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## ■ Mandatory food enrichment

The following tables show the status with regard to mandatory food enrichment in June 2003, replacing those we published in 2000. Our aim has been to include all countries worldwide where such regulations are in force. The foods currently used for mandatory enrichment and included in this overview are cereal products, dairy products, fats and oils, and sugar. Regulations for enrichment of salt, infant formulas and foods for special dietary uses ("dietetic foods") also exist, but are not shown here. Foods enriched on a voluntary basis (e.g. non-staples such as breakfast cereals, beverages and snacks) are not included, although the amounts permitted may also be regulated.

As regulations are regularly amended, the status in a particular country may be different from that shown. The information provided here represents the best of the authors' knowledge and neither they nor the publisher can take responsibility for the validity of the legal requirements listed. This table should be considered as a work-in-progress, and readers who have more current and/or accurate information are encouraged to notify the Nutriview office.

We especially express our thanks to the specialists at Roche around the world and to those at USAID's micronutrient program MOST, who have contributed significantly towards keeping this publication up to date. – A. Bowley

### Terminology

The following definitions of widely used expressions may provide a clearer understanding of food enrichment terminology.

<i>Food:</i>	A nourishing substance, solid or liquid, taken into the body to sustain life, provide energy or promote growth.
<i>Staple food:</i>	A basic item of food used regularly by most of the population.
<i>Substitute food:</i>	A food designed to resemble a common food in appearance, texture, flavour and odour, and intended as a complete or partial replacement for that food.
<i>Nutrient:</i>	A constituent of food that supports growth, movement or protection of the body.
<i>Essential nutrient:</i>	A nutrient that cannot be synthesized in the body. If lacking in the diet, characteristic biochemical or physiological changes occur.
<i>Macronutrient:</i>	A nutrient required in more than trace amounts (proteins, fats, carbohydrates, some minerals).
<i>Micronutrient:</i>	A nutrient required only in minute quantities daily (vitamins, trace elements, most minerals).
<i>Enrichment/ fortification:</i>	Addition of essential nutrients to a food (whether or not normally contained in the food) to prevent or correct a demonstrated deficiency of one or more nutrients in the population or specific population groups.
<i>Nutrification:</i>	Addition of essential nutrients to improve the nutritional value of a food.
<i>Restoration:</i>	Addition of essential nutrients to replace losses that occur during food manufacture, storage and handling.
<i>Standardization:</i>	Addition of essential nutrients to a food to compensate for naturally occurring variations in nutrient levels.
<i>Supplementation:</i>	Provision of micronutrients in a pharmaceutical dosage form usually in situations requiring amounts higher than those normally supplied by the diet.

### Enrichment criteria

Food enrichment should preferably be under government control; proper application of regulations should be monitored and strictly enforced. This is important to ensure that nutrient levels are adequate and safe (neither too low nor too high) and that the target population is reached economically. Other foods than those listed may be enriched. The selection must be made carefully for each population according to the following criteria:

- The food should be consumed basically by all people in the target population.
- The daily per-capita intake should be stable and uniform.
- The fortified food should be stable under standard conditions of storage and use.
- The added nutrients should be physiologically available from the food.
- The added nutrients should not increase the risk of excessive intake or toxic effects.
- Enrichment should not produce undesirable changes to the organoleptic characteristics of the food.
- Enrichment should not increase the price of the food substantially.
- Enrichment should be economically feasible through an industrial process.

The main reasons for adding nutrients to foods are:

- To restore losses due to processing, storage and handling.
- As a public health measure to correct a recognized dietary deficiency.
- To improve overall nutritional quality of the food supply.

### Explanatory notes to the tables:

- Figures in parentheses indicate that addition is optional.
- To simplify comparisons all amounts are shown in the same units (not necessarily those stipulated in original mandate).
- Conversion factors: 1000IU vitamin A = 300 µg RE = 1.8mg beta-carotene; 1000IU vitamin D = 25 µg cholecalciferol.

