RECOMMENDED METHODS OF ANALYSIS AND SAMPLING

CODEX STAN 234-1999[1]

PART A

METHODS OF ANALYSIS BY ALPHABETICAL ORDER OF COMMODITY CATEGORIES AND NAMES

PART B

METHODS OF SAMPLING BY ALPHABETICAL ORDER OF COMMODITY CATEGORIES AND NAMES

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[1] The most updated version of the method should be used, in application of ISO/IEC 17025: 1999. The present list of methods reflects the amendments adopted by the 30th Session of the Codex Alimentarius Commission in 2007.

PART A

METHODS OF ANALYSIS BY ALPHABETICAL ORDER OF COMMODITY CATEGORIES AND NAMES

Commodity Standard	*Provision*	*Method*	*Principle*	*Type*
All Foods				
All foods	Acesulfame K, Aspartame	EN 12856 : 1999-04	High performance liquid chromatography	II
All foods	Cyclamate	EN 12857 : 1999-04	High performance liquid chromatography	II
All foods	Cyclamate	NMKL 123 (1998)	Spectrophotometry	III
All foods	Saccharin	EN 12856 : 1999-04	High performance liquid chromatography	III
All Foods (see also meat products)	Nitrates and/or Nitrites	EN 12014-1:1997-04	Part 1- General considerations	N/A
Individual Foods[2]	Sulphites	EN 1988-1 : 1998-02 AOAC 990.28	Part 1: Optimized Monier-Williams method	III
Individual Foods[3]	Sulphites	EN 1988-2:1998 -02 NMKL 135 (1990)	Part 2: Enzymatic method	III
Cereals, Pulses and Legumes and Derived Products				
Certain pulses	Moisture	ISO 665:1977 (confirmed 1995)	Gravimetry	I
Degermed maize (corn) meal and maize (corn) grits	Ash	AOAC 923.03 ISO 2171:1993 ICC Method No 104/1 (1990)	Gravimetry	I
Degermed maize (corn) meal and maize (corn) grits	Fat, crude	AOAC 945.38F; 920.39C	Gravimetry (ether extraction)	I
Degermed maize (corn) meal and maize (corn) grits	Moisture	ISO 712:1998 ICC Method No 110/1 (1986)	Gravimetry	I

[2] Hominy, fruit juice, sea food
[3] Wine, dried apples, lemon juice, potato flakes, sultanas, beer

Commodity Standard	*Provision*	*Method*	*Principle*	*Type*
Degermed maize (corn) meal and maize (corn) grits	Particle size (granularity)	AOAC 965.22	Sieving	I
Degermed maize (corn) meal and maize (corn) grits	Protein	ICC Method No 105/1 (1986)	Titrimetry, Kjeldahl digestion	I
Durum wheat semolina and durum wheat flour	Ash (semolina)	AOAC 923.03 ISO 2171:1993	Gravimetry	I
Durum wheat semolina and durum wheat flour	Moisture	ISO 712:1998 ICC Method 110/1 (1986)	Gravimetry	I
Durum wheat semolina and durum wheat flour	Protein (N x 5.7)	ICC Method No 105/1	Titrimetry, Kjeldahl digestion	I
Instant Noodles	Extraction of oil from instant noodles	described in the standard	Gravimetry	I
Instant Noodles	Acid Value	described in the standard	Titrimetry	I
Instant Noodles	Moisture	described in the standard	Gravimetry	
Maize (corn)	Moisture	ISO 6540:1980 (confirmed 1994)	Gravimetry	I
Peanuts (raw)	Aflatoxins, total	AOAC 991.31	Immunoaffinity column (Aflatest)	II
Peanuts (raw)	Aflatoxins, total	AOAC 993.17	Thin layer chromatography	III
Peanuts (intended for further processing)	Aflatoxins, total	AOAC 975.36	Romer minicolmn	III
Peanuts (Cereals, shell-fruits and derived products (including peanuts))	Sum of aflatoxins B_1, B_2, G_1 and G_2	EN 12955 : 1999-07 ISO 16050:2003	HPLC with post column derivatization and immunoaffinity column clean up	III
Peanuts (intended for further processing)	Aflatoxins, total	AOAC 979.18	Holaday-Velasco minicolumn	III
Pearl millet flour	Ash	AOAC 923.03	Gravimetry	I
Pearl millet flour	Colour	*Modern Cereal Chemistry*, 6th Ed., D.W. Kent-Jones and A.J. Amos (Ed.), pp. 605-612, Food Trade Press Ltd, London, 1969.	Colorimetry using specific colour grader	IV

Commodity Standard	*Provision*	*Method*	*Principle*	*Type*
Pearl millet flour	Fat, crude	AOAC 945.38F; 920.39C	Gravimetry (ether extraction)	I
Pearl millet flour	Fibre, crude	ISO 5498:1981 (B.5 Separation)	Gravimetry	I
Pearl millet flour	Moisture	ISO 712:1998 ICC Method No 110/1 (1986)	Gravimetry	I
Pearl millet flour	Protein	AOAC 920.87	Titrimetry, Kjeldahl digestion	I
Sorghum flour	Ash	AOAC 923.03 ISO 2171:1993 ICC Method No 104/1 (1990)	Gravimetry	I
Sorghum flour	Colour	*Modern Cereal Chemistry*, 6th Ed., D.W. Kent-Jones and A.J. Amos (Ed.), pp. 605-612, Food Trade Press Ltd, London, 1969.	Colorimetry using specific colour grader	IV
Sorghum flour	Fat, crude	AOAC 945.38F; 920.39C	Gravimetry (ether extraction)	I
Sorghum flour	Fibre, crude	ICC Method No 113 (1972) ISO 6541:1981 (confirmed 1996)	Gravimetry	I
Sorghum flour	Moisture	ISO 712:1998 ICC Method No 110/1 (1986)	Gravimetry	I
Sorghum flour	Particle size (granularity)	AOAC 965.22	Sieving	I
Sorghum flour	Protein	ICC Method No 105/1 (1986)	Titrimetry, Kjeldahl digestion	I
Sorghum flour	Tannins	ISO 9648:1988 (confirmed 1994)	Spectrophotometry	I
Sorghum grains	Ash	AOAC 923.03 ISO 2171:1993 ICC Method No 104/1 (1990)	Gravimetry	I
Sorghum grains	Fat, crude	AOAC 945.38F, 920.39C	Gravimetry (ether extraction)	I
Sorghum grains	Moisture	ISO 6540:1980 (confirmed 1994)	Gravimetry	I
Sorghum grains	Protein	ICC Method No 105/1 (1986)	Titrimetry, Kjeldahl digestion	I
Sorghum grains	Tannins	ISO 9648:1988 (confirmed 1994)	Spectrophotometry	I

Commodity Standard	*Provision*	*Method*	*Principle*	*Type*
Soy protein products	Ash	AOAC 923.03 ISO 2171:1993 (Method B)	Gravimetry	I
Soy protein products	Fat	CAC/RM 55-1976 - Method 1	Gravimetry (extraction)	I
Soy protein products	Fibre, crude	ISO 5498:1981	Gravimetry	I
Soy protein products	Moisture	AOAC 925.09	Gravimetry (vacuum oven)	I
Soy protein products	Protein	AOAC 955.04D (using factor 6.25)	Titrimetry , Kjeldahl digestion	II
Vegetable protein products	Ash	AOAC 923.03 ISO 2171:1993 (Method B)	Gravimetry, Direct	I
Vegetable protein products	Fat	CAC/RM 55-1976 - Method 1	Gravimetry (extraction)	I
Vegetable protein products	Fibre, crude	AACC (1982) 32-17	Ceramic fiber filteration	I
Vegetable protein products	Moisture	AOAC 925.09	Gravimetry (vacuum oven)	I
Vegetable protein products	Protein	AOAC 955.04D (using factor 6.25)	Titrimetry, Kjeldahl digestion	II
Wheat flour	Ash	AOAC 923.03 ISO 2171:1993 ICC Method No 104/1 (1990)	Gravimetry	I
Wheat flour	Fat acidity	AOAC 939.05	Titrimetry	I
Wheat flour	Moisture	ISO 712:1998 ICC Method No 110/1 (1986)	Gravimetry	I
Wheat flour	Particle size (granularity)	AOAC 965.22	Sieving	I
Wheat flour	Protein	ICC Method No 105/1 (1986)	Titrimetry, Kjeldahl digestion	I
Wheat protein products including wheat gluten	Protein	Vital wheat gluten and devitalized wheat gluten AOAC 979.09 (wheat protein in grain Nx5.7)	Kjeldahl	I
		Solubilized wheat protein AOAC 920.87 (wheat protein in flour Nx5.7)	Kjeldahl	I

Commodity Standard	*Provision*	*Method*	*Principle*	*Type*
Wheat protein products including Wheat gluten	Fibre, crude	AOAC 962.09	Ceramic fiber filteration	I
Wheat protein products including Wheat gluten	Ash	AOAC 923.03 ISO 2171:1980, method B	Gravimetry	I
Whole and decorticated pearl millet grains	Ash	AOAC 923.03	Gravimetry	I
Whole and decorticated pearl millet grains	Fat, crude	AOAC 945.38F; 920.39C	Gravimetry (ether extraction)	I
Whole and decorticated pearl millet grains	Fibre, crude	ISO 5498:1981 (B.5 Separation)	Gravimetry	I
Whole and decorticated pearl millet grains	Moisture	ISO 712:1998 ICC Method No 110/1 (1986)	Gravimetry	I
Whole and decorticated pearl millet grains	Protein	AOAC 920.87	Titrimetry, Kjeldahl digestion	I
Whole maize (corn) meal	Ash	AOAC 923.03 ISO 2171:1993 ICC Method No 104/1 (1990)	Gravimetry	I
Whole maize (corn) meal	Fat, crude	AOAC 945.38F; 920.39C	Gravimetry (ether extraction)	I
Whole maize (corn) meal	Moisture	ISO 712:1998 ICC Method No 110/1 (1986)	Gravimetry	I
Whole maize (corn) meal	Particle size (granularity)	AOAC 965.22	Sieving	I
Whole maize (corn) meal	Protein	ICC Method No 105/1 (1986)	Titrimetry, Kjeldahl digestion	I
Cocoa Products and Chocolate				
Chocolate and chocolate products				
Chocolate and chocolate products	Cocoa butter	AOAC 963.15 IOCCC 14-1972	Gravimetry (Soxhlet extraction)	I

