

CDN Resource Laboratories Ltd.

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Certificate of Analysis

REFERENCE MATERIAL: CDN-MPC-2302

Recommended values and the "Between Lab" Two Standard Deviations

Copper	25.76 %	± 0.29 %	Titration/ Volumetric	Certified value
Gold	0.763 gpt	± 0.057 gpt	30 g FA, instrumental finish	Certified value
Silver	98 ppm	± 8 ppm	4 Acid digestion / ICP	Certified value
Silver	99 ppm	± 7 ppm	Aqua Regia digestion/ ICP	Certified value
Copper	25.1 %	± 1.2 %	4 Acid digestion / ICP	Certified value
Copper	26.1 %	± 1.1 %	Aqua Regia digestion/ ICP	Certified value
Molybdenum	2456 ppm	± 84 ppm	4 Acid digestion / ICP	Certified value
Molybdenum	2436 ppm	± 141 ppm	Aqua Regia digestion/ ICP	Certified value
Lead	71 ppm	± 12 ppm	4 Acid digestion / ICP	Provisional mean
Lead	65 ppm	± 14 ppm	Aqua Regia digestion/ ICP	Provisional mean
Arsenic	694 ppm	± 67 ppm	4 Acid digestion / ICP	Provisional mean
Arsenic	728 ppm	± 49 ppm	Aqua Regia digestion/ ICP	Certified value
Iron	11.50 %	± 0.39 %	4 Acid digestion / ICP	Certified value
Iron	10.83 %	± 0.75 %	Aqua Regia digestion/ ICP	Certified value
Total S	15.0 %	± 0.5 %	IR instrument- LECO Induction	Certified value
Bismuth		69	4 Acid digestion / ICP	Indicated value
Bismuth		89	Aqua Regia digestion/ ICP	Indicated value
Fluorine	253 ppm	± 37 ppm	Fusion Ion Electrode	Provisional mean

Note 1: Standards with an RSD of near or less than 5% are certified; RSD's of between 5% and 15% are Provisional; RSD's over 15% are Indicated. Provisional and Indicated values cannot be used to monitor accuracy with a high degree of certainty.

PREPARED BY: CDN Resource Laboratories Ltd.
CERTIFIED BY: Ali Alizadeh, MSc, MBA, P Geo
INDEPENDENT GEOCHEMIST: Dr. Barry Smee., Ph.D., FGC
DATE OF CERTIFICATION: March 27th, 2024

ORIGIN OF REFERENCE MATERIAL:

Standard CDN-MPC-2302 was prepared from a concentrate which became available to CDN Resource Laboratories.

METHOD OF PREPARATION:

Reject ore material was dried, crushed, pulverized, and then passed through a 270-mesh screen. The +270 material was discarded. The -270 material was mixed for 5 days in a double-cone mixer. Splits were taken and sent to 15 commercial laboratories for round robin assaying.

Assay Procedures:

Cu: Classical Titration
Au: 30 gr. fire assay pre-concentration, AA or ICP finish.
F: Fusion Ion Electrode or ICP Finish
Ag, Cu, Mo, Pb, Fe, As, Bi: 4-acid digestion, and Aqua Regia digestion AA or ICP finish.
Total S: LECO Induction

Statistical Procedures:

The final limits were calculated after first determining if all data was compatible within a spread normally expected for similar analytical methods done by reputable laboratories. Data from any one laboratory was removed from further calculations when the mean of all analyses from that laboratory failed a T test of the global means of the other laboratories. The means and standard deviations were calculated using all remaining data. Any analysis that fell outside of the mean ±2 standard deviations was removed from the ensuing data base. The mean and standard deviations were again calculated using the remaining data. This method is different from that used by Government agencies in that the actual “between-laboratory” standard deviation is used in the calculations. This produces upper and lower limits that reflect actual individual analyses rather than a grouped set of analyses. The limits can therefore be used to monitor accuracy from individual analyses, unlike the Confidence Limits published on other standards.

Quality Assurance and Quality Control Procedures:

Screening Test: After completion of homogenization, three samples, 300g each of homogenized material was randomly collected and was re-screened by a testing sieve. Over size material of this standard and based on CDN’s screening test was ~%1.0.

