



World Food
Programme

Technical Specifications for

CANNED MEAT - LUNCHEON MEAT - UKRAINE

Version: 2

Replacing: v.1, 2022

Date of issue: 30.12.2022

Key changes:

The new version of the specification is applicable both to international and local procurement.

1. Introduction

This specification applies to **Canned luncheon meat** (hereafter called the product) purchased for **Ukraine** and distributed by WFP.

2. Standards and references

Except when specified otherwise in the contract, the manufacture, testing, packaging and labelling, of the product shall be in strict compliance with the specifications set forth herein, and with the following standards/guidelines¹ (whichever is stricter). Supplier shall not deviate in any way from the Specifications without WFP's prior written consent.

- CODEX GENERAL PRINCIPLES OF FOOD HYGIENE INCLUDING ANNEX "HAZARD ANALYSIS AND CRITICAL CONTROL POINT (HACCP) SYSTEM AND GUIDELINES FOR ITS APPLICATION" (CXC 1-1969)
- CODEX CODE OF HYGIENIC PRACTICE FOR LOW AND ACIDIFIED LOW ACID CANNED FOODS (CXC 23-1979)
- CODEX CODE OF PRACTICE FOR THE PREVENTION AND REDUCTION OF INORGANIC TIN CONTAMINATION IN CANNED FOODS (CXC 60-2005)
- CODEX GENERAL STANDARD FOR CONTAMINANTS AND TOXINS IN FOOD AND FEED (CXS 193- 1995)
- CODEX GENERAL STANDARD FOR FOOD ADDITIVES (CXS 192-1995)
- CODEX GENERAL STANDARD FOR THE LABELLING OF PREPACKED FOODS (CXS 1-1985)
- CODEX STANDARD FOR LUNCHEON MEAT (CXS 89-1981)
- MAXIMUM RESIDUE LIMITS (MRLS) AND RISK MANAGEMENT RECOMMENDATIONS (RMRS) FOR RESIDUES OF VETERINARY DRUGS IN FOODS (CXM 2)

3. Raw Materials

Product shall be manufactured from ingredients that are fresh, of good quality, free from foreign materials and substances hazardous to health, that comply with Codex Alimentarius and relevant food laws and standards of the originating. The quality of raw materials should be adequate so that the final product will meet all requirements specified in this document.

¹ The latest edition of the referenced below (including any amendments) applies.

The product should be made of chicken (or other poultry) or beef or pork or a mix of these, and as per contract.

The product should contain binders (e.g., carbohydrate and protein), as per Codex Standard (CXS 89-1981).

Nitrite, potassium and/or sodium salts in the product shall not exceed 80 mg/kg.

4. Processing

4.1 Food safety and risk assessment at manufacturing premises

For compliance with Codex standards, the processor shall be able to demonstrate by principle and practice the adoption, implementation and recording of:

- Good Manufacturing Practice
- Hazard Analysis Critical Control Point program
- Global Food Safety Initiative (GFSI) scheme

In this context an appointed WFP staff/ WFP appointed Inspector / Quality Surveyor is entitled to visit the factory without prior notice during any period when WFP product is being manufactured to check that production is done as per WFP contract specification. The Inspector / Quality Surveyor may request to see:

- **Records** (i.e. names of people in charge of the process and quality control, temperatures of the process, mixing times / net contents, cleaning schedules, CCP monitoring, traceability etc.).
- **Procedures** (e.g. cleaning, personnel hygiene, risk assessment and HACCP, environmental monitoring programme, sampling & analysis, product release and control of non-conformance etc.).
- **Instructions** (e.g. process instructions, cleaning instructions, zoning instructions etc.).
- The **quality manual** for the process or factory.
- Conditions in the factory (process rooms, warehouses, laboratories, cloakrooms, factory grounds, utility rooms, etc.)

4.2 Thermal process establishment

The manufacturing facility shall establish the thermal processes used to assure commercial sterility of its canned products through scientific validation studies. Thermal process establishment must consist of two parts: 1) temperature distribution studies specific to the process lines and retort systems used; and 2) heat penetration studies specific to the product form, fill medium, ingredients and can size. The results for such studies must determine how the minimum F_0 value to achieve commercial sterility is achieved when the operating parameters for the facility's cook schedules are followed. The studies shall also determine the critical factors for the thermal process, provide alternative process schedules, document the retort configuration and instrumentation, determine vent schedules and cooling protocols. Retort records must provide proof that these are monitored and complied. Such records shall be reviewed by a trained individual within 24 hours of the completion of the cook. Thermal processes must be established prior to use and validated at a frequency that reflects any changes that may impact the safety of the process or product.

In the absence of such validation triggers, thermal process validation may be done annually or once every two years. The cans should be shelf stable even when stored under tropical conditions (>40 °C). Risk of thermophilic spoilage should be adequately managed by the producer (e.g. appropriate thermal treatment, raw material controls, stability studies).

5. Product Specifications

5.1 General requirements

- The product's organoleptic characteristics shall be characteristics of the designated product
- The product shall comply with requirements stated in Table 3 of this document.

- The product shall contain at least 55% of meat without edible offal. Edible offal means such offals as have been passed as fit for human consumption including lungs (but not if the animal from which the lungs have been taken has been scalded by immersion in hot water) but not including ears, scalp, snouts (including lips and muzzle), mucous membrane, sinews, genital system, udders, intestines and urinary bladder. Edible offal also includes poultry skin.
- The product shall be Halal if required by the contract.

