

University of Florida - IFAS
Soil and Water Science Department Core Laboratories
ICP-Mass Spectrometry Laboratory

Mission Statement- The Biogeochemistry of Trace Metals Laboratory (BTML) provides expertise and service for elemental analysis of environmental samples.

Location- 3183 McCarty Hall A

Contributing Faculty- Lena Ma (Coordinator)

Equipment- NexION 300X inductively coupled plasma mass spectrometer (ICP-MS).

Procedures and Costs-

1. Elemental analysis:

	UF Accounts	External Pricing
(a) Experimental setup -	\$150	\$200
(b) Analysis of 1 element, per sample -	\$6	\$8
(c) Additional elements, per sample -	\$3	\$4

2. Other procedures:

(a) Digestion, per sample -	\$10	\$15
(b) Filtration, per sample -	\$10	\$15

Note: Prices listed will be appropriately discounted for labor or materials provided from external sources. Use of the laboratory facilities by graduate students and post-doctoral associates will be accommodated to the extent possible.

For additional information contact:

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Basis for Establishing ICP-Mass Spectrometry Laboratory Analytical Prices Prices for each procedure are established to cover the following costs on a per sample basis for the following:

- (i) Use of expendable materials (tubing, standards, argon, chemicals, tips, gloves etc.).
- (ii) Maintenance and operation costs of equipment required to conduct the procedure.
- (iii) Labor costs for the level of expertise required for the procedure.
- (iv) Overhead and incidental costs, on a time-proportional basis, that have to be paid by the core lab (e.g., electrical service and plumbing; safe chemical waste disposal, etc.).

The following are example cost analysis for operation of an ICP-MS program:

Analysis of 10 samples, 4 elements: \$150 setup, \$15 per sample: \$300

Analysis of 10 samples, 1 element: \$150 setup, \$6 per sample: \$210

Analysis of 10 samples, 2 elements: \$150 setup, \$9 per sample: \$240

Sample Preparation:

Solutions should be diluted so that the final acid concentration is approximately 1-3%, usually aqua regia or nitric acid (**NOT hydrofluoric**).

Solutions should be filtered so there is no particulate matter.

Minimum volume required is typically 5-10mL.

Always include a blank digest prepared with the same protocols as your sample.

Let me know if you have any additional questions.