



# QWAS

## Water Microbiology

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### Water Microbiology

The Quality in Water Analysis Scheme (QWAS) has been specifically developed for the microbiological analysis of waters and effluent sludge.

Microorganisms occur in water naturally and the majority are relatively harmless. However contamination of water from faecal sources can lead to large outbreaks of disease.

In many 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 microorganisms are to be tested, and the acceptable limits for the target microorganisms.

For laboratories responsible for the analysis of waters, participation in a relevant LGC AXIO 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.

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

\*The full range and availability of test materials and analytes is determined on an annual basis and may be added or removed. For accredited and non-accredited status please see current application form/scheme description.

