" WHAT'S NEW WITH CHOPIN TECHNOLOGIES : LET'S BRING THE ULTIMATE TOOLS TO MAKE YOUR LIFE EASIER"

Charles Loubersac d'Hotel,

EXPORT SALES MANAGER, Chopin Technologies SAS

Chopin Technologies, part of Tripette & Renaud group, has been one of the leader for the equipment of the milling industries since 1836

The unique position of Chopin Technologies on the market is to be innovative leader with the largest range of products throughout all the quality control cereal industry.

CHOPIN Technologies being one of the leading companies in the field of laboratory equipment for quality control of grain and its derivatives is proud to share its latest innovations.

Since 1836

CHOPIN TECHNOLOGIES

Chopin Innovations :

Infraneo : The milling-minded infrared

Mixolab Profiler

New objectives in QC & Chopin's answers

Control & optimization of your milling process with the CHOPIN Technologies Infraneo® Junior

=>

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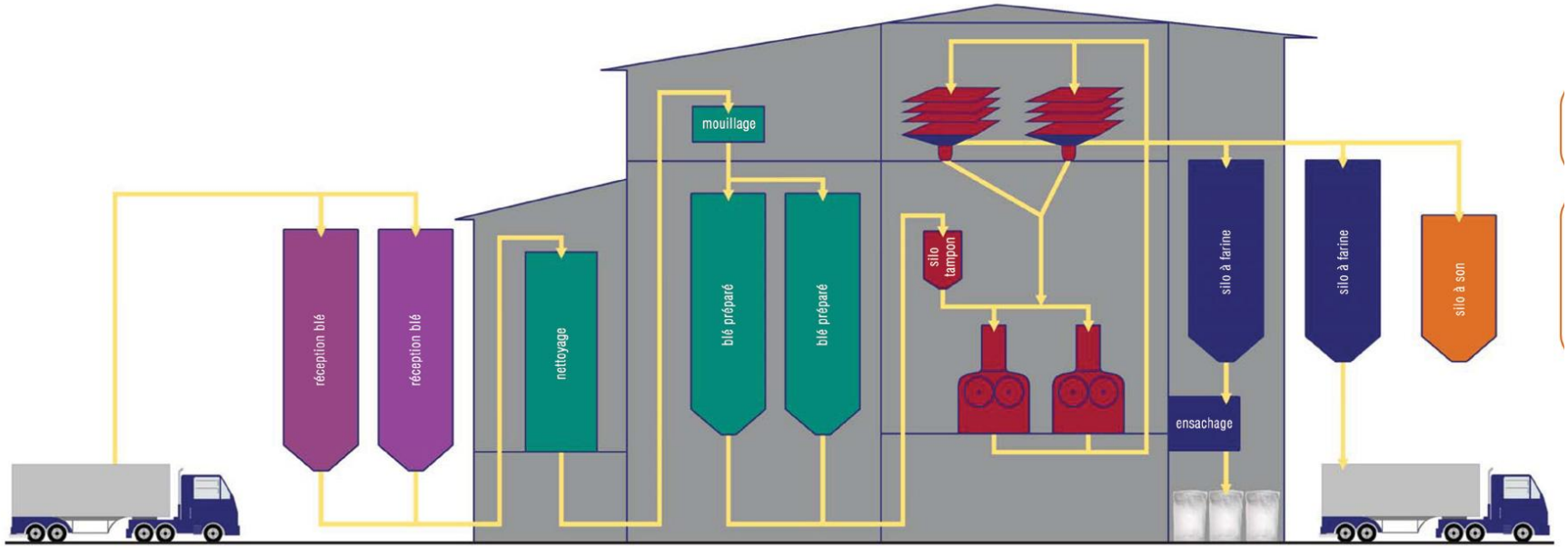
Infraneo :

The milling-minded infrared

- Intake, conditioning, milling, by-product flours ; the Infraneo tune your control at each step of wheat transformation



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Select your requirements

Product	Parameters
Wheat	Moisture, Proteins, wet Gluten, Zeleny, W
Flour	Moisture, Proteins, ash, wet gluten, zeleny, water absorption, starch damage, W
Bran	Moisture, Proteins, ash, starch, Cellulose
Midlings	Moisture, Proteins, ash, starch, Cellulose
Wheat gluten	Moisture, Proteins,
Barley	Moisture, Proteins,
Corn	Moisture, Proteins, starch, fat
…/…	…/…

- ✓ Large choice of available calibration
- ✓ Calibrations developped on the Infraneo Senior

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The Mixolab

ICC Standard N° 173

AACC 54-60.01

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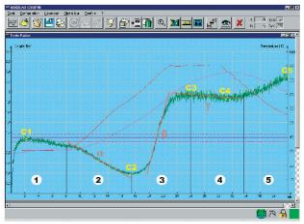
The Mixolab System

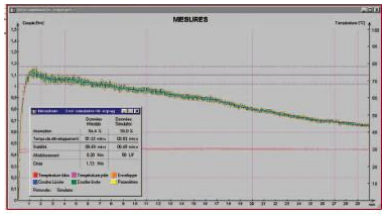
Mixolab System

Mixolab Standard



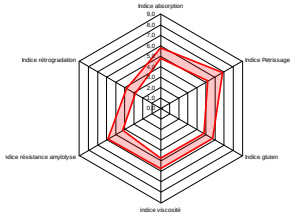
Ideal tool for your own **R&D**,
the **Mixolab Standard** brings the entire & detailed information on your raw material. (protocol with standard **ICC n° 173** AACC 54-60.01) both flour & grinded wheat

Mixolab Simulator



Comparative tool for the Quality control,
the **Mixolab simulator** let you compare your data with your commercial partners, by using the regular existing analytical tools.

Mixolab Profiler



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

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Mixolab Profiler

The consistency tool

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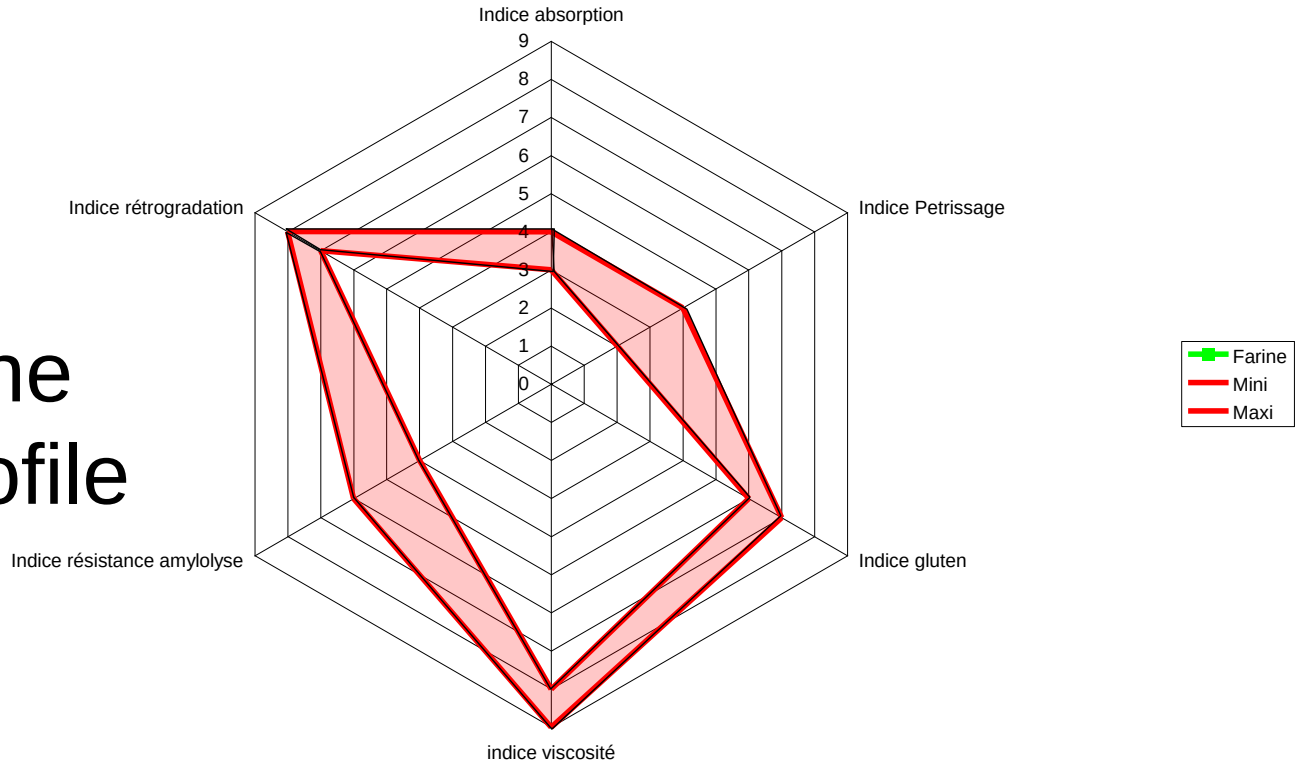
Mixolab Profiler

