

Measure of dough tenacity, extensibility,
elasticity and baking strength

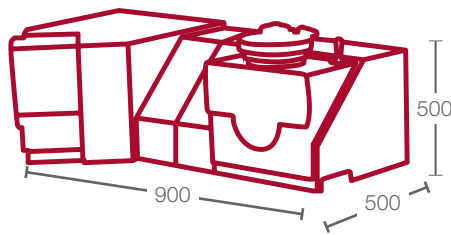


International reference

- Tenacity (P), extensibility (L), elasticity (I.e.), baking strength (W)
- Standardized analysis (AACC 54-30, ICC 121, NF EN-ISO 27971, GOST 51415-99) for commercial transactions

Easy to use

- Comprehensive software with a simple, modern and intuitive interface



70 Kg

220/240V - 50/60Hz
1300W



Test time : **40 minutes**
Operator time : **20 minutes**

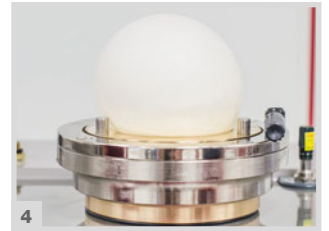
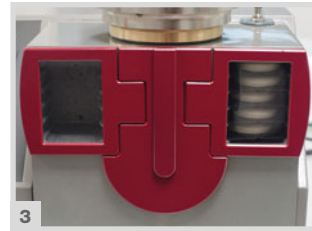
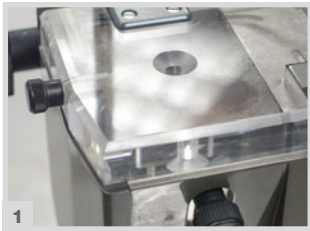
The Alveograph test

The Alveograph test consists of producing a test piece of dough, which, under air pressure, turns into a **bubble**.

This process reproduces the deformation of the dough when subject to carbon dioxide during **fermentation**.

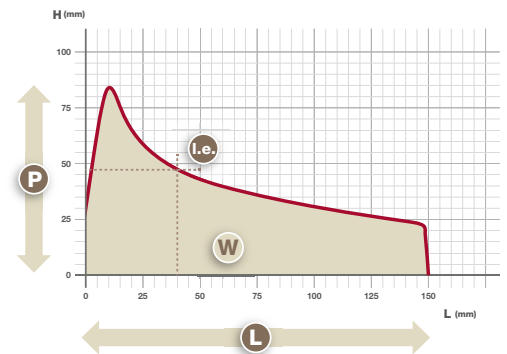
The test involves 4 main steps:

1. **Mixing** flour and salted water
2. **Preparing** five calibrated pieces of dough
3. **Putting** these pieces of dough to rest
4. Automatically **inflating** each piece of dough until the resulting bubble bursts



The Alveograph measures the essential rheological characteristics of the dough:

- **P** : dough **tenacity** (aptitude to resist deformation)
- **L** : dough **extensibility** (maximum volume of air that the bubble is able to contain)
- **P/L** : configuration of the curve
- **I.e.** : **elasticity index**, **I.e.**= $P200/P$ ($P200$: pressure at 4cm from the beginning of the curve)
- **W** : dough **baking strength** (surface under the curve)



Why are these results important?

The Alveograph produces results that serve as references for all of the cereal industry. These results allow controlled production processes and ensure quality of the final products.

Use within the cereal industry

For Storage Operators

- Secure the buying and selling of wheat and flour using an international reference
- Monitor wheat quality upon reception
- Select and classify wheats according to their future use
- Detect insect contaminated wheat

For Millers

- Optimize the blends of wheat and flour
- Adapt the flour for its final use by accurately measuring out additives and improvers
- Control the different flour fractions
- Use on durum wheat (*Triticum durum*): semolina protocol (standard UNI 10453)

For Bakers

- Monitor the conformity of incoming flour
- Test new compositions
- Control additives

Wheat selection

Compare, select and classify the different batches of wheat available on the market according to their future use.

Durum wheat (*triticum durum*)

The Alveograph evaluates the tenacity of semolina intended for making pasta and determines the bread-making capacities of durum wheat flour (standard protocol UNI10 453).

Wheat or flour blends

In milling, wheat or flour is blended to adapt quality according to the future use. With the Alveograph, calculate the right blend for making high quality products.

Additives

Optimize their usage by measuring their effects (cysteine, ascorbic acid, yeast, glucose, etc.) on the plastic properties of the dough.

Proteases

The hydrolysis of peptide bonds leads to a partial destruction of the gluten network. These effects are clearly shown on the Alveograph results.

