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BIO LISME ME

Speedy system for sampling and detecting
Listeria monocytogenes in agri-food and
related European industries

A project funded by
the European Commission under the FP7
(activity: research for the benefit of SMEs)



BIOLISME

Food-borne infections, caused by the consumption of foodstuff contaminated with bacteria, viruses or toxins, [keep at the top of the list of diseases affecting people every year](#). This is a public health problem, critical Europe-wide and world-wide, and not only for consumers, but also for the whole food chain.

Listeria monocytogenes is one of the pathogen microorganisms that cause great concern nowadays. This bacterium is the causing agent of listeriosis, a potentially lethal disease in high risk populations (newborns, pregnant women and immuno-compromised people). Avoiding the proliferation of this microorganism involves keeping a strict environmental cleanliness and disinfection, specially when considering its ability to grow in biofilms.

Sampling of the product and of working environment allows evaluating the compliance with HACCP programmes and Good Manufacture and Hygiene Practices. Nevertheless, **current techniques for the sampling and analysis of *L. monocytogenes* present some limitations**, such as: low recovery rates of the microorganism with the sampling methods; long duration and low sensitivity of the detection techniques; and need of special equipment and skilled staff. As a consequence, **companies must wait several days since samples are taken until they receive the analytical results, having a risk of getting false negatives**.

The objective of BIOLISME is to develop a system to monitor the levels of *L. monocytogenes* on surfaces in contact with food products. With this new system, **companies will be able to carry out the determinations by themselves, analysing more samples *in situ* and in a quick, simple and reliable manner**.

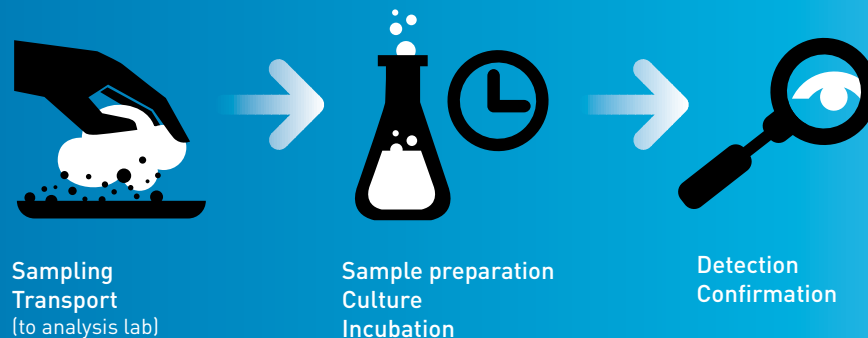
This system will bring a number of benefits, such as:

- **Higher recovery rate** of microorganisms.
 - **Improved detection levels** of the microorganism.
 - **Integration of the steps of the analysis** (sampling, sample processing and detection)
 - **Easiness-to-use**: semi-automated system, minimum handling.
 - **Cutback in the duration and cost** per analysis.
- And also:
- **Increase in food safety levels** for consumers.
 - **Competitive advantage** for end user companies.
 - **New business opportunities** for companies in related sectors.

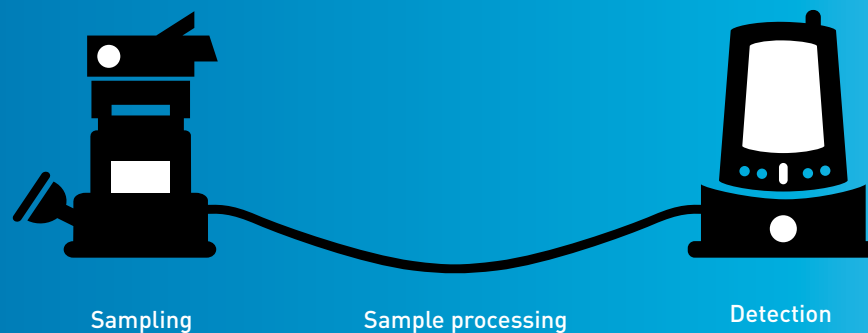
BIOLISME (FP7-SME-2008-232037)

is a 2-year project with a budget of 1,319,337 €.

TRADITIONAL METHOD



BIOLISME METHOD



Higher recovery rate of microorganisms in sampling process

Integration of the steps of the analysis

Improvement in detection levels of the microorganism