

# Breaking it Down:

## Why Biodegradability Is the Beauty Industry’s Next Big Shift



By Luca Phillips

In the world of beauty care, sustainability has become more than a buzzword, it’s a business imperative. From packaging to sourcing, brands are under increasing pressure to prove that their products not only work but also tread lightly on the planet. One of the most important yet often overlooked aspects of this sustainability story is biodegradability.

Put simply, biodegradability is a measure of a substance’s ability to break down over time. When something is easily biodegradable, it can break down naturally and quickly, potentially reducing its harm and environmental impact. Non-degradable substances have a greater potential to persist, accumulate, and therefore present toxicity to the environment. For an industry where millions of products are washed down the drain every day, the distinction of how a substance degrades matters.

“Choosing biodegradable ingredients enhances a product’s sustainability profile and minimizes long-term environmental impact.”

says the team at Inolex, a leading sustainable beauty care ingredient designer.

### The Hidden Challenge: Testing Biodegradability

Despite its importance, assessing biodegradability isn’t always straightforward. Currently, there is no standard test for assessing biodegradation of mixtures or cosmetic formulations. That’s because biodegradability is an inherent property of individual molecules, not mixtures. To formulate biodegradable mixtures, one must choose ingredients wisely and test those ingredients for biodegradability rather than the formula. Fortunately, tools already exist to make this easier. At [inolex.com](http://inolex.com), brands can search and filter ingredients based on third-party standards and certifications, including biodegradability.

### Making the Claim Without Greenwashing

For brands, communicating biodegradability responsibly is essential. Simply stating “biodegradable” on a finished product risks veering into greenwashing if the claim isn’t substantiated. Since formulations are mixtures, the most reputable way to make the claim is by knowing the biodegradation status of each ingredient and stating clearly how it was evaluated. This level of transparency not only builds trust with consumers but also ensures compliance with evolving regulations.

The good news is that the industry is already moving toward biodegradable alternatives for some of its most widely used ingredients. Two standout examples from Inolex showcase how science-driven innovation can deliver performance and sustainability hand in hand.

## Biodegradable Beauty Ingredients



**LexFeel® WOW DT** is a fast-spreading, dry-touch emollient designed as a plant-based alternative to cyclomethicone (D5). Why is it important to move away from D5?

- In addition to toxicity concerns around traditional cyclomethicones like D5, regulators also cite their potential persistence in the environment.
- Silicones are synthetic and not biodegradable, and increased regulations and consumer demand has been driving brands to reformulate without silicones.

**LexFilm™ Sun Natural MB** tackles another critical issue: microplastics in personal care. Many suncare and skin care products are often washed off into waterways; when non-biodegradable ingredients are used, they can accumulate and potentially cause harm to marine life. This 100% natural polymer is readily biodegradable, aiming to prevent biopersistence in the environment. It also boosts product performance, improving water resistance so sunscreen stays on your skin, where it belongs.



For formulators looking for inspiration, Inolex even develops finished prototypes, such as the Smooth Glider Clear Deodorant. Made with over 86% natural ingredients, it is vegan, and free from silicones, aluminum, alcohol, talc, baking soda, and parabens. Additionally, 95% of the ingredients in this formula are verified biodegradable—demonstrating how sustainable product design can meet consumer expectations for efficacy, safety, and transparency. Customers can request all Inolex ingredients and prototype samples via [www.inolex.com](http://www.inolex.com)

### The Future Is Biodegradable

As beauty brands continue their sustainability journeys, biodegradability will become an increasingly critical part of the conversation. It’s not just about what goes into a formula, but where those ingredients end up once they’ve done their job. For consumers, the message is simple: the choices made at the ingredient level matter. For brands, the challenge, and opportunity, is to adopt biodegradable alternatives that safeguard both performance and the planet. Because in the end, the beauty of sustainable ingredients lies in what’s left behind: nothing harmful, nothing lasting, just nature taking care of itself.