



Guide

TO THE

Cacao Sensory Analysis Tasting Form

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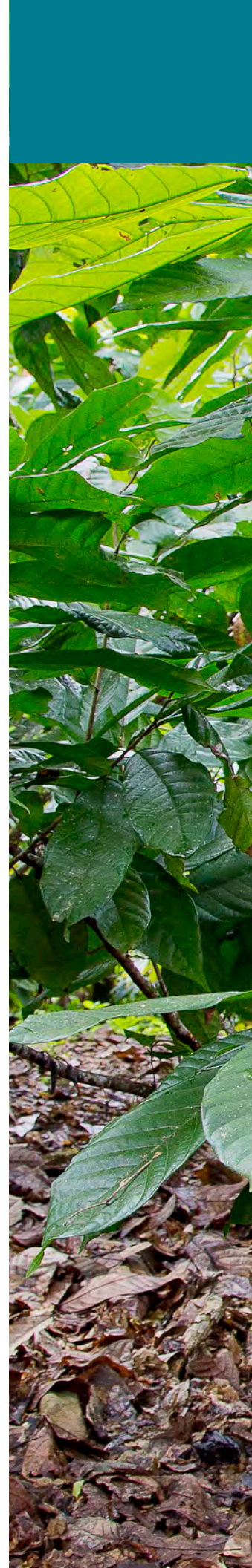
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Contents

Introduction 4

Cacao Sensory Analysis Tasting Form 6

Structure of the Tasting Form 8

How to analyze and evaluate each category 11

Aroma 12

Acidity 13

Bitterness 14

Astringency 15

Defects 16

Flavor 17

Aftertaste 18

Comments 19

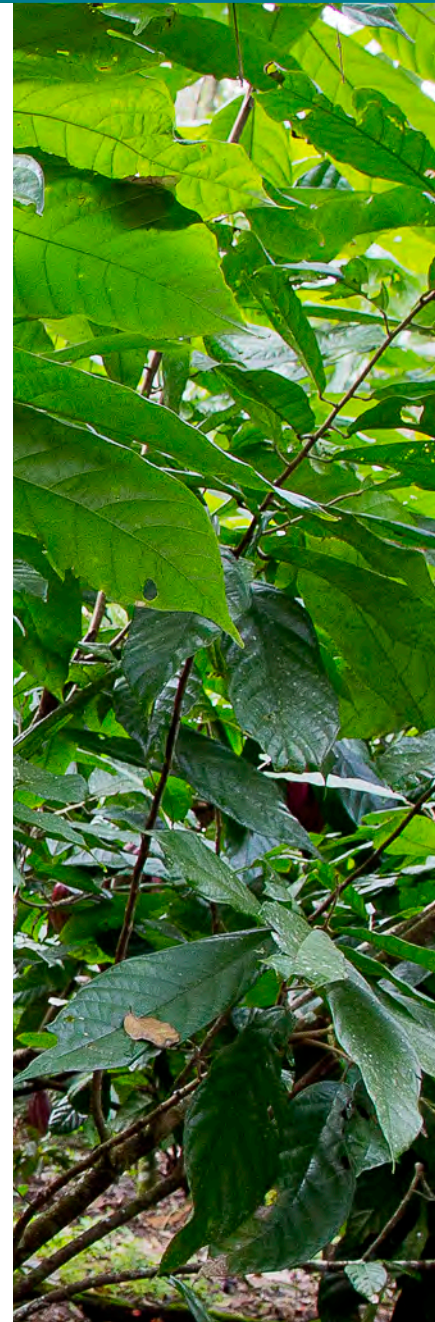
Taster's Points 19

Final Score 19

Analyzing your Results 20

Bibliography and References 22

Image Credits 23



Introduction

Welcome.

In 2010, Equal Exchange and TCHO began the Cooperative Development Program aimed at strengthening their supply chain partners and interacting with them in new and innovative ways. When this project began, there was no universal methodology for physical and organoleptic evaluation of cacao beans. Through strategic alliances with cooperatives in Peru, Ecuador and the Dominican Republic, we proposed to develop the following tools to evaluate the quality of cacao: a Cacao Sensory Analysis Tasting Form and Guide, a standard Protocol for the Preparation of Liquor Samples, and a Taster Training Program. The objective of these tools is to achieve a common and inclusive language for all cacao stakeholders.

We are pleased to present this Guide to support your use of the Cacao Sensory Analysis Tasting Form. We hope that the guide will provide a more detailed explanation of the form, and help tasters to identify the potential, the attributes and the sensory profile of a sample. This document aims to support your understanding and interpretation of the form, and walks you through the steps to evaluate each of the

attributes found in a sample. We have also provided references to engage the taster's sensorial memory.

We hope that the following information will allow you to effectively carry out the sensory evaluation process for cacao. The intention is to make it understandable and accessible through the entire value chain, though the primary users may include the following:

- Laboratory technicians
- Cacao Sellers
- Cacao Buyers
- Chocolatiers

The information is presented with some assumptions. The first is that the taster already has his/her sample prepared. The second assumption is that said taster and his/her tasting panel has a suitable space for the analysis. The third is that the taster has some basic knowledge of cacao sensory analysis. If you require further information, please refer to our bibliography and resources at the end of this document.

