Practical consequences of implementation of EU legislation and Codex standards applicable to juices

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AIJN. European Fruit Juice Association
Industries

Legislation & Industry Codes affect sales and trade in Juices
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1. Codex Alimentarius

- CODEX Alimentarius Commission is a joint body set up by the Food and Agricultural Organisation (FAO) and the World Health Organisation (WHO)

- AIM: to set up and implement a joint Food Standard Programme to protect the health of consumers, to ensure fair practices in food trade and to promote and facilitate international trade in food

- MEMBERS: membership is open to all Member Nations and Associate Members of FAO and WHO. International governmental organizations and international NGO’s can attend as observers
1. Codex Alimentarius cont.

CODEX Alimentarius has 2 types of standards:

- General (horizontal) standards
  across-the-board application to all foods
  e.g. - food labelling
  - food additives
  - pesticides residues / contaminants

- Commodity (vertical) standards
  standards for specific foods or classes of foods
  e.g. - preserved fruits
  - fresh fruits and vegetables
  - **fruit juices and nectars**
1. Codex Alimentarius cont.

- Adopted CODEX standards and guidelines are a benchmark for local authorities and international trade.

- The CODEX standards are binding for Codex Alimentarius members in international trade but not on the national market.

- Adopted CODEX standards and guidelines are acknowledged by the World Trade Organization (WTO) in cases of trade disputes.

- **The CODEX GENERAL STANDARD FOR FRUIT JUICES AND NECTARS (247-2005)** is the standard for international trade in juice products.

- Fruit Juices & Nectars that are conform the CODEX standard have to be allowed for sale in the EU even if the EU Fruit Juice legislation sets stricter criteria. Example min. Brix values.
The Standard defines:
- Fruit Juice
- Concentrated Fruit Juice
- Water Extracted Fruit Juice
- Fruit Purée
- Concentrated Fruit Purée
- Fruit Nectar

Sets specific labelling provisions

Lists methods of analysis and sampling

Sets essential composition and quality factors i.e.
- min. Brix values for reconstituted juice/ and purée (91 fruits)
- water for reconstitution
- permitted ingredients like sugars, nutrients etc.
  (citrus reticulata or hybrids in citrus sinensis – nat. Derogation up to 10%)

Specifies allowed food additives, processing aids, contaminants and pesticides
2. EU LEGISLATION

DG Agriculture
- Vertical food legislation
- Fruit Juice Dir.
- CMO Fruit & Vegetables

DG SANCO
- Horizontal food legislation
- Additives
- Contaminants Pesticides

Other
- Customs
- Trade negotiations
- Multilateral & Bilateral
# Horizontal & Vertical Food Legislation

Directives or Regulations covering 20 subject areas

<table>
<thead>
<tr>
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<tbody>
<tr>
<td></td>
<td>Product definitions</td>
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<table>
<thead>
<tr>
<th>Additives</th>
<th>Authorised treatments</th>
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<tr>
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<td>- pesticides - patulin -</td>
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<table>
<thead>
<tr>
<th>Contaminants &amp; Residues OTA</th>
<th>Definitions Raw Materials</th>
</tr>
</thead>
</table>

Provisions in the Directive(s)

- **Product Names/Definitions**
  - Fruit Juice
  - Fruit Juice from concentrate
  - Concentrated Fruit Juice
  - Dehydrated/powdered FJ
  - Fruit Nectar

- **Authorised Ingredients**
  e.g. Vitamins & minerals, flavour, pulp and cells, sugars (acidity reg. or sweetening), lime/lemon (acid reg.)

