codex alimentarius commission

FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS

WORLD HEALTH ORGANIZATION

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October 1999

TO: Codex Contact Points
Interested International Organizations

FROM: Secretary, Joint FAO/WHO Food Standards Programme
FAO, Viale delle Terme di Caracalla, 00100 Rome, Italy

SUBJECT: **REQUEST FOR COMMENTS AND INFORMATION ON THE ADVISORY LISTS OF MINERAL SALTS AND VITAMIN COMPOUNDS FOR THE USE IN FOODS FOR INFANTS AND CHILDREN (CAC/GL 10-1979, AMENDED 1983, 1991)**

DEADLINE: **1st February 2000**

COMMENTS:

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BACKGROUND

The Advisory Lists of Mineral Salts and Vitamin Compounds for Use in Foods for Infants and Children were adopted by the Codex Alimentarius Commission at its 13th Session in 1979. The 15th Session in 1983 approved amendments to the special vitamin forms, amendments to the list of mineral salts and the special vitamin forms were adopted by the 19th Session in 1991.

The 21st Session of the Codex Committee on Nutrition and Foods for Special Dietary Uses (21-25 September 1998) had considered this issue based on CRD 20 provided by the Delegation of New Zealand and recalled that the latest amendments to the Lists had been made in 1991, and that many nutrient sources permitted for use in at the national level were not included in the lists, which could create barriers to trade. In order to take into account the importance of public health and safety, new scientific and technological developments, and the work of JECFA on specifications, and that it was necessary to ensure its consistency with current practice in member countries the Committee agreed to propose the revision of the Lists and the 23rd Session of the Commission (ALINORM 99/37, paras 201-211 and Appendix VIII) approved it as new work.

Governments and international organizations are therefore invited to submit their comments or information on the current Advisory Lists Of Mineral Salts And Vitamin Compounds For The Use In Foods For Infants And Children (see Annex) and should do so in writing in conformity with the Uniform Procedure for the Elaboration of Codex Standards and Related Texts (see *Procedural Manual of the Codex Alimentarius Commission, Tenth Edition, pages 20-21)* preferably by an email to addressees as indicated above **not later than 1st February 2000.**

Annex

ADVISORY LISTS OF MINERAL SALTS AND VITAMIN COMPOUNDS FOR USE IN FOODS FOR INFANTS AND CHILDREN

CAC/GL 10-1979 (AMENDED 1983, 1991)

ADVISORY LIST OF MINERAL SALTS FOR USE IN FOODS FOR INFANTS AND CHILDREN

Salts	Purity Requirements	Use in Foods for Infants and Children
1. Source of Calcium (Ca)		
1.1 Calcium carbonate	FCC, FAO/WHO	Milk substitute formulae; Infant cereals
1.2 Calcium chloride	FCC, FAO/WHO	Milk-based and milk substitute formulae
1.3 Calcium citrate	FCC, FAO/WHO	Milk-based, milk substitute, protein hydrolysate and meat-based formulae
1.4 Calcium gluconate	FCC, FAO/WHO	Protein hydrolysate formulae
1.5 Calcium glycerophosphate	FCC	
1.6 Calcium lactate	FCC, FAO/WHO	Electrolyte mixture supplement
1.7 Calcium phosphate, monobasic	FCC, FAO/WHO	Milk substitute and low sodium formulae
1.8 Calcium phosphate, dibasic	FCC	Milk substitute and protein hydrolysate formulae
1.9 Calcium phosphate, tribasic	FCC, FAO/WHO	Milk substitute, protein hydrolysate and premature formulae; infant cereals
1.10 Calcium oxide	FCC, FAO/WHO	Protein supplement formulae
1.11 Calcium sulphate	FCC, FAO/WHO	Infant cereals
2. Source of Phosphorus (P)		
2.1 Calcium phosphate, monobasic	FCC, FAO/WHO	Milk substitute and low sodium formulae
2.2 Calcium phosphate, dibasic	FCC	Milk substitute and protein hydrolysate formulae
2.3 Calcium phosphate, tribasic	FCC, FAO/WHO	Milk substitute, protein hydrolysate and premature formulae; infant cereals
2.4 Magnesium phosphate, dibasic	FCC	Milk substitute and lactose-free formulae
2.5 Magnesium phosphate, tribasic	FCC, FAO/WHO	