Commodity Standard	*Provision*	*Method*	*Principle*	*Type*
Chocolate and chocolate products	Fat-free cocoa solids	AOAC 931.05	Oven evaporation and factor	I
Chocolate and chocolate products	Fat-free milk solids	IOCCC 17-1973 or AOAC 939.02	Titrimetry, Kjeldahl digestion; after extraction of milk proteins	II
Chocolate and chocolate products	Fat, total	AOAC 963.15	Gravimetry (Soxhlet extraction)	I
Chocolate and chocolate products	Milkfat	IOCCC 5-1962 AOAC 945.34; 925.41B; 920.80	Titrimetry/Distillation	I
Chocolate and chocolate products	Moisture	IOCCC 26-1988 or AOAC 977.10 (Karl Fischer method); or AOAC 931.04 or IOCCC 1-1952	Gravimetry	I
Chocolate and chocolate products	Non-cocoa butter vegetable fat	AOCS Ce 10/02 and described in the Standard	Described in the Standard	I
Cocoa (Cacao) Mass or Cocoa/ Chocolate Liquor, and Cocoa Cake	Cocoa shell	AOAC 968.10 and 970.23	Spiral vessel count, Stone cell count	I
Cocoa (Cacao) Mass or Cocoa/ Chocolate Liquor, and Cocoa Cake	Fat	AOAC 963.15 or IOCCC 14 (1972)	Gravimetry (Soxhlet extraction)	I
Cocoa butter	Free fatty acids	ISO660:1996 amended 2003; or AOCS Cd 3d-63 (03)	Titrimetry	I
Cocoa butter	Unsaponifiable matter	ISO 3596:2000 or ISO 18609: 2000; or AOCS Ca 6b-53 (01)	Titrimetry after extraction with diethyl ether	I
Cocoa powders (cocoa) and dry cocoa-sugar mixtures	Moisture	IOCCC 26-1988 or AOAC 977.10 (Karl Fischer method)	Gravimetry	I
Fats and Oils and Related Products				
Fats and Oils (all)	Arsenic	AOAC 952.13 (Codex general method)	Colorimetry (diethyldithiocarbamate)	II
Fats and Oils (all)	Arsenic	AOAC 942.17 (Codex general method)	Colorimetry (molybdenum blue)	III
Fats and Oils (all)	Arsenic	AOAC 985.16 (Codex general method)	Atomic absorption spectrophotometry	III

Commodity Standard	*Provision*	*Method*	*Principle*	*Type*
Fats and oils	Butylhydroxyanisole, butylhydroxytoluene, tert-butylhydroquinone, & propyl gallate	AOAC 983.15; or AOCS Ce-6-86	Liquid chromatography	II
Fats and Oils (all)	Insoluble impurities	ISO 663:2007	Gravimetry	I
Fats and Oils (all)	Lead	AOAC 994.02 ISO 12193:2004 (Codex general method) or AOCS Ca 18c-91 (03)	Atomic absorption spectrophotometry (direct graphite furnace)	II
Fats and Oils (all)	Matter volatile at 105°C	ISO 662:1998	Gravimetry (open-drying)	I
Fats and Oils (all)	Soap content	BS 684 Section 2.5; or AOCS Cc 17-95 (97)	Gravimetry	I
Fats and oils not covered by individual standards	Acid Value	ISO 660:1996; or AOCS Cd 3d-63 (03)	Titrimetry	I
Fats and oils not covered by individual standards	Copper and Iron	AOAC 990.05 ISO 8294:1994 or AOCS Ca 18b-91 (03) (Codex general method)	Atomic absorption Spectrophotometry (direct graphite furnace)	II
Fats and oils not covered by individual standards	Peroxide value	AOCS Cd 8b-90 ISO 3961:1996	Titrimetry using *iso*-octane	I
Fat spreads and blended spreads	Fat content	ISO 17189 | IDF 194: 2003	Gravimetry	I
Named Animal Fats	Acidity	ISO 660:1996 amended 2003; or AOCS Cd 3d-63 (03)	Titrimetry	I
Named Animal Fats	GLC ranges of fatty acid composition	ISO 5508: 1990 and ISO 5509: 2000 or AOCS Ce 2-66 (97) and Ce 1e-91 (01) or Ce 1f-96 (02)	Gas chromatography of methyl esters	II

Commodity Standard	*Provision*	*Method*	*Principle*	*Type*
Named Animal Fats	Copper and Iron	AOAC 990.05 ISO 8294:1994; or AOCS Ca 18b-91 (03) (Codex general method)	Atomic absorption Spectrophotometry (direct graphite furnace)	II
Named Animal Fats	Iodine value (IV)	ISO 3961: 1996; or AOAC 993.20; or AOCS Cd 1d-1992 (97)	Wijs-Titrimetry	I
Named Animal Fats	Peroxide value	AOCS Cd 8b-90 (97) ISO 3961:1996	Titrimetry using *iso*-octane	I
Named Animal Fats	Relative density	ISO/AOCS method for apparent density to be inserted	Pycnometry	II
Named Animal Fats	Refractive index	ISO 6320:2000; or AOCS Cc 7-25 (02)	Refractometry	II
Named Animal Fats	Saponification value	ISO 3657:2002; or AOCS Cd 3-25 (03)	Titrimetry	I
Named Animal Fats	Unsaponifiable matter	ISO 3596:2000 or ISO 18609: 2000; or AOCS Ca 6b-53 (01)	Titrimetry after extraction with diethyl ether	I
Named Animal Fats	Titre	ISO 935:1988; or AOCS Cc 12-59 (97)	Thermometry	I
Named Vegetable Oils	Acidity	ISO 660: 1996, amended 2003; or AOCS Cd 3d-63 (03)	Titrimetry	I
Named Vegetable Oils	Apparent density	ISO 6883: 2000, with the appropriate conversion factor; or AOCS Cc 10c-95 (02)	Pycnometry	I
Named Vegetable Oils	Baudouin test (modified Villavecchia or sesameseed oil test)	AOCS Cb 2-40 (97)	Colour reaction	I
Named Vegetable Oils	Carotenoids, total	BS 684 Section 2.20	Spectrophotometry	II
Named Vegetable Oils				
Named Vegetable Oils	Copper and iron	ISO 8294: 1994; or AOAC 990.05; or AOCS Ca 18b-91 (03)	AAS	II
Named Vegetable Oils	Crismer value	AOCS Cb 4-35 (97) and AOCS Ca 5a-40 (97)	Turbidity	I

Commodity Standard	*Provision*	*Method*	*Principle*	*Type*
Named Vegetable Oils	GLC ranges of fatty acid composition	ISO 5508: 1990 and ISO 5509: 2000; or AOCS Ce 2-66 (97) and Ce 1e-91 (01) or Ce 1f-96 (02)	Gas chromatography of methyl esters	II
Named Vegetable Oils	Halphen test	AOCS Cb 1-25	Colorimetry	I
Named Vegetable Oils	Insoluble impurities	ISO 663: 2000	Gravimetry	I
Named Vegetable Oils	Iodine value (IV)	Wijs - ISO 3961: 1996; or AOAC 993.20; or AOCS Cd 1d-1992 (97); or NMKL 39 (2003)	Wijs-Titrimetry [4]	I
Named Vegetable Oils	Lead	AOAC 994.02 ; or ISO 12193: 2004; or AOCS Ca 18c-91 (03)	Atomic Absorption	II
Named Vegetable Oils	Moisture & volatile matter at 105°C	ISO 662: 1998	Gravimetry	I
Named Vegetable Oils	Peroxide value (PV)	AOCS Cd 8b-90 (03); or ISO 3960: 2001	Titrimetry	I
Named Vegetable Oils	Refractive index	ISO 6320: 2000; or AOCS Cc 7-25 (02)	Refractometry	II
Named Vegetable Oils	Reichert value and Polenske value	AOCS Cd 5-40 (97)	Titrimetry	I
Named Vegetable Oils	Relative density	IUPAC 2.101 with the appropriate conversion factor	Pycnometry	II
Named Vegetable Oils	Saponification value (SV)	ISO 3657: 2002; or AOCS Cd 3-25 (03)	Titrimetry	I
Named Vegetable Oils	Slip point	ISO 6321:2002 for all oils; AOCS Cc 3b-92 (02) for all oils except palm oils; AOCS Cc 3-25 (97) for palm oils only	Open ended capillary tube	I
Named Vegetable Oils	Soap content	BS 684 Section 2.5; or AOCS Cc 17-95 (97)	Gravimetry	I

[4] It is possible to calculate the Iodine Value from fatty acid composition data obtained by gas chromatography e.g. using AOCS Cd 1b-87 (97)

Commodity Standard	*Provision*	*Method*	*Principle*	*Type*
Named Vegetable Oils	Sterol content	ISO 12228: 1999; or AOCS Ch 6-91 (97)	Gas chromatography	II
Named Vegetable Oils	Tocopherol content	ISO 9936: 1997; or AOCS Ce 8-89 (97)	HPLC	II
Named Vegetable Oils	Unsaponifiable matter	ISO 3596: 2000; or ISO 18609: 2000; or AOCS Ca 6b-53 (01)	Gravimetry	I
Olive Oils and Olive Pomace Oils	Absorbency in ultra-violet	COI/T.20/Doc. No. 19 or ISO 3656:2002 or AOCS Ch 5-91 (01).	Absorption in ultra violet	II
Olive Oils and Olive Pomace Oils	Acidity, free (acid value)	ISO 660:1996, amended 2003 or AOCS Cd 3d-63 (03)	Titrimetry	I
Olive Oils and Olive Pomace Oils	Alpha-tocopherol	ISO 9936:1997	HPLC	II
Olive Oils and Olive Pomace Oils				
Olive Oils and Olive Pomace Oils	Difference between the actual and theoretical ECN 42 triglyceride content	COI/T.20/Doc. no. 20 or AOCS Ce 5b-89 (97)	Analysis of triglycerides of HPLC and calculation	I
Olive Oils and Olive Pomace Oils	Erythrodiol + uvaol content	IUPAC 2.431.	Gas chromatography	II
Olive Oils and Olive Pomace Oils	Fatty acids in the 2-position of the triglycerides	ISO 6800:1997 or AOCS Ch 3-91 (02)	Gas chromatography	I
Olive Oils and Olive Pomace Oils	Halogenated solvents, traces	COI/T.20/Doc. no. 8.	Gas chromatography	II
Olive Oils and Olive Pomace Oils	Insoluble impurities in light petroleum	ISO 663:2000	Gravimetry	I
Olive Oils and Olive Pomace Oils	Iodine value	ISO 3961:1996 or AOAC 993.20 or AOCS Cd 1d-92 (97) or NMKL 39 (2003)	Wijs-Titrimetry	I
Olive Oils and Olive Pomace Oils	Iron and copper	ISO 8294:1994 or AOAC 990.05	AAS	II
Olive Oils and Olive Pomace Oils	Lead	AOAC 994.02 or ISO 12193:2004 or AOCS Ca 18c-91(97)	AAS	II
Olive Oils and Olive Pomace Oils	Moisture and volatile matter	ISO 662:1998	Gravimetry	I
Olive Oils and Olive Pomace Oils				
Olive Oils and Olive Pomace Oils	Organoleptic characteristics	COI/T.20/Doc. no. 15.	Panel test	I
Olive Oils and Olive Pomace Oils	Peroxide value	ISO 3960:2001 or AOCS Cd 8b-90 (03).	Titrimetry	I

