CHOPIN
TECHNOLOGIES

"WN # 3 Mixolab' Profile how to improve communication between millers & bakers with dough rheology"

IAOM 2012– Abu Dhabi, UAE - Charles Loubersac Dhotel

All about quality…

Process

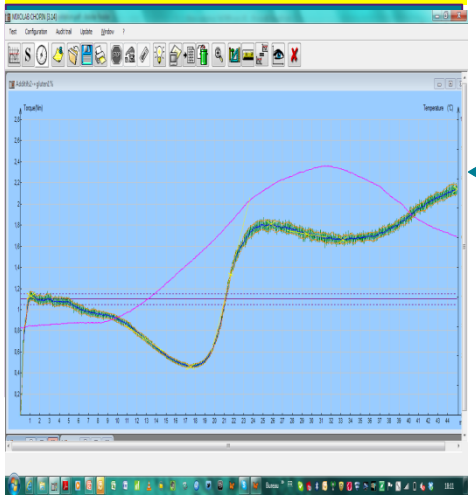
FLOUR

MIXER

PROCESS

3. Monitor & adjust

2. Determine Relationship



Fermentation

DOUGH

1. Clearly define target dough

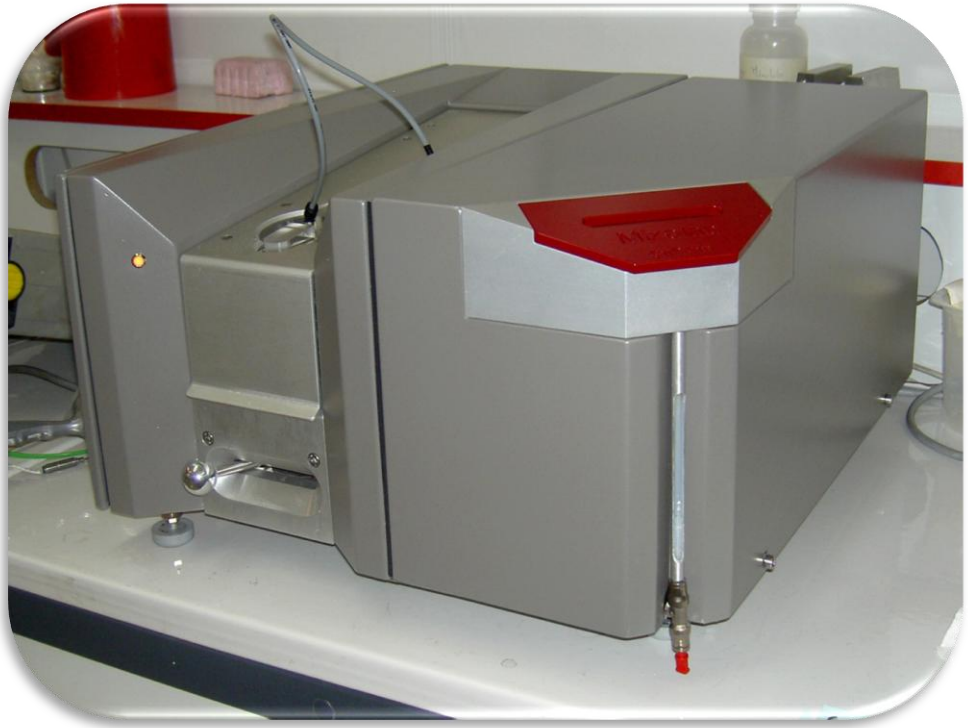

WARNING

There is a real need for simple, but yet accurate quality control tool.

But we need to aim on the objective (customer satisfaction) not on the beauty nor the history of the technology !

Industrial bakers need results!

The Mixolab



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The Mixolab System

Mixolab System

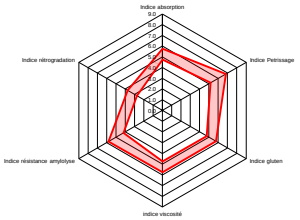
Mixolab Standard

Ideal tool for your **R&D**, the **Mixolab Standard** brings the entire & detailed information on your raw material. (protocol with standard ICC n° 173-AACC 54-60.01)

Mixolab Simulator

Comparative tool for the Quality control, the **Mixolab simulator** let you compare your data with Farinograph® data.

