



Technical Specifications of

RATION

Commodity code: **PPFRTN000**
Version: **16.0**
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This version replaces the version 15.0 and all older versions.

The main changes are:

- 1. Add more tests for Halva*
- 2. Removed Glucono-delta-lactone test for Canned luncheon meat*
- 3. Updated list of tests for whole lentil and chickpeas*
- 4. Add 5 new commodities and its compulsory tests and packaging: 1/Hummus with Tehena, 2/Fruit juice, 3/Extra virgin olive oil, 4/Canned peas and carrot and 5/Couscous*
- 5. Updated bag specification for 5-25kg of Rice, Bulgur Wheat, Split lentil, Whole lentil, Chickpeas, Beans, Wheat flour and carton specification*
- 6. Specified some test methods for: Rice, Bulgur, Pasta, Tomato Paste, Canned Beef, Canned fish (Mackerel, Tuna, Sardine), Canned fava beans, Cheese)*

1. SCOPE

This specification applied for **Ration** that WFP purchase and distribute to beneficiaries. As per contractual agreement, the **Ration** may include some or all of the commodities listed at table 1. The proportion of each commodity in the ration will be specified in the contract.

Table 1: List of commodities of Ration

No	Commodity	No	Commodity
1	White Rice 5%	18	Canned Sardines
2	Bulgur Wheat	19	Canned Fava Beans
3	Split Lentil	20	Canned Chickpeas
4	Whole Lentil	21	Cheddar cheese
5	Chickpeas	22	Cream cheese
6	Beans	23	Black tea
7	Fortified Wheat Flour	24	Dates
8	Pasta (Macaroni, Spaghetti, Vermicelli)	25	Jam
9	White Sugar 150	26	Coffee
10	Iodized Salt	27	Tahini
11	Sunflower Oil	28	Halva
12	Palm oil	29	Hummus with Tehena
13	Tomato Paste	30	Fruit juice
14	Canned Beef	31	Extra virgin olive oil
15	Canned Chicken Luncheon meat	32	Canned peas and carrots
16	Canned Mackerel	33	Couscous
17	Canned Tuna		

2. GENERAL REQUIREMENTS

Unless otherwise specified in the contract, all commodities in the Ration must comply with the following guidelines or standards of Codex Alimentarius:

- Recommended International Code of Practice: General Principles of Food Hygiene CAC/RCP 1-1969 Rev 4 - 2003 including Annex “Hazard Analysis and Critical Control Point (HACCP) System and Guidelines for its application”, of the Codex Alimentarius.
- General principles for addition of essential nutrients to foods: CAC/GL 09-1987 (amended 1989, 1991), of the Codex Alimentarius.
- General standard for the labelling of prepacked foods: CODEX STAN 1-1985, of the Codex Alimentarius.

3. PRODUCT SPECIFICATIONS

Quality of all commodities in the Ration must meet WFP specifications (for certain commodities) at the following link:

<http://foodqualityandsafety.wfp.org/specifications;jsessionid=38613B2681405F4A3938B1F98E66ADB8>)

and local (e.g country standard), international standards (e.g Codex, ISO...) for these commodities.

Specific requirements for packaging, marking and analytical requirements are showed at following paragraphs.

4. SHELF LIFE

Shelf life of commodities shall be specified in the contract.

5. PACKAGING REQUIREMENT

Primary packaging

The products covered by the provisions of this specification must be packed in appropriate packaging which safeguard the hygienic, nutritional, technological, and organoleptic qualities of the product, and fit for storage and multiple handling. Unless otherwise specified in the contracts, primary packaging must comply with general requirements showed in table 2.

Table 2: General requirements for primary packaging

Commodities	Net weight/ volume	Packaging requirements
Rice, Bulgur Wheat, Split lentil, Whole lentil,	< 1kg bags	Laminate 60PE/LDPE+12PETor equivalent. Bags must be well sealed in order to prevent leakage during transport
Chickpeas, Beans, Wheat flour ¹ , Pasta, Sugar, Salt	1 to 5 kg bags	Laminate 80PE/LDPE+12PETor equivalent. Bags must be well sealed in order to prevent leakage during transport
Rice, Bulgur Wheat, Split lentil, Whole lentil, Chickpeas, Beans, Wheat flour	>5 to 25 kg bags ²	<ul style="list-style-type: none"> - Bags made of woven PP are to be given special food grade “ultraviolet” treatment. - Bags have a heat cut mouth to prevent fibrillation and have sewn single folder bottom. - Bags must be closed by double stitching with suitable thread. - Bags must be clean, sound and free from insect, fungal infestation. - Bags must be new, uniform, strong, fit for export and multiple handling. - Construction of fabric must be solid to sustain harsh handling. - Density (grammage): minimum 92 g/square meter. - Dimension and weight: much be suitable and fit to the net weight of product. <p>The bags of the product must pass the drop test (after each drop, there shall be no rupture or loss of contents) following the principles of the drop test standard (EN 277, ISO 7965-2 or equivalent) with following sequence:</p> <ul style="list-style-type: none"> - Butt dropping: Bag is dropped from a height of 1.20m on the bottom and the top of the bag.

¹ Rice, Bulgur Wheat, Split lentil, Whole lentil, Chickpeas, Beans, Wheat flour can be packed in same packaging for >5-25kg bags

² Do not include in the secondary packaging. Two percent of spare printed bags as per marking requirements must be shipped along with the cargo and included in the price.

		- Flat dropping: Bag is dropped from a height of 1.60m twice on one flat face and twice on the opposite flat face.
Oil	1.0 or 1.5 litres bottle	Made of Polyethylene Terephthalate (PET). They shall be hermetically closed thanks to a safety device. PET bottles shall be suitable for foodstuff, clean and free from any abnormal odor.
	3 to 5 litres jerry cans (plastic)	High Density Polyethylene (HDPE), with heat-sealed membranes and screw-top lids. They shall be made by blow-molding and be seamless so that they can not leak (except at the closure) unless ruptured. The containers must be suitable for foodstuffs, have stoppers fitted with safety devices and must be hermetically sealed. The containers shall have two flat walls, a built-in handle and a screw top. <u>Specifications:</u> - Material: HDPE - Color: white/translucent - Net weight: 200gm minimum for 5 litres empty jerry cans. - Rated capacity: 3.0 or 5.0 litres - Screw cap with inner plug Typical wall thickness: 1.0 mm (middle of side panels)
Tomato paste Canned fish Canned beef	0.2 to 0.5 kg can	The metal containers (tins) must be coated internally and externally with lacquers appropriate for the product. Specifications and guarantees for the material, lacquers and other treatments used shall be available. Likewise, the facility must obtain the acceptable ranges and limits for the double seam dimensions and other characteristics of the filled can specific to the can type, size and supplier. Together with fill standards required for the product, these specifications will be used to ensure the finished product is hermetically sealed during the seaming operation.
Canned beans, chickpeas	0.5 to 1.0 kg can	
Juice	As per contractual agreement	Tetra Pak bottle
Cheese, Jame, dates, Tahini, Tee, Coffee, Halva, Hummus with tehena, Couscous	As per contractual agreement	As per contractual agreement

Secondary packaging

Unless otherwise specified in the contracts, except >5kg bags of Rice, Bulgur Wheat, Split lentil, Whole lentil, Chickpeas, Beans, all commodities of the **Ration** shall be packed in one carton box of strong, uniform, fit for storage and multiple handling. General requirements for carton box is showed in table 3.

