

**NATIONAL AGENCY FOR FOOD AND DRUG ADMINISTRATION AND CONTROL (NAFDAC)**

**FRUIT JUICE AND NECTAR REGULATIONS 2018**

**COMMENTS ARE WELCOMED FROM STAKEHOLDERS WITHIN 60 DAYS.**

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**Commencement:**

**In exercise of the powers conferred on the Governing Council of the National Agency for Food and Drug Administration and Control (NAFDAC) by Sections 5 and 30 of the NAFDAC Act Cap N1 LFN 2004 and Section 12 of the Food, Drugs and Related Products (Registration, Etc.) Act Cap F33 LFN 2004 and of all the powers enabling it in that behalf, THE GOVERNING COUNCIL OF THE NATIONAL AGENCY FOR FOOD AND DRUG ADMINISTRATION AND CONTROL with the approval of the Honourable Minister of Health hereby makes the following Regulations:-**

1. **Scope**

The provision of these Regulations shall be applicable to fruit juice and nectar products.

1. **Prohibition**
2. No fruit juice or nectar shall be manufactured, imported, exported, advertised, sold distributed or used in Nigeria, unless it has been registered in accordance with the provisions of these Regulations.
3. No person shall manufacture, import, export, advertise, sell, distribute or use any fruit juice or nectar which contains non-nutritive sweeteners without the approval of the Agency.
4. Fruit juice may contain sugar, invert sugar or dextrose and any food additives, excluding non-nutritive sweeteners not approved by the Agency.
5. **Definitions/Composition of fruit juices, nectar and fruit puree**

Definitions and compositions of fruit juices, nectar and fruit puree shall be as provided in Schedule “A’ to these Regulations.

1. **Organoleptic Properties.**

The product shall have the characteristic colour, aroma and flavour of the fruit juice. The natural volatile juice components may be restored to any juice obtained from the same type of fruits from which natural volatile juice components have been removed.

1. **Use and limits of food additives**

The use and limits of any food additives in the manufacture of fruit juice and nectar shall be as approved by the Agency and as indicated in Schedule “D”.

1. **Maximum Limits of contaminants**

The maximum limits of contaminants in fruit juices and nectars shall comply with the limits as provided in Schedule “E” to these Regulations.

1. **Labelling.** 
   1. Fruit juices and nectars shall be labelled in accordance with the Pre-packaged Food (Labelling) Regulations 2018.
   2. The percentage fruit content present shall be so declared on the Ingredients list on the product label.
   3. No labelling of soft drinks specified in these Regulations shall bear the word “fruit juice” unless the fruit content is as provided in Schedule C.
   4. No labelling of soft drinks specified in these Regulations shall bear the word “fruit drink” unless the fruit juice content is not less than 5 percent.
2. **Name of fruit juice to indicate the nature**
3. The name of every fruit juice shall indicate the accurate nature,
4. Where a name has been established for the fruit juice in these Regulations, such a name shall be used,
5. Where no common name exists for the fruit juice, an appropriate descriptive name shall be used, provided that, no product shall be named fruit juice drink,
6. A coined or fanciful name may be used, provided the name is not misleading and is accompanied by an appropriate descriptive term,
7. In the case of a combination of two or more fruit juices, the name of the juices in the order of predominance by weight or the word “fruit” shall be declared on the package, and
8. In case of a single fruit juice or a combination of two or more fruit juices, any of which are made from concentrate(s), the words “ from concentrate(s)”, shall follow the word “juice(s)” in the name(s) of such juice(s) when declared on the package.
9. **List of Ingredients.**

A complete list of ingredients used in preparing any fruit juice shall be declared on the label in descending order of the proportion present, except in the case of a dehydrated fruit juice intended to be reconstituted by the addition of an appropriate quantity of potable water, in which case, the ingredients may be listed in order of proportion in the reconstituted product, provided that the list of ingredients shall be headed by a statement such as “ingredients when reconstituted”.

