



From color cosmetics and fragrances to detergents and cleaning products, we are here to support you from the product development stage to launching your safe, sustainable products on the market.»

The increased demand for safe and effective sustainable products has even reached the personal and home care sector. But which raw materials do consumers perceive as sustainable? Which alternative ingredients can be used while still ensuring product quality? And how can we improve the shelf lives of natural products?

Our interdisciplinary team has all the knowledge and expertise you need for a fully sustainable product development process chain: from raw materials to the mechanical processes right through to the packaged product. We aim to work with you to develop bio-based, recyclable products, as well as resource-efficient production processes for personal and home care products.

Develop and optimize your products with us!
We look forward to working with you.

Contact

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Fraunhofer Institute for Process
Engineering and Packaging IVV



Sustainable, effective, safe

Personal & Home Care

Product optimization

Quality and efficacy

We provide the following services to evaluate and optimize your products and applications with sustainability and functionality in mind:

- Analytically evaluating and selecting plant-based raw materials and alternatives to synthetic ingredients, e.g., bio-based additives or proteins
- Investigating, modeling and optimizing formulas to protect active substances and odorants
- Developing encapsulation processes in the context of biopolymer materials
- Carrying out multi-encapsulation processes to protect raw materials
- Characterizing and optimizing fragrances
- Assessing and developing extraction processes for plant-based raw materials
- Predicting the physical, chemical and microbial stability of products and raw materials

Product performance

Psychophysiological effect

We examine how your product is perceived by customers. Our researchers use the methods below to analyze which specific multisensory parameters influence consumer acceptance and purchasing behavior:

- Measuring the psychophysiological responses to multisensory stimuli and predicting behavior
- Evaluating the psychophysiological effects of fragrance components
- Sensory optimization
- Developing and validating sensors and analytics systems to detect specific marker substances, e.g., to assess the source, purity or effect of raw materials
- Evaluating datasets using AI
- Investigating (nano-)encapsulated substance release



Product safety

Custom packaging designs

With resource scarcity and environmental sustainability in mind, we use the following methods to develop safe, sustainable packaging tailored perfectly to your products:

- Investigating, modeling and optimizing packaging in order to extend shelf life
- Evaluating and advising on barrier properties and recyclability
- Using bio-based raw materials in packaging and packaging systems
- Testing and validating mechanical and physical characteristics
- Evaluating legal conformity
- Holding workshops and testing for recyclability and recycled content levels

Production processes

Hygiene and efficiency

We are here to optimize your production processes and support you in creating safe, efficient cleaning procedures. We offer the following services:

- Digitalizing monitoring and control processes as well as data collection
- Increasing the efficiency of processing plants
- Conducting microbiological assessments of filling plants
- Automating and optimizing cleaning systems and processes
- Hygienic design consulting

If you would like to take advantage of our personalized advisory services, please do not hesitate to get in touch.

