



**ALS Methods**  
**AuME-TL43™**  
**AuME-TL44™**  
**AuME-ST43™**  
**AuME-ST44™**

# Au + Multi-Element Methods

Trace and Super-Trace Level analysis suitable for Soils & Sediments

Applicable to a variety of exploration sample types, the competitively priced Au + Multi-Element packages employ a single Aqua Regia digest with 25g or 50g charge weights to combat nugget effect. Both Trace Level and Super Trace lowest detection limit options are available.

Method	Sample Size	Type
AuME-TL43™	25g	Trace Level
AuME-TL44™	50g	Trace Level
AuME-ST43™	25g	Super Trace Level
AuME-ST44™	50g	Super Trace Level

Gold, in conjunction with a wide range of basemetal and pathfinder elements, are determined from the same digested solution via a combination of ICP-MS and ICP-AES for a complete exploration tool.

This combination allows ALS to deliver improved value for money in a competitive environment and a high level of data confidence with the advantage of reporting both precious metals and other analytes from the same sample aliquot to trace anomalies to the same sub-sample.

Major rock forming minerals can be used to map lithological and regolith boundaries, while mobile element data can be used to map regional structures.

These methods are excellent for regolith, allowing subsurface gold mineralization to be well-characterized. Aqua regia dissolves native gold as well as gold bound in sulfide minerals. However, depending on the composition of the soil, gold determined by this method may or may not match recovery from fire assay methods as it is not a total decomposition technique.



## Trace Level Detection Limits

AuME-TL43™ (25g sample) & AuME-TL44™ (50g sample) Analytes & Ranges (ppm)

Au	0.001-1	Cs	0.05-500	Mo	0.05-10000	Sr	0.2-10000
Ag	0.01-100	Cu	0.2-10000	Na	0.01-10%	Ta	0.01-500
Al	0.01-25%	Fe	0.01-50%	Nb	0.05-500	Te	0.01-500
As	0.1-10000	Ga	0.05-10000	Ni	0.2-10000	Th	0.2-10000
B	10-10000	Ge	0.05-500	P	10-10000	Ti	0.005-10%
Ba	10-10000	Hf	0.02-500	Pb	0.2-10000	Tl	0.02-10000
Be	0.05-1000	Hg	0.01-10000	Rb	0.1-10000	U	0.05-10000
Bi	0.01-10000	In	0.005-500	Re	0.001-50	V	1-10000
Ca	0.01-25%	K	0.01-10%	S	0.01-10%	W	0.05-10000
Cd	0.01-1000	La	0.2-10000	Sb	0.05-10000	Y	0.05-500
Ce	0.02-500	Li	0.1-10000	Sc	0.1-10000	Zn	2-10000
Co	0.1-10000	Mg	0.01-25%	Se	0.2-1000	Zr	0.5-500
Cr	1-10000	Mn	5-50000	Sn	0.2-500		

## Super Trace Level Detection Limits

AuME-ST43™ (25g sample) & AuME-ST44™ (50g sample) Analytes & Ranges (ppm)

Au	0.1 ppb-1 ppm	Cu	0.01-250	Nb	0.002-250	Ta	0.005-250
Ag	0.001-100	Fe	0.001%-50%	Ni	0.04-250	Te	0.01-250
Al	0.01%-25%	Ga	0.004-250	P	0.001%-1%	Th	0.002-250
As	0.01-250	Ge	0.005-250	Pb	0.005-250	Ti	0.001%-10%
B	10-10,000	Hf	0.002-250	Pd	0.001-100	Tl	0.002-250
Ba	0.5-10,000	Hg	0.004-250	Pt	0.001-100	U	0.005-100
Be	0.01-250	In	0.005-250	Rb	0.005-250	V	0.1-250
Bi	0.001-250	K	0.01%-10%	Re	0.001-50	W	0.001-250
Ca	0.01%-25%	La	0.002-250	S	0.01%-10%	Y	0.003-250
Cd	0.001-250	Li	0.1-250	Sb	0.005-250	Zn	0.1-250
Ce	0.003-250	Mg	0.01%-25%	Sc	0.005-250	Zr	0.01-500
Co	0.001-250	Mn	0.1-10,000	Se	0.1-250		
Cr	0.01-250	Mo	0.01-250	Sn	0.01-250		
Cs	0.005-250	Na	0.001%-10%	Sr	0.01-10,000		

ALS provides a wide range of specialised testing services covering all stages of your project's life cycle.

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