1. **Penalty.** 
   1. A person who contravenes a provision of these Regulations is guilty of an offence and liable on conviction:-
2. in the case of an individual, to imprisonment for a term not exceeding two years or to a fine of not less than N50,000 or to both such imprisonment and fine; and
3. in the case of body corporate, to a fine of not less than N100, 000.
   1. Where an offence under these Regulations is committed by a body corporate or firm or other association of individuals every:-
4. director, manager, secretary or other similar officer of the body corporate; or
5. partner or officer of the firm; or
6. trustee of the body concerned; or
7. person concerned in the management of the affairs of the association; or
8. person who was purporting to act in a capacity referred to in paragraphs (a) to (e) is severally guilty of that offence and liable to be proceeded against and punished for that offence in the same manner as if he himself committed the offence, unless he proves that the act or omission constituting the offence took place without his knowledge, consent or connivance.
9. **Forfeiture.**

In addition to the Penalty specified these Regulations, a person convicted of an offence under these Regulations shall forfeit to the Agency the fruit juice or nectar and 4 whatsoever is used in connection with the commission of the offence.

1. **Interpretation**

In these Regulations, unless the context otherwise requires

1. **“Agency” means the National Agency for Food and Drug Administration and Control:**
2. **“Fruit juice”** means the unfermented but fermentable liquid obtained from the edible part of sound, appropriately mature and fresh fruit or of fruit maintained in sound condition by suitable means including post harvest surface treatment applied in accordance with the applicable provision of Codex Alimentarius Commission.
3. “**Concentrated fruit juice**” means the product that complies with the definition given in Regulation 12 (b) above, except water has been physically removed in an amount sufficient to increase the Brix level to a value at least 50% greater than the Brix value established for reconstituted juice from the same fruit.
4. **“Package”** means any form of packaging material in which the fruit juices and nectars are packed for sale as a single item.
5. **Repeal of Fruit Juice and Nectar Regulation 2005.**

The Fruit Juice and Nectar Regulations 2005 is hereby repealed.

1. **Citation**

These Regulations may be cited as Fruit Juice and Nectar Regulations, 2018

**SCHEDULE “A”**

**DEFINITIONS AND COMPOSITIONS OF FRUIT JUICES, NECTAR AND FRUIT PUREE**

Fruit juice may contain sugar, invert sugar or dextrose and any food additives, excluding non-nutritive sweetener approved by the Agency.

