DermNet NZ

Authoritative facts about the skin from the New Zealand Dermatological Society Incorporated.

Food additives and E numbers

Foods sold in the European Union (EU) have had full ingredient labelling since the mid-1980s. These include standard codes (E numbers) that accurately describe additives used in the production of food. These numbers are also used in Australia and New Zealand but without the "E".

Many of these additives were once of natural origin. However, most are now prepared/produced synthetically as these are often less expensive than the natural product.

The more commonly used additives are included in Table 1 below, which lists the E-number, the proper name of the additive, a short description of the additive and its common use. As new uses are often found for these additives, the tables are neither inclusive nor exhaustive.

A full list of additives in the EU is published by the Food Standards Agency (United Kingdom). A similar list for Australia and New Zealand is published by the New Zealand Food Safety Association.

Numbers without an "E" prefix that are under consideration for becoming E numbers and commonly used additives have not yet been given numbers and are included in Table 2.

The tables are neither complete nor inclusive and may under go change as additives are re-classified.

- E100s are generally colours.
- E200 to E282 are mainly preservatives and acids.
- E300 to E341 are mainly antioxidants and acid regulators.
- E400s include emulsifiers, stabilisers, thickeners, anti-caking agents, release agents and bulking agents.

Table 1: E numbers

Number	Name	Description	Examples of Use
E100	Curcumin	Naturally occurring orange/yellow colour, extracted from the spice turmeric	Used in pastries, confectionery, sauces and soups
E101	Riboflavin or lactoflavin	Naturally occurring B group vitamin usually obtained from yeast or produced synthetically.	Enrichment and fortification of food. Added to processed cheese as yellow/orange colour
E102	Tartrazine	Widely used yellow/orange colour	Found in soft drinks, cakes, biscuits, puddings, meat products, sauces, tinned and packet convenience foods and confectionery
E104	Quinoline Yellow	A synthetic coal tar dye, greenish yellow in colour	Used with other yellow colours, especially in smoked fish
E110	Sunset Yellow	A synthetic coal tar dye, yellow in colour, used with E102	Found in soft drinks, cakes, biscuits, puddings, meat products, sauces, tinned and packet convenience foods and confectionery
E120	Cochineal	Natural red colour obtained from egg yolk and dried insects. Can be manufactured	Red colour in foods

E122	Carmoisine	A synthetic coal tar dye, red/purple in colour	Often added to raspberry and chocolate flavoured deserts, marzipan, jam, cherryade, bottled sauce and breaded products
E123	Amaranth	A synthetic coal tar dye, red in colour	Sometimes used in gravy mixes, meat patties, and blackcurrant drinks
E124	Ponceau 4R	A synthetic coal tar dye, red in colour	Often used to restore red colour to tinned strawberries. Also added to strawberry jam, jelly and ice cream, tomato soup, savoury rice, cheesecake mix and some meat products
E127	Erythrosine	A synthetic coal tar dye, red in colour, rich in mineral iodine.	Regular component of glace cherries, peach melba yogurt, vacuum-packed ham and pork, tinned strawberries and certain flavours of chips and potato based snacks.
E128	Red 2G	A synthetic coal tar dye, red in colour.	Pork pies, sausages and other meat products.
E129	Allura Red AC	Colouring agent	
E131	Patent Blue V	Colouring agent	
E132	Indigo Carmine	A synthetic coal tar dye, blue in colour.	Added to gravy mix and certain meat products.
E133	Brilliant Blue	A synthetic coal tar dye, blue in colour. Often mixed with E102 to make green.	Bacon flavour snacks.
E140	Chlorophyll	Naturally occurring green pigment found in leaves and stems of plants. Also manufactured.	Added to green vegetables to enhance their colour.
E141	Copper complex of Chlorophyll	A more stable colour obtained by a reaction between copper and manufactured chlorophyll.	Used to heighten the green colour of products such as cucumber relish.
E142	Green S	A synthetic coal tar dye, green in colour.	Used to restore the expected green colour to tinned peas. Also added to asparagus soup, lemon or lime drinks and jellies and mint sauce.
E150	Caramel	Commonly used brown colour and flavouring agent made from the caramelisation or burning of sugar by heat or chemicals.	Used in soft drinks, gravy mix, brown bread, cakes, biscuits, malt vinegar, marmalade and beef products.
E150b	Caustic sulphite caramel	Colouring agent	
E150c	Ammonia caramel	Colouring agent	
E150d	Sulphite ammonia caramel	Colouring agent	
E151	Black PN	A synthetic coal tar dye, black in colour.	Used to darken fruits sauces.
E153	Carbon Black/Vegetable Carbon	Natural black colour obtained from burnt plant material, now often manufactured.	Added to concentrated fruit juices, preserves and jellies.