Homogeneity Test:

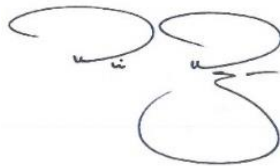
15 samples were selected selectively throughout the batch and were sent to an independent assay Laboratories for Homogeneity testing following directions of Annex B, Homogeneity and Stability of proficiency test items, ISO 13528:2015 Guidelines.

Assay results went through a statistical work-up by checking the mean, standard deviation, and %RSD. Based on performed statistical works outlined by ISO 13528; CDN-MPC-2302 is statistically homogenized (Appendix III).

LEGAL NOTICE:

This certificate and the reference material described in it have been prepared with due care and attention. However, CDN Resource Laboratories Ltd. nor Barry Smee accept any liability for any decisions or actions taken following the use of the reference material. Our liability is limited solely to the cost of the reference material.

Certified by



Ali Alizadeh, MSc, MBA, P.Geo.

Geochemist



Dr. Barry Smee., Ph.D., FGC

APPENDIX I:

Whole rock analysis and 30 element ICP analysis (4-acid digestion) were also conducted on 3 samples.

APPROXIMATE CHEMICAL COMPOSITION (by whole rock analysis):

Analyte	Percent	Analyte	Percent
SiO ₂	29.3	Na ₂ O	1.4
Al ₂ O ₃	7.6	MgO	1.2
Fe ₂ O ₃	16.9	K ₂ O	0.9
CaO	2.9	TiO ₂	0.3
MnO	<0.1	LOI	6.8
Total S	15.0	Total C	0.2

Participating Laboratories: (not in same order as table of assays)

Activation Labs, Ancaster, Ontario, Canada
ALS, Perth, Australia
ALS Lima, Peru
ALS, Loughrea, Ireland
ALS Canada, North Vancouver, BC, Canada
Bureau Veritas, Vancouver, BC, Canada
MS Analytical, Langley, BC, Canada
SGS Lakefield, ON, Canada

APPENDIX II: Results from round-robin assaying:

Standard	Lab 1	Lab 2	Lab 3	Lab 4	Lab 5	Lab 6	Lab 7	Lab 8
	Au by Fire Assay, 30g sample size and Instrumental finish							
MPC-2302	0.731	0.756	0.737	0.763	0.786	0.790	0.80	0.81
	0.749	0.698	0.773	0.712	0.797	0.773	0.78	0.79
	0.747	0.732	0.744	0.741	0.757	0.761	0.78	0.76
	0.742	0.742	0.729	0.774	0.732	0.780	0.78	0.76
	0.703	0.724	0.747	0.747	0.810	0.737	0.80	0.82
	0.785	0.712	0.732	0.729	0.764	0.750	0.78	0.76
	0.797	0.730	0.766	0.752	0.770	0.815	0.80	0.78
	0.780	0.698	0.743	0.925	0.774	0.732	0.81	0.76
	0.820	0.766	0.739	0.754	0.788	0.722	0.76	0.74
	0.732	0.725	0.778	0.764	0.799	0.755	0.82	0.76
Mean	0.759	0.728	0.749	0.766	0.778	0.762	0.79	0.77
Std. Devn.	0.04	0.02	0.02	0.06	0.02	0.03	0.02	0.03
% RSD	4.70	3.08	2.31	7.66	2.98	3.75	2.27	3.29
Ag (g/t) by 4Acid digestion Instrumental finish								
MPC-2302	93	102	103	101	99	102	97	94
	93	101	103	100	101	100	90	93
	92	101	103	100	101	100	91	94
	93	100	102	101	101	100	92	95
	91	100	102	99	102	101	92	94
	91	102	104	100	100	100	95	93
	92	101	106	99	102	101	95	94
	93	104	104	101	101	101	96	94
	92	103	101	101	101	101	97	92
	93	101	103	100	101	101	95	95
Mean	92	102	103	100	101	101	94	94
Std. Devn.	0.88	1.27	1.37	0.79	0.876	0.67	2.54	0.92
% RSD	0.96	1.25	1.33	0.79	0.868	0.67	2.70	0.98
Ag (g/t) by Aqua Regia digestion Instrumental finish								
MPC-2302	91	102	101	97	98	92	94	97.3
	90	103	103	97	99	99	94	97.5
	91	101	102	98	98	100	96	103.0
	89	101	103	97	87	100	94	107.0
	91	104	103	94	99	96	95	106.0
	81	101	101	97	98	98	97	103.0
	91	99	100	97	98	99	98	105.0
	81	101	102	98	99	98	100	105.0
	90	102	103	97	100	92	95	104.0
	91	102	102	98	98	92	95	99.2
Mean	89	102	102	97	97	97	96	102.7
Std. Devn.	4.10	1.35	1.05	1.15	3.718	3.46	1.99	3.50
% RSD	4.62	1.33	1.03	1.19	3.817	3.59	2.08	3.41

