

1,4 DIOXANE – Contaminant. Known human respiratory and immune system toxicant. Strong evidence suggests carcinogenicity. Animal studies show sense organ effects at very low doses (cosmetic specific study). Animal studies show reproductive effects at high doses. The European Union classifies it as an irritant. Banned in Canada.

2-ETHYLHEXYL ACRYLATE – Known human immune system toxicant. Known human skin and lung toxicant. Animal studies show sense organ effects at very low doses (bodycare specific). The Int'l Agency for Research on Cancer found limited evidence of carcinogenicity. The European Union classifies it as an irritant. Animal studies show skin irritation at very low doses. Animal studies show brain and nervous system effects at high doses.

ACETAMIDE MEA – Viscosity controlling, foam boosting, skin conditioning. Animal studies show sense organ effects at very low doses. Possibly mutagenic.

ACETOPHENONE – Masking agent. Known human respiratory toxicant. Animal studies show sense organ effects at very low doses (bodycare specific). Animal studies show brain and nervous system effects at low doses. Persistent and bioaccumulative in wildlife. The European Union classifies it as an irritant. Tests on mammalian cells show positive mutation results. Animal studies show developmental effects at high doses.

ACRYLATES COPOLYMER – Antistatic. May contain harmful impurities – METHACRYLIC ACID, ACRYLIC ACID, 2-ETHYLHEXYL ACRYLATE.

ACRYLIC ACID – Strong evidence suggests it is a human immune system toxicant. Known human respiratory toxicant. Animal studies show sense organ effects at very low doses (bodycare specific). Animal studies show reproductive effects at low doses. Tests on mammalian cells show positive mutation results. Animal studies show endocrine system and brain and nervous system disruption at high doses. Animal studies show skin irritation at very low doses. The European Union classifies it as a wildlife and environmental toxicant. Has never been assessed for safety in the United States.

AEROSOL SPRAYS – Hydrocarbons and compressed gases strongly contribute to global warming. Aerosol sprays also emit volatile organic compounds (VOCs) which contribute to ground-level ozone levels, a “key component” of asthma-inducing smog.

ALKYL BENZOATE – Skin conditioning agent; emollient. The ester of BENZOIC ACID.

ALUMINA – Opacifying agent; viscosity controlling. Strong evidence of human neurotoxicity. Animal studies show tumor formation at moderate doses. Has never been assessed for safety. Also known as ALUMINUM OXIDE.

ALUMINUM HYDROXIDE – Opacifying agent. Strong evidence of human neurotoxicity. Animal studies show broad systemic effects at low doses. Studies show possible reproductive effects.

ALUMINUM OXIDE – Opacifying agent; viscosity controlling. See ALUMINA.

ALUMINUM POWDER – Coloring agent. Strong evidence of human neurotoxicity. Strong evidence suggests it is a human immune and respiratory system toxicant. Has never been assessed for safety.

AMINOMETHYL PROPANOL – pH adjuster; buffering agent. The European Union classifies it as an irritant. Animal studies show brain and nervous system effects at moderate doses. Animal studies show endocrine disruption at high doses. The European Union classifies it as a wildlife and environmental toxicant. Associated with the contaminants nitrosamines and oxazolidine.

AMMONIUM LAURETH SULFATE – Surfactant; foaming agent. CIR found strong evidence that it is a human irritant (cosmetic specific). Animal studies show broad systemic effects at moderate doses.

AMMONIUM LAURYL SULFATE – Surfactant; foaming agent. Animal studies show sense organ effects at very low doses (cosmetic specific). Animal studies show skin irritation at very low doses.

ARGININE – Skin conditioning, masking, fragrance ingredient. Animal studies show cardiovascular effects and brain and nervous system effects at very low doses. Tests on mammalian cells show positive mutation results. Animal studies show endocrine disruption and reproductive effects at moderate doses. Has never been assessed for safety.

AVOBENZONE – Sunscreen agent. Tests on mammalian cells show positive mutation results. Associated with immunotoxicity. Studies about skin absorption contradict each other. Has not been assessed for safety. Associated with the contaminants BENZOIC ACID, BENZALDEHYDE, ACETOPHENONE

AZELAIC ACID – Fragrance ingredient, buffering, masking. Animal studies show sense organ effects at moderate doses (cosmetic specific). Animal studies show skin irritation at moderate doses. Has never been assessed for safety.

BABASSUAMADOPROPALKONIUM CHLORIDE - See QUATERNARY AMMONIUM COMPOUNDS

BEHENALKONIUM CHLORIDE – See QUATERNARY AMMONIUM COMPOUNDS

BEHENTRIMONIUM METHOSULFATE – See QUATERNARY AMMONIUM COMPOUNDS

BENZALDEHYDE – Flavoring agent, fragrance ingredient, masking. Animal studies show respiratory effects and brain and nervous system effects at very low doses. Tests on mammalian cells show positive mutation results. Animal studies show endocrine disruption at high doses. Animal studies show skin irritation at low doses.

BENZALKONIUM CHLORIDE – Antimicrobial agent; preservative; surfactant. Known human immune system toxicant. CIR found strong evidence that it is a human skin irritant. In Canada it is limited to less than 0.1% as a preservative. See QUATERNARY AMMONIUM COMPOUNDS

BENZETHONIUM CHLORIDE – See QUATERNARY AMMONIUM COMPOUNDS.