E154	Brown FK	A synthetic coal tar dye, brown in colour.	Added to smoked fish.
E155	Chocolate Brown HT	A synthetic coal tar dye, brown in colour.	Various foods.
E160 a - f	Carotenoids	Plant pigments derived from carrots, tomatoes, apricots, oranges, rosehip and green leafy vegetables. Now mostly manufactured.	Provide a range of colours from yellow to red.
E160a	Alpha-, Beta, Gamma-carotenes	Beta-carotene is a well-known substance that is converted by the body to Vitamin A. Orange in colour.	Added to biscuits, cakes, margarine, creamed rice, cheese products and certain soups.
E160b	Annatto	Orange/peach pigment naturally present in butter and cheese.	Used to give creamy colour to creamed rice, coffee creamer, pastry, cheese and cheese products.
E160c	Paprika extract; Capsanthian; Capsorubin	Colouring agent	
E160d	Lycopene	Colouring agent	
E160e	Beta-apo-8'-carotenal (C30)	Colouring agent	
E160f	Ethyl ester of beta-apo-8'-carotenoic acid (C30)	Colouring agent	
E161 a: g	Xanthrophylls	Carotenoid pigments providing natural yellow to red colours.	No typical products.
E161b	Lutein	Colouring agent	
E161g	Canthaxanthin	Colouring agent	
E162	Betanin (Beetroot Red)	Naturally occurring red/purple colour in beetroots.	May be added to oxtail soup.
E163	Anthocyanins	Plant pigments with colours ranging from red to blue.	Naturally present in red cabbage and grapes.
E170	Calcium Carbonate (Chalk)	Naturally occurring mineral. It has various functions including acid regulator, firming agent, releasing agent and nutrient.	It is added to white flour as a calcium supplement to replace the loss due to refining. Frequently an ingredient in bread and baked products.
E170	Calcium carbonates		
E171	Titanium dioxide	Colouring agent	
E172	Iron oxide	Naturally occurring mineral. Added to fortify food.	Added to flour and breakfast cereals.
E173	Aluminium	Colouring agent	
E174	Silver	Colouring agent	
E175	Gold	Colouring agent	
E180	Litholrubine BK	Colouring agent	
E200	Sorbic Acid	Naturally occurring in some fruit but generally manufactured synthetically for use as a food preservative.	Commonly added to soft drinks, cheese spread, frozen pizza and cakes.
E201	Sodium Sorbate	Salt of Sorbic Acid.	As for Sorbic Acid.
E202	Potassium Sorbate	Salt of Sorbic Acid.	Used to preserve glace cherries.
E203	Calcium Sorbate	Salt of Sorbic Acid.	As for Sorbic Acid.

E210	Benzoic Acid	Occurs naturally in cherry bark, raspberries, tea, anise and cassia bark, but largely prepared synthetically for commercial use.	Acts as a preservative and anti-oxidant most frequently in fruit products, soft drinks, pickled produce and salad dressings.
E211	Sodium Benzoate	Salt of Benzoic Acid.	In bottled sauces.
E212	Potassium Benzoate	Salt of Benzoic Acid.	As per Benzoic Acid.
E213	Calcium Benzoate	Salt of Benzoic Acid.	As per Benzoic Acid.
E214	Ethyl p-hydroxybenzoate	Preservative	
E214-219	Hydroxy Benzoate salts	Salts of Benzoic Acid.	As per Benzoic Acid.
E215	Sodium ethyl p-hydroxybenzoate	Preservative	
E216	Propyl p-hydroxybenzoate	Preservative	
E217	Sodium propyl p-hydroxybenzoate	Preservative	
E218	Methyl p-hydroxybenzoate	Preservative	
E219	Sodium methyl p-hydroxybenzoate	Preservative	
E220	Sulfur Dioxide	Gas prepared chemically for use as a food preservative, flour improver, bleaching agent and vitamin C stabiliser.	Found in carbonated drinks, marmalade, glace cherries, mixed peel, cakes, fruit based products and meat products.
E221	Sodium sulphite	Preservative	
E222	Sodium Hydrogen Sulphite/Bisulphite	Synthetic preservative and bleaching agent.	Often added to wine and beer.
E223	Sodium Metabisulphite	Synthetic preservative.	Added to sausages and some bottled sauces.
E224	Potassium metabisulphite	Preservative	
E226	Calcium sulphite	Preservative	
E227	Calcium hydrogen sulphite	Preservative	
E228	Potassium hydrogen sulphite	Preservative	
E230	Biphenyl; diphenyl	Preservative	
E231	Orthophenyl phenol	Preservative	
E232	Sodium orthophenyl phenol	Preservative	
E234	Nisin	Preservative	
E235	Natamycin	Preservative	
E239	Hexamethylene tetramine	Preservative	
E242	Dimethyl dicarbonate	Preservative	
E249	Potassium Nitrite	Naturally occurring mineral used as a preservative and as a colour fixative.	Used in cooked meats, sausages and in cured meats.
E250	Sodium Nitrite	Derived from sodium nitrate by chemical or	Added to cooked and cured

