Production: PROCESSED CHEDDAR CHEESE

Objective: Measurement of cutting force of processed cheddar cheese using the wire cutter

Type of action: Cutting test

Test setting:

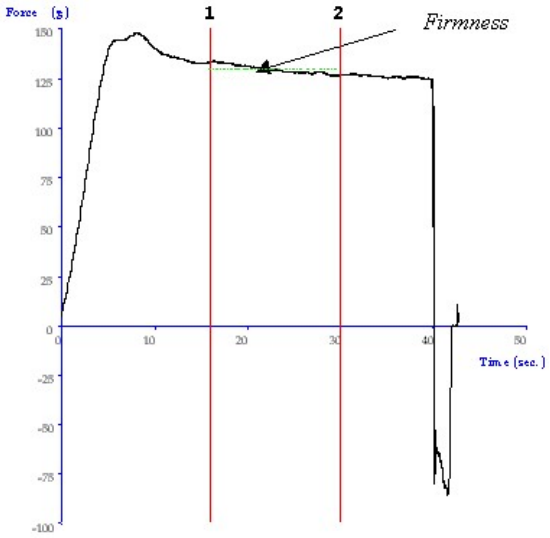
Speed	Test mode	Trigger	Target	Hold
0.5 mm/s	Distance (c)	50 gf	25 mm	0 sec

Accessory:

Wire butter cutter, Platform

Test Set-Up:
The sample was removed from its tin just prior to testing, and positioned centrally on the Heavy Duty Platform blank plate. The test was commenced immediately.

Typical plots:



The above curve was produced from processed cheddar cheese, tested at 20C.

Observations:
Once contact was made with the sample there was an initial time period required for the wire to come into full contact with the whole sample (which is usually as a result of an uneven sample surface). After this point, the slope of the curve decreased considerably until the force was seen to plateau as the wire continued to cut into the sample to the specified distance. The greater the cutting force, the firmer is the sample.

Data Analysis:

☒Ave (+)(From 15 to 30 second)

Notes:

- Depending upon the regularity of the surface, it may be necessary to increase the trigger force value slightly. Consideration should be taken to ensure that when the test begins to plot data the wire should be in such a position so as to be in full contact with the product surface but should not have not started shearing to any considerable depth.
- The samples should be of the same dimensions and temperature in order to make comparisons between tests.
- The sample is tested on a Heavy Duty Platform rather than directly on the machine base as this heats up during use and may be a source of error.
- When attempting to optimise test settings it is suggested that the first tests are performed on the hardest samples to anticipate the maximum testing range required and ensure that the force capacity allows testing of all future samples.