



Commercial Laboratory Services



Commercial Lab Services at REGENESIS®

As part of a complete suite of remediation products and solutions, REGENESIS® employs a full laboratory for researching and developing new and existing product lines and providing services to assist in the remediation of soil and groundwater at contaminated sites. Our recently renovated laboratory, located at our corporate headquarters, is staffed by experienced environmental chemists and engineers.

Outfitted with the latest analytical instrumentation, our team of scientists are well-equipped to conduct a wide variety of tests and experiments to address your needs. Our analytical and testing capabilities include: gas chromatography (GC) coupled with flame ionization (FID), electron capture (ECD), and mass spectrometry (MS) detectors, liquid chromatography with an evaporative light scattering detector (LC-ELSD), UV-visible spectroscopy, as well as batch and column testing methods.

LABORATORY SERVICES

In addition to providing a complete suite of remediation products and solutions, REGENESIS offers a range of laboratory services to assist clients in the remediation of contaminated sites. Our state-of-the-art laboratory is staffed with chemists and environmental scientists who are experienced in the design and implementation of site specific laboratory-scale studies to address your needs.

The following testing options are currently offered by REGENESIS:



SOIL OXIDANT DEMAND (SOD)

Quantitatively measures the amount of sodium persulfate consumed by reactions with the soil matrix



TOTAL OXIDANT DEMAND (TOD)

Determines oxidant demand for percarbonate-based ISCO applications



TREATABILITY TESTING

Demonstrates the efficacy of REGENESIS technologies on a bench scale level to enhance performance in the field

Oxidant Demand Testing

Oxidant demand testing quantifies the amount of oxidant that is consumed by the native soil matrix at your site. REGENESIS offers two types of oxidant demand testing: soil oxidant demand (SOD) and total oxidant demand (TOD). In SOD tests, the oxidant demand is determined using sodium persulfate, the active ingredient in PersulfOx®. TOD tests measure the consumption of RegenOx® Part A, REGENESIS' sodium percarbonate based oxidant.

SOD

The SOD test performed by REGENESIS is a quantitative measurement of the amount of sodium persulfate consumed by reactions with the soil matrix over time. The SOD for each soil sample is determined by a batch test method using site soil and groundwater (or distilled water). The water phase, dosed with a known amount of sodium persulfate, is sampled after incubation at 15°C and the remaining persulfate concentration is determined through a titration. The SOD results are reported in units of g/kg (grams of sodium persulfate consumed per kilogram of soil).

TOD

Oxidant demand for percarbonate-based ISCO applications is measured through the TOD test. The TOD for each soil sample is determined by a batch-test method using site soil and groundwater (or distilled water). The water phase, dosed with a known amount of RegenOx Part A, is sampled after incubation at 15°C and the remaining percarbonate is quantified by UV-visible spectroscopy. The TOD results are reported in units of g/kg (grams of RegenOx Part A consumed per kilogram of soil).

REGENESIS Treatability Testing

Treatability testing is a cost-effective tool to demonstrate technology efficacy under your site-specific conditions prior to a field application. REGENESIS currently offers standard and custom ISCO testing with PersulfOx and RegenOx as well as custom bench tests for other REGENESIS technologies upon request.

In a standard ISCO bench test, the baseline groundwater and/or soil contaminant concentration is first measured in the provided samples.* A control vs. treated batch study is then initiated with the contaminated site soil and groundwater: "treated" samples are dosed with one loading of either PersulfOx or RegenOx and the "control" samples are sterilized. After 21 days, the remaining contaminant levels in the groundwater and/or soil are measured in both the "control" and "treated" sample vessels. At the conclusion of the test, the customer will be provided with a final written report that includes the experimental design, tabulation of results, and data interpretation.

Contaminants that can be tested in a standard bench test include:

- Total petroleum hydrocarbons (TPH-gasoline or TPH-diesel)
- BTEX (benzene, toluene, ethylbenzene, and xylene)
- cVOCs (chlorinated volatile organic compounds)

Customized tests for additional contaminants may be available upon request.

*All analytical measurements are performed by a certified laboratory.

FIND YOUR REMEDIATION SOLUTION TODAY

REGENESIS is the global leader in the research, development, and commercialization of environmental technologies. We specialize in scientifically-proven products and services for the treatment of a wide range of environmental challenges.

REGENESIS uniquely combines innovative products and expert-based services, ensuring a high degree of certainty while meeting remediation objectives.



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