



## Certificate of Analysis

Work Order: TO122410

To: **Gordon Richards**  
**Gordon Richards**  
6410 Holly Park Drive  
DELTA  
BC V4K 4W6

Date: Aug 29, 2012

P.O. No. : Project:SMOKO  
Project No. : -  
No. Of Samples : 81  
Date Submitted : Aug 04, 2012  
Report Comprises : Pages 1 to 19  
(Inclusive of Cover Sheet)

**Distribution of unused material:**

Discard samples:

Certified By :

Bruce Robertson  
Operations Manager

**SGS Minerals Services (Toronto) is accredited by Standards Council of Canada (SCC) and conforms to the requirements of ISO/IEC 17025 for specific tests as indicated on the scope of accreditation to be found at <http://www.scc.ca/en/programs/lab/mineral.shtml>**

Report Footer:

L.N.R. = Listed not received  
n.a. = Not applicable

I.S. = Insufficient Sample  
-- = No result

\*INF = Composition of this sample makes detection impossible by this method  
M after a result denotes ppb to ppm conversion, % denotes ppm to % conversion  
Methods marked with an asterisk (e.g. \*NAA08V) were subcontracted  
Methods marked with the @ symbol (e.g. @AAS21E) denote accredited tests

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Element Method Det.Lim. Units	Ag@ MMI-M5 1 ppb	Al@ MMI-M5 1 ppm	As@ MMI-M5 10 ppb	Au@ MMI-M5 0.1 ppb	Ba@ MMI-M5 10 ppb	Bi@ MMI-M5 1 ppb	Ca@ MMI-M5 10 ppm	Cd@ MMI-M5 1 ppb	Ce@ MMI-M5 5 ppb	Co@ MMI-M5 5 ppb
P3	21	22	<10	0.4	9530	<1	540	6	159	144
P4	15	37	<10	0.4	8750	<1	470	3	192	189
P5	27	9	<10	0.5	8060	<1	770	2	16	33
P6	9	29	10	0.3	7630	<1	470	6	260	202
P7	43	12	<10	0.7	15000	<1	710	10	25	84
P8	9	33	<10	0.5	8630	<1	720	7	350	248
P9	17	18	<10	0.3	11800	<1	700	12	203	218
P10	5	46	<10	0.2	4990	<1	710	4	420	164
P11	5	90	<10	0.2	9280	<1	360	2	448	148
P12	2	222	20	<0.1	4730	<1	50	2	140	90
P13	4	170	<10	0.1	5830	<1	240	2	329	123
P14	3	124	10	<0.1	13300	<1	220	1	592	124
P15	5	180	<10	<0.1	13200	<1	150	2	267	118
P16	5	108	<10	<0.1	7720	<1	150	5	66	66
P17	29	113	<10	0.3	21100	<1	290	14	643	82
P18	49	45	<10	1.2	24400	<1	640	8	550	36
P19	15	62	<10	1.0	23000	<1	670	13	804	40
P21	17	69	<10	0.9	13800	<1	690	2	1510	186
P22	27	13	<10	0.7	12900	<1	850	5	109	67
P25	12	157	<10	0.5	5150	<1	50	1	66	161
P29	4	205	20	0.3	4040	<1	60	4	86	1590
P30	6	83	20	0.8	13500	<1	100	5	154	821
P31	6	119	<10	1.0	13600	<1	170	3	43	327
P38	6	109	20	0.4	5220	<1	40	<1	45	157
P39	9	167	<10	0.3	3140	<1	110	3	190	134
P40	8	121	10	0.5	9520	<1	120	3	260	224
P46	14	154	20	0.8	1730	<1	120	3	86	315
P48	4	226	<10	0.2	4500	<1	170	4	79	185
P49	4	194	20	0.1	3210	<1	120	1	106	106
P50	16	193	<10	0.8	2470	<1	80	3	60	131
P51	16	106	<10	0.6	3120	<1	270	5	152	1150
P54	10	133	<10	0.5	4600	<1	210	10	795	135
P55	4	135	<10	0.3	6700	<1	300	<1	515	113
P56	2	176	20	0.2	3350	<1	130	1	184	49
P57	12	84	<10	0.4	7890	<1	140	<1	1210	41
P58	3	199	<10	0.2	7180	<1	250	<1	5200	50
P59	16	95	<10	0.3	14000	<1	90	<1	851	33
P60	4	103	<10	0.5	17400	<1	370	1	2600	46
P61	2	282	<10	<0.1	2550	<1	80	1	62	54
M2	2	36	30	0.3	3650	<1	370	2	166	335
M3	2	28	<10	<0.1	5610	<1	490	<1	84	22
M5	27	9	<10	0.3	6340	<1	670	3	66	106
M6	28	5	<10	0.3	3500	<1	610	4	<5	16

