

Dalhousie EPMA Analysis Request Form

Name :

Advisor :

Student - Undergraduate Graduate
 Faculty / Research Associate / Post-Doc

General Tasks

- WDS Quantitative Analysis
- WDS Qualitative Analysis
- WDS Linescan
- WDS Compositional Mapping
- EDS Semi-quantitative Analysis
- Imaging
- Monazite Dating

WDS/EDS Analysis

Minerals:

Other Materials:

Elements: *(if different from standard list)*

WDS Compositional Mapping

Minerals:

Other Materials:

Elements:

Sample Information

- Polished Thin Section
- Powder
- Pressed Pellet
- Glass (Volcanic/Synthetic/Inclusion)
- Thin Film
- Metallographic
- Bulk / Other
- Number of Samples :
- Grain Mounts
- Carbon-Coating Required

Training

- WDS - 2 to 3 hours
- EDS - 1 hour
- Imaging (SEI,BEI,CL) - 1 hour
- Peak searching - 1 hour
- Sample change - 30 minutes
- MANDATORY SAFETY REVIEW**

WDS Quantitative Analysis

- Silicates Na Mg Si Al K Ca Ti Cr Fe Mn
- Carbonates Na Mg Si Al K Ca Ti Fe Mn P F
- Sulfides S Mn Fe Co Ni Cu Zn As Ag Sb Au Pb Bi
- Oxides Na Mg Al Si Ca Ti V Cr Mn Fe Ni Zn Zr Nb
- Monazite Si P S Ca Y La Ce Pr Nd Sm Gd Dy Pb Th U
- Apatite F Na Si P Cl K Ca V Fe Sr Ba La Ce Pr Nd
- Sulfates Na Mg P S Cl K Ca Br Sr Ba Pb
- Metals Ti V Cr Mn Fe Co Ni Cu Zn Mg Nb Mo Ta W
- Pharmaceuticals, Binders Na Mg K Ca C N S O Cl
- Additional Elements
- Custom

Quantitative Analysis Details

No. of Analyses :

N.B. ADVISORS - Please specify to your student the number of analyses you want them to do and your analytical strategy.

Most Important Elements & Purpose of Analysis:

Imaging

- Secondary Electron Imaging
- Back-Scatter Electron Imaging
- Topographic Imaging
- Low Resolution Cathodoluminescence Imaging
- EDS Imaging

Laboratory Policy Notes

- 1) Please submit analysis requests at least 2 weeks in advance.
- 2) Last-minute requests to change WDS analytes are undertaken at the discretion of EPMA personnel.
- 3) Modifications to basic analytical profiles and/or creation of custom profiles are on a *pro rata* basis.
- 4) Training is mandatory for new users who wish to use the microprobe after hours; competency for permission to use the probe after hours will be assessed by EPMA personnel.
- 5) Users must follow instructions given by EPMA personnel or risk loss of lab privileges.
- 6) EPMA personnel do not advise students on analytical strategy nor interpret results- advisors shall properly prepare their students prior to arrival at the lab.
- 7) If an unscheduled lab closure (e.g., illness, power failure) leads to a cancelled booking, users will be contacted and rescheduled as soon as possible.
- 8) Users should provide a minimum notice of 2 days to cancel a booking and will be charged for any work already done.

Training times may vary depending on previous experience with other SEMs or microprobes.

EPMA personnel not responsible for sample preparation (except coating) or sample storage after analysis complete.