Table 1: Cereals

Country	Product	Mandate	Nutrient	Mandated level	
				(IU/kg)	(mg/kg)
USA	Wheat flour (enriched, enriched bromated, enriched self-rising)	21 CFR 137.165 21 CFR 137.160 21 CFR 137.185	Vitamin B1		6.4
			Vitamin B2		4.0
			Niacin		52.9
			Folic acid		1.54
			Iron		44.1
			Calcium		(2110)
USA	Enriched bread, rolls, buns	21 CFR 136.115	Vitamin B1		4.0
			Vitamin B2		2.43
			Niacin		33.1
			Folic acid		0.95
			Iron		27.6
			Calcium		(1320)
USA	Enriched farina	21 CFR 137.305	Vitamin B1		4.41–5.51
			Vitamin B2		2.65–3.31
			Niacin		35.3–44.1
			Folic acid		1.54–1.91
			Vitamin D	(≥550)	
			Iron		≥28.7
			Calcium		(≥1100)
USA	Enriched macaroni products Enriched noodle products Enriched vegetable macaroni products Enriched vegetable noodle products	21 CFR 139.115 21 CFR 139.155 21 CFR 139.135	Vitamin B1		8.82–11.0
			Vitamin B2		3.75–4.85
			Niacin		59.5–75.0
		21 CFR 139.165	Folic acid		2.0–2.64
			Vitamin D	(550–2200)	
			Iron		28.7–36.4
Calcium		(1100–1380)			
USA	Enriched macaroni products with fortified proteins	21 CFR 139.117	Vitamin B1		11.0
			Vitamin B2		4.85
			Niacin		75.0
			Iron		36.4
			Calcium		(1380)
USA	Enriched nonfat milk macaroni products	21 CFR 139.122	Vitamin B1		8.82–11.0
			Vitamin B2		3.75–4.85
			Niacin		59.5–75.0
			Folic acid		2.0–2.64
			Iron		28.7–36.4
USA	Enriched corn meals	21 CFR 137.260	Vitamin B1		4.41–6.62
			Vitamin B2		2.65–4.0
			Niacin		35.3–52.9
			Folic acid		1.54–2.2
			Vitamin D	(550–2200)	
			Iron		28.7–57.3
			Calcium		1100–1650
USA	Enriched rice	21 CFR 137.350	Vitamin B1		4.41–8.82
			Vitamin B2		2.65–5.29
			Niacin		35.3–70.6
			Folic acid		1.54–3.08
			Vitamin D	(550–2200)	
			Iron		28.7–57.3
			Calcium		(1100–2200)

