



Chopin Mixolab Profiler

Comprehensive flour characterisation
based on 6 quality indexes



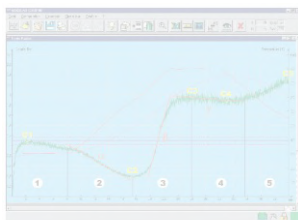
The Mixolab



The Mixolab System

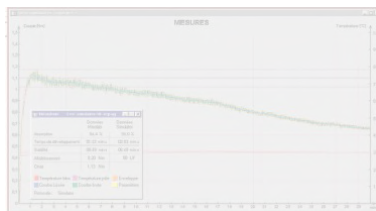
Mixolab System

Mixolab Standard



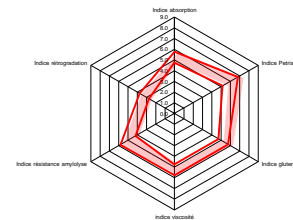
Ideal tool for your **R&D**, the **Mixolab Standard** brings the entire & detailed information on your raw material. (protocol with standard **ICC n° 173**)

Mixolab Simulator



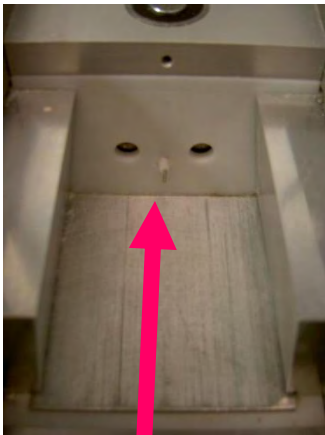
Comparative tool for the Quality control, the **Mixolab Simulator** let you compare your data with Farinograph® data.

Mixolab Profiler

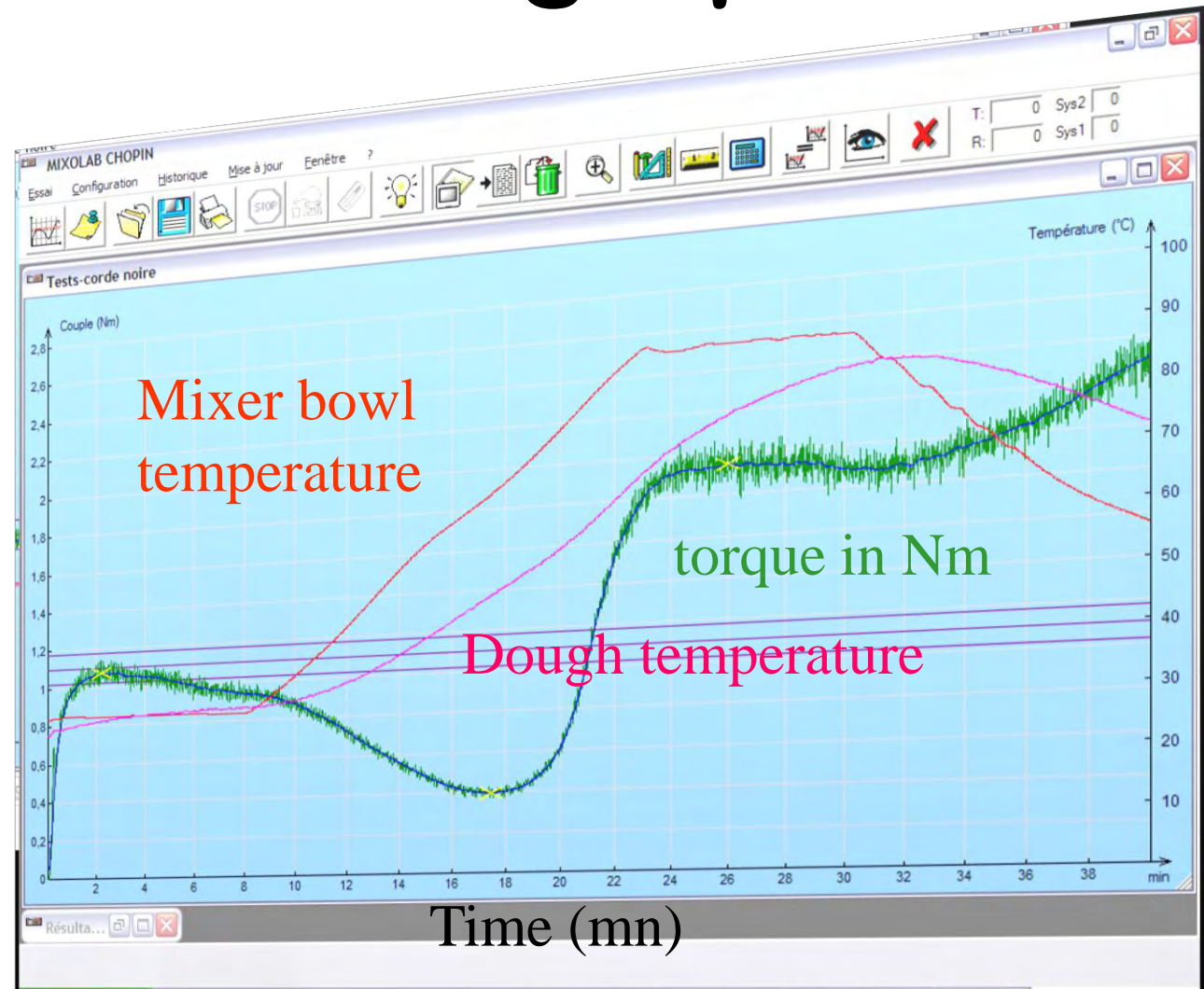


Perfect tool for the **Quality control** of your raw materials. With the **Mixolab Profiler**, you control, select, discriminate & improve your flour safely.

Standard graph



Torque (Nm)



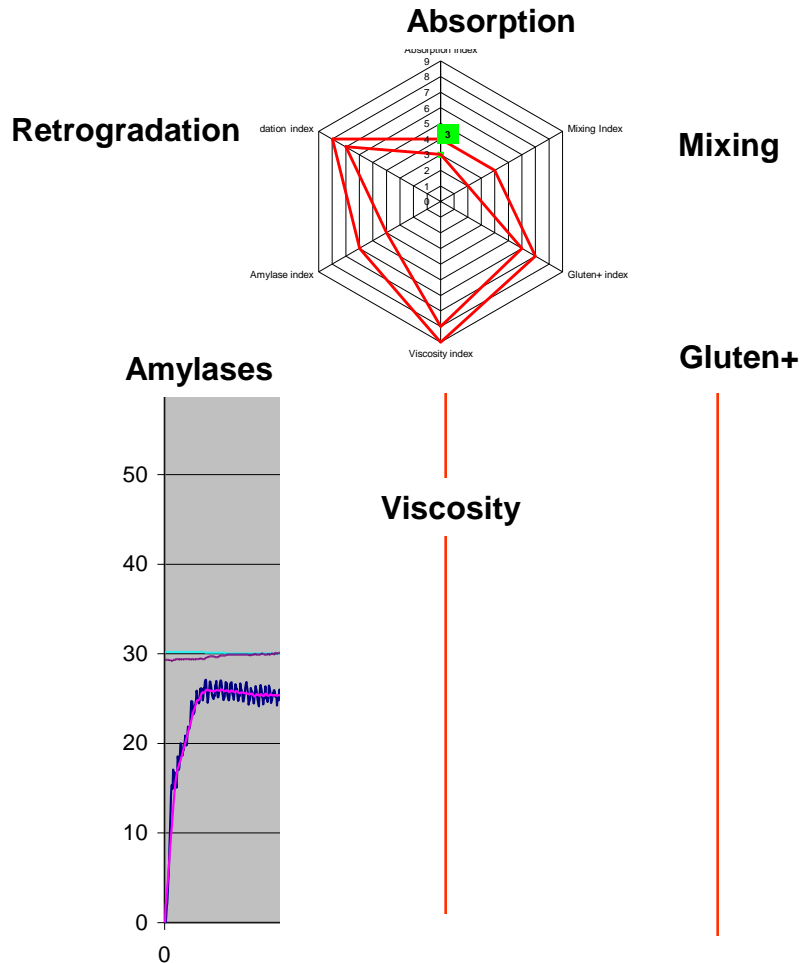
T°C (°C or °F)

