



SCA Standard 103-2024

Coffee Value Assessment:
Descriptive Assessment

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SCA's Standards Development Panel (2024)

Zoey Thorson (Barista Guild)

Tonny Butera (Coffee Roasters Guild)

Hylan Joseph (Coffee Technicians Guild)

Yi-Ling Wu (SCA Board of Directors)

Andrew Tolley (SCA Board of Directors)

Expert Group

Mario Fernandez-Alduenda (SCA, Technical Officer)

Kim Elena Ionescu (SCA, Chief Sustainability and
Knowledge Development Officer)

Peter Giuliano (CSF, Executive Director)

Jenn Rugolo (SCA, Curatorial Director)

Yannis Apostolopoulos (SCA, Chief Executive Officer)

The SCA would like to thank the nearly 800 individuals and businesses who participated in the Coffee Value Assessment's Early Adopter program, the trainers and attendees of the CVA for Cuppers course hosted around the world, and CVA Ambassadors: their use of and feedback on the different assessments was key to producing these standards.

Coffee Value Assessment: Descriptive Assessment

1 Preface

Specialty coffee (see definition in 4.1) acquires value because of its attributes, whether intrinsic (related to the material reality of a coffee) or extrinsic attributes (the informational or symbolic attributes of coffee). Sensory attributes, or the sensory perceptions of coffee or coffee experience, are a special class of a coffee's intrinsic attributes because of their relevance to consumers and the specific methodologies required for their measurements. Sensory attributes are gathered and interpreted through sensory methodologies.

One of such sensory methodologies is the descriptive assessment. A coffee's descriptive profile is important in several situations: to determine if the coffee fits required profile or style specifications; to discover unique or special sensory attributes; to showcase a coffee's "flavor notes" along the chain all the way to consumers; or to distinguish coffees that show a similar impression of quality but for vastly different reasons. Descriptive analysis methods seek to generate an objective and quantitative representation of a product's sensory character. Their output can be correlated with other layers of information, such as impression of quality, or specific factors or variables related to production or processing.¹

The sensory assessment used in the Coffee Value Assessment system combines intensity ratings and check-all-that-apply (CATA) descriptions. Instead of quantifying the intensity of specific sensory attributes, such as "chocolate" or "fruity," the total intensity of each cupping section is rated, i.e., the total fragrance intensity.

¹ See *Coffee Sensory and Cupping Handbook* (2021), chapter 14.

This standard supersedes the following Heritage SCA Standard:

- SCA Cupping Protocol (2004)

2 Scope

This standard has been designed for the descriptive assessment of green arabica coffee, prepared and tasted under the methods in *SCA Standard 102-2024 Coffee Value Assessment: Sample Preparation and Tasting Mechanics*, and assessed in conjunction with the methods in other standards of this series, such as the Affective Assessment. This standard may easily be adapted for the assessment of coffee in stages other than green coffee: roasted coffee may be assessed without any modification to this standard. For the assessment of brewed coffee products, the fragrance section should be omitted. Assessment of coffee in other stages shall require other adaptations, not described here.

Similarly, this standard may be adapted for the assessment of *Coffea* species other than arabica, though those modifications are outside the scope of this document.

The statistical data analysis methods required to interpret the descriptive assessment data with confidence are outside the scope of this standard.

Tasters' selection, training, and qualifications are outside the scope of this standard.

3 Normative References

SCA Standard 102-2024 Coffee Value Assessment: Sample Preparation and Tasting Mechanics

SCA Standard 104-2024 Coffee Value Assessment: Affective Assessment

SCA Standard 610 Coffee Value Assessment: System Operation (in preparation)

4 Terms and Definitions

4.1 General Terms

Attribute(s). A property that is characteristic of something; a quality or feature regarded as a characteristic or inherent part of a coffee. A product (or coffee) can be thought of as a collection of attributes. Well-defined attributes can be identified using a variety of methods.

Affective assessment. A sensory assessment, described in *SCA Standard 104-2024 Coffee Value Assessment: Affective Assessment*, which focuses on discovering the impression of quality of a coffee.

Descriptive assessment. A sensory assessment, described in this standard, which focuses on profiling and characterizing the sensory attributes of coffee objectively.

