Chapter 20

Organic acids and other chemical treatments

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Abstract

Decontamination of food products using organic acids and other chemical treatments has been and continues to be one of the most important interventions for controlling their microbiological safety and quality. This chapter first covers aspects pertinent to the principles and technology of decontamination with chemical agents, and then reviews food decontamination applications of chemical treatments, with a particular emphasis on organic acids, as well as information regarding their mode of action and effectiveness against spoilage and/or pathogenic bacteria. Additional topics discussed in the chapter include potential effects of chemical decontamination on food quality, concerns and risks other than food quality associated with this type of intervention, and regulatory aspects of its implementation.

Key words: chemical agents; food decontamination; microbiological safety and quality; organic acids