Time (mn)



The Mixolab Indexes

Consistency step by step

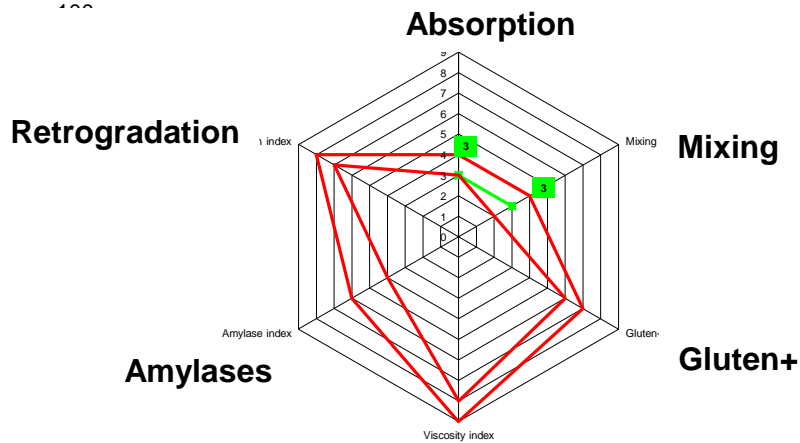


1st index :
Water absorption.

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

Higher index : higher water absorption

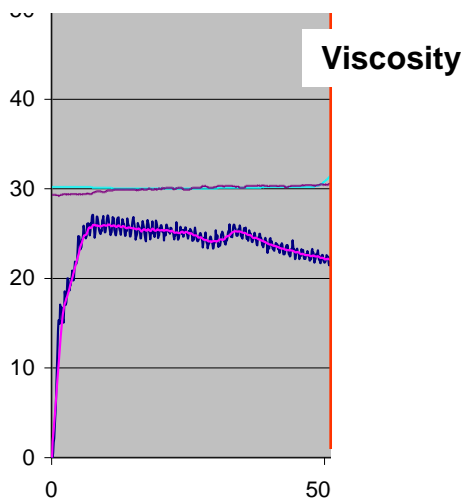
Consistency step by step



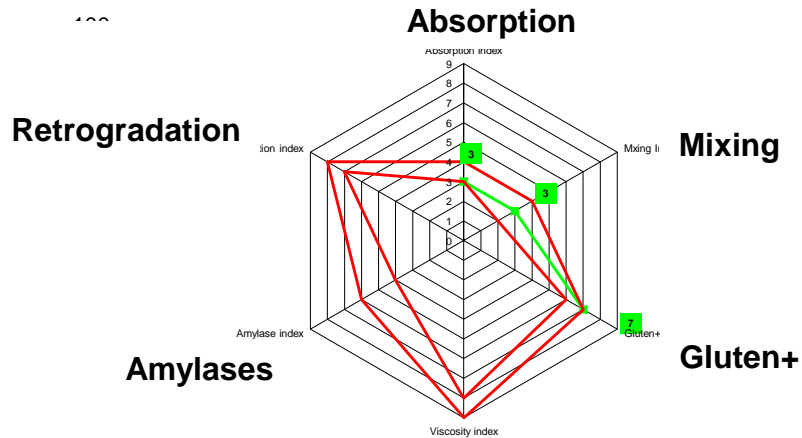
2nd index: Mixing behavior.

This index gives 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.