- It creates a new scoring system & inverse the QC as it exists actually. It scores the raw material in function of end product & the process rather than the raw material alone.

1. You determine the requested profile



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Mixolab Profiler

- Based on the complete rheological analysis of the dough - the Mixolab Profiler displays the Mixolab Standard (ICC 173 AACC 54-60.01) curve in functional and understandable way.

- With the standard test, you obtain the comprehensive analysis of : water absorption, development time, stability and weakening of gluten, gluten resistance to heating, gelatinization of starch, amylase activity during baking, retrogradation of starch.

- With the profiler there are functional parameters of quality scored from 0 to 9 and displayed on a 6 axis graph creating the quality Profile.

How to create a profile

- its creation is easy : it can be done with a dozen of analyses of flours that bring satisfaction.
- The profile is based on the maximum & minimum values of each index.
- It discriminate accurately a flour according to its end use.

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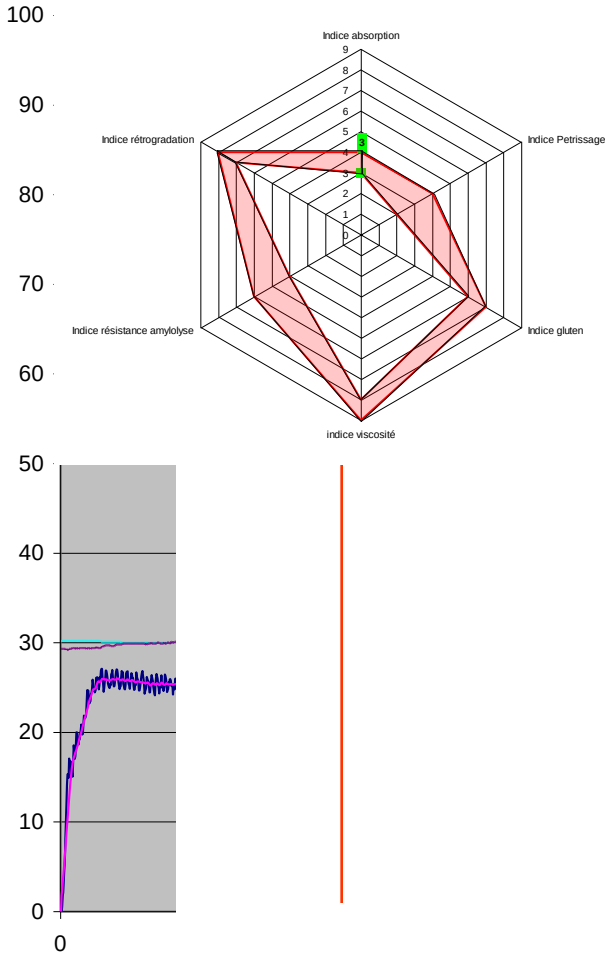
2 : run the test…
the index step by step



1st index :
Water absoption.

According to the flour components (proteines, starch, fibers…).
Influence on the dough yield (benefit).

Higher is the index more your flour absorbs water

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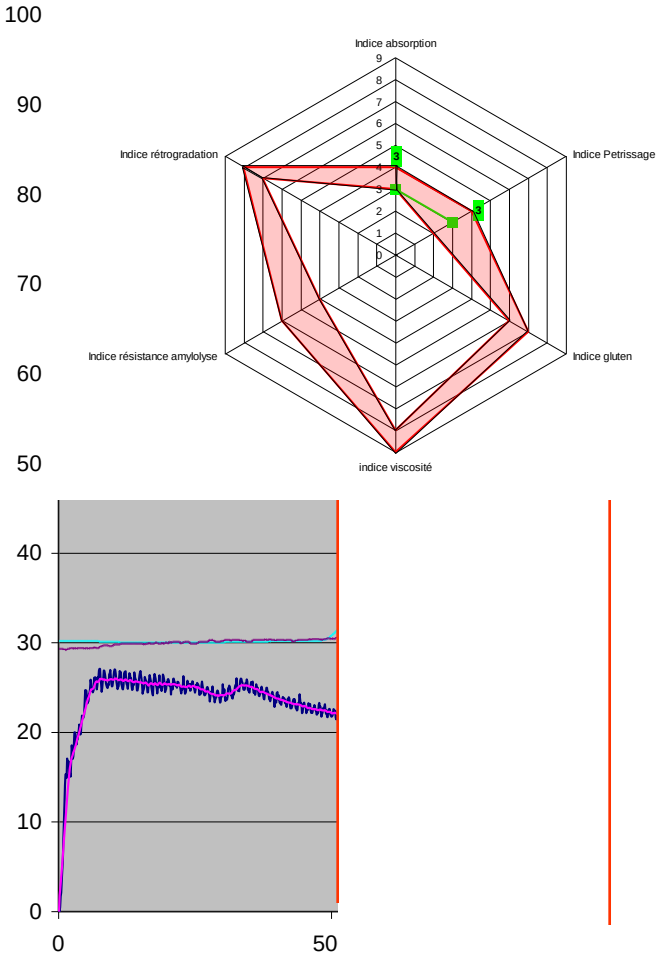
2 : run the test…
the index step by step



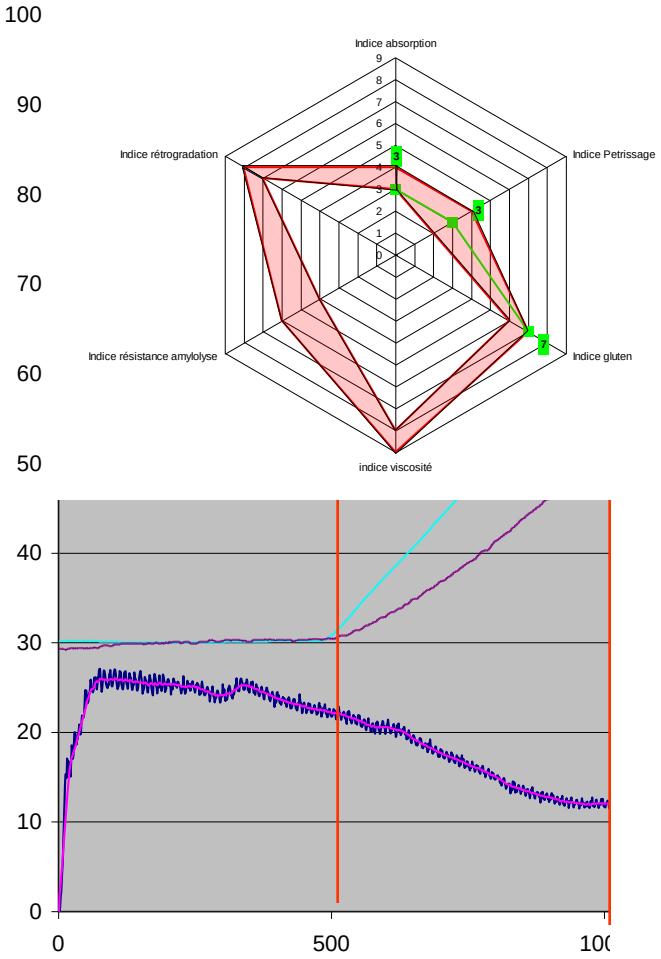
2nd index:
Mixing behaviour.