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Element Method Det.Lim. Units	Ag@ MMI-M5 1 ppb	Al@ MMI-M5 1 ppm	As@ MMI-M5 10 ppb	Au@ MMI-M5 0.1 ppb	Ba@ MMI-M5 10 ppb	Bi@ MMI-M5 1 ppb	Ca@ MMI-M5 10 ppm	Cd@ MMI-M5 1 ppb	Ce@ MMI-M5 5 ppb	Co@ MMI-M5 5 ppb
M7	24	11	<10	0.4	10500	<1	580	3	122	170
M8	27	14	<10	0.4	8060	<1	620	8	40	61
M9	11	33	10	0.4	7580	<1	420	12	153	181
M10	26	16	<10	0.5	9420	<1	620	5	72	198
M11	31	11	10	1.0	10600	<1	640	6	233	334
M12	50	10	<10	0.6	18500	<1	680	6	129	188
M13	2	128	<10	<0.1	7340	<1	290	3	170	221
M14	8	87	<10	0.7	15100	<1	290	<1	3120	174
M15	<1	125	<10	<0.1	9480	<1	370	4	1020	188
M16	7	29	<10	0.4	10100	<1	490	2	311	54
M17	59	4	<10	0.7	18900	<1	930	35	19	213
M18	8	75	<10	0.5	11300	<1	530	2	2890	986
M19	8	24	<10	0.5	12400	<1	520	4	428	546
M20	4	124	<10	<0.1	7740	<1	290	<1	283	206
M21	4	114	<10	<0.1	6470	<1	350	<1	122	88
M22	8	53	<10	0.2	2510	<1	470	<1	204	14
M23	5	100	<10	<0.1	4340	<1	400	<1	137	73
M24	6	94	<10	<0.1	4770	<1	500	<1	160	164
M25	7	64	<10	0.2	9870	<1	250	1	97	163
M26	25	5	<10	1.2	35900	<1	760	4	60	13
M30	15	22	<10	2.1	12900	<1	720	2	314	10
M31	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.
M32	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.
M33	7	50	<10	0.3	15600	<1	350	<1	43	25
M34	7	146	<10	0.2	24400	<1	150	<1	897	118
M35	19	109	<10	0.3	33800	<1	560	12	2150	77
M36	28	19	<10	0.6	14600	<1	670	8	108	129
M37	41	8	<10	0.9	16900	<1	700	3	37	14
M40	3	45	<10	0.4	12000	<1	640	2	823	58
M41	4	25	<10	0.4	11500	<1	680	3	1240	15
M42	7	95	10	0.3	6840	<1	180	6	75	207
M43	6	73	<10	0.4	5480	<1	310	6	250	385
M44	10	54	<10	0.3	4260	<1	440	12	437	38
M45	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.
M46	14	15	<10	0.9	12100	<1	650	5	324	10
M47	11	102	<10	0.3	6970	<1	350	12	341	142
M48	7	49	<10	<0.1	6040	<1	530	9	471	14
M49	2	123	<10	<0.1	4390	<1	370	3	62	80
*Rep P14	3	116	10	<0.1	12000	<1	200	2	583	116
*Rep P22	30	13	<10	0.7	13600	<1	870	6	109	44
*Rep P55	5	149	<10	0.3	5360	<1	230	<1	498	138
*Rep M3	2	28	<10	0.3	5380	<1	470	<1	76	28
*Rep M31	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.

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Element Method Det.Lim. Units	Ag@ MMI-M5 1 ppb	Al@ MMI-M5 1 ppm	As@ MMI-M5 10 ppb	Au@ MMI-M5 0.1 ppb	Ba@ MMI-M5 10 ppb	Bi@ MMI-M5 1 ppb	Ca@ MMI-M5 10 ppm	Cd@ MMI-M5 1 ppb	Ce@ MMI-M5 5 ppb	Co@ MMI-M5 5 ppb
*Rep M37	41	7	<10	1.0	17100	<1	710	3	34	12
*Rep M47	8	95	<10	0.3	6790	<1	350	11	322	150
*Std MMISRM16	20	37	10	27.2	60	<1	230	4	15	58
*Std AMIS0169	8	56	10	0.4	760	<1	40	2	726	106
*Std MMISRM18	26	23	<10	9.0	150	<1	190	92	23	79
*Bik BLANK	<1	1	<10	<0.1	10	<1	<10	<1	<5	<5
*Bik BLANK	<1	<1	<10	<0.1	<10	<1	<10	<1	<5	<5
*Bik BLANK	<1	<1	<10	<0.1	<10	<1	<10	<1	<5	<5

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Element Method Det.Lim. Units	Cr@ MMI-M5 100 ppb	Cs@ MMI-M5 0.5 ppb	Cu@ MMI-M5 10 ppb	Dy@ MMI-M5 1 ppb	Er@ MMI-M5 0.5 ppb	Eu@ MMI-M5 0.5 ppb	Fe@ MMI-M5 1 ppm	Ga@ MMI-M5 1 ppb	Gd@ MMI-M5 1 ppb	Hg@ MMI-M5 1 ppb
P3	<100	<0.5	2900	25	14.1	7.9	42	1	32	<1
P4	<100	<0.5	3140	32	18.9	8.9	57	2	39	<1
P5	<100	<0.5	1610	7	3.5	2.3	13	<1	10	<1
P6	<100	<0.5	2580	28	15.4	8.4	127	1	35	<1
P7	<100	<0.5	2470	12	6.2	3.9	12	<1	14	<1
P8	<100	<0.5	3590	46	26.1	13.4	81	2	56	<1
P9	<100	<0.5	3760	30	16.3	9.3	46	1	39	<1
P10	<100	<0.5	580	76	41.7	22.0	24	2	97	<1
P11	<100	<0.5	330	44	20.5	11.9	17	2	51	<1
P12	100	3.2	380	18	7.8	5.4	70	10	19	<1
P13	<100	0.5	210	41	20.2	10.6	55	4	43	<1
P14	<100	2.5	160	31	11.3	9.4	26	4	34	<1
P15	<100	<0.5	120	20	8.4	7.0	35	4	23	<1
P16	<100	0.7	150	9	4.4	3.0	33	3	10	<1
P17	<100	<0.5	290	68	37.0	18.1	26	2	75	<1
P18	<100	<0.5	3040	137	74.6	35.7	22	2	170	<1
P19	<100	<0.5	1220	148	80.6	40.3	27	2	171	<1
P21	<100	<0.5	510	446	275	114	13	6	539	<1
P22	<100	<0.5	2180	39	19.1	11.3	16	<1	52	<1
P25	<100	1.8	5440	14	9.6	2.7	321	1	10	<1
P29	<100	1.0	1770	21	12.8	3.6	135	7	15	<1
P30	<100	1.6	9630	51	34.8	10.6	320	2	41	<1
P31	<100	0.6	3570	23	23.3	3.8	235	<1	13	<1
P38	<100	2.2	4820	14	15.4	2.3	324	2	9	<1
P39	<100	1.9	1230	56	31.4	10.9	91	4	48	<1
P40	<100	1.3	5740	76	48.3	13.3	229	2	59	<1
P46	300	2.9	7490	18	9.9	4.2	184	7	18	<1
P48	100	9.2	480	13	6.0	3.1	72	3	13	<1
P49	<100	8.9	580	26	13.2	5.5	58	6	24	<1
P50	100	19.8	2010	32	13.4	11.7	110	4	52	<1
P51	100	1.5	11500	29	15.2	7.7	82	2	33	<1
P54	100	0.9	7270	161	94.1	37.3	91	5	165	<1
P55	<100	3.5	1710	69	39.5	16.4	17	2	70	<1
P56	100	2.6	440	30	16.3	8.0	83	9	32	<1
P57	<100	1.0	1190	249	118	67.5	8	6	295	<1
P58	<100	<0.5	200	547	265	151	12	17	632	<1
P59	<100	2.1	780	173	77.2	42.4	13	6	177	<1
P60	<100	<0.5	360	301	129	74.9	8	8	354	<1
P61	<100	1.1	60	13	6.7	3.6	80	6	12	<1
M2	<100	<0.5	2550	24	13.8	6.2	256	1	27	<1
M3	<100	<0.5	170	6	2.9	2.1	12	<1	8	<1
M5	<100	<0.5	1800	11	5.9	3.9	31	<1	16	<1
M6	<100	<0.5	1100	2	1.1	<0.5	7	<1	2	<1

