

The evolution of cosmetic butters: authenticity

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It is important in the first instance to understand that the focus of this article is on what we classify as 'true', 'authentic' or 'unadulterated' butters in the personal care market. Such a butter may simply be defined as "the fat obtained from the fruit, nut or seed from a specific botanical source". Further to this, it is recognised that a butter will be of a waxy solid or semi-solid state at a temperature range of 20°C – 30°C. While butters are significant to the food industry, cocoa and shea being two key raw materials for confectionary, we can equally identify with both as having major importance within the personal care market. That said, butter demand continues to grow but more-so outside of these two historic core materials. What were historically recognised as the base ingredient, or an important component, in many personal care products on which a formulation was focused, butters in the personal care evolution have taken an exotic route through authenticity. Listing Cocoa, Mango or Shea, for example, on the product portfolio, when presented to formulators, now extends to such product names as Cupuaçu, Murumuru and Ucuuba. Multi-functional as they are, the ever-developing world and increasingly consumer-led demand means formulators are keen to explore the growing number of commercially available butters now present in the market for a variety of skin, lip and hair care applications.

Authenticity

The demand for natural and organic ingredients from the consumer strengthens not only the support of a healthy lifestyle but brings with it an awareness of sustainability. New product development based on natural or organic themes are a core growth focus for both brand owners and manufacturers and in the UK alone, the natural and certified organic product sector increased by 23% in 2019 with a value of £106.4m. The Soil Association Organic Beauty and Wellbeing Market 2020 Report further details that 2019 results showed a ninth year of consecutive double-digit



growth and, since 2010, was the third largest growth in percentage terms. On a global scale, 2019 estimations for the market were \$36bn and this is predicted to reach \$54bn by 2027. The continued upward pattern in these results, and a strong value in sales revenue, has a positive and encouraging effect throughout the entire supply chain. The consumer-led movement via each step ultimately reaches the origin; the raw material producer, which is a very significant achievement.

'Authentic', 'true' or 'unadulterated', whichever adjective we wish to use for the butters, 'hydrogenated' or 'modified' are not ones we can give any consideration to in this situation. A hydrogenated olein does indeed have its place in commercial applications, offering a consistent quality, batch after batch, is one factor. The second may be stable pricing, but this is not necessarily guaranteed. However, while many may think that such modified products offer no contribution to the progress of true butters, the contradiction is that it may have some influence.

An increasing availability of butters achieved by hydrogenation therefore means the portfolio of authentic butters can be presented to the formulator and ultimately, their compliance with the brief, whether it be a natural or organic requirement, which is a starting point. Having ticked the first compliance box, the increasing inclusion in formulations is of course the foundation on which to build this product portfolio. From here onwards, the journey from grower to end user has never been more important, especially the story behind the raw material. From origin, looking positively at their ingredient being brought to market and, whether it be the formulator, brand owner or consumer, all having an interest in different aspects of the story, be it the corporate social responsibility, the ethical production, the environmental respect, the natural sustainability, or indeed the traceability of the raw material. The marketing story exists for the brand owners and for the consumer, their wellbeing and lifestyle path of consciousness continues.

Social responsibility

The origin of many raw materials may be far from what we would recognise as being commercial and in some circumstances, underdeveloped may be a more appropriate adjective. Whether it be with their production facilities, their organisational structure or their marketing operation, the latter not existing at all in many situations and therefore the reason for an established organisation to bring the raw material to market. Having said that, it is the local traditional operation in management, such as grower groups or owner co-operatives, in combination with the local traditional processing techniques, that allows the continuity of raw material production. And so, it is seen that with the starting point working effectively and efficiency following through each stage of the origin to consumer path, collective success ensues. The livelihoods of many at origin may be dependent upon the success of the raw material as few income options

exist, increased production benefits the local rural communities and, with the increased demand, an expansion in the community network follows, as fruit, nut and seed collection requirements increase.

Sustainability

While the positives can be seized upon of a raw material demand existing and the confidence in the ability to fulfil that demand existing also, this supply / demand ratio must always remain balanced. The ratio relationship must encompass many criteria and, with such a delicate balance, if tipped to a bias it could have a disastrous outcome. The requirement to be sensible and consistent in all commercial activity is a priority never to be overlooked, not least to allow demand outstripping supply and there being a risk that quality is compromised, and continuity of supply is threatened. Consistency in everything is of paramount importance and the irony is that the only inconsistency in the whole process is nature itself, the very reason that we are gifted to have access to these raw materials. It therefore becomes evident that the management of the botanical source is critical in all growing areas, a sustainable forest management plan and an environmental protection policy must exist. The natural harvesting protocol should never be forced or deviated from, the fruit, nuts and seeds falling when mature and being collected when ready to do so. Methods of collection and their timing follow a traditional and natural process respectively. If this practice is followed then the raw material quality, while not guaranteed due to natural climatic influences, will have an acceptance of consistency.

“The best way to preserve the environment is by keeping a community there. Encouraging the community to remain in the countryside, besides valuing a wealth of the local ecological heritage, contributes to its preservation. Care begins here, because it is where the community sustains itself.”

