

Honey

Short Description

Honey is the primary carbohydrate food source for honey bees. It is derived from the nectar of flowers and preserved by the bees for future use. Honey is known as one of the only perfect foods that should never spoil as long as it is kept airtight and without water.

Source

Honey bees go to flowers to collect both pollen and nectar. It is the nectar of the flower that bees ingest into their honey storage stomach and bring back to the hive to be cured into honey and stored for future generations. Female worker bees have a special straw-like tongue called a proboscis that allows them to access the nectar at the base of the flower. Another type of honey called *Forest Honey* or *Honeydew* is produced from the sticky sweet secretion of aphids or other insects consuming tree sap.

Variations

For every nectar producing plant in the world there is a unique honey with its own blend of sugars, enzymes, amino acids, vitamins and minerals. The colour of honey is a good indicator of its taste. The general rule of thumb is the darker the honey, the stronger the flavour, and the lighter the honey the milder and sweeter the flavour. Darker honeys are arguably *healthier* due to the fact that their colour comes from the extra flavonoids and antioxidants in the honey¹. Manuka honey from the Manuka Flower in New Zealand has been shown to have up to 20 times more antioxidants than Sage honey. Every nectar has a different ratio of glucose to fructose which will affect its sweetness and crystallization speed. High glucose honeys generally taste sweeter and crystallize faster and coarser than high fructose honeys. Dandelion is known to be a very high glucose honey and can crystallize in the matter of weeks. Fireweed honey contains mostly fructose and is known to be very mild and can take up to a year or two to crystallize.

Hive Use

Honey provides the carbohydrates required by the bees to survive year round. Plenty of animals and insects consume nectar from a flower at the time of collection, but only bees try to preserve it for future use. Once deposited into the honeycomb back at the hive, the bees will preserve the honey by dehydrating it. Nectar can be as high as 80% water and the bees will reduce that to about 18% before sealing the cell with more wax to prevent water from being reabsorbed.

Human Use

Honey has been collected and used by humans for thousands of years. Ancient Egypt, China, and India all seem to have been taking part in honey collection of some type, either stealing honey from wild bee hives, or keeping and taking care of bee hives for the production of honey. In ancient times you would have had to have been a King / Queen or Pharaoh to be giving the luxury of eating honey. Traditionally, honey was recognized as more than just a sweet food and used primarily for the numerous medicinal benefits. Today honey is primarily used as a sugar substitute, but also recognized as a natural anti-bacteria agent and preservative. Since honey contains mostly glucose and fructose, and less than 2%

¹ <http://www.pelogenix.com/Antioxidant.html>

sucrose, it is a much healthier sugar due to glucose and fructose's easier assimilation into the body than that of sucrose.

Forms

Honey can be purchased in liquid or solid (creamed) forms. 29 Celsius is the freezing point of honey and so all liquid honey at room temperature will eventually crystallize (freeze). Honey may be pasteurized (heated to 70C for 15 minutes) or unpasteurized. Honey can also be purchased in its raw form as honeycomb, still in the beeswax as the bees made it. Heath Canada defines raw honey as honey not heated beyond the requirements to filter and grade, therefore all our honey at Planet Bee can be considered raw.

Storage

Most importantly, honey should be stored out of direct sunlight and in an air-tight container. Liquid honey can be stored at room temperature, but requires greater than 29C to keep liquid. Creamed honey can be stored at room temperature but may re-liquefy if exposed to temperatures higher than 29C. During the summer you may want to keep your creamed honey in the fridge to keep it solid.

Medicinal Uses

Since honey is < 18% water and hygroscopic, it kills bacteria by absorbing the water it needs to survive. An enzyme called glucose-oxidase can react with glucose to produce hydrogen-peroxide, another powerful antimicrobial, when enough water and sodium are available. Blood from an open wound and the sodium readily available on skin are sufficient to facilitate this reaction in a slow and controlled manner such that the concentration of hydrogen-peroxide never reaches a level that irritates the skin. It is these two qualities that make honey such a great anti-septic and preservative.

Precautions

Honey is not recommended for children under the age of 1 due to the rare chance of botulism spores in the honey. Pasteurizing the honey would eliminate this concern but it would also kill off all the good enzymes in the honey. Diabetics should monitor their consumption of honey as they would other fruit sugars. A tablespoon a day is considered safe.

References

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