**BENZOIC ACID** – Fragrance ingredient; ph adjuster. Animal studies show sense organ effects at very low doses (bodycare specific study). Animal studies show brain and nervous system effects at moderate doses. Animal studies show skin irritation at low doses. Found to be a primary skin irritant in human dermatitis studies.

**BENZOPHONE** – Fragrance ingredient; ultraviolet light absorber. Limited evidence of endocrine disruption. Animal studies show brain and nervous system effects at moderate doses. Tests on mammalian cells show positive mutation results. Animal studies show reproductive effects and skin irritation at high doses. Has never been assessed for safety.

**BENZOPHONE-3** – See OXYBENZONE

**BENZYL ALCOHOL** – Fragrance ingredient, external analgesic, preservative, solvent, viscosity decreasing agent, masking agent. Strong evidence of human neurotoxicity. Tests on mammalian cells show positive mutation results. The European Union classifies Benzyl alcohol as toxic or harmful. Animal studies show endocrine disruption and reproductive effects at high doses. Animal studies show skin irritation at low doses.

**BETAINE** – Hair conditioning agent; antistatic; viscosity controlling. Animal studies show brain and nervous system effects and endocrine disruption at high doses. Animal studies show broad systemic effects at moderate doses. Has never been assessed for safety.

**BETA SITOSTEROL** – Common sterol derived from plants. Skin conditioning agent. Caused endocrine disruption and blood effects in animal studies at very low doses. Animal studies show reproductive effects at low doses. Bioaccumulative.

**BHA (BUTYLATED HYDROXYANISOLE)** – Fragrance ingredient; masking agent. Known human immune system toxicant. The European Union found it unsafe for use in cosmetics and banned it. Possible human carcinogen (cosmetic specific). Animal studies show liver effects at very low doses. Bioaccumulative in wildlife. Limited evidence of endocrine disruption. Animal studies show brain and nervous system effects at moderate doses. Animal studies show reproductive effects at high doses.

**BHT (BUTYLATED HYDROXYTOLUENE)** - Fragrance ingredient, masking agent. Known human immune system toxicant. Strong evidence suggests it is a human skin toxicant. Animal studies show skin irritation, brain and nervous system effects and endocrine disruption at low doses. Tests on mammalian cells show positive mutation results. Animal studies show reproductive effects at high doses.

**BORON NITRIDE** – Absorbent, opacifying, skin conditioning. Very often this ingredient is nano.

**BRONOPOL** – Preservative. Fifth on the list of preservatives that cause dermatitis (American College of Dermatology Test Trays). Breaks down to produce formaldehyde. Associated with the contaminants nitrosamines.

**BUTYLATED HYDROXYANISOLE** – See BHA

BUTYLATED HYDROXYTOLUENE – See BHT

BUTYLENE GLYCOL – Fragrance ingredient; skin conditioning agent. CIR found strong evidence that it is a human irritant (cosmetic specific). Animal studies show endocrine disruption, brain and nervous system effects and reproductive effects at high doses. Animal studies show sense organ effects at moderate doses.

BUTYLPARABEN – See PARABENS

C # - # – Emollient, surfactant. Has never been assessed for safety in bodycare. Animal studies show skin irritation, brain and nervous system effects at high doses. Animal studies show sense organ effects at high doses (cosmetic specific study).

CARRAGEENAN – Thickener. An often “degraded” extract of irish moss and other seaweeds. Animal studies showed blood effects, kidney or renal effects and gastrointestinal effects at very low doses. Animal studies show brain and nervous system effects at moderate doses. Tests on mammalian cells show positive mutation results. Is associated with IBS (Irritable Bowel Syndrome). NOTE: This is specific to oral products. No harmful effects are associated with external use.

CERESIN – A wax used as a viscosity controlling agent. Known to cause allergic reactions in sensitive individuals. Has never been assessed for safety.

CETEARETH 2-100 – Surfactant, penetration enhancer. CIR found it unsafe for use on damaged or broken skin. Animal studies show sense organ effects and skin irritation at low doses. Animal studies show brain and nervous system effects at moderate doses. Associated with the contaminants ethylene oxide and 1,4 dioxane.

CETETH-20, CETETH-20 PHOSPHATE – Surfactant, emulsifying. Animal studies show skin irritation, brain and nervous system effects and broad systemic effects at high doses. Associated with the contaminants ethylene oxide and 1,4 dioxane.

CETRIMONIUM BROMIDE – Antistatic agent, surfactant, preservative. CIR found strong evidence that it is a human skin toxicant and assessed it as safe. Animal studies show reproductive effects and brain and nervous system effects at low doses. Animal studies show sense organ effects at very low doses (cosmetic specific study).

CETYL ALCOHOL – Emulsion stabilizer, fragrance ingredient, surfactant. Animal studies show sense organ effects at low doses (cosmetic specific study). Animal studies show skin irritation at very low doses.

CETYL BETAINE – See QUATERNARY AMMONIUM COMPOUNDS.

COCAMIDE DEA – Surfactant, foam booster, emulsifier. Known human immune system toxicant. Strong evidence that it is a human skin toxicant. US EPA office of pesticide found some evidence that it may cause cancer. Animal studies show sense organ effects at very low doses. Animal studies show skin irritation at low doses.