**Table 1: Cereals**

Country	Product	Mandate	Nutrient	Mandated level	
				(IU/kg)	(mg/kg)
Canada	Flour White flour Enriched flour Enriched white flour	Food and Drugs Act and Regulations B.13.001	Vitamin B1	6.4	
			Vitamin B2	4.0	
			Vitamin B6	(3.1)	
			Niacin	53.0	
			Folic acid	1.5	
			Pantothenic acid	(13.0)	
			Iron	44.0	
			Magnesium	(1900)	
Canada	Enriched bread	Food and Drugs Act and Regulations B.13.022	Vitamin B1	4.0	
			Vitamin B2	2.4	
			Vitamin B6	(1.4)	
			Niacin	33.0	
			Folic acid	1.0	
			Pantothenic acid	(6.0)	
			Iron	27.6	
			Magnesium	(900)	
Canada	Enriched precooked rice	Food and Drugs Act and Regulations B.13.010.1	Vitamin B1	4.5	
			Vitamin B6	6.0	
			Niacin	42.0	
			Folic acid	0.16	
			Pantothenic acid	12.0	
			Iron	16.0	
Argentina	Wheat flour	Ley 25.630, 22/08/2002 (Not yet implemented)	Vitamin B1	6.3	
			Vitamin B2		1.3
			Folic acid	2.2	
			Niacin		13.0
			Iron	30.0	
Bolivia	Wheat flour	Decreto Supremo No. 24420 (26/11/96)	Vitamin B1	4.45	
			Vitamin B2	2.65	
			Niacin	35.6	
			Folic acid	1.5	
			Iron	60.0	
Brazil.	Wheat flour	Resolution - RDC 344, 13 December, 2002	Folic acid	(1.5)	
			Iron	(42.0)	
Chile	Wheat flour	Reglamento Sanitario de los Alimentos Art. 350 (13/05/97) Decreto Supremo 977	Vitamin B1	6.3	
			Vitamin B2	1.3	
			Niacin	13.0	
			Folic acid	2.0–2.4	
			Iron	30.0	
Colombia	Wheat flour	Decreto 1944, passed in 1996	Vitamin B1	6.0	
			Vitamin B2	4.0	
			Niacin	55.0	
			Folic acid	1.54	
			Iron	44.0	
Costa Rica	Wheat flour	Reglamento Centroamericano R-UAC 67.01.15:2002	Vitamin B1	5.4	
			Vitamin B2	3.6	
			Niacin	45.0	
			Folic acid	1.8	
			Iron	45.0	
Costa Rica	Corn flour	Mandate being written/to be consolidated with wheat flour	Vitamin B1	4.0	
			Vitamin B2	2.5	
			Niacin	45.0	
			Folic acid	1.3	
			Iron	22.0	

**Table 1: Cereals**

Country	Product	Mandate	Nutrient	Mandated level	
				(IU/kg)	(mg/kg)
Costa Rica	Rice	#30031-S	Vitamin B1	5.3	
			Vitamin B2	3.5	
			Niacin	35.0	
			Folic acid	1.8	
			Iron	22.0	
Dominican Republic	Wheat flour	Mandate being written this year	Vitamin B1	5.4	
			Vitamin B2	3.6	
			Niacin	45.0	
			Folic acid	1.8	
			Iron	45.0	
	Vitamin B12	?			
Ecuador	Wheat flour	Legislation passed in 1996	Vitamin B1	4.0	
			Vitamin B2	7.0	
			Niacin	40.0	
			Folic acid	0.6	
			Iron	55.0	
El Salvador	Wheat flour	Reglamento Centroamericano R-UAC 67.01.15:2002	Vitamin B1	5.4	
			Vitamin B2	3.6	
			Niacin	45.0	
			Folic acid	1.8	
			Iron	45.0	
El Salvador	Corn flour	Mandate being written/to be consolidated with wheat flour	Vitamin B1	4.0	
			Vitamin B2	2.5	
			Niacin	45.0	
			Folic acid	1.3	
			Iron	22.0	
Guatemala	Wheat flour	Reglamento Centroamericano R-UAC 67.01.15:2002	Vitamin B1	5.4	
			Vitamin B2	3.6	
			Niacin	45.0	
			Folic acid	1.8	
			Iron	45.0	
Guatemala	Pasta	Coguanor NGO 34 176 (06/86)	Vitamin B1	8.8–11.0	
			Vitamin B2	3.7–4.8	
			Niacin	59.5–74.9	
			Iron	26.8–36.8	
Guatemala	Corn flour	Mandate being written/to be consolidated with wheat flour	Vitamin B1	4.0	
			Vitamin B2	2.5	
			Niacin	45.0	
			Folic acid	1.3	
			Iron	22.0	
Honduras	Wheat flour	Reglamento Centroamericano R-UAC 67.01.15:2002	Vitamin B1	5.4	
			Vitamin B2	3.6	
			Niacin	45.0	
			Folic acid	1.8	
			Iron	45.0	
Honduras	Corn flour	Mandate being written/to be consolidated with wheat flour	Vitamin B1	4.0	
			Vitamin B2	2.5	
			Niacin	45.0	
			Folic acid	1.3	
			Iron	22.0	
Mexico	Wheat flour	Gentlemen's agreement between industry and government 1998	Vitamin B1	4.0–8.0	
			Vitamin B2	2.4–5.0	
			Niacin	28.0–45.0	
			Folic acid	0.4–0.8	
			Iron	24.0–40.0	
			Zinc	16.0–26.0	

