

Online Resource 3: Supplemental material on mass-transfer calculations

Table 1. Results of mass-transfer calculations showing gains and losses relative to the least mineralized sample ($\Delta C_i/C_0$)

	Felsic metavolcanic		Intermediate metavolcanic		Mafic metavolcanic		Metasedimentary rocks	
	Co ore	Au-Co ore	Co ore	Au-Co ore	Co ore	Au-Co ore	Co ore	Au-Co ore
Au	2.70	777.09	7.30	613.95	2.64	1174.56	4.24	408.96
Co	72.780	90.358	29.108	13.285	48.537	38.054	74.918	83.648
As	186.26	151.29	42.86	2.90	99.86	56.11	337.41	292.58
Mo	1.65	79.36	671.59	12.01	159.49	53.11	137.79	146.44
Cu	159.00	102.19	109.00	90.40	132.61	524.93	71.45	97.58
Ni	0.75	1.33	0.05	-0.06	0.82	-0.23	0.66	1.22
S	395.02	819.63	817.13	587.45	264.47	379.92	287.98	437.46
U	6.61	9.09	1.98	23.42	68.38	42.81	10.35	52.11
SiO ₂	-0.19	-0.24	-0.07	-0.37	-0.02	-0.17	-0.06	-0.02
Al ₂ O ₃	0.11	0.20	0.19	-0.18	-0.07	-0.29	0.05	0.11
Fe ₂ O ₃	7.37	8.24	4.02	2.51	2.85	4.81	4.51	5.45
CaO	1.58	-0.48	-0.76	-0.95	-0.64	-0.96	-0.56	-0.79
MgO	0.20	-0.48	-0.46	-0.61	-0.44	-0.59	-0.34	-0.55
Na ₂ O	-0.21	-0.52	-0.25	-0.96	-0.32	-0.77	-0.71	-0.70
K ₂ O	1.74	4.51	2.45	4.55	0.45	0.17	2.29	2.58
Cr ₂ O ₃	-0.16	-0.26	0.17	-0.33	0.22	-0.23	0.24	-0.01
TiO ₂	-0.15	0.09	0.07	-0.09	-0.13	-0.51	-0.09	-0.08
MnO	0.46	-0.32	-0.36	-0.74	0.10	-0.51	0.24	-0.29
P ₂ O ₅	0.17	-0.63	0.87	-0.01	-0.28	-0.19	-0.56	-0.48
BaO	0.71	0.89	2.05	3.65	2.54	1.55	4.07	4.20

