

## Fact sheet

# Cosmetics packaging testing

Delivering science-led cosmetics packaging testing supporting innovation, safety, quality, sustainability and compliance for over 30 years

**By prioritising cosmetic packaging testing, manufacturers can assure the quality, safety, and integrity of both the packaging and the packaged cosmetic products, ensuring consumer safety and regulatory compliance. Learn how Intertek's expertise can support your cosmetics packaging lifecycle.**



Cosmetic packaging testing is essential for ensuring the safety of cosmetic products, which is mandated in Europe by Regulation (EC) n° 1223/2009. This regulation requires that any product placed on the market is safe for human health under normal usage conditions. Effective cosmetics packaging testing is vital as it helps identify harmful chemical substances that could be released from the packaging into the product. Additionally, new challenges for compliance and safety may arise when using recycled plastics or novel packaging materials. Intertek is your partner for overcoming quality, safety, sustainability, and innovation challenges in cosmetics packaging throughout its entire lifecycle. Trust us to support your success in the ever-evolving cosmetics industry.

### Enabling materials innovation of packaging for cosmetics products

Innovation in cosmetics packaging materials is critical for brands to meet sustainability goals, enhance user experience, and differentiate in a competitive market. Developing new materials, including bioplastics, plant-based-sourced materials, and recycled plastics, aims to reduce environmental impact and appeal to eco-conscious consumers. Testing these materials is critical to ensure the durability of materials' properties, compatibility with products, and safety. Proper testing ensures packaging preserves product integrity, prevents contamination, and meets regulatory standards. Our team of scientists have worked with innovators worldwide, providing rigorous testing to help brands build consumer

trust, enabling them to launch innovative, sustainable, and high-quality packaging solutions confidently. Our expertise covers all types of packaging materials – paper, corrugated cardboard, flexible and rigid plastic, textiles, metal, glass, ceramics, silicon and other similar products. Our expertise includes:

- Material properties (polymer, plastics, card, paper, novel materials, natural source materials)
- Performance testing and properties (physical/mechanical testing/thermal) when using alternative additives or post-consumer recyclates are added or after lightweighting strategies
- Compatibility with ingredients, coatings, adhesives
- Raw materials testing and validation programs
- Failure investigations
- Durability and protection from micro-organisms (ISO 846)

### Regulatory Testing Support

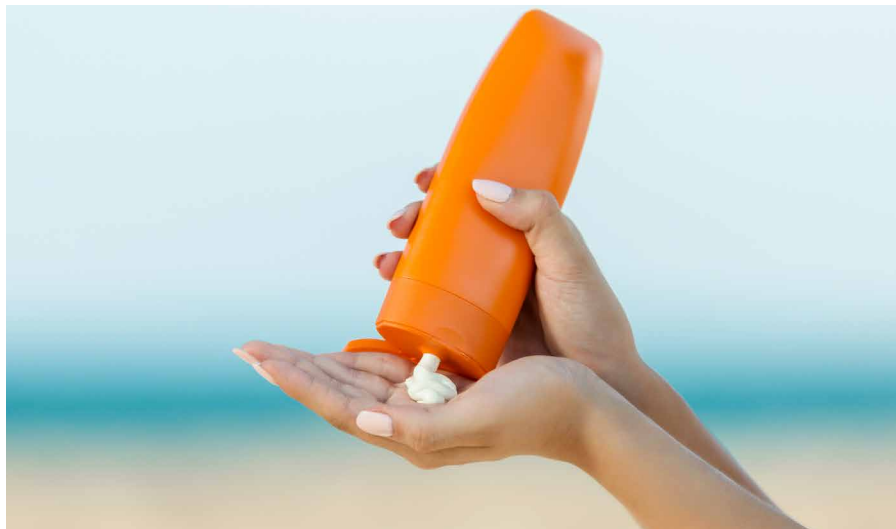
Intertek offers analytical solutions that comply with cosmetic regulations and meet your quality, safety, and efficiency requirements. We have extensive experience in adapting established food contact testing procedures for the evaluation of cosmetic packaging. Our analytical expertise includes conducting overall and specific migration tests, phthalate testing using GC-MS, primary aromatic amines (PAAs) migration testing, and PAH migration assessments in accordance with Ausschuss für Produktsicherheit (AfPS) standards. Additionally, we evaluate the migration of

PCBs, bisphenols, dioxins, furans using a range of chromatographic methods and heavy metals using ICP-MS, employing relevant simulants or extraction solvents as needed.

Our scientists routinely design analytical studies for migration of species from recycled materials used in packaging, using a combination of GC-MS and LC-QToF-MS techniques to detect and quantify any packaging ingredients and Non-Intentionally Added Substances (NIAS) that could have formed during production or recycling processes.



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## Regulatory Compliance Testing and Support:

- Testing accordance with Regulation No (EC) 1223/2009, EC 10/2011, CosPaTox or ELIPSO – FEBEA guidance
- Testing in accordance with EU 2022/1616 for packaging that contains recycled plastics and the Packaging and Packaging Waste Regulation (PPWR)
- Migration studies: overall migration, specific migration
- Specialist NIAS studies
- Restricted or prohibited substances analysis (e.g. Heavy metals, BPA, phthalates, PFAS (ISO 21675:2019))
- Stability studies
- Preservative efficacy
- Toxicological risk assessments and food contact materials regulatory assurance

## Sustainability and Use of Recycled Materials in Cosmetics Packaging Testing

The cosmetics industry is increasingly using recycled plastics for packaging and this trend is expected to continue, largely driven by upcoming regulations that mandate recycled content in packaging. Current practices largely use food-contact grade recyclates due to established safety assessments that ensure their compatibility with food-grade virgin plastics. Recycled plastics derived from other types of waste often fail to meet the stringent legal requirements for food contact, necessitating dedicated safety assessments before they can be used in cosmetic packaging. The need for such assessments arises because existing frameworks based on food contact approvals do not apply.

Guidelines from industry bodies and stakeholder groups such as the CosPaTox Consortium or the joint ELIPSO-FEBEA working group address safety challenges associated with incorporating recycled plastics in cosmetics packaging. These outline a systematic approach focused on using recycled HPDE, LDPE, PP and PET materials, which are highly important to the cosmetic products, detergents, and home care products industries.



Our **CircularAssure** scientists routinely design materials characterization studies focused on extracting and migrating species from pellets of recycled cosmetic packaging, using a combination of non-targeted screening methods to identify and semi-quantify migrating substances. This includes NIAS screening for substances that could have formed during production or recycling processes. Targeted analyses are required to quantify actual migration substances. For screening and targeted analysis, we use a range of advanced chromatography analytical techniques (GC-MS, LC-MS, LC-MS QTOF). Our regulatory consultants perform safety assessments and toxicological risk assessments.


## Boosting Sustainability for Packaging for Cosmetics

- Biodegradability/compostability
- Performance, properties, quality and safety testing of recycled materials
- Migration and NIAS Testing
- Chemical composition of recycled materials
- Product resource consumption, Carbon Footprint/LCA
- Recycled Content Verification
- Eco-Claims Verification


At Intertek, we are committed to supporting your cosmetics packaging journey with rigorous testing and compliance solutions tailored to your needs. Together, we can ensure the safety, sustainability, and innovation of your products while meeting regulatory standards. Trust us to help you deliver high-quality cosmetics packaging that resonates with eco-conscious consumers and enhances your brand's reputation.

### For more information

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