What Comes Naturally
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What Comes Naturally

While there are several technical guidelines and grades of organic materials to define what products are natural, the wishes of the consumers ultimately dictate what is good or bad.

We live in a world where vegetarian eggs are laid by cage-free hens that ingest omega 3 fatty acids, lutins and choline. The resultant brown eggs are sold in 100% recyclable plastic cartons. "Natural" is a mild word in this increasingly organic world, a world less dependent on pesticides and fertilizers than ever before. Driven by the organic food industry, the halo effect of this consumer movement has profound implications for the future of personal care.

An FDA Monograph may limit formulation options, but at least definitions and methodology are clearly established. Hydroquinone at 2% is a skin lightener, and arbutin and kojic acid are not. There is similar certainty with sunscreens and SPF values, antiperspirants and sweat reduction. Where there is no legal definition, cosmetic claims can become murky indeed. Nowhere are the waters more muddied than in the interpretation of the word "natural," and it is a confusion as much rooted in emotion as in science.

> The cosmetic industry must realize that the consumer of organic products is much more demanding of strict conformance to standards than the average person.

The general definition of natural has changed over time. A traditional version is "products derived from the plant kingdom, animals or their secretions, via extraction, expression or distillation without intentional chemical reaction or change." Animal products have been almost totally removed from commerce in the past decades, as plant products have gained an advantage over petroleum derivatives because they are a "renewable resource."

Currently, the consumer or the marketplace defines what is accepted as natural. Even the extraction process is factored in, with mechanical expression, heat and water acceptable, yet organic solvents are not. Growing methods have come under increased scrutiny. Traditionally, it was acceptable to use fertilizers, pest control and irrigation. In the shift to organic production, only natural fertilizers and pest control are allowed. But now we have gone beyond organic to biodynamic. Biodynamic plantations are planted for the purpose of harvest, but then left completely in the wild, with no additional intervention in the growing process.

The fragrance industry was able to use the concept of "nature identical" to create commercially viable natural perfumes. A chemical made in the laboratory was acceptable if the same chemical also existed in nature, and essential oils were assumed to be natural. Lately, the scrutiny of the extraction methods, combined with the European focus on fragrance allergens, has made it more difficult to satisfy the most particular customers. The presence of allergens in many of the natural products used in fragrances belies the common perception that "natural" is safe.

From a formulation point of view, the first step toward creating natural cosmetics was to put in a token amount of a botanical or botanical blend. This approach works as a primitive marketing hook rather than a serious attempt to provide functionality. The next step was to use quality naturals at levels producing a genuinely functional effect, necessitating a high formulation cost and commitment to the consumers' needs. Neither of these approaches extended to the composition of the bases themselves.

The next step was to formulate the product itself with natural materials. Table 1 lists some materials that can be used to make natural cosmetics. This involves increased cost and formulation challenges. Along the way, chemistry inevitably enters. A natural product is hydrogenated—how natural is that? Just as beauty is in the eye of the beholder, the naturalness of hydrogenated oils is in the eye of the formulator or consumer.

Some Natural Cosmetic Ingredients

Natural emollients

1. Plant oils
2. Shea, cocoa and jojoba butters

Natural humectants

1. Lecithin
2. Panthenol
3. Glycerin

Natural surfactants

1. Castile soap
2. Yucca extract
3. Soapwort
4. Quillaia bark extract

Natural preservatives

1. Tea tree oil
2. Thyme oil
3. Grapefruit seed extract
4. D-Alpha Tocopherol Acetate

BDIH Certification Requirements

1. **Plant Ingredients**
   Use of plant ingredients whenever possible is encouraged. Plants should be grown organically or wild-harvested.

2. **Animal Protection and Animal Testing**
   Neither in the production nor in product development is testing on animals to be carried out, nor outsourced to another company.

3. **Mineral Ingredients**
   The use of inorganic salts and mineral ingredients is generally allowed.

4. **Restricted Ingredients**
   Emulsifying agents and surfactants may be used if they are obtained by the hydrolysis, hydrogenation, esterification or trans-esterification of the following materials: fats, oils and waxes, lecithin, lanolin, monosaccharides, oligosaccharides and polysaccharides, proteins and lipoprotein.

5. **Unacceptable Ingredients**
   Synthetic coloring agents, synthetic fragrances, ethoxylated ingredients, silicones, paraffin and other petroleum products.

6. **Preservatives**
   Certain preservatives identical to those found in nature are allowed along with natural preservation systems for the safety and stability of the product. These include: benzoic acid, its salts and ethyl esters; salicylic acid and its salts; ascorbic acid and its salts; benzyl alcohol.

7. **Irradiation**
   Sterilization of natural ingredients and their cosmetic end products through radioactive treatment is not allowed.

8. **Certified Natural Cosmetics**
   An independent testing institute evaluates the compliance of the above criteria. Compliance is documented by the BDIH "Certified Natural Cosmetic" seal.

For more information, visit the following Web sites:

www.kontrollierte-naturkosmetik.de/en/the_guidelines.htm
www.organicconsumers.org/bodycare/organic_standards_cosmetics.cfm
www.health-report.co.uk/natural_organic_cosmetics.htm
www.ams.usda.gov/nop/indexIE.htm

Guidelines for natural body care and cosmetics were established in 1996 by a German association, BDIH (Bund Deutscher Industrie- und Handelsunternehmen). The guidelines, an abbreviated form shown here, take into account consumer expectations for safe and ecologically sound products. Compliance, confirmed by independent outside testing, results in a "Certified Natural Cosmetic" seal.

One guideline that has been a recent subject of controversy is the percent of ingredients claimed as organic. There are different levels of products. Those that are labeled 100% organic obviously allow no room for non-certified material An "Organic" claim implies 95% certified organic materials, the remainder coming from an allowable synthetics list. "Made with organic ingredients" requires 70% organic materials. But abuse has entered this realm with the use of "organic floral waters" or hydrosols. To create these infusions, botanicals are boiled in water, and the steam cooled back to a now upgraded version of water. If tea is "brewed" this way, the product becomes "Steam Tea." Using Steam Tea instead of water as an ingredient, the 70% organic is easily achieved, but in a highly unethical manner.

The Organic Consumers Association has formally complained to the USDA's National Organic Program against this practice. Food standards clearly define the organic components as non-water, non-salt agricultural products. Transferring these criteria to cosmetics clearly shows the deceptive intent of the Steam Tea type claim. The cosmetic industry must realize that the consumer of organic products is much more demanding of strict conformance to standards than the average person.

There never will be a perfect definition of "natural," therefore, either self-regulation or the rule of law must prevail. The organic movement is evolving, so freezing it at a fixed point of its evolution and imposing that vision as law may be a false victory. Taking a cue from the food industry is useful, but may miss vital technical differences between the nature of the two industries. Perhaps the best stance is to respect the wishes of the consumers, act honorably as the supplier of products to the market and to respond in a positive way as new technological challenges arise. Maybe the organic trend is emotional at its heart, but aren't emotions what our products are ultimately meant to serve? ■ **GCI**

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