Virgin Coconut Oil - Specification
TECHNICAL COMMITTEE REPRESENTATION
The following organizations were represented on the Technical Committee:

Afroganics Essential
Amal Organics
Diamond Industries Ltd
Kentaste Products Ltd
Kwale Coconuts
Muyaza Virgin Coconut Oil
Pwani Oils Ltd
Sylo Health Products
Kenya Bureau of Standards – Secretariat

REVISION OF KENYA STANDARDS

In order to keep abreast of progress in industry, Kenya Standards shall be regularly reviewed. Suggestions for improvements to published standards, addressed to the Managing Director, Kenya Bureau of Standards, are welcome.

© Kenya Bureau of Standards, 2018

Copyright, Users are reminded that by virtue of section of the Copyright Act, Cap. 12 of 2001 of the Laws of Kenya, copyright subsists in all Kenya Standards and except as provided under section 26 of this Act, no Kenya Standard produced by Kenya Bureau of Standards may be reproduced, stored in a retrieval system in any form or transmitted by any means without prior permission in writing from the Managing Director.

© KEBS 2018—All rights reserved
Virgin Coconut Oil - Specification

KENYA BUREAU OF STANDARDS (KEBS)

Head Office:  P.O. Box 54974, Nairobi-00200, Tel.: (+254 020) 605490, 602350, Fax: (+254 020) 604031
             E-Mail: info@kebs.org,  Web:http://www.kebs.org

Coast Region       Lake Region       Rift Valley Region
P.O. Box 99376, Mombasa-80100  P.O. Box 2949, Kisumu-40100  P.O. Box 2138, Nakuru-20100
Tel.: (+254 041) 229563, 230939/40  Tel.: (+254 057) 23549, 22396
Fax: (+254 041) 229448  Fax: (+254 057) 21814

Tel.: (+254 051) 210553, 210555
Foreword

This Kenya Standard was prepared by the Edible fats and Oils TC under the guidance of the Standards Project Committee, and it is in accordance with the procedures of the Kenya Bureau of Standards.

This draft standard addresses the quality and safety requirements necessary to produce a safe product for human consumption while promoting the basis for promoting the production of virgin coconut oil in the country.

During the preparation of this standard, reference was made to the following documents:

Codex Stan 210: Codex standard for named vegetable Oils and fats


Acknowledgement is hereby made for the assistance derived from these sources.
Virgin Coconut Oil - Specification

1 Scope
This Draft Kenya Standard specifies the requirements, methods of sampling and tests for virgin coconut oil for human consumption.

2 Normative references
The following referenced documents are indispensable for the application of this standard. The latest edition of the standard shall apply:

3 Definition
For the purpose of this standard, the following definitions shall apply:

Virgin Coconut oil
edible oil obtained without altering the nature of oil. For example by use of mechanical procedures such as expelling or pressing, and the application of heat only without the use of solvents. It may have been purified by washing with water, settling, filtering and centrifuging only.
3.2

**fats and oils**

Food stuffs which are composed of glycerides of fatty acids of vegetable, animal or marine origin. They may contain small amounts of other lipids such as phosphatides, unsaponifiable constituents and free fatty acids naturally present in the fat or oil.

3.3

**non–virgin (refined) fats and oils**

Fats and oils obtained by mechanical procedures and/or solvent extraction and subjected to refining processes to adopt it specially for use in food products.

3.4

**edible fats and oils**

Food stuffs which are composed of glycerides of fatty acids of vegetable, animal or marine origin complying with the provisions of this standard. They may contain small amounts of other lipids such as phosphatides, unsaponifiable constituents and free fatty acids naturally present in the fat or oil.

3.5

**edible vegetable fat**

3.6

**Health claim**

Is a representation that states, suggests or implies that a relationship exists between a food or constituent of that food and health.

3.7

**Label**

Is any tag, brand, marks, pictorial or other descriptive matter, written, printed, stencilled, marked, embossed or impressed on, or attached to, a container of any products within the scope of this standard.

