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Attention:Susan Schmitz

Accurassay Laboratories
1046 Gorham Street
Thunder Bay, ON
Canada P7B 5X5

Report Date: 2015/08/24
Report #: R3637729
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B5F7775
Received: 2015/08/10, 13:18

Sample Matrix: SOLID
Samples Received: 10

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Reference
Trace Metals by Neutron Activation	10	N/A	2015/08/21	BQL SOP-00001	Neutron Activation

Remarks:

Becquerel is an ISO 17025 accredited laboratory for certain tests listed within the scope of accreditation. This test report shall not be reproduced, except in full, without written approval of Becquerel Laboratories Inc.

Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.

Encryption Key

Simona Vatamanescu

24 Aug 2015 15:56:59 -04:00

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Simona Vatamanescu,
Email: SVatamanescu@maxxam.ca
Phone# (905)826-3080
==========
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RESULTS OF ANALYSES OF SOLID

Maxxam ID		ATT305	ATT306	ATT307	ATT308		ATT309		ATT310		
Sampling Date											
	UNITS	**284039**	**284154**	**284186**	**284194**	**RDL**	**284205**	**RDL**	**284211**	**RDL**	**QC Batch**
Bromine	ppm	4	1	1	2	1	1	1	3	1	4158953
Antimony (Sb)	ppm	5.6	14.0	0.3	0.6	0.2	4.2	0.2	0.5	0.2	4158953
Arsenic (As)	ppm	<1	2	<1	<1	1	4	1	1	1	4158953
Barium (Ba)	ppm	1000	800	1000	1300	100	1100	100	870	100	4158953
Cadmium (Cd)	ppm	16	67	36	25	10	73	10	27	10	4158953
Cerium (Ce)	ppm	66	26	37	30	10	31	10	27	10	4158953
Cesium (Cs)	ppm	6	4	5	5	1	4	1	2	1	4158953
Chromium (Cr)	ppm	100	73	94	120	50	79	50	100	50	4158953
Cobalt (Co)	ppm	20	16	<10	<10	10	15	10	19	10	4158953
Europium (Eu)	ppm	<2	<2	<2	<2	2	<2	2	<2	2	4158953
Gold (Au)	ppm	0.270	2.42	0.018	0.020	0.005	0.150	0.005	0.050	0.005	4158953
Hafnium (Hf)	ppm	4	3	3	2	2	<2	2	2	2	4158953
Iridium (Ir)	ppm	<0.1	<0.1	<0.1	<0.1	0.1	<0.1	0.1	<0.1	0.1	4158953
Iron (Fe)	ppm	39000	35000	31000	34000	5000	57000	5000	88000	5000	4158953
Lanthanum (La)	ppm	34	14	18	17	5	18	5	15	5	4158953
Lutetium (Lu)	ppm	<0.5	<0.5	<0.5	<0.5	0.5	<0.5	0.5	<0.5	0.5	4158953
Molybdenum (Mo)	ppm	5	6	5	4	2	8	2	5	2	4158953
Nickel (Ni)	ppm	46	65	27	41	20	33	20	49	20	4158953
Rubidium (Rb)	ppm	160	87	180	160	10	110	10	69	10	4158953
Samarium (Sm)	ppm	4.9	2.4	2.8	2.6	0.2	2.8	0.2	2.3	0.2	4158953
Scandium (Sc)	ppm	11.0	10.0	8.2	7.3	0.5	6.4	0.5	5.9	0.5	4158953
Selenium (Se)	ppm	<10	<10	<10	<10	10	<10	10	<10	10	4158953
Silver (Ag)	ppm	39	22	45	52	5	700	5	120	5	4158953
Sodium (Na)	ppm	6000	13000	4100	4400	500	2400	500	1500	500	4158953
Tantalum (Ta)	ppm	<1	<1	<1	<1	1	<1	1	<1	1	4158953
Tellurium (Te)	ppm	<20	<20	<20	<20	20	<20	20	<20	20	4158953
Terbium (Tb)	ppm	<1	<1	<1	<1	1	<1	1	<1	1	4158953
Thorium (Th)	ppm	5.7	2.0	2.4	2.3	0.5	2.0	0.5	1.9	0.5	4158953
Tin (Sn)	ppm	<200	<200	<200	<200	200	<200	200	<200	200	4158953
Tungsten (W)	ppm	3	<2	3	4	2	<6.3 (1)	6.3	7	2	4158953
Uranium (U)	ppm	1.6	<0.5	0.8	0.8	0.5	0.6	0.5	<0.5	0.5	4158953
Ytterbium (Yb)	ppm	<5	<5	<5	<5	5	<5	5	<5	5	4158953
Zinc (Zn)	ppm	6600	19000	13000	12000	200	21700	200	26400	200	4158953
Zirconium (Zr)	ppm	<500	<500	<500	<500	500	<500	500	<500	500	4158953

