

Abstract:

In recent years, there has been growing demand for improved ways of disinfecting fresh produce. This is driven, amongst other things, by concerns over the frequency and extent of contamination of ready-to-eat fresh foods by human pathogens such as *Listeria monocytogenes*, which is able to grow and survive at refrigeration temperatures. Contamination of produce arises in the field (e.g. as a result of slurry application) as well as during storage, transport and packaging – where conditions can favour the reactivation of dormant spores of some bacteria e.g. *Bacillus cereus*. Recent interest has been shown in harnessing ozone, a strong oxidant, for the surface decontamination of fresh produce. The biocidal action of ozone is well established, and the gas has been used worldwide for over a century for the disinfection of potable water. Data presented support this novel application for ozone, illustrating up to a 4-log₁₀ reduction in *Escherichia coli* bacterial suspensions by exposure to a dissolved ozone (O₃) concentration of 0.51 ppm.