Standard	Lab 1	Lab 2	Lab 3	Lab 4	Lab 5	Lab 6	Lab 7	Lab 8
	Cu (%) by Volumetric							
MPC-2302	25.6	25.68	25.80	-	25.83	26.03	26.26	25.75
	25.7	25.65	25.80	-	25.86	26.68	25.53	25.79
	25.6	25.59	25.75	-	25.82	26.14	25.22	25.77
	25.7	25.64	25.77	-	25.79	26.69	26.25	25.79
	25.7	25.60	25.71	-	25.93	26.10	25.57	25.79
	25.6	25.59	25.81	-	26.01	25.98	25.10	25.77
	25.7	25.82	25.87	-	25.79	25.90	26.04	25.78
	25.6	25.66	25.80	-	25.82	26.20	25.39	25.76
	25.6	25.53	25.83	-	25.93	25.70	26.22	25.78
	25.7	25.61	25.85	-	25.97	25.77	25.61	25.77
Mean	25.7	25.64	25.80	-	25.88	26.12	25.72	25.78
Std. Devn.	0.053	0.077	0.047	-	0.079	0.337	0.440	0.014
% RSD	0.205	0.302	0.182	-	0.305	1.289	1.709	0.053
Cu (%) by 4Acid digestion Instrumental finish								
MPC-2302	24.7	>DTL	25.7	25.9	25.5	>DTL	24.716	24.7
	24.6	>DTL	25.8	25.6	25.6	>DTL	24.419	24.5
	25.6	>DTL	25.9	25.6	25.5	>DTL	24.387	23.7
	24.0	>DTL	25.8	25.6	25.7	>DTL	24.416	24.9
	24.7	>DTL	25.7	25.8	25.2	>DTL	24.305	24.7
	24.3	>DTL	25.9	25.6	25.1	>DTL	24.514	24.4
	24.6	>DTL	26.0	25.6	25.0	>DTL	24.480	24.5
	24.4	>DTL	25.8	25.7	25.1	>DTL	25.077	24.5
	24.6	>DTL	25.9	25.7	25.1	>DTL	25.353	24.6
	24.3	>DTL	25.6	25.6	25.2	>DTL	24.872	24.5
Mean	24.6		25.8	25.7	25.3		24.654	24.5
Std. Devn.	0.42		0.12	0.11	0.25		0.35	0.32
% RSD	1.71		0.46	0.41	0.99		1.40	1.29
Cu (%) by Aqua Regia digestion Instrumental finish								
MPC-2302	26.2	>DTL	26.3	26.1	25.7	>DTL	-	26.6
	25.8	>DTL	26.2	26.0	25.7	>DTL	-	27.6
	25.8	>DTL	26.3	26.0	25.8	>DTL	-	27.7
	25.7	>DTL	26.1	26.0	25.8	>DTL	-	27.6
	25.4	>DTL	26.1	26.1	25.7	>DTL	-	27.7
	25.9	>DTL	25.6	26.1	26.0	>DTL	-	27.1
	25.6	>DTL	25.8	27.4	25.8	>DTL	-	27.6
	25.3	>DTL	25.8	26.0	25.8	>DTL	-	27.9
	26.0	>DTL	26.0	26.0	25.8	>DTL	-	27.6
	25.5	>DTL	26.0	26.0	25.8	>DTL	-	26.5
Mean	25.7		26.0	26.2	25.8		-	27.4
Std. Devn.	0.28		0.23	0.43	0.09		-	0.49
% RSD	1.08		0.88	1.66	0.34		-	1.78