Good Luck!



TIP



When conducting a tasting, print the following two pages double-sided to include the Tasting Form with quick reference Instructions on the back.



CACAO

SENSORY ANALYSIS

Tasting Form

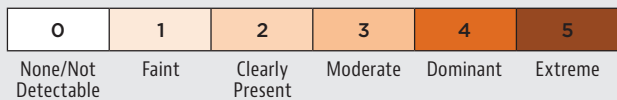
SAMPLE _____

TASTER _____

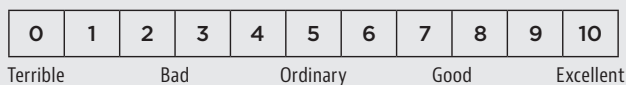
DATE _____

CATEGORIES		INTENSITY	NOTES	QUALITY (0-10)	POINTS
Aroma		0 1 2 3 4 5 			x1 =
Acidity		0 1 2 3 4 5 			x1 =
Bitterness	INTENSITY 0 to 2.5: ≥ 5 in quality 2.5 to 5: ≤ 5 in quality	0 1 2 3 4 5 			x1 =
Astringency		0 1 2 3 4 5 			x1 =
Defects		0 1 2 3 4 5 			x2 =
Flavor	Cocoa/Cacao	0 1 2 3 4 5 			x2 =
	Sweet	0 1 2 3 4 5 			
	Nutty	0 1 2 3 4 5 			
	Dried Fruit	0 1 2 3 4 5 			
	Fresh Fruit	0 1 2 3 4 5 			
	Floral	0 1 2 3 4 5 			
	Spices	0 1 2 3 4 5 			
	Other				
Aftertaste		0 1 2 3 4 5 			x1 =
COMMENTS:			TASTER'S POINTS		x1 =
				FINAL SCORE	

INTENSITY SCALE



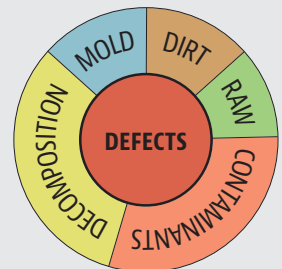
QUALITY SCALE



TIPS TO SCORE QUALITY FOR DEFECTS

Name the defect:
A reduction in quality points should be defined in the notes.

Inverse relationship:
As the defect flavor(s) increase in intensity, the quality score decreases.



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Tasting Form Instructions

The goal of these instructions is to give users of the form a quick and basic guide to its use. For more in-depth information, please reference the *Guide to the Cacao Sensory Analysis Tasting Form* or contact us at cacaoquality@gmail.com

Filling in the Form

Aroma Smell the sample. Mark the intensity of the aroma on the first scale, write any characteristics that you find in the notes section, and score the quality. Remember that a low intensity or even absence of aroma does not imply a lower quality.

Acidity The relationship between intensity and quality varies depending on the perception and description of the acids that the taster finds during the evaluation. For example, if the taster perceives a citric or fruity acid, the score may be higher than if the acidity is more like vinegar (acetic acid).

Bitterness and Astringency These are inherent characteristics of cacao, but the level of intensity can influence the quality, and there is often an inverse relationship. For example, a bitterness level that is 'Clearly Present' with an intensity of 2, might have a score between 'Good' and 'Excellent' in quality; while a higher intensity of bitterness may decrease the quality.

Example:

CATEGORIES	INTENSITY	NOTES	QUALITY (0-10)	POINTS
Bitterness	0 1 2 3 4 5 [] [] [X] [] [] []	mild bitterness	8	x 1 = 8

This example is consistent with the guideline provided on the form for bitterness and astringency, which indicates that an intensity score lower than or equal to 2.5 may result in a quality score of 5 or higher.

Defects Increased intensity of defects means a lower score in quality. For example, if you find a strong flavor such as dirt that is 'Dominant' with an intensity of 4, your quality score will likely be between 'Terrible' and 'Bad'.

Example:

CATEGORIES	INTENSITY	NOTES	QUALITY (0-10)	POINTS
Defects	0 1 2 3 4 5 [] [] [] [X] [] []	dirt	1.5	x 2 = 3

If quality points are deducted, the taster should write the name of the specific defect in the notes section. If the sample is clean or free of defects, it should be scored as 'Excellent' in quality. To the right we offer some general categories of defects and some specific examples of common defects within those categories.

Flavor The taster need only evaluate the characteristics that are perceived, as not all can be found in every sample. The quality score is based on a combination of factors including the harmony, clarity and complexity of the flavors.

Aftertaste The residual flavor left in the mouth after the sample has dissolved completely.

Taster's Points The taster's general impression and subjective quality score for the sample.

Comments This space is for observations which are not noted elsewhere (for example: appearance, texture). The taster may also use Comments to prepare a summary of the evaluation and recommendations.

Final Score A cumulative total of all quality points. The highest possible final score is 100 points.

Using the Scales

This form contains two types of scales. The purpose of the Intensity Scale is to develop a **flavor profile** of the samples, while the Quality Scale helps to identify the sample's **potential**. Remember that there is no direct relationship between intensity and quality, except in the case of Bitterness, Astringency and Defects. Half points are permitted when scoring on either scale.

