

PURE BEAUTY



missing the mark:

the truth about organic products

by Adria Lake

Far from being the “gold standard”, organic skin care products have their own shortcomings and limitations. By demystifying the term, we may finally focus on the one issue that really matters: product safety and efficacy.

What is it about the idea of “organic” that we find so alluring?

We equate organic with quality, safety and sustainability. We believe that organic products are superior to their non-organic counterparts. We are convinced that synthetic chemicals are toxic for both our health and the environment. So, buying organic seems a smart and sensible choice.

But is it? Especially in the case of organic skin care. As a formulator and proponent of organic ingredients, I experience first-hand the challenges in formulating organic skin care and understand their limitations only too well. We produce small batches of freshly prepared organic spa and skin care products in quantities that would be laughable by commercial standards. Even then, it is always a race against time, as organic ingredients begin to degrade from the moment of production. So why produce them at all?

Evolution of beauty care

For thousands of years, almost every culture on earth has kept their own unique tradition of preparing natural beauty care, curative baths and medicines from plants and herbs. Their potency and effectiveness are time tested and science is just now beginning to understand and validate the wealth of knowledge long kept hidden in these traditional formulations. The so-called organic products we now find in department stores bear no resemblance to their time-honoured predecessors. We would like to believe that they are made with the same intention and respect for nature when, in fact, they are produced in mass quantities in much the same way as conventional

skin care. But, by labelling them as organic, manufacturers are able to sell them at a premium and market them as if they were rare and potent potions.

And organic certification has only reinforced the myth and added to the confusion.

Sense and sensibility

Common sense would tell us that the process required to ensure skin care products will stay ‘fresh’ after enduring long distances in hot and humid shipping containers and years of sitting on the brightly lit store counters or in our bathroom shelves would disqualify them from their ‘organic’ status, regardless of how many organic certifications are printed on their labels? Sadly, common sense has long been drowned by safety scares and unsubstantiated claims, the driving force behind the current rage for anything organic and the proliferation of organic certifications. Interestingly, the safety and efficacy of organic skin care themselves remains untested.

Why buy organic skin care if they are no more effective than other products on the shelves? Because they do not contain toxic chemicals and are better for the environment? Think again.

Venture with me beyond the sound bites and snap judgments for a moment and let us explore the hidden world of organic skin care and the big business of organic ‘branding’...

“organic”

skin care claim 1

CHEMICAL FREE

“Organic” skin care is free of synthetic chemicals, pesticides and other contaminants.

DID YOU KNOW?

Plants also produce natural toxins (endogenous pesticides) to protect themselves against fungi, insects and animal predators. The bigger the threat, the higher concentration of endogenous toxins the plant will produce. And this is precisely what happens with plants, which are grown organically. Traceable amounts of these endogenous pesticides are often found in organic skin care ingredients, essential oils and botanical extracts; as well as heavy metals such as lead, cadmium, nickel, mercury, copper, zinc that come from the organic fertilizers used by the growers.

INSIDER INFO

Unlike fresh organic produce, which require very little processing, organic ingredients used in skin care must go through physical, biological, and chemical processes before they are ready to use as cosmetic ingredients. Most plant extraction methods also require synthetic or petro-chemicals. And at least 50% of the ingredients used in cosmetics are derived from petroleum. The organic food standards which bar the use of all petroleum by-products were not designed for the skin care industry. Even the “green chemistry” endorsed by many of the organic certification bodies does not rely solely on natural ingredients. Its aim is to provide realistic guidelines for skin care formulators, which means allowing the use of synthetics and petro-chemicals in the absence of commercially viable natural substitutes.

REALITY CHECK

Every ingredient in any skin care product is a chemical. We breathe and ingest them every day. If someone were to offer you a cocktail of butanol, iso amyl alcohol, hexanol, phenyl ethanol, tannin, benzyl alcohol, caffeine, geraniol, quercetin, 3-galloyl epicatchin, 3-galloyl epigallocatechin and inorganic salts, would you take it? If you drink tea, you have been enjoying them all along. In short, a chemical cannot simply be classified as “dangerous” or “safe”; it always depends on the amount or dose, used.

PURITY TESTS

Both organic and non-organic ingredients should go through rigorous testing to determine their purity before they can be used as skin care ingredients. In reality, however, many certified organic oils, extracts and essential oils contain various diluents and contaminants.



INSIDER INFO

Mother Nature is still the best chemist. But her concoctions are seldom sweet and innocuous. She mixes potent cures and lethal poisons, often in the same brew. Her complexity demands respect and deep understanding. She is magnanimous, but far from benign. But, surely, organic ingredients are safer than synthetic chemicals? Not necessarily. Parabens, the much maligned preservatives which have been found to have the properties of endocrine disruptors (ED's), are 1000 to 1,000,000 times weaker than natural estrogenic compounds found in natural skin care ingredients such as soy, hops, sage, St. John's wort, rosehips, yarrow and some variety of seaweed.

