

## List of Designated Additives

The substances below are the designated additives appearing in Table 1, as mentioned in Article 12 of the Enforcement Regulations under the Food Sanitation Law. These additives are listed here in alphabetic order. They are 464 in total as of January 15, 2020. The number preceding the name of each additive is the sequence number given to the corresponding additive in the original Japanese table.

16	Acesulfame Potassium (Acesulfame K)
20	Acetaldehyde
326	Acetic Acid, Glacial
23	Acetone
22	Acetophenone
17	Acetylated Distarch Adipate
19	Acetylated Distarch Phosphate
18	Acetylated Oxidized Starch
5	Adipic Acid
26	Advantame
32	DL-Alanine
193	Aliphatic Higher Alcohols
194	Aliphatic Higher Aldehydes (except those generally recognized as highly toxic)
195	Aliphatic Higher Hydrocarbons (except those generally recognized as highly toxic)
181	Allyl Cyclohexylpropionate
370	Allyl Hexanoate (Allyl Caproate)
54	Allyl Isothiocyanate (Volatile Oil of Mustard)
438	Aluminum Ammonium Sulfate (Crystal: Ammonium Alum, Desiccated: Burnt Ammonium Alum)
439	Aluminum Potassium Sulfate (Crystal: Alum or Potassium Alum, Desiccated: Burnt Alum)
29	(3-Amino-3-carboxypropyl)dimethylsulfonium chloride
44	Ammonia
35	Ammonium Alginate
243	Ammonium Bicarbonate (Ammonium Hydrogen Carbonate)
240	Ammonium Carbonate
84	Ammonium Chloride
455	Ammonium Dihydrogen Phosphate (Ammonium Phosphate, Monobasic or Monoammonium Phosphate)
45	Ammonium isovalerate
101	Ammonium Persulfate
440	Ammonium Sulfate
30	Amyl alcohol
31	$\alpha$ -Amylcinnamaldehyde ( $\alpha$ -Amylcinnamic Aldehyde)
27	Anisaldehyde (p-Methoxybenzaldehyde)
28	$\beta$ -apo-8'-carotenal
34	L-Arginine L-Glutamate
40	Argon
381	Aromatic Alcohols
382	Aromatic Aldehydes (except those generally recognized as highly toxic)
7	L-Ascorbic Acid (Vitamin C)
9	L-Ascorbic Acid 2-glucoside
12	L-Ascorbic Palmitate (Vitamin C Palmitate)

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10	L-Ascorbic Stearate (Vitamin C Stearate)
13	Asparaginase
15	Aspartame (L-a-Aspartyl-L-Phenylalanine Methyl Ester)
25	Azoxystrobin
376	Benzaldehyde
41	Benzoic Acid
99	Benzoyl Peroxide
164	Benzyl Acetate
375	Benzyl Alcohol
364	Benzyl Propionate
310	<i>Biotin</i>
312	Bisbentiamine (Benzoylthiamine Disulfide)
395	d-Borneol
348	Butanol
163	Butyl Acetate
349	Butylamine
350	sec-Butylamine
426	Butyl Butyrate
303	Butyl p-Hydroxybenzoate
352	Butylated Hydroxyanisole
189	Butylated Hydroxytoluene
351	Butyraldehyde
422	Butyric Acid
153	Calcium Acetate
37	Calcium Alginate
8	Calcium L-Ascorbate
242	Calcium Carbonate
102	Calcium Carboxymethylcellulose (Calcium Cellulose Glycolate)
86	Calcium Chloride
115	Calcium Citrate
459	Calcium Dihydrogen Phosphate (Calcium Phosphate, Monobasic)
334	Calcium Dihydrogen Pyrophosphate (Acid Calcium Pyrophosphate)
78	Calcium Disodium Ethylenediaminetetraacetate (Calcium Disodium EDTA)
128	Calcium Gluconate
123	Calcium Glycerophosphate
227	Calcium Hydroxide (Slaked Lime)
292	Calcium Lactate
458	Calcium Monohydrogen Phosphate (Calcium Phosphate, Dibasic)
171	Calcium Oxide
308	Calcium Pantothenate

