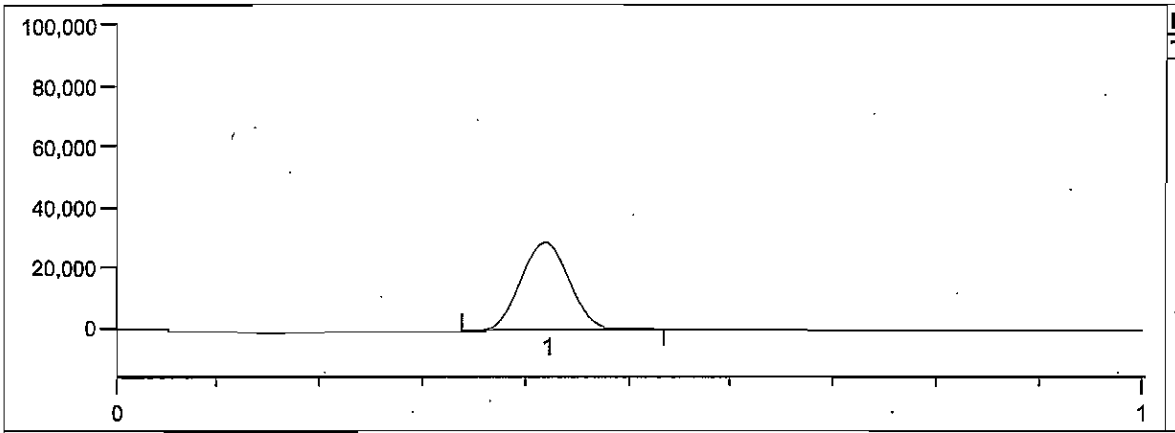


Date: 1/14/05
Time: 7:55 PM

Peak	rt	Area
1	0.43	503,037
2	0.94	55,431

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
25	S	05BR0023-43	MBA	1	503,037	1.73	0.0165		< HS	accept

Notes:

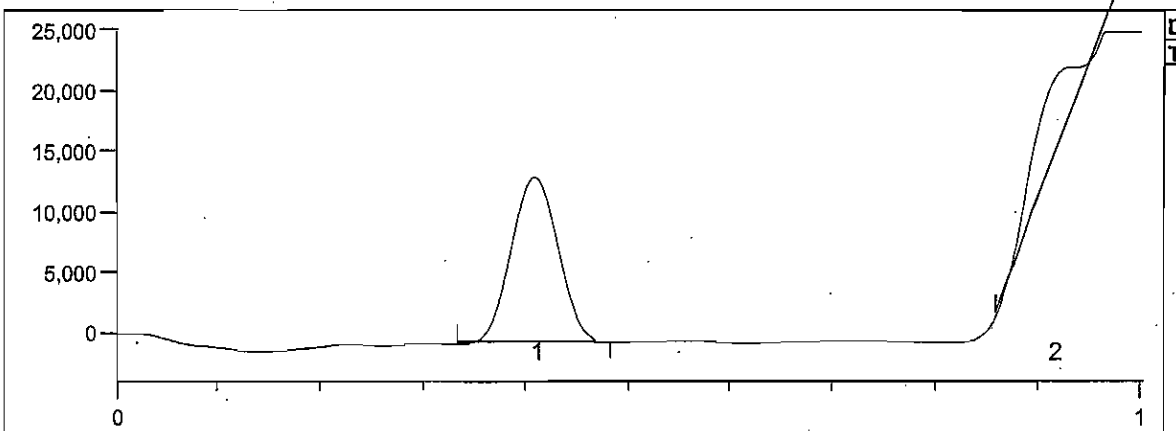


Date: 1/14/05
Time: 8:03 PM

Peak	rt	Area
1	0.42	1,032,959

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
26	S	05BR0023-44	MBA	1	1,032,959	3.54	0.0338		< HS	accept

Notes:



Date: 1/14/05
Time: 8:08 PM

Peak	rt	Area
1	0.40	457,332
2	0.91	231,261

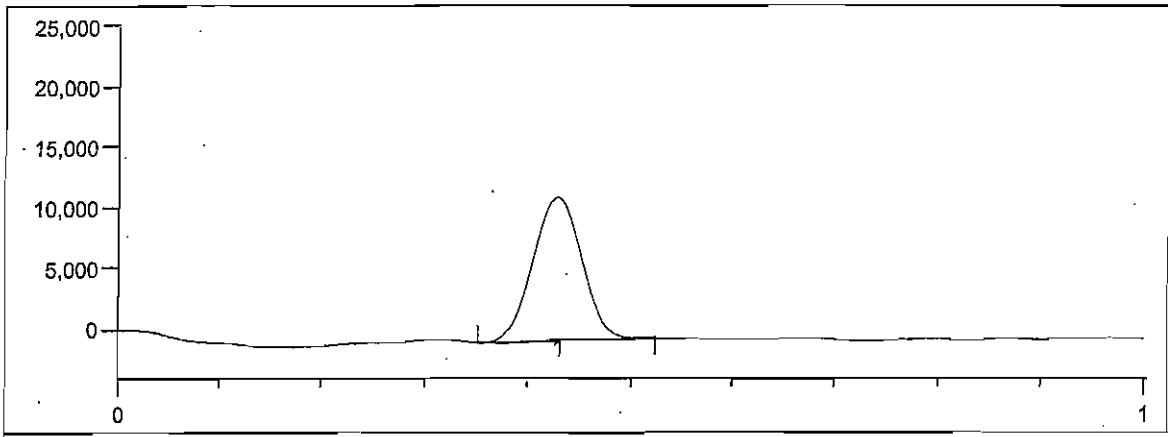
Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
27	S	05BR0023-46	MBA	1	457,332	1.57	0.0145		< HS	accept

Notes:

Batch Number: 04-1029, 04-1046
Method Number: BR-0021

Project Number(s): WIN001
Instrument ID: HGAA-1

Date Analyzed: 1/14/05
Analyst Name: ABN

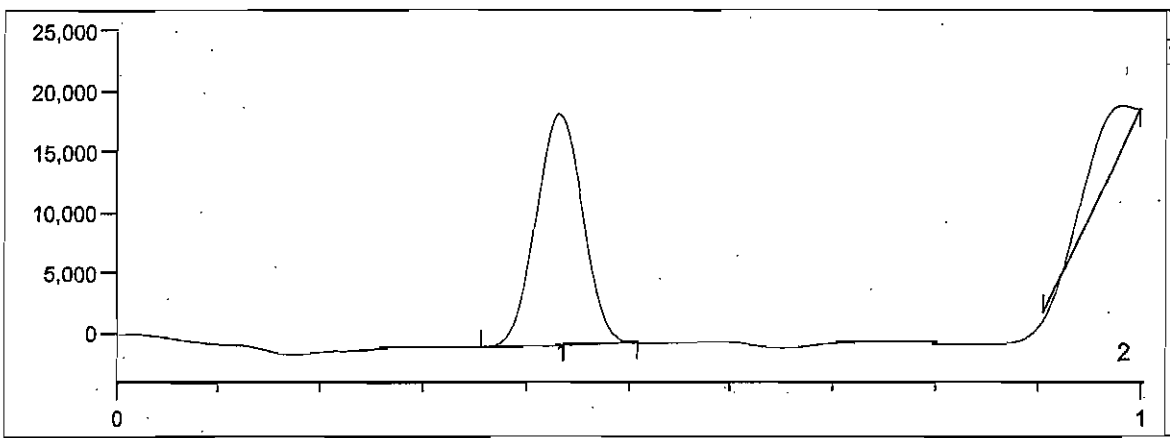


Date:	1/14/05
Time:	8:14 PM

Peak	rt	Area
1	0.42	415,219

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
28	S	05BR0023-47	MBA	1	415,219	1.42	0.0137		< HS	accept

Notes:

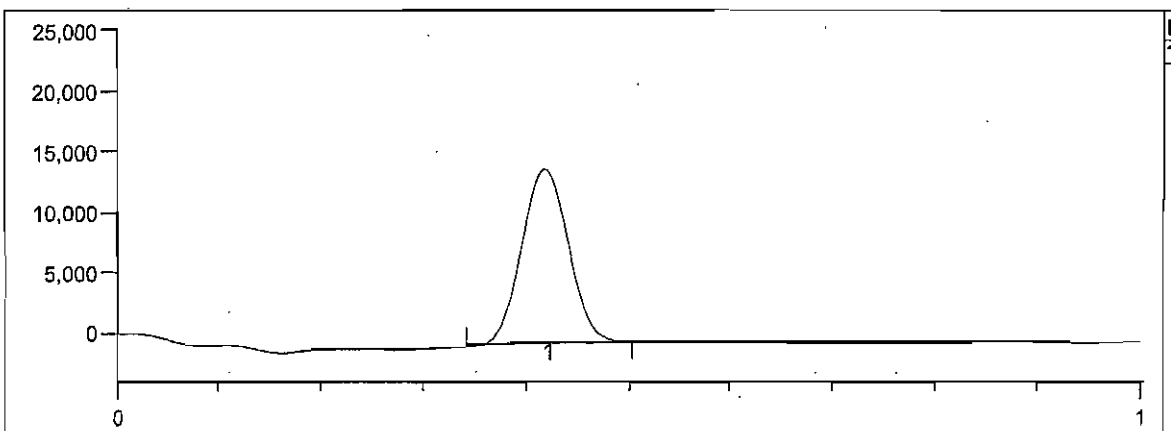


Date:	1/14/05
Time:	8:21 PM

Peak	rt	Area
1	0.43	640,456
2	0.98	183,519

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
29	S	05BR0023-48	MBA	1	640,456	2.20	0.0210		< HS	accept

Notes:



Date:	1/14/05
Time:	8:27 PM

Peak	rt	Area
1	0.42	488,011

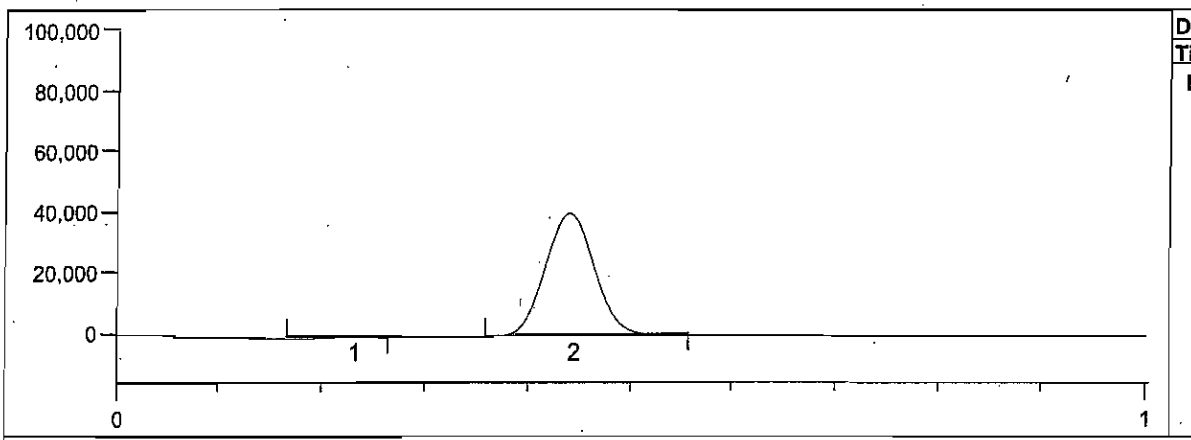
Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
30	S	05BR0023-49	MBA	1	488,011	1.67	0.0170		< HS	accept

Notes:

Batch Number: 04-1029, 04-1046
Method Number: BR-0021

Project Number(s): WIN001
Instrument ID: HGAA-1

Date Analyzed: 1/14/05
Analyst Name: ABN

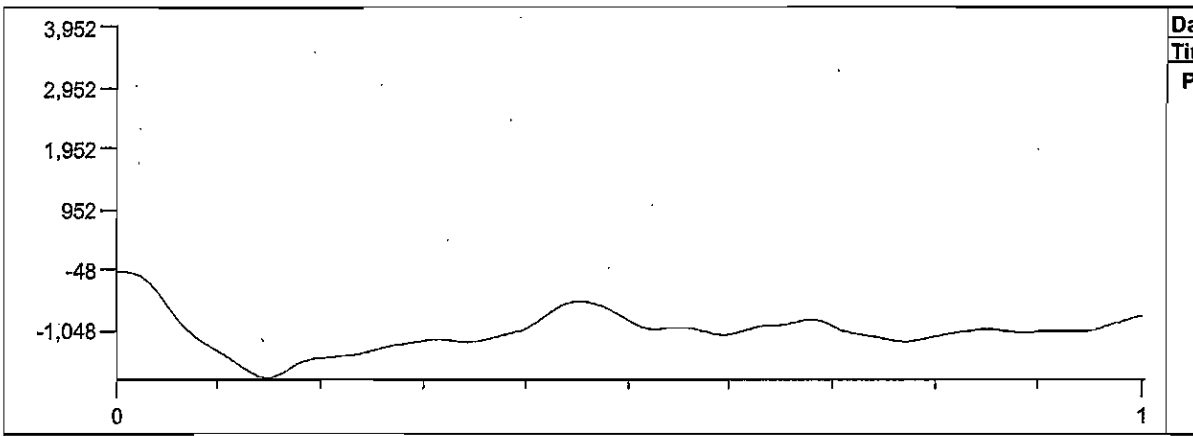


Date:	1/14/05
Time:	8:33 PM

Peak	rt	Area
1	0.23	8,835
2	0.44	1,442,285

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
31	OPR	CCV 5 ng		2	1,442,285	4.95		98.9	80-120	accept

Notes:

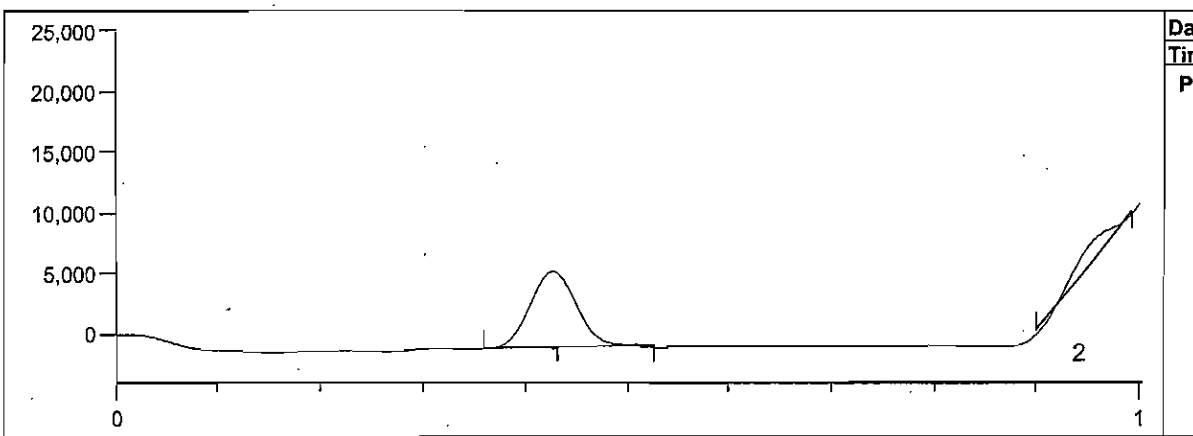


Date:	1/14/05
Time:	8:40 PM

Peak	rt	Area

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
32	CCB	CCB		0	0	0.00			< 0.14	accept

Notes:



Date:	1/14/05
Time:	8:46 PM

Peak	rt	Area
1	0.42	217,709
2	0.93	56,860

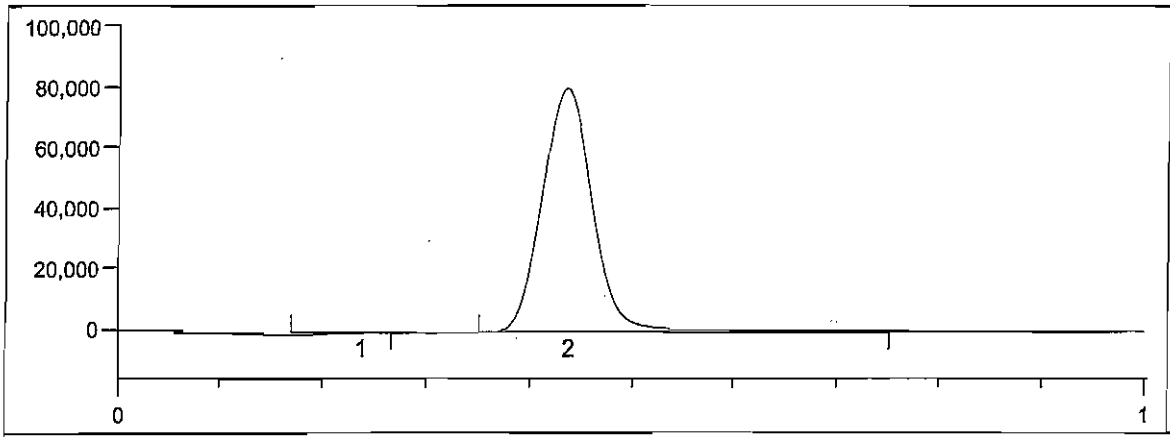
Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
33	S	05BR0023-50	MBA	1	217,709	0.747	0.00704		< HS	accept

Notes:

Batch Number: 04-1029, 04-1046
Method Number: BR-0021

Project Number(s): WIN001
Instrument ID: HGAA-1

Date Analyzed: 1/14/05
Analyst Name: ABN

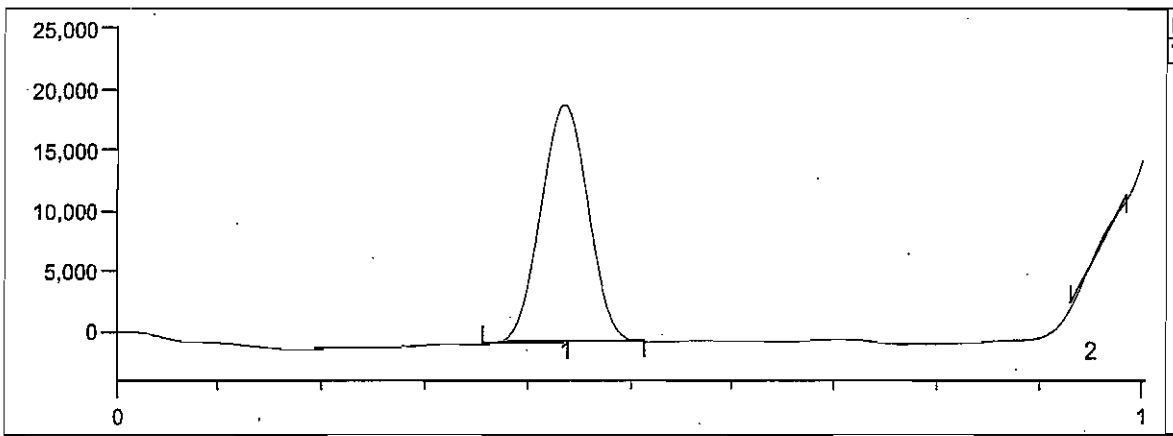


Date: 1/14/05
Time: 8:52 PM

Peak	rt	Area
1	0.23	10,290
2	0.43	2,947,795

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
34	S	05BR0023-51	MBA	2	2,947,795	10.1	0.0980		< HS	accept

Notes:

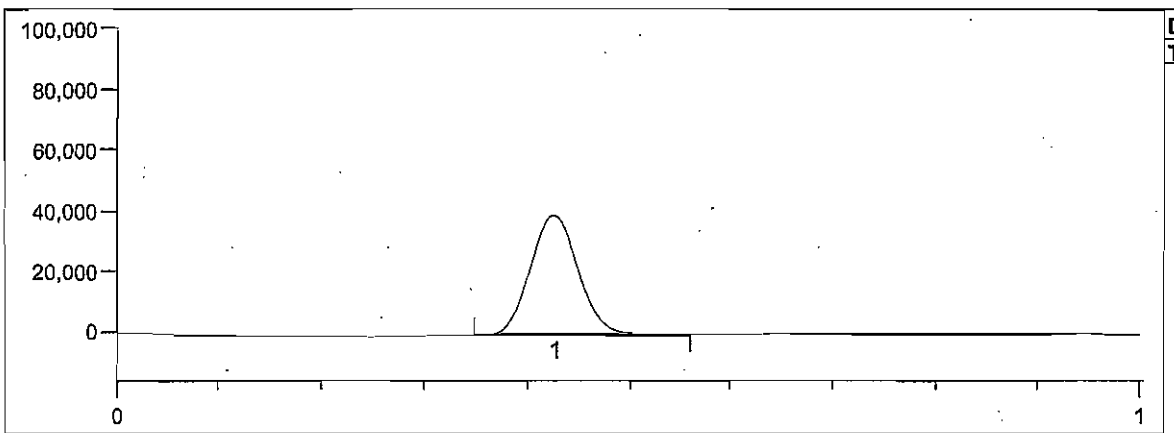


Date: 1/14/05
Time: 8:58 PM

Peak	rt	Area
1	0.43	671,608
2	0.94	15,762

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
35	S	05BR0023-52	MBA	1	671,608	2.30	0.0218		< HS	accept