This index gives an information on the behaviour of the flour when kneading at 30°C. It manages the stability, DDT and weakening…

The higher is the index the more stable will be the flour when kneading.

CHOPIN TECHNOLOGIES

2 : run the test…
the index step by step



3rd index:
Gluten index.

This is for the behaviour of the gluten when heating the dough.

The higher is the index the more resistant to constraint the gluten will be.

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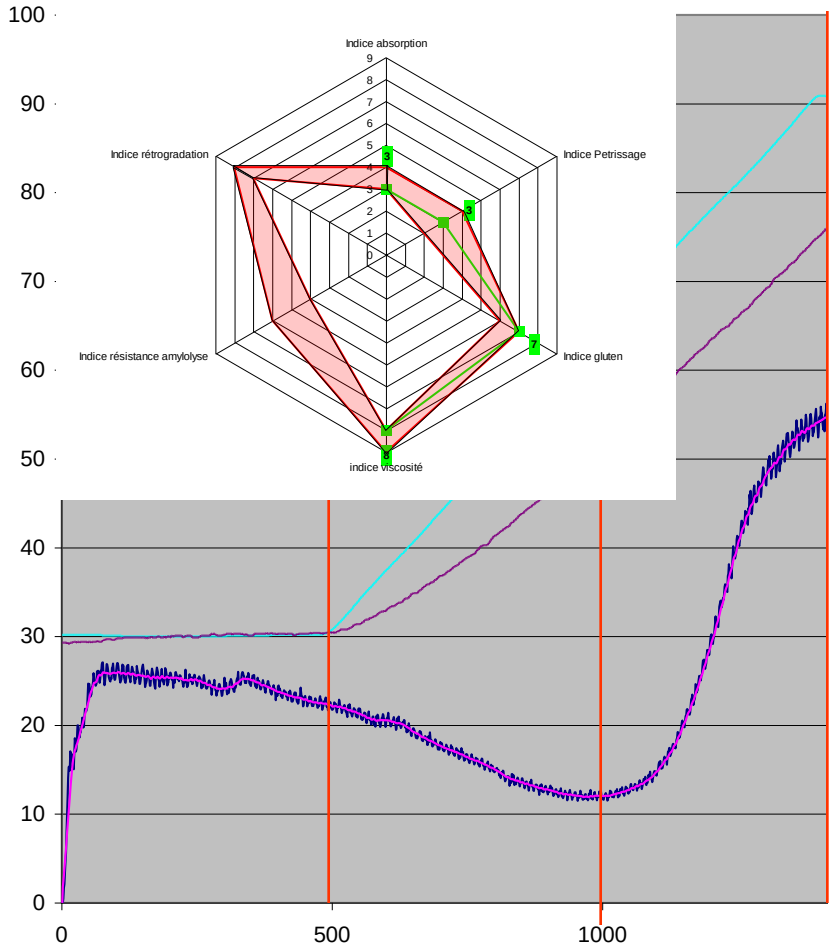
2 : run the test…
the index step by step



4th index:
The viscosity.

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

The higher is the index the more viscous the dough facing heating will be.

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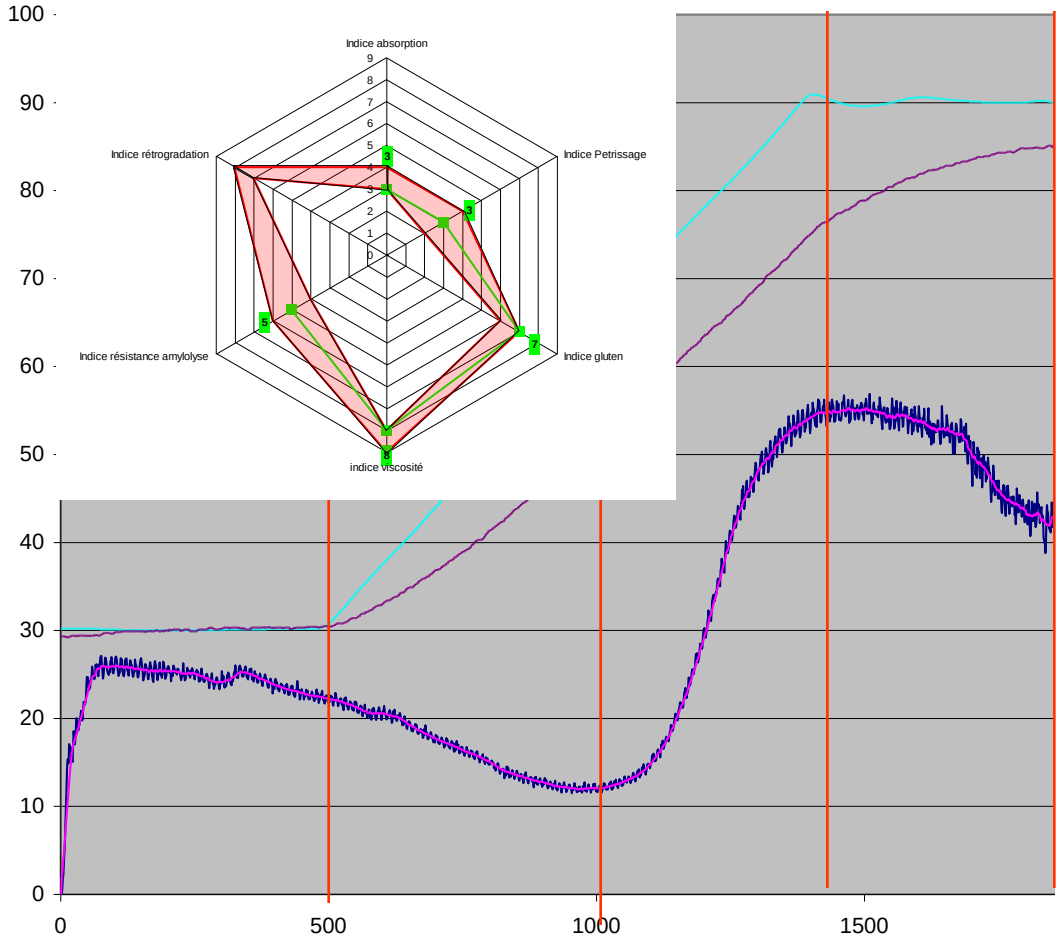
2 : run the test…
the index step by step



5th index:
Amylolysis resistance.

This is according to the starch ability to « resist » to the amylolysis.

The higher is the index the lower is the amylasic acitvity.