Commodity Standard	*Provision*	*Method*	*Principle*	*Type*
Olive Oils and Olive Pomace Oils	Relative density	IUPAC 2.101, with the appropriate conversion factor	Pycnometry	I
Olive Oils and Olive Pomace Oils	Refractive index	ISO 6320:2000 or AOCS Cc 7-25 (02)	Refractometry	II
Olive Oils and Olive Pomace Oils	Saponification value	ISO 3657:2002 or AOCS Cd 3-25 (03)	Titrimetry	I
Olive Oils and Olive Pomace Oils	Sterol composition and total sterols	COI/T.20/Doc. no. 10 or ISO 12228:1999 or AOCS Ch 6-91 (97).	Gas chromatography	II
Olive Oils and Olive Pomace Oils	Stigmastadienes	COl/T.20/Doc. no. 11 or ISO 15788-1:1999 or AOCS Cd 26-96 (03).	Gas chromatography	II
Olive Oils and Olive Pomace Oils	Stigmastadienes	ISO 15788-2: 2003	HPLC	III
Olive Oils and Olive Pomace Oils	*Trans* fatty acids content	COI/T.20/Doc no. 17 or ISO 15304:2002 or AOCS Ce 1f-96 (02)	Gas chromatography of methyl esters	II
Olive Oils and Olive Pomace Oils	Unsaponifiable matter	ISO 3596:2000 or ISO 18609:2000 or AOCS Ca 6b-53 (01)	Gravimetry	I
Olive Oils and Olive Pomace Oils	Wax content	COI/T.20/Doc. no. 18 or AOCS Ch 8-02 (02)	Gas chromatography	II
Margarine	Fat	IUPAC 2.801	Gravimetry	I
Margarine	Milkfat	CAC/RM 15-1969	Titrimetry	I
Margarine	Sodium chloride	AOAC 971.27 (Codex general method)	Potentiometry	II
Margarine	Vitamin A	AOAC 960.45	Spectrophotometry	II
Margarine	Vitamin D	AOAC 936.14	Bioassay	II
Margarine	Vitamin E	IUPAC 2.411	TLC followed by spectrophotometry or GLC	II
Margarine	Water	CAC/RM 17-1969 (described in the Standard)	Gravimetry	I
Minarine	Fat	IUPAC 2.801	Gravimetry	I
Minarine	Milkfat	CAC/RM 15-1969 (described in the Standard)	Titrimetry	I
Minarine	Sodium chloride	AOAC 971.27 (Codex general method)	Potentiometry	II

Commodity Standard	*Provision*	*Method*	*Principle*	*Type*
Minarine	Vitamin A	AOAC 960.45	Spectrophotometry	II
Minarine	Vitamin D	AOAC 936.14	Bioassay	II
Minarine	Vitamin E	IUPAC 2.411	TLC followed by spectrophotometry or GLC	II
Minarine	Water	CAC/RM 17-1969	Gravimetry	I
Fish and Fishery Products				
Fish and fishery products	Histamine	AOAC 977.13	Fluorimetry	II
Fish and fishery products	Mercury	AOAC 977.15	Flameless atomic absorption spectrophotometry	III
Fish and fishery products: canned products	Drained weight	Described in the Standard	Weighing	I
Fish and fishery products: canned products	Net weight	Described in the Standard	Weighing	I
Boiled Dried Salted Anchovies	Sodium Chloride (chloride expressed as sodium chloride)	AOAC 937.09	Titrimetry	II
Canned shrimps or prawns	Size, determination of	Described in the Standard	Number per 100 g	I
Frozen fish and fishery products	Thawing and cooking procedures	Described in the Standards	Thawing and heating	I
Quick frozen blocks of fish fillet, minced fish flesh and mixtures of fillets and minced fish flesh	Proportion of fish fillet and minced fish	AOAC 988.09	Physical separation	I
Quick frozen blocks of fish fillet, minced fish flesh and mixtures of fillets and minced fish flesh	Net content of frozen fish blocks covered by glaze	Described in the Standard	Gravimetry	I
Quick frozen blocks of fish fillet, minced fish flesh and mixtures of fillets and minced fish flesh	Sodium chloride	AOAC 971.21 (Codex general method)	Potentiometry	II

Commodity Standard	*Provision*	*Method*	*Principle*	*Type*
Quick frozen fish fillets	Net weight of products covered by glaze	Described in the Standard	Water spraying and sieving	I
Quick Frozen Fish sticks (fish fingers) and fish portions - breaded or in batter	Fish content (declaration)	AOAC 996.15 and calculation (described in the standard)	Gravimetry	I
Quick frozen fish sticks (fish fingers) and fish portions - breaded or in batter	Net weight	Described in the Standard	Weighing	I
Quick Frozen Fish Sticks (fish fingers) and Fish Portions-Breaded and in Batter (except for certain fish species with soft flesh)	Proportion of fish fillet and minced fish	WEFTA Method (described in the Stnadard)	Gravimetry	I
Quick frozen fish sticks (fish fingers) and fish portions - breaded or in batter	Sodium chloride	AOAC 971.27 (Codex general method)	Potentiometry	II
Salted Atlantic Herring and Salted Sprat	Water content	AOAC 950.46B	air drying	I
Salted Fish of the *Gadidae* Family	Salt	WEFTA Method	Titrimetry (Mohr) Salt determined as chloride expressed as sodium chloride	II
Salted Fish and Dried Salted Fish of the *Gadidae* Family of Fishes	Salt Content Water content	Sampling and method described in the Standard	Gravimetry	I
Foods for Special Dietary Uses				
Special foods	Ash	AOAC 942.05	Gravimetry	I
Special foods	Calcium	AOAC 984.27	ICP emission spectrometry	III
Special foods	Calories by calculation	Method described in CAC/VOL IX-Ed.1, Part III	Calculation method	III
Special foods	Carbohydrates	Method described in CAC/VOL IX-Ed.1, Part III	Calculation	III
Special foods	Chloride	AOAC 971.27 (Codex general method)	Potentiometry	II
Special foods	Dietary fibre, total	AOAC 985.29	Gravimetry (enzymatic digestion)	I

Commodity Standard	*Provision*	*Method*	*Principle*	*Type*
Special foods	Fat	CAC/RM 55-1976	Gravimetry (extraction)	I
Special foods	Fat in foods not containing starch, meat or vegetable products	CAC/RM 1-1973, B-2	Gravimetry	I
Special foods	Fill of containers	CAC/RM 46-1972	Weighing	I
Special foods	Folic acid	AOAC 944.12	Microbioassay	II
Special foods	Linoleate (in the form of glycerides)	AOAC 922.06; 969.33; 963.22	Acid hydrolysis, preparation of methyl esters and gas chromatography	II
Special foods	Linoleate (in the form of glycerides)	AOAC 922.06; 979.19	Acid hydrolysis and spectrophotometry	III
Special foods	Loss on drying	AOAC 934.01 AOAC 925.23	Gravimetry	I
Special foods	Loss on drying (milk based)	AOAC 925.23 IDF Standard 21B:1987 ISO 6731:1989	Gravimetry	I
Special foods	Nicotinamide for foods not based on milk	AOAC 961.14	Colorimetry	II
Special foods	Nicotinamide for milk-based foods	AOAC 944.13	Microbioassay	II
Special foods	Pantothenic acid/enriched foods	AOAC 945.74	Microbioassay	II
Special foods	Pantothenic acid/non-enriched foods	*The Analyst* 89 (1964):1, 3-6, ibid. 232 US Dept Agr., *Agr. Handbook* 97 (1965)	Microbioassay	IV
Special foods	Phosphorous	AOAC 986.24	Colorimetry (molybdovanadate)	II
Special foods	Protein efficiency ratio (PER)	AOAC 960.48	Rat bioassay	I
Special foods	Protein, crude	Method described in CAC/VOL IX-Ed. 1, Part III	Titrimetry, Kjeldahl digestion	I

Commodity Standard	*Provision*	*Method*	*Principle*	*Type*
Special foods	Riboflavin	AOAC 970.65	Fluorometry	II
Special foods	Sodium and potassium	ISO 8070:1987 (confirmed 1992) IDF Standard 119A:1987	Flame emission spectrophotometry	II
Special foods	Sodium and potassium	AOAC 984.27	ICP emission spectrometry	III
Special foods	Thiamine	AOAC 942.23	Fluorometry	II
Special foods	Vitamin A	AOAC 974.29	Colorimetry	IV
Special foods	Vitamin A in foods in which carotenes have been added as a source of vitamin A	AOAC 941.15	Spectrophotometry	III
Special foods	Vitamin B_{12}	AOAC 952.20	Microbioassay	II
Special foods	Vitamin B_6	AOAC 961.15	Microbioassay	II
Special foods	Vitamin C	AOAC 967.22	Microfluorometry	II
Special foods	Vitamin C	AOAC 967.21	Colorimetry (dichloroindophenol)	III
Special foods	Vitamin D	AOAC 936.14	Rat bioassay	IV
Special foods	Vitamin E	AOAC 971.30	Colorimetry	IV
Foods with low-sodium content (including salt substitutes)	Iodine	AOAC 925.56	Titrimetry	II
Foods with low-sodium content (including salt substitutes)	Silica (colloidal, calcium silicate)	AOAC 950.85N	Gravimetry	IV
Follow-up formula	Dietary fibre, total	AOAC 991.43	Gravimetry (enzymatic digestion)	I
Follow-up formula	Iodine (milk based formula)	AOAC 992.24	Ion-selective potentiometry	II
Follow-up formula	Pantothenic acid	AOAC 992.07	Microbioassay	II
Follow-up formula	Pantothenic acid	*The Analyst* 89 (1964)(1) 3-6, 232 US Dept Agr., *Agr. Handbook* 97 (1965)	Microbioassay	IV
Follow-up formula	Vitamin A	AOAC 974.29	Colorimetry	IV
Follow-up formula	Vitamin A (retinol isomers)	AOAC 992.04	Liquid chromatography	II

Commodity Standard	*Provision*	*Method*	*Principle*	*Type*
Follow-up formula	Vitamin A (retinol)	AOAC 992.06	Liquid chromatography	II
Follow-up formula	Vitamin K_1	AOAC 992.27	Liquid chromatography	II
Fruit Juices and Nectars				
Fruit Juices and Nectars	Ascorbic acid-L (additives)	IFU Method No 17a (1995)	HPLC	II
Fruit Juices and Nectars	Ascorbic acid-L (additives)	ISO 6557-1: 1986	Fluorescence spectrometry	IV
Fruit Juices and Nectars	Ascorbic acid-L (additives)	AOAC 967.21 IFU Method No 17 ISO 6557-2: 1984	Indophenol method	III
Fruit Juices and Nectars	Carbon dioxide (additives and processing aids)	IFU Method No 42 (1976)	Titrimetry (back-titration after precipitation)	IV
Fruit Juices and Nectars	Cellobiose	IFU Recommendation No.4 October 2000	Capillary gas chromatography	IV
Fruit Juices and Nectars	Citric acid [5](additives)	AOAC 986.13	HPLC	II
Fruit Juices and Nectars	Citric acid [5](additives)	EN 1137: 1994 IFU Method No 22 (1985)	Enzymatic determination	III
Fruit Juices and Nectars	Glucose and fructose (permitted ingredients)	EN 12630 IFU Method No 67 (1996) NMKL 148 (1993)	HPLC	III
Fruit Juices and Nectars	Glucose-D and fructose-D (permitted ingredients)	EN 1140 IFU Method No 55 (1985)	Enzymatic determination	II
Fruit Juices and Nectars	HFCS & HIS in apple juice (permitted ingredients)	Determination of HFCS & HIS by Capillary GC method JAOAC 84, 486 (2001)	CAP GC Method	IV
Fruit Juices and Nectars	Malic acid (additives)	AOAC 993.05	Enzymatic determination and HPLC	III
Fruit Juices and Nectars	Malic acid-D	EN 12138 IFU Method No 64 (1995)	Enzymatic determination	II
Fruit Juices and Nectars	Malic acid-D in apple juice	AOAC 995.06	HPLC	II

