

S. I. of 2005

**DRUGS AND RELATED PRODUCTS (REGISTRATION, ETC.)  
ACT 1996 (AS AMENDED)**

**Fruit Juice and Nectar Regulations 2005**

*Commencement:*

**In exercise of the powers conferred on the Governing Council of the National Agency for Food and Drug Administration and Control (NAFDAC) by Section 8 of the Drugs and Related Products (Registration, Etc.) Act 1996, as amended, 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:-**

Prohibition.

1. (i) No fruit juice or nectar shall be manufactured, imported, exported, advertised, sold or distributed in Nigeria, unless it has been registered in accordance with the provisions of these Regulations.
- (ii) No person shall manufacture, import, export, advertise, sell, distribute any fruit juice or nectar which contains non-nutritive sweeteners without the approval of the Agency.
- (ii) Fruit juice may contain sugar, invert sugar or dextrose and any food additives, excluding non-nutritive sweeteners approved by the Agency.

Definitions/  
compositions  
of fruit juices,  
nectar and  
fruit puree.

2. Definitions and compositions of fruit juices, nectar fruit puree shall be as in Schedule "A" to these Regulations.

- Organoleptic Properties. **3.** The product shall have the characteristic colour, aroma and flavour of the fruit juice and 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.
- Use and limits of food additives. **4.** The use and limits of any food additives in the manufacture of fruit juice and nectar shall be as approved by the Agency and indicated in Schedule "D".
- Maximum Limits of contaminants in fruit juices and nectars . **5.** The maximum limits of contaminants in fruit juices and nectars shall comply with the limits specified in Schedule " E" to these regulations.
- Labelling. **6.-(1)** Fruit juices and nectars shall be labelled in accordance with the Pre-packaged Food (Labelling) Regulations 2005.
- Name of fruit juice to Indicate the nature etc. **(2)**
- (i) The name of every fruit juice shall indicate the accurate nature,
  - (ii) Where a name has been established for the fruit juice in these Regulations, such a name shall be used,
  - (iii) 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,
  - (iv) A coined or fanciful name may be used, provided the name is not misleading and is accompanied by an appropriate descriptive term,
  - (v) 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
  - (vi) 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.

List of Ingredients. **7.** 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".

Penalty. **8.** (1) A person who contravenes a provision of these Regulations is guilty of an offence and liable on conviction:-

(a) in the case of an individual, to imprisonment for a term not exceeding two years or to a fine of not less than ₦50,000 or to both such imprisonment and fine; and

(b) in the case of body corporate, to a fine of not less than ₦100,000.

(2) Where an offence under these Regulations is committed by a body corporate or firm or other association of individuals:-

(a) every director, manager, secretary or other similar officer of the body corporate; or

(b) every partner or officer of the firm; or

(c) every trustee of the body concerned; or

(d) every person concerned in the management of the affairs of the association; or

(e) every person who was purporting to act in a capacity referred to in paragraphs (a) to (d) 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.

Forfeiture. **9.** In addition to the penalty specified in regulation 8 of these Regulations, a person convicted of an offence under these Regulations shall forfeit to the Agency the fruit juice or nectar and

whatsoever is used in connection with the commission of the offence.

Application      **10.**      The provisions of these Regulations shall be applicable to fruit juice and nectar products.

Interpretation. **11.**      In these Regulations, unless the content otherwise requires :-

**"Agency"** means the National Agency for Food and Drug Administration and Control;

**"Fruit juice"** means the unfermented but fermentable liquid obtained from a named fruit, fruit juice fresh, frozen, canned or made from concentrates and if fruit juice is made from concentrate, the juice shall be reconstituted with potable water to not less than the soluble solids that such fruit juice had before concentration and it may be cloudy or clear and shall have the essential characteristics typical of the juice of the fruit from which it comes; and

**"Package"** means any form of packaging material in which the fruit juices and nectars are packed for sale as a single item.

Citation      12.      These Regulations may be cited as Fruit Juice and Nectar Regulations, 2005.

## **SCHEDULE "A"**

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

#### ***Orange Juice (Citrus sinensis)***

- 1.(1) 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.

- (2) 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.
- (3) The essential oils content of an orange juice shall not exceed 0.4ml/kg.

***Pineapple Juice***  
***(Ananas comosus)***  
***(Ananas sativus)***

- 2.(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.

***Grape Juice***  
***(Vitis Vinifera or hybrids thereof; Vitis Labrusca or hybrids thereof).***

- 3.-(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.