All weak, torn, dirty, used or unserviceable cartons to be rejected outright and shall be replaced at supplier's cost.

Two percent of spare printed carton as per marking requirements must be shipped along with the cargo and included in the price.

Table 3: Requirements for Carton

Net weight	Packaging requirements
Max. 20kg	<p>New, strong cardboard cartons, manufactured from well-constructed double walled corrugated board (5 ply) with a grammage of minimum 900 grams per square meter.</p> <ul style="list-style-type: none"> - Edge crush resistance of carton shall be minimum 12 kN/m. - Carton seams should be glued, stapled. <p>Cartons shall be fully filled and stacked well for maximum strength. Slip sheets or plywood should be placed inside each container to provide the required stacking strength. Pallets with appropriate stacking configuration could also be used.</p>

5. MARKING

Requirements for bags, cans and cartons... shall be specified in the contract.

6. ANALYTICAL REQUIREMENTS

The principal tests in table 4-35 must be performed in order to check if the quality of commodities in the **Ration** meets WFP requirements. Additional tests may be defined in case of further quality assessment is required.

List of tests of commodities in the **Ration** would be updated and showed at:

<http://foodqualityandsafety.wfp.org/specifications;jsessionid=38613B2681405F4A3938B1F98E66ADB8>

Table 4: List of compulsory tests and reference method for RICE 5% (Version 14.1_For Syria)

No	Tests	Requirements	Reference method (or equivalent; Latest version)
1	Moisture	Max. 14.0 %	ISO 712
2	Protein content	Min 7.0 %	ISO 20483
3	Ash content (total ash)	Max. 0.5 %	ISO 2171
4	Damaged and yellow kernels	Max. 0.45 %	ISO 7301
5	Rotten kernels	Max. 0.5 %	
6	Unripe and red kernels	Max. 2.0 %	
7	Chalky kernels	Max. 3.0 %	
8	Broken kernels	Max. 5.0 %	
9	Paddy kernels	Max. 0.01 %	
10	Extraneous matter	Max. 0.15 %	
11	Dead insect (in part or whole)	Max. 30 per 100kg	
12	Live insect	Nil	

13	Arsenic (inorganic)	Max. 0.2 ppm	http://www.fda.gov/Food/FoodScienceResearch/LaboratoryMethods/ucm328363.htm
14	Cadmium	Max. 0.4 ppm	AOAC 999.10
15	Pesticide residues	Shown at: http://www.codexalimentarius.net/pestres/data/commodities/details.html?id=158	EU 15662
16	Phoxim	Max 0.01 mg/kg	ISO 78-2
17	Methyl bromide	Max 0.01 mg/kg	BS EN 13191-1
18	Ochratoxin A	Max. 5.0 ppb	AOAC 2000.3
19	Milling degree	Well milled	ISO 7301
20	Organoleptic quality	Natural odour, colour, bright appearance	Visual inspection
21	Average kernel length (<i>only if required</i>)	As per contractual agreement	

Table 5: List of compulsory tests and reference method for BULGUR WHEAT (WFP spec reference: V13.0, 20 September 2013)

No	Tests	Requirements	Reference method (or equivalent; Latest version)
1	Moisture	13.0 % max. (by weight)	ISO 712
2	Organoleptic	Natural smell, taste and color	Organoleptic examination
	<i>Kernel Size (unless otherwise specified in the contract)</i>		
3	- Over 2.5mm	1.0% max. (by weight)	
4	- Between 1.5mm- 2.5mm	98.5% max. (by weight)	
5	- Under 1.5mm	0.5% max. (by weight)	
6	Purity	99.9% min. (by weight)	Visual examination
7	Impurities	0.1% max. (by weight)	Visual examination
8	Scorched kernel (whole, or parts)	0.2% max. (by weight)	Visual examination
9	Ungelatinized kernels	1.0% max. (by weight)	Visual examination
10	Total ash	1.75% max. (by weight, on dry basis)	ISO 2171
11	Ash insoluble in acid	0.3% max. (by weight, on dry basis)	ISO 5985

12	Protein	9.3% min. (<i>by weight, on dry basis</i>)	AOAC 981.10 ISO 20483
13	Crude fibres	2.3% max. (<i>by weight, on dry basis</i>)	AOAC 962.09
14	Mesophyllic aerobic bacteria	10,000 cfu per g max.	ICC No 125
15	Coliforms	100 cfu per g max.	AACC 42-11
16	Salmonella	0 cfu per 25g max.	AOAC 2005.03
17	Escherichia Coli	<10 cfu per g max.	AACC 42-25B
18	Yeasts and moulds	1,000 cfu per g max.	ICC No 146
19	GMO (<i>only if required</i>)	< 0.9% of GMO material	ISO 21570 PCR quantitative

Table 6: List of compulsory tests and reference method for SPLIT LENTIL (WFP spec reference: V1.0, 27 March 2011)

No	Tests	Requirements	Reference method (or equivalent; Latest version)
1	Moisture	12% max	ISO 24557
2	Total damage	2% max	ISO 605
3	Total foreign material	1% max	
4	Unhusked grains	1% max	
5	Broken	2% max	
6	Discoloured	1% max	
7	Cooking time	15 minutes (no soaking)	
8	Organoleptic	Clean and bright appearance, Natural smell	ISO 605
9	Live insect	Nil Visual	
10	Aflatoxin (total)	20 ppb max	ISO 16050
11	GMO (only if required)	< 0.9% of GMO material	ISO 21570 PCR quantitative

Table 7: List of compulsory tests and reference methods for WHOLE LENTIL (WFP spec reference: V15.0, 15 December, 2015)

No	Tests	Requirements	Reference methods (or equivalent- Latest version)
1	Organoleptic characteristic	Bright and clear appearance, Normal smell and colour	Organoleptic examination
2	Moisture	MAX. 14.0 %, m/m	ISO 24557
3	Other colour grains	MAX. 5.0 %, m/m	Visual examination
4	Insect damaged grains	MAX. 1.0 %, m/m	ISO 605
5	Other damaged grains (Peeled, split, broken,	MAX. 3.5 %, m/m	

	<i>immature, heated, sprouted, diseased...)</i>		
6	Total damaged grains (<i>Insect damaged grains+ Other damaged grains</i>)	MAX. 3.5 %, m/m	
7	Inorganic matter	MAX. 0.2 %, m/m	
8	Filth	MAX. 0.1 %, m/m	
9	Live insects	Nil	
10	Dead insect (whole or fragment)	MAX. 10 /kg	
11	Toxic-noxious seeds	Free	
12	Total foreign matter (<i>Organic matter+ Inorganic matter+ Insects+ other impurities of animal origin</i>)	MAX. 1.0 %, m/m	
13	Size	As per contractual agreement	
14	Varieties (<i>only if required</i>)	As per contractual agreement	
15	Total aflatoxin (B1+B2+G1+G2) (<i>only if required</i>)	MAX. 20.0 ppb	ISO 16050
16	GMO (<i>only if required</i>)	< 0.9 % of GMO material in total lentil DNA	Quantitative PCR- ISO 21570

