

## Hot trends

# Decoding Notions of Natural and Organic in Personal Care\*

An expert in cosmeceuticals guides perfumers and flavorists through the controversy surrounding organic materials in personal care and the need for standards to separate hype from reality

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**T**he growth in the use of natural products in personal care has been well documented in the last few years. The growth continues today and will, for the foreseeable future.

In the United States, according to a recent article in DATAMONITOR entitled “Developing the Basis for US Personal Care,” the total value of the natural personal care product market is growing at an annual rate of 21.4 percent, which explains with some irony why so many “chemical” companies have developed extensive ranges of “natural” raw materials for personal care firms. For example, Induchem AG now offers Unisurrection S-61, a plant-based, preservative-free active complex for restructuring and protecting the skin that is derived from beet root and *Haberlea rhodopensis* leaf extract. Or consider rooibos extract from Jarchem, a product derived from South African caffeine-free tea that imparts strong anti-inflammatory, antimicrobial, antioxidant and hypoallergenic properties. The so-called “naturals” market now represents around 12 percent of the overall \$48 billion US personal care market.

An extension of the natural product personal care market and the “wellness” phenomenon has been the cosmeceutical product category. Overall today, cosmeceuticals in the United States is a \$1.9 billion industry and will grow to \$3.9 billion by 2006, a whopping 70 percent increase.

As a point of comparison, when we analyze the overall US skin care segment, which is now over \$2 billion and growing

at around 6 percent per annum, we see a market that pales in growth to clinical, spa and doctor-prescribed skin care brands, which are now outpacing the total skin care market at a rate of 62 percent in dollar volume. The prestige personal care market, which is reported as a separate segment, will reach \$11.8 billion by 2007. This will be driven by makeup growth stimulated by a sustained focus on younger women and via offering older women enhanced cosmeceutical products that deliver anti-aging and other benefits.

### Cosmeceuticals in Alliance with Foods

Just what are cosmeceuticals? They are the combination of modern medical research and development and cosmetics. Cosmeceuticals come in at the point at which cosmetic products produce “drug-like” benefits based on the function of specific ingredients that claim to provide clinical effects in addition to traditional cosmetic functionality. Cosmeceutical brand sales in US department stores soared at a blistering 77 percent last year as consumers continued to focus on new cutting-edge products and technology aimed at slowing down the signs of aging.

As I’ve mentioned, the development of cosmeceuticals has been fueled by an explosion of new ingredients, many of which originally entered the market through boutique or doctor-influenced brands. Mass market manufacturers have become increasingly quick to apply the latest breakthroughs and have, themselves, invested in new technology and research and development.

**A novel partnership:** In 2002 Nestle and L’Oreal formed a joint venture to produce cosmeceutical beauty products in France. The joint company Laboratories INNEOV hopes to capitalize on this growing

\*Modified from a speech originally presented at the Personal Care Ingredients & Technology Expo.

market, which is not hampered by regulations at the current time. That means new products can be developed and brought to market more quickly. Alliances and cooperation between food and personal care manufacturers is nothing new, but the application of joint research and technology solely for the beauty and food supplement field is. In the personal care industry, there is an exponential growth trend occurring not just in the United States, but globally. By 2007, analysts expect the global market for medically advanced cosmeceutical products to top \$56 billion (current: \$45 billion). It is this type of growth that has stimulated the Nestle/L'Oreal alliance. The venture draws on the key strengths from each company. The product development folks are focusing on dietary supplements intended to improve hair, nail and skin appearance and combines Nestle's nutritional know-how with the dermatological expertise of L'Oreal.

The utilization of experts and leading authorities in the spa/clinical and medical fields to promote product credibility is the most current marketing strategy in the cosmeceutical world. It is almost a guarantee that as the cosmeceutical industry evolves and continues to shift towards prestige anti-aging skin care and pharmaceutical-type products more joint ventures such as the Nestle/L'Oreal will occur.