Notes:



Date: 1/14/05
Time: 9:03 PM

Peak	rt	Area
1	0.42	1,387,454

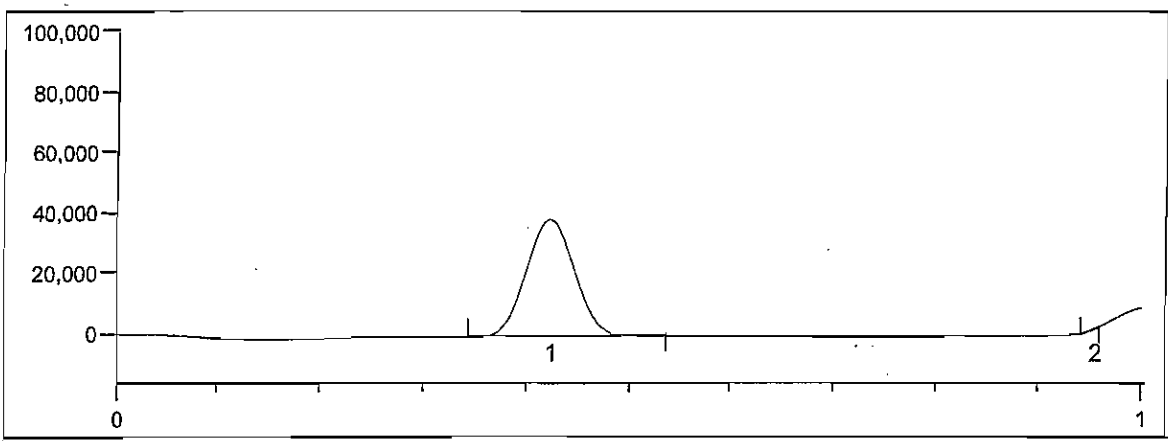
Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
36	S	05BR0023-54	MBA	1	1,387,454	4.76	0.0458		< HS	accept

Notes:

Batch Number: 04-1029, 04-1046
Method Number: BR-0021

Project Number(s): WIN001
Instrument ID: HGAA-1

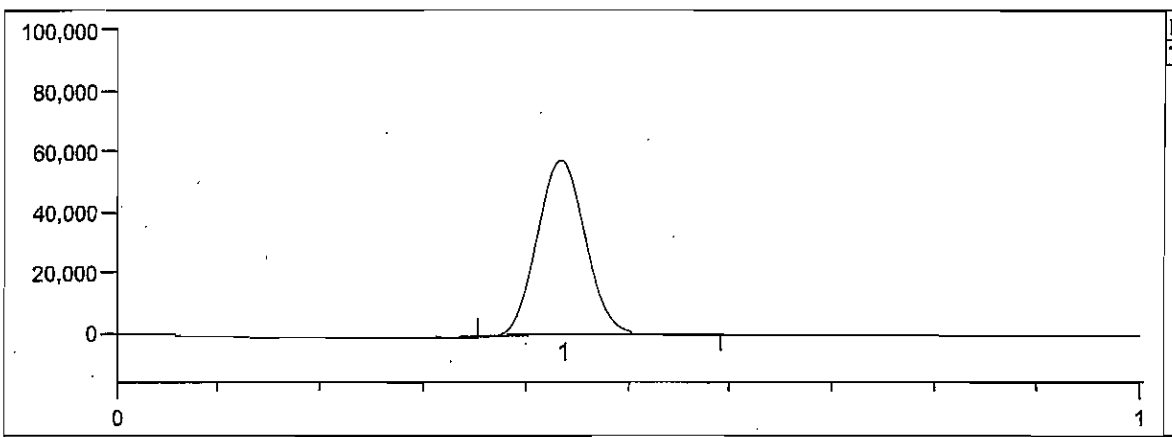
Date Analyzed: 1/14/05
Analyst Name: ABN



Date:	1/14/05	
Time:	9:09 PM	
Peak	rt	Area
1	0.42	1,361,715
2	0.95	-1,652

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
37	S	05BR0023-55	MBA	1	1,361,715	4.67	0.0449		< HS	accept

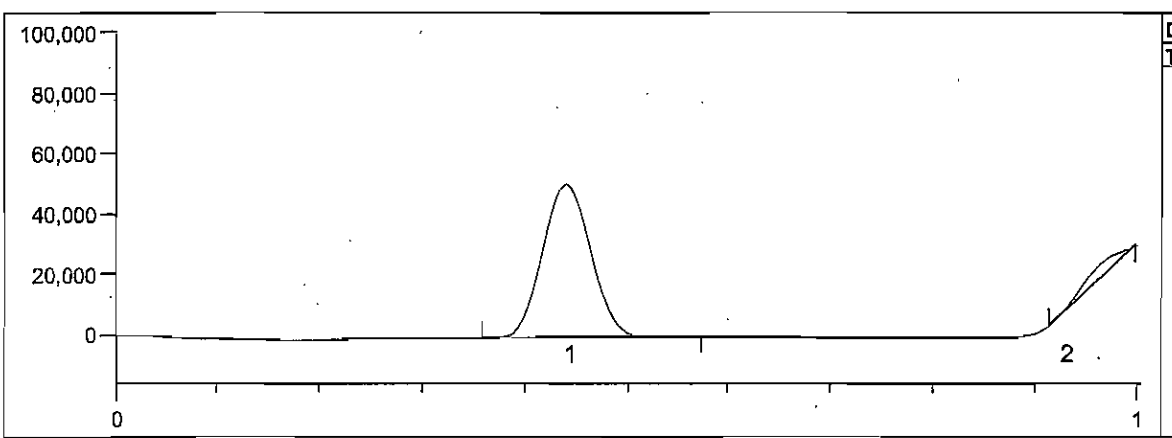
Notes:



Date:	1/14/05	
Time:	9:18 PM	
Peak	rt	Area
1	0.43	2,061,613

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
38	S	05BR0023-56	MBA	1	2,061,613	7.07	0.0717		< HS	accept

Notes:



Date:	1/14/05	
Time:	9:25 PM	
Peak	rt	Area
1	0.44	1,781,722
2	0.92	154,336

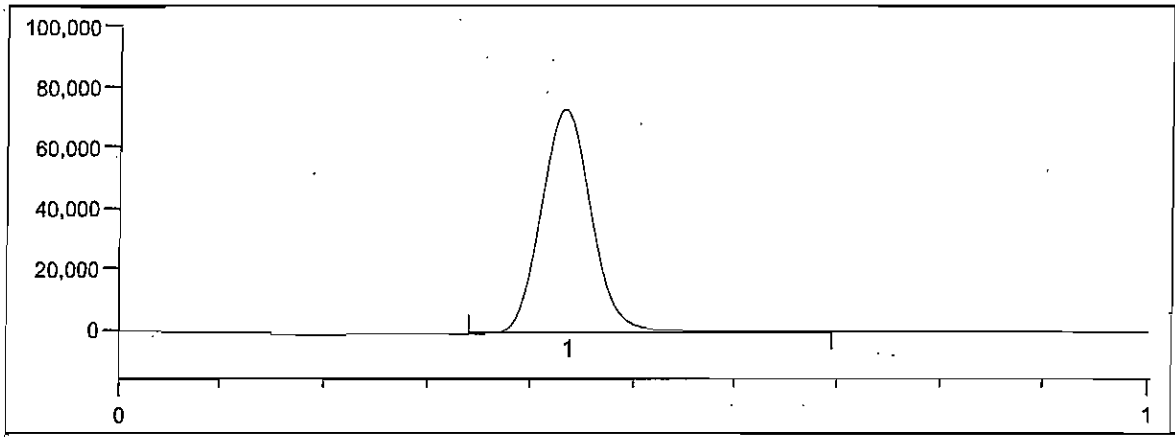
Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
39	S	05BR0023-57	MBA	1	1,781,722	6.11	0.0613		< HS	accept

Notes:

Batch Number: 04-1029, 04-1046
Method Number: BR-0021

Project Number(s): WIN001
Instrument ID: HGAA-1

Date Analyzed: 1/14/05
Analyst Name: ABN

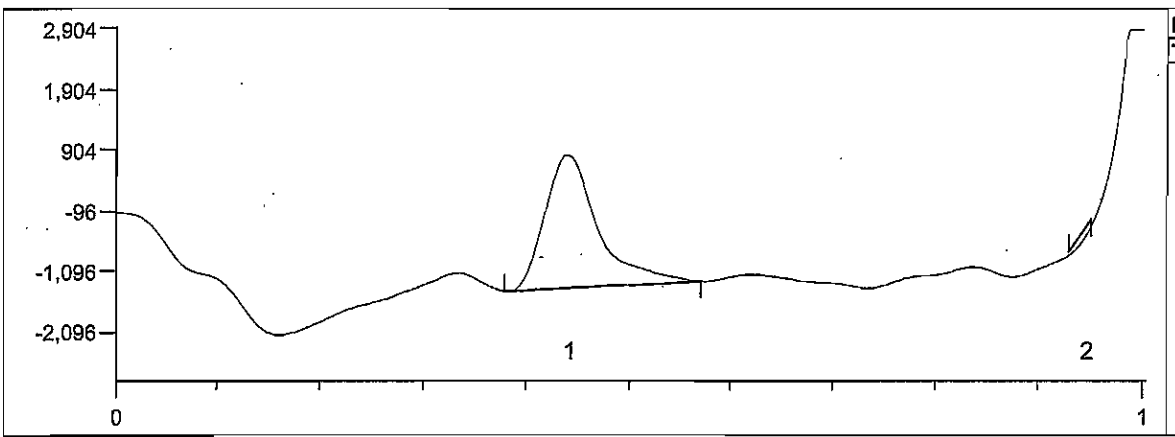


Date:	1/14/05
Time:	9:30 PM

Peak	rt	Area
1	0.43	2,683,058

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
40	S	05BR0023-58	MBA	1	2,683,058	9.20	0.0920		< HS	accept

Notes:

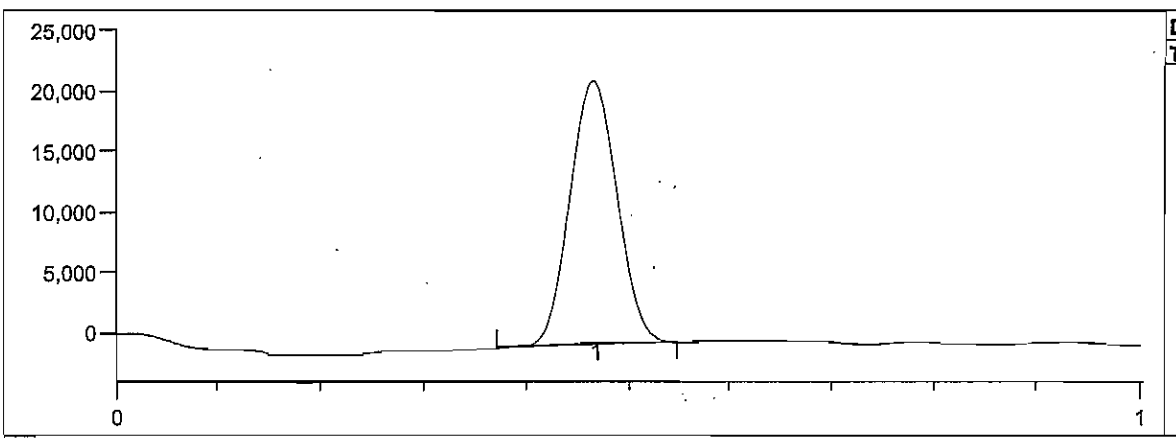


Date:	1/14/05
Time:	9:37 PM

Peak	rt	Area
1	0.44	83,486
2	0.94	-525

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
41	S	05BR0023-59	MBA	1	83,486	0.286	0.00280		< HS	accept

Notes:



Date:	1/14/05
Time:	9:43 PM

Peak	rt	Area
1	0.46	737,769

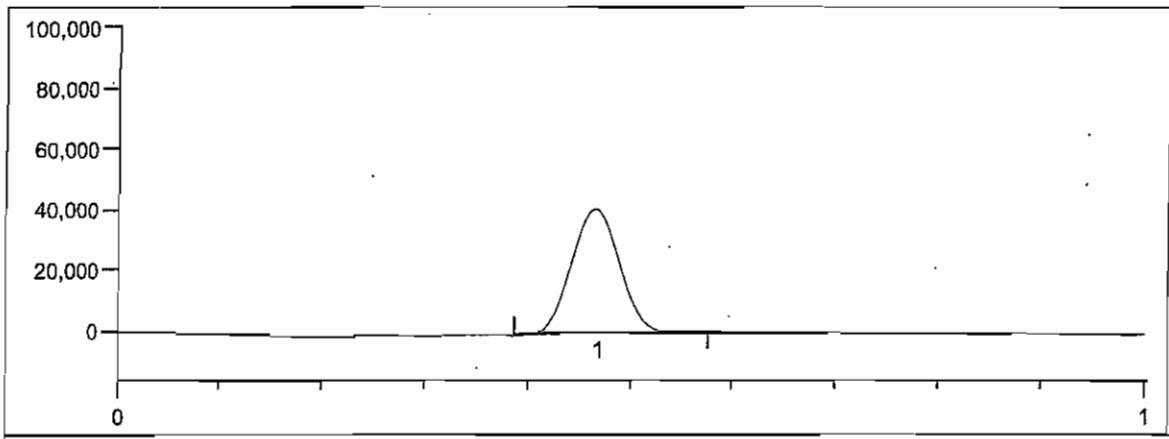
Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
42	S	05BR0023-60	MBA	1	737,769	2.53	0.0228		< HS	accept

Notes:

Batch Number: 04-1029, 04-1046
Method Number: BR-0021

Project Number(s): WIN001
Instrument ID: HGAA-1

Date Analyzed: 1/14/05
Analyst Name: ABN

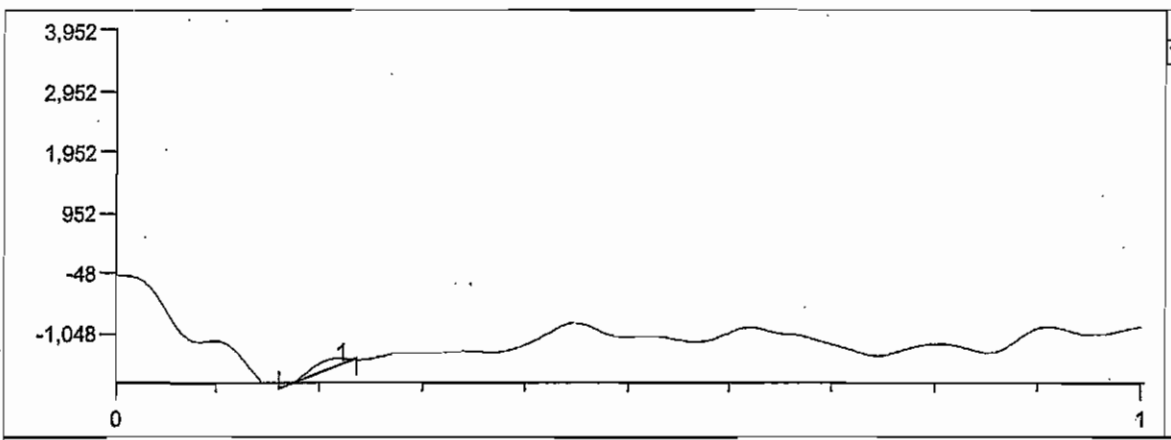


Date: 1/14/05
Time: 9:50 PM

Peak	rt	Area
1	0.46	1,440,258

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
43	OPR	CCV 5 ng		1	1,440,258	4.94		98.8	80-120	accept

Notes:

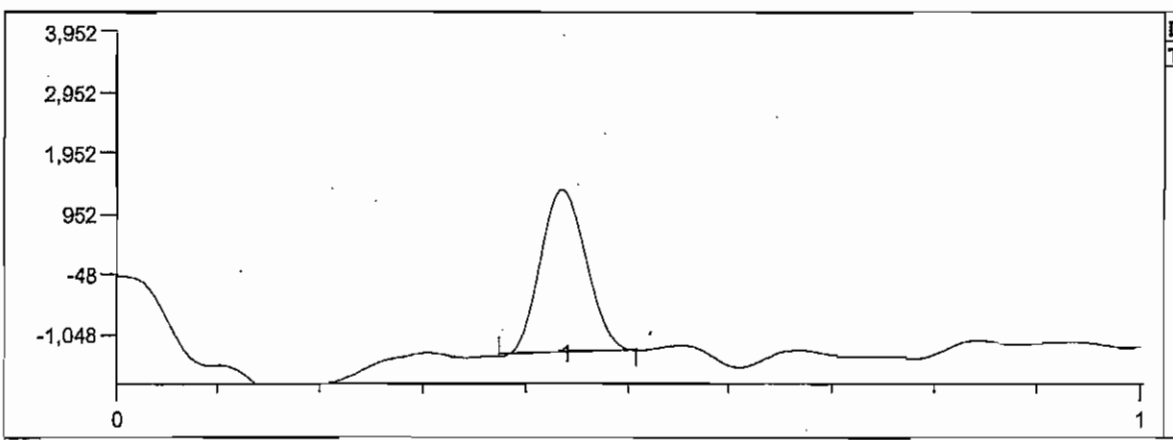


Date: 1/14/05
Time: 9:55 PM

Peak	rt	Area
1	0.22	5,172

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
44	CCB	CCB		0	0	0.00			< 0.14	accept

Notes:



Date: 1/14/05
Time: 10:17 PM

Peak	rt	Area
1	0.43	89,606

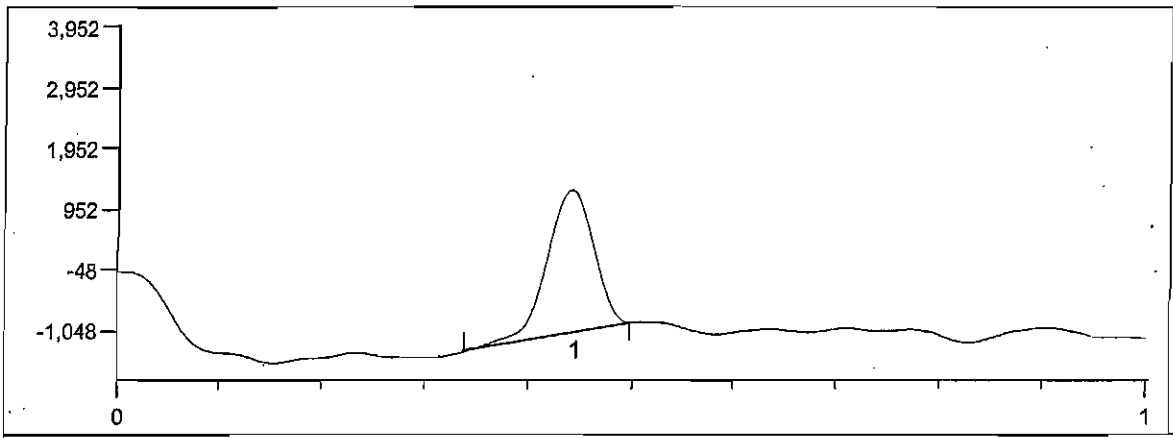
Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
45	MBB	MB-1		1	89,606	0.307	0.00307	0.00307	< 0.003	reject

Notes:

Batch Number: 04-1029, 04-1046
Method Number: BR-0021

Project Number(s): WIN001
Instrument ID: HGAA-1

Date Analyzed: 1/14/05
Analyst Name: ABN

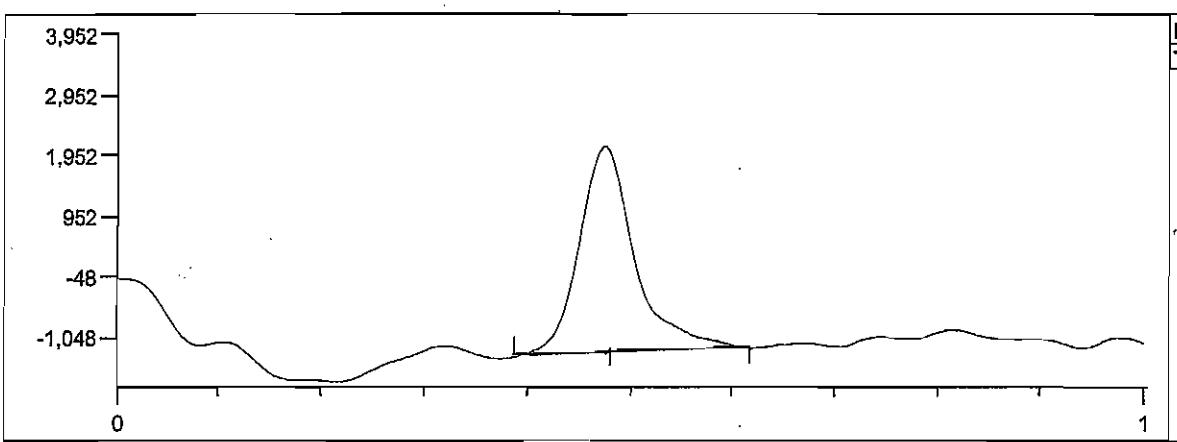


Date: 1/14/05
Time: 10:22 PM

Peak	rt	Area
1	0.44	78,031

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
46	MBB	MB-2		1	78,031	0.268	0.00268	0.00268	< 0.003	accept

