

The scientific and regulatory dignity of the cosmetic ingredient.

The premises

During its development, each ingredient is subject to articulated research, production and regulatory verification processes, necessary to make it feasible and usable.

The ingredients intended for the cosmetics sector play a fundamental role as they take a decisive part in the fortunes of the entire supply chain. In fact, safety, stability and functionality of the finished product largely depend on them.

The scientific and regulatory dignity of the cosmetic ingredient is expressed above all through correct communication along the whole supply chain.

Each actor in the cosmetic supply chain can contribute to safeguarding all its activities, in order to guarantee high levels of harmony, participation and satisfaction.

The facts

Negative messages, direct or indirect, relating to cosmetic products damage the credibility and image of the ingredients above all, and generate unfounded fears and illusory expectations in the consumer.

Marketing strategies that use this kind of messages to differentiate and distinguish products, if they do not carefully evaluate the negative consequences, risk endorsing these expectations, which the consumer turns into requirements. This triggers a dangerous drift as a consolidated requirement then becomes difficult to remove.

These messages, without scientific basis, are mainly disseminated by independent organizations and self-accredited individuals who seek to gain an advantage in the cosmetic supply chain, often breaking the relevant Regulations.

Furthermore, many of them are unjustifiably disparaging and often even defamatory of different classes of ingredients, and thus deceive the consumer as well as causing confusion through the process of the choice

Their uncontrolled diffusion initiates two typical consolidation processes, known in social psychology as "cognitive coherence mechanism" and "strengthening mechanism", which make information even more resistant even if it is incorrect.

The reference Standards

As is well known, all cosmetics placed on the European market are safe as they comply with the strict dictates of the "European Regulation on cosmetic products" 1223/2009, which in its annexes clearly establishes which substances are permissible or unlawful to use and, if any, with what restrictions. These annexes are constantly updated by specialized scientific commissions, always in step with technical-scientific progress.

Regulation 1223/2009 provides the consumer with the necessary safety guarantees with many of its provisions and in particular with the "Safety assessment" (Article 10 and Annex I) and with the application of "Good manufacturing practices" (Article 8).

Therefore, in many cases the misleading messages also discredit the European regulatory framework on cosmetic products and in particular the provisions aimed to ensure consumer safety: definitely won't be the absence of certain ingredients to guarantee that a cosmetic product is better or safer than others.

The safety and transparency of the ingredient, from the operator, to the consumer, to the environment, are determined and widely guaranteed in particular by two other European Regulations:

- EC Regulation 1907/2006 «REACH»;
- EC Regulation 1272/2008 «CLP».

For what concerns the transparency and correctness of the claims instead, there are two reference Regulations:

- Commission Regulation (EU) 655/2013, which establishes common criteria for the justification of the claims used in relation to cosmetic products, which in Annex I, article 5, paragraph 1) expressly states "The declarations relating to cosmetics must be objective and not to denigrate competing products, nor to denigrate legally used ingredients";
- Directive 2005/29 / EC, relating to unfair commercial practices between businesses and consumers in the internal market.

To these are about to be added three new European Regulations aimed at prevent greenwashing and non-transparent communication that are already spreading especially on digital platforms:

- Environmental performance of products & businesses and substantiating green claims (initiative on claims relating to the environmental impact of products and services through the use of standard methods for their quantification);
- Digital Services Act (law on digital services, guaranteeing a safe and responsible online environment);
- Digital Markets Act (law on digital markets, guaranteeing fair and open digital markets).

The concept that the European Commission wants to convey is very clear: a secure and transparent network, and claims that are acceptable only if based on data obtained with relevant and scientifically validated methods.

The evidence

The food sector under some aspects is very similar to the cosmetic one, especially for the misleading messages that reach the consumer.

The SITOX (Italian Society of Toxicology) reports the following.

"The scientific evidence shows that in the first place of food risks are:

- nutritional deficiencies;
- intoxications of bacterial origin.

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Instead, in current opinion we find:

- residues of plant protection products;
- food additives;

however, both are governed by very strict rules."

Similarly, even in the cosmetic supply chain the perception of the consumer is distorted by messages that can prevent him from orienting himself correctly in the market and from making a conscious and informed choice, with alteration of the perception of risk.

Scientific evidences show that at the top of the risks associated with the use of a cosmetic product are:

- products that do not comply with Regulation 1223/2009 (especially products imported and placed on the market irregularly) - source: RAPEX;
- the possibility of individual local skin reactions, immune-mediated or non-immune-mediated (contact dermatitis, contact urticaria, photoallergic dermatitis, pigmentation defects) - source: Cosmetovigilanza, ISTISAN Report 19/24;
- infections due to incorrect or missing preservative system - source: Cosmetovigilanza, ISTISAN Report 19/24.

Instead, in current opinion the consumer doubts:

- its safety due to the presence of ingredients subject to "free from" campaigns (preservatives, perfumes, specific ingredients and entire classes of ingredients);
- that contains only natural ingredients;
- that it is sustainable;
- of its real effectiveness.

Natural and sustainable

"Natural" and "sustainable" are two concepts that develop on distinct paths, not necessarily converging.

The "natural" in cosmetics is very well defined by the ISO 16128 Guidelines which, beyond the extravagant and free interpretations that we occasionally come across, define clearly and unequivocally how to calculate the naturalness of a substance and therefore of a cosmetic ingredient. It should be emphasized that an ISO standard arises from the work of a widely participated team of specialized experts and establishes criteria that must be accepted and applied.

The concept of sustainability, on the other hand, leads back to the principles of Industrial Ecology, and specifically to those of Green Engineering and Green Chemistry, which dictate a very precise approach towards virtuous behaviour in all stages of a supply chain that is related to chemistry.

In fact, a substance that has a high percentage of naturalness can be much less sustainable than a substance which has a percentage of naturalness equal to or close to zero. Here comes clear that isn't the naturalness of a substance that determines how sustainable it is, but all its impacts over its entire life cycle.

It is the Life Cycle Assessment (LCA) that allows to calculate the canonical seven impacts (primary energy, carbon footprint, thinning of the stratospheric ozone layer, acidification, eutrophication, photochemical smog, solid waste, all parameterized to their respective weight factors), to which an eighth should be added, namely the water footprint.

The international Responsible Care program also makes possible to obtain data, analyzes and assessments in the health, safety and environment (typically HSE, or Health-Safety-Environment) areas of an activity. The obtained data show that the companies that apply this program are on average safer and less impactful than the others.

Claims in this area cannot therefore be based on good intentions but only on authentic and validated data and calculations: this is what the European Commission will ask with the above initiatives.

The recommendations

It is necessary to increase knowledge, understanding and trust in the scientific method and in the provisions established by the Regulations in order to guarantee the consumer a "conscious and informed choice", that is to put him in a position to have all the elements useful for his evaluation, elements that are well founded on a scientific and regulatory basis and not driven exclusively by marketing needs.

In promoting ingredients and finished products, it is very appropriate:

- resist to the temptation to take directly or indirectly advantage by discrediting certain ingredients or classes of ingredients, abandoning the "without" policy in favour of the "with" policy;
- not to use information or data that do not have irrefutable scientific support;
- not to attribute properties that are not proven with validated and reproducible scientific methods;
- always use positive wording to enhance its own work.

It is essential to recover and consolidate the trust of the consumer, as well as of all operators, in a supply chain that is among the most regulated and controlled, and which guarantees attention, transparency, seriousness and safety throughout its development.