

CDN Resource Laboratories Ltd.

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REFERENCE MATERIAL: CDN-CM-42

Recommended values and the “Between Lab” Two Standard Deviations

Gold	0.576 g/t ± 0.050 g/t	Certified value	30g FA / ICP or AA
Copper	0.526 % ± 0.022 %	Certified value	4-acid / ICP or AA
Copper	0.529 % ± 0.018 %	Certified value	Aqua regia / ICP or AA

Note: 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.

The certified value and between lab 2SD calculated for each element are done so for a specific analytical procedure. It is inappropriate to apply them to other techniques (eg. geochemical analyses).

PREPARED BY: CDN Resource Laboratories Ltd.

CERTIFIED BY: Duncan Sanderson, B.Sc., Licensed Assayer of British Columbia

INDEPENDENT GEOCHEMIST: Dr. Barry Smee., Ph.D., P. Geo.

DATE OF CERTIFICATION: December 20, 2016

ORIGIN OF REFERENCE MATERIAL:

Standard CDN-CM-42 was prepared using ore from a project in the south-central Far East. The ore is from K-silicate, silicic and sericitic altered intermediate volcanic and related intrusive rocks exhibiting porphyry-style copper and gold mineralization. 810 kg of this ore was combined with 13 kg of a high grade Au-Cu ore.

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 laboratories for round robin assaying. Round robin results are displayed below.

APPROXIMATE CHEMICAL COMPOSITION (from whole rock analysis) is as follows:

	Percent		Percent
SiO ₂	61.5	K ₂ O	3.2
Al ₂ O ₃	16.5	TiO ₂	0.5
Fe ₂ O ₃	7.5	LOI	4.4
CaO	2.3	Total S	2.0
Na ₂ O	1.5	Total C	0.1
MgO	1.5		

Round-robin results are displayed on the following page.

