

BOSTWICK

Abstract:

The Bostwick consistometer is a stainless steel trough with a reservoir and gate at one end. Tomato paste is filled into a reservoir and released into trough by opening the gate. Paste flow in the trough after 30 seconds is measured in centimeters and is reported as Bostwick consistency. The commercial metal Bostwick has a 24 cm trough. This distance is adequate for consistency measurement of concentrated product. However, for determining juice consistency a longer trough is necessary. A 50 cm experimental Plexiglas consistometer, with inside dimensions identical to those of the Bostwick consistometer but longer was constructed by our shop personnel in our department. Graduations were marked at 1 cm increments to measure product flow in the trough. Instead of the spring-actuated gate of the commercial Bostwick, the Plexiglas device has a plastic gate, which fits into a groove and is removed manually after the reservoir is filled.

Supplies needed:

Plexiglas Bostwick, level, small screwdriver, spatula, timer, and white, plastic gate.

Procedure:

- 1) Make sure room temperature is set for 20 degrees C
- 2) Place Bostwick on countertop, usually with the gate on the left and the numbers reading in ascending order
- 3) Level the Bostwick both lengthwise and widthwise by adjusting the screws of the Bostwick until the bubble of the level is between the two center dark lines.
- 4) Insert white, plastic gate in slotted groove
- 5) Check temperature of sample before doing the test (should be 20 +/- 1 C)

- 6) Stir the sample with the spatula, then pour into the small reservoir created by the white gate, leveling off the sample with the spatula
- 7) Zero the timer
- 8) Simultaneously, pull out the white gate and start the timer
- 9) Stop the timer at 30 seconds and record the measurement
- 10) Need two measurements within 0.5 cm of each other per sample
- 11) Rinse Bostwick and dry completely with towels or facial tissue between trials