Name:…… Date:……

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Name	Chemical Type	Other information
Acid		Compound which dissolves in water to make a solution with a pH less than 7
Alkali		Compound which dissolves in water to make a solution with a pH above 7.
Aloe barbadensis	Skin softener	Softens skin, soothes burns and injuries. Name not used in cosmetics.
Aloe vera (Latin)	Skin softener	See Aloe barbadensis.
Ammonium laureth sulfate	Surfactant	See Surfactants.Compound made from coconut oils. Good at breaking up oils and soil, so effective in shampoos. Good cleansing agent and foam maker.
Ammonium lauryl sulfate	Surfactant	See Surfactants. Compound made from coconut oils. Mild cleansing properties when used at pH 5-6. Non-toxic and not irritating when used in 'rinse off' products.
Ammonium xylenesulfonate	Solvent	Flammable liquid which does not mix with water. No known toxic or irritant effects.
Antiseptic		Compound which prevents infection of the skin by bacteria. Small cuts can be treated with an antiseptic.
Aqua	Neutral	This is the name used in European cosmetic products for water. Water is the main ingredient of many cosmetic products so is found first in the ingredients list. Sterile water must be used - this means the water must be boiled to ensure no bacteria or other microorganisms are present.
Arginine	Alkali	Alkaline amino acid. No value when used in cosmetics.
Behenyl alcohol	Emulsifier Thickener	Non-toxic.
Benzophenone	Preservative	These compounds help prevent the product from reacting with UV light. May cause skin irritation.
Benzyl alcohol	Solvent Preservative Antiseptic	Irritating and corrosive to skin when in concentrated solution.
Betaines		Compounds used in shampoos to lower the irritation potential of surfactants. No known toxicity.
2-bromo-2-nitropane-1,3-diol	Preservative	Safe when used up to 0.1% concentration.
Binder		A substance which absorbs water, swells and helps to hold other ingredients together.
BHT - Butylated hydroxytoluene	Preservative Anti-oxidant	Can cause allergic reactions.
Butylparaben	Preservative	See Parabens.
Camellia sinesis	Oil Perfume	Oil from the camellia plant. The same plant produces greentea, which has lots of positive effects including reducing blood pressure.

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Name	Chemical Type	Other information
Carbomer	Emulsifier Thickener	White powder. See Emulsifiers. No known toxicity or skin irritating properties.
Carboxylic acids	Acid	Molecules which are based on carbon atoms. The acidity is due to the -COOH (caboxylate) group. The substance dissolves in water making an acidic solution. Used to lower pH of cosmetics.
Castor oil	Oil	Oil from the seed of the castor oil plant. Soothing to skin.
Cellulose gums	Emulsifier Film former	See Emulsifiers and Film formers. Compounds from plant cell walls which are resistant to decomposition by bacteria. Non-toxic.
Cetearyl alcohol	Emulsifier	Very widely used in hair products. A waxy substance. Non- toxic and not irritating to the skin or scalp.
Cetyl alcohol	Emulsifier	Widely used ingredient extraxted from the heads of sperm whales. Added as a solid, waxy substance. Non-toxic and not irritating.
Chamomila recutita (Latin)	Oil	Oil from the camomile plant. Soothing to skin.
Chlorhexidine digluconate	Antiseptic Alkali	Cleans bacteria from skin. Can cause dermatitis, which is severe irritation of the skin, in concentrated solution. Safe up to 0.2% concentration.
Citric acid	Acid Sequestering agent Preservative	Compound obtained from citrus fruit; lemons, oranges, grapefruit. Non-toxic - can be drunk in solution of water to help provide vitamin C.
Citrus limonium (Latin)	Oil	Lemon oil obtained from the skin of lemons.
Citrus paradisi (Latin)	Oil	Grapefruit oil obtained from the skin of grapefruit.
Citrus sinensis (Latin)	Oil	Sweet orange oil obtained from the skin of oranges.
Cocoglucoside		See Glucosides.
Cocoamide DEA /MEA	Solvent Emulsifier Surfactant Humectant	See DEA.
Cocoamidopropyl betaine	Emulsifier Surfactant Thickener	Compound based on coconut oil and beets, eg sugar beet. May cause skin irritation.
Coconut acid	Surfactant Skin cleanser	Compound found in coconut oil. Used widely in soaps and shampoos. Very good skin cleanser. May cause skin irritation.
CI number	Colouring pigment	There are many colouring pigments which can be used. Each is registered and given a number
Colophonium		This is a resin obtained from pine trees. Used to give colour - usually yellow-orange.
Cucumis melo (Latin)		Melon extract - usually juice. Used in products for dry hair and to improve skin condition.

