Raw Pasta Firmness 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
- Hardness
- Flexibility
- Elasticity

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

![Figure 1: TVT Texture Analyzer](image1)

Scope
- Determination of firmness of raw pasta by single cycle compression test.

Method Description
The recording of the measurement data commences once the measurement starts. The probe will then compress the samples to a pre-defined distance. After 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.

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Load cell (recommended)  50 - 100kg

**Probe**
P-CY75A, Cylinder probe 75 mm diameter, aluminum
(Figure 2)
Part number: 67.30.75

![Figure 2: P-CY75A](image2)
### Profile Settings

<table>
<thead>
<tr>
<th>Setting Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single Cycle Compression</td>
<td></td>
</tr>
<tr>
<td>Sample height [mm]</td>
<td>15.0</td>
</tr>
<tr>
<td>Starting distance from sample [mm]</td>
<td>5.0</td>
</tr>
<tr>
<td>Compression [mm]</td>
<td>10.00</td>
</tr>
<tr>
<td>Initial speed [mm/s]</td>
<td>2.0</td>
</tr>
<tr>
<td>Test speed [mm/s]</td>
<td>2.0</td>
</tr>
<tr>
<td>Retract speed [mm/s]</td>
<td>10.0</td>
</tr>
<tr>
<td>Trigger force [g]</td>
<td>5</td>
</tr>
<tr>
<td>Data rate [pps]</td>
<td>200</td>
</tr>
</tbody>
</table>

### Sample preparation:
Place three pieces of the pasta centered under the probe and commence the test.

### Curve Description
The maximum peak force is here defined as the firmness of the sample, while the total area is the work of compression. Smaller peaks represent cracking of the sample.

### Data Analysis
The force required to shear the samples to a certain distance is here defined as firmness 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.