Standard	Lab 1	Lab 2	Lab 3	Lab 4	Lab 5	Lab 6	Lab 7	Lab 8
	S (%) by IR							
MPC-2302	15.2	15.55	14.70	14.80	14.95	14.25	14.90	13.8
	14.9	15.55	14.70	14.75	15.00	14.36	15.09	13.8
	15.2	15.60	14.90	14.95	14.75	15.08	15.09	14.1
	15.2	15.70	14.75	14.90	14.95	15.21	14.99	13.8
	15.0	15.55	14.75	14.85	14.95	14.90	14.80	13.9
	15.2	15.50	14.75	14.85	14.95	14.17	14.99	14.2
	15.3	15.05	14.95	14.90	14.85	14.98	14.99	13.9
	15.1	16.40	14.80	14.75	15.00	15.23	15.19	13.9
	15.3	15.55	14.50	14.90	14.90	14.74	14.90	13.7
14.9	17.80	14.85	14.90	15.00	14.94	14.99	13.6	
Mean	15.1	15.83	14.77	14.86	14.93	14.79	14.99	13.9
Std. Devn.	0.15	0.77	0.12	0.07	0.08	0.39	0.11	0.18
% RSD	0.99	4.85	0.85	0.46	0.53	2.66	0.74	1.27
F (ppm) by Ion Electrode ICP								
MPC-2302	180	240	280	260	250	236	240	280
	140	310	280	250	260	251	230	200
	180	330	280	250	240	249	230	260
	180	280	280	240	240	242	230	270
	230	280	280	250	240	234	230	270
	140	280	270	220	230	231	240	260
	180	290	280	250	250	239	240	250
	160	410	280	240	240	240	240	250
	240	250	310	230	250	240	240	270
	310	290	290	260	250	242	240	260
Mean	194	296	283	245	245	240	236	257
Std. Devn.	52.32	47.66	10.59	12.69	8.50	6.17	5.16	22.14
% RSD	26.97	16.10	3.74	5.18	3.47	2.57	2.19	8.61
Pb (ppm) by 4Acid digestion Instrumental finish								
MPC-2302	58	70	70	70	70	-	<DTL	81
	54	70	70	70	70	-	<DTL	82
	57	80	60	70	70	-	<DTL	81
	55	70	60	70	70	-	<DTL	87
	56	70	70	60	70	-	<DTL	78
	55	70	70	70	70	-	<DTL	79
	57	70	60	70	70	-	<DTL	82
	54	80	70	70	70	-	<DTL	74
	57	70	60	70	70	-	<DTL	77
	54	80	80	70	70	-	<DTL	82
Mean	56	73	67	69	70	-		80
Std. Devn.	1.49	4.83	6.75	3.16	0.00	-		3.53
% RSD	2.68	6.62	10.07	4.58	0.00	-		4.40

Standard	Lab 1	Lab 2	Lab 3	Lab 4	Lab 5	Lab 6	Lab 7	Lab 8
	Pb (ppm) by Aqua Regia digestion Instrumental finish							
MPC-2302	53	70	60	70	60	-	70	64
	51	70	60	70	70	-	70	65
	53	80	60	70	60	-	60	68
	53	160	70	60	60	-	70	70
	53	90	60	70	60	-	70	71
	48	70	70	70	50	-	70	67
	52	60	70	60	60	-	60	70
	47	70	70	80	60	-	70	70
	52	70	60	70	60	-	70	68
	52	70	60	70	60	-	70	64
Mean	51	81	64	69	60	-	68	68
Std. Devn.	2.17	28.85	5.16	5.68	4.71	-	4.22	2.63
% RSD	4.22	35.62	8.07	8.23	7.86	-	6.20	3.88
As (ppm) by 4Acid digestion Instrumental finish								
MPC-2302	559	720	720	620	690	700	670	161
	556	680	720	650	690	700	650	147
	555	690	710	600	700	700	670	148
	550	710	730	590	710	700	700	163
	533	710	730	590	730	700	660	146
	542	700	710	600	710	700	700	146
	539	700	720	600	740	700	670	154
	544	690	740	570	720	700	690	145
	567	720	720	620	710	700	690	154
	525	720	730	570	720	700	690	149
Mean	547	704	723	601	712	700	679	151
Std. Devn.	12.81	14.30	9.49	24.24	16.19	0.00	17.29	6.46
% RSD	2.34	2.03	1.31	4.03	2.27	0.00	2.55	4.27
As (ppm) by Aqua Regia digestion Instrumental finish								
MPC-2302	647	720	730	740	720	309	680	720
	641	730	740	750	720	269	690	716
	648	720	750	750	720	261	690	755
	638	740	750	750	630	225	680	790
	654	730	740	730	710	259	700	781
	586	730	720	750	710	242	710	762
	649	700	720	750	690	271	720	783
	579	720	750	750	730	243	720	784
	645	720	740	720	710	217	690	772
	649	720	740	740	710	243	700	737
Mean	634	723	738	743	705	254	698	760
Std. Devn.	27.34	10.59	11.35	10.59	28.38	26.27	14.76	27.25
% RSD	4.32	1.47	1.54	1.43	4.03	10.34	2.11	3.59

