

Mercury & Methylmercury Capabilities

Involved in the development and validation of the most accurate and precise mercury and methylmercury analytical methods in use today, Brooks Rand Labs possesses decades of experience providing the technical expertise, fast turn-around-times, competitive pricing, and superior customer service required of the most demanding mercury and methylmercury monitoring programs.

NELAP accredited and certified in many states, we offer unparalleled professionalism coupled with the innovation only a specialty services laboratory can provide. We constantly strive to refine and improve our methods to achieve ever-lower detection limits and to optimize our analytical methods to meet the specific requirements of every project.

Method Detection Limits

	Mercury	Methylmercury
Waters (ng/L)	0.15	0.010
Soils & Sediments (ng/g)	0.05	0.008
Plant & Animal Tissues (ng/g)	0.04	0.07

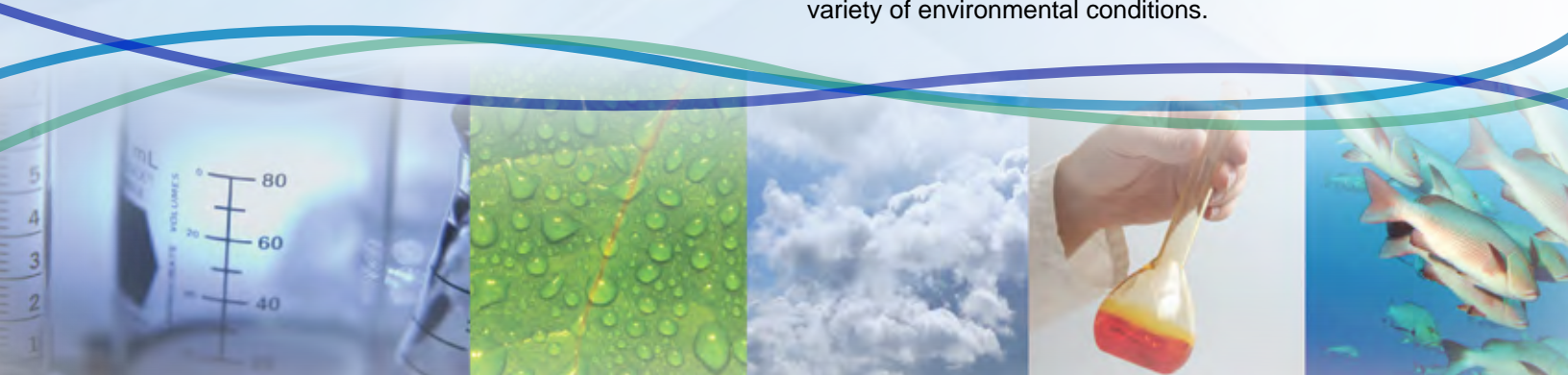


Ambient Air Monitoring

With more than three years of experience working on high-profile projects with extraordinarily stringent quality control requirements, Brooks Rand Labs possesses unmatched expertise in monitoring ambient air for mercury concentrations that could impair the health of laboratory or industrial workers exposed to the toxin in the workplace.

Atmospheric Deposition

Determining the concentration of mercury or methylmercury found in wet or dry deposition can be critically informative in establishing potential mercury cycle sources that are not directly related to a single point-source. Brooks Rand Labs has developed and deployed multiple innovative sample collection methods to accurately measure wet and dry deposition in a variety of environmental conditions.



“...timely, professional, and knowledgeable... Brooks Rand Labs stands out as one of the best in client services.”

*Forrest Dierberg, Ph.D.
Vice President and Laboratory Director
DB Environmental, Inc.*

Elutriate Generation

Effectively evaluating the effects of dredging projects often entails replicating elutriate generation under controlled conditions in the laboratory. Where mercury or methylmercury analyses are required, Brooks Rand Labs has developed custom procedures that ensure an accurate representation of the chemical processes that occur without compromising the integrity of the sample through inadvertent contamination.

Bioavailability

Despite the growing interest in the regulatory community concerning bioavailability, Brooks Rand Labs remains one of the foremost experts in providing commercially practical solutions to determine the concentrations of various mercury species with specific valence states or characteristics. Through advanced separation techniques, we are able to quantify mercury concentrations in sediments and water according to the fraction of interest.

Pore Water Extractions

The extraction of interstitial waters from sediment samples prior to the analysis for mercury or methylmercury requires particular precautions to prevent both potential contamination and species conversion. Brooks Rand Labs has developed custom procedures that allow the collection of pore water extracts in an anoxic environment that will maintain the integrity of the sample.

Specialty Mercury Species

	MDL
Volatile Mercury in waters (ng/L)	0.05
Acid-labile Mercury in waters (ng/L)	0.25
Reactive Mercury in sediments (ng/g)	0.80

Selective Sequential Extractions of Mercury from Solids

Mercury Species in Solids by EPA 3200

	MDL (ng/g)
Extractable Organic Hg	0.05
Extractable Inorganic Hg	0.25
Semi-mobile Hg	0.20
Non-mobile Hg	0.25

	MDL (ng/g)
F1: Water Soluble Hg	0.20
F2: Weak Acid Leachable Hg	0.20
F3: Organo-complexed Hg	2.0
F4: Strongly-complexed Hg	2.0
F5: Mineral-bound Hg	2.0