COCAMIDOPROPYL BETAINE – Anti-static agent, hair conditioning agent, surfactant, cleansing agent. Classified as a human immune system toxicant. Associated with the contaminants nitrosamines.

COCOAMPHOCARBOXYGLYCINATE – See DISODIUM COCOAMPHODIACETATE

CYCLOMETHICONE – Antistatic, hair conditioning emollient. Caused changes in liver weight in animal testing. Animal studies showed skin irritation at moderate doses. Bioaccumulative.

CYCLOPENTASILOXANE – Anti-frizz. Used to make hair and skin "shiny". Found to change liver weight in lab rats. Bioaccumulative. Animal studies show sense organ effects at moderate doses (cosmetic specific study). Found to irritate eyes and skin in lab rabbits. Some reports say it lingers in the body for five years.

CYCLOTETRAILOXANE – Solvent, skin conditioning agent. The European Union found limited evidence of developmental toxicity. Persistent and bioaccumulative in wildlife. European Union classifies it as an environmental and wildlife toxicant.

DEA (DIETHANOLAMINE) – pH Adjuster. Strong evidence suggests it is a human skin toxicant. Moderate evidence suggests it is a human immune system toxicant. It is a known human respiratory system toxicant. Animal studies show sense organ effects at very low doses (cosmetic specific study). The European Union classifies it as a harmful irritant. Animal studies show neurodevelopmental effects at moderate doses. Animal studies show endocrine disruption and brain and nervous system effects at high doses.

DIAZOLIDINYL UREA – Preservative. Known human immune system toxicant. Strong evidence suggests it is a human skin toxicant. Tests on mammalian tissue show positive mutation results. Animal studies show endocrine disruption at high doses. Animal studies show broad systemic effects at high doses. Tests showed altered sleep time in mice.

DICETYLDIMONIUM CHLORIDE – See QUATERNARY AMMONIUM COMPOUNDS

DIETHANOLAMINE – See DEA

DIHYDROXYACETONE – Colorant, skin conditioning agent, tanner. Not approved by the FDA for use around the eyes. Tests on mammalian cells show positive mutation results. Animal studies show broad systemic effects at high doses.

DIMETHICONE COPOLYL – Solvent, emulsion stabilizer. CIR determined that it is not safe for use on damaged or broken skin. Limited evidence of sense organ toxicity.

DIOCTYL SODIUM SULFOSUCCINATE – Surfactant, cleansing agent, emulsifier. Animal studies show sense organ effects at very low doses (cosmetic specific study). Animal studies show endocrine disruption and brain and nervous system effects at moderate doses. Animal studies show reproductive effects at high doses. Animal studies show skin irritation at low doses. CIR found it safe for use with a concentration limit.

DIPROPYLENE GLYCOL – Fragrance ingredient, solvent, masking, viscosity controlling. CIR found strong evidence that it is a human irritant. Animal studies show sense organ effects at moderate doses (cosmetic specific study). Animal studies show brain and nervous system effects at high doses.

DISODIUM COCOAMPHODIACETATE – Surfactant. Animal studies show sense organ effects and skin irritation at very low doses (cosmetic specific study). Animal studies show skin irritation at very low doses.

DISODIUM EDTA – Chelating agent, penetration enhancer, viscosity controlling. Animal studies show brain and nervous system effects at low doses. Animal studies show broad systemic effects at low doses. Studies on mammalian cells show positive mutation results. Animal studies show endocrine disruption and reproductive effects at high doses. Because it is a penetration enhancer, it can increase absorption of other harmful chemicals.

DISODIUM LAURETH SULFOSUCCINATE – Surfactant, foaming agent. May be contaminated with human carcinogenic nitrosamines. Also associated with the contaminants ethylene oxide and 1,4 dioxane.

DMDM HYDANTOIN – Preservative. Known human immune system toxicant. Strong evidence suggests it is a human skin toxicant. Animal studies show broad systemic effects at moderate doses. Skin sensitizer. Known to release formaldehyde.

EDTA – Chelating agent. Animal studies show broad systemic effects at low doses. Tests on mammalian cells show positive mutation results. Animal studies show brain and nervous system effects at moderate doses. Animal studies show reproductive effects at high doses. Because it is a penetration enhancer, it can increase absorption of other harmful chemicals.

EMU OIL – Emollient. A refined oil from the fat of Emu birds. These flightless Australian birds are becoming less common and are factory farmed.

ENSULIZOLE – Sunscreen agent, UV absorber, UV filter. Prohibited in Japan for some types of cosmetics. “Produces excess reactive oxygen species that can interfere with cellular signaling, cause mutations, lead to cell death and may be implicated in cardiovascular disease.” Tests on mammalian cells show positive mutation results. Has never been assessed for safety in the United States.

ETHYL ACETATE – Fragrance ingredient, solvent. Strong evidence suggests human neurotoxicity. Limited evidence suggests sense organ toxicity. Tests on mammalian cells show positive mutation results. The European Union classifies it as an irritant.