- **Authorised treatments & substances** e.g.
  Mechanical extraction processes, physical processes inclu. In-line water extraction, enzymes

- **Definitions Raw Materials** i.e. fruit, fruit purée, sugars ,honey, pulp and cells

- **Min. juice/purée content for fruit nectars depending upon fruit variety**

- **Min. Brix values for reconstituted juice/purée from 18 different fruits**

<table>
<thead>
<tr>
<th>Fruit Name</th>
<th>Min. Degree Brix</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apple</td>
<td>11,2</td>
</tr>
<tr>
<td>Apricot</td>
<td>11,2</td>
</tr>
<tr>
<td>Banana</td>
<td>21,0</td>
</tr>
<tr>
<td>Blackcurrant</td>
<td>11,6* (11,0)</td>
</tr>
<tr>
<td>Grape</td>
<td>15,9</td>
</tr>
<tr>
<td>Grapefruit</td>
<td>10,0</td>
</tr>
<tr>
<td>Guava</td>
<td>9,5* (8,5)</td>
</tr>
<tr>
<td>Lemon</td>
<td>8,0</td>
</tr>
<tr>
<td>Orange</td>
<td>11,2</td>
</tr>
<tr>
<td>Passionfruit</td>
<td>13,5* (12)</td>
</tr>
<tr>
<td>Peach</td>
<td>10,0</td>
</tr>
<tr>
<td>Pear</td>
<td>11,9</td>
</tr>
<tr>
<td>Pineapple</td>
<td>12,8</td>
</tr>
<tr>
<td>Raspberry</td>
<td>7,0</td>
</tr>
<tr>
<td>Sour cherry</td>
<td>13,5</td>
</tr>
<tr>
<td>Strawberry</td>
<td>7,0</td>
</tr>
</tbody>
</table>

* These min. Brix degree values only apply to reconstituted juice produced in EU.
3. Application of legislative requirements for fruit juices

Labelling
- Product and Sales Names
- Ingredients list
- QUID
- Nutritional Labelling
- Others (date min. durability, net quantity ..)

Additives
- Food Improvement Agents Package
- Miscellaneous Additives
- Sweeteners
- Colours

Contaminants & Pesticides
- EU Standards Contaminants
- Max. Contaminants levels in AIJN COP
- Pesticides Regulation
3.1. Fruit Juice Labelling
Product names listed in the fruit juice directive shall be used in trade to designate them.

Product name = sales denomination

- **Fruit Juice**
  (for direct juice)
- **Fruit Juice from concentrate**
  (for reconstituted juice)

*For AIJN it is understood that the product name Fruit Juice from concentrate can be split up in 2 parts i.e. “Fruit Juice” and “from concentrate”. The 2 parts can be labelled on 2 subsequent lines. The “from concentrate” on the 2nd line does not have to be in the same font and/or letter size but must remain clearly readable.*
FRUIT JUICE
1. SALES NAME cont.

If fruit juice/fruit juice from concentrate is made from
- a single kind of fruit the name of that fruit shall substitute the word fruit e.g. Orange juice
- two or more kinds * of fruit the product name is to be supplemented by the list of fruits used in descending order of fruits used e.g. Orange and peach juice
- three or more kinds of fruit the indication of the fruits used may be replaced by the words “several fruits” or a similar wording or by the number of fruits used e.g. Multifruit

*Lemon/lime juice used for acidifying only to be listed in ingredients list
For fruit juices which have been sweetened* by the addition of sugars, the sales name shall include the word “sweetened” or “with added sugar”, followed by an indication of the maximum quantity of sugar added, calculated as dry matter and expressed in grams per litre

“sweetened orange juice...” or “apple juice with added sugar...”

*In fruit juice and fruit juice from concentrate, other than pear or grape juice, the quantity of sugars added for sweetening purposes, expressed as dry matter, may not exceed 150 g per litre of juice.
For mixtures of fruit juice and fruit juice from concentrate obtained entirely or partly from one or more concentrated products the labelling shall bear the words “made with concentrate(s)” or “partially made with concentrate(s)” as appropriate.

The words “made with” shall be replaced by “from..” as of Jan. 2011.

This info shall be labelled close to the product name, standing out well from any background in clearly visible characters.

