SAINT LUCIA NATIONAL STANDARD

DLNS 67: 2005

SPECIFICATION FOR VINEGAR

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GENERAL STATEMENT

The Saint Lucia Bureau of Standards was established under the Standards Act (No14 of 1990 and started operations on 01 April 1991. A broad-based 15-member Standards Council directs the affairs of the Bureau.

The Standards Act gives the Bureau the responsibility to develop and promote standards and Codes of Practice for products and services for the protection of the health and safety of consumers and the environment as well as for industrial development in order to promote the enhancement of the economy of St. Lucia. The Bureau develops standards through consultations with relevant interest groups. In accordance with the provisions of the Standards Act, public comment is invited on all draft standards before they are declared as St. Lucia National Standards.

The Bureau also administers the Metrology Act No. 17 of 2000. This legislation gives the Bureau the responsibility to regulate all weights and measures and to manage and co-ordinate the metrification of St. Lucia.

The Bureau operates a Product Certification Scheme applicable to all products for which national standards exist. If a product satisfies all the requirements for certification a licence to carry the St. Lucia Standards Mark is issued to the manufacturer of the product. The presence of the mark on a product indicates that the product conforms to all the requirements of a specific national standard and assures consistent quality (of the product) to the consumer.

The Bureau is a member body of the International Organization for Standardisation (ISO), an affiliate member of the International Electrochemical Commission (IEC) and members of the Caribbean Regional Organization for Standards and Quality (CROSQ) and the Pan American Standards Commission (COPANT). The Bureau is the local agent for several foreign standards bodies such as the British Standards Institution (BSI) and the American Standards for Testing and Measurement (ASTM). The Bureau also serves as the enquiry point for the World Trade Organization (WTO) on matters pertaining to the Technical Barriers to Trade (TBT) Agreement.

In accordance with good practice for the adoption and application of standards, St. Lucia National Standards are subject to review every five years. Suggestions for improvements are always welcomed.
SPECIFICATION FOR VINEGAR

AMENDMENTS ISSUED SINCE LAST PUBLICATION

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ATTACHMENT PAGE FOR SLBS AMENDMENT SHEET
SAINT LUCIA NATIONAL STANDARD

DLNS 67: 2005

SPECIFICATION FOR VINEGAR

TECHNICAL COMMITTEE FOR FOOD PRODUCTS AND FOOD SAFETY

The following persons comprised the Technical Committee which was responsible for the formulation of the standard:

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Dr. Xanthe Dubuisson

Representing

Ministry of Agriculture, Forestry and Fisheries

Members

Fulgence St. Prix(Technical Secretary)

St Lucia Bureau of Standards

Parker Ragnanan

Min. of Health, Human Services, Family Affairs & Gender Relations

Pariat Emmanuel

Consumer Affairs

Kenneth Lalsingh

St Lucia Chamber of Commerce

Norma Maynard

Sir Arthur Lewis Community College

Dr. Mkabi Walcott

Saint Lucia Bureau of Standards

Eldon Serieux

National Manufacturers Association

Allison Astwood

Caribbean Environmental Health Institute
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0 Foreword

0.1 This standard has been prepared through the Saint Lucia Bureau of Standards to set levels of quality for vinegar produced or imported into Saint Lucia.

0.2 This standard is intended to be recommended for mandatory status.

0.3 In the preparation of this standard considerable assistance was derived from the following documents:


Canada Food and Drug Regulations, part B division 19-Vinegar

FDA/ORCA (CPG 7109: 22)

1 Scope

1.1 This standard outlines the requirements for vinegar of the types and classes specified in Clause 3.

2 Definition

For the purpose of this standard the following definition shall apply

2.1 **vinegar eel:** The free-living nematode, *Aguillula aceti*, from 1-2 mm in length and about 0.04mm in width which lives its life cycle in vinegar.

3 Product Description

3.1 Vinegar is the liquid produced by double fermentation (alcoholic and subsequent acetous) of a suitable raw material which contains starch or sugar or both starch and sugar, and shall contain not less than 4 g of acetic acid per 100 ml. and not more than 12g per 100 ml.

3.2 Solutions of acetic acid prepared by diluting concentrated or glacial acetic acid with water, with or without the addition of food colour or other ‘vinegar’ or the words “salad dressing” or any other word or words which
may lead the purchaser to believe the contents consist either wholly or in part of vinegar as defined in this standard.

3.3 Solutions of acetic acid prepared as described in the above clause, shall subject to sub-clause 3.4, be labeled, “Diluted acetic acid” (Food Grade) and shall contain not less than 5g per 100 ml. of acetic acid.

4 Product Designation

4.1 For the purposes of this Standard vinegar shall be of the following types and classes:

- **Type I** ‘X’ vinegar where ‘X’ is the common or usual name of the starting material, or alternatively of the alcoholic product of the first fermentation.
- **Type II** Spirit vinegar, alcoholic vinegar or white vinegar.
- **Type III** Distilled vinegar
- **Class 1** Spiced or flavoured vinegar
- **Class 2** Mixed or blended vinegar

4.2 The following describes the various types of vinegar.

4.2.1 **Wine Vinegar**: shall be vinegar made from wine and may contain caramel.

4.2.2 **Cider Vinegar or Apple vinegar**: shall be vinegar made from the liquid expressed from whole apples, apple parts or apple cuts and may contain caramel.

4.2.3 **Spirit Vinegar, Alcohol Vinegar, White Vinegar or Grain Vinegar**: shall be vinegar made from diluted distilled alcohol.

