

Measure of dough tenacity, extensibility, elasticity and baking strength



International reference

- Water absorption (WA), 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

Accurate and easy to use

- Automated and fully controlled test conditions (temperature and hygrometry)
- Comprehensive software with a simple, modern and intuitive interface

Versatile

- Possibility to modify the test parameters to create personalized protocols, for example by varying the intensity and the duration of the mixing
- New results, new analysis protocols to meet the needs of the wheat industry



80 Kg

220/240V - 50/60Hz
2300W



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

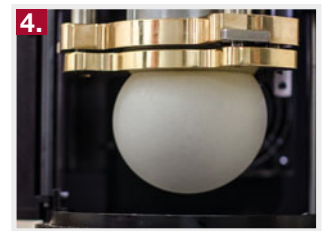
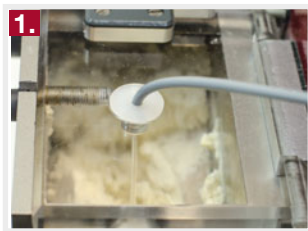
The Alveograph test

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**.

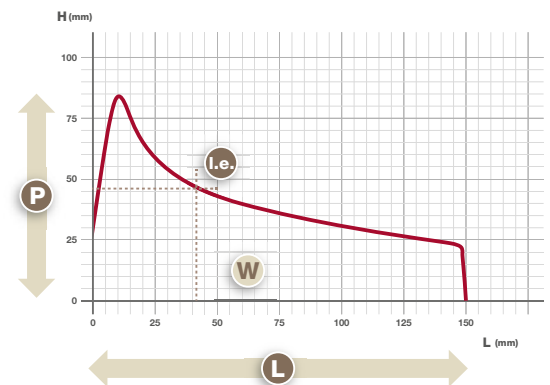
The test involves 4 main steps:

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.= P_{200}/P (P_{200} : 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

Key functions and innovations

Control of the test conditions

- Thanks to automatic regulation of temperature and hygrometry in the test, the results are independent of environmental conditions, and therefore more accurate.

Cooling

- Cooling is assured by an integrated system (Peltier effect). Therefore, there is no need to connect the equipment to a cooling water system.

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.

Dough hydration

- At the beginning of the test, water is added automatically and very precisely.
- The temperature of the water tank is regulated.

Inflation of the dough pieces

- The positioning and the inflation of the dough pieces are automated, and carried out in a temperature and humidity controlled compartment.
- The inverted bubble is more spherical and closer to the ideal conditions of the test.

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.

Protocols

- New parameters, stress/strain and first derivative, are now calculated automatically.
- «Degradation», «relaxation» and «hybrid» protocols (a combination of different protocols, for example: alveo + relaxation) are pre-loaded in the software.
- Custom protocols can be created, for example, by varying the intensity and duration of the mixing. Consequently, the Alveograph test has even more predictive analysis of flour performances.

Blends

- Select up to 5 products and automatically find the most affordable blend that corresponds to your target Alveograph values.

Improver guide

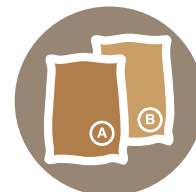
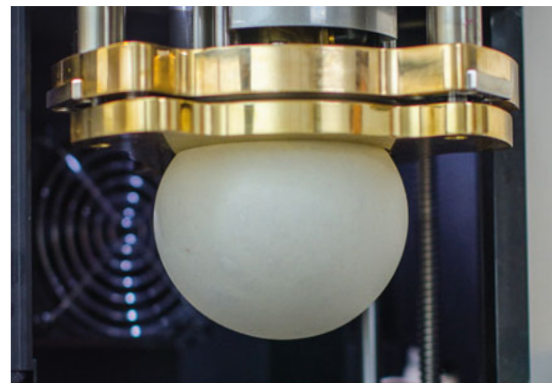
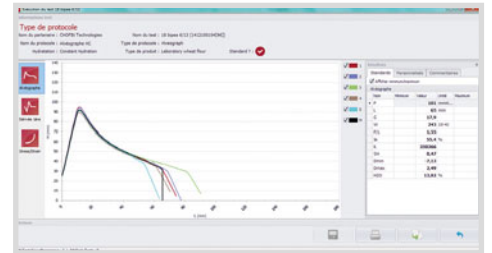
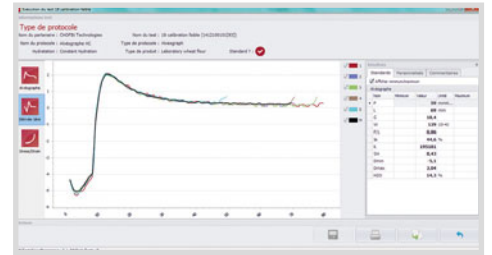
- Helps you to quickly choose the most suitable additive to obtain target Alveograph values.

