

Natural Foods Merchandiser Personal Care Glossary

1,4-dioxane: In cosmetics, 1,4-dioxane is the byproduct of a chemical process used to soften harsh ingredients. Though the U.S. Food and Drug Administration says the levels of 1,4-dioxane found in cosmetics do not pose a hazard to consumers, the National Toxicology Agency says its presence—even as a trace contaminant—is cause for concern, and The Environmental Protection Agency lists it as a probable human [carcinogen](#). A recent study from The Organic Consumer's Association showed that many "natural" and "organic" brand shampoos, body washes, lotions and other personal care products also contain 1,4-Dioxane. And research from the Environmental Working Group shows that 1,4-dioxane is currently present in many children's bath products. To avoid the carcinogen, the OCA urges customers to be on the lookout for "myreth," "oleth," "laureth," "cetareth," any other "eth," "PEG," "polyethylene," "polyethylene glycol," "polyoxyethylene," or "oxynol," on ingredient lists.

acetone: Also known as dimethyl ketone, 2-propanone and beta-ketopropane, this colorless chemical occurs naturally in plants, trees, volcanic gases and forest fires and is formed from the breakdown of body fat. Products containing acetone, like [cleaners](#), nail polish and certain [hair and skin products](#) can cause skin, eyes, and lung irritation, according to the Environmental Working Group's Cosmetic Safety Database and the [Agency for Toxic Substances and Disease Registry](#).

alcohol: This form of ethanol, or flammable liquid, can be harsh [and drying to the skin](#), causing it to produce more oil. It appears as the secondary ingredient in many astringent facial cleansers and toners as "denatured alcohol", meaning it contains a denaturant that makes it undrinkable, according to the [FDA](#). Look for it in cosmetics under names like SD (specially denatured) Alcohol 23-A, SD Alcohol 40, and SD Alcohol 40-B.

alkaline: The body's pH, or acid-alkaline ratio is the balance between hydrogen cations (H⁺) used to form acids. Removing the H⁺ creates alkalinity, or the base part of your pH. pH is measured on a scale of 0 to 14: Less than 7.0 is acidic, exactly 7.0 is neutral and greater than 7.0 is alkaline. Scrubbing skin excessively and frequently washing with soap (which unlike cleansers that are created to cleanse skin without disrupting its pH, are highly alkaline) can force skin in an alkaline state, causing your body to rebalance itself—which can [lead to irritation](#). Maintaining [skin's natural pH balance](#) by avoiding chemical astringents and harsh scrubbing can help keep it healthy and blemish free.

alkyl benzoate: An emollient created by reacting alcohols with benzoic acid, alkyl benzoate is used in [shampoos](#), body wash, [moisturizers](#) and lotions for its conditioning and softening properties. It is given the lowest possible hazard score by the [Environmental Working Group](#).

allantoin: An [organic salt](#) created by the oxidation of uric acid—a chemical produced when the body breaks down certain food substances—allantoin is found most often in moisturizers and [anti-aging creams](#). It can help heal wounds, stimulate the growth of healthy tissue, relieve skin irritation and soften the skin, according to Stephen Strassler, president of Reviva Labs. Allantoin can be extracted from the uric acid of cows, but in natural products is more likely to be extracted from plants such as comfrey and bearberry.

allergen: Allergens are substances that the immune system recognizes as foreign or dangerous and can cause an allergic reactions or sensitivities, according to the [U.S. National Library of Medicine](#). When

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allergens contact the skin or enter the body, they can cause hives, rashes, itching or more severe problems like anaphylaxis, which is sudden and requires immediate medical attention. The [National Library of Medicine](#) lists bacteria, viruses, chemicals, dust, drugs (such as antibiotics and serums), foods (like milk, chocolate, strawberries, wheat, nuts and shellfish), perfumes, plants, pollen and smoke as common allergens. Allergens most often found in [personal care products](#) include parabens, fragrances, aluminum salts, acrylate, D&C violet No. 2, FD&C blue No. 1 and FD&C green Nos. 1 through 3.

alpha-hydroxy acids: Derived from fruit and milk sugars and often appearing in [creams and lotions](#), AHAs have been found in some studies to counteract damaging effects of [sun exposure](#) and [aging](#) like wrinkles and spotting by increasing skin's thickness. However, the [FDA](#) reports that AHAs may also cause severe redness, swelling (especially in the eye area), burning, blistering, bleeding, rashes, itching and skin discoloration, and applying an AHA to the skin may make people more susceptible to [sun damage](#), including sunburn.

aluminum: A metallic earth element that resists oxidation. Some forms of aluminum, like aluminum chlorohydrate and aluminum zirconium are used in antiperspirants to [block pores and inhibit sweat](#). According to the American Society of Nephrology, small amounts of aluminum can be absorbed through the skin.