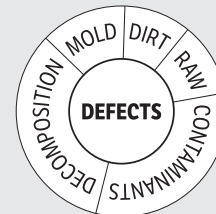
INTENSITY SCALE

0	1	2	3	4	5
None/Not Detectable	Faint	Clearly Present	Moderate	Dominant	Extreme

QUALITY SCALE

0	1	2	3	4	5	6	7	8	9	10
Terrible	Bad	Ordinary	Good	Excellent						

Examples of Defects



MOLD
musty, basement, mildew

DIRT
mud, wet earth, dust

RAW
vegetal, unripe, grassy, green

CONTAMINANTS
plastic, chemical, smoke, metal, petrol

DECOMPOSITION
hammy, meaty, rancid, putrid, compost

Note: Do not deduct points in defects for aroma, bitterness or astringency—these are evaluated in their respective categories.

TIP

A maximum evaluation time of 10 minutes per sample is recommended.

The Structure of the Tasting Form

Header

The taster should fill out in clear and legible print the sample identification code, his/her name(s), surnames and date of the analysis.



CACAO
SENSORY ANALYSIS
Tasting Form

SAMPLE # 156
TASTER Elías Contreras Trujillo
DATE 27 - Julio - 2017

CATEGORIES		INTENSITY	NOTES	QUALITY (0-10)	POINTS
Aroma		0 1 2 3 4 5			x1 =
Acidity		0 1 2 3 4 5			x1 =
Bitterness	INTENSITY 0 to 2.5: > 5 in quality 2.5 to 5: < 5 in quality	0 1 2 3 4 5			x1 =
Astringency		0 1 2 3 4 5			x1 =
Defects		0 1 2 3 4 5			x2 =
Flavor	Cocoa/Cacao	0 1 2 3 4 5		x2 =	
	Sweet	0 1 2 3 4 5			
	Nutty	0 1 2 3 4 5			
	Dried Fruit	0 1 2 3 4 5			
	Fresh Fruit	0 1 2 3 4 5			
	Floral	0 1 2 3 4 5			
	Spices	0 1 2 3 4 5			
	Other				
Aftertaste		0 1 2 3 4 5			x1 =
COMMENTS:			TASTER'S POINTS		x1 =
FINAL SCORE					

Note: For Bitterness and Astringency the relation between intensity and quality is **inverse**, meaning that as the intensity increases, the quality tends to decrease.

Comments

This space is for observations which are not noted elsewhere (for example: appearance, texture). The taster may also use Comments to prepare a summary of the evaluation and recommendations.

INTENSITY SCALE

0	1	2	3	4	5
None/Not Detectable	Faint	Clearly Present	Moderate	Dominant	Extreme

QUALITY SCALE

0	1	2	3	4	5	6	7	8	9	10
Terrible	Bad	Ordinary	Good	Excellent						

TIPS TO SCORE QUALITY FOR DEFECTS

Name the defect:
A reduction in quality points should be defined in the notes.

Inverse relationship:
As the defect flavor(s) increase in intensity, the quality score decreases.

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Intensity & Quality Scales

See page 9

Taster's Points

The taster's general impression and subjective quality score for the sample, taking into account all of the other categories of evaluation.

Final Score

This is the sum of all quality points obtained during the tasting. The maximum score is **100 points.**

Filling out the form

The analysis of the sample will be distributed into several categories: Aroma, Acidity, Bitterness, Astringency, Defects, Flavor and Aftertaste. Each attribute is organized into four fields, evaluated as follows:

1 INTENSITY
Assess the intensity of the perceived attributes on a scale of 0 (absent) to 5 (extreme), half points are allowed.

2 NOTES
Take note of specific attributes (descriptors) perceived in the sample, if the taster can and desires to capture that level of detail.

3 QUALITY
The quality of each category is valued numerically, using a quality scale from 0 (terrible) to 10 (excellent). On this scale, the use of half points is also allowed.

4 POINTS
Total points are valued numerically for quality, taking into account that in Defects and Flavor the quality points are **doubled.**

Stages of Sensory Analysis

- 1 Observe the appearance: color, brightness, etc. The taster can take note of these observations in Comments and/or take them into consideration for in Taster's Points.
- 2 Smell the sample to evaluate the Aroma category. Use a clean and odor-free container during this part of the evaluation.
- 3 Taste the sample to evaluate the following categories: Acidity, Bitterness, Astringency, Defects, and Flavors. If the sample is solid, chew it gently, allowing

it to slowly melt on the palate. It is possible that the taster will have to repeat the tasting process several times in order to identify and capture all the information needed to complete the analysis.

TIP

A maximum evaluation time of 10 minutes per sample is recommended.

- 4 When the sample has been ingested and / or has been expiated, the taster analyzes residual flavors in the mouth for the Aftertaste category.

Intensity and Quality Scales

This section helps the taster to define and standardize the intensity of each attribute, and provide some guidance to quantify the quality score. During the analysis, the intensity and /or quality of any of the categories may vary and change.

