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Nurturing Naturals: a plethora of ingredients

Natural personal care products change from hippie to hip through well-being products.

Veronica MacDonald
 Associate Editor



From pet foods to building materials, natural products have undoubtedly made an impact on a wide range of consumer product categories. Consumers, in an effort to escape their frenetic and skin-damaging daily activities, welcome health and well-being messages from manufacturers. They are looking to return to nature and get in-tune with their bodies. London-based Euromonitor, in its "Cosmetics & toiletries in the U.S." study from 1998-2003, said Americans increasingly link natural and at-home spa products with overall health and wellness. This link has resulted in unprecedented sales levels.

Natural personal care products represented 14% of the personal care category and sales of \$4.6 billion in 2002, according to the Nutrition Business Journal (NBJ). Overall, Packaged Facts said sales of U.S. natural personal care products have soared nearly 52% since 1998.

"It's too big to be niche," insisted Darrin Duber-Smith, president of consulting firm Green Marketing, Denver, CO. "It's a bona fide segment."

The organic segment in particular has soared. "Non-food" organic product sales, such as personal care products, nutritional supplements, household cleaners and pet food, grew nearly 20% to \$440 million, according to a 2004 manufacturer survey by Greenfield, MA-based Organic Trade Association (OTA) and NBJ.

Nothing but the Truth

There are several other movements occurring in the industry as well, according to experts contacted by Happi. Analysts at Euromonitor said manufacturers have responded to consumer desires for comfort, simplicity and wellness with natural ingredients that can be used across a wide spectrum of products. Also, consumers have shown a desire for solid scientific data.

"Claim substantiation has become more of an issue," insisted Jay Lang of Charkit Chemical Inc., Darien, CT. "There is less smoke and mirrors and more data."

Research firm Kline & Company, Little Falls, NJ, said a shift in marketing natural ingredients has changed from using the terms "healthy" and "natural" to valid efficacy claims, in its "Specialty raw materials for cosmetics and toiletries" study.

"Marketers should be less interested in ingredients," insisted Mr. Duber-Smith. "People are not looking for buzzwords; they are looking for antioxidant effects."

Sabinsa, Piscataway, NJ, executives said the perception of skin as a major organ for health has also driven growth in the segment. This ideology is borrowed from Asian health care systems and the natural evolution of the human body and skin.

"Skin delineates and establishes the identity of the organism, and effectively works as an intercom between the individual organism and the outside environment by selectively delivering or regulating the traffic of information, or a variety of nutrients, to the body," explained Dr. Vladimar Badmaev and Tasneen Padiath of Sabinsa. "This newly perceived role of the skin changes the personal care segment into personal health and (then) beauty delivery systems."

Sabinsa executives predict ingredients that will become the darlings of the industry in the next few years include agents that enhance the skin's absorption of nutrients and bioavailability to target cells. One example is tetrahydropiperine (THP), which is derived from black pepper.

Executives at Bio-Botanica, Hauppauge, NY, said the explosive growth in botanicals is also due to a widespread natural, holistic lifestyle approach, awareness of alternative products and scientific validation.

Still others said the growth comes down to the individual and the perceived end result. "We see increased emphasis on products that offer, in an emotional vein, 'feel good' as well as 'look good' attributes to consumers," explained Steve Pickman of MGP Ingredients, Atchison, KS. "In other words, there seems to be a growing tendency among consumers that 'If I look better, I feel better, too.'"

And enhancing beauty is what personal care products aim to do.

Institut du Monoi Offers Extract, Names Formula Winners

Institut du Monoi, Paris, France, announced the winners of its 2003 formulation contest whereby cosmetic chemists worked with Monoi de Tahiti, an oil imported from the South Pacific Islands. Monoi de Tahiti is extracted by an enfleurage process in which buds are soaked in local refined coconut oil and then filtered. This product has been used in sun tan oils in France for more than 30 years, and for many, it "evokes summertime," according to Institut du Monoi's spokesperson Jacques Berac.



Monoi flower

Traditionally, Monoi de Tahiti has been used by the Mahoi people of Tahiti as a sacred oil, as well as for baby massages and treatments for hair exposed to a great deal of sun, heat and wind. Tests verify that Monoi de Tahiti is rich in methyl salicylate, a skin-soothing agent.

