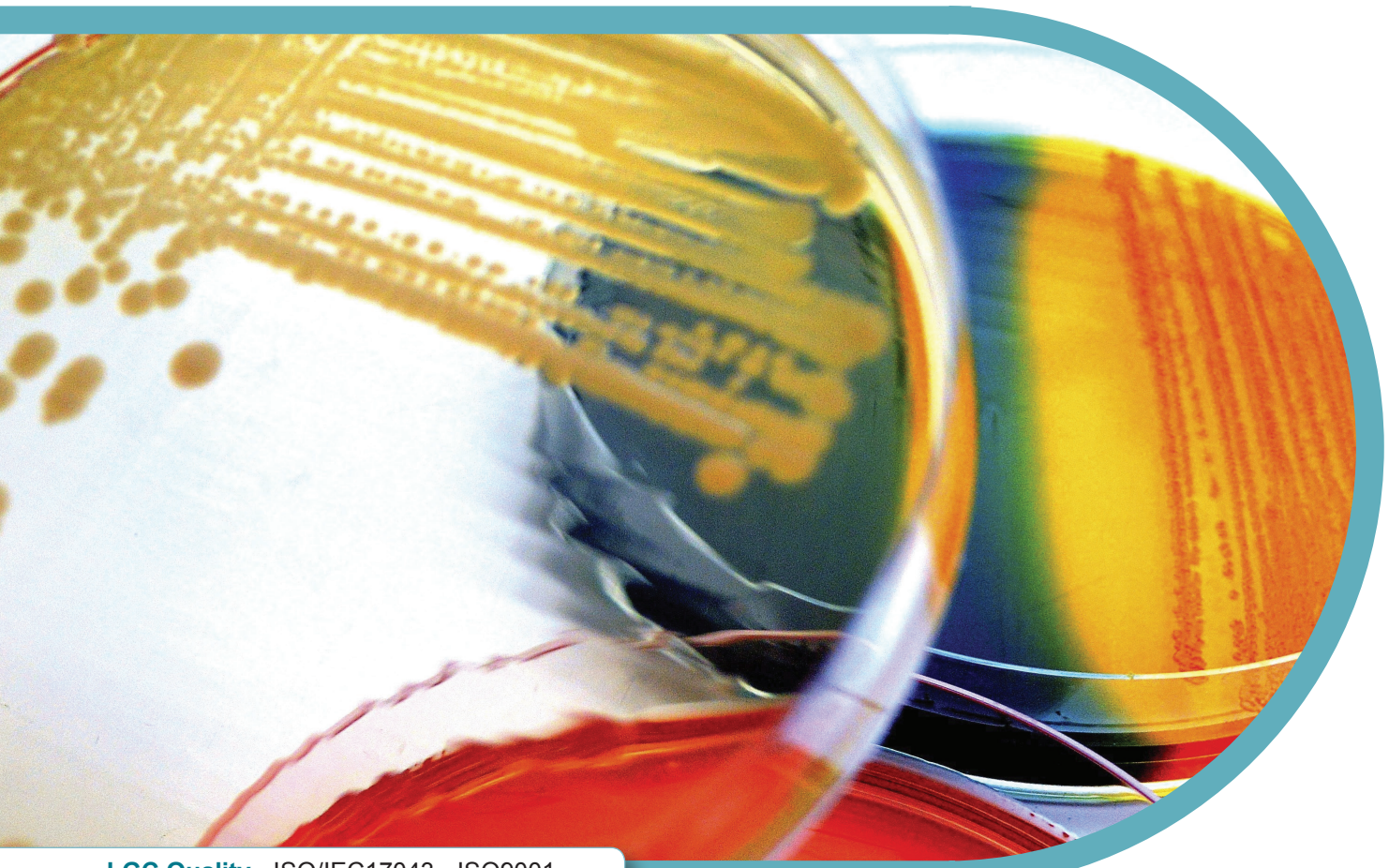
# **QWAS** – Water microbiology proficiency scheme

Microorganisms live in water naturally and most are relatively harmless. However some of them can cause devastating disease in humans. Many of the world's hospital beds are filled with people suffering from a water related disease. In developing countries, a large proportion of illnesses are linked to poor water quality and substandard or nonexistent sanitation conditions.

In several countries, water microbiology is the subject of legislation. Regulations specify how often water sources are sampled, how sampling is done, how analysis will be performed, what microbes are detected, and the acceptable limits for the target microorganisms in the sample.

The QWAS scheme is solely intended for microbiological analysis of a wide range of water samples, effluents and sludges. For laboratories that perform the analysis of water, participation in a relevant proficiency testing scheme can provide confidence that results of these analyses and the equipment used to produce those results are meaningful and accurate which, in turn, helps to ensure the safety of water.



## Scheme operation

The QWAS scheme year operates from January to December and test materials are despatched ten times per annum. Round despatch dates and reporting deadlines are available on the current QWAS application form, and further information can be found in the QWAS scheme description. These documents can be downloaded from our website www.lgcstandards.com

| Test material | Analytes |
|---|---|
| Bathing, recreational & surface water | **Enumeration**<br>Coagulase-positive staphylococci, *Staphylococcus* species, Sulphite-reducing *Clostridia*. |
| Bathing, surface & wastewater | **Enumeration**<br>Enterococci (faecal streptococci), *Escherichia coli*, Faecal coliforms, Total coliforms.<br>**Detection**<br>*Salmonella* species. |
| Effluent sludge | **Enumeration**<br>*Escherichia coli*.<br>**Detection**<br>*Salmonella* species. |
| Environmental water | **Enumeration**<br>*Legionella pneumophila* by culture, *Legionella pneumophila* by PCR. *Legionella* species by culture, *Legionella* species by PCR.<br>**Detection**<br>*Legionella pneumophila*, *Legionella* species.<br>**Identification**<br>*Legionella pneumophila*, *Legionella* species. |
| Mineral water | **Enumeration**<br>Enterococci (faecal streptococci), *Escherichia coli*, *Pseudomonas aeruginosa*, Total aerobic count at 22°C & 37°C.<br>**Detection**<br>Coagulase-positive staphylococci, Sulphite-reducing *Clostridia*, Sulphite-reducing *Clostridia* spores ONLY. |
| Paper exercise | Colony count and calculation of number of microorganisms. |
| Potable water | **Enumeration**<br>*Clostridium perfringens*, Coliforms, Enterococci (faecal streptococci), *Escherichia coli*, *Pseudomonas aeruginosa*, Sulphite-reducing *Clostridia*, Sulphite-reducing *Clostridia* spores ONLY, Total aerobic count at 22°C & 37°C.<br>**Detection**<br>Coliforms, Enterococci (faecal streptococci), *Escherichia coli*, *Legionella* species (low levels), Sulphite-reducing *Clostridia*.<br>**Identification (non pathogenic)**<br>Identification of organism to correct family, genus or species level. |
| Process water | **Enumeration**<br>*Pseudomonas* species, Total aerobic count, Yeast, Mould, Yeast & mould (total). |
| Sea water | **Enumeration**<br>Enterococci (faecal streptococci), *Escherichia coli*, Faecal coliforms, Total coliforms.<br>**Detection**<br>*Salmonella* species. |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