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M7	<100	<0.5	2620	18	9.0	6.0	48	<1	24	<1
M8	<100	<0.5	1420	10	5.1	3.6	22	<1	14	<1
M9	<100	<0.5	3580	18	10.4	5.4	117	1	21	<1
M10	<100	<0.5	2550	17	9.3	5.3	35	<1	22	<1
M11	<100	<0.5	6330	28	15.7	9.1	90	1	35	<1
M12	<100	<0.5	3560	81	47.8	14.7	10	<1	83	2
M13	<100	<0.5	80	9	4.6	3.3	20	3	12	<1
M14	<100	<0.5	430	163	71.5	44.6	11	7	201	<1
M15	<100	0.8	80	52	26.6	13.5	10	3	60	<1
M16	<100	<0.5	780	69	34.9	19.4	14	1	92	<1
M17	<100	<0.5	3830	14	7.5	3.9	7	<1	17	1
M18	<100	<0.5	770	362	181	99.6	11	8	470	2
M19	<100	<0.5	1700	54	25.6	18.5	22	2	80	<1
M20	<100	<0.5	160	38	18.5	9.5	23	2	40	<1
M21	<100	<0.5	150	15	7.6	4.4	23	2	16	<1
M22	<100	<0.5	240	19	7.2	5.0	12	1	23	<1
M23	<100	<0.5	60	11	5.5	2.7	14	1	12	<1
M24	<100	<0.5	170	20	10.8	4.0	11	1	19	<1
M25	<100	<0.5	200	11	5.2	3.5	15	<1	14	<1
M26	<100	<0.5	1910	33	16.6	12.4	10	<1	46	<1
M30	<100	<0.5	1680	116	59.5	31.7	12	1	140	<1
M31	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.
M32	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.
M33	<100	<0.5	200	9	4.2	3.5	10	<1	11	<1
M34	<100	<0.5	370	137	69.7	33.7	17	5	133	<1
M35	<100	<0.5	940	204	100.0	54.8	13	5	240	<1
M36	<100	<0.5	2280	29	15.1	9.3	26	<1	39	<1
M37	<100	<0.5	1810	19	8.8	5.9	9	<1	26	1
M40	<100	<0.5	710	222	132	50.1	12	3	244	<1
M41	<100	<0.5	690	86	42.8	28.0	15	3	122	<1
M42	<100	1.1	3360	32	23.1	5.0	345	<1	22	<1
M43	<100	<0.5	4220	70	40.9	14.6	203	2	72	<1
M44	<100	0.5	2020	58	30.3	15.8	87	2	71	<1
M45	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.
M46	<100	<0.5	4520	59	27.4	17.7	15	2	80	<1
M47	<100	<0.5	5280	90	52.8	19.9	124	2	95	<1
M48	<100	<0.5	330	37	18.1	13.5	21	2	50	<1
M49	<100	0.8	140	15	9.1	3.5	13	<1	14	<1
*Rep P14	<100	2.6	160	29	10.4	9.0	31	5	32	<1
*Rep P22	<100	<0.5	2110	44	22.0	12.8	13	<1	60	<1
*Rep P55	<100	3.4	2260	81	43.1	18.3	29	3	78	<1
*Rep M3	<100	<0.5	140	6	2.6	2.0	10	<1	8	<1
*Rep M31	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.