Some research suggests that when absorbed by the skin near the breast, these aluminum-based compounds may cause estrogen-like (hormonal) effects that promote breast cancer cell growth, according to the [National Cancer Institute](#). Other studies have linked the use of [aluminum-based antiperspirants](#) to an increased risk for Alzheimer's disease.

ammonia: This colorless gas appears in many household products like window cleaners and personal care products such as [hair dyes](#). Once exposed to open air, liquid ammonia (or ammonia dissolved in water) turns into a gas. According to the [Agency for Toxic Substances and Disease Registry](#), exposure to high levels of ammonia in air may irritate skin, eyes, throat and lungs and can cause coughing and burns.

animal ingredients/animal testing/cruelty-free: No federal law determines the criteria for claiming "cruelty-free," "against animal testing" or "not tested on animals." But the [Coalition for Consumer Information on Cosmetics](#) has a cruelty-free standard, and [PETA](#) and [Vegan Action](#) provide a list of animal-derived ingredients and [certified vegan](#) products. And www.caringconsumer.com offers a list of companies that have agreed to not conduct animal testing.

antibacterial: Antibacterial agents help stave off infection, treat wounds and alleviate itching. Common antibacterial ingredients in personal care products include [lemon balm](#), lavender, [wasabi](#), neem, organic alcohol, ginger, echinacea, eucalyptus, sage, and shiitake mushroom.

antioxidant: These compounds from plant foods, including beta-carotene, vitamin C and bioflavonoids, fight off cell-attacking free radicals, the unstable molecules your body produces when it's exposed to environmental toxins or when it [breaks down food](#). By neutralizing free radicals produced by skin in response to sun exposure, antioxidant-rich creams are used to prevent and reduce effects of UV rays like dark patches (or liver spots), fine wrinkles, and [rough skin](#), according to the [Beth Israel Deaconess Medical Center](#) and reduce other [signs of aging](#).

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antiseptic: Antiseptics inhibit the growth of microorganisms on living tissue. By fighting bacteria and promoting circulation, antiseptics can help eradicate [acne](#) and appear [innatural deodorants](#). Natural antiseptics used in PC products include lavender, tea tree oil, lemon, apple cider vinegar and honey.

aromatherapy: Aromatherapy uses [essential oils](#) to impact physical, mental, emotional and spiritual balance, according to the [National Association for Holistic Aromatherapy](#). Aromatherapy's psychological effects include alleviating depression, recharging the mind and body, and promoting relaxation, which may help improve [heart health](#).

artificial color: Artificial colors in cosmetics that are subject to certification are primarily petroleum-derived and are sometimes known as "coal-tar dyes" (coal-tar colors consist of one or more substances that are made from coal-tar or derived from intermediates of the same identity as coal-tar intermediates) or "synthetic-organic" colors, according to the [FDA](#). Coal-tar dyes may cause dermatitis, according to the [National Institute of Health](#). Colors exempt from certification are obtained primarily from mineral, plant or animal sources. Though they're not subject to batch certification requirements, they're still considered artificial colors. [Makeup labels](#) may list FD&C or D&C, followed by a color and a number (like FD&C yellow No. 5). The [FDA](#) deems FD&C colors safe for use in food, drugs and cosmetics and D&C colors safe for drugs and cosmetics. However, D&C violet No. 2, FD&C blue No. 1 and FD&C green Nos. 1 through 3 contain benzene, which can cause irritation or allergic reactions and may increase leukemia risk, according to the [American Cancer Society](#). Some people may have reactions to the [artificial dye in makeup](#), so alternatives like iron oxides in yellow, black, bluish-red or yellowish-red are mixed with titanium dioxide, a white mineral, in natural mineral makeup.

astaxanthin: This naturally occurring carotenoid pigment is a powerful antioxidant harvested from microalgae and also found in salmon. By neutralizing free radicals, it can help [prevent sun damage](#). When applied before sun exposure, astaxanthin protects cells from future damage, and it fights oxidative damage after sun exposure to help [prevent signs of aging](#). Some eye health supplements **and moisturizing creams contain this antioxidant**.

astringent: Astringents are used topically to shrink or constrict tissue. [Aftershaves](#) and toners are common astringent formulations, and key astringent ingredients include witch hazel and alcohol. These substances help close the skin's cells and are generally used after bathing and before moisturizing.

Ayurveda: This ancient form of holistic healing, which originated in India, considers physical and emotional wellbeing along with external factors and physical processes. Ayurvedic treatments rely heavily on herbs and other plants—including oils and common spices and there are currently, more than 600 herbal formulas and 250 single plant drugs included in the "pharmacy" of Ayurvedic treatments, according to the [National Center for Complementary and Alternative Medicine](#). Discovering [what dosha \(or body and skin type\) you are](#), can help determine the ingredients that will best [nourish skin](#).

beeswax: Made by worker bees and molded into the honeycomb for honey storage, beeswax is an important thickening agent and emulsifier in cosmetic products, particularly [lip balm](#).

