



Chemicals and Synthetics to Avoid in Personal Care Products

| Chemical / Synthetic | Products Found In | Adverse Reactions / Claims | Risk | M | C |
|---|--|--|------|------|------|
| Alpha hydroxyl acid (AHA) (anti-wrinkle cream) | Skin and hair care products. Used as a solvent in cleaning compounds and for tanning leather. | Skin is exfoliated chemically instead of mechanically via abrasion, dries and increases skin aging. With concentrations over 3% thins the skin. | Low | | |
| Alkyl-phenol-ethoxylates | Shampoo | Mimics estrogen, reduces sperm count | Low | Yes | Yes |
| Ammonium laureth sulphate | Hair and bubble bath products, shaving cream, liquid hand soap | Easily absorbed by the skin, irritation to skin, eyes, and lungs | Low | Yes | Yes |
| Aluminum starch octenylsuccinate | Colour additive in cosmetics, eyeshadow | Neurotoxicity, organ system toxicity. Contamination concerns arsenic, lead, heavy metals. | High | Yes | Yes |
| Alcohol, Isopropyl (SD-40), ceteostearyl alcohol | Skin and hair products, fragrance, body rubs, antibacterial hand washes. Acts as a carrier accelerating the penetration of other harmful chemicals. | If synthetically produced (*) is toxic and poisonous. Drying, irritating solvent, strips skin of moisture and natural immune barrier, headaches, flushing, dizziness, mental depression, nausea, vomiting, headaches, flushing, dizziness. Dries skin and makes it more susceptible to bacteria, molds and viruses. | Low | Yes* | Yes* |
| Bentonite, soap clay | Facial mask and face products, makeup, soap | Research has found that it is toxic to animals. Respiratory toxicant. | Mod | | Yes |
| Benzene, toluol, toluene, methylbenzene, phenylenediamine | Nail polish / nail and cuticle treatment, cosmetics. Also found in cigarettes. | allergies, irritation to skin, eyes, lungs, neurotoxicity, immunotoxicity, toxic to bone marrow, liver and kidneys. | High | Yes | Yes |
| BHT (DBPC) | Lipstick, moisturizer, foundation, sunscreen, concealer, facial moisturizer, deodorant, antiperspirants | Allergies, immunotoxicity, neurotoxicity, endocrine disruption, organ system toxicity, irritation (skin, eyes, or lungs) | Mod | Yes | Yes |
| Ceteareth-20 (see polyethylene glycol) | | | | | |



Naturopathic Foundations

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|---|---|---|-------------|-----|-----|
| Coal tar | Shampoo (esp to treat dandruff, dry scalp), hair dYes, eczema cream, anti-itch cream, rosacea cream | Potentially severe allergic reactions, skin irritation, contact dermatitis, harmful to the immune system, respiratory toxicity, irritation to skin, eyes, lungs, multiple organ system toxicity, neurotoxicity | High | Yes | Yes |
| Cocamido betaine, Cocomidopropyl betaine, carboxymethyl, inner salt, quaternary ammonium compounds | Shampoo, conditioner, body wash, facial cleanser, hair colour, toothpaste, bubble bath, soap | Eyelid dermatitis, contact dermatitis, asthma-like symptoms, immune system irritant. May produce nitrosamines, may release formaldehyde. | Mod | | |
| Carbomer 934, 940, 941, 960, 961C | As a thickener, stabilizer in creams, toothpaste, eye makeup, bathing products | Eye irritation | Low | | |
| Diethanolamine (DEA), mono-ethanolamine (MEA), tri-ethanolamine (TEA), amides, coco, coconut fatty acid (used to make products "foamy") | Used in liquid soap, shampoo, conditioner, hair dye, lotions, soap, cream, bubble bath. Used in dishwashing detergent and laundry soap. Synthetic solvent, brake fluid, industrial degreasers and antifreeze. | Harmful to the liver, kidneys, and pancreas. Irritates skin, eyes, mucous membranes. Hormone-disrupting, health risks to infants and young children. Causes allergic reactions, contact dermatitis. Toxic and hazardous. Contamination with nitrosamines. | Mod to High | Yes | Yes |
| DMDM hydantoin, MDM hydantoin | Hair products, facial moisturizer/cleansers, sunscreen, body wash | Allergic reactions, irritation to skin, eyes, or lungs, organ system toxicity. Contamination concerns formaldehyde. | High | | |
| Dioxane – see polyethylene glycol | | | | | |
| Ethanol (trolamine, triethanolamine) | Facial products, moisturizer, sunscreen, makeup | Allergies, immunotoxicity, irritation to skin, eyes or lungs, endocrine disruption, organ system toxicity. Contamination concerns nitrosamines. | High | | Yes |
| FD, FDC, FD&C colour | Shampoo (esp to treat dandruff, dry scalp), hair dYes, plus many other personal care products | Potentially severe allergic reactions, skin irritation, contact dermatitis, asthma attacks, fatigue, nervousness, headaches, nausea, lack of concentration, linked to cancer | Mod | | Yes |



