

Honey and Biotech

Standard Operating Procedure #501

Flame Test for Honey

Laboratory: Bioresearch

Location: RM 169

SOP prepared by: R. Sanders

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General: Raw honey comes directly from the beehives and goes through minimal processing. This type of honey can also be called raw unfiltered honey. One of the most widely-adulterated products globally is honey, particularly the organic variety, a high-value item prized for its unique properties, such as being a good source of antioxidants. According to the U.S. Food Fraud database, it is the third most targeted food for adulteration, after milk and olive oil. It's also financially significant: the global honey market size was valued at USD 9.21 billion in 2020 and is expected to grow at a compound annual growth rate of 8.2%. If honey samples have been altered with other ingredients, then the sample will not light due to moisture content.

Safety: Eye protection

Materials

honey samples
beaker of water
sterile swabs
Bunsen burner

Procedure

1. To test honey samples for added water, dip cotton swab in the honey and allow excess to drip off of the swab for 5 minutes.
2. Place honey-dipped cotton swab into the flame of a bunsen burner to see if it burns uniformly. Make sure to extinguish the lit swab in a beaker of tap water before disposing in the trash.
3. If it doesn't burn, then it contains added water. Pure honey is flammable.
4. Repeat steps 1-2 for each sample.

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