The **B**oston **U**niversity **S**table Isotope **L**aboratory was established in 1989 as a regional center for stable isotope analysis. Since then, we have developed into a well-respected world-class facility, collaborating with researchers throughout the United States, as well as in Europe, South America, and elsewhere. Stable isotopes are non-radioactive, naturally-occurring variations of elements found in nature, differing in the number of neutrons found in the nucleus of atoms. The elements of interest to ecologists include carbon, nitrogen, oxygen, hydrogen, and sulfur. Stable isotopes have a wide range of applications in ecology and conservation biology, including the analysis of paleoclimates, diets, food webs, nutrient and water flux in terrestrial and aquatic ecosystems, energy and water flux in free-ranging animals, for identifying sources of pollution, and for monitoring sites under bioremediation.

Quality control and quality assurance are extremely important to the laboratory. International standards are used for calibration, and internal well-characterized lab standards are used on a day-to-day basis. For samples prepared by the lab, numerous replicates are run as a check on external precision, and users are encouraged to include replicates in preloaded samples.

The **B**oston **U**niversity **S**table **I**sotope **L**aboratory provides services to educational and governmental institutions, and to private industry. Our state-of-the-art facility includes a Finnigan Delta-S and two GV Instruments IsoPrime isotope ratio mass spectrometers, elemental analyzers, MultiFlow device, vacuum lines, furnaces, and associated peripherals for processing a variety of organic and inorganic samples. One EA is capable of pyrolysis of water samples for oxygen 18 and uses the ChromeHD procedure for deuterium.

This is both a research and a contract lab, so individuals are encouraged to contact either the laboratory manager or one of the co-directors about collaborative research. For novel applications not listed, please contact the laboratory manager to discuss the feasibility and details of your project.

Sample Price List

Note a price drop in solid CN and water samples!

Matrix/Isotope		Price
Water		
Oxygen 18	(price drop)	$10.00
Deuterium	(price drop)	$10.00
Solid Organic samples		
^{13}C and ^{15}N (preloaded)	(price drop)	$8.00
^{13}C and ^{15}N (dried material)	(price drop)	$9.50
^{15}N only (preloaded)		$6.00
^{13}C only (preloaded)		$6.00
Minerals		
^{13}C and ^{18}O in carbonates		$12.00
Gas		
Purified CO_2 or N_2		$6.00
Atmospheric CO_2		$12.00
Breath CO_2		$12.00
Dissolved Inorganic Species		
^{13}C DIC		$15.00
^{15}N in ammonia		$35.00
^{15}N in nitrate		$35.00

For other types of samples, see the website (www.bu.edu/sil/) or contact the Lab Manager. We also specialize in small size solid samples. Contact the Laboratory Manager for details.

Sample Size Requirements

Material	Amount
Deuterium in water	20 ul
Oxygen 18 in water	200 ul*
Dried animal material	3 mg
Dried plant material	20 mg
Soil (will vary with OM content	20-500 mg
Carbonate	200 ug
Dissolved inorganic nitrogen	500 ml
Dissolved inorganic carbon	200 ml
Atmospheric air	10-20 ml exetainer
Breath	10 ml exetainer

Note: O18 in water for smaller samples is under development.
Note: these are generally minimum requirements.

Preloaded Sample Sizes

Material	Amount
Plant material for C and N	2 mg
Animal material for C and N	1 mg
Soils (will vary with %OM)	5-15 mg
DIN filters (N on filters)	10 umoles
POM filters	call
Small organic samples	call

Turnaround times

For preloaded samples in 96 well trays, turnaround time is generally under 4 weeks. For ground material it is about 5 weeks. Water samples can be completed in 4 weeks. Most sample sets can be completed in less than 5 weeks, although DIN samples take longer, due to the sample preparation involved.

Contact Information

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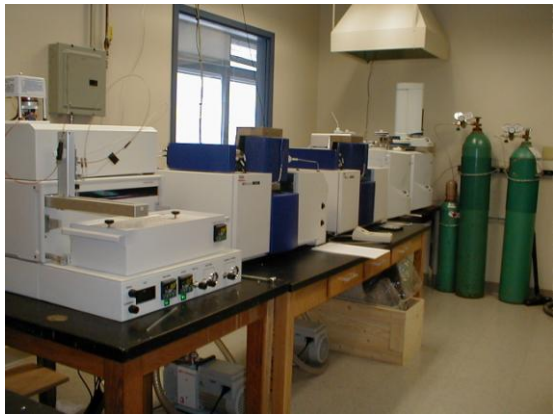
BOSTON UNIVERSITY
Stable Isotope Laboratory

BOSTON UNIVERSITY

Lab description, price list, and services offered.
1 June 2007



For further information, please contact the Lab Manager:

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