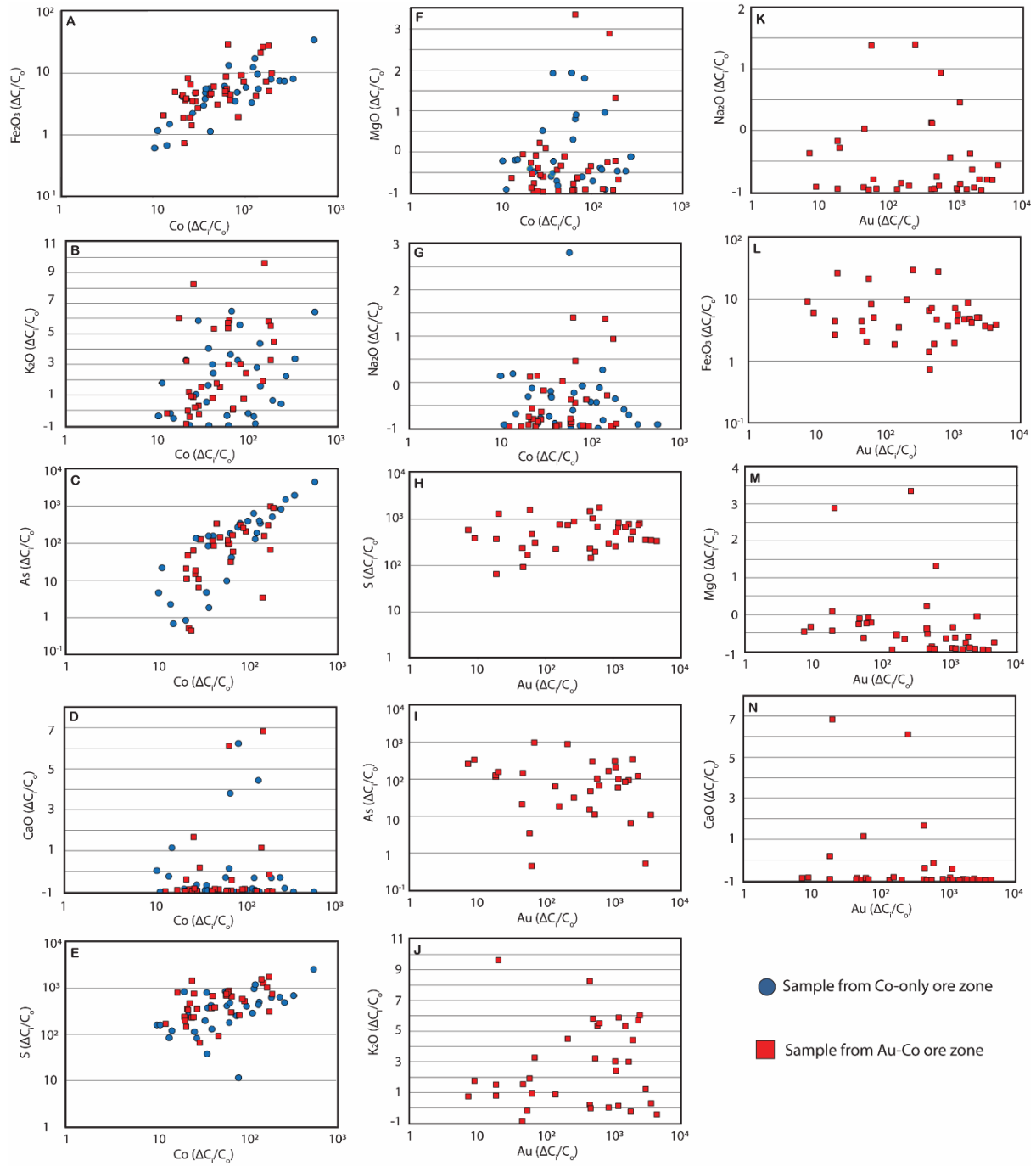


Fig. 1. Biplots showing the gains and losses of Co vs other elements (A-F) and of Au vs other elements (G-N) for selected samples. Individual representative samples were chosen from the mineralized parts of the mafic, intermediate-composition, and felsic metavolcanic, and metasedimentary rocks. Data points represent the results of mass-transfer calculations for each sample calculated against the least-altered composition for its respective rock type.

