Production: COOKIES

Objective: Measure the snapping force and deflection of a cookie as a measure of shelf life

Type of action: Bending test

Test setting:

Speed	Test mode	Trigger	Target	Hold
2 mm/s	Distance (c)	20 gf	15 mm	0 sec

Accessory:

Three-point bending rig, Platform

Sample Preparation:

Precisely centre each cookie on the base and position the blade to just above the product. Break 6-15 cookies per variable per test day.

This procedure was designed for sugar snap cookies that are rolled to 3/8 inch and cut with a 3-inch cutter. The gap distance of the base can be adjusted to accommodate cookies of various sizes, although using a common gap will allow results to be directly compared between different types and sizes of cookies.

Test Set-Up:

Each cake sample was positioned centrally under the probe and the test commenced. Analysis was conducted only after all of the tests were completed and archived for each cake set.

Data Analysis:

☒Max Force

☒Peak Distance

Results

Mark the peak force (hardness) and the distance (softness or flexibility) if desired. Calculate the average and standard deviation on the measurements.

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.