Mixolab Profiler



Perfect tool for the **Quality control** of your raw materials. With the **Mixolab profiler**, you control, select, discriminate & improve your flour safely.

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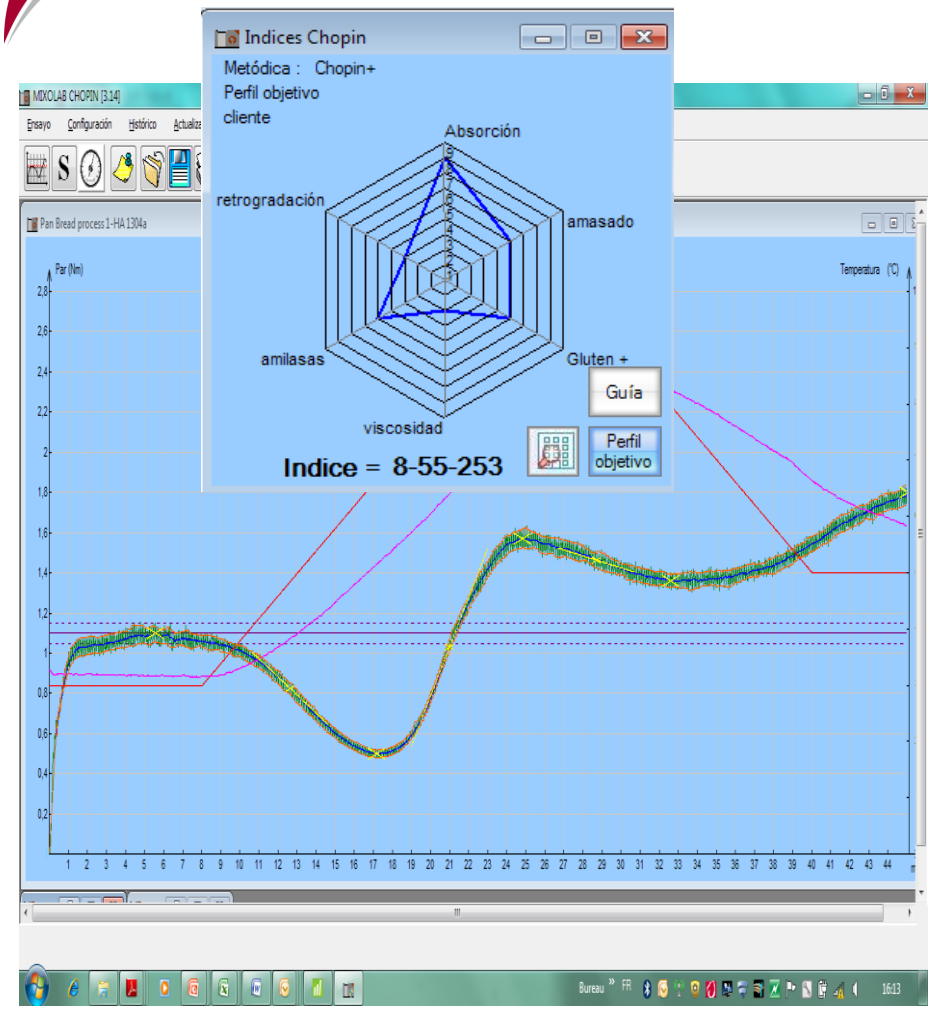
From standard graph To Profile



The Profile is a « Curve Translator »

It converts the standard graph into a very comprehensive quality control tool grading from 0 to 9:

- **Water Absorption**
- **Mixing behaviour**
- **Gluten Behaviour**
- **Starch pasting (viscosity)**
- **Amilasic activity**
- **Starch retrogradation (set back)**