REALITY CHECK

Legislative bodies governing cosmetics production in the US and Europe, the Federal Food, Drug and Cosmetic Act (FD&C Act) and the European Cosmetic Directive, prohibit the marketing of adulterated or misbranded cosmetics, research and control the safety of chemicals, and issue a list of 'prohibited and restricted' ingredients. But, the responsibility for ensuring the safety of skin care formulations falls squarely on the product manufacturer.

“organic”

skin care claim²

SAFETY

“Organic” skin care is safe.

DID YOU KNOW?

Dibutylphthalate, a common chemical used in nail polish, is banned in Europe due to its fetal toxicant properties. Yet, theobromine, a natural occurring alkaloid found in cocoa beans and also a fetal toxicant, is much more potent. So far, no one is talking about banning chocolate, soy or seaweed. This is not to infer that these natural ingredients pose significant danger unless used in very high concentrations. The comparisons are here to put our perception of risk in perspective and to shatter the naïve assumption that organic or natural ingredients are safe and synthetic chemicals are toxic.



“organic”

skin care claim³

EFFICACY

“Organic” skin care ingredients are more effective than non-organic ingredients.

INSIDER INFO

Well-informed proponents of organic ingredients will readily admit that there is no clinical evidence to support this claim. In fact, plants used in modern skin care formulations often lack the very phytochemicals that are preserved when they are prepared according to traditional methods. Organic ingredients may be superior in quality but not in efficacy.

REALITY CHECK

Cosmetics is legally defined as “articles intended to be applied to the human body ...for cleansing, beautifying, promoting attractiveness, or altering the appearance without affecting the body’s structure or functions”. Because of this somewhat outdated definition, skin care products are not subject to pre-market approval, which requires scientific review to ensure the safety and effectiveness of the products.

QUALITY & EFFICACY

The quality of any botanical ingredients is largely influenced by the following:

- Growing conditions of the plant. When cultivating plants, which are grown specifically for extraction, the location, altitude, fertility of the soil, weather conditions and method of cultivation all have influence upon its quality.
- Harvesting time and care of the plant material during transport and storage.
- Method of processing the plant for extraction of active ingredients.
- Overall health of the plants themselves (i.e. is the plant disease free?).

The efficacy of skin care ingredients and products however, is determined by the following factors:

- Concentration. Many of the more than 320 botanical ingredients used in skin care products are at concentrations far below therapeutic ranges to be effective.
- Permeability. A major challenge to the clinical efficacy of any botanical ingredient is the delivery of therapeutic concentrations of the desired active ingredients across the stratum corneum – our skin’s own permeability barrier.
 - Stability of formulation. This includes chemical, physical and photo stability tests to ensure efficacy and that toxic metabolites are not formed during the formulation.
 - Freshness. Truly organic products can only be produced in small batches and will come with a production and used by dates. Freshness is imperative in organic skin care. Active ingredients cannot defy the laws of chemistry. They begin auto-oxidation to some degree from the time of production and will often need refrigeration to keep fresh.



DID YOU KNOW?

Replacing Parabens with natural alternatives such as essential oils or curry plant leaves alone would call for a very large harvest, as hundreds of kilograms of plant material are required to produce a relatively minute amount of essential oils. And the result would still be less than optimal as very few natural alternatives offer broad-spectrum preservation.



PURITY TESTS BILLION DOLLAR INDUSTRY

The market share of "Organic" skin care is still fairly small but is rampantly growing. In Europe, its share is highest in Germany and Austria, where it makes up around 4% of total cosmetic sales. In other European countries the average is about 2%. The North American market share is a respectable 15% of total cosmetic and toiletry sales, with sales increasing by 20% a year. Currently, the global sales of "organic" cosmetics are increasing by over US\$1 billion a year. European sales exceeded US\$2 billion for the first time in 2008.

INSIDER INFO

The adage "when we buy organic skin care products we are taking part in the healing of our planet" makes intuitive sense. But, the cold hard truth may not be so heartwarming. The global cosmetic and skin care industry is hundreds of billions of dollars strong. At this astounding growth rate, one simple question comes to mind: how much arable land would we need to set aside to grow the organic ingredients required to supply the ferocious demand? And, as there is no evidence supporting organic ingredients superiority in their efficacy as skin care ingredients, does it make ecological sense to insist on their use? Wouldn't it make more sense to use our farm land to grow high quality food crops that would feed the world's growing populations and utilise science to develop safe and effective ingredients for our skin care?

"organic"

skin care claim₄

SUSTAINABILITY

"Organic" skin care is environmentally friendly and sustainable.