***Lemon Juice  
(Citrus lemon)***

- 4.(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.

***Grapefruits (Citrus  
Paradisi)***

- 5.(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.

***Apple Juice  
(Pyrus Malus)***

6. (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.

***Blackcurrant Juice  
(Ribes Nigrum L)***

- 7.(1) 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.
- (2) 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.
- (3) The total quantity of added sugars calculated as dry matter shall not exceed 200g/kg of the final product.
- (4) The ethanol content shall not exceed 3g/kg.

- (5) The volatile acids content shall not exceed 1.2g/kg expressed as acetic acid.

***Other fruit juice(s)***

8. (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.

***Mixed Fruit juice***

9. (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.
- Carbonated Fruit Juice*** 10. Carbonated juice or sparkling juice shall be the named 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.
- Fruit Puree*** 11. (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.
- Nectar*** 12. (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 –

- (a) 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 1<sup>st</sup> table below;
- (b) 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 1<sup>st</sup> 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;
- (c) 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 -

<b>Fruit</b>	<b>Botanical Name</b>	<b>Brix Level Reconstituted Juice From Concentrate</b>	<b>Brix Level Single Strength Juice Not from Concentrate</b>
Apple	<i>Pyrus malus</i>	11.2	10.2
Apricot	<i>Prunus armeniaca L.</i>	11.2	10.2
Aronia/Chokebery	<i>Aronia melanocarpa (michx.) Ell.</i>	No data currently available	No data currently available
Azerole	<i>Malpighia punicifolia L.</i>	6.5	6.0
Banana	<i>Musca species (plantains excluded)</i>	21	20.0
Bilberry/Blueberry	<i>Vaccinium myrtillus L.</i> <i>Vaccinium corymbosum L.</i> <i>Vaccinium angustifolium</i>	10.0	8.5
Blackberry	<i>Rubus fruitcosus L.</i>	8.8	8.0
Blackcurrant	<i>Ribes nigrum L.</i>	11.0	10.5
Boysenberry	<i>Rubus loganobaccus L.H. Bailey</i>	8.0	7.0
Buckthornberry = Sallow Thorn		5.8	No data currently available
Carambola	<i>Averrhoa carambola</i>	7.8	No data currently available
Casaba Melon	<i>Cucumis melo var. Inodorus</i>	7.5	No data currently available
Cashew Fruit	<i>Anacardium occidentale L.</i>	11.5	10.5
Cloudberry	<i>Rubus chamaemorus L.</i>	9.0	8.0

Coconut	<i>Cocos nucifera L.</i>	No data currently available	No data currently available
Cranberry	<i>Vaccinium macrocarpon Ait.;</i> <i>Vaccinium oxycoccos L.</i>	7.5	7.0
Crowberry	<i>Empetrum nigrum L.</i>	6.0	5.5
Date	<i>Phoenix dactylifera L.</i>	18.5	No data currently available
Dew berry	<i>Rubus hispidus of North America &amp; R. caesius of Europe</i>	10.0	No data currently available
Elderberry	<i>Sambucuc nigra L.</i> <i>Sambucus canadensis</i>	10.0	9.0
Fig	<i>Ficus carica</i>	18.2	No data currently available
Gooseberry	<i>Ribes uva-crispi L.</i>	7.0	6.0
Grape	<i>Vitis Vinifera or hybrids thereof; Vitis Labrusca or hybrids thereof</i>	15.9	13.5
Grapefruit	<i>Citrus Paradisi Macfayden</i>	10.0	9.5
Guava	<i>Psidium guajava</i>	9.5	8.5
Honey dew melon	<i>(Cucumis melo)</i>	9.6	No data currently available
Kiwi	<i>Actinidia chinensis J. E. Planch</i>	11.5	10.5
Kumquat	<i>Fortunella sp.</i>	No data currently available	No data currently available
Lemon	<i>Citrus limon (L.) Burm.f)</i>	8.0	7.0
Lime	<i>Citrus aurantifolia Swingle</i>	8.0	7.0
Lingonberry	<i>Vaccinium vitis-idaea L.</i>	10.0	9.0
Longanberry	<i>Rubus usinus var. loganobaccus</i>	10.0	No data currently available
Lulo	<i>Solanum quitoenes L.</i>	No data currently available	No data currently available
Litchi	<i>Litchi chinensis Sonn.</i>	12.0	11.2
Mandarin/Tangerine	<i>Citrus reticulata</i>	11.2	10.5
Mango	<i>Mangifera indica</i>	13.0	14.0
Melon	<i>Cucumis melo L.</i>	8.0	7.5
Mulberry	<i>Morus spec.</i>	No data currently available	No data currently available
Nectarine	<i>Prunus persica</i>	10.0	No data currently available
Orange	<i>Citrus sinensis</i>	11.2	10.0
Papaya	<i>Carica papaya L.</i>	9.5	9.0
Passion fruit	<i>Passiflora edulis and Passiflora edulis forma flavicarpa</i>	13.5	12.4
Peach	<i>Prunus persica</i>	10.0	9.0
Pear	<i>Pyrus communis L.</i>	11.9	11.0

