

# Schedule 16                      Types of substances that may be used as food additives

**Note 1** This instrument is a standard under the *Food Standards Australia New Zealand Act 1991* (Cth). The standards together make up the *Australia New Zealand Food Standards Code*. See also section 1.1.1—3.

Substances used as food additives are regulated by Standard 1.1.1 and Standard 1.3.1. This Standard lists substances for the definitions, in subsection 1.1.2—11(3), of **additive permitted at GMP**, **colouring permitted at GMP** and **colouring permitted to a maximum level**.

**Note 2** The provisions of the Code that apply in New Zealand are incorporated in, or adopted under, the *Food Act 2014* (NZ). See also section 1.1.1—3.

## S16—1                      Name

This Standard is *Australia New Zealand Food Standards Code – Schedule 16 – Types of substances that may be used as food additives*.

**Note** Commencement:  
This Standard commences on 1 March 2016, being the date specified as the commencement date in notices in the *Gazette* and the *New Zealand Gazette* under section 92 of the *Food Standards Australia New Zealand Act 1991* (Cth). See also section 93 of that Act.

## S16—2                      Additives permitted at GMP

For subsection 1.1.2—11(3), the additives permitted at GMP are the substances listed in the following table (first in alphabetical order, then in numerical order):

**Additives permitted at GMP—alphabetical listing**

Acetic acid, glacial	260	Aspartame (technological use consistent with section 1.3.1—5 only)	951
Acetic and fatty acid esters of glycerol	472a	Beeswax, white & yellow	901
Acetylated distarch adipate	1422	Bentonite	558
Acetylated distarch phosphate	1414	Bleached starch	1403
Acetylated oxidised starch	1451	Butane (for pressurised food containers only)	943a
Acid treated starch	1401	Calcium acetate	263
Adipic acid	355	Calcium alginate	404
Advantame	969	Calcium aluminium silicate	556
Agar	406	Calcium ascorbate	302
Alginic acid	400	Calcium carbonates	170
Alkaline treated starch	1402	Calcium chloride	509
Aluminium silicate	559	Calcium citrate	333
Ammonium acetate	264	Calcium fumarate	367
Ammonium alginate	403	Calcium gluconate	578
Ammonium carbonates	503	Calcium glutamate, Di-L-	623
Ammonium chloride	510	Calcium hydroxide	526
Ammonium citrates	380	Calcium lactate	327
Ammonium fumarate	368	Calcium lactylates	482
Ammonium lactate	328	Calcium lignosulphonate (40-65)	1522
Ammonium malate	349	Calcium malates	352
Ammonium phosphates	342	Calcium oxide	529
Ammonium salts of phosphatidic acid	442		
Arabinogalactan (larch gum)	409		
Ascorbic acid	300		

Calcium phosphates	341	Hydroxypropyl starch	1440
Calcium silicate	552		
Calcium sulphate	516	Isobutane (for pressurised food containers only)	943b
Calcium tartrate	354	Isomalt	953
Carbon dioxide	290		
Carnauba wax	903		
Carrageenan	407	Karaya gum	416
Cellulose, microcrystalline and powdered	460		
Citric acid	330	L-glutamic acid	620
Citric and fatty acid esters of glycerol	472c	Lactic acid	270
Cupric sulphate	519	Lactic and fatty acid esters of glycerol	472b
		Lactitol	966
		Lecithin	322
Dextrin roasted starch	1400	Locust bean (carob bean) gum	410
Diacetyltartaric and fatty acid esters of glycerol	472e	Lysozyme	1105
Disodium guanylate, 5'-	627		
Disodium inosinate, 5'-	631	Magnesium carbonates	504
Disodium ribonucleotides, 5'-	635	Magnesium chloride	511
Distarch phosphate	1412	Magnesium glutamate, Di-L-	625
		Magnesium lactate	329
		Magnesium phosphates	343
Enzyme treated starches	1405	Magnesium silicates	553
Erythorbic acid	315	Magnesium sulphate	518
Erythritol	968	Malic acid	296
		Maltitol & maltitol syrup	965
Fatty acid salts of aluminium, ammonia, calcium, magnesium, potassium and sodium	470	Mannitol	421
Ferric ammonium citrate	381	Metatartaric acid	353
Ferrous gluconate	579	Methyl cellulose	461
*Permitted flavouring substances, excluding quinine and caffeine	-	Methyl ethylcellulose	465
Fumaric acid	297	Monk fruit extract (luo han guo extract)	-
		Mono- and diglycerides of fatty acids	471
		Monoammonium glutamate, L-	624
		Monopotassium glutamate, L-	622
Gellan gum	418	Monosodium glutamate, L-	621
Glucono delta-lactone	575	Monostarch phosphate	1410
Glycerin (glycerol)	422		
Guar gum	412		
Gum arabic (Acacia)	414	Nitrogen	941
		Neotame (technological use consistent with section 1.3.1—5 only)	961
Hydrochloric acid	507	Nitrous oxide	942
Hydroxypropyl cellulose	463		
Hydroxypropyl distarch phosphate	1442	Octafluorocyclobutane (for pressurised food containers only)	946
Hydroxypropyl methylcellulose	464		

