



Evaluation of the behavior of the spore-forming strains for the production of the new functional food



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State-of-the-Art

Probiotic bacteria

The choice of using probiotic bacteria capable of producing endospores allows to overcome the numerous problems inherent in maintaining cell viability during the conditions of the production process and during the shelf life of a food. The research is aimed at developing of probiotic foods such as pasta and baked goods - usually excluded from the offer of functional products. During the activities it is planned to evaluate the behavior of probiotic strains of *B. Clausii* and *B. Coagulans* in simulated GIT conditions in order to uniquely define the factors that influence their germination.



Anti- technological bacteria

The focus will also be on anti-technological spore-forming bacteria such as *Clostridia*, responsible of different defects in cheese. *Clostridia* represents a major concern for cheese producers since conditions supporting Propionic acid bacteria development during ripening may favour *clostridia* as well. As widely known, *clostridia* germination and outgrowth during the ripening may lead to an undesirable butyric acid fermentation responsible for late blowing defect in cheeses.



Objective and Milestone

Selection of the probiotic bacilli strains and assessment of functional properties

Development of functional products

Validation of the protocols on a semi-industrial scale



Definition of the most suitable procedure for the determination of spore-formers *clostridia* in dairy samples

Evaluate the inhibitory activity of several antimicrobial compounds against *Cl. Sporogenes*

Reference:

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