"Monoi could be the ultimate active ingredient today," insisted Mr. Berac. "It is the art of passage from plant to skin, from healer to patient. It has the best of both worlds: tradition and a modern approach."

Two winners of the contest were announced in the respective "well-being" and "extreme" categories: Pacific Peel body scrub-gellified oil by Karin Heinrich from Alban Muller International and Frisson de Monoi solid cream/stick by Francine

Vaution from Affix.

The exfoliating Pacific Peel formula has a soft texture and contains Tiare flower essence and coconut shell powder for use in massage. The matte Frisson de Monoi cream/stick is designed to protect the skin exposed to extreme climatic conditions and contains mountain plants such as edelweiss and tropical plants such as Tiare floral water.

The Institute recently issued promotional materials to inspire formulators to use the oil in a wide range of products, from baby creams to hair conditioners. More info: www.monoi-institut.org.

Age Does Matter

Wrinkles are not well liked by Americans, so there has been a growing desire for consumers of all ages to not only feel younger, but look younger too. Anti-aging and natural ingredients will continue to lead specialty raw material growth in the U.S. cosmetics and toiletries sector, according to Kline & Company. The firm predicts demand for active ingredients, including vitamins, botanical extracts and polysaccharides, will increase more than 5% annually, reaching 6.6 million pounds by 2008. That's double the average growth rate for C&T specialty raw materials as a whole, analysts reported.

Kline said demand has dramatically increased in the past decade for vitamin E acetate, vitamin C derivatives and capsules, grapeseed extract, soy isoflavones and polyphenols from green tea, which act as antioxidants, skin conditioners and moisturizers. Other star actives include chitosan from shrimp shells, phycopolysaccharides from seaweed and beta-glucans from yeast or fungi.

Euromonitor added that manufacturers now offer natural anti-aging ingredients, such as green tea and grapeseed extract, that do not irritate the skin like the sloughing action of synthetic alpha hydroxy acids.

"Anti-aging products aren't going anywhere soon, and people are looking for natural skin-firmers, age spot whiteners and UV ingredients in all products," insisted Mr. Duber-Smith of Green Marketing.

This has also forced decades-old natural product marketers to re-think their product offerings. "Natural personal care companies realized that in order to be accepted in the mainstream, they had to align their features and benefits with mainstream attitudes," Mr. Duber-Smith said.

Presperse executives pointed out that certain natural ingredients halt or reverse the aging process through a variety of mechanisms such as antioxidant activity, free-radical scavenging, stimulating collagen synthesis, elastase and collagenase enzyme inhibition, repairing UV-damaged cells and protecting against UVA and UVB damage. Thanks to improved testing, these benefits are now being realized.

"What has changed is the improvement in the methodology to test for the effectiveness of new materials coming into the marketplace," insisted Tony Ansaldi, marketing director of Presperse, Somerset, NJ. "The overall level of sophistication has improved dramatically especially in the area of in-vitro testing and this has contributed to the increased introduction of new materials."

Presperse distributes Secma's Bioplasma which protects against heat shock proteins, free radicals and lipid peroxidation; Native Essence which prevents inflammation and stimulates Ceramide III & IV and Laminaine which stimulates collagen production. Bioland, also distributed by Presperse, offers Ulmas, an anti-inflammatory extract from Japanese Elm, enzyme-inhibiting Areca Catechu seed extract and moisturizing

Nanomoist based on fermented sucrose.

Draco Natural Products, San Jose, CA, offers the Vital Treasures product line, a range of standardized extracts for personal care and cosmetics, such as green tea, pueraria isoflavones with phytoestrogen and antioxidant polyphenols such as grapeseed and pine bark.

"We have had big growth in the demand for functional ingredients for the skin that increase physiological improvement," explained Draco's Brien Quirk.



Green tea is a star natural ingredient, able to stave off free radicals, reduce inflammation and protect against UV rays.

Executives said research shows phytochemicals can inhibit enzymes that degrade the skin's matrix proteins (elastin and collagen) when activated by inflammation due to UV rays, free radicals or rancid lipids in the diet. "These proteins are essential for the firm, supple characteristics of the skin," Mr. Quirk added.

