

Low Sodium Food Products: Enhancing Salt Perception Through Protein-Based Encapsulation

Timeline: 11/24- 04/25
Budget: €20k

Startup



- Name: Nucaps
- Founded: 2017
- Tagline: Protein encapsulation of functional food ingredients
- Location: Pamplona, Spain

Industry partner



- Name: K+S AG
- Founded: 10/1889
- Tagline: Salt, potash & magnesium producer
- Headquarter: Kassel, Germany

The problem

Reducing the salt content in food products in line with the European strategy aiming to lower sodium intake, without compromising on taste, flavour and functionality.

The solution

NuCaps aims to develop a protein-based encapsulation technology to obtain a dry powder containing sodium salt from K+S, with a rheology of powder superior to 500 microns, suitable for application in the food sector and free from allergens. The powder is designed to allow controlled and delayed release of salt in the mouth, thereby enhancing the perception of saltiness.

Project deliverables

- Proof of concept: Most promising prototype of 12 variants, based on different proteins, has been selected
- Optimization: The characteristics - e.g. saltiness, off-flavour, colour - of the prototype have been improved
- Pilot scale-up: Technical-economic evaluation of the optimized prototype



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