[5] All juices except citrus based juices

Commodity Standard	*Provision*	*Method*	*Principle*	*Type*
Fruit Juices and Nectars	Malic acid-L	EN 1138 (1994) IFU Method No 21 (1985)	Enzymatic determination	II
Fruit Juices and Nectars	Pectin (additives)	IFU Method No 26 (1964/1996)	Precipitation/photometry	I
Fruit Juices and Nectars	Benzoic acid and its salts; sorbic acid and its salts	IFU Method No 63 (1995) NMKL 124 (1997)	HPLC	II
Fruit Juices and Nectars	Benzoic acid and its salts	ISO 5518:1978 ISO 6560: 1983	Spectrometry	III
Fruit Juices and Nectars	Preservatives in fruit juices (sorbic acid and its salts)	ISO 5519: 1978	Spectrometry	III
Fruit Juices and Nectars	Quinic, malic & citric acid in cranberry juice cocktail and apple juice (permitted ingredients and additives)	Determination of quinic, malic and citric acid in cranberry juice cocktail and apple juice AOAC 986.13	HPLC	III
Fruit Juices and Nectars	Saccharin	NMKL 122 (1997)	Liquid chromatography	II
Fruit Juices and Nectars	Soluble solids	AOAC 983.17 EN 12143 (1996) IFU Method No 8 (1991) ISO 2173: 2003	Indirect by refractometry	I
Fruit Juices and Nectars	Sucrose (permitted ingredients)	EN 12146 (1996) IFU Method No 56 (1985/1998)	Enzymatic determination	III
Fruit Juices and Nectars	Sucrose (permitted ingredients)	EN 12630 IFU Method No 67 (1996) NMKL 148 (1993)	HPLC	II
Fruit Juices and Nectars	Sulphur dioxide (additives)	Optimized Monier Williams AOAC 990.28 IFU method No. 7A (2000) NMKL 132 (1989)	Titrimetry after distillation	II
Fruit Juices and Nectars	Sulphur dioxide (additives)	NMKL 135 (1990)	Enzymatic determination	III
Fruit Juices and Nectars	Sulphur dioxide (additives)	ISO 5522:1981 ISO 5523:1981	Titrimetry after distillation	III
Fruit Juices and Nectars	Tartaric acid in grape juice (additives)	EN 12137 (1997) IFU Method No 65 (1995)	HPLC	II

Commodity Standard	*Provision*	*Method*	*Principle*	*Type*
Fruit Juices and Nectars	Total nitrogen	EN 12135 (1997) IFU Method No 28 (1991)	Digestion/titration	I
Fruit Juices and Nectars	Sections 3.2 Quality Criteria and 3.3 Authenticity[6]	Determination of acetic acid EN 12632; IFU Method No 66 (1996)	Enzymatic determination	II
Fruit Juices and Nectars		Determination of alcohol (ethanol) IFU Method No 52 (1996)	Enzymatic determination	II
Fruit Juices and Nectars		Detection of anthocyanins IFU Method No 71 (1998)	HPLC	I
		Determination of ash in fruit products AOAC 940.26 ;EN 1135 (1994); IFU Method No 9 (1989)	Gravimetry	I
		Detection of beet sugar in fruit juices AOAC 995.17	Deuterium NMR	II
		Determination of benzoic acid as a marker in orange juice AOAC 994.11	HPLC	III
		Determination of C^{13}/C^{12} ratio of ethanol derived from fruit juices JAOAC 79, No. 1, 1996, 62-72	Stable isotope mass spectrometry	II
		Determination of carbon stable isotope ratio of apple juice AOAC 981.09 - JAOAC 64, 85 (1981)	Stable isotope mass spectrometry	II
		Determination of carbon stable isotope ratio of orange juice AOAC 982.21	Stable isotope mass spectrometry	II

[6] **3.4 Verification of Composition, Quality and Authenticity**

Fruit juices and nectars should be subject to testing for authenticity, composition, and quality where applicable and where required. The analytical methods used should be those found in Section 9, Methods of Analysis and Sampling.

The verification of a sample's authenticity / quality can be assessed by comparison of data for the sample, generated using appropriate methods included in the standard, with that produced for fruit of the same type and from the same region, allowing for natural variations, seasonal changes and for variations occurring due to processing.

		Determination of carotenoid, total/individual groups EN 12136 (1997); IFU Method No 59 (1991)	Spectrophotometry	I
		Determination of centrifugable pulp EN 12134 (1997) - IFU Method No 60 (1991)	Centrifugation/% value	I
		Determination of chloride (expressed as sodium chloride) EN12133 (1997) IFU Method No 37 (1991)	Electrochemical titrimetry	III
		Determination of chloride in vegetable juice AOAC 971.27 (Codex general method) ISO 3634:1979	Titration	II
		Determination of essential oils (Scott titration AOAC 968.20 - IFU 45b*	(Scott) distillation, titration	I
		Determination of essential oils (in citrus fruit) (volume determination)* ISO 1955:1982	Distillation and direct reading of the volume determination	I
		Determination of fermentability IFU Method No 18 (1974)	Microbiological method	I
		Determination of formol number EN 1133 (1994) IFU Method No 30 (1984)	Potentiometric titration	I
		Determination of free amino acids EN 12742 (xxxx) IFU Method No 57 (1989)	Liquid Chromatography	II
		Determination of fumaric acid IFU Method No 72 (1998)	HPLC	II
		Determination of glucose fructose and saccharose EN 12630 - IFU Method No 67 (1996) NMKL 148 (1993)	HPLC	II
		Determination of gluconic acid IFU Method No 76 (2001)	Enzymatic determination	II

		Determination of glycerol IFU Method No 77 (2001)	Enzymatic determination	II
		Determination of hesperidin and naringin EN 12148 (1996) - IFU Method No 58 (1991)	HPLC	II
		Determination of hydroxymethylfurfural IFU Method No 69 (1996)	HPLC	II
		Determination of hydroxymethylfurfural ISO 7466:1986	Spectrometry	III
		Determination of isocitric acid-D IFU Method No 54 (1984)	Enzymatic determination	II
		Determination of Lactic acid- D and L EN 12631 (1999) IFU Method No 53 (1983/1996)	Enzymatic determination	II
		Determination of L-malic/total malic acid ratio in apple juice AOAC 993.05	Enzymatic determination and HPLC	II
		Determination of naringin and neohesperidin in orange juice AOAC 999.05	HPLC	III
		Determination of pH-value NMKL 179:2005 EN 1132 (1994);IFU Method No 11 (1989);ISO 1842: 1991	Potentiometry	II IV
		Determination of phosphorus/phosphate EN 1136 (1994) IFU Method No 50 (1983)	Photometric determination	II
		Determination of proline by photometry – non-specific determination EN 1141 (1994); IFU Method No 49 (1983)	Photometry	I
		Determination of relative density EN 1131 (1993); IFU Method No 1 (1989) & IFU Method No General sheet (1971)	Pycnometry	II
		Determination of Relative density IFU Method No 1A	Densitometry	III

		Determination of sodium, potassium, calcium, magnesium in fruit juices EN 1134 (1994); IFU Method No 33 (1984)	Atomic Absorption Spectroscopy	II
		Determination of sorbitol-D IFU Method No 62 (1995)	Enzymatic determination	II
		Determination of stable carbon isotope ratio in the pulp of fruit juices ENV 13070 (1998) Analytica Chimica Acta 340 (1997)	Stable isotope mass spectrometry	II
		Determination of stable carbon isotope ratio of sugars from fruit juices ENV 12140 Analytica Chimica Acta.271 (1993)	Stable isotope mass spectrometry	II
		Determination of stable hydrogen isotope ratio of water from fruit juices ENV 12142 (1997)	Stable isotope mass spectrometry	II
		Determination of stable oxygen isotope ratio in fruit juice water ENV 12141(1997)	Stable isotope mass spectrometry	II
		Detection of starch AOAC 925.38 (1925) IFU Method No 73 (2000)	Colorimetric	I
		Determination of sugar beet derived syrups in frozen concentrated orange juice $\delta^{18}O$ Measurements in Water AOAC 992.09	Oxygen isotope ratio analysis	I
		Determination of titrable acids, total EN 12147 (1995) IFU Method No Method No 3, (1968) ISO 750:1998	Titrimetry	I
		Determination of total dry matter (vacuum-oven drying at 70°C)* EN 12145 (1996) IFU Method No 61 (1991)	Gravimetric determination	I
		Determination of total solids (Microwave oven drying)* AOAC 985.26	Gravimetric determination	I

		Determination of Vitamin C (dehydro-ascorbic acid and ascorbic acid) AOAC 967.22	Microfluorometry	III
		Determination of Vitamin C EN 14130 : 2004	HPLC	II

* *Because there is no numerical value in the Standard duplicate Type I methods have been included which may lead to different results.*

Milk and Milk Products

Milk products	Iron	NMKL 139 (1991) (Codex general method)	Atomic absorption spectrophotometry	II
Milk products	Iron	IDF Standard 103A:1986 ISO 6732:1985	Photometry (bathophenanthroline)	IV
Milk products (products not completely soluble in ammonia)	Milkfat	IDF 124-3 | ISO 8262-3:2005	Gravimetry (Weibull-Berntrop)	I
Blend of evaporated skimmed milk and vegetable fat	Total fat	IDF 13C:1987 | ISO 1737:1999	Gravimetry (Röse-Gottlieb)	IV
Blend of evaporated skimmed milk and vegetable fat	Milk solids-not-fat* (MSNF)	IDF 21B:1987 | ISO 6731:1989 IDF 13C:1987 | ISO 1737:1999	Calculation from total solids content and fat content Gravimetry (Röse-Gottlieb)	IV
Blend of evaporated skimmed milk and vegetable fat	Milk protein in MSNF*	IDF 20-part 1 or 2:2001 | ISO 8968-part 1 or 2:2001	Titrimetry (Kjeldahl)	IV
Reduced fat blend of evaporated skimmed milk and vegetable fat	Total fat	IDF 13C:1987 | ISO 1737: 1999	Gravimetry (Röse-Gottlieb)	IV
Reduced fat blend of evaporated skimmed milk and vegetable fat	MSNF *	IDF 21B:1987 | ISO 6731:1989 IDF 13C:1987 | ISO1737:1999	Calculation from total solids and fat contents	IV

* Milk total solids and Milk solids-not-fat content include water of crystallization of lactose

Reduced fat blend of Evaporated skimmed milk and vegetable fat	Milk protein in MSNF*	IDF 20-1 or 2:2001 | ISO 8968-1 or 2:2001	Titrimetry (Kjeldahl)	IV
Blend of skimmed milk and vegetable fat in powdered form	Total fat	IDF 9C:1987 | ISO1736:2000	Gravimetry (Röse-Gottlieb)	IV
Blend of skimmed milk and vegetable fat in powdered form	Water**	IDF 26:2004 | ISO 5537:2004	Gravimetry, drying at 87°C	IV
Blend of skimmed milk and vegetable fat in powdered form	Milk protein in MSNF*	IDF 20-part 1 or part 2:2001 | ISO 8968-part 1 or part 2:2001	Titrimetry (Kjeldahl)	IV
Reduced fat blend of skimmed milk powder and vegetable fat in powdered form	Total fat	IDF 9C:1987 | ISO 1736:2000	Gravimetry (Röse-Gottlieb)	IV
Reduced fat blend of skimmed milk powder and vegetable fat in powdered form	Water**	IDF 26:2004 | ISO 5537:2004	Gravimetry, drying at 87°C	IV
Reduced fat blend of skimmed milk powder and vegetable fat in powdered form	Milk protein in MSNF*	IDF 20-part 1 or part 2:2001 | ISO 8968-part 1 or part 2:2001	Titrimetry (Kjeldahl)	IV
Blend of sweetened condensed skimmed milk and vegetable fat	Total fat	IDF 13C:1987 | ISO 1737:1999	Gravimetry (Röse-Gottlieb)	IV
Blend of sweetened condensed skimmed milk and vegetable fat	Milk solids-not-fat* (MSNF)	IDF 15B:1991 | ISO 6734:1989 IDF 13C:1987 | ISO 1737:1999	Calculation from total solids content and fat content Gravimetry (Röse-Gottlieb)	IV