		bacterial action. Acts as a preservative and colour fixative.	meats, bacon and pork sausages.
E250	Sodium nitrite	Preservative	
E251	Sodium Nitrate	Naturally occurring mineral usually manufactured synthetically for use as a food preservative and colour fixative.	In cooked meats, bacon, ham and cheese.
E252	Potassium Nitrate	Naturally occurring but more usually produced artificially from waste animal and vegetable material. This additive is one of the oldest and most effective preservatives for meat. Also acts as a curing agent.	Found in cured and cooked meats, and sausages.
E260	Acetic Acid	Natural component of vinegar but generally manufactured from wood. Used as a preservative, acid or colour diluent.	Found in pickles, bottled sauces and chutneys.
E260	Acetic acid		
E261	Potassium acetate		
E262	Sodium acetate		
E263	Calcium acetate		
E270	Lactic Acid	Produced by the fermentation of lactose, which is the sugar present in milk. It occurs naturally in soured milk and yogurt and acts as a preservative, acid, flavour and assists the action of anti-oxidants.	Widely used in salad dressings, cakes, biscuits, confectionery and certain types of prepared meat dishes.
E270	Lactic acid		
E280	Propionic Acid	Fatty acid produced by animals in the process of digestion, but generally manufactures synthetically. Functions as a preservative.	Added to baked goods.
E281	Sodium Propionate	Salt of propionic acid.	Added to baked goods.
E282	Calcium Propionate	Salt of propionic acid. Found naturally in Swiss cheese.	Added to baked goods.
E283	Potassium Propionate	Salt of propionic acid.	Added to baked goods.
E284	Boric acid	Preservative	
E285	Sodium tetraborate; borax	Preservative	
E290	Carbon Dioxide	Gas present in air, but produced synthetically for food. Adds the fizz to fizzy drinks (carbonation), but is also used as a coolant, freezant, propellant, preservative and packaging gas.	Carbonated drinks.
E290	Carbon dioxide		
E296	Malic acid		
E297	Fumaric Acid	Prepared synthetically as an acid flavour.	Baked products.
E300	L-Ascorbic Acid (Vitamin C)	Occurs naturally in fruit and vegetables but is synthesised biologically. It acts as a preservative, anti-oxidant, meat colour fixative, and flour improver. Also a vitamin.	Found in fruit juices, bread, baked products, powdered mashed potatoes, etc.
E301	Sodium L-Ascorbate	Salt of ascorbic acid.	Added to cured meats.
E302	Calcium L-Ascorbate	Salt of ascorbic acid.	Similar function to Ascorbic Acid.
E304	Ascorbyl Palmitate	Salt of ascorbic acid.	Used in sausage and cured

