Handling of Forest Honey

Presentation By : Robert Leo, Advisor, Aadhimalai FPO, Keystone Foundation

Origin of Honey

- Blossom Nectar
  Nectar secreted in flower
  .
- Honey Dew –Nectar secreted in
  Leaf petiole
  Stem
  Plant shoot-tip
  Bark
  Roots
  fruits

Composition of honey in % -Tropical wild honey!!

Components	Average	Range
Moisture	17.2	≥ 25
Fructose (Levulose)	38.2	≤ 44.3
Glucose (Dextrose)	31.3	≤ 40.7
Sucrose	1.3	≤ 7.6
Maltose(reducing sugar)	7.3	≤ 16.2
Higher sugar	1.5	≤ 8.3
Gluconic acid(fee acids)	0.43	≤ 0.92
Lactones(as glucolactone)	0.14	≤ 0.37
Total acid(as gluconic acid)	0.57	≤ 1.17
Ash	0.169	≤ 1.02
Nitrogen	0.041	≤ 0.13

Standards in India

- ≤ 20 %moisture special grade
- ≤ 22 % grade A
- ≤ 25% standard
- ≤ 70% reducing sugar SG (BH 65%, HD+BH 45%)
- ≤ 65% reducing sugar AG
- ≤ 5% surcose
- ≥ 0.95% fru/glu ratio(mass)
- ≥0.5% Ash(mass)
- ≤ 2%acidity/formic acid

- Fiches's test negative

Free from other impurities

Body parts of honey-way of collection
Pollen (system of storage)
Minute particles of soil
forest dust, bark,
Dirt from vessels
Dust from tools, smoker

when temperature increases in honey–diastase deteriorate to corresponding to time

30℃	150-250days
40℃	20-50days
50℃	4.5-9days
60℃	1,2-5days
70℃	5-14hrs
80℃	1.2 HRS

Hive/colony temperature: 32 ℃ (+,- 1degree)
At time of harvest 1 to 10mg
≥ 40˚C Heat destroys all enzymes (diastase)in honey

Hydroxy methyl furfuraldehyde
(HMF) in honey increases corresponding to increase in temperature
India-≤80mg.kg Canada and china 40mg.kg permitted

WHY PEOPLE PRACTICE HEATING OF HONEY? TO REDUCE MOISTURE

Clean honey

Role of Pollen

✓Pollen accumulates on the surface

✓If moisture is high- it starts decay

✓dipterans eggs presents- larvae emerges from pollen in some forest areas

✓All wild pollen are not suitable for consumption

✓Consumers: all are not willing

✓Pollen has protein: only coat is digestible

Unsqueezed , mid-rib cutting and draining with clean filter enhance quality and long self life

Crystallisation:

Crystallisation is a natural process in honey. Granulation of honey takes place into uneven crystals with partly separated liquid. The fructose and glucose percentage varies from one type of honey to another. By nature, glucose tends to crystallise. Fructose is highly soluble in water remains to be liquid. The level of Sucrose in some honey maybe higher than 1.31%, this is a crucial agent for crystallisation. In honey higher glucose and sucrose complement each other to crystallise rapidly. Uneven crystallisation takes place with higher water content and finely uniform crystallisation happens in thicker honey, as found in temperate areas.

The sugar content in nectar varies from flower to flower, thus varies in honey too. Other than sugar composition, some external elements like foreign particles and temperature induce crystallisation process in honey.

1.Any dirt, pollen grain, wax particles presence in honey acts as nuclei to form the first crystal and spread. Fine filtering is suggested to avoid or slow down the crystallisation process.

2. Temperature while storing is important. Honey becomes loose in warm and thick in cold temperatures. Temperature range 10-150C is highly probable to crystallise and 25-27C is suitable for longer storage.

Charak- Ayurveda
“nothing is as troublesome as the Ama* caused by improper intake of Honey”
When Honey is heated, it become hard to digest and produces unwanted qualities.
Heat alters chemical contents of honey, otherwise eg..it increases peroxides, which is known for their unhealthy effects
(Diastase-starch-dextrose,,katalase-hydro.peroxide-water-oxygen
Glucose-glucon acid-hydrogen perozoxide, phosphatase of some pollen)

*Ama –toxic-undigested matter in the body is considered as root cause for most of illness

நன்றி

Thankyou