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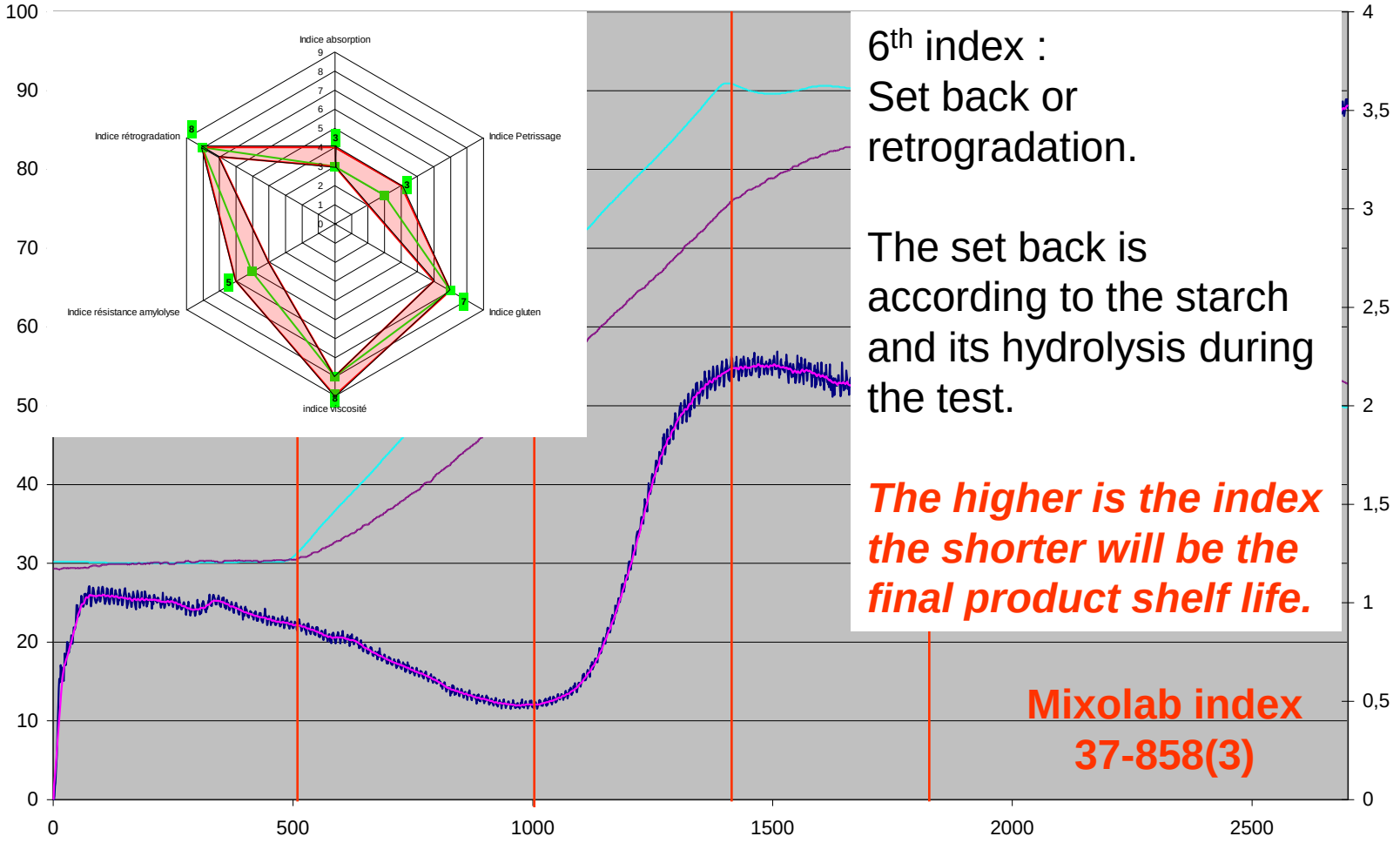
2 : run the test…
the index step by step



6th index :
Set back or retrogradation.

The set back is according to the starch and its hydrolysis during the test.

The higher is the index the shorter will be the final product shelf life.

Mixolab index 37-858(3)

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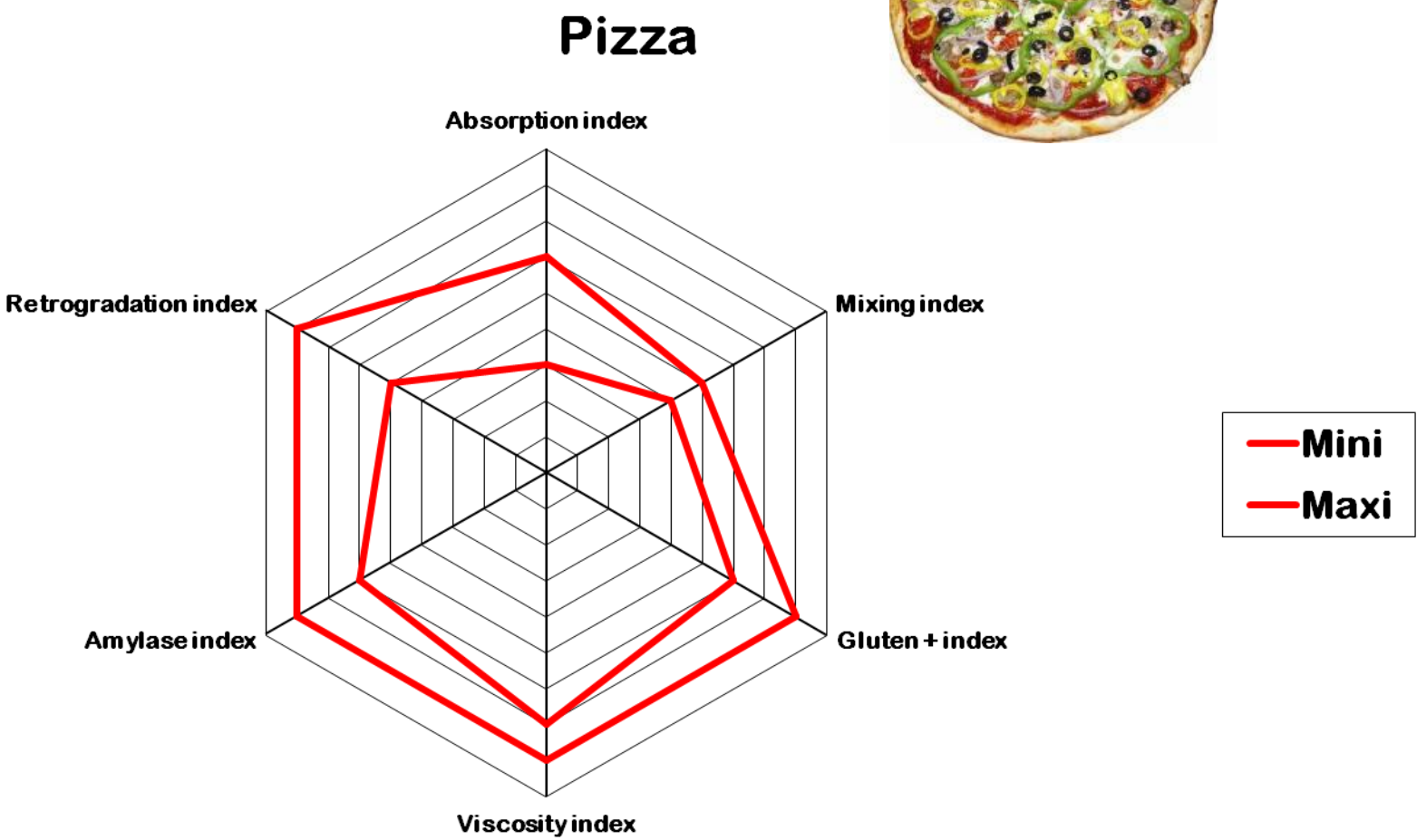
Is the profiler an added value for your lab ?

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.

