

Boston University

User Fee Structure for ICP-ES, ICP-MS and Laser Labs

The Department of Earth Sciences has developed the following user fee structure for the ICP-ES, ICP-MS and LA-ICP-MS laboratories in order to cover basic operating costs such as consumables and service calls.

We aim to be flexible in our analytical capabilities, and welcome users of all levels of experience and needs. We have extensive experience with earth materials (rocks, sediments, volcanic glasses, crystals, seawater and other waters).

Feel free to contact us to discuss which of the below fee structures best fits your needs.

Current prices as of October 2009

| | Internal BU User | External User | Non-NSF user |
|--|---------------------|---------------|--------------|
| Major and trace element packages | | | |
| Major Element Package (ICP-ES) | \$40 | \$70 | \$140 |
| Trace Element Package (ICP-MS) | \$40 | \$70 | \$140 |
| Combo Package (ICP-ES/ICP-MS) | \$70 | \$120 | \$240 |
| Prices per hour of instrument time | | | |
| ICP-ES cost per hour | \$30 | \$40 | \$80 |
| ICP-MS cost per hour | \$30 | \$40 | \$80 |
| LA-ICP-MS cost per hour | \$40 | \$60 | \$120 |
| Prices per sample | | | |
| ICP-ES cost per sample | \$20 | \$30 | \$60 |
| ICP-MS cost per sample | \$20 | \$30 | \$60 |
| LA-ICP-MS cost per sample | \$30 | \$45 | \$90 |
| Minimum cost of analyses | | | |
| Minimum cost on ICP-ES | \$90 | \$120 | \$240 |
| Minimum cost on ICP-MS | \$90 | \$120 | \$240 |
| Minimum cost of LA-ICP-MS | \$120 | \$180 | \$360 |
| Determination of concentration range of samples for standardization | | | |
| Determining concentration for standards on ICP-ES/ICP-MS | \$90 | \$120 | \$240 |
| Sample digestions per sample | | | |
| | \$5 | \$15 | \$30 |

Major and Trace element packages

These packages only apply to geological, oceanographic, and environmental materials that have been provided as powders. There is an additional charge of \$5 per sample for powdering. The packages include digestions of the samples as well as their analyses on the instruments. Options for digestions protocols include flux fusions, microwave digestions, and open vial digestions. Standardization is performed using a minimum of four rock standards (certified reference materials) of known concentration which are digested along with the samples.

Prices per hour of instrument time

Hourly costs apply to those who come to BU and run their samples on the instruments with sufficient training. Training is given only to those who plan to use the instruments on a routine basis.

Prices per sample

Per sample costs apply to those who send samples to BU for analysis. A minimum cost for analyses on either instrument is based on the minimum time to tune each instrument and set up a run. Prices include blanks and standards sent to be run along with the samples.

Standardization

If standards are not supplied, they can be made at BU. There is an additional cost for standard preparation of \$2 per element in the standard curve (e.g., 10 elements = \$20, 30 elements = \$60...). Standard curves consist of four points, which will add an additional four items to the total cost of the run. If the concentration range of the samples are not well constrained (within an order of magnitude), a quick analyses must be conducted to determine the concentration ranges needed for the standards.

Sample Digestions per sample

Digestion costs apply to those who come to BU and digest their samples in our labs with sufficient training.

Laser-ICP-MS cost per sample

Cost per sample by laser ablation includes three spots on a sample plus an additional three spots on a standard(s).

Sample notes

All solutions provided must be filtered/free of particulates and organic compounds. All sample solutions should be in 2% to 5% HNO₃. Sample solutions can be in HCl, but interferences may become an issue on some elements particularly on the ICP-MS (e.g., ⁴⁰Ar³⁵Cl on ⁷⁵As). There is an additional charge of \$5 per sample, for samples that have trace amounts of HF (< 0.5%). Once again, interference issues may arise on the ICP-MS (e.g. ⁴⁰Ar¹⁹F on ⁵⁹Co).

We require a minimum of 10 to 15 ml of solution for analysis. Smaller volumes can be analyzed but require different introduction systems, and therefore an additional charge of \$5 per sample.

Laser mounts should be polished, free of coatings, and > 30 microns thick.

Please contact us for advice regarding your specific analytical needs.