

Sustainability Innovations in Cosmetics & Personal Care



Natural & Sustainable Ingredients

Reduce environmental impact and preserve biodiversity. Reduce exposure to harmful chemicals and promote human health.

TECH EXAMPLES

- Sustainable and natural microbiome-based skincare ingredients ([Gobiotics Ingredients](#))
- Microalgae-based functional ingredients for skincare ([Microphyte](#))
- Natural exfoliants, pigments, and oils derived from spent coffee grounds ([Kaffe Bueno](#))
- High-performance pigments, pearls and glitter for coloured cosmetics derived from plant-based cellulose ([Spaxell](#))



Biodegradable & Zero-Waste Formulations

Reduce pollution and minimise the impact on the ecosystem. Reduce the reliance on synthetic materials and future-proof the industry.

TECH EXAMPLES

- Lignin-based raw materials (e.g. SPF booster and antioxidant) for cosmetics ([Lignopure](#))
- Bio-based conditioning and texturing polymers generated from the guar plant ([Syensqo](#))
- Biodegradable functional ingredients (e.g. skin hydrator and thickener) derived from harmful seaweed ([Origin by Ocean](#))
- Sustainable microbial cellulose-based microbeads and rheology modifiers as alternatives to microplastics ([Bioweg](#))



Ethical Production & Use of Upcycled Materials

Mitigate climate change and offset carbon emissions. Reduce waste and avoid using harmful chemicals in the manufacturing process.

TECH EXAMPLES

- Carbon-negative, vegan, renewable microalgae-derived wax to replace petroleum wax ([Upwell Materials](#))
- Cellulose-based rheology modifier produced through fermentation ([Cellugy](#))
- Bio-based, upcycled birch bark ingredients from forest industry side streams, used as white pigments, active ingredients, and gelling agent ([Innomost](#))
- Upcycled plant-based active ingredients from food waste ([The Upcycled Beauty Company](#))



Novel Formulation & Packaging Solutions

Minimise packaging by developing solid, waterless beauty products. Reduce packaging waste by using recyclable or biodegradable materials.

TECH EXAMPLES

- Solid, waterless beauty products with minimal, plastic-free packaging ([SBTRCT](#))
- Biodegradable, home-compostable microbial polyhydroxyalkanoate (PHA) packaging solutions ([Shellworks](#))
- Mycelium-based rigid packaging, a compostable polystyrene alternative ([Ecovative](#))
- SCOBY (symbiotic culture of bacteria and yeast) bacterial cellulose-based compostable packaging ([MakeGrowLab](#))



Certifications & Labelling

Meet global standards and regulatory requirements. Build trust and transparency with consumers and strengthen brand reputation and differentiation.

KEY SUSTAINABLE CERTIFICATIONS

- COSMOS (Cosmetic Organic and Natural Standard) and Ecocert
- Leaping Bunny
- PETA (People for the Ethical Treatment of Animals) Cruelty-Free
- NATRUE
- Fair Trade
- FSC (Forest Stewardship Council)
- RSPO (Roundtable on Sustainable palm Oil)
- Vegan
- B Corporation

CERTIFICATION PATHWAY

1. Identify relevant certifications that align with the company's sustainability goals.
2. Assess current practices with internal audit and gap analysis.
3. Implement sustainable practices.
4. Obtain certifications.
5. Communicate the sustainability effort with consumers.

INNOVATION ADOPTION STRATEGIES

Sustainable Sourcing

- Prioritise ingredients from certified organic farms and ethical suppliers.
- Establish and expand sourcing networks for biodegradable ingredients and upcycled materials.

Formulation Innovation & Collaborative Development

- Develop high-performance formulations using natural, sustainable ingredients to replace synthetic and harmful alternatives.
- Focus R&D on novel, zero-waste formulations and compositions.
- Collaborate with innovators on waterless formulas and sustainable packaging solutions (recyclable, reusable, refillable, compostable and biodegradable).

Green Production & Resource Efficiency

- Integrate green chemistry and resource-efficient practices throughout production.
- Build expertise in closed-loop systems that reduce waste and optimise material and energy use.