Table 8: List of compulsory tests and reference methods for CHICKPEAS (WFP specification V16.0, 15 January, 2016)

No	Tests	Requirements	Reference methods (or equivalent- Latest version)
1	Organoleptic characteristic	Bright and clear appearance, Normal smell and colour	Organoleptic examination
2	Moisture	MAX. 14.0 %, m/m	ISO 24557
3	Other colour chick peas	MAX. 5.0 %, m/m	Visual examination
4	Insect damaged chick peas	MAX. 1.0 %, m/m	ISO 605
5	Other damaged chick peas (Peeled, split, broken, immature, discoloured. mouldy...)	MAX. 4.0 %, m/m	
6	Total damaged chick peas (Insect damaged grains+ other damaged grains)	MAX. 4.0 %, m/m	
7	Inorganic matter	MAX. 0.2 %, m/m	

8	Filth	MAX. 0.1 %, m/m	
9	Live insect	Nil	
10	Dead insect (whole or fragment)	MAX. 3 /kg	
11	Toxic-noxious seeds	Free	
12	Total foreign matter (Organic matter+ Inorganic matter+ Insects+ other impurities of animal origin)	MAX. 1.0 %, m/m	
13	Size: ≥ 6 mm diameter	MIN. 95.0 % m/m	
14	Size: < 6 mm diameter	MAX. 5.0 % m/m	
15	Total aflatoxin (B1+B2+G1+G2) (<i>only if required</i>)	MAX. 20.0 ppb	ISO 16050
16	Varieties (<i>only if required</i>)	As per contractual agreement	ISO 605
17	GMO (<i>only if required</i>)	Negative (< 0.9% of GMO material)	ISO 21570

Table 9: List of compulsory tests and reference methods for BEANS

No	Requirements	Maximum limits	Reference method (or equivalent; Latest version)
1	Foreign matter, % m/m	0.75	ISO 605
2	Inorganic matter, % m/m	0.2	
3	Other edible grains, % m/m	0.2	
4	Pest damaged grains, % m/m	2.0	
5	Heat damaged grains, % m/m	0.2	
6	Contrasting varieties, % m/m	1	
7	Broken/split, % m/m	2.0	
8	Discoloured, % m/m	1.0	
9	Total defectives grains, % m/m	3.5	
10	Filth, % m/m	0.1	
11	Moisture, % m/m	14.0	ISO 24557
12	Total aflatoxin (AFB1+AFB2+AFG1+AFG2), ppb	10.0	ISO 16050
13	Live insect	Nil	ISO 605
14	Cooking test	90 minutes for 12hrs soaking	
15	Organoleptic quality	Clean and bright appearance, Natural odour	ISO 605
16	Colour and/or varieties	As per contractual agreement	

Table 10: List of compulsory tests and reference method for FORTIFIED WHEAT FLOUR (WFP spec reference: V4.0, 23 May 2011)

No	Tests	Requirements	Reference method (or equivalent; Latest version)
1	Organoleptic	Pleasant smell; Typical taste and color	Organoleptic examination
2	Moisture content	14 % maximum	ISO 712
3	Ash	0.65% maximum of dry matter	ICC No. 104
4	Protein	11 % minimum of dry matter	ICC No. 105
5	Zeleny index	30 ml minimum	ICC No 116 & 118 ISO 5529
6	Delayed sedimentation	Zeleny value + 5 ml minimum	
7	Hagberg Falling Number (HFN)	230 min. (incl. 60 sec preparation)	ICC No 107 ISO 3093
8	Wet gluten	28 % minimum	AACC 38-12A ICC No 155 ISO 21415-1
9	Gluten index	85 % minimum	ICC 155 AACC 3812
Chopin Alveograph			
10	W	215 minimum	ISO 27971
11	P	80 minimum	
12	L	80 minimum	
13	Fatty acid	maximum 120 mg KOH per 100 gram dry matter	ISO 7305
14	Vitamin A (from premix only)	1.0 mg/kg	AOAC 992.04 AACC 86-03
15	Iron (from premix only)	15.0 mg/kg	AOAC 944.02 AACC 40-41B

Table 11: List of compulsory tests and reference method for PASTA (WFP spec reference: V14.0, 21 July 2014) (applicable for Macaroni, Spaghetti, Vermicelli)

N°	Tests	Requirements	Reference method (or equivalent; Latest version)
1	It should be homogenous in colour and shape, free of spots. Free of off smell, moulds, foreign material and insects.	Comply	<i>Organic, visual examination</i>
2	Length	As per contractual agreement	<i>Measurement</i>
3	Diameter	As per contractual agreement	<i>Measurement</i>
4	Thickness	As per contractual agreement	<i>Measurement</i>

5	Cooking test	The product holds its shape and texture after boiling it for 10 minutes.	<i>Cooking</i>
6	Broken	3.0% max. by weight	<i>Visual examination</i>
7	Moisture	13.0% max. by weight	<i>ISO 712</i>
8	Protein	10.5-12.0% by weight	<i>ISO 20483</i>
9	Ash	0.9% max. by weight in dry matter	<i>ISO 2171</i>
10	Cellulose	0.5% max. by weight	
11	Ash insoluble in acid of dry matter	0.15% max. by weight	<i>AOCS Ba 5b-68</i>
12	Soluble solids	8.0% max. by weight	
13	Sodium and potassium salts	1.0% max. by weight	
14	Acidity (mg KOH per 100g dry matter)	4.0 max.	<i>ISO 7305</i>
15	Arsenic (As)	1.0 mg/kg max.	<i>AOAC 986.15</i>
16	Lead (Pb)	2.0 mg/kg max.	<i>AOAC 999.11</i>
17	Mercury (Hg)	1.0 mg/kg max.	<i>AOAC 971.21</i>
18	Total plate count	10,000 cfu/g max.	<i>ICC No 125</i> <i>AACC 42-11</i>
19	Salmonella (per 25g)	0 cfu/25g	<i>AACC 42-25B</i>
20	Escherichia Coli	0 cfu/g	<i>AOAC 991.14</i>
21	Staphylococcus aureus	0 cfu/g	<i>AACC 42-30B</i>
22	Yeast & Moulds	200 cfu/g max.	<i>ICC No 146</i> <i>AACC 42-50</i>
23	GMO (<i>only if required</i>)	< 0.9% of GMO material	ISO 21570 PCR quantitative

Table 12: List of compulsory tests and reference method for WHITE SUGAR 150 (WFP spec reference: V14.0, 20 February 2014)

No	Tests	Requirements	Reference method (or equivalent; Latest version)
1	Taste	Natural	Sensorial examination
2	Smell	Natural	Sensorial examination
3	Colour of the solution	150 ICUMSA units max	ICUMSA Method GS 2/3-10 (2011)
4	Moisture content	0.10% m/m max	ICUMSA Method GS 2/1/3/9-15 (2007)
5	Conductivity ash	0.10% m/m max	ICUMSA Method GS 2/3/9-17 (2011)
6	Polarization	99.5°Z min	ICUMSA Method GS 1/2/3/9-1 (2011)
7	Invert sugar content	0.10% m/m max	ICUMSA Method GS 2/3/9-5 (2011)

