

Aseptic packaging of processed food and beverages

■ SREENATH PILLAI AND LEENA MURALIDHARAN

SUMMARY : Aseptic packaging can be defined as the filling of a commercially sterile product into a sterile container under aseptic conditions and hermetically sealing the containers so that re-infection is prevented, which is shelf-stable at ambient conditions. Aseptic packaging is the important development in the field of packaging. The first aseptic filling plant for milk was presented in Switzerland in 1961. Aseptic package does not only protect the product but also maintain the quality of the product. Packaging for aseptic was particularly in demand for long shelf-life, high seal integrity and consumer appeal and efficiency (a filled package weight is 97 per cent product and only 3 per cent packaging material); using a minimum quantity of materials necessary to achieve a given function. In 2007, Dr. Philip E. Nelson received the World Food Prize in recognition for his pioneering work in aseptic processing and bulk storage. Aseptic packaging process places less heat stress on foods than canning, therefore, product can contain more nutrients as well as taste, colour and texture. Glass bottles may lack the oxygen and light barriers needed to increase shelf life, heavier to transport, breaks more easily than aseptic packaging, stacking not as efficient, may require preservatives to be added to the product, can be recycled. The aseptic packaging is very well accepted in food product applications worldwide as a safe and high-quality packaging option. Aseptic sterilized food products by destroying the harmful bacteria and pathogenic micro-organisms through a tightly controlled thermal process and combines the sterile product with the sterile packaging material; the end result is a shelf-stable product requiring no refrigeration.

Key Words : Aseptic packaging, Processed food, Longer shelf life, Quality food.

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Aseptic packaging can be defined as the filling of a commercially sterile product into a sterile container under aseptic conditions and hermetically sealing the containers so that re-infection is prevented. This results in a product, which is shelf-stable at ambient conditions.

Aseptic packaging is the important development in the field of packaging. The first aseptic filling plant for milk was presented in Switzerland in 1961. Aseptic package should not

only protect the product but also maintain the quality of the product. Hence, the structure as well as composition of aseptic packaging are more complex and vary depending on product application, package size and package type.

What are aseptic?:

- Packaging
- Processing
- Sterilization

Aseptic packaging applications are growing in popularity for in the medical devices, pharmaceutical, food and beverage industries.

Aseptic comes to America:

Aseptically processed foods and beverages have been available to U.S. consumers for more than 25 years and in wider use overseas for even longer. Globally, aseptic packaging sales are approaching 150 billion annual units representing an

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