**Table 1: Cereals**

Country	Product	Mandate	Nutrient	Mandated level	
				(IU/kg)	(mg/kg)
Mexico	Wheat flour	NOM-147-SSA1-1996	Folic acid Iron		2.0 35.0
Mexico	Corn flour	Gentlemen's agreement between industry and government 1998	Vitamin B1 Vitamin B2 Niacin Folic acid Iron Zinc		4.0–8.0 2.4–5.0 28.0–45.0 0.4–0.8 24.0–40.0 (20.0)
Nicaragua	Wheat flour	Reglamento Centroamericano R-UAC 67.01.15:2002	Vitamin B1 Vitamin B2 Niacin Folic acid Iron		5.4 3.6 45.0 1.8 45.0
Nicaragua	Corn flour	Mandate being written/to be consolidated with wheat flour	Vitamin B1 Vitamin B2 Niacin Folic acid Iron		4.0 2.5 45.0 1.3 22.0
Panama	Wheat flour	Reglamento Centroamericano R-UAC 67.01.15:2002	Vitamin B1 Vitamin B2 Niacin Folic acid Iron		5.4 3.6 45 1.8 45
Panama	Corn flour	Mandate being written/to be consolidated with wheat flour	Vitamin B1 Vitamin B2 Niacin Folic acid Iron		4.0 2.5 45.0 1.3 22.0
Paraguay	Wheat flour	Decreto 20830 (28/4/98)	Vitamin B1 Vitamin B2 Niacin Folic acid Iron		4.5 2.5 35.0 3.0 45.0
Peru	Wheat flour	DS No. 004-96-SA (8/96)	Iron		30.0
Trinidad /Tobago	Wheat flour	Caricom Standard 1997	Iron		16.4–36.4
Venezuela	Wheat flour (for bread only)	Decreto 1993	Vitamin B1 Vitamin B2 Niacin Iron		1.5 2.0 20.0 20.0
Venezuela	Precooked corn flour	Decreto No. 2.492 (20/08/92)	Vitamin A Vitamin B1 Vitamin B2 Niacin Iron	9500	
					3.1 2.5 51.0 50.0
UK	Flour	Flour and Bread Regulations 1984	Vitamin B1 Niacin Folic acid Iron Calcium		≥2.4 ≥16.0 ? ≥16.5 2350–3900
Malawi	Maize flour	MS34 : 2002 (draft)	Vitamin A Vitamin B1 Vitamin B2 Niacin Pyridoxine Folic acid Vitamin B12 Iron Zinc	2830	
					0.894 1.05 12.2 1.3 2.063 0.016 9.4 7.5