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Element	Cr@	Cs@	Cu@	Dy@	Er@	Eu@	Fe@	Ga@	Gd@	Hg@
Method	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5
Det.Lim.	100	0.5	10	1	0.5	0.5	1	1	1	1
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppm	ppb	ppb	ppb
*Rep M37	<100	<0.5	1740	17	8.5	5.6	8	<1	24	1
*Rep M47	<100	<0.5	6750	84	49.3	19.0	139	2	90	<1
*Std MMISRM16	<100	11.0	820	2	0.8	0.8	3	<1	3	17
*Std AMIS0169	<100	7.8	3770	25	11.0	10.5	42	11	39	<1
*Std MMISRM18	<100	6.4	840	3	1.3	1.1	4	<1	5	9
*Bik BLANK	<100	<0.5	<10	<1	<0.5	<0.5	1	<1	<1	<1
*Bik BLANK	<100	<0.5	<10	<1	<0.5	<0.5	<1	<1	<1	<1
*Bik BLANK	<100	<0.5	<10	<1	<0.5	<0.5	<1	<1	<1	<1

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Element Method Det.Lim. Units	In@ MMI-M5 0.5 ppb	K@ MMI-M5 0.1 ppm	La@ MMI-M5 1 ppb	Li@ MMI-M5 5 ppb	Mg@ MMI-M5 1 ppm	Mn@ MMI-M5 10 ppb	Mo@ MMI-M5 5 ppb	Nb@ MMI-M5 0.5 ppb	Nd@ MMI-M5 1 ppb	Ni@ MMI-M5 5 ppb
P3	<0.5	8.0	65	<5	94	9810	9	1.7	119	454
P4	<0.5	7.0	88	<5	82	6450	<5	0.9	135	359
P5	<0.5	2.5	10	<5	99	580	<5	0.6	23	448
P6	<0.5	5.4	117	<5	63	10300	9	1.6	153	746
P7	<0.5	5.0	13	<5	59	3430	6	<0.5	30	914
P8	<0.5	3.9	160	<5	89	19300	8	1.1	242	1490
P9	<0.5	4.4	91	8	86	13900	7	0.6	149	1480
P10	<0.5	4.5	235	8	111	11400	<5	<0.5	325	461
P11	<0.5	16.0	147	<5	65	2180	<5	<0.5	196	184
P12	<0.5	12.8	73	<5	16	960	<5	5.8	71	143
P13	<0.5	3.0	189	<5	58	2080	<5	1.5	168	261
P14	<0.5	15.4	354	<5	33	1640	<5	1.9	177	59
P15	<0.5	13.2	156	<5	32	1310	<5	2.0	102	130
P16	<0.5	21.6	28	<5	39	2480	<5	1.7	38	118
P17	<0.5	26.6	218	<5	59	5500	<5	<0.5	235	301
P18	<0.5	11.9	196	<5	99	2050	<5	<0.5	395	1980
P19	<0.5	20.9	235	<5	111	1250	<5	<0.5	430	1140
P21	<0.5	21.1	748	12	162	1500	<5	<0.5	1280	971
P22	<0.5	3.7	60	9	155	2660	7	<0.5	129	1070
P25	<0.5	12.2	30	<5	22	110	<5	1.8	38	898
P29	<0.5	15.6	37	<5	17	26800	6	3.6	45	279
P30	<0.5	16.6	59	<5	37	26700	9	1.9	108	1010
P31	<0.5	12.4	22	<5	59	4290	<5	0.7	36	1070
P38	<0.5	8.6	21	<5	12	280	<5	1.8	30	795
P39	<0.5	4.6	78	<5	26	1050	<5	1.3	132	361
P40	<0.5	8.6	89	<5	36	2540	<5	1.4	148	1100
P46	<0.5	15.3	38	<5	29	370	17	6.5	55	696
P48	<0.5	11.4	44	<5	41	490	<5	1.2	46	439
P49	<0.5	12.8	53	<5	29	1460	20	3.2	72	105
P50	<0.5	25.9	20	<5	16	160	10	1.7	85	352
P51	<0.5	42.8	54	<5	74	430	15	1.6	108	4070
P54	<0.5	21.9	422	<5	69	890	8	1.7	547	3680
P55	<0.5	4.5	190	<5	80	880	<5	<0.5	207	846
P56	<0.5	7.9	93	<5	24	460	<5	4.7	118	128
P57	<0.5	8.7	525	<5	31	330	<5	<0.5	989	84
P58	<0.5	5.2	3270	<5	59	570	<5	<0.5	3150	163
P59	<0.5	15.1	395	<5	14	200	<5	<0.5	622	68
P60	<0.5	4.7	1580	<5	79	200	<5	<0.5	1480	185
P61	<0.5	9.5	45	<5	24	1600	<5	1.5	55	90
M2	<0.5	9.1	67	<5	59	13400	20	3.7	105	640
M3	<0.5	10.8	29	<5	119	800	<5	<0.5	29	167
M5	<0.5	2.8	32	<5	118	2510	5	<0.5	56	513
M6	<0.5	5.0	<1	<5	140	470	8	<0.5	<1	360

