Powdered silver cyprinid (Mukene) — Specification
Compliance with this standard does not, of itself confer immunity from legal obligations
A Uganda Standard does not purport to include all necessary provisions of a contract. Users are responsible for its correct application.
Foreword

Uganda National Bureau of Standards (UNBS) is a parastatal under the Ministry of Trade, Industry and Cooperatives established by the Act of Parliament of 1983, of the Laws of Uganda. UNBS is mandated to coordinate the elaboration of standards and is

(a) a member of International Organisation for Standardisation (ISO) and

(b) a contact point for the WHO/FAO Codex Alimentarius Commission on Food Standards, and

(c) the National Enquiry Point on TBT/SPS Agreements of the World Trade Organisation (WTO).

The work of preparing Uganda Standards is carried out through Technical Committees. A Technical Committee is established to deliberate on standards in a given field or area and consists of representatives of consumers, traders, academicians, manufacturers, government and other stakeholders.

Draft Uganda Standards adopted by the Technical Committee are widely circulated to stakeholders and the general public for comments. The committee reviews the comments before recommending the draft standards for approval and declaration as Uganda Standards by the National Standards Council.

This Draft Uganda Standard, DUS 780:2012, was developed by the subcommittee on Fish and Fishery products (SC 10) under supervision of technical committee on Food and Agriculture standards (UNBS/TC 2).

This Draft Uganda Standard has been developed as a result of the need to provide guidance to industry in production and regulation of powdered silver cyprinid (mukene).
Powdered silver cyprinid (Mukene) — Specification

1 Scope

This Draft Uganda Standard specifies requirements and methods of sampling and test for powdered silver cyprinid (mukene) of the species *Rastrineobola argentea*, intended for human consumption.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

US 7, General standard for the labelling of pre-packaged foods

US 28, Code of practice for hygiene in the food and drink manufacturing industry

US 45, General standard for food additives

US 500, Guidelines for nutritional labelling of foods

US 508, Guidelines for nutritional and health claims for food

US 566, Use of Nutrition claims — Requirements

US 738, General standard for contaminants and toxins in food and feed

FDUS EAS 217-2, Microbiology of foods and animal feeding stuffs — Horizontal method for the enumeration of microorganisms – Part 2: Colony count technique at 30 °C

FDUS EAS 217-4, Microbiology of foods and animal feeding stuffs — Horizontal method for the detection and enumeration of coliforms – Part 4: Most probable number technique

FDUS EAS 217-8, Microbiology of foods and animal feeding stuffs — General guidance for enumeration of yeasts and moulds – Part 8: Colony count technique at 25 °C

US ISO 7251, Microbiology of food and animal feeding stuffs — Horizontal method for the detection and enumeration of presumptive Escherichia coli — Most probable number technique

US ISO 11290-2, Microbiology of food and animal feeding stuffs — Horizontal method for the detection and enumeration of *Listeria monocytogenes* – Part 2: Enumeration method

US ISO 16050, Foodstuffs — Determination of aflatoxin B1, and the total content of aflatoxins B1, B2, G1 and G2 in cereals, nuts and derived products — High-performance liquid chromatographic method

DUS 919, Dried silver cyprinid (Mukene) — Specification
3 Terms and definitions

For the purposes of this standard, the following terms and definitions shall apply.

3.1 powdered silver cyprinid (mukene)
product produced by milling or grinding of dried silver cyprinid (mukene) into flour

3.2 foreign matter
organic and inorganic materials (such as sand, soil, glass) other than extraneous matter in the ground silver cyprinid (mukene)

3.3 extraneous matter
organic matter of silver cyprinid (mukene) origin other than powdered silver cyprinid (mukene)

3.4 food grade material
materials that are free from substances that are hazardous to human health

4 Essential quality and composition requirements

4.1 Raw materials
The raw material shall be dried silver cyprinid (mukene) of sound quality, that complies with the requirements of DUS 919.

4.2 Finished product
Powdered silver cyprinid (mukene) shall be safe and suitable for human consumption and shall conform to the following requirements. It shall:

a) have taste and odour typical of the product;
b) have colour characteristic of the variety;
c) be free from any indication of spoilage; and
d) be free from extraneous and foreign matter.

4.3 Specific requirements

4.3.1 Particle size
Using a standard method of sifting, not less than 90 per cent of the product shall pass through a sieve the dimension of the mesh of which is: diameter of 1000µm.

4.3.2 The powdered silver cyprinid (mukene) shall comply with the requirements of Table 1.
Table 1 — Specific requirements for powdered silver cyprinid (mukene)

<table>
<thead>
<tr>
<th>S/N</th>
<th>Parameter</th>
<th>Requirement</th>
<th>Test methods</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Moisture content, % m/m, max.</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Total ash content, % max.</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Acid insoluble ash, % max.</td>
<td>0.5</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Protein content, % min. (N x 5.7)</td>
<td>45</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Crude fat, % max.</td>
<td>14</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Dry matter, % m/m, min.</td>
<td>97</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Iron, mg/100g, min</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Zinc, mg/100g, min</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Calcium, mg/100g, min.</td>
<td>1500</td>
<td></td>
</tr>
</tbody>
</table>

5 Food additives

Food additives may be used in the preparation of powdered silver cyprinid (mukene) in accordance with US 45.