4.2.4 **Malt Vinegar**: shall be a vinegar made from an infusion of malt undistilled prior to acetous fermentation, and may contain other cereals or caramel, shall be dextro-rotatory, and shall contain, in 100 millilitres measured at a temperature of 20°C, not less than:

(a) 1.8 grams of solids; and
(b) 0.2 gram of ash.
4.3 The following describes the various classes of vinegar:

4.3.1 **Class 1 - Spiced or Flavoured Vinegar**

4.3.1.1 Spiced or flavoured vinegar is the vinegar or blend of vinegars in which one or more spices are steeped to produce the desired flavour.

4.3.1.2 The appropriate designation of this type of vinegar shall include the name or names of the vinegars used in the manufacturing process, preceded by the name of the characters and flavour.

Alternatively the terms ‘spiced’ may precede the types of vinegar and a list of the spices used shall be included on the label.

**Examples:** “Garlic flavoured malt vinegar” and “Spiced cane vinegar” (List of spices to be included).

4.3.2 **Class 2 – Mixed or Blended Vinegar**

4.3.2.1 Mixed or blended vinegar shall be a combination of two or more varieties of vinegar of which spirit vinegar shall contribute not more than 55 per cent of the total acetic acid.

4.3.2.2 The appropriate designation for this type of vinegar shall contain reference to the appropriate designation of each type of vinegar used.

**Examples:** ‘Cane and Honey vinegar’ or alternatively ‘Blended vinegar’ (appropriate designation of each constituent vinegar to be listed in decreasing order of proportion).

5 Essential composition and quality Criteria

5.1 Food additives | Max. allowable
--- | ---
5.1.1 Sulphur dioxide | 200 mg/kg
5.1.2 L-ascorbic acid (as antioxidant) | 400 mg/kg
5.1.3 Caramel colour (plain) | GMP
5.1.4 Caramel colour (ammonium sulphite process) | 1 g/kg
5.1.5 Caramel colour (ammonia process)- malt vinegar only 1 g/kg

5.1.6 Flavours

Natural flavours and natural flavouring substances as permitted by the Saint Lucia Bureau of Standards.

5.1.7 Flavour enhancers

Monosodium, monopotassium and calcium glutamate 5 g/kg (except for wine vinegar)

5.2 Processing aids

5.2.1 Nutrients for Acetobacter (such as yeast extracts and autolysates and amino-acids) and nutrient salts.

5.2.2 Clarifying and filtering agents as approved by the Saint Lucia Bureau of Standards and used in accordance with Good Manufacturing Practice

5.3 Contaminants

<table>
<thead>
<tr>
<th>Substance</th>
<th>Max. allowable</th>
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<tbody>
<tr>
<td>Arsenic (As)</td>
<td>1 mg/kg</td>
</tr>
<tr>
<td>Lead (Pb)</td>
<td>1 mg/kg</td>
</tr>
<tr>
<td>Sum of Copper (Cu) and Zinc (ZN)</td>
<td>10 mg/kg</td>
</tr>
<tr>
<td>Iron (Fe)</td>
<td>10 mg/kg</td>
</tr>
</tbody>
</table>

5.3.5 When tested by appropriate methods of sampling and examination the product:

(a) shall have an aerobic plate count of less than 10; and
(b) shall not contain vinegar eels

6 Physical and Chemical characteristics

6.1 All types of vinegar shall be clear, bright, free from cloudiness or suspended particles and shall possess a clean odour characteristic of the type of vinegar.

6.2 The product may contain added colouring matter approved for use by the Bureau of standards
6.3 Vinegar shall contain only acetic which was derived from a fermentation process. (see appendix A)

7 **Hygiene**

7.1 Premises on which vinegar is produced shall conform to Saint Lucia Code of Practice SLCP 1: 1995 – *Code of Practice for the General Principles of Food Hygiene – Part 1 Food production and processing.*

8 **Processing and packaging requirements**

8.1 Vinegar shall be prepared, processed and packaged under sanitary conditions and by such methods as will reflect acceptable standards of workmanship and quality in the finished product.

8.2 The product shall be so treated either before or after the sealing of the container as to give a prolonged shelf life.

8.3 The product shall be packed in suitable containers approved for use by the Saint Lucia Bureau of Standards.

8.4 Closures for glass bottles shall be resistant to corrosion by the product.

8.5 Vinegar shall occupy not less than 90% v/v of water capacity of the container.

*Note:* The water capacity of the container is the volume of distilled water at 20 degrees Celsius which the sealed container will hold when completely filled.

9 **Labelling Requirements**


9.2 The concentration of vinegar shall be expresses on the label as per cent acetic acid.

9.3 Only Type III vinegar shall be labeled ‘distilled’ vinegar.

9.4 Vinegar containing more than 8 g of acetic acid per 100 ml shall carry labeling information which includes the following
(a) the word ‘Concentrated’ as part of the name of the product, that is, Concentrated ‘X’ vinegar

(b) recommendations for dilution.

10 Methods of analysis

10.1 Oxidation value for vinegar; to determine the authenticity of vinegar: According to Pearson’s composition and analysis of foods, Nineth Edition, 1991

10.2 Determination of total acid content (expressed as CHCOOH); according to AOAC method (direct titration) (Official Methods of Analysis of the AOAC, 1990, XVth. Edition, 930.35J)


APPENDIX A

TEST TO IDENTIFY GENUINE VINEGARS

Genuine vinegars can be chemically identified by the appearance of a pink color when 2.5 ml is added to 2 drops of saturated alcoholic hexyresorcinol and 2.5 ml of saturated aqueous trichloracetic acid.