Draco's Seabuckthorn Water Flavonoids, TriniTea, Sea Rose and Antiaging Traditional Herbal Antioxidant block these matrix enzyme activities.

Some executives cited white tea and plantain extracts as the next "big" natural ingredients, especially in anti-aging soaps and cosmetics. Sabinsa reported that sales of boswellin, ursolic acid and rosmarinic acid saw a boost in the past year due to the aging baby boomer generation. TetraWhite, an innovative blend from Sabinsa, contains tetrahydrocurcuminoids, licorice extract, galanga oil, tetrahydropiperine and avobenzone, which together inhibit tyrosinase activity and free radical scavenging, and show UV-protectant properties.

Bio-Botanica's Phytoplennolin, derived from *Centipeda cunninghamii*, is also an effective anti-inflammatory, cell-renewing agent with mild sunscreen properties.

Fruitanicals, a new line of fruit ingredients from Bio-Botanica, offers an array of benefits such as exfoliation, vitamin/mineral enrichment, antioxidant protection and healing characteristics. Bio-Botanica also offers Purestrol, an alcohol-free extract of *Pueraria Mirifica* that is ideal for breast creams, eye gels, body gels and day/night creams.

"Studies have shown the natural 'anti-aging' properties of this botanical [Purestrol] due to the presence of a wide variety of phytoestrogenic compounds found in the root," explained Dorie Greenblatt of Bio-Botanica.

Lighten Up

Several natural skin care lighteners have also made news. Sabinsa executives said growth in the skin-whitening market was spurred by ethnic and export markets. The company was granted a patent last November for its Tetrahydrocurcuminoids. Sabinsa also recently introduced Galanga Extract derived from roots of *Kaempferia Galanga* with antimicrobial action and tyrosinase-inhibitory functions. It can be used for anti-acne and lightening products, as well as mouthwashes, deodorants and hair care items.

Sabinsa also offers skin brightening and anti-aging Soy Isoflavones 50% CG, an ingredient with soy phytoestrogens that stimulate collagen synthesis and regulate matrix metalloproteases.

Albacan is an all-natural and effective skin lightening botanical blend from Bio-Botanica.

There are also other skin care concerns. For instance, Sabinsa launched Policosanol, a mixture of sugar cane wax alcohols to manage acne and promote skin smoothness.

Sophora Flavescens or Ku Shen is an anti-itch, soothing botanical from Draco Natural Products which has antipruritic effects. "We are seeing a greater interest in the therapeutic benefits of botanical extracts for the skin," insisted the company's Mr. Quirk. Also, licorice extract has cortisone-like anti-inflammatory activity without any of the hazards of hydrocortisone, he said.

The Natural Appeal

Natural ingredients sound appealing to consumers, partly because they are familiar and partly because they are deemed safe.

"Demand has skyrocketed, especially since many natural ingredients offer functionality along with a pleasant story," said Penny Antonopoulos of Tri-K Industries.

Tri-K's vegetable-derived proteins from wheat, oat, rice, soy, and pea from Maybrook deliver the same functionality as animal-derived proteins. Tri-K's Biobase self-emulsifying bases are also popular due their ability to mimic the skin's natural lipid barrier using naturally-derived ingredients.

Tri-K distributes Alban Muller's Protectami with brown algae that favors cell communication in the epidermis and increases cohesion. From Soliance, Tri-K introduced Oenotherol to repair sun damage and maintain the integrity of the dermo-epidermal junction; Oraposide to stimulate natural cell defenses; Spring Sea Water to decrease water loss and improve hydric exchanges between the dermis and epidermis and Cucurbitine to inhibit histamine production. Tri-K also offers an entire line of babassu-derived ingredients from VaMa International.



MGP Ingredients offers gliadin, a wheat protein with effective skin-tightening properties, in Omni-Smooth.

Executives at MGP Ingredients, Atchison, KS, report steady interest in natural-based ingredients, such as plant proteins, starches and protein derivatives. Executives said wheat proteins, including hydrolyzed, quaternized and fractionated proteins, represent the flagship of the company's personal care ingredients fleet. The interest is linked to the versatility of the ingredients.