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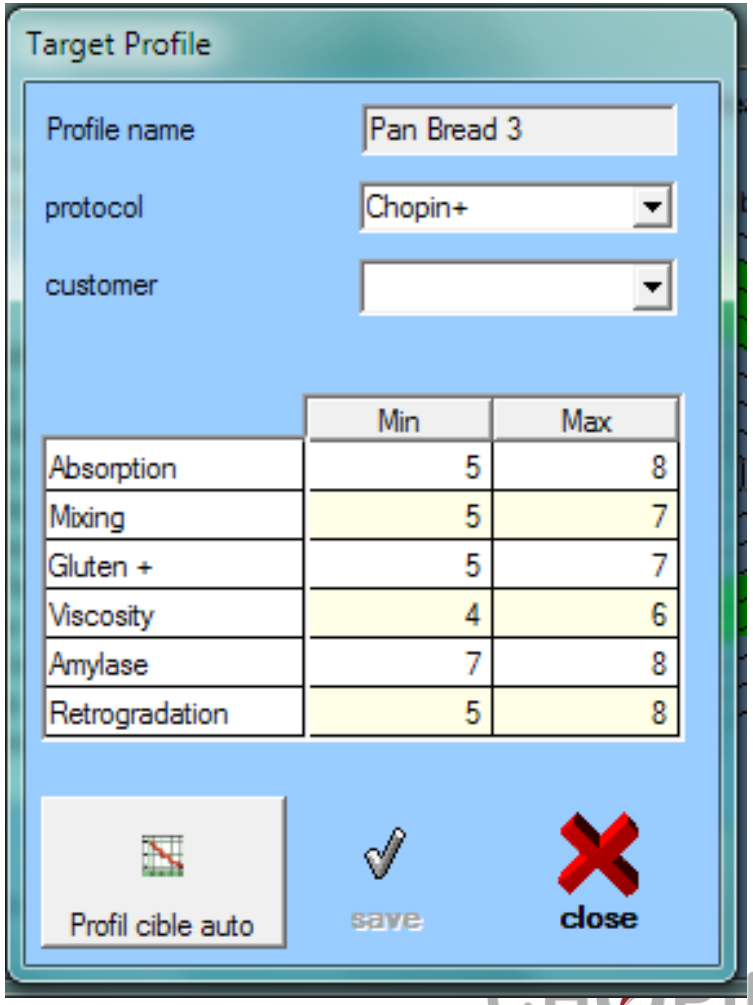
3 steps to create a Profile

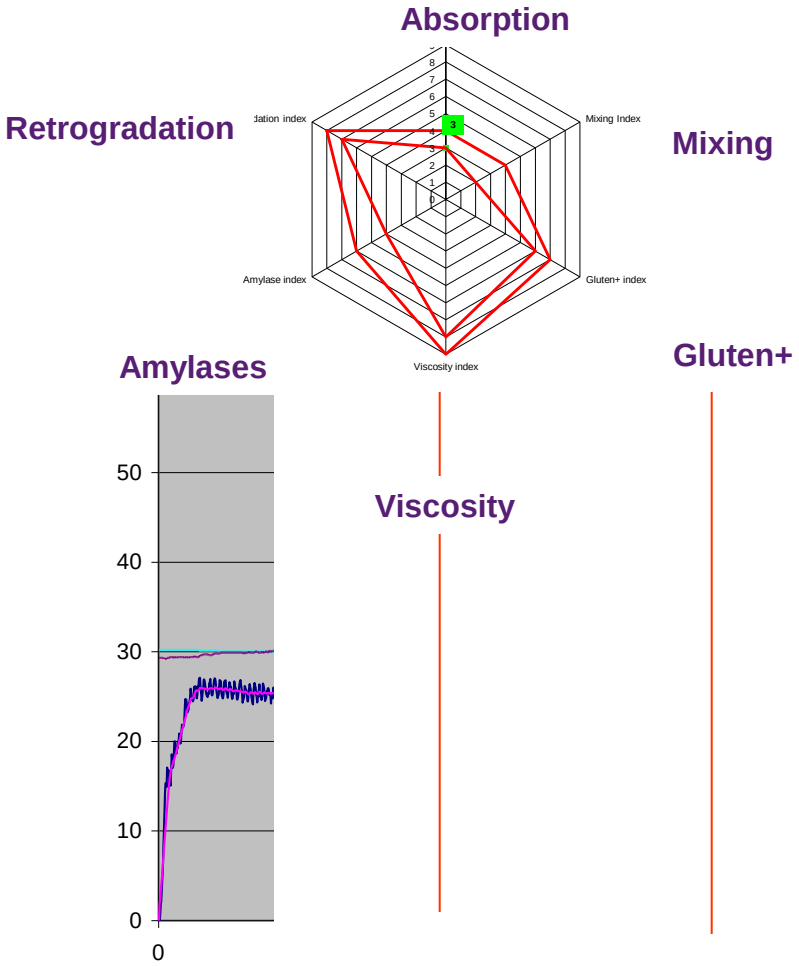
Everything starts with observation of the flour (dough) on the processing line.