Oxidised starch	1404	Sodium acetates	262
		Sodium alginate	401
Pectins	440	Sodium aluminosilicate	554
Petrolatum (petroleum jelly)	905b	Sodium ascorbate	301
Phosphated distarch phosphate	1413	Sodium carbonates	500
Polydextroses	1200	Sodium carboxymethylcellulose	466
Polydimethylsiloxane	900a	Sodium citrates	331
Polyethylene glycol 8000	1521	Sodium erythorbate	316
Polyoxyethylene (20) sorbitan monooleate	433	Sodium fumarate	365
Polyoxyethylene (20) sorbitan monostearate	435	Sodium gluconate	576
Polyoxyethylene (20) sorbitan tristearate	436	Sodium lactate	325
		Sodium lactylates	481
Polyphosphates	452	Sodium malates	350
Potassium acetate or potassium diacetate	261	Sodium phosphates	339
Potassium adipate (Salt reduced and low sodium foods only)	357	Sodium sulphates	514
Potassium alginate	402	Sodium tartrate	335
Potassium ascorbate	303	Sorbitan monostearate	491
Potassium carbonates	501	Sorbitan tristearate	492
Potassium chloride	508	Sorbitol	420
Potassium citrates	332	Starch acetate	1420
Potassium fumarate	366	Starch sodium octenylsuccinate	1450
Potassium gluconate	577	Stearic acid	570
Potassium lactate	326	Sucralose (technological use consistent with section 1.3.1—5 only)	955
Potassium malates	351	Sucrose esters of fatty acids	473
Potassium phosphates	340	Tara gum	417
Potassium sodium tartrate	337	Tartaric acid	334
Potassium sulphate	515	Tartaric, acetic and fatty acid esters of glycerol (mixed)	472f
Potassium tartrates	336	Thaumatococcus	957
Processed eucheuma seaweed	407a	Tragacanth gum	413
Propane (for pressurised food containers only)	944	Triacetin	1518
Propylene glycol	1520	Triphosphates	451
Propylene glycol alginate	405	Xanthan gum	415
Propylene glycol esters of fatty acids	477	Xylitol	967
Pyrophosphates	450		
		Yeast mannoproteins	455
Shellac	904		
Silicon dioxide (amorphous)	551		

**Additives permitted at GMP—numerical listing**

–	Monk fruit extract (luo han guo extract)	349	Ammonium malate
–	*Permitted flavouring substances, excluding quinine and caffeine	350	Sodium malates
		351	Potassium malates
		352	Calcium malates
170	Calcium carbonates	353	Metatartaric acid
		354	Calcium tartrate
260	Acetic acid, glacial	355	Adipic acid
261	Potassium acetate or potassium diacetate	357	Potassium adipate (Salt reduced and low sodium foods only)
262	Sodium acetates	365	Sodium fumarate
263	Calcium acetate	366	Potassium fumarate
264	Ammonium acetate	367	Calcium fumarate
270	Lactic acid	368	Ammonium fumarate
290	Carbon dioxide	380	Ammonium citrates
296	Malic acid	381	Ferric ammonium citrate
297	Fumaric acid		
		400	Alginic acid
300	Ascorbic acid	401	Sodium alginate
301	Sodium ascorbate	402	Potassium alginate
302	Calcium ascorbate	403	Ammonium alginate
303	Potassium ascorbate	404	Calcium alginate
315	Erythorbic acid	405	Propylene glycol alginate
316	Sodium erythorbate	406	Agar
322	Lecithin	407	Carrageenan
325	Sodium lactate	407a	Processed eucheuma seaweed
326	Potassium lactate	409	Arabinogalactan (larch gum)
327	Calcium lactate	410	Locust bean (carob bean) gum
328	Ammonium lactate	412	Guar gum
329	Magnesium lactate	413	Tragacanth gum
330	Citric acid	414	Gum arabic (Acacia)
331	Sodium citrates	415	Xanthan gum
332	Potassium citrates	416	Karaya gum
333	Calcium citrate	417	Tara gum
334	Tartaric acid	418	Gellan gum
335	Sodium tartrate	420	Sorbitol
336	Potassium tartrates	421	Mannitol
337	Potassium sodium tartrate	422	Glycerin (glycerol)
339	Sodium phosphates	433	Polyoxyethylene (20) sorbitan monooleate
340	Potassium phosphates		
341	Calcium phosphates	435	Polyoxyethylene (20) sorbitan monostearate
342	Ammonium phosphates		
343	Magnesium phosphates	436	Polyoxyethylene (20) sorbitan tristearate

