

‘Electrolysed oxidising water’ provides a real alternative to formaldehyde

For as long as most people in the industry can remember, there has been a debate over the use and safety of formaldehyde in the hatchery. Will its use be banned or will it not? This has been the question at the back of everyone’s mind.

One of the reasons for its persistence over time has been the lack of a suitable alternative and the perceived impact of formaldehyde on chick and worker welfare.

However, pressure from third parties has made some hatcheries remove formaldehyde from their list of ‘approved chemicals’ for their hatcheries and farms.



The equipment that generates the Nontox (right) and an optional 1,000 litre storage tank (left).

Fortunately, there may now be an alternative for hatchery use and International Hatchery Practice recently spent time with Watter BV who have developed a new disinfecting technology. This is based on the electro-chemical activation of salt and water.

Dutch incubation specialists Pas Reform have the distribution rights for this technology in hatcheries. Pas Reform has worked in consultation with Watter to develop new applications for Nontox in a variety of hatchery disinfection applications.

In simple terms, the addition of salt and

electricity to water in a Watter unit produces a safe and powerful disinfecting solution which is called Nontox and can be described as ‘electrolysed oxidising water’.

Nontox has a wide range of applications in human and animal health and in other agricultural fields such as horticulture.

The beauty of the Watter system is its simplicity. As long as you have water and electricity supplies and have acquired a Watter unit the only other thing you need are salt tablets that the unit needs to convert water to Nontox.

What is more, you can set your Nontox production unit up in the hatchery and it will provide you with an on-going supply. This interesting disinfectant can be used for the routine disinfection of facilities and equipment, the disinfection of water and can be fogged in a cabinet to sanitise hatching eggs prior to setting.

Product benefits

This product also has the beneficial advantages that no residues are left on surfaces in the hatchery and no build-up of resistance to the product in bacteria has ever been encountered. The product is also active against fungi such as *Aspergillus Spp.*

Nontox is backed up by both laboratory and field evaluations and Watter BV has certificates relating to its on farm use that confirm that the product does what it claims



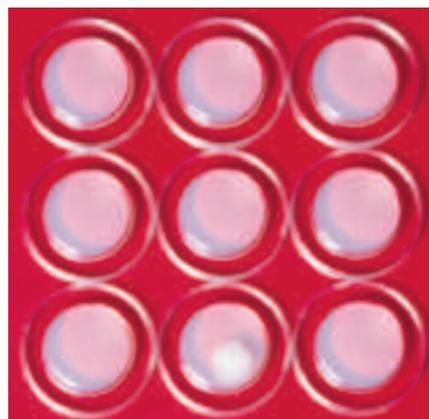
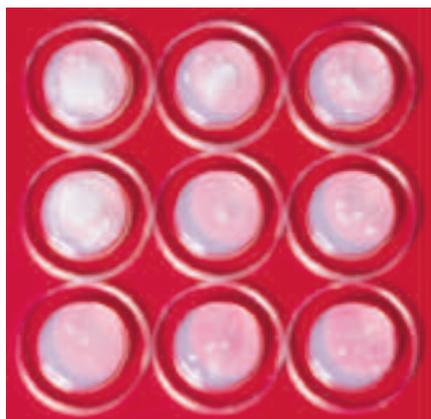
Salt tablets are easily placed into the front of the machine.

and that it complies with the appropriate legislation. The disinfecting action comes from the free radicals in combination with active chlorine compounds such as HClO and ClO^- which are produced when electricity is passed through a brine solution made by adding the salt tablets to water in the Watter unit.

On the poultry front, work has shown that

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The microbiological contact plates on the left are before treatment with Nontox and the ones on the right are 22 hours after treatment.



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chicks produced from eggs that have been fogged with Nontox in the hatchery perform better at three weeks of age.

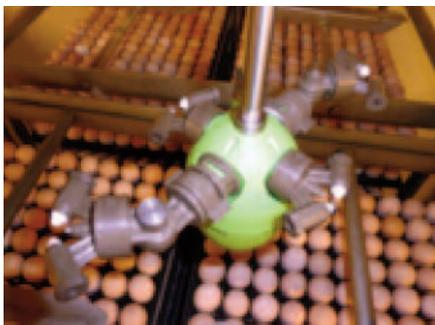
We visited the Probroed & Slood hatchery in Holland to see an operational system that is producing Nontox for hatchery use.

The Watter system is set up on minimal floor space. The Watter unit is plumbed into the water system and an 80 litre tank holds the Nontox.

This tank is effectively a reserve of disinfectant that can be drawn upon when demand is high and can be topped up when demand is low. The system is capable of producing 70-80 litres of Nontox per hour.

The salt tablets come in conveniently sized

Fumigation occurs through nozzles developed by Pas Reform to create the optimum droplet size for egg disinfection.



The equipment for generating an air-borne mist of Nontox to disinfect rooms in the hatchery.

polythene bags so that when the system requires a top up all the tablets in that bag go into the hopper on the unit.

This means that in the hatchery the salt, which can be corrosive, is either in sealed polythene bags or in the hopper on the actual unit that produces the Nontox.

So, how effective is Nontox?

Laboratory studies at TNO in Holland have shown that in testing in accordance with European standard NEN-EN 1276 Nontox shows at least a 5 log reduction (the requirement to pass this test) of various bacteria including *E. coli*, *Staphylococcus aureus*, *Enterococcus hirae* and *Pseudomonas aeruginosa*.

More recently, this novel disinfectant has been evaluated in hatcheries where it has

shown to be very effective as is so clearly demonstrated by the microbiological contact plates shown on the previous page.

With anything new 'the proof of the pudding is in the eating'!

This being the case, it will be interesting to see what the uptake of Nontox is by hatcheries over the next couple of years. ■

Looking inside the 'fumigation' cabinet where Nontox is being applied to eggs prior to setting.