Notes:

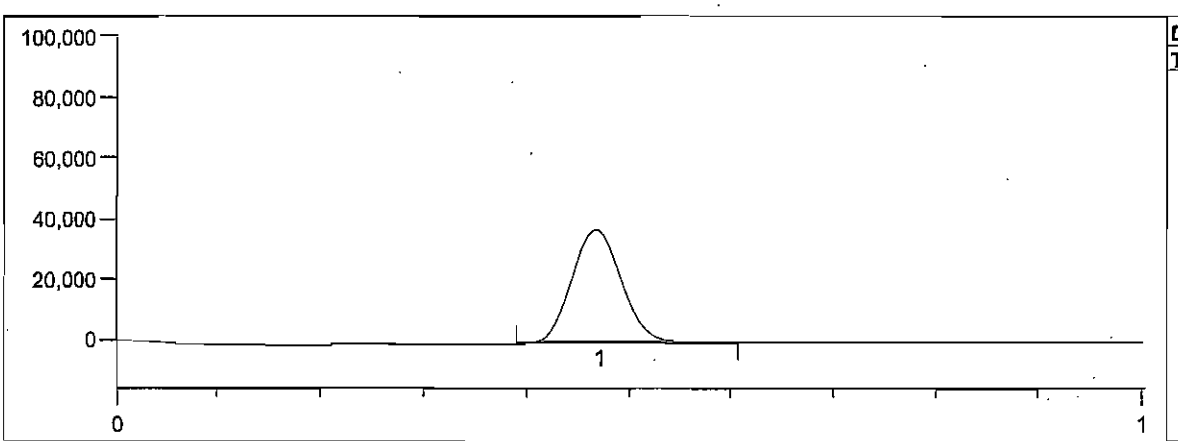


Date: 1/14/05
Time: 10:30 PM

Peak	rt	Area
1	0.47	136,412

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
47	MBB	MB-3		1	136,412	0.468	0.00468	0.00468	< 0.003	reject

Notes:



Date: 1/14/05
Time: 10:39 PM

Peak	rt	Area
1	0.46	1,357,828

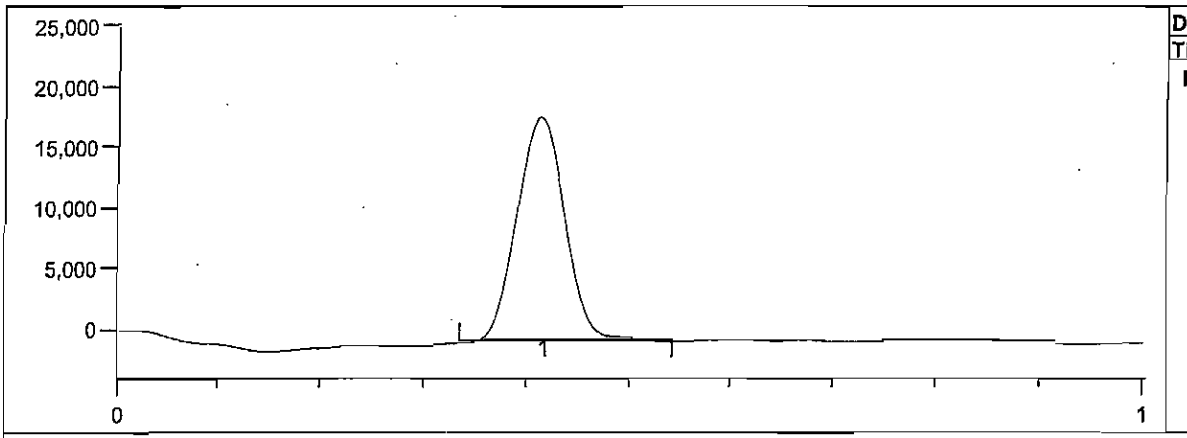
Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
48	IPR	LFB-1B	MBB	1	1,357,828	4.66	1.86	93.1	75-125	accept

Notes:

Batch Number: 04-1029, 04-1046
Method Number: BR-0021

Project Number(s): WIN001
Instrument ID: HGAA-1

Date Analyzed: 1/14/05
Analyst Name: ABN

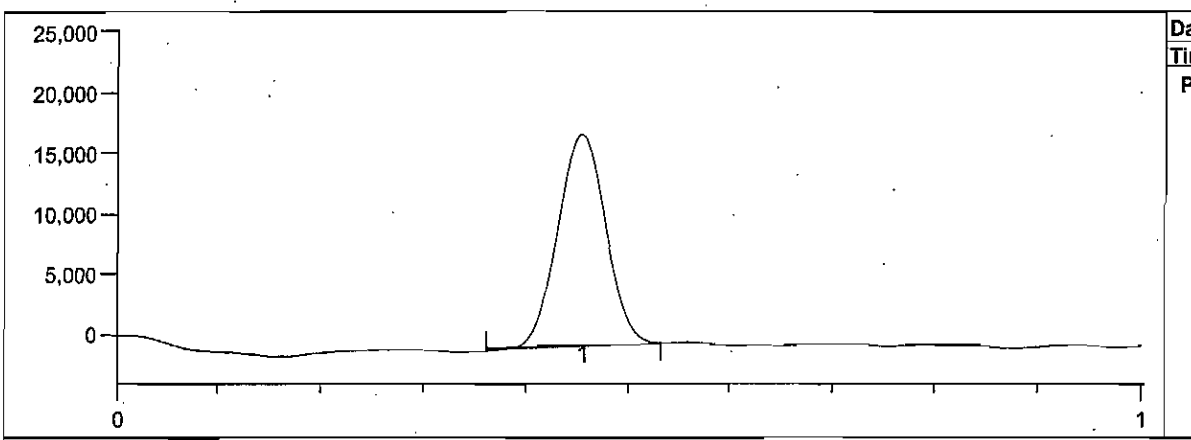


Date: 1/14/05
Time: 10:45 PM

Peak	rt	Area
1	0.41	640,817

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
49	IPR	LFB-2B	MBB	1	640,817	2.20	0.879	87.9	75-125	accept

Notes:

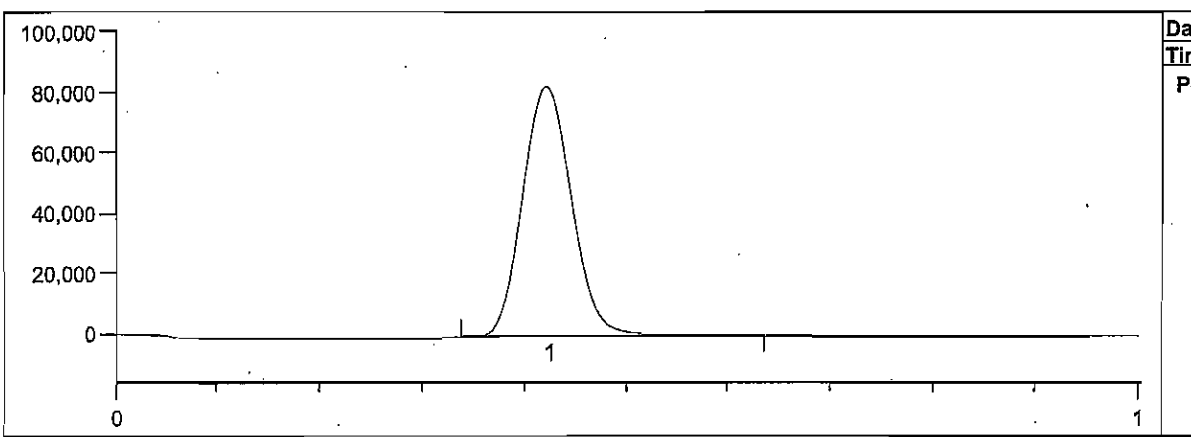


Date: 1/14/05
Time: 10:55 PM

Peak	rt	Area
1	0.45	610,789

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
50	IPR	LFB-2BR	MBB	1	610,789	2.09	0.838	83.8	75-125	accept

Notes:



Date: 1/14/05
Time: 11:03 PM

Peak	rt	Area
1	0.42	2,959,425

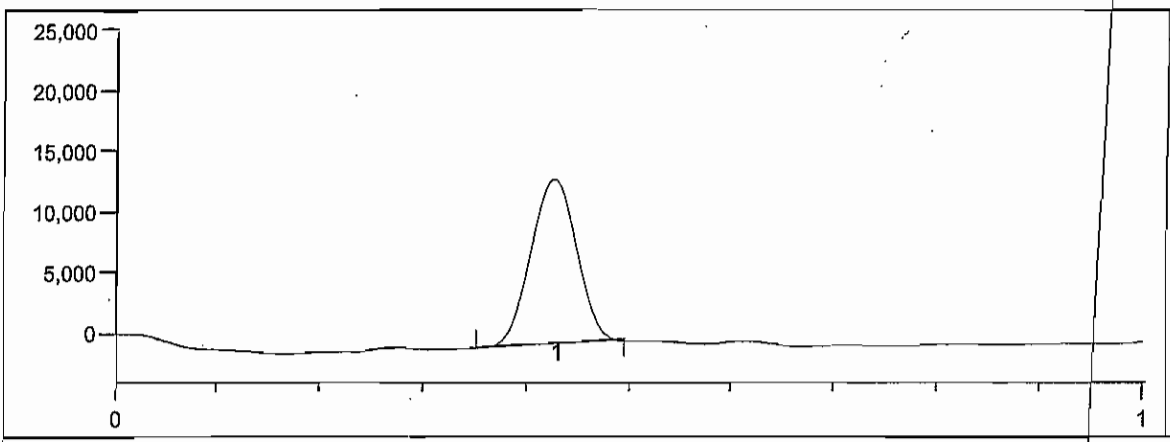
Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
51	IPR	CRM-1B	MBB	1	2,959,425	10.1	19.7	93.0	75-125	accept

Notes:

Batch Number: 04-1029, 04-1046
Method Number: BR-0021

Project Number(s): WIN001
Instrument ID: HGAA-1

Date Analyzed: 1/14/05
Analyst Name: ABN

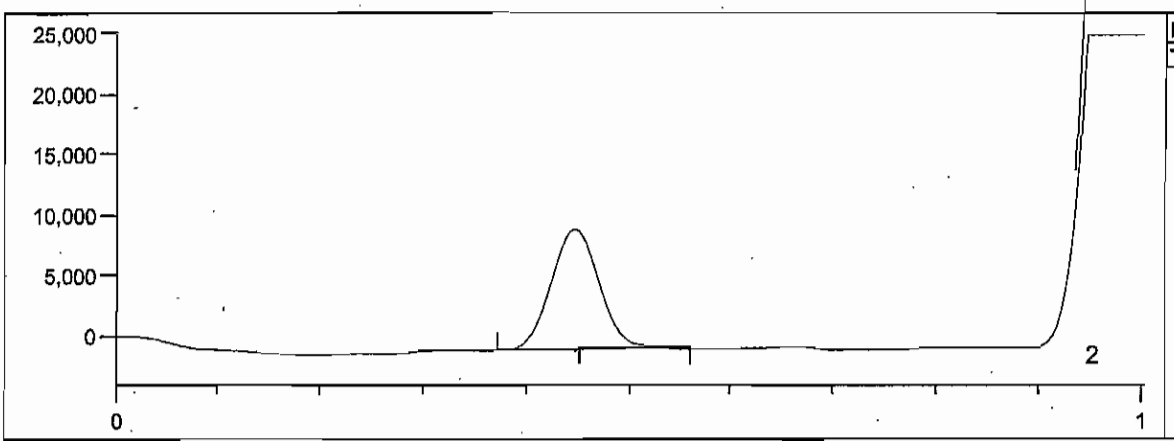


Date: 1/14/05
Time: 11:13 PM

Peak	rt	Area
1	0.42	446,172

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
52	S	05BR0023-81	MBB	1	446,172	1.53	0.0149		< HS	accept

Notes:

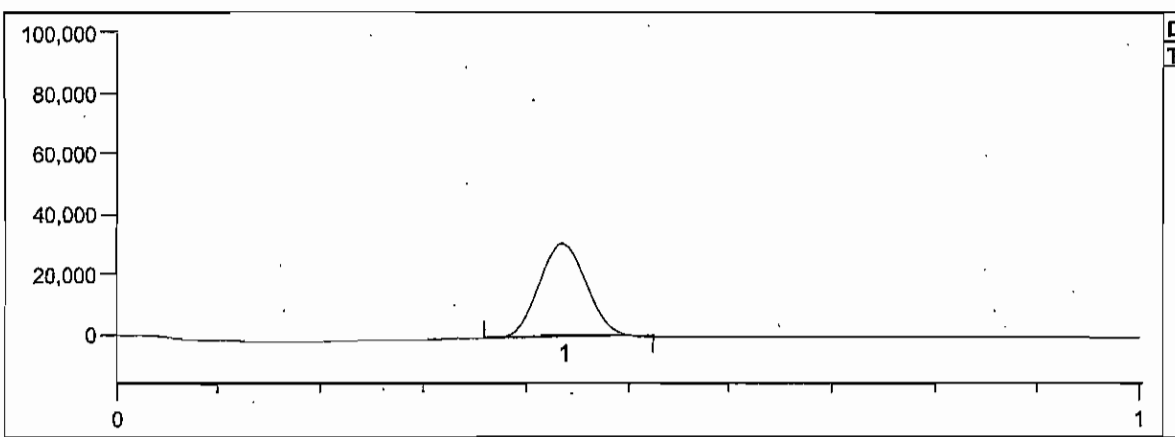


Date: 1/14/05
Time: 11:19 PM

Peak	rt	Area
1	0.44	350,857
2	0.94	326,828

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
53	MD	05BR0023-81	MBB	1	350,857	1.20	0.0120	21.6	< 35	accept

Notes:



Date: 1/14/05
Time: 11:29 PM

Peak	rt	Area
1	0.43	1,095,899

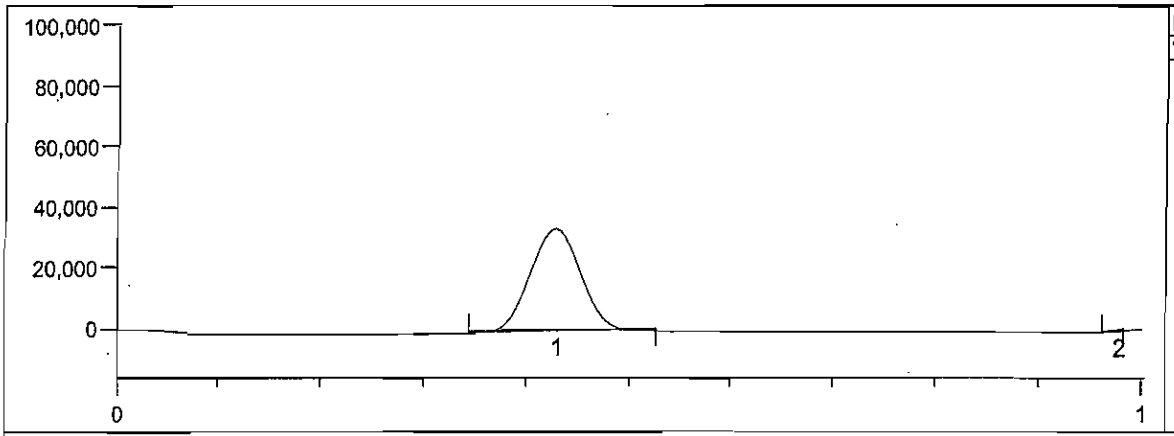
Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
54	MS	05BR0023-81	MBB	1	1,095,899	3.76	1.41	71.8	65-135	accept

Notes:

Batch Number: 04-1029, 04-1046
Method Number: BR-0021

Project Number(s): WIN001
Instrument ID: HGAA-1

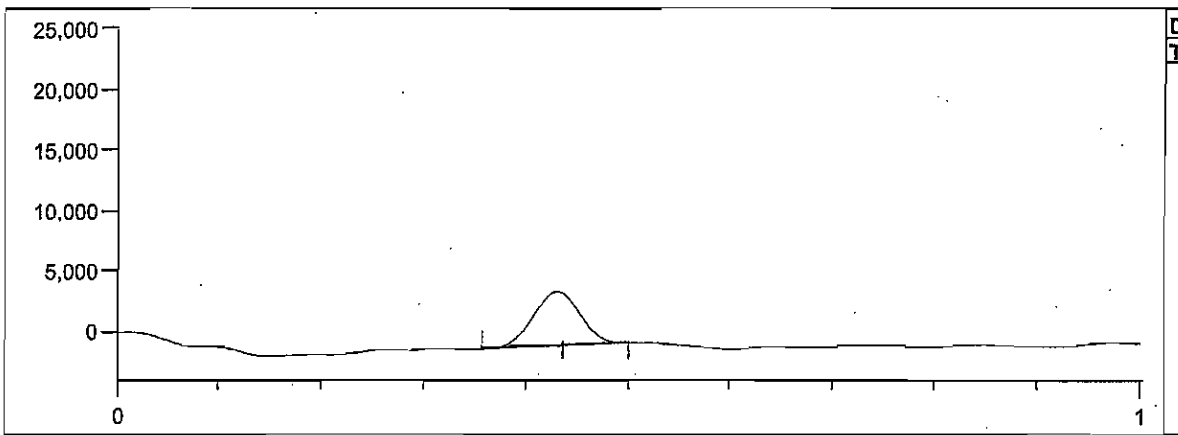
Date Analyzed: 1/14/05
Analyst Name: ABN



Date:	1/14/05	
Time:	11:37 PM	
Peak	rt	Area
1	0.42	1,231,535
2	0.97	-388

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
55	MSD	05BR0023-81	MBB	1	1,231,535	4.22	1.60	79.2	65-135	accept

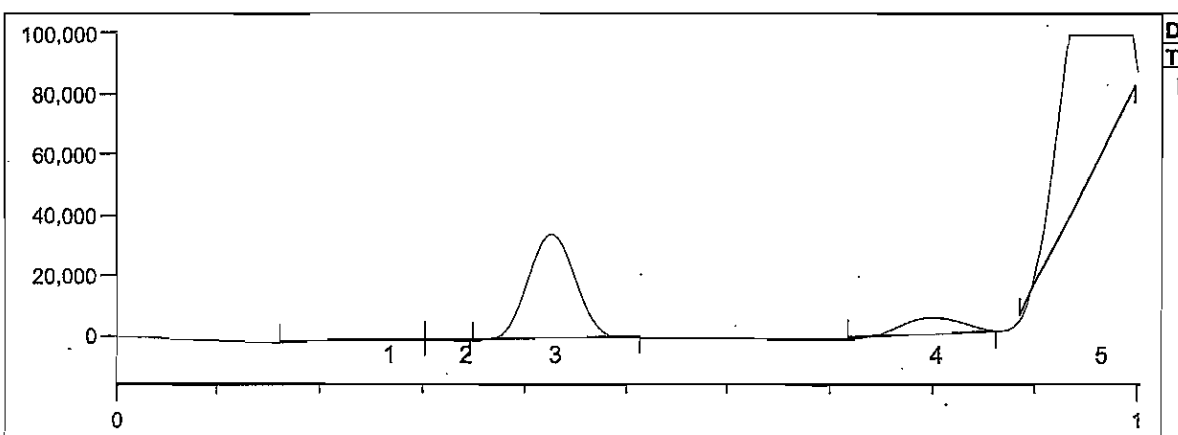
Notes:



Date:	1/14/05	
Time:	11:43 PM	
Peak	rt	Area
1	0.43	153,405

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
56	S	05BR0023-82	MBB	1	153,405	0.526	0.00976		< HS	accept

Notes:



