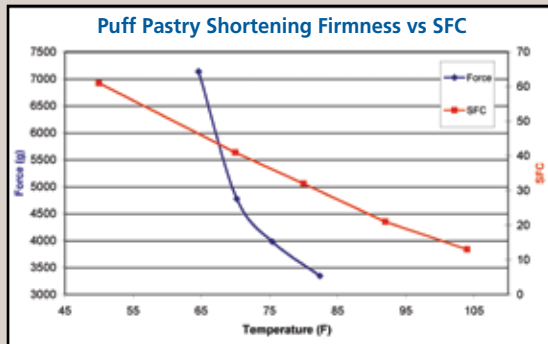
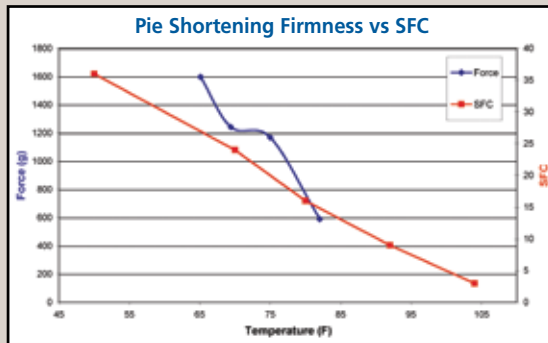


SFC does not predict firmness

Traditionally, Solid Fat Content (SFC) has been used as a means of communicating about how hard or soft a shortening is. However, SFC does not provide an indication of the true textural qualities that are critical in many functional bakery shortenings and margarines.



The SFC curve for puff pastry shortening (Red Line) indicates a linear increase in solids with decreasing temperatures. The firmness curve shows a much more dramatic increase in firmness over the same temperature range.



The SFC curve for pie shortening (Red Line), indicates that the % of solid fat present is nearly linear across the temperatures measured. However, the firmness curve (Blue Line) suggests that there is an optimal usage range above which the shortening gets soft very quickly and below which, the product becomes firm very quickly.

Features

- Electronic measurement and recording of firmness
- Electronic measurement of Speed of the probe through the product.
- Real-time feedback to the technician of penetration rate (Speedometer).
- Integrated Electronic Temperature measurement.
- Temperature measurements are associated with Force measurement and are downloaded with the Force data to Excel® spreadsheets
- Configurable for many products (not just shortening) by setting the desired penetration rate, depth of measurement, type of probe and specification ranges, all of which can be preloaded onto the instrument



Bunge Oils Consistometer

Texture Measurement That Goes to the Shop Floor!



Portable texture measurement for shortenings, margarines, butters, cheeses, icings, pastes, and more



With nearly 200 years of experience and a reputation you can trust, Bunge is more than an ingredient manufacturer. We are the Oil Experts.

Contact (800) 828-0800 for more information on the Bunge Oils Consistometer.

Note: Excel is a trademark of Microsoft, Spot On is a trademark of Innoquest Inc.



St. Louis, Missouri
(800) 828-0800
TransFatSolutions.com



Bunge Oils Consistometer

The Bunge Oils Consistometer is designed to provide an objective measurement of force for more accurate, precise and reliable texture readings. This portable instrument allows for the measurement of shortenings, margarines and other products. Delivering a digital data collection for download to an Excel® spreadsheet for review and analysis.

- Simple to operate; employs Self Teaching features
- Works on a variety of products and ingredients
- Gives an intuitive, understandable result
- Tells you about the entire sample, not just the surface
- Good operator-to-operator variability



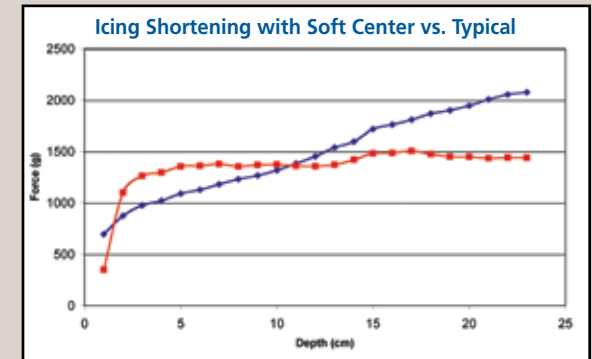
Technical Points

- Precision load cell is the basis for Force measurements
- IR depth sensor is the basis for depth and speed measurements
- High-speed thermocouple is the basis for temperature measurement
- Adjustable data acquisition rate takes force readings at operator specified intervals
- Calculates and displays instantaneous rate of penetration to guide operator
- On-board functions calculates and displays:
 - the average force of a measurement;
 - the mean of a group of measurements;
 - the Standard Deviation of a group of measurements
 - the equilibrated temperature of the measured sample
- Integrated temperature measurement that is associated with the texture measurement.
- Data can be downloaded as an Excel® file for analysis and plotting
- Interchangeable probe tips can be used to adapt the instrument to different products.
- Shaft extensions can be added to measure larger samples

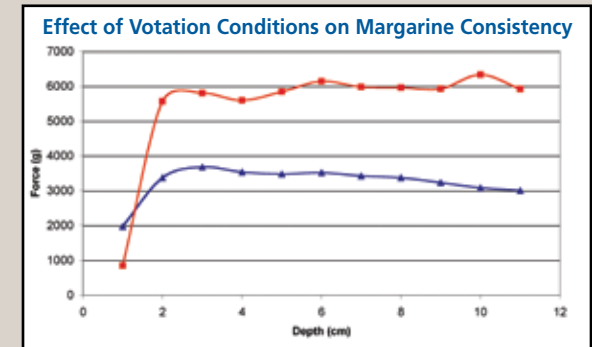


Consistometer software interface

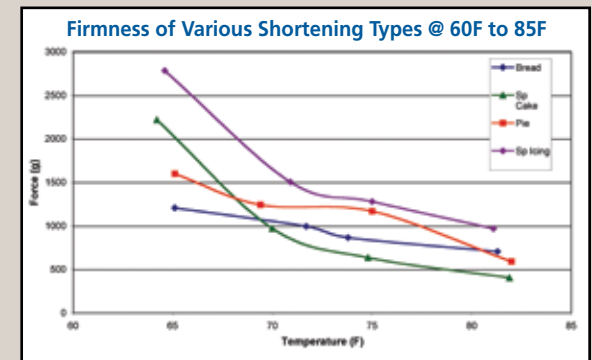
Example Plots



Icing Shortenings showing difference between uniform firmness and a hard surface with soft interior.



Roll-In Margarines showing difference between uniform and brittle texture.



Firmness curves illustrating how product firmness hardens or softens over a range of temperatures.