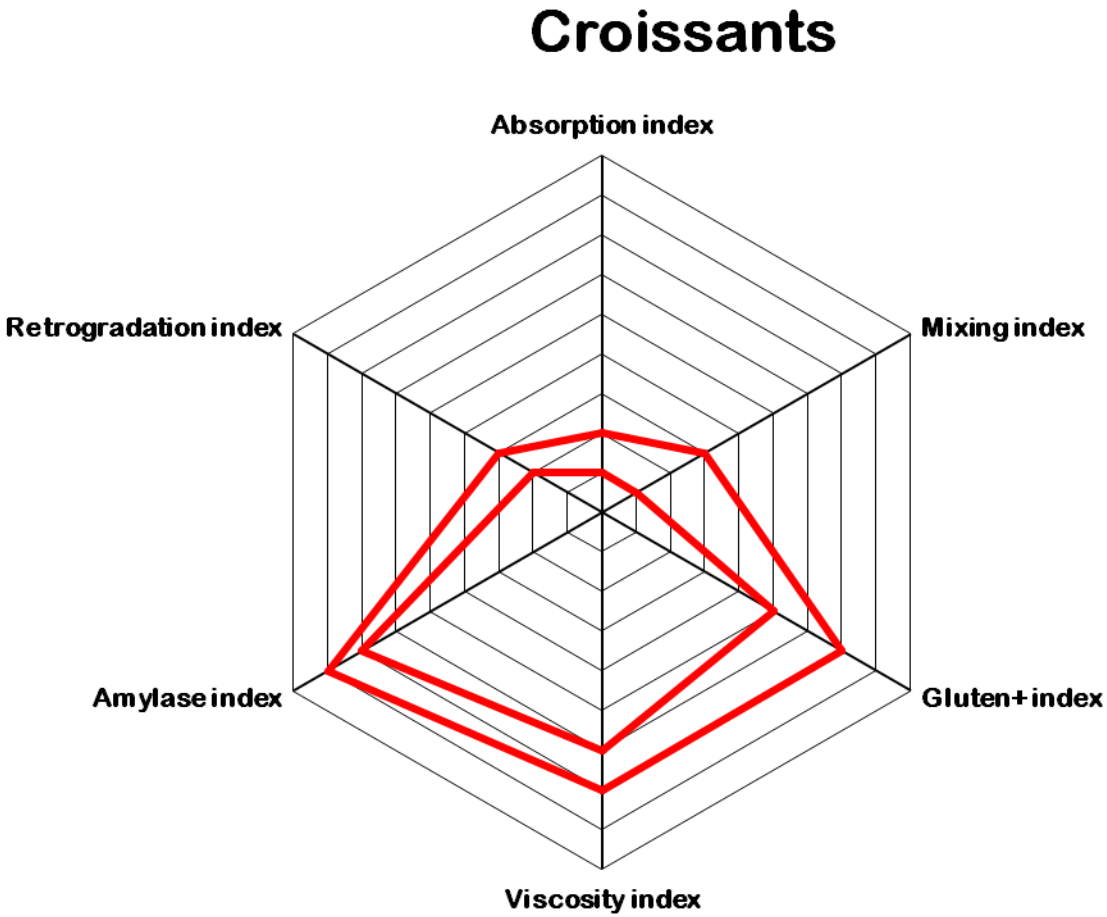
If not matching, the system suggests which points must be improved and even how!

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.

Typical profile



Typical profile



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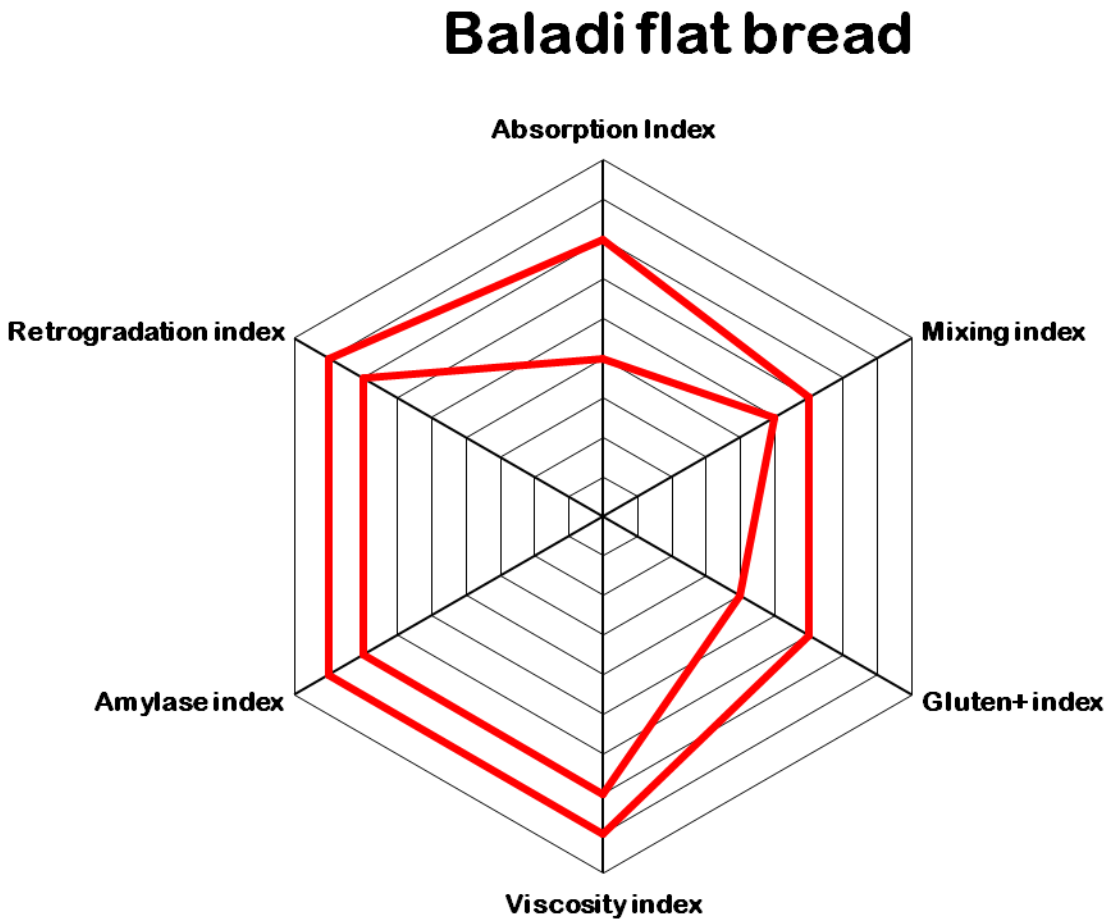
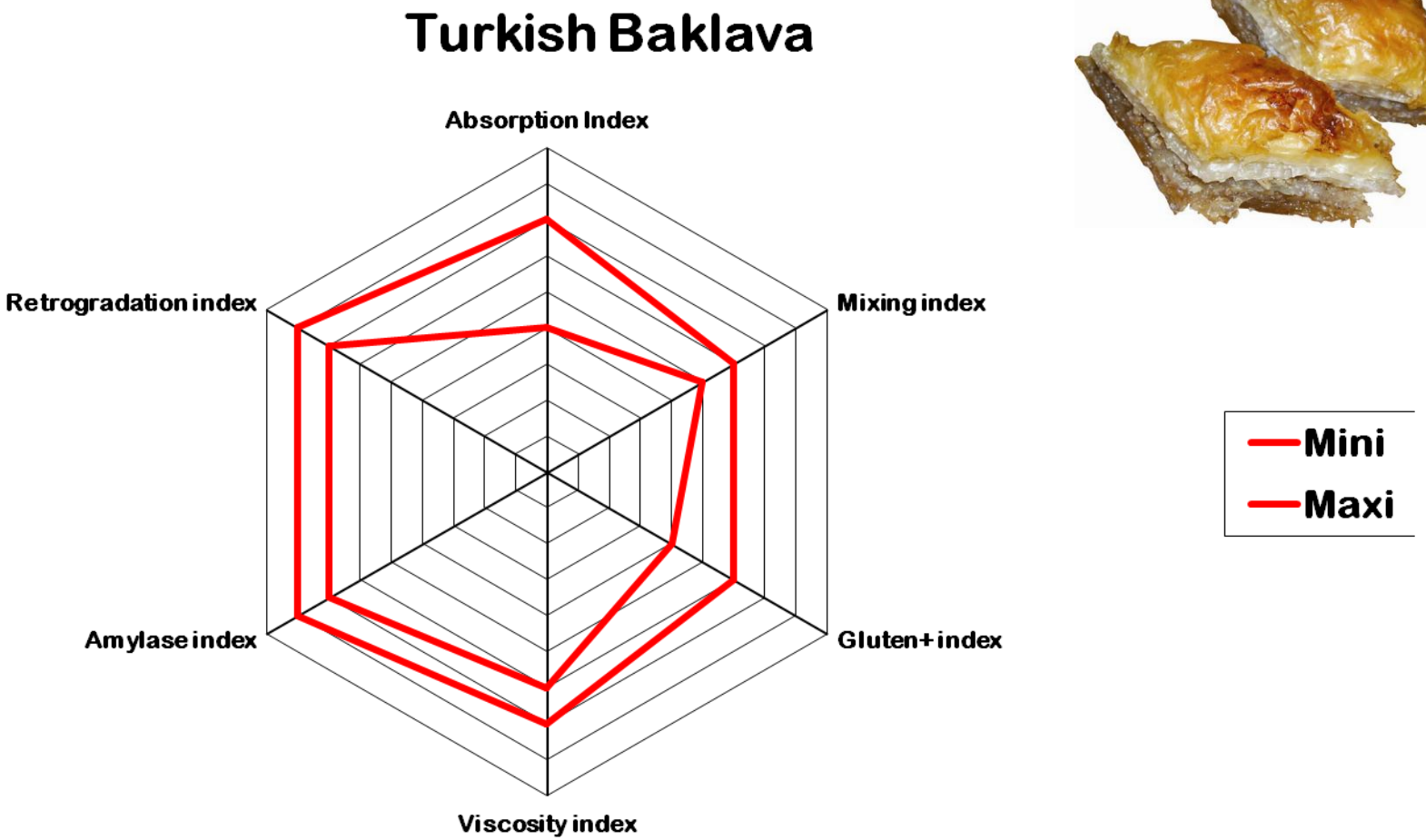
Typical profile



