



**BUREAU  
VERITAS**

MINERALS

## ► AQ250

<b>Package Description</b>	Ultra Trace Geochemical Aqua Regia digestion
<b>Samples Digestion</b>	HNO <sub>3</sub> -HCl acid digestion
<b>Instrumentation Method</b>	ICP-ES and ICP-MS
<b>Legacy Code</b>	1F
<b>Applicability</b>	Sediment, Soil, Non-mineralized Rock and Drill Core

## ► METHOD DESCRIPTION

Prepared sample is digested with a modified Aqua Regia solution of equal parts concentrated HCl, HNO<sub>3</sub> and DI H<sub>2</sub>O for one hour in a heating block or hot water bath. Sample is made up to volume with dilute HCl. Sample splits of 0.5g, 15g or 30g can be analyzed.

Lead isotope Add On (+ISO) <sup>204</sup>Pb, <sup>206</sup>Pb, <sup>207</sup>Pb, <sup>208</sup>Pb are suitable for geochemical exploration of U and other commodities where gross differences in natural to radiogenic Pb ratios, is a benefit. Isotope values can be reported in both concentrations and intensities. Sample splits of 0.5g, 15g or 30g can be analyzed.

						Extended Package Elements		
ELEMENT	DETECTION LIMIT	UPPER LIMIT	ELEMENT	DETECTION LIMIT	UPPER LIMIT	ELEMENT	DETECTION LIMIT	UPPER LIMIT
Ag	2 ppb	100 ppm	Mo	0.01 ppm	2000 ppm	Be*	0.1 ppm	1000 ppm
Al*	0.01%	10%	Na*	0.001%	5%	Ce*	0.1 ppm	2000 ppm
As	0.1 ppm	10000 ppm	Ni	0.1 ppm	10000 ppm	Cs*	0.02 ppm	2000 ppm
Au	0.2 ppb	100 ppm	P*	0.001%	5%	Ge*	0.1 ppm	100 ppm
B* <sup>A</sup>	20 ppm	2000 ppm	Pb	0.01 ppm	10000 ppm	Hf*	0.02 ppm	1000 ppm
Ba*	0.5 ppm	10000 ppm	S	0.02%	10%	In	0.02 ppm	1000 ppm
Bi	0.02 ppm	2000 ppm	Sb	0.02 ppm	2000 ppm	Li*	0.1 ppm	2000 ppm
Ca*	0.01%	40%	Sc	0.1 ppm	100 ppm	Nb*	0.02 ppm	2000 ppm
Cd	0.01 ppm	2000 ppm	Se	0.1 ppm	100 ppm	Rb*	0.1 ppm	2000 ppm
Co	0.1 ppm	2000 ppm	Sr*	0.5 ppm	10000 ppm	Re	1 ppb	10000 ppb
Cr*	0.5 ppm	10000 ppm	Te	0.02 ppm	1000 ppm	Sn*	0.1 ppm	100 ppm
Cu	0.01 ppm	10000 ppm	Th*	0.1 ppm	2000 ppm	Ta*	0.05 ppm	2000 ppm
Fe*	0.01%	40%	Ti*	0.001%	5%	Y*	0.01 ppm	2000 ppm
Ga*	0.1 ppm	1000 ppm	Tl	0.02 ppm	1000 ppm	Zr*	0.1 ppm	2000 ppm
Hg	5 ppb	50 ppm	U*	0.05 ppm	2000 ppm	Pt*	2 ppb	100 ppm
K*	0.01%	10%	V*	2 ppm	10000 ppm	Pd*	10 ppb	100 ppm
La*	0.5 ppm	10000 ppm	W*	0.05 ppm	100 ppm			
Mg*	0.01%	30%	Zn	0.1 ppm	10000 ppm			
Mn*	1 ppm	10000 ppm						

**Limitations:** \*This digestion is only partial for some Cr and Ba minerals and some oxides of Al, Hf, Mn, Sn, Ta and Zr. †Volatilization may occur during fuming resulting in some loss of As, and Sb



