

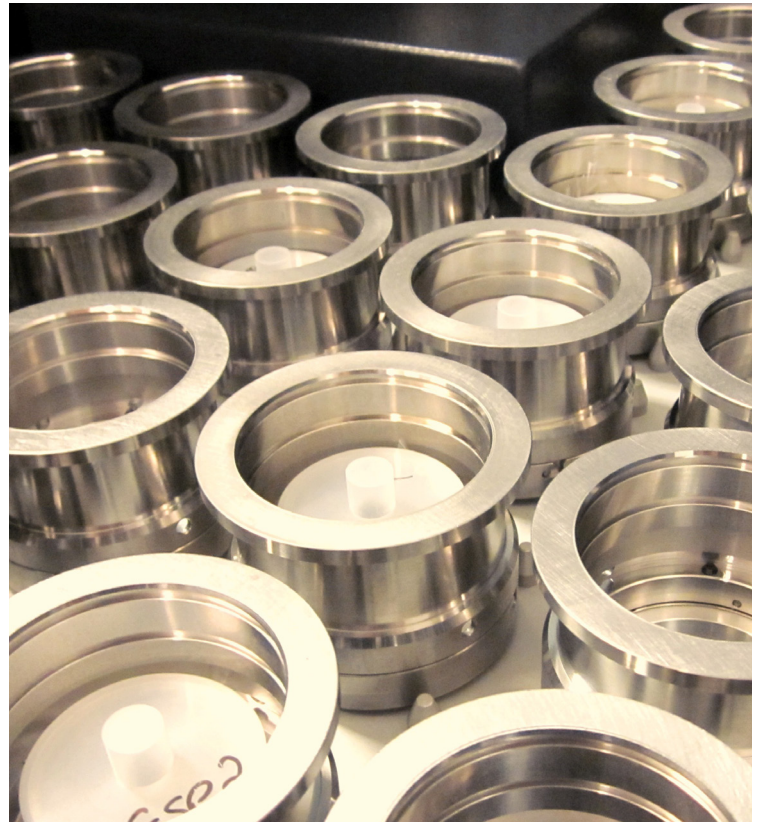


## Advanced Microanalysis Centre™ X-ray Fluorescence (XRF) Spectroscopy

The Saskatchewan Research Council's (SRC) Advanced Microanalysis Centre™ incorporates X-ray fluorescence (XRF) spectrometers, which provide one of the simplest, most accurate and economical methods for multi-element analysis. Elements from carbon to uranium can be measured with a detection range of 1 to 50 ppm.

### Services, Features and Equipment

- Bruker S8 TIGER XRF spectrometers, equipped with TouchControl™ and SampleCare™, create ease of use and robust reliability.
- Fast, non-destructive analytical method is suitable for solid, liquid and powdered samples.
- Concentrations up to 100% are analyzed directly, without dilution and with reproducibility better than  $\pm 0.1\%$ .
- System is capable of analyzing oil and other petroleum samples in addition to rock powders.



## Available Packages and Expected Lower Limit of Detection (LLD)

Please contact us for pricing.

### Major oxides

Analyte	LLD
Na <sub>2</sub> O	0.01 %
MgO	0.01 %
Al <sub>2</sub> O <sub>3</sub>	0.01 %
SiO <sub>2</sub>	0.03 %
P <sub>2</sub> O <sub>5</sub>	0.01 %
K <sub>2</sub> O	0.01 %
CaO	0.01 %
TiO <sub>2</sub>	0.01 %
MnO	0.01 %
Fe <sub>2</sub> O <sub>3</sub>	0.01 %

### Uranium Assay

Analyte	LLD
U <sub>3</sub> O <sub>8</sub>	0.01 %

### REE

Analyte	LLD
Ce	5 ppm
Pr	5 ppm
Nd	5 ppm
Sm	5 ppm
Eu	5 ppm
Gd	5 ppm
Tb	10 ppm
Dy	10 ppm
Ho	10 ppm
Er	10 ppm
Yb	5 ppm
Th	10 ppm
U	2 ppm

### Major plus

Analyte	LLD
Na <sub>2</sub> O	0.005 %
MgO	0.005 %
Al <sub>2</sub> O <sub>3</sub>	0.005 %
SiO <sub>2</sub>	0.010 %
P <sub>2</sub> O <sub>5</sub>	0.005 %
K <sub>2</sub> O	0.005 %
CaO	0.005 %
TiO <sub>2</sub>	0.005 %
MnO	0.005 %
Fe <sub>2</sub> O <sub>3</sub>	0.005 %
F	0.01 %
S	0.01 %
Cl	0.01 %

### Potash

Analyte	LLD
Na <sub>2</sub> O	0.005 %
MgO	0.005 %
Al <sub>2</sub> O <sub>3</sub>	0.005 %
SiO <sub>2</sub>	0.010 %
P <sub>2</sub> O <sub>5</sub>	0.005 %
K <sub>2</sub> O	0.005 %
CaO	0.005 %
TiO <sub>2</sub>	0.005 %
MnO	0.005 %
Fe <sub>2</sub> O <sub>3</sub>	0.005 %
F	0.01 %
Cl	0.01 %
Br	10 ppm

### Trace elements

Analyte	LLD
Sc	2 ppm
V	1 ppm
Cr	4 ppm
Co	3 ppm
Ni	2 ppm
Cu	5 ppm
Zn	4 ppm
Ga	1 ppm
As	3 ppm
Se	10 ppm
Br	10 ppm
Rb	1 ppm
Sr	1 ppm
Y	5 ppm
Zr	5 ppm
Nb	1 ppm
Mo	1 ppm
Sn	3 ppm
Sb	2 ppm
Cs	5 ppm
Ba	5 ppm
La	5 ppm
Hf	10 ppm
Ta	10 ppm
W	10 ppm
Pb	1 ppm
Bi	5 ppm
Th	10 ppm
U	2 ppm