### Attribute Intensity Scale

<table>
<thead>
<tr>
<th>Attribute Intensity Scale</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Absent</td>
</tr>
<tr>
<td>1</td>
<td>Just a trace and may not be found if tasted again</td>
</tr>
<tr>
<td>2</td>
<td>Present in the sample but at low intensity</td>
</tr>
<tr>
<td>3 to 5</td>
<td>Clearly characterising the sample</td>
</tr>
<tr>
<td>6 to 8</td>
<td>Dominant characterization of the sample</td>
</tr>
<tr>
<td>9 to 10</td>
<td>Maximum. Over powers some other flavour notes in the sample</td>
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**Note on the use of the term *flavour*:** Refers to the complex combination of aromas, tastes and other sensations perceived during tasting.

**Note on examples of origins typical of intensity level**
- These examples are for illustrative purposes only and they are not meant to be exclusive of any origins/types.
- Specific lots of individual origins can differ dramatically from these frequently encountered values.
- Currently available, widely traded and traditionally known origins and may be reviewed in future editions.

### Descriptors

#### Cocoa
- Typical flavour of roasted cocoa beans that are well fermented, dried, free of defects.

#### Acidity
- Perception of acidity intensity is particular dependent on the amount of sample in the mouth.
- **Total acidity** is the sum of the following individual acidities:
  - **Acid - Fruit**: citric or other fruit acids
  - **Acid - Acetic**: vinegar (it can be smelled in the sample)
  - **Acid - Lactic**: typically occurring in sour milk and yogurt
  - **Acid - Mineral and Butyric**: harsh metallic tasting (mineral) and rancid butter (butyric)

#### Bitterness
- Perception of bitterness intensity is particular dependent on the amount of sample in the mouth. Typically perceived in caffeine, coffee, kola nut, some beers and grapefruits.

#### Astringency
- Perception of astringency intensity is particular dependent on the amount of sample in the mouth. Could be perceived in 2 ways:
  - **Mouth-drying effect**: sharp, perceived between tongue and palate and /or at the back of the front teeth and inside lips and gums - typical of raw nut skins and green banana skins.
  - **Velvety sensation**: on the sides of mouth and tongue. Typical of tannins in some wines or beers.

**Examples of origins typical of intensity level**

#### Cocoa
- 0 - 2: Absent - low intensity - Under-fermented cocoa, ancient Criollos
- 3 - 5: Clearly characterising the sample - Appropriately fermented “Nacional” and Papua New Guinean lots
- 6 - 8: Dominant character - Appropriately fermented cocoa and some West African and some Dominican Republic Hispaniolan lots
- 9 - 10: Strong intensity - Some West African lots

#### Acidity
- 0 - 2: Absent - low intensity - Some well-prepared West African lots
- 3 - 5: Clearly characterising the sample - Some Ecuadorian, Peruvian and Central American lots
- 6 - 8: Dominant character - Some Dominican Republic Hispaniolan, Papua New Guinean and Malaysian lots

#### Bitterness
- 1 - 2: Low intensity - Some ancient Criollos
- 3 - 5: Clearly characterising the sample - normal intensity - Well-prepared West African lots
- 6 - 8: Dominant character - high intensity - severely under and unfermented cocoa

#### Astringency
- 1 - 2: Low intensity - Some ancient Criollos
- 3 - 5: Clearly characterising the sample - normal intensity for most cocoa
- 6 - 8: High intensity
- 9 - 10: Extreme intensity

