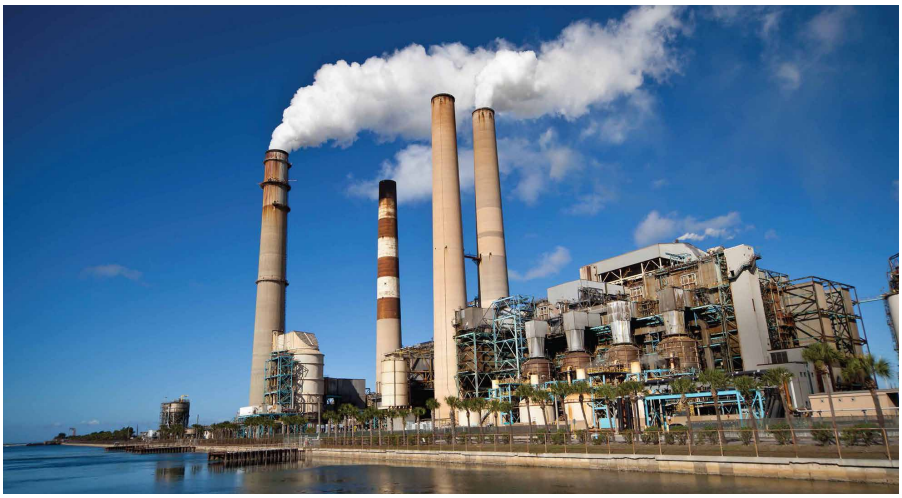
Fact sheet

Intertek Microbiology Services for the CCUS Industry

Safeguarding the integrity of carbon storage through advanced microbial testing

Transport and storage of captured CO_2 is rapidly advancing to reduce emissions and meet net zero targets. However, microbial activity in these environments can compromise site integrity, reduce efficiency and pose safety risks. That's why Intertek's microbial testing and consultancy services are essential for identifying risks such as microbiologically influenced corrosion (MIC) and ensuring safe, reliable carbon storage.



Why Microbiology Matters in CCUS

Carbon Capture, Utilisation and Storage (CCUS) is essential for Net Zero targets, yet CO_2 injection into deep subsurface environments significantly disrupts indigenous microbial communities. These shifts can stimulate processes such as methanogenesis, sulphate reduction, and biofilm formation, contributing to microbiologically influenced corrosion (MIC), reservoir souring, and decreased injectivity. Although current monitoring strategies often overlook microbial parameters, these changes can impact storage integrity both positively (e.g., enhanced mineral or biological CO_2 sequestration) and negatively (e.g., methane generation, infrastructure corrosion, or clogging due to carbonate or hydrate buildup). Integrating microbiological monitoring is therefore vital for assessing and managing the long-term stability of CO_2 storage systems.

Intertek's Microbiological Testing Capabilities

- **Microbial Contamination Assessment** – Detect and quantify microbial populations using a range of methods including MPN, qPCR and NGS.
- **MIC Risk Evaluation** – Identify corrosion risks caused by sulphate-reducing bacteria and other corrosive microbes.
- **Reservoir Souring Studies** – Evaluate microbial activity that may lead to H_2S generation and degradation.
- **Custom Research & Consultancy** – Understand microbial responses to high CO_2 environments and their impact on storage integrity.
- **Environmental Microbiology Testing** – Support microbial monitoring strategies and frameworks.

Integrated Support for CCUS Projects

Intertek combines microbiology with corrosion consultancy, production chemistry, and reservoir characterisation to de-risk CCUS implementation. With over 50 years of experience, advanced laboratories, and proven expertise in energy transition, Intertek is a trusted partner for strategy development and long-term asset reliability.

For more information

UK	+44 1224 708500
USA	+1 7134798400
UAE	+971 6508 6111
Malaysia	+603 8966 3008
Australia	+61 8 9263 0263

web.ep.oil.gas@intertek.com

intertek.com/capcis/carbon-capture/