# Glossary of Flavour Descriptors

Glossary of terms for flavour evaluations with some matching descriptors and examples of some origins/reference notes for calibration. The glossary has been developed by Ed Seguine & Darin Sukha for the 2015 Edition of the *Cocoa of Excellence* Programme.

<table>
<thead>
<tr>
<th>Flavour descriptor</th>
<th>Description &amp; associated flavours</th>
<th>Examples of origins &amp; references for calibration</th>
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</thead>
<tbody>
<tr>
<td>Cocoa</td>
<td>Describes the typical flavour of cocoa beans that are well fermented, roasted and free of defects. Associated flavours: Chocolate bars, fermented/roasted cocoa</td>
<td>Low intensity = 1-2 (Unfermented cocoa) Medium intensity = 4-6 (Fully Fermented Indonesia, PNG, and Arriba) Strong intensity = 8 (West Africa)</td>
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<tr>
<td>Acid</td>
<td><strong>Citric acid</strong> – Fruit&lt;br&gt;<strong>Acetic acid</strong> - Vinegar (you can smell it in the sample)&lt;br&gt;<strong>Lactic acid</strong> - Vomit like, like in sour milk or molasses&lt;br&gt;<strong>Mineral acid</strong> - Metallic tasting</td>
<td>Low intensity = 1-2 (ancient Criollo) Low/Moderate (normal) intensity = 3-4 (West Africa) Strong intensity = 7-8 (Unfermented cocoa)</td>
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<tr>
<td>Bitterness</td>
<td>Associated with poor fermentation and/or certain varieties. Usually due to a lack of fermentation; perceived on the back of the tongue/throat. Associated flavours: Caffeine (Coffee), Beer &amp; Grapefrui</td>
<td>Low intensity = 1-2 (ancient Criollo) Low/Moderate (normal) intensity = 3-4 (West Africa) Strong intensity = 7-8 (Unfermented cocoa)</td>
</tr>
<tr>
<td>Astringency</td>
<td>Associated with poor fermentation and/or certain varieties. Usually due to a lack of fermentation. Mouth drying and/or puckering effect which boosts the production of saliva; perceived between tongue and palate or at the back of the front teeth. Associated flavours: Raw nut skins, Banana skins &amp; some wines</td>
<td>Low intensity = 2-3 (ancient Criollo) Moderate (normal) intensity = 3-4 (some West Africa) Medium intensity = 5-6 (Arriba) Strong intensity = 7-8 (Unfermented cocoa)</td>
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<tr>
<td>Sweet</td>
<td>Describes liquors with a characteristic flavour of unrefined caramelised cane juice (Panela). Associated flavours: Caramel, brown sugar &amp; fudge</td>
<td>Low intensity = 0 (West Africa - Ghana) Strong intensity = 5-8, ancient Criollo (Venezuela)</td>
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<tr>
<td>Fresh fruit</td>
<td>Broad range of fresh fruits:&lt;br&gt;<strong>Fruit berry</strong> - currants, not fully ripe raspberry.&lt;br&gt;<strong>Fruit citrus</strong> - essence of citrus.&lt;br&gt;<strong>Fruit tropical</strong> - banana, passion fruit, orange, almost always some citrus note involved.</td>
<td>Low intensity = 1-2 (West Africa) Medium intensity = 3-5 (Fully Fermented Indonesia) Strong intensity = 6-7, (PNG, some Trinidad (TSH))</td>
</tr>
</tbody>
</table>
**Browned fruit**

<table>
<thead>
<tr>
<th>Fruit dark tree</th>
<th>Fruit dried</th>
<th>Fruit over ripe</th>
<th>Fruit brown</th>
</tr>
</thead>
<tbody>
<tr>
<td>plum, dark cherry</td>
<td>dried apricot, banana etc., caramelisation of fruit sugar, essence of a fruit that has undergone the drying process, sulphur and nutty notes also</td>
<td>beginning of over fermentation, over ripe fruit as a step to over fermentation</td>
<td>prunes or dates</td>
</tr>
</tbody>
</table>

**Fruit dried**

- Medium intensity = 3-5 (Fully Fermented Indonesia)
- Strong intensity = 6-7, (PNG, Some Caribbean origins)

**Nutty**

- Nutty - nut meat
- Nut skins - associated with some astringent sensation like skins of almond and peanuts etc.

**Fruit over ripe**

- beginning of over fermentation, over ripe fruit as a step to over fermentation

**Fruit brown**

- prunes or dates

**Floral**

- Broad range from green grassy vegetative to flowers and perfumed type notes:
  - Floral - coming from natural environment you can get this by taking a walk in your garden, green earthy, herbal and woody.
  - Floral grassy - green on fresh cut grass, very fresh grass, young leaf (green floral).
  - Floral green vegetative (dark green) - green vegetative, old cocoa leaf crushed, dark green note. Green beans, cooked bell peppers (dark green vegetables)
  - Floral woody (generic) - was grown now dried essential oil, structural bases, going for walk in forest before winter, the dried flowers. Floral mushroom - mushroom, meaty, savoury, MSG.
  - Floral earthy - forest after the rain, smell of dampness coming up from the cocoa estate soil.
  - Floral herbal - Aged dried spices. Commonality of all the dried herbs and linked with astringency at times.
  - Floral perfumy - a persistence that lingers like when fixatives (e.g. Vanilla) are added to perfume to kick the smell into a persistent mode. Floral flowers - breathe it in and it’s gone. Difference between most roses and a strongly scented rose variety such as Mister Lincoln. Floral orange blossom - Is essentially floral-flowers but with orange blossom flavour specifically.

