

# Natural and Organic Cosmetics: Regulatory Definitions, Certification, and Consumer Trust

## 1. Introduction

Natural and organic cosmetics, formulated primarily from plant, mineral, and other naturally occurring ingredients, are gaining market prominence. Organic variants require adherence to certified farming practices, minimizing synthetic chemicals, GMOs, and petrochemical derivatives.

Natural and organic cosmetics are the products formulated primarily with ingredients derived from plants, minerals, and other naturally occurring substances. Unlike conventional cosmetics, they minimize use of synthetic chemicals such as petrochemical derivatives and raw materials & fragrances of synthetic origin, and certain preservatives. Organic cosmetics go a step further by ensuring that a significant portion of their ingredients are grown without the use of pesticides and/or synthetic fertilisers, or genetically modified organisms (GMOs) and also following certified organic farming practices.

The cosmetics industry has witnessed a surge in products labelled as "natural" and "organic". However, ambiguous terminology and lack of well-defined regulations has led to confusion among consumers and manufacturers. This article aims to provide information related to regulatory challenges for industry in terms of natural and organic cosmetics including discussion on the implications for product safety and marketing.

## 2. Definitions

There are currently no formal regulations defining the term "natural" in marketing, leading to its broad and inconsistent use while 'organic' is a fairly regulated term (across the UK, EU, US & Australia), meaning that certified organic products are prepared and grown in a way that is consistent with organic farming standards.

**2.1 Natural cosmetics** are primarily composed of ingredients derived from plants, minerals, and other naturally occurring substances. Common ingredients include plant-based oils (e.g., coconut, jojoba, argan), essential oils (e.g., lavender, tea tree), botanical extracts (e.g., aloe vera, chamomile), natural clays, minerals, beeswax, shea butter, and cocoa butter.

**2.2 Organic cosmetics** are beauty and personal care products made primarily from ingredients that are grown and processed according to **organic farming standards**, without the use of synthetic chemicals such as pesticides, chemical fertilizers, GMO's. Such products use preservatives of natural or natural based such as essential oils (tea tree, rosemary), benzoic acid, sorbic acid and their salts, and benzyl alcohol and only use those approved by certification bodies.

### 3. Certification Standards Overview

Both Natural and Organic products may undergo certifications to ensure ingredient authenticity, and compliance with sustainability and health standards resulting in gaining consumer trust. Table 1 provides summary of criteria, type and requirement for certifications.

**Table 1:** Summary of Certification for “natural” and “organic” cosmetics

Standard / Region	Definition of Natural	Organic Requirement	Key Restrictions	Certification Type
COSMOS – Natural	Ingredients of natural origin	None	No GMOs, petrochemicals, parabens, phenoxyethanol, perfumes, synthetic colorants	Third-party
COSMOS – Organic		≥95% plant ingredients organic; 20% total product organic (10% for rinse-off products)		
ECOCERT – Natural	≥95% ingredients natural origin	None	No synthetic perfumes, dyes, petrochemicals	
ECOCERT – Organic		≥95% plant-based organic; ≥10% total product organic		
NATRUE	Strict natural ingredient list	Organic portion varies by level (1 &2)	No synthetic fragrances/colors, petrochemicals, microplastics	
ISO 16128	Provides calculation method for natural index	Provides calculation method for organic index	No ban on synthetics (guideline only)	Self-declaration
EU Regulation	No legal definition of “natural”	None	Claims must be truthful, substantiated	Self-declaration or certification
US (FDA/FTC)	No legal definition	USDA Organic applies only to agricultural-based products	No misleading claims	Self-declaration or USDA Organic

## 4. ISO 16128: Standardizing Natural and Organic Content

ISO 16128 provides a uniform framework for defining and calculating natural and organic content in cosmetics. This helps brands across different countries align with a common reference point, reducing confusion caused by varying regional definitions. **Part 1:** Defines ingredient categories—natural, natural origin, organic, organic origin while Part 2 offers formulas for calculating the percentage of natural or organic content in a product, including the Natural Index (NI), Natural Origin Index (NOI), Organic Index (OI), and Organic Origin Index (OOI) as summarised in **Table 2**.

