

The PURELAB flex

A different approach to sanitization

The Importance of regular sanitization

After organic and inorganic chemical impurities are removed, bacterial growth can still occur, even though very pure water provides an extremely harsh environment with minimal nutrient content. Remaining trace impurities, materials of construction in contact with the pure water and debris from dead bacteria can act as sources of food and biofilms. If this bacterial growth is not minimized, it can cause problems to the purity of the water required which may impact on any test work results.

The bacteria themselves are not the only problem; they also produce endotoxins and nucleases. Endotoxins are fragments of cell membrane that are released when cells die and during bacterial cell metabolism. They can cause serious interference in many laboratory techniques where water or prepared reagents will come into contact with DNA or RNA and can be affected by nucleases in the water.

The inside of most water purification systems consists of long lengths of pipework, connectors, reservoirs and filters which present a high surface area for bacteria growth. A sanitization regime is suggested as part of the maintenance schedule. This is recommended for most water purification systems to minimize the build up of particles, biofilm, micro-organisms and bacterial by-products.

Our products are designed to ensure that all wetted parts are sanitized as simply as possible. The majority of systems use rapid dissolving chlorine based tablets and a pre-programmed sanitization procedure. However, we recognise the inconvenience involved in this crucial maintenance procedure.



Most of our products, with the exception of the PURELAB flex, have had a recommended monthly sanitization procedure of the complete system. ELGA LabWater maintain this position for all of the predecessors of the PURELAB flex, including all units with reverse osmosis technology. The PURELAB flex is an innovative new style of system and so our recommendation for sanitization reflects this.

Why can we sanitize the PURELAB flex less frequently?

The PURELAB flex is a low volume system. It has been designed with less internal pipework, fewer components and a high efficiency UV system, and as such the scope for biofilm build-up is reduced. The point of use filters available have demonstrated their ability to provide the required bacterial and endotoxin control when used as recommended.

Bacteria will still grow within any water purification system, so if micro-organisms are of concern for the application, it is important to monitor and sanitize the unit to prevent the bacteria levels reaching levels that affect the efficiency of the point of use filter.

The PURELAB flex uses a unique, simple to use, sanitization procedure that should only be required infrequently (once a year).

Easy and quick sanitization

Sanitization of the PURELAB flex is a simple procedure which cleans all wetted parts of the unit, including the handset and point of dispense. The sanitant and quenching agent is supplied in a single and safe to handle cartridge which means no harsh chemicals needs to be ordered, handled or mixed. The cartridge simply clips into place once the purification pack is removed. The sanitization procedure can be simply selected on the dispense handset and does not generate any chemical waste, as the sanitant is absorbed and neutralized within the specialist sanitization cartridge.



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