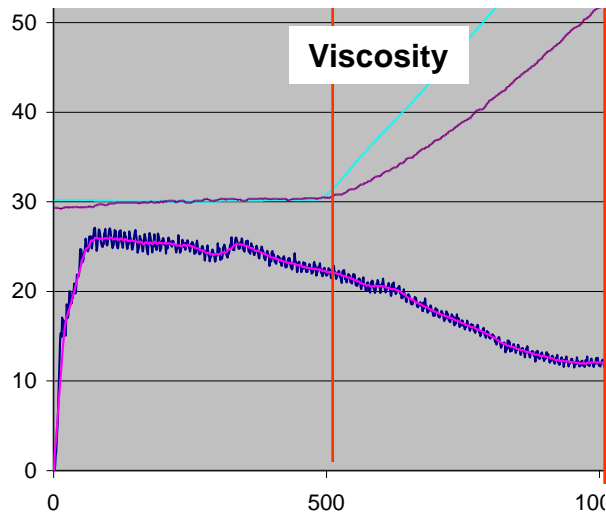
Consistency step by step



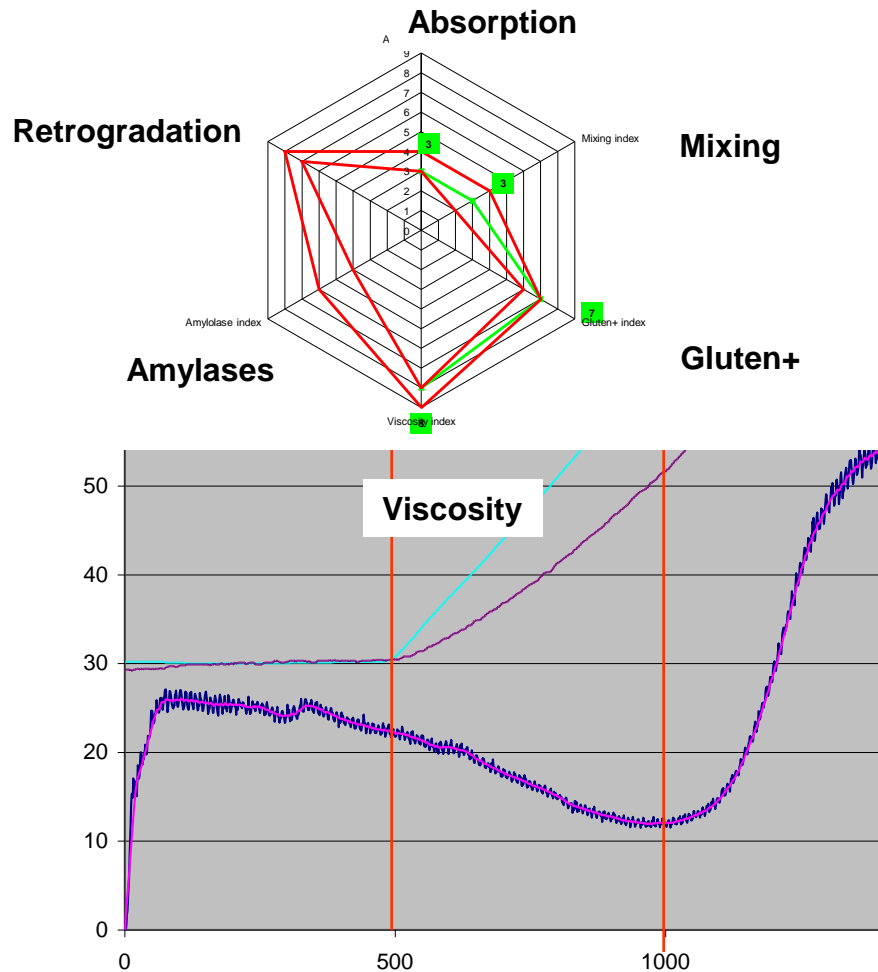
**3rd index:
Gluten+ index.**

Measures the behavior of the gluten when heating the dough.

***Higher index : Higher
gluten resistance to
constraint.***



Consistency step by step

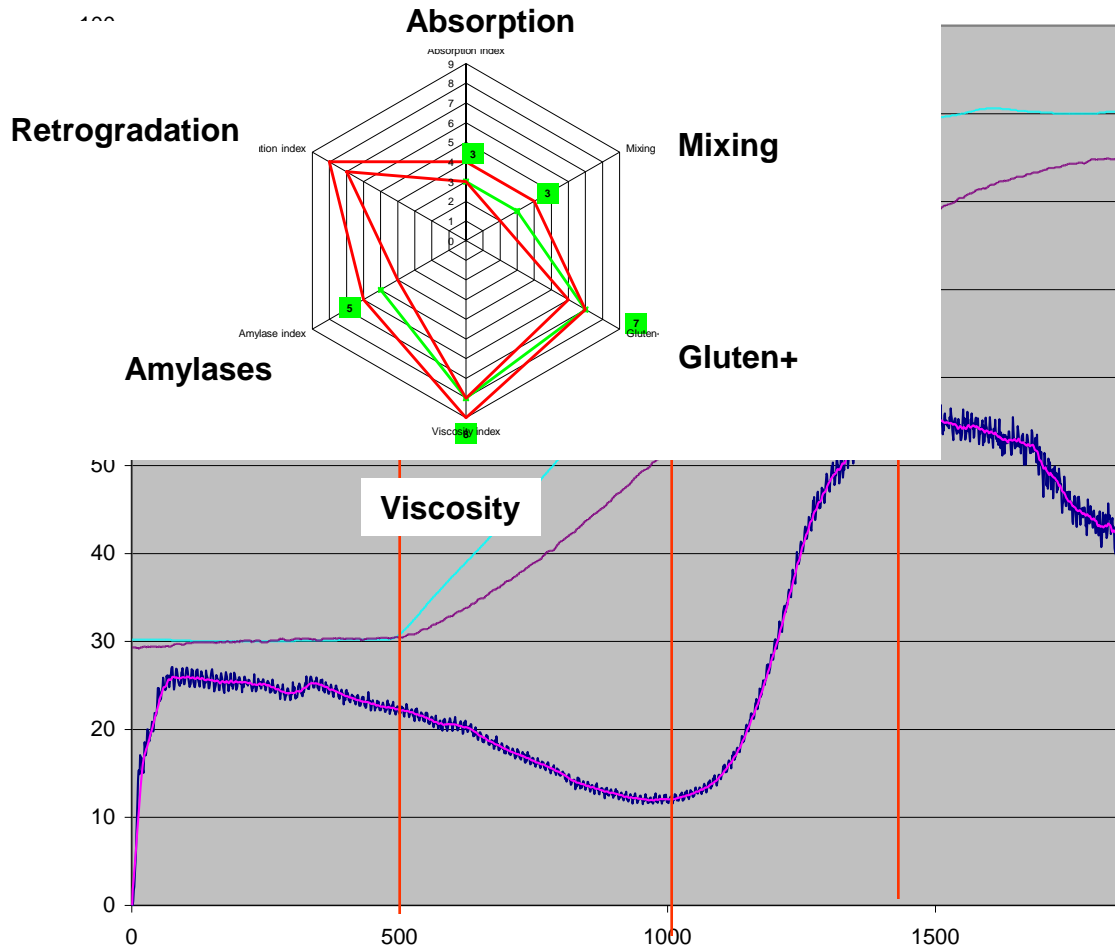


**4th index:
The viscosity.**

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

Higher index : Higher dough viscosity during heating.