Gluten

The effects that gluten has on dough are easily detectable with the Alveograph. For example, excess gluten results in high dough elasticity, and poor extensibility.

Insect contaminated wheat

The Alveograph makes it possible to detect flour that has been produced with contaminated wheat.

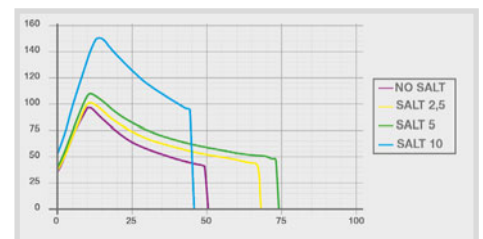
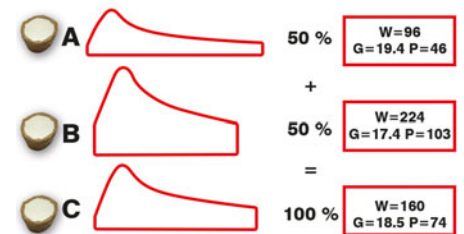
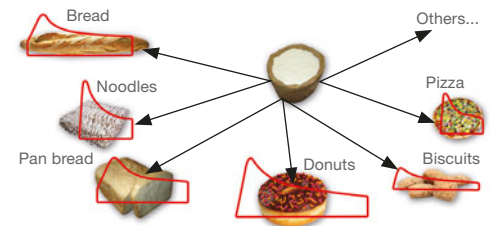
Deactivated yeasts

Deactivated yeast has an effect on the dough plastic qualities, which are detectable with the Alveograph.

Salt

Salt produces a reinforcement of protein structure. In bread making, this effect is researched to avoid sticking after mixing. The effect of salt on dough rheology can be measured with the Alveograph.

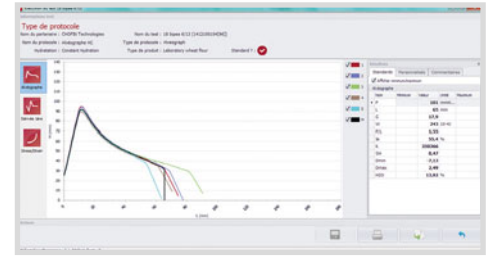
And plenty more!



Key functions and innovations

Instruments linked to PC software

- Test data is displayed live test after test
- A standard analysis certificate is automatically generated. Your company name and logo can easily be added.
- All data is backed up to assure perfect traceability.



Extrusion and cutting of dough pieces

- Resting plates have a high-resistance anti-adhesive coating to facilitate the preparation of dough pieces.
- Dough cutter is semi-automatic and very easy to use.



Additional equipment

The NF EN ISO 27971 describes the steps to follow in order to achieve a repeatable and reproducible Alveograph test, starting from a sample of wheat. CHOPIN Technologies offers equipment specifically developed for this:

- The EM10 oven or Infraneo: to measure moisture content. (1 and 2)
- The MR2L mixer: to temper the wheat and mix flour. (3)
- The CD1 mill : to make a representative laboratory flour. (4)



Available services

After Sales Service

service@chopin.fr

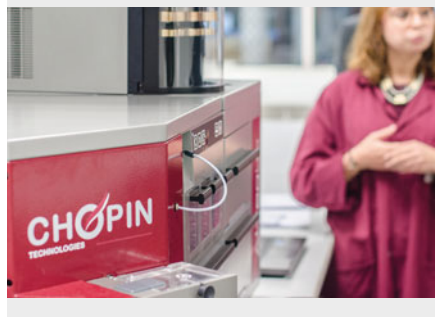
Our service technicians guide you to guarantee optimal and durable use of your AlveoPC.



CT Center

ctcenter@chopin.fr

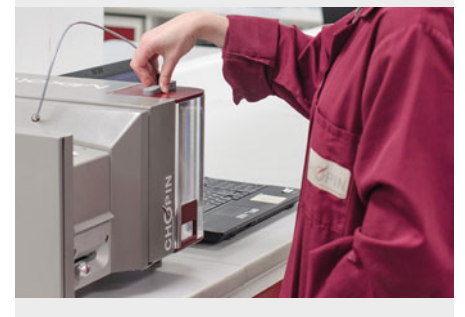
The CT Center offers you specific training, to improve your knowledge and get the most out of your AlveoPC.



Applications Laboratory

labo.applications@chopin.fr

Our experts are here to help you in developing new protocols, or in developing specific tests.



Code	ALVEOPC
Options	STRONG and WEAK control flours