ETHYL DIGLYCOL – See POLYETHYLENE GLYCOL

ETHYL HEXANEDIOL – Fragrance ingredient; solvent. Strong evidence suggests it is a human skin toxicant. The European Union classifies it as an irritant and says it is a serious risk to the eyes.

ETHYLHEXYLGLYCERIN – Skin conditioning agent; deodorant agent. European Union classifies it as an irritant with limited evidence of eye toxicity.

ETHYL VANILLIN – Fragrance ingredient, masking. Tests on mammalian cells show positive mutation results. Animal studies show broad systemic effects and skin irritation at moderate doses. Animal studies show brain and nervous system effects at high doses.

ETHYLENE GLYCOL – Fragrance ingredient, viscosity controlling. Known human respiratory toxicant. Limited evidence suggests reproductive toxicity. Tests on mammalian cells showed positive mutation results. Animal studies show skin irritation at moderate doses. Associated with the contaminants Ethoxyethanol and Methoxyethanol.

ETHYLENE OXIDE – Contaminant. Strong evidence suggests it is a human reproductive, respiratory, immune, and skin toxicant. Strong evidence suggests human neurotoxicity. Moderate evidence suggests it is a human developmental toxicant. Known human carcinogen. Possible human sense organ and cardiovascular toxicant. The European Union classifies it as an irritant. Banned in Canada and Europe. CIR did not assess it for safety.

ETHYLHEXYL METHOXYCINNAMATE – See OCTINOXATE

FARNESOL – Fragrance ingredient, masking agent. Classified as a possible human immune system toxicant on the list of banned and restricted fragrances. Animal studies show brain and nervous system effects at moderate doses. Tests on microorganisms show positive mutation results. Animal studies show liver effects at high doses.

FLUORIDE – Used in toothpaste. Strong evidence of human neurotoxicity. Multiple animal studies show reproductive effects at very low doses. Animal studies show tumor formation at low doses. Gastrointestinal, kidney and cardiovascular effects also found in animal studies at low doses. Banned in Canada.

FORMALDEHYDE – Cosmetic biocide, preservative. Known human immune and respiratory system toxicant. Known human carcinogen. Possible human developmental and reproductive toxicant. Possible human hematologic toxicant. Possible human cardiovascular toxicant. Restricted in Canada. The CIR recommends minimalizing use in cosmetics. Animal studies show sense organ effects at very low doses (cosmetic specific studies). Animal studies show skin irritation at very low doses.

FRAGRANCE – Deodorizing, perfume. Known human immune system toxicant. Moderate evidence suggests human neurotoxicity. Has never been assessed for safety. Often petroleum-based. Often contaminated with phthalates.

FULLERENE – Antimicrobial, skin conditioning. Tests on mammalian cells show positive mutation results. Animal studies “show changes at low doses where the human health implications are not yet well understood.” Has never been assessed for safety. Nano-scale ingredient.

GERMABENS – Germaben II is a combination of PROPYLENE GLYCOL, DIAZOLIDINYL UREA, METHYLPARABEN, and PROPYLPARABEN

GERMALL – See DIAZOLIDINYL UREA and IMIDAZOLIDINYL UREA

GLUCOSE OXIDASE – Conditioning agent; stabilizer. Broad systemic toxicity in animal tests at very low doses. Caused dermatitis in animal tests at very low doses.

HEXADECANOL – See CETYL ALCOHOL

HOMOSALATE – UV absorber, fragrance ingredient, penetration enhancer. Because it enhances penetration, it can increase the absorption of other harmful ingredients. In one study, homosalate increased absorption of 2,4D (a pesticide) by 32.1%. Associated with the contaminant SALICYLIC ACID

HYDROQUINONE – Hair colorant, fragrance ingredient, skin bleaching agent. Known human immune system toxicant. Known human respiratory toxicant. Strong evidence suggests it is a human skin toxicant. Strong evidence suggests human neurotoxicity. The European Union found limited evidence of eye toxicity. The European Union, Amer Conf of Gov't Industrial Hygienists, and The International Agency for Research on Cancer found limited evidence of carcinogenicity. Animal studies show skin irritation at very low doses. Animal studies show endocrine disruption at high doses. The European Union classifies it as an irritant and wildlife and environmental toxicant. Banned for skin care products in Canada. CIR assessed as safe.

HYDROXYETHYL ACRYLATE – Skin highlighter. Known human immune system toxicant. Animal studies show sense organ effects at very low doses (cosmetic specific study). Animal studies show brain and nervous system effects at moderate doses. Animal studies show positive mutation results. Moderate evidence suggests it is a human skin irritant. The European Union classifies it as a wildlife and environmental toxicant. Known to cause skin burns.

IMIDAZOLIDINYL UREA – Preservative. Known human immune system and skin toxicant. Often derived from urine and other bodily fluids. Can release formaldehyde.

IODOPROPYLYL BUTYLCARBAMATE – Preservative. One or more human case studies show significant immune effects. CIR found strong evidence that it is a human toxicant. CIR assessed as safe with a concentration limit. Limited evidence suggests gastrointestinal or liver toxicity. Known to cause allergic contact dermatitis.