**Notes:**
- Velvety - typical of appropriately fermented “nacional”
- Sharp - mouth drying - typical of under-fermented cacao
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<th>Descriptor</th>
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<th>Examples of origins typical of intensity level</th>
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| **Fresh Fruit** | **Total Fresh Fruit** is composed of the following:  
  - **Fruit - Berry**: red or black currant, strawberry, raspberry, blackberry, acai berry  
  - **Fruit - Citrus**: orange, lemon, lime, grapefruit or generic sensation of citrus-like fruit  
  - **Fruit - Dark**: cherry, plum  
  - **Fruit - Yellow / Orange / White flesh**: apricot, peach, pear or banana  
  - **Fruit - Tropical**: passion fruit, pineapple, mango or soursop |  
  - **0 - 2**: Absent - low intensity - many West African lots  
  - **3 - 5**: Clearly characterising the sample - Some Central and South American, well fermented Asia and Pacific country lots  
  - **6 - 7**: Dominant character - Madagascar, some Central and South American country lots, some Papua New Guinean lots |
| **Browned Fruit** | **Total Browned Fruit** is composed of the following:  
  - **Fruit - Dried**: dried apricot, banana, yellow raisin, fig, that has undergone an unsulphured drying process  
  - **Fruit - Brown**: dark raisin, dates, prune  
  - **Fruit - Over ripe**: No longer fresh but severely over-ripe fruit, turning brown inside and outside, as a step towards over-fermentation. |  
  - **0 - 2**: Absent - low intensity - many West African lots  
  - **3 - 5**: Clearly characterising the sample - fully fermented Indonesian and some Caribbean country lots  
  - **6 - 8**: Dominant character - some Papua New Guinean and some Caribbean country lots |
| **Floral** | **Total Floral** is composed of the following:  
  - **Floral - Grassy / Green vegetal / Herbal**:  
    - Grassy - freshly cut grass, young green leaves  
    - Green vegetal - crushed mature leaves  
    - Herbal - hay, straw or herbal / dried green, herbs like thyme and rosemary  
  - **Floral - Earthy / Mushroom / Moss / Woodsy**:  
    - Earthy - smell of dampness rising from soil after rain  
    - Mushroom - smell of fresh mushrooms  
    - Moss - damp moss often associated with earthy  
    - Woodsy - leaves and wood on a forest floor  
  - **Floral - Orange blossom**: specifically orange blossom flavour  
  - **Floral - Flowers**: jasmine, honeysuckle, rose, lilac, lilies, etc |  
  - **0 - 2**: Absent - low intensity - West African lots  
  - **3 - 5**: Clearly characterising the sample - appropriately fermented “Nacional” and some Caribbean country lots  
  - **6 - 8**: Dominant character - some Caribbean country lots and some Peruvian lots |
| **Woody** | **Total Woody** is composed of the following:  
  - **Wood - Light wood**: freshly cut cocoa wood, white pine wood, maple wood, ice cream/popsicle wooden stick  
  - **Wood - Dark wood**: oak, walnut, teak, mahogany  
  - **Wood - Resin**: pitch of pine or other resinous wood |  
  - **0 - 2**: Absent - low intensity  
  - **3 - 5**: Clearly characterising the sample - some “Nacional” and many West African lots |
| **Spice** | **Total Spice** is composed of the following:  
  - **Spice - Spices**: dried coconut, nutmeg, cinnamon, cloves, liquorice, tonka, vanilla, black pepper  
  - **Spice - Tobacco**: dried tobacco leaves  
  - **Spice - Savoury / Umami**: sodium glutamate, umami |  
  - **0 - 2**: Absent - low intensity - in most origins  
  - **3 - 5**: Clearly characterising the sample - in some West African, Central and South American and Caribbean country lots |
| **Nutty** | **Total Nutty** is composed of the following:  
  - **Nutty - Nut flesh**: the edible kernel of a light roasted nut - hazelnut, macadamia, pecan, walnut, cashew, almond, brazil nut  
  - **Nutty - Nut skins**: the flavour of lightly roasted nut skins - hazelnut, macadamia, pecan, walnut, cashew, almond, brazil nut |  
  - **0 - 2**: Absent - low intensity - in most origins  
  - **3 - 5**: Clearly characterising the sample - some Central and South American and Caribbean countries’ lots and ancient Criollos |
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<tr>
<td>Sweet</td>
<td>Sweet - White sugar, browned sugar, panela, caramel: a characteristic sweet flavour from a range of white refined sugar to unrefined caramelized cane juice.</td>
<td>- 0 - 2: Absent - low intensity - in most origins&lt;br&gt;- 3 - 5: Clearly characterising the sample - some Central and South American and Caribbean countries’ lots and ancient Criollos</td>
</tr>
<tr>
<td>Roast Degree</td>
<td>Roast Degree: A measure of the extent of the roasting the beans Significant under or over roasting alters many of the attribute values.</td>
<td>- 2 - 3: Low roast&lt;br&gt;- 4 - 6: Medium Roast&lt;br&gt;- 7: High roast&lt;br&gt;- 8 - 10: Levels of burnt/over-roasted</td>
</tr>
<tr>
<td>Off-Flavours</td>
<td>Off-Flavours are any unpleasant characters from the following: &lt;ul&gt; - Dirty / Dusty: not related to texture but an off-flavour&lt;br&gt;- Musty: stale, damp, mildewy, decaying&lt;br&gt;- Mouldy: characteristic of mould growth&lt;br&gt;- Meaty / Animal / Leather: &lt;ul&gt; - Meaty - cured meat, ham, rendered fat&lt;br&gt; - Animal - dirty animal / farmyard&lt;br&gt; - Leather - used old leather&lt;br&gt;- Over-fermented / Rotten fruit: decomposing fruit&lt;br&gt;- Putrid / Manure: &lt;ul&gt; - Putrid - wet decomposing vegetative matter&lt;br&gt; - Manure - farmyard animal manure&lt;br&gt;- Smoky: contamination from the smoke (any kind&lt;br&gt;- Other Off-Flavour: rancid, diesel, oil fumes, petroleum, tar, paint, tyres, chemicals, etc.</td>
<td>- 0: Absent - clean, well fermented, dried and stored cocoa beans&lt;br&gt;- 1 - 2: Low intensity&lt;br&gt;- 3 +: Clearly characterising the sample as a defect</td>
</tr>
<tr>
<td>Global Quality</td>
<td>The Global Quality score reflects the overall impression of the: &lt;ul&gt; - expressed flavour potential&lt;br&gt;- uniqueness of the sample&lt;br&gt;- balance of flavour and cleanliness of the finish It celebrates the expression of genetics and terroir diversity through the farmer’s knowhow.</td>
<td>- 0 = means a serious and overwhelming flaw is present. This is not a “veto” but is a clear statement of the quality - or in this case lack thereof.&lt;br&gt;- More than 7 - No off-flavour must be present. Bitterness and astringency must be balanced and fall within a moderate or normal range.</td>
</tr>
</tbody>
</table>

### Comments on the flavours for the cocoa producer
- Field for key words related to the description of the flavour that is perceived and feedback to the producers

### Comments on the Global Quality for the cocoa producer
- Field for key words that describe samples with a Global Quality score of ≥7 (Uniqueness, Complexity, Harmony / Balance, Clarity / Clean / Bright, Acidity Quality, Astringency Quality, Bitterness Quality, Finish / Aftertaste)