440	Pectins	519	Cupric sulphate
442	Ammonium salts of phosphatidic acid	526	Calcium hydroxide
450	Pyrophosphates	529	Calcium oxide
451	Triphosphates	551	Silicon dioxide (amorphous)
452	Polyphosphates	552	Calcium silicate
455	Yeast mannoproteins	553	Magnesium silicates
460	Cellulose, microcrystalline and powdered	554	Sodium aluminosilicate
461	Methyl cellulose	556	Calcium aluminium silicate
463	Hydroxypropyl cellulose	558	Bentonite
464	Hydroxypropyl methylcellulose	559	Aluminium silicate
465	Methyl ethylcellulose	570	Stearic acid
466	Sodium carboxymethylcellulose	575	Glucono delta-lactone
470	Fatty acid salts of aluminium, ammonia, calcium, magnesium, potassium and sodium	576	Sodium gluconate
471	Mono- and diglycerides of fatty acids	577	Potassium gluconate
472a	Acetic and fatty acid esters of glycerol	578	Calcium gluconate
472b	Lactic and fatty acid esters of glycerol	579	Ferrous gluconate
472c	Citric and fatty acid esters of glycerol	620	L-glutamic acid
472e	Diacyltartaric and fatty acid esters of glycerol	621	Monosodium glutamate, L-
472f	Tartaric, acetic and fatty acid esters of glycerol (mixed)	622	Monopotassium glutamate, L-
473	Sucrose esters of fatty acids	623	Calcium glutamate, Di-L-
477	Propylene glycol esters of fatty acids	624	Monoammonium glutamate, L-
481	Sodium lactylates	625	Magnesium glutamate, Di-L-
482	Calcium lactylates	627	Disodium guanylate, 5'-
491	Sorbitan monostearate	631	Disodium inosinate, 5'-
492	Sorbitan tristearate	635	Disodium ribonucleotides, 5'-
500	Sodium carbonates	900a	Polydimethylsiloxane
501	Potassium carbonates	901	Beeswax, white & yellow
503	Ammonium carbonates	903	Carnauba wax
504	Magnesium carbonates	904	Shellac
507	Hydrochloric acid	905b	Petrolatum (petroleum jelly)
508	Potassium chloride	941	Nitrogen
509	Calcium chloride	942	Nitrous oxide
510	Ammonium chloride	943a	Butane (for pressurised food containers only)
511	Magnesium chloride	943b	Isobutane (for pressurised food containers only)
514	Sodium sulphates	944	Propane (for pressurised food containers only)
515	Potassium sulphate	946	Octafluorocyclobutane (for pressurised food containers only)
516	Calcium sulphate	951	Aspartame (technological use consistent with section 1.3.1—5 only)
518	Magnesium sulphate		

953	Isomalt	1403	Bleached starch
955	Sucralose (technological use consistent with section 1.3.1—5 only)	1404	Oxidised starch
957	Thaumatococcus	1405	Enzyme treated starches
961	Neotame (technological use consistent with section 1.3.1—5 only)	1410	Monostarch phosphate
965	Maltitol & maltitol syrup	1412	Distarch phosphate
966	Lactitol	1413	Phosphated distarch phosphate
967	Xylitol	1414	Acetylated distarch phosphate
968	Erythritol	1420	Starch acetate
969	Advantame	1422	Acetylated distarch adipate
		1440	Hydroxypropyl starch
		1442	Hydroxypropyl distarch phosphate
1105	Lysozyme	1450	Starch sodium octenylsuccinate
		1451	Acetylated oxidised starch
1200	Polydextroses	1518	Triacetin
		1520	Propylene glycol
1400	Dextrin roasted starch	1521	Polyethylene glycol 8000
1401	Acid treated starch	1522	Calcium lignosulphonate (40-65)
1402	Alkaline treated starch		

### **S16—3 Colourings permitted at GMP**

- (1) For section subsection 1.1.2—11(3), the \*colourings permitted at GMP are the substances listed in the following table (first in alphabetical order, then in numerical order):

