

Food supplements

List of Vitamins and Minerals which may be used in the manufacture of food supplements in the EU

This guidance applies to the whole of the UK and was prepared by the Department of Health in association with the Welsh Government, and Food Standards Agency in Scotland and Northern Ireland

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<http://www.dh.gov.uk/publications>

Important note

This document was correct at the time of publishing. The lists of vitamins and minerals permitted for use in food supplements is subject to change. Please ensure you check the European Commission's website for any amendments to the list ([Click here](#))

Vitamins and minerals which may be used in the manufacture of food supplements as permitted by Directive 2002/46/EC relating to food supplements¹

Vitamins	Unit of measurement	Minerals	Unit of measurement
Vitamin A	µg RE	Calcium	mg
Vitamin D	µg	Magnesium	mg
Vitamin E	mg α-TE	Iron	mg
Vitamin K	µg	Copper	µg
Vitamin B1	mg	Iodine	µg
Vitamin B2	mg	Zinc	mg
Niacin	mg NE	Manganese	mg
Pantothenic acid	mg	Sodium	mg
Vitamin B6	mg	Potassium	mg
Folic acid ²	µg	Selenium	µg
Vitamin B12	µg	Chromium	µg
Biotin	µg	Molybdenum	µg
Vitamin C	mg	Fluoride	mg
		Chloride	mg
		Phosphorus	mg
		Boron	mg
		Silicon	mg

¹ As amended by Regulation (EC) No. 1137/2008 (OJ L311, 21.11.2008, p.1; Regulation (EC) No. 1170/2009 (OJ L314, 1.12.2009, p.36); and Regulation (EC) No. 1161/2011 (OJ L296, 15.11.2011, p.29)

² Folic acid is the term included in Annex I of Commission Directive 2008/100/EC of 28 October 2008 amending Council Directive 90/496/EEC on nutrition labelling for foodstuffs as regards recommended daily allowances, energy conversion factors and definitions for nutrition labelling purposes and covers all forms of folates."

Vitamins

VITAMIN A	(a) retinol (b) retinyl acetate (c) retinyl palmitate (d) beta-carotene
VITAMIN D	(a) cholecalciferol (b) ergocalciferol
VITAMIN E	(a) D-alpha-tocopherol (b) DL-alpha-tocopherol (c) D-alpha-tocopheryl acetate (d) DL-alpha-tocopheryl acetate (e) D-alpha-tocopheryl acid succinate (f) mixed tocopherols ³ (g) tocotrienol tocopherol ⁴
VITAMIN K	(a) phylloquinone (phytomenadione) (b) menaquinone ⁵
VITAMIN B1	(a) thiamin hydrochloride (b) thiamin mononitrate (c) thiamine monophosphate chloride (d) thiamine pyrophosphate chloride
VITAMIN B2	(a) riboflavin (b) riboflavin 5'-phosphate, sodium
NIACIN	(a) nicotinic acid (b) nicotinamide (c) inositol hexanicotinate (inositol hexaniacinate)
PANTOTHENIC ACID	(a) D-pantothenate, calcium (b) D-pantothenate, sodium (c) dexpanthenol (d) pantethine
VITAMIN B6	(a) pyridoxine hydrochloride (b) pyridoxine 5'-phosphate (c) pyridoxal 5'-phosphate
FOLATE	(a) pteroylmonoglutamic acid (b) calcium-L-methylfolate

³ alpha-tocopherol <20%, beta-tocopherol <10%, gamma-tocopherol 50 – 70% and delta-tocopherol 10 - 30%

⁴ Typical levels of individual tocopherols and tocotrienols:

115 mg/g alpha-tocopherol (101 mg/g minimum)

5 mg/g beta-tocopherol (<1 mg/g minimum)

45 mg/g gamma-tocopherol (25 mg/g minimum)

12 mg/g delta-tocopherol (3 mg/g minimum)

67 mg/g alpha-tocotrienol (30 mg/g minimum)

<1 mg/g beta-tocotrienol (<1 mg/g minimum)

82 mg/g gamma-tocotrienol (45 mg/g minimum)

5 mg/g delta-tocotrienol (<1 mg/g minimum).

⁵ Menaquinone occurring principally as menaquinone-7 and, to a minor extent, menaquinone-6.

