Standard Operating Procedure #500

Brix Refractometer

Laboratory: Bioresearch

Location: RM 169

SOP prepared by: R. Sanders

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General:. A refractometer is a portable, precision optical instrument. It's a convenient tool to check the quality of honey and other high sugar containing liquids, such as maple syrup and molasses. Honey is considered raw if it has a water content reading of lower than 14 percent. This is considered the best quality honey. The international standard for good quality, consumable honey is less than 20 percent water**.**

Brix is a measure of dissolved solids in a liquid measured via its specific gravity (SG). One degree Brix is 1 g of sucrose in 100 g of solution. The Brix of honey ranges from around 70 to 88.

Safety: Eye protection

Materials

honey samples
honey refractometer
disposable pipettes
Kimwipes™

Procedure

1. Make sure honey samples are at room temperature before testing.
2. Lift the clear panel that sits on top of the blue prism and clean the glass or prism with a lint free cloth or Kimwipe™.
3. Add two drops of the honey sample to the blue prism and spread it out. Make sure there are no air bubbles in the sample and close the clear panel. Any air can be squeezed out by gently pressing down the panel and wiggling it slightly.
4. Hold the refractometer towards a bright light and look through the eyepiece. Look for a field of blue and another field of white, with a very distinct line where the two fields meet. In most analogue refractometers there is an ascending Brix scale in the middle, and a descending water content scale on the right.
5. The line will go through both scales to give both the Brix and the water content in percent in the same reading.
6. Clean the clear panel and prism using a moistened soft lint-free cloth.
7. Repeat steps 1-6 for 5 trials of each honey sample.