Production: HAMBURGER BUNS

Objective: Firmness measurement of buns by compression with a probe

Type:
This method was designed for commercially produced buns that were sent sliced and in pillow packs. Heels sometimes tend to cup, therefore, crowns are used for testing. The sample preparation procedure outlined below is used to ensure equal thickness of samples being tested.

Type of action: Penetration test

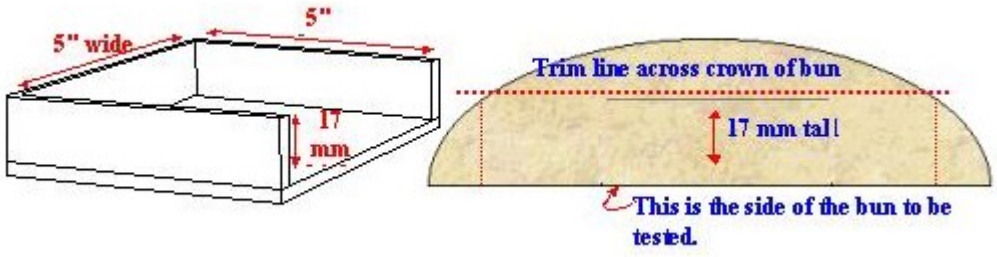
Test setting:

Speed	Test mode	Trigger	Target	Hold
1 mm/s	Distance (c)	10 gf	5 mm	0 sec

Accessory:

ϕ 25 mm cylinder probe. Acrylic , Platform

Sample Preparation:
After cooling for 30 minutes, buns are double bagged and held at room temperature until further testing. Buns are generally tested on days 1, 3 and 7 after baking. On each testing date, 10 or more buns of each variable are sliced and measured.
Crowns are first cut in 4 places around the edge of the bun (simply to fit inside of the template, eliminate this step if using a wider template). Place the bun crust side up in the template having sidewalls 17 mm tall. Cut bun top off level with the sidewalls to create samples of equal height. Use a good quality bread knife with a gentle sawing motion. Place the sample under the probe with the inside crumb facing upward.



Data Analysis:

☒Max Force

Results

Each time a measurement is taken, the maximum peak force value is recorded and the average and standard deviation are calculated.

Notes:

- This method is from a collection of procedures for testing the texture of common bakery products with the Texture Analyzer. These procedures have been developed by and are used at the American Institute of Baking's Experimental Bakery Lab in Manhattan, Kansas.
- It is the philosophy of the researchers at the AIB to have extremely flexible protocols for texture testing. Bakery products come in every imaginable type and shape, so meaningful textural comparisons must account for the different product geometry's. These test procedures typically manage differences in geometry by reducing the products' size to a common denominator.
- Generally, the objective of most of these tests is to measure the firmness and shelf life of a baked product. Since the bulk of these protocols address sample handling, they can and should be modified slightly if the test objective is different (eg springiness, cohesiveness, resilience, etc).
- These protocols are simply starting places for developing test methods which are suitable for your own products. A researcher should be comfortable modifying the sample handling protocols, test speeds and distances to accommodate any specific purposes.