

# RECP Best Practice Catalogue

*Introduction of the gluten index analysis*

*Developed within the framework of MED TEST II*



UNITED NATIONS  
INDUSTRIAL DEVELOPMENT ORGANIZATION



The SwitchMed Programme is  
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# Best Practice - Introduction of the gluten index analysis

SECTOR:	Food & Beverage
SUBSECTOR:	Bakery and farinaceous products
PRODUCTS	Couscous (fine and medium), short pasta (small pellets, Tlitli, elbows of different sizes, vermicelli, macaroni, bird tongue, snail).
CATEGORY	Process control or modification
APPLICABILITY	Process
COMPANY SIZE	147 employees



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## Description of the problem (Base scenario):

The quality and quantity of gluten in the semolina have a great impact on the processing characteristics and the final quality of the pasta and couscous. A low gluten index results in a sticky paste having poor extrusion properties, which reduces productivity and specifically increases water and energy consumption.

The company uses the physicochemical parameters of the semolina sent by the supplier and does not determine the gluten index while carrying out its production. It is estimated that the rate of recycled products is about 1% because of not taking into account the gluten index.

## Description of the Solution

Measure the gluten index to better characterise the semolina and its qualification for production and to create the possibility of adapting and optimising the process (and the final products) according to semolina quality. This analysis can be done using the Glutomatic system which is a standardised international system for determining the qualitative and quantitative characteristics of gluten.



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## Economic Benefits

It is estimated (based on feedback from other sites) that the losses and the rate of recycled products can be reduced significantly:

- With a productivity increase of 1% one year after implementation.
- 1% more product with the same energy input
- Water consumption reduction

The overall annual savings are on the order of € 14,800

## Environmental Benefits

- Reduction in energy consumption specific to the reverse osmosis unit:

Not relevant

## Health and safety impact



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<b>Capital investments &amp; financial indicators</b>	Cost: € 25,000 Return on investment < 2 years
<b>Suppliers</b>	Instruments suppliers (imported)
<b>Other aspects</b>	Improvement of and stabilisation of quality
<b>Implementation</b>	



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