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bentonite: This natural clay, often generated from volcanic ash, according to the [Industrial Minerals Association of North America](#), has exfoliating and anti-inflammatory properties. Used as a [skin mask](#), bentonite draws out skin's impurities like excess oils and dirt.

biodynamic: Developed by Austrian philosopher Rudolf Steiner, Ph.D., in 1924, [biodynamic agriculture](#) is a belief that farms are living organisms, self-contained and self-sustaining. According to biodynamic certifying agency [Demeter](#), on a biodynamic farm, a farmer wouldn't buy fertilizer but would instead make his own from compost and manure produced on the farm. All plants are open-pollinated so there's no need to bring in outside seed. Planting is determined by astronomical influences such as the phases of the moon. Like certified organic farms, certified-biodynamic farms are free of synthetic pesticides and must meet the same three-year transition that the [National Organic Program](#) requires. A growing number of personal care companies are using biodynamic plants in their formulations.

biotin: Also called vitamin H or vitamin B7, biotin is a water-soluble B-complex vitamin produced naturally in the intestine. It is often found in [hair care](#) products to add body and texture. While it occurs naturally in animals, the vast majority of biotin used in cosmetics is plant-derived.

blepharitis: This eyelid inflammation caused by malfunctioning oil glands near the base of the eyelids results in red, itchy, irritated, dandruff-like flakes on the eyelids, according to the [American Optometric Association](#). Classified as anterior, which appears on the outside front edge of the eyelid, or posterior, which is on the inner edge of the eyelid, blepharitis is difficult to treat, but it won't lead to permanent eyesight damage.

botanicals: Botanicals are plants and plant parts used for their medicinal or therapeutic properties, flavor and/or scent, according to the [National Institutes of Health Office of Dietary Supplements](#). Botanical products are also called herbal products or phytomedicines. Herbs are a subset of botanicals. Botanicals are available in tablets, capsules, powders, teas, extracts and fresh or dried plants for medicinal or therapeutic purposes. The [American Botanical Council](#) provides **science-based and traditional information on botanicals**.

brightening/lightening: Conventional brightening and lightening agents often use chemicals to [remove stains or discoloration from teeth](#), lighten hair or even out dark patches on skin. Certain lighteners may cause sensitivities or pain. Natural lighteners and brighteners include calcium carbonate, which erases surface stains on teeth, lemon juice that naturally bleaches, bamboo (*Arundinaria japonica*) and silica. Herbal extracts like mallow, peppermint, cowslip primrose, lady's mantle, speedwell, lemon balm and yarrow can lighten skin to [help counter age spots](#).

carcinogen: Basically, carcinogens are any substance that can cause cancer. These substances have different levels of cancer-causing potential, and the risk also depends on duration and intensity of exposure plus an individual's genetic makeup, according to the [American Cancer Society](#). For a complete list of known and potential carcinogens, go to [cancer.org](#).

carotenoid/carotene: [Carotenoids](#) are highly pigmented (red, orange, yellow), antioxidant, fat-soluble compounds naturally present in many fruits, grains, oils and vegetables like green plants, carrots, sweet

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potatoes, squash, spinach, apricots and green peppers. Carotenes (alpha, beta, and gamma caroten) are provitamins, meaning they can be converted into vitamin A, which is an antioxidant.

ceramides: These lipid molecules composed of sphingosine, an amino alcohol that contains a long, unsaturated hydrocarbon chain, and fatty acids are concentrated in cell membranes and are depleted with age. They're appearing in [face creams](#) and as [ingestible beauty supplements](#) for their ability to keep skin taugth and hydrated.

cetareth (-15, -16, -17, -18, -20): These petrochemicals are used in skin-care products, moisturizers, [hair conditioners](#), suntan and [indoor-tanning products](#) and hair-coloring products, and may contain [potential carcinogens](#) like 1,4-dioxane and ethylene oxide, according to the [Environmental Working Group](#).

collagen: This family of fibrous proteins is the most abundant form of protein in the animal kingdom and the principal component of skin, nails, cartilage, tendons and ligaments. The slowing of collagen production as you age results in a loss of elasticity, causing wrinkles and sagging skin.

crystal deodorant: This form of [chemical-free](#) deodorant uses colorless mineral salts to prevent the spread of odor-causing bacteria and is a natural alternative to conventional deodorants.

dioxins: These are toxic chemicals are produced through paper and pulp bleaching; burning of municipal, toxic, and hospital wastes; certain electrical fires; and smelters. Dioxins can also be found in some insecticides, herbicides, wood preservatives, and cigarette smoke, according to the [National Cancer Institute](#) They are present in some chlorine-bleached and rayon-containing products, like [tampons](#) and can accumulate in fatty tissues, where they may persist for months or years, according to the [National Institute of Environmental Health Sciences](#). Though not all types of dioxins are carcinogens, the [National Cancer Institute](#) reports that TCDD, which the general population is exposed to primarily through dairy, fish and meat, is likely to cause cancer in humans.

Ecocert: This [L'Isle Jourdain, France-based certification organization](#) has created ecological and organic cosmetics standards. It audits finished products for ingredients, processes and packaging used, supplier commitment regarding raw materials delivered and inspection of labeling. It checks manufacturing processes, including energy and waste management, transportation and storage to certify both "Ecological Cosmetics" and "Ecological and Organic Cosmetics." Learn more at www.ecocert.com.

eczema/atopic dermatitis: [Eczema](#), also known as atopic dermatitis, causes inflammation that leads to dry, thick, scaly bumps; crusty red bumps and sores; and itching. There is no definitive cause of eczema, but sufferers often have an overactive immune system, which causes flare ups from exposure to solvents, industrial chemicals, detergents, fumes, tobacco smoke, paints, bleach, woolen fabrics, acidic foods, astringents and other alcohol-containing skin care products, and some soaps and fragrances, , according to the [National Eczema Association](#).