The addition of extra pulp and cells to fruit juice and fruit juice from concentrate shall be indicated on the labelling (place not specified).
PRODUCT NAME

• Fruit Juice = NFC from 3 kinds of fruit

• Fruit Juice from Concentrate

Grape juice = 50%
Apple juice = 28%
Cranberry Juice = 22%
FRUIT JUICE

2. LIST OF INGREDIENTS

- Fruit juice(s) or fruit juice(s) from concentrate as in the product name
- Fruit purée or concentrated fruit purée
- Pulp or cells when extra added *
- Sugars
- Carbon dioxide
- Additives, i.e. name of the category followed by the specific name of the additive or the EC number e.g. Acidity regulator: citric acid or E330
- Nutrients if used (Regulation 1925/2006) i.e. minerals, vitamins

* for reconstituted products no obligation to list the ingredients used for this purpose i.e. water, aroma, pulp and cells...
In the case of prepackaged liquids, the net quantity shall be expressed in units of volume.

Shall appear in the same field of vision* as the name of the product.

*Same field of vision does not essentially require “labelling” in one bloc.
The date of minimum durability* or, in the case of foodstuffs which, from the microbiological point of view, are highly perishable, the “use by” date

shall appear in the same field of vision as the product name and the net quantity

*Is the date until which the foodstuff retains its specific properties when properly stored

The date shall be preceded by the words:

“Best before...” when the date includes a day

“Best before end..” in other cases

The words are accompanied by the date itself or by a reference where the date is given on the labelling (eg. See on top/see cap)
5. SPECIAL CONDITIONS

- Special storage conditions or conditions of use must be labelled (place not specified) for example in the case of highly perishable goods
  
  eg. *Shake well before use*

  *Once opened keep refrigerated and consume within 3-4 days*
The name or business name and address of the manufacturer or packager, or a seller established within the Community must be labelled (place not specified)
QUANTITY INGREDIENT DECLARATION (QUID)

QUID is obligatory when a juice:

- Is made from two kinds of fruit
- Is made out of three or more kinds of fruits and one or several (but not all) fruits are emphasised in pictures, graphics or words

(When extra addition of pulp is emphasized on the label the % of weight must be given)
QUANTITY INGREDIENT DECLARATION (QUID)

QUID is not applicable to juices and nectars when:

- Made from one kind of fruit
- No fruits are emphasized in case of multi fruits (or all fruits are shown and/or named)
Nutritional labelling is compulsory where a nutrition claim appears on labelling, in presentation or advertising.

- Small 4: energy, protein, carbohydrate, fat
- Big 8: energy, protein, carbohydrate, sugars, fat, saturates, fibre, sodium

The existing legislation on labelling and nutritional labelling is currently under revision and will be included in a new Regulation on the Provision of Food Information to Consumer.
NUTRITIONAL LABELLING

- Final adoption of the new REG foreseen for 2010, but important delays to be expected
- **Key challenges of the current proposal:**
  - Mandatory nutrition labelling
  - **Total amounts of energy**, fat, saturates, carbohydrates, **sugars** and salt to be declared on front of pack
  - Those 6 elements also declared in relation to their Guideline Amounts/Reference Daily Intakes (defined by the legislation)
Industry initiative – Guideline Daily Amounts – GDA’s
Front of pack sugar/energy labelling

- Intrinsic vs. extrinsic sugars
- Origin labelling of the primary ingredient
For fruit juice without any added mono- or disaccharides or any other foodstuff used for its sweetening purposes the particulars "with no added sugar" can be used to describe the product (place not specified).

But since sugars are naturally present in fruit juices the above claim will trigger the obligation to put the indication **CONTAINS NATURALLY OCCURRING SUGARS** on the label (as of January 2010).

For fruit juices whose durability has been extended by means of packaging gases authorised by Dir.89/107/EC the label **must** include the particular "**packaged in a protective atmosphere**" (place not specified).
A foodstuff, i.e. a juice, may not be marketed unless it is accompanied by an indication which allows identification of the lot to which it belongs. The lot identification shall be determined and affixed by the producer, manufacturer or packer of the product or the first seller within the Community (to be preceded by the letter ‘L’ except when it is clearly distinguishable from the other indications on the label).

Lot identification however need not to appear when the date of minimum durability or “use by” date (min. day and month) appears on the label.
FRUIT NECTAR

1. SALES NAME

- **Fruit Nectar** (regardless whether the juice used is direct juice and/or juice made from concentrate)

- When sugars/honey are replaced by sweeteners the particular “with sweetener(s)” shall accompany the product name.

