eurofins | Cosmetics & Personal Care

Ecotoxicity & Biodegradability

The guide to measure the environmental impact of cosmetics products

More than ever, consumers require that there is full transparency about the potential environmental impacts of the consumer products they use, such as cosmetics. In response, companies increasingly look to prove their environmentally-friendly credentials.

To meet both consumer and producer demand, Eurofins network of companies supports clients to measure the environmental impact of their cosmetic products (from raw materials to finished products and packaging).

What is Biodegradability?

Biodegradability is the capacity of a material to decompose over time as a result of biological activity, especially to be broken down by microorganisms, in smaller molecules (carbon dioxide, water, mineral salts…). OECD 301 Guidelines (readily biodegradability) are standards which are the most used today to measure a substance biodegradation. The standard for the assay is chosen according to the properties of the test substance (solubility, volatility, etc.). Biodegradability tests on finish products and raw materials are really important issues for cosmetics market. Indeed, biodegradability is a criteria in regulations as REACH or for labels awarding as European Ecolabel for example (according to OECD guidelines).

Some of the biodegradability tests offered include:

- Ready biodegradability (OECD 301 A,OECD 301 B, OECD 301 D, OECD 301 F)
- Intrinsic biodegradability (OECD 302 B, OECD 302 C)
- Biodegradability and compostability of plastics (NF EN 14995, NF EN 13432, NF T 51-800)

What is Ecotoxicity?

Ecotoxicity is the measure of the impact of substances, on living organisms, in various ecosystems: freshwater, marine water, sediment and oil organisms. Depending on the method, we can study the acute toxicity or the chronic toxicity. Like biodegradability, ecotoxicity is a criteria in regulations or for labels awarding (according to OECD or ISO guidelines).

Some of the ecotoxicity tests offered include:

- Acute and chronic toxicity
- Fresh water organisms: Water Lentils, Daphnia, Algea…
- Marine water organisms: Microtox, Oyster, Algea, Corals…
- Benthic organisms
- Terrestrials organisms: Worms, Plants, Bacteria

The results of these tests make it possible to assess quantitatively and qualitatively the ecotoxicity and biodegradability of a given product, which ultimately benefits design processes, external communication and sustainable development approaches.

Cosmetics@eurofins.com

www.eurofins.com/cos

@ Eurofins Cosmetics & Personal Care

eurofins | Cosmetics & Personal Care

Global Expertise, Personal Touch