The taster can mark the scale according to his or her initial impression and indicate with an arrow a change in the intensity. A mark between two points of the scale will usually indicate a half point.

INTENSITY SCALE

INTENSITY SCALE					
0	1	2	3	4	5
None/Not Detectable	Faint	Clearly Present	Moderate	Dominant	Extreme

- 0 = None, not detectable
- 1 = Faint, weak presence
- 2 = Clearly Present, not difficult to perceive
- 3 = Moderate, indicating a distinctive feature
- 4 = Dominant, this attribute may mask or overpower other characteristics of the sample
- 5 = Extreme, the presentation of this attribute is the most intense possible for cacao in the sensorial memory of the taster

QUALITY SCALE

QUALITY SCALE										
0	1	2	3	4	5	6	7	8	9	10
Terrible	Bad		Ordinary			Good		Excellent		

- TERRIBLE** = approximately 0–2
- BAD** = approximately 2–4
- ORDINARY** = approximately 4–6
- GOOD** = approximately 6–8
- EXCELLENT** = approximately 8–10

Tips to Evaluate Quality in Defects

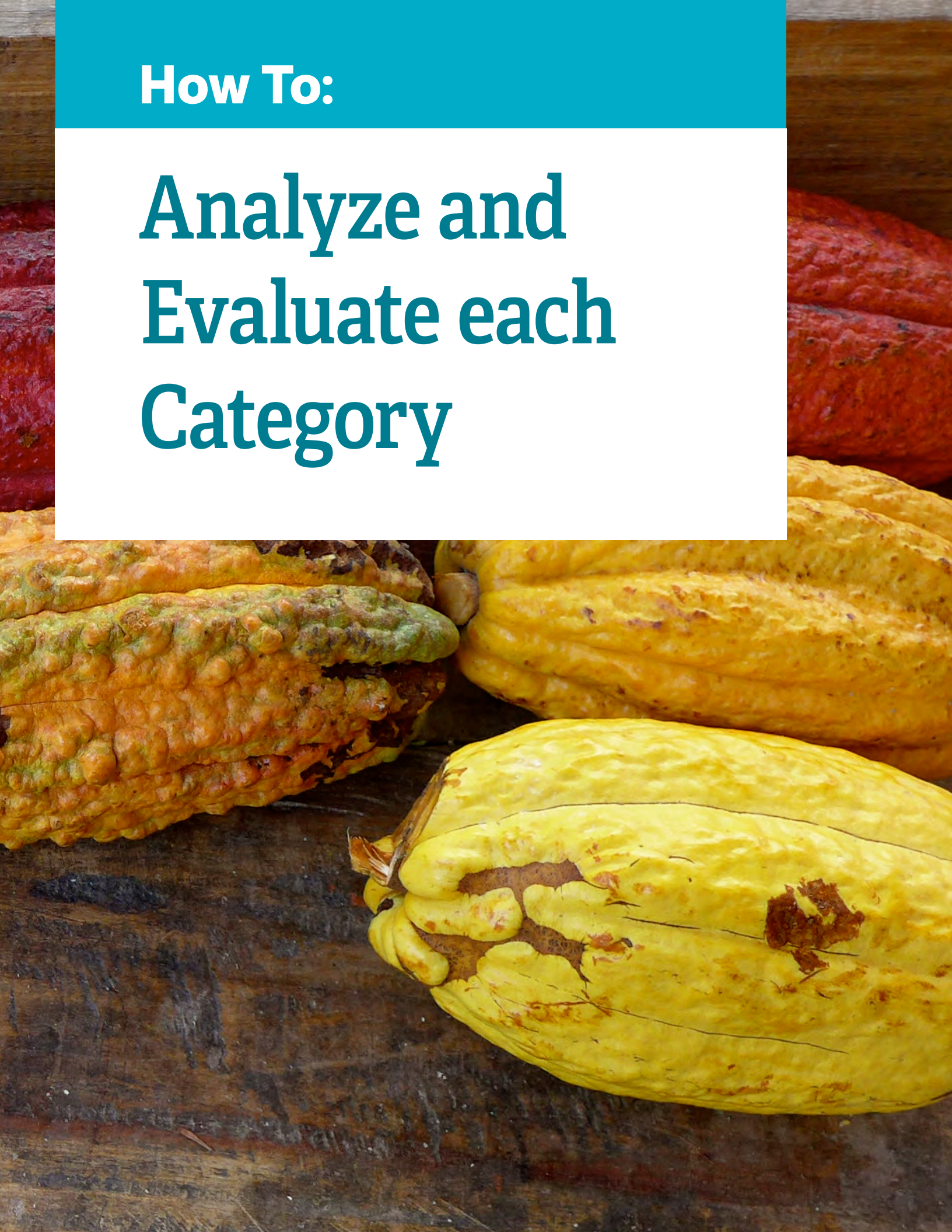
To assess the intensity of defects, you should take into account the total intensity of all the defects identified. We suggest that the taster explicitly name the defect that he or she has identified to avoid deduction of quality points without justification.

To evaluate quality in defects, there is an inverse relationship: the **higher** the intensity of the defective flavor, or defective flavors, the **lower** the quality score.