			meats.
E306	Tocopherol (Vitamin E)	Obtained from soya bean oil, wheatgerm, rice germ, cottonseed, maize and green leaves. Used as an antioxidant and nutrient.	Added to fats and oils.
E307	Synthetic Alpha Tocopherol	Synthetic products of Tocopherol with similar functions.	Added to fats, oils and sausages.
E308	Synthetic Gamma Tocopherol	Synthetic products of Tocopherol with similar functions.	Added to fats, oils and sausages.
E309	Synthetic Delta Tocopherol	Synthetic products of Tocopherol with similar functions.	Added to fats, oils and sausages.
E310	Propyl Gallate	Synthetically prepared antioxidant.	Added to fats and oils. Will be found in fried foods. May give rise to a bitter taste.
E311	Octyl Gallate	Synthetic product similar to Propyl Gallate with similar function.	Added to fats and oils.
E312	Dodecyl Gallate	Synthetic product similar to Propyl Gallate with similar function.	Added to fats and oils.
E315	Erythorbic acid	Antioxidants	
E316	Sodium erythorbate	Antioxidants	
E320	Butylated Hydroxyanisole (BHA)	Antioxidant manufactured synthetically for use alone or with E280, E310, or E330	Often found in chips and other potato snacks, biscuits, pastry, bottled sauces and fried foods.
E321	Butylated Hydroxytoluene (BHT)	Synthetically prepared antioxidant.	Similar to Butylated Hydroxyanisole.
E322	Lecithins	Type of fat or lipid compound found naturally in all living organisms, protective against cholesterol deposition. Egg yolk is a rich source of lecithins, but commercially, most is obtained from soya beans. Used as an antioxidant, and emulsifier.	Found in chocolate and chocolate products, powdered milk, margarine and potato snacks.
E325	Sodium lactate	Salt of lactic acid (E270) used as a humectant	Added to confectionery.
E326	Potassium Lactate	Salt of lactic acid (E270) used as an acid regulator.	Acid regulator.
E327	Calcium Lactate	Salt of lactic acid (E270) used as an acid regulator and firming agent	Frequently incorporated into baking powder.
E330	Citric Acid	Occurs naturally in citrus fruit but may also be prepared from the fermentation of molasses. Used as an antioxidant, preservative, acid regulator and flour improver.	Typically added to pickles, bottled sauces, dairy and baked products.
E331	Sodium Citrate	Salt of Citric Acid with similar functions.	As for E330.
E332	Potassium Citrate	Salt of Citric Acid with similar functions.	As for E330.
E333	Calcium Citrate	Salt of Citric Acid, which acts as an acid regulator, emulsifier and firming agent.	Found in carbonated drinks, wine, confectionery and cheese products.
E334	Tartaric Acid	Natural product of wine making used as an acid regulator.	Added to baking powder.
E335	Sodium L-Tartrate	Salt of Tartaric Acid with similar function.	As for E334.
E336	Potassium L-Tartrate (Cream of Tartar)	Salt of Tartaric Acid with similar function.	As for E334.

E337	Sodium potassium tartrate		
E338	Phosphoric acid		
E339	Sodium phosphates		
E340	Potassium phosphates		
E341	Calcium Orthophosphates (Pyrophosphates)	Synthetic products of a naturally occurring mineral. Used as an anti-caking agent, acid regulator, emulsifier, flour improver, nutrient and an aid to antioxidants.	Found in potato snacks, pastry mix and baking powder.
E341	Calcium Phosphate	Rising agent.	Baked products.
E343	Magnesium phosphates		
E350	Sodium malates		
E351	Potassium malate		
E352	Calcium malates		
E353	Metatartaric acid		
E354	Calcium tartrate		
E355	Adipic acid		
E356	Sodium adipate		
E357	Potassium adipate		
E363	Succinic acid		
E380	Triammonium citrate		
E385	Calcium disodium ethylene diamine tetra-acetate; calcium disodium EDTA		
E400	Alginic Acid	Emulsifier, stabiliser and gelling agent or thickener extracted from brown seaweed.	Frequently added to ice cream, instant desserts and puddings.
E401	Sodium Alginate	Salt of Alginic Acid with similar functions.	As for E400.
E402	Potassium alginate	Emulsifiers, Stabilisers, Thickeners and Gelling Agents	
E403	Ammonium alginate	Emulsifiers, Stabilisers, Thickeners and Gelling Agents	
E404	Calcium alginate	Emulsifiers, Stabilisers, Thickeners and Gelling Agents	
E405	Propane-1,2-diol alginate	Emulsifiers, Stabilisers, Thickeners and Gelling Agents	
E406	Agar	Naturally occurring gum extracted from seaweeds. It is not digested so acts a source of dietary fibre. Also acts as a stabiliser and gelling agent.	Used in tinned ham, meat glazes and in ice cream.
E407	Carrageenan (Irish Moss)	Gum naturally present in red seaweed. Used as an emulsifier, stabiliser, and gelling agent.	Found in ice cream.
E407a	Processed eucheuma seaweed	Emulsifiers, Stabilisers, Thickeners and Gelling Agents	
E410	Locust Bean Gum (Carob Bean Seed Gum)	Natural extract from the Carob tree seed. Similar to E407.	Added to ice cream, and soups. Carob is a non-caffeine containing substitute for cocoa and chocolate. Used in