Standard	Lab 1	Lab 2	Lab 3	Lab 4	Lab 5	Lab 6	Lab 7	Lab 8
	Bi (ppm) by 4Acid digestion Instrumental finish							
MPC-2302	<DTL	90	<DTL	30	80	<DTL	<DTL	<DTL
	<DTL	100	<DTL	90	70	<DTL	<DTL	<DTL
	<DTL	110	<DTL	80	70	<DTL	<DTL	<DTL
	<DTL	70	<DTL	80	80	<DTL	<DTL	<DTL
	<DTL	40	<DTL	70	50	<DTL	<DTL	<DTL
	<DTL	50	<DTL	<DTL	50	<DTL	<DTL	<DTL
	<DTL	20	<DTL	110	70	<DTL	<DTL	<DTL
	<DTL	70	<DTL	90	50	<DTL	<DTL	<DTL
	<DTL	60	70	50	80	<DTL	<DTL	<DTL
	<DTL	130	<DTL	130	50	<DTL	<DTL	<DTL
Mean		74		81	65			
Std. Devn.		33.73		29.77	13.54			
% RSD		45.58		36.70	20.83			
Bi (ppm) by Aqua Regia digestion Instrumental finish								
MPC-2302	<DTL	80	80	70	180	<DTL	-	<DTL
	<DTL	90	70	110	60	<DTL	-	<DTL
	<DTL	120	70	100	210	<DTL	-	<DTL
	<DTL	60	90	10	190	<DTL	-	<DTL
	<DTL	150	80	40	220	<DTL	-	<DTL
	<DTL	70	100	90	220	<DTL	-	<DTL
	<DTL	100	90	30	20	<DTL	-	<DTL
	<DTL	80	70	70	80	<DTL	-	<DTL
	<DTL	90	110	140	70	<DTL	-	<DTL
	<DTL	90	100	50	200	<DTL	-	<DTL
Mean		93	86	71	145		-	
Std. Devn.		25.84	14.30	39.85	77.78		-	
% RSD		27.79	16.63	56.12	53.64		-	
Fe (%) by 4Acid digestion Instrumental finish								
MPC-2302	10.9	11.20	11.55	11.80	11.65	11.35	11.71	11.6
	10.8	11.20	11.55	11.70	11.65	11.21	11.45	11.6
	11.2	11.15	11.45	11.65	11.60	11.24	11.42	11.3
	10.6	11.15	11.45	11.75	11.70	11.24	11.46	11.8
	10.9	11.20	11.55	11.65	11.65	11.22	11.44	11.7
	10.9	11.20	11.50	11.65	11.60	11.11	11.66	11.5
	10.8	11.20	11.55	11.55	11.75	11.36	11.52	11.6
	9.5	11.25	11.55	11.60	11.65	11.31	11.85	11.5
	11.2	11.25	11.55	11.70	11.70	11.25	12.09	11.6
	8.6	11.40	11.55	11.55	11.65	11.32	11.99	11.7
Mean	10.5	11.22	11.53	11.66	11.66	11.26	11.66	11.6
Std. Devn.	0.83	0.07	0.04	0.08	0.05	0.08	0.25	0.14
% RSD	7.90	0.64	0.37	0.69	0.39	0.67	2.11	1.18