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Element Method Det.Lim. Units	In@ MMI-M5 0.5 ppb	K@ MMI-M5 0.1 ppm	La@ MMI-M5 1 ppb	Li@ MMI-M5 5 ppb	Mg@ MMI-M5 1 ppm	Mn@ MMI-M5 10 ppb	Mo@ MMI-M5 5 ppb	Nb@ MMI-M5 0.5 ppb	Nd@ MMI-M5 1 ppb	Ni@ MMI-M5 5 ppb
M7	<0.5	4.2	59	<5	96	5400	9	0.9	100	521
M8	<0.5	3.1	21	<5	99	3970	7	<0.5	43	462
M9	<0.5	11.4	71	<5	62	17300	16	1.2	96	593
M10	<0.5	4.0	41	<5	134	10200	<5	<0.5	75	639
M11	<0.5	6.6	106	<5	110	14100	8	1.2	156	928
M12	<0.5	5.0	50	21	208	8280	13	<0.5	128	1820
M13	<0.5	9.0	128	<5	63	1460	<5	1.3	63	112
M14	<0.5	3.7	2350	<5	73	410	<5	<0.5	1030	209
M15	<0.5	3.1	420	<5	74	4240	<5	<0.5	300	145
M16	<0.5	4.0	116	<5	112	690	<5	<0.5	247	369
M17	<0.5	4.2	8	15	117	7120	7	<0.5	22	1010
M18	<0.5	3.6	953	<5	121	11200	<5	<0.5	1590	602
M19	<0.5	6.0	210	<5	157	19500	<5	<0.5	341	461
M20	<0.5	17.5	123	<5	70	2090	<5	0.6	138	288
M21	<0.5	31.8	68	<5	90	910	<5	0.5	59	181
M22	<0.5	17.1	103	<5	154	120	<5	<0.5	82	169
M23	<0.5	11.4	73	<5	123	1010	<5	<0.5	43	191
M24	<0.5	20.8	55	<5	176	2560	<5	<0.5	51	266
M25	<0.5	49.4	41	<5	76	1500	<5	<0.5	44	174
M26	<0.5	8.6	47	15	75	130	<5	<0.5	97	977
M30	<0.5	6.2	123	17	198	460	<5	<0.5	299	1140
M31	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.
M32	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.
M33	<0.5	33.5	20	<5	111	280	16	<0.5	32	194
M34	<0.5	19.7	521	<5	37	440	<5	0.6	469	284
M35	<0.5	10.5	560	<5	94	7530	<5	<0.5	818	720
M36	<0.5	4.0	57	<5	103	5570	<5	<0.5	116	1040
M37	<0.5	2.8	20	<5	97	290	<5	<0.5	48	471
M40	<0.5	6.5	197	7	153	2450	<5	<0.5	446	1000
M41	<0.5	10.2	254	10	166	1010	<5	<0.5	425	792
M42	<0.5	6.4	29	<5	57	1710	5	1.2	52	1080
M43	<0.5	3.5	96	<5	61	6750	8	1.1	195	1760
M44	<0.5	4.9	182	5	90	550	6	0.6	266	1050
M45	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.
M46	<0.5	7.2	126	<5	149	290	8	<0.5	248	866
M47	<0.5	18.3	143	<5	79	720	8	0.8	268	4960
M48	<0.5	11.8	188	10	103	1930	<5	<0.5	235	277
M49	<0.5	49.7	47	<5	102	400	<5	<0.5	43	83
*Rep P14	<0.5	15.1	354	<5	29	1780	<5	2.4	174	55
*Rep P22	<0.5	3.2	55	11	158	1950	6	<0.5	133	1060
*Rep P55	<0.5	4.8	212	<5	63	1060	<5	0.9	239	817
*Rep M3	<0.5	11.2	27	<5	115	1050	<5	<0.5	27	154
*Rep M31	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.

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Element Method Det.Lim. Units	In@ MMI-M5 0.5 ppb	K@ MMI-M5 0.1 ppm	La@ MMI-M5 1 ppb	Li@ MMI-M5 5 ppb	Mg@ MMI-M5 1 ppm	Mn@ MMI-M5 10 ppb	Mo@ MMI-M5 5 ppb	Nb@ MMI-M5 0.5 ppb	Nd@ MMI-M5 1 ppb	Ni@ MMI-M5 5 ppb
*Rep M37	<0.5	2.8	18	<5	98	300	<5	<0.5	45	443
*Rep M47	<0.5	18.7	139	<5	79	1280	12	1.0	254	4580
*Std MMISRM16	<0.5	37.7	4	<5	35	100	48	<0.5	13	230
*Std AMIS0169	<0.5	42.9	409	<5	31	3730	<5	3.4	348	462
*Std MMISRM18	<0.5	26.4	7	<5	92	580	33	<0.5	17	544
*Bik BLANK	<0.5	<0.1	<1	<5	<1	10	<5	<0.5	<1	<5
*Bik BLANK	<0.5	<0.1	<1	<5	<1	<10	<5	<0.5	<1	<5
*Bik BLANK	<0.5	<0.1	<1	<5	<1	<10	<5	<0.5	<1	6

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Element Method Det.Lim. Units	P@ MMI-M5 0.1 ppm	Pb@ MMI-M5 10 ppb	Pd@ MMI-M5 1 ppb	Pr@ MMI-M5 1 ppb	Pt@ MMI-M5 1 ppb	Rb@ MMI-M5 5 ppb	Sb@ MMI-M5 1 ppb	Sc@ MMI-M5 5 ppb	Sm@ MMI-M5 1 ppb	Sn@ MMI-M5 1 ppb
P3	0.2	20	<1	24	<1	<5	2	25	29	<1
P4	0.2	40	<1	29	<1	28	<1	49	33	<1
P5	0.1	<10	<1	4	<1	7	<1	9	7	<1
P6	0.3	30	<1	34	<1	<5	3	43	33	<1
P7	0.2	<10	<1	5	<1	<5	<1	12	10	<1
P8	0.2	10	<1	52	<1	<5	3	38	55	<1
P9	0.2	10	<1	31	<1	<5	2	19	36	<1
P10	0.1	10	<1	67	<1	27	<1	55	83	<1
P11	0.2	210	<1	44	<1	36	<1	53	44	<1
P12	2.3	310	<1	18	<1	145	<1	54	17	<1
P13	0.3	290	<1	39	<1	60	<1	93	36	<1
P14	0.5	200	<1	49	<1	184	<1	58	32	<1
P15	0.6	660	<1	26	<1	93	<1	40	22	<1
P16	0.7	300	<1	8	<1	131	<1	28	9	<1
P17	0.2	380	<1	51	<1	61	<1	56	59	<1
P18	0.1	50	<1	75	<1	11	<1	72	124	<1
P19	0.1	110	<1	80	<1	17	<1	78	128	<1
P21	0.1	120	<1	257	<1	11	<1	108	400	<1
P22	<0.1	20	<1	24	<1	5	<1	15	38	<1
P25	1.6	<10	<1	9	<1	120	<1	55	9	<1
P29	1.2	70	<1	10	<1	149	1	52	12	<1
P30	1.0	40	<1	22	<1	81	3	193	30	<1
P31	0.5	10	<1	8	<1	42	<1	145	11	<1
P38	1.0	<10	<1	7	<1	100	1	78	7	<1
P39	0.4	180	<1	26	<1	101	<1	71	35	<1
P40	0.4	120	<1	31	<1	58	<1	161	43	<1
P46	2.6	130	<1	12	<1	158	<1	57	15	<1
P48	1.4	20	<1	11	<1	149	<1	33	11	<1
P49	3.1	40	<1	15	<1	169	<1	53	20	<1
P50	1.8	190	<1	14	<1	392	<1	64	38	<1
P51	1.3	40	<1	23	<1	130	<1	51	28	<1
P54	1.4	110	<1	120	<1	109	<1	150	137	<1
P55	0.2	140	<1	47	<1	84	<1	75	58	<1
P56	1.6	120	<1	26	<1	71	<1	50	29	<1
P57	<0.1	350	<1	201	<1	77	<1	260	267	<1
P58	<0.1	200	<1	766	<1	57	<1	414	632	<1
P59	0.1	430	<1	132	<1	122	<1	272	160	<1
P60	<0.1	310	<1	357	<1	29	<1	184	298	<1
P61	2.1	310	<1	13	<1	168	<1	32	12	<1
M2	0.7	60	<1	23	<1	6	6	61	25	<1
M3	0.2	<10	<1	6	<1	28	<1	14	7	<1
M5	0.1	<10	<1	12	<1	7	<1	12	14	<1
M6	<0.1	<10	<1	<1	<1	6	<1	6	<1	<1