1. **Select every flour performing perfectly**
2. **Test the flour on the Mixolab (Minimum 20 sample)**
3. **Use the built in software to determine the mini/maxi values (Target profile).**

User can create as many target profile as needed (per product, per line…).



Consistency step by step



1st index :
Water absorption.

Depends on the flour components quantity & quality (proteins, starch, fibers,…).
Impacts the dough yield (R.O.I.).

Higher index : higher water absorption

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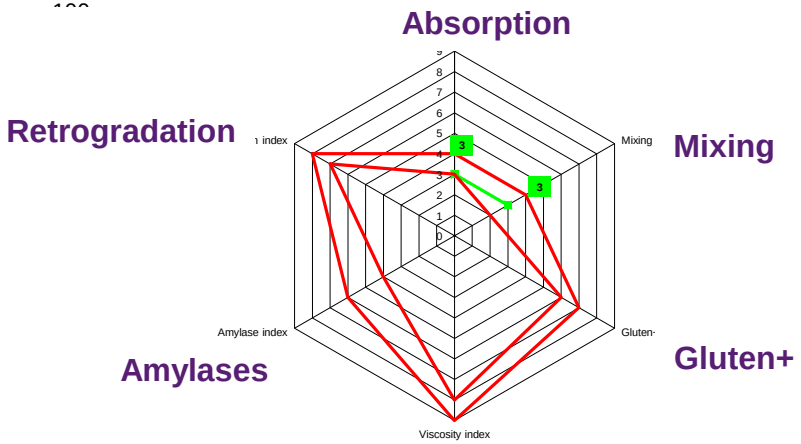
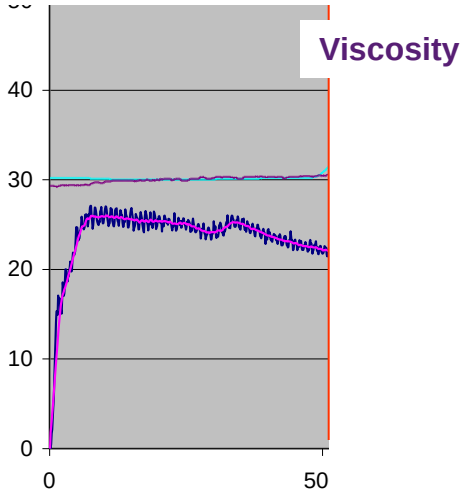
Consistency step by step





2nd index:
Mixing behavior.

This index gives an information on the behavior of the flour when mixing at 30°C. It integrates the stability, DDT and weakening…

Higher index : Higher dough stability during mixing.

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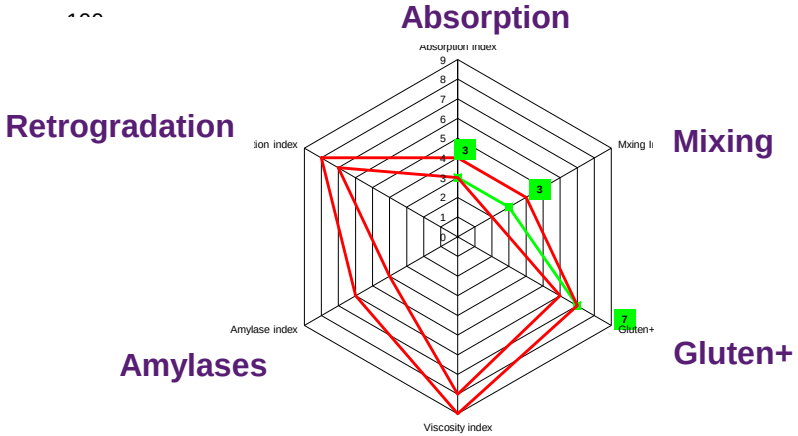
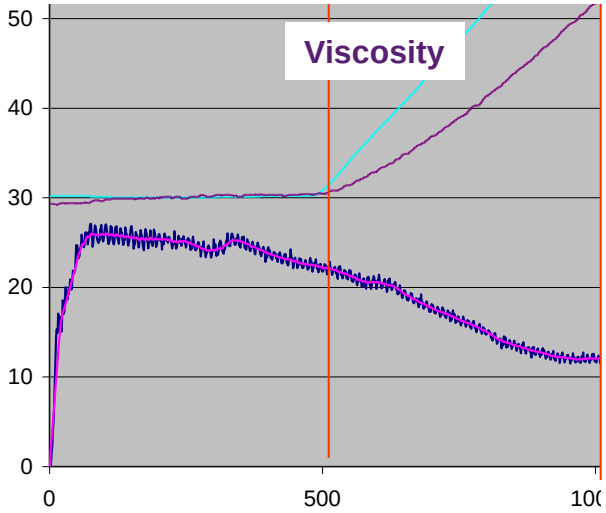
Consistency step by step



