

Corporate Innovation Challenge Template

Challenge Name: Low-cost measuring methodology to identify the concentration of essential oils in aromatic roots in the field

Code Name: BIOECONOMYVENTURES-2022-OC2-NATIX_2

Challenge Domain:

- Bio-based Fragrances, Cosmetics and Personal & Home Care

Description of the Corporate innovation Challenge

Natix is a company specialised in the production of natural extracts such as essential oil and enzymes using different plant- and animal-sources. Sotecna, part of Natix group, is specialized in essential oil extraction from aromatic roots and seeds from plant locally grown. Essential oils are used as natural food flavouring, perfume, and cosmetics applications.

One of the main parameters of variability in essential oil production is the yield of essential par quantity of plants. This yield depends on many parameters, including variety, soil, climate, cultural practices, harvest period and method.

The quantity of essential oil in the plants is related – at the different stages of growing and metabolism - to the presence and concentration of precursor molecules, that are indispensable for metabolization of essential oil compounds, further stored in plans cells. Alternatively, some plants used essential oil as defence mechanism, stored in the form of reactive compounds released in case of plant stress.

Identifying and measuring these indicators molecules on field during culture could highly help to control, predict, optimize, and improve essential oil yield of extraction.

An in-field measurement method able to predict essential oil content would be a great step in optimizing cultivation methods and harvest period for a better extraction yield. Many further paths of improvement would be set up based on such a low-cost and non-destructive in-field measurement method.

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Expected results
<ul style="list-style-type: none"> ● Increased yield of essential oil extraction ● Improved incomes for farmers and extraction company ● Consolidation of an integrated supply chain ● Reduction of environmental impact by decrease of energy needed for extraction and cultivation surface requested ● Innovation by developing new products currently non-profitable.
Types of Collaboration
<ol style="list-style-type: none"> 1. Pilot running and product testing 2. R&D opportunity 3. Knowledge sharing and Tech Transfer 4. Sales and purchase of products and services
Participation confirmation
<p>I confirm Natix S.A. availability and participation in the BioeconomyVentures programme. This confirmation allows BioeconomyVentures the right to publicly disclose the company's name, challenge information, logo, and website for the purpose of dissemination and attracting new innovators to the programme.</p>

Company Information
Company Name: Natix S.A.
Challenge owner name and last name: Gilles Vanderstocken
Challenge owner email: gvs@enzybel.com
<p>Company information:</p> <p>Natix S.A is an international bio-tech company with the ambition to become the leading plant-based enzymes provider for environmentally friendly food-related products. Natix brings together a group of companies with a common vision: To improve human well living by creating effective & innovative solutions, valorising what nature offers and contributing to a more sustainable world. Natix is the legal structure for all natural extracts and enzyme-related activities, including products from Enzybel and Sotecna S.A.</p>

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Sotecna is specialized in essential oil distillation since its inception in 1950'. Developed with a strong local relationship with farmers in the region of Lessines, Sotecna produces essential oil from local plants, including horseradish, angelica root, angelica seeds, lovage, celery, fenel by traditional distillation methods.

sotecna

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