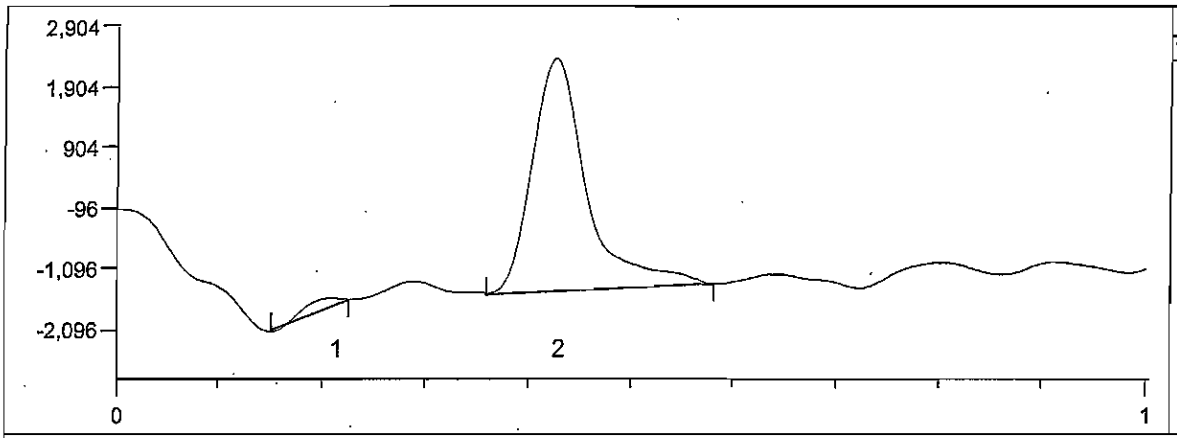
Date:	1/14/05	
Time:	11:49 PM	
Peak	rt	Area
1	0.26	28,725
2	0.34	5,907
3	0.42	1,207,737
4	0.80	267,430
5	0.96	3,661,710

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
57	S	05BR0023-83	MBB	3	1,207,737	4.14	0.0825		< HS	accept

Notes:

Project Number(s): WIN001
Instrument ID: HGAA-1

Date Analyzed: 1/14/05
Analyst Name: ABN

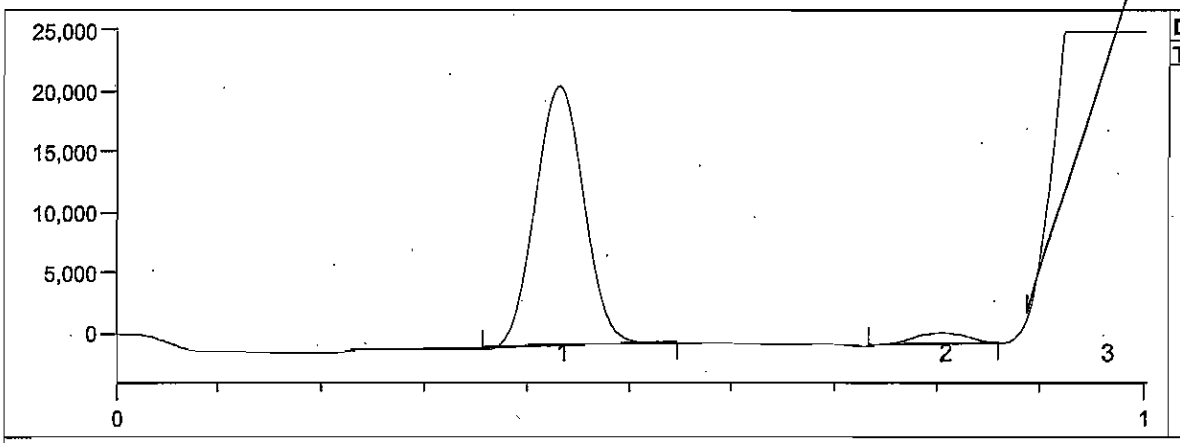


Date:	1/14/05
Time:	11:56 PM

Peak	rt	Area
1	0.21	5,620
2	0.42	148,263

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
58	S	05BR0023-84	MBB	2	148,263	0.508	0.00987		< HS	accept

Notes:

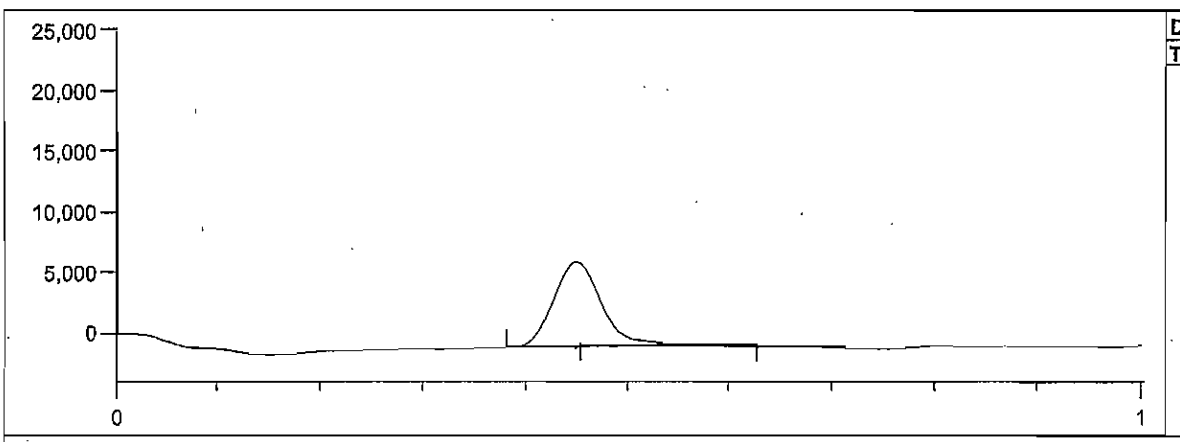


Date:	1/15/05
Time:	12:02 AM

Peak	rt	Area
1	0.43	763,830
2	0.80	40,112
3	0.96	1,348,018

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
59	S	05BR0023-85	MBB	1	763,830	2.62	0.0508		< HS	accept

Notes:



Date:	1/15/05
Time:	12:07 AM

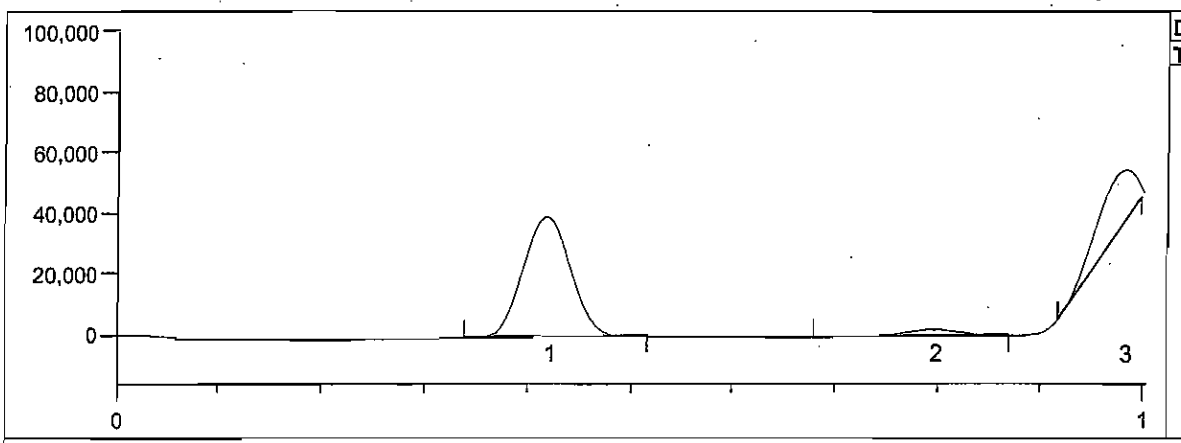
Peak	rt	Area
1	0.45	255,446

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
60	S	05BR0023-86	MBB	1	255,446	0.876	0.0177		< HS	accept

Notes:

Project Number(s): WIN001
Instrument ID: HGAA-1

Date Analyzed: 1/14/05
Analyst Name: ABN

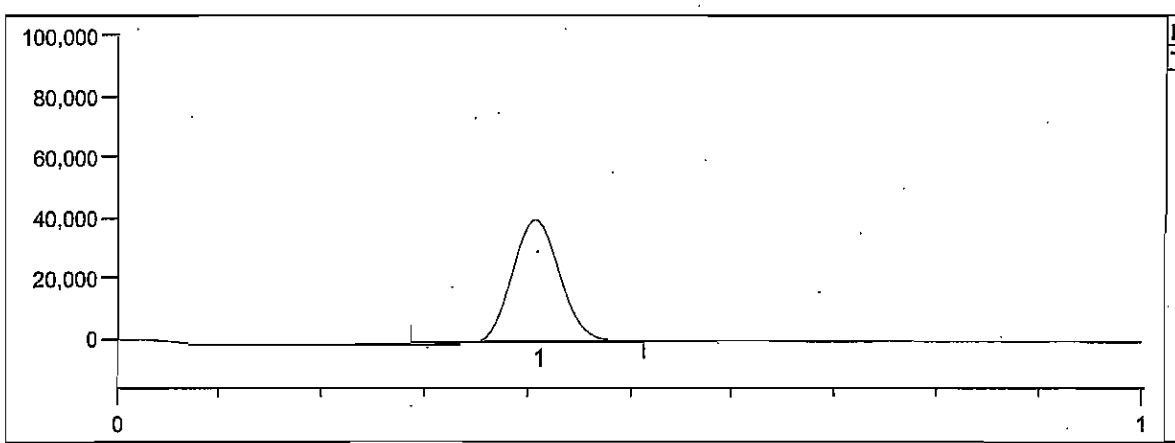


Date: 1/15/05
Time: 12:13 AM

Peak	rt	Area
1	0.42	1,379,627
2	0.79	110,029
3	0.98	574,653

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
61	S	05BR0023-87	MBB	1	1,379,627	4.73	0.0912		< HS	accept

Notes:

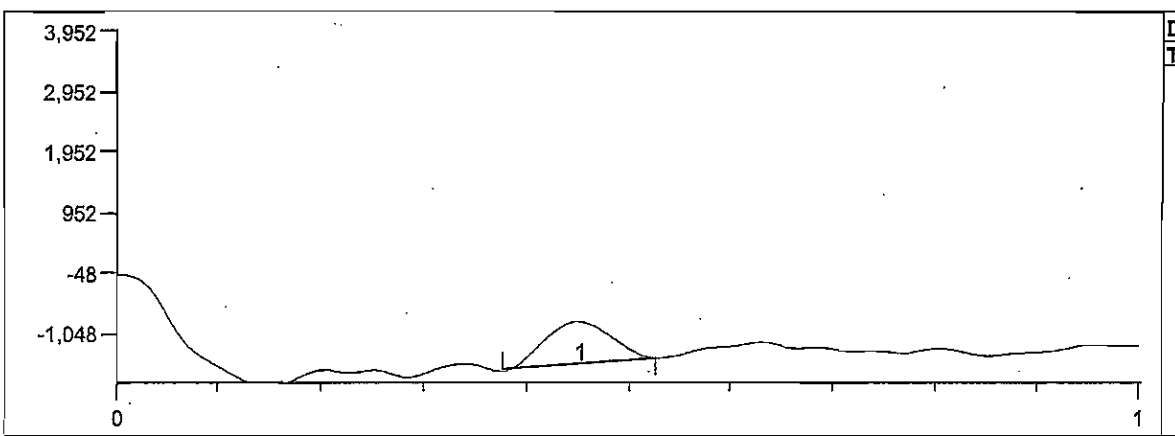


Date: 1/15/05
Time: 12:19 AM

Peak	rt	Area
1	0.40	1,414,638

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
62	OPR	CCV 5 ng		1	1,414,638	4.85		97.0	80-120	accept

Notes:



Date: 1/15/05
Time: 12:25 AM

Peak	rt	Area
1	0.45	34,744

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
63	CCB	CCB		1	34,744	0.119			< 0.14	accept

Notes:

BRL QA Summary

Batch #: **04-1031** ***Method #:*** **EPA 160.3**

Analyte: **% Solids** ***Matrix:*** **Biota**

PRECISION *Criteria: RPD<15% or +/-2xPQL if results <5xPQL*
Method Duplicate (MD)

Sample ID	*Sample Value % Solid*	*Duplicate Value % Solid*	*Average Value % Solid*	*RPD*
05BR0023-11	29.83	30.20	30.02	1.3%
05BR0023-15	27.15	27.03	27.09	0.4%

Method Blanks (MB) *Criteria: < MDL or < 1/10th sample*

MB1	*MB2*	*Average*	*StDev*	*MDL*	*PQL*
% Solid	*% Solid*	*% Solid*	*% Solid*	*% Solid*	*% Solid*
0.00	0.00	0.00	0.00	0.15	0.50

Note: MDL/PQL is based on representative weight used in the analysis of this batch.

12/27/2004

Project Manager

BROOKS RAND, LLC
3958 6th Avenue, NW Seattle, WA 98107 U.S.A. 206.632.6206

QUALITY ASSURANCE REPORT

Batch:	04-1031
Analysis:	Percent Solids
Tracking:	05BR0023
Project:	WIN001
Matrix:	Biota
Batch Size:	20 samples
Analysis Date:	December 23, 2004

1 **SAMPLE PREPARATION** – Acceptable

2 **CALIBRATION** – Not Applicable

3 **CALIBRATION VERIFICATION** – Not Applicable

4 **QUALITY CONTROL SAMPLES (QCS)** – Not Applicable

5 **BLANKS** – Acceptable

6 **METHOD DUPLICATE ANALYSIS** – Acceptable

7 **MATRIX SPIKE ANALYSIS** – Not Applicable

8 **LIMITS OF DETECTION** – Acceptable

9 **OVERALL DATA QUALITY** – Acceptable

No qualification of the data was required based on this review.

I certify that, to the best of my knowledge and belief, the data are reported as true and accurate. The Laboratory Director, or his designee, has authorized release of data contained in this Quality Assurance Report as verified by the following signature(s).

12.27.04
Tressa K. Pearson-Franks
Quality Assurance Associate

SAMPLE PROCESSING FORM

20

Batch #: 04-1031 Analysis: % Solids Method: EPA 160.3

Tracking #	Lab ID	Project Ref #	Data Due Date	Matrix	Comments
QA: Full					
05BR0023	1	WIN001	1/3/2005	Biota	
05BR0023	2	WIN001	1/3/2005	Biota	
05BR0023	3	WIN001	1/3/2005	Biota	
05BR0023	4	WIN001	1/3/2005	Biota	
05BR0023	5	WIN001	1/3/2005	Biota	
05BR0023	6	WIN001	1/3/2005	Biota	
05BR0023	7	WIN001	1/3/2005	Biota	
05BR0023	8	WIN001	1/3/2005	Biota	
05BR0023	9	WIN001	1/3/2005	Biota	
05BR0023	10	WIN001	1/3/2005	Biota	
05BR0023	11	WIN001	1/3/2005	Biota	
05BR0023	12	WIN001	1/3/2005	Biota	
05BR0023	13	WIN001	1/3/2005	Biota	
05BR0023	14	WIN001	1/3/2005	Biota	
05BR0023	15	WIN001	1/3/2005	Biota	
05BR0023	16	WIN001	1/3/2005	Biota	
05BR0023	17	WIN001	1/3/2005	Biota	
05BR0023	18	WIN001	1/3/2005	Biota	
05BR0023	19	WIN001	1/3/2005	Biota	
05BR0023	20	WIN001	1/3/2005	Biota	

Tracking #	See SOW	See Memo	See Proj Mgr	Consult MSDS	See Contract Info	See Lab Mgr
05BR0023	No	No	No	No	No	No

QA Comments: Report on a WET weight basis.

Batched By _____ Date: 12/15/04

Prepared By: _____ Date: 12/22/04

Comments: _____

Analyzed By: _____ Date: 12/23/04

Comments: _____

Data Entry By _____ Date: 12/23/04

Comments: _____

Primary Data Review By _____ Date: 12/23/04

Comments: _____

Final Review By: _____ Date: 12.27.04

Comments: _____

Dry Weight Determination

Batch # 04-1031(% Solids), Tracking # 05BR0023

Analyst:	MJL	Project:	WIN001		Date:	12/23/04	
	Dish	Tare Wt.	Wet Wt	Dry Wt.	Wet Wt.	Dry Wt.	Dry Wt.
Sample #	ID #	(g)	(Gross g)	(Gross g)	(Net g)	(Net g)	(%)
MB-1	A	0.971		0.971			
MB-2	B	0.968		0.968			
05BR0023-1	C	0.964	1.808	1.183	0.844	0.219	25.95
05BR0023-2	D	0.965	2.123	1.235	1.158	0.270	23.32
05BR0023-3	E	0.963	2.242	1.285	1.279	0.322	25.18
05BR0023-4	F	0.964	2.273	1.273	1.309	0.309	23.61
05BR0023-5	G	0.963	2.677	1.402	1.714	0.439	25.61
05BR0023-6	H	0.966	2.275	1.330	1.309	0.364	27.81
05BR0023-7	I	0.963	2.053	1.244	1.090	0.281	25.78
05BR0023-8	J	0.964	2.230	1.267	1.266	0.303	23.93
05BR0023-9	K	0.965	3.547	1.737	2.582	0.772	29.90
05BR0023-10	L	0.968	2.412	1.407	1.444	0.439	30.40
05BR0023-11	M	0.971	3.348	1.680	2.377	0.709	29.83
05BR0023-11MD	N	0.971	3.570	1.756	2.599	0.785	30.20
05BR0023-12	O	0.966	2.981	1.562	2.015	0.596	29.58
05BR0023-13	P	0.968	3.265	1.661	2.297	0.693	30.17
05BR0023-14	Q	0.970	3.817	1.839	2.847	0.869	30.52
05BR0023-15	R	0.970	1.806	1.197	0.836	0.227	27.15
05BR0023-15MD	S	0.969	1.657	1.155	0.688	0.186	27.03
05BR0023-16	T	0.959	3.069	1.562	2.110	0.603	28.58
05BR0023-17	U	0.960	2.398	1.336	1.438	0.376	26.15
05BR0023-18	V	0.960	3.593	1.578	2.633	0.618	23.47
05BR0023-19	W	0.962	3.711	1.589	2.749	0.627	22.81
05BR0023-20	X	0.965	3.389	1.488	2.424	0.523	21.58
Method Duplicate Analysis - criterion: RPD<15%							
05BR0023-11	M	0.971	3.348	1.680	2.377	0.709	29.83
05BR0023-11MD	N	0.971	3.570	1.756	2.599	0.785	30.20
						Average	30.02
						RPD	1.3%
05BR0023-15	R	0.970	1.806	1.197	0.836	0.227	27.15
05BR0023-15MD	S	0.969	1.657	1.155	0.688	0.186	27.03
						Average	27.09
						RPD	0.4%
Method Blank Analysis - criterion: < MDL or <1/10th associated results							
				(Representative)			
MB-1	A	0.971		0.971	2.000	0.0000	0.00%
MB-2	B	0.968		0.968	2.000	0.0000	0.00%
					Average	0.0000	0.00%
					StDev	0.0000	0.00%

Batch # 04-1031

Dry Weight Determination

Sample ID #	Dish No.	Tare Wt. (g.)	Wet Wt. (Gross g.)	Dry Wt. (Gross g.)	Wet Wt. (Net g.)	Dry Wt. (Net g.)	Dry Wt. (%)
MB-1	A	0.971	~~0.971~~ NOR	0.971			
MB-2	B	0.968	~~0.9~~ NOR	0.968			
05BR0023-1	C	0.964	1.808	1.183			
-2	D	0.965	2.123	1.235			
-3	E	0.963	2.242	1.285			
-4	F	0.964	2.273	1.273			
-5	G	0.963	2.677	1.402			
-6	H	0.966	2.275	1.330			
-7	I	0.963	2.053	1.244			
-8	J	0.964	2.230	1.267			
-9	K	0.965	3.547	1.737			
-10	L	0.968	2.412	1.487			
-11	M	0.971	3.348	1.680			
-11MD	N	0.971	3.570	1.756			
-12	O	0.966	2.981	1.562			
-13	P	0.968	3.265	1.661			
-14	Q	0.970	3.817	1.839			
-15	R	0.970	1.806	1.197			
-15MD	S	0.969	1.657	1.155			
-16	T	0.959	3.069	1.562			
-17	V	0.960	2.398	1.336			
-18	V	0.960	3.593	1.578			
-19	W	0.962	3.711	1.589			
-20	X	0.965	3.389	1.488			

Scale Sartorius & Adventurer
Oven BlueM

WIN001 / 05BR0023
Customer/Project Reference #

Time/Date in 12:20 / 12/22/04 Oven temp 90 °C
Time/Date out 3:00P / 12/23/04 Oven temp 90 °C

F. Mefford & MJL
Performed by Margaret Langley

BRL QA Summary

Batch #: **04-1032** ***Method #:*** **EPA 160.3**

Analyte: **% Solids** ***Matrix:*** **Biota**

PRECISION *Criteria: RPD<15% or +/-2xPQL if results <5xPQL*
Method Duplicate (MD)

Sample ID	*Sample Value % Solid*	*Duplicate Value % Solid*	*Average Value % Solid*	*RPD*
05BR0023-22	19.54	20.15	19.84	3.0%
05BR0023-32	24.78	22.71	23.74	8.7%

Method Blanks (MB) *Criteria: < MDL or < 1/10th sample*

MB1	*MB2*	*Average*	*StDev*	*MDL*	*PQL*
% Solid	*% Solid*	*% Solid*	*% Solid*	*% Solid*	*% Solid*
0.50	0.00	0.25	0.35	0.30	1.00

Note: MDL/PQL is based on representative weight used in the analysis of this batch.