**Table 1: Cereals**

Country	Product	Mandate	Nutrient	Mandated level	
				(IU/kg)	(mg/kg)
Nigeria	Wheat flour	Nigerian Industrial Standard NIS 121:2000	Vitamin A	30000	
			Vitamin B1		6.2
			Niacin		49.5
			Riboflavin		3.7
			Iron		40.7
Nigeria	Milled maize products	Nigerian Industrial Standard NIS 295:2000	Vitamin A	30000	9.0
South Africa	Maize meal (super)	Act 54, 1972, April 2003	Vitamin A	6250	
			Vitamin B1		3.09
			Vitamin B2		1.79
			Niacin		29.70
			Pyridoxine		3.89
			Folic acid		1.89
			Iron		37.35
			Zinc		18.90
South Africa	Maize meal (special)	Act 54, 1972, April 2003	Vitamin A	6250	
			Vitamin B1		3.86
			Vitamin B2		1.88
			Niacin		31.86
			Pyridoxine		4.25
			Folic acid		1.90
			Iron		40.14
			Zinc		22.55
South Africa	Maize meal (sifted)	Act 54, 1972, April 2003	Vitamin A	6250	
			Vitamin B1		4.76
			Vitamin B2		1.97
			Niacin		34.65
			Pyridoxine		4.79
			Folic acid		1.92
			Iron		44.28
			Zinc		26.60
South Africa	Maize meal (unsifted)	Act 54, 1972, April 2003  Special permission may be granted for a lower iron content (34.65 mg/kg)	Vitamin A	6250	
			Vitamin B1		5.57
			Vitamin B2		2.06
			Niacin		38.25
			Pyridoxine		5.42
			Folic acid		1.94
			Iron		50.40
			Zinc		30.20
South Africa	Wheat flour (white)	Act 54, 1972 April 2003	Vitamin A	5360	
			Vitamin B1		3.91
			Vitamin B2		2.05
			Niacin		38.42
			Pyridoxine		2.82
			Folic acid		1.36
			Iron		43.65
			Zinc		20.70
South Africa	Wheat flour (brown)	Act 54, 1972 April 2003	Vitamin A	4712	
			Vitamin B1		3.79
			Vitamin B2		1.95
			Niacin		54.76
			Pyridoxine		3.07
			Folic acid		1.24
			Iron		47.97
			Zinc		26.73

**Table 1: Cereals**

Country	Product	Mandate	Nutrient	Mandated level	
				(IU/kg)	(mg/kg)
South Africa	Wheat bread (white)	Act 54, 1972 April 2003	Vitamin A	2664	
			Vitamin B1		2.49
			Vitamin B2		1.41
			Niacin		27.91
			Pyridoxine		2.13
			Folic acid		0.74
			Iron		32.26
Zinc	15.30				
South Africa	Wheat bread (brown)	Act 54, 1972 April 2003	Vitamin A	2331	
			Vitamin B1		2.54
			Vitamin B2		1.39
			Niacin		41.59
			Pyridoxine		2.67
			Folic acid		0.74
			Iron		34.69
Zinc	20.07				
Zambia	Enriched flour	Government of Zambia Statutory Instrument No. 90 of 2001	Vitamin B1	5661	Not specified
			Vitamin B2		3.3–4.5
			Nicotinic acid		35.5–44.4
			Iron		28.9–36.7
Zambia	Enriched maize meal	Government of Zambia Statutory Instrument No. 90 of 2001	Vitamin A	5661	
			Vitamin B1		2.4
			Vitamin B2		2.0
			Niacin		22.4
			Pyridoxine		0.4
			Folic acid		2.4
			Iron		12.0
Zinc	12.0				
Australia	Flour, wholemeal and mixtures for making bread	Australian Food Standard Code Part B (B1)	Vitamin B1		≥6.4
Bahrain	Enriched and enriched treated wheat flour	Bahraini Standard 194/1994	Vitamin B1	≥551.15	≥6.38
			Vitamin B2		≥3.96
			Niacin		≥52.91
			Vitamin D		
			Iron		≥36.30
Indonesia	Enriched wheat flour	MOH decree no. 632/MENKES/ SK/VI/1998 National Standard No.153/MPP/ Kep/5/2001 jo 323/MPP/Kep/11/ 2001	Vitamin B1	10000–21 700	2.5
			Vitamin B2		4.0
			Folic acid		2.0
			Iron		60.0
			Zinc		30.0
Philippines	Enriched wheat flour	Republic Act No. 8976 (Philippine Food Fortification Act of 2000)	Vitamin A	10000–21 700	70.0-105.0
			Iron (elemental) (sulphate or fumarate)		50.0-75.0
Philippines	Enriched rice	Republic Act No. 8976 (Philippine Food Fortification Act of 2000)	Iron (ferrous sulfate)		60.0–90.0
Saudi Arabia	Enriched wheat and enriched treated flour	Saudi Arabian Standards SSA 219/1994 (Folic acid included since January 2000)	Vitamin B1	≥551.15	≥6.38
			Vitamin B2		≥3.96
			Niacin		≥52.91
			Folic acid		1.5
			Vitamin D		
			Iron		≥36.30
Calcium	≤2115.0				