Consistency step by step

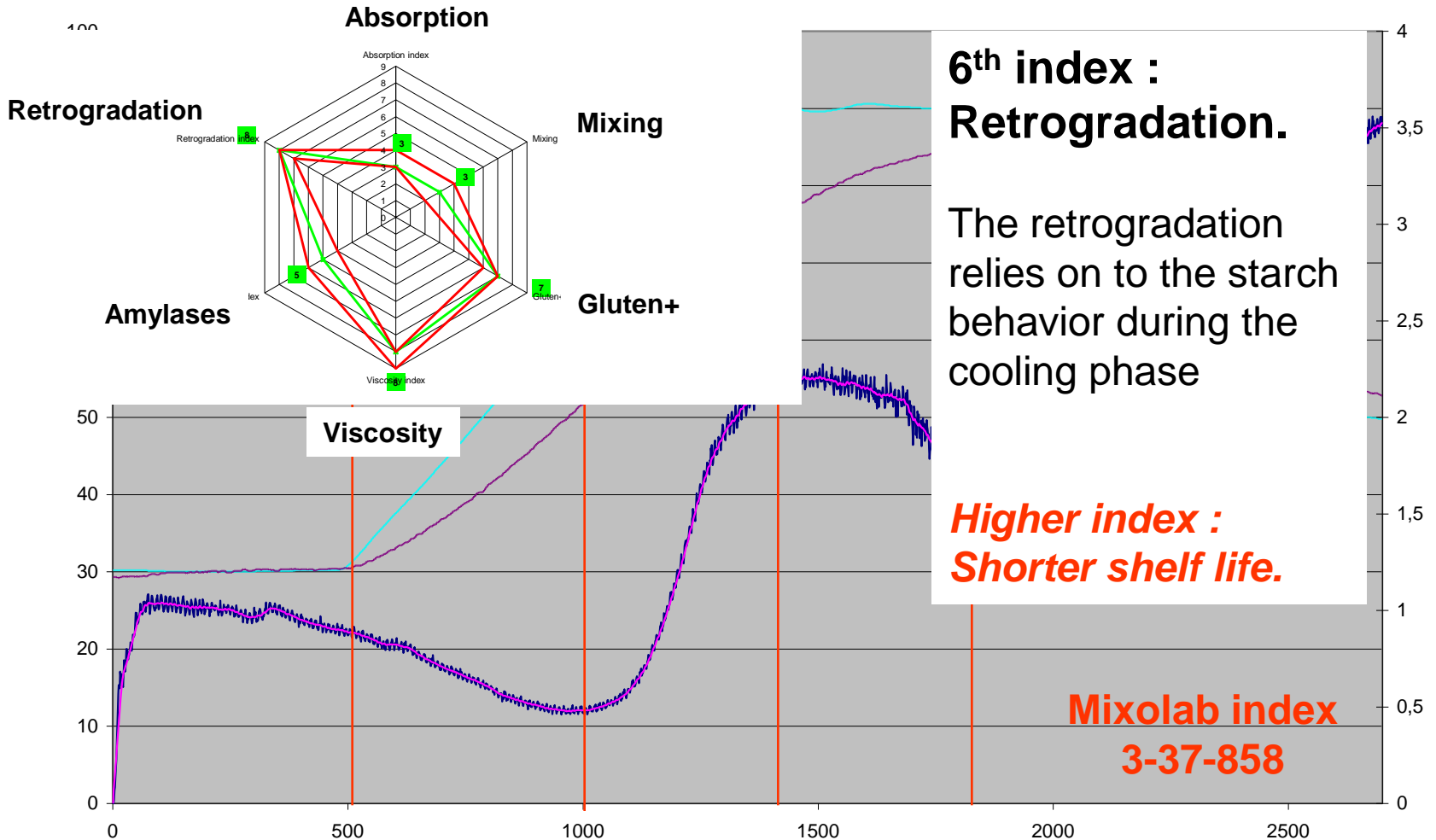


5th index:
Amylase activity.

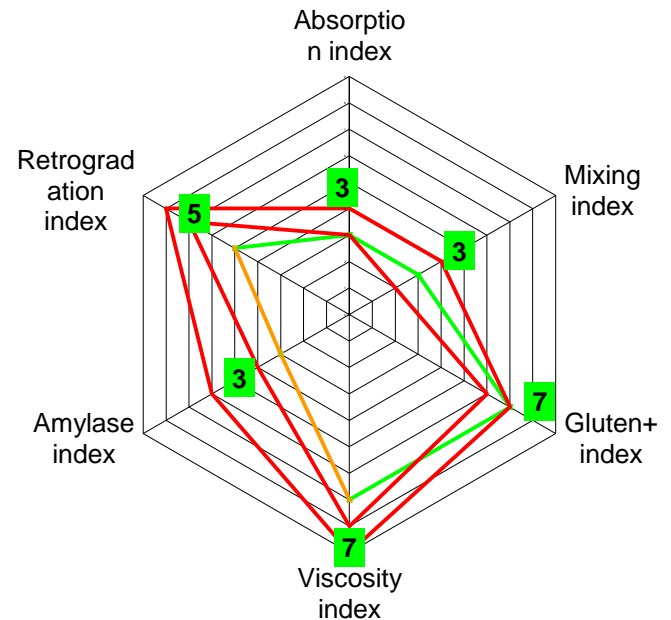
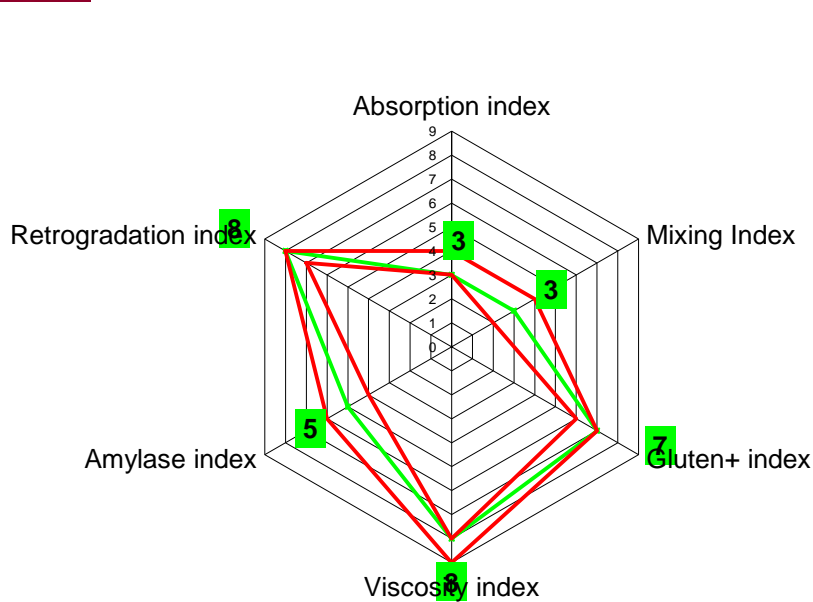
Depends on starch
resistance to diastasic
activity

**Higher index : Lower
amylasic activity.**

Consistency step by step



Flour characterization: You are **IN** or **OUT**



You are **IN** :

Your flour has the requested qualities for your final product

You can receive or deliver the flour

You are **OUT** :