ISOCETETH-20 – Surfactant, emulsifying agent. A POLYETHYLENE GLYCOL ether. Associated with the contaminants 1,4 DIOXANE and ETHYLENE OXIDE

ISOPROPYL METHYLPHENOL – see o-Cymen-5-OL

ISOPROPYL MYRISTATE – Fragrance ingredient, emollient, solvent. Strong evidence that it is a human irritant. Animal studies show skin irritation at very low doses. Animal studies show broad systemic effects at high doses.

ISOPROPYL PALMITATE – Emollient. Animal studies show broad systemic effects and skin irritation at low doses.

LAURAMIDE DEA – Foam boosting, viscosity controlling. Animal studies show sense organ effects at low doses. Animal studies show tumor formation at high doses. Animal studies show skin irritation at very low doses. Associated with nitrosamines contaminants.

LAURETH-7 – A surfactant. Associated with the contaminants 1,4 DIOXANE and ETHYLENE OXIDE.

LINOLEAMIDOPROPYL PG-DIMONIUM CHLORIDE – See QUATERNARY AMMONIUM COMPOUNDS

LITHIUM CHLORIDE – A crystalline salt used in bath salts. Strong evidence of human neurotoxicity. Animal studies show brain and nervous system effects, cardiovascular effects, liver effects, and blood clotting effects at very low doses. Tests on mammalian cells show positive mutation results. Skin irritant.

MAGNESIUM ALUMINUM SILICATE – Absorbent, anticaking agent, viscosity controlling. Strong evidence suggests human neurotoxicity. CIR assessed as safe.

METHACRYLIC ACID- Artificial nail builder, film forming. The European Union classifies it as toxic and harmful. Tests on non-mammalian cells show positive mutation results. Animal studies show brain and nervous system effects at high doses.

METHYLCHLOROISOTHIAZOLINONE – Preservative. Known human immune system toxicant. CIR found strong evidence that it is a human skin toxicant. CIR assessed as safe with qualifications. Animal studies show positive mutation results.

METHYLPARABEN – See PARABENS

MINERAL OIL – Fragrance ingredient, antistatic, skin protecting. Animal studies show sense organ effects at low doses (cosmetic specific). Animal studies show skin irritation at moderate doses. Has never been assessed for safety.

MYRISTIC ACID – Perfuming, emulsifier. This acid is often derived from animal products. Animal studies show brain and nervous system effects at low doses. Animal studies show sense organ effects at moderate doses (cosmetic specific). Animal studies show skin irritation at low doses.

MYRISTYL ALCOHOL – Emulsion stabilizer, foam boosting, skin conditioning, viscosity controlling. Animal studies show tumor formation at high doses. Animal studies show sense organ effects at moderate doses (cosmetic specific). Animal studies show skin irritation at low doses.

MYRISTYL LACTATE – Skin conditioning agent, emollient. The CIR found this safe only for sun protection, and this industry recommendation is often violated. Very few studies have been conducted.

MYRISTYL MYRISTATE – Skin conditioning agent, emollient. The CIR found strong evidence that it is a human irritant (bodycare specific) and classified it as safe.

NITROSAMINES – Contaminant. Banned in Canada and the European Union. The EPA, Int'l Agency for Research on Cancer, and the NTP Report on Carcinogens all declared it a “possible human carcinogen”. The Proposition 65 List of Carcinogens states there is “strong evidence” that it causes cancer. The CHE Toxicant and Disease Database states that there is “moderate evidence” that it causes gastrointestinal and respiratory cancer. Animal studies show tumor formation at very low doses. Animal studies show reproductive effects at very low doses. Animal studies show endocrine system disruption at low doses. Limited evidence of immune toxicity. Animal studies show respiratory effects at low doses. Animal studies show brain and nervous system effects at moderate doses.

NONOXYNOL-# - Surfactant, cleansing agent. Animal studies show sense organ effects at very low doses (bodycare specific). Persistent and bioaccumulative in wildlife. Animal studies show brain and nervous system effects at very low doses. Animal studies show skin irritation at very low doses. Associated with the contaminants 1,4 DIOXANE and ETHYLENE OXIDE.

o-CYMEN-5-OL (ISOPROPYL METHYLPHENOL) – Preservative. Animal studies show skin irritation and brain and nervous system effects at low doses.

OCTINOXATE – UV absorber, UV filter. “Produces excess reactive oxygen species that can interfere with cellular signaling, cause mutations, lead to cell death and may be implicated in cardiovascular disease.” Human case studies show possible photoallergic effects. Animal studies show reproductive effects at moderate doses. “Ingredient is suspected or measured to accumulate in people.” Animal studies show liver effects at high doses. Wildlife and environmental toxicant. Because it is a penetration enhancer, it can increase absorption of other harmful ingredients.

OCTISALATE – Fragrance ingredient, UV absorber. Human case studies show possible human immune effects. Animal studies show skin irritation and broad systemic effects at moderate doses. Because it is a penetration enhancer, it can increase absorption of other harmful ingredients.

OCTOCRYLENE – UV absorber, sunscreen agent. “Produces excess reactive oxygen species that can interfere with cellular signaling, cause mutations, lead to cell death and may be implicated in cardiovascular disease.” Persistent and bioaccumulative in wildlife. Animal studies show liver effects at high doses. Wildlife and environmental toxicant. Found to absorb into the skin at 0-0.25%

OCTYL METHOXYCINNAMATE – See OCTINOXATE

OLETH-# - Associated with the contaminants 1,4 DIOXANE and ETHYLENE OXIDE. Animal studies show skin irritation at very low doses (bodycare specific).