12/30/2004

Elizabeth Medonek
Project Manager

20

SAMPLE PROCESSING FORM

Batch #: 04-1032 Analysis: % Solids Method: EPA 160.3

Tracking #	Lab ID	Project Ref #	Data Due Date	Matrix	Comments
QA: Full					
05BR0023	21	WIN001	1/3/2005	Biota	
05BR0023	22	WIN001	1/3/2005	Biota	
05BR0023	23	WIN001	1/3/2005	Biota	
05BR0023	24	WIN001	1/3/2005	Biota	
05BR0023	25	WIN001	1/3/2005	Biota	
05BR0023	26	WIN001	1/3/2005	Biota	
05BR0023	27	WIN001	1/3/2005	Biota	
05BR0023	28	WIN001	1/3/2005	Biota	
05BR0023	29	WIN001	1/3/2005	Biota	
05BR0023	30	WIN001	1/3/2005	Biota	
05BR0023	31	WIN001	1/3/2005	Biota	
05BR0023	32	WIN001	1/3/2005	Biota	
05BR0023	33	WIN001	1/3/2005	Biota	
05BR0023	34	WIN001	1/3/2005	Biota	
05BR0023	35	WIN001	1/3/2005	Biota	
05BR0023	36	WIN001	1/3/2005	Biota	
05BR0023	37	WIN001	1/3/2005	Biota	
05BR0023	38	WIN001	1/3/2005	Biota	
05BR0023	39	WIN001	1/3/2005	Biota	
05BR0023	40	WIN001	1/3/2005	Biota	

Tracking #	See SOW	See Memo	See Proj Mgr	Consult MSDS	See Contract Info	See Lab Mgr
05BR0023	No	No	No	No	No	No

QA Comments: Report on a WET weight basis.

Batched By 12/15/04 Date: [signature]

Prepared By: B. Ahlow Date: 12/~~27~~ 23/04 FCM 12/30/04

Comments:

Analyzed By: B. Ahlow Date: 12/27/04

Comments:

Data Entry By B. Ahlow Date: 12/27/04

Comments:

Primary Data Review By B. Ahlow Date: 12/27/04

Comments:

Final Review By: [signature] Date: 12/30/04

Comments:

BROOKS RAND, LLC
3958 6th Avenue, NW Seattle, WA 98107 U.S.A. 206.632.6206

QUALITY ASSURANCE REPORT

Batch:	04-1032
Analysis:	Percent Solids
Tracking:	05BR0023
Project:	WIN001
Matrix:	Biota
Batch Size:	20 samples
Analysis Date:	December 27, 2004

1 **SAMPLE PREPARATION** – Acceptable

2 **CALIBRATION** – Not Applicable

3 **CALIBRATION VERIFICATION** – Not Applicable

4 **QUALITY CONTROL SAMPLES (QCS)** – Not Applicable

5 **BLANKS** – Acceptable

6 **METHOD DUPLICATE ANALYSIS** – Acceptable

7 **MATRIX SPIKE ANALYSIS** – Not Applicable

8 **LIMITS OF DETECTION** – Acceptable

9 **OVERALL DATA QUALITY** – Acceptable

No qualification of the data was required based on this review.

I certify that, to the best of my knowledge and belief, the data are reported as true and accurate. The Laboratory Director, or his designee, has authorized release of data contained in this Quality Assurance Report as verified by the following signature(s).

12/30/04

Frank McFarland
Quality Assurance Manager

Dry Weight Determination

Batch # 04-1032(% Solids), Tracking # 05BR0023

Analyst:	BZ	Project:	WIN001		Date:	12/28/04	
	Dish	Tare Wt.	Wet Wt	Dry Wt.	Wet Wt.	Dry Wt.	Dry Wt.
Sample #	ID #	(g)	(Gross g)	(Gross g)	(Net g)	(Net g)	(%)
MB-1	MB-1	0.954		0.959			
MB-2	MB-2	0.956		0.956			
05BR0023-21	A	0.956	2.127	1.216	1.171	0.260	22.20
05BR0023-22	B	0.957	2.006	1.162	1.049	0.205	19.54
05BR0023-23	C	0.955	2.166	1.228	1.211	0.273	22.54
05BR0023-24	D	0.968	2.249	1.231	1.281	0.263	20.53
05BR0023-25	E	0.968	2.151	1.203	1.183	0.235	19.86
05BR0023-26	F	0.960	2.124	1.219	1.164	0.259	22.25
05BR0023-27	G	0.972	2.001	1.208	1.029	0.236	22.93
05BR0023-28	H	0.960	2.001	1.184	1.041	0.224	21.52
05BR0023-29	I	0.960	2.010	1.178	1.050	0.218	20.76
05BR0023-30	J	0.960	2.185	1.232	1.225	0.272	22.20
05BR0023-31	K	0.960	2.112	1.210	1.152	0.250	21.70
05BR0023-32	L	0.962	2.088	1.241	1.126	0.279	24.78
05BR0023-33	M	0.964	2.232	1.213	1.268	0.249	19.64
05BR0023-34	N	0.965	2.288	1.265	1.323	0.300	22.68
05BR0023-35	O	0.961	2.450	1.306	1.489	0.345	23.17
05BR0023-36	P	0.962	2.208	1.223	1.246	0.261	20.95
05BR0023-37	Q	0.956	2.359	1.289	1.403	0.333	23.73
05BR0023-38	R	0.958	2.302	1.237	1.344	0.279	20.76
05BR0023-39	S	0.960	2.090	1.490	1.130	0.530	46.90
05BR0023-40	T	0.955	2.225	1.259	1.270	0.304	23.94
05BR0023-22MD	U	0.960	2.062	1.182	1.102	0.222	20.15
05BR0023-32MD	V	0.954	2.090	1.212	1.136	0.258	22.71
Method Duplicate Analysis - criterion: RPD<15%							
05BR0023-22	B	0.957	2.006	1.162	1.049	0.205	19.54
05BR0023-22MD	U	0.960	2.062	1.182	1.102	0.222	20.15
						Average	19.84
						RPD	3.0%
05BR0023-32	L	0.962	2.088	1.241	1.126	0.279	24.78
05BR0023-32MD	V	0.954	2.090	1.212	1.136	0.258	22.71
						Average	23.74
						RPD	8.7%
Method Blank Analysis - criterion: < MDL or <1/10th associated results							
				(Representative)			
MB-1	MB-1	0.954		0.959	1.000	0.0050	0.50%
MB-2	MB-2	0.956		0.956	1.000	0.0000	0.00%
					Average	0.0025	0.25%
					StDev	0.0035	0.35%

Batch # 04-1032

Dry Weight Determination

Sample ID #	Dish No.	Tare Wt. (g.)	Wet Wt. (Gross g.)	Dry Wt. (Gross g.)	Wet Wt. (Net g.)	Dry Wt. (Net g.)	Dry Wt. (%)
MB-1	MB-1	0.954	—	0.959			
-2	MB-2	0.956	—	0.956			
05BR0023-21	A	0.956	2.127	1.216			
-22	B	0.957	2.006	1.162			
-23	C	0.955	2.166	1.228			
-24	D	0.968	2.249	1.231			
-25	E	0.968	2.151	1.203			
-26	F	0.960	2.124	1.219			
-27	G	0.972	2.001	1.208			
-28	H	0.960	2.001	1.184			
-29	I	0.960	2.010	1.178			
-30	J	0.960	2.185	1.232			
-31	K	0.960	2.112	1.210			
-32	L	0.962	2.088	1.241			
-33	M	0.964	~~2.090~~	2.232 1.213			
-34	N	0.965	2.288	1.265			
-35	O	0.961	2.450	1.306			
-36	P	0.962	2.208	1.223			
-37	Q	0.956	2.359	1.289			
-38	R	0.958	2.302	1.237			
-39	S	0.960	2.090	1.490			
-40	T	0.955	2.225	1.259			
22 MD	U	0.960	2.062	1.182			
32 MD	V	0.954	2.090	1.212			

Scale prep lab Balance #2
Oven Hood → prep lab

WINO01
Customer/Project Reference #

Time/Date in 4:00 12.23 Oven temp 105 °C
Time/Date out 4:00 12:27 Oven temp 105 °C

B. Hollow
Performed by

BRL QA Summary

Batch #: **04-1033** ***Method #:*** **EPA 160.3**

Analyte: **% Solids** ***Matrix:*** **Biota**

PRECISION *Criteria: RPD<15% or +/-2xPQL if results <5xPQL*				
Method Duplicate (MD)				
Sample ID	***Sample Value % Solid***	***Duplicate Value % Solid***	***Average Value % Solid***	***RPD***
05BR0023-45	24.45	23.70	24.08	3.1%
05BR0023-53	26.84	27.07	26.95	0.9%

Method Blanks (MB) *Criteria: < MDL or < 1/10th sample*					
MB1	***MB2***	***Average***	***StDev***	***MDL***	***PQL***
% Solid	***% Solid***	***% Solid***	***% Solid***	***% Solid***	***% Solid***
-0.13	0.00	-0.06	0.09	0.08	0.25

Note: MDL/PQL is based on representative weight used in the analysis of this batch.

12/30/2004

Project Manager

BROOKS RAND, LLC
3958 6th Avenue, NW Seattle, WA 98107 U.S.A. 206.632.6206

QUALITY ASSURANCE REPORT

Batch:	04-1033
Analysis:	Percent Solids
Tracking:	05BR0023
Project:	WIN001
Matrix:	Biota
Batch Size:	20 samples
Analysis Date:	December 28, 2004

1 **SAMPLE PREPARATION** – Acceptable

2 **CALIBRATION** – Not Applicable

3 **CALIBRATION VERIFICATION** – Not Applicable

4 **QUALITY CONTROL SAMPLES (QCS)** – Not Applicable

5 **BLANKS** – Acceptable

6 **METHOD DUPLICATE ANALYSIS** – Acceptable

7 **MATRIX SPIKE ANALYSIS** – Not Applicable

8 **LIMITS OF DETECTION** – Acceptable

9 **OVERALL DATA QUALITY** – Acceptable

No qualification of the data was required based on this review.

I certify that, to the best of my knowledge and belief, the data are reported as true and accurate. The Laboratory Director, or his designee, has authorized release of data contained in this Quality Assurance Report as verified by the following signature(s).

12/30/04
Frank McFarland
Quality Assurance Manager

SAMPLE PROCESSING FORM

20

Batch #: 04-1033 Analysis: % Solids Method: EPA 160.3

Tracking #	Lab ID	Project Ref #	Data Due Date	Matrix	Comments
QA: Full					
05BR0023	41	WIN001	1/3/2005	Biota	
05BR0023	42	WIN001	1/3/2005	Biota	
05BR0023	43	WIN001	1/3/2005	Biota	
05BR0023	44	WIN001	1/3/2005	Biota	
05BR0023	45	WIN001	1/3/2005	Biota	
05BR0023	46	WIN001	1/3/2005	Biota	
05BR0023	47	WIN001	1/3/2005	Biota	
05BR0023	48	WIN001	1/3/2005	Biota	
05BR0023	49	WIN001	1/3/2005	Biota	
05BR0023	50	WIN001	1/3/2005	Biota	
05BR0023	51	WIN001	1/3/2005	Biota	
05BR0023	52	WIN001	1/3/2005	Biota	
05BR0023	53	WIN001	1/3/2005	Biota	
05BR0023	54	WIN001	1/3/2005	Biota	
05BR0023	55	WIN001	1/3/2005	Biota	
05BR0023	56	WIN001	1/3/2005	Biota	
05BR0023	57	WIN001	1/3/2005	Biota	
05BR0023	58	WIN001	1/3/2005	Biota	
05BR0023	59	WIN001	1/3/2005	Biota	
05BR0023	60	WIN001	1/3/2005	Biota	

Tracking #	See SOW	See Memo	See Proj Mgr	Consult MSDS	See Contract Info	See Lab Mgr
05BR0023	No	No	No	No	No	No

QA Comments: Report on a WET weight basis.

Batched By: [signature] Date: 12/15/04

Prepared By: [signature] Date: 12/17/04

Comments:

Analyzed By: [signature] Date: 12/28/04

Comments:

Data Entry By: [signature] Date: 12/29/04

Comments:

Primary Data Review By: [signature] Date: 12/29/04

Comments:

Final Review By: [signature] Date: 12/30/04

Comments:

Dry Weight Determination

Batch # 04-1033(% Solids), Tracking # 05BR0023

Analyst:	MK	Project:	WIN001		Date:	12/29/04	
	Dish	Tare Wt.	Wet Wt	Dry Wt.	Wet Wt.	Dry Wt.	Dry Wt.
Sample #	ID #	(g)	(Gross g)	(Gross g)	(Net g)	(Net g)	(%)
MB-1	A	0.969		0.964			
MB-2	B	0.956		0.956			
05BR0023-41	C	0.983	4.918	1.865	3.935	0.882	22.41
05BR0023-42	D	0.963	5.785	2.053	4.822	1.090	22.60
05BR0023-43	E	0.964	4.417	1.737	3.453	0.773	22.39
05BR0023-44	F	0.958	5.782	2.153	4.824	1.195	24.77
05BR0023-45	G	0.970	4.156	1.749	3.186	0.779	24.45
05BR0023-45MD	H	0.970	3.797	1.640	2.827	0.670	23.70
05BR0023-46	I	0.964	6.649	2.272	5.685	1.308	23.01
05BR0023-47	J	0.965	4.292	1.747	3.327	0.782	23.50
05BR0023-48	K	0.961	6.317	2.176	5.356	1.215	22.68
05BR0023-49	L	0.960	3.833	1.696	2.873	0.736	25.62
05BR0023-50	M	0.967	4.389	1.700	3.422	0.733	21.42
05BR0023-51	N	0.969	4.967	1.862	3.998	0.893	22.34
05BR0023-52	O	0.962	6.578	2.303	5.616	1.341	23.88
05BR0023-53	P	0.972	4.601	1.946	3.629	0.974	26.84
05BR0023-53MD	Q	0.967	4.665	1.968	3.698	1.001	27.07
05BR0023-54	R	0.967	4.432	1.846	3.465	0.879	25.37
05BR0023-55	S	0.978	5.207	2.100	4.229	1.122	26.53
05BR0023-56	T	0.972	5.004	1.906	4.032	0.934	23.16
05BR0023-57	U	0.964	5.022	2.042	4.058	1.078	26.56
05BR0023-58	V	0.964	7.198	2.269	6.234	1.305	20.93
05BR0023-59	W	0.971	5.391	1.951	4.420	0.980	22.17
05BR0023-60	X	0.963	4.381	1.610	3.418	0.647	18.93
Method Duplicate Analysis - criterion: RPD<15%							
05BR0023-45	G	0.970	4.156	1.749	3.186	0.779	24.45
05BR0023-45MD	H	0.970	3.797	1.640	2.827	0.670	23.70
						Average	24.08
						RPD	3.1%
05BR0023-53	P	0.972	4.601	1.946	3.629	0.974	26.84
05BR0023-53MD	Q	0.967	4.665	1.968	3.698	1.001	27.07
						Average	26.95
						RPD	0.9%
Method Blank Analysis - criterion: < MDL or <1/10th associated results							
				(Representative)			
MB-1	A	0.969		0.964	4.000	-0.0050	-0.13%
MB-2	B	0.956		0.956	4.000	0.0000	0.00%
					Average	-0.0025	-0.06%
					StDev	0.0035	0.09%

Batch # 04-1033

Dry Weight Determination

Sample ID #	Dish No.	Tare Wt. (g.)	Wet Wt. (Gross g.)	Dry Wt. (Gross g.)	Wet Wt. (Net g.)	Dry Wt. (Net g.)	Dry Wt. (%)
MB-1	A	0.969		0.964			
MB-2	B	0.956		0.956			
05BR0023-41	C	0.983	4.918	1.865			
42	D	0.963	~~5.864~~ 5.795	2.053			
43	E	0.964	4.417	1.737			
44	F	0.958	5.782	2.153			
45	G	0.970	4.1516	1.749			
45MD	H	0.970	3.797	1.640			
46	I	0.964	6.649	2.272			
47	J	0.965	4.292	1.747			
48	K	0.961	6.317	2.176			
49	L	0.960	3.833	1.696			
50	M	0.967	4.389	1.700			
51	N	0.969	4.967	1.862			
52	O	0.962	6.578	2.303			
53	P	0.972	4.601	1.946			
53MD	Q	0.967	4.665	1.968			
54	R	0.967	4.432	1.846			
55	S	0.978	5.207	2.100			
56	T	0.972	5.004	1.906			
57	U	0.964	5.022	2.042			
58	V	0.964	7.198	2.269			
59	W	0.971	5.391	1.951			
60	X	0.963	4.381	1.610			

Scale Sartorius
Oven Blue M

WIN001
Customer/Project Reference #

Time/Date in 12/27/04 2pm Oven temp 105 °C
Time/Date out 12/28/04 2pm Oven temp 100 °C

MK
Performed by

BRL QA Summary

Batch #: **04-1034** ***Method #:*** **EPA 160.3**

Analyte: **% Solids** ***Matrix:*** **Biota**

PRECISION *Criteria: RPD<15% or +/-2xPQL if results <5xPQL*
Method Duplicate (MD)

Sample ID	*Sample Value % Solid*	*Duplicate Value % Solid*	*Average Value % Solid*	*RPD*
05BR0023-68	18.17	18.90	18.53	4.0%
05BR0023-74	19.33	18.14	18.74	6.4%

Method Blanks (MB) *Criteria: < MDL or < 1/10th sample*

MB1	*MB2*	*Average*	*StDev*	*MDL*	*PQL*
% Solid	*% Solid*	*% Solid*	*% Solid*	*% Solid*	*% Solid*
0.08	-0.15	-0.04	0.16	0.08	0.25

Note: MDL/PQL is based on representative weight used in the analysis of this batch.

12/30/2004

Elizabeth Medowek
Project Manager

BROOKS RAND, LLC
3958 6th Avenue, NW Seattle, WA 98107 U.S.A. 206.632.6206

QUALITY ASSURANCE REPORT

Batch:	04-1034
Analysis:	Percent Solids
Tracking:	05BR0023
Project:	WIN001
Matrix:	Biota
Batch Size:	20 samples
Analysis Date:	December 29, 2004

1 **SAMPLE PREPARATION** – Acceptable

2 **CALIBRATION** – Not Applicable

3 **CALIBRATION VERIFICATION** – Not Applicable

4 **QUALITY CONTROL SAMPLES (QCS)** – Not Applicable

5 **BLANKS** – Acceptable

6 **METHOD DUPLICATE ANALYSIS** – Acceptable

7 **MATRIX SPIKE ANALYSIS** – Not Applicable

8 **LIMITS OF DETECTION** – Acceptable

9 **OVERALL DATA QUALITY** – Acceptable

No qualification of the data was required based on this review.

I certify that, to the best of my knowledge and belief, the data are reported as true and accurate. The Laboratory Director, or his designee, has authorized release of data contained in this Quality Assurance Report as verified by the following signature(s).

F. McFarland 12/30/04
Frank McFarland
Quality Assurance Manager

SAMPLE PROCESSING FORM

Batch #: 04-1034 Analysis: % Solids Method: EPA 160.3

Tracking #	Lab ID	Project Ref #	Data Due Date	Matrix	Comments
QA: Full					
05BR0023	61	WIN001	1/3/2005	Biota	
05BR0023	62	WIN001	1/3/2005	Biota	
05BR0023	63	WIN001	1/3/2005	Biota	
05BR0023	64	WIN001	1/3/2005	Biota	
05BR0023	65	WIN001	1/3/2005	Biota	
05BR0023	66	WIN001	1/3/2005	Biota	
05BR0023	67	WIN001	1/3/2005	Biota	
05BR0023	68	WIN001	1/3/2005	Biota	
05BR0023	69	WIN001	1/3/2005	Biota	
05BR0023	70	WIN001	1/3/2005	Biota	
05BR0023	71	WIN001	1/3/2005	Biota	
05BR0023	72	WIN001	1/3/2005	Biota	
05BR0023	73	WIN001	1/3/2005	Biota	
05BR0023	74	WIN001	1/3/2005	Biota	
05BR0023	75	WIN001	1/3/2005	Biota	
05BR0023	76	WIN001	1/3/2005	Biota	
05BR0023	77	WIN001	1/3/2005	Biota	
05BR0023	78	WIN001	1/3/2005	Biota	
05BR0023	79	WIN001	1/3/2005	Biota	
05BR0023	80	WIN001	1/3/2005	Biota	

Tracking #	See SOW	See Memo	See Proj Mgr	Consult MSDS	See Contract Info	See Lab Mgr
05BR0023	No	No	No	No	No	No

QA Comments: Report on a WET weight basis.