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Element Method Det.Lim. Units	P@ MMI-M5 0.1 ppm	Pb@ MMI-M5 10 ppb	Pd@ MMI-M5 1 ppb	Pr@ MMI-M5 1 ppb	Pt@ MMI-M5 1 ppb	Rb@ MMI-M5 5 ppb	Sb@ MMI-M5 1 ppb	Sc@ MMI-M5 5 ppb	Sm@ MMI-M5 1 ppb	Sn@ MMI-M5 1 ppb
M7	0.2	10	<1	21	<1	11	2	15	23	<1
M8	0.1	<10	<1	9	<1	15	<1	9	12	<1
M9	0.3	20	<1	22	<1	62	2	50	21	<1
M10	0.1	<10	<1	15	<1	<5	<1	22	19	<1
M11	0.2	10	<1	34	<1	<5	3	51	35	<1
M12	<0.1	60	<1	21	<1	20	<1	29	45	<1
M13	0.2	50	<1	16	<1	127	<1	21	11	<1
M14	<0.1	300	<1	286	<1	51	<1	182	186	<1
M15	0.1	30	<1	77	<1	43	<1	66	52	<1
M16	<0.1	20	<1	45	<1	18	<1	40	71	<1
M17	0.2	20	<1	4	<1	16	<1	8	9	<1
M18	<0.1	80	<1	336	<1	38	<1	290	412	<1
M19	<0.1	<10	<1	71	<1	11	<1	65	75	<1
M20	0.2	130	<1	31	<1	44	<1	66	35	<1
M21	0.3	140	<1	14	<1	43	<1	45	14	<1
M22	0.2	70	<1	19	<1	31	<1	16	17	<1
M23	0.2	70	<1	10	<1	36	<1	26	9	<1
M24	0.1	40	<1	12	<1	24	<1	51	13	<1
M25	0.3	150	<1	9	<1	42	<1	26	12	<1
M26	<0.1	20	<1	17	<1	13	<1	13	32	<1
M30	<0.1	60	<1	51	<1	9	<1	32	100	<1
M31	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.
M32	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.
M33	0.2	60	<1	6	<1	33	<1	9	8	<1
M34	<0.1	400	<1	108	<1	48	<1	245	115	<1
M35	0.1	210	<1	172	<1	17	<1	217	201	<1
M36	<0.1	10	<1	22	<1	12	<1	28	31	<1
M37	<0.1	<10	<1	8	<1	9	<1	20	17	<1
M40	0.1	30	<1	79	<1	20	<1	47	161	<1
M41	<0.1	10	<1	85	<1	8	<1	20	105	<1
M42	1.3	20	<1	11	<1	50	1	92	16	<1
M43	0.5	80	<1	39	<1	44	2	105	55	<1
M44	0.3	40	<1	58	<1	31	<1	62	64	<1
M45	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.
M46	<0.1	10	<1	46	<1	11	<1	24	61	<1
M47	0.4	120	<1	54	<1	58	<1	103	74	<1
M48	0.4	<10	<1	52	<1	61	<1	22	49	<1
M49	0.1	20	<1	9	<1	97	<1	26	11	<1
*Rep P14	0.6	190	<1	49	<1	174	<1	57	31	<1
*Rep P22	<0.1	20	<1	23	<1	7	<1	14	43	<1
*Rep P55	0.3	200	<1	54	<1	90	<1	95	64	<1
*Rep M3	0.2	<10	<1	6	<1	27	<1	12	6	<1
*Rep M31	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.