			beverages, confectionery and baked products.
E412	Guar Gum (Cluster Bean Gum)	Naturally occurring seed gum from a tree of the pea family. Used as a thickener and stabiliser.	Added to bottled sauces, soup, ice cream and frozen desserts.
E413	Tragacanth	Natural gum obtained from a tree of the pea family. Used as a stabiliser, emulsifier and thickener. Used to prevent crystallisation of sugar.	As E412 and in confectionery.
E414	Acacia (Gum Arabic)	Similar to E413.	Similar to E413.
E415	Xanthan Gum	Made from fermentation of carbohydrates by bacteria. Used as an emulsifier, stabiliser and thickener.	Added to ice cream and bottled sauces.
E416	Karaya gum	Emulsifiers, Stabilisers, Thickeners and Gelling Agents	
E417	Tara gum	Emulsifiers, Stabilisers, Thickeners and Gelling Agents	
E418	Gellan gum	Emulsifiers, Stabilisers, Thickeners and Gelling Agents	
E420	Sorbitol	Sugar alcohol produced from glucose. Is less quickly absorbed than sugar so often used as a sweetener. Also used as a humectant and food colour diluent. May have a laxative effect in large doses.	Widely used in diabetic confectionery, preserves, biscuits, cakes and soft drink.
E421	Mannitol	Sugar alcohol derived from mannose, but general manufactured from seaweed. Acts as a sweetener, emulsifier, anti-caking agent and thickener.	Used in confectionery and desserts.
E422	Glycerol	Naturally occurring in many plant cells but generally prepared commercially from fats and oils. Used as a humectant.	In confectionery and cake icing.
E422	Glycerine	Colourless sweet liquid obtained from fatty acids, flavour and bulking agent.	Cake icing.
E425	Konjac	Emulsifiers, Stabilisers, Thickeners and Gelling Agents	
E431	Polyoxyethylene (40) stearate		
E432	Polyoxyethylene sorbitan monolaurate; Polysorbate 20	Emulsifiers, Stabilisers, Thickeners and Gelling Agents	
E433	Polyoxyethylene sorbitan mono-oleate; Polysorbate 80	Emulsifiers, Stabilisers, Thickeners and Gelling Agents	
E434	Polyoxyethylene sorbitan monopalmitate; Polysorbate 40	Emulsifiers, Stabilisers, Thickeners and Gelling Agents	
E435	Polyoxyethylene sorbitan monostearate; Polysorbate 60	Emulsifiers, Stabilisers, Thickeners and Gelling Agents	
E436	Polyoxyethylene	Emulsifiers, Stabilisers, Thickeners and	

	sorbitan tristearate; Polysorbate 65	Gelling Agents	
E440 (a)	Pectin	Occurs naturally in fruits, roots and stems of plants.	Used as a stabiliser and jelling agent. Added to preserves, jellies and mint sauce.
E440 (b)	Amidated Pectin	Chemically treated Pectin used as an emulsifier and jelling agent.	Preserves and jellies.
E442	Ammonium phosphatides	Emulsifiers, Stabilisers, Thickeners and Gelling Agents	
E444	Sucrose acetate isobutyrate	Emulsifiers, Stabilisers, Thickeners and Gelling Agents	
E445	Glycerol esters of wood rosins	Emulsifiers, Stabilisers, Thickeners and Gelling Agents	
E450 (a-c)	Sodium and Potassium Phosphate salts	Synthetically prepared emulsifiers, stabilisers and humectants.	Added to meat products, bread, sausages and cheese products such as cheese spread.
E451	Triphosphates		
E452	Polyphosphates		
E459	Beta-cyclodextrin		
E460	Cellulose	Fibrous part of plant cell walls used as a bulking agent.	Used in high fibre bread and low calorie products.
E461	Methylcellulose	Derived from Cellulose with similar properties.	Used in slimming foods.
E463	Hydroxypropyl cellulose	Emulsifiers, Stabilisers, Thickeners and Gelling Agents	
E464	Hydroxypropyl methyl cellulose	Emulsifiers, Stabilisers, Thickeners and Gelling Agents	
E465	Ethylmethylcellulose	Derived from Cellulose with similar properties.	Added to fruitcake and bottled sauces.
E466	Carboxymethylcellulose	Derived from Cellulose with similar properties.	Used in ice cream, cream products and cheesecake mix.
E467	Sodium carboxy methyl cellulose	Emulsifiers, Stabilisers, Thickeners and Gelling Agents	
E468	Crosslinked sodium carboxy methyl cellulose	Emulsifiers, Stabilisers, Thickeners and Gelling Agents	
E469	Enzymatically hydrolysed carboxy methyl cellulose	Emulsifiers, Stabilisers, Thickeners and Gelling Agents	
E470	Sodium, Potassium and Calcium Salts of Fatty Acids	Synthetically manufactured emulsifiers, stabilisers and anti-caking agents.	Crisps and potato snacks.
E471	Mono and Diglycerides of Fatty Acid	Normal products of fat digestion but are prepared synthetically.	Frequently added to powdered milk, packet soup, cake, crisps, and potato snacks, bread and baked products and margarine.
E471 (a-e)	Acid reactions with E471: (a) Acetic (b) Lactic	Functions include emulsifier, stabiliser, thickener, humectant and releasing agent.	Found in cheesecake mix, soups, bread and baked products.