emollient: Emollients are substances that soften the skin and protect against dryness and scaling. They are common in [moisturizers and creams](#). The word emollient is sometimes used interchangeably with

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moisturizer, but generally moisturizer refers to a formulation and emollient to a single ingredient. Emollients have three possible methods of action. They can work via occlusion, adding a layer of oil over the skin to prevent moisture loss; as humectants, increasing the skin's ability to hold water; and as lubricants, making the skin smooth and slippery.

emulsifier: An emulsifier is any substance that keeps a product containing both oil and water from separating into its component ingredients. Emulsifiers play a key role in formulating [lotions](#), [shampoos](#) and many other personal care items. They are used to stabilize both whole formulations and individual ingredients, such as surfactants. Common natural emulsifiers include lecithin and [beeswax](#), which the [Cosmetics Database](#) ranks as low hazard ingredients.

enzymes: These naturally occurring proteins derived from plant or animal sources are found in all human organs and cells and are essential to all bodily functions, according to the [U.S. National Library of Medicine](#). Also used in exfoliants, [enzymes](#) provide a less harsh alternative to walnut shells or apricot kernels by scrubbing away dry or dead skin while fighting inflammation and nourishing dry skin.

essential oils: Essential oils are extracted from aromatic plant material by steam distillation or mechanical expression. The astringent liquid substances can have significant antimicrobial and antibacterial activity when applied topically, according to the [National Cancer Institute](#). The highly concentrated volatile liquid substances are frequently used in aromatherapy. [Studies show](#) essential oils have significant antimicrobial activity, which may help treat skin infections and inhibit virus replication. Lavender, [peppermint](#), clary sage, ginger and rose oils are used to reduce and control pain. [Others](#), like sandalwood, tea tree, lemongrass, oregano and bay oils, have antimicrobial and antibacterial effects that can help treat skin [infections](#). Recognized as germ-fighters, essential oils also appear in [household cleaners](#) and air fresheners.

exfoliants: These granular ingredients, often found in [body and facial scrubs](#), can eliminate dry, dead skin and help the body release toxins and stimulate circulation. Walnut shells and apricot kernels, crushed almonds, oatmeal, cornstarch and fruit acids are common exfoliants. A product with enzymes, which can be less harsh than plant seeds or nuts, is best for [sensitive skin](#). [Salt](#), another common exfoliant, also contains skin-nourishing minerals.

fair trade: Fair trade practices help ensure small farmers and producers are not exploited. The resulting higher incomes reduce poverty and increase investment in education and health care. The [TransFair USA](#) certification standards also require sustainable practices and direct trade. Look for its label on beauty products that contain [fair trade ingredients](#).

formaldehyde: A nearly colorless gas also known as methanol, methylene oxide, oxymethylene, methylaldehyde and oxomethane, formaldehyde has a pungent, suffocating odor. It is naturally produced in small amounts in our bodies and appears in many personal care products including antiseptics, medicines and cosmetics, according to the [Agency for Toxic Substances and Disease Registry](#). Reactions include eye, nose, throat and skin irritations.

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free radical: These molecules, which can damage cells and contribute to illnesses like heart disease and cancer, are formed when the body breaks down food or by environmental exposures like tobacco smoke and radiation. Numerous studies show that antioxidants, found in many plant foods and vitamins A, C and E, can prevent free-radical damage. You can ingest antioxidants or apply antioxidant-rich products topically.

glycerin: Also called glycerol or glycerine, glycerin is present in all natural lipids. It can be synthesized or derived from natural plant, vegetable and animal substances by fermenting sugars or by mixing hot water with a fat to break it down into glycerol and fatty acids. Glycerin is a humectant—able to absorb water from other sources—and when used in formulations with moisturizing agents, improves the skin's water-holding capacity. Glycerin esters are used as emollients or moisturizers—to soothe or soften the skin, and thickening agents; common forms include glyceryl cocoate, glyceryl dipalmitate and glycerol monostearate.

glycolic acid: Molecularly the smallest of the alpha hydroxy acids, glycolic acid is a hygroscopic (able to attract water molecules), crystalline solid that is water-soluble. It is used in skin care products as an exfoliant to reduce wrinkles and acne scarring and improve the skin's appearance. It works by weakening the lipids that bind the upper layer of the epidermis, dissolving the dead skin cells on the surface.

green chemistry: [Green chemistry](#), or sustainable chemistry, is the design, manufacture or use of chemical products and processes that reduce or eliminate hazardous substances.

honey: Honey has antioxidant, antibiotic and antiviral capabilities and is often used for its moisturizing and healing properties. It appears in [facial masks](#) and lotions as a [raw](#) humectant. Its strong antimicrobial properties help clean and clear away bacteria, making it ideal for oily or acne-prone skin when dabbed onto pimples.

humectant: A humectant is a hygroscopic substance, meaning it can absorb water from the air. Common humectant ingredients include glycerin, propylene glycol, sorbitol and lactic acid. In cosmetics, especially moisturizers and facial creams, [humectants](#) nourish the outer layers of the skin by absorbing water.

hyaluronic acid: A component of the human body that helps restore collagen and smooth skin by attracting and holding moisture in skin. It is often found in [anti-aging](#) creams.