1. **Orange Juice (Citrus sinenis)**
2. Orange juice shall be the fruit juice obtained from the endocarp of sound, ripe oranges and the juice may have been concentrated and later reconstituted with potable water suitable for the purpose of maintaining the essential composition and quality factors of the juice.
3. The soluble solid determined by the minimum Brix level for the single strength orange juice not from concentrate shall be 10 and the Brix level for reconstituted orange juice from concentrate shall be 11.2.
4. The essential oils content of an orange juice shall not exceed 0.4ml/kg.
5. **Pineapple Juice (Ananas comosus) (Ananas sativus)**
   1. Pineapple juice shall be the fruit juice obtained from sound ripe pineapples and the juice may have been concentrated and later reconstituted with potable water suitable for the purpose of maintaining the essential composition and quality factors of the juice.
   2. The soluble solids determined by minimum Brix level shall be 11.2 for pineapple juice exclusive of added sugars and where the juice has been obtained using concentrated juice with the addition of potable water, the soluble solids determined by the minimum Brix level shall be 12.8 for pineapple juice exclusive of added sugars.
   3. The total quantity of added sugars shall not exceed 25g/kg and the addition of sugars is not permitted when the juice has been acidified.
   4. Ethanol content of the pineapple juice shall not exceed 3g/kg.
6. **Grape Juice (Vitis Vinifera or hybrids thereof; Vitis Labrusca or hybrids thereof)**
   1. Grape juice shall be the fruit juice obtained from sound, ripe grapes and the juice may have been concentrated and later reconstituted with potable water suitable for the purpose of maintaining the essential composition and quality factors of juice.
   2. The soluble grape solids determined by the minimum Brix level shall be 13.5 for grape juice and where the juice has been obtained using concentrated juice with the addition of potable water, the soluble solids determined by the minimum Brix level shall be 15.9 for grape juice.
   3. The ethanol content shall not exceed 5g/kg.
   4. The volatile acids content of a Grape Juice shall not exceed 0.4g/kg, expressed as acetic acid.
7. **Lemon Juice (Citrus lemon)** 
   1. Lemon Juice shall be the fruit juice obtained from sound, ripe lemon and the juice may have been concentrated and later reconstituted with potable water suitable for the purpose of maintaining the essential composition and quality factors of the juice.
   2. The soluble lemon solids determined by the minimum Brix level for lemon juice shall be 7.0.
   3. The ethanol content of a Lemon Juice shall not exceed 3g/kg.
   4. The essential oils content of a Lemon Juice shall not exceed 0.5ml/kg.
8. **Grapefruits (Citrus Paradisi)** 
   1. Grapefruit juice shall be the fruit juice obtained from sound, ripe grapefruits and the juice may have been concentrated and later reconstituted with potable water suitable for the purpose of maintaining the essential composition and quality factors of the juice.
   2. The soluble solids determined by the minimum Brix level shall be 9.5 for grapefruit exclusive of added sugars and the total quantity of added sugars and the minimum Brix level for reconstituted grapefruit from concentrate shall be 10.0.
   3. The total quantity of added sugars shall not exceed 50g/kg.
   4. The ethanol content shall not exceed 3.0g/kg.
   5. The essential oils content shall not exceed 0.3ml/kg.
9. **Apple Juice (Pyrus Malus)**
   1. Apple juice shall be the fruit juice obtained from sound, ripe apples and the juice may have been concentrated and later reconstituted with potable water suitable for the purpose of maintaining the essential composition and quality factors of the juice.
   2. The soluble solids determined by the minimum Brix level shall be 10.2 for apple juice and the minimum Brix level for reconstituted apple juice from concentrate shall be 11.2.
   3. The ethanol content shall not exceed 5g/kg.
   4. The volatile acids content of an apple juice shall not exceed 0.4g/kg. expressed as acetic acid.
10. **Blackcurrant Juice (Ribes Nigrum L)**
11. Blackcurrant juice shall be the fruit juice obtained from sound, ripe blackcurrants and the juice may have been concentrated and later reconstituted with potable water suitable for the purpose of maintaining the essential composition and quality factors of the juice.
12. The soluble solids determined by the minimum Brix level shall be 10.5 for blackcurrant juice and the minimum Brix level for reconstituted blackcurrant from concentrate shall be 11.0.
13. The total quantity of added sugars calculated as dry matter shall not exceed 200g/kg of the final product.
14. The ethanol content shall not exceed 3g/kg.
15. The volatile acids content shall not exceed 1.2g/kg expressed as acetic acid.
16. **Other fruit juice(s)**
    1. Other fruit juices shall be the fruit juices made from fruits of single species and the fruit juices may have been concentrated and later reconstituted with potable water suitable for the purpose of maintaining the essential composition and quality factors of the juice.
    2. The soluble solids determined by the minimum Brix level shall correspond to the soluble solids content of the named ripe fruit exclusive of added sugar as in Schedule ‘A’.
    3. The total quantity of added sugars shall not exceed 100g/kg, except for very acid fruits, where 200g/kg is permitted.
    4. The addition of sugar is not permitted when the juice has been acidified.
    5. The ethanol content shall not exceed 5g/kg.
17. **Mixed Fruit juice** 
    1. Mixed fruit juice shall be the fruit juice obtained from two or more species of sound ripe fruits and the juices may have been concentrated and later reconstituted with potable water suitable for the purpose of maintaining their essential composition and quality factors.
    2. The soluble solids determined by the minimum Brix level (exclusive of added sugars) shall be a value which corresponds to the soluble solids content of the ripe fruits exclusive of added sugars.
    3. The quantity of sugars added, calculated as dry sugar shall not exceed 100g/kg.
    4. The addition of sugars to mixed fruit juice is not permitted when the juice has been acidified.
    5. The ethanol content of a mixed fruit juice shall not exceed 3g/kg.
18. **Carbonated fruit juice**
19. Carbonated juice or sparkling juice shall be the named Fruit Juice fruit juice impregnated with carbon dioxide, under pressure or where the fruit juice contains more than 2g/kg of carbon dioxide and the term “carbonated” shall appear in close proximity to the name of the product and carbon dioxide shall be declared in the list of ingredients.
20. **Fruit Puree** 
    1. Fruit puree is the unfermented but fermentable product obtained by sieving the edible part of the whole or peeled fruit without removing the juice.
    2. The fruit shall be sound, appropriately mature and fresh fruit or fruit preserved by physical means.
    3. Concentrated fruit puree may be obtained by the physical removal of water from the fruit puree.
21. **Nectar** 
    1. Nectar is the unfermented but fermentable product obtained by adding potable water, sugars, or both ,or other carbohydrate sweeteners as described in Schedule ‘C’ to fruit puree or concentrated fruit puree or to a mixture of those products.
    2. The minimum juice and/or puree content shall be as in Schedule ‘C’.