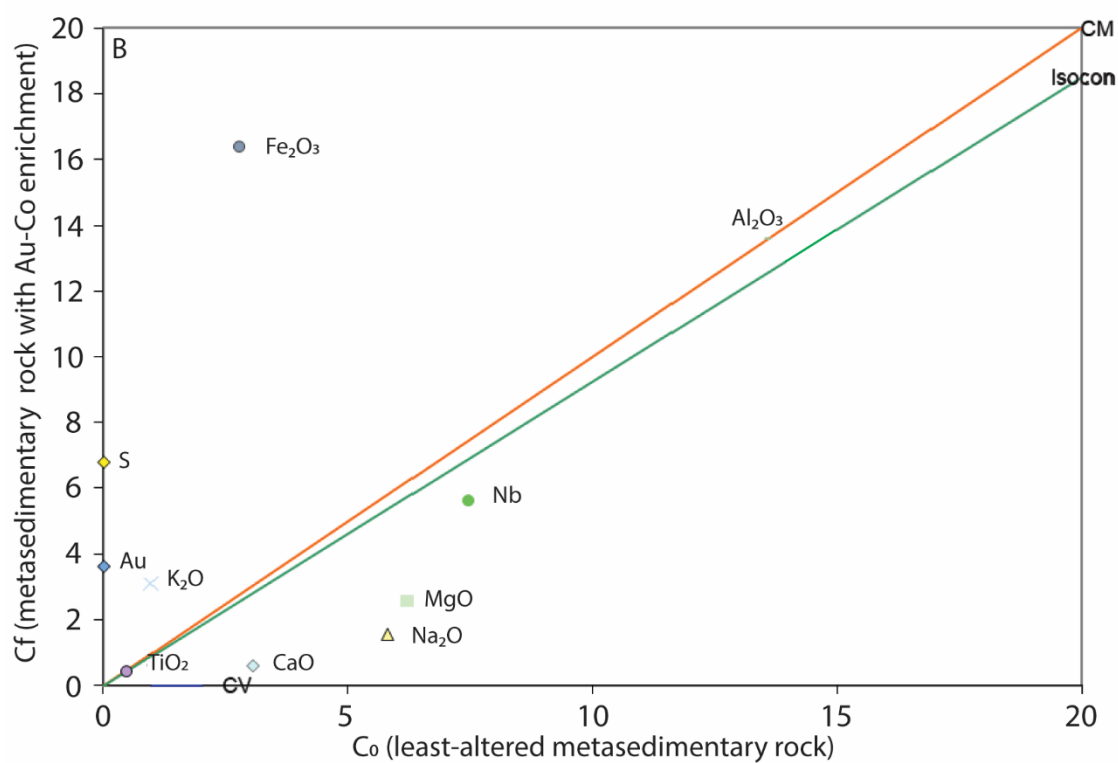
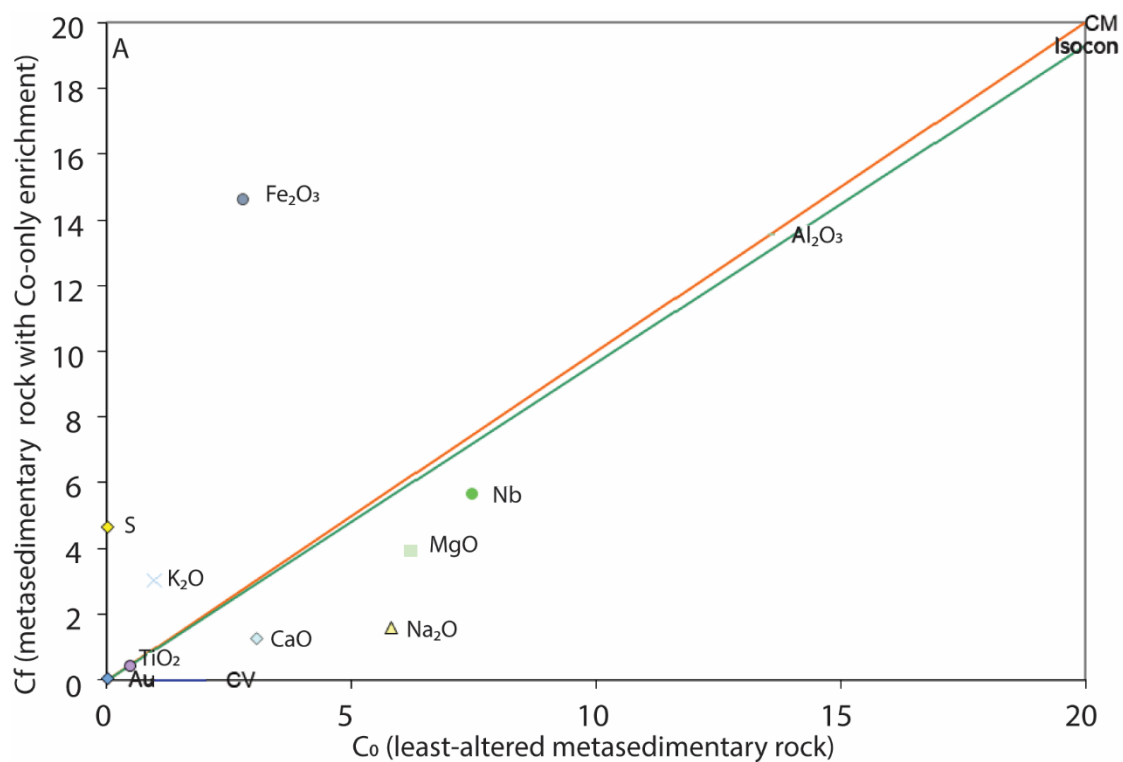


Fig. 2. Representative isocons used in mass-transfer calculations. Both Isocons have been scaled for better presentation. CM= constant mass line. A) Isocon for metasedimentary rocks with Co-only enrichment, B) isocon for metasedimentary rocks with Au-Co enrichment

Mineralium Deposita

Geochemical signatures of mineralizing events in the Juomasuo Au-Co deposit, Kuusamo belt, northeastern Finland

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