INCI (International Nomenclature for Cosmetic Ingredients): The International Nomenclature Committee, which has industry and government representatives from the major international markets, developed this system to create consistent labeling terms for cosmetic ingredients like waxes, oils, pigments and chemicals throughout various countries. Common examples include vitamin E (Tocopherol), Almond Butter (Hydrogenated Almond Oil), Aloe Vera Extract (Aloe Barbadensis Leaf Juice) and Avocado (Persea Gratissima)

isopropyl palmitate: This substance is an ester, created by reacting an acid with an alcohol. In this case, the base ingredients are isopropyl alcohol and palmitic acid, derived from palm oil. Isopropyl palmitate is used as an emollient, moisturizer and thickening agent in [personal care products](#).

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jojoba: Jojoba—or *Simmondsia chinensis*—is a fruit from a woody shrub native to the semiarid regions of southern Arizona, southern California and northwestern Mexico. Its [oil](#) helps create a protective, moisturizing layer on dry skin to help soften and balance oil production. It can also treat [dry hair](#), by moisturizing and preventing sun and chlorine damage.

lactic acid: A type of [alpha hydroxy acid](#), lactic acid is manufactured through bacterial fermentation of milk, corn, or cane or grape sugars. It is naturally produced by the body, creating muscle burn after strenuous activity. In skin care products it acts as a gentle exfoliant.

lanolin: This natural [emollient](#) in lotions and [lip balms](#) is composed of purified water and fat derived from the oil glands of sheep. It may cause an allergic reaction in sensitive individuals, and products containing lanolin cannot be certified vegan. However, the sheep is not harmed from the extraction and because it's a naturally occurring compound that is not only used for human skin but also to prevent physical damage to livestock and relieve animal suffering, lanolin is considered sustainable, according to the [Organic Materials Review Institute](#).

lauric acid: This coconut-oil derivative acts as a foaming agent in soaps, shampoos and [bubble baths](#) replacing harsh synthetic ingredients like sodium lauryl sulfate.

lauryl glucoside: As a [surfactant](#) and detergent, lauryl glucoside is used as a sudsing agent in personal care products. It is made from a coconut derivative combined with glucose, as is its close cousin, decyl glucoside. Both ingredients are mild and biodegradable, and can be used in place of harsher detergents such as [sodium lauryl sulfate](#) and sodium laureth sulfate, though they provide less sudsing action.

lecithin: A mixture of phospholipids that are important in cell structure and metabolism. Lecithin acts as a natural emulsifier and emollient, and can penetrate the epidermis to deliver substances to the cell level. Lecithin also contains choline and inositol, important components of cell membranes.

melanin: A dark biological pigment in hair, skin and eyes formed from the metabolism of the amino acid tyrosine. To avoid [melanin damage](#), which can't be repaired and causes sunspots and premature wrinkles, increase consumption of vitamin E, beta-carotene and unsaturated fatty acids and apply sunscreen regularly taking a [vitamin B6 supplement](#) can help create melanin for colorful hair. [Studies](#) also show that melanin reduces the formation of two types of DNA damage to help prevent the death of cells from UVs.

mica: A group of silicate minerals used as a base in natural [mineral makeup](#).

mineral makeup: [Mineral makeup](#) contains natural mineral color pigments instead of the synthetic versions in conventional products. Because it isn't always "all natural" or "organic," look for products free of preservatives, artificial fragrances, synthetic oils and dye. In addition to not containing common skin irritants, natural mineral makeup's main ingredients—often zinc oxide and titanium dioxide—act as sun blocks. Experts do agree, though, that the sunblocking activity provided by mineral makeup is not enough. General wisdom is to use a physical block of 30 or higher in addition to the makeup.

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mineral salts: Many mineral salts are natural astringents, which can be used in natural antiperspirants and [deodorants](#) to eliminate odor-causing bacteria. As ingredients in exfoliants, they remove dead skin while nourishing with minerals. In [bath salts](#), they promote relaxation and draw out impurities.

Natural Products Association: Formerly known as the National Nutritional Foods Association, the [NPA](#) is the nation's largest and oldest trade association for natural products, representing more than 10,000 retailers, manufacturers, wholesalers and distributors of natural products, including foods, dietary supplements and personal care. Under its Natural Certification Program and [Seal of Approval](#). Products must be made up of at least 95 percent truly natural ingredients or ingredients that are derived from natural sources. They also can't contain ingredients with any potential suspected human health risks nor be made from processes that significantly or adversely alter the purity/effect of the natural ingredients. Ingredients are required to come from a purposeful, renewable/plentiful source found in nature like flora, fauna, mineral and the processes must be minimal and can't use synthetic/harsh chemicals or otherwise dilute purity. Non-natural ingredients are used only when no viable natural alternative ingredients are available and when there are no suspected potential human health risks.

