

Request for Industrial Partners

Project title: Biosurfactant synthesis from industrial side streams

Acronym: IndiSurf

Project ID	
Type	ICON
Period	3 years
Starting date	2023
Total project budget	TBD
Subsidy percentage	according to SBO and O&O regulations
Current industrial partners	confidential
Catalisti contact	Linsey Garcia-Gonzalez (lgarciagonzalez@catalisti.be)

Project description

Introduction

Surfactants are performance molecules that intervene in nearly every human activity and have a very wide application spectrum. The global production of surfactants is currently estimated at around 20 million tons/year. Whereas conventional fossil based chemically produced surfactants are currently dominating the market, there is a clear trend towards bio based surfactants (biosurfactants), mainly driven by the consumer preference for sustainable bioproducts in cosmetics and household applications. The consumer wants more eco- and skin-friendly biosurfactants with a natural (bio) appeal and is willing to pay for it. This megatrend is causing a significant shift in the surfactant industry. Whereas microbial biosurfactants have long been seen in the surfactant industry as merely a scientific curiosity, they are currently gaining market share and are quickly becoming an industrial reality, with several industrial surfactant players building a large-scale production plant.

Moreover, there is a clear trend towards the use of waste- and/or side streams as feedstocks for the industrial production of biobased products such as biosurfactants. Industrial side streams are a preferred feedstock because they are available on-site in large quantities with stable composition and traceability. The use of these “second generation” feedstocks results in so-called “landless” bioproducts, i.e. no additional agricultural land is being used for the production of these feedstocks. This is increasingly important because the use of “first-generation” renewable feedstocks, such as sugar and vegetable oils, is associated with high environmental impacts associated with the agricultural production.

The side streams from industrial processing are mostly poorly valorized for biogas, bioethanol and animal feed applications. Whereas the desire to use these as feedstock for the production of high added value bioproducts is obvious, they can however not simply be used as an alternative to the conventional first generation (clean) feedstocks. The presence of impurities in these feedstocks typically inhibits the biotechnological conversion and hampers the subsequent down-stream processing for the purification of the bioproduct. In order to alleviate these problems, the development of suitable pretreatment processes for the purification and upgrading of these side streams is required. Moreover, specific production strains have to be developed that are able to use these feedstocks and to withstand the presence of residual inhibitors in the (pretreated) feedstock.

Goals

This project will pave the path towards industrial biosurfactant production in Flanders. More specifically, IndiSurf aims to produce microbial biosurfactants from industrial side streams from starch and oilseed processing plants. The biosurfactants will be used in different applications, such as home-and personal care products and animal feed.

RfP IndiSurf

Request

To complete the consortium, Catalisti is searching for additional industrial partners interested in valorizing biosurfactants in specific applications (other than home- and personal care products and animal feed).

How to reply to this request

Please send an **email** to Linsey Garcia-Gonzalez (lgarciagonzalez@catalisti.be) with adeneuer@catalisti.be in CC, and **briefly describe your interest and potential contribution** to the project. Based on all offers, the current industrial partners will determine together with Catalisti which partners can join the consortium. After submission of your offer, you can be contacted by phone to further elaborate your offer.

Important notice: Partners that wish to participate in Catalisti-supported projects are required to be member of Catalisti. For more information on membership and membership fees, please visit our [website](#) or contact Linsey Garcia-Gonzalez (lgarciagonzalez@catalisti.be).

Contact

Please contact Linsey Garcia-Gonzalez (lgarciagonzalez@catalisti.be, +32 479 450 426) if you have any questions concerning this RfP or the Catalisti procedures in general.

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