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| Fluoride | Toothpaste, mouthwash, tooth whitening, breath fresheners | Hazardous chemical especially to children. Linked to dental deformity, arthritis, allergic reactions, Crohn's disease, neurotoxicity, endocrine disruption, organ system toxicity | High | Yes | Yes |
| Formaldehyde Formalin, formic aldehyde, merthaldehyde, methanol oxomethane. | Skin, body and hair products, sunscreen, nail products, antiperspirants. Also found in wrinkle-resistant clothing, glues, adhesives, paints, and furniture. | Dermatitis, severe allergic reactions, the respiratory system, joint pain, skin reactions, chronic fatigue, dizziness, loss of sleep, triggers heart palpitations, aggravates coughs and colds, weakens immune system, biochemical or cellular level changes, neurotoxicity. | High | Yes | Yes |
| Fragrances or perfume. (term includes up to 4,000 ingredients, often petroleum based) | Various products | Headaches, dizziness, allergic rashes, skin discolouration, violent coughing, vomiting, skin irritation, affects central nervous system, depression, hyperactivity, irritability, inability to cope, behavioural changes, hormone disruptor. Due to the range of ingredients used the type of adverse reactions is broad. | Mod to High | Yes | Yes |
| Hydantoin DMDM – see DMDM | | | | | Yes |
| Imidazolidinyl urea | Facial moisturizers and cleansers, makeup, sunscreen, bodywash. | Irritation, Allergies, multiple organ toxicity. May be contaminated with formaldehyde. | Mod | | |
| Lead acetate | Hair dYes, styling gel / lotion, dandruff / scalp treatment | Hormone disruptor, accumulates in the bones, allergies, immunotoxicity, neurotoxicity, persistent bioaccumulation, ecotoxicity. | High | Yes | Yes |



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| Mercury (thimersol, Hg, ethyl mercury sodium salt, ethylmercurithiosalicylate) | Eye drops, ointment, deodorants, makeup. Found in vaccinations. | Neurological damage, behavioural abnormalities, leg cramps, muscle weakness, numbness, depression, allergies, immunotoxicity, persistence and bioaccumulation, organ system toxicity, endocrine disruption, irritation biochemical or cellular level changes, ecotoxicity. | High | Yes | Yes |
| Mineral Oil (paraffinum, petroleum by-product) | Many personal care products, Baby oil (100% mineral oil) | Interferes with skin's ability to eliminate toxins, promoting acne and other disorders. Coats the skin like plastic, clogging the pores. Slows down skin function and cell development, results in premature aging. | Mod | | |
| Paba (ethyl paba, para-aminobenzoic acid, benzoic acid) | Sunscreen agent, hair products, body wash / cleanser, moisturizer, shaving cream, facial moisturizer | Photosensitivity, contact dermatitis, allergies, immunotoxicity, biochemical or cellular level changes, neurotoxicity, organ system toxicity, may increase the risk of skin cancer. | High | Yes | Yes |
| Parabens (butyl, ethyl, germa, methyl, propyl) Petroleum based | Body wash / cleansers, hair products, toothpaste, tooth whitening | Absorbed through intact skin and from the GI tract and blood. Allergic reactions, endocrine disruptor (mimics estrogen), found in breast tumors, neurotoxicity, organ system toxicity | High | Yes | Yes |
| Polyethylene glycol (PEG 4-200, polyoxethylene, polygocol, polyether glycol, stearyl ether) Petroleum based | Hair colour, bleaching and other hair products, facial moisturizer, sunscreen, acne treatment, anti-bacterial soap, deodorant. | Causes delay contact allergy, toxic to kidneys, nervous system, skin and lung irritant. Contamination concerns ethylene oxide, 1,4-dioxane | Mod to High | Yes | Yes |
| Phenylenediamine | Permanent hair dYes / bleaching, hair spray, shampoo | Eczema, bronchial asthma, gastritis, allergies, irritation to skin, eyes and lungs, photosensitivity, neurotoxicity, endocrine disruption, ecotoxicity. Contamination concerns nitrosamines. | High | Yes | Yes |
| Phthalates -see fragrances | | | | | |