	(c) Citric (d) Tartaric (e) Diacetyl Tartaric		
E472a	Acetic acid esters of mono- and diglycerides of fatty acids	Emulsifiers, Stabilisers, Thickeners and Gelling Agents	
E472b	Lactic acid esters of mono- and diglycerides of fatty acids	Emulsifiers, Stabilisers, Thickeners and Gelling Agents	
E472c	Citric acid esters of mono- and diglycerides of fatty acids	Emulsifiers, Stabilisers, Thickeners and Gelling Agents	
E472d	Tartaric acid esters of mono- and diglycerides of fatty acids	Emulsifiers, Stabilisers, Thickeners and Gelling Agents	
E472e	Mono- and diacetyltartaric acid esters of mono- and diglycerides of fatty acids	Emulsifiers, Stabilisers, Thickeners and Gelling Agents	
E472f	Mixed acetic and tartaric acid esters of mono- and diglycerides of fatty acids	Emulsifiers, Stabilisers, Thickeners and Gelling Agents	
E473	Sucrose esters of fatty acids	Emulsifiers, Stabilisers, Thickeners and Gelling Agents	
E474	Sucroglycerides	Emulsifiers, Stabilisers, Thickeners and Gelling Agents	
E475	Polyglycerol Ester of Fatty Acids	Synthetic product of E471 used as an emulsifier and stabiliser.	Puddings and packet cheesecakes.
E476	Polyglycerol polyricinoleate	Emulsifiers, Stabilisers, Thickeners and Gelling Agents	
E477	Propane-1,2-diol esters of fatty acids	Emulsifiers, Stabilisers, Thickeners and Gelling Agents	
E479b	Thermally oxidised soya bean oil interacted with mono and diglycerides of fatty acids	Emulsifiers, Stabilisers, Thickeners and Gelling Agents	
E481	Sodium Stearoyl-2-lactylate	Prepared synthetically from Lactic Acid, used as a stabiliser and emulsifier.	Potato snacks.
E482	Calcium stearoyl-2-lactylate	Emulsifiers, Stabilisers, Thickeners and Gelling Agents	
E483	Stearyl tartrate	Emulsifiers, Stabilisers, Thickeners and Gelling Agents	
E491	Sorbitan monostearate	Emulsifiers, Stabilisers, Thickeners and Gelling Agents	
E492	Sorbitan tristearate	Emulsifiers, Stabilisers, Thickeners and Gelling Agents	
E493	Sorbitan monolaurate	Emulsifiers, Stabilisers, Thickeners and Gelling Agents	

E494	Sorbitan monooleate	Emulsifiers, Stabilisers, Thickeners and Gelling Agents	
E495	Sorbitan monopalmitate	Emulsifiers, Stabilisers, Thickeners and Gelling Agents	
E500	Sodium Bicarbonate/ Hydrogen Carbonate (Bicarb of Soda)	Prepared synthetically for use as an acid regulator, firming agent, release agent, raising agent and diluent.	Malted drinks, tinned custard, cheesy potato snacks, bread and bread products.
E501	Potassium carbonates		
E503	Ammonium carbonates		
E504	Magnesium Carbonate	Naturally occurring mineral used as an anti-caking agent.	Table salt and icing sugar.
E507	Hydrochloric acid		
E508	Potassium Chloride	Natural occurring chemical often associated with rock salt. Used as an emulsifier, stabiliser, salt substitute and dietary supplement.	Found in low sodium or salt products.
E509	Calcium Chloride	Product of natural salt brine, but more often prepared chemically. Used as a firming agent and to prevent texture deterioration.	Red kidney beans.
E511	Magnesium chloride		
E512	Stannous chloride		
E513	Sulphuric acid		
E514	Sodium sulphates		
E515	Potassium sulphates		
E516	Calcium sulphate		
E517	Ammonium sulphate		
E520	Aluminium sulphate		
E521	Aluminium sodium sulphate		
E522	Aluminium potassium sulphate		
E523	Aluminium ammonium sulphate		
E524	Sodium hydroxide		
E525	Potassium hydroxide		
E526	Calcium hydroxide		
E527	Ammonium hydroxide		
E528	Magnesium hydroxide		
E529	Calcium oxide		
E530	Magnesium oxide		
E535	Sodium ferrocyanide		
E536	Potassium ferrocyanide		
E538	Calcium ferrocyanide		
E541	Sodium Aluminium Phosphate	Synthetically prepared raising agent.	Self-raising flower.
E551	Silicon Dioxide (Silica)	Derived from sand. Used as an anti-caking agent.	Potato snacks