#### **Colouring permitted at GMP—alphabetical listing**

Alkanet (& Alkannin)	103	Curcumins	100
Anthocyanins	163	Flavoxanthin	161a
Beet Red	162	Iron oxides	172
Caramel I – plain	150a	Kryptoxanthin	161c
Caramel II – caustic sulphite process	150b	Lutein	161b
Caramel III – ammonia process	150c	Lycopene	160d
Caramel IV – ammonia sulphite process	150d	Paprika oleoresins	160c
Carotenal, b-apo-8'-	160e	Rhodoxanthin	161f
Carotenes	160a	Riboflavins	101
Carotenoic acid, b-apo-8'-, methyl or ethyl esters	160f	Rubixanthan	161d
Chlorophylls	140	Saffron, crocetin and crocin	164
Chlorophylls, copper complexes	141	Titanium dioxide	171
Cochineal and carmines	120	Vegetable carbon	153
		Violoxanthin	161e

**Colouring permitted at GMP—numerical listing**

100	Curcumins	160e	Carotenal, b-apo-8'-
101	Riboflavins	160f	Carotenoic acid, b-apo-8'-, methyl or ethyl esters
103	Alkanet (& Alkannin)	161a	Flavoxanthin
120	Cochineal and carmines	161b	Lutein
140	Chlorophylls	161c	Kryptoxanthin
141	Chlorophylls, copper complexes	161d	Rubixanthan
150a	Caramel I – plain	161e	Violoxanthin
150b	Caramel II – caustic sulphite process	161f	Rhodoxanthin
150c	Caramel III – ammonia process	162	Beet Red
150d	Caramel IV – ammonia sulphite process	163	Anthocyanins
153	Vegetable carbon	164	Saffron, crocetin and crocin
160a	Carotenes	171	Titanium dioxide
160c	Paprika oleoresins	172	Iron oxides
160d	Lycopene		

**S16—4 Colourings permitted to a maximum level**

For subsection 1.1.2—11(3), the colourings permitted to a maximum level are the substances listed in the following table (first in alphabetical order, then in numerical order):

**Note** See subsection 1.3.1—4(3), which establishes a maximum level for all colourings used in a food

**Colourings permitted to maximum level—alphabetical listing**

Allura red AC	129	Green S	142
Azorubine / Carmoisine	122	Indigotine	132
Brilliant black BN	151	Ponceau 4R	124
Brilliant blue FCF	133	Quinoline yellow	104
Brown HT	155	Sunset yellow FCF	110
Fast green FCF	143	Tartrazine	102

**Colourings permitted to maximum level—numerical listing**

102	Tartrazine	132	Indigotine
104	Quinoline yellow	133	Brilliant blue FCF
110	Sunset yellow FCF	142	Green S
122	Azorubine / Carmoisine	143	Fast green FCF
124	Ponceau 4R	151	Brilliant black BN
129	Allura red AC	155	Brown HT

## Amendment History

The Amendment History provides information about each amendment to the Schedule. The information includes commencement or cessation information for relevant amendments.

These amendments are made under section 92 of the *Food Standards Australia New Zealand Act 1991* unless otherwise indicated. Amendments do not have a specific date for cessation unless indicated as such.

### About this compilation

This is compilation No. 2 of Schedule 16 as in force on **23 January 2019** (up to Amendment No. 183). It includes any commenced amendment affecting the compilation to that date.

Prepared by Food Standards Australia New Zealand on **23 January 2019**.

### Uncommenced amendments or provisions ceasing to have effect.

To assist stakeholders, the effect of any uncommenced amendments or provisions which will cease to have effect, may be reflected in the Schedule as shaded boxed text with the relevant commencement or cessation date. These amendments will be reflected in a compilation registered on the Federal Register of Legislation including or omitting those amendments and provided in the Amendment History once the date is passed.

The following abbreviations may be used in the table below:

ad = added or inserted  
exp = expired or ceased to have effect  
rs = repealed and substituted  
am = amended  
rep = repealed

**Schedule 16** was published in the Food Standards Gazette No. FSC96 on 10 April 2015 as part of Amendment 154 (F2015L00442 — 1 April 2015) and has since been amended as follows:

Section affected	A'ment No.	FRL registration Gazette	Commencement (Cessation)	How affected	Description of amendment
S16—3	168	F2017L00414 11 April 2017 FSC110 13 April 2017	13 April 2017	am	Heading (colouring) to correct inconsistency with defined term.
S16—2	183	F2019L00037 11 Jan 2019 FSC124 23 Jan 2019	23 January 2019	ad	Entry for Monk fruit extract (luo han guo extract) 'alphabetical listing'