



Analytical Services for the Oil and Gas Sector



NCIMB has been working with the oil and gas sector for over 30 years. We have grown as the industry developed by tailoring our services in response to demand. Our oilfield services include:

- Oilfield microbiology
- Biocide testing
- Fuel testing
- Analytical services
- Whole effluent assessment toxicity testing

NCIMB is ISO 9001:2015 certified, licensed by the Scottish Environment Protection Agency (SEPA) and FPAL registered.

Analytical Services for the Oil and Gas Sector

NCIMB's oilfield services can help you to assess the risk of microbially influenced corrosion and ensure your operations comply with environmental regulations.

Customer satisfaction is key to our continued success and we strive to maintain customer loyalty by providing high quality, cost-effective and timely analytical data and products.



High quality standards

At NCIMB we understand the importance of quality assurance to the oil and gas industry and are committed to delivering the highest quality analytical results. NCIMB is ISO9001 certified, licensed by the Scottish Environment Protection Agency (SEPA) and FPAL registered. Our oil and gas industry customers include major operating and service companies, as well as independents, and we also work in partnership with well-respected suppliers to deliver a comprehensive service.

Customer focused experts

At NCIMB we take pride in the levels of service we deliver, and the relationship we build with our customers. Our highly qualified and experienced scientists are available to advise customers on the most appropriate and cost-effective approach to their oilfield microbiology, ecotoxicity and analytical requirements. They are on hand to help you interpret results and understand the methodologies used.

Protecting your assets

Some commonly occurring microorganisms can cause serious problems in oilfield environments. For example, sulphate reducing bacteria (SRBs) can influence corrosion rates in pipelines, vessels and machinery. Microbial monitoring is therefore an essential step towards safeguarding against corrosion.

Our skilled microbiologists are experts in identifying and quantifying the groups of microorganisms that can influence corrosion and cause reservoir souring. We can advise on the most appropriate techniques and have participated in R&D projects as well as undertaking routine analysis of corrosion coupons and biocide testing. We also supply media kits for customers who wish to undertake their own testing.

Working in partnership

NCIMB partners with corrosion monitoring specialists ICR in the delivery of full microbiological audits and surveys of production facilities.

We're here to protect your business and support innovation.

Our microbiologists are experts in identifying and quantifying microorganisms that influence corrosion and cause reservoir souring. We can undertake biocide testing to help you determine the most effective means of control.

For more information about our full range of products and services, please visit our website www.ncimb.com



Safeguarding the environment

The oil and gas industry is committed to complying with national and international regulations in order to safeguard the environment and ensure a safe working environment. NCIMB provides an ecotoxicity testing and chemical analysis service that can help you to fulfil these obligations.

Analytical services

At NCIMB we have developed our analytical services in response to the needs of the oil and gas industry. Our services include a standard suite of commonly requested effluent tests, which includes total hydrocarbons, pH and COD.

Ecotoxicity testing

NCIMB undertakes ecotoxicity testing using the MARA and LumiMARA bioassays. These multispecies microbial tests have been successfully trialled with produced water samples from 15 North Sea facilities.

OSPAR Recommendation 2012/5 requires contracting parties, of which the UK is one, to implement a risk-based

approach for the management of produced water. This includes assessment of the whole effluent toxicity rather than focusing solely on the measurement of compounds known to be within the effluent. Produced water is a complex substance and this approach takes account of the impact of unknown substances within it, as well as the combined effects of all components.

NCIMB's MARA and LumiMARA bioassays are recommended by the UK's Department of Business, Energy and Industrial Strategy (BEIS), as part of their preferred approach to achieving this.

Fuel testing

Microbial proliferation and the presence of contaminants in fuel and fuel components can cause serious problems including under-performance of machinery, filter clogging and microbially influenced corrosion. NCIMB offers quality assured analysis of fuel and fuel components to nationally recognised standards.

We can test fuel samples for bacteria and fungi, particulate contamination and water content. We can carry out investigations to aid in solving contamination issues or test for the presence of a suspected contaminant.



Oilfield microbiology

We identify and quantify microorganisms known to influence corrosion using culture-based methods, qPCR and metagenomics. Different methods can be combined to create a comprehensive analytical tool for the detection of problem microbes.

Groups of microbes identified include general heterotrophic bacteria; acid producing general heterotrophic bacterial; sulphate reducing bacteria, sulphate reducing archaea, and nitrate reducing bacteria.

Analytical services

Our service includes standard suite of commonly requested produced water and effluent tests. Analyses include:

- pH
- Total hydrocarbon content (THC)
- Chemical oxygen demand (COD)
- Biological oxygen demand (BOD)
- Sulphide/sulphate
- Chloride/chlorine
- Total suspended solids.
- Additional tests are available on request.

Media kits

We supply media kits for the quantification of sulphate reducing bacteria, general heterotrophic bacteria/acid producing bacteria and nitrate reducing bacteria.

Ecotoxicity testing

Bacterial testing using the MARA and LumiMARA tests recommended by BEIS as part of their preferred approach to implementation of OSPAR's RBA requirement.

- Increased genetic diversity of bacterial testing compared to single species tests such as Microtox
- Assessment of both acute and chronic toxicity.
- We work with our partners to source higher order testing and deliver a comprehensive ecotoxicity testing service.

Fuel testing

We test fuel samples for the presence of bacteria and fungi, particulate contamination and water content, and carry out investigations to aid in solving contamination issues or test for the presence of a suspected contaminant.

Biocide testing

We can test biocides against our own North Sea microbial consortium, or enrich from clients' samples. We can also undertake enumeration from customer samples following treatment at the production facility to determine efficacy in situ.

To find out more...

To find out more about any or our analytical services, for information about how to ship a sample, or to request a quote, please email NCIMB at enquiries@ncimb.com