**Table 2: Dairy products**

Country	Product	Mandate	Nutrient	Mandated level	
				(IU/kg or /L)	(mg/kg)
USA	Fortified nonfat dry milk (reconstituted)	21 CFR 131.127	Vitamin A Vitamin D	2115 425	
USA	Evaporated milk	21 CFR 131.130	Vitamin A Vitamin D	(4225) 845	
Canada	Whole milk	Food and Drugs Act and Regulations B.08.004	Vitamin D	300–400 per reasonable daily intake	
Canada	Skimmed milk Partly skimmed milk	Food and Drugs Act and Regulations B.08.004	Vitamin A Vitamin D	1200–2500 300–400	
Canada	Evaporated milk	Food and Drugs Act and Regulations B.08.010	Vitamin D Vitamin C	300–400	60–75
Brazil	Dried skim milk for complementary food programs	Portaria MS No. 975 (17/09/90)	Vitamin A Vitamin D	15000–25000 2000–2400	
Costa Rica	Milk	Decreto:# 29629 - S, julio 2001	Vitamin A Folic acid Iron	2400	1.6 5.6
Guatemala	Skim milk	Norma Coguanor NGO-34041 (02/91)	Vitamin A Vitamin D	2000–3000 400–600	
Honduras	Milk	Standard of the Industry	Vitamin A Vitamin D	2000 400	
Mexico	Milk (pasteurized, ultrapasteurized, sterilized, powder)	NOM-184-SSA1-2002	Vitamin A Vitamin D	1033–2333 200–300	
Venezuela	Milk powder	Covenin 1981	Vitamin A Vitamin D	4000 400	
Malaysia	Milk (evaporated/condensed (un)sweetened, filled)	Food Act 1983, Food Regulations 1985/Amendment 1990	Vitamin A	≥6700	
Philippines	Filled milk, sweetened or unsweetened	Administrative order 132 s. 1970	Vitamin A Vitamin D	≥4866 (≥973)	
Thailand	Sweet condensed milk	MOPH notification 149 (1993)	Vitamin A	11000	

