

Nanotechnology in Active Food Packaging: Consumers' Acceptance

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The EU-funded NanoPack project completed an extensive research to examine how active food packaging technologies are perceived by consumers and retailers.

Consumers are showing a growing readiness to use innovative nanotechnology-based solutions in the food packaging industry, according to an extensive research carried out in Europe and Asia by the EU-funded [NanoPack Project](#).

Active food packaging technologies offer several benefits to consumers and retailers, including increased food safety, extended shelf-life, improved freshness, reduced food waste, and more. In order to examine how end-users perceive nanotechnology and its benefits, the NanoPack Project conducted a thorough research on the acceptance of new active food packaging technologies among consumers and retailers.

NanoPack organized 10 focus groups and conducted 10 in-depth interviews with consumers and retail managers in China, Spain, Italy, Denmark and Ireland. The findings revealed that, in the case of the NanoPack solution, consumers were not concerned with the "nanotechnology" aspect. Interviewees expressed more concern over the inclusion of essential oils and the "active" nature of this technology, with which they were not familiar. They expressed fear that food products would become "contaminated" or "altered" after the active component was released in the packaging atmosphere.

"The benefits of active packaging solutions are not always aligned in consumer minds," said Polymeros Chrysochou, associate professor at the [Aarhus University](#) of Denmark, who, together with Alexandra Festila, assistant professor at the same university conducted the research. "So, for example, extending the shelf-life of a product and keeping its freshness seem to be a contradiction in consumers' minds."

"Freshness is a rather vague promised benefit and people have different interpretations of it," said Chrysochou. "They may perceive it in terms of the time passed from the production, where a shorter time equates a fresher food product. This means that consumers do not see a product with an extended shelf life as being necessarily fresh, since a longer time has passed since production."

The research further indicated that retailers' main concern was that new technologies should meet product safety criteria. Only after this has been resolved, can it be aligned with the strategy and internal processes of the company.

NanoPack will reveal the full findings of the research at the project's annual meeting, which will be hosted by [IVV Fraunhofer](#) Freising, Germany, February 19–21, 2019.

The meeting will be attended by members of NanoPack's Advisory Board including Professor Lilia Ahrné of the [University of Copenhagen](#) and Professor Diána Bánáti.



About NanoPack

NanoPack is an EU-funded project which aims to develop and demonstrate solutions for extending food shelf life through using novel antimicrobial surfaces applied in active food packaging products.

NanoPack intends to develop, scale up and run pilot lines in operational industrial settings to manufacture and validate antimicrobial polymer films that are commercially feasible and accepted by retailers and consumers alike.

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