Specialty coffee. A coffee or coffee experience that is recognized for its distinctive attributes and, because of these attributes, has significant extra value in the marketplace.

Tasting. A general term meaning the sensory assessment of a product using all senses but specifically involving the senses of smell and taste. In coffee, the term “tasting” encompasses cupping and other forms of tasting, such as tasting coffee from a batch brew.

4.2 Tasting and Sensory Terms

CATA. Check-all-that-apply: a list of descriptors where the options that best represent a coffee's sensory character are selected by the user.

Cupping. A method for the sensory assessment of coffee, which involves tasting several cups per coffee sample, using a different set of coffee beans for each cup, which is ground and brewed independently. The purpose of a cupping may be to do a descriptive assessment or an affective assessment.

Flavor category. A group of sensory descriptors that share common characteristics and are grouped together. For the purpose of the CVA Descriptive Assessment, each descriptor in the inner or middle circle of the Flavor Wheel also represents a “flavor category” that encompasses descriptors in the outer circle of the wheel.

Flavor Wheel. The *SCA/WCR/UC Davis Coffee Taster's Flavor Wheel*.

Gustative. Referring to the sense of taste, just as “visual” refers to the sense of sight and “olfactory” to the sense of smell. The main physiological structure of the sense of taste is the set of tastebuds.

Intensity. The perceived strength of a sensory stimulus in a cupping section. Intensity does not imply quality or desirability. For example, fragrance intensity is the perceived strength of the odor of the dry coffee grounds, as a single perception.

Olfactory. Relating to the sense of smell. The human olfactory system consists of the nose, the nasal cavities, and the olfactory bulb in the brain, which processes information from the olfactory receptors lining the nasal cavities.

Orthonasal. One of two entryways of odor molecules into the human olfactory epithelium, the orthonasal passageway is through the nose, as we breathe in, and is how we pick up the odor from the environment.

Retronasal. One of two entryways of odor molecules into the human olfactory epithelium, the retronasal passageway is from the back of the mouth cavity, as we breathe out, and is how we pick up the olfactory component of flavor.

Sensory category example. A set of suggested ingredients or products that exemplify the sensory character of a category in the Flavor Wheel, for tasters to become familiarized with each category's distinctive character.

Tactile. Referring to the sense of touch. In this case, it refers to the “mouthfeel” or tactile sensations within the mouth in response to the coffee stimulus: thickness (viscosity), texture, pungency, etc.

4.3 Cupping Sections

Cupping sections are aspects of the coffee tasting experience. These aspects are split into parts, either along time or based on the different sensory modalities involved, for the purpose of analysis.

Fragrance. The orthonasal olfactory perception of the coffee grounds prior to brewing, (i.e., the smell of the coffee grounds).

Aroma. The orthonasal olfactory perception of the coffee brew, assessed at two moments: right after brewing and while the crust is broken (i.e., the smell of the brew).

Flavor. The perception coming from both the taste of the brew and the brew's retronasal olfactory component, while the brew is in the mouth. It is perceived as a single “flavor” impression, as the brain combines the different sensory inputs.

Aftertaste. The perception coming from both the taste and the retronasal olfactory component caused by the remnants of the brew inside the mouth and throat, after the brew has been ejected or swallowed. It is perceived as a single impression, as the brain combines the different sensory inputs.

Acidity. The perception of sour taste provoked by the brew, which may vary in intensity and character.

Sweetness. The perception of gustatory or retronasal sweetness provoked by the brew.

Mouthfeel. The tactile perception of the brew while it is in the mouth, excluding the temperature perception. It encompasses the brew's thickness (viscosity), its texture, and other tactile properties such as astringency (mouth-drying property).

5 Descriptive Lexicon

This section, together with Appendix 8.3, establishes the meaning of the CATA terms used in the Descriptive Assessment. Additional freely elicited descriptors may be used by tasters at the different cupping sections to further specify or nuance their perceptions.

5.1 Olfactory Lexicon

The descriptive assessment includes a number of descriptive terms for olfactory-driven flavors in coffee, which are collectively referred to as the "olfactory lexicon." These are frequently used terms, representing descriptors that are often found on cupping sheets. Each olfactory lexicon term has a number of sensory examples that serve to help define the sensory term and increase communication among cupping professionals (see Appendix 8.3). Each olfactory lexicon term may also represent a "category" of flavors. For example, while "citrus fruit" may be used as its own descriptive term, it might also encompass other flavors such as lemon, lime, orange, and grapefruit (which all appear on the complete Coffee Taster's Flavor Wheel).