- In case sugars and sweeteners are used the particular “with sugar(s) and sweetener(s)” shall accompany the product name.

- For fruit nectar obtained entirely or partly from concentrate the labelling shall bear the words “made with concentrate(s)” or “partially made from concentrate(s)” as appropriate.

*This info shall be labelled close to the product name, standing out well from any background in clearly visible characters.*
8. OTHER INDICATIONS

- For fruit nectar without any mono- or disaccharides or any other foodstuff used for its sweetening purposes the particulars “with no added sugar” can be used to describe the product.

- But since sugars are naturally present in fruit juices/purées which are used in nectars the above claim will trigger the obligation to put the indication **CONTAINS NATURALLY OCCURRING SUGARS** on the label (as of January 2010).
3.2. Additives Directives
Food Improvement Agents Package

On 31 December 2008 the EU published its new Food Improvement Agents Package (FIAP)

The Package consists of 4 new Regulations providing a common authorisation procedure for food additives, food enzymes and food flavourings, and individual regulations on enzymes, additives and flavourings

All 4 Regulations came into force on 20 January 2009, with most of the measures applying from 20 January 2010

Food additives permitted under Directives 94/35/EC, 94/36/EC and 95/2/EC can be still be used under the transitional arrangements
a. Miscellaneous Additives
Directive 95/2/EEC

- **Acids**
  - Ascorbic acid (E300) – QS in juices/nectars
  - Citric acid (E330)
    - 3 g/l juice and 5 g/l nectar
  - Malic acid (E296) – 3 g/l in pineapple juice
  - Lactic acid (E270) – 5 g/l in nectars

- **Stabiliser**
  - Pectins (E440)
    - 3 g/l pineapple + passion fruit juice
    - 3 g/l pineapple + passion fruit nectar
a. Miscellaneous Additives


- Calcium Carbonate (E170)
  - QS in grape juice

- Potassium tartrate (E336)
  - QS in grape juice

- Dimethylpolysiloxane (E900)
  - 10 mg/l pineapple juice

- Sulphites (E200)
  - 50 mg/l in apple, grapefruit and pineapple juices in dispensers in catering establishments
  - 350 mg/l in lemon and lime juice
  - 70 mg/l for religious grape juice!

- Packaging gases: QS for all juices and nectars

*will be repealed by REG (EC) 1333/2008 on food additives from 20/01/10
Sweeteners Directive
Directive 94/35/EC*

- Sweeteners allowed in nectars
  - Acesulfame K (E950): 350 mg/l
  - Aspartame (E951): 600 mg/l
  - Cyclamat (E952): 250 mg/l
  - Saccharin (E954): 80 mg/l
  - Neohesperidin D.C. (E959): 30 mg/l
  - Sucralose (E955): 300 mg/l
  - Salt of aspartame-acesulfame (E962): 350 mg/l

*will be repealed by REG (EC) 1333/2008 on food additives as from 20 January 2010
Fruit juices and nectars are included in Annex II which lists foodstuffs which may not contain added colours.

The same applies to fruit, vegetables and processed fruit.

*will be repealed by REG (EC) 1333/2008 on food additives as from 20 January 2010
3.3. Contaminants & Pesticides
## EU Regulations on Contaminants in Food

<table>
<thead>
<tr>
<th></th>
<th>OTA</th>
<th>Patulin</th>
<th>Lead</th>
<th>Cadmium</th>
<th>Inorganic Tin</th>
<th>Arsenic</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Fruit</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>0.10 mg/kg wet weight</td>
<td>0.050 mg/kg wet weight</td>
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<td></td>
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<tr>
<td><strong>Berries and small fruit</strong></td>
<td></td>
<td></td>
<td>0.20 mg/kg wet weight</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td><strong>Fruit Juices &amp; fruit nectars</strong></td>
<td>50 µg/kg</td>
<td></td>
<td>0.050 mg/kg wet weight</td>
<td></td>
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<td></td>
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<tr>
<td><strong>Grape Juice</strong></td>
<td>2.0 µg/kg</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td><strong>Apple Juice infants/yc</strong></td>
<td>10 µg/kg</td>
<td></td>
<td></td>
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<tr>
<td><strong>Canned fruit juices</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>100 mg/kg</td>
<td></td>
</tr>
<tr>
<td><strong>Canned vegetables</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>100 mg/kg</td>
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</table>
Max. levels for contaminants in AIJN COP (mg/kg)