The **Mixolab Guide** helps you to improve the profile



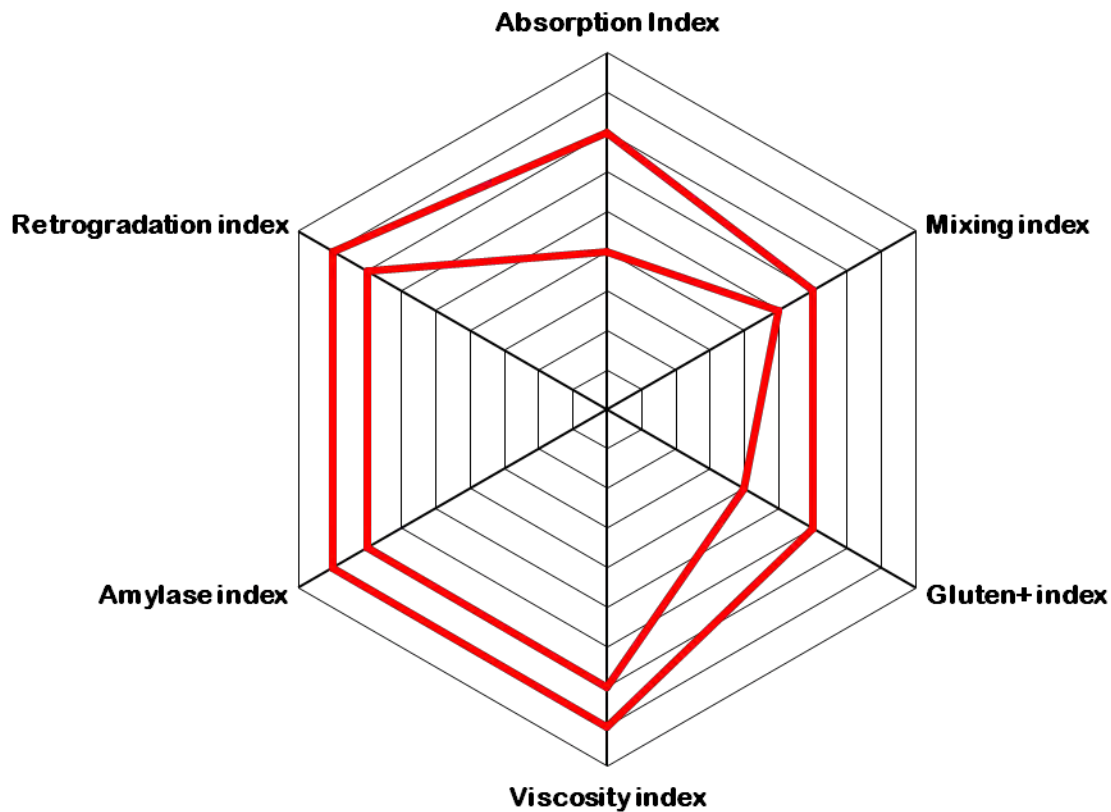
Mixolab Profiler

Different products characterization



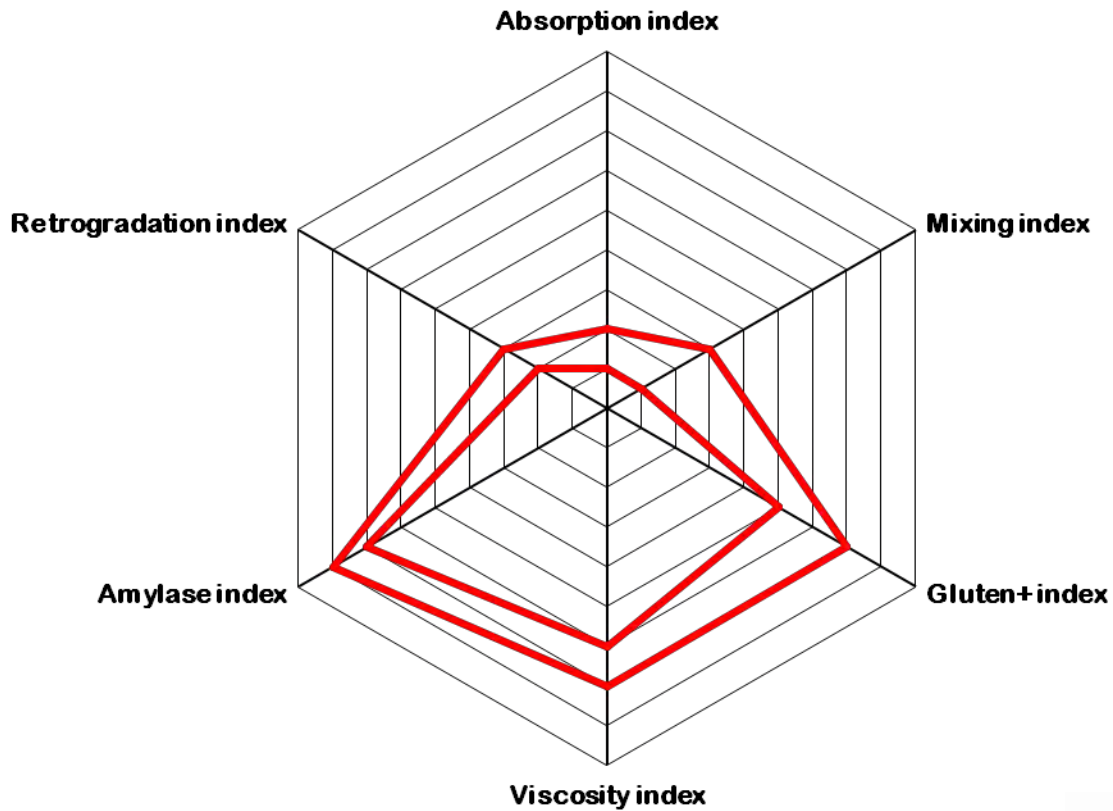
Typical Profile

Baladi flat bread