How To:

Analyze and Evaluate each Category



Aroma

CONCEPT


A sensory perception based on one's olfactory senses, such as the sense of smell.¹

Steps to Analyze Aroma

- 1 The taster will take the sample container and bring it to the nose, and will deeply inhale trying to perceive the attributes of its aroma.
- 2 The taster will mark the intensity of the aroma, taking into consideration that the intensity is not directly correlated to the quality. Intensity for the aroma category varies widely depending on whether the sample is liquid or solid, but quality should not be affected by that factor.
- 3 Write down any notes related to the aroma; if the taster was not able to clearly perceive the aroma of the sample, the action could be repeated.
- 4 Rate the quality, using the scales as a guide, and for multiply the score by one. The maximum score in Aroma: 10 points.


EXAMPLE 1

If an aroma or a combination of aromas related to subcategories for flavor is perceived (cacao/chocolate, sweet, nutty, dried fruit, fresh fruit, floral, spices), the quality assessment might be between Good and Excellent.

CATEGORIES	INTENSITY	NOTES	QUALITY (0-10)	POINTS	
Aroma		caramel, raisin, brownie	9.5	x 1 =	9.5

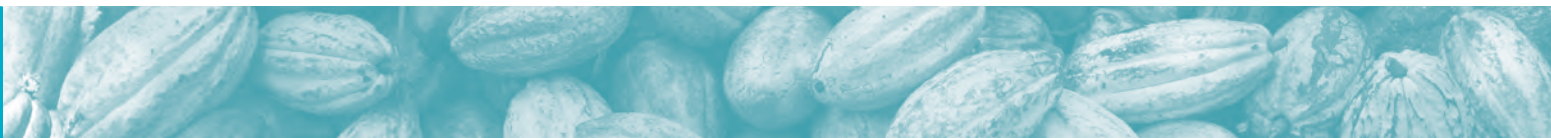
EXAMPLE 2

If an aroma or a combination of aromas related to the defects subcategories is perceived (mold, dirt, raw, contaminants, decomposition) is perceived, the quality assessment might be Bad or Terrible.

CATEGORIES	INTENSITY	NOTES	QUALITY (0-10)	POINTS	
Aroma		mold	3	x 1 =	3

TIP

The mark between two points on the scale indicates a half point—so in this example the intensity score is 2.5.



Acidity

CONCEPT

The organoleptic property produced by pure or mixed substances, that when tasted generate acid flavor like citrus. Acid is the elemental flavor caused by diluted aqueous solutions of acidic substances, such as citric acid or tartaric acid.²

Steps to Analyze Acidity

- 1 During the tasting stage of analysis, mark the intensity of the acid or the combination of acids perceived, taking into account that the intensity is not directly correlated to the quality. The relation between intensity and quality varies depending on the perception and description of the types acids found during the tasting. These include citric, acetic, lactic, butyric, tartaric, malic, carbonic, and phosphoric, etc.
- 2 Write down any notes related to the acidity.
- 3 Rate the quality, using the scales as a guide, and for multiply the score by one. The maximum score in Acidity: 10 points.

ACIDS REFERENCES



Citric acid

lime, orange, clementine, grapefruit



Malic acid

apple



Tartaric acid

grapes, tamarind



Acetic acid

vinegar, sour



Lactic acid

sour milk, yogurt



Butyric acid

rancid butter, fatty foods, vomit



Nitric acid

putrid meat

EXAMPLE 1

If you perceive citric or fruity acid, the quality score might be between Good and Excellent.

CATEGORIES	INTENSITY	NOTES	QUALITY (0-10)	POINTS													
Acidity	<table border="1"> <tr> <td>0</td> <td>1</td> <td>2</td> <td>3</td> <td>4</td> <td>5</td> </tr> <tr> <td></td> <td></td> <td>X</td> <td></td> <td></td> <td></td> </tr> </table>	0	1	2	3	4	5			X				citric, clementine	8	x 1 =	8
0	1	2	3	4	5												
		X															

EXAMPLE 2

If you notice an acid similar to vinegar, with an intensity of 2 or “Present”, but it does not characterize the sample and overwhelm other features, the quality score might be Ordinary.

CATEGORIES	INTENSITY	NOTES	QUALITY (0-10)	POINTS													
Acidity	<table border="1"> <tr> <td>0</td> <td>1</td> <td>2</td> <td>3</td> <td>4</td> <td>5</td> </tr> <tr> <td></td> <td></td> <td>X</td> <td></td> <td></td> <td></td> </tr> </table>	0	1	2	3	4	5			X				sour, vinegar	5	x 1 =	5
0	1	2	3	4	5												
		X															

Bitterness

CONCEPT

An organoleptic property produced by pure or mixed substances, that when tasted generate a bitter flavor. Bitterness is the elemental flavor caused by dilute aqueous solutions of various substances, such as quinine or caffeine.³

Steps to Analyze Bitterness

- During the tasting stage of analysis, mark the intensity of the bitterness taking into account that intensity could correlate to quality and, frequently, there is an inverse relationship. You should refer to the small scales next to the categories names for Bitterness and Astringency.
 - If the taster identifies a level of intensity for bitterness between Absent with an intensity of 0, and Present with an intensity of 2-2.5, the quality rating might be Ordinary, Good or Excellent.
 - If the taster identifies a level of intensity for bitterness between Clearly Present with an intensity of 2.5-3, and Extreme with an intensity of 5, the quality rating might be Ordinary, Bad or Terrible.
- Write down any notes related to bitterness.
- Rate the quality, using the scales as a guide, and for multiply the score by one. The maximum score in Bitterness: 10 points.

