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Eco conception of Raw Materials for cosmetics

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PURPOSE OF THE ABSTRACT

Amongst fine chemistry industries, the specificity of cosmetics is the large number of raw materials which are necessary for performance. Cosmetics used to be safe, sensorial, efficient. In addition, it turns to be responsible in terms of social and environmental impact. For this we need to develop eco-conception tools in order to measure the real 360° impact of our formula. In LVMH Perfume and Cosmetics, we develop an eco-conception tool called Index of Eco Formulation (IFE) with 6 axes: Renewability (Natural Index ? ISO 16128), traceability, mediatic index, Sustainability (Cradle to gate), labels (certifications) and Environmental impact (Gate to grave). We will develop two examples: one from active development and another for formula eco-conception.

Concerning ingredient development, we have now access to a large number of extraction technologies (maceration, Sc CO₂, ultra sounds, microwave, NaDES, extrusion,?) , biotransformation (enzymatic extraction or enzymatic biocatalysis) and fermentation (single strain or bacterial consortia). We will provide figures of eco-conception for those technologies.

Concerning formula, we will provide the example of the foundation recently launched by Guerlain called L'essentiel: this formula has been conceived with measurements of each ingredient in order to achieve a Naturality Origin Index of 97%, a full traceability of 80% of the formula and a low environmental impact measured by a Life Cycle Analysis.

FIGURES

FIGURE 1

FIGURE 2

KEYWORDS

eco-conception | cosmetics | Plant extraction | sustainability

BIBLIOGRAPHY