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362	Calcium Propionate
432	Calcium 5'-Ribonucleotide
168	Calcium Saccharin
138	Calcium Silicate
239	Calcium Sorbate
231	Calcium Stearate
233	Calcium Stearoyl Lactylate (Calcium Stearyl Lactylate)
442	Calcium Sulfate
105	Canthaxanthin
287	Carbon Dioxide (Carbonic Acid, Gas)
104	β-Carotene
285	Chlorine Dioxide
2	Chlorous Acid Water
149	Cholecalciferol (Vitamin D3)
187	1,8-Cineole (Eucalyptol)
225	Cinnamaldehyde (Cinnamic Aldehyde)
140	Cinnamic Acid
157	Cinnamyl Acetate
224	Cinnamyl Alcohol (Cinnamic Alcohols)
184	Citral
111	Citric Acid
185	Citronellal
186	Citronellol
156	Citronellyl Acetate
108	Citronellyl Formate
269	Copper Chlorophyll
267	Copper Salts (limited to Copper Gluconate and Cupric Sulfate)
155	Cyclohexyl Acetate
425	Cyclohexyl Butyrate
182	L-Cystein Monohydrochloride
257	Decanal (Decyl Aldehyde)
258	Decanol (Decyl Alcohol)
454	Diammonium Hydrogen Phosphate (Diammonium Phosphate or Ammonium Phosphate, Dibasic)
190	Dibenzoyl Thiamine
191	Dibenzoyl Thiamine Hydrochloride
180	2,3-Diethyl-5-methylpyrazine
179	2,3-Diethylpyrazine
289	Dimethyl dicarbonate
196	2,3-Dimethylpyrazine
197	2,5-Dimethylpyrazine

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198	2,6-Dimethylpyrazine
199	2,6-Dimethylpyridine
188	Diphenyl (Biphenyl)
456	Dipotassium Hydrogen Phosphate (Dipotassium Phosphate or Potassium Phosphate, Dibasic)
183	Disodium 5'-Cytidylate (Sodium 5'-Cytidylate)
335	Disodium Dihydrogen Pyrophosphate (Acid Disodium Pyrophosphate)
79	Disodium Ethylenediaminetetraacetate (Disodium EDTA)
124	Disodium Glycyrrhizinate
110	Disodium 5'-Guanylate (Sodium 5'-Guanylate)
460	Disodium Hydrogen Phosphate (Disodium Phosphate)
63	Disodium 5'-Inosinate (Sodium 5'-Inosinate)
433	Disodium 5'-Ribonucleotide (Sodium 5'-Ribonucleotide)
148	Disodium Succinate
206	Disodium DL-Tartrate (Disodium dl-Tartrate)
207	Disodium L-Tartrate (Disodium l-Tartrate)
66	Disodium 5'-Uridylate (Sodium 5'-Uridylate)
449	Distarch Phosphate
83	Ergocalciferol (Calciferol or Vitamin D2)
81	Erythorbic Acid (Isoascorbic Acid)
68	Ester Gum
69	Esters
80	Ethers
152	Ethyl Acetate
21	Ethyl Acetoacetate
424	Ethyl Butyrate
141	Ethyl Cinnamate
259	<i>Ethyl Decanoate (Ethyl Caprate)</i>
70	Mixture of 2-Ethyl-3,5-dimethylpyrazine and 2-Ethyl-3,6-dimethylpyrazine
373	Ethyl Heptanoate (Ethyl Enanthate)
371	Ethyl Hexanoate (Ethyl Caproate)
302	Ethyl p-Hydroxybenzoate
51	Ethyl Isovalerate
74	2-Ethyl-3-methylpyrazine
75	2-Ethyl-5-methylpyrazine
76	2-Ethyl-6-methylpyrazine
77	5-Ethyl-2-methylpyridine
93	Ethyl Octanoate (Ethyl Caprylate)
342	Ethyl Phenylacetate
361	Ethyl Propionate
72	2-Ethylpyrazine

