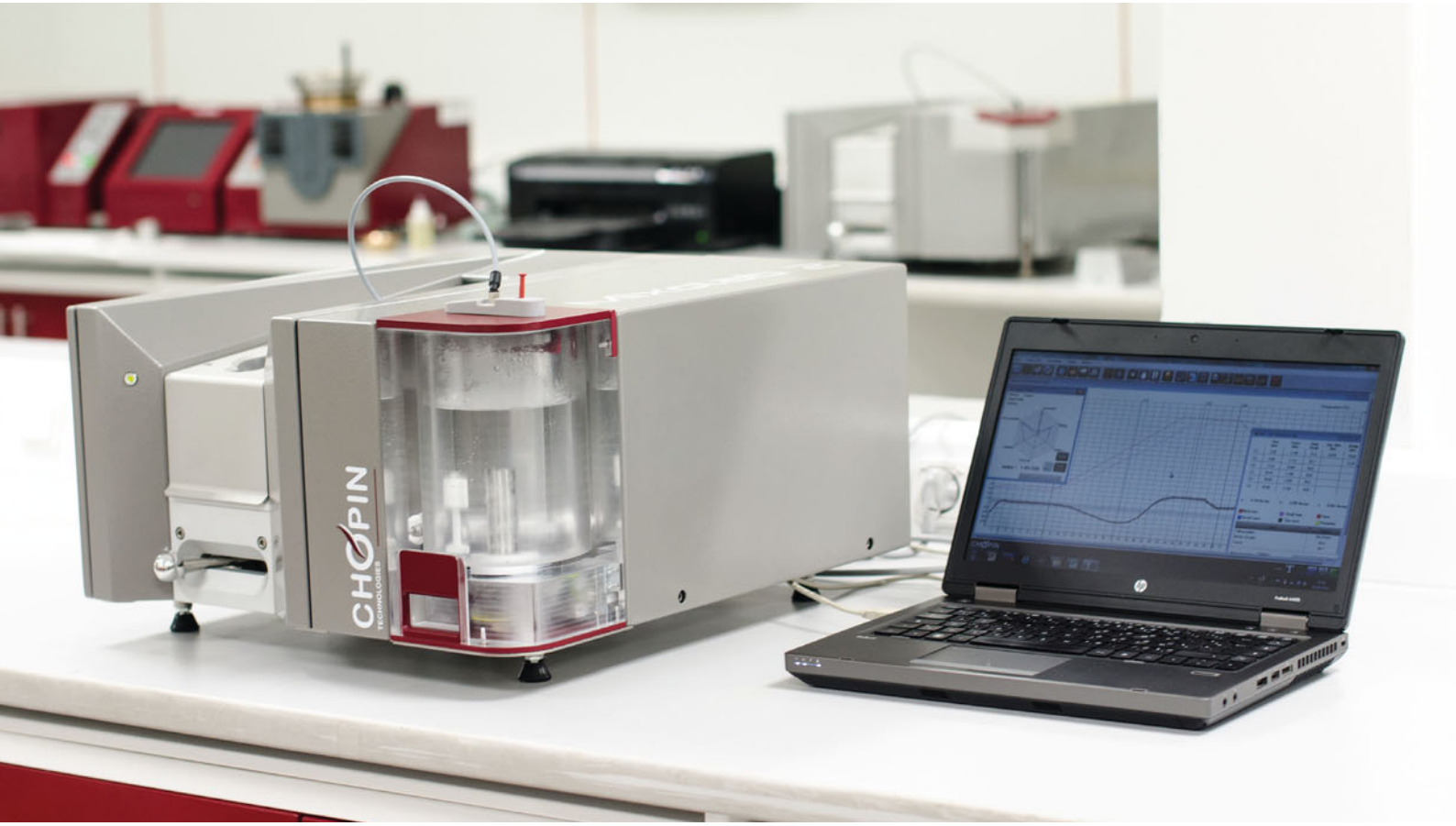
CHOPIN TECHNOLOGIES

Mixolab 2

Measures the characteristics of dough during mixing, as well as the quality of starch and protein



