Bridging the Gap Between Art and Science - SenSelect®

Authors: Karen H. Chen, Mark Chandler, Croda Inc, USA

Abstract

Meeting the aesthetic targets desired by the end consumer is a challenge that faces all formulators. With more focus on specific market demographics, formulating varying skin feels continues to increase in complexity. However, we offer a solution to these challenges with the SenSelectR formulation tool.

Using an advanced sensory methodology that links qualitative and quantitative descriptive analysis, the SenSelect® formulation tool can bridge the gap between the marketing aesthetic "wants" and the R&D engineered output.

SenSelect® is a sensory selection tool for formulators to identify what key emollient and emulsifier combinations are needed to reach a desired skin feel sensory profile attribute. With this tool, it engineers what was previously viewed only as an "art" also into a science. This allows for fewer trials and a shorter development cycle - creating greater speed to market.

Introduction

Last year the Cosmetic & Toiletries global market was valued at just under \$270 billion with an anticipated average year on year growth of approximately 3%. The more mature regions of North America and Western Europe accounted for 21% and 29% of the global market. The emerging region of Asia Pacific exceeded North America, following very closely on the heels of Western Europe at 24% of the global market. The emerging markets of Asia Pacific, Africa and the Middle East, and Eastern Europe are anticipated to experience significant levels of growth with a forecasted average year-on-year growth of close to, and, in some cases, exceeding 5%.

With this phenomenal forecasted growth comes greater consumer demand. There is demand for better performing actives, better performing products and treatments, and better formulation aesthetics. To more accurately state the final point, consumers will demand products that better meet their regional, lifestyle, and demographic aesthetic needs. Companies will continuously need to create and re-create formulations to keep up with the competition and the demand of delivering newer

and better products to the market. Ultimately the feel and texture of new formulations will play a great part in a product's market success and will become one of the primary points of differentiation from competition.

To create a successful product, two major parameters need to be addressed: 1) Understanding the consumer need via marketing description and 2) Translating that need into an emulsion in a timely manner, because, as we all know, time is money. Speed to market can be the difference between a blockbuster product which is envied by all of your competitors, and a sad, 'me-too' product that is the object of derision.

An important part of the product development process is to define and write a detailed product description and sensory profile followed by putting together the initial prototypes for evaluation. This part of the process has been referred to as "the art of formulation" and like art, it is typically left to interpretation. But when it comes to interpreting consumer needs within a specified development time frame, what starts as an art can end up being a stressful, horrifying mess. It is often very difficult to describe what a product should feel like and the difficulty is added to by the different sensory languages that the marketers and consumers speak versus the cosmetic formulator.

In addition to this language gap, it takes years of experience and sometimes a great deal of trial and error to get the sensory experience of a product just right. If you were given the opportunity to do it faster, and to do it better, would you not jump at that chance? If you were to be given a selection of ingredients - emulsifier and emollient combinations - to help you reach your goal, would you not place high value on such a tool? To address these points, we offer the formulator SenSelect® which is a web-based technology that identifies formulations with a number of emollient-emulsifier combinations which will meet consumer sensory requirements. To put it simply, SenSelect® helps to take the guesswork out of building your formulation foundation. It replaces trial and error with a systematic checklist of possibilities that help the cosmetic chemist to increase the speed to market of their formulations.