	Lab 1	Lab 2	Lab 3	Lab 4	Lab 5	Lab 6	Lab 7	Lab 8	Lab 9	Lab 10	Lab 11	Lab 12	Lab 13	Lab 14	Lab 15
	Au g/t	Au g/t	Au g/t	Au g/t	Au g/t	Au g/t	Au g/t	Au g/t	Au g/t	Au g/t	Au g/t	Au g/t	Au g/t	Au g/t	Au g/t
CM-42-1	0.619	0.576	0.550	0.601	0.598	0.571	0.580	0.592	0.579	0.592	0.577	0.610	0.553	0.553	0.544
CM-42-2	0.636	0.587	0.605	0.608	0.582	0.558	0.590	0.579	0.551	0.571	0.568	0.585	0.559	0.547	0.540
CM-42-3	0.606	0.610	0.662	0.607	0.563	0.550	0.560	0.520	0.626	0.537	0.602	0.606	0.536	0.576	0.567
CM-42-4	0.564	0.545	0.633	0.600	0.594	0.576	0.550	0.553	0.617	0.543	0.604	0.613	0.563	0.562	0.554
CM-42-5	0.635	0.581	0.595	0.585	0.573	0.564	0.560	0.589	0.593	0.574	0.553	0.617	0.569	0.551	0.566
CM-42-6	0.594	0.615	0.606	0.566	0.566	0.566	0.530	0.564	0.599	0.612	0.584	0.617	0.541	0.554	0.560
CM-42-7	0.604	0.615	0.609	0.600	0.583	0.548	0.560	0.530	0.557	0.530	0.573	0.560	0.572	0.541	0.534
CM-42-8	0.597	0.642	0.602	0.629	0.580	0.552	0.540	0.555	0.608	0.565	0.595	0.599	0.566	0.564	0.560
CM-42-9	0.576	0.650	0.620	0.621	0.572	0.569	0.570	0.539	0.592	0.590	0.561	0.601	0.557	0.558	0.544
CM-42-10	0.617	0.571	0.604	0.594	0.571	0.555	0.530	0.555	0.597	0.569	0.569	0.589	0.561	0.546	0.547
Mean	0.605	0.599	0.609	0.601	0.578	0.561	0.557	0.558	0.592	0.568	0.579	0.600	0.558	0.555	0.552
Std. Devn.	0.0234	0.0330	0.0284	0.0176	0.0114	0.0097	0.0200	0.0241	0.0240	0.0260	0.0173	0.0177	0.0116	0.0102	0.0114
% RSD	3.86	5.50	4.67	2.93	1.98	1.72	3.60	4.32	4.06	4.57	2.99	2.96	2.08	1.84	2.07
4-acid	% Cu	% Cu	% Cu	% Cu	% Cu	% Cu	% Cu	% Cu	% Cu	% Cu	% Cu	% Cu	% Cu	% Cu	% Cu
CM-42-1	0.525	0.525	0.523	0.527	0.530	0.536	0.543	0.522	0.540	0.500	0.547	0.542	0.51	0.51	0.516
CM-42-2	0.526	0.528	0.520	0.511	0.531	0.528	0.547	0.544	0.542	0.537	0.555	0.550	0.51	0.53	0.512
CM-42-3	0.517	0.527	0.525	0.523	0.524	0.524	0.539	0.534	0.549	0.523	0.553	0.547	0.52	0.51	0.509
CM-42-4	0.514	0.545	0.523	0.518	0.530	0.537	0.540	0.546	0.535	0.524	0.560	0.542	0.53	0.52	0.517
CM-42-5	0.519	0.523	0.524	0.515	0.533	0.531	0.546	0.518	0.539	0.507	0.557	0.541	0.50	0.52	0.512
CM-42-6	0.517	0.521	0.525	0.521	0.524	0.534	0.536	0.523	0.534	0.493	0.554	0.538	0.52	0.51	0.512
CM-42-7	0.514	0.520	0.520	0.519	0.535	0.531	0.545	0.531	0.536	0.516	0.556	0.541	0.52	0.51	0.510
CM-42-8	0.520	0.532	0.523	0.524	0.534	0.523	0.538	0.523	0.530	0.501	0.554	0.540	0.53	0.52	0.504
CM-42-9	0.526	0.534	0.522	0.519	0.531	0.526	0.538	0.515	0.533	0.493	0.556	0.534	0.50	0.51	0.513
CM-42-10	0.518	0.533	0.528	0.522	0.544	0.519	0.544	0.505	0.543	0.507	0.559	0.544	0.52	0.52	0.516
Mean	0.520	0.529	0.523	0.520	0.532	0.529	0.542	0.526	0.538	0.510	0.555	0.542	0.516	0.516	0.512
Std. Devn.	0.0046	0.0075	0.0024	0.0046	0.0057	0.0058	0.0039	0.0128	0.0056	0.0146	0.0036	0.0045	0.0107	0.0070	0.0037
% RSD	0.89	1.42	0.46	0.89	1.08	1.09	0.71	2.43	1.05	2.85	0.65	0.82	2.08	1.36	0.73
Aqua regia	% Cu	% Cu	% Cu	% Cu	% Cu	% Cu	% Cu	% Cu	% Cu	% Cu	% Cu	% Cu	% Cu	% Cu	% Cu
CM-42-1	0.526	0.536	0.520	0.511	0.533	0.532	0.535	0.540	0.533	0.533	0.539	0.530	0.52	0.52	0.500
CM-42-2	0.526	0.534	0.524	0.512	0.536	0.527	0.535	0.536	0.532	0.557	0.543	0.529	0.53	0.51	0.497
CM-42-3	0.534	0.542	0.525	0.516	0.540	0.517	0.540	0.539	0.531	0.548	0.541	0.533	0.52	0.51	0.515
CM-42-4	0.528	0.535	0.517	0.515	0.529	0.522	0.537	0.533	0.534	0.553	0.537	0.530	0.52	0.50	0.499
CM-42-5	0.518	0.534	0.526	0.521	0.536	0.530	0.543	0.544	0.534	0.546	0.539	0.529	0.52	0.51	0.519
CM-42-6	0.517	0.531	0.528	0.524	0.537	0.530	0.541	0.526	0.532	0.530	0.533	0.535	0.53	0.51	0.520
CM-42-7	0.525	0.538	0.526	0.527	0.533	0.531	0.537	0.527	0.536	0.548	0.538	0.532	0.52	0.52	0.519
CM-42-8	0.524	0.537	0.526	0.529	0.531	0.527	0.536	0.539	0.528	0.537	0.540	0.530	0.53	0.51	0.510
CM-42-9	0.529	0.545	0.528	0.530	0.542	0.532	0.532	0.540	0.508	0.530	0.548	0.519	0.52	0.51	0.503
CM-42-10	0.533	0.535	0.528	0.528	0.537	0.522	0.535	0.533	0.528	0.529	0.536	0.526	0.52	0.50	0.515
Mean	0.526	0.537	0.525	0.521	0.535	0.527	0.537	0.536	0.530	0.541	0.539	0.529	0.523	0.510	0.510
Std. Devn.	0.0055	0.0041	0.0036	0.0073	0.0040	0.0051	0.0033	0.0059	0.0080	0.0105	0.0041	0.0044	0.0048	0.0067	0.0090
% RSD	1.05	0.77	0.69	1.40	0.74	0.96	0.62	1.10	1.51	1.94	0.76	0.83	0.92	1.31	1.77

Note: Four acid Cu results from laboratory 11 were removed for failing the t test.

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.

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

Activation Laboratories, Ancaster, Ontario, Canada
Activation Laboratories, Thunder Bay, Ontario, Canada
AGAT, Mississauga, Ontario
ALS Canada, North Vancouver, B.C., Canada
ALS Loughrea (OMAC), Ireland
ALS, Lima, Peru
Andes Analytical, Santiago Chile
Argetest, Ankara, Turkey
Bureau Veritas, Vancouver, BC, Canada
Certimin S.A., Lima, Peru
MS Analytical, Langley, BC, Canada
SGS, Lakefield, Ontario
SGS, Lima, Peru
SGS, Vancouver, BC, Canada
TSL Laboratories, Saskatoon, Saskatchewan, Canada


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Certified by


Duncan Sanderson, Certified Assayer of B.C.

Geochemist


Dr. Barry Smee, Ph.D., P. Geo.