E552	Calcium Silicate	Salt of Silicon Dioxide with similar functions. Also used as a glazing agent, acid regulator, releasing agent and as a coating agent.	Found in chewing gum, meat pies, salt and confectionery.
E553	Sodium Silico Aluminate/ magnesium silicate	Salt of Silicon Dioxide with similar functions.	Often found in packet noodles.
E554	Sodium aluminium silicate		
E555	Potassium aluminium silicate		
E556	Aluminium calcium silicate		
E558	Bentonite		
E559	Aluminium silicate; Kaolin		
E570	Fatty acids		
E574	Gluconic acid		
E575	Glucono delta-lactone		
E576	Sodium gluconate		
E577	Potassium gluconate		
E578	Calcium gluconate		
E579	Ferrous gluconate		
E585	Ferrous lactate		
E620	L-Glutamic Acid	Naturally occurring amino acid obtained from protein but generally manufactured by bacterial fermentation of carbohydrates. Used as a flavour enhancer and salt substitute.	Used as a nutrient to increase protein values.
E621	Monosodium Glutamate (MSG)	Present naturally in seaweed but generally prepared chemically from sugar beet. Flavour enhancer of protein rich foods.	Meat, Chinese foods, packet convenience meals and snacks (eg. soup), dries products, crisps and potato snacks.
E622	Monopotassium Glutamate	Similar to Monosodium Glutamate.	Similar to 621.
E623	Calcium Glutamate	Similar to Monosodium Glutamate.	Similar to 621.
E624	Monoammonium glutamate		
E625	Magnesium diglutamate		
E626	Guanylic acid		
E627	Sodium Guanylate	Occurs naturally in sardines and yeast extract but generally manufactured synthetically. Used as a flavour enhancer.	Often added to crisps and other potato snacks, gravy granules and pre-cooked dried rice.
E628	Dipotassium guanylate		
E629	Calcium guanylate		
E630	Inosinic acid		
E631	Sodium Inosinate	Made from sardines and meat extract.	Similar to 627.
E632	Dipotassium inosinate		
E633	Calcium inosinate		
E634	Calcium 5'-		

	ribonucleotides		
E635	Sodium-5-Ribonucleotide	Mixture of 627 and 631.	Added to crisps and potato snacks and packet soups.
E640	Glycine and its sodium salt		
E650	Zinc acetate		
E900	Dimethylpolysiloxane		
E901	Beeswax, white and yellow		
E902	Candelilla wax		
E903	Carnauba wax		
E904	Shellac		
E905	Microcrystalline wax		
E912	Montan acid esters		
E914	Oxidised Polyethylene wax		
E920	L-Cysteine		
E927	Azodicarbonamide	Chemically manufactured flour improver.	Common ingredient in flour, bread and baked products.
E927b	Carbamide		
E938	Argon		
E939	Helium		
E941	Nitrogen		
E942	Nitrous oxide		
E943a	Butane		
E943b	Iso-butane		
E944	Propane		
E948	Oxygen		
E949	Hydrogen		
E950	Acesulfame K	Sweeteners	
E951	Aspartame	New artificial sweetener of protein origin. Contains phenylalanine.	Artificial sweeteners, confectionery, ice cream, low calorie desserts and soft drinks.
E951	Aspartame	Sweeteners	
E952	Cyclamic acid and its Na and Ca salts	Sweeteners	
E953	Isomalt	Sweeteners	
E954	Saccharin	Calorie-free artificial sweetener.	Low calorie products, soft drinks and confectionery.
E957	Thaumatin	Sweeteners	
E959	Neohesperidine DC	Sweeteners	
E965	Glucose (hydrogenated) or Maltitol	Natural occurring sugar in grapes, corn, etc.	Confectionery, cakes, biscuits, puddings, desserts, soft drinks, convenience foods.
E966	Lactitol	Sweeteners	
E967	Xylitol	Sweeteners	
E999	Quillaia extract		

