IMPFT135K

Principles of sterile processing in food technology

Overview

This standard is about the principles of sterile processing in food technology. You need to understand the methods of sterile processing, and how the processing achieves sterility.

You need to understand the role of heat, pH and acidity in sterilization, and how sterility is maintained in packaging methods

Performance criteria

You must be able to: See IMPPO110S Carry out process control of production in food manufacture

Knowledge and understanding

You need to know and understand:

1 the aim of sterile processing; kill all micro-organisms, inactivate all enzymes
2 the scientific principles involved in the destruction of micro-organisms and their spores, and the inactivation of enzymes
3 what the difference is between absolute sterility and commercial sterility
4 the use of heat treatment as the most commonly used method of sterilisation
5 the range and application of methods for food sterilisation used in food manufacturing
6 how the acidity levels of food can influence the use of heat treatment or sterilisation methods
7 how pH levels impact on inhibiting spoilage organisms from pH 5.3 and lower
8 the definition and examples of Low acid foods, Acid foods and High acid foods
9 how the presence and levels of osmotically active substances can influence the use of heat treatment or other sterilisation methods
10 how osmotically active substances biochemically act within food mixtures
11 the function of sugars, starches and salts as osmotically active substances
12 the use of glass and sterilisable pouches for the packaging of sterile food and drink
13 the structure and use of sterilisable pouches

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