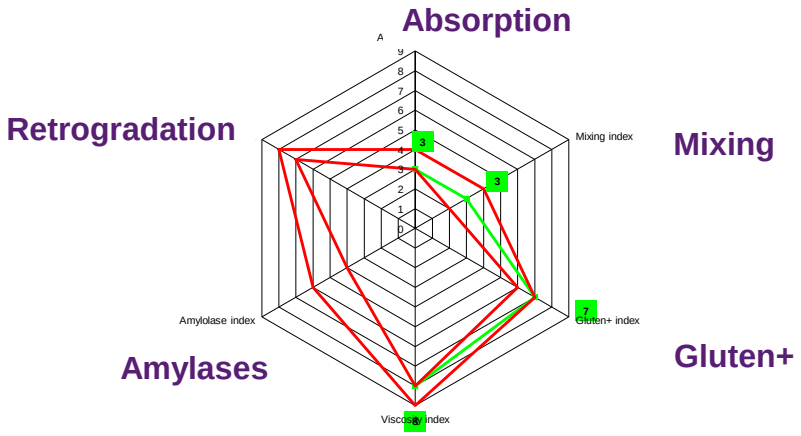


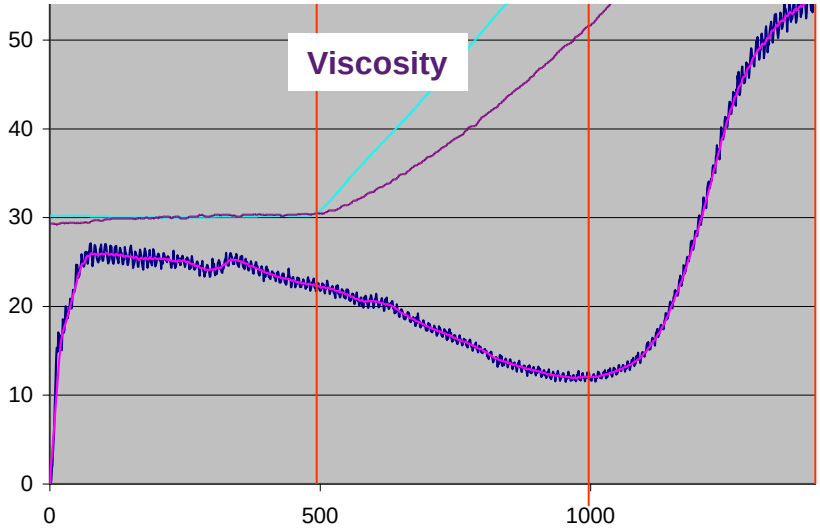
3rd index:
Gluten+ index.

Measures the behavior of the gluten when heating the dough.

Higher index : Higher gluten resistance to constraint.

Consistency step by step





4th index:
The viscosity.

The increase of the viscosity during that phase relies on both the amylasic activity & the starch quality.

Higher index : Higher dough viscosity during heating.