Batched By: Date: 12/15/04

Prepared By: Date: 12/28/04
Comments:

Analyzed By: Date: 12/29/04
Comments:

Data Entry By: Date: 12/29/04
Comments:

Primary Data Review By: Date: 12/29/04
Comments:

Final Review By: Date: 12/30/04
Comments:

Dry Weight Determination

Batch # 04-1034(% Solids), Tracking # 05BR0023

Analyst:	MK	Project:	WIN001		Date:	12/29/04	
	Dish	Tare Wt.	Wet Wt	Dry Wt.	Wet Wt.	Dry Wt.	Dry Wt.
Sample #	ID #	(g)	(Gross g)	(Gross g)	(Net g)	(Net g)	(%)
MB-1	A	0.967		0.970			
MB-2	B	0.977		0.971			
05BR0023-61	C	0.975	5.848	2.026	4.873	1.051	21.57
05BR0023-62	D	0.970	4.238	1.635	3.268	0.665	20.35
05BR0023-63	E	0.969	3.459	1.301	2.490	0.332	13.33
05BR0023-64	F	0.977	5.604	1.814	4.627	0.837	18.09
05BR0023-65	G	0.969	4.911	1.699	3.942	0.730	18.52
05BR0023-66	H	0.972	4.124	1.549	3.152	0.577	18.31
05BR0023-67	I	0.971	3.055	1.233	2.084	0.262	12.57
05BR0023-68	J	0.975	4.008	1.526	3.033	0.551	18.17
05BR0023-68MD	K	0.961	3.818	1.501	2.857	0.540	18.90
05BR0023-69	L	0.968	3.914	1.336	2.946	0.368	12.49
05BR0023-70	M	0.964	4.127	1.563	3.163	0.599	18.94
05BR0023-71	N	0.961	4.887	1.738	3.926	0.777	19.79
05BR0023-72	O	0.960	3.049	1.211	2.089	0.251	12.02
05BR0023-73	P	0.971	4.042	1.394	3.071	0.423	13.77
05BR0023-74	Q	0.966	4.323	1.615	3.357	0.649	19.33
05BR0023-74MD	R	0.972	4.522	1.616	3.550	0.644	18.14
05BR0023-75	S	0.970	3.432	1.269	2.462	0.299	12.14
05BR0023-76	T	0.967	5.760	1.762	4.793	0.795	16.59
05BR0023-77	U	0.962	7.690	2.246	6.728	1.284	19.08
05BR0023-78	V	0.972	7.147	2.272	6.175	1.300	21.05
05BR0023-79	W	0.971	4.769	1.786	3.798	0.815	21.46
05BR0023-80	X	0.968	6.316	2.141	5.348	1.173	21.93
Method Duplicate Analysis - criterion: RPD<15%							
05BR0023-68	J	0.975	4.008	1.526	3.033	0.551	18.17
05BR0023-68MD	K	0.961	3.818	1.501	2.857	0.540	18.90
						Average	18.53
						RPD	4.0%
05BR0023-74	Q	0.966	4.323	1.615	3.357	0.649	19.33
05BR0023-74MD	R	0.972	4.522	1.616	3.550	0.644	18.14
						Average	18.74
						RPD	6.4%
Method Blank Analysis - criterion: < MDL or <1/10th associated results							
				(Representative)			
MB-1	A	0.967		0.970	4.000	0.0030	0.08%
MB-2	B	0.977		0.971	4.000	-0.0060	-0.15%
					Average	-0.0015	-0.04%
					StDev	0.0064	0.16%

Batch # 04-1034

Dry Weight Determination

Sample ID #	Dish No.	Tare Wt. (g.)	Wet Wt. (Gross g.)	Dry Wt. (Gross g.)	Wet Wt. (Net g.)	Dry Wt. (Net g.)	Dry Wt. (%)
MB-1	A	0.967		0.970			
MB-2	B	0.977		0.971			
05BR0023-61	C	0.975	5.948	2.026			
62	D	0.970	4.238	1.635			
* 63	F	0.969	3.459	1.301			
64	E	0.977	5.604	1.814			
65	G	0.969	4.911	1.699			
66	H	0.972	4.124	1.549			
* 67	I	0.971	3.055	1.233			
68	J	0.975	4.008	1.526			
68 MD	K	0.961	3.818	1.501			
* 69	L	0.968	3.914	1.336			
70	M	0.964	4.127	1.563			
71	N	0.961	4.887	1.738			
* 72	O	0.960	3.049	1.211			
* 73	P	0.971	4.042	1.394			
74	Q	0.966	4.323	1.615			
74 mp	R	0.972	4.522	1.616			
* 75	S	0.970	3.432	1.269			
76	T	0.967	5.760	1.762			
77	U	0.962	7.690	2.246			
78	V	0.972	7.147	2.272			
* 79	W	0.971	4.769	1.786			
80	X	0.968	6.316	2.141			

Scale Sartorius
Oven Blue M

WIN001
Customer/Project Reference #

Time/Date in 12/28/04 12 noon Oven temp 100 °C
Time/Date out 12/29/04 3:30 pm Oven temp 100 °C

MK
Performed by

* - sample very "water-y"

BRL QA Summary

Batch #: **04-1052** ***Method #:*** **EPA 160.3**

Analyte: **% Solids** ***Matrix:*** **Biota**

PRECISION *Criteria: RPD<15% or +/-2xPQL if results <5xPQL*

Method Duplicate & Triplicate (MD & MT)

Sample ID	*Sample Value % Solid*	*Duplicate Value % Solid*	*Triplicate Value % Solid*	*Average Value % Solid*	*RPD*
05BR0023-81	19.96	19.80	19.93	19.90	0.3%

Method Blanks (MB) *Criteria: < MDL or < 1/10th sample*

MB1	*MB2*	*Average*	*StDev*	*MDL*	*PQL*
% Solid	*% Solid*	*% Solid*	*% Solid*	*% Solid*	*% Solid*
-0.27	-0.23	-0.25	0.02	0.10	0.33

Note: MDL/PQL is based on representative weight used in the analysis of this batch.

1/12/2005

Project Manager

BROOKS RAND, LLC
3958 6th Avenue, NW Seattle, WA 98107 U.S.A. 206.632.6206

QUALITY ASSURANCE REPORT

Batch:	04-1052
Analysis:	Percent Solids
Tracking:	05BR0023
Project:	WIN001
Matrix:	Biota
Batch Size:	7 samples
Analysis Date:	January 11, 2005

1 **SAMPLE PREPARATION** – Acceptable

2 **CALIBRATION** – Not Applicable

3 **CALIBRATION VERIFICATION** – Not Applicable

4 **QUALITY CONTROL SAMPLES (QCS)** – Not Applicable

5 **BLANKS** – Acceptable

6 **METHOD TRIPLICATE ANALYSIS** – Acceptable

7 **MATRIX SPIKE ANALYSIS** – Not Applicable

8 **LIMITS OF DETECTION** – Acceptable

9 **OVERALL DATA QUALITY** – Acceptable

I certify that, to the best of my knowledge and belief, the data are reported as true and accurate. The Laboratory Director, or his designee, has authorized release of data contained in this Quality Assurance Report as verified by the following signature(s).

1.12.05
Tressa K. Pearson-Franks
Quality Assurance Associate

SAMPLE PROCESSING FORM

Batch #: 04-1052 Analysis: % Solids Method: EPA 160.3

Tracking #	Lab ID	Project Ref #	Data Due Date	Matrix	Comments
QA: Full					
05BR0023	81	WIN001	1/3/2005	Biota	
05BR0023	82	WIN001	1/3/2005	Biota	
05BR0023	83	WIN001	1/3/2005	Biota	
05BR0023	84	WIN001	1/3/2005	Biota	
05BR0023	85	WIN001	1/3/2005	Biota	
05BR0023	86	WIN001	1/3/2005	Biota	
05BR0023	87	WIN001	1/3/2005	Biota	

Tracking #	See SOW	See Memo	See Proj Mgr	Consult MSDS	See Contract Info	See Lab Mgr
05BR0023	No	No	No	No	No	No

QA Comments: Report on a WET weight basis.

Batched By: MLG Date: 12.16.04

Prepared By: Date: 1/7/05

Comments: prep w/ batch 04-1046

Analyzed By: Date: 1/10/05

Comments:

Data Entry By: Date: 1/11/05

Comments:

Primary Data Review By: Date: 1/11/05

Comments:

Final Review By: Date: 1.12.05

Comments:

Dry Weight Determination

Batch # 04-1052(% Solids), Tracking # 05BR0023

Analyst:	MK	Project:	WIN001		Date:	01/11/05	
	Dish	Tare Wt.	Wet Wt	Dry Wt.	Wet Wt.	Dry Wt.	Dry Wt.
Sample #	ID #	(g)	(Gross g)	(Gross g)	(Net g)	(Net g)	(%)
MB-1	A	0.979		0.971			
MB-2	B	0.978		0.971			
05BR0023-81	C	0.975	4.236	1.626	3.261	0.651	19.96
05BR0023-81MD	D	0.975	4.126	1.599	3.151	0.624	19.80
05BR0023-81MT	E	0.974	4.285	1.634	3.311	0.660	19.93
05BR0023-82	F	0.975	4.289	1.641	3.314	0.666	20.10
05BR0023-83	G	0.979	4.257	1.998	3.278	1.019	31.09
05BR0023-84	H	0.978	4.463	1.471	3.485	0.493	14.15
05BR0023-85	I	0.978	3.821	1.471	2.843	0.493	17.34
05BR0023-86	J	0.978	4.692	1.673	3.714	0.695	18.71
05BR0023-87	K	0.974	4.297	1.637	3.323	0.663	19.95
Method Duplicate Analysis - criterion: RPD<15%							
05BR0023-81	C	0.975	4.236	1.626	3.261	0.651	19.96
05BR0023-81MD	D	0.975	4.126	1.599	3.151	0.624	19.80
05BR0023-81MT	E	0.974	4.285	1.634	3.311	0.660	19.93
						Average	19.90
						RSD	0.3%
Method Blank Analysis - criterion: < MDL or <1/10th associated results							
				(Representative)			
MB-1	A	0.979		0.971	3.000	-0.0080	-0.27%
MB-2	B	0.978		0.971	3.000	-0.0070	-0.23%
					Average	-0.0075	-0.25%
					StDev	0.0007	0.02%

Batch # 04-1052

Dry Weight Determination

Sample ID #	Dish No.	Tare Wt. (g.)	Wet Wt. (Gross g.)	Dry Wt. (Gross g.)	Wet Wt. (Net g.)	Dry Wt. (Net g.)	Dry Wt. (%)
MB-1	A	0.979		0.971			
MB-2	B	0.978		0.971			
05BR0023-81	C	0.975	4.236	1.626			
81 MD	D	0.975	4.126	1.599			
81 MT	E	0.974	4.285	1.634			
82	F	0.975	4.289	1.641			
83	G	0.979	4.257	1.998			
84	H	0.978	4.463	1.471			
85	I	0.978	3.821	1.471			
86	J	0.978	4.692	1.673			
87	K	0.974	4.297	1.637			

Scale Sartorius
Oven Blue M.

WIN001
Customer/Project Reference #

Time/Date in 1/7/05 1230 pm Oven temp 100 °C
Time/Date out 1/10/05 430 pm Oven temp 100 °C

MC
Performed by

Brooks Rand LLC Sample Receiving Log

Tracking # **05BR0023**

Customer:	Windward Environmental
Contact:	Susan McGroddy
Project Ref. #:	WIN001
Collection Date	08/02/04-09/16/04
QA Level	Full
Sample Condition	Intact
Shipping container intact?	Yes
Shipping container type:	cooler
Shipping container temp:	-48°C
Shipping container coolant:	dry ice
Sample preservation:	none
Acid lab #	
Hg Concentration:	
Sample storage area:	Freezer #3
Sample Turnaround Time:	
Contract Turnaround Time:	28 days

Due Date:	1/6/2005
Receiving Date:	12/9/2004
Receiving Time:	9:00 AM
Logged-in by:	Christabel Fowler
Log-in Date:	12/9/2004
Log-in Time:	9:55 AM
Airbill present?	Yes
Airbill #	632945867699
Carrier:	Fed Ex
Custody seal present?	No
Custody seal intact?	No
COC Present?	Yes
COC Number:	04-08-06-22
Analysis request form?	No
COC/Sample tag agree?	Yes

See SOW	No	See Project Manage	No
See Mem	No	See Lab Manage	No
Consult MSDS	No	See Contract Inf	No

Comments:

Lab ID:	Sample Tag #	Container #	Size:	pH	Matrix/Sub-Matrix	Comments:
1	LDW-T1-A-SS-WB-comp-1	60ml	Glass Jar	<2	Biota,	
Analysis / Method:		% Solids	EPA 160.3			
Analysis / Method:		As(Inorganic)	EPA 1632 (HGAA)			
2	LDW-T1-B-SS-WB-comp-1	60ml Jar	Glass Jar	<2	Biota,	
Analysis / Method:		% Solids	EPA 160.3			
Analysis / Method:		As(Inorganic)	EPA 1632 (HGAA)			
3	LDW-T2-A-SS-WB-comp-1	60ml jar	Glass Jar	<2	Biota,	
Analysis / Method:		% Solids	EPA 160.3			
Analysis / Method:		As(Inorganic)	EPA 1632 (HGAA)			
4	LDW-T2-B-SS-WB-comp-1	60ml	Glass Jar	<2	Biota,	
Analysis / Method:		% Solids	EPA 160.3			
Analysis / Method:		As(Inorganic)	EPA 1632 (HGAA)			
5	LDW-T3-A-SS-WB-comp-1	60ml	Glass Jar	<2	Biota,	

Lab ID:	Sample Tag #	Container #	Size:	pH	Matrix/Sub-Matrix	Comments:
Analysis / Method:		% Solids	EPA 160.3			
Analysis / Method:		As(Inorganic)	EPA 1632 (HGAA)			
6	LDW-T3-B-SS-WB-comp-1	60ml	Glass Jar	<2	Biota,	
Analysis / Method:		% Solids	EPA 160.3			
Analysis / Method:		As(Inorganic)	EPA 1632 (HGAA)			
7	LDW-T4-A-SS-WB-comp-1	60ml	Glass Jar	<2	Biota,	
Analysis / Method:		% Solids	EPA 160.3			
Analysis / Method:		As(Inorganic)	EPA 1632 (HGAA)			
8	LDW-T4-B-SS-WB-comp-1	60ml	Glass Jar	<2	Biota,	
Analysis / Method:		% Solids	EPA 160.3			
Analysis / Method:		As(Inorganic)	EPA 1632 (HGAA)			
9	BL-SS-WB-comp-1	60ml	Glass Jar	<2	Biota,	
Analysis / Method:		% Solids	EPA 160.3			
Analysis / Method:		As(Inorganic)	EPA 1632 (HGAA)			
10	BL-SS-WB-comp-2	60ml	Glass Jar	<2	Biota,	
Analysis / Method:		% Solids	EPA 160.3			
Analysis / Method:		As(Inorganic)	EPA 1632 (HGAA)			
11	BL-SS-WB-comp-3	60ml	Glass Jar	<2	Biota,	
Analysis / Method:		% Solids	EPA 160.3			
Analysis / Method:		As(Inorganic)	EPA 1632 (HGAA)			
12	BL-SS-WB-comp-4	60ml	Glass Jar	<2	Biota,	
Analysis / Method:		% Solids	EPA 160.3			
Analysis / Method:		As(Inorganic)	EPA 1632 (HGAA)			
13	BL-SS-WB-comp-5	60ml	Glass Jar	<2	Biota,	
Analysis / Method:		% Solids	EPA 160.3			
Analysis / Method:		As(Inorganic)	EPA 1632 (HGAA)			
14	BL-SS-WB-comp-6	60ml	Glass Jar	<2	Biota,	
Analysis / Method:		% Solids	EPA 160.3			
Analysis / Method:		As(Inorganic)	EPA 1632 (HGAA)			
15	EP-SS-WB-comp-1	60ml	Glass Jar	<2	Biota,	
Analysis / Method:		% Solids	EPA 160.3			
Analysis / Method:		As(Inorganic)	EPA 1632 (HGAA)			
16	EP-SS-WB-comp-2	60ml	Glass Jar	<2	Biota,	
Analysis / Method:		% Solids	EPA 160.3			

Lab ID:	Sample Tag #	Container #	Size:	pH	Matrix/Sub-Matrix	Comments:
Analysis / Method:		As(Inorganic)	EPA 1632 (HGAA)			
17	EP-SS-WB-comp-3	60ml	Glass Jar	<2	Biota,	
Analysis / Method:		% Solids	EPA 160.3			
Analysis / Method:		As(Inorganic)	EPA 1632 (HGAA)			
18	LDW-M-M-PP-FL-comp-1	60ml	Glass Jar	<2	Biota,	
Analysis / Method:		% Solids	EPA 160.3			
Analysis / Method:		As(Inorganic)	EPA 1632 (HGAA)			
19	LDW-M-M-SP-FL-comp-1	60ml	Glass Jar	<2	Biota,	
Analysis / Method:		% Solids	EPA 160.3			
Analysis / Method:		As(Inorganic)	EPA 1632 (HGAA)			
20	BL-ES-FL-comp-1	60ml	Glass Jar	<2	Biota,	
Analysis / Method:		% Solids	EPA 160.3			
Analysis / Method:		As(Inorganic)	EPA 1632 (HGAA)			
21	BL-ES-FL-comp-2	60ml	Glass Jar	<2	Biota,	
Analysis / Method:		% Solids	EPA 160.3			
Analysis / Method:		As(Inorganic)	EPA 1632 (HGAA)			
22	BL-ES-FL-comp-3	60ml	Glass Jar	<2	Biota,	
Analysis / Method:		% Solids	EPA 160.3			
Analysis / Method:		As(Inorganic)	EPA 1632 (HGAA)			
23	BL-ES-FL-comp-4	60ml	Glass Jar	<2	Biota,	
Analysis / Method:		% Solids	EPA 160.3			
Analysis / Method:		As(Inorganic)	EPA 1632 (HGAA)			
24	BL-ES-FL-comp-5	60ml	Glass Jar	<2	Biota,	
Analysis / Method:		% Solids	EPA 160.3			
Analysis / Method:		As(Inorganic)	EPA 1632 (HGAA)			
25	BL-ES-FL-comp-6	60ml	Glass Jar	<2	Biota,	
Analysis / Method:		% Solids	EPA 160.3			
Analysis / Method:		As(Inorganic)	EPA 1632 (HGAA)			
26	EP-ES-FL-comp-1	60ml	Glass Jar	<2	Biota,	
Analysis / Method:		% Solids	EPA 160.3			
Analysis / Method:		As(Inorganic)	EPA 1632 (HGAA)			
27	EP-ES-FL-comp-2	60ml	Glass Jar	<2	Biota,	
Analysis / Method:		% Solids	EPA 160.3			
Analysis / Method:		As(Inorganic)	EPA 1632 (HGAA)			

Lab ID:	Sample Tag #	Container #	Size:	pH	Matrix/Sub-Matrix	Comments:
28	EP-ES-FL-comp-3	60ml	Glass Jar	<2	Biota,	
Analysis / Method:		% Solids	EPA 160.3			
Analysis / Method:		As(Inorganic)	EPA 1632 (HGAA)			
29	EP-ES-FL-comp-4	60ml	Glass Jar	<2	Biota,	
Analysis / Method:		% Solids	EPA 160.3			
Analysis / Method:		As(Inorganic)	EPA 1632 (HGAA)			
30	EP-ES-FL-comp-5	60ml	Glass Jar	<2	Biota,	
Analysis / Method:		% Solids	EPA 160.3			
Analysis / Method:		As(Inorganic)	EPA 1632 (HGAA)			
31	EP-ES-FL-comp-6	60ml	Glass Jar	<2	Biota,	
Analysis / Method:		% Solids	EPA 160.3			
Analysis / Method:		As(Inorganic)	EPA 1632 (HGAA)			
32	LDW-T1-M-ES-FL-comp-1	60ml	Glass Jar	<2	Biota,	
Analysis / Method:		% Solids	EPA 160.3			
Analysis / Method:		As(Inorganic)	EPA 1632 (HGAA)			
33	LDW-T1-M-ES-FL-comp-2	60ml	Glass Jar	<2	Biota,	
Analysis / Method:		% Solids	EPA 160.3			
Analysis / Method:		As(Inorganic)	EPA 1632 (HGAA)			
34	LDW-T2-M-ES-FL-comp-1	60ml	Glass Jar	<2	Biota,	
Analysis / Method:		% Solids	EPA 160.3			
Analysis / Method:		As(Inorganic)	EPA 1632 (HGAA)			
35	LDW-T2-M-ES-FL-comp-2	60ml	Glass Jar	<2	Biota,	
Analysis / Method:		% Solids	EPA 160.3			
Analysis / Method:		As(Inorganic)	EPA 1632 (HGAA)			
36	LDW-T3-M-ES-FL-comp-1	60ml	Glass Jar	<2	Biota,	
Analysis / Method:		% Solids	EPA 160.3			
Analysis / Method:		As(Inorganic)	EPA 1632 (HGAA)			
37	LDW-T3-M-ES-FL-comp-2	60ml	Glass Jar	<2	Biota,	
Analysis / Method:		% Solids	EPA 160.3			
Analysis / Method:		As(Inorganic)	EPA 1632 (HGAA)			
38	LDW-T4-M-ES-FL-comp-1	60ml	Glass Jar	<2	Biota,	
Analysis / Method:		% Solids	EPA 160.3			
Analysis / Method:		As(Inorganic)	EPA 1632 (HGAA)			