<table>
<thead>
<tr>
<th>VEGETABLES</th>
<th>Arsenic</th>
<th>Lead</th>
<th>Copper</th>
<th>Zinc</th>
<th>Iron</th>
<th>Tin</th>
<th>Mercury</th>
<th>Cadmium</th>
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<tr>
<td>Tomato juice</td>
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<td>0,05</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>1</td>
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<td>0,05</td>
</tr>
<tr>
<td>Carrot Juice/Puree</td>
<td>none</td>
<td>none</td>
<td>none</td>
<td>none</td>
<td>none</td>
<td>none</td>
<td>none</td>
<td>none</td>
</tr>
<tr>
<td>FRUITS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Peach Puree/Juice</td>
<td>0,1</td>
<td>0,05</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>1</td>
<td>0,01</td>
<td>0,05</td>
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<tr>
<td>Orange</td>
<td>0,1</td>
<td>0,05</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>1</td>
<td>0,01</td>
<td>0,05</td>
</tr>
<tr>
<td>Mango Puree/Juice</td>
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<td>5</td>
<td>5</td>
<td>5</td>
<td>1</td>
<td>0,01</td>
<td>0,05</td>
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<tr>
<td>Pomegranate Juice</td>
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<td>5</td>
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<td>1</td>
<td>0,01</td>
<td>0,05</td>
</tr>
<tr>
<td>Passion fruit juice</td>
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<td>5</td>
<td>5</td>
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<td>1</td>
<td>0,01</td>
<td>0,05</td>
</tr>
<tr>
<td>Blackcurrant Juice/Puree</td>
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<td>5</td>
<td>5</td>
<td>5</td>
<td>1</td>
<td>0,01</td>
<td>0,05</td>
</tr>
<tr>
<td>Sour Cherry Juice/Puree</td>
<td>0,1</td>
<td>0,05</td>
<td>5</td>
<td>5</td>
<td>15*</td>
<td>1</td>
<td>0,01</td>
<td>0,05</td>
</tr>
<tr>
<td>Guava Puree/Juice</td>
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<td>5</td>
<td>5</td>
<td>5</td>
<td>1</td>
<td>0,01</td>
<td>0,05</td>
</tr>
<tr>
<td>Banana Puree/Juice</td>
<td>0,1</td>
<td>0,05</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>1</td>
<td>0,01</td>
<td>0,05</td>
</tr>
<tr>
<td>Apple juice</td>
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<td>0,05</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>1</td>
<td>0,01</td>
<td>0,05</td>
</tr>
<tr>
<td>Grape</td>
<td>0,1</td>
<td>0,05</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>1</td>
<td>0,01</td>
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<tr>
<td>Pear</td>
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<td>5</td>
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<td>Raspberry</td>
<td>0,1</td>
<td>0,05</td>
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<td>5</td>
<td>5</td>
<td>1</td>
<td>0,01</td>
<td>0,05</td>
</tr>
</tbody>
</table>

*recent increase
Pesticides

- Up until 2008, the regulation of pesticide residues within the EU was a responsibility that was shared between the Commission and the Member states. The Commission was responsible for setting EU wide MRLs, but if there was not a value for a particular chemical on a crop a Member state could establish a national value if they felt the need.

- Since September 2008 the competence for this area has passed fully to the Commission under Regulation (EC) No 396/2005. This new regulation simplified the position in Europe and has set harmonised MRLs across the member states.
The EU MRLs are fixed and expressed on the fresh products (fruits and vegetables), but they also apply to processed products, taking into account dilution or concentration by applying the appropriate transfer factor.

Details of the pesticides regulation etc. can be found at this web address:


The EU commission website provides a very easy to use and up to date source of this data:
http://ec.europa.eu/sanco_pesticides/public/index.cfm
THANK YOU FOR YOUR ATTENTION