

Internship offer

Industrialization of fruit puree fermentation

Location : Avignon
Start : From February 2023
Duration : 6 month
Level : Master 2

Key word : Food science, microbiology, fermentation, industrialization, monitoring, arôme.

Context

One of the main challenges in food production is managing the variability of raw materials to deliver a final product with required qualities.

The production of fruit puree is a typical example: the quality of the main substrate, the fruit, depends on the annual weather, agricultural practices, and the cultivation area.

The fermentation process adds a second challenge to the production of purees. Indeed, the fermentations will behave differently depending on the composition of the puree (quantities of sugar and nitrogen, turbidity, among others).

Objectives

The objective of this internship is to propose a process prior to fermentation to secure and industrialize all the stages for the production of fruit puree.

The first step will consist of setting up a pre-fermentation technology. Analytical methods will be used to validate the constitution of each test.

The fermentation of fruit puree will be studied, at several levels (microbiological, macronutrients (sugars & organic acids), aromatic composition, others...).

The second part of this internship will consist in monitoring the manufacturing process as a whole. This approach will guarantee the quality of the resulting fruit purees and may have a positive impact on the production flow.

Fermentation markers will be monitored (pH, Redox, lactic acid, Infra Red spectrum, etc.) with the aim of validating a "model" approach for monitoring the manufacturing process.

Required profile

You will need to have strong knowledge of food science, as well as a good knowledge and affinity for microbiology and food processes.

But also demonstrate:

- **Autonomy, to create and set up your experiences**
- **Proactivity, to be able to propose ideas and solutions throughout the project**
- **Curiosity, for the discovery of new food products**
- **Communication skills, to share and discuss your results with the team**

Training as an engineer in the food science, for example, or a master's degree in food science seem to us to be the most suitable.



Internship offer

Atelier du Fruit

An innovative, ethical and societal company, Atelier du Fruit supports companies in the food industry in Research & Development around natural processes.

Our team: We are currently 9 people; doctors, engineers and technicians, passionate about science and living food!

Our expertise: Two natural biotechnologies: fermentation and enzymes.

Our missions: to over-express taste, to bio-preserve foods and to improve nutritional qualities.

Our mode of operation: service contracts with food manufacturers or management of research projects.

**Please send your application to :
(before November 30th)**

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