NSF: This independent nonprofit offers programs and services for standards development, product testing and certification, onsite audits and inspections. It recently released "made with organic" standards for personal care. [NSF](#) also trains and educates in environmental health, including air, water and food safety issues.

menthol: Found in peppermint plants, menthol is cooling, anti-inflammatory and mildly anesthetic so it helps [stop itching](#) caused by [burns and bites](#). It also [stimulates circulation](#) to help treat problems like acne. However, it is recognized as a [trigger for rosacea](#).

nanotechnology: This new science uses nanoparticles—ingredient molecules that are smaller than 100 nanometers. Nanoparticles that are appearing in cosmetics and personal care products are very tiny—between 50,000 and 100,000 times smaller than the width of a human hair. Nanoparticles can be engineered to become this size and can occur in nature through natural processes, such as sea spray and erosion, according to the [Nanotechnology Initiative](#). [Some studies](#) show that nano-sized particles can have benefits, such as helping to protect skin from cancer when used in sunscreens. However, the Environmental Working Groups reports that they may hazardous because their small size produce chemical or physical properties different from larger materials. [Critics wonder if nanoparticles](#) can gain access and cause damage to tissues and cells—including in the brain—that larger particles can't reach. The [FDA](#) hasn't developed its own definition of nanotechnology, but does approve nanoparticle products for human use. To find out if your products are made using nanotechnology, go to the [Environmental Working Group's Cosmetics Database](#), or find the latest research and regulations.

natural: While there is no industry-wide definition of natural, in 2008 the NPA came out with a [natural label for the personal care](#) market, requiring products bearing the NPA Natural Seal to be made with at least 95 percent natural ingredients. It defines natural as only ingredients found in nature, excluding all petroleum compounds. Visit the [NPA](#) for more details about the seal.

neem: The oil, bark and leaves from this Indian tree appear in everything from toothpaste to shampoo to

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acne [products](#). [Neem oil](#) is filled with long-chain fatty acids, antioxidants and glycerides that penetrate and moisturize chronically dry skin. Its antihistamine and antibacterial properties help prevent dermatitis and other [skin infections](#) and relieve itchiness. Some [toothpastes](#) use its bark to reduce plaque and bacteria. It also may reduce the ability of some streptococci (the bacteria that cause strep throat and other oral conditions) and prevent or even reverse gingivitis, according to the [International Dental Journal](#).

OASIS seal: Short for [Organic and Sustainable Industry Standards](#), OASIS is a personal care trade association that recently announced organic and “made with organic” [standards for personal care products](#). The “made with organic” standard starts at 70 percent minimum organic content, with additional criteria for the remaining ingredients. The organic designation starts at 85 percent, shifting to 90 percent in January 2010 and 95 percent two years later. For the details behind the OASIS standards, visit www.oasisseal.org.

organic body care: Body care products displaying the [USDA organic seal](#) contain at least 95 percent certified organic ingredients, excluding water and salt. “100 percent organic” USDA-certified products don’t contain synthetic ingredients like synthetic colors and fragrances, sodium hydroxide, or petrolatum—a petroleum derivative often found in moisturizers, according to the [Safe Cosmetics Action Network](#). However, a body care product is only eligible if it contains or is made up of [agricultural ingredients](#). In addition, individual personal care ingredients such as herbs can be USDA certified organic.

parabens: These antimicrobial preservative agents, which appear in ingredient decks under names like methylparaben, propylparaben, ethylparaben or butylparaben, are used in cosmetics and various personal care products like lotions, creams, facial cleansers, hand soaps, hair conditioners, toothpastes and men’s shaving creams. Because they mimic estrogen, studies have linked parabens to low sperm counts and decreased testosterone levels in men. Research shows they may also be linked to breast cancer and they may trigger [allergic reactions](#) like rashes and red marks.

peptides: Peptides are two or more amino acids linked together by a dehydration synthesis. They come from the extraction of human hormone-like components found in living things or are produced synthetically. Peptides can have anti-inflammatory, antibacterial and anticancer properties. By helping skin produce collagen, they can also reduce wrinkles and other [signs of aging](#) and plump up sagging skin. Most peptides used in anti-aging [skin care products](#) come from plants.

p-phenylenediamine: Also known as PPD, it is used in many conventional hair dyes. Short-term exposure to high levels may cause severe dermatitis, eye irritation and tearing, asthma, gastritis, renal failure, vertigo, tremors, convulsions and coma in humans, according to the [EPA](#). Eczematoid contact dermatitis may result from chronic long-term exposure. PPD ranks in the “high hazard” category on the nonprofit EWG’s Skin Deep cosmetic-safety database.

pH: pH stands for [potential of hydrogen](#) and is equal to the activity of hydrogen ions in a solution. Measured on a scale of 0 to 14, pH assesses how acidic or basic (alkaline) something is; less than 7.0 is acidic, exactly 7.0 is neutral and greater than 7.0 is alkaline.

phthalates: These industrial chemicals are plasticizers in products like toothbrushes, toys and vinyl flooring and they also appear in shampoos and lotions. They are commonly used to help nail polishes stay

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blended and dry evenly. They can enter your body through inhalation or through skin and nails. Studies link phthalates to [problems](#) with reproductive, endocrine and respiratory systems. Di-2-ethylhexyl phthalate (DEHP) and butylbenzyl phthalate (BBzP), two commonly used phthalates, have been found to cause reproductive problems in lab animals. The chemicals have also been linked to human reproductive effects, including lower sperm concentrations, reduced sperm motility, sperm morphology changes, DNA breakage in sperm, changes in levels of reproductive hormones in men and male infants, and, in a preliminary study, feminization of newborn baby boys, according to the [Environmental Working Group](#).

