



Technical Specifications for OATS

Specification reference: **Oats**

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1. SCOPE

This specification applies to **oat** grains of *Avena sativa* and *Avena byzantina* purchased by WFP for processing for direct human consumption. This specification does not apply to *Avena nuda* (hulless oats).

2. DEFINITIONS

Test weight shall be the weight per ISO 7971-1986 or any other equipment giving equivalent results expressed as kilograms per hectolitre as determined on a test portion of the original sample.

Hull-less and broken kernels: (kernels with no hulls and broken of any size).

Damaged kernels (including pieces of kernels that show visible deterioration due to moisture, weather, disease, insects, mould, heating, fermentation, sprouting or other causes.

Wild oats: are grains of *Avena fatua* or *Avena sterilis*.

Insect bored kernels: kernels which have been visibly bored or tunnelled by insects.

Ergot: *Sclerotium* of the fungus *Claviceps purpurea*.

Filth: Impurities of animal origin (including dead insects).

Other organic extraneous matter is defined as organic components other than edible grains of cereals (foreign seeds, stems, etc.).

Inorganic extraneous matter is defined as any inorganic component (stones, dust, etc.).

3. REFERENCE

Codex Standard for Oats CODEX STAN 201-1995.

4. PRODUCT SPECIFICATION

4.1 General requirements

| | |
|------------------------------|--------------------------------------------------------------|
| Moisture | 14.0 % m/m max. |
| Organoleptic | Bright, clear appearance, natural smell and color |
| Test weight | 46 kg/hl min. |
| Hull-less and broken kernels | 5.0% m/m max. |

| | |
|--------------------------------------------------------------|---------------------------|
| Edible grains other than oats (whole or identifiably broken) | 3.0% m/m max. |
| Damaged kernels | 3.0% m/m max. |
| Wild oats | 0.2% m/m max. |
| Insect bored kernels | 0.5% m/m max. |
| Ergot | 0.05% m/m max. |
| Filth | 0.1% m/m max. |
| Other organic extraneous matter | 1.5% m/m max. |
| Inorganic extraneous matter | 0.5% mm/m max. |
| Live insect | Nil |
| Crop year | As per contractual |

If required by recipient country, Oats need to be obtained from non-genetically modified varieties.

4.2 Toxic or noxious seeds

The products covered by the provisions of this specification shall be free from the following toxic or noxious seeds in amounts which may represent a hazard to human health.

- *Crotalaria* (*Crotalaria* spp.), Corn cockle (*Agrostemma githago* L.), Castor bean (*Ricinus communis* L.), Jimson weed (*Datura* spp.), and other seeds that are commonly recognized as harmful to health.

4.3 Contaminants

4.3.1 Heavy metals

Oats shall be free from heavy metals in amounts which may represent a hazard to health.

4.3.2 Pesticide residues

Oats shall comply with those maximum residue limits established by the Codex Alimentarius Commission for this commodity.

4.3.3 Mycotoxins

Oats shall comply with those maximum mycotoxin limits established by the Codex Alimentarius Commission for this commodity.

4.4 Hygiene

4.4.1 It is recommended that the product covered by the provisions of this specification 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 this product.

4.4.2 To the extent possible in good manufacturing practice, the cleaned product shall be free from objectionable matter.

4.4.3 When tested by appropriate methods of sampling and examination, the products:

- 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. PACKAGING AND MARKING

As per contractual agreement.

6. STORING

Oats must be stored under dry, ventilated and hygienic conditions.

7. SAMPLING REQUIREMENTS

Representative samples can be drawn according to international sampling method standards at the bagging section or in the warehouse.

For packed units, sampling frequency and reference method are showed in *table 1*. One laboratory samples of about 3kg is required by lot or sub-lot of 500MT maximum.

For the bulk (static and flowing), the sampling must follow the rules described in paragraphs 5.2 of ISO 24333-2009.

Table 1: Sampling rules

| Lot or sub-lot size (MT) | Number of increment | Place of sampling | Reference |
|--------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|-------------|
| ≤100 | 3 % of bags and minimum 50 bags (e.g. 60 increments for a lot of 100 MT, packed in 50 kg bag) | Warehouse | GAFTA 124-2 |
| 101-500 | 3 % of bags Examples: - 120 increments for a lot of 200 MT, packed in 50 kg bag - 180 increments for a lot of 300 MT, packed in 50 kg bag - 240 increments for a lot of 400 MT, packed in 50 kg bag - 300 increments for a lot of 500 MT, packed in 50 kg bag | | |

8. ANALYTICAL REQUIREMENTS

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

Table 2: List of compulsory analyses/tests and reference methods

| No | Analyses/tests | Limit | Reference method (or equivalent) |
|----|--------------------------------------------------------------------------|--------------------------------------------------------------|-------------------------------------|
| 1 | Moisture | 14.0 % m/m max. | <i>ISO 711-2009</i> |
| 2 | Organoleptic | Bright, clear appearance, natural smell and color | <i>Organoleptic examination</i> |
| 3 | Test weight | 46 kg/hl min. | <i>ISO 7971-1986</i> |
| 4 | Hull-less and broken kernels | 5.0% m/m max. | <i>Visual examination</i> |
| 5 | Edible grains other than oats (<i>whole or identifiably broken</i>) | 3.0% m/m max. | <i>Visual examination</i> |
| 6 | Damaged kernels | 3.0% m/m max. | <i>Visual examination</i> |
| 7 | Wild oats (<i>Avena fatua</i> or <i>Avena sterilis</i>) | 0.2% m/m max. | <i>Visual examination</i> |
| 8 | Insect bored kernels | 0.5% m/m max. | <i>Visual examination</i> |
| 9 | Ergot | 0.05% m/m max. | <i>Visual examination</i> |
| 10 | Filth | 0.1% m/m max. | <i>Visual examination</i> |
| 11 | Other organic extraneous matter | 1.5% m/m max. | <i>Visual examination</i> |
| 12 | Inorganic extraneous matter | 0.5% mm/m max. | <i>Visual examination</i> |
| 13 | Live insect | Nil | <i>Visual examination</i> |
| 14 | GMO (<i>only if required</i>) | Negative (< 0.9% of GMO material) | |