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Element Method Det.Lim. Units	P@ MMI-M5 0.1 ppm	Pb@ MMI-M5 10 ppb	Pd@ MMI-M5 1 ppb	Pr@ MMI-M5 1 ppb	Pt@ MMI-M5 1 ppb	Rb@ MMI-M5 5 ppb	Sb@ MMI-M5 1 ppb	Sc@ MMI-M5 5 ppb	Sm@ MMI-M5 1 ppb	Sn@ MMI-M5 1 ppb
*Rep M37	<0.1	<10	<1	7	<1	8	<1	18	16	<1
*Rep M47	0.4	120	<1	52	<1	53	<1	98	73	<1
*Std MMISRM16	0.2	100	25	2	<1	315	<1	10	4	<1
*Std AMIS0169	2.5	100	<1	94	<1	244	<1	56	56	<1
*Std MMISRM18	0.6	250	15	3	8	155	<1	6	5	<1
*Bik BLANK	<0.1	<10	<1	<1	<1	<5	<1	<5	<1	<1
*Bik BLANK	<0.1	<10	<1	<1	<1	<5	<1	<5	<1	<1
*Bik BLANK	<0.1	<10	<1	<1	<1	<5	<1	<5	<1	<1

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P3	2580	<1	4	<10	30.3	12	<0.5	97	<1	178
P4	2650	<1	5	<10	24.2	9	<0.5	63	<1	223
P5	4600	<1	1	<10	6.7	<3	<0.5	100	<1	43
P6	1730	<1	5	<10	33.6	37	<0.5	47	<1	185
P7	2090	<1	2	<10	10.3	11	<0.5	20	<1	79
P8	2790	<1	8	<10	31.5	14	<0.5	120	<1	311
P9	2660	<1	5	<10	30.5	5	<0.5	50	<1	201
P10	3160	<1	13	<10	48.6	6	<0.5	52	<1	480
P11	2190	<1	8	<10	26.2	15	<0.5	18	<1	264
P12	300	<1	3	<10	66.3	1880	<0.5	12	<1	84
P13	1550	<1	7	<10	30.4	425	<0.5	11	<1	272
P14	960	<1	6	<10	26.9	619	0.5	12	<1	161
P15	1060	<1	4	<10	39.0	645	<0.5	9	<1	99
P16	770	<1	1	<10	22.4	471	<0.5	5	<1	46
P17	1720	<1	11	<10	53.2	27	<0.5	26	<1	432
P18	3010	<1	24	<10	30.6	4	<0.5	229	<1	907
P19	2810	<1	24	<10	34.6	4	<0.5	94	<1	908
P21	3910	<1	74	<10	67.9	11	<0.5	100	<1	3060
P22	3420	<1	7	<10	26.7	4	<0.5	44	<1	243
P25	530	<1	2	<10	30.8	232	<0.5	25	<1	80
P29	430	<1	3	<10	36.1	1220	<0.5	15	<1	125
P30	890	<1	7	<10	39.1	297	<0.5	84	<1	348
P31	1340	<1	3	<10	37.8	57	<0.5	61	<1	140
P38	540	<1	2	<10	31.3	215	0.6	49	<1	87
P39	800	<1	9	<10	42.6	336	<0.5	26	<1	359
P40	1110	<1	11	<10	64.7	242	<0.5	73	<1	472
P46	520	<1	3	<10	42.7	1110	0.6	13	<1	100
P48	1060	<1	2	<10	19.5	376	1.1	16	<1	78
P49	500	<1	4	<10	46.5	1140	0.9	14	<1	140
P50	460	<1	6	<10	34.5	344	6.1	18	<1	216
P51	890	<1	5	<10	13.2	124	<0.5	19	<1	171
P54	930	<1	26	<10	39.2	198	<0.5	48	<1	1000
P55	1800	<1	11	<10	101	347	0.9	29	<1	438
P56	550	<1	5	<10	50.5	1280	<0.5	11	<1	173
P57	730	<1	43	<10	31.8	49	<0.5	56	<1	1220
P58	2270	<1	94	<10	47.7	84	<0.5	38	<1	3260
P59	390	<1	29	<10	48.8	133	<0.5	73	<1	809
P60	3010	<1	53	<10	32.9	6	<0.5	57	<1	1960
P61	620	<1	2	<10	25.3	244	<0.5	5	<1	71
M2	1760	<1	4	<10	28.3	254	<0.5	60	<1	151
M3	4100	<1	1	<10	26.3	12	<0.5	10	<1	36
M5	3600	<1	2	<10	12.8	6	<0.5	226	<1	76
M6	3190	<1	<1	<10	<0.5	<3	<0.5	111	<1	10

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M7	2360	<1	3	<10	24.2	11	<0.5	36	<1	112
M8	3090	<1	2	<10	12.2	6	<0.5	142	<1	63
M9	2250	<1	3	<10	22.6	25	<0.5	101	<1	121
M10	4060	<1	3	<10	22.5	7	<0.5	200	<1	116
M11	3730	<1	5	<10	37.4	13	<0.5	91	<1	190
M12	5170	<1	13	<10	19.2	5	<0.5	91	<1	466
M13	2160	<1	2	<10	22.2	366	<0.5	6	<1	62
M14	2210	<1	29	<10	49.4	20	<0.5	60	<1	873
M15	3220	<1	9	<10	29.7	<3	<0.5	12	<1	379
M16	2700	<1	12	<10	32.0	3	<0.5	42	<1	402
M17	3290	<1	2	<10	1.7	3	<0.5	9	<1	97
M18	3370	<1	64	<10	40.5	16	<0.5	96	<1	2010
M19	3150	<1	10	<10	35.6	6	<0.5	44	<1	345
M20	2090	<1	6	<10	33.8	162	<0.5	17	<1	210
M21	2550	<1	2	<10	30.6	125	<0.5	11	<1	90
M22	4030	<1	3	<10	16.9	8	<0.5	13	<1	112
M23	2970	<1	2	<10	22.8	10	<0.5	6	<1	74
M24	3020	<1	3	<10	25.4	6	<0.5	21	<1	111
M25	1460	<1	2	<10	35.1	28	<0.5	17	<1	58
M26	3350	<1	6	<10	17.0	<3	<0.5	177	<1	241
M30	4360	<1	20	<10	31.4	<3	<0.5	123	<1	698
M31	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.
M32	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.
M33	2400	<1	1	<10	9.5	12	<0.5	5	<1	59
M34	1150	<1	22	<10	61.1	179	<0.5	53	<1	764
M35	3290	<1	35	<10	41.6	8	<0.5	55	<1	1100
M36	2500	<1	5	<10	23.4	5	<0.5	31	<1	186
M37	3120	<1	3	<10	13.1	3	<0.5	26	<1	119
M40	4650	<1	36	<10	49.1	13	<0.5	62	<1	1210
M41	4160	<1	16	<10	55.1	3	<0.5	57	<1	502
M42	1310	<1	4	<10	30.6	114	<0.5	49	<1	110
M43	2000	<1	11	<10	28.3	71	<0.5	161	<1	468
M44	2010	<1	10	<10	26.0	26	<0.5	129	<1	367
M45	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.
M46	3310	<1	10	<10	25.9	<3	<0.5	41	<1	320
M47	1230	<1	14	<10	32.0	47	<0.5	109	<1	631
M48	2260	<1	7	<10	59.2	6	<0.5	32	<1	210
M49	2150	<1	2	<10	38.6	15	<0.5	9	<1	95
*Rep P14	860	<1	5	<10	26.6	841	<0.5	11	<1	146
*Rep P22	3490	<1	8	<10	24.6	13	<0.5	45	<1	270
*Rep P55	1340	<1	13	<10	82.7	255	0.9	37	<1	478
*Rep M3	3880	<1	<1	<10	25.2	7	<0.5	8	<1	32
*Rep M31	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.