Lab ID:	Sample Tag #	Container #	Size:	pH	Matrix/Sub-Matrix	Comments:
39	BL-ES-WB-comp-1	60ml	Glass Jar	<2	Biota,	
Analysis / Method:		% Solids	EPA 160.3			
Analysis / Method:		As(Inorganic)	EPA 1632 (HGAA)			
40	BL-ES-WB-comp-2	60ml	Glass Jar	<2	Biota,	
Analysis / Method:		% Solids	EPA 160.3			
Analysis / Method:		As(Inorganic)	EPA 1632 (HGAA)			
41	BL-ES-WB-comp-3	60ml	Glass Jar	<2	Biota,	
Analysis / Method:		% Solids	EPA 160.3			
Analysis / Method:		As(Inorganic)	EPA 1632 (HGAA)			
42	BL-ES-WB-comp-4	60ml	Glass Jar	<2	Biota,	
Analysis / Method:		% Solids	EPA 160.3			
Analysis / Method:		As(Inorganic)	EPA 1632 (HGAA)			
43	BL-ES-WB-comp-5	60ml	Glass Jar	<2	Biota,	
Analysis / Method:		% Solids	EPA 160.3			
Analysis / Method:		As(Inorganic)	EPA 1632 (HGAA)			
44	BL-ES-WB-comp-6	60ml	Glass Jar	<2	Biota,	
Analysis / Method:		% Solids	EPA 160.3			
Analysis / Method:		As(Inorganic)	EPA 1632 (HGAA)			
45	EP-ES-WB-comp-1	60ml	Glass Jar	<2	Biota,	
Analysis / Method:		% Solids	EPA 160.3			
Analysis / Method:		As(Inorganic)	EPA 1632 (HGAA)			
46	EP-ES-WB-comp-2	60ml	Glass Jar	<2	Biota,	
Analysis / Method:		% Solids	EPA 160.3			
Analysis / Method:		As(Inorganic)	EPA 1632 (HGAA)			
47	EP-ES-WB-comp-3	60ml	Glass Jar	<2	Biota,	
Analysis / Method:		% Solids	EPA 160.3			
Analysis / Method:		As(Inorganic)	EPA 1632 (HGAA)			
48	EP-ES-WB-comp-4	60ml	Glass Jar	<2	Biota,	
Analysis / Method:		% Solids	EPA 160.3			
Analysis / Method:		As(Inorganic)	EPA 1632 (HGAA)			
49	EP-ES-WB-comp-5	60ml	Glass Jar	<2	Biota,	
Analysis / Method:		% Solids	EPA 160.3			
Analysis / Method:		As(Inorganic)	EPA 1632 (HGAA)			

Lab ID:	Sample Tag #	Container #	Size:	pH	Matrix/Sub-Matrix	Comments:
50	EP-ES-WB-comp-6	60ml	Glass Jar	<2	Biota,	
Analysis / Method:		% Solids	EPA 160.3			
Analysis / Method:		As(Inorganic)	EPA 1632 (HGAA)			
51	LDW-T1-M-ES-WB-comp-1	60ml	Glass Jar	<2	Biota,	
Analysis / Method:		% Solids	EPA 160.3			
Analysis / Method:		As(Inorganic)	EPA 1632 (HGAA)			
52	LDW-T1-M-ES-WB-comp-2	60ml	Glass Jar	<2	Biota,	
Analysis / Method:		% Solids	EPA 160.3			
Analysis / Method:		As(Inorganic)	EPA 1632 (HGAA)			
53	LDW-T2-M-ES-WB-comp-1	60ml	Glass Jar	<2	Biota,	
Analysis / Method:		% Solids	EPA 160.3			
Analysis / Method:		As(Inorganic)	EPA 1632 (HGAA)			
54	LDW-T2-M-ES-WB-comp-2	60ml	Glass Jar	<2	Biota,	
Analysis / Method:		% Solids	EPA 160.3			
Analysis / Method:		As(Inorganic)	EPA 1632 (HGAA)			
55	LDW-T3-M-ES-WB-comp-1	60ml	Glass Jar	<2	Biota,	
Analysis / Method:		% Solids	EPA 160.3			
Analysis / Method:		As(Inorganic)	EPA 1632 (HGAA)			
56	LDW-T3-M-ES-WB-comp-2	60ml	Glass Jar	<2	Biota,	
Analysis / Method:		% Solids	EPA 160.3			
Analysis / Method:		As(Inorganic)	EPA 1632 (HGAA)			
57	LDW-T4-M-ES-WB-comp-1	60ml	Glass Jar	<2	Biota,	
Analysis / Method:		% Solids	EPA 160.3			
Analysis / Method:		As(Inorganic)	EPA 1632 (HGAA)			
58	LDW-T4-M-SF-WB-comp-1	60ml	Glass Jar	<2	Biota,	
Analysis / Method:		% Solids	EPA 160.3			
Analysis / Method:		As(Inorganic)	EPA 1632 (HGAA)			
59	LDW-T4-M-SF-FL-comp-1	60ml	Glass Jar	<2	Biota,	
Analysis / Method:		% Solids	EPA 160.3			
Analysis / Method:		As(Inorganic)	EPA 1632 (HGAA)			
60	BL-SC-EM-comp-1	60ml	Glass Jar	<2	Biota,	
Analysis / Method:		% Solids	EPA 160.3			
Analysis / Method:		As(Inorganic)	EPA 1632 (HGAA)			

Lab ID:	Sample Tag #	Container #	Size:	pH	Matrix/Sub-Matrix	Comments:
61	BL-SC-EM-comp-2	60ml	Glass Jar	<2	Biota,	
Analysis / Method:		% Solids	EPA 160.3			
Analysis / Method:		As(Inorganic)	EPA 1632 (HGAA)			
62	BL-SC-EM-comp-3	60ml	Glass Jar	<2	Biota,	
Analysis / Method:		% Solids	EPA 160.3			
Analysis / Method:		As(Inorganic)	EPA 1632 (HGAA)			
63	BL-SC-HP-comp-1	60ml	Glass Jar	<2	Biota,	
Analysis / Method:		% Solids	EPA 160.3			
Analysis / Method:		As(Inorganic)	EPA 1632 (HGAA)			
64	EP-SC-EM-comp-1	60ml	Glass Jar	<2	Biota,	
Analysis / Method:		% Solids	EPA 160.3			
Analysis / Method:		As(Inorganic)	EPA 1632 (HGAA)			
65	EP-SC-EM-comp-2	60ml	Glass Jar	<2	Biota,	
Analysis / Method:		% Solids	EPA 160.3			
Analysis / Method:		As(Inorganic)	EPA 1632 (HGAA)			
66	EP-SC-EM-comp-3	60ml	Glass Jar	<2	Biota,	
Analysis / Method:		% Solids	EPA 160.3			
Analysis / Method:		As(Inorganic)	EPA 1632 (HGAA)			
67	EP-SC-HP-comp-1	60ml	Glass Jar	<2	Biota,	
Analysis / Method:		% Solids	EPA 160.3			
Analysis / Method:		As(Inorganic)	EPA 1632 (HGAA)			
68	LDW-T1-M-SC-EM-comp-1	60ml	Glass Jar	<2	Biota,	
Analysis / Method:		% Solids	EPA 160.3			
Analysis / Method:		As(Inorganic)	EPA 1632 (HGAA)			
69	LDW-T1-M-SC-HP-comp-1	60ml	Glass Jar	<2	Biota,	
Analysis / Method:		% Solids	EPA 160.3			
Analysis / Method:		As(Inorganic)	EPA 1632 (HGAA)			
70	LDW-T2-M-SC-EM-comp-1	60ml	Glass Jar	<2	Biota,	
Analysis / Method:		% Solids	EPA 160.3			
Analysis / Method:		As(Inorganic)	EPA 1632 (HGAA)			
71	LDW-T2-M-SC-EM-comp-2	60ml	Glass Jar	<2	Biota,	
Analysis / Method:		% Solids	EPA 160.3			
Analysis / Method:		As(Inorganic)	EPA 1632 (HGAA)			

Lab ID:	Sample Tag #	Container #	Size:	pH	Matrix/Sub-Matrix	Comments:
72	LDW-T2-M-SC-HP-comp-1	60ml	Glass Jar	<2	Biota,	
Analysis / Method:		% Solids	EPA 160.3			
Analysis / Method:		As(Inorganic)	EPA 1632 (HGAA)			
73	LDW-T2-M-SC-HP-comp-2	60ml	Glass Jar	<2	Biota,	
Analysis / Method:		% Solids	EPA 160.3			
Analysis / Method:		As(Inorganic)	EPA 1632 (HGAA)			
74	LDW-T3-M-SC-EM-comp-1	60ml	Glass Jar	<2	Biota,	
Analysis / Method:		% Solids	EPA 160.3			
Analysis / Method:		As(Inorganic)	EPA 1632 (HGAA)			
75	LDW-T3-M-SC-HP-comp-1	60ml	Glass Jar	<2	Biota,	
Analysis / Method:		% Solids	EPA 160.3			
Analysis / Method:		As(Inorganic)	EPA 1632 (HGAA)			
76	BL-DC-EM-comp-1	60ml	Glass Jar	<2	Biota,	
Analysis / Method:		% Solids	EPA 160.3			
Analysis / Method:		As(Inorganic)	EPA 1632 (HGAA)			
77	BL-DC-EM-comp-2	60ml	Glass Jar	<2	Biota,	
Analysis / Method:		% Solids	EPA 160.3			
Analysis / Method:		As(Inorganic)	EPA 1632 (HGAA)			
78	BL-DC-EM-comp-3	60ml	Glass Jar	<2	Biota,	
Analysis / Method:		% Solids	EPA 160.3			
Analysis / Method:		As(Inorganic)	EPA 1632 (HGAA)			
79	BL-DC-HP-comp-1	60ml	Glass Jar	<2	Biota,	
Analysis / Method:		% Solids	EPA 160.3			
Analysis / Method:		As(Inorganic)	EPA 1632 (HGAA)			
80	EP-DC-EM-comp-1	60ml	Glass Jar	<2	Biota,	
Analysis / Method:		% Solids	EPA 160.3			
Analysis / Method:		As(Inorganic)	EPA 1632 (HGAA)			
81	EP-DC-EM-comp-2	60ml	Glass Jar	<2	Biota,	
Analysis / Method:		% Solids	EPA 160.3			
Analysis / Method:		As(Inorganic)	EPA 1632 (HGAA)			
82	EP-DC-EM-comp-3	60ml	Glass Jar	<2	Biota,	
Analysis / Method:		% Solids	EPA 160.3			
Analysis / Method:		As(Inorganic)	EPA 1632 (HGAA)			

Lab ID:	Sample Tag #	Container #	Size:	pH	Matrix/Sub-Matrix	Comments:
83	EP-DC-HP-comp-1	60ml	Glass Jar	<2	Biota,	
Analysis / Method:		% Solids	EPA 160.3			
Analysis / Method:		As(Inorganic)	EPA 1632 (HGAA)			
84	LDW-T1-M-DC-EM-comp-1	60ml	Glass Jar	<2	Biota,	
Analysis / Method:		% Solids	EPA 160.3			
Analysis / Method:		As(Inorganic)	EPA 1632 (HGAA)			
85	LDW-T1-M-DC-HP-comp-1	60ml	Glass Jar	<2	Biota,	
Analysis / Method:		% Solids	EPA 160.3			
Analysis / Method:		As(Inorganic)	EPA 1632 (HGAA)			
86	LDW-T3-M-DC-EM-comp-1	60ml	Glass Jar	<2	Biota,	
Analysis / Method:		% Solids	EPA 160.3			
Analysis / Method:		As(Inorganic)	EPA 1632 (HGAA)			
87	LDW-T3-M-DC-HP-comp-1	60ml	Glass Jar	<2	Biota,	
Analysis / Method:		% Solids	EPA 160.3			
Analysis / Method:		As(Inorganic)	EPA 1632 (HGAA)			

Christabel Fowler 12/09/04

Sample Custodian signature Date

AXYS | Axys Analytical Services Ltd

Brooks Rand Report #05BR0023

Release Chain Of Custody

SHIP TO : Brooks Rand

Telephone : 206-632-3020

Contact Person : Elizabeth Madonick

Project Chemist : Ravin Ramjuttun

Axys Contract No. : 4033

WG14431 (REQ2048)

Axys Analytical Services Ltd., P.O. Box 2219, 2045 Mills Road West, Sidney, BC, Canada V8L 3S8 Tel:(250) 655-5800 Fax:(250) 655-5811

AXYS ID	CLIENT ID	MATRIX	QUANTITY
L7311-1	LDW-T1-A-SS-WB-comp-1	Tissue	
L7311-2	LDW-T1-B-SS-WB-comp-1	Tissue	
L7311-7	LDW-T2-A-SS-WB-comp-1	Tissue	
L7311-8	LDW-T2-B-SS-WB-comp-1	Tissue	
L7311-13	LDW-T3-A-SS-WB-comp-1	Tissue	
L7311-14	LDW-T3-B-SS-WB-comp-1	Tissue	
L7311-19	LDW-T4-A-SS-WB-comp-1	Tissue	
L7311-20	LDW-T4-B-SS-WB-comp-1	Tissue	
L7311-25	BL-SS-WB-comp-1	Tissue	
L7311-26	BL-SS-WB-comp-2	Tissue	
L7311-27	BL-SS-WB-comp-3	Tissue	
L7311-28	BL-SS-WB-comp-4	Tissue	
L7311-29	BL-SS-WB-comp-5	Tissue	
L7311-30	BL-SS-WB-comp-6	Tissue	
L7311-31	EP-SS-WB-comp-1	Tissue	
L7311-32	EP-SS-WB-comp-2	Tissue	
L7311-33	EP-SS-WB-comp-3	Tissue	
L7311-34	LDW-M-M-PP-FL-comp-1	Tissue	
L7311-35	LDW-M-M-SP-FL-comp-1	Tissue	
L7311-60	BL-ES-FL-comp-1	Tissue	
L7311-61	BL-ES-FL-comp-2	Tissue	
L7311-62	BL-ES-FL-comp-3	Tissue	
L7311-63	BL-ES-FL-comp-4	Tissue	
L7311-64	BL-ES-FL-comp-5	Tissue	
L7311-65	BL-ES-FL-comp-6	Tissue	
L7311-66	EP-ES-FL-comp-1	Tissue	
L7311-67	EP-ES-FL-comp-2	Tissue	
L7311-68	EP-ES-FL-comp-3	Tissue	
L7311-69	EP-ES-FL-comp-4	Tissue	
L7311-70	EP-ES-FL-comp-5	Tissue	
L7311-71	EP-ES-FL-comp-6	Tissue	

AXYS | Axys Analytical Services Ltd.

Brooks Rand Report #05BR0023

Release Chain Of Custody

SHIP TO : Brooks Rand

Telephone : 206-632-3020

Contact Person : Elizabeth Madonick

Project Chemist : Ravin Ramjuttun

Axys Contract No. : 4033

WG14431 (REQ2048)

Axys Analytical Services Ltd., P.O. Box 2219, 2045 Mills Road West, Sidney, BC, Canada V8L 3S8 Tel.(250) 655-5800 Fax.(250) 655-5811

AXYS ID	CLIENT ID	MATRIX
L7311-72	LDW-T1-M-ES-FL-comp-1	Tissue
L7311-73	LDW-T1-M-ES-FL-comp-2	Tissue
L7311-74	LDW-T2-M-ES-FL-comp-1	Tissue
L7311-75	LDW-T2-M-ES-FL-comp-2	Tissue
L7311-76	LDW-T3-M-ES-FL-comp-1	Tissue
L7311-77	LDW-T3-M-ES-FL-comp-2	Tissue
L7311-78	LDW-T4-M-ES-FL-comp-1	Tissue
L7311-79	BL-ES-WB-comp-1	Tissue
L7311-80	BL-ES-WB-comp-2	Tissue
L7311-81	BL-ES-WB-comp-3	Tissue
L7311-82	BL-ES-WB-comp-4	Tissue
L7311-83	BL-ES-WB-comp-5	Tissue
L7311-84	BL-ES-WB-comp-6	Tissue
L7311-85	EP-ES-WB-comp-1	Tissue
L7311-86	EP-ES-WB-comp-2	Tissue
L7311-87	EP-ES-WB-comp-3	Tissue
L7311-88	EP-ES-WB-comp-4	Tissue
L7311-89	EP-ES-WB-comp-5	Tissue
L7311-90	EP-ES-WB-comp-6	Tissue
L7311-91	LDW-T1-M-ES-WB-comp-1	Tissue
L7311-92	LDW-T1-M-ES-WB-comp-2	Tissue
L7311-97	LDW-T2-M-ES-WB-comp-1	Tissue
L7311-98	LDW-T2-M-ES-WB-comp-2	Tissue
L7311-103	LDW-T3-M-ES-WB-comp-1	Tissue
L7311-104	LDW-T3-M-ES-WB-comp-2	Tissue
L7311-109	LDW-T4-M-ES-WB-comp-1	Tissue
L7311-112	LDW-T4-M-SF-WB-comp-1	Tissue
L7311-115	LDW-T4-M-SF-FL-comp-1	Tissue
L7311-116	BL-SC-EM-comp-1	Tissue
L7311-117	BL-SC-EM-comp-2	Tissue
L7311-118	BL-SC-EM-comp-3	Tissue

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Brooks Rand Report #05BR0023

Release Chain Of Custody

SHIP TO : Brooks Rand
Telephone : 206-632-3020
Contact Person : Elizabeth Madonick

Project Chemist : Ravin Ramjuttun
Axys Contract No. : 4033
WG14431 (REQ2048)

Axys Analytical Services Ltd., P.O. Box 2219, 2045 Mills Road West, Sidney, BC, Canada V8L 3S8 Tel.(250) 655-5800 Fax.(250) 655-5811

AXYS ID	CLIENT ID	MATRIX
L7311-119	BL-SC-HP-comp-1	Tissue
L7311-120	EP-SC-EM-comp-1	Tissue
L7311-121	EP-SC-EM-comp-2	Tissue
L7311-122	EP-SC-EM-comp-3	Tissue
L7311-123	EP-SC-HP-comp-1	Tissue
L7311-124	LDW-T1-M-SC-EM-comp-1	Tissue
L7311-127	LDW-T1-M-SC-HP-comp-1	Tissue
L7311-128	LDW-T2-M-SC-EM-comp-1	Tissue
L7311-129	LDW-T2-M-SC-EM-comp-2	Tissue
L7311-131	LDW-T2-M-SC-HP-comp-1	Tissue
L7311-135	LDW-T2-M-SC-HP-comp-2	Tissue
L7311-136	LDW-T3-M-SC-EM-comp-1	Tissue
L7311-139	LDW-T3-M-SC-HP-comp-1	Tissue
L7311-140	BL-DC-EM-comp-1	Tissue
L7311-141	BL-DC-EM-comp-2	Tissue
L7311-142	BL-DC-EM-comp-3	Tissue
L7311-143	BL-DC-HP-comp-1	Tissue
L7311-144	EP-DC-EM-comp-1	Tissue
L7311-145	EP-DC-EM-comp-2	Tissue
L7311-146	EP-DC-EM-comp-3	Tissue
L7311-147	EP-DC-HP-comp-1	Tissue
L7311-148	LDW-T1-M-DC-EM-comp-1	Tissue
L7311-151	LDW-T1-M-DC-HP-comp-1	Tissue
L7311-152	LDW-T3-M-DC-EM-comp-1	Tissue
L7311-155	LDW-T3-M-DC-HP-comp-1	Tissue

No. Item(s):	Date Shipped:	Shipper's Name:	WAY Bill #:	Signature:
87	08 Dec 04	SUSAN ROSS STROCEL	6329 4586 7699	

Relinquished by (Signature)	Received by (Signature)	Courier	Waybill No.
Date / Time	Date / Time		
Relinquished by (Signature)	Received by (Signature)	Sample Receipt	
Date / Time	Date / Time		

	Coolers #1	# 2	# 3
Temp C			
Custody Seal #			
Seal Intact	Y/N		
	Y/N		

AXYS | Axys Analytical Services Ltd.