Typical profile



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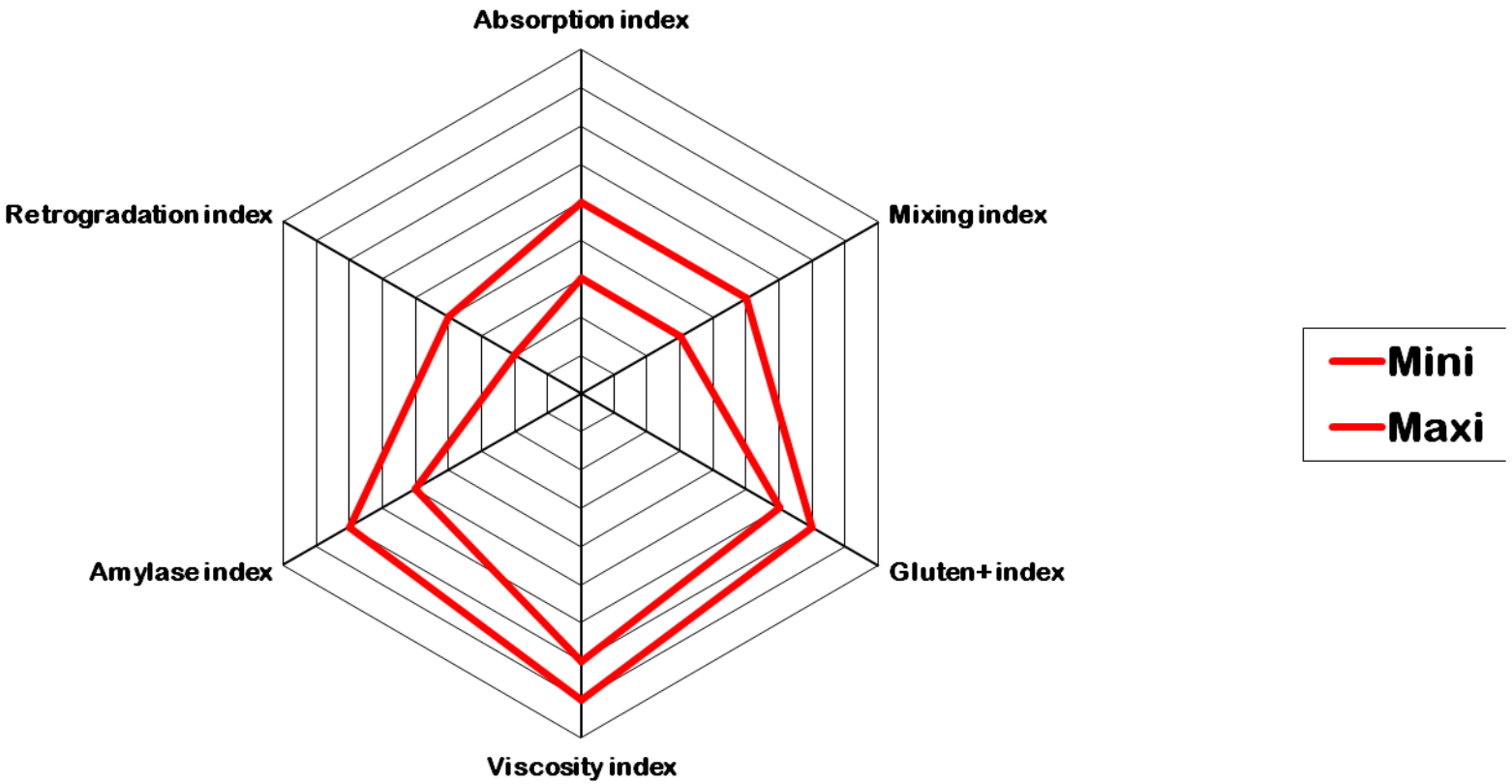
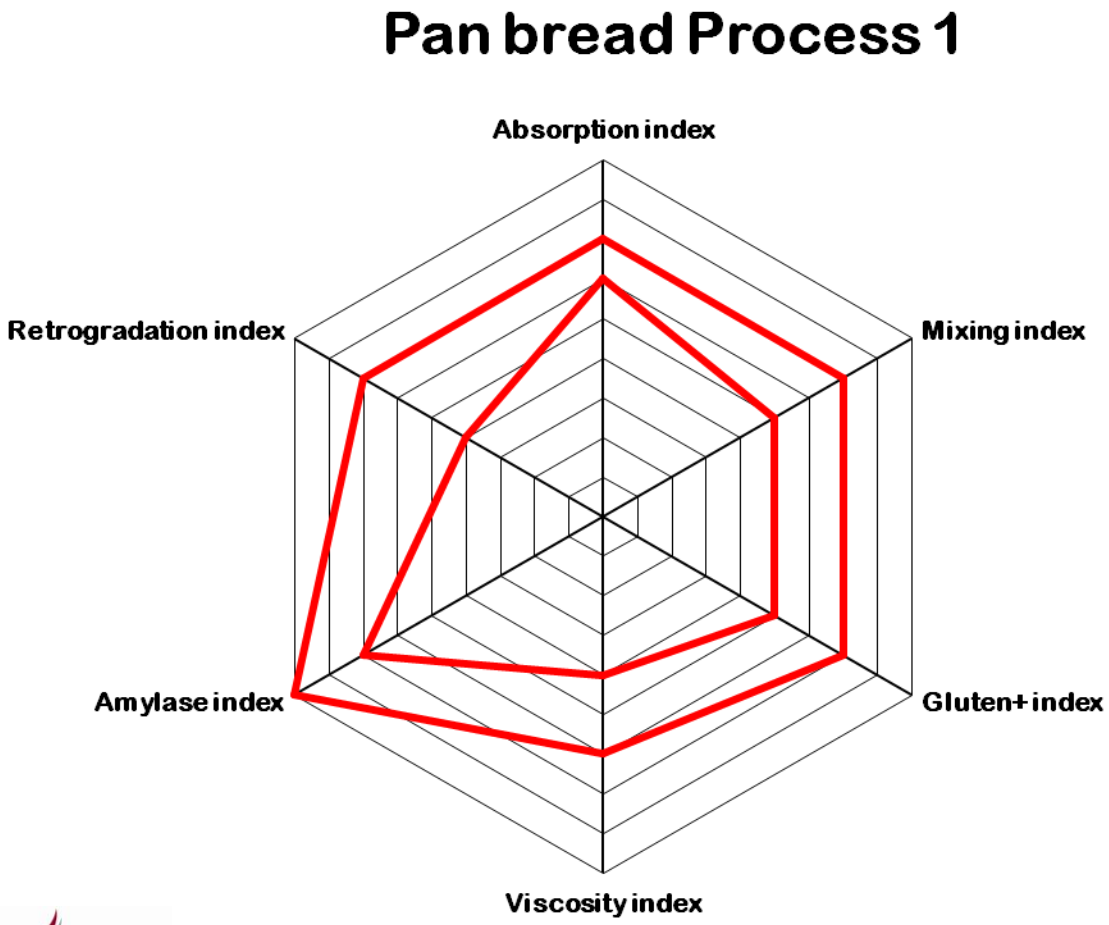
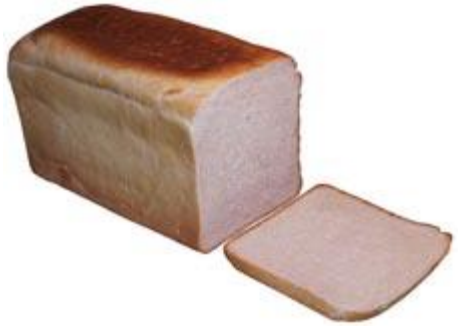
Typical profile