E1103	Invertase	Emulsifiers, Stabilisers, Thickeners and Gelling Agents	
E1105	Lysozyme	Preservative	
E1200	Polydextrose		
E1200	Polydextrose	Natural occurring sugar in grapes, corn, etc.	Confectionery, cakes, biscuits, puddings, desserts, soft drinks, convenience foods.
E1201	Polyvinylpyrrolidone		
E1202	Polyvinylpolypyrrolidone		
E1400-1414	Starches	Generally of maize, corn, potato, wheat or tapioca in origin. Used to modify texture and stability.	Sauces, chutneys, confectionery, desserts, meat, fish, dairy, baked products.
E1404	Oxidised starch		
E1410	Monostarch phosphate		
E1412	Distarch phosphate		
E1413	Phosphated distarch phosphate		
E1414	Acetylated starch		
E1420	Acetylated Starch		
E1422	Acetylated distarch adipate		
E1440	Hydroxyl propyl starch		
E1442	Hydroxy propyl distarch phosphate		
E1450	Starch sodium octenyl succinate		
E1451	Acetylated oxidised starch		
E1505	Triethyl citrate		
E1518	Glyceryl triacetate; triacetin		
E1520	Propylene Glycol	Synthetic carrier for extracts, flavours and spices. Functions as a stabiliser and humectant.	Miscellaneous foods.

Table 2: Numbers with no E prefix

Name	Description	Examples of Use
Arrowroot	Natural plant starch used as a thickening agent.	In glazes and jellies.
Caffeine	Naturally occurring flavouring agent.	Used in the newer energy drinks.
Calciferol	Vitamin D. Generally extracted from yeast.	Used to fortify margarine.
Calcium Bromate	Maturing agent and flour improver.	Used in bread.
Casein	Naturally present milk protein used as an emulsifier, texturiser and a dietary supplement.	Miscellaneous foods.
Chlorine	Synthetically prepared bleaching agent.	White flour, white bread, cakes and puddings.

Chlorine Dioxide	Synthetically prepared additive similar to Chlorine. Also used as a water purifier and oxidising agent.	Similar to Chlorine.
Corn Syrup	Glucose obtained from corn or maize starch. Used as a sweetener.	Miscellaneous foods.
Dipotassium Phosphate	Acid regulator.	Non-dairy powdered creams.
Disodium Phosphate	Emulsifier.	Macaroni products, cheese.
Edible Bone phosphate	Mineral supplement and anti-caking agent extracted from animal bones.	Miscellaneous foods.
Extenders	Frequently a soya bean product, used to make meat go further.	Meat products.
Fructose	Naturally occurring sugar, present in fruit and honey. Acts as a sweetener.	Miscellaneous foods.
Gelatine	Protein extract from animal bones and tissue. Used as a stabiliser and jelling agent.	Jellies, glazes, certain dessert products.
Hydrolysed vegetable protein	Produced chemically from raw protein. Flavour enhancer.	Soups, gravy and meat products.
Invert Sugar	Syrup of 50% glucose and 50% fructose. Humectant and sweetener.	Confectionery and sweet products.
Iodine	Found in seafood.	Added to salt.
Lactose	Sugar present naturally in milk. Used as a humectant and sweetener.	Infant formula.
Niacin/Nicotinic Acid	Natural occurring B group vitamin. Added to fortify food.	Breakfast cereals.
Polysorbate 60	Prepared from sorbitol (E420) and used as a stabiliser and emulsifier.	Bread and baked products.
Potassium Bromate	Oxidising agent, improver and bleaching agent manufactured synthetically.	Added to flour.
Sodium Chloride/Salt	Natural occurring mineral. Acts as preservative and flavour enhancer.	Miscellaneous foods.
Sucrose	From cane or beet sugar. Available as molasses, granulated caster, icing and demerara sugar. Preservative and sweetener.	Miscellaneous foods.
Thiamine	Naturally occurring vitamin B1, generally manufactured. Added to fortify food.	Breakfast cereal.
Vanillin	Naturally occurring flavouring, generally manufactured synthetically.	Baked products.
Yellow 2G	A synthetic coal tar dye, yellow in colour.	Found in soft drinks, cakes, biscuits, puddings, meat products, sauces, tinned and packet convenience foods and confectionery.

Related information

References:

Reference Additives: Why do we need them? Safeway Healthy Living Publication issued by Safeway Nutritional Advisory Service, Aylesford, Kent, United Kingdom.

On DermNet NZ:

- Food additives

Other websites:

- Food Standards Australia New Zealand
- New Zealand Food Safety Association
- Food Standards Agency (UK)
- E Numbers to Avoid www.safekids.co.uk
- ExploreENumbers

Books:

See the DermNet NZ bookstore

Author: Assoc. Prof. Marius Rademaker, Department of Dermatology, Health Waikato.

DermNet does not provide an on-line consultation service.
If you have any concerns with your skin or its treatment, see a dermatologist for advice.