**Table 2:** Summary of indices to calculate % of Natural or organic content in product

Index	Definition	Value Range	Calculation Basis
Natural Index (NI)	Indicates if an ingredient is fully natural	0 or 1	1 = fully natural; 0 = not natural; for extracts, based on proportion of natural solvents
Natural Origin Index (NOI)	Measures natural or natural-derived content	0 to 1	1 = natural or wholly natural-derived; 0.5–1 = partially derived; 0 = not natural
Organic Index (OI)	Indicates if an ingredient is organic	0 or 1	1 = organic; 0 = not organic; calculated using mass of organic vs. non-organic solvents and ingredients
Organic Origin Index (OOI)	Measures organic or organic-derived content	0 to 1	1 = organic or derived organic; 0–1 = partially derived; 0 = not organic

ISO 16128 enhances transparency and harmonizes ingredient assessment globally, but does not officially define allowable labelling or restrict synthetics.

## 5. Common Concerns associated with “Natural” or “organic” products

### 5.1 Natural versus Organic Classification

"Natural" and "organic" are not interchangeable. Natural ingredients may not be organically grown, while organic products must meet specific agricultural and processing standards. Organic cosmetics can be considered as a subset of natural cosmetics, with stricter requirements regarding ingredient sourcing and processing.

## 5.2 Greenwashing Risks

The absence of strict regulations for "natural" claims increases the risk of greenwashing, where products are marketed as more natural or eco-friendly than they truly are. To avoid greenwashing and build consumer trust, manufacturers are advised to provide specific claims (e.g., "90% natural ingredients"), obtain third-party certifications, disclose exact percentages of organic/natural content, and avoid vague terms like "pure" or "clean" without context.

## 5.3 Safety Considerations

The source of an ingredient (organic or not) does not determine its safety. All cosmetic products must be safe for use as labelled, and companies are legally responsible for ensuring product safety.

## 5.4 Regulatory Ambiguity

- **USA:** Presently lacks a standard "natural" definition, but proposed "Natural Cosmetic Act" mentions "natural" as >70% natural ingredients excluding water
- **EU:** enforces truthful claims through Regulations 1223/2009 and 655/2013; "natural" is evaluated per Member States (e.g. France), sometimes requiring  $\geq 95\%$  natural content to claim "natural".
- **India:** presently are no clear regulatory guidelines, other than to avoid any misleading claims as mentioned under Cosmetic rules 2020.

## 6. Conclusion

Natural and organic cosmetics represent a growing segment of the beauty industry, driven by consumer demand for transparency and sustainability. Clear definitions, robust certification standards, and transparent labelling are essential to protect consumers and ensure product integrity. Third-party certifications like COSMOS, ECOCERT, and NATRUE, along with unified frameworks like ISO 16128, enable measurement and transparency. To foster consumer trust and integrity, industry players must collaborate to harmonize standards, enforce regulations, and reduce greenwashing. Ultimately, these efforts protect consumers and sustain the credibility of natural and organic cosmetics.

## 7. References

1. ISO 16128:2016 – Cosmetics — Guidelines on technical definitions and criteria for natural and organic cosmetic ingredients and products Part 1: Definitions for ingredients
2. ISO 16128:2016 – Cosmetics — Guidelines on technical definitions and criteria for natural and organic cosmetic ingredients — Part 2: Criteria for ingredients and products
3. <https://www.cosmos-standard.org/en/>
4. <https://natlawreview.com/article/natural-cosmetics-products-without-clear-definition>
5. Regulation (EC) No 1223/2009 - Cosmetic Products
6. Commission Regulation (EU) No 655/2013 - Common criteria for the justification of claims used in relation to cosmetic products
7. <https://natrue.org/our-standard/natrue-criteria-2/>
8. <https://www.cosmos-standard.org/en/>
9. <https://www.fda.gov/cosmetics/cosmetics-labeling-claims/organic-cosmetics>
10. [https://www.natrue.org/uploads/2020/10/English\\_NATRUE-Label-Usage-Guidelines\\_v2-2021.pdf](https://www.natrue.org/uploads/2020/10/English_NATRUE-Label-Usage-Guidelines_v2-2021.pdf)
11. [www.microbe-investigations.com](http://www.microbe-investigations.com)
12. <https://www.bioecoactual.com/en/2023/10/16/france-takes-measures-to-combat-greenwashing/>