8	Coliforms	10 cfu/10g max	ISO 4832
9	Salmonella	Absent in 25 g	ISO 6759
10	Yeast and Mould	20 cfu/10g max	ICUMSA Method GS 2/3-47 (1998)
11	Sulphur dioxide (SO ₂)	70 mg/kg max	ICUMSA Method GS 2/1/7/9-33 (2011)
12	Arsenic (As)	0.5 mg/kg max	ICUMSA Method GS 2/3/9-25 (2007)
13	Lead (Pb)	0.5 mg/kg max	ICUMSA Method GS 2/3-24 (1998)
14	Copper (Cu)	1.0 mg/kg max	ICUMSA Method GS 9-9 (2013)

Table 13: List of compulsory tests and reference method for IODIZED SALT (WFP spec reference: V13.1, 26 March 2013)

No	Tests	Requirements	Reference method (or equivalent; Latest version)
1	Organoleptic	- Normal smell - Colour: white - 10g of salt in 100ml water shall give a colourless solution having a neutral reaction	
2	Particle size	- min 85 % pass through 1.00 mm sieve - max 20 % pass through 0.212 mm sieve Or: as per specified in the purchase contract.	
3	Sodium chloride (NaCl)	Min 97.0 % (m/m, on dry matter)	ISO 2481
4	Moisture content	Max 3.0 % (m/m)	ISO 2483
5	Water insoluble matter	Max 0.2 % (m/m)	ISO 2479
6	Iodine	30.0 – 50.0 mg/kg	ESPA/CN 109/84
7	Alkalinity (as Na ₂ CO ₃)	Max 0.1 % (m/m)	ISO 3196
8	Acid insoluble matter	Max 0.15 % (m/m)	ISO 2479
9	Sulphate (as SO ₄)	Max 0.5 % (m/m)	ISO 2480
10	Arsenic (As)	Max 0.5 mg/kg	ECSS/SC 312-1982
11	Copper (Cu)	Max 2.0 mg/kg	ECSS/SC 144-1977
12	Lead (Pb)	Max 2.0 mg/kg	ECSS/SC 313-1982
13	Cadmium (Cd)	Max 0.5 mg/kg	ECSS/SC 314-1982

14	Mercury (Hg)	Max 0.1 mg/kg	ECSS/SC 312-1982
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Table 14: List of compulsory tests and reference method for SUNFLOWER OIL (WFP spec reference: V2.0, 20 May 2011)

No	Tests	Requirements	Reference method (or equivalent; Latest version)
1	Organoleptic	Neutral/bland taste; absence of foreign odours and flavours	Organoleptic examination
2	Moisture and volatile matter	0.2% maximum	ISO 662
3	Insoluble impurities	0.05% maximum	ISO 663
4	Free fatty acid	0.15% maximum expressed as oleic acid	ISO 18395
5	Acid value	0.6 mg maximum of KOH/g oil	ISO 660
6	Color	5-1/4 inch Lovibond cell Red: 1.5 maximum Yellow: 15 maximum	BS 684-1.14
7	Soap content	0.005% maximum	AOCS Cc 15-60
8	Peroxide number	2 milliequivalents maximum of active oxygen per kg oil	ISO 3960
9	Saponification value	188-194 mg KOH/g oil	ISO 3657
10	Iodine value	118– 141 g / 100g oil	ISO 3961
11	Unsaponifiable matter	1.5% maximum	ISO 18609
12	Refractive index (ND 40 °C)	1.461 – 1.468	ISO 6320
13	Relative density (20°C /water at 20°C)	0.918 – 0.923	AOCS 10c-95
14	Vitamin A	24000– 36000 UI per kg oil	AOAC 2001.13
15	Vitamin D	2400 – 3600 UI per kg oil	AOAC 2002.05

Table 15: List of compulsory tests and reference method for PALM OLEIN OIL (WFP spec reference: V2.0, 20 May 2011)

No	Tests	Requirements	Reference method (or equivalent; Latest version)
1	Organoleptic	Neutral/bland taste; absence of foreign odours and flavours	Organoleptic examination

2	Moisture and volatile matter	0.2% maximum	ISO 662
3	Insoluble impurities	0.05% maximum	ISO 663
4	Free fatty acid	0.1% maximum expressed as palmitic acid	ISO 18395
5	Acid value	0.6 mg maximum of KOH/g	ISO 660
6	Color	5-1/4 inch Lovibond cell Red: 3 maximum Yellow: 30 maximum	BS 684-1.14
7	Soap content	0.005% maximum	AOCS Cc 15-60
8	Peroxide value	2 milliequivalents maximum of active oxygen per kg of oil	ISO 3960
9	Melting point	24°C maximum	ISO 6321
10	Saponification	194 - 202 mg KOH per g oil	ISO 3657
11	Iodine value	55 - 60 g per 100g oil	ISO 3961
12	Unsaponifiable matter	1.3% maximum	ISO 18609
13	Refractive index (ND 40°C)	1.458 – 1.460	ISO 6320
14	Relative density (40°C /water at 20°C)	0.889 – 0.920	AOCS 10c-95
15	Vitamin A	24000– 36000 UI per kg oil	AOAC 2001.13
16	Vitamin D	2400 – 3600 UI per kg oil	AOAC 2002.05

Table 16: List of compulsory tests and reference method for TOMATO PASTE (WFP spec reference: V1.0, 26 May 2011)

No	Tests	Requirements	Reference method (or equivalent; Latest version)
1	Organoleptic	Normal/typical taste and odor. Absence of burnt taste, fermented taste and smell.	Organoleptic examination
2	Concentration (Brix)	28% minimum	ISO 2172
3	Consistency by Bostwick (at 12 Brix, at 300C)	4-11 cm/30s	
4	Colour (at 12 Brix)	2 minimum Gardner Color Scale	
5	pH	4.5 maximum	ISO 1842
6	Acidity	7% maximum	ISO 7305
7	Sugar (at dry matter)	42% minimum	ISO 3634
8	Salt	2% maximum	ISO 3634

9	Total Coliform	10 cfu/g maximum	AOAC 2005.03
10	Escherichia Coli	Absent	AOAC 991.14
11	Salmonella	Absent	ISO 6579
12	Staphylococcus aureus	Absent	AOAC 975.55
13	Lysteria monocytogenes	Absent	AOAC 993.09
14	Bacillus cereus	50 cfu per g maximum	AOAC 980.31
15	Howard mould count	60% maximum	AOAC 965.41

Table 17: List of compulsory tests and reference method for CANNED BEEF (WFP spec reference: V1.0, 30 March, 2010)