**SCHEDULE 'B'**

**COMPOSITION**

**Basic ingredients**

1. Soluble Solids are as follows –

* + - 1. for fruit juices not from concentrates offered for consumption as such, the soluble solids content of the single strength juice shall not be modified and shall be in accordance with the minimum Brix level established in the 1st table below;
      2. the preparation of fruit offered for direct consumption that requires reconstitution of condensed or concentrated juices shall be in accordance with the minimum Brix level indicated in the 1st table, exclusive of the solids of any added optional ingredients and additives and if there is no Brix level specified in the table, minimum Brix shall be calculated on the basis of the soluble solids content of the single strength, unconcentrated juice used to produce such concentrated juice;
      3. for reconstituted juice from concentrate, potable water used in reconstitution shall at a minimum meet Guidelines for Drinking Water Quality of the World Health Organization with Nitrate levels which shall not exceed 25 mg/l and Sodium levels shall not exceed 50 mg/l.

2. Minimum Brix level for reconstituted juice from concentrate and single strength juice not from concentrate are as follows –

|  |  |  |  |
| --- | --- | --- | --- |
| **Fruit** | **Botanical Name** | **Brix Level**  **Reconstituted**  **Juice**  **From Concentrate** | **Brix Level**  **Single Strength**  **Juice Not from Concentrate** |
| Apple | **Pyrus malus** | 11.2 | 10.2 |
| Apricot | Prunus armeniaca L. | 11.2 | 10.2 |
| Aronia/Chokebery | Aronia melanocarpa (michx.) Ell. | No data currently available | No data currently available |
| Azerole | Malpighia punicifolia L. | 6.5 | 6.0 |
| Banana | Musca species (plantains excluded) | 21 | 20.0 |
| Bilberry/Blueberry | Vaccinium myrtillus L.  Vaccinium corymbosum L.  Vaccinium angustifolium | 10.0 | 8.5 |
| Blackberry | Rubus fruitcosus L. | 8.8 | 8.0 |
| Blackcurrant | Ribes nigrum L. | 11.0 | 10.5 |
| Boysenberry | Rubus loganobaccus L.H. Bailey | 8.0 | 7.0 |
| Buckthornberry = Sallow Thorn |  | 5.8 | No data currently available |
| Carambola | Averrhoa carambola | 7.8 | No data currently available |
| Casaba Melon | Cucumis melo var. Inodorus | 7.5 | No data currently available |
| Cashew Fruit | Anacardium occidentale L. | 11.5 | 10.5 |
| Cloudberry | Rubus chamaemorus L. | 9.0 | 8.0 |
| Coconut | Cocos nucifera L. | No data currently available | No data currently available |
| Cranberry | Vaccinium macrocarpon  Ait.;  Vaccinium oxycoccos L. | 7.5 | 7.0 |
| Crowberry | Empetrum nigrum L. | 6.0 | 5.5 |
| Date | Phoenix dactylifera L. | 18.5 | No data currently available |
| Dew berry | Rubus hispidus of North  America & R. caesius of Europe | 10.0 | No data currently available |