Quality and certification

Authentic, socially responsible, ethically produced, environmentally respectful, sustainably aware and 100% natural, are credible factors for a progressive looking formulator, brand owner and consumer. In addition, COSMOS Approved and a selection of raw materials with organic certification is also a possibility. To further enhance the product portfolio, there is access to an exotic butter range that has not undergone any refining process in its production. The fruits, nuts or seeds collected through the natural maturing process and in-line with the natural harvesting time ensures a good starting material is available; the naturally contained vitamins, carotenoids and tocopherols are present and preserved. Furthermore, with



strict focus on the quality of the starting botanical, acid values and peroxide levels should be of no concern; low results are an expectation and any concerns with stability should therefore be unfounded. The cold pressed process and method of extraction allows all the naturally occurring components to be retained for the benefits of the raw material, with no exposure to high temperatures or solvent extraction in the refining process that may impact the natural composition, especially where components are temperature sensitive. The idea with cold pressed extraction is to ensure the triglycerides and other components such as tocopherols, phytosterols, phenolic compounds and hydrocarbons remain, with no degradation to the raw material whatsoever.

Composition, properties and applications

The properties of each authentic butter and their compositional differences offer the formulator a varied raw material portfolio with which to work, and the option to make choices on those most suited to the brief. A balanced composition between saturated and unsaturated fatty acids offers a low melting point close to body temperature, allowing high inclusion levels in the finished product. Unsaponifiable fractions contain tocopherols, phytosterols, vitamins and minerals that truly represent the botanical source in its natural state, being nutrient rich. Concentration of lauric acid offers the performance of a mineral oil but with the naturality status, being non-petroleum derived, therefore enhancing the ethical

status. Enabling ease of penetration to the skin and scalp, and the non-obstruction of skin pores are advantageous, efficient and effective. Protection from external factors and anti-microbial activity can also be identified and used to good effect.

Whatever the finished product, a cream, lotion, moisturiser, shampoo, conditioner, stick or bar product, authentic butters have an important role to play in a multitude of personal care applications. Their touch and feel, their softness, their smoothness and the ease in which they can be spread, are all characteristics that the formulator can take to the bench to work with.

Skin, lip and hair formulation development in moisturising, emolliency, hydration, anti-aging, regeneration, anti-inflammatory, healing, absorbing, rejuvenating, after-sun, nourishment, protection, shine, gloss, softness, maintenance, volume control, and anti-frizz formulations have the opportunity to contribute to the evolution through authenticity.

Exotic authentic butters

As an example, a selection of Brazilian Rainforest butters are available that are compliant in all aspects that have been described beforehand, sourced throughout three Amazon states and benefitting 1,347 families comprising 5,484 individuals.

Cupuaçu Butter

A balanced composition between saturated and unsaturated fatty acids, giving the product a low melting point and a soft-solid aspect that melts quickly upon contact with the skin. Its unsaponifiable fraction is

Cupuçu Butter	
Typical Fatty Acid Profile	%
Palmitic Acid (C16:0)	5–9
Stearic Acid (C18:0)	32–38
Oleic Acid (C18:1)	37–43
Linolenic Acid (C18:3)	Max. 4
Arachidic Acid (C20:0)	9–13

abundant with many benefitting compounds, including tocopherols and phytosterols.

- Its primary fatty acid is oleic acid (C18:1, omega-9) followed by stearic acid (C18:0)
- Also contains palmitic acid (C16:0) and arachidic acid (C20:0)
- High in phytosterols, especially beta-sitosterol
- High in natural vitamin E and vitamins A and C
- Saturated/unsaturated ratio: 60/40
- Soft solid that melts quickly when in contact with the skin
- Melting point: 30°C
- Triglycerides exhibit excellent water absorption capacity
- Softness
- Recovery of moisture and natural elasticity, especially in dry and mistreated skin and hair

Murumuru Butter	
Typical Fatty Acid Profile	%
Lauric Acid (C12:0)	44–56
Myristic Acid (C14:0)	24–32
Palmitic Acid (C16:0)	5–9
Oleic Acid (C18:1)	5–10
Linoleic Acid (C18:2)	Max 4.5
Linolenic Acid (C18:3)	Max. 0.1
Arachidic Acid (C20:0)	Min 0.1



Ucuuba Butter.

Ucuuba Butter	
Typical Fatty Acid Profile	%
Lauric Acid (C12:0)	14–17
Myristic Acid (C14:0)	67–73
Palmitic Acid (C16:0)	Max. 6
Oleic Acid (C18:1)	Max. 6

Murumuru Butter

Tocopherol rich and containing short and medium chain fatty acids belonging to the lauric group, low acidity, high levels of saturated fatty acids, with a firm consistency offering a higher melting point. The high lauric acid content can offer a replacement for mineral silicones. A versatile material for use in skin, hair and lip care.

Skin care:

- Nourishing
- Soothing
- Protective
- Emollient
- Moisturizing

Hair care:

- Protective and nourishing for roots
- Maintenance for curls
- Volume control

Ucuuba Butter

A rich source of myristic acid (C14:0) and lauric acid (C12:0) with good absorption properties and offering versatility in skin and hair care formulations.

Skin care:

- Anti-inflammatory
- Anti-aging
- Hydrating
- Protective
- Emollient
- Moisturizing

Hair care:

- Protective
- Shine and gloss
- Volume control

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