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Name	Chemical Type	Other information
Dandruff		Human skin flakes produced most often on the scalp. Skin and allergy specialists disagree about its cause - could be an allergic reaction. Shampoos to treat this use zinc pyrithione and a surfactant.
DEA - Diethanolamine	Emulsifier Humectant Surfactant Solvent	This compound is found in coconut and soybean oils and is used to make other substances. Has useful properties but may cause skin irritation. Can be contaminated with cancer-causing compounds called nitrosoamines during manufacture.
DMDM hydantoin	Preservative	'DMDM' stands for 'Dimethylol dimethyl'. Can irritate the skin. See Preservatives.
Dimethicone	Oil	Protects skin forming a barrier to other liquids.
Dipropylene glycol		See Glycols.
Disodium dityrylbiphenyl	Colouring agent	This gives colour to the product. Its use is banned in the USA.
Disodium EDTA	Preservative	'EDTA' stands for 'ethylenediaminetetraacetic acid'.
Disodium laureth sulfosuccinate	Surfactant	See Surfactants.
Disodium PEG-4-Cocoamido MIPA sulfosuccinate	Surfactant	See Surfactants. 'PEG' stands for 'polyethylene glycol' and 'MIPA' stands for 'monoisopropanolamine'.
Disodium phosphate	Salt	See sodium phosphate.
Distearyl ether	Skin softener	This is made from stearic acid. See Stearic acid and Skin softeners.
Elaesis guineensis (Latin)	Oil	This is the Latin name for palm kernel oil, which is obtained from the African palm tree.
Emulsifier		Substance which is added to help make an emulsion. An emulsion is the mixture of two liquids which do not usually mix together, such as oil and water. The emulsifier helps to keep the two liquids mixed, stopping layers forming.
Ethyoxydiglycol	Solvent	Non-toxic and not irritating.
Film former		Compounds which give cosmetic products a film-like appearance - shiny, glossy and with a silky feel.
Formaldehyde	Preservative Disinfectant	Highly toxic substance causing skin irritation. Use in cosmetics is banned in Japan and Sweden. Concentration must be less than 0.2%. See Preservatives.
Glucosides	Thickening agent	Compounds made in reactions between sugars and alcohol.
Glycerin	Solvent Humectant Skin softener	Also called 'glycerol'. A compound made during soap manufacture. Very widely used. Non-toxic and not irritating to skin.

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Name	Chemical Type	Other information
Glyceryl cocoate		See Coconut oil and Glycerin.
Glycols	Humectants	Name is from 'Glycerin' and 'Alcohol'. See Humectants. May cause skin irritation.
Glycol distearate/stearate		See Stearic acid.
Guar hydroxypropyltrimonium chloride	Preservative Surfactant Antiseptic	Can be toxic. May irritate the skin when used in concentrated solutions. Concentrations as low as 0.1% can irritate the eye.
Hammamelis virginiana (Latin)	Skin anaesthetic Skin freshener	Common name is 'witch hazel'. Obtained from a plant. Makes the skin feel 'tight' and fresh as it dries up grease and moisture.
Hexylene glycol		See Glycols.
Helianthus annus (Latin)	Oil	Sunflower seed oil. Contains Vitamin E which is thought to help keep skin looking young. Used in anti-aging products. No known toxicity.
Humectant		A substance used to preserve moisture content.
Humulus lupulus (Latin)	Perfume	From the hops plant. Hops are also used in brewing beer. Can cause skin irritation.
Hydroxypropylmethylcellulose		See Cellulose gums.
Isopropyl myristate		A compound made in a reaction between an acid and an alcohol. Used to form lather. Causes blackheads and is being removed from cosmetics.
Lactic acid	Skin freshener	See Carboxylic acids. Corrosive in concentrated solutions. May sting sensitive skin.
Lanolin		Greasy substance from wool which absorbs water and holds it on to the skin. Can cause skin irritation.
Laureth number 1-23	Surfactant	See Surfactants.
Laureth 11 carboxylic acid	Acid	See Carboxylic acids.
Lauric acid	Foam maker Acid	Compound which reacts with water to make a foam. The molecules are made from 10 carbon atoms joined in a line, with hydrogen atoms and oxygen atoms. See also Carboxylic acids
Lauryl glucoside	Surfactant	See Surfactants.
Magnesium nitrate	Salt	See Nitrates.
Magnolia biondii (Latin)	Perfume	Non-toxic perfume from the magnolia tree.
Maleated soybean oil	Preservative Oil	Soybean oil from the soya bean plant which has been partially changed to Maleic acid. Maleic acid is a carboxylic acid (see Carboxylic acids). The change is made to reduce the effects of soybean oil on the skin - these include skin irritation, hair damage and acne-like pimples.

