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Avocado oil — Specification

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Foreword

Rwanda Standards are prepared by Technical Committees and approved by Rwanda Standards Board (RSB) Board of Directors in accordance with the procedures of RSB, in compliance with Annex 3 of the WTO/TBT agreement on the preparation, adoption and application of standards.

The main task of technical committees is to prepare national standards. Final Draft Rwanda Standards adopted by technical committees are ratified by members of RSB Board of Directors for publication and gazette as Rwanda Standards.

DRS 597 was prepared by Technical Committee RSB/TC 06, *Edible Oils and Fats*.

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

KS 2992:2024: Virgin avocado oil — Specification

The assistance derived from the above source is hereby acknowledged with thanks.

Committee membership

The following organizations were represented on the Technical Committee on *Edible Oils and Fats* (RSB/TC 06) in the preparation of this standard.

Masaka Creamery

Mount meru soyco

Minimex

National Industrial Research and Development Agency (NIRDA)

Rwanda Agriculture and Animal Resources Development Board (RAB)

Lenz family Limited

Norbert Business Group Limited (NBG)

Rwanda Standards Board (RSB) – Secretariat

Avocado oil — Specification

1 Scope

This Draft Rwanda Standard specifies the requirements, sampling and test methods for virgin, and refined avocado oil derived from the fruit of avocado (*Persea americana*) intended for human consumption.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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.

AOAC 952.13, *Arsenic in food. Silver diethyldithiocarbamate*

RS CXS 192, *General standard for food additives*

RS EAS 38, *Labelling of pre-packaged foods — Specification*

RS EAS 39, *Hygiene in the food and drink manufacturing industry — Code of practice*

RS ISO 660, *Animal and vegetable fats and oils— Determination of acid value and acidity*

RS ISO 661, *Animal and vegetable fats and oils — Preparation of test sample*

RS ISO 662, *Animal and vegetable fats and oils — Determination of moisture and volatile matter content*

RS ISO 663, *Animal and vegetable fats and oils — Determination of insoluble impurities content*

RS ISO 12193, *Animal and vegetable fats and oils — Determination of lead by direct graphite furnace atomic absorption spectroscopy*

RS ISO 17189, *Butter, edible oil emulsions and spreadable fats — Determination of fat content (Reference method)*

RS EAS 769, *Fortified edible fats and oils — Specification*

RS EAS 803, *Nutrition Labelling — Requirements*

RS EAS 804, *Claims — General requirements*

RS EAS 805, *Use of Nutrition and health claims — Requirements*

RS ISO 3657, *Animal and vegetable fats and oils — Determination of saponification value*

RS ISO 3960, *Animal and vegetable fats and oils — Determination of peroxide value*

RS ISO 3961, *Animal and vegetable fats and oils — Determination of iodine value*

RS ISO 5555, *Animal and vegetable fats and oils — Sampling*

RS ISO 12193, *Animal and vegetable fats and oils — Determination of lead by direct graphite furnace atomic absorption spectroscopy*

RS ISO 13547-2, *Copper, lead, zinc and nickel sulphide concentrates — Determination of arsenic Part 2 Acid digestion and inductively coupled plasma atomic emission spectrometric method*

RS ISO 8294, *Animal and vegetable fats and oils - Determination of copper, iron and nickel contents - Graphite furnace atomic absorption method*

RS ISO 6320, *Animal and vegetable fats and oils — Determination of refractive index*

RS ISO 21033, *Animal and vegetable fats and oils — Determination of trace elements by inductively coupled plasma optical emission spectroscopy (ICP-OES)*

RS ISO 6883, *Animal and vegetable fats and oils — Determination of conventional mass per volume (litre weight in air)*

3 Terms and definitions

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

3.1

avocado oil

edible oil extracted from the pulp or flesh of avocado fruit.

3.2

virgin avocado oil

avocado oil obtained from avocado fruit without altering its nature may be obtained by use of mechanical procedures such as expelling or pressing, with or without the application of heat and without the use of solvents. It may have been purified by washing with water, settling, filtering and centrifuging only

3.3

refined (non-virgin) avocado oil

avocado oil obtained by mechanical procedures and/or solvent extraction and subjected to refining processes to adopt it speciality for use in food products

3.5

cold pressed avocado oil

avocado oil obtained, without altering the oil, by mechanical procedures, e.g., expelling or pressing, without the application of heat. They may have been purified by washing with water, settling, filtering and centrifuging only

3.6

pulp

creamy, smooth-textured part of avocado fruit that surrounds a seed of avocado. It is covered by a thick and bumpy skin.

