

AUSTRALIAN

**ENVIRONMENTAL
SERVICES**

TOTAL QUALITY. ASSURED.

For more than 130 years, companies around the world have depended on Intertek to help ensure the quality and safety of their products, processes and systems.

Intertek is a leading Total Quality Assurance provider to industries worldwide. Our network of more than 1,000 laboratories and offices and over 46,000 people in more than 100 countries, delivers innovative and bespoke Assurance, Testing, Inspection and Certification solutions for our customers' operations and supply chains. Intertek supports companies' success in the global marketplace, by helping customers to meet end users' expectations for safety, sustainability, performance, integrity and desirability in virtually any market worldwide.

ECOTOXICOLOGY

Ecotoxicity testing provides a foundation for understanding the impacts that a chemical or complex chemical mixtures / effluents has on the environment. Laboratory ecotoxicity studies, often known as direct toxicity assessments (DTA) or whole effluent testing (WET) examine the relationships between exposure and effect under controlled conditions to determine threshold toxicity concentrations.

Intertek Ecotoxicology utilises integrated approaches to determine and characterize environmental toxicity, risk, and ecological impacts. Experienced in array of international regulatory guidelines, Intertek's ecotoxicologists can tailor a testing regime to fulfil client's regulatory requirements. Utilising a range of bioassays from multiple tropic levels and ecosystems, toxicity assessments focus on bioavailability to derive toxicity thresholds.

Intertek's ecotoxicology laboratory combined with Intertek's environmental chemists provide a cohesive service delivering high quality reliable results to meet the needs of industry and environmental regulators.

HYDROCARBON FINGERPRINTING

Hydrocarbon forensics and product characterisation help identify the source of hydrocarbon contamination from an oil spill or legacy contamination. Intertek provides the analytical tools for fingerprinting hydrocarbons such as high resolution gas chromatography mass spectrometry (GCMS) for semi-volatile hydrocarbon analysis, volatile hydrocarbon analysis by Purge & Trap, stable carbon isotope analysis to determine biodegradation and biomarker analysis.

The combination of these high precision analytical tools enable to characterise and source the contamination, access the weathering and biodegradation effect and finally provide an estimate of the age of the spill. The use of high precision analytical tools together with Intertek expert advised and consultancy services will aid environmental site assessment in the detection of hydrocarbons in surface and near-surface environments and in the determination of the source of those hydrocarbons.

GAS COMPOSITION

Intertek provides routine gas composition testing, including routine C₁ to C₆+ testing and extended permanent gas analysis such as O₂, N₂, CO₂ and CO. Sulphur speciation of Hydrogen sulphide, Carbonyl sulphide, Methyl mercaptan and Sulphur dioxide to study and assist the air emission control is routinely conducted by Intertek with the use of a gas chromatograph coupled to a flame photometric detector (GC-FPD). The Gas composition analysis capabilities with stable carbon isotope analysis by gas isotope ratio mass spectrometry IRMS, allowing determination of the genetic origin of gas in the subsurface, continuity of reservoirs, and sourcing mechanisms for inorganic gases.

MINERALS ENVIRONMENTAL TESTING SERVICES

Intertek environmental laboratories support the minerals industry with water, soil and air testing to governmental, regulatory and industry standards.

Minerals environmental services include:

- Water quality
- Biological tissue analysis
- Acid sulphate soils
- Environmental baseline studies
- Waste analysis and characterisation
- Sediment and soil analysis
- Soil nutrient analysis
- Acid rock drainage prediction test

ULTRA-TRACE ANALYSIS

Intertek's ultra-trace chemical analysis services deliver credible results, conducted by experts who have experience across many industries

A highly-skilled approach is utilised combining appropriate instrumentation with sample preparation and methodology that are most relevant to both the sample matrix and the aim of the study. Our expertise enables us to detect, identify, and measure trace amounts of chemicals down to low-trace and ultra-trace levels from parts per million (ppm), parts per billion (ppb) and parts per trillion (ppt) levels.

Our scientists are highly skilled in the accurate quantification of elements at trace levels and in a variety of challenging matrices through a wide variety of state of the art analytical equipment. We can offer bespoke single or multi-element analytical services as required including multi-analyte packages.

ACID ROCK DRAINAGE

Acid rock drainage occurs when sulphide compounds are exposed to oxygen creating potential acidic drainage conditions. Intertek provides a range of tests to measure actual and potential acid capacity for mine-site and road waste.

Specialist Studies and Trials:

- AMIRA test methods for Acid rock drainage (ARD), Ref: AMIRA P387A
- Free draining leach column test
- Client prescribed test conditions
- ASTM5774-13: Humidity cell test; Laboratory weathering of solid material using humidity cells
- ASTM Method 1313: LEAF test; Liquid-solid partitioning as a function of extract pH using parallel batch extraction procedure
- Client prescribed anoxic saturated column test

**QUALITY ANALYSIS,
INDEPENDENT SERVICES
ACCREDITED LABORATORIES.
GLOBAL SCOPE,
LOCAL PRESENCE.**

100 Countries.
1000 Laboratories.
46,000 Employees.



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