Typical profile, according to the process





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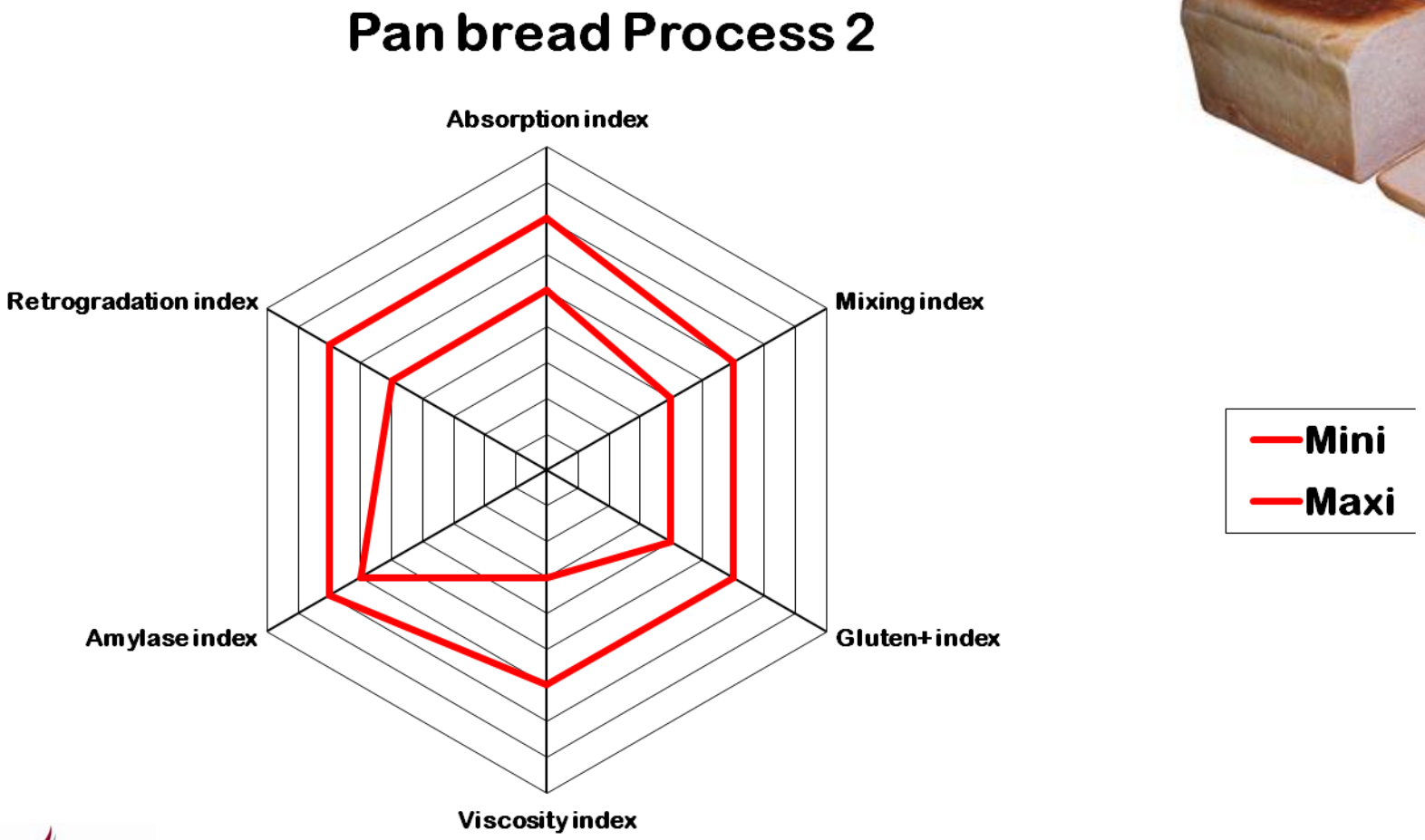
Typical profile, according to the process



