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Emulsified sauces — 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 gazettment as Rwanda Standards.

DRS 586 was prepared by Technical Committee RSB/TC 006, *Edible fats and oils*.

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

KS 551: 2012 Emulsified sauces— 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 fats and oils* (RSB/TC 006) in the preparation of this standard.

Masaka Creamery

Mount Meru SOYCO

MINIMEX

Rwanda Food and drugs authority (RFDA)

Ministry of Agriculture and Animal resource (MINAGRI)

Rwanda Consumer's Rights Protection Organization (ADECOR)

INNOPRO Ltd

Rwanda Standards Board (RSB) – Secretariat

Emulsified sauces — Specification

1 Scope

This draft Rwanda standard specifies the requirements, sampling and test method for emulsified sauces intended for human consumption.

This standard does not apply to mayonnaise.

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.

RS CXS 210; Standard for named vegetable oils

RS EAS 12; Potable water — Specification

RS EAS 147-1; Vinegar — Specification — Part 1: Vinegar from natural sources

RS CXS 212; Sugars — Specification

RS EAS 35; Fortified edible salt — Specification

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

AOAC 950.17; Citric acid in non-alcoholic beverages

RS ISO 1842; Fruit and vegetable products — Determination of pH

RS ISO 1738; Butter — Methods of analysis — Part 4: Determination of salt content

RS ISO 3960; Animal and vegetable fats and oils — Determination of peroxide value — Iodometric (visual) endpoint determination

RS CXS 192; General standard for food additive

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

RS ISO 4833-1; Microbiology of the food chain — Horizontal method for the enumeration of microorganisms — Part 1: Colony count at 30 degrees C by the pour plate technique

RS ISO 6579-1; Microbiology of the food chain — Horizontal method for the detection, enumeration and serotyping of Salmonella — Part 1: Detection of Salmonella spp

RS ISO 16649-2; Microbiology of food and animal feeding stuffs — Horizontal method for the enumeration of beta-glucuronidase-positive Escherichia coli — Part 2: Colony-count technique at 44 degrees C using 5-bromo-4-chloro-3-indolyl beta-D-glucuronide

RS ISO 6888-1; Microbiology of food and animal feeding stuffs — Horizontal method for the enumeration of coagulase-positive staphylococci (Staphylococcus aureus and other species) — Part 1: Technique using Baird-Parker agar medium Inclusion of an alternative confirmation

RS ISO 21527-1; Microbiology of food and animal feeding stuffs — Horizontal method for the Enumeration of yeasts and moulds — Part 1: Colony Count technique in products with water activity greater than or equal to 0,95

AOAC 952.13; Arsenic in food. Silver diethyldithiocarbamate

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

3 Terms and definitions

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

3.1

emulsified sauce

sauce made by mixing two ingredients that don't easily mix together using an emulsifying agent

3.3

condiment

spice, sauce, or preparation that is added to food, typically after cooking, to impart a specific flavour, to enhance the flavour, or to complement the dish

3.4

mustard sauce

sauce of prepared mustard thinned with vinegar and vegetable oil with sugar and seasonings.

3.5

Emulsion

mixture of two or more liquids that are normally immiscible

3.6

Vinegar

liquid containing mainly water and acetic acid that helps stabilize and emulsify the mixture.

3.7

food grade packaging material

packaging material made of substances which are safe and suitable for their intended use and which will not impart any toxic substance or undesirable odour or flavour to the product

3.8

plant based milk

non-dairy milk derived from plants, often used in eggless mayonnaise recipes to provide a creamy texture and act as an emulsifying agent

4 Types of emulsified sauces

Emulsified sauces are categorized into types not limited to the following:

- a) **Aioli:** Emulsified sauce to which sufficient garlic has been added to characterize the sauce
- b) **Eggless mayonnaise** an emulsion produced from edible vegetable oil, a solution of an acidifying agent without egg and egg products in which the fat content is not less than 15 % (m/m),
- c) **Salad cream, salad dressing, sauce for salad:** an emulsion produced from edible vegetable oil, a solution of an acidifying agent with or without egg yolk, milk protein or vegetable protein, and in which the fat content is not less than 15 % (m/m),
- d) **bearnaise sauce** an emulsion produced from edible vegetable oils and/or butter, a solution of an acidifying agent, estragon (tarragon) and in which the fat content is not less than 65 % (m/m).
- e) **tartar sauce, mustard sauce or cocktail sauce** emulsions produced from edible vegetable oil, a solution of an acidifying agent, and characterizing ingredients in which the fat content is not less than 50 % (m/m).

5 Requirements

5.1 General requirements

Emulsified sauce shall

- a) be made from ingredients complying with relevant Rwanda standards
- b) maintain their consistency when stored under refrigeration
- c) be free from pig products or its derivatives or any other animal fats.
- d) be semisolid, uniform, smooth for the texture of the product
- e) be free from lumps due to poor manufacturing.
- f) be free from impurities and foreign materials, rancidity and any other foreign flavours
- g) be small and uniform in size for the bubbles of oil;

5.2 Essential ingredients

5.2.1 Edible vegetable oils complying with RS CXS 210 and the phases of the oil in the final product shall not separate when placed in the refrigeration.