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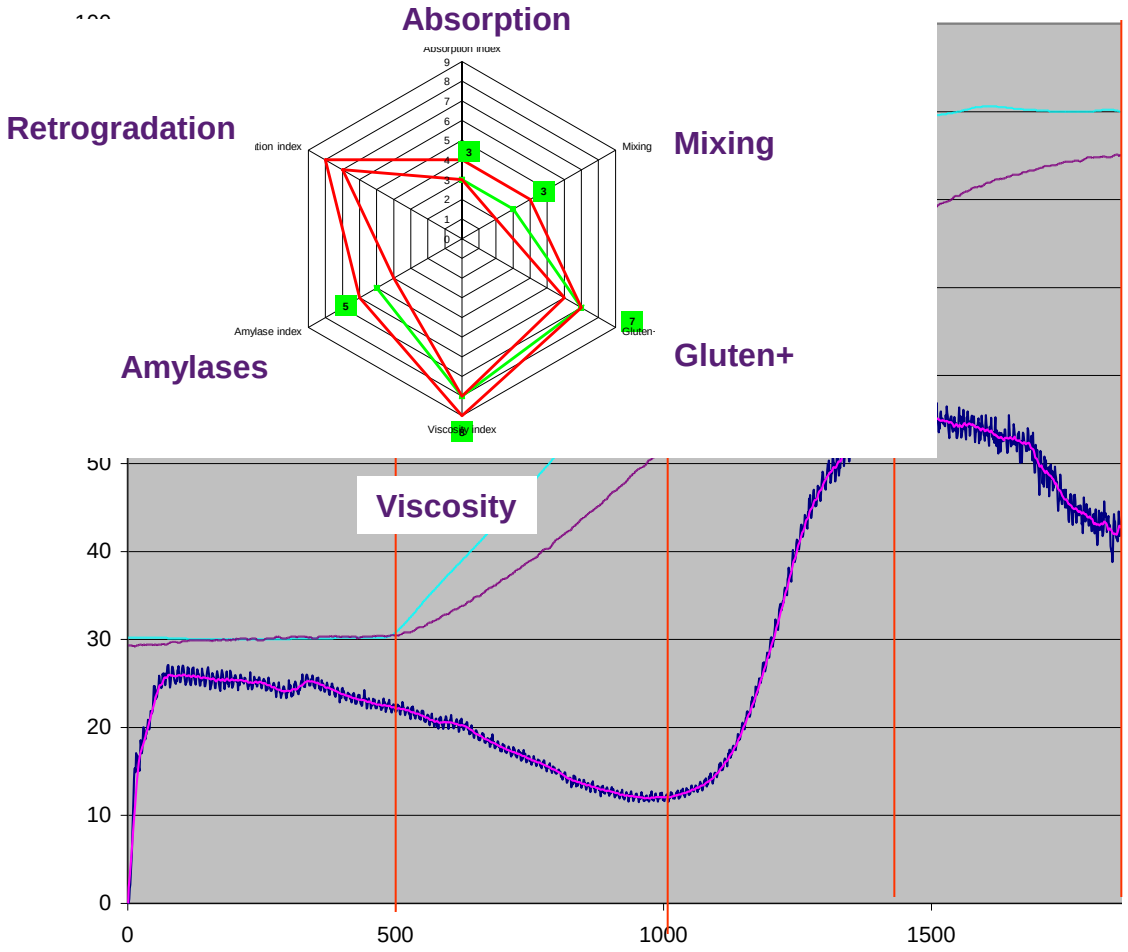
Consistency step by step



5th index: Amylolysis resistance.

Depends on starch resistance to diastasic activity

Higher index : Lower amylasic activity.