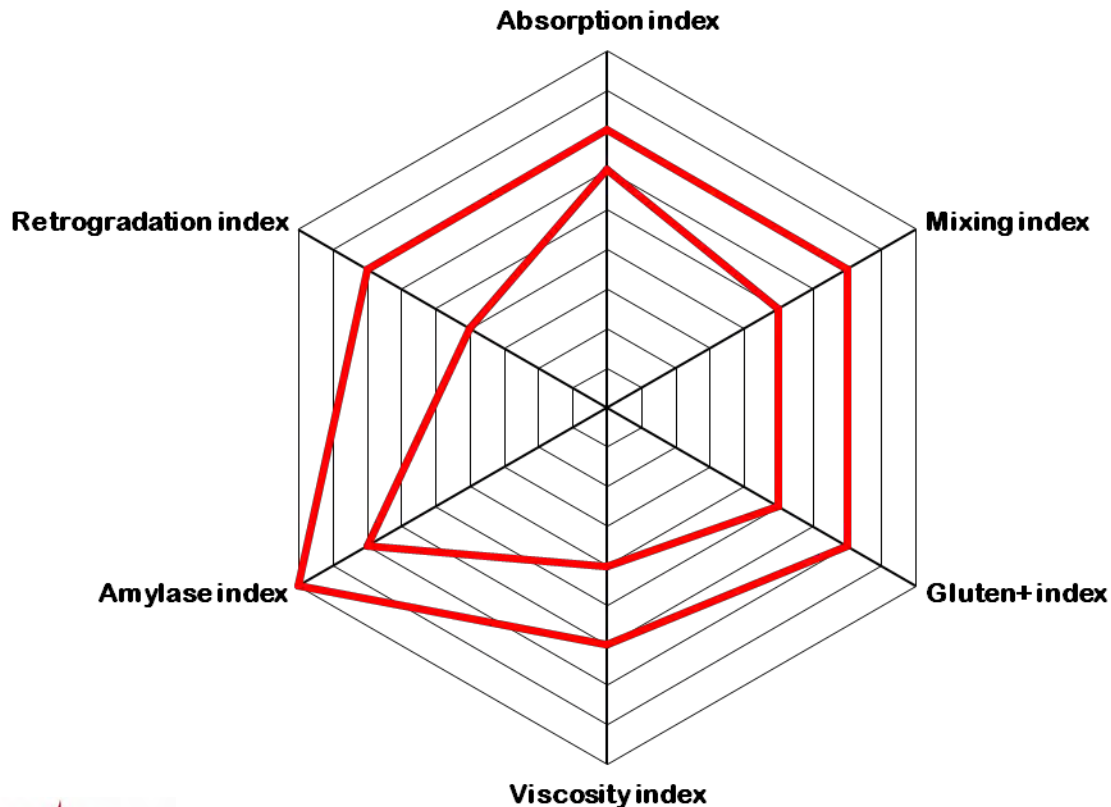
Typical Profile

Croissants



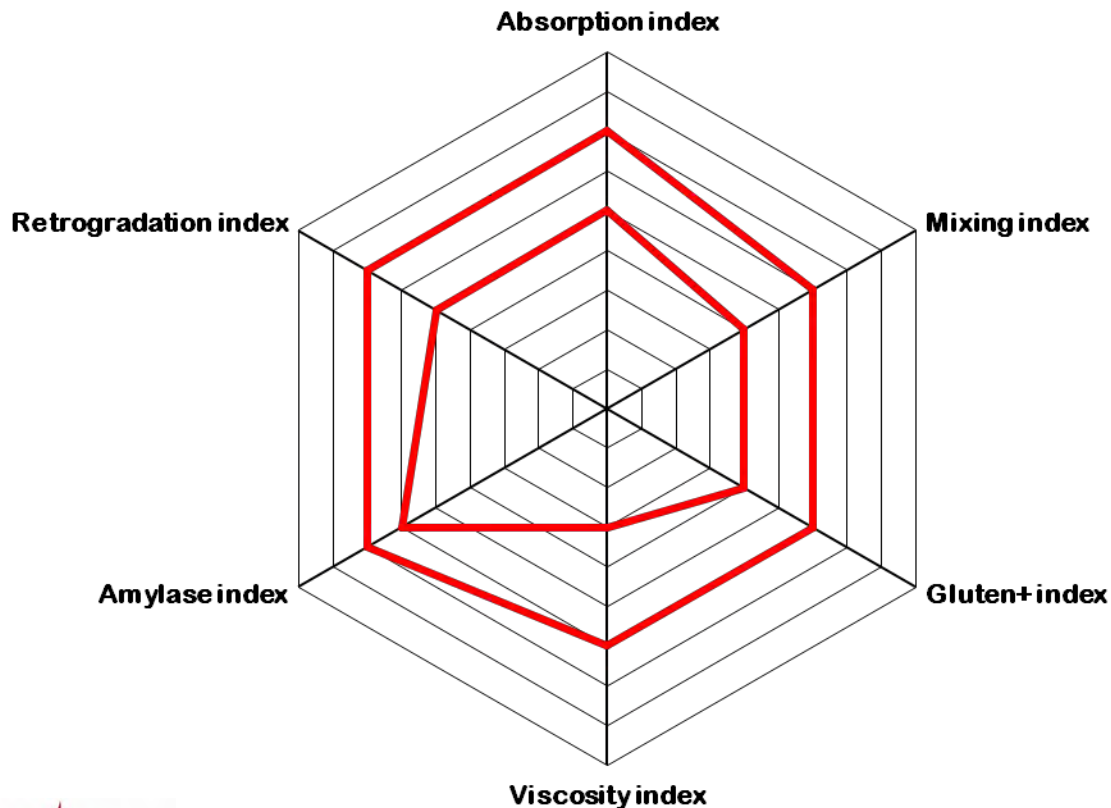
Typical Profile, according to the process

Pan bread Process 1



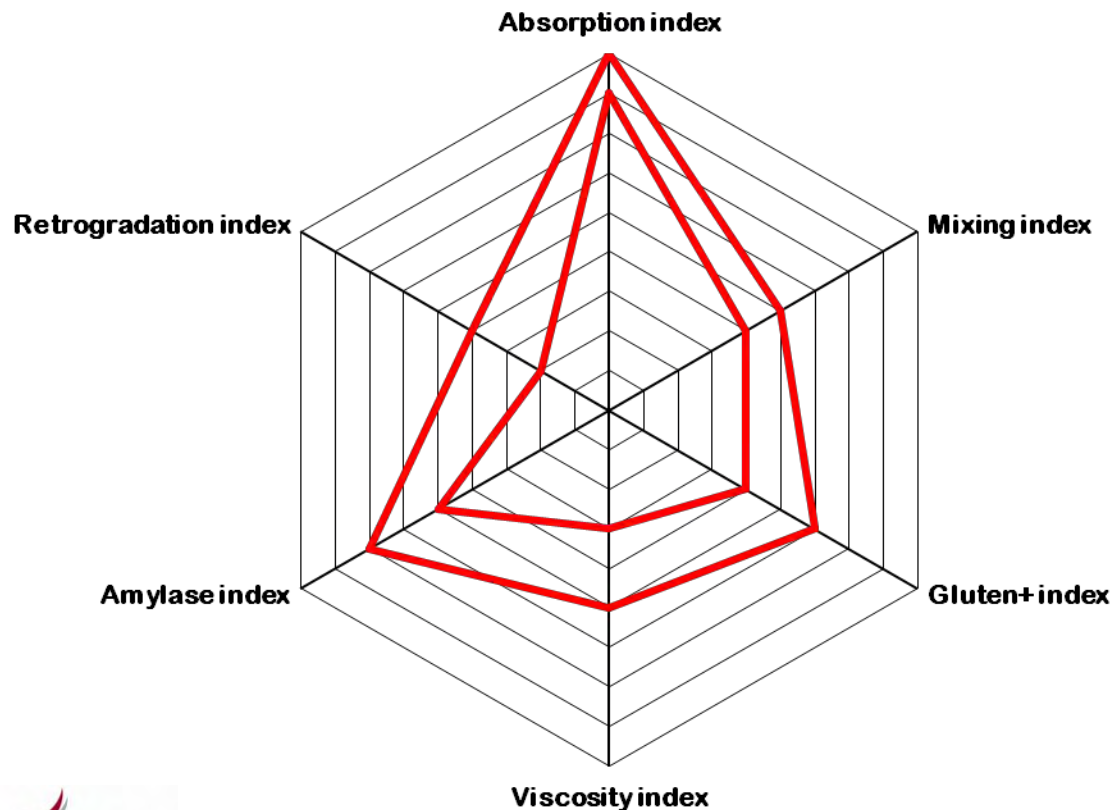
Typical Profile, according to the process