3.7

foreign matter

any undesirable material visible with naked eye in a packaged avocado oil

3.8

food grade packaging material

material which is safe and suitable for the intended use and which will not impart any toxic substance or undesirable odour or flavour to the product.

4 Requirements

4.1 General requirements

Avocado oil shall:

- a) be free from foreign matter;
- b) be free from rancid or undesirable odour and/or taste; and
- c) have characteristic colour of avocado oil.

4.2 Specific requirements

Avocado oils shall comply with requirements given in Table 1 when tested in accordance with the test methods specified therein.

Table 1 — Specific requirements for avocado oil

S/N	Characteristic	Requirement	Test method
i.	Fat content, % by mass, min	99.05	RS ISO 17189
ii.	Moisture and volatile matter at 105°C, %, m/m	0.2	RS ISO 662
iii.	Insoluble impurities, %, m/m, max.	0.05	RS ISO 663
iv.	Soap Content, %, m/m, max	0.005	RS ISO 660
v.	Acid value, (mg/KOH/g (max): a) Virgin and cold pressed avocado oil b) Non-virgin avocado oil	4 0.6	RS ISO 660
vi.	Peroxide value, (up to milliequivalent of active oxygen/kg oil (max.): a) Virgin and cold pressed avocado oil b) Non- virgin avocado oil	15 10	RS ISO 3960
vii.	Iodine value gI ₂ per 100g	70-95	RS ISO 3961
viii.	Saponification value, mg KOH/g oil	177-199	RS ISO 3657
ix.	Refractive index, at 20°C	1.457-1.472	RS ISO 6320
x.	Refractive density at 20°C	0.910-0.925	RS ISO 6883

5 Food additives

Refined avocado oils may contain food additives in accordance with CXS 192.

Virgin avocado oil shall not contain food additives.

6 Fortification

Refined avocado oil may be fortified in accordance with RS EAS 769.

7 Contaminants

7.1 Pesticides

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

7.2 Heavy metals

Avocado oil shall comply with the maximum limits of heavy metals as specified in Table 2 when tested in accordance with the test methods therein.

Table 2 — Heavy metal contaminants limits in avocado oil

S/N	Parameter	Maximum level mg/kg	Test method
i.	Lead (Pb)	0.1	RS ISO 12193
ii.	Arsenic (As)	0.1	AOAC 952.13
iii.	Iron (Fe) mg/kg, max: a) Virgin and cold pressed b) Non virgin	5 2.5	RS ISO 8294
iv.	Copper, mg/kg, max: a) Virgin and cold pressed b) Non virgin	0.4 0.1	

8 Hygiene

Avocado oil shall be produced, processed, handled and stored in accordance with RS EAS 39.

9 Packaging

9.1 Avocado oil shall be packaged in containers made from food grade packaging material and sealed in a manner that will safeguard the hygienic, nutritional and organoleptic properties of the product throughout the shelf life of the product.

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

10 Labelling

In addition to the labelling requirements specified in RS EAS 38, the following information describing the product shall be legibly and indelibly labelled on the packaging material:

- a) Name of the product as “Virgin avocado oil”; or “Non virgin/refined avocado oil” or “cold pressed avocado oil”.
- b) list of ingredients in descending order;
- c) name and address of manufacturer/importer;
- d) country of origin;

- e) date of manufacture;
- f) expiry date;
- g) food additives; if used
- h) fortificants if used
- i) net content declared in SI units (metric system);
- j) storage instructions;
- k) instructions for use; and
- l) batch and/or lot number.

11 Nutritional and health claims

Any health and nutrition claim attached to avocado oil shall be in accordance with RS EAS 803, RS EAS 804 and RS EAS 805.

12 Sampling

Sampling and sample preparation for testing shall be carried out in accordance with RS ISO 5555 and RS ISO 661 respectively.

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