



Grain milling industry has detected one of their main problems in the final product quality assurance, is the control of raw materials and the control of their toxicity: mycotoxins (ochratoxin A, aflatoxins...), pesticides and formation of acrylamide.

Nowadays, agro-food SMEs are forced to use very laborious methodologies, with long preparation phases and high investments. These methods are slow and hardly applicable "in situ" or in processing line. Thus, there is a clear need to develop new analytical tools able to detect contaminants in an easy, reliable and economic way. Current analyses in laboratories are long and relatively expensive, so it disturbs flour production and increases final process costs.

"MAP-MILLING" PROJECT APPROACH

The **global objective** of the project is to increase the food safety in the grain processing/milling industry according to the new regulation and market demands, requiring a high quality products and demonstrated reliability.



The consortium is led by two entrepreneurial associations from very important agrofood regions (Aragon-Spain and Lazio-Italy) with experience on previous projects under FP 5 (**CEZ** and **ROME**). There are also 4 agro-food associations from 4 different countries (Spain - **AIAA**, Italy - **UNIONA**, Germany – **PRO AGRO** and Estonia - **AEFI**) covering regional and national scopes. Finally, Associations group is completed with a European Association (**DEMETER**) that represents milling industries in 12 EU countries.

The 3 SMEs represent different conditions in grain milling sector (Spain - **HARITASA**, Italy - **ROMANA** and Germany - **MUHLE**).

Finally, the Researchers have experience in European projects and show a great complementarity of skills: **AZTI** (food technology, food safety, pesticides), **IGV** (cereal grain industry, mycotoxins, acrylamide), **INTECHNICA** (Quality/Environment/Risk Management Systems) and **ITA** (Industrial applications, software and electronics, technology transfer and implementation).

PROJECT RESULTS

The main results to be obtained from the project for the grain milling industry are the following:

- Identification of needs and requirements (appraisal and demands) of the potential end-users (grain-milling industries) for detection of pollutants in cereal samples
- Design and development of quick, reliable and cheap measurement systems for some target pesticides (2,4-D, DDT and chlorophyriphos-methyl) in cereal products in validation stage.
- Comparison of Mycotoxins measurement systems and preliminary advice for quick, low cost and reliable prediction of some mycotoxins (DON...)
- Study on minimization of Acrylamide formation on cereal flour-based baking products.
- Development of a Risk Management System for grain milling SMEs.
- Design and development of a Free Software Tool integrating the results of the MAP-MILLING project.

FURTHER INFORMATION

Further information can be provided by contacting the MAP-MILLING's project technical coordinator or visiting the MAP-MILLING's project public website in: <http://www.mapmilling.net/>

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