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73	3-Ethylpyridine
71	Ethylvanillin
90	Eugenol
192	Fatty Acids
118	Ferric Ammonium Citrate
87	Ferric Chloride
117	Ferric Citrate
336	Ferric Pyrophosphate
347	Ferrocyanides (Potassium Ferrocyanide (Potassium Hexacyanoferrate(II)), Calcium Ferrocyanide (Calcium Hexacyanoferrate(II)), Sodium Ferrocyanide (Sodium Hexacyanoferrate(II)))
129	Ferrous Gluconate (Iron Gluconate)
443	Ferrous Sulfate
355	Fludioxonil
421	Folic Acid
220	Food Blue No.1 (Brilliant Blue FCF) and its Aluminum Lake
221	Food Blue No.2 (Indigo Carmine) and its Aluminum Lake
219	Food Green No.3 (Fast Green FCF) and its Aluminum Lake
210	Food Red No.2 (Amaranth) and its Aluminum Lake
211	Food Red No.3 (Erythrosine) and its Aluminum Lake
212	Food Red No.40 (Allura Red AC) and its Aluminum Lake
213	Food Red No.102 (New Coccine)
214	Food Red No.104 (Phloxine)
215	Food Red No.105 (Rose Bengale)
216	Food Red No.106 (Acid Red)
217	Food Yellow No.4 (Tartrazine) and its Aluminum Lake
218	Food Yellow No.5 (Sunset Yellow FCF) and its Aluminum Lake
353	Fumaric Acid
356	Furfurals and its derivatives (except those generally recognized as highly toxic)
144	Geraniol
154	Geranyl Acetate
107	Geranyl Formate
126	Gluconic Acid
125	Glucono-delta-Lactone (Gluconolactone)
132	L-Glutamic Acid
131	Glutamyl-valyl-glycine
121	Glycerol (Glycerin)
122	Glycerol Esters of Fatty Acids
120	Glycine
369	Hexanoic Acid (Caproic Acid)
372	Hexylamine

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145	High Test Hypochlorite
311	L-Histidine Monohydrochloride
177	Hypobromous Acid Water
89	Hydrochloric Acid
98	Hydrogen Peroxide
316	Hydroxycitronellal
317	Hydroxycitronellal Dimethylacetal
315	1-Hydroxyethylidene-1,1-Diphosphonic Acid
319	Hydroxypropyl Cellulose
318	Hydroxypropyl Distarch Phosphate
321	Hydroxypropyl Methylcellulose
320	Hydroxypropyl Starch
175	Hypochlorous Acid Water
64	Imazalil
65	Indoles and its derivatives
47	Ion Exchange Resin
46	Ionone
293	Iron Lactate
174	Iron Sesquioxide (Diiron Trioxide or Iron Oxide Red)
151	Isoamyl Acetate
48	Isoamylalcohol
423	Isoamyl Butyrate
106	Isoamyl Formate
50	Isoamyl Isovalerate
340	Isoamyl Phenylacetate
360	Isoamyl Propionate
56	Isobutanol
58	Isobutylaldehyde (Isobutanal)
57	Isobutylamine
300	Isobutyl p-Hydroxybenzoate
341	Isobutyl Phenylacetate
49	Isoeugenol
62	L-Isoleucine
61	Isopentylamine
59	Isopropanol
60	Isopropylamine
112	Isopropyl Citrate
301	<i>Isopropyl p-Hydroxybenzoate</i>
52	<i>Isoquinoline</i>
53	Isothiocyanates (except those generally recognized as highly toxic)

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55	Isovaleraldehyde
143	Ketones
290	Lactic Acid
427	Lactones (except those generally recognized as highly toxic)
431	Linalool
166	Linalyl Acetate
428	L-Lysine L-Aspartate
430	L-Lysine L-Glutamate
429	L-Lysine Monohydrochloride
246	Magnesium Carbonate
88	Magnesium Chloride
229	Magnesium Hydroxide
462	Magnesium Monohydrogen Phosphate
173	Magnesium Oxide
139	Magnesium Silicate
232	Magnesium Stearate
445	Magnesium Sulfate
446	DL-Malic Acid (dl-Malic Acid)
396	Maltol
397	D-Mannitol (D-Mannite)
418	dl-Menthol (dl-Peppermint Camphor)
419	l-Menthol (Peppermint Camphor)
165	l-Menthyl Acetate
400	DL-Methionine
401	L-Methionine
305	p-Methylacetophenone
43	Methyl Anthranilate
410	2-Methylbutanol
411	3-Methyl-2-butanol
414	trans-2-Methyl-2-butenal, (E)-2-Methyl-2-butenal
415	3-Methyl-2-butenal
416	3-Methyl-2-butenol
413	2-Methylbutyraldehyde
412	2-Methylbutylamine
406	Methyl Cellulose
142	Methyl Cinnamate
405	5-Methyl-6,7-dihydro-5H-cyclopentapyrazine
417	Methyl Hesperidin (Soluble Vitamin P)
407	1-Methylnaphthalene
402	Methyl N-Methylantranilate