* Milk total solids and Milk solids-not-fat content including water of crystallization of lactose
** Water content excluding the crystallized water bound to lactose (in fact to read moisture content)

*Milk total solids and Milk solids-not-fat content include water of crystallization of lactose

Blend of sweetened condensed skimmed milk and vegetable fat	Milk protein in MSNF*	IDF 20-part1 or part 2:2001 | ISO 8968-part 1 or part 2:2001	Titrimetry (Kjeldahl)	IV
Reduced fat blend of sweetened condensed skimmed milk and vegetable fat	Total fat <= 8% m/m >= 1%m/m	IDF 13C:1987 | ISO 1737: 1999	Gravimetry (Röse-Gottlieb)	IV
Reduced fat blend of sweetened condensed skimmed milk and vegetable fat	MSNF * >= 20% m/m	IDF 15B:1991 | ISO 6734:1989 IDF 13:1987 | ISO1737:1999	Calculation from total solids and fat contents	IV
Reduced fat blend of sweetened condensed skimmed milk and vegetable fat	Milk protein in MSNF*	IDF 20-part 1 or part 2:2001 | ISO 8968-part 1 or part 2:2001	Titrimetry (Kjeldahl)	IV
Butter	Copper	IDF Standard 76A:1980/ISO 5738:1980/AOAC 960.40	Photometry, diethyldithiocarbamate	II
Butter	Lead	AOAC 972.25 (Codex general method)	Atomic absorption spectrophotometry	II
Butter	Milk solids-not-fat	IDF 80-2 | ISO 3727-2:2001	Gravimetry	I
Butter	Milkfat	IDF 80-3 | ISO 3727-3:2003	Gravimetry	I
Butter	Salt	IDF 12 | ISO 1738:2004	Titrimetry (Mohr: determination of chloride, expressed as sodium chloride)	II
Butter	Salt	IDF 179 | ISO 15648:2004	Potentiometry (determination of chloride, expressed as sodium chloride)	III
Butter	Vegetable fat	ISO 17670 / IDF 202	Gas liquid chromatography	II
Butter	Vegetable fat	IDF Standard 32:1965 ISO 3595:1976 (confirmed 1996) AOAC 955.34A	Phytosteryl acetate test	III
Butter	Water	IDF 80 | ISO 37271:2001	Gravimetry	I
Cheese	Citric acid	IDF RM 34 | ISO TS 2963:2006	Enzymatic method	II

Cheese	Citric acid	ISO 2963:1997 AOAC 976.15	Photometry	III
Cheese	Milkfat	IDF 5 | ISO 1735:2004	Gravimetry (Schmid-Bondzynski-Ratslaff)	I
Cheese	Moisture	IDF Standard 4A:1982 ISO 5534:1985	Gravimetry, drying at 102 °C	I
Cheese (and cheese rind)	Natamycin	IDF Standard 140A:1992 ISO 9223:1991	Molecular absorption spectrophotometry & HPLC after extraction	II
Cheeses, individual	Milkfat in dry matter	IDF 5:2004 | ISO 1735:2004	Gravimetry after solvent extraction	I
Cheeses, individual	Dry matter (Total solids)	ISO 5534/IDF 4: 2004	Gravimetry, drying at 102°C	I
Cheeses in brine	Milkfat in dry matter (FDM)	IDF 5 | ISO 1735:2004	Gravimetry (Schmid-Bondzynski-Ratslaff)	I
Cottage cheese	Fat-free dry matter	IDF 4:2004 | ISO 5534:2004	Gravimetry, drying at 102°C Calculation from dry matter and fat contents	IV
Cottage cheese	Milkfat	IDF 5:2004 | ISO 1735:2004 IDF 124-3:2005 | ISO 8262-3:2005	Gravimetry (Schmid-Bondzinski-Ratzlaff) Gravimetry (Weibull-Berntrop)	IV
Cottage cheese	Milk fat in dry matter	IDF 126A:1988 ISO 8262-3:1987	Gravimetry (Weibull-Berntrop)	I
Cheese, Unripened Including Fresh Cheese	Protein	IDF Standard 20B:1993 AOAC 991.20-23 ISO 8968 Part I	Titrimetry, Kjeldahl	I
Cream and Prepared Creams	Milk protein	ISO 8968-1 /IDF20-1:2001 AOAC 991.20	Titrimetry (Kjeldahl)	I
Cream	Milkfat	IDF Standard 16C:1987 ISO 2450:1999	Gravimetry (Röse-Gottlieb)	I

Cream	Solids	IDF Standard 21B:1987 ISO 6731:1989	Gravimetry (drying at 102°C)	I
Creams Lowered in Milkfat Content	Milkfat	IDF Standard 16C:1987 ISO 2450:1999 AOAC 995.19	Gravimetry	I
Creams, Whipped Creams and Fermented Creams	Milk solids-not-fat	IDF Standard 80:1977 ISO 3727:1977 AOAC 920.116	Gravimetry	I
Cream cheese	Dry matter	IDF 4:2004 | ISO 5534:2004	Gravimetry drying at 102°C	IV
Cream cheese	Moisture on fat free basis	IDF 4:2004 | ISO 5534:2004 and IDF 5:2004 | ISO 1735:2004	Calculation from fat content and moisture content	IV
Dairy fat spreads	Total fat	IDF 194:2003 | ISO 17189:2003	Gravimetry Direct determination of fat using solvent extraction	I
Dairy fat spreads	Vegetable fat	IDF 54:1970 | ISO 3594: 1976 IDF 32:1965 | ISO 3595:1976	Gas liquid chromatography Phytosterol acetate test	II III
Edible casein products	Acids, free	IDF Standard 91:1979 ISO 5547:1978	Titrimetry (aqueous extract)	IV
Edible casein products	Ash (including P_2O_5)	IDF Standard 90:1979) ISO 5545:1978	Furnace, 825°C	IV
Edible Casein Products	Casein in protein	IDF Standard 29:1964	Titrimetry, Kjeldahl	I
Edible casein products	Copper	AOAC 985.35	Atomic absorption spectrophotometry	II
Edible casein products	Copper	IDF 76 | ISO 5738:2004	Colorimetry (diethyldiethiocarbamate)	III
Edible casein products	Lactose	IDF 106 | ISO 5548:2004	Photometry (phenol and H_2SO_4)	IV
Edible casein products	Lead	AOAC 972.25 (Codex general method)	Atomic absorption spectrophotometry	II

Edible casein products	Lead	AOAC 982.23 (Codex general method)	Anodic stripping voltanmetry	III
Edible casein products	Lead	IDF RM 133 | ISO TS 6733: 2006	Spectrophotometry (1,5-diphenylthiocarbazone)	III
Edible casein products	Lead	NMKL 139 (1991) (Codex general method)	Atomic absorption spectrophotometry	III
Edible casein products	Milkfat	ISO 5543 | IDF 127: 2004	Gravimetry (Schmid-Bondzynski-Ratslaff)	I
Edible casein products	Moisture	IDF 78 | ISO 5550:2006	Gravimetry (drying at 102°C)	I
Edible casein products	pH	IDF Standard 115A:1989 ISO 5546:1979	Electrometry	IV
Edible casein products	Protein (total N x 6.38 in dry matter)	IDF Standard 92:1979 ISO 5549:1978	Titrimetry, Kjeldahl digestion	IV
Edible casein products	Sediment (scorched particles)	IDF 107 | ISO 5739:2003	Visual comparison with standard disks, after filtration	IV
Emmental	Calcium >= 800mg/100g	ISO 8070 | IDF 119[7]	Flame atomic absorption	IV
Evaporated milks	Milkfat	IDF Standard 13C: 1987 ISO 1737:1999	Gravimetry (Röse-Gottlieb)	I
Evaporated Milks	Protein	AOAC 945.48H AOAC 991.20 – IDF 20B:1993	Kjeldahl, titrimetry	I
Evaporated milks	Solids, total	IDF Standard 21B:1987 ISO 6731:1989	Gravimetry (drying at 102°C)	I
Fermented milks	Protein	ISO 8968-1 | IDF 20-1:2001 AOAC 991.20	Titrimetry (Kjeldahl)	I
Fermented milks	Milk fat	ISO 1211:1999 IDF 1D:1996 AOAC 905.02	Gravimetry	I
Fermented milks	Lactic acid (total acidity expressed as lactic acid)	IDF 150:1991 ISO 11869:1997	Potentiometry, titration to pH 8.30	I

[7] *Draft international standard*

	Microorganisms constituting the starter culture	IDF 149A:1997 (Annex A)	Colony count at 25°C, 30°C, 37°C and 45°C according to the starter organism in question	IV
Milk powders and cream powders	Milkfat	IDF Standard 9C: 1987 ISO 1736:2000	Gravimetry (Röse-Gottlieb)	I
Milk powders and cream powders	Protein (in milk solids-not-fat)	IDF 20-1 | ISO 8968-1:2001	Titrimetry, Kjeldahl digestion	I
Milk powders and cream powders	Scorched particles	IDF 107 | ISO 5739:2003	Visual comparison with standard disks, after filtration	IV
Milk powders and cream powders	Solubility	IDF 129 | ISO 8156:2005	Centrifugation	I
Milk powders and cream powders	Acidity, titratable	IDF Standard 86:1981 ISO 6091:1980	Titrimetry, titration to pH 8.4	I
Milk powders and cream powders	Water	IDF 26 | ISO 5537:2004[8]	Gravimetry (drying at 102°C)	IV
Milkfat products	Antioxidants (phenolic)	IDF Standard 165:1993	Reversed phase gradient liquid chromatography	II
Milkfat Products	Copper	IDF Standard 76A:1980/ISO 5738:1980/AOAC 960.40	Photometry, diethyldithiocarbamate	II
Milkfat products	Fatty acids, free (expressed as oleic acid)	IDF 6 | ISO 1740:2004	Titrimetry	I
Milkfat products	Milkfat	IDF Standard 24:1964	Gravimetry (calculation from solids-not-fat and water content)	IV
Milkfat Products	Peroxide value (expressed as meq. of oxygen/kg fat)	AOAC 965.33	Titrimetry	I
Milkfat products	Vegetable fat (sterols)	IDF Standard 54:1979 ISO 3594:1976	Gas liquid chromatography	II
Milkfat products	Vegetable fat	IDF Standard 32:1965 ISO 3595:1976	Phytosteryl acetate test	III
Milkfat products	Water	IDF 23 | ISO 5536:2002	Titrimetry (Karl Fischer)	II
Milkfat products (anhydrous milkfat)	Peroxide value	AOAC 965.33	Titrimetry	I

[8] The replacing method has only been validated for milk powders, not for creams

