



Vacuum Packed (VP) and Modified Atmosphere Packaged (MAP) Foods factsheet

In order to maintain quality and increase shelf-life of foods, many producers/retailers are now packaging products under vacuum or modified atmosphere conditions. Although such techniques may restrict the growth of spoilage organisms, there is the potential to create conditions suitable for the growth of anaerobic pathogens, such as psychrotrophic *Clostridium botulinum*, which is able to multiply and produce toxin at chill temperatures as low as 3.3°C.

Therefore it is essential that expert advice is obtained and reference is made to the relevant Code of Practice to ensure that a safe product is produced.

Key Issues for Vacuum Packed (VP) and Modified Atmosphere Packaged (MAP) Foods

- Hazard Analysis (Based on the principles used to develop HACCP) to identify all potential hazards and establish control measures.
- Monitoring of control points.
- Product formulation.
- Temperature control.
- Definition of product life.
- Training and education of food handlers.
- Evidence of conformance should be maintained for all control points.

It is important to give information of product type and also clear handling and usage instructions to the end-user including:

- Ingredients
- Manufacturer's name and address.
- Refrigeration instructions.
- Storage instructions including temperature guidance
- Use by date.
- Partial use of products, e.g. Consume within X days of opening.
- Cooking or reheating instructions if appropriate, which must be based on proper evaluation of product safety.

Further advice on labelling requirements can be obtained from Trading Standards Officers (contact details below)

Guidelines on Good Manufacturing Practice for VP and MAP Foods

- There should be evidence to show that all Critical Control Points are under control.
- Ensure that all starting materials are delivered under appropriate condition e.g. chill temperatures.
- Purchase good quality products from a reputable supplier and seek their advice on how shelf life may be affected by repackaging, if appropriate.
- Chilled materials should be transferred immediately to chilled storage areas on receipt and the temperatures should be monitored during storage. .
- During food preparation, the temperature of the product should be kept as low as possible at all times and ideally below 5°C.
- Cooked ingredients must be adequately segregated from raw ingredients and ideally stored separately. Equipment, which has been used for handling raw ingredients, must not be used for handling cooked food without proper cleaning and disinfection procedures being followed.
- It is critical that all preservation factors, e.g. pH, salt levels and cooking process, are controlled and meet the specified requirements for every batch of product produced.
- After cooking, product must be cooled as rapidly as possible and should be transferred to a chilled store as soon as possible. (See fact sheet on cooling of cooked meats)
- Ensure that a correct vacuum or modified atmosphere has been applied and that all seals are intact.
- It is critical that the temperature during storage and distribution is controlled and meets the specified requirements.
- It is critical that the shelf life of a product is defined based on the preservation factors used and that the product is used within the shelf life.
- There should be an effective withdrawal procedure system to ensure that any product which does not conform to the process requirements can be effectively traced and returned if necessary.

Guidance

- A Code of Practice for the Manufacture of Vacuum and Modified Atmosphere Packaged Chilled Foods (Camden & Chorleywood Food Research Association)
- Report on Vacuum Packaging and Associated Processes (HMSO).

Contact Details

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