BITTERNESS REFERENCES



Citrus peel and pith



Burnt coffee, caffeine



Chicory, Verbena



Aspirin

EXAMPLE 1

If the bitterness intensity level is 2 or Clearly Present, the quality rating might be between Good and Excellent.

CATEGORIES		INTENSITY	NOTES	QUALITY (0-10)	POINTS	
Bitterness	INTENSITY 0 to 2.5: ≥ 5 in quality 2.5 to 5: ≤ 5 in quality		mild bitterness, not a dominant characteristic of the sample	8	x 1 =	8

EXAMPLE 2

If the bitterness intensity level is 5 or Extreme, similar to the experience of chewing an aspirin, the quality rating could be Terrible.

CATEGORIES		INTENSITY	NOTES	QUALITY (0-10)	POINTS	
Bitterness	INTENSITY 0 to 2.5: ≥ 5 in quality 2.5 to 5: ≤ 5 in quality		aspirin	2	x 1 =	2

Astringency

CONCEPT

Astringency refers to the puckery or drying sensation created in the mouth and throat. A strong astringent taste is often described as "sharp," and it can leave the mouth feeling rough, raw or sandpapery. A low to moderate amount of astringency may have a more subtle, even "slippery" feel.⁴

Steps to Analyze Astringency

- During the tasting stage of analysis, mark the intensity of the astringency taking into account that intensity could correlate to quality and, frequently, there is an inverse relationship. You should refer to the small scales next to the categories names for Bitterness and Astringency.
 - If the taster identifies a level of intensity for astringency between Absent with an intensity of 0, and Present with an intensity of 2-2.5, the quality rating might be Ordinary, Good or Excellent.
 - If the taster identifies a level of intensity for astringency between Clearly Present with an intensity of 2.5-3, and Extreme with an intensity of 5, the quality rating might be Ordinary, Bad or Terrible.
- Write down any notes related to astringency.
- Rate the quality, using the scales as a guide, and for multiply the score by one. The maximum score in Astringency: 10 points.

ASTRINGENCY REFERENCES



Nut skins, seeds of certain fruits



Unripe or under-ripe fruits, peels of fruits such as bananas or plantains



Oversteeped tea, some red wines

EXAMPLE 1

An astringency that starts out very light at the beginning and that increases during tasting up to an intensity of 2, or Present, can have a quality rating between Good and Excellent. In this case, the taster describes it as a sensation similar to the experience of tasting an over-steeped black tea.

CATEGORIES		INTENSITY	NOTES	QUALITY (0-10)	POINTS	
Astringency	INTENSITY		Sensation similar to tasting a black tea, increases over time	7	x 1 =	7
	0 to 2.5: ≥ 5 in quality 2.5 to 5: ≤ 5 in quality					

EXAMPLE 2

An astringency that is Dominant with an intensity of 4, can have a quality rating between Bad and Terrible. In this case, the taster describes it as a sensation similar to the experience of tasting a banana peel or an unripe banana.

CATEGORIES		INTENSITY	NOTES	QUALITY (0-10)	POINTS	
Astringency	INTENSITY		Banana peel	3	x 1 =	3
	0 to 2.5: ≥ 5 in quality 2.5 to 5: ≤ 5 in quality					

Defects

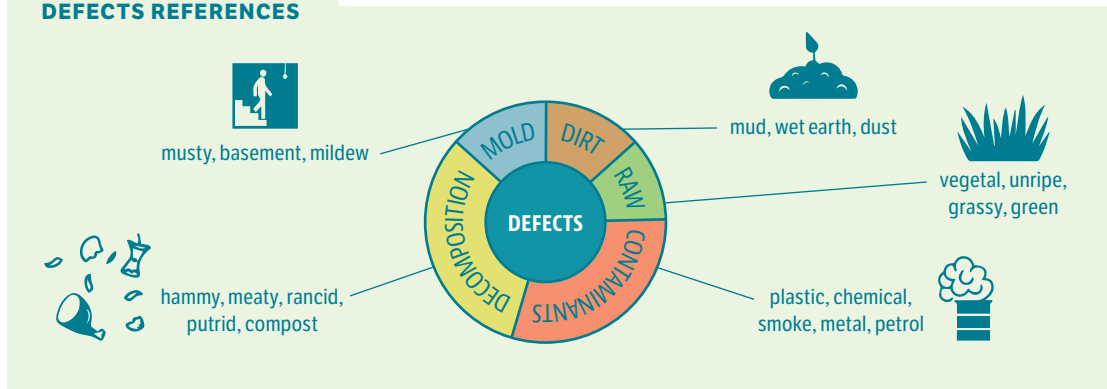
CONCEPT

This category is defined by the presence of defective flavors that are not characteristic of cacao, generally associated with a deteriorating condition or transformation affecting the product.⁵

