

How to develop products with health claims

Health is listed as one of the main important drivers of innovation in the food industry. Developing products bearing a health claim is an excellent way to gain the trust of the consumers. The health benefits of product with health claims are scientifically proved and approved by European Food Safety Association (EFSA).

The food industry is confronted with increased global competition and more stringent customer demands and it is pressurized to improve the pace and quality of its innovation processes. The main drivers of innovation correspond to the general consumer expectations: pleasure, health, physical, convenience and ethics.

Pleasure is the leading driver, followed by health and convenience. In 2016, it accounted for nearly one in four innovations launched. All the health trends (natural, medical and vegetal) gained ground in 2016, making health the most dynamic driver of food innovation in Europe in terms of growth.

Regulation on nutrition and health claims (EC) No. 1924/2006 came into force in the European Union (EU) in 2007 aims to stimulate innovation to produce healthier food products in the food industry, also to ensure that the claims are truthful and do not mislead consumers.

Developing products with health claim is a market with great potential, still the availability of such products is far from expectations. The food industry faces obstacles regarding meeting the requirements of the Regulation. European Food Safety Association (EFSA) provides guidance documents on the technical and scientific requirements of the health claim substantiation, but some of the food companies need further help.

The Industry Guidelines and Recommendation on the development of products with health claims elaborated within the framework of PATHWAY-27 FP7 funded EU project (www.pathway27.eu) aims to provide support to food companies, especially to SMEs in the organization of the product development process for products with health claims.

Within PATHWAY-27 FP7 funded EU project, three 3 different widely-consumed food matrices (dairy-, bakery-, egg products) were enriched in three bioactives compounds, namely docosahexaenoic acid (DHA), β -glucan (BG), and anthocyanins (AC). The used enrichments influenced the basic characteristics of the products e.g. sensory attributes.

The core of the Guidelines is the flowchart which presents the product development process step by step. Then, all necessary inputs, information to be collected at the start of each step are identified, along with the outputs necessary for the successful execution of a next step. This tool can be considered as a planning tool, check-list to the companies.

With the value-chain based approach, the aspects which are related to and critical for the development of foods enriched in bioactive compounds can be identified and monitor through the whole process.

Critical aspects from the product point of view:

- the concentration of the natural ingredient or the bioactive compound used as enrichment.
- the characterization of the bioactive compound,
- the reproducibility and the uniformity – low variability within and between batches – of the test and control product samples through the whole shelf-life time,
- the safety and fitness of the products for human consumption and
- the stability (microbiological, chemical and sensory) of the test and control products.

Furthermore, special attention has to be paid to the harmonization of different task during the development process as the food samples for the human intervention studies and for all analysis and testing must be in the right place, at the fixed time and in the right quantity.

The complexity of the above mentioned process requires higher level of collaboration between the different research fields (e.g. FBOs, biostatistician, and clinical experts). Careful and systematic planning and the method described in the Guidelines can be the key to minimise the changes and delays in the development process and to achieve the ultimate goal and have a product with health claims.

The elaborated Industry Guidelines and Recommendations for development of products with health claims are publicly available on the website of the PATHWAY-27 (<http://pathway27.eu/>).

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References:

Regulation (EC) No 1924/2006 of the European parliament and of the council of 20 December 2006 on nutrition and health claims made on foods.