### Cosmeceuticals and Increased Claims

Driving all of this is the consumer's penchant to stay healthy and look and feel young. Here is a look at some of the ingredients that are finding their way into anti-aging products and maybe even your bathrooms:

- **Kinetin:** A natural plant growth factor that is added to anti-aging products to treat fine lines, hyperpigmentation and sun damage.
- **Human growth factors:** Extracted from cultured cells, including foreskin and placenta.
- **Copper:** Used in medical centers to treat wounds, some companies have tapped into the anti-aging potential of copper and are adding it to face and body creams.
- **Lipids:** Fatty acids, ceramide and cholesterol are all components of healthy skin. Some research indicates that replacing these lipids in certain ratios may treat eczema, diaper rash and plump up aging skin.
- **Retinol:** Also known as vitamin A, retinol comes prescription strength in Retin A, which has been proven to be effective at erasing lines and hyperpigmentation. Over the counter creams contain less active ingredient.
- **Coenzyme Q10:** A powerful antioxidant that is a natural component of human cells. Recent research suggests that Q10 supplementation may help prevent Parkinson's disease progression. When added

to skin creams, it is thought to improve elasticity.

- **Vitamin C:** It's not just in orange juice anymore. This vitamin can be found in creams and serums to address fine lines and uneven pigmentation. Transdermal patches (think nicotine patch) are the latest take from the cosmeceutical industry to maximize delivery of this highly unstable vitamin.

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As the number of people who are concerned about toxins in our environment grows, more and more skin care companies are jumping on the natural and organic bandwagon. According to a recent article in GCI magazine by Claire Briney:

The increasingly close alignment of cosmetics and toiletries with food trends and anxieties surrounding man's intervention in nature are leading to a notable emergence of organic cosmetics and toiletries products. Organic skin care has generated interest since the launch of the French April 2003 bio (organic) cosmetics label, which guarantees a minimum of 10 percent of organic ingredients in the final product. According to industry professionals, the main players in the cosmetics and toiletries market already have contacted ECOCERT, the organization behind the label. The Institute National de la Recherche Agronomique (INRA) sees exponential growth of French organic products in all sectors...a sign that organic cosmetics could soon turn from a niche to a mass market category.

### Tricky Definitions

But what do “natural” and “organic” mean? How do we really know what we are buying is really natural and organic? Are natural and organic really any better for us? What products are truly natural and organic?

According to Narelle Chenery, director of research and development, Miessence:

[O]ur skin is the largest eliminatory organ in the body. It is a two-way membrane. Toxins are eliminated through the skin via perspiration and absorbed through the skin into the body's circulation system, through hair follicles and sebaceous glands, but not through the sweat glands. One square inch of skin contains approximately 65 hairs, 100 sebaceous glands and 650 sweat glands. Every square inch of your skin is like a thousand open mouths, absorbing into the body most of what is put on it.

Manufacturers must be careful about claims with respect to absorption. Products that penetrate the skin would generally be labeled as “drugs” and would be governed by much stricter regulations. However, it is now recognized that the skin does absorb many ingredients in skin care preparations. This is both good and bad. Good, because it means our skin can be nourished from the outside with some wonderful ingredients. Bad, because ingredients that would never be allowed to be taken orally can still be absorbed into our system through our skin.

What do “natural” and “organic” mean on product labels? Nowhere do these concepts take a more gratuitous bruising than in the personal care industry. If we first take the word “natural” and look it up in “The Concise Oxford English Dictionary,” we would find this description of natural thus: “existing in, or caused by nature; not artificial; uncultivated; wild existing in natural state; not disguised or altered.” Many labels have long lists of chemical names, some followed by the phrase “derived from (some natural substance).” This can be misleading for consumers who are looking for genuine natural products.

### Manipulations of Terminology

When chemicals such as cocamide DEA or sodium hydroxysultaine are followed by the words “derived from coconut oil,” the consumer is led to believe that these synthetic chemicals must somehow

be “natural.” While this may be true in some cases where a natural oil or extract is actually used, it is ultimately irrelevant because what you end up with after the chemical solvent extraction and processing is usually anything but natural or pure. It is just another chemical concoction with some rather awful sounding long name to describe the process the “natural” product went through. This very subject is now the center of controversy surrounding the issue of standards to regulate organic ingredients used in personal care. The US Department of Agriculture, which regulates such matters, recently stepped down from its position and has ceased to be involved with any regulatory control of organic ingredients used in personal care.