N o	Tests	Requirements	Reference method (or equivalent; Latest version)
Nutrition value			
1	Moisture	65% max	AOAC 950.46
2	Protein	13.0% min	AOAC 992.15
3	Fat	18% max	AOAC 960.39
4	Ash	2.5% max	AOAC 920.153
5	Organoleptic (texture, color, smell, taste)		
Food additives		<i>Max</i>	
6	Salt	3%	AOAC 935.47
7	Sodium nitrite	100 mg/kg	ISO/DSI 2918
8	Carbonhydrates	8%	By difference: % CHO= 100%- (%moisture+ % protein+% fat+% ash)
9	Ascorbic acid	300 mg/kg	AOAC 967.22
10	Starch	6 %	AOAC 996.11
Can			
11	Net weight	700/800g	CODEX STAN 119 - 1981, REV. 1 – 1995
12	Incubation test		BAM Chapter 21A
13	Seam check (vacuum, seam thickness, seam length, countersink depth, cover hook, body hook, actual overlap, % overlap, body hook butting, free space, tightness)		BAM Chapter 21A
Microbiology		<i>Max (CFU/g)</i>	
14	Total of yeast and moulds	0	AOAC 997.02
15	Total coliforms	0	ISO 4831 : 1993
16	Escherichia Coli	0	AOAC 986.33
17	Salmonella	0	ISO 6888 : 1993
18	Staphylococcus aureus	0	AOAC 2003.07
19	Clostridium botulinum	0	AOAC 977.26
20	Clostridium perfringens	0	ISO 7937: 1985

Chemical contaminants and toxins		<i>Max (mg/kg)</i>	
21	Cadmium (Cd)	0.05	AOAC 945.58
22	Lead (Pb)	0.5	AOAC 934.07
23	Tin (Sn)	250	AOAC 985.16
24	Sudan red dyes (I, II, III and IV)	0	HPLC or LC-MS/MS
Veterinary drugs residues		<i>Max (mg/kg)</i>	
25	Tetracycline	0.1	AOAC 995.09
26	Chloramphenicol	Not detected	ISO 13493: 1998
Hormone residues		<i>Max (mg/kg)</i>	
27	Diethylstilbestrol	0	AOAC 956.10

Table 18: List of compulsory tests and reference method for CANNED LUNCHEON MEAT (Chicken, Beef...)

No	Tests	Requirements		Reference methods (or equivalent; Latest version)
		<i>Tinplate container</i>	<i>Other container</i>	
1	Tin (Sn)	Max. 200 mg/kg	Max. 50 mg/kg	AOAC 985.16
2	Lead (Pb)	Max. 0.5 mg/kg		AOAC 934.07
3	Staphylococcus aureus	Max. 1000 cfu/g		AOAC 980.31
4	Salmonella	Absent in 25 g		ISO 6579
5	E. Coli	Absent in 1 g		AOAC 991.14
6	Fat	Max. 30.0%* or Max. 35.0%**		ISO 1443
7	Salt	Max. 3.0 %		ISO 2481
8	Nitrite, potassium and/or sodium salts	Max. 125 mg/kg		ISO/DIS 2918
9	Ascorbic acid	Max. 500 mg/kg		AOAC 985.33
10	Phosphate (natural + added), (natural Phosphate is calculated as 250 x protein %)	Max. 800 mg/kg (expressed as P2O5)		ISO 13730

* The product with binder
 ** The product without binder and edible offal

Table 19: List of compulsory tests and reference method for CANNED MACKEREL (FSHCFI000, Version 14.1)

No	Tests	Requirements		Reference method (or equivalent; Latest version)
1		200g cans	425g cans	

2	Number of fish (<i>headed, gutted, viscera, tail and fins are removed</i>)	2-4 pieces	5-7 pieces	Visual inspection
3	Net weight	200g	425g	CODEX 119 - 1981, Rev.1-1995
4	Drained weight (60% of net weight)	Min. 120g	Min. 255g	CODEX 119 - 1981, Rev.1-1995
5	Can size and weight	74.1 x 59.0 mm; 29.9g	115.0 x 75.0 mm; 59.0 g	Can manufacturer specifications
6	Fish species	<i>Sardina pilchardus</i> <i>Sardinops melanostictus</i> , <i>S. neopilchardus</i> , <i>S. ocellatus</i> , <i>S. sagax</i> , <i>S. caeruleus</i> , <i>Sardinella aurita</i> , <i>S. brasiliensis</i> , <i>S. maderensis</i> , <i>S. longiceps</i> , <i>S. gibbosa</i> <i>Clupea harengus</i> <i>Clupea bentincki</i> <i>Sprattus sprattus</i> <i>Hyperlophus vittatus</i> <i>Nematalosa vlaminghi</i> <i>Etrumeus teres</i> <i>Ethmidium maculatum</i> <i>Engraulis anchoita</i> , <i>E. mordax</i> , <i>E. ringens</i> <i>Opisthonema oglinum</i>		Visual inspection
7	Organoleptic (texture, color, smell, taste)	Characteristic of fresh fish and good quality fill medium		CAC-GL31-1999
8	- Thermal Process - Incubation Tests	Minimum Fo value, cook schedules		- Temperature distribution, heat penetration study, retort records - GB/T4789.26 (2003); TIS 335; BAM Chapter 21A
9	Seam checks	Specific to can size, type, supplier		Vacuum, overlap, seam records
10	Total Coliform	0 cfu/g		BS 5763:1991 Part 2
11	Escherichia Coli	0 cfu/g		AOAC 966.23B,
12	Salmonella	Absence (in 25g of sample)		ISO 6579:2002
13	Staphylococcus aureus	Absence (in 25g of sample)		AOAC 975.55
14	Lysteria monocytogenes	Absence (in 25g of sample)		AOAC 993.09 AOAC 994.03
15	Mercury (Hg)	Max. 0.5ppm		AOAC 977.15
16	Cadmium (Cd)	Max. 0.05ppm		AOAC 945.58
17	Lead (Pb)	Max. 0.5ppm		AOAC 972.23
18	Inorganic Arsenic (As)	Max. 1.0ppm		AOAC 986.15
19	Tin (Sn)	Max. 200ppm		AOAC 985.16
20	Melamine	Max. 250ppm		ELISA AgraQuant® kit. Romer Labs. http://www.romerlabs.com/pdts_kits.htm
21	Para red	Absence		HPLC or LC-MS/MS
22	Rhodamine	Absence		HPLC or LC-MS/MS
23	Sudan red dyes (I, II, III and IV)	Absence		HPLC or LC-MS/MS
24	Histamine	Max. 10 mg/100 g		AOAC977.13

