Laboratory of Biogeochemistry and Environmental Conservation (LBIOŚ)

The Laboratory of Biogeochemistry and Environmental Conservation specializes in analyzing **the physical and chemical properties of water, wastewater, soil, sediments and biological materials** based on current legal regulations and norms. It offers **biogeochemical and toxicological research of environmental samples.** Our portfolio includes analytical, research and development services, consulting, expertise in the field of environmental monitoring, protection and restitution as well as environmental impact assessment.

We also offer **lipid analysis**, dedicated to studying n-alkanes, fatty acids, and sterols. This facility supports **paleoenvironmental and archaeological research**, offering detailed insights into past environmental and climatic conditions through biomarker studies.

We conduct specialist training and organize short-term internships. The offer is addressed to scientific and research institutions, entities from the public and industrial sectors.

The Laboratory of Biogeochemistry and Environmental Conservation specializes in performing the elemental composition spectral analysis (FAAS, GFAAS, ICP-MS). Moreover, using LC-Q-TOF-MS, GC-MS techniques, we perform analyses of organic (e.g. soil lipids) and toxic substances in the environment (e.g. polycyclic aromatic hydrocarbons (PAH), cyanotoxins). We offer complete analytical solutions with GC and elemental analyzers for isotope ratio analyses on various samples

Equipment:

- gas chromatograph combined with a high resolution mass spectrometer ;
- ultra-high-performance liquid chromatography coupled with high-resolution mass spectrometers with time-of-flight analyzers ;
- inductively coupled plasma mass spectrometer ICP-MS;
- high-resolution, multi-element atomic absorption spectrometer with atomization in a graphite furnace or in a flame;
- analyzer for the accurate determination of carbon, hydrogen and nitrogen within a variety of organic and inorganic materials;
- isotope ratio mass spectrometer combined with elemental analyzers, gas chromatograph and gas bench;
- UV-VIS spectrophotometer;
- devices for preparing samples for analysis e.g. mineralizers, freeze dryers, centrifuges, vacuum concentrators.

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See our offer

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