Persimmon	<i>Diospyros kaki L.</i>	No data currently available	No data currently available
Pineapple	<i>Ananas comosus L. Merrill</i> = <i>Ananas sativus L. Lindl</i>	12.8	11.2
Plum	<i>Prunus domestica</i>	11.2	10.0
Pomegranate	<i>Prunica grana</i>	12.0	11.2
Prune	<i>Prunus domestica</i>	18.5	No data currently available
Quetsche	<i>Prunus domestica L.</i>	11.2	10.0
Quince	<i>Cydonia L oblonga</i>	11.2	10.0
Raspberry	<i>Rubus idaeus</i>	7.0	6.3
Red currant	<i>Ribes rubrum L.</i>	10.0	9.0
Rhubarb	Rheum, R. rhabarbarum	5.7	No data currently available
Rose hip	<i>Rosa sp.</i>	9.0	8.0
Rowanberry	<i>Sorbus aucuparia L.</i>	11.2	10.0
Swallow-thron berry	<i>Hippae rhamnoides L.</i>	5.8	5.0
Sloe	<i>Prunus spinosa L.</i>	5.8	5.0
Sour cherry	<i>Prunus cerasus</i>	13.5	12.4
Soursop	<i>Annona muricata L.</i>	14.5	13.5
Stonesbaer	<i>Prunus cerasus cv. Stevnsbaer</i>	17.3	14.7
Strawberry	<i>Fragaria ananassa</i>	7.0	6.3
Sugar apple	<i>Annona squamosa L.</i>	14.5	13.5
Sweet cherry	<i>Prunus avium</i>	20.0	No data currently available
Tomato	<i>Lycopersicum esculentum L.</i>	5.0	4.2
Umbu	<i>Spondias tuberosa anuda</i>	9.0	8.0
Water melon	<i>Citrullus lanatus L.</i>	7.8	7.5
White currant	<i>Ribes rubrum L.</i>	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
WhortleberryOther: High Acidi	30
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

<b>FUNCTION</b>		<b>MAXIMUM LEVEL</b>
<b>4.1</b>	<b>ANTIOXIDANTS</b>	
300	Ascorbic acid	Limited by GMP
220	Sulphur dioxide (lemon, lime and gape must only)	350mg/l
<b>4.2</b>	<b>ACIDITY REGULATORS</b>	
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
<b>4.3</b>	<b>CARBONATING AGENTS</b>	
290	Carbon dioxide	Limited by GMP
<b>4.4</b>	<b>STABILIZERS</b>	
440	Pectins	<3g/l
<b>4.5</b>	<b>SWEETENERS (OR NECTARS)</b>	
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)**

<b>FUNCTION</b>	<b>SUBSTANCE</b>
Antifoaming Agents	Polymethylsiloxane <sup>5</sup>
Clarifying Agents Filtration Aids Flocculating Agents	Adsorbent clays (bleaching, natural or activated earths)
	Adsorbent resins
	Activated carbon (only from plants)
	Bentonite
	Calcium hydroxide <sup>6</sup>
	Cellulose
	Chitosan
	Colloidal silica
	Diatomaceous earth
	Gelatin (from skin collagen)
	Ion exchange resins (Cation and Anion)
	Kaolin
	Perlite
	Polyvinylpyrrolidone
	Potassium tartrate <sup>6</sup>
	Precipitated calcium carbonate <sup>6</sup>
Rice hulls	
Silica sol	
Sulphur dioxide <sup>6,7</sup>	
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

2005

**DR. ANDEM NYONG ANDEM**  
***Chairman Governing Council***  
***National Agency for Food and Drug Administration***  
***and Control (NAFDAC)***