Table 20: List of compulsory tests and reference method for CANNED TUNA

No	Tests	Requirements	Reference method (or equivalent; Latest version)
1	Fish species	<ul style="list-style-type: none"> - Thunnus alalunga - Thunnus albacares - Thunnus atlanticus - Thunnus obesus - Thunnus maccoyii - Thunnus thynnus - Thunnus tongoe - Euthynnus affinis - Euthynnus alleteratus - Euthynnus lineatus - Katsuwonus pelamis (syn. Euthynnus pelamis) - Sarda chilensis - Sarda orientalis - Sarda Sarda 	Visual inspection
2	Organoleptic (texture, color, smell, taste)	Characteristic of fresh fish and good quality fill medium	CAC-GL31-1999
3	Type (Skin-on, skinless; Chunk, Flake, grated)	As per contractual agreement	
4	Net weight	As per contractual agreement	CODEX 119 - 1981, Rev.1-1995
5	Drained weight	Min. 60% of net weight	CODEX 119 - 1981, Rev.1-1995
6	Can size and weight	As per contractual agreement	Can manufacturer specifications
7	- Thermal Process	Minimum Fo value, cook schedules	- Temperature distribution, heat penetration study, retort records
	- Incubation Tests		- GB/T4789.26 (2003); TIS 335; BAM Chapter 21A
9	Seam checks	Specific to can size, type, supplier	Vacuum, overlap, seam records
10	Total Coliform	0 cfu/g	BS 5763:1991 Part 2
11	Escherichia Coli	0 cfu/g	AOAC 966.23B, BS 5763:1991 Part 8
12	Salmonella	Absence (in 25g of sample)	ISO 6579
13	Staphylococcus aureus	Absence (in 25g of sample)	AOAC 975.55
14	Lysteria monocytogenes	Absence (in 25g of sample)	AOAC 993.09 AOAC 994.03
15	Mercury (Hg)	Max. 0.5ppm	AOAC 977.15
16	Cadmium (Cd)	Max. 0.05ppm	AOAC 945.58
17	Lead (Pb)	Max. 0.5ppm	AOAC 972.23
18	Inorganic Arsenic (As)	Max. 1.0ppm	AOAC 986.15
19	Tin (Sn)	Max. 200ppm	AOAC 985.16
20	Melamine	Max. 250ppm	ELISA AgraQuant® kit. Romer Labs. http://www.romerlabs.com/pdts_kits.htm
21	Para red	Absence	HPLC or LC-MS/MS

22	Rhodamine	Absence	HPLC or LC-MS/MS
23	Sudan red dyes (I, II, III and IV)	Absence	HPLC or LC-MS/MS
24	Histamine	Max. 10 mg/100 g	AOAC977.13

Table 21: List of compulsory tests and reference method for CANNED SARDINES

No	Tests	Requirements		Reference method (or equivalent; Latest version)
		200g cans	425g cans	
1	Number of fish (<i>headed, gutted, viscera, tail and fins are removed</i>)	1-2 pieces	3-4 pieces	Visual inspection
2	Net weight	200g	425g	CODEX 119 - 1981, Rev.1-1995
3	Drained weight (60% of net weight)	Min. 120g	Min. 255g	CODEX 119 - 1981, Rev.1-1995
4	Can size and weight	74.1 x 59.0 mm; 29.9g	115.0 x 75.0 mm; 59.0 g	Can manufacturer specifications
5	Fish species	<i>Sardina pilchardus</i> <i>Sardinops melanostictus</i> , <i>S. neopilchardus</i> , <i>S. ocellatus</i> , <i>S. sagax</i> , <i>S. caeruleus</i> , <i>Sardinella aurita</i> , <i>S. brasiliensis</i> , <i>S. maderensis</i> , <i>S. longiceps</i> , <i>S. gibbosa</i> <i>Clupea harengus</i> <i>Clupea bentincki</i> <i>Sprattus sprattus</i> <i>Hyperlophus vittatus</i> <i>Nematalosa vlaminghi</i> <i>Etrumeus teres</i> <i>Ethmidium maculatum</i> <i>Engraulis anchoita</i> , <i>E. mordax</i> , <i>E. ringens</i> <i>Opisthonema oglinum</i>		Visual inspection
6	Organoleptic (texture, color, smell, taste)	Characteristic of fresh fish and good quality fill medium		CAC-GL31-1999
7	- Thermal Process - Incubation Tests	Minimum Fo value, cook schedules		- Temperature distribution, heat penetration study, retort records - GB/T4789.26 (2003); TIS 335; BAM Chapter 21A
8	Seam checks	Specific to can size, type, supplier		Vacuum, overlap, seam records
9	Total Coliform	0 cfu/g		BS 5763:1991 Part 2
10	Escherichia Coli	0 cfu/g		AOAC 966.23B,
11	Salmonella	Absent (in 25g of sample)		ISO 6579
12	Staphylococcus aureus	Absent (in 25g of sample)		AOAC 975.55
13	Lysteria monocytogenes	Absent (in 25g of sample)		AOAC 993.09 AOAC 994.03
14	Mercury (Hg)	Max. 0.5ppm		AOAC 977.15
15	Cadmium (Cd)	Max. 0.05ppm		AOAC 945.58
16	Lead (Pb)	Max. 0.5ppm		AOAC 972.23
17	Inorganic Arsenic (As)	Max. 1.0ppm		AOAC 986.15
18	Tin (Sn)	Max. 200ppm		AOAC 985.16

19	Melamine	Max. 250ppm	ELISA AgraQuant® kit. Romer Labs. http://www.romerlabs.com/pdts_kits.htm
20	Para red	Absent	HPLC or LC-MS/MS
21	Rhodamine	Absent	HPLC or LC-MS/MS
22	Sudan red dyes (I, II, III and IV)	Absent	HPLC or LC-MS/MS
23	Histamine	Max. 10 mg/100 g	AOAC977.13

Table 22: List of compulsory tests and reference method for CANNED FAVA BEANS and CHICKPEAS

No	Tests	Requirements	Reference method (or equivalent; Latest version)
1	Packaging	Should be Sealed in safe healthy containers that are free from material that could react with the product, can coated with anti-sulphur lacquer.	
2	Color, size and other grains	Kernels homogenous in colour, size, and free of other grains	
3	Smell, color and taste of product	Colour / taste (Special) free of abnormalities	
4	Foreign materials, impurities and broken parts	Product should be free of foreign materials, broken pieces and live and/or dead insect or its parts	
5	Cooking and shape	Beans (or Peas) should be mature free of wrinkles	
6	Size and other grains	Bean (or Peas) and liquids should keep its natural colour	
7	Industrial colors	The product must be free of any industrial color	
8	EDTA	Max. 250 mg/kg	
9	Dark part in the surface	Max. 10% of the internal surface	
10	Swelling test	Not detected	
11	Drained weight	Min. 60%	AOAC 968.30
12	Kernels damaged by Insects	Max. 1%	
13	Food Salt	Max. 2%	ISO 3634
14	Pb	Max. 0.1mg/kg	ISO 11212-1, 2, 3, 4
15	Fe	Max. 1.5mg/kg	AOAC 999.11
16	Cu	Max. 0.1mg/kg	AOAC 999.11
17	As	Max. 0.1mg/kg	ISO 11212-1, 2, 3, 4
18	Acidity (Citric acid Based)	Max. 0.5%	ISO 7305
19	Total plate count	<5 cfu/g	AOAC 990.12

Table 23: List of compulsory tests and reference method for CHEDDAR CHEESE

No	Tests	Requirements	Reference method (or equivalent; Latest version)
1	Organoleptic quality	- near white or ivory through to light yellow or orange colour a - firm-textured (when pressed by thumb), smooth and waxy texture - gas holes are absent, but a few openings and splits are acceptable	Organoleptic examination
2	Milk in dry matter	Min. 22.0%	
3	Dry matter	Min. 49.0%	AOAC 925.10
4	Salmonella	Absent in 25g	ISO 6579
5	Enterobacteriaceae	≤100 cfu/g	ISO 21528-2