Pan bread Process 2



Typical Profile, according to the process

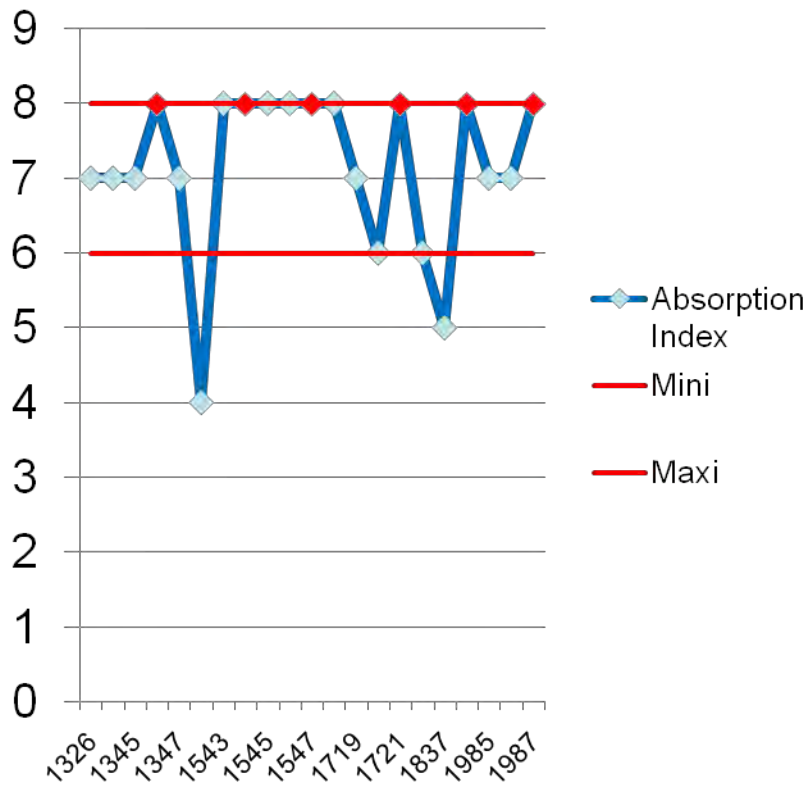
Pan bread Process 3



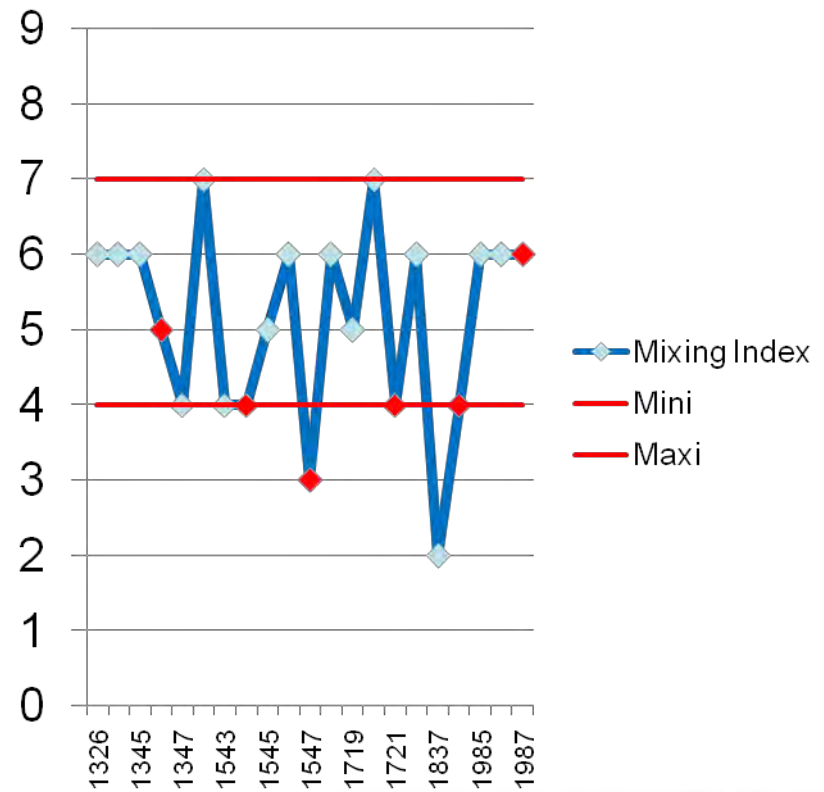
Viscosity index
IAOM Arusha 2008 – Mixolab Profiler

