



Technical Specifications for

IODIZED SALT

Specification reference: **Iodized Salt**

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1. SCOPE

This specification applies to **Iodized Salt** distributed by WFP.

2. RAW MATERIALS

2.1 Salt

Salt used for **Iodized Salt** conforms to Codex Standard for Salt (CODEX STAN 150-1985, Rev. 1-1997).

2.2 Iodine Source

Potassium iodate (KIO₃) added in salt shall be of food grade quality and conform to all applicable Codex standards.

Iodized Salt producers should purchase potassium iodate from WFP approved premixes suppliers: BASF (Stern Vitamin), DSM, Fortitech, Nicholas Piramal, Hexagon Nutrition or their authorized dealers and GAIN premix facility. Addresses of premix suppliers are on <http://foodquality.wfp.org>

3. PROCESSING

The production of salt shall only be performed by reliable manufacturers having the knowledge and the equipment requisite for the adequate production of food grade salt.

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

- Good Manufacturing Practice
- Hazard Analysis Critical Control Point program

The manufacturer must be *registered under national food law* as a manufacturer of foods for human consumption.

4. PRODUCT SPECIFICATION

4.1 General requirements

Iodized Salt is dried, sieved, edible and iodized for human consumption.

- Sodium chloride as NaCl: min 97.0 % (on dry matter)
- Moisture content: max 3.0% (m/m)
- Water insoluble matter: max 0.2 % (m/m)
- Iodine: 30.0 – 50.0 mg/kg (means 50 – 84mg of potassium iodate per kg of salt)
- Colour: shall be white and 10 g of salt in 100 ml water shall give a colourless solution having a neutral reaction.

4.2 Particle size distribution

Regular salt

- min 85 % pass through 1.00 mm sieve
- max 20 % pass through 0.212 mm sieve

Otherwise: particle size will be specified in the purchase contract.

4.3 Food additives

Food additives listed in Tables 1 and 2 of the Codex General Standard for Food Additives (CODEX STAN 192-1995) in Food Category 12.1.1 (Salt) may be used in foods subject to this standard.

All additives used shall be of food grade quality.

4.4 Chemical contaminants

Contaminants in the **Iodized Salt** shall not exceed the following levels:

Table 1: Limit of chemical contamination in Iodized Salt

Item	Maximum limit
Alkalinity (as Na ₂ CO ₃)	0.1 % (m/m)
Acid insoluble matter	0.15 % (m/m)
Sulphate (as SO ₄)	0.5 % (m/m)
Arsenic	0.5 mg/kg
Copper	2.0 mg/kg
Lead	2.0 mg/kg
Cadmium	0.5 mg/kg
Mercury	0.1 mg/kg
Calcium	0.5 % (m/m)
Tin (as Sn)	100.0 mg/kg

Iodized Salt shall not contain other contaminants and toxins in amounts which may represent a hazard to health.

5. PACKAGING

Iodised salt shall be packed in air tight bags of either high density polyethylene (HDPE) or polypropylene (PP) (laminated or non-laminated) or LDPE-lined jute bags (Grade 1803 DW jute bags lined with 150 gauge polyethylene sheet).

Marking: as per contractual agreement.

6. STORING

Iodized Salt must be stored under dry, ventilated and hygienic conditions.

7. ANALYTICAL REQUIREMENTS

The principal tests in table 2 must be performed in order to check if the quality of **Iodized Salt** meets above requirements. Additional analyses shall be defined in case of further quality assessment.

Table 2: List of test/analysis

No	Parameter	Limit	Analytical method (or equivalent)
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 2483:1973
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