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| Propylene glycol (propane-1,2-diol, 2-hydroxypropanol methylethyl glycol) | Hair products, facial moisturizer / cleanser, body wash, sunscreen. Also found in anti-freeze, de-icer, latex paint, laundry detergent. | Decreases natural moisture of the skin, weakens protein and cellular structure. Irritation of nasal and respiratory passages, kidney damage, liver abnormalities, neurotoxicity, endocrine disruption. If ingested can cause nausea, vomiting, and diarrhea. Damages cell DNA. | Mod | Yes | Yes |
| Sodium Lauryl Sulfate / sodium laureth sulfate (in most products that are “foamy”) | Shampoo, hair conditioners, hair colouring / bleaching, body wash, facial creams, lotions, soaps. Found in car wash soap, engine degreasers, garage floor cleaners. | Corrodes hair follicle and impedes hair growth, skin irritation, dermatitis. Penetrates the eyes, brain, and liver. Degenerates cell membranes, damages the immune system, may cause blindness, depression, cataracts, retards the healing process. Can form toxic nitrosamines. | Mod | Yes | Yes |
| Styrene / acrylates copolymer, butyl ester | Nail polish, sunscreen, body wash / cleanser, facial moisturizer, foundation, concealer | Adverse reactions | Mod | | |
| Synthetic colours – see coal tar | | | | | |
| Silica talc – silicon dioxide | Baby powders, face powders, eye shadow, blush, sunscreen, lipstick, lip gloss, condoms, contraceptives | Allergies, immunotoxicity, persistence and bioaccumulation, biochemical or cellular level changes, organ system toxicity. Toxic when inhaled – affects in lungs, causing respiratory disorders, ovarian cancer. | Low - High | | Yes |
| Toluene (see benzenes) | | | | | |
| Triclosan (5-chloro-2-phenol) | Facial cleanser / moisturizer, body wash / cleanser, soap, antibacterial soap, deodorants, toothpaste | Irritation to skin, eyes of lungs, organ system toxicity, endocrine disruptor, persistence and bioaccumulation, ecotoxicity. Contamination concerns dioxin and chloroform. | High | Yes | Yes |



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| Triethanolamine (TEA) | Facial moisturizer, sunscreen, facial cleanser, makeup. Used as a pH balancer. | Facial dermatitis, irritation (skin, eyes, lungs), allergies, endocrine disruption, organ system toxicity. Contamination concerns nitrosamines. | High | | Yes |
| Vinyl acetate, ethenyl acetate, acrylate copolymer | Mascara, acne treatment, perfumes, deodorizers, paints, sealants, chewing gum | Organ system toxicity, neurotoxicity, multiple, additive exposure | Mod | Yes | Yes |

Guide:

M – mutagenic (may be linked to reproductive or developmental toxicity)

C – carcinogenic (may be linked to cancer)

References:

www.ewg.org/skindeep/

www.ferlowbrothers.com