| Elderberry | Sambucuc nigra L.  Sambucus canandensis | 10.0 | 9.0 |
| Fig | Ficus carica | 18.2 | No data currently available |
| Gooseberry | Ribes uva-crispi L. | 7.0 | 6.0 |
| Grape | Vitis Vinifera or hybrids thereof; Vitis Labrusca or hybrids thereof | 15.9 | 13.5 |
| Grapefruit | Citrus Paradisi Macfayden | 10.0 | 9.5 |
| Guava | Psidium guajava | 9.5 | 8.5 |
| Honey dew melon | (Cucumis melo) | 9.6 | No data currently available |
| Kiwi | Actinidia chinensis J. E. Planch | 11.5 | 10.5 |
| Kumquat | Fortunella sp. | No data currently available | No data currently available |
| Lemon | Citrus limon (L.) Burm.f) | 8.0 | 7.0 |
| Lime | Citrus aurantifolia Swingle | 8.0 | 7.0 |
| Lingonberry | Vaccinium vitis-idaea L. | 10.0 | 9.0 |
| Longanberry | Rubus usinus var.  loganobaccus | 10.0 | No data currently available |
| Lulo | Solanum quitoenes L. | No data currently available | No data currently available |
| Litchi | Litchi chinensis Sonn. | 12.0 | 11.2 |
| Mandarin/Tangerine | Citrus reticulata | 11.2 | 10.5 |
| Mango | Mangifera indica | 13.0 | 14.0 |
| Melon | Cucumis melo L. | 8.0 | 7.5 |
| Mulberry | Morus spec. | No data currently available | No data currently available |
| Nectarine | Prunus persica | 10.0 | No data currently available |
| Orange | Citrus sinenis | 11.2 | 10.0 |
| Papaya | Carica papaya L. | 9.5 | 9.0 |
| Passion fruit | Passiflora edulis and Passiflora edulis forma flavicarpa | 13.5 | 12.4 |
| Peach | Prunus persica | 10.0 | 9.0 |
| Pear | Pyrus communis L. | 11.9 | 11.0 |
| Persimmon | Diospyros kaki L. | No data currently available | No data currently available |
| Pinneapple | Ananas comosus L. Merrill  =  Ananas sativus L. Lindl | 12.8 | 11.2 |
| Plum | Prunus domestica | 11.2 | 10.0 |
| Pomegranate | Prunica grana | 12.0 | 11.2 |
| Prune | Prunus domestica | 18.5 | No data currently available |
| Quetsche | Prunus domestica L. | 11.2 | 10.0 |
| Quince | Cydonia L oblonga | 11.2 | 10.0 |
| Raspberry | Rubus idaeus | 7.0 | 6.3 |
| Red currant | Ribes rubrum L. | 10.0 | 9.0 |
| Rhubarb | Rheum, R. rhubarbarum | 5.7 | No data currently available |
| Rose hip | Rosa sp. | 9.0 | 8.0 |
| Rowanberry | Sorbus aucuparia L. | 11.2 | 10.0 |
| Swallow-thron berry | Hipphae rhamnoides L. | 5.8 | 5.0 |
| Sloe | Prunus spinosa L. | 5.8 | 5.0 |
| Sour cherry | Prunus cerasus | 13.5 | 12.4 |
| Soursop | Annona muricata L. | 14.5 | 13.5 |
| Stonesbaer | Prunus cerasus cv. Stevnsbaer | 17.3 | 14.7 |
| Strawberry | Fragaria ananassa | 7.0 | 6.3 |
| Sugar apple | Annona squamosa L. | 14.5 | 13.5 |
| Sweet cherry | Prunus avium | 20.0 | No data currently available |
| Tomato | Lycopersicum esculentum L. | 5.0 | 4.2 |
| Umbu | Spondias tuberosa anuda | 9.0 | 8.0 |
| Water melon | Citrullus lanatus L. | 7.8 | 7.5 |
| White currant | Ribes rubrum L. | 10.0 | 9.0 |