Last year, the Organic Trade Association's Personal Care Task Force (PCTF) and other members of the personal care community attended an exploratory meeting for the development of organic personal care standards organized by NSF International, an independent, not-for-profit, non-governmental organization. The personal care advocates expressed their strong concern regarding a continued need for meaningful and enforceable product standards for organic products used in personal care.

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## No Regulations, No Definition

Now, what about “organic?” A fair description of organic products might read: produced and involving production without the use of pesticides, artificial fertilizers or synthetic chemicals. Simple, right? Well, yes and no.

Without regulations, the definition of organic is not so clear! An increasing number of companies are now claiming to use “organic” herbs in their products. But what about the rest of the ingredients? Are they safe? Are they natural or from an organic source? Surely there must be an authority that governs the use of the term organic on labels?

In reality, the term “certified organic” is governed by a number of internationally recognized bodies. In the United States, as of today, it is regulated by the Department of Agriculture’s National Organic Program; in Australia, the Biological Farmers of Australia (BFA) is the largest body; in Europe, such matters are overseen by ECOCERT regulation F-32600. Searching for products with the logo of a certifying body on the label is the only way one can guarantee the organic authenticity and integrity of every ingredient in the product. Only then can it truly be called a natural product. Without the certified organic label, the organic claim means nothing, as it cannot be verified.

Hopefully, meetings like that one will lead to better governance of organic ingredients used in personal care in the United States.

## Codebreaking Personal Care Labels

How do we know what we are buying is really natural and organic? Fortunately, there is a very simple way to differentiate between the hype and truth in a personal care product: read the ingredient list on the label.

Narelle Chenery of Miessence Inc. has done a good job at helping us understand this. Take for example an ingredient list of a so-called natural and organic body moisturizer (my editorial comments appear in brackets):

### Apricot Cream

Natural or organic ingredients include:

- 1 Water (deionized)
  - 2 Isopropyl palmitate (palm oil derivative)
  - 3 Apricot kernel oil [Content: 2.5 percent.]
  - 4 Bis-diglyceryl caprylate/caprate/isostearate/stearate/hydroxystearate adipate (vegetable triglyceride)
  - 5 Glyceryl stearate SE (vegetable derived)
  - 6 Caprylic/capric triglyceride (glycerin-derived emollient)
- [Numbers 5 and 6 are all produced by chemical reactions between various fatty acids and glycerol (synthetic glycerine). They are largely synthetic.]
- 7 Cetareth-12 (organic emulsifier) [A synthetic emulsifier that contains levels of ethylene oxide and dioxane.]
  - 8 Tocopherol oil (vitamin E)
  - 9 Chamomile extract

- 10 Sage extract
  - 11 Linden extract (lime blossom extract)
  - 12 Balm mint extract
  - 13 Shea butter (from karite)
  - 14 Wheat germ oil
  - 15 Carrot oil
- [Numbers 8 to 15 are natural ingredients.]
- 16 Cetyl alcohol (organic co-emulsifier)  
[May be natural or synthetic.]
  - 17 Sodium hydroxide (pH adjuster)  
[Otherwise known as caustic soda, or lye, a powerful drain cleaner that is extremely alkaline and corrosive.]
  - 18 Sorbic acid (organic compound)  
[Sorbic acid was once isolated from the mountain ash berry, but is now chemically synthesized and is a questionable preservative.]
  - 19 Tocopherol acetate (vitamin E derivative) [Synthetic vitamin E.]
  - 20 Methyl paraben
  - 21 Propyl paraben
  - 22 Imidazolidinyl urea (organic compound)
- [Numbers 20 to 22 are toxic and allergenic preservatives that have been linked to increasing oestrogen levels in women.]
- 23 Fragrance [Probably synthetic; may contain phthalates.]
  - 24 FD & C yellow no. 5, D7C red no. 33  
[Consists of synthetic colors.]

Notice my comment next to apricot oil: content: 2.5 percent. Apricot oil is number 3 on the list. This means everything *after* apricot oil makes up less than 2.5 percent of the volume. This means that about 90 percent of the product is water and isopropyl palmitate. Isopropyl palmitate is derived from isopropyl alcohol, synthetic alcohol and palmitic acid, a fatty acid from palm oil.

