

Specialized Toxicity Testing

EnviroScience biologists have extensive experience with culturing and examining many different species of freshwater, saltwater, and sediment organisms. Our toxicologists can customize study plans to meet numerous requirements for specialty projects meeting the needs of each individual client. Contact our Bioassay Laboratory at (800) 940-4025 about developing a special toxicity test for you.

Product Testing

Aquatic Ecotoxicity Testing for LC50

Aquatic toxicity is useful data to include in a Safety Data Sheet (SDS) for products that will be used in the environment and could affect aquatic life. The EnviroScience ecotoxicity lab provides testing to obtain aquatic toxicity LC50 data.

The LC in LC50 stands for lethal concentration. The LC50 is an estimate of the product concentration that would kill 50% of the exposed specimens for the specified exposure period.

Providing aquatic toxicity data also serves as a useful tool for obtaining an EcoLogo. An EcoLogo is a seal of approval that is printed on a certified product's label, designating the product as eco-friendly.

Numerous methods and species can be utilized depending on your requirements. Some common freshwater test species include *Ceriodaphnia dubia* (water flea), *Daphnia magna* (water flea), *Pimephales promelas* (fathead minnow), *Oncorhynchus mykiss* (rainbow trout), and *Selenastrum capricornutum* (algae). EnviroScience also provides testing with other freshwater and marine organisms.

Elutriate Testing

Elutriate bioassays provide another method for assessing the potential toxicity of sediments in aquatic systems. Elutriate testing identifies harmful toxins within the sediment that can ultimately affect aquatic organisms living in the water column. EnviroScience biologists follow the procedures for elutriate testing outlined in US EPA 503/8-91/001, in which site sediments are combined with laboratory water to solubilize components present in the sediment. Test organisms are exposed for a specified amount of time, depending on whether acute or chronic endpoints are required.

Brine Studies

Brine water is a by-product of hydraulic fracturing or “fracking,” which is a way of extracting oil and natural gas from shale deposits. Brine Studies provide a method for determining the level of toxicity that brine water, discharged by a treatment plant or major discharger, may have on an aquatic environment. A brine study is designed to determine at what concentration the brine water may be discharged to minimize the effect on the receiving water quality. These studies additionally ensure that the aquatic organisms are not affected by the addition of brine water into the water system.

EnviroScience provides high quality environmental services to hundreds of satisfied municipal, industrial, and private sector clients throughout the Midwest and Northeast. We have clients in Ohio, Pennsylvania, West Virginia, Illinois, New York, Michigan, Indiana, Tennessee, and many other states. Our company has an excellent reputation with regulatory agencies on both the state and federal level. Our confidence in our

methodology and the professionalism of our experienced biologists allows us to guarantee that our procedures and reported data will meet all acceptance criteria.

In Action





Need help with your project?

Our experts are here to discuss your needs and how we can help you move your project forward. Fill out the form below for more information on our services or to request a quote and we'll get back to you within 24 hours. If you need a response within an hour or less, please call us at 800-940-4025.

Your Name (required)

Your Email (required)

Subject

Your Message