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Element Method Det.Lim. Units	Sr@ MMI-M5 10 ppb	Ta@ MMI-M5 1 ppb	Tb@ MMI-M5 1 ppb	Te@ MMI-M5 10 ppb	Th@ MMI-M5 0.5 ppb	Ti@ MMI-M5 3 ppb	Tl@ MMI-M5 0.5 ppb	U@ MMI-M5 1 ppb	W@ MMI-M5 1 ppb	Y@ MMI-M5 5 ppb
*Rep M37	3210	<1	3	<10	11.1	6	<0.5	25	<1	112
*Rep M47	1250	<1	13	<10	30.2	55	<0.5	106	<1	589
*Std MMISRM16	510	<1	<1	<10	18.4	7	<0.5	45	<1	9
*Std AMIS0169	80	<1	5	<10	67.2	387	1.4	25	1	121
*Std MMISRM18	1080	<1	<1	<10	19.3	5	<0.5	26	<1	20
*Bik BLANK	<10	<1	<1	<10	0.5	<3	<0.5	<1	<1	<5
*Bik BLANK	<10	<1	<1	<10	<0.5	<3	<0.5	<1	<1	<5
*Bik BLANK	<10	<1	<1	<10	0.6	<3	<0.5	<1	<1	<5

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Element Method Det.Lim. Units	Yb@ MMI-M5 1 ppb	Zn@ MMI-M5 20 ppb	Zr@ MMI-M5 5 ppb
P3	12	20	38
P4	15	40	29
P5	3	<20	9
P6	14	20	64
P7	5	20	14
P8	24	<20	51
P9	14	40	41
P10	30	40	38
P11	13	30	25
P12	5	40	127
P13	13	30	48
P14	7	<20	36
P15	6	30	29
P16	3	40	22
P17	29	30	29
P18	53	50	25
P19	56	50	26
P21	214	<20	49
P22	14	<20	26
P25	8	30	86
P29	10	50	64
P30	30	30	93
P31	23	20	53
P38	14	<20	55
P39	22	20	60
P40	37	40	77
P46	8	40	109
P48	4	<20	39
P49	10	<20	75
P50	10	<20	66
P51	12	80	34
P54	74	200	67
P55	28	20	56
P56	13	30	69
P57	83	<20	29
P58	174	<20	30
P59	54	<20	45
P60	73	<20	24
P61	5	40	36
M2	12	40	77
M3	2	<20	16
M5	5	<20	15
M6	1	<20	<5

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Element Method Det.Lim. Units	Yb@ MMI-M5 1 ppb	Zn@ MMI-M5 20 ppb	Zr@ MMI-M5 5 ppb
M7	8	<20	37
M8	4	<20	19
M9	9	<20	44
M10	8	<20	23
M11	15	<20	52
M12	35	50	23
M13	3	20	33
M14	45	<20	34
M15	18	<20	18
M16	23	<20	26
M17	5	30	10
M18	117	<20	57
M19	16	<20	34
M20	13	<20	32
M21	5	<20	29
M22	4	<20	12
M23	3	<20	15
M24	7	<20	21
M25	4	<20	17
M26	13	40	19
M30	42	50	14
M31	L.N.R.	L.N.R.	L.N.R.
M32	L.N.R.	L.N.R.	L.N.R.
M33	3	<20	7
M34	50	<20	51
M35	63	40	66
M36	12	20	29
M37	6	<20	17
M40	108	<20	39
M41	28	30	33
M42	21	50	49
M43	32	<20	84
M44	23	50	54
M45	L.N.R.	L.N.R.	L.N.R.
M46	17	20	46
M47	45	30	60
M48	13	60	25
M49	7	40	23
*Rep P14	6	20	40
*Rep P22	15	20	26
*Rep P55	32	20	67
*Rep M3	2	<20	13
*Rep M31	L.N.R.	L.N.R.	L.N.R.

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Element	Yb@	Zn@	Zr@
Method	MMI-M5	MMI-M5	MMI-M5
Det.Lim.	1	20	5
Units	ppb	ppb	ppb
*Rep M37	6	<20	16
*Rep M47	41	30	61
*Std MMISRM16	<1	370	12
*Std AMIS0169	9	190	42
*Std MMISRM18	<1	700	26
*Bik BLANK	<1	<20	<5
*Bik BLANK	<1	<20	<5
*Bik BLANK	<1	<20	<5

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