

SAMPLE COLLECTION

Sample collection is the most critical part of a soil geochemistry program. The MMI™ Technology has specific sampling protocol based on years of experience and research. In the absence of an orientation survey, samples must be taken at a constant depth (10-25 cm) below the organic-inorganic soil interface. There is no sample preparation or drying. The analysis is done on a 50 g sample and the extracted solution is analysed via ICP-MS, providing determinations in the part per billion range. For detailed instructions for the MMI™ sampling protocols and orientation surveys, please visit <https://www.sgs.com/en/mining/analytical-services/geochemistry/mobile-metal-ions-mmi> or contact us at minerals@sgs.com.

ICP-MS UNIVERSAL CELL TECHNOLOGY

SGS is committed to the MMI™ Technology. With the development of the ICP-MS combined with reaction cell technology we are able to further enhance this analytical approach. The lower detection limits provided by the removal of interferences using cell based technology inside the ICP-MS means that we can better define anomalous targets. For instance, for the exploration of nickel deposits, kimberlites and layered intrusions, low level chrome (1 ppb) is an important geological trace element. For uranium exploration, low level vanadium (1 ppb) is also important. If either or both of these elements are required for your program, we can analyse your samples using the MMI-ME package.

MOBILE METAL ION STANDARD PACKAGE / ICP-MS (53 ELEMENTS)

GE_MMIM

ELEMENTS AND LIMIT(S)

Ag ≥ 0.5 ppb	Er ≥ 0.2 ppb	Nd ≥ 1 ppb	Tb ≥ 0.1 ppb
Al ≥ 1 ppm	Eu ≥ 0.2 ppb	Ni ≥ 5 ppb	Te ≥ 10 ppb
As ≥ 10 ppb	Fe ≥ 1 ppm	P ≥ 0.1 ppm	Th ≥ 0.5 ppb
Au ≥ 0.1 ppb	Ga ≥ 0.5 ppb	Pb ≥ 5 ppb	Ti ≥ 10 ppb
Ba ≥ 10 ppb	Gd ≥ 0.5 ppb	Pd ≥ 1 ppb	Tl ≥ 0.1 ppb
Bi ≥ 0.5 ppb	Hg ≥ 1 ppb	Pr ≥ 0.5 ppb	U ≥ 0.5 ppb
Ca ≥ 2 ppm	In ≥ 0.1 ppb	Pt ≥ 0.1 ppb	W ≥ 0.5 ppb
Cd ≥ 1 ppb	K ≥ 0.5 ppm	Rb ≥ 1 ppb	Y ≥ 1 ppb
Ce ≥ 2 ppb	La ≥ 1 ppb	Sb ≥ 0.5 ppb	Yb ≥ 0.2 ppb
Co ≥ 1 ppb	Li ≥ 1 ppb	Sc ≥ 5 ppb	Zn ≥ 10 ppb
Cr ≥ 100 ppb	Mg ≥ 0.5 ppm	Sm ≥ 1 ppb	Zr ≥ 2 ppb
Cs ≥ 0.2 ppb	Mn ≥ 100 ppb	Sn ≥ 1 ppb	
Cu ≥ 10 ppb	Mo ≥ 2 ppb	Sr ≥ 10 ppb	
Dy ≥ 0.5 ppb	Nb ≥ 0.5 ppb	Ta ≥ 1 ppb	