5.2 Contaminants

- The product shall not contain any harmful substances including, but not limited to, micro-organisms, heavy metals, pesticides, mycotoxin, foreign matter or anti-nutritional factors, in amounts that may represent a hazard to health. JEFCA and EFSA evaluations shall be the reference for acceptable limits (whichever is stricter).
- The product shall comply strictly with Codex General Standard for Contaminants and Toxins in Food and Feed (CXS 193-1995)², Codex Maximum Residue Limits for Pesticide Residues³ and guidelines of International commission on microbiological specifications for foods⁴. Additionally, the product shall contain maximum 2.5ppm of Melamine.
- Fit for human consumption guarantee: Suppliers shall manage the quality of their products and guarantee that the product is 'fit for human consumption' and in line with TIC Council/IFIA Guidelines⁵.

5.3 Shelf life

Unless stated otherwise in the contractual agreement, the product shall have minimum 36 months shelf life when stored dry under tropical conditions of storage (>40 °C). The supplier should conduct its own shelf life studies using methods in line with WFP shelf life study requirements⁶.

6. Packaging

6.1 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. Primary packaging must be food grade and comply with general requirements showed in table 1.

Weight and quantity tolerance must meet The International Organization of Legal Metrology International Recommendation OIML R 87⁷.

Table 1: General requirements for primary packaging

Net weight/ volume	Packaging requirements
0.2 to 0.5 kg can (and/or as per contract)	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

² <https://www.fao.org/fao-who-codexalimentarius/codex-texts/list-standards/tr/>

³ <https://www.fao.org/fao-who-codexalimentarius/codex-texts/dbs/pestres/en/>

⁴ <https://www.icmsf.org/publications/books/>

⁵ http://www.ifia-federation.org/content/wp-content/uploads/Fit_for_Human_Consumption_Bulletin_Rev_4.pdf

⁶ <https://foodqualityandsafety.wfp.org>

⁷ OIML R 87 Quantity of commodity in prepackages www.oiml.org/en/files/pdf_r/r087-e16.pdf, latest edition to be followed.

	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.
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6.2 Secondary packaging (not required if foods are purchased as part of a ration, or as per contract)

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 2 Secondary packaging requirements

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>

7. Marking

As per contract. Labels of package and carton must be approved by WFP.

Primary and secondary packaging must be marked with traceability information that allows tracing at least up to day of production.

The labelling of the product shall comply with Codex General Standard For The Labelling Of Prepacked Foods (CX5 1-1985).

8. Stuffing of Containers and other transport vehicles⁸

If pallets⁹ are used for transportation: it is highly recommended to have 3 first bottom layers placed as column stacking, the rest can be interlocked (cross-stacking) for load stability. Pallet shall be wrapped in a suitable manner (locked to the pallet, enough containment force) and the cartons should be banded when necessary. The cartons shall be secured to pallets in order to prevent any damage to the contents or packaging during transport. Pallet used should be strong enough to support the charge during transportation. Pallets shall be stackable (minimum double stock) without damage to the cartons during shipment. The pallets are recommended to be heat treated as per ISPM 15 standards (methyl bromide fumigation is not allowed).

If no pallets are used for transportation: dunnage (of strong sheets such as carton, plywood...) should be placed inside each container/vehicle at every three layers of cartons to provide the required stacking strength. In addition, protecting material like air bag, carton, polystyrene, can be used. Also, kraft paper shall be adhered to all internal sides, door, and floor of container. Kraft paper also need to be placed on the top of packaging.

For transportation, unless fully shrink-wrapped pallets are used, and unless otherwise specified in the contract, it is highly recommended to place desiccant at appropriate location in order to absorb moisture.

Supplier needs to use high quality desiccant and calculate the quantity of desiccant based on:

- Efficiency of desiccant

⁸For more details, please refer to container loading procedure:

https://documents.wfp.org/stellent/groups/public/documents/manual_guide_proced/wfp254688.pdf

⁹ Slip sheet can be used instead of pallets upon agreement with WFP.

- Length of time in transit in container
- Container capacity

Supplier needs to provide in the offer the type of desiccant and quantity to be used for the consignment.

The following table provides a guideline on the quantity to be used:

Table 2: Guideline on the quantity to be used for calcium chloride-based desiccants:

Estimated days in container	20 ft container	40 ft container
15-59 days	9.00 kg	17.50 kg
60-89 days	11.25 kg	22.50 kg
90-120 days	13.50 kg	25.00 kg

Better alternative material can be used upon agreement with WFP.

Empty containers/vehicles shall be clean, pest free and free of damage, odours and previous cargo remains. Ventilation holes shall remain clear and unsealed.

9. Storing

The product shall be stored under dry, ventilated and hygienic conditions and away from direct sunlight.

10. Analytical Requirements

As per contractual agreement, WFP can appoint an inspection company to check that the food matches requirements of this specification. Analytical tests in table 3 are usually utilized, and additional tests might be performed. Suppliers shall follow its own food safety and quality management plan. WFP reserves the rights to change the testing plan at any time.

Table 3: List of compulsory tests and reference method

No	Tests	Requirements		Reference methods (latest versions) ¹⁰
		Tinplate container	Other container	
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	Fat	Max. 35.0 %		ISO 1443
4	Salt	Max. 2.4 %		ISO 2481
5	Phosphate (natural + added), (natural Phosphate is calculated as 250 x protein %)	Max. 3520 ppm as phosphorus		ISO 13730
6	Organoleptic	Pleasant smell; typical taste and colour		Organoleptic examination
7	Protein	Min. 9.5%		AOAC 992.15
8	Swelling test (37°C for 7 days)	Should not show any sign of swelling after incubation		
9	Swelling test (55°C for 5 days)	Should not show any sign of swelling after incubation		
10	Packaging	Can should be without dents, rust or other physical defects (e.g. damaged seal/droops/ or other as per https://www.fao.org/3/w9626e/w9626e.pdf)		

¹⁰ or equivalent validated methods