REALITY CHECK

Our ability to synthesise plant molecules and develop highly effective synthetic ingredients in the lab is one of modern science's great achievements. Some man-made ingredients are identical to their natural counterparts and are more environmentally friendly when created synthetically. Lab production means we can massively reduce the quantity of land and water used to produce them.

the truth about Organic Branding

Our partiality for everything organic has morphed a humble farming method into a powerful global brand – one of the most persuasive and lucrative. But, unlike other global brands, which are highly proprietary, the “organic” brand is available to all. Anyone can use it. At no cost and without any legal consequences. Is it any wonder that just about everyone is using it?

First, there is the word...

The need to regulate the use of the word “ORGANIC” is a real concern. But there is a lot more at play here than meets the eye. The cosmetic industry is a powerful political and lobbying force. So far, all legislative attempts to define and regulate the word had been met with strong objections. Thus, governments have opted to stay above the fray. Unlike the agriculture and food industries, there are currently no official regulations governing organic cosmetics. In Europe, only the Cosmetic Directive has any legal force. However, it does not include any specific regulations on a European level concerning organic and natural cosmetics.

Organic certifications

The situation in the US is identical. Organic farming is regulated by the Department of Agriculture (USDA) but cosmetics are not. Some cosmetics brands use NOP (National Organic Program) certification to make known the organic origin of their ingredients, not the organic nature of the finished products. But, there are many privately funded and industry backed organisations that will issue organic certifications for a fee, if your product meets their version of the organic standards. Why agree on one set of standards if subtle differences mean everyone gets a piece of the pie?

More than one standard

Case in point, Europe’s five major organic associations (Ecocert, BDIH, the Soil Association, AIAB and ICEA) still cannot agree on a harmonised ‘organic’ standardisation. Instead, a lobby group of the leading European natural cosmetics companies have decided to form yet another certification body: NaTRUE. To add to the confusion, large retailers such as Whole Foods Market and Boots have also developed standards for their own natural and organic beauty products. Cosmetic giants (including Estée Lauder brands, L’Oreal, and Jason Naturals), not widely known for being champions of organic products, have also created the Organic and Sustainable Industry Standards (OASIS). And there are many other certification bodies offering yet more options. What does all this mean to the consumer but more confusion? Furthermore, organic certification does not address the more relevant issue of product safety and efficacy.

What’s real?

Arguing over the definition or authenticity of ‘organic’ skin care, which we have established as a purely marketing term, sidesteps the importance of a Safety and Efficacy guideline based on independent scientific review and research for all types of skin care products. Harmonising safety and efficacy standards would be challenging but not impossible. This will also force big manufacturers to invest their billions on the research and development of safe and effective skin care ingredients and products rather than in decimating our planet’s rare resources to grow and process ingredients for their ineffective and fictional “organic” skin care lines.

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“The NOP is a marketing program, not a safety program” according to USDA’s spokesperson Joan Shaffer. She further explains that the NOP organic seal works just like the USDA grading system for beef. “Steak may be graded prime, but that has no bearing on whether it is safe or nutritious to eat”. The Soil Association also admits that one of its key market restraints is the lack of conclusive evidence to support the benefits of natural personal care products.



USING “ORGANIC” WITH CARE

In conclusion, the idea of organic skin care that can be produced cheaply in mass quantities is a fantastic marketing invention that has no base in reality. By its very nature, organic products degrade within a relatively short amount of time. And, large quantities of pure, high quality organic ingredients are economically and ecologically costly to produce. In the case of skin care, our insistence on organic ingredients has resulted in countless number of ineffective products that pay lip-service to the concept of organic formulation. Our misguided demand may also be detrimental to the environment as it fuels an explosion of land cultivation for non-food crops which will go to waste in the hands of unscrupulous cosmetic giants.

- We may not be able to regulate the use of the word ‘organic’, but we can demystify it. Far from being the ‘gold standard’, organic products have many shortcomings and limitations. By making educated rather than purely emotional choices, we can bring safe and highly effective skin care products to the market.
- Our concern for our health and the sustainability of our planet is justifiable. But we also need to acknowledge our dependency on man-made chemicals. Sanitation, medication, electronic gadgets and food technology are responsible for our social progress and increased life expectancy. And all of them rely on chemicals developed in the labs. The future of our health and the planet also depends on our bold scientific explorations, not our idealistic vision of the past.
- Respect for traditions is best shown by adapting them to the present. Combining natural substances with man-made ingredients and technologies can result in even better performance products. Instead of shunning synthetic ingredients, we need to insist that more research and tests are done to ensure that they are safe and effective, both for our use and the environment. Using fewer but more effective products is a smarter way to conserve our natural resources and take care of ourselves.☐