6 Contaminants

6.1 Heavy metals and other contaminants

Powdered silver cyprinid (mukene) shall comply with those maximum limits for heavy metals and other contaminants specified in US 738.

6.2 Pesticides and veterinary drug residues

Powdered silver cyprinid (mukene) shall comply with those maximum pesticide and veterinary drug residue limits established by the Codex Alimentarius Commission for similar commodity.

6.3 Mycotoxins

Powdered silver cyprinid (mukene) shall not contain mycotoxins in amount that may present hazard to health. In particular the product shall conform to the maximum limits for aflatoxin specified in Table 2.

Table 2 — Maximum limits for aflatoxin in Powdered silver cyprinid (mukene)

<table>
<thead>
<tr>
<th>S/N</th>
<th>Parameter</th>
<th>Limit</th>
<th>Method of Test</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Total aflatoxin, micrograms per kilogram, maximum</td>
<td>10</td>
<td>US ISO 16050</td>
</tr>
<tr>
<td>2</td>
<td>Aflatoxin B1 only, ppb max</td>
<td>5</td>
<td></td>
</tr>
</tbody>
</table>

7 Hygiene

Powdered silver cyprinid (mukene) shall be produced and handled in a hygienic manner in accordance with US 28.
Powdered silver cyprinid (mukene) shall comply with the microbiological limits given in Table 3.

<table>
<thead>
<tr>
<th>S/N</th>
<th>Microorganisms</th>
<th>Requirement</th>
<th>Method of test</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td><em>Pseudomonas</em> species/g, max.</td>
<td>Absent</td>
<td>ISO 13720</td>
</tr>
<tr>
<td>2</td>
<td><em>Salmonella</em> in 30 g, max.</td>
<td>Absent</td>
<td>ISO 6579</td>
</tr>
<tr>
<td>3</td>
<td><em>E. coli</em> /g, max.</td>
<td>Absent</td>
<td>ISO 7251</td>
</tr>
<tr>
<td>4</td>
<td><em>Cloiforms</em>/100 g, max.</td>
<td>Absent</td>
<td>ISO 4832</td>
</tr>
<tr>
<td>6</td>
<td>Total viable count/g, max.</td>
<td>$10^5$</td>
<td>ISO 4833</td>
</tr>
<tr>
<td>7</td>
<td><em>Clostridium perfringens</em>/g, max.</td>
<td>Absent</td>
<td>ISO 7937</td>
</tr>
<tr>
<td>8</td>
<td><em>Listeria monocytogetenes</em> in 25 g, max.</td>
<td>Negative</td>
<td>ISO 11290/2</td>
</tr>
</tbody>
</table>

8 Packaging

Powdered silver cyprinid (mukene) shall be packaged in food grade material containers which shall safeguard the hygienic, nutritional, technological and organoleptic qualities of the product.

The containers, including packaging material, shall be made of substances which are safe and suitable for their intended use. They shall not impart any toxic substance or undesirable odour or flavour to the product.

9 Weights and Measures

Powdered silver cyprinid (mukene) shall be packaged in accordance with the Weights and Measures legislation of the destination country.

10 Labelling

10.1 In addition to the requirements in US 7, the following specific labelling requirements shall apply and shall be legibly and indelibly marked:

a) common name of the product as “Powdered silver cyprinid (mukene)”;  
b) net weight in metric units;  
c) name and physical address of the manufacturer/packer/distributor of the product shall be declared on the label;  
d) a date of manufacture;  
e) lot identification;  
f) list of ingredients in descending order  
g) expiry date;  
h) country of origin;  
i) the words "Human food";
j) storage instructions; and
k) instructions on disposal of used package.

10.2 When labelling non-retail packages, information for non-retail packages shall either be given on the packages or in accompanying documents, except that the name of the product, lot identification and the name and address of the manufacturer or packer shall appear on the packages.

10.3 Nutrition labelling and claims
Nutritional labelling, nutrition and health claims may be made in accordance with US 500, US 508, US 566.

11 Methods of sampling and test
Powdered silver cyprinid (mukene) shall be sampled in accordance with the appropriate methods of sampling. Tests shall be conducted in accordance with appropriate methods where indicated in an appropriate clause or other international standard methods.
Certification marking

Products that conform to Uganda standards may be marked with Uganda National Bureau of Standards (UNBS) Certification Mark shown in the figure below.

The use of the UNBS Certification Mark is governed by the Standards Act, and the Regulations made thereunder. This mark can be used only by those licensed under the certification mark scheme operated by the Uganda National Bureau of Standards and in conjunction with the relevant Uganda Standard. The presence of this mark on a product or in relation to a product is an assurance that the goods comply with the requirements of that standard under a system of supervision, control and testing in accordance with the certification mark scheme of the Uganda National Bureau of Standards. UNBS marked products are continually checked by UNBS for conformity to that standard.

Further particulars of the terms and conditions of licensing may be obtained from the Executive Director, Uganda National Bureau of Standards.