Comprehensive

- The only standardized device permitting comprehensive analysis of dough as it undergoes increasing temperatures

Versatile

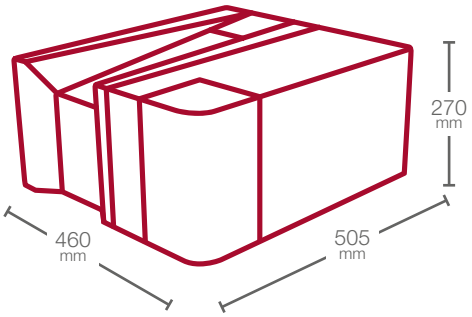
- Easily create customized testing protocols for various cereals, whole wheat flours or doughs sampled directly online

Simple

- The “Profiler” system allows products to be simply classified based on six quality criteria: water absorption, mixing, gluten, viscosity, amylase, and retrogradation

Simulator

- The parameters obtained are fully comparable with those of the Farinograph®



33 Kg

220/240V - 50/60Hz
1000 W

Compliant with

ICC 173/1 ; AACC 54-60-01 ; NF V03-765 ; ISO 17718 ; GOST 54498-2011

Test time : **45 minutes**
Operator time : **5 minutes**

CHOPIN TECHNOLOGIES

The Mixolab analyzes the characteristics of dough during mixing, as well as the quality of starch and protein.

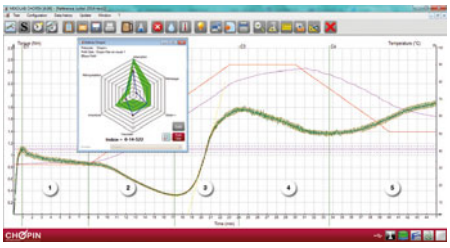
Measuring principle

The Mixolab measures the consistency of a dough subjected to the dual constraints of mixing and increasing temperatures. It analyzes the quality of protein and the starch using a 50 gram sample of the flour.

Mixolab Standard

The standard “Chopin +” protocol analyzes:

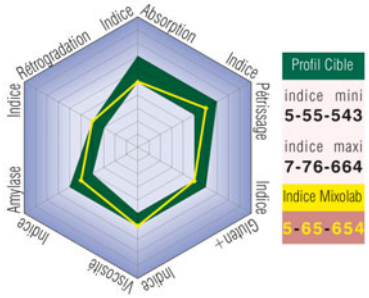
1. Behavior during mixing (hydration, development time, stability, etc.)
2. Protein quality
3. Starch gelatinization
4. Amylase activity
5. Starch retrogradation



Mixolab Profiler

The integrated software measures each of the standard curve parameters and converts them into six qualitative indexes :

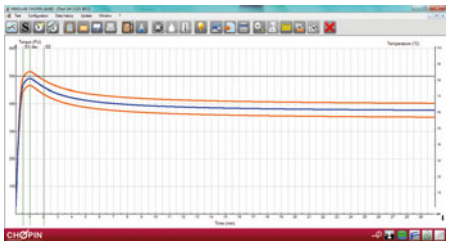
Index type	Values	Significance : the higher the index value the...
ABSORPTION	From 0 to 9	... more the flour absorbs water
MIXING		... more the flour is stable at kneading
GLUTEN+		... more the gluten resists heat
VISCOSITY		... greater the dough’s viscosity when heated
AMYLASE		... weaker the amylase activity
RETROGRADATION		... shorter the cooked product’s shelf life will be



Mixolab Simulator - *New*

The Simulator protocol displays a reconstituted Farinograph® curve and gives results that are fully comparable to those of the Farinograph®:

