



Credit: Anacail

Every year microorganisms spoil millions of tonnes of food. Some food-borne microorganisms cause an annual toll of half a million food poisoning cases in the UK. A new plasma device produced with STFC follow on funding helps remove this threat to our food supply.

The device uses electrodes to generate a cold plasma inside the food's packaging without having to open it. This ozone then circulates, destroying microorganisms on the food surface, preventing them from causing disease or spoiling the food.

Since the pack remains sealed at all times, the decontamination is enduring, and leads to a longer shelf life; the process can add several days to the shelf-life of packaged food (more than a week in some cases). Since unused ozone rapidly decays back to normal oxygen, no residues are left on the food and the flavour unchanged.

The device was developed by Anacail, a University of Glasgow spinout company, with the help of follow on funding from the STFC.

According to Declan Diver, Anacail's director "The STFC IPS funding underpinned critical prototype technology development for the fledgling Anacail, and was a fantastic boost to our progress and investment prospects".

The use of ozone improves food safety so could potentially reduce the burden of food poisoning on the UK economy. Extending the shelf life of food also reduces food waste; improving food security and lowering prices. Since 15 million tonnes of food are currently wasted in the UK every year improved shelf life could have significant impact on the British economy.

Anacail continues to grow, having secured £2.8 million in investment from several organisations, as well as grants from Innovate UK and Scottish Enterprise worth more than £1m. Anacail is also branching out into medical decontamination equipment.

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Declan Diver Director of Anacail