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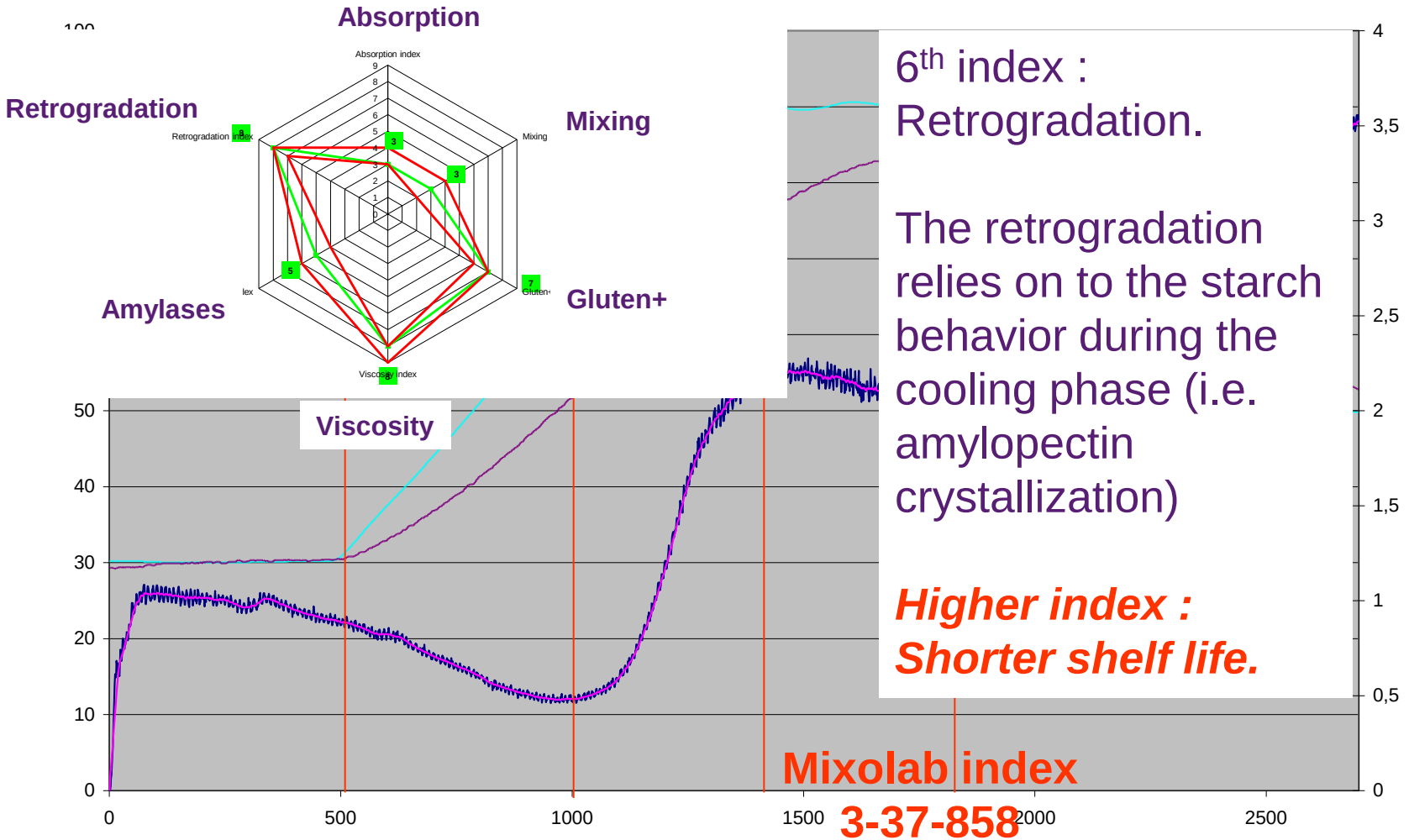
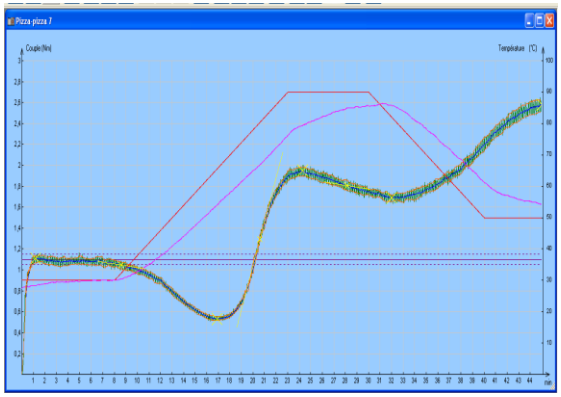
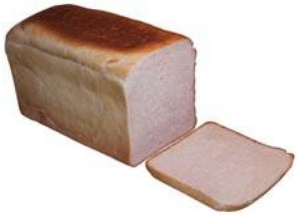
Consistency step by step