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
(1) W Detection Limit is elevated due to high Ag.

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RESULTS OF ANALYSES OF SOLID

Maxxam ID		ATT311	ATT312	ATT313	ATT314		
Sampling Date							
	UNITS	284306	284313	284334	284360	RDL	QC Batch
Bromine	ppm	<1	<1	4	<1	1	4158953
Antimony (Sb)	ppm	1.8	42.9	1.5	0.5	0.2	4158953
Arsenic (As)	ppm	2	3	1	2	1	4158953
Barium (Ba)	ppm	920	720	310	560	100	4158953
Cadmium (Cd)	ppm	<10	45	58	<10	10	4158953
Cerium (Ce)	ppm	27	25	45	53	10	4158953
Cesium (Cs)	ppm	4	6	7	4	1	4158953
Chromium (Cr)	ppm	61	58	64	110	50	4158953
Cobalt (Co)	ppm	16	10	20	11	10	4158953
Europium (Eu)	ppm	<2	<2	<2	<2	2	4158953
Gold (Au)	ppm	1.34	0.527	0.180	0.034	0.005	4158953
Hafnium (Hf)	ppm	2	2	3	3	2	4158953
Iridium (Ir)	ppm	<0.1	<0.1	<0.1	<0.1	0.1	4158953
Iron (Fe)	ppm	32000	34000	36000	22000	5000	4158953
Lanthanum (La)	ppm	14	13	23	28	5	4158953
Lutetium (Lu)	ppm	<0.5	<0.5	<0.5	<0.5	0.5	4158953
Molybdenum (Mo)	ppm	5	6	6	7	2	4158953
Nickel (Ni)	ppm	21	<20	35	63	20	4158953
Rubidium (Rb)	ppm	96	140	81	71	10	4158953
Samarium (Sm)	ppm	2.6	2.6	3.2	3.9	0.2	4158953
Scandium (Sc)	ppm	8.6	7.5	6.9	6.3	0.5	4158953
Selenium (Se)	ppm	<10	<10	<10	<10	10	4158953
Silver (Ag)	ppm	9	74	<5	<5	5	4158953
Sodium (Na)	ppm	18000	22000	13000	15000	500	4158953
Tantalum (Ta)	ppm	<1	<1	<1	<1	1	4158953
Tellurium (Te)	ppm	<20	<20	<20	<20	20	4158953
Terbium (Tb)	ppm	<1	<1	<1	<1	1	4158953
Thorium (Th)	ppm	1.8	7.4	4.3	5.4	0.5	4158953
Tin (Sn)	ppm	<200	<200	<200	<200	200	4158953
Tungsten (W)	ppm	<2	<2	<2	2	2	4158953
Uranium (U)	ppm	<0.5	14.0	1.3	1.4	0.5	4158953
Ytterbium (Yb)	ppm	<5	<5	<5	<5	5	4158953
Zinc (Zn)	ppm	<200	9200	13000	<200	200	4158953
Zirconium (Zr)	ppm	<500	<500	<500	<500	500	4158953

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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GENERAL COMMENTS

Results relate only to the items tested.

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VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).

Robert Allen, Becquerel

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