

# WATER & FOOD

## Electrolysed water in food processing and foodservice

ROX water (electrolysed water) is promoted as a revolutionary chemical free cleaning and sanitising system. Over 20 000 units of Hoshizaki Electric's Japanese made ROX water units have been installed in Japan.

ROX Water is created by a process that electrolyses a weak saline solution (tap water and common salt) resulting in a dissociation of the water into two separate streams. A very dilute salt water solution passing through a membrane results in the generation of alkaline electrolysed water (cleaning water) at the cathode (negatively charged terminal) and acidic electrolysed water (sanitising water) at the anode (positively charged terminal), with the following properties.

- **Alkaline cleaning water.** A dilute solution of sodium hydroxide (NaOH), pH about 11.3, that is a natural cleaning agent and detergent and a highly effective degreaser.
- **Acidic sanitising water.** A sterilising and disinfecting solution containing hypochlorous acid (HOCL) with a pH about 2.7 and a very high oxidation reduction potential (ORP) of 1100 Mv. Due to this high ORP, the sodium hypochlorite (HCLO) in acidic ROX Water is claimed to sterilise approximately 80 times faster than other sodium hypochlorite solutions of the same concentration.

The Australian distributors, eWater Systems, state that there are numerous independent research studies that have explored and validated the effectiveness of electrolysed water. It has been shown to significantly lower the presence of pathogens and bacteria such as *E. coli*, *Listeria*, *Salmonella* and *Staphylococcus* and has been shown to be more effective and faster acting than many widely used sanitising alternatives.

eWater Systems' Director, **Phil Gregory** said, "Initially the effectiveness of ROX surprised us as it does anyone because it seems incredible that water at

tap temperature with no suds, colours, smell or chemicals could work so well. However, the proof is undeniable and people in numerous industries are embracing ROX water because it represents an ideal combination of effectiveness and sustainability."

Electrolysed water is promoted for use wherever chemical cleaners and sanitisers are used, including food processing, hospitality, aged care, agricultural and tourism industries. The system has been tested and installed at Austin Health CPU, Hungry Jacks and Jaman and Nobu Restaurants in Crown Melbourne and is due to be installed at the IVY complex in Sydney, Melbourne and Brisbane Convention Centres, Southern Health CPU and more.

Austin Health Central Production Unit at Heidelberg in Victoria, where meals are prepared for a number of metropolitan Melbourne hospitals, uses electrolysed water for cleaning and sanitising not only utensils and equipment, but also surfaces and floors, and even in preparing fresh foodstuffs. Before ROX Water was accepted as an alternative to chemicals by Austin Health, the system was subjected to stringent microbiological testing and evaluation. Reporting on five weeks of independent tests, Food Services Supervisor, **Eileen Palmieri** stated that the trial results pointed to ROX water as being as effective as traditional chemicals in reducing bacterial numbers to safe levels.

AgriQuality, the independent microbiologists testing the water at Austin Health reported, "ROX water was shown to perform at least as well if not better than the traditional cleaning and sanitising methods when used on surfaces and equipment. On one of the trials it was shown to perform considerably better."

The system was also assessed byASUREQuality for Hungry Jacks who found, "... In these trials (comparing traditional cleanser and traditional sanitiser to ROX cleaning and sanitising), the ROX procedure performed the best or better overall"

Further information including antimicrobial data is available from eWater Systems Pty Ltd (03 9645 4055, [www.ewater.com](http://www.ewater.com)). □

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