

Honey Processing

There are three elements concerning Food Hygiene to be considered in the processing of honey. Although honey, due to its very high sugar content, is considered a low risk product in terms of bacteriological hazards, chemical and physical hazards must be taken into account as well as general hygiene standards:

1. **Prerequisites** – as in any food processing the cleanliness of the area, equipment and people coming into contact with or close proximity to the product is essential; as is the availability of adequate washing facilities for all three. The exclusion of animals, pests and uncontrolled children from areas where the product is exposed is necessary. Also the exclusion of any people suffering from any transmittable illness from the handling is also required.

2. **The process** – good practice should be adopted to avoid contamination due to bacteriological, chemical and physical contaminants.

Use only approved preservatives and paints on hives and keep vermin out, particularly mice in the winter by using suitable mouse guards.

When transporting supers in vehicles, make sure that they are protected from contaminants that may have been left by previous use of the vehicle or trailer. Use polythene sheet or bags to cover the floor and wrap the supers if on a trailer.

Cleaning of equipment and the working area before and after use with suitable cleaning materials.

Any people involved in the process should wear suitable protective clothing to protect the product from contamination by clothing or body particles. Particular attention should be paid to checking filters before and after use, for damage.

Particular care should be taken when bottling in glass jars to minimise honey exposed and uncapped, keeping only the minimum number of jars of honey uncapped. Particular attention must be paid, to the critical control point action in the case of any breakage, as this is probably the most serious of hazards. Glass or plastic jars should be cleaned before filling either in a dishwasher with a minimum rinse temperature of 85 °C or hand washed then heated in oven to 90 °C. Do not rely on being clean from the manufacturer.

Care should be taken to prevent the product overheating and potentially reducing its antiseptic qualities as well as its natural enzymes.

3. Hazards and Critical Control Points:

Step	Hazard	Monitoring	Control & Corrective Action
The Hive and honey removal	Contamination from paints, preservatives, soil and plant material, vermin and disease treatments	Check all paints and preservatives for suitability of use. Use regular inspection to detect signs of vermin infestation. Make sure honey supers do not come in direct contact with the soil or vegetation. Check all bee treatments manufacturers instructions for methods of use.	Dispose of any honey, preferably by fire, that has been exposed to any of these contaminations. It may be possible to leave honey that has been exposed to some bee disease treatments for winter feed for the bees. Some bee disease treatments are recognised as safe with honey when used according to manufacturers instructions.
Transportation of honey in supers	Physical and chemical contamination from transport, animals and rain water	Inspect vehicle/trailers and ensure clean and free from potential contaminants such as petrol, oil, soil plant and animal material. Ensure supers only come in contact with food standard coverings such as polythene sheet.	Dispose of any honey, preferably by fire, that has been exposed to any of these contaminations.
Uncapping, extraction and settling	Contamination from equipment, premises and people.	Inspect equipment before use for damage and contaminants. Pay particular attention to non-stainless steel equipment for damage that may expose unsuitable material. Ensure premises cleaning procedures have been adhered to before processing starts. Ensure people are dressed in suitable protective clothing	Do not commence processing before checks completed satisfactorily.
Filtration	Failure to remove physical contaminants	Check filters before and after use for damage.	Do not use if damaged, re-filter with good filter if found damaged after use.
Storage	Contamination and tainting by other substances from surroundings or containers. Deterioration due to high temperatures or moisture absorption	Check containers for suitability of storing food. Ensure lids seal to prevent moisture absorption. Ensure no unsuitable chemicals stored in area. Monitor maximum temperature with max/min thermometer to remain below 40 °C	Check before bottling that conditions have been met. Test by taste for tainting. Test with refractometer if water absorption suspected. Use only for confectionary honey if temperature exceeded or water content exceeds permitted level for normal honey
Preparation to bottle and bottling	High temperature spoiling. Contamination from environment. Glass breakage contamination	Monitor temperature of warming cabinets (do not exceed 50 °C) Check equipment and area as in uncapping step. Check number of glass or hard plastic jars before and after. Monitor for breakage.	Downgrade honey if temperature exceeded. Do not proceed until equipment and area checked for cleanliness and contaminants. Dispose of any honey exposed if glass is broken during the process. Clean up any closed jars and equipment to remove any slivers of glass and recheck any unfilled jars and caps for glass.
Distribution and display	Contamination or moisture absorption due to damaged seals caused by poor handling or packaging. Tampering.	Ensure shipping or transportation containers are suitable to protect the product from damage.	Remove from sale any damaged product. Use tamper evident seals to allow detection of intentional contamination. Investigate any damaged tamper evident labels.