plant dyes: For hair coloring, plant dyes include henna, chamomile and indigo. Unlike [synthetic pigments](#), plant dyes aren't linked to increased [cancer risk](#). Henna contains hennatannic acid, which bonds to the proteins in hair, nails or skin, creating a semi-permanent dye and coating and sealing the hair shaft to protect from damage.

plaque: Plaque is an invisible mass of harmful bacteria that live in the mouth and stick to the teeth. Some plaques cause tooth decay and others cause gum disease, according to the [NIH](#). [Natural ingredients](#) like xylitol, neem and zinc citrate can help fight the bacteria.

propylene glycol: Because of its humectant properties, propylene glycol is used as a synthetic preservative in personal care products, including creams, hair gels and fragrances. It can cause [allergic reactions](#) like shortness of breath, bumpy rashes and inflammation. The EWG reports it also allows other chemicals to penetrate deeper into the skin and thus increases the amounts of chemicals that can reach the bloodstream.

Pycnogenol: A proprietary mixture of water-soluble bioflavonoids extracted from French maritime pine, Pycnogenol has antioxidant actions that help reverse the effects of aging by fighting free radicals.

renewable resources: These resources are capable of being replaced by natural ecological cycles or by recycling and can appear in everything from home to personal care products. Renewable ingredients found in personal care products include honey, beeswax and lanolin.

resorcinol: This resin is used in many [permanent hair dyes](#) to help develop color and in facial products to reduce acne. Resorcinol is a known endocrine disruptor that may be carcinogenic, according to the [EWG](#). It also can cause skin irritations and allergies.

rooibos: Red tea, or [rooibos tea](#), comes from the leaves of the rooibos plant (*Aspalathus linearis*), which grows in South Africa. It is now appearing in [skin care](#) because of its antioxidant aspalathin, an anti-inflammatory polyphenol that reduces dry, flaky skin symptoms. Rooibos' antioxidants may help prevent cancer and cardiovascular disease, and the tea is rich in minerals and flavonoids, according to the [Journal of Agriculture and Food Chemistry](#).

rosacea: Acne rosacea is a chronic skin condition characterized by red, flaky patches often appearing on the nose and cheeks, and sometimes lesions resembling small pimples. The cause isn't known, but alcohol, spicy foods, hot drinks, sun exposure, temperature extremes or excessive exercise may exacerbate the condition. [Natural solutions](#) to rosacea include eliminating trans fats, high-fructose corn

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syrup, sugar and common allergens such as corn, dairy, gluten and peanuts. Also, loading up on wild-caught salmon, halibut and sardines, whole grains, almonds and dark leafy greens and using oatmeal-based skin care products can fight rosacea.

salicylic acid: Also called beta hydroxy acid or BHA, salicylic acid is an exfoliant and antimicrobial used for treating [breakouts](#) and blemishes. As a derivative of aspirin, or acetylsalicylic acid, it is a powerful anti-irritant. Topical salicylic acid is also used to treat skin conditions that involve scaling or overgrowth of skin cells such as psoriasis, ichthyoses dandruff, corns, calluses, and warts on the hands or feet, according to the [U.S. National Library of Medicine](#). By loosening skin so that it is removed more easily, it helps treat dry, scaly, or thickened skin, reports NLM. For treating acne, it reduces swelling and redness and [unplugs blocked skin pores](#).

salves: These multipurpose ointments, often made from herbs infused in olive oil that are then added to a beeswax or cocoa-butter base, can help treat bug bites, scrapes, [sunburns](#), [diaper rash](#) and [dry skin](#). Emollients soften skin while herbs can offer antibacterial properties to treat irritation.

shea butter: Made from the fat of [African karite tree nuts](#), shea butter is a moisturizer and has anti-inflammatory and UV-protection properties. It is available in [moisturizing creams and lotions](#) or in a pure, cakelike form.

Skin Deep (cosmeticsdatabase.com): [The Environmental Working Group's Skin Deep Cosmetics Database](#) provides information on 42,000 cosmetics and personal care products, detailing their ingredients and associated health risks.

sodium borate: Also known as borax, sodium borate comes from a natural mineral and acts as a [laundry detergent](#) and gentle [household scrub](#) that replaces sodium hydroxide, the major ingredient in many household cleaners that is extremely corrosive and can be fatal when swallowed, according to the Agency for [Toxic Substances and Disease Registry](#). Borax also appears in some moisturizers and facial cleansers.

sodium laureth/lauryl sulfate: Used as a [foaming agent](#) in shampoos, soaps and bubble baths, sodium laureth contains the potential cancer-causing petrochemical 1,4-dioxane and may cause skin irritations.

stearate: Also known as stearic acid, stearate is a plant- or [animal-derived](#) fatty acid used as an emollient in moisturizers, sunscreens, facial cleansers and some makeup.

