

**Breaking News on Food Processing & Packaging - North America**

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**Ozone jet washer helps firms clean-up**

By George Reynolds

12/12/2006- **A new power washer, using ozone mixed with cold water to decontaminate food processing premises, will reduce costs and help the environment, its manufacturer claims.**

Processors are under pressure to prevent contamination and improve food safety, but also to find ways to reduce the use of chemicals, producing toxic waste.

Ozone is known to be an excellent disinfectant, and is safe to use with food, without the use of additional chemicals. The gas is a naturally occurring tri-atomic form of oxygen that is formed as sunlight passes through the atmosphere. Ozone can be generated artificially by passing high voltage electricity through oxygenated air.

The Eco-Jet uses ozone mixed with cold water to produce a powerful cleaning stream, that can tackle difficult clean-ups including resistant buildup and biofilm, claims its US manufacturer Eco-Safe.

Ozone is an unstable, highly reactive form of oxygen. It breaks through the membrane of bacteria, such as salmonella and E. coli. Once the oxidation process of cleaning is complete, the ozone reverts back to oxygen, leaving no trace of chemical residue. This usually takes between 20 and 30 minute after use.

Ozone is at least ten times stronger than chlorine as a disinfectant, killing bacteria 3100 times faster, the company claims. Furthermore, chlorine reacts with meat forming highly toxic and carcinogen compounds, tri-halomethanes (THMs), impairing the quality of products.

Chlorine can also form harmful chloroform, carbon tetrachloride, chloromethane besides THMs.

*"Independent laboratory tests have shown the Eco Jet approach results in a superior level of sanitizing as opposed to traditional methods, while saving time, energy and chemical costs,"* said Michael Elliot, president of Eco-Safe Systems.

The company claims firms using the ozone jet will benefit from increased product value due to lower instances of spoilage, contamination and extended shelf life. Furthermore, because ozone is more soluble in cold water, firms could benefit from reduced water heating bills.

Eco-Safe calculate that firms switching to ozone can expect to increase product value by one per cent of product price.

Both the Food and Drug Administration and the US Department for Agriculture have approved ozone as sanitizer for food contact surfaces and for direct application to food products. It has also been used extensively used in the purification of bottled and municipal water.

Eco-Safe said the pressure washer reduces or eliminates the costs for additional cleaning chemicals, the labor required for clean-up time and significantly reduces wastewater dumping surcharges.

A growing number of industries are faced with rising costs of wastewater treatment. Eco-Safe offers its WR-2700 and WR-3700 reclamation systems, that can integrate into operations to reclaim 80 per cent of total water usage, the company claims.

Eco-Safe claims the reclaimed water is cleaner than that supplied by the utility companies, and can be reused to at the plant of discharged into the sewage system without costly surcharges.

Food processing plants using other chemicals tend to have a strong odour. Eco Safe claims using ozone as replacement improves the smell of as well as the safety of working environments, reducing employee illnesses.

The manufacturer has been in operation since 1992 and offers their products for sale and lease to customers through the US.

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