Monitoring the quality of company A with the Profiler

Absorption index

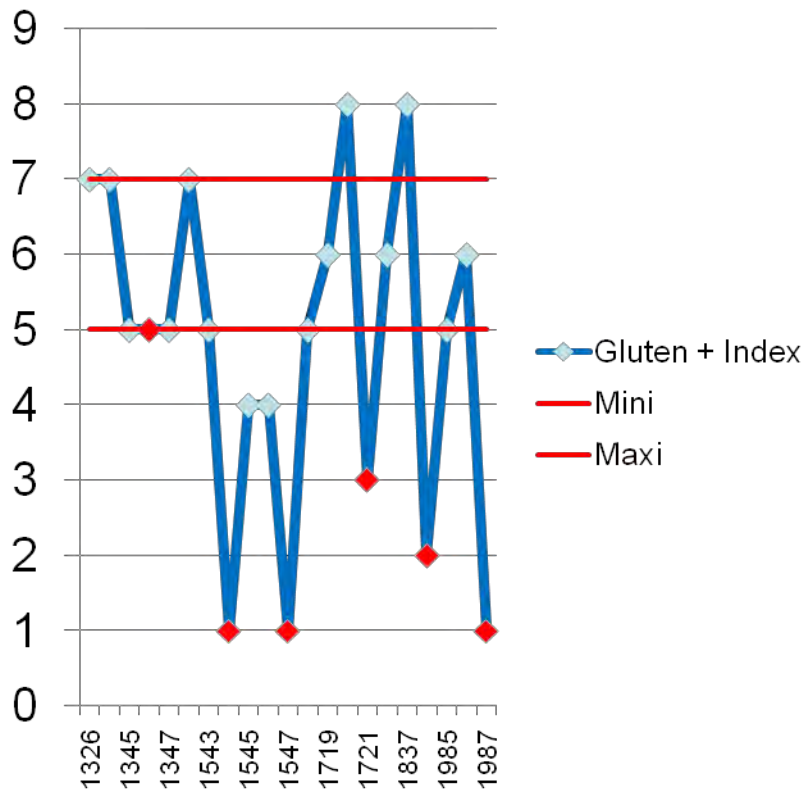


Mixing Index

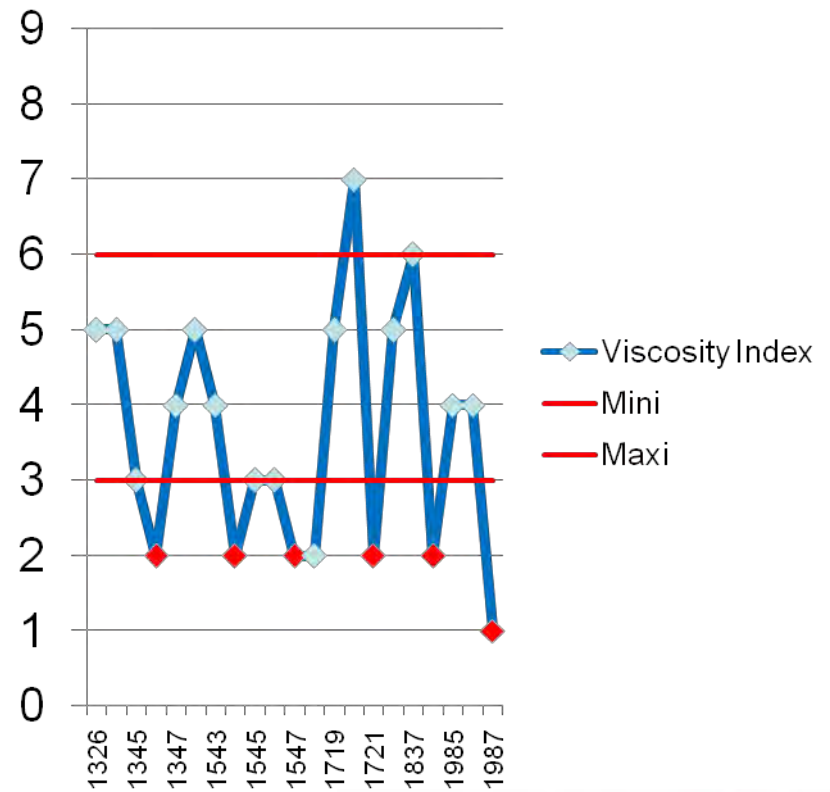


Monitoring the quality of company A with the Profiler

Gluten+ index

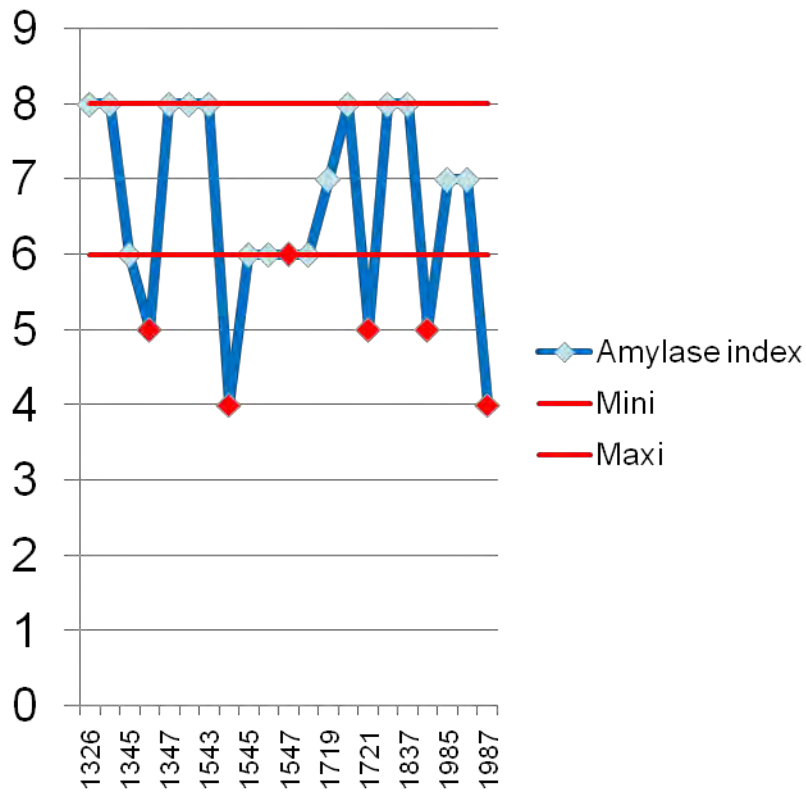


Viscosity Index

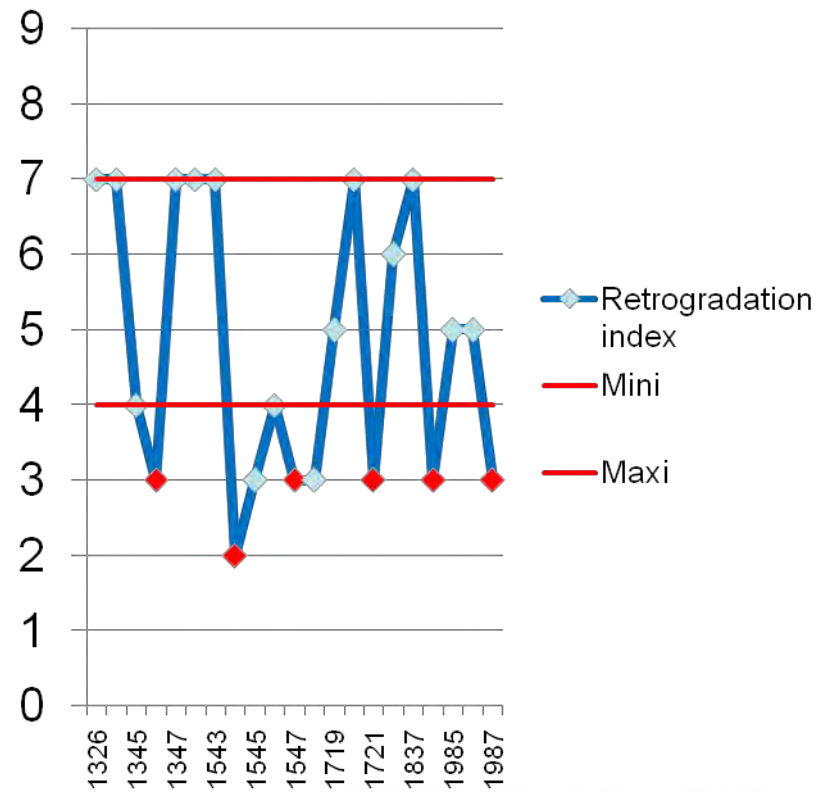


Monitoring the quality of company A with the Profiler

Amylases index



Retrogradation Index





Decision rules

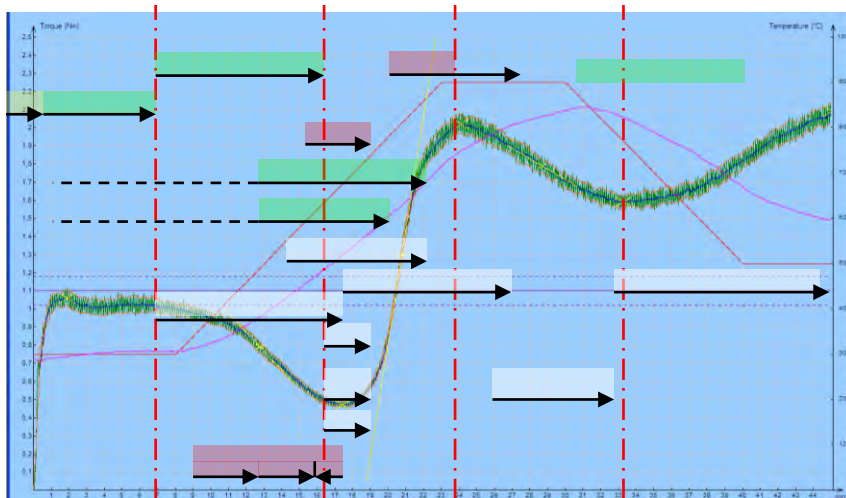
- For Company A; sample must be rejected if
 - 50% or more of the profile is out of range and critical parameters are :
 - Gluten + index $< \text{ or } = 3$
 - Viscosity index $< \text{ or } = 2$
 - Amylase index $< \text{ or } = 5$
 - Retrogradation index $< \text{ or } = 3$
 - Water absorption & Dough mixing index : not critical



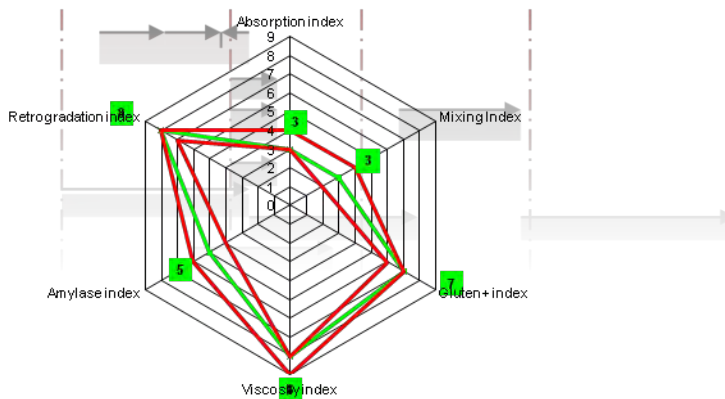
An efficient quality control tool results in production easiness, and savings

- Accepting samples out of limits will lead to:
 - Low bread volume
 - Low resistance to fermentation
 - High stickiness
 - ...
- In this example, Company A, applying these rules rejected 6 out of the 21 samples tested (28,6% of incoming flours) avoiding many production problems and money losses.
- Indicating each flour providers about the real weaknesses of their flours, allows to improve quality and consistency of deliveries.

Conclusions



- CHOPIN Technologies' goal is to provide a common language between laboratories, customers and suppliers
- The Mixolab Profiler as a unique tool allows:
 - A complete analysis of the dough in one single test
 - The setting of mini/maxi limits based on well performing flour
 - To avoid acceptance of bad performing flour affecting product quality and costs.





**Thank you
for your attention**