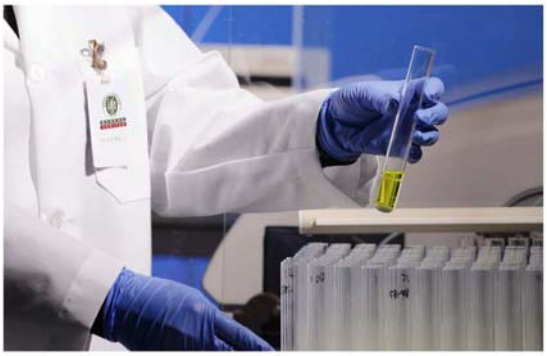

BUREAU VERITAS MINERALS

► FA100, FA300, FA400 & FA500

Package Description	Precious Metals by Lead Collection Fire Assay
Samples Digestion	Lead-collection fire assay fusion
Instrumentation Method	ICP-MS (FA100), ICP-ES (FA300), AAS (FA400), Gravimetric (FA500)
Legacy Code	3B, G6
Applicability	Rock, Drill Core

► METHOD DESCRIPTION

30 or 50g of prepared sample is custom-blended with fire-assay fluxes, PbO litharge and a silver inquart. Firing the charge at 1050ºC liberates Ag, Au and PGEs that report to the molten Pb-metal phase. After cooling the Pb button is recovered, placed in a cupel and fired at 950ºC to render a Ag, Au and PGEs dore bead. The bead is then either digested with nitric and hydrochloric acids for instrumentation determination or weighed and parted with nitric acid to dissolve Ag leaving gold which is weighed directly. Ag is determined by difference of the dore bead from the gold in gravimetric analysis.

ELEMENT	DETECTION LIMIT	UPPER LIMIT
FA100 – ICP-MS		
Au	1 ppb	1 ppm
Pt	0.1 ppb	1 ppm
Pd	0.5 ppb	1 ppm
FA300-ICP-ES		
Au	2 ppb	10 ppm
Pt	3 ppb	10 ppm
Pd	2 ppb	10 ppm
FA400-AAS		
Au	5 ppb	10 ppm
FA500-Gravimetric		
Au	0.9 ppm	
Ag	20 ppm	

Note: Sulphide rich samples may require a 15g or smaller sample charge for proper fusion.