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Name	Chemical Type	Other information
Menthol	Skin anaesthetic Skin freshener	Gives a 'cool' feeling to the skin. Acts as an anaesthetic when in 100% concentration. Non-toxic below 3%.
Methyl lactate	Skin freshener	See Menthol and Lactic acid. This is a compound made from these two substances.
Methylchloroisothiazolinone (MCT) and Methylisothiazolinone (MIT)	Preservative	Usually used with methylisothiazolinone. Both are toxic and can cause skin irritation. Safe in very low concentrations in products which rinse off the skin.
Methyldibromo glutaronitrile	Preservative	Toxic substance which is absorbed through the skin. Safe to use in rinse off products.
Methylparaben	Preservative	See Parabens.
Mica	Solid powder Lubricant	Used to give a glow or colour. Not irritating to skin.
Niacinamide	Vitamin B	Used to treat skin diseases. No known toxicity or irritating properties.
Nitrates	Salt	Used to help keep colour compounds (see CI number) the correct shade.
Olea europea (Latin)	Oil	This is the Latin name for olive oil, which is obtained from olives. The same oil can be used in cooking. May cause skin irritation.
Parfum		This is the general name given to 'fragrance'. This could mean one or more compounds added to give the product an attractive smell.
Palm kernel acid	Acid Oil Surfactant Emulsifier Opacifier	This is the oil from the palm nut producted by the palm tree. See Surfactants, Emulsifiers, Opacifiers.
Palmitic acid	Acid Oil	Compound which occurs naturally in many animal fats and plant oils including cow's milk, palm nuts and butter. Each molecule has 16 carbon atoms arranged in a long chain, with hydrogen and oxygen atoms. See Carboxylic acid.
Panthenol	Skin softener Vitamin B complex	Widely used in hair products. Also known as Vitamin B complex factor. Is good for the body so is non-toxic.
Panthenyl ethylether		This is made from panthenol (see above).
Parabens	Preservatives	Most commonly used ingredient other than water. Used in low concentrations so will be found at the ends of ingredients lists. These compounds stop bacteria growing in the product and are not irritating or toxic. Parabens may be cancer causing.
Paraffinium liquidium (Latin)	Skin softener	Liquid paraffin obtained from wood, coal and petroleum. Non-toxic and not irritating to skin.

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Name	Chemical Type	Other information
PEG polyethyleneglycol	Binder Skin softener Solvent Humectant	See Binders, Surfactants, Skin softeners, Solvents, Humectants.
PEG 6 caprylic /capric glycerides	Skin softener	See Skin softeners.
PEG 7 glycerylcocoate	Skin cleanser	Non-toxic and not irritating to skin.
PEG 40 hydrogenated castor oil		See PEG and castor oil.
PEG 150 distearate	Skin cleanser	Compound made from stearic acid and PEG.
PEG 200 hydroxyglycerylpalmitate	Skin cleanser	Non-toxic and not irritating to skin.
Petrolatum	Skin softener	This is the main ingredient in Vaseline and other petroleum jelly products. Used as skin softener, and protects skin from irritation.
Phenoxyethanol	Antiseptic	Not irritating to skin, but can irritate eyes above 2.2% concentration.
Polyquaternium 1-14	Antiseptic Surfactant Preservative	This is a group of compounds which can be toxic and irritating to skin even at low concentrations.
Polysorbates 1-85	Emuslifier	See Emulsifiers. Non-toxic and not irritating to skin.
PPG 9 laurate		PPG stands for 'Polypropylglycol'. A compound made from a glycol and lauric acid.
Preservative		Compound used to stop bacteria and other microorganisms like yeasts growing in the product. This is essential to keep the product safe for use. Some preservatives are added to help keep the product colour, appearance and texture. All cosmetics include preservatives. Most used today are non-toxic.
Propylene glycol	Humectant Solvent Wetting agent	Also called 1,2-propanediol. This is a widely used cosmetic ingredient with similar properties to glycerin. It is toxic and its use is being phased out.
PVP/dimethylaminoethyl-methylacrylate copolymer	Film former Thickener	See Film former and Thickener. A polymer is a compound made from many smaller molecules joined together. Many copies of small molecules called polyvinylpyrrolidone (PVP) and dimethylaminoethylmethacrylate are joined in an alternating line to make one long molecule.

