Geoanalytical Laboratories Potash Exploration Package

SRC's Geoanalytical Laboratories in Saskatoon have expanded their facilities to provide a new potash preparation and analysis laboratory.

The Laboratory offers a Potash Exploration Package for the determination of soluble K_2O and MgO (wt%) in addition to other analytes that are of interest in the exploration of potash. The package is comprised of three analyses: Soluble ICP-OES geochemistry, % insoluble and % moisture.

Method Summary:

Sample Preparation Rock samples are jaw crushed to 60% @ -2mm and 100-200g sub sample split out using a riffler. The sub sample is pulverized to 90% @ -106 microns using a puck and ring grinding mill. The pulp is then transferred to a labeled plastic snap top vial.

Soluble Digestion and ICP-OES Analysis An aliquot of pulp is placed in a test-tube with 15 mls of 30oC DI water. The sample is shaken. The soluble solution is then analyzed by ICP-OES. The method is suitable for the soluble analysis of potash samples for the determination of commercial potash (KCl or Sylvite). The analysis will not be suitable for the determination of insoluble salt minerals which may be present (e.g. Anhydrite, Kieserite, Polyhalite).

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Soluble Detection Limits (ICP-OES)

Element	DL	Element	DL	Element	DL
Al_2O_3	0.01%	Ag	0.2 ppm	Nd	1 ppm
CaO	0.01%	Ba	1 ppm	Ni	1 ppm
Fe_2O_3	0.01%	Be	0.2 ppm	Pb	1 ppm
K_2O*	0.01%	Cd	1 ppm	Pr	1 ppm
MgO	0.01%	Ce	1 ppm	S	10 ppm
MnO	0.01%	Co	1 ppm	Sc	1 ppm
Na_2O*	0.01%	Cr	1 ppm	Sm	1 ppm
P_2O_5	0.01%	Cu	1 ppm	Sn	1 ppm
TiO_2	0.01%	Dy	0.2 ppm	Sr	1 ppm
		Er	0.2 ppm	Ta	1 ppm
		Eu	0.2 ppm	Tb	1 ppm
		Ga	1 ppm	Th	1 ppm
		Gd	1 ppm	U	2 ppm
		Hf	1 ppm	V	1 ppm
		Ho	1 ppm	W	1 ppm
		La	1 ppm	Y	1 ppm
		Li	1 ppm	Yb	0.1 ppm
		Mo	1 ppm	Zr	1 ppm
		Nb	1 ppm	Zn	1 ppm

* K_2O soluble estimation of measurement uncertainty for the following ranges:

20-39% ± 1.0 wt%

40-59% ± 1.5 wt%

>60% ± 2.0 wt%

The reported uncertainty is expanded using a coverage factor k=2 for a level of confidence of approximately 95% assuming a normal distribution.

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SRC's Geoanalytical Laboratories are world renowned for providing accurate, high quality analytical services you can trust to meet the needs of your exploration program.

The Geoanalytical Team: Our people make all the difference. At SRC's Geoanalytical Laboratories we strive to keep up with the growth in industry and the needs of our customers.