Now let’s look at an ingredient list of a certified organic body moisturizer. As before, my editorial comments are in brackets.

### Certified Organic Moisturizer

- 1 Proprietary blend of organic native Australian distilled herbal extracts and aloe vera [A proprietary blend of organic native Australian distilled herbal extracts.]
- 2 Organic safflower oil [Cold-pressed from organic safflower seeds.]
- 3 Purified water [Purified water.]
- 4 Organic avocado oil [Cold-pressed from organic avocado fruit.]
- 5 Organic cocoa butter [From organic



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- cocoa beans.]
- 6 Non-GMO lecithin [From non-genetically modified soybean oil.]
  - 7 Organic sugar-cane ethanol [From organic sugar.]
  - 8 Organic unrefined beeswax [From organic beehives!]
  - 9 Lime [Cold-pressed from the skin of organic limes.]
  - 10 d-Panthenol (pro-vit b5) [A precursor to vitamin B5.]
  - 11 Olive extract [From organic olive leaves.]
  - 12 Grapefruit extract [From grapefruit seeds.]
  - 13 Sclerotium gum [A natural gum.]
  - 14 Organic orange [Cold-pressed from organic orange peel.]
  - 15 Vanilla extract [From organic vanilla beans from Madagsacar.]



## More on the Web [www.perfumerflavorist.com](http://www.perfumerflavorist.com)

Jack Corley discusses chemical alternatives in personal care, including emollients, humectants and emulsifiers.

### Regulations

Growing consumer awareness of health and wellness is truly an international movement. The controversy over whether certain chemicals are safe in personal care products is generating almost as much controversy these days as the claims that are appearing on product labels. Scrutiny and complaints by consumers have spilled over into the laps of regulatory and elected officials. The US FDA recently expressed some concern about both substantiation for cosmetic claims and whether certain

cosmetic claims do go “over the line” so as to resemble drug claims. Under the legal concept known as “puffery,” it is legal for cosmetics companies to brag that their products make women look more beautiful. According to the US FDA guidelines, however, companies can’t claim in their packaging that their products affect the skin’s structure or function. Cosmetics making this claim are considered red drugs under US FDA rules and require the organization’s approval before they can be sold. The US FDA began laying the groundwork for closer scrutiny of anti-wrinkle creams with a June 2002 memorandum of understanding between its two internal divisions responsible for the oversight of drugs and cosmetics. Enforcement efforts in the past have been exacerbated by virtue of the fact that cosmetics and drugs are regulated separately.

The California State Senate approved a bill last year banning phthalates in cosmetics. The move was sponsored by Assembly Member Judy Chu who said the bill was necessary because phthalates have been shown to cause reproductive harm, and “preventing birth defects is far more important than producing nail polish that doesn’t chip.”

Interestingly, the current USDA organic law actually began in California in 1990 through the efforts of the Department of Health Services, the California Department of Food and Agriculture, and a strong agriculture advocacy group. The same lobby, instrumental for the passage of the 1990 California law, is also working diligently towards the establishment of a national law using the 1990 California Food Act as a model.

Ironically, the consumer interest and growth in organic personal care products have come along at a time when the USDA is trying to distance itself from regulating organic personal care products entirely. The marketplace could then return to a charlatan period with all kinds of organic claims made that have absolutely nothing to do with reality. This would be a big setback to all the work done to date to eliminate such outlandish claims.

Some assert that control of organic ingredients used in personal care should fall under the US FDA. Others believe that the recent work done by the Organic Trade Association’s Personal Care Task Force needs to continue, and that “new” organic standards be finalized before the end of this year.

All the controversy over synthetic vs. natural and natural vs. organic aside, there is no question that the use of both natural and organic products in personal care will continue as the concept of wellness and proactive healthcare moves into mainstream markets. How these products will be regulated remains to be seen! The question’s gravity will only increase as mass market, certified organic personal care products become a reality. No doubt mass marketers like Wal-Mart already have their eye on that ball.

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