5.2.3 Potable water complying with RS EAS 12

5.2.4 Acidifying agents such as lemon juice or vinegar complying with RS EAS 147-1

5.2.5 Food grade salt complying with RS EAS 35

5.3 Optional ingredients

The following ingredients among others may be added as optional ingredients to improve on the physical or organoleptic properties of the product or as technologically may be considered:

- a) Hen's egg yolk;
- b) Hen' egg white;
- c) Hen's egg products;
- d) Sugars complying with RS CXS 212;
- e) Condiments, spices, herbs;

- f) Fruits and vegetables, including fruit juice and vegetable juice;
- g) Mustard;
- h) Dairy products;
- i) Starch;
- j) Lemon;
- k) Vitamins and mineral.
- l) plant based milk

NOTE 1: It is recommended that iron and copper should be less than 5 mg/kg and 1mg/kg as exceeding this limit may contribute to the product going rancid. However, when appropriately coated forms are used, the limit may be exceeded without the product going rancid

5.4 Specific requirements

Emulsified sauces shall comply with the Specific requirements given in Table 1 when tested in accordance to test methods specified therein:

Table 1 — Specific requirements for emulsified sauces

| S/N | Parameters | Product | | | | Test Methods |
|------|---|---------|--|-----------------|--|--------------|
| | | Aioli | Eggless mayonnaise And Salad cream, salad dressing, sauce for salad | Bearnaise sauce | Tartar sauce, Remoulade piquant or sharp sauce, Cocktail sauce, Mustard sauce | |
| ii) | Fatty phase (Edible vegetable oil), %m/m,min | 50 | [10-15] | 65 | 50 | RS ISO 17189 |
| iii) | Egg yolk content expressed as percentage of the whole product, % m/m, min | 5 | 2.5 | 5 | 5 | |

| | | | | | | |
|-------|---|----------|---------------------------------------|---------|---------|-------------|
| v) | Total acidity as acetic acid,% m/m | 0.3 -1.5 | [0.3-1.5] [0.05-1.0] | 0.3-1.5 | 0.3-1.5 | AOAC 950.17 |
| vi) | pH, max | 4 | 4 | 4 | 4 | RS ISO 1842 |
| vii) | Salt, | 1 | 1 | 1 | 1 | RS ISO 1738 |
| viii) | Peroxide value, milliequivalents of peroxide oxygen/Kg, max | 10 | 10 | 10 | 10 | RS ISO 3960 |

NOTE The minimum egg content shall only apply to products where eggs have been used as ingredient. This parameter does not apply to eggless products.

Food additives

Food additives may be used in emulsified sauces. When used, food additives shall comply with RS CXS 192.

6 Contaminants

6.1 Heavy metals

Emulsified sauces shall not have heavy metals in excess of those given in table 2 when tested in accordance with test methods specified therein.

Table 2 — Limits for heavy metal contaminants

| Contaminant | Maximum limit (mg/kg) | Test method |
|--------------|-----------------------|--------------|
| Lead (pb) | 0.2 mg/kg | RS ISO 12193 |
| Arsenic (As) | 0.1 | AOAC 952.13 |

6.2 Pesticide Residues

Emulsified sauces shall comply with those maximum residue limits established by the Codex Alimentarius Commission.

7 Hygiene

7.1 Emulsified sauces shall be prepared and handled in accordance with hygienic requirements given in RS CXC 1.

7.2 Emulsified sauces shall conform to microbiological limits in table 3 when tested in accordance with test methods specified therein.

Table 3 – Microbiological limits

| S/N | Characteristic | Maximum limit | Test Method |
|------|------------------------------------|-----------------|----------------|
| i. | Total viable count, CFU/g | 10 ⁴ | RS ISO 4833-1 |
| ii. | <i>Salmonella spp, per 25 g</i> | Absent | RS ISO 6579-1 |
| iii. | <i>Escherichia coli</i> CFU/g | 10 | RS ISO 16649-2 |
| iv. | <i>Staphylococcus aureus</i> CFU/g | 10 | RS ISO 6888-1 |
| v. | Listeria count/25g | Absent | RS ISO |
| vi) | Mould and yeast, CFU/g | 10 ² | RS ISO 21527-1 |

7.3 The level of total aflatoxin in Emulsified sauces shall not exceed 10 ppb, wherein aflatoxin B₁ shall not be more than 5 ppb when tested according to RS ISO 16050.

8 Packaging

Emulsified sauces shall be packaged in food grade material that shall ensure product safety and integrity.

9 Labelling

In addition to the requirements specified in RS EAS 38, the following specific provisions shall apply:

- a) Name of the product shall be according to categories given in clause 4.
- b) Brand name/registered trademark.
- c) In case eggs other than hen's eggs and egg products are used, their origin shall be declared.
- d) Provision to say whether product contain eggs or is eggless
- e) the addition of an ingredient to impart a characteristic taste to the product shall be indicated in an appropriate manner so as to form a part of the product;
- f) Ingredients in descending order of proportion.
- g) Manufacture date
- h) Batch number

- i) Expiry date
- j) Net content
- k) Storage instruction; and
- l) Instruction for use

10 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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