3.8

**Nutrition claim**

Is any representation which states, suggests or implies that a food had particular nutritional properties including but not limited to the energy value and to the content of protein, fat and carbohydrates, as well as the content of vitamins and minerals with the exception of mentioning the substance on the list of ingredients and qualitative and quantitative declaration of nutrient as may be required in regulations or product standards.
4 Quality requirements and essential composition

4.1 General requirements

4.1.1 Virgin coconut oil shall be free from foreign and/or rancid odour and/or taste.

4.1.2 The colour shall be characteristic of coconut oil

4.1.3 Chemical extraction using solvents shall not be used in the production of virgin coconut oil

4.2 Specific compositional requirements

The virgin coconut oil shall comply with the quality requirements in Table 1.

Table 1 — Specific compositional requirement for blended oils

<table>
<thead>
<tr>
<th>SL No.</th>
<th>Characteristic</th>
<th>Requirement</th>
<th>Test method</th>
</tr>
</thead>
<tbody>
<tr>
<td>i)</td>
<td>Fat content, % by mass, min.</td>
<td>99.5</td>
<td>ISO 17189</td>
</tr>
<tr>
<td>ii)</td>
<td>Moisture and Volatile matter at 105 °C, %, m/m, max.</td>
<td>0.2</td>
<td>ISO 662</td>
</tr>
<tr>
<td>iii)</td>
<td>Insoluble impurities, %, m/m, max.</td>
<td>0.05</td>
<td>ISO 663</td>
</tr>
<tr>
<td>iv)</td>
<td>Soap Content, %, m/m, max.</td>
<td>0.005</td>
<td>ISO 10539</td>
</tr>
<tr>
<td>v)</td>
<td>Acid value, (mg/KOH/g (max).</td>
<td>4</td>
<td>ISO 660</td>
</tr>
<tr>
<td>vi)</td>
<td>Peroxide value, (mEq oxygen/kg (max.))</td>
<td>15</td>
<td>ISO 3960</td>
</tr>
<tr>
<td>vii)</td>
<td>Iron (Fe) mg/kg, max.</td>
<td>5</td>
<td>ISO 8294</td>
</tr>
<tr>
<td>viii)</td>
<td>Copper, mg/kg, max.</td>
<td>0.4</td>
<td></td>
</tr>
</tbody>
</table>

5 Contaminants

5.1 Pesticide residues

Virgin coconut oil shall comply with those maximum pesticide residue limits established by the Codex Alimentarius Commission for this commodity.

5.2 Other contaminants

Virgin coconut oil shall comply with those maximum limits specified in Table 2.

Table 2 — Heavy metal contaminants limits in Virgin coconut oil

<table>
<thead>
<tr>
<th>SL No</th>
<th>Contaminant (mg/kg)</th>
<th>Max. Limit</th>
<th>Method of test</th>
</tr>
</thead>
<tbody>
<tr>
<td>i)</td>
<td>Lead (as Pb)</td>
<td>0.1</td>
<td>ISO 12193</td>
</tr>
<tr>
<td>ii)</td>
<td>Arsenic (as As)</td>
<td>0.1</td>
<td>ISO 2590</td>
</tr>
</tbody>
</table>
6  **Hygiene**
Virgin coconut oil shall be produced, processed, handled and stored in accordance with KS EAS 39.

7  **Packaging**
7.1 Virgin coconut oil shall be packaged in food grade containers and sealed in manner to ensure the safety and quality requirements specified in this standard are maintained throughout the shelf life of the product.

7.2 The packaging material, printing inks used and adhesives (where used) on the labels shall not contain harmful chemicals that may migrate into the Virgin coconut oil to present a hazard to human.

8  **Labelling**
8.1 Labelling of Virgin coconut oil shall be done in accordance with KS EAS 38. In addition the following shall be shown:

a) name of the product; The name shall be 'Virgin coconut oil';

b) the name, address and physical location of the manufacturer/distributor;

8.2 Any health and nutrition claim attached to blended oil shall be in accordance with KS EAS 804 and KS EAS 805.

11  **Sampling**
Sampling shall be carried in accordance with ISO 5555 and samples prepared for testing according to ISO 661.