"A dominant trend that we see in the natural personal care market seems to be driven by a desire for ingredients and products that are not only functional, but are also perceived as being environmentally-friendly," explained MGP's Mr.

Pickman.

MGP offers Omni-Smooth, infused with skin-tightening gliadin from wheat protein. Executives said the natural functional qualities of the ingredient, and the growing desire among baby boomers to combat signs of aging, fostered great interest in Omni-Smooth in the past year.

Lipo Chemicals, Paterson, NJ, recently introduced Cosmelene of Coleus, an ingredient sourced from the roots of Plectranthus barbatus that regulates the hydro-lipid balance in agressed and aging skin. "Customers tend to focus on vegetable-derived materials, not just naturals," according to Lipo spokespersons.

Like Buttah

Some executives told Happi that demand for exotic butters has increased significantly in the past few years due to their efficacy in rinse-off applications.

"The trend started with ethnic skin care soap formulations but as the news spread, and consumer demand for effective moisturization grew, manufacturers of exotic butters responded by offering various butters from all over the world," explained Cara Feldman Hunt, Twincraft Soap Company, Winooski, VT. "In a soap bar, they deliver moisturization without the dampening foaming characteristic as natural oils do."



Twincraft offers a variety of butters for soap applications.

Twincraft introduced a soap that contains three exotic butters in combination with a high foaming vegetable soap base for use in a highly moisturizing, non-stripping soap bar application. Fragrance, antioxidants and exfoliants can also be added. Exotic butters from the Amazon such as illipe, murumuru and capaucu are also newly available in the industry, as well as macadamia seed, kokum, and sal butters from India.

Executives at Arista Industries, Wilton, CT, said there has been a conscious move away from petroleum-based and synthetic products. Arista supplies natural oils derived from beans, nuts and seeds, as well as natural butters.

"People tend to stay with traditional oils, because they have known them for so many years," explained Mary Ann Siciliano of Arista.

Noveon Inc., Cleveland, OH, formed an alliance with Chemyunion Quimica Ltda in Brazil to distribute Rainforest botanicals and a joint venture with Specialty Natural Products of Thailand for Asian botanicals. "As a result of these two relationships, we now have multiple products for both skin and hair care applications, and have substantially increased our portfolio in the actives and botanicals ingredient areas," explained Noveon's Laurie Marshall.

Executives at Euromonitor told Happi that there has been an increase of aloe vera, vitamin E and tea tree oil in all types of soap formulations. To meet this demand, Australia-based Southern Cross Botanicals recently introduced Melafresh T96, a colorless and highly pure extract of Australian tea tree oil, which can be applied to problem skin, oral hygiene and anti-dandruff products. Similarly, the company's Melafresh T10-WS can be added to aqueous-based products, gels, wipes and sticks.

Rainforest Harvest, derived from fruits of the Australian Rainforest, is also new from Southern Cross. Due to its rejuvenating and moisturizing properties, it can be added to shower gels. Southern Cross is distributed by Active Concepts, South Plainfield, NJ.

Executives at Charkit Chemical report growing popularity for skin care butters and waxes derived from triglyceride oils, such as olive, almond and raspberry and cranberry seed oils. Charkit's Mr. Lang said such ingredients have crossed over from other industries.

"Many natural raw materials have roots in the food or nutraceutical industries, yet are finding personal care applications," he explained. "Essential fatty acids were found to mirror the skin, and have applications both internally and externally."



Charkit executives said olive oil is now being used in skin care butters.

The Supplement Link

Many suppliers of natural personal care ingredients also find customers in the supplement, functional foods and over-the-counter/pharmaceutical markets, according to Green Marketing's Mr. Duber-Smith. "There is a crossover seen earlier in the supply chain these days," he said.

And it makes sense. More men than women take supplements to change their looks, 37% versus 22%, according to a survey of 1000 adults by EuroPharma, Green Bay, WI, in February. However, equal numbers of men and women ages 45-54 take supplements as an aging preventative.

"The internal health of the body has a remarkable impact on the aging and health status of the skin's external appearance," Mr. Quirk of Draco explained. Draco offers sleep-inducing botanical extracts that reduce cortisol, decrease insulin and increase growth hormone during sleep, which affect skin thickness and regeneration. Also, Burdock root, Rhodiola and brassica family botanicals are said to enhance DNA-repairing enzymes.