**OXYBENZONE** – Sunscreen agent, UV absorber, UV filter. Human case studies show significant photoallergic effects. “Produces excess reactive oxygen species that can interfere with cellular signaling, cause mutations, lead to cell death and may be implicated in cardiovascular disease.” Limited evidence suggests developmental toxicity. “Ingredient is suspected or measured to accumulate in people.” Animal studies show cardiovascular effects at moderate doses. Tests on mammalian cells show positive mutation results. Wildlife and environmental toxicant. Because it is a penetration enhancer, it can increase absorption of other harmful chemicals.

**PABA (PARA-AMINOBENZOIC ACID)** – Sunscreen agent, UV absorber, UV filter. Banned in Canada. “Produces excess reactive oxygen species that can interfere with cellular signaling, cause mutations, lead to cell death and may be implicated in cardiovascular disease.” Moderate evidence suggests it is a human toxicant. Tests on mammalian cells show positive mutagenic effects. Animal studies show brain and nervous system effects and reproductive effects at high doses. Animal studies show broad systemic effects at moderate doses.

**PAHS** – Banned in Europe and Canada. Probable human carcinogen (gastrointestinal, renal, reproductive, respiratory, skin). Persistent and bioaccumulative in wildlife and humans. Moderate evidence suggests human skin and immune system toxicity. Known hematologic toxicant. Wildlife and environmental toxicant.

**PARA-AMINOBENZOIC ACID** – See PABA

**PARABENS (BUTYLPARABEN, METHYLPARABEN, PROPYLPARABEN)** – Preservative. Animal studies show reproductive effects at very low doses. Studies show endocrine disruption at low doses. Animal studies show brain and nervous system effects at moderate doses. Strong evidence suggests they are human skin toxicants. Tests on mammalian cells show positive mutation results. Parabens were found in breast cancer tissue.

**PARFUM** – See FRAGRANCE

**PARSOL 1789** – See AVOBENZONE

**PEG (PEG-#)** – Polyethylene glycol/polyethylene. Used in making surfactants. Commonly used in antifreeze. Can cause hives and eczema.

**PEG-7 GLYCERYL COCOATE** – Skin conditioner. The polyethylene glycol ether of glyceryl cocoate. Associated with the contaminant 1,4 dioxane. Not safe for use on damaged skin. Alters skin structure and enhances penetration.

**PEG-100 STEARATE** – A surfactant (cleansing agent). Not safe for use on damaged or broken skin. Animal studies show tumor formation at moderate doses. Animal studies show reproductive effects and endocrine disruption at high doses. Animal studies show skin irritation at very low doses.

**PENTYLENE GLYCOL** – Solvent, skin conditioning. Animal studies show brain and nervous system effects at high doses. Animal studies show broad systemic effects at high doses. Animal studies show skin irritation at high doses. Has never been assessed for safety.

PETROLATUM – Skin conditioning agent, emollient, UV absorber. Banned in Europe. Associated with the contaminant PAHS

PHENETHYL ALCOHOL – Fragrance ingredient, preservative. Animal studies show sense organ effects at very low doses (bodycare specific). Animal studies show brain and nervous system effects and reproductive effects at moderate doses. Tests on mammalian cells show positive mutation results. Animal studies show skin irritation at low doses. Has never been assessed for safety.

PHENOXYETHANOL – Preservative. Animal studies show organ effects at very low doses. In Europe, phenoxyethanol is classified as a harmful irritant. Animal studies showed positive mutation effects. Linked to allergic contact urtica and dermatitis.

PHENYLBENZIMIDAZOLE SULFONIC ACID – See ENSULIZOLE

PHTHALATES – Known human immune system toxicant. Banned in the European Union. See FRAGRANCE

POLOXAMER 335 – Surfactant, cleansing agent. Animal studies show broad systemic effects at low doses. Animal studies show brain and nervous system effects at high doses.

POLYACRYLAMIDE – Stabilizer and foaming agent. Often added to pesticides. Often contaminated with acrylamide, which is known to be neurotoxic and a possible carcinogen. Highly toxic and irritating to the skin. Absorbs easily through unbroken skin.

POLYBUTENE – Binder, viscosity increasing agent. CIR found strong evidence that it is a human irritant (bodycare specific) and assessed it as safe.

POLYETHYLENE GLYCOL – See PEG

POLYPROPYLENE GLYCOL – Solvent, skin conditioning agent. Animal studies show brain and nervous system effects at low doses. Animal studies show sense organ effects at moderate doses (bodycare specific). Animal studies show skin irritation at moderate doses.

POLYQUATERNIUM-# - See QUATERNARY AMMONIUM COMPOUNDS

POLYSORBATE 60 – A fragrance ingredient, emulsifier, and surfactant. Animal studies show tumor formation at high doses. Caused broad systemic effects and reproductive effects at moderate doses in animal studies.

POLYSORBATE 80 – Emulsifier associated with the contaminant 1,4 dioxane. Linked to miscarriages. Caused infertility in lab rats and mice. Causes anaphylactoid reactions in some people.