Brooks Rand Report #05BR0023

Release Chain Of Custody

SHIP TO : Brooks Rand

Telephone : 206-632-3020

Contact Person : Elizabeth Madonick

Project Chemist : Ravin Ramjuttun

Axys Contract No. : 4033

WG14431 (REQ2048)

Axys Analytical Services Ltd , P.O. Box 2219, 2045 Mills Road West, Sidney, BC, Canada V8L 3S8 Tel.(250) 655-5800 Fax.(250) 655-5811

Sample Tag			

Notes :

CHAIN-OF-CUSTODY/TEST REQUEST FORM

Project/Client Name:	Lower Duwamish Waterway Group (LDWG)	Ship to:	Brooks Rand,3958 6th Ave NW, Seattle WA 98107		
Project Number:	04-08-06-22	Attn:	Elizabeth Madonick	Shipping Date:	08 Dec 04
Contact Name:	Susan McGroddy	Shipper:	SUSAN ROSS STROEL	Airbill Number:	6329 4556 7699
Sampled By:	Matt Luxon	Form filled out by:	Teresa Rawsthorne	Turnaround requested:	

Sample Date	Axys Sample Identification	Windward Sample Identification	Sample Volume	Matrix	Fish and Crab	Comments / Instructions
02-08-2004	L7311-1	LDW-T1-A-SS-WB-comp-1	5	tissue	Inorganic Arsenic (EPA 1632) and Percent moisture	
02-08-2004	L7311-2	LDW-T1-B-SS-WB-comp-1	20	tissue		
03-08-2004	L7311-7	LDW-T2-A-SS-WB-comp-1	42	tissue		
03-08-2004	L7311-8	LDW-T2-B-SS-WB-comp-1	9	tissue		
02-08-2004	L7311-13	LDW-T3-A-SS-WB-comp-1	7	tissue		
03-08-2004	L7311-14	LDW-T3-B-SS-WB-comp-1	9	tissue		
04-08-2004	L7311-19	LDW-T4-A-SS-WB-comp-1	5	tissue		
04-08-2004	L7311-20	LDW-T4-B-SS-WB-comp-1	7	tissue		
14-09-2004	L7311-25	BL-SS-WB-comp-1	18	tissue		
14-09-2004	L7311-26	BL-SS-WB-comp-2	11	tissue		
14-09-2004	L7311-27	BL-SS-WB-comp-3	14	tissue		
14-09-2004	L7311-28	BL-SS-WB-comp-4	19	tissue		
14-09-2004	L7311-29	BL-SS-WB-comp-5	14	tissue		
14-09-2004	L7311-30	BL-SS-WB-comp-6	17	tissue		
		Total Number of Containers	14	Purchase Order/Statement of Work #		

1) Released by:	1) Rec'd by:	2) Released by:	2) Rec'd by:
Print name: SUSAN ROSS STROEL	Christabel Fowler	Print name:	
Signature:	Company: BRL	Signature:	Company:
Company: AXYS ANALYTICAL		Company:	
Date/Time: 08 Dec 04 13:00h	Date/Time: 12/9/04 09:00	Date/Time:	Date/Time:

To be completed by Laboratory upon sample receipt:

Date of receipt:: 12/09/04	Laboratory W.O. #:
Condition upon receipt: good	Time of receipt: 09:00
Cooler temperature: -4.8°C	Received by: CAF

Wind Ward environmental LLC
200 West Mercer Street
Suite 401
Seattle, WA 98119
Tel: (206) 378-1364
Fax: (206) 217-9343

CHAIN-OF-CUSTODY/TEST REQUEST FORM

Project/Client Name:	Lower Duwamish Waterway Group (LDWG)	Ship to:	Brooks Rand,3958 6th Ave NW, Seattle WA 98107		
Project Number:	04-08-06-22	Attn:	Elizabeth Madonick	Shipping Date:	08 Dec 04
Contact Name:	Susan McGroddy	Shipper:	Susan Ross Stroebel	Airbill Number:	6329 4586 7699
Sampled By:	Matt Luxon	Form filed out by:	Teresa Rawsthorne	Turnaround requested:	

Sample Date	Axys Sample Identification	Windward Sample Identification	Sample Volume	Matrix	Fish and Crab	Comments / Instructions
16-09-2004	L7311-31	EP-SS-WB-comp-1	5	tissue	Inorganic Arsenic (EPA 1632) and Percent moisture	
16-09-2004	L7311-32	EP-SS-WB-comp-2	10	tissue		
16-09-2004	L7311-33	EP-SS-WB-comp-3	5	tissue		
03-08-2004	L7311-34	LDW-M-M-PP-FL-comp-1	33	tissue		
04-08-2004	L7311-35	LDW-M-M-SP-FL-comp-1	42	tissue		
14-09-2004	L7311-60	BL-ES-FL-comp-1	17	tissue		
14-09-2004	L7311-61	BL-ES-FL-comp-2	19	tissue		
14-09-2004	L7311-62	BL-ES-FL-comp-3	21	tissue		
14-09-2004	L7311-63	BL-ES-FL-comp-4	28	tissue		
14-09-2004	L7311-64	BL-ES-FL-comp-5	11	tissue		
14-09-2004	L7311-65	BL-ES-FL-comp-6	17	tissue		
16-09-2004	L7311-66	EP-ES-FL-comp-1	7	tissue		
16-09-2004	L7311-67	EP-ES-FL-comp-2	5	tissue		
16-09-2004	L7311-68	EP-ES-FL-comp-3	8	tissue		
		Total Number of Containers	14	Purchase Order/Statement of Work #		

1) Released by:	1) Rec'd by:	2) Released by:	2) Rec'd by:
Print name: Susan Ross Stroebel	Christabel Fowler	Print name:	
Signature:	Company: BRC	Signature:	Company:
Company: Axys Analytical		Company:	
Date/Time: 08 Dec 04 13:00 hr	Date/Time: 12/9/04 09:00	Date/Time:	Date/Time:

- 203 -

Brooks Rand Report #05BR0023

Wind Ward environmental LLC
200 West Mercer Street
Suite 401
Seattle, WA 98119
Tel: (206) 378-1364
Fax: (206) 217-9343

To be completed by Laboratory upon sample receipt:

Date of receipt:: good	Laboratory W.O. #:
Condition upon receipt: 12/9/04	Time of receipt: 09:00
Cooler temperature: -4.8°C	Received by: CAF

CHAIN-OF-CUSTODY/TEST REQUEST FORM

Project/Client Name:	Lower Duwamish Waterway Group (LDWG)	Ship to:	Brooks Rand,3958 6th Ave NW, Seattle WA 98107
Project Number:	04-08-06-22	Attn:	Elizabeth Madonick
Contact Name:	Susan McGroddy	Shipper:	Susan Ross Strickel
Sampled By:	Matt Luxon	Form filled out by:	Teresa Rawsthorne

Shipping Date: 08 Dec 04
Airbill Number: 6329 4586 9699
Turnaround requested:

Sample Date	Axys Sample Identification	Windward Sample Identification	Sample Volume	Matrix	Fish and Crab	Comments / Instructions
16-09-2004	L7311-69	EP-ES-FL-comp-4	15	tissue	Inorganic Arsenic (EPA 1632) and Percent moisture	
16-09-2004	L7311-70	~~EP-ES-FL-comp-~~5	9	tissue		
16-09-2004	L7311-71	EP-ES-FL-comp-6	10	tissue		
02-08-2004	L7311-72	LDW-T1-M-ES-FL-comp-1	22	tissue		
02-08-2004	L7311-73	LDW-T1-M-ES-FL-comp-2	24	tissue		
03-08-2004	L7311-74	LDW-T2-M-ES-FL-comp-1	30	tissue		
03-08-2004	L7311-75	LDW-T2-M-ES-FL-comp-2	15	tissue		
03-08-2004	L7311-76	LDW-T3-M-ES-FL-comp-1	14	tissue		
03-08-2004	L7311-77	LDW-T3-M-ES-FL-comp-2	41	tissue		
02-09-2004	L7311-78	LDW-T4-M-ES-FL-comp-1	14	tissue		
14-09-2004	L7311-79	BL-ES-WB-comp-1	43	tissue		
14-09-2004	L7311-80	BL-ES-WB-comp-2	23	tissue		
14-09-2004	L7311-81	BL-ES-WB-comp-3	34	tissue		
14-09-2004	L7311-82	BL-ES-WB-comp-4	40	tissue		
		Total Number of Containers	14		Purchase Order/Statement of Work #	

1) Released by:	1) Rec'd by:	2) Released by:	2) Rec'd by:
Print name: Susan Ross Strickel	Christabel Fowler	Print name:	
Signature:	Company: BRC	Signature:	Company:
Company: Axys Analytical		Company:	
Date/Time: 08 Dec 04 13:00	Date/Time: 12/9/04 09:00	Date/Time:	Date/Time:

- 204 - 39

Brooks Rand Report #05BR0023

Wind Ward environmental LLC
200 West Mercer Street
Suite 401
Seattle, WA 98119
Tel: (206) 378-1364
Fax: (206) 217-9343

To be completed by Laboratory upon sample receipt:

Date of receipt: 12/9/04	Laboratory W.O. #:
Condition upon receipt: good	Time of receipt: 09:00
Cooler temperature: -48°C	Received by: CAF

CHAIN-OF-CUSTODY/TEST REQUEST FORM

Project/Client Name:	Lower Duwamish Waterway Group (LDWG)	Ship to:	Brooks Rand,3958 6th Ave NW, Seattle WA 98107		
Project Number:	04-08-06-22	Attn:	Elizabeth Madonick	Shipping Date:	08 Dec 04
Contact Name:	Susan McGroddy	Shipper:	Susan Ross Strocel	Airbill Number:	0329 4586 7699
Sampled By:	Matt Luxon	Form filled out by:	Teresa Rawsthorne	Turnaround requested:	

Sample Date	Axys Sample Identification	Windward Sample Identification	Sample Volume	Matrix	Fish and Crab	Comments / Instructions
14-09-2004	L7311-83	BL-ES-WB-comp-5	28	tissue	Inorganic Arsenic (EPA 1632) and Percent moisture	
14-09-2004	L7311-84	BL-ES-WB-comp-6	25	tissue		
16-09-2004	L7311-85	EP-ES-WB-comp-1	22	tissue		
16-09-2004	L7311-86	EP-ES-WB-comp-2	46	tissue		
16-09-2004	L7311-87	EP-ES-WB-comp-3	22	tissue		
16-09-2004	L7311-88	EP-ES-WB-comp-4	29	tissue		
16-09-2004	L7311-89	EP-ES-WB-comp-5	37	tissue		
16-09-2004	L7311-90	EP-ES-WB-comp-6	34	tissue		
02-08-2004	L7311-91	LDW-T1-M-ES-WB-comp-1	25	tissue		
05-08-2004	L7311-92	LDW-T1-M-ES-WB-comp-2	41	tissue		
03-08-2004	L7311-97	LDW-T2-M-ES-WB-comp-1	44	tissue		
03-08-2004	L7311-98	LDW-T2-M-ES-WB-comp-2	24	tissue		
03-08-2004	L7311-103	LDW-T3-M-ES-WB-comp-1	29	tissue		
03-08-2004	L7311-104	LDW-T3-M-ES-WB-comp-2	30	tissue		
		Total Number of Containers	14	Purchase Order/Statement of Work #		

1) Released by:	1) Rec'd by:	2) Released by:	2) Rec'd by:
Print name: Susan Ross Strocel	Christabel Fowler	Print name:	
Signature:		Signature:	
Company: Axys Analytical	Company: BRL	Company:	Company:
Date/Time: 08 Dec 04 13:00	Date/Time: 12/9/04 09:00	Date/Time:	Date/Time:

To be completed by Laboratory upon sample receipt:

Date of receipt:: 12/9/04	Laboratory W.O. #:
Condition upon receipt: good	Time of receipt: 09:00
Cooler temperature: -48°C	Received by: CAF

Wind Ward environmental LLC
200 West Mercer Street
Suite 401
Seattle, WA 98119
Tel: (206) 378-1364
Fax: (206) 217-9343

CHAIN-OF-CUSTODY/TEST REQUEST FORM

Project/Client Name:	Lower Duwamish Waterway Group (LDWG)	Ship to:	Brooks Rand,3958 6th Ave NW, Seattle WA 98107		
Project Number:	04-08-06-22	Attn:	Elizabeth Madonick	Shipping Date:	08 DEC 04
Contact Name:	Susan McGroddy	Shipper:	Susan Ross Strocel	Airbill Number:	6329 4586 9691
Sampled By:	Matt Luxon	Form filled out by:	Teresa Rawsthorne	Turnaround requested:	

Sample Date	Axys Sample Identification	Windward Sample Identification	Sample Volume	Matrix	Fish and Crab	Comments / Instructions
02-09-2004	L7311-109	LDW-T4-M-ES-WB-comp-1	28	tissue	Inorganic Arsenic (EPA 1632) and Percent moisture	
04-08-2004	L7311-112	LDW-T4-M-SF-WB-comp-1	49	tissue		
30-08-2004	L7311-115	LDW-T4-M-SF-FL-comp-1	44	tissue		
14-09-2004	L7311-116	BL-SC-EM-comp-1	7	tissue		
14-09-2004	L7311-117	BL-SC-EM-comp-2	14	tissue		
14-09-2004	L7311-118	BL-SC-EM-comp-3	9	tissue		
14-09-2004	L7311-119	BL-SC-HP-comp-1	10	tissue		
16-09-2004	L7311-120	EP-SC-EM-comp-1	11	tissue		
16-09-2004	L7311-121	EP-SC-EM-comp-2	12	tissue		
16-09-2004	L7311-122	EP-SC-EM-comp-3	11	tissue		
16-09-2004	L7311-123	EP-SC-HP-comp-1	9	tissue		
30-08-2004	L7311-124	LDW-T1-M-SC-EM-comp-1	11	tissue		
30-08-2004	L7311-127	LDW-T1-M-SC-HP-comp-1	54	tissue		
31-08-2004	L7311-128	LDW-T2-M-SC-EM-comp-1	10	tissue		
		Total Number of Containers	14		Purchase Order/Statement of Work #	

1) Released by:	1) Rec'd by:	2) Released by:	2) Rec'd by:
Print name: Susan Ross Strocel	Christabel Fowler	Print name:	
Signature:	Company: BRL	Signature:	Company:
Company: AXYS Analytical		Company:	
Date/Time: 08 Dec 04 13:00h	Date/Time: 12/9/04 09:00	Date/Time:	Date/Time.

To be completed by Laboratory upon sample receipt:

Date of receipt:: 12/9/04	Laboratory W.O. #:
Condition upon receipt: good	Time of receipt: 09.00
Cooler temperature: -18°C	Received by: CAF

Wind Ward environmental LLC
200 West Mercer Street
Suite 401
Seattle, WA 98119
Tel: (206) 378-1364
Fax: (206) 217-9343

CHAIN-OF-CUSTODY/TEST REQUEST FORM

Project/Client Name:	Lower Duwamish Waterway Group (LDWG)	Ship to:	Brooks Rand,3958 6th Ave NW, Seattle WA 98107		
Project Number:	04-08-06-22	Attn:	Elizabeth Madonick	Shipping Date:	08 Dec 04
Contact Name:	Susan McGroddy	Shipper:	SUSAN ROSS STROEL	Airbill Number:	6829 4586 1699
Sampled By:	Matt Luxon	Form filled out by:	Teresa Rawsthorne	Turnaround requested:	

Sample Date	Axys Sample Identification	Windward Sample Identification	Sample Volume	Matrix	Fish and Crab	Comments / Instructions
31-08-2004	L7311-129	LDW-T2-M-SC-EM-comp-2	9	tissue	Inorganic Arsenic (EPA 1632) and Percent moisture	
31-08-2004	L7311-131	LDW-T2-M-SC-HP-comp-1	10	tissue		
31-08-2004	L7311-135	LDW-T2-M-SC-HP-comp-2	10	tissue		
03-09-2004	L7311-136	LDW-T3-M-SC-EM-comp-1	10	tissue		
03-09-2004	L7311-139	LDW-T3-M-SC-HP-comp-1	10	tissue		
14-09-2004	L7311-140	BL-DC-EM-comp-1	13	tissue		
14-09-2004	L7311-141	BL-DC-EM-comp-2	52	tissue		
14-09-2004	L7311-142	BL-DC-EM-comp-3	44	tissue		
14-09-2004	L7311-143	BL-DC-HP-comp-1	30	tissue		
16-09-2004	L7311-144	EP-DC-EM-comp-1	18	tissue		
16-09-2004	L7311-145	EP-DC-EM-comp-2	39	tissue		
16-09-2004	L7311-146	EP-DC-EM-comp-3	38	tissue		
16-09-2004	L7311-147	EP-DC-HP-comp-1	40	tissue		
30-08-2004	L7311-148	LDW-T1-M-DC-EM-comp-1	52	tissue		
		Total Number of Containers	14	Purchase Order/Statement of Work #		

1) Released by:	1) Rec'd by:	2) Released by:	2) Rec'd by:
Print name: SUSAN ROSS STROEL	Christabel Fowler	Print name:	
Signature:	Company: BRL	Signature:	Company:
Company: AXYS ANALYTICAL		Company:	
Date/Time: 08 Dec 04 13:00h	Date/Time: 12/9/04 09:00	Date/Time:	Date/Time:

To be completed by Laboratory upon sample receipt:

Date of receipt:: 12/9/04	Laboratory W.O. #:
Condition upon receipt: good	Time of receipt: 09:00
Cooler temperature: -48°C	Received by: CAF

Wind Ward environmental LLC
200 West Mercer Street
Suite 401
Seattle, WA 98119
Tel: (206) 378-1364
Fax: (206) 217-9343

CHAIN-OF-CUSTODY/TEST REQUEST FORM

Project/Client Name:	Lower Duwamish Waterway Group (LDWG)	Ship to:	Brooks Rand,3958 6th Ave NW, Seattle WA 98107		
Project Number:	04-08-06-22	Attn:	Elizabeth Madonick	Shipping Date:	08 Dec 04
Contact Name:	Susan McGroddy	Shipper:	SUSAN KOSS STROCEL	Airbill Number:	6329 4586 7699
Sampled By:	Matt Luxon	Form filled out by:	Teresa Rawsthorne	Turnaround requested:	

Sample Date	Axys Sample Identification	Windward Sample Identification	Sample Volume	Matrix	Fish and Crab	Comments / Instructions
30-08-2004	L7311-151	LDW-T1-M-DC-HP-comp-1	27	tissue	Inorganic Arsenic (EPA 1632) and Percent moisture	
30-08-2004	L7311-152	LDW-T3-M-DC-EM-comp-1	19	tissue		
30-08-2004	L7311-155	LDW-T3-M-DC-HP-comp-1	17	tissue		
				tissue		
				tissue		
				tissue		
				tissue		
				tissue		
				tissue		
				tissue		
				tissue		
				tissue		
				tissue		
				tissue		
				tissue		
Total Number of Containers			3	Purchase Order/Statement of Work #		

1) Released by:	1) Rec'd by:	2) Released by:	2) Rec'd by:
Print name: SUSAN ROSS STROCEL	Christabel Fowler	Print name:	
Signature:	Company: BRL	Signature:	Company:
Company: AXYS ANALYTICAL		Company:	
Date/Time: 08 Dec 04 13:00h	Date/Time: 12/9/04 09:00	Date/Time:	Date/Time:

Wind Ward environmental LLC
200 West Mercer Street
Suite 401
Seattle, WA 98119
Tel: (206) 378-1364
Fax: (206) 217-9343

To be completed by Laboratory upon sample receipt:

Date of receipt:: 12/9/04	Laboratory W.O. #:
Condition upon receipt: good	Time of receipt: 09:00
Cooler temperature: -48°C	Received by: CAF

ORIGIN ID: YYJA (250) 655-5829
SUSAN ROSS STROCEL
AXYS ANALYTICAL SERVICES
2045 MILLS RD W.

SIDNEY BC V8L 3S8

SHIP DATE: 08DEC04 1 / 1
SYSTEM #0749239 / CAFE2208

ACTUAL WGT: 30.3 KGS SCALE

DRY ICE: 14.0 KGS

TO:

ELIZABETH MADONICK (206) 632-3020
BROOKS RAND
3958 6TH AVE

SEATTLE, WA 98107

REF: 4033

FedEx

INTL PRIORITY

TRK# **6329 4586 7699** FORM 0430

SEA A2

98107 -WA-US

WV BFIA

ICE

Part # 156148-434 NRIT 8-04

ORIGIN ID: YYJA (250) 655-5829
SUSAN ROSS STROCEL
AXYS ANALYTICAL SERVICES
2045 MILLS RD W.

SIDNEY, BC V8L 3S8

SHIP DATE: 08DEC04 1/1
SYSTEM #0749239 / CAFE2208

ACTUAL WGT: 30.3 KGS SCALE

Dry Ice/Neige Carbonique 14.0 kgs

AWB

ECI

WV BFIA

6329 4586 7699 FORM 0430

FedEx INTERNATIONAL

6329 4586 7699

ICE

TO: ELIZABETH MADONICK (206) 632-3020
BROOKS RAND
3958 6TH AVE

SEATTLE, WA 98107

US

REF: 4033
DESCRIPTION: Homogenized Fish Tissue on DRY ICE UN184

Shipper's Declaration not required
Dry Ice 9,UN 1845,III 1 x 14.0 kg. 904

INTL PRIORITY

COUNTRY MFG: US

CUSTOM VALUE: $87.00 CAD

SIGN: SUSAN ROSS STROCEL
T/C: S 167871275
D/T: S 167871275

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CONSIGNEE COPY - PLEASE PLACE IN POUCH

Part # 156148-434 NRIT 8-04

Brooks Rand Report #05B5023