

# Water Analysis Costs and Specification

## Outlet sampling and analysis

**The BS8554:2015 recommends that where there is a Water Safety Plan (WSP) this should require an ongoing sampling programme for monitoring control measures. Sampling points should be designated according to the sampling plan, and indicated on a schematic diagram of the water system in the sampling plan.**

Outlets to be sampled are, therefore, normally selected by you as per your WSP.

ProEconomy's water sampling technicians are trained in collecting samples from outlets including those for Legionella analysis, following the BS7592:2008 standard, as well as those for Pseudomonas aeruginosa analysis following the HTM04-01, 2016 recommendations.

Temperatures at the outlets are always recorded by ProEconomy's technicians whenever samples are taken. Samples are analysed by an independent, UKAS accredited laboratory.

### Microbial analysis

The ISO 11731, 2017 culture method for Legionella analysis is applied by the laboratory.

The British Standard 6068: Section 4.2 1989, and the ISO 8199:2007 culture method for Pseudomonas aeruginosa analysis is applied by the laboratory.

During the first 3 months after activating the Orca system, samples can be taken for Total Viable bacterial Counts (TVCs) analysis to ensure the water quality is improving and that the biofilm in the pipework is reducing. The British Standard 6068: Section 4.5 1999, ISO 6222:1999 for this analysis would be applied by the laboratory.

### Copper and silver analysis

The HTM04-01, 2016 and the HSG274, 2014 recommended copper and silver target levels for Legionella control at outlets are more than 0.2mg/l for copper and more than 0.02mg/l for silver.

To monitor that these target levels are consistently maintained, ProEconomy recommend that samples are taken for copper and silver analysis from the WSP selected outlets.

Copper and silver analysis by a UKAS accredited laboratory is carried out using Inductively Coupled Plasma technologies, which have been proven to provide the most consistent and accurate results.

### Orca system and tank sampling

Enough copper and silver has to be produced by the Orca system so that enough, above the targets for controlling the target organisms, can be delivered to outlets.

Therefore, as part of ProEconomy's maintenance agreement with you, samples for copper and silver analysis are taken on a monthly basis from the Orca system and any tank that is treated by the Orca system.

## Presentation of results

You will be notified immediately if confirmed Legionella and Pseudomonas aeruginosa results are received.

Results are interpreted by ProEconomy's microbiological team, headed by Dr. Birgitta Bedford, PhD in Legionella Control, and advice is given with any notification of a positive Legionella or Pseudomonas aeruginosa result, also conforming to ProEconomy's contingency plan.

Results are presented in an Excel worksheet for easy reference. These are colour coded green for good results, and red for bad results.

Copper results below the Legionella control target level, of 0.2mg/l, and results above the Water Supply (Water Quality) Regulations' maximum allowed copper value for drinking water, of 2mg/l, are coloured red.

Silver results below the Legionella control target level, of 0.02mg/l, and results above the World Health Organisation's maximum recommended value for drinking water, of 0.1 mg/l, are also coloured red.

Legionella results above the 100cfu/l limit of detection, Pseudomonas aeruginosa results above 0cfu/100ml and TVC results above 100cfu/ml are also coloured red.

Results are all UKAS certified with a signed certificate of analysis that is sent to you when received.

## Our package includes:

- Fully trained sampling technician to take, transport and collate samples.
- Samples collected and analysed by a UKAS approved laboratory.
- Results received and formatted by ProEconomy's microbiological team for easy interpretation by the client in confidential workbooks.
- Analysis based advice and protocols distributed to the client.
- Contingency plan in place, reacting to positive sample results. Advice for assistance in remedial works.
- All sample points QR coded
- Password protected content management system collating real time sample data and UKAS approved laboratory sample results
- Water management meetings attended on request.
- HSE meetings or visits attended on request.