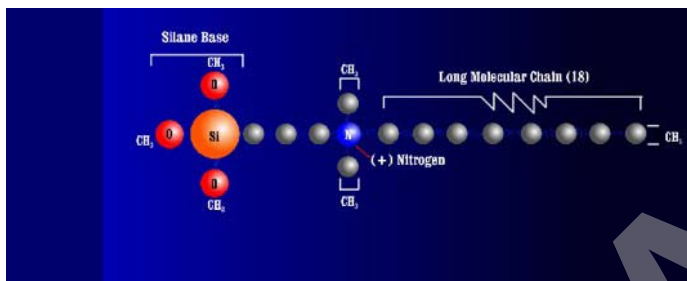


Anti-microbial protection – everywhere!

During the Cold War, when US submarines spent many months underwater on patrol, US Navy scientists developed a compound to maintain healthy air on board – Zoono. This compound has potential for applications in many systems, including food handling, production and packaging.



The Zoono molecule

Zoono is a long-lasting, water-based anti-microbial treatment which protects surfaces against microbial, viral and fungal contamination for extended periods without the need for re-application and irrespective of how many times the surface is washed-down.

The molecules of this astonishing compound form ionic and covalent associations which bond it to surfaces. The sword-shaped long chain organic aliphatic component of the Zoono molecules stabs and electrocutes microbial cells on contact, and continues to do so as it encounters further cells.

The product has food safety approval and has been extensively tested for its antimicrobial effectiveness in the USA, New Zealand, and Australia. It is non-toxic, non mutagenic, non-teratogenic and non-allergenic. The compound can be sprayed on surfaces, added to wash water or impregnated into packaging materials – and these are just some examples of its potential applications.

In addition to its suitability for surfaces and for implements in constant use, Zoono has potential for application to other areas, such as water and air-conditioning systems and for minimising the risk of water borne contamination and illnesses such as Legionnaire's Disease.

Zoono's Ken Rayward believes that the potential of Zoono is infinite. "It's capable of bonding to just about any surface you can think of that may potentially carry germs," he said. "Walls and floors in homes, hotels, hospitals, on food processing plant and equipment, air ducting, air filters: you name it. We have done work which shows that it is a highly effective hand sanitiser which doesn't need regular reapplication. It's antifungal properties make it very effective in treating athletes foot."

So what about food?

In addition to its potential to enhance food safety in food production plants, the application of Zoono to food packaging ma-



Zoono-coated foam meat trays, which testing has shown have the potential to improve bacterial shelf life for meats by up to 1 – 1.5 days (Photo from Alto Packaging)

terials has potential to enhance the shelf-life of perishables and reduce food-borne disease.

Alto Packaging Ltd's Albany plant has recently launched a range of Zoono-coated foam meat trays, which testing has shown to have the potential to improve bacterial shelf life for meats by up to 1 – 1.5 days.

The water based Zoono compound is applied during the production of roll stock and maintains its efficacy during forming of meat trays. Alto has gained the exclusive global rights to include this technology in all food packaging applications and is currently testing it for use with open cell trays, rigid trays with pads, closed cell trays and Alto's own case-ready system.

"This technology will potentially deliver numerous benefits for retailers, food manufacturers and consumers alike, allowing longer display time, improved food safety, greater supply chain efficiencies and overall, better food quality." said Hayden Grant, Alto's sales and marketing manager for food packaging at the Albany and Hastings Plants.