Milk Products obtained from Fermented Milks Heat-Treated after Fermentation	Protein	IDF Standard 20B:1993 ISO 8968 Part I AOAC 991.20-23	Titrimetry (Kjeldahl)	I
Mozzarella	Milkfat in dry matter – with high moisture	IDF 5:2004 | ISO 1735:2004	Gravimetry after solvent extraction	IV
Mozzarella	Milkfat in dry matter – with low moisture	IDF 5:2004 | ISO 1735:2004	Gravimetry after solvent extraction	IV
Processed cheese products	Citric acid	IDF RM 34 | ISO TS 2963:2006	Enzymatic method	II
Processed cheese products	Citric acid	AOAC 976.15	Photometry	III
Processed cheese products	Milkfat	IDF 5 | ISO 1735:2004	Gravimetry (Schmid- Bondzynski-Ratzlaff)	I
Processed cheese products	Phosphate, added (expressed as phosphorus)	IDF Standard 51B:1991	Calculation	IV
Processed cheese products	Phosphorus	IDF Standard 33C: 1987 ISO 2962:1984	Spectrophotometry (molybdate-ascorbic acid)	II
Processed cheese products	Salt	IDF 88 | ISO 5943:2004	Potentionmetry (determination of chloride, expressed as sodium chloride)	II
Sweetened condensed milk	Milkfat	IDF Standard 13C: 1987 ISO 1737:1999	Gravimetry (Röse-Gottlieb)	I
Sweetened and Condensed Milks	Protein	AOAC 945.48H AOAC 991.20 – IDF 20B:1993	Kjeldahl, titrimetry	I
Sweetened Condensed Milks	Solids	IDF Standard 15B:1991 ISO 6734:1989	Gravimetry, drying at 102 °C	I
Whey Cheese	Dry matter (for denomination)	IDF 58 | ISO 2920:2004	Gravimetry, drying at 88 °C	I
Whey cheeses by concentration	Dry matter (total solids)	IDF 58 | ISO 2920:2004	Gravimetry, drying at 88 °C	I
Whey cheeses by coagulation	Dry matter (total solids)	IDF 4:2004 ISO 5534:2004	Gravimetry, Drying at 102°C	IV

Whey cheese	Fat on the dry basis	IDF 59 A:1986 | ISO 1854:1999 and IDF 58:2004 | ISO 2920:2004	Calculation from fat content and dry matter content	I
Whey cheese	Milkfat (in dry matter)	IDF Standard 59A:1986 ISO 1854:1999	Gravimetry (Röse-Gottlieb)	I
Whey cheeses including Whey cheeses by concentration	Total fat	IDF 59A:1986 ISO 1854:1999	Gravimetry (Röse Gottlieb)	I
Whey cheeses by coagulation	Total fat	IDF 5:2004 | ISO 1735:2004	Gravimetry (Schmid-Bondzynski-Ratzlaff	I
Creamed whey cheese	Fat on the dry basis	IDF 59 A: 1986 | ISO 1854: 1999 and IDF 58:2004 | ISO 2920:2004	Calculation from fat content and dry matter content	I
Skimmed whey cheese	Fat on the dry basis	IDF 59 A:1986 | ISO 1854:1999 and IDF 58:2004 | ISO 2920:2004	Calculation from fat content and dry matter content	I
Whey powders	Ash	IDF Standard 90:1979 ISO 5545:1978	Furnace, 825°C	IV
Whey powders	Copper	AOAC 985.35	Atomic absorption spectrophotometry	II
Whey powders	Copper	IDF 76 | ISO 5738:2004	Photometry (diethyldiethiocarbamate)	III
Whey Powders	Lactose	IDF 79B:1991	Enzymatic method: glucose moiety (method A), galactose moiety (method B)	II
Whey powders	Lead	AOAC 972.25 (Codex general method)	Atomic absorption spectrophotometry	II
Whey powders	Milkfat	IDF Standard 9C:1987 ISO 1736:2000	Gravimetry (Röse-Gottlieb)	I

Whey powders	Milk protein	ISO 8968-1 | IDF 20-1:2001 AOAC 991.20	Titrimetry (modified Kjeldahl)	I
Whey powders	Moisture, "Free"	IDF 58 | ISO 2920:2004	Gravimetry (drying at 88±2°C)	IV
Whey powders	Protein (total N x 6.38)	IDF Standard 92:1979 ISO 5549:1978	Titrimetry, Kjeldahl digestion	IV
Whey powders	Water (not including water of crystallization of lactose)	IDF 26A:1993 AOAC 927.05	Gravimetry	I
Yoghurt products	*Lactobacillus bulgaricus* & *Streptococcus thermophilus*	IDF 117 | ISO 7889:2003	Colony count at 37°C	
Yoghurt products	*Lactobacillus bulgaricus* & *Streptococcus thermophilus*	IDF 146 | ISO 9232:2003	Test for identification	
Yoghurt products	Solids, Total	IDF 151 | ISO 13580:2005	Gravimetry (drying at 102°C)	I
Yoghurt	*Streptococcus thermophilus* & *Lactobacillus delbrueckii* subsp. *Bulgaricus* >= 10^7 cfu/g	ISO 7889/IDF 117: 2003	Colony count at 37°C	I
Yoghurt	*Streptococcus thermophilus* & *Lactobacillus delbrueckii* subsp. *bulgaricus* >= 10^7 cfu/g	ISO 9232/IDF 146:2003	Test for identification: morphological , cultural and biochemical characteristics	I
Natural Mineral Waters				
Natural mineral waters	Arsenic	AOAC 986.15 (Codex general method)	Atomic absorption spectrophotometry	II
Natural mineral waters	Arsenic	ISO 6595:1982 (confirmed 1995)	Spectrophotometry	IV
Natural mineral waters	Barium	*Examination of Water Pollution Control* WHO Pergamon Press (1982) Vol. 2, pp. 65-66		IV
Natural mineral waters	Barium	*Examination of Water Pollution Control.* WHO Pergamon Press (1982) Vol. 2, pp. 67-68		IV
Natural mineral waters	Borate	ISO 9390:1990	Spectrophotometry	II

Natural mineral waters	Cadmium	ISO 8288:1986 (confirmed 1995)	Flame atomic absorption spectrophotometry	II
Natural mineral waters	Cadmium	AOAC 974.27	Atomic absorption spectrophotometry	III
Natural mineral waters	Cadmium	AOAC 986.15 (Codex general method)	Anodic stripping voltanmetry	III
Natural mineral waters	Calcium	ISO 6058:1984	Titrimetry	II
Natural mineral waters	Calcium	ISO 7980:1986 (confirmed 1995)	Atomic absorption spectrophotometry	III
Natural mineral waters	Chloride	*Examination of Water Pollution Control.* WHO Pergamon Press (1982) Vol. 2, pp. 205-208		II
Natural mineral waters	Chloride	AOAC 973.51	Titrimetry (Mercuric nitrate)	III
Natural mineral waters	Chloride	ISO 9297:1989 (confirmed 1994)	Titrimetry	III
Natural mineral waters	Chromium (VI)	*Examination of Water Pollution Control.* WHO Pergamon Pres (1982) Vol. 2, pp. 86-87		IV
Natural mineral waters	Coliform organism, thermotolerant organism and presumptive *Escherichia coli*	ISO 9308-1:1990	Membrane filtration	I
Natural mineral waters	Copper	ISO 8288:1986 (confirmed 1995)	Flame atomic absorption spectrophotometry	II
Natural mineral waters	Copper	AOAC 960.40 (Codex general method)	Colorimetry	III
Natural mineral waters	Faecal Streptococci	ISO 7899-2:1984	Membrane filtration	I
Natural mineral waters	Fluoride	*Examination of Water Pollution Control.* WHO Pergamon Press (1982) Vol. 2, pp. 245-247		II
Natural mineral waters	Fluoride	*Examination of Water Pollution Control.* WHO Pergamon Press (1982) Vol.2, pp. 247-250		III

Natural mineral waters	Iron, dissolved	ISO 6332:1988 (confirmed 1995)	Spectrophotometry	II
Natural mineral waters	Lead	ISO 8288:1986 (confirmed 1995)	Flame atomic absorption spectrophotometry	II
Natural mineral waters	Lead	AOAC 974.27	Atomic absorption spectrophotometry	III
Natural mineral waters	Magnesium	ISO 6059:1984 (confirmed 1995)	Titrimetry	II
Natural mineral waters	Magnesium	ISO 7980:1986 (confirmed 1995)	Atomic absorption spectrophotometry	III
Natural mineral waters	Manganese	*Examination of Water Pollution Control.* WHO Pergamon Press (1982) Vol. 2, pp. 121-122		II
Natural mineral waters	Manganese	ISO 6333:1986 (confirmed 1995)	Spectrophotometry	III
Natural mineral waters	Mercury	ISO 5666-3:1984 (confirmed 1995)	Flameless atomic absorption spectrophotometry	II
Natural mineral waters	Mercury	AOAC 977.22	Flameless atomic absorption spectrophotometry	III
Natural mineral waters	Nitrates	ISO 7890-2:1986 (confirmed 1995)	Spectrophotometry	II
Natural mineral waters	Nitrates	*Examination of Water Pollution Control.* WHO Pergamon Press (1982) Vol.2, pp. 280-283		IV
Natural mineral waters	Nitrates	*Handbuch Lebensmittel Chemie* (1969)		IV
Natural mineral waters	Nitrites	ISO 6777:1984	Molecular absorption spectrophotometry	IV
Natural mineral waters	Phenols	ISO 6439:1990 (confirmed 1995)	Spectrophotometry	I
Natural mineral waters	Potassium	*Examination of Water Pollution Control.* WHO Pergamon Press (1982) Vol.2, pp. 142-145		II
Natural mineral waters	Selenium	AOAC 986.15	Atomic absorption spectrophotometry	II

Natural mineral waters	Selenium	*Examination of Water Pollution Control.* WHO Pergamon Press (1982) Vol.2, pp.320-322		III
Natural mineral waters	Sodium	*Examination of Water Pollution Control.* WHO Pergamon Press (1982) Vol.2 pp. 148-151		II
Natural mineral waters	Sodium	*Examination of Water Pollution Control.* WHO Pergamon Press (1982) Vol.2, pp. 151-152		III
Natural mineral waters	Spores of sulphite-reducing anaerobes (Clostridia)	ISO 6461-2:1986 (confirmed 1996)	Membrane filtration	I
Natural mineral waters	Sulphates	ISO 9280:1990 (confirmed 1995)	Gravimetry	III
Natural mineral waters	Sulphide	*Handb. Spurenanal.* 1974		IV
Natural mineral waters	Surface active agents	ISO 7875-1:1996	Spectrophotometry (methylene blue)	I
Processed Fruits and Vegetables				
Processed fruits and vegetables	Benzoic acid	NMKL 124 (1997)	Liquid Chromatography	II
Processed fruits and vegetables	Benzoic acid	NMKL 103 (1984); or AOAC 983.16	Gas Chromatography	III
Processed fruits and vegetables	Calcium	AOAC 968.31	Complexometry/ Titrimetry	II
Processed fruits and vegetables	Drained Weight	AOAC 968.30 (Codex General Method for processed fruits and vegetables)	Sieving Gravimetry	I
Processed fruits and vegetables	Fill of containers	CAC/RM 46-1972 (reference to "metal containers" deleted and refer to ISO 90.1:1986 for determination of water capacity in metal containers)	Weighing	I
Processed fruits and vegetables	Lead	AOAC 972.25 (Codex general method)	AAS (Flame absorption)	III
Processed fruits and vegetables	Packing medium Canned berry fruits (raspberry, strawberry)	AOAC 932.12 ISO 2173:1978	Refractometry	I

