

Sustainability - Raw Material Performance and Metrics

Authors: Dr. Oliver Springer, Dr. Marrit Eckstein, Dr. Thomas Satzinger, Dr. Jürgen Meyer, Dr. Peter Schwab, Wibke Paesler, Peter Becker, Evonik Personal Care, Sustainability Working Group, Essen, Germany

Keywords: Sustainability, Life Cycle Analysis, Environmental Impact, Move 360° Toolkit

Abstract

The sustainability features of cosmetics and their respective ingredients need to be substantiated by harmonised and transparent metrics to obtain both consumer and manufacturer credibility. Life Cycle Analysis can give a comprehensive overview within the life cycle as such but selecting individual features for claims is misleading. Significant environmental benefits could be found during the processing and application of both raw materials and the final product. References could be used to substantiate environmental advantages and guide the way for eco-optimisation. Evonik's Move 360° Toolkit tracks frequently queried parameters for raw materials to aid the selection of formulation options amongst manufacturer preferences and sustainability targets.

Introduction

Increased consumer awareness about responsible business practices and sustainable products leads to different approaches amongst cosmetic manufacturers. The natural cosmetic market and its continuous double-digit growth per year indicate this basic demand for consumer products that take into consideration the world's environmental and social challenges. People don't want to harm their personal and ecological environment by their consumer behaviour. But how to go about choosing the right product (Figure 1)?

Does a purely natural based product take all this into consideration? Within market studies⁽¹⁾ it has become obvious that consumers are highly confused by labels and certificates.

Unfortunately, only a few sustainability product characteristics are currently covered by certifiers for natural cosmetics and their ingredients⁽²⁾. Demographic change, water scarcity and ethical issues whilst sourcing raw

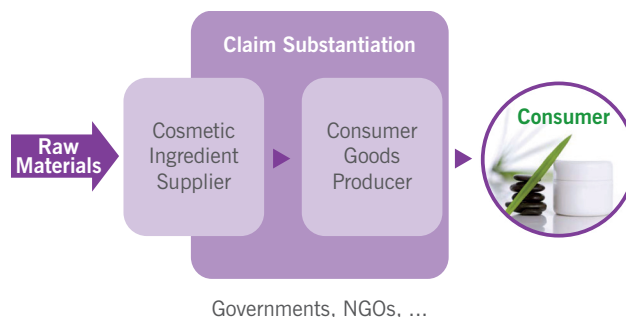


Figure 1. What is the Optimal Rating System?
Re-thinking Today's Approach

- "Credibility of brands and its manufacturers are more important than certificates."
- "Don't spend all the efforts to create new standards."
- "Display characteristics for individual choice."
- "There should not be one binary number for all CR characteristics"

materials for food and cosmetics are becoming more and more obvious to the consumer. Recent discussions about Palm Oil⁽³⁾ have raised questions on future availability and responsible sourcing.

Manufacturers are also becoming aware about more environmentally friendly technologies within their own sustainability programmes and efforts. Supplier ratings according to their environmental programmes and products are taking place and life cycle analyses have already shown the points of highest impact (Figure 9).

In recent years, terms such as 'natural', 'plant-based', 'organic' and 'renewable' have become firmly established in our everyday vocabulary, most commonly in the Personal Care market. Assuming that a natural based ingredient is also an environmentally friendly and safe ingredient, this trend leads to a global vegetalisation process in the raw material market.

Reflecting manufacturer efforts and targetting sustainability criteria of products as key performance