Steps to Analyze Defects

- 1 During the tasting stage of analysis, mark the intensity of the defect or combination of defects perceived, taking into consideration that as the defect flavor(s) increase in intensity, the quality score decreases.
- 2 Write down any notes related to defects. Note that any reduction in quality points should be defined in the notes. If the sample is clean or free of defects, the quality score is Excellent.
- 3 Remember that, in this case, flavors or textures related to the processing of the sample during roasting or grinding are not Defects. You may record these observations in Comments and suggest that the sample be processed again with new parameters.
- 4 Rate the quality, using the scales as a guide, and for multiply the score by TWO. The maximum score in Defects: 20 points.

DEFECTS REFERENCES



EXAMPLE 1

The sample does not have an identifiable defect. In this case where the taster is unable to name the defect, he or she should not reduce the points in quality.

CATEGORIES	INTENSITY	NOTES	QUALITY (0-10)	POINTS													
Defects	<table border="1"> <tr> <td>0</td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td> </tr> <tr> <td></td><td></td><td></td><td></td><td>X</td><td></td> </tr> </table>	0	1	2	3	4	5					X			10	x 1 =	20
0	1	2	3	4	5												
				X													

EXAMPLE 2

If you find a Dominant taste of mold and wet soil with an intensity of 4, then you might rate the quality between Bad and Terrible.

CATEGORIES	INTENSITY	NOTES	QUALITY (0-10)	POINTS													
Defects	<table border="1"> <tr> <td>0</td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td> </tr> <tr> <td></td><td></td><td></td><td></td><td>X</td><td></td> </tr> </table>	0	1	2	3	4	5					X		Strong mold, wet soil	2	x 1 =	4
0	1	2	3	4	5												
				X													

Flavor

CONCEPT

The impression caused by a food or another substance, which is determined primarily by chemical sensations detected via taste (the tongue) and smell (the retronasal cavity).

Steps to Analyze Flavor

- 1 During the tasting stage of analysis, mark the intensity of the perceived positive or neutral flavors, taking into account that negative flavors are evaluated mainly in Defects. The relationship between intensity and quality varies depending on the perception and description of the flavors found during the tasting.
- 2 Write down any notes related to flavor(s). Not all the flavor categories are always present in a sample, only describe what you perceive.
- 3 The quality rating is based on a combination of factors including, but not limited to: harmony, clarity, complexity.
- 4 Rate the quality, using the scales as a guide, and for multiply the score by TWO. The maximum score in Flavor: 20 points.

FLAVOR REFERENCES



Cocoa/Cacao

chocolate, fudge, brownie, cocoa powder, nibs



Sweet

candy, honey, cane sugar/panela, malt, molasses, brown sugar



Nuts

peanuts, almonds, pecans, pistachio



Fresh fruits

apples, banana, melon, pineapple, cherry, grapes



Dry fruits

raisins, prunes, dried fig, dried cherry, dried peach



Flowers

roses, jasmine, coffee flowers



Spices

cinnamon, cloves, basil, oregano, bay

EXAMPLE 1

	CATEGORIES	INTENSITY	NOTES	QUALITY (0-10)	POINTS
Flavor	Cocoa/Cacao	0 1 2 3 4 5 X	chocolaty	9	x 2 = 18
	Sweet	0 1 2 3 4 5 X	cane sugar		
	Nutty	0 1 2 3 4 5 X	almonds, hazelnuts		
	Dried Fruit	0 1 2 3 4 5 X	raisins		
	Fresh Fruit	0 1 2 3 4 5 X			
	Floral	0 1 2 3 4 5 X			
	Spices	0 1 2 3 4 5 X			
	Other		sweet tobacco		

Aftertaste

CONCEPT

The residual flavors left in the mouth and on the palate, after the sample has dissolved completely.

Steps to Analyze Aftertaste

- 1 When the sample has been completely ingested or/and has been expiated, the taster analyzes residual flavors in the mouth.
- 2 The taster will mark the intensity of the aftertaste, taking into consideration that the intensity is not directly correlated to the quality.
- 3 Write down any notes related to the aftertaste.
- 4 Rate the quality, using the scales as a guide, and multiply the score by one. The maximum score in Aftertaste: 10 points.


EXAMPLE 1

An aftertaste that might be rated Good or Excellent in quality may be prolonged or short, and may include positive attributes related to subcategories for Flavor (cacao / chocolate, sweet, nutty, dried fruit, fresh fruit, floral, spices) and might have low intensities of bitterness and astringency.

CATEGORIES	INTENSITY	NOTES	QUALITY (0-10)	POINTS	
Aftertaste		long-lasting citrus note, mild bitterness	8	x 1 =	8

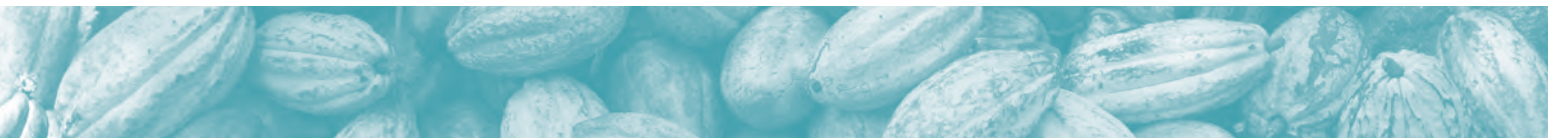
EXAMPLE 2

An aftertaste that might be rated Bad quality may be prolonged or short, and the intensities of bitterness and astringency tend to be higher.