surfactant: Surfactants, a term created by combining the words surface acting agents, work by lowering the surface tension of liquids, creating a sudsing action. These organic compounds are made of molecules with both a hydrophobic (water-hating) and hydrophilic (water-loving) part. As a result, surfactants "adsorb," or cling to, dirt and oils, and keep them from readhering to surfaces, including [skin](#). In other words, surfactants act as emulsifiers, allowing water to absorb and wash away oils.

sustainable: Sustainability means consciously using a resource in a way that it is not permanently damaged and the negative environmental impacts of production and transportation are minimal. With the exception of seafood, there are no government or industry-approved regulations for sustainability,

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although an effort is underway to develop a sustainable agriculture standard. OASIS, short for Organic and Sustainable Industry Standard sets a minimum organic content and provides a list of acceptable ingredients for its [Organic Standard](#)--the first of several standards meant to support and protect organic and sustainable consumer goods. The European [Ecocert](#) label also promotes sustainability.

talc: This magnesium trisilicate mineral may contain asbestos—a known human carcinogen—in its natural form, according to the [American Cancer Society](#). Talc appears in [loose powders, blushes and eye shadows](#). If contaminated with asbestiform fibers, it can cause cancer, [respiratory diseases](#), and allergies, according to the [Environmental Working Group's Cosmetic Safety Database](#).

tartar: Tartar forms in the mouth when plaque mineralizes on the teeth. When it accumulates, it provides more surface area for plaque buildup. [Toothpastes](#) containing [zinc citrate](#), [tea tree oil](#), (research results are mixed) and barleria are [natural ways](#) to help fight the bacteria that form plaque.

titanium dioxide/zinc oxide/iron oxides: [Sunscreens](#) made from zinc oxide and titanium dioxide form a barrier on the skin that reflects the sun and keeps rays from penetrating. According to the EWG, zinc and titanium can offer 20 percent more protection from UVA rays than chemical sunscreens—which contain ingredients that absorb UV rays rather than block them. Chemical sunscreens are also more readily absorbed into the body, the EWG reports. Broad-spectrum sunscreens contain both physical and chemical barriers and are believed to offer the best protection by filtering UVA and UVB rays, according to the [Journal of Investigative Dermatology](#).

toluene: This clear, colorless liquid gives many nail polishes their distinctive smell. According to the [Agency for Toxic Substances and Disease Registry](#), low to moderate levels of toluene can cause tiredness, confusion and weakness. These symptoms usually disappear when exposure is stopped, but in the long term, this [nail-polish ingredient](#) may be toxic to the reproductive system, according to the [Environmental Protection Agency](#).

UVA/UVB rays: UVB rays have been linked to skin cancer in numerous studies, while UVA rays, which are responsible for tanning effects, attack the connective tissue found in the deeper layers of the skin. The FDA reports that long-term exposure to UVA rays causes premature aging and wrinkles, and may increase the risk of melanomas. [Broad-spectrum sunscreens](#) that contain both physical and chemical barriers believed to offer the best protection, filtering both types of rays, according to the [Journal of Investigative Dermatology](#).

vegan: [Vegan certification](#) means that personal care products don't contain any animal-derived ingredients, including beeswax, royal jelly (a honeybee secretion touted for its antioxidants) or lanolin. Vegan Action (www.vegan.org) and PETA (www.peta.org) certify vegan products.

vitamin A: This fat-soluble vitamin is derived from retinoids and provitamin carotenoids and is found in the diet as retinol from animal sources (such as liver) or as provitamin A —also called beta-carotene—in fruits and vegetables. It is effective in treating acne, according to the [NIH](#). Vitamin A deficiency can result in scaly, rough skin. Vitamin A also produces natural oils in the scalp that can help [strengthen hair](#).

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vitamin B complex: The B vitamins, including B1, B2, B3, B5, B6, B7, B9 and B12, have a variety of functions that help regulate chemical reactions in the body. A [vitamin B](#) complex helps treat and prevent various skin problems and is particularly effective in handling oily skin. B6 helps create melanin for colorful hair; [B7 \(biotin\)](#) may help fight hair loss and may make nails stronger; and B9 (folate) [helps your body produce blood cells](#), which transport oxygen to the scalp so it may contribute to [hair growth](#). Vitamin B can also help treat dandruff, a common skin issue for older adults. Vitamin B2, or riboflavin, may help treat rosacea, possibly by improving the skin's mucus secretion.

vitamin C: This water-soluble vitamin is an antioxidant that blocks free radical damage to help protect cells. It is necessary to form collagen, the protein used to make skin, scar tissue, tendons, ligaments and blood vessels, which your body produces less of as you age—resulting in wrinkles. It is also helps heal wounds and repairs and maintains cartilage, bones, and teeth. The human body does not manufacture vitamin C, so it must be obtained through diet or supplementation. Studies show that when [applied topically](#), vitamin C might effectively treat aging skin. Recent [research](#) also shows that eating more vitamin-C rich foods can prevent wrinkles. When taken with vitamin E, it helps protect skin from [sun damage](#).

vitamin E: When [consumed](#) or applied topically, this antioxidant vitamin helps protect skin from free-radical damage by stabilizing lipid membranes, which can help prevent signs of aging and lock in [moisture](#). [Vitamin E](#) also promotes circulation for healthy hair.