**Floral grassy**

- green on fresh cut grass, very fresh grass, young leaf (green floral).

**Floral green vegetative (dark green)**

- green vegetative, old cocoa leaf crushed, dark green note. Green beans, cooked bell peppers (dark green vegetables)

**Floral woodsy (generic)**

- was grown now dried essential oil, structural bases, going for walk in forest before winter, the dried flowers.

**Floral earthy**

- forest after the rain, smell of dampness coming up from the cocoa estate soil.

**Floral herbal**

- Aged dried spices. Commonality of all the dried herbs and linked with astringency at times.

**Floral perfumy**

- a persistence that lingers like when fixatives (e.g. Vanilla) are added to perfume to kick the smell into a persistent mode.

**Floral flowers**

- breathe it in and it’s gone. Difference between most roses and a strongly scented rose variety such as Mister Lincoln.

**Floral orange blossom**

- Is essentially floral-flowers but with orange blossom flavour specifically.

**Floral absent**

- Low intensity = 0-2, (West Africa)
- Medium - Strong intensity =3-7, (Arriba, Scavina, some Trinidad (TSH))
- Floral Orange Blossom - Peru, Ecuador

**Ecuador origin beans tend to be floral, herbal, floral orange blossom, earthy**

Floral mushroom and earthy are positive attributes (not earthy associated with off flavours musty, moldy, etc.)
| Woody | Woody light wood - ash, beach, maple, white pine, cut cocoa tree  
Woody dark wood - oak, walnut, teak  
Woody resin - pitch pine, balsam of dark or light tree resins | Woody light wood and Woody resin are often (but not always) associated with under fermented and acidic beans Woody dark wood is often (but not always) associated with well fermented beans |
|------|---------------------------------------------------------------|
| Spicy | Spice tobacco - Tobacco spice is the smell outside a tobacco shop, not ashy and dirty but rather like pipe tobacco, sweet.  
Spice peppery - spicy, peppery, savoury. | As a note = 1, or clearly present in the sample = 2-3  
Spice tobacco from West Africa, particularly Ivorian beans  
Spice peppery - mainly Columbian and Peruvian origins |
| Off-flavours | Hammy - carved meats, ham, and improper fermentation.  
Smoky - happens when burning vegetative matter (wood, grass, cocoa hulls etc.) during drying. | |
|      | Leather - not freshly tanned in a leather store, but rather more like leather with sweat and urine, like horse saddles.  
Over fermented manure - farm yard, manure.  
Over fermented putrid - faeces.  
Dirty – unpleasant dirty character, like dirty utensils, often associated with quality of astringency, increased astringency = increased dirty flavour etc. Function of dusty.  
Bark wood - not good, typically unpleasant, dry, dusty, smelly, not a clean smell. Under fermented, astringency, raw, leather, dirty tend to be associated with bark wood as well. | |

**Scoring**

During tastings panellists score the intensity of the flavour attributes for each flavour descriptor by using a range of scores from 0 to 10, where the higher numbers denoted stronger flavour intensities.

**Scoring & values used for sensory evaluation**

<table>
<thead>
<tr>
<th>Attribute Intensity</th>
<th>Meaning</th>
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<tbody>
<tr>
<td>0</td>
<td>None present</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</td>
</tr>
<tr>
<td>Score</td>
<td>Description</td>
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<tr>
<td>-------</td>
<td>-------------</td>
</tr>
<tr>
<td>3-5</td>
<td>Clearly characterizing the sample</td>
</tr>
<tr>
<td>6-8</td>
<td>Dominant</td>
</tr>
<tr>
<td>9-10</td>
<td>Maximum that you have experienced</td>
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</tbody>
</table>

**Flavour wheel**
The flavour wheel is a graphic visualization of the intensity of the flavours in the sample.

![Flavour wheel image]

**Global quality**
Global Quality is a qualitative score that indicates the panellist’s judgement of the overall quality of the sample. Having a global quality indicator in the flavour testing for both liquor and chocolate is very useful as it goes beyond simple attributes of the sample but is intended to reflect an overall attribute standing. It is not a score derived using a formula or calculation from the attributes but stands on its own for each evaluator to indicate their impression of overall quality.

No off-flavour must be present in giving a high scoring (>5) for Global Quality. When a high scoring (>5) is given, it is expected that the beans are good and without defects. If they do, the overall quality would not be good (1-4). Zero for global quality means a serious flaw is present. This is not a “veto” but is a very clear opinion of the quality - or in this case the lack thereof.