Salts	Purity Requirements	Use in Foods for Infants and Children
2.6 Potassium phosphate, monobasic	FCC, FAO/WHO	Protein hydrolysate formulae
2.7 Potassium phosphate, dibasic	FCC, FAO/WHO	Milk-based, milk substitute and protein hydrolysate formulae
2.8 Sodium phosphate, dibasic	FCC, FAO/WHO	Electrolyte mixture supplement
2.9 Phosphoric acid	FCC, FAO/WHO	All infant and follow-up formulae; cereal-based foods for infants and children
3. Source of Chloride (Cl)		
3.1 Calcium chloride	FCC, FAO/WHO	Milk-based, milk substitute and protein supplement formulae; electrolyte mixture supplement
3.2 Choline chloride	FCC, FAO/WHO	Milk-based, milk substitute and protein hydrolysate formulae
3.3 Magnesium chloride	FCC, FAO/WHO	Milk-based, milk substitute and lactose-free formulae
3.4 Manganese chloride	FCC	Milk-based formulae
3.5 Potassium chloride	FCC, FAO/WHO	
3.6 Sodium chloride	FCC, FAO/WHO	Milk-substitute formulae, baby foods and electrolyte mixture supplement
3.7 Sodium chloride, iodized	FCC	Milk substitute formulae
3.8 Hydrochloric acid	FCC, FAO/WHO	All infant and follow-up formulae; cereal-based foods for infants and children
4. Iron (Fe)		
4.1 Ferrous carbonate, stabilized	MI	
4.2 Ferrous citrate	MI	Milk and soy-based liquid infant formulae
4.3 Ferrous fumarate	FCC	Vitamins, iron supplement
4.4 Ferrous gluconate	FCC, FAO/WHO	
4.5 Ferrous lactate	MI	Milk and soy-based liquid infant formulae
4.6 Ferrous succinate	MI	
4.7 Ferrous sulphate	FCC	Milk-based, milk substitute and protein hydrolysate formulae
4.8 Ferric ammonium citrate	FAO/WHO	
4.9 Ferric citrate	MI	Milk and soy-based liquid infant formulae, not allowed in powdered formulae, cereals or canned baby foods

Salts	Purity Requirements	Use in Foods for Infants and Children
4.10 Ferric gluconate	MI	
4.11 Sodium ferric pyrophosphate	MI	
4.12 Hydrogen reduced iron	FCC	Infant cereals; protein supplement formulae
4.13 Electrolytic iron	FCC	Infant cereals
4.14 Carbonyl iron	MI	
4.15 Ferric pyrophosphate	FCC	Milk-based formulae
5. Source of Magnesium (Mg)		
5.1 Magnesium carbonate	FCC, FAO/WHO	Baked products
5.2 Magnesium chloride	FCC, FAO/WHO	Milk-based, milk substitute and lactose-free formulae
5.3 Magnesium oxide	FCC, FAO/WHO	Milk substitute, protein hydrolysate and premature formulae
5.4 Magnesium phosphate, dibasic	FCC	Milk substitute, lactose-free formulae
5.5 Magnesium phosphate, tribasic	FCC, FAO/WHO	
5.6 Magnesium sulphate	FCC	Electrolyte mixture supplement
6. Source of Sodium (Na)		
6.1 Sodium bicarbonate	FCC, FAO/WHO	Milk-based formulae, gazed products
6.2 Sodium carbonate	FCC, FAO/WHO	Protein hydrolysate formulae
6.3 Sodium chloride	FCC, FAO/WHO	Milk substitute formulae, baby foods, electrolyte mixture supplement
6.4 Sodium chloride, iodized	FCC	Milk substitute formulae
6.5 Sodium citrate	FCC, FAO/WHO	Milk-based, milk substitute and protein hydrolysate formulae, electrolyte mixture supplement
6.6 Sodium gluconate	FCC	
6.7 Sodium lactate	FAO/WHO	
6.8 Sodium phosphate, monobasic	FCC, FAO/WHO	Milk substitute formulae
6.9 Sodium phosphate, dibasic	FCC, FAO/WHO	Electrolyte mixture supplement
6.10 Sodium phosphate, tribasic	FCC, FAO/WHO	

Salts	Purity Requirements	Use in Foods for Infants and Children
6.11 Sodium sulphate	FCC	
6.12 Sodium tartrate	FCC, FAO/WHO	
7. Source of Potassium (K)		
7.1 Potassium bicarbonate	FCC, FAO/WHO	
7.2 Potassium carbonate	FCC, FAO/WHO	
7.3 Potassium chloride	FCC, FAO/WHO	
7.4 Potassium citrate	FCC, FAO/WHO	
7.5 Potassium glycerophosphate	FCC	
7.6 Potassium gluconate	MI	
7.7 Potassium phosphate, monobasic	FCC, FAO/WHO	Protein hydrolysate formulae
7.8 Potassium phosphate, dibasic	FCC, FAO/WHO	Milk-based, milk substitute and protein hydrolysate formulae
8. Source of Copper (Cu)		
8.1 Copper gluconate	FCC	
8.2 Cupric carbonate	MI	Baked products, protein supplement formulae
8.3 Cupric citrate	MI	Milk-based, protein hydrolysate and meat-based formulae
8.4 Cupric sulphate	MI	
9. Source of Iodine (I)		
9.1 Potassium iodide	FCC	Milk-based, milk substitute, meat-based formulae
9.2 Sodium iodide	FCC	Milk-based, milk substitute and protein hydrolysate formulae
9.3 Potassium iodate	FCC, FAO/WHO	
10.Source of Zinc (Zn)		
10.1 Zinc acetate	MI	
10.2 Zinc chloride	MI	

