



## WHAT IS HONEY?

### % COMPOSITION

#### **Sugars**

|              |     |
|--------------|-----|
| Glucose      | 31  |
| Fructose     | 38  |
| Water        | 17  |
| Sucrose      | 1.3 |
| Other Sugars | 8.7 |

(Maltose, Isomaltose, Maltulose, Turalose, Nigerose, Kojibiose)

|              |      |
|--------------|------|
| <b>Acids</b> | 0.57 |
|--------------|------|

Gluconic (greatest amount). Glucose (plus hydrogen peroxide) are produced by the action of the bee enzyme glucode-oxidase on sucrose)  
Plus: Succinic, Malic, Acetic, Citric, Butyric, Amino Acids (18 free amino acids are present, proline being the most abundant).

|              |      |
|--------------|------|
| Ash          | 0.17 |
| Nitrogen     | 0.14 |
| Undetermined | 2.43 |

#### **Enzymes**

Invertase  
Diastase or Amylase  
Glucose oxidase  
Catalase  
Acid Phosphatase

Average pH 3.91

Calorific value 1380 cal/lp = 304 cal/100 g

HMF max. permitted under EU regs 40 mg/kg

Minerals: Traces

Plant Substances: tiny amounts of aromatic compounds which give honey much of its fine aroma and varying taste.

Antibiotic qualities: Acidity, Hyperosmotic, Hydrogen Peroxide, Inhibine.

Refractive Index: Honey, 21% water content 1.484



## TEMPERATURE and its effect on HONEY

| Deg C | Deg F  | Effect   |
|-------|--------|--|
| -1    | 30     | Negligible crystal growth  |
| 10    | 50     | Reduced crystal growth   |
| 11    | 52     | No yeast growth – best upper temperature for storage   |
| 14    | 57     | Granulation most rapid   |
| 24    | 75     | Preparation temperature for seeding creamed honey  |
| 27    | 80     | Prepare blossom honey combs for extraction. Honey unlikely to ferment above this temperature.  |
| 32    | 90     | Prepare heather honey for extraction   |
| 35-43 | 95-110 | Normal filtering/bottling temperature. Do not keep at this temperature longer than necessary. Use lowest temperature consistent with required viscosity/filtering. |
| 41    | 107    | Wax combs collapse around this temperature.  |
| 49    | 120    | Re-liquify solid rape honey. Cool down asap  |
| 71    | 160    | Flash heating for 4-5 mins maximum. Cool rapidly to 24/75. Only for use if you have large-scale industrial heat exchangers etc.                                    |
| 75    | 167    | Honey flavour, colour, chemistry irreversibly damaged  |

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