- Water absorption
- Development time
- Stability
- Weakening



A reliable, innovative and efficient device

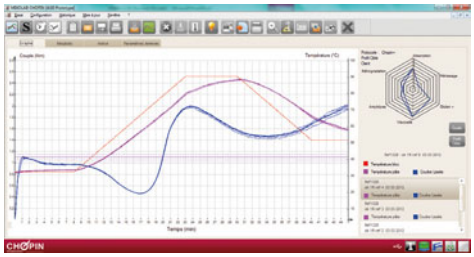
- Precise, automatic mixer temperature regulation (max: 90°C)
- Robust, easy to clean, dual component aluminium/stainless steel mixer
- Easy to remove water tank for simple, rapid cleaning
- Water added automatically, rapidly and very precisely (+/- 0.02 ml). Possibility to add water in different fractions (pump capacity: 75 ml)
- Full electronic calibration on all the measurement points on the Chopin+ curve (temperature & torque) for greater analysis precision

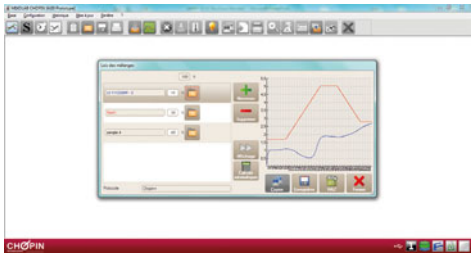
CHOPIN TECHNOLOGIES

The Mixolab is a solution for the entire cereal industry, from cereal breeding to baking and food production.

Simple, comprehensive and intuitive software - *New*

- Temperature-specific stability index evaluating the dough's resistance to temperature increase (to supplement the conventional mixing stability value)
- Possibility to carry out testing protocols varying both the temperature (max: 90°C) AND the mixing speed (max 250 rpm), for example, to mimic a resting phase
- "Blending law" function to create and save theoretical curves corresponding with prior results
- "Additive effect" function to directly visualize the optimum amount of additive to use
- Function creating automatic calculations at the end of the test, displaying the results of "predictive formulas", such as bread volume
- An integrated "Control chart" menu for monitoring the instrument's precision
- An automatic C1 test to determine the flour's hydration potential in less than eight minutes
- Results export in .csv or .xls file formats
- Integrated videos providing instructional tutorials

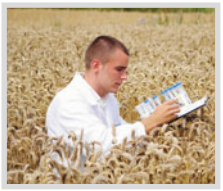




Providing solutions

For Breeders

- Facilitates wheat seed variety selection from generations F4-F5



For Millers

- Wheat testing at point of delivery
- Detection of pest-infestation in wheats
- Wheat and flour blends optimization
- Adaptation of flours for final uses through precise dosing of additives
- Analysis of different flour mill streams
- Assessing the impact of damaged starch

For Bakers

- Verifying the conformity of delivered flours
- Studying the rheological behavior of fiber-rich flours
- Facilitates the elaboration of gluten-free products
- Studying whole-wheat formulas

For All

- Optimization of customer specifications and quality control

The Mixolab can analyze flour, ground cereal or dough sampled directly from the process line, thus offering extraordinary flexibility.

Application examples

- Analysis of wheat varieties (analysis of flours or ground grains)
- Analysis of various types of flour (bread wheat, durum wheat, barley, rye, rice, corn, quinoa, cassava, etc.)
- Analysis of the effects of additives (enzymes, gluten, emulsifiers, protease, lipases, cysteine, amylase) or ingredients (salts and substitutes, sugars, fats)
- Analysis of the effects of fibers on dough behavior
- Evaluation of the effects of damaged starch
- Analysis of dough sampled directly from the process line
- And much more!

For a more comprehensive list of applications, consult the Mixolab Applications Handbook available on our website www.chopin.fr/en

Advantages

Comprehensive

Comprehensive analysis of dough subjected to a cycle of warming and cooling

Standardized

Compliant with ISO 17718, ICC173/1, AACC 54-60-01, NF V03-765, NFV03-764, GOST 54498-2011 standards

Simple

Automatic water addition; fully removable mixer for rapid cleaning
Preventive maintenance messages displayed at regular intervals

User friendly

PC controlled for complete traceability
Software available in 12 languages

Versatile

Works equally well with flours and ground cereal
Customizable protocols

Adaptable

Used in quality control and research and development

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