POLYVINYLPIRROLIDONE (PVP) – Binder, emulsion stabilizer, hair fixative, film forming. Animal studies show broad systemic effects at moderate doses. Animal studies show endocrine disruption at high doses. Petroleum product.

POTASSIUM HYDROXIDE – Emulsifier, cuticle softener, pH adjuster. “Extremely corrosive, and ingestion may cause violent pain, bleeding, collapse, and death.” Skin application on mice caused tumors. Cosmetic-specific animal studies show skin irritation and sense organ effects at very low doses.

POTASSIUM MYRISTATE – Surfactant, cleansing agent, emulsifier. See MYRISTIC ACID

PPG-30 – Skin conditioning agent. Animal studies show brain and nervous system effects at low doses. Animal studies show skin irritation and sense organ effects at moderate doses (bodycare specific).

PROPANEDIOL – Solvent, viscosity controlling. Classified by the National Library of Medicine as a skin irritant. Studies on mammalian cells show positive mutation results. Animal studies show brain and nervous system effects at high doses. Animal studies show broad systemic effects at high doses.

PROPYLENE GLYCOL – Fragrance ingredient, skin conditioning agent, viscosity controlling agent. Classified as a skin irritant. Animal studies show reproductive effects at moderate doses. Tests on mammalian cells show positive mutation results. Animal studies show endocrine disruption at high doses. Penetration enhancer.

PROPYL GALLATE – Fragrance ingredient, perfuming. CIR found strong evidence that it is a human skin irritant and assessed it as safe. The European Union found limited evidence of immune system toxicity (bodycare specific). The European Union classifies it as toxic and harmful (bodycare specific). Tests on mammalian cells show positive mutation results. Animal studies show skin irritation, endocrine disruption, and reproductive effects at high doses.

PROPYLPARABEN – See PARABENS

PROVIDONE – See POLYVINYLPYRROLIDONE

PVP – See POLYVINYLPYRROLIDONE

QUATERNARY AMMONIUM COMPOUNDS – Synthetic derivatives of ammonium chloride. Anti-microbial and preservative. Toxic to the immune system, mucous membranes and can damage organs. Found to be possibly mutagenic in animal testing. Associated with the contaminant FORMALDEHYDE

QUATERNIUM-15 – See QUATERNARY AMMONIUM COMPOUNDS

RETINYL PALMITATE – Skin conditioning agent. Is on the Canadian “hotlist” of restricted ingredients. Animal studies show reproductive effects at low doses. Tests on mammalian cells show positive mutation results. Animal studies show brain and nervous system effects and broad systemic effects at high doses.

SALICYLIC ACID – Antiacne agent, preservative, skin conditioning. Animal studies show brain and nervous system effects at low doses. Animal studies show sense organ effects at very low doses. Persistent and bioaccumulative in wildlife. Animal studies show reproductive effects at

moderate doses. Animal studies show skin irritation at moderate doses. Because it is a penetration enhancer, it can increase absorption of other harmful ingredients.

SODIUM BENZOATE – Preservative; fragrance ingredient. Animal studies show brain and nervous system effects at moderate doses. Animal studies show broad systemic effects at low doses. Tests on mammalian cells show positive mutation results. Animal studies show reproductive system effects and skin irritation at high doses. Internal consumption strongly linked to ADHD.

SODIUM BISULFATE – Buffering agent. The European Union found limited evidence of eye toxicity (bodycare specific) and classifies it as an irritant. Tests on mammalian cells show positive mutation results.

SODIUM BORATE – Preservative, emulsifier. Has a drying and irritating effect on the skin. Is on the Canadian “Hotlist”. The CIR found it unsuitable for use on infants. Animal studies showed broad systemic effects at low doses. The FDA has prohibited it in food. Animal studies show brain and nervous system effects and endocrine disruption at high doses. Tests on mammalian cells show positive mutation results. In the diet of rabbits at rats it caused growth retardation. In the diet of male rats it exerted toxic effects on the sex glands as well as infertility.

SODIUM CETEARYL SULFATE – Surfactant, foaming agent. Animal studies show sense organ effects at low dose (bodycare specific). Animal studies show skin irritation at moderate doses.

SODIUM DEHYDROACETATE – Preservative. The European Union classifies it as toxic and harmful (bodycare specific). Tests on mammalian cells show positive mutation results. Animal studies show endocrine disruption at high doses. Animal studies show reproductive effects at high doses.

SODIUM HYDROXIDE – PH adjuster. Animal studies show brain and nervous system effects, sense organ effects, skin irritation, and metabolic effects at very low doses. Tests on mammalian cells show positive mutation results.

SODIUM HYDROXYMETHYLGLYCINATE – Hair conditioning agent, preservative. Is known to release FORMALDEHYDE.

SODIUM LAURETH SULFATE – Emulsifier, surfactant, cleansing agent, foaming agent. Associated with the contaminants 1,4 dioxane and ethylene oxide. Animal studies show sense organ effects and skin irritation at very low doses. Known human skin irritant.

SODIUM LAURYL SULFATE – Emulsifier, surfactant, cleansing agent, foaming agent. Animal studies show broad systemic effects at low doses. Tests on mammalian cells show positive mutation results. Animal studies show brain and nervous system effects at moderate doses. Known human skin irritant. Animal studies show skin irritation at very low doses. Animal studies show endocrine disruption and reproductive effects at very low doses. Associated with eczema.