Salts	Purity Requirements	Use in Foods for Infants and Children
10.3 Zinc oxide	MI	Protein hydrolysate formulae
10.4 Zinc sulphate	FCC	Milk-based, milk substitute and protein hydrolysate formulae
11. Source of Manganese (Mn)		
11.1 Manganese carbonate	MI	
11.2 Manganese chloride	FCC	Milk-based formulae
11.3 Manganese citrate	MI	
11.4 Manganese sulphate	FCC	Milk-based, milk substitute and protein hydrolysate formulae

Abbreviations:

FAO/WHO = General Principles for the Use of Food Additives, Codex Alimentarius Volume 1.

FCC = Food Chemicals Codex

MI = Merck Index

ADVISORY LIST OF VITAMIN COMPOUNDS FOR USE IN FOODS FOR INFANTS AND CHILDREN

Vitamin	Vitamin Form	Purity Requirements
1. Vitamin A	Retinyl acetate	USP, BP, Ph. Eur., FCC
	Retinyl palmitate	USP, BP, Ph. Eur., FCC
	Retinyl propionate	USP, BP, Ph. Eur., FCC
2. Provitamin A	Beta-carotene	FAO/WHO, FCC
3. Vitamin D		
3.1 Vitamin D_2	Ergocalciferol	USP, BP, Ph. Eur., FCC
3.2 Vitamin D_3	Cholecalciferol	USP, FCC
	Cholecalciferol-cholesterol	DAB
4. Vitamin E	d-alpha-tocopherol	NF, FAO/WHO
	dl-alpha-tocopherol	NF, FAO/WHO, FCC
	d-alpha-tocopheryl acetate	NF, FCC
	dl-alpha-tocopheryl acetate	NF, FCC
	d-alpha-tocopheryl succinate	FCC
	dl-alpha-tocopheryl succinate	NF
5. Thiamin (Vitamin B_1)	Thiamin chloride hydrochloride	USP, BP, Ph. Eur., FCC
	Thiamin mononitrate	USP, FCC
6. Riboflavin (Vitamin B_2)	Riboflavin	USP, BP, Ph. Eur., FAO/WHO, FCC
	Riboflavin 5'-phosphate sodium	BPC, FCC
7. Niacin	Nicotinamide	USP, BP, Ph. Eur., FCC
	Nicotinic acid	NF, BP, Ph. Eur., FCC
8 Vitamin B_6	Pyridoxine hydrochloride	USP, BP, Ph. Eur., FCC
9. Biotin (Vitamin H)	d-biotin	FCC
10. Folacin	Folic acid	USP, BP
11. Pantothenic acid	Calcium pantothenate	USP, Ph. Eur., FCC
	Panthenol	FCC
12. Vitamin B_{12}	Cyanocobalamin	USP, BP, Ph. Eur.
	Hydroxocobalamin	NF, BP
13. Vitamin K_1	Phytylmenaquinone	USP, BP
14. Vitamin C	Ascorbic acid	USP, BP, Ph. Eur., FAO/WHO, FCC
	Sodium ascorbate	USP, FAO/WHO, FCC
	Calcium ascorbate	FCC
	Ascorbyl-6-palmitate	NF, FAO/WHO, FCC
15. Choline	Choline bitartrate	DAB, FCC
	Choline chloride	FAO/WHO, DAB, FCC
16. Inositol		FCC

SPECIAL VITAMIN FORMS

For reasons of stability and easier handling, some vitamins have to be converted into suitable preparations, e.g. stabilized oily solutions, gelatine coated products, fat embedded preparations. For this purpose, the edible materials and the additives included in the respective Codex standard may be used:

		Maximum Level in Ready-to-use Food
(a)	Dextrins	100 mg/kg
(b)	Modified starches as included in the Supplementary List to Section 5.1, Codex Alimentarius Volume 1	100 mg/kg
(c)	Gum arabic (gum acacia)	100 mg/kg
(d)	Silicon dioxide	10 mg/kg

Abbreviations:

USP = United States Pharmacopoeia

NF = United States National Formulary

BP = British Pharmacopoeia, including addenda

BPC = British Pharmaceutical Codex

Ph. Eur. = European Pharmacopoeia

FAO/WHO = General Principles for the Use of Food Additives, Codex Alimentarius Volume 1

DAB = Deutsches Arzneibuch 7

FCC = Food Chemicals Codex