CATEGORIES	INTENSITY	NOTES	QUALITY (0-10)	POINTS	
Aftertaste		sharp astringency that persists and intensifies	3.5	x 1 =	3.5

TIP

The arrow indicates a change in the intensity perceived during the evaluation. In this example, the intensity started at 3, but increased to a 4.



Comments

Steps for Comments

- 1 This space is for observations which are not noted elsewhere (for example: appearance, texture).
- 2 The taster may also use Comments to prepare a summary of the evaluation and recommendations.
- 3 The taster may take note of any additional factors that have influenced the sensory analysis, such as environmental conditions and sample processing.

EXAMPLE

COMMENTS: *A complex sample with an aroma of roasted almonds and dried fruit flavors such as prunes that last through the aftertaste.*

Taster's Points

CONCEPT

The taster's general impression and subjective quality score for the sample, taking into account all of the other categories of evaluation. In this category, the taster can rate the sample based on personal and professional perception of quality.

Steps for Taster's Points

After evaluating all other categories, rate the quality, using the scales as a guide, and multiply the score by one. The maximum score in Taster's Points: 10 points.

Final Score

The taster will tally all of the quality points from the far right-hand column (after multiplication) and notate the sum in the box next to Final Score. The maximum Final Score: **100 points**.

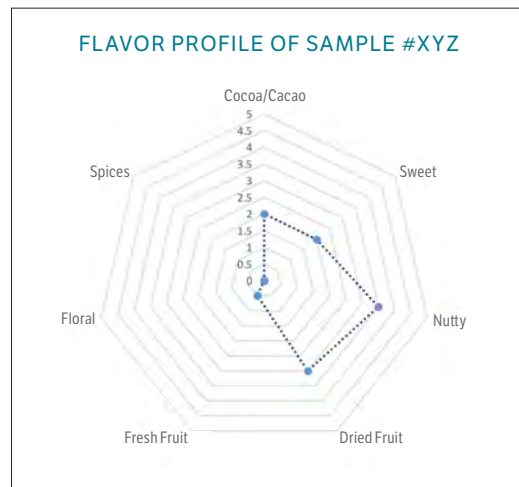
Analyzing your Results

Scoring

The use of the information that results from sensory analysis depends on the user and his/her objectives. Possible actions are infinite but below we offer some suggestions.

Logically, the higher the Final Score, the better the sample. Final scores can be used for decision making, such as:

- **Create flavors profile and other sensorial characteristics**
- **Identify and correct processing defects**
- **Decide if the sample is accepted for buying or selling, or if it is rejected**
- **Establish a value or ranking in comparison with other samples**
- **Determine a purchase or sales price**
- **Determine winners of a contest**
- **Set a standard or make comparison with a standard**

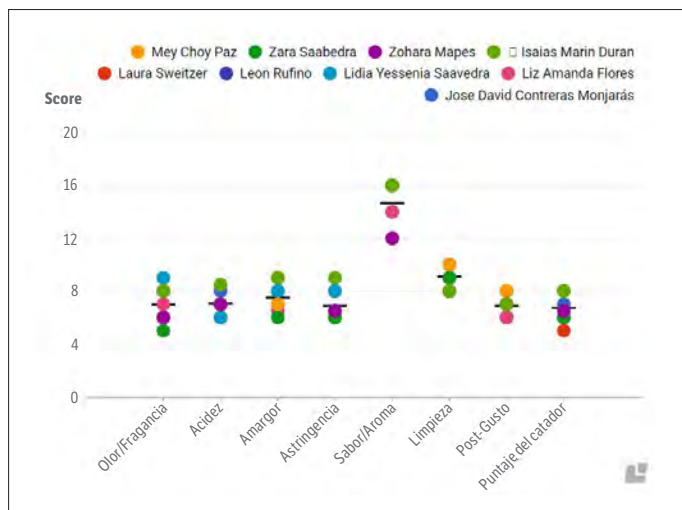


There are many ways to communicate the results of your analysis. A spider graph representation of the flavor profile can be an effective way to visualize your results.

Calibration

An important step is to calibrate with other tasters. Calibration is not easy and requires a lot of practice. After tasting, the leader of the tasting panel must collate all results in a single summary scoring sheet. We recommend that the tasting panel review results category by category, and if there is a lot of difference between scores, the panel can re-taste and discuss in order to reach a final decision.

This image from the program Cropster shows the calibration of a group of tasters on a particular sample. The black lines represent the average scores.



Notes:

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¹ Illy, 340.

² Ibáñez Moya, 6.

³ Ibáñez Moya, 6.

⁴ Goodwin.

⁵ Ibáñez Moya, 8.

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