

Cooked Pasta Firmness & Stickiness, by Compression

TVT Texture Analyzer

The TVT Texture Analyzer (Figure 1) offers rapid and objective analysis for different products. The following parameters can be characterized for your product category:

- Firmness
- Stickiness

Both international standard methods as well as customer tailor-made profiles are available.



Figure 1: TVT Texture Analyzer

Scope

- Determination of firmness and stickiness for cooked pasta by single cycle compression.

Method Description

The recording of the measurement data commences once the probe reaches the pre-set trigger force. The probe will then compress the sample to a pre-defined percentage of the sample thickness. After compression, the probe returns to its starting position.

Calibration

Make sure the instrument is correctly calibrated before the measurements. How to perform the calibration can be found in the User's Manual.

Load cell (recommended) 5 – 10 kg

Probe

P-CY35S, Cylinder probe 35 mm diameter, stainless steel (Figure 2)
Part number: 67.30.35



Figure 2: P-CY35S

Profile Settings

Setting Parameter

Single Cycle Compression

Sample height [mm]	10.0
Starting distance from sample [mm]	5.0
Compression [%]	75.00
Initial speed [mm/s]	2.0
Test speed [mm/s]	2.0
Retract speed [mm/s]	2.0
Trigger force [g]	10
Data rate [pps]	200
Adhesiveness	Marked <input checked="" type="checkbox"/>

Sample preparation

Cooking, cooling and other preparation and handling of the product are critical actions for the outcome of the results. In order to compare different samples, these procedures needs to be kept constant and well documented. Place the sample on the measuring table centered below the probe and commence the test. Work quickly, since contact with air dries out the sample and might affect the results.

Curve Description

The maximum positive peak⁺ force value is here used for the firmness while the peak value of the negative peak⁻ is the stickiness of the sample. The area of peak⁻ is the adhesiveness of the sample. Distance to maximum peak⁺ force give information about the size of the sample.

Data Analysis

The force required to compress the sample is here defined as firmness while the force required for withdraw of the probe is the stickiness. These parameters can be measured in the units [g] or [N]. Except raw data (force, time and distance) the program also directly provides calculated results such as *mean value* and *standard deviation*.