

### Abstract:

Documented outbreaks of human gastroenteritis associated with consumption of raw fruits and vegetables contaminated with pathogenic bacteria, parasites, and viruses have occurred with increased frequency in many countries in the past decade. Enhanced epidemiologic and surveillance techniques, together with changes in agronomic, harvesting, distribution, processing, and consumption patterns and practices have undoubtedly contributed to this increase. The risk of human infections can be reduced by preventing contamination, controlling growth, or removing or killing pathogens by washing or treating raw fruits and vegetables with sanitizers. The efficacy of sanitizers, however, is often minimal because pathogens on and in plant tissues are protected against exposure to the lethal components. The hydrophobic cuticle, diverse surface morphology, and abrasions in the epidermal tissues of fruits and vegetables can prevent access of sanitizers to sites where pathogens may be lodged. The challenge is to devise a treatment that will reach pathogens on the surface and in subsurface areas of fruits and vegetables in an active form without compromising sensory quality.