

# Chocolate Coated Mint Candy Texture Analysis

Testing the hardness and stickiness of chocolate-coated mint candy is critical to assess texture quality and consumer experience. Hardness data ensures the candy's chocolate shell provides the right resistance, while stickiness of the mint filling affects mouthfeel and satisfaction.

## Background:

- This candy has a hard chocolate outer layer and a creamy mint filling. The test compresses each piece to measure the force required to penetrate the chocolate coating and reach the creamy filling, providing insights into both hardness and stickiness.



## Equipment:

- CTX Texture Analyzer with 5kg load cell
- Components: Fixture Base Table, 2 mm Flat Cylindrical Probe
- Software: Texture Pro for data collection and analysis

## Settings:

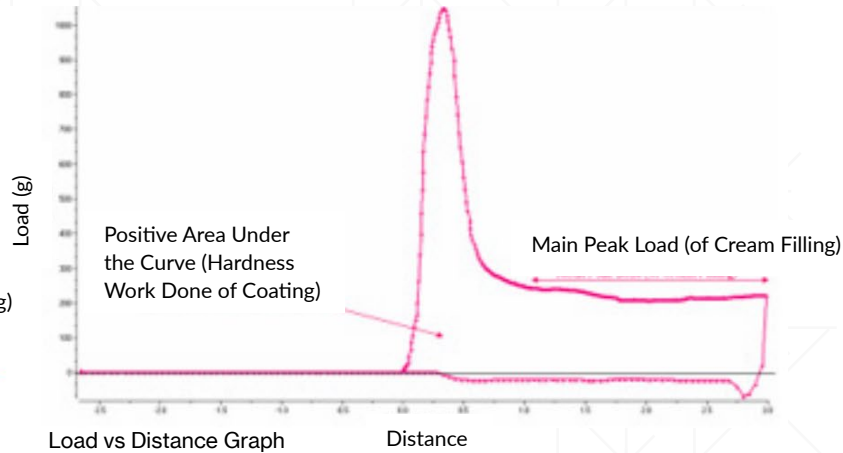
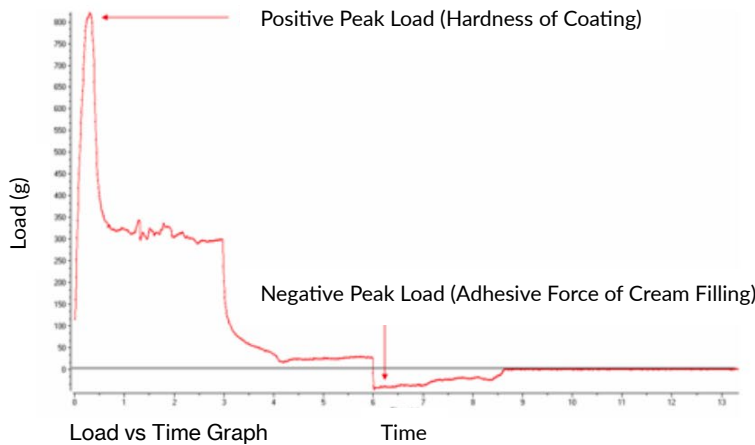
- Test Type: Compression
- Target Type: Distance
- Target Value: 3 mm
- Trigger Load: 10 g
- Pre-Test Speed: 1 mm/s
- Test Speed: 1 mm/s

## Procedure:

1. Attach the cylindrical probe and secure the Fixture Base Table on the analyzer.
2. Center the candy sample on the table under the probe.
3. Position the probe 3 mm above the sample surface.
4. Set test parameters in the software, initiate the test, and record results.
5. Clean the probe with a dry cloth between samples to avoid cross-contamination.
6. Repeat for all samples to ensure consistency.

## Observations:

- Load vs. Time Graph: Shows hardness of the chocolate shell, with peak load reflecting the maximum force needed to penetrate the coating.
- Load vs. Distance Graph: Indicates work done in compressing and bending the sample, which correlates to hardness and stickiness.



## Results:

- Sample Data (Average Values):
  - Hardness (Peak Load): 820 g
  - Hardness Work Done: 10.62 mJ
  - Adhesive Force: 47 g
  - Mean Load: 308 g

#	Sample Description Product Name	Batch Name	Results Hardness Cycle 1 (g)	Hardness Work Cycle 1 (mJ)	Adhesive Force (g)	Mean Load (g)
1	Candy	Chocolate Coated Mint Candy	820.00	10.62	47.00	308.00

## Discussion:

The peak load value measures the shell's hardness, while work done relates to the energy required for compression, indicating chewability. Adhesive force assesses the stickiness of the mint filling. These values help define ideal texture, ensuring consistent quality in the chocolate-coated mint candy.