SODIUM LAURYL SULFOACETATE – Surfactant, foaming agent. Animal studies show brain and nervous system effects at high doses. Animal studies show broad systemic effects at moderate doses. Animal studies show skin irritation at low doses.

SODIUM METABISULFITE – An inorganic salt used primarily to straighten hair. Known human eye, immune and respiratory system toxicant. Nervous system effects seen in animal testing at moderate doses. Linked through studies to asthma when inhaled.

SODIUM METHYL OLEYL TAURATE – Surfactant, antistatic, foaming. Animal studies show sense organ effects at very low doses (bodycare specific). Animal studies show endocrine disruption at high doses.

SODIUM MYRETH SULFATE – Emulsifier, surfactant, cleansing agent, foaming agent. Animal studies show sense organ effects and skin irritation at very low doses.

SODIUM POLYACRYLATE – Binding, emulsion stabilizing, film forming, skin conditioning. Animal studies show sense organ effects at low doses (bodycare specific). Associated with the contaminants METHACRYLIC ACID, ACRYLIC ACID, and 2-ETHYLHEXYL ACRYLATE

SODIUM SULFATE – Viscosity increasing agent, bulking agent. Animal studies show toxic effects at moderate doses. The Environmental Protection Agency classifies it as toxic.

SORBIC ACID – Fragrance ingredient, preservative. Strong evidence suggests that it is a human skin toxicant. Tests on mammalian cells show positive mutation results. Animal studies show skin irritation at very low doses.

SOYAMIDE DEA – See DEA

SOYAMIDOPROPALKONIUM CHLORIDE – See QUATERNARY AMMONIUM COMPOUNDS

STEARDIMONIUM CHLORIDE – See QUATERNARY AMMONIUM COMPOUNDS

STEARETH-# - Surfactant, cleansing agent. The POLYETHYLENE GLYCOL ether of STEARYL ALCOHOL. Animal studies show broad systemic effects at moderate doses.

STEARYL ALCOHOL – Emulsion stabilizing, foam boosting, masking. CIR found strong evidence that it is a human irritant and assessed it as safe. Animal studies show tumor formation at high doses. Animal studies show sense organ effects at moderate doses (bodycare specific).

STYRENE – Perfuming. The National Library of Medicine found moderate evidence that it is a human immune system toxicant. Strong evidence suggests human neurotoxicity. Known human respiratory toxicant. Possible human sense organ, cardiovascular, and gastrointestinal toxicant. Animal studies show sense organ effects at very low doses (bodycare specific). Int'l Agency for Research on Cancer found limited evidence of carcinogenicity. Limited evidence of endocrine disruption. The European Union classifies it as an irritant. Wildlife and environmental toxicant.

STYRENE/PVP COPOLYMER – Film forming, opacifying. A copolymer prepared from PVP and STYRENE monomers.

SYNTHETIC FRAGRANCE – See FRAGRANCE

TALC – Anti-caking, absorbing agent. Respiratory toxicity when inhaled. Chemical composition is very similar to asbestos. Animal studies show skin irritation at moderate doses.

TALLOW – Emollient. Rendered beef fat. May cause eczema and blackheads.

TEA – See TRIETHANOLAMINE

TETRAHYDROXYPROPYL ETHYLENEDIAMINE – Chelating ingredient. Animal studies show broad systemic effects at high doses. Has never been assessed for safety.

TETRASODIUM EDTA – Chelating agent. Animal studies show sense organ effects and skin irritation at low doses. Skin penetration enhancer.

TRIBEHENIN – Emollient, skin conditioning. Animal studies show broad systemic effects at high doses. Because it is a penetration enhancer, it may increase the absorption of other harmful ingredients.

TRICLOSAN – Cosmetic biocide, preservative. Studies show endocrine disruption at very low doses. Persistent and bioaccumulative in wildlife. The European Union classifies it as an irritant and wildlife and environmental toxicant. Animal studies show broad systemic effects at low doses. Animal studies show reproductive effects at high doses. Studies show positive mutagenic results. Associated with the contaminants Chloroform and Dioxin.

TRIETHANOLAMINE – Fragrance ingredient, emulsifying agent, masking. Known human immune system toxicant. Strong evidence suggests it is a human skin and respiratory system toxicant. Int'l Agency for Research on Cancer found limited evidence of carcinogenicity. Animal studies show sense organ effects at very low doses (bodycare specific). Animal studies show endocrine disruption at high doses. Animal studies show skin irritation at moderate doses.

TRISODIUM EDTA – See TETRASODIUM EDTA

UREA – Antistatic, skin conditioning. Often derived from urine and other animal products. Tests on mammalian cells show positive mutation results. Animal studies show brain and nervous system effects at moderate doses. Animal studies show respiratory effects at moderate doses. Animal studies show reproductive effects at high doses. Animal studies show skin irritation at low doses. Because it is a penetration enhancer, it may increase the absorption of other harmful ingredients.

VANILLIN – Fragrance ingredient, masking. Tests on mammalian cells show positive mutation results. Animal studies show broad systemic, reproductive system, and brain and nervous system effects at moderate doses. Has never been assessed for safety.