EuroPharma's survey found that more women than men take supplements for specific health concerns. Executives cited agents to detoxify the liver, improve plasma antioxidant status, fat metabolism, sleep and mood, as gaining popularity in the supplements market. Their jump into personal care is inevitable, some experts said.

"The 'Inside Outside' approach seems to be the biggest trend with the use of functional bioactive ingredients that were once the mainstay of the dietary supplement industry," insisted Mr. Quirk, who noted that alpha lipoic acid, DMAE, and CoQ10 have emerged as skin care components.

The Essential Components

Essential oils are also popular ingredients in the natural personal care market, because they can add fragrance or provide skin care remedies. South Bend, IN-based Lebermuth Company recently launched Tea Tree Heart, an efficacious tea tree oil that can be blended into essential oil products, minus the medicinal tea tree smell.

"Companies are working toward a goal for natural products to really work, be efficacious and have therapeutic value," insisted Lebermuth's Rob Brown.

However, many conditions have affected the essential oil industry lately, such as competitive prices in China, drought in Australia and increased demands and prices for grapefruit and rose oils. Also, the strong euro and political situations have hurt the essential oil industry, such as political uprisings in Haiti, a big producer of vetiver, according to Lebermuth executives. "There is turmoil in the world today and it affects how we get things into the country," explained Mr. Brown. "It has hit natural products in terms of delivery and price."

Lebermuth executives added that mint oil combinations have gained popularity recently, moving from the oral care sector into other personal care categories.

What's Organic?

Manufacturers of organic ingredients have recently faced a harsh reality-all the time and effort invested in becoming organic-certified by the U.S. Department of Agriculture

(USDA) are now moot. In April, the USDA issued a scope statement for its National Organic Program (NOP) that declared personal care companies have until Oct. 21, 2005 to use up existing supplies of labels and packaging with USDA NOP certification. After that, they will have to find other avenues of certification such as Europe's ECOCERT, Quebec's CAQ, the UK's UKROFS and The Danish government's programs. All of them will be recognized by the USDA, since the USDA has opted out of the certification process.

The Organic Trade Association (OTA), Greenfield MA, said the scope statement will allow anyone to make organic claims and will increase consumer confusion about which products truly contain organically-produced agricultural products.

"The latest USDA NOP scope statement continues to recognize and allow the labeling of Certified Organic Ingredients contained in a product," said Donna Bayliss of Bayliss Ranch, Biggs, CA. "They will not at this time be certifying facilities or finished products."

Mr. Brown of Lebermuth maintained there is a large segment of the population that wants proof that products are organic, and are willing to spend money for that assurance. "This has been one of the only areas of growth in the fragrance business," Mr. Brown insisted.

However, since NOP now only applies to food and fibers, there will be a divide seen between companies that have substantial amounts of organic-certified ingredients, and others that do not.

"Real organic companies care more about the environment and will still want to be organic-certified by a viable company and want to use these claims," predicted Mr. Brown. "However, it opens up a wide range of flexibility in the personal care market."

"The organic cosmetic regulation is now open for interpretation which allows formulators freedom to develop organic products," Twincraft's Ms. Hunt agreed.

Though it may be harder to determine authenticity, there is no doubt that consumers resonate with organic ingredients' pesticide- and herbicide-free ideology.

"Natural doesn't have a legal definition," said Mr. Duber-Smith. "Organic is a good way to differentiate; it gives a product an identity."

And suppliers have benefited from this point of difference.

"We've seen tremendous support of certified organic botanicals and herbs from the farm to the shelf," insisted Ms. Bayliss. In the past year, Bayliss Ranch launched its Allpant Essence line of eight organic, aromatic, water-soluble plant extracts captured from steam. They can be used in personal care products as well as mouthwashes, ranging from lemon verbena to chocolate mint. Ms. Bayliss said organic ingredient growth has been primarily driven by consumers.

"The consumer is demanding real ingredients and innovative manufacturers are responding with replacements to synthetics from the farm when and wherever it is safe and sensible," insisted Ms. Bayliss.