**Table 3: Fats and oils**

Country	Product	Mandate	Nutrient	Mandated level (IU/kg)
USA	Margarine	21 CFR 166.110	Vitamin A	33000
Canada	Margarine	Food and Drugs Act and Regulations B.09.016	Vitamin A Vitamin D Vitamin E	≥33000 ≥5300 (0.6/g linoleic acid)
Chile	Margarine	Reglamento Sanitario de los Alimentos, Art. 263 (13/05/97)	Vitamin A Vitamin D	30000 (3000)
Colombia	Margarine	Resolución 11488/84 Artículo 52 (22/08/84)	Vitamin A Vitamin D	30000 3000
Ecuador	Margarine	Norma: INEN 282	Vitamin A Vitamin D	20000–30000 2000–4000
El Salvador	Margarine	Norma	Vitamin A	15 000
Guatemala	Margarine	Norma Coguanor NGO 34176 (06/86)	Vitamin A	15000–50000
Honduras	Margarine	Standard of the Industry	Vitamin A Vitamin D	35000 1500
Mexico	Table margarine	NMX-F-016-S-1979	Vitamin A Vitamin D	20000 (2000)
Peru	Margarine	Norma ITINTEC	Vitamin A Vitamin D	30000 3000
Belgium	Margarine		Vitamin A Vitamin D	22500–27000 2500–3000
Denmark	Margarine		Vitamin A	25200
Netherlands	Margarine		Vitamin A Vitamin D	≥20000 ≥3000
Portugal	Margarine	NP 897–1983	Vitamin A	1800
Sweden	Margarine		Vitamin A Vitamin D	≥30000 ≥3000
Turkey	Table margarine		Vitamin A Vitamin D	20000 1000
UK	Margarine	Margarine Regulations 1967	Vitamin A Vitamin D	24000–30000 2800–3520
Nigeria	Margarine	Nigerian Industrial Standard NIS 243:2000	Vitamin A Vitamin D	26 000–33 000 28 000–33 000
Nigeria	Edible oils (sunflower, coconut, soya bean, rape seed, palm kernel, cotton seed, palm, maize, groundnut, sesame seed)	Nigerian Industrial Standard NIS 90:2000, NIS 387:2000, NIS 392:2000, NIS 394:2000, NIS 289:2000, NIS 389:2000, NIS 230:2000, NIS 391:2000, NIS 388:2000, NIS 393:2000	Vitamin A	20000
Australia	Table margarine	Australian Food Standard Code Part G (G2)	Vitamin A Vitamin D	≥28300 ≥2200
India	Vanaspati	Prevention of Food Adulteration Act 1954 (37 of 1954)	Vitamin A	≥25000
India	Margarine	and PFA Rules 1955	Vitamin A	≥30000
Indonesia	Margarine	DG of FDA Decree No. 02240/B/SK/VII/91	Vitamin A Vitamin D	25000–35000 2500–3500
Malaysia	Table margarine	Food Act 1983, Food Regulations 1985/Amendment 1990	Vitamin A Vitamin D	25000–35000 2500–3500
New Zealand	Table margarine		Vitamin A Vitamin D	>28300 ≥2200
Pakistan	Vegetable ghee Cooking oil	Gazette - 221 - 1981 UDC ICS: 67.200 (1st revision) Gazette - 2858 - 1990 UDC 641: 664.34	Vitamin A	33000

**Table 3: Fats and oils**

Country	Product	Mandate	Nutrient	Mandated level (IU/kg)
Philippines	Margarine	Administrative order No. 243 s. 1975	Vitamin B1 Vitamin A Vitamin D	(≥88.0mg/kg) ≥33000 (≥3300)
Philippines	Enriched cooking oil	Republic Act No. 8976 (Philippine Food Fortification Act of 2000)	Vitamin A	40000–76000
Singapore	Margarine Table margarine	Food Regulation 91	Vitamin A Vitamin D	≥28300 ≥2200

**Table 4: Sugar**

Country	Product	Mandate	Nutrient	Mandated level (IU/kg)
Costa Rica	Sugar	#27021-S 1998, #27957-S 1999 #28482-S 2000, #30140-S 2002	Vitamin A	50000
El Salvador	Sugar	Decreto No. 843 (14/04/94)	Vitamin A	50000
Guatemala	Sugar	Decreto No. 56-74 (28/06/74)	Vitamin A	50000
Honduras	Sugar	Decreto No. 385 (07/10/76)	Vitamin A	50000
Nicaragua	Sugar	Legislation passed in 1999	Vitamin A	50000
Panama	Sugar	Decreto No. 385 (07/10/76) (Not enforced)	Vitamin A	50000
Malawi	Sugar	MBS 202:1989. Amendment 1, August 2001 (draft)	Vitamin A	50000
Nigeria	Sugar, refined white, refined brown	Nigerian Industrial Standard NIS 90:2000; NIS 438:2000	Vitamin A	25000
Zambia	Sugar (refined, white, yellow, brown, golden)	Government of Zambia Statutory Instrument No. 90 of 2001	Vitamin A	≥33300
Philippines	Sugar	Republic Act No. 8976 (Philippine Food Fortification Act of 2000)	Vitamin A	16600–99000