

Partnering Opportunity

Technology Offer

Biosensors for food safety and quality control

Summary

A Basque biotech SME is developing innovative miniturized biosensors by way of screen-printing technology and compact transduction systems. They are looking for technical and or commercial cooperation with technical assistance with food or biotechnological companies interested in validating biosensors in their industrial processes or in collaborating in affinity systems development

Reference TOES20190619001

Details

Description

This is a Basque biotech SME with broad experience in developing biosensors for application in the food industry. Concretely, it has already developed and commercialized biosensors in the wine sector for the determination of quality parameters of grapes and wines, for histamine quantification in seafood and for lactose quantification in delactosed products. These experiences have provided this company with the opportunity of achieving growth, diversification and world-wide internationalization. Control of food quality and safety is essential to guarantee consumers' protection and comply with the current European legislation. In the agrofood industry there is a growing need to develop quick and easy methods for monitoring procedures that assure products quality and safety. Biosensors are important biotechnological based tools in the food industry that allow meeting the previous mentioned need, representing an effective, fast and economical method.

The SME proposes the development of disposable miniaturized enzymatic biosensors or affinity biosensors to be applied for routine screening procedures. Miniaturization of biosensors by using screen-printing technology and compact transduction systems, allows reproducible large-scale fabrication in order to make biosensors more competitive with great advantages in the simplification of monitoring procedures.

The development of this technology is at its initial stage. The Basque SME is working in different aspects of the development:

- High reproducible fabrication of disposable electrodes
- User friendly miniaturized device
- Affinity systems
- Large scale fabrication of enzymes

The SME is looking for technical cooperation with agrofood or biotechnological companies. It offers its expertise and looks for companies interested in the development of one specific

miniaturized biosensor to be deployed into their industrial processes. The role of the partner will be to validate the biosensor in its industrial processes, obtaining a biosensor which can fulfil its specific needs.

The SME is also willing to collaborate on affinity systems developments.

Advantages and Innovations

For the agrofood industry the monitorization of key parameters for quality and safety control is of great importance. Currently detection methods implanted in the food industries are expensive and time consuming. The companies are demanding low cost, fast and accurate technologies for the quantification of key parameters at real time. The biosensoric technology of the Basque SME complies with all these requirements.

Miniaturization of biosensors by using screen-printing technology and compact transduction systems, allows reproducible large-scale fabrication in order to make biosensors more competitive. Miniaturized ready to use biosensors and user-friendly measure devices will provide an innovative solution with great impact in the food industry by offering quick and easy solutions for monitoring procedures.

The technology is very competitive offering to the agrofood industry an alternative methodology for screening procedures with the following advantages, real time screening procedures, ready to use, accuracy, simplicity, low cost.

Stage of Development

Under development/lab tested

Partner Sought

Type and Role of Partner Sought

The partner sought for applications and validation of biosensors is an industrial company from the food industry. The partner is expected to collaborate providing its specific needs to the SME and with the validation of the biosensors including them in its industrial processes.

For affinity systems development, the partner sought is an industrial company from the biotechnological sector. The partner is expected to collaborate from a technical point of view with the SME to develop new biosensors or affinity systems.

Type and Size of Partner Sought

University, R&D Institution, 251-500

Type of Partnership Considered

Commercial agreement with technical assistance

Technical cooperation agreement