Processed fruits and Vegetables (except canned bamboo shoots, pH determined by AOAC 981.12)	pH	ISO 1842:1991	Potentiometry	IV
Processed fruits and vegetables	pH	AOAC 981.12	Potentiometry	III
Processed fruits and vegetables	pH	NMKL 179:2005	Potentiometry	II
Processed fruits and vegetables	Soluble solids	ISO 2173:2003 AOAC 932.12	Refractometry	I
Processed fruits and vegetables	Sorbates	NMKL 103 (1984) / AOAC 983.16	Gas Chromatography	III
Processed fruits and vegetables	Sorbates	NMKL 124 (1997)	Liquid Chromatography	II
Processed fruits and vegetables	Tin	AOAC 980.19 (Codex general method)	AAS	II
Processed fruits and vegetables	Total solids	AOAC 920.151	Gravimetry	I
Canned green beans and wax beans	Tough strings	CAC/RM 39-1970	Stretching	I
Canned green peas	Proper fill (in lieu of drained weight)	CAC/RM 45-1972	Pouring and measuring	I
Canned green peas	Solids, alcohol insoluble	AOAC 938.10	Gravimetry including sieving	I
Canned green peas	Types of peas, distinguishing	CAC/RM 48-1972	Visual inspection	I
Canned mangoes	Syrup	AOAC 932.14C	Brix spindle method	I
Canned mature processed peas	Solids, total	AOAC 964.22	Gravimetry (vacuum oven)	I
Canned mushrooms	Washed drained weight	CAC/RM 44-1972	Sieving	I
Canned palmito	Mineral impurities	ISO 762:1982 (confirmed 1992)	Gravimetry	I
Canned Stone Fruits	Drained weight	AOAC 968.30 ISO:2173:1978	Gravimetry	I
Canned Stone Fruits	Soluble solids	AOAC 932.14C	Refractometry	
Canned strawberries	Calcium	AOAC 968.31	Complexometric titrimetry	II
Canned strawberries	Mineral impurities	AOAC 971.33	Gravimetry	I

Certain canned citrus fruits	Calcium	NMKL 153:1996	Atomic Absorption Spectrophotometry	II
Certain canned citrus fruits	Calcium	AOAC 968.31	Complexometry Titrimetry	III
Citrus marmalade	Calcium	AOAC 968.31	Complexometric titrimetry	II
Dates	Identification of defects	Described in the Standard	Visual inspection	I
Dates	Moisture	AOAC 934.06	Gravimetry (vacuum oven)	I
Dried apricots	Identification of defects	Described in the Standard	Visual inspection (weighing)	I
Dried apricots	Moisture	AOAC 934.06	Gravimetry (vacuum oven)	I
Dried apricots	Sulphur dioxide	AOAC 963.20	Colorimetry	II
Grated desiccated coconut	Acidity, total (in extracted oil)	Described in the Standard	Titration of extracted oil	IV
Grated desiccated coconut	Ash	AOAC 950.49	Gravimetry	I
Grated desiccated coconut	Extraneous vegetable matter	Described in the Standard	Counting extraneous material with the naked eye	IV
Grated desiccated coconut	Moisture	AOAC 925.40	Gravimery (loss on drying)	I
Grated desiccated coconut	Oil content	AOAC 948.22	Gravimetry	I
Jams (fruit preserves) and jellies	Calcium	AOAC 968.31	Complexometric titrimetry	II
Jams (fruit preserves) and jellies	Mineral impurities	AOAC 971.33	Gravimetry	I
Mango chutney	Ash insoluble in HCl	ISO 763:1982	Gravimetry	I
Pickled cucumbers	Acidity, total	AOAC 942.15	Titrimetry	I
Pickled cucumbers	Drained weight	AOAC 968.30	Gravimetry	I
Pickled cucumbers	Mineral impurities	AOAC 971.33	Gravimetry	I
Pickled cucumbers	Salt in brine	AOAC 971.27 (Codex general method)	Potentiometry	II
Pickled cucumbers	Volume fill by displacement	Described in the Standard	Displacement	I
Preserved tomatoes	Calcium	AOAC 968.31	Complexometric titrimetry	III
Preserved tomatoes	Calcium	NMKL 153:1996	Atomic Absorption Spectrophotometry	II
Preserved tomatoes	Mould count	AOAC 965.41	Howard mould count	I

Processed tomato concentrates	Lactic acid	EN 2631:1999	Enzymatic determination	II
Processed tomato concentrates	Mineral impurities (sand)	AOAC 971.33	Gravimetry	IV
Processed tomato concentrates	Mould count	AOAC 965.41	Howard mould count	I
Processed tomato concentrates	Natural tomato soluble solids	AOAC 970.59	Refractometry	I
Processed tomato concentrates	Sodium chloride	AOAC 971.27 (Codex general method)	Potentiometry	II
Processed tomato concentrates	Tomato soluble solids	AOAC 970.59	Refractometry	I
Raisins	Mineral impurities	CAC/RM 51-1974	Ashing	I
Raisins	Mineral oil	CAC/RM 52-1974	Extraction and separation on alumina	II
Raisins	Moisture	AOAC 972.20	Electrical conductance	I
Raisins	Sorbitol	AOAC 973.28	Gas chromatography	II
Raisins	Sulphur dioxide	AOAC 963.20	Colorimetry	II
Table olives	Acidity of brine	Described in the Standard	Titrimetry	IV
Table olives	pH of brine	Described in the Standard	Potentiometry	IV
Table olives	Salt in brine	AOAC 971.27 (Codex general method)	Potentiometry	II
Unshelled pistachio nuts	Identification of defects	Described in the Standard	Visual inspection	I
Unshelled pistachio nuts	Moisture	AOAC 925.40	Gravimetry (loss on drying)	I
Unshelled pistachio nuts	Size classification	Described in the Standard	Number per 500 g	I
Quick Frozen Fruits and Vegetables				
Quick frozen fruits and vegetables	Net weight	CAC/RM 34-1970	Weighing	I
Quick frozen fruits and vegetables	Thawing procedure	CAC/RM 32-1970	Thawing	I
Quick frozen fruits and vegetables: Berries, leek and carrot	Mineral impurities	CAC/RM 54-1974	Flotation and sedimentation	I
Quick frozen fruits and vegetables: Berries, Whole kernel corn and Corn-on-the-cob	Soluble solids, total	CAC/RM 43-1971	Refractometry	I

Quick frozen fruits and vegetables: Peaches and berries	Drained fruit/drained berries	Described in the Standards	Draining	I
Quick frozen fruits and vegetables: Vegetables	Cooking procedure	CAC/RM 33-1970	Cooking	I
Quick frozen French fried potatoes	Moisture	AOAC 984.25	Gravimetry (convection oven)	I
Quick frozen green and wax beans	Tough strings	CAC/RM 39-1970	Stretching	I
Quick frozen peas	Solids, alcohol insoluble	CAC/RM 35-1970	Gravimetry	I
Quick frozen spinach	Dry matter, Salt-free	Described in the Standard	Weighing	I
Processed Meat and Poultry Products and Soups and Broths				
Meat Products	Nitrates and/or Nitrites	ENV 12014-3:1998-06 - Part 3	Spectrometric determination of nitrate and nitrite content of meat products after enzymatic reduction of nitrate to nitrite	III
Meat Products	Nitrates and/or Nitrites	ENV 12014-4:1998-06 - Part 4 NMKL 165 (2000)	Ion-exchange chromatographic method	III
Processed meat and poultry products	Fat	ISO 1443-1973	Gravimetry	I
Processed meat and poultry products	Lead	AOAC 934.07	Colorimetry (dithizone)	II
Processed meat and poultry products	Nitrates	ISO 3091:1975 (confirmed 1996)	Colorimetry (cadmium reduction)	II
Processed meat and poultry products	Nitrites	ISO 2918:1975 (confirmed 1996)	Colorimetry	IV
Processed meat and poultry products	Tin	AOAC 985.16 (Codex general method)	Atomic absorption spectrophotometry	II
Processed meat and poultry products	Nitrogen/protein	ISO 937:1978 (confirmed 1995)	Titrimetry	II
Bouillons and Consommés (soups and broths)	Amino nitrogen	AIIBP Method No 2/7	Volumetry (modified Van Slyke)	II
Bouillons and Consommés (soups and broths	Creatinine	AIIBP Method No 2/5	HPLC	II
Bouillons and Consommés (soups and broths	Nitrogen, total	AOAC 928.08	Kjeldahl	II

Bouillons and Consommés (soups and broths)	Sodium chloride	AIBP Method No 2/4	Potentiometric titration (chloride expressed as sodium chloride)	II
Canned corned beef	Lead	AOAC 972.25 (Codex general method)	Atomic absorption spectrophotometry	II
Canned corned beef	Nitrites, potassium and/or sodium salt	AOAC 973.31 (Codex general method)	Colorimetry	II
Canned corned beef	Nitrites, potassium and/or sodium salt	ISO 2918:1975 (confirmed 1996)	Colorimetry	IV
Canned corned beef	Tin (Products in tinplate and other containers)	AOAC 985.16 (Codex general method)	Atomic absorption spectrophotometry	II
Cooked cured chopped meat	Fat	ISO 1443-1973	Gravimetry (extraction)	I
Cooked cured chopped meat	Lead	AOAC 972.25 (Codex general method)	Atomic absorption spectrophotometry	II
Cooked cured chopped meat	Nitrites	AOAC 973.31 (Codex general method)	Colorimetry	II
Cooked cured chopped meat	Nitrites	ISO 2918:1975 (confirmed 1996)	Colorimetry	IV
Cooked cured chopped meat	Tin	AOAC 985.16 (Codex general method)	Atomic absorption spectrophotometry	II
Cooked cured ham	Fat	ISO 1443:1973	Gravimetry (extraction)	I
Cooked cured ham	Gelatin, added	Described in the Standard	Calculation	I
Cooked cured ham	Lead	AOAC 972.25 (Codex general method)	Atomic absorption spectrophotometry	II
Cooked cured ham	Nitrites	AOAC 973.31 (Codex general method)	Colorimetry	II
Cooked cured ham	Nitrites	ISO 2918:1975 (confirmed 1996)	Colorimetry	IV
Cooked cured ham	Protein (conversion factor 6.25)	ISO 937:1978 (confirmed 1995)	Titrimetry, Kjeldahl digestion	II
Cooked cured ham	Tin	AOAC 985.16 (Codex general method)	Atomic absorption spectrophotometry	II
Cooked cured pork shoulder	Fat	ISO 1443:1973	Gravimetry (extraction)	I
Cooked cured pork shoulder	Gelatin, added	Described in the Standard	Calculation	I
Cooked cured pork shoulder	Lead	AOAC 972.25 (Codex general method)	Atomic absorption spectrophotometry	II
Cooked cured pork shoulder	Nitrites	AOAC 973.31 (Codex general method)	Colorimetry	II

Cooked cured pork shoulder	Nitrites	ISO 2918:1975 (confirmed 1996)	Colorimetry	IV
Cooked cured pork shoulder	Protein	ISO 937:1978 (confirmed 1995)	Titrimetry, Kjeldahl digestion	II
Cooked cured pork shoulder	Tin	AOAC 985.16 (Codex general method)	Atomic absorption spectrophotometry	II
Luncheon meat	Fat	ISO 1443:1973	Gravimetry (extraction)	I
Luncheon meat	Lead	AOAC 972.25 (Codex general method)	Atomic absorption spectrophotometry	II
Luncheon meat	Nitrites, potassium and/or sodium salt	AOAC 973.31 (Codex general method)	Colorimetry	II
Luncheon meat	Nitrites, potassium and/or sodium salt	ISO 2918:1975 (confirmed 1996)	Colorimetry	IV
Luncheon meat	Tin	AOAC 985.16 (Codex general method)	Atomic absorption spectrophotometry	II
Sugars and Honey				
Honey	Acidity	MAFF Validated Method V19 *J. Assoc. Public Analysts* (1992) 28 (4) 171-175	Titrimetry	I
Honey	Moisture	AOAC 969.38B or MAFF Validated Method V21	Refractometry	I
Honey	Sample preparation	AOAC 920.180	-	-
Honey	Solids, water-insoluble	MAFF Validated Method V22 *J. Assoc. Public Analysts* (1992) 28(4) 189-193	Gravimetry	I
Honey	Sugars added (for sugar profile)	AOAC 998.18	Carbon isotope ratio mass spectrometry	I
Honey	Sugars added: detection of corn and cane sugar products	AOAC 978.17	Carbon isotope ratio mass spectrometry	I
Sugars (dextrose anhydrous and dextrose monohydrate)	D-Glucose	ISO 5377:1981	Titrimetry	I