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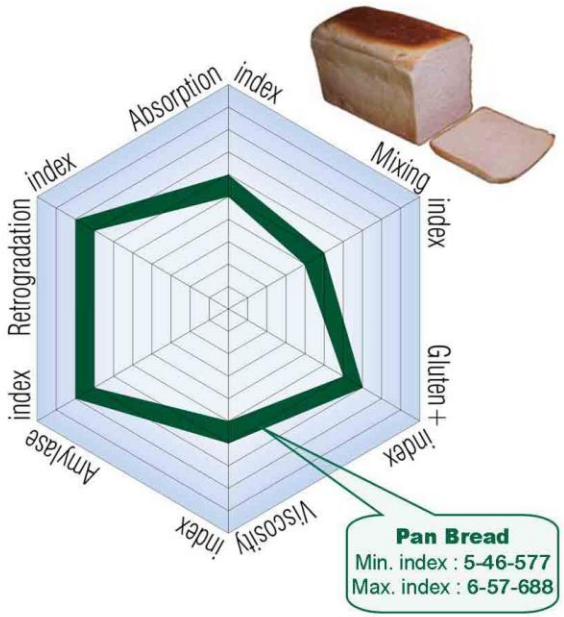
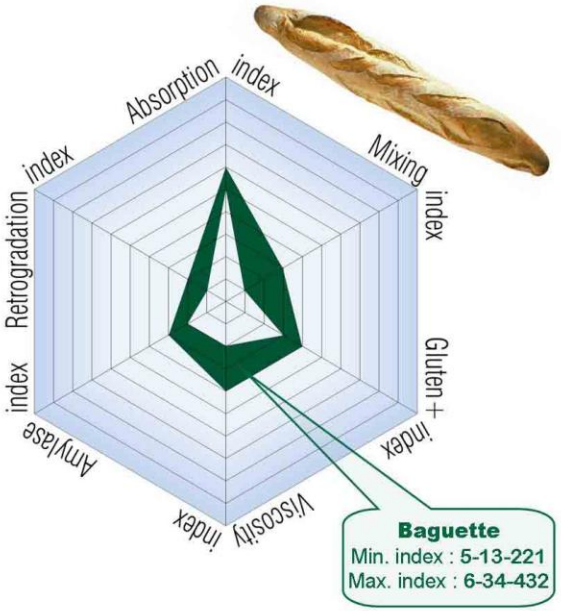
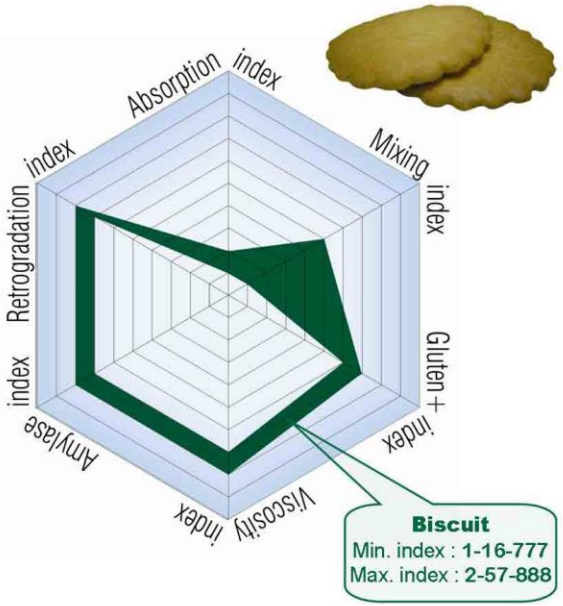
Some examples & profiles

The entire profile completely discriminates the 3 types of flour.







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New objective in QC

Dietary fiber : Whole meal &
Fiber trend, digestilibity,
gluten free

On the alveograph
On the Mixolab
On the Sdmatic
../..

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Why Whole Grain becomes a Hot Fashion?

- It sounds good
- It looks good
- It is indeed good for you!

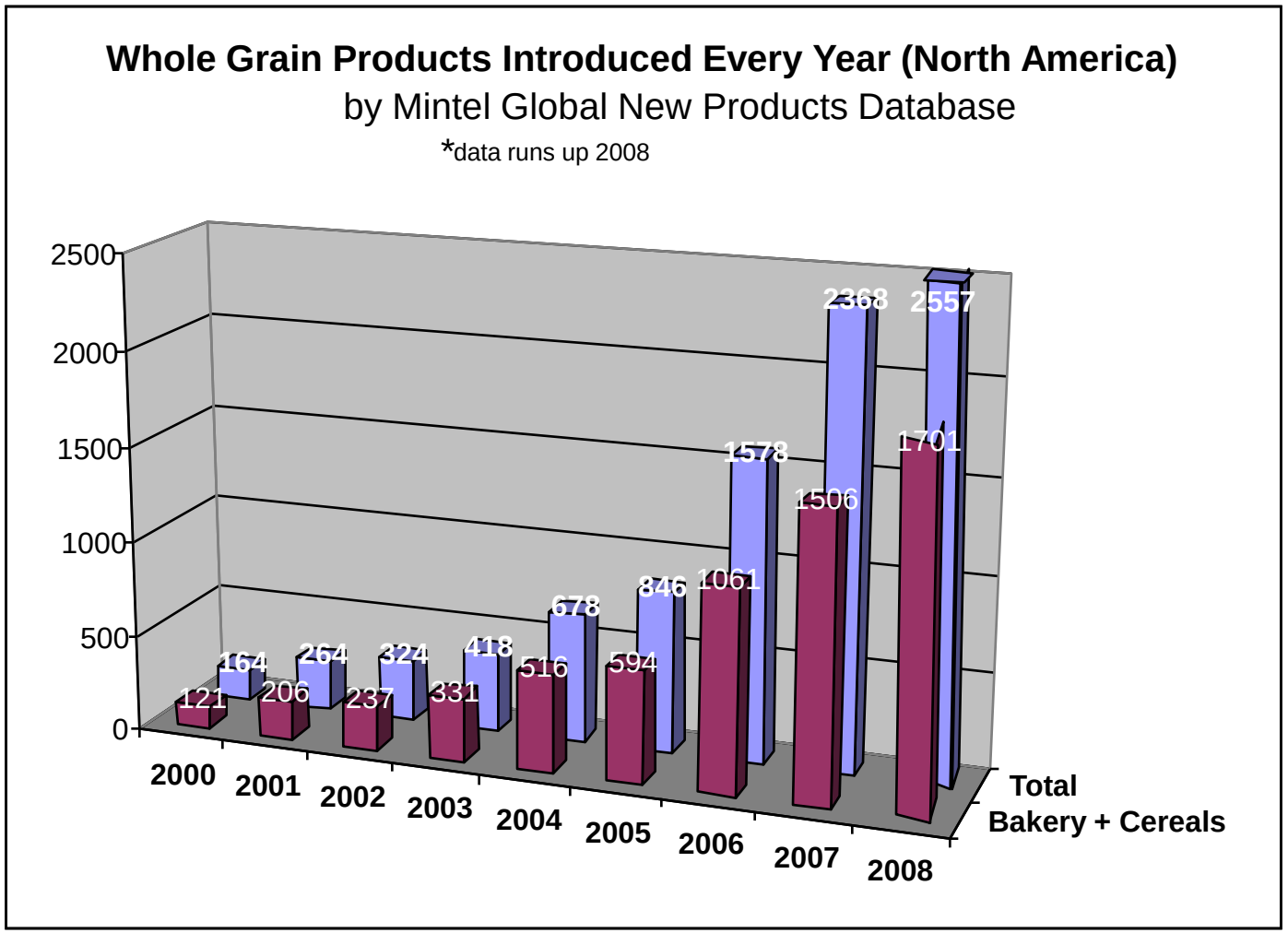
<u>Scientific Evidences have Suggested</u>:

- Improve Heart Health and Control Blood Pressure
- Control Body Weight
- Reduce the Risk of Diabetes
- Reduces Risk of Certain Cancers

In the US : sales of *whole grain bread* rose 58 percent

Industry Listens and Reacts to It :

-



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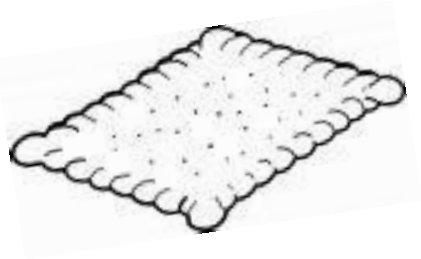
So, go Whole grain !



Whole grain ingredients and products is good for your health : more vitamins, minerals, phytochemicals and complex carbohydrates.

But the challenge is :

- Keep excellent eating quality as well. Whole Grain flour shall not impact good taste, texture and appearance.

- Physical properties of whole grain flour must be maintained to assure quality & consistency. Absorption, particle size distribution, macroscopic nutrient retention (i.e. fiber) influence baking function and finished product attributes such as color, geometry, and baked moisture loss. Freshness/shelf-life shall remain as good.

- Functional attributes of whole grain flour and potential methods to assess whole grain flour quality BUT most of available devices are only considering flour properly

Chopin's answers to new challenges in QC

1- CT center : a dedicated application laboratory for our customers

2- partnerships with the Industry : millers & bakers

3- dedication, listening user's needs and R&D

4- international lobbying & standardization

Safety, innovation, confort & savings

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Thank you for your attention…
Questions ?
See us Booth 40

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