Standard	Lab 1	Lab 2	Lab 3	Lab 4	Lab 5	Lab 6	Lab 7	Lab 8
	Fe (%) by Aqua Regia digestion Instrumental finish							
MPC-2302	10.1	10.85	11.05	10.80	10.70	11.15	11.07	11.9
	10.0	10.85	11.10	10.90	10.80	10.97	11.16	12.5
	10.1	10.75	11.05	10.95	10.70	11.13	11.38	12.4
	10.0	10.75	11.05	10.85	9.48	10.99	11.03	12.5
	10.2	10.85	11.05	10.45	10.70	10.84	11.28	12.6
	9.1	10.75	11.00	10.85	10.75	10.81	11.59	12.5
	10.2	10.45	10.80	10.85	10.70	11.04	11.65	12.6
	9.0	10.75	11.10	10.95	10.85	10.91	11.63	12.6
	10.1	10.75	11.05	10.90	10.85	10.30	11.45	12.5
	10.1	10.80	11.05	10.85	10.75	10.31	11.39	12.0
Mean	9.9	10.76	11.03	10.84	10.63	10.85	11.36	12.4
Std. Devn.	0.45	0.12	0.09	0.14	0.41	0.31	0.23	0.25
% RSD	4.51	1.08	0.78	1.32	3.84	2.81	1.99	2.03
Mo (ppm) by 4Acid digestion Instrumental finish								
MPC-2302	2610	2460	2470	2510	2430	2420	2380	2510
	2620	2470	2460	2480	2440	2370	2330	2510
	2610	2480	2430	2480	2440	2390	2360	2490
	2590	2480	2440	2490	2450	2380	2330	2490
	2590	2450	2440	2470	2470	2400	2370	2510
	2580	2530	2460	2460	2460	2390	2390	2530
	2590	2490	2470	2460	2470	2430	2370	2500
	2590	2510	2460	2480	2470	2420	2420	2480
	2610	2500	2450	2480	2480	2400	2460	2470
	2500	2520	2460	2470	2460	2420	2430	2510
Mean	2589	2489	2454	2478	2457	2402	2384	2500
Std. Devn.	33.81	26.01	13.50	14.76	16.36	19.89	42.22	17.64
% RSD	1.31	1.05	0.55	0.60	0.67	0.83	1.77	0.71
Mo (ppm) by Aqua Regia digestion Instrumental finish								
MPC-2302	1840	2500	2420	2520	2400	2483	2290	2620
	1800	2530	2450	2530	2420	2463	2300	2820
	1840	2520	2460	2540	2410	2444	2370	2830
	1860	2520	2450	2520	2140	2419	2280	2830
	1800	2530	2440	2430	2410	2383	2350	2840
	1670	2500	2370	2520	2400	2423	2390	2810
	1870	2400	2330	2510	2400	2450	2400	2830
	1880	2480	2430	2520	2430	2406	2410	2860
	1890	2500	2480	2530	2430	2279	2370	2790
	1820	2500	2470	2530	2410	2310	2340	2700
Mean	1827	2498	2430	2515	2385	2406	2350	2793
Std. Devn.	63.43	37.95	46.67	31.00	86.83	65.74	46.67	74.84
% RSD	3.47	1.52	1.92	1.23	3.64	2.73	1.99	2.68

Notes:

- Ag results assayed by Aqua Regia digestion with instrumental finish from Lab 1 were removed for failing the t test.
- Total 5 results from Lab 8 were removed for failing the t test.
- Pb results assayed by 4 Acid digestion with instrumental finish from Lab 1 were removed for failing the t test.
- As results assayed by 4 Acid digestion with instrumental finish from Labs 1 and 8 were removed for failing the t test.
- As results assayed by Aqua Regia digestion with instrumental finish from Labs 1 and 6 were removed for failing the t test.
- Fe results assayed by 4 Acid digestion with instrumental finish from Lab 1 were removed for failing the t test.
- Fe results assayed by Aqua Regia digestion with instrumental finish from Lab 8 were removed for failing the t test.
- Mo results assayed by 4 Acid digestion with instrumental finish from Lab 1 were removed for failing the t test.
- Mo results assayed by Aqua Regia digestion with instrumental finish from Labs 1 and 8 were removed for failing the t test.