VITAMIN B12	(a) cyanocobalamin (b) hydroxocobalamin (c) 5'-deoxyadenosylcobalamin (d) methylcobalamin
BIOTIN	(a) D-biotin
VITAMIN C	(a) L-ascorbic acid (b) sodium-L-ascorbate (c) calcium-L-ascorbate ⁶ (d) potassium-L-ascorbate (e) L-ascorbyl 6-palmitate (f) magnesium L-ascorbate (g) zinc L-ascorbate

⁶ May contain up to 2% of threonate.

Minerals

Calcium	calcium acetate calcium L-ascorbate calcium bisglycinate calcium carbonate calcium chloride calcium citrate malate calcium salts of citric acid calcium gluconate calcium glycerophosphate calcium lactate calcium pyruvate calcium salts of orthophosphoric acid calcium succinate calcium hydroxide calcium L-lysinate calcium malate calcium oxide calcium L-pidolate calcium L-threonate calcium sulphate
Magnesium	magnesium acetate magnesium L-ascorbate magnesium bisglycinate magnesium carbonate magnesium chloride magnesium salts of citric acid magnesium gluconate magnesium glycerophosphate magnesium salts of orthophosphoric acid magnesium lactate magnesium L-lysinate magnesium hydroxide magnesium malate magnesium oxide magnesium L-pidolate magnesium potassium citrate magnesium pyruvate magnesium succinate magnesium sulphate magnesium taurate magnesium acetyl taurate
Iron	ferrous carbonate

	ferrous citrate ferric ammonium citrate ferrous gluconate ferrous fumarate ferric sodium diphosphate ferrous lactate ferrous sulphate ferric diphosphate (ferric pyrophosphate) ferric saccharate elemental iron (carbonyl+electrolytic+hydrogen reduced) ferrous bisglycinate ferrous L-pidolate ferrous phosphate ferrous ammonium phosphate ferric sodium EDTA iron (II) taurate
Copper	cupric carbonate cupric citrate cupric gluconate cupric sulphate copper L-aspartate copper bisglycinate copper lysine complex copper (II) oxide
Iodine	sodium iodide sodium iodate potassium iodide potassium iodate
Zinc	zinc acetate zinc L-ascorbate zinc L-aspartate zinc bisglycinate zinc chloride zinc citrate zinc gluconate zinc lactate zinc L-lysinate zinc malate zinc mono-L-methionine sulphate zinc oxide zinc carbonate zinc L-pidolate

	zinc picolinate zinc sulphate
Manganese	manganese ascorbate manganese L-aspartate manganese bisglycinate manganese carbonate manganese chloride manganese citrate manganese gluconate manganese glycerophosphate manganese pidolate manganese sulphate
Sodium	sodium bicarbonate sodium carbonate sodium chloride sodium citrate sodium gluconate sodium lactate sodium hydroxide sodium salts of orthophosphoric acid sodium sulphate
Potassium	potassium sulphate potassium bicarbonate potassium carbonate potassium chloride potassium citrate potassium gluconate potassium glycerophosphate potassium lactate potassium hydroxide potassium L-pidolate potassium malate potassium salts of orthophosphoric acid
Selenium	L-selenomethionine selenium enriched yeast ⁷ selenious acid sodium selenate sodium hydrogen selenite sodium selenite

⁷ Selenium-enriched yeasts produced by culture in the presence of sodium selenite as selenium source and containing, in the dried form as marketed, not more than 2.5 mg Se/g. The predominant organic selenium species present in the yeast is selenomethionine (between 60 and 85% of the total extracted selenium in the product). The content of other organic selenium compounds including selenocysteine shall not exceed 10% of total extracted selenium. Levels of inorganic selenium normally shall not exceed 1% of total extracted selenium.

Chromium	chromium (III) chloride chromium (III) lactate trihydrate chromium nitrate chromium picolinate chromium (III) sulphate
Molybdenum	ammonium molybdate (molybdenum (VI)) potassium molybdate (molybdenum (VI)) sodium molybdate (molybdenum (VI))
Fluoride	calcium fluoride potassium fluoride sodium fluoride sodium monofluorophosphate
Boron	boric acid sodium borate
Silicon	choline-stabilised orthosilicic acid silicon dioxide silicic acid ⁸

⁸ In the form of gel.