Profiler represents your product



IN



OUT

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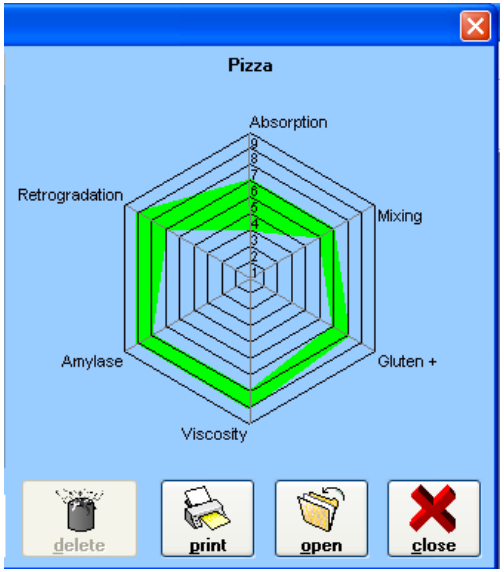
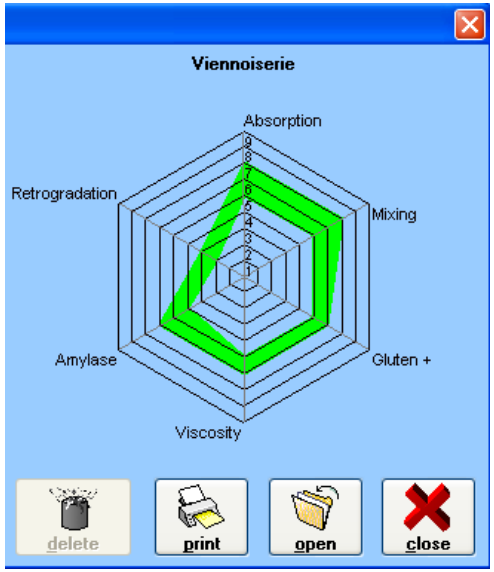
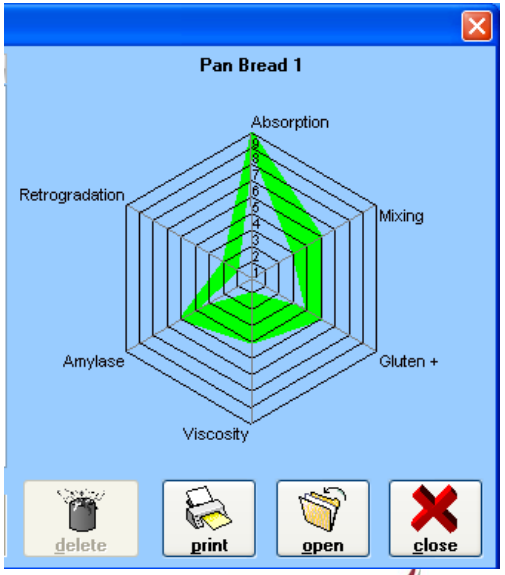
Different products







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Is the profiler an added value for your lab ?

By creating the requested quality profile and checking if grain or flour perfectly matches it, you avoid problems on production line. It guarantees 100% consistency.

If not matching, the system suggests which points must be improved and even how!

Due to its versatility, comprehensive & accurate way of reversing the dough rheology for the functionalities of the flours, you improve and manage the quality of your production in perfect accordance to customer's needs.

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Why do we need innovative tools?

1. Protein Quantity does not mean protein quality.
2. Starch represents more than 70% of wheat flour.
3. Starch can differ in granule sizes and granule damage.
4. Starch does not react the same way when there is a limited amount of water available.
5. Interactions between starch, protein, lipids and the action of enzymes are critical to better understand dough functionality.

The Mixolab is the only device available since more than 6 years bringing all these information in one single test.

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Most of our users are VERY conservatives !

Reasons for not changing

They have no problems

- Denying the reality
- Fixing the problem in another way (cost)
- Actual situation is perfect

They do not want to change

- Do « like always » more comfortable
- No change is safer

Conclusions
The Mixolab brings you more…

Safety

- Standardized device (ICC, Afnor & AACC pending)
- Support of a well established company (est. 1836)
- Full support of technicians and application experts.

Innovations

- The Mixolab represents still the latest innovation in rheological equipement for the milling/baking industry.
- The profiler is a unique tool only available on Mixolab.

Confort

- A complete analyse in one single test.
- Compact system, requiring little laboratory space.
- All tests are computer-monitored and data processing is extremely easy.
- Easy to perform, even by non lab-technicians

Savings

- Only one device for a complete analyse in a very short time.
- Better decisions based on a better information from the lab (wheat purchases, blendings…)

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