Others see organic ingredients as a natural extension of the naturals market. "Organically-grown sources of raw materials are a more in-depth extension of the natural concept," said Ben Blinder of Tri-K Industries.

Tri-K offers organically-sourced materials such as the Phytami line of extracts from Alban Muller International and organic versions of extremely mild amphoteric-based surfactants from VaMa International under the Vamasoft range. Tri-K also follows ECOCERT guidelines.

Croda Inc., Edison, NJ, offers the Crodamazon range derived from the Brazilian Rain Forest. The line received organic certification from Instituto Biodinamico in Brazil.

Bio-Botanica has an FDA-registered, pharmaceutically-licensed, certified organic and Kosher facility, which follows strict cGMP and SOP compliance, executives said.

"As 'organic' continues to play a growing and more dominant role in the food and pharmaceutical industries, it is only natural that it 'dominos' into the cosmetic/personal care category as well," explained the company's Ms. Greenblatt.

Another issue is genetically-engineered or modified (GMO) foods. Seattle-based Save Organic Food Coalition has waged a campaign supporting the labeling of GMO foods, a move that would affect the personal care industry in the near future. Coalition members said organic farmers report their crops are contaminated by neighboring genetically altered crops. Organic growers could stand to lose millions of dollars if they cannot export food to countries that shun contaminated food, especially those in Europe.

Formulations Are Forever Changing

Along with the new rules for organic certification, formulations are changing as well, due to both substantiated and unsubstantiated concerns about synthetic ingredients. Euromonitor said several propylene glycol-free, alcohol-free and organic deodorants were launched between 2001 and 2003, as well as oral hygiene products without artificial, animal or genetically-modified ingredients.

Executives at Body Blue, a Mississauga, Canada-based contract manufacturer of propylene glycol (PG)-free deodorants, said the FDA issued a mandate in June of 2003 requiring labeling for aluminum-containing AP/deos for people with renal conditions and other diseases. The company's Duncan Coopland said, "That's going to get people to think about, 'What am I putting on myself? There's a warning label here...this is not good.'" Since the company introduced PG-free deodorants in 2003, executives said 70% of the natural products marketplace has converted to PG-free formulas.

In soaps, Ms. Hunt of Twincraft said there have been a move from traditional tallow-based formulas to products without animal-derived ingredients. In fact, the company's tallow business has decreased 80% in the past five years.

However, "As more and more traditionally 'mainstream' customers begin adopting natural ingredients, the demand for efficacy data and documentation grows," insisted Ms. Marshall of Noveon.

Preserving the Product

Preservation is an area of concern for some customers, and manufacturers have been scrambling to find natural answers. This is a very difficult task, since microorganisms must remain at safe levels for the life of the product.

Bio-Botanica launched BioPein and Neopein, two botanical blends that contain broad-spectrum antimicrobial activity and are powerful enough to be used as a substitute for synthetic ingredients, according to executives.

"We recognized a need in the marketplace for a natural preservative product that would enable formulators to truly make an 'all-natural' label claim," said Bio-Botanica's Ms. Greenblatt.

Grapeseed and grapefruit seed extracts have gained recognition as natural preservatives, and other citrus ingredients are being tested as well. But, according to

some industry insiders, there are other alternatives.

"These citrus-type substances are not as effective as synthetic ones, but the problem of preservatives could be solved with vacuum packaging," insisted Green Marketing's Mr. Duber-Smith. "We also need to ask ourselves if we really need a product to last 15 years."

Another packaging trend is post-consumer recycled containers. This resonates well with environmentally-concerned consumers. "The natural personal care market is trying to minimize a negative impact on the world and maximize a healthful impact on the body," explained Mr. Duber-Smith.

Show Me the Money

With all the activity in the natural personal care market, from scientific data for well-being actives to changing regulations for organic ingredients, a few things remain the same. Consumers want natural products and will continue to buy them. Secondly, suppliers must keep up with improved and validated ingredients, as well as new formulation ideas. These challenges can all be overcome with proper funding. "When R&D is increased, the products get better," Mr. Duber-Smith opined. With this in place, experts expect natural ingredients will continue to flourish.

Looking for a supplier of natural ingredients? A list of them starts on p. 86 in the print version of Happi.

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