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408	Methyl b-Naphthyl Ketone
409	2-Methypyrazine
404	6-Methylquinoline
403	5-Methylquinoxaline
170	Methyl Salicylate
133	Monoammonium L-Glutamate
135	Monocalcium Di-L-Glutamate
137	Monomagnesium Di-L-Glutamate
114	Monopotassium Citrate and Tripotassium Citrate
134	Monopotassium L-Glutamate
14	Monosodium L-Aspartate
354	Monosodium Fumarate (Sodium Fumarate)
136	Monosodium L-Glutamate
147	Monosodium Succinate
450	Monostarch Phosphate
420	Morpholine Salts of Fatty Acids
280	Natamycin
295	Neotame
283	Nicotinamide (Niacinamide)
282	Nicotinic Acid (Niacin)
279	Nisin
4	Nitrous Oxide
296	g-Nonalactone (Nonalactone)
91	Octanal (Capryl Aldehyde or Octyl Aldehyde)
92	Octanoic Acid
200	Oxalic Acid
172	Oxidized Starch
377	2-Pentanol (sec-Amyl alcohol)
379	trans-2-Pentenal
380	1-Penten-3-ol
378	Pentylamine
97	Peracetic Acid
374	l-Perillaldehyde
162	Phenethyl Acetate (Phenylethyl Acetate)
344	Phenethylamine
345	Phenol Ethers (except those generally recognized as highly toxic)
346	Phenols (except those generally recognized as highly toxic)
339	L-Phenylalanine
95	o-Phenylphenol and Sodium o-Phenylphenate
343	2-(3-Phenylpropyl)pyridine



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464	Phosphated Distarch Phosphate
448	Phosphoric Acid
322	Piperidine
323	Piperonal (Heliotropine)
324	Piperonyl Butoxide
392	Polybutene (Polybutylene)
385	Polyisobutylene (Butyl Rubber)
386	Polysorbate 20
387	Polysorbate 60
388	Polysorbate 65
389	Polysorbate 80
161	Polyvinyl Acetate
391	Polyvinylpyrrolidone
390	Polyvinylpyrrolidone
36	Potassium Alginate
204	Potassium DL-Bitartrate (Potassium Hydrogen DL-Tartrate or Potassium Hydrogen dl-Tartrate)
205	Potassium L-Bitartrate (Potassium Hydrogen L-Tartrate or Potassium Hydrogen d-Tartrate)
201	Potassium Bromate
241	Potassium Carbonate (anhydrous)
85	Potassium Chloride
457	Potassium Dihydrogen Phosphate (Monopotassium Phosphate)
127	Potassium Gluconate
226	Potassium Hydroxide (Caustic Potash)
291	Potassium Lactate
398	Potassium Metaphosphate
208	Potassium Nitrate
297	Potassium Norbixin
393	Potassium Polyphosphate
333	Potassium Pyrophosphate (Tetrapotassium Pyrophosphate)
330	Potassium Pyrosulfite (Potassium Hydrogen Sulfite or Potassium Metabisulfite)
238	Potassium Sorbate
441	Potassium Sulfate
357	Propanol
365	Propiconazole
358	Propionaldehyde
359	Propionic Acid
383	Propyl Gallate
304	<i>Propyl p-Hydroxybenzoate</i>
366	Propylamine
367	Propylene Glycol

