

# Development of a new line of yoghurts and smoothies with natural ingredients, fruit and honey

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## 01. Rationale

The project entitled "Development of a new line of yoghurts and smoothies with natural ingredients, fruit and honey" is based on the design of a new line of fat-free yoghurt blended with fruit and/or fresh liquefied vegetables and with natural sweeteners. This project makes it possible to obtain a new line of high-quality, high-added-value products that will help improve the competitiveness of fruit, vegetables and honey from the Lleida area and integrate them into the agri-food chain through their treatment and processing. It will promote these local products by allowing them to be used as raw materials in the production of yoghurts.

The overall objective is to design and develop a new line of yoghurts and smoothies with natural ingredients containing fruit, vegetables and honey from local markets. As such, the following specific technical objectives have been set:

- Design and develop natural extracts with sweetening power.
- Evaluate the use of honey as a substitute for added sugars.
- Design and develop a new line of fat-free yoghurt smoothies with fresh fruit, vegetables and natural sweeteners.
- Evaluate the impact of innovative technologies for the preservation of seasonal fruit.

The activities that have been carried out in the framework of the project are shown below.

- Activity 1. Design and development of plant extracts and honey extracts.
- Activity 2. Formulation of a drinkable yoghurt with fresh fruit and/or vegetables and natural sweetening extracts at laboratory scale.
- Activity 3. Formulation of a drinkable yoghurt with fresh fruit and/or vegetables and natural sweetening extracts at pilot and semi-industrial scale.
- Activity 4. Evaluation of the stability and shelf life of the products developed.
- Activity 5. Transfer of project results to stakeholders.

## 02. Results and conclusions

The expected results of the project were related to the fields of

application of the participating companies. Firstly, on a general scale, the aim was to obtain knowledge for incorporating stabilised liquefied fruit and vegetables that would better maintain the organoleptic and physicochemical characteristics of the final product, as well as knowledge on the use of honey as a natural sweetener in yoghurts. Secondly, using all the knowledge acquired, the aim was to develop a range of yoghurt products with low sugar content and low caloric value. Finally, the aim was to generate useful knowledge about the stability of the products developed and their susceptibility to loss of stability under adverse conditions during storage.

The project was carried out correctly and the objectives set at the beginning of the project were achieved. It is important to highlight that the project has been a success that has allowed the development of new formulations optimised on an industrial scale and new triple-free yoghurts (no fat, no added sugars and no artificial additives) with fresh vegetables from Lleida and natural sweeteners.

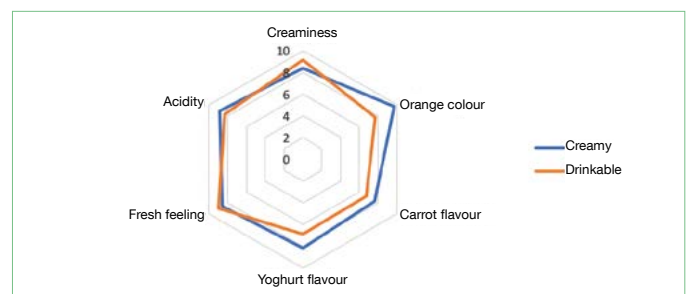
In addition, production protocols have been developed for the formulation of the new yoghurts, the formulation of the vegetable purees and the formulation of the natural sweeteners on an industrial scale. Although work could now begin to market the new products developed, the marketing department has detected that the market still finds it difficult to associate products with savoury ingredients with a sweet taste. Therefore, the new products developed are not expected to be launched onto the market immediately. However, a new line of new and industrially optimised products is now available that is ready to be launched when the forecasts are more favourable.



Dose test samples of carrot puree in drinkable yoghurt, from left to right: 8%, 10%, 15% and 20%. Photo: Operational Group.



Dose test samples, from left to right: 15% gazpacho, carrot and courgette puree in creamy yoghurt. Photo: Operational Group.



Comparison between creamy carrot yoghurt vs drinkable carrot yoghurt. Source: Operational Group.