APPENDIX III: QAQC

Table below illustrates percentages of over size (+275 mesh) material in CDN-MPC-2302

Standard	Study Date	Total weight Screened (g)	Total weight Over size (g)	Percentage
MPC-2302	11/6/2023	300	3.5	1.2%
	11/6/2023	300	3.5	1.2%
	11/6/2023	300	4	1.3%

Table below shows homogeneity test results of CDN-MPC-2302

MPC-2302	Au Original	Au Repeat	Between Sample Variance Wt	Sample Avg. Xt	Stdev of Sample Avg	Within-Sample Std.
	0.720	0.760	0.040	0.740	0.001	0.002
	0.766	0.755	0.011	0.761	0.000	0.000
	0.745	0.772	0.027	0.759	0.000	0.001
	0.759	0.830	0.071	0.795	0.001	0.005
	0.750	0.742	0.008	0.746	0.001	0.000
	0.789	0.777	0.012	0.783	0.000	0.000
	0.756	0.779	0.023	0.768	0.000	0.001
	0.742	0.760	0.018	0.751	0.000	0.000
	0.789	0.759	0.030	0.774	0.000	0.001
	0.769	0.796	0.027	0.783	0.000	0.001
	0.781	0.767	0.014	0.774	0.000	0.000
	0.768	0.775	0.007	0.772	0.000	0.000
	0.787	0.774	0.013	0.781	0.000	0.000
	0.777	0.775	0.002	0.776	0.000	0.000
0.774	0.771	0.003	0.773	0.000	0.000	
Statistics			Gavg	SX	SS	
Mean	0.765	0.773	0.769	0.015	0.007	
SD	0.0197	0.0202	C	C SQRT		
RSD	2.577	2.611	0.0006	0.03		
Proof of Homogeneity	Based on Statistical procedures outlined in Annex B, ISO 13528:2015 guidelines, If "SS is < square root of C" Standard is considered homogeneous. MPC-2302 is statistically homogenous					

APPENDIX IV: General Notes

Intended Use

This Certified Reference Material, fit for use as a control sample in routine assay laboratory quality control when inserted within runs of test samples and measured in parallel to test samples. This material can also be used for method development, use as independent calibration verification check standard or for validation of accuracy in a method validation exercise.

This CRM can also be used to assess inter-laboratory or instrument bias and establish within-laboratory precision and within-laboratory reproducibility. The certified concentrations and expanded uncertainty for this material are property values based on an inter-laboratory measurement campaign and reflect consensus results from the laboratories that took part in the exercise.

Handling

Do not use if the seal is broken or there are any signs of contamination.

The material is packaged in either Tin Tie envelopes, foil envelopes, or jars that must be shaken before use.

Storage information

The material should be stored in a dry place, in such a way that it does not compromise the integrity of the CRM. The material should be stored in conditions which will ensure it does not absorb moisture.

Certificate is not valid if re-packaged by a third party.

Metrological Traceability

The values quoted herein are based on the consensus values derived from statistical analysis of the data from an inter-laboratory measurement program. Traceability to SI units is via the standards used by the individual laboratories all of which are accredited to the ISO17025 general requirements for the competence of testing and calibration laboratories and who have maintained measurement traceability during the analytical process.

Period of Validity

The certified values are valid for this product, while still sealed in its original packaging, until notification to the contrary. The material's stability will undergo regular testing every five years throughout its inventory duration. Should product stability become an issue, all customers will be notified and notification to that effect will be placed on the <http://www.cdnlabs.com/> website.

Minimum Sample Size

Most of the laboratory's reporting used a 0.5g sample size for the ICP and a 30g sample size for the fire assay. Our certified gold values are based on 30g Fire Assay determinations. For optimal results, we strongly recommend you assay our standards with similar methods using "at least" 30g of material. Using a smaller sample weight may result in erratic values. These are the recommended minimum sample sizes for the use of this material.

Statistical Procedures

Round robin samples were sent to participating laboratories.

The mean and standard deviation for all data were calculated. Outliers were defined as samples beyond the mean \pm 2 Standard Deviations from all data. These outliers were removed from the data and a new mean and standard deviation were determined. This method makes use of actual "between-laboratory" standard deviation in the calculations. This produces upper and lower limits that reflect actual individual analyses rather than a grouped set of analyses.

Statistical analysis was carried out by Dr. Barry Smee, an independent statistician. A statistical report is provided along with a certificate of analysis.