World Food Programme

Technical Specifications for

CANNED MEAT - LUNCHEON MEAT

Version: 1
Replacing: Ration Specification V2
Date of issue: 25 June 2021

The key adjustments are:
Added WFP technical expectations for canned products (e.g. shelf life conditions, thermal process etc).

1.Introduction

This specification applies to **canned luncheon meat** (hereafter called the product) internationally purchased and distributed by WFP.

2. Standards and references

Except when specified otherwise in the contract, the product shall comply with latest versions of recognized international standards and best practices and/or guidelines such as:

- 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)

Additionally, the supplier shall comply with relevant local regulations/standards of the food originating and recipient countries.

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 and recipient countries. The quality of raw materials should be adequate so that the final product will meet all requirements specified in this document.

The product should be made of chicken or beef and/or as per contract.

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 Fo 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 shall comply with requirements stated in Table 3 of this document.

5.2 Contaminants

The product shall be free from contaminants in amounts which may represent a hazard to health. The product shall comply with those maximum contaminant limits established by the Codex Alimentarius for this commodity. This includes compliance with Codex General Standard for Contaminants and Toxins in Food and Feed (CXS 193-1995) and Codex Maximum Residue Limits for pesticide residues. Additionally, the product shall meet the requirements stated in Table 2.

5.3 Hygiene

It is recommended that the products covered by the provisions of this standard be prepared and handled in accordance with the appropriate sections of the Recommended International Code of Practice – General Principles of Food Hygiene (CAC/RCP 1-1969), and other Codes of Practice recommended by the Codex Alimentarius Commission which are relevant to these products. To the extent possible in good manufacturing practice, the products shall be free from objectionable matter. When tested by appropriate methods of sampling and examination, the product:
– shall be free from micro-organisms in amounts which may represent a hazard to health;
– shall be free from parasites which may represent a hazard to health; and
– shall not contain any substance originating from micro-organisms in amounts which may represent a hazard to health.

5.4 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 requirements[1].

5.5 Fit for human consumption guarantee

Suppliers shall have to check the quality of their products and guarantee that the product is 'fit for human consumption'.

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.

Table 1: General requirements for primary packaging

Net weight/ volume	Packaging requirements
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.

7. Marking

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

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

[1] https://foodqualityandsafety.wfp.org

8. Stuffing of Containers and other transport vehicles[2]

If pallets[3] 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
- 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.

[2]For more details, please refer to container loading procedure: https://documents.wfp.org/stellent/groups/public/documents/manual_guide_proced/wfp254688.pdf
3 Slip sheet can be used instead of pallets upon agreement with WFP.

Table 3: List of compulsory tests and reference method

No	Tests	Requirements		Reference methods (latest versions) [4]
		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. 30.0%[5] or Max. 35.0 %[6]		ISO 1443
4	Salt	Max. 3.0 %		ISO 2481
5	Nitrite, potassium and/or sodium salts	Max. 125 mg/kg		ISO/DIS 2918
6	Ascorbic acid	Max. 500 mg/kg		AOAC 985.33
7	Phosphate (natural + added), (natural Phospahte is calculated as 250 x protein %)	Max. 800 mg/kg (expressed as P205)		ISO 13730
8	Organoleptic	Pleasant smell; typical taste and colour		Organoleptic examination

[4] *or equivalent validated methods*

[5] *the product with binder*

[6] *the product without binder and edible offal*