**SCHEDULE 'C'**

**MINIMUM JUICE AND/OR PUREE IN FRUIT NECTARS**

|  |  |
| --- | --- |
| **Fruit Nectars Made From** | **Minimum Juice and/or**  **Puree Content  (% m/m)** |
| Apricot | 35 |
| Bilberry | 40 |
| Blackberry | 30 |
| Blackcurrant | 30 |
| Blackcurrant (non pulpy) | 30 |
| Cloudberry | 30 |
| Cranberry | 30 |
| Elderberry | 50 |
| Goosberry | 30 |
| Grapefruit | 50 |
| Guava | 25 |
| Mandarine | 50 |
| Mango (pulpy) | 30 |
| Orange | 50 |
| Peach | 40 |
| Peer | 40 |
| Raspberry | 40 |
| Redcurrant | 30 |
| Rose hip | 40 |
| Rowanberry | 30 |
| Sea Buckthorn | 25 |
| Strawberry | 40 |
| Tangerine | 50 |
| Whitecurrant | 30 |
| Whortleberry Other: High Acidic | 30 |
| Apple | 50 |
| Banana | 25 |
| Other:    High Acidity, High pulp Content, or Strong Flavour | 25 |
| Other:    Low Acidity, Low pulp Content, or Low/Medium Flavour | 50 |

**SCHEDULE 'D'**

**USE AND LIMITS OF FOOD ADDITIVES**

|  |  |  |
| --- | --- | --- |
| **FUNCTION** |  | **MAXIMUM LEVEL** |
| **4.1** | **ANTIOXIDANTS** |  |
| 300 | Ascorbic  acid | Limited by GMP |
| 220 | Sulphur dioxide (lemon, lime and grape must only) | 350mg/l |
| **4.2** | **ACIDITY REGULATORS** |  |
| 300 | Citric acid | 2g/l |
| 330 | Citric acid for (nectars) | 5g/l |
| 296 | Malic acid (or nectars) | Limited by GMP |
| 336 | Tartaric acid (for nectars) | Limited by GMP |
| **4.3** | **CARBONATING AGENTS** |  |
| 290 | Carbon dioxide | Limited by GMP |
| **4.4** | **STABILIZERS** |  |
| 440 | Pectins | <3g/l |
| **4.5** | **SWEETENERS (OR NECTARS)** |  |
| 950 | Acesulfame K | <350mg |
| 951 | Aspartame | <600mg |
| 952 | Cyclamic Acid and Salts | <400mg/l |
| 954 | Saccharine and Salts | <80mg/l |
| 955 | Sucralose | <250mg/l |
| 954 | Neohesperidine | 30mg/l |
| 4.6 | Preservatives can be added only in accordance with national legislation |  |

**PROCESSING AIDS – MAXIMUM LEVEL OF USE IN LINE WITH GOOD MANUFACTURING PRACTICES (GMP)**

|  |  |
| --- | --- |
| **FUNCTION** | **SUBSTANCE** |
| Antifoaming Agents | Polymethylsiloxane5 |
| Clarifying Agents  Filtration Aids  Flocculating Agents | Adsorbent clays  (bleaching, natural or activated earths) |
| Adsorbent resins |
| Activated carbon (only from plants) |
| Bentonite |
| Calcium hydroxide6 |
| Cellulose |
| Chitosan |
| Colloidal silica |
| Diatomaceous earth |
| Gelatin (from skin collagen) |
| Ion exchange resins (Cation and Anion) |
| Kaolin |
| Perlite |
| Polyvinylpolypyrrolidone |
| Potassium tartrate6 |
| Precipitated calcium carbonate6 |
| Rice hulls |
| Silica sol |
| Sulphur dioxide6,7 |
| Tannin |

**SCHEDULE 'E'**

    \***Maximum Limits of Contaminants in Fruit Juice and Nectars**

|  |  |
| --- | --- |
| **Contaminant in Fruit Juice/Nectars** | **Maximum**  **Limits**  **(mg/kg)** |
| Arsenic (As) | 0.2 mg/kg |
| Lead (Pb) | 0.1 mg/kg |
| Tin (Sn) | 200 mg/kg |
| Copper (Cu) | 5 mg/kg |
| Zinc (zn) | 5 mg/kg |
| Iron (Fe) | 15 mg/kg |
| Sum of Copper, Zinc and Iron | 20 mg/kg |
| Mineral impurities insoluble in 10% of Hydrochloric Acid shall not exceed 25mg/kg (only for clarified juices) | |
| Toxins |  |
| Mycotoxins |  |
| Patulin (in apple juice and apple juice ingredients) | 50 µg/kg |

**MADE** at Abuja this………………………..day of …………………….2018

**………………………..**

**Inuwa Abdulkadir Esq**

**Chairman Governing Council**

**National Agency for Food and Drug Administration and Control (NAFDAC)**