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39	Propylene Glycol Alginate
368	Propylene Glycol Esters of Fatty Acids
327	Pyrazine
328	Pyridoxine Hydrochloride (Vitamin B6)
329	Pyrimethanil
338	Pyrrrole
332	Pyrrolidine
434	Riboflavin (Vitamin B2)
436	<i>Riboflavin 5'-Phosphate Sodium (Riboflavin Phosphate Sodium, Vitamin B2 Phosphate Sodium)</i>
435	<i>Riboflavin Tetrabutryate (Vitamin B2 Tetrabutryate)</i>
167	Saccharin
286	Silicon Dioxide (Silica Gel)
223	Silicone Resin (Polydimethylsiloxane)
160	Sodium Acetate
38	Sodium Alginate
11	Sodium L-Ascorbate (Vitamin C Sodium)
42	Sodium Benzoate
244	Sodium Bicarbonate (Bicarbonate Soda or Sodium Hydrogen Carbonate)
245	Sodium Carbonate (Crystal: Carbonate Soda, Anhydrous: Soda Ash)
103	Sodium Carboxymethylcellulose (Sodium Cellulose Glycolate)
266	Sodium Carboxymethylstarch
100	Sodium Caseinate
3	Sodium Chlorite
150	Sodium Chondroitin Sulfate
268	Sodium Copper Chlorophyllin
263	<i>Sodium Dehydroacetate</i>
461	Sodium Dihydrogen Phosphate (Monosodium Phosphate)
82	Sodium Erythorbate (Sodium Isoascorbate)
116	Sodium Ferrous Citrate (Sodium Iron Citrate)
130	Sodium Gluconate
178	Sodium Hydrosulfite (Hydrosulfite)
228	Sodium Hydroxide (Caustic Soda)
176	Sodium Hypochlorite (Hypochlorite of Soda)
260	Sodium Iron Chlorophyllin
294	Sodium Lactate
447	Sodium DL-Malate (Sodium dl-Malate)
399	Sodium Metaphosphate
281	Sodium Methoxide (Sodium Methylate)
209	Sodium Nitrate
6	Sodium Nitrite

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298	Sodium Norbixin
96	Sodium Oleate
309	Sodium Pantothenate
384	Sodium Polyacrylate
394	Sodium Polyphosphate
363	Sodium Propionate
337	Sodium Pyrophosphate (Tetrasodium Pyrophosphate )
331	Sodium Pyrosulfite (Sodium Metabisulfite, Acid Sulfite of Soda)
169	Sodium Saccharin (Soluble Saccharin)
24	Sodium selenite
234	Sodium Stearoyl Lactylate
444	Sodium Sulfate
33	Sodium Sulfite
237	Sorbic Acid
235	Sorbitan Esters of Fatty Acids
236	D-Sorbitol (D-Sorbit)
159	Starch Acetate
94	Starch Sodium Octenyl Succinate
146	Succinic Acid
230	Sucralose (Trichlorogalactosucrose)
222	Sucrose Esters of Fatty Acids
284	Sulfur Dioxide (Sulfurous Acid, Anhydride)
437	<i>Sulfuric Acid</i>
325	Sunflower Lecithin
202	DL-Tartaric Acid (dl-Tartaric Acid)
203	L-Tartaric Acid (d-Tartaric Acid)
265	Terpene Hydrocarbons
264	Terpineol
158	Terpinyl Acetate
261	5,6,7,8-Tetrahydroquinoxaline
262	2,3,5,6-Tetramethylpyrazine
256	<i>L-Theanine</i>
247	Thiabendazole
250	Thiamine Dicylsulfate (Vitamin B1 Dicylsulfate)
253	Thiamine Dilaurylsulfate (Vitamin B1 Dilaurylsulfate)
248	Thiamine Hydrochloride (Vitamin B1 Hydrochloride)
249	Thiamine Mononitrate (Vitamin B1 Mononitrate)
252	Thiamine Naphthalene-1,5-Disulfonate (Vitamin B1 Naphthalene-1,5-Disulfonate)
251	Thiamine Thiocyanate (Vitamin B1 Thiocyanate)
254	<i>Thioethers (except those generally recognized as highly toxic)</i>

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255	<i>Thiols (Thioalcohols) (except those generally recognized as highly toxic)</i>
277	DL-Threonine
278	L-Threonine
288	Titanium Dioxide
270	dl- $\alpha$ -Tocopherol
271	all-rac- $\alpha$ -Tocopheryl Acetate
272	R,R,R- $\alpha$ -Tocopheryl Acetate
452	Tricalcium Phosphate (Calcium Phosphate, Tribasic)
113	Triethyl Citrate
453	Trimagnesium Phosphate
275	Trimethylamine
276	2,3,5-Trimethylpyrazine
451	Tripotassium Phosphate (Potassium Phosphate, Tribasic)
119	Trisodium Citrate (Sodium Citrate)
463	Trisodium Phosphate (Sodium Phosphate, Tribasic)
273	DL-Tryptophan
274	L-Tryptophan
67	g-Undecalactone (Undecalactone)
307	Valeraldehyde
306	L-Valine
299	Vanillin
313	Vitamin A (Retinol)
314	Vitamin A Fatty Acids Esters (Retinol Esters of Fatty Acids Esters)
109	Xylitol
1	Zinc salts (limited to Zinc Gluconate and Zinc Sulfate)