

EXECUTIVE SUMMARY

DESCRIPTION

EU policies to ensure food safety are based in finding effective and integrated solutions and developing better ways of assuring microbiological security in food, in this context, an essential aspect to ensure food safety is the performance of quality based analytical controls.

The European Regulation for the microbiological criteria (2073/2005 and modifications) is aimed for the harmonization in most aspects of safety and health regulations within Europe, establishing safety criteria and reference official methods for testing . This regulation clearly states the need of proficiency in the performance of the analysis and as consequence testing laboratories need to adopt actions for their recognition by official bodies and entities.

The implementation and the maintenance of the ISO/IEC 17025 quality assurance system in a laboratory requires of technical competence to achieve all the necessary milestones in the areas of management; training of technicians; equipment certification; systematic for methods validation and extensive documentation. The drawbacks of developing and maintaining an efficient quality assurance system, such as the time-consuming efforts, the increased expenses and the bureaucracy, impair laboratories from achieving this goal and in most cases the process is elongated from what was originally planned, increasing costs and postponing the benefits achieved by the accreditation or recognition of the laboratory proficiency.

MicroQLab main objective is to develop an innovative E-learning programme on Quality Systems for food microbiological laboratories, providing knowledge acquisition and specialisation in the analytical area of food microbiology.

As it has been expressed by the EU commission, there is an important need to modernize higher education and quality in VET, in order to keep up with the globalization and technological developments all over Europe. MicroQLab attends to the need of professional development for staff in line with industry and organization needs and objectives, that requires more and more, higher level of quality in their results.

The methodology for obtaining the course will be first conducting a Needs Analysis at a European level, to access the level of difficulty encountered by laboratory workers when facing the implementation of a Quality System in their laboratories. This information will be analysed to obtain the specific contents of the course. In a second stage, the design of an E-learning programme will be created in an open platform, interactive and attractive for the user and before the release there will be a third stage in which a pilot study will be done with trainees from different parts of Europe, in order to evaluate the adequacy, acceptance and to implement corrections before obtaining the final version. MicroQLab will use the latest ICT tools, making more modern, attractive and flexible the process of learning, adapted to today's preferences for the youth.

The course will be presented in modules that can be obtained independently so, making even more flexible for the trainees the knowledge acquisition, with interactive exercises, practical situations that will prepare then better to apply the methods learnt in a real situation. The learning process will be aid with virtual laboratories, presenting scenarios with a particular

situation (e.g. evaluation of a calibration equipment). Other audiovisual elements, such as videos and games, will encourage the trainee to complete the course.

The main impact of MicroQLab, for the target groups, will be the access to a more efficient and cost-effective way of implementing a quality system in a laboratory in the analytical area of food microbiology. This will improve skills and qualifications to facilitate personal development and employability for trainees that are seeking for jobs and need to acquire practical competence to access to the labour market .

The course will be also very beneficial for the trainees that are already working and need the acquisition of new knowledge and skills to achieve new responsibilities in the work place, allowing to have competence in new areas that are every time more in demand. These trainees will benefit saving time and efforts when confronted to the tasks involved in the implementation of a quality system, making them more motivated and satisfied at their jobs.

For the stakeholder the impact of MicroQLab will be also important and can be measured by the improvement of the competitiveness of the food sector by building the abilities of employees to better practices in food control, assurance of quality and increasing growth and internationalization.

Apart from the benefits obtained by the target groups, long term result of the project can be envisaged by the transference of the concept and methodology to other sectors and by transferring the course to new or existing VET or University courses for their official recognition to public curriculum.

OBJECTIVES

The main objective is the development of an innovative e-learning programme on Quality Systems for food microbiological laboratories, contributing to the EU policies to ensure food safety and the European Commission aim for the harmonization in most aspects of safety and health regulations.

1. To improve the quality of the performance of microbiological analysis by taking into account all the factors that are involved in the result.
2. To improve the efficiency of the training in the implementation of quality systems by an interactive and attractive e-learning solution that will reduce training efforts.
3. To contribute to modernize higher education and quality in VET, in order to keep up with the globalization and technological developments all over Europe by the inclusion of new ITC tools.
4. To improve skills and qualifications to facilitate personal development and employability for trainees that are seeking for jobs and need to acquire practical competence to access to the labour market in the analytical field and food testing.
5. To improve the competitiveness of the food sector by building the abilities of employees to better practices in food control, assurance of quality and increasing growth and internationalization.

RESULTS

The main result is **to obtain an E-learning programme that will facilitate the implementation of Quality Systems for microbiological food testing laboratories.**

The development of this project will allow to work in an European frame to obtain a product adapted to the needs of the trainees, which will incorporate ITC tools to make more attractive and flexible the acquisitions for knowledge,

Updating the methodologies and contents of the regular education to new emerging training tools to achieve a more interactive, innovative and attractive product.

The project will allow to set the basis for the development of more courses within the fields of natural science, engineering and technology, by giving an examples of a training programme with most innovative aspects allowing participants to interact through virtual platforms maintaining the learning process interesting and engaging.

PARTNERS



ainia
centro tecnológico

AINIA is a technology centre with the legal status of a private non-profit association, created in 1987 and formed by more than 900 companies mainly from the food sector, but also from environment and energy, packaging, chemical products, cosmetics, pharmaceuticals and biomedicine sectors.



Founded 1965, **KIN Food Institute** in the field of VET, research and development as well as quality assurance for the food industry. The benefits of membership are the highly customer-oriented cooperation of different working fields as well as establishing network with leading European food institutes which has been in operation since 1993.



Istituto Zooprofilattico Sperimentale dell'Abruzzo e del Molise "G. Caporale" (hereafter named IZSAM) is a public health body belonging to the Italian National Health System, aiming at physical, mental and social welfare of human beings, through the development and application of veterinary sciences.



ISQ is a private, non-profit and independent technological institution founded in 1965 and actually runs operations in more than 30 countries across the world (EU, Eastern Europe, Africa, Americas and Asia), offering its experience in technical inspections, technical assistance for engineering projects, consultancy services and training activities, supported by transversal research and development activities and by 23 accredited laboratories (e.g.: chemical, bio and agro testing, non-destructive testing, Aerospaciale, etc)