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Name	Chemical Type	Other information
Saccharum officinarium (Latin)		Sugar cane extract. Also called 'Black strap molasses'. No use in cosmetics identified.
Salt		The general name for a compound produced in a reaction between an acid and an alkali. The other product is water. We use 'salt' to mean 'sodium chloride', but this is not the chemical meaning.
Sequestering agent		Preservative preventing changes in colour, texture or appearance.
Skin anaesthetic		Compound which is absorbed into the skin and reduces the nervous system's ability to detect sensation. 'Local' anaesthetics are used to stop pain for dental operations, wart removal, stitching up cuts and other small skin-based problems.
Skin cleanser		Compound which removes grease from the skin.
Skin freshener		Compound which creates a 'tight' feeling to the skin. Usually evaporates quickly from the skin, giving a cooling effect.
Skin softener		Compound which is absorbed into the skin and replaces moisture. Helps to remove dry patches. Also called 'emollients'.
Sodium benzoate	Preservative	Non-toxic.
Sodium C12-13 pareth sulfate	Salt Skin softener Humectant	Compound based on PEG.
Sodium citrate	Sequestering agent	Non-toxic
Sodium chloride Salt	Salt Antiseptic	May cause drying of the skin. May cause skin irritation.
Sodium cocoyl isethionate	Skin cleanser	Safe in concentration up to 50% in rinse off products.
Sodium isethionate	Alkali Emulsifier	This is the name cosmetic producers use for sodium hydroxide. This is toxic and corrosive.
Sodium lauroamphoacetate	Surfactant	See Surfactants.
Sodium laureth sulfate	Water softener Surfactant Skin cleanser	Can cause skin and eye irritation in high concentrations. See Surfactants, Water softeners, Skin cleansers.
Sodium lauryl sulfate	Emulsifier Surfactant	See Surfactants and Emulsifiers. May cause drying of skin by removing grease. May be irritating to skin.
Sodium methyl paraben	Preservative	See Parabens.
Sodium palm kernelate	Salt Soap	Compound produced by reacting palm kernel acid with sodium hydroxide. Acts as a soap
Sodium palmitate	Salt Soap	Compound produced by reacting sodium hydroxide with palmitic acid. Acts as a soap.

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Name	Chemical Type	Other information
Sodium peanutate		Peanut oil.
Sodium phosphate	Salt	Compound used to keep pH constant. Non-toxic and not irritating.
Sodium stearate	Salt Soap	Compound produced by reacting sodium hydroxide with stearic acid. Acts as a soap.
Sodium styrene/ acrylates copolymer	Binder Film former	May cause skin irritation.
Sodium tallowate	Salt	Compound formed from tallow, a mixture of animal fats.
Solvent		Liquid used to make solutions. Solid substances are added to the solvent. These dissolve making the solution.
Sorbic acid	Preservative Humectant	Produces velvet-like feel on the skin. Non-toxic, but may cause irritation to senstive skins.
Stearic acid	Acid	Naturally occurring compound found in butter, animal fats and oils. Molecules have 18 carbon atoms arranged in a long chain, bonded to hydrogen and oxygen atoms. Widely used cosmetic ingredient.
Sulfonated oils	Emulsifier Wetting agent	Remove colour from natural and dyed hair. May cause drying of the skin.
Surfactants		Compounds which lower the surface tension of water. The name 'surfactant' comes from 'surface active'. There are four types called anionic, cationic, amphoteric and nonionic. The type depends on whether the surfactant molecule breaks up into charged particles called 'ions' in water. Found in all substances used for washing.
TEA dodecylbenzenesulfonate	Emulsifier	See Sulfonated oils.
Tetrasodium EDT	Preservative	Prevents colour, texture and appearance changes. See EDTA.
Tetrasodium etidronate	Thickener	Compound added to make the product less 'runny'. Has no other cosmetic purpose.
Titanium dioxide	Pigment	White compound used to make an opaque product. Not irritating to skin.
Tocophenylacetate	Antioxidant	Prevents oxygen from the air reacting with compounds in the product.
Trideceth - 7		See PEG and Glycols
Triclocarban	Antiseptic	Used to kill bacteria in 'medicated' products.
Triclosan	Antiseptic	Used to kill bacteria in 'medicated' products.
Trimethylopropane tricaprylate/tricaprate	Perfume	Used to help make product smell attractive. Occurs naturally in sweat, cow and goat milks, coconut oil and palm oil. Non-toxic.

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Name	Chemical Type	Other information
Water softener		Compound added to remove calcium and magnesium ions which cause 'hard' water and prevent a lather forming with soap.
Wetting agent		A compound which dissolves in water and helps to make water spread across a surface by lowering surface tension. This means the same as surfactant, but in cosmetics seems to be used to describe different compounds.
Zinc pyrithione /pyridinethione	Antidandruff substance	Added to shampoos to treat dandruff (see dandruff). Some evidence this can damage nerves.
Zinc sulfate	Salt Skin freshener	Compound made in the reaction between sulfuric acid and zinc metal. May cause skin irritation.