Sugars (dextrose anhydrous and dextrose monohydrate)	Solids, total	ISO 1741:1980	Gravimetry (vacuum oven)	I
Sugars (dextrose anhydrous and dextrose monohydrate, dried glucose syrup, glucose syrup, powdered dextrose, lactose)	Sulphated ash	ISO 5809:1982	Single sulphonation	I
Sugars (dextrose anhydrous and dextrose monohydrate)	Sulphur dioxide	ISO 5379:1983	Acidimetry and nephelometry	IV
Sugars (fructose)	pH	ICUMSA GS 1/2/3/4/7/8-23 (1994)	Potentiometry	I
Sugars (fructose)	Conductivity ash	ICUMSA GS 2/3-17 (1994)	Conductimetry	I
Sugars (fructose)	D-Fructose	ISO 10504:1988	Liquid chromatography (refractive index detection)	II
Sugars (fructose)	D-Glucose	ISO 10504:1988	Liquid chromatography (refractive index detection)	II
Sugars (fructose)	Loss on drying	ISO 1742:1980	Gravimetry	I
Sugars (fructose)	Sulphur dioxide	ISO 5379:1983	Acidimetry and nephelometry	IV
Sugars (glucose syrup and dried glucose syrup)	Reducing sugar	ISO 5377:1981	Titrimetry	I
Sugars (glucose syrup and dried glucose syrup)	Solids, total	ISO 1742:1980	Gravimetry (vacuum oven)	I
Sugars (glucose syrup and dried glucose syrup)	Sulphur dioxide	ISO 5379:1983	Acidimetry and nephelometry	IV
Sugars (lactose)	Lactose, anhydrous	ICUMSA GS 4/3-3 (1994)	Titrimetry	II
Sugars (lactose)	Loss on drying	USP General Chapter 731	Gravimetry (Drying at 120°C for 16 h)	I
Sugars (lactose)	pH	ICUMSA GS 1/2/3/4/7/8-23 (1994)	Potentiometry	I
Sugars (plantation or mill white sugar)	Conductivity ash	ICUMSA GS 1/3/4/7/8-13 (1994)	Conductimetry	I
Sugars (plantation or mill white sugar)	Invert sugar	ICUMSA GS 1/3/7-3 (1994)	Titrimetry (Lane & Eynon)	I

Sugars (plantation or mill white sugar)	Loss on drying	ICUMSA GS 2/1/3-15 (1994)	Gravimetry	I
Sugars (plantation or mill white sugar)	Polarization	ICUMSA GS 1/2/3-1 (1994)	Polarimetry	II
Sugars (plantation or mill white sugar)	Sulphur dioxide	ICUMSA GS 2/3-35 (1998) NMKL 135 (1990) EN 1988-2 (1998)	Enzymatic method	II
Sugars (powdered sugar and powdered dextrose)	Sulphur dioxide	ICUMSA GS 2/3-35 (1998) NMKL 135 (1990) EN 1988-2 (1998)	Enzymatic method	II
Sugars (powdered sugar)	Colour	ICUMSA GS 2/3-9 (1994)	Photometry	I
Sugars (powdered sugar)	Conductivity ash	ICUMSA GS 2/3-17 (1994)	Conductimetry	I
Sugars (powdered sugar)	Invert sugar	ICUMSA GS 2/3-5 (1997) after filtration if necessary to remove any anticaking agents	Titrimetry	I
Sugars (powdered sugar)	Loss on drying	ICUMSA GS 2/1/3-15 (1994)	Gravimetry	I
Sugars (powdered sugar)	Polarization	ICUMSA GS 2/3-1 after filtration if necessary to remove any anticaking agents	Polarimetry	II
Sugars (raw cane sugar)	Sulphur dioxide	ICUMSA GS 2/3-35 (1998) NMKL 135 (1990) EN 1988-2 (1998)	Enzymatic method	II
Sugars (soft white sugar and soft brown sugar)	Conductivity ash	ICUMSA GS 1/3/4/7/8-13 (1994)	Conductimetry	I
Sugars (soft white sugar and soft brown sugar)	Invert sugar	ICUMSA GS 4/3-3 (1994) (applicable at levels >10% m/m)	Titrimetry (Lane & Eynon)	I
Sugars (soft white sugar and soft brown sugar)	Invert sugar	ICUMSA GS 1/3/7-3 (1994) (applicable at levels <10% m/m)	Titrimetry (Lane & Eynon)	I
Sugars (soft white sugar and soft brown sugar)	Loss on drying	ICUMSA GS 2/1/3-15 (1994)	Gravimetry	I
Sugars (soft white sugar and soft brown sugar)	Sucrose plus invert sugar	ICUMSA GS 4/3-7 (1994)	Titrimetry	I
Sugars (soft brown sugar)	Sulphated ash	ICUMSA GS 1/3/4/7/8-11 (1994)	Gravimetry	I

Sugars (soft white sugar and soft brown sugar)	Sulphur dioxide	ICUMSA GS 2/3-35 (1998) NMKL 135 (1990) EN 1988-2 (1998)	Enzymatic method	II
Sugars (soft white sugar)	Colour	ICUMSA GS 2/3-9 (1994)	Photometry	I
Sugars (white sugar)	Conductivity ash	ICUMSA GS 2/3-17 (1994)	Conductimetry	I
Sugars (white sugar)	Invert sugar	ICUMSA GS 2/3-5 (1997)	Titrimetry	I
Sugars (white sugar)	Loss on drying	ICUMSA GS 2/1/3-15 (1994)	Gravimetry	I
Sugars (white sugar)	Polarization	ICUMSA GS 2/3-1 (1994)	Polarimetry	II
Sugars (white sugar)	Sulphur dioxide	ICUMSA GS 2/3-35 (1998) NMKL 135 (1990) EN 1988-2 (1998)	Enzymatic method	II
Miscellaneous Products				
Edible cassava flour	Fibre, crude	ISO 5498:1981 (B.5 separation)	Gravimetry	I
Edible cassava flour	Granularity	ISO 2591-1:1988	Sieving	I
Edible cassava flour	Moisture	ISO 712:1998	Gravimetry	I
Food grade salt	Arsenic	ESPA/CN-E/105-1996	Photometry	II
Food grade salt	Cadmium	ESPA/CN-E/107-1997	Atomic absorption spectrophotometry	II
Food grade salt	Calcium and magnesium	ISO 2482:1973	Complexometric titrimetry	II
Food grade salt	Copper	ESPA/CN-E/101-1994	Photometry	II
Food grade salt	Halogens	ISO 2481:1973	Mercurimetry	II
Food grade salt	Insoluble matter	ISO 2479:1972	Gravimetry	II
Food grade salt	Iodine	ESPA/CN-E/109-1994	Titrimetry using sodium thiosulphate	II
Food grade salt	Iodine	AOAC 925.56	Titrimetry using sodium thiosulphate	III
Food grade salt	Lead	ESPA/CN-E/108-1994	Atomic absorption spectrophotometry	II
Food grade salt	Loss on drying	ISO 2483:1973	Gravimetry (drying at 110°C)	I

Food grade salt	Mercury	ESPA/CN-E/106-1994	Cold vapour atomic absorption spectrophotometry	II
Food grade salt	Potassium	ESPA/CN-E/104-1994 (applicable to products containing ≥2 mg-K/kg)	Flame atomic absorption spectrophotometry	II
Food grade salt	Potassium	ESPA/CN-E/103-1994 (applicable to products containing ≥100 mg-K/kg)	Titrimetry	III
Food grade salt	Sodium chloride	Described in the Standard	Calculation	I
Food grade salt	Sulphate	ISO 2480:1972	Gravimetry	II
Gari	Ash	ISO 2171:1993	Gravimetry	I
Gari	Fibre, crude	ISO 5498:1981 (B.5 separation)	Gravimetry	I
Gari	Granularity	ISO 2591-1:1988	Sieving	I
Gari	Moisture	ICC Method No 109/1 (1986) ISO 712:1998	Gravimetry	I
Guideline level for acrylonitrile	Acrylonitrile	AOAC 985.13	Gas chromatography	II
Guideline levels for mercury in fish	Methyl mercury	AOAC 988.11	Atomic absorption spectrophotometry	II
Guideline levels for vinyl chloride monomer	Vinyl chloride monomer	ISO 6401:1985	Gas chromatography	II
Guideline levels for vinyl chloride monomer	Vinyl chloride monomer	Commission Directive 81/432/EEC O.J. No. L.167, p. 6, 24.6.81	Gas chromatography ("head-space")	III
Guidelines for nutrition labelling	Polyunsaturated fatty acids	AOCS Ce 1h-05[9]	Gas liquid chromatography	II
Guidelines for nutrition labelling	Saturated fat	AOAC 996.06; or AOCS Ce 1h-05	Gas liquid chromatography	II
Guidelines for nutrition labelling	Saturated fatty acids	AOCS Ce 1h-05	Gas liquid chromatography	II

[9] Can also be used to measure *trans* unsaturated fatty acids

PART B

METHODS OF SAMPLING BY ALPHABETICAL ORDER OF COMMODITY CATEGORIES AND NAMES

Commodity Standard	Method of Sampling	Notes
Cereals, Pulses and Legumes and Derived Products		
Durum wheat semolina and durum wheat flour	Described in the Standard (According to Codex Sampling Instructions)	
Wheat protein products including Wheat gluten	ISO 13690:1999	
Fats and Oils		
Olive Oils and Olive-Pomace Oils	ISO 661:1989 and ISO 5555:2001.	
Milk and Milk Products		
Milk products	IDF 50 | ISO 707[10]	General Instructions for obtaining a sample from a bulk
Milk products	IDF 113 | ISO 5538:2004	Inspection by attributes
Milk products	IDF Standard 136A:1992 ISO 8197:1988	Inspection by variables
Butter	IDF 50 | ISO 707	General Instructions for obtaining a sample from a bulk
Cheese	IDF 50 | ISO 707	General Instructions for obtaining a sample from a bulk
Cheeses in brine	IDF 50 | ISO 707	General Instructions for obtaining a sample from a bulk
Edible casein products	IDF 50 | ISO 707	General Instructions for obtaining a sample from a bulk
Creams, Whipped creams and Fermented	IDF Standard 50C:1995	General instructions

[10] *Draft standard which is publicly available*

Creams Fermented Milks	ISO 707:1997 AOAC 968.12	
Evaporated milks	IDF 50 | ISO 707	General Instructions for obtaining a sample from a bulk
Milk powders and cream powders	IDF 50 | ISO 707	General Instructions for obtaining a sample from a bulk
Milkfat products	IDF 50 | ISO 707	General Instructions for obtaining a sample from a bulk
Sweetened condensed milks	IDF 50 | ISO 707	General Instructions for obtaining a sample from a bulk
Whey cheese	IDF 50 | ISO 707	General Instructions for obtaining a sample from a bulk
Whey powders	IDF 113 | ISO 5538:2004	Inspection by attributes
Whey powders	IDF 50 | ISO 707	General Instructions for obtaining a sample from a bulk
Processed Fruits and Vegetables		
Grated desiccated coconut	Described in the Standard (According to Codex Sampling Instruction)	