

Pet Food Pellets Hardness 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:

- Hardness
- Fracture Force
- Break Force
- Springiness/Elasticity

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



Figure 1. TVT Texture Analyzer

Scope

- Determination of pet food pellets hardness 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 distance of the sample height. After the compression, 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) 50 - 100kg

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]	5.0
Starting distance from sample [mm]	5.0
Compression [mm]	2.50
Initial speed [mm/s]	2.0
Test speed [mm/s]	2.0
Retract speed [mm/s]	10.0
Trigger force [g]	100
Data rate [pps]	200

Sample preparation

Take two samples directly from storage and place them centrally under the probe. Commence the test.
***NOTE** If the samples are left standing in open air, they might absorb moisture from the atmosphere which could influence the results.*

Data Analysis

The force required to compress 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*.