Table 24: List of compulsory tests and reference method for CREAM CHEESE

No	Tests	Requirements	Reference method (or equivalent; Latest version)
1	Organoleptic quality	- near white through to light yellow colour - texture is spreadable and smooth to slightly flaky and without holes	Organoleptic examination
2	Milk in dry matter	Min. 25.0%	
3	Moisture on fat free basis	Max. 67.0%	
4	Dry matter	Min. 22.0%	AOAC 925.10
5	Salmonella	Absent in 25g	ISO 6579
6	Enterobacteriaceae	≤100 cfu/g	ISO 21528-2

Table 25: List of compulsory tests and reference method for BLACK TEA

No	Tests	Requirements	Reference method (or equivalent; Latest version)
1	Water extract	Min. 32.0%, dry basis	ISO 9768
2	Total ash	4.0-8.0%, dry basis	ISO 1575
3	Water soluble ash (per total ash)	Min. 45.0%, dry basis	ISO 1576
4	Alkalinity of total ash	1-3%, dry basis	ISO 1578
5	Acid insoluble ash	Max. 1.0%, dry basis	ISO 1577
6	Crude fiber	Max. 16.5%, dry basis	ISO 5498
7	Total polyphenol	Max. 9.0%, dry basis	ISO 14502-1

Table 26: List of compulsory tests and reference method for DATES

No	Tests	Requirements		Reference method (or equivalent; Latest version)
		Unpitted dates	Pitted dates	
1	Size	Min. 4.75g/date	Min. 4.0g/date	
2	Pit		Max. 4 pits/100 dates	
3	Moisture	Max. 30.0%, m/m		ISO 24557
4	Mineral impurities	Max. 1.0 g/kg		
5	Blemishes	Max. 7.0% by count		
6	Damaged dates	Max. 6.0% by count		
7	Unripe Dates	Max. 6.0% by count		
8	Unpollinated Dates	Max. 6.0% by count		
9	Dirt	Max. 6.0% by count		
10	Insects and mites	Max. 6.0% by count		
11	Scouring	Max. 1.0% by count		
12	Mould	Max. 1.0% by count		
13	Decay	Max. 1.0% by count		
14	Live insect	Nil		
15	Organoleptic quality	characteristic colour and flavour for the variety and type, be of proper stage of ripeness		
16	Varieties	As per contractual agreement		

Table 27: List of compulsory tests and reference method for JAM

No	Tests	Requirements	Reference method (or equivalent; Latest version)
1	Organoleptic quality	- Appropriate gelled consistency, having normal colour and flavour - Free from defective materials normally associated with fruits	Organoleptic examination
2	Defect	largely free of defects such as plant material skins (if peeled), stones and pieces of stones and mineral matters	Organoleptic examination
3	Soluble solids content	60-65%, m/m	AOAC 932.14C ISO 2173
4	Minimum Fill	Min. 90.0% of the water capacity	CAC/RM 46-1972
5	Salmonella	Absent in 25g	ISO 6579
6	Enterobacteriaceae	≤100 cfu/g	ISO 21528-2
7	Type of fruits	As per contractual agreement	

Table 28: List of compulsory tests and reference method for GROUND COFFEE

No	Tests	Requirements	Reference method (or equivalent; Latest version)
1	Moisture	Max. 5.0%, m/m	ISO 11294
2	Insoluble caffeine	Min. 0.5%, m/m	ISO 20481
3	Soluble ash	Max. 5.0%, m/m	
4	Insoluble ash	Max. 0.1%, m/m	ISO 1576
5	Water soluble matter	Min. 25.0%, m/m	
6	Impurities	Max. 0.3%, m/m	
7	Pass through 0.56mm diameter hole sieve	Min. 30.0%, m/m	
8	Can not pass through 0.25mm diameter hole sieve	Max. 15.0%, m/m	

Table 29: List of compulsory tests and reference method for TAHINI

No	Tests	Requirements	Reference method (or equivalent; Latest version)
1	Colour	Uniform	Organoleptic examination
2	Protein	Min. 17.0%, m/m	AOAC 920.87
3	Fat	Min. 52.0%, m/m	AOAC 920.39
4	Size	<100 microns	
5	Foreign matter	Max. 0.1%, m/m	
6	Moisture	Max. 1.0%, m/m	AOAC 925.10
7	Total plate count	<10,000 cfu/g	ISO 4833
8	Yeasts and Moulds	<100 cfu/g	AOAC 997.02
9	Coliform	<10cfu/g	AOAC 991.14
10	Salmonella	Absent/ 25gr	ISO 6579
11	Enterobacteriaceae	≤100 cfu/g	ISO 21528-2
12	Water activity	Max. 0.6	ISO/CD 18787

Table 30: List of compulsory tests and reference method for HALVA*

No	Tests	Requirements	Reference methods (or equivalent; Latest version)
1	Foreign matter	free from impurities, foreign bodies, pathogens and insects and its parts	Visual examination
2	Smell and Taste	acceptable smell and taste free of molds	Organoleptic examination
3	Characteristics	homogenous crumply texture and easily cut	Visual examination

4	Color	White (slight yellow color is acceptable as well)	Visual examination
5	Moisture	Max. 3.0 %, m/m	AOAC 925.10
6	Total ash	Max. 2.0 %, m/m	ISO 2171
7	Acid insoluble ash	Max. 0.2 %, m/m	ISO 5985
8	Fat	Max. 28.0 %, m/m	AOAC 996.06
9	Total sugar (Glucose Syrup)	Max. 55.0 %, m/m	NEN 3571
10	Saponin	Max. 1.0 %, m/m	HPLC method
11	Zn	Max. 55 mg/kg	AOAC 999.1
12	Mg	Max. 2750 mg/kg	AOAC 974.27
13	Al	Max. 65 mg/kg	J AOAC Int. 2001 Jul-Aug;84(4):1187-93. or ISO 12020
14	Ti	Max. 0 mg/kg	
15	As	Max. 1 mg/kg	AOAC 973.78
16	Pb	Max. 5 mg/kg	AOAC 999.1
17	Cu	Max. 20 mg/kg	AOAC 999.1
18	Staphylococcus aureus	Max. 10 cfu/g	ISO 6888-1, 2, 3
19	Salmonella	Absent in 25g	ISO 6579

* See detail definitions and requirements in: Codex 309R- REGIONAL STANDARD FOR HALWA TEHENIA and recipient country standards/specifications

Table 31: List of compulsory tests and reference method for HUMMUS WITH TEHENA*

No	Tests	Requirements	Reference methods (or equivalent; Latest version)
1	Colour and taste	Colour / taste (Special) free of abnormal	Organoleptic examination
2	Foreign materials	Free of foreign materials and broken pieces	Visual examination
3	Inspect	Mature free from insects	Visual examination
4	Colour of beans and liquids	Bean and liquids should keep its natural colour	Visual examination
5	Negative pressure	0.1-0.42 bar	
6	Oil content	Max. 2.0 %, m/m	AOAC 996.06
7	Acidity (as citric acid)	Max. 1.0 %, m/m	
8	Swelling test	Should not show any sign of swelling after incubation for 10 days in (30-37 C) for non acidic and for 10 days in (25 C) for acidic	
9	Salt	Max. 2.0 %, m/m	ISO 1738
10	Salmonella	0 cfu/25g	ISO 6579
11	Enterobacteriaceae	≤100 cfu/g	ISO 21528-2

