

TERRITORIES INVOLVED	DESCRIPTION OF THE PROJECT	RESULTS OBTAINED AND REPLICABILITY	PROJECT CONTINUATION
VASQUE COUNTRY	<ul style="list-style-type: none"> <li>AIN carried out previous studies on the opportunity of obtaining high-value products from broccoli and cauliflower by-products used as food ingredients and for other sectors such as cosmetics or pharmaceuticals. Until then, these by-products were only used for evaluation in animal feed as an ingredient.</li> <li>During the project, Ingredalia was created, a company owned by large processing companies as well as a technology centre, for the valorisation of by-products generated in the processing of vegetables.</li> <li>Specifically, Ingredalia has a patent for the industrial process for the valorisation of broccoli processing by-products that allows it to extract sulforaphane and glucosinolate, reported as very beneficial for the immune system in humans and other animals in many published clinical studies.</li> <li>ORHI's support to Ingredalia has focused on supporting the industrialisation of its process, optimizing the formulation of the active ingredient and identifying and validating the encapsulation technology (micro and nano) that will allow its manufacture on an industrial scale.</li> </ul>	<ul style="list-style-type: none"> <li>New formulation to ensure that the active ingredient can be produced on an industrial scale in the most suitable format for greater absorption by the body (both as a food additive, animal or human food supplement or as a cosmetic cream).</li> <li>Identification of encapsulation technologies that allow industrialized production and high variability in obtaining marketable final products aimed at different sectors and marketing routes.</li> <li>Encapsulation technology will allow replicating industrial production with new ingredients from other types of plant by-products.</li> <li>Initial marketing support for a better positioning of Ingredalia brand on social networks.</li> </ul>	<ul style="list-style-type: none"> <li>Study other types of vegetable by-products that contain high-value compounds and can be extracted with the technology and process developed by Ingredalia (e.g. pepper, thistle, asparagus).</li> <li>Development of the marketing channel, especially the international one, establish distribution agreements with specialized agents in each of the sectors to which the different product presentations are oriented.</li> <li>Marketing processes to adapt the presentation of the product to the different customer segments.</li> </ul>
LA RIOJA			
X NAVARRE			
PYRENEES ATLANTIQUES			
OCCITANIE			
OTHER TERRITORIES			

## PROJECT'S CONTRIBUTION TO THE FOLLOWING INDICATORS

INDICATOR	INITIAL VALUE	FINAL VALUE
• <i>Raw material for the sulforaphane production</i>	Made from cultivated broccoli seeds and sprouts, it competes with broccoli intended for food.	From broccoli processing by-products, value is created from what the industry considers waste.
• <i>Sulforaphane producing companies in the world from by-products</i>	0	1 (Ingredalia)
• <i>Number of alternatives for industrial process production from by-products</i>	1	4
• <i>Product versions valid for food matrices</i>	0	From 3 to 5 in 2022
• <i>Production and sales expectations in 2021</i>	500 kg	2.000 a 3.000 Kg

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