

Halva Firmness, by Puncture

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:

- Hardness
- Consistency
- Stickiness

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



Figure 1: TVT Texture Analyzer

Scope

- Determination of firmness of halva by single cycle puncture test.

Method Description

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

Calibration

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

Load cell (recommended) 10 – 15 kg

Probe

P-CY03S, Cylinder probe 3 mm diameter, stainless steel
Part number: 67.30.03 (Figure 2)



Figure 2: P-CY03S

Profile settings

Setting Parameter

Single Cycle Compression

Sample height [mm]	50.0
Starting distance from sample [mm]	5.0
Compression [mm]	20.00
Initial speed [mm/s]	1.5
Test speed [mm/s]	2.0
Retract speed [mm/s]	10.0
Trigger force [g]	50
Data rate [pps]	200
Adhesiveness	Marked <input checked="" type="checkbox"/>

Sample preparation

Take out the samples from the place of storage just before testing and place it under the probe. Choose a flat testing area and start the measurement. Several measurements can be performed on the same sample. However, make sure that new tests are not performed too close to old test holes. Storage, packaging and handling of the samples might influence the result and should thereby be kept constant.

Curve Description

Maximum peak⁺ force is here defined as the firmness of the sample, while the compression area is the total work of penetration. Smaller peaks indicate the inhomogeneity of the sample.

Data Analysis

The force required to puncture the sample to a certain distance is here defined as hardness and 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*.