12	NON-ANALYSED parameter Teheana content	Min. 8.0 %, m/m	
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* See detail definitions and requirements in: CXS_257R_REGIONAL STANDARD FOR CANNED HUMUS WITH TEHENA and recipient country standards/specifications

Table 32: List of compulsory tests and reference method for FRUIT JUICE*

No	Tests*	Requirements					Reference methods (or equivalent; Latest version)
		Apple	Pear	Apple	Orange	Pineapple	
1	Patulin (Max., mg/kg)	50	-	-	-		ISO 8128-1 or 2
2	Dissolved solid matter (%)	9-11	10-11	9-11	10-13	10-12	AOAC 22.019
3	Taste, Odor and Color	be homogenous with clear aroma, smell and taste					Organoleptic examination
4	Impurities	Free from impurities (dust residues, seed of fruit, insects or their parts...)					Visual examination
5	Salt	Max. 1.0%, m/m					ISO 3634
6	Volatile Acid (reference to acetic acid)	Max. 0.4 g/kg					IFJU no 12 of 1968
7	Vitamin C (ascorbic acid)	Max. 200 mg/kg					AOAC of 43.061 - 43.064
8	pH	Max. 4.4					ISO 1842
9	As	Max. 0.2 mg/kg					ISO 17239
10	Tin	Max. 150.0 mg/kg					AOAC 985.16
11	SO ₂	Max. 10.0 mg/kg					IFJU Method No. 7, 1968
12	Pb	Max. 0.3 mg/kg					ISO 6633
13	Cu	Max. 5.0 mg/kg					AOAC 999.1
14	Zn	Max. 5.0 mg/kg					AOAC 999.1
15	Fe	Max. 15.0 mg/kg					AOAC 999.1
16	Salmonella	0 cfu/25g					ISO 6579
17	Enterobacteriaceae	≤100 cfu/g					ISO 21528-2

* See detail definitions and requirements in: CXS_247_CODEX GENERAL STANDARD FOR FRUIT JUICES AND NECTARS and recipient country standards/specifications

Table 33: List of compulsory tests and reference method for EXTRA VIRGIN OLIVE OIL*

No.	Tests	Requirements	Reference methods (or equivalent; Latest version)
1	Organoleptic characteristics	- Colour, odour and taste must be characteristic of the designated product - Free from foreign and rancid odour and taste	Organoleptic examination
2	Moisture and volatile matter	MAX. 0.2 %, m/m	ISO 662
3	Insoluble impurities	MAX. 0.1 %, m/m	ISO 663
4	Halogenated solvents	MAX. 0.2 mg/kg	ISO 16035
5	Free acidity	MAX. 1.0 %, m/m, expressed as oleic acid	ISO 660
6	Wax	MAX. 250 mg/kg	ISO/TS 23647
7	Absorbency in ultra-violet (at 270 nm)	MAX. 0.25	ISO 3656
8	Peroxide value	MAX. 20.0 milliequivalents of active oxygen/kg oil	ISO 3960
9	Saponification value	184 - 196 mg KOH/g oil	ISO 3657
10	Iodine value	75-94 g/100g oil	ISO 3961
11	Unsaponifiable matter	MAX. 1.5 % m/m	ISO 18609
12	Refractive index (ND 20°C)	1.4677-1.4705	ISO 6320
13	Relative density (20°C /water at 20°C)	0.910 - 0.916	AOCS 10c-95
14	Iron	MAX. 3.0 mg/kg	ISO 8294
15	Copper	MAX. 0.1 mg/kg	
16	Total sterols	Min. 1000mg/kg	COI/T.20/ Doc. No 10
17	Vitamin A	24000 - 36000 IU/kg oil	AOAC 2001.13
18	Vitamin D	2400 - 3600 IU/kg oil	AOAC 2002.05

* See detail definitions and requirements in: CXS_033_CODEX STANDARD FOR OLIVE OILS AND OLIVE POMACE OILS_rev, 2015 and recipient country standards/specifications

Table 34: List of compulsory tests and reference method for CANNED VEGETABLES, PEAS AND CARROT*

No	Tests	Requirements	Reference methods (or equivalent; Latest version)
1	Organoleptic characteristics	Pleasant smell; Typical taste and colour	Organoleptic examination
2	Minimum fill	MIN. 90.0 % of water capacity of the can	ISO 90-1 or ISO 90-2
3	Drained weight	MIN. 62.5 % m/m	AOAC 968.30
4	PEAS: Blemished peas	MAX. 5.0 %, m/m, drained weight of peas	Visual examination, weighing
5	PEAS: Seriously blemished peas	MAX. 1.0 %, m/m, drained weight of peas	
6	PEAS: Pea fragments	MAX. 10.0 %, m/m, drained weight of peas	
7	PEAS: Yellow peas	MAX. 2.0 %, m/m, drained weight of peas	
8	PEAS: Extraneous plant material	MAX. 0.5 % m/m, drained weight of peas	Visual examination, weighing
9	PEAS: Total above defects	MAX. 12.0 %, m/m, drained weight of peas	
10	CARROT: Blemished carrots	MAX. 20 %, m/m, drained weight of carrot	
11	CARROT: Mechanical damage	MAX. 10 %, m/m, drained weight of carrot	
12	CARROT: Malformations	MAX. 20 %, m/m, drained weight of carrot	
13	CARROT: Unpeeled parts (30% or more of the surface is unpeeled)	MAX. 20 %, m/m, drained weight of carrot	
14	CARROT: Fibrous	MAX. 10 %, m/m, drained weight of carrot	
15	CARROT: Black or dark green collar	MAX. 20 %, m/m, drained weight of carrot	Visual examination
16	CARROT: Extraneous plant material	MAX. 1 piece/1000g of total content of carrot in the container	
17	Lead	MAX. 1.0 mg/kg	ISO 6633
18	Tin	MAX. 250 mg/kg	AOAC 985.16
19	Size of peas (if required)	as per contractual agreement	Visual examination
20	Type of carrot (if required)	as per contractual agreement	Visual examination

* See detail definitions and requirements in: CODEX STAN 297-2009_CODEX STANDARD FOR CERTAIN CANNED VEGETABLES_ amendment. 2015 and recipient country standards/specifications

Table 35: List of compulsory tests and reference method for COUSCOUS*

No.	Tests	Requirements	Reference methods (or equivalent; Latest version)
1	Organoleptic criteria	- Homogeneous golden yellow kernel, free from abnormalities and foreign matters. - Typical taste without off flavors - Typical smell without foreign odors	Organoleptic examination
2	Moisture	Max. 13.5 % w/w	ISO 712
3	Swelling ratio	Min. 2	Weight after swelling during 60 minutes in water at 25°C / weight before swelling
4	Ash	Max. 1.1 %	ISO 2171
5	Total Plate Count	Max. 10000 CFU/g	ISO 4833
6	Yeast and mold	Max. 100 CFU/g	ISO 21527-2

* See detail definitions and requirements in:

http://documents.wfp.org/stellent/groups/public/documents/manual_guide_proced/wfp272187.pdf

and recipient country standards/specifications