Virtual store

- Virtually attribute a product to a silo or a cell and enter its price.

Analysis traceability

- Monitor over time the quality of a specific product in relation to a given supplier or customer.



Product	P	L	W	St	P/L	Price	Percentage of product
if 513	120	35	250	10.4	2.18	200,00	2%
if 52	70	307	225	13.2	1.73	200,00	47
if 53	44	42	113	43.9	0.48	200,00	7

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 Alveolab 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 Alveolab, 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 Alveolab results.

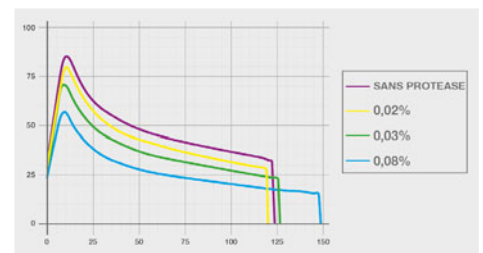
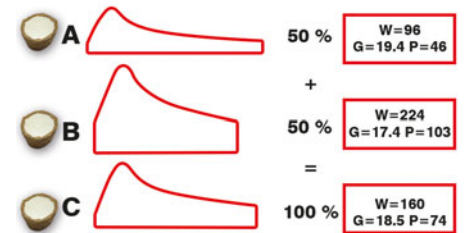
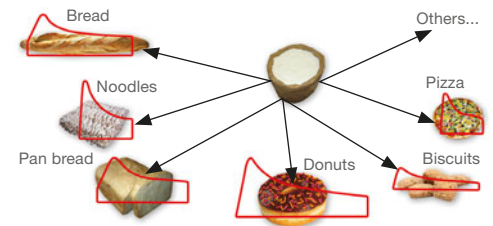
Gluten

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

Insect contaminated wheat

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

And plenty more!



Available services

After Sales Service

service@chopin.fr

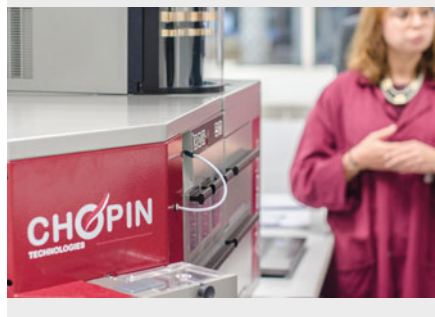
Our service technicians guide you to guarantee optimal and durable use of your Alveolab.



CT Center

ctcenter@chopin.fr

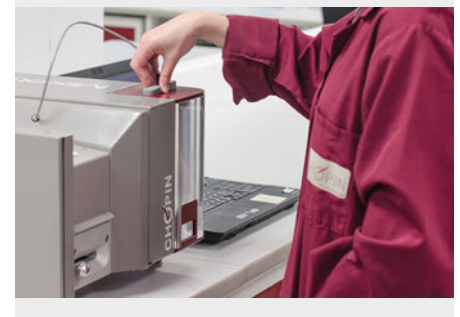
The CT Center offers you specific training, to improve your knowledge and get the most out of your Alveolab.



Applications Laboratory

labo.applications@chopin.fr

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



Code	ALVEOLAB
Options	STRONG and WEAK control flour for Alveograph