A Novel Approach to Formulation, Scale-Up & Testing

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Introduction

After twenty years of working on the ingredient side of the cosmetic industry, I started my own brand. Despite my career success selling a plethora of ingredients, my formulation design paradoxically did not utilize many ingredients at all. My experience led me to believe that a majority of ingredients used by many brands, most notoriously indie brands, are wasteful, unwarranted and solely used for "label marketing". I approached formulation of our core product launch, Bath and Bubble Gels, with an authentic guiding principle—safety first and an intentional "less is more" ingredient approach—that I believed would yield significant gains when it came to consumer expectation in a world of transparency. While every approach has pros and cons, we truly believe the framework we have created for product design outweighs any drawbacks.

Body

Our formulation design process involved establishing ingredient sourcing standards that included sourcing only US-produced, naturally-derived raw materials, ingredients that could demonstrate sustainable methods of sourcing and production, and ingredients compatible with a cold-process method of production. All formulations contained less than 10 ingredients, reinforcing our less-is-more approach. We used only ingredients that had a necessary function. That translated into not using a multitude of oils and extracts.

With this standard, we avoided the need to transport ingredients by ocean or airfreight, which has an obvious cost savings and, most importantly, a reduction in carbon emissions. Furthermore, by avoiding the use of heat in manufacturing, we were able to avoid the cost and energy waste of heating tanks. It also allows for less complicated manufacturing and less ingredient packaging waste after production.

Our strategy also included using only thoroughly tested materials, complete with safety dossiers. Ingredients like Cocamidopropyl Hydroxysultaine vary from source to source. In fact, there are nearly one dozen suppliers of this material. We focused on selecting one with the fewest impurities from a supplier with an impeccable track record for safety, reducing formulation and regulatory complications.

The fragrance selection process was essentially a formulation within a formulation design. It bore the same key requirements as our standard ingredient framework, but accounting for the complexities fragrance addition adds. All components needed to be USA-made, natural or nature identical, compliant for IFRA and the EU, and demonstration of sustainable methods for sourcing and production.

Safety is another key pillar of our formulation design. We conducted industry standard stability testing, continued further by testing the stability of the formulation in the final packaging. We also conducted microbiological testing in the form of preservative efficacy testing. We chose to conduct additional safety

testing, such as HRIPT and Tear Free testing. We needed to be certain we had an exceptionally mild and safe formulation.

Conclusion

Our formulation approach is more environmentally friendly due to fewer ingredients, local sourcing, and use of cold process production. We have reduced complexity in our supply chain and can produce and scale faster than our competition due to using fewer ingredients, while having increased quality oversight. Because of our thorough safety testing, we can consider larger retail opportunities where there are strict testing requirements without additive cost.

Our formula design approach does have drawbacks; our less-is-more approach, with no label marketing ingredients is a more challenging "story" to communicate when consumers are conditioned to analyze ingredient decks by INCI name alone. Additionally, thorough safety testing and manufacturing processes result in significantly higher start-up costs, making it challenging to survive in an already crowded space.