Glutograph®-E
Testing the quality of wet and dry gluten

... where quality is measured.
Glutograph®-E

**Application**
The Glutograph®-E represents the state-of-the-art on the sector of gluten testing. The instrument enables:
- Reliable, objective, and reproducible measurement of the stretching and elastic properties of washed wet gluten and of dry gluten mixed with water to a dough
- Testing of sample size, usually occurring in practice, when gluten is washed out
- Testing flour quality with regard to its suitability for noodle production
- Recognition of drying and heat damage of flour and dry gluten
- Survailling the quality of doughs during production

**The principle**
The measuring system of the Glutograph®-E consists of two parallel, round, corrugated plates mounted at a defined distance opposite to each other. The sample is placed between these two plates.

The fixed distance and diameter of the two plates provide a defined sample volume and a reproducible sample geometry.

While the upper plate stands still, the lower one is turned with a constant force – independent of shear angle and sample. Depending on your gluten quality, this constant force (shear stress) stretches the sample more or less, i.e. the lower plate is deflected more or less quickly against the upper one. This deflection (shear angle) is recorded as a function of time.

After having reached a certain deflection, the sample is released and recovers according to its elasticity.

**The diagram**
The resulting diagram first shows the stretching process (rising curve). The falling curve in the second part represents the recovery of the sample.

The shear time (time up to reaching a certain preset deflection) is a measure of the stretching properties of the sample.

The recovery of the sample after a certain time mirrors the elasticity.

**Measuring diagrams of different qualities of gluten**

<table>
<thead>
<tr>
<th>Weak gluten</th>
<th>Strong gluten</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1" alt="Weak gluten diagram" /></td>
<td><img src="image2" alt="Strong gluten diagram" /></td>
</tr>
</tbody>
</table>

**Glutograph®-E**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sample weight</strong></td>
<td>approx. 2 - 3 g</td>
</tr>
<tr>
<td><strong>Torque measurement</strong></td>
<td>electronically</td>
</tr>
<tr>
<td><strong>Printer port</strong></td>
<td>USB/Ethernet</td>
</tr>
<tr>
<td><strong>Mains connection</strong></td>
<td>1 x 230 V; 50/60 Hz + N + PE; 1.0 A</td>
</tr>
<tr>
<td></td>
<td>115 V; 50/60 Hz + PE; 1.0 A</td>
</tr>
<tr>
<td><strong>Dimensions</strong></td>
<td>290 x 320 x 340 mm</td>
</tr>
<tr>
<td><strong>Weight</strong></td>
<td>approx. 12 kg net</td>
</tr>
</tbody>
</table>

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