

Honey storage and its essential bases

1. It's crucial to prevent any deterioration of the honey frequently caused by:

- its heating
- long term storage
- fermentation (due to the water content higher than 20%, the crystallisation and the presence of yeast)
- contamination (eg., due to storage in faulty or inappropriate containers)
- loss of the aroma and taste (due to its storage in non air tight containers)
- destruction of a honey comb (due to a wax moth or *Braula coeca*/bee louse)

2. Storage of the honey:

Honey should be stored in 30lb (13.6kg), white polythene buckets with good fitting lids. (Any bigger ones are difficult to handle during the process of bottling). The full honey buckets should be stored in a clean, cold and vermin proof store until the moment of bottling. They need to be labelled with date of extraction, source and type of honey.

The comb honey can be stored in a freezer, that helps to kill off the wax moth and *Braula coeca* and maintain the liquid estate of the honey. The comb should be placed in air tight plastic bags or 'Tupperware' type boxes that protect the surface of the comb during the storage at low temperatures.

The buckets should be totally full to minimise the amount of air accumulated in the top, and the centre of the lid should be depressed to minimise the amount of air; then stored at the temperature of 14°C for rapid granulation and once the honey is set - at the lowest temperature possible that starts below 10°C; (when honey gets granulated, the sides of a bucket are very solid), this procedure helps slowing the fermentation down and decreasing the diastase activity.



It's a good practice not to store the honey for more than 12 months (due to increase of the HMF value and the decrease of the diastase activity) It's extremely important not to extract unripe honey or extract the honey with the water content higher than 20%. Remember, the honey is hygroscopic and absorbs moisture from the atmosphere. The use of the refractometer is highly recommended to check the content of the honey moisture. There are osmophilic (sugar tolerant) yeasts in every type of honey and, in case of exceeding 20% of its moisture content they start multiplying and secreting enzymes which ferment the sugars creating alcohol, acetic acid and carbon dioxide. The chemical reaction causes the buckets to then expand and give off an unpleasant odour.

Glucose is less soluble in water than the other honey sugars so honeys with high glucose content granulates faster than fructose dominant honey. During the crystallisation the water molecules are released which increases the water content of the uncrystallised honey. If the honey already has a higher than average water content than any increase in temperature will encourage fermentation.

It's essential to minimise the heating process when preparing stored honey.

The best solution is to give unripe honey back to the bees before the fermentation starts or to pasteurise it and sell as "Baker's Honey".



