Installed equipment should be capable of proportional dosing relative to flow

- Level of copper in drinking water must not exceed 2mg/l (Para. 2.108)
- Values of more than 0.2 mg/l copper and more than 0.02 mg/l silver are recommended (Para. 2.105)
- Maintaining adequate silver ion concentrations in hard water systems can be difficult due to the build-up of scale on the silver electrodes (Para. 2.106)
- Ionisation systems should be regularly inspected (Para. 2.107)
- Water samples should be taken regularly and analysed by a UKAS-accredited laboratory (Para. 2.107)
- The ionisation process is PH sensitive and dosing levels may need increasing for PH levels greater than 7.6 (Para. 2.106)

"When used correctly, copper and silver ionisation is shown to be effective at controlling Legionella and can penetrate and control biofilms." (Para. 2.101)

HSG274: The control of Legionella bacteria in hot and cold water systems

Auto-adjust technology and flow-proportional dosing ensures consistent ion release.

- The control mechanism incorporated into Orca ensures that the level of copper in the water supply can’t rise above 1 mg/litre.
- The actual ion concentration set is tailored to the requirements of the water system.
- The Orca’s unique ultrasonic anti-scaling technology reduces scale build-up dramatically so the system operates at peak efficiency.
- Touch-screen technology makes weekly interrogation of ion levels a simple process, while ProEconomy’s comprehensive support package includes monthly system checks.
- Monthly samples are taken and sent to a UKAS-accredited lab for analysis. Legionella and ion levels are checked and acted upon if required, and records stored securely.
- Water quality and pH levels are checked pre-installation of the Orca system to ensure the correct system is provided. Ion release can be easily adjusted. Out of 200 systems installed, ProEconomy has never encountered problems with pH affecting operation.

Copper concentrations above 1mg/l may cause staining of laundry and sanitary ware and increase the corrosion of galvanised iron and steel fittings (Para. 5.3)

HTM 04-01: Safe water in healthcare premises

Some staining only occurs at about 10% of sites. ProEconomy uses a very effective cleaning agent, and stain removal can be incorporated into the maintenance schedule. Laundry staining has never happened at an Orca site. As copper ion levels never rise above 1mg/l corrosion isn’t an issue.

...silver salts may be used to maintain the bacteriological quality of drinking-water. Higher levels of silver, up to 0.1 mg/l could be tolerated in such cases without risk to health.”

Guidelines for drinking water quality (4th edn.)

Orca has a failsafe system to ensure that the 0.1 mg/l level can’t exceeded. For optimum Legionella control, the Orca doses at 0.02mg/L - 0.08mg/l

Since 1 September 2015, a biocidal product cannot be made available on the EU market if the substance supplier or product supplier is not included in the Article 95 list (for the product-type to which the product belongs).

European Biocidal Products Regulations 528/2012

ProEconomy is a founder member of the Biocidal Product Directive’s copper and silver task forces and is included on the Article 95 list for both metals.
ProEconomy | orca

Copper and Silver Water Treatment

proven Legionella control