# Flour & Dough Testing

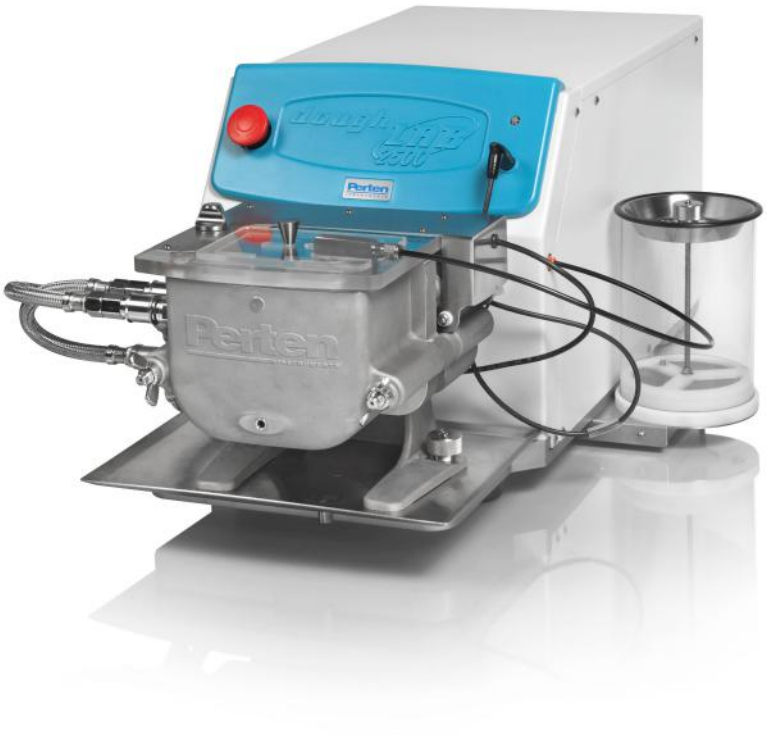
doughLAB

Flour

Dough

Bread

Pasta & Noodles



## Real-world Flour and Dough Testing

doughLAB The New Standard

Standard Method:
AACCI 54-70.01

Perten INSTRUMENTS
a PerkinElmer company

# doughLAB

doughLAB is a flexible dough mixer used to determine flour water absorption, dough development time and other dough mixing parameters. The instrument performs the traditional 20 minute test and AACCI 54-70.01 approved high-speed mixing 10 minute test. The 10 minute test increases lab throughput and efficiency. It improves analysis results by making it easier to interpret samples with long development times, indistinct development peaks and multiple peaks. In addition, the high speed method more closely resembles today's bread making processes. The doughLAB includes user-friendly Windows software designed for both millers and researchers, and automated water dispensing (no need for a burette). The mixing chamber and blades are detachable for easy cleaning. Specify the performance of wheat, rye and durum doughs. Create custom tests for bread, pastry, cookie, pasta and noodle doughs. Flour, whole meal, semolina and formulations containing ingredients and improvers can all be tested.

## Features and Benefits

**Standard 20 minute test:** Water absorption, dough development time, stability and more.
**Approved High Speed Rapid Mixing Method:** AACC International Method 54-70.01.
**Versatile:** Programmable temperature to study dough performance during heating, cooling and gelling/cooking. Variable speed mixing to study stiff and crumbly doughs, novel formulations, evaluate dough response to changing stress and mimic commercial mixing.
**Automated:** Integrated bowl temperature control system. Integrated automatic water dispensing with "drip" function and temperature control.
**User Friendly:** Windows software with flour/dough quality methods included in the software library, plus users can create their own methods. Real time graphs, data analysis, diagnostics and virtual blending function. Test configurations, data, and analysis programs stored in software and easily transferable. Easy to use "routine user" mode.
**Traceable:** Calibrated in standard and traceable torque units (Nm). Complies with ISO9000 and Quality System requirements.

## Applications

**Flour Specification:** Water absorption, development time, stability, softening, mixing tolerance index and other parameters using standard methodology.
**Blend Performance:** Predict the result of commercial flour blends.
**At-line Dough Testing:** Verify dough performance before proofing and baking.
**Protein and Starch Performance:** Gluten and carbohydrate behavior in real time.
**Effect of Ingredients and Improvers:** Evaluate the performance of flour treatments.
**AACC International High Speed Rapid Mixing Method:** Use high-speed mixing to emulate commercial mixing processes.

## Specifications

**Power Requirements:** AC 220/240 V ± 10% 50/60 Hz, 1200 VA.
**Computer Requirements:** PC with Windows Vista or later operating system.
**Dimensions (H x W x D), Net Weight:** 370 x 490 x 970 mm, 91 kg incl. bowl.
**Data Interface:** USB B type.
**Temperature Monitoring:** Sample, bowl and water.
**Water supply:** 1 L/min at maximum, 100 kPa (at instrument), <25°C. (Chilled water supply required for operation below room temperature.)
**Heating/Cooling Rate:** Heating: 2.5°C/minute max. Cooling: 5°C/minute max. (depending on cooling system).
**Temperature Range:** 10-80°C (variable).
**Torque Range:** 0-25 Nm.
**Speed Range:** 0, 10-200 rpm.



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