5.2 Taste Lexicon

The following sensory examples illustrate each taste modality qualitatively.

- **Salty.** 0.20% sodium chloride solution (use refined table salt).
- **Sour (gustative).**¹ 0.04% citric acid solution.
- **Sweet (gustative).**¹ 0.52% sucrose solution (use white sugar or refined sugar).
- **Bitter.** Dark roasted coffee (about Agtron #35).
- **Umami.** 0.10% solution monosodium glutamate (MSG).

Note 1: These terms are used here to describe gustative sensations. However, both "sour" and "sweet" can also be used as descriptors for olfactory sensations. See Appendix 8.3 for sensory examples of these terms when they represent olfactory sensations.

5.3 Mouthfeel Lexicon

The term "mouthfeel" represents the brew's thickness (viscosity) in the mouth and its texture, and other tactile sensations such as astringency and "metallic feel."

- **Rough (Gritty, Chalky, Sandy).** The feel of very small particles in the brew, exemplified by ibrik/cezve coffee.
- **Oily.** The feel of the brew's oils in the mouth, exemplified by coffee with a small amount of butter. This texture can also be exemplified by that of butter or cream, from the mouthfeel point of view.
- **Smooth (Velvety, Silky, Syrupy).** A smooth texture in the mouth, exemplified by a syrup.
- **Mouth-drying.** A drying, puckering, or tingling sensation on the surface and/or edge of the tongue and mouth. Exemplified by alum solution (see *WCR Sensory Lexicon*).
- **Metallic.** An aromatic and mouthfeel associated with tin cans or aluminum foil. Exemplified by potassium chloride solution (see *WCR Sensory Lexicon*).

6 The Descriptive Assessment

6.1 Overview

Descriptive assessment follows the steps outlined in *SCA Standard 102-2024 Coffee Value Assessment: Sample Preparation and Tasting Mechanics*. Refer to that standard for the general procedures to prepare a sample and taste a coffee.

- Once the sample is ready to be assessed, and before starting the tasting, the roast level of the sample shall be estimated visually, when applicable, and recorded.
- Next, in the first step of the assessment, fragrance shall be assessed and its intensity rated; the characteristics found in the fragrance shall be marked in the CATA section for orthonasal characteristics (below the fragrance and aroma intensity scales).
- In the second step, the coffee shall be brewed, aroma assessed, and its intensity rated; the characteristics found in the aroma shall also be marked in the same CATA section for orthonasal characteristics.
- In the third step, the brew shall be liquored several times, during which the remaining sections shall be assessed. The intensity of flavor and aftertaste shall be rated, and their characteristics checked in a CATA list that accounts for both flavor and aftertaste. The acidity intensity shall be

rated, and its characteristics described through freely elicited terms. The same shall be done for sweetness, while mouthfeel shall be rated in intensity, and its characteristics checked in the mouthfeel CATA list. In all sections, tasters may use additional descriptors to better describe the checked terms or, in rare cases, to describe characteristics that are not covered in the CATA lists.

6.2 Rating Intensity

The intensity of cupping sections shall be rated using 15-point scales (see Figure 1). As they progress through the cupping sections, tasters shall assess the total intensity of each section using the 15-point scale. As an example, if a coffee's fragrance has a strong fruity note and a subtle chocolate note, the taster would not rate the individual intensity of each characteristic, but the combined (total) intensity of the fragrance—how strong the fragrance is, no matter its blend of components.

Figure 1. Intensity scale for "fragrance" on the descriptive assessment form.



Tasters may place a tick anywhere along the intensity scale, even in between integer numbers; however, the integer number closest to the tick shall be recorded as the taster's output. If, for whatever reason, a taster changes their mind regarding a section's intensity before the cupping is over, they shall add a second mark and show the direction of change with an arrow above the scale. The original tick should not be erased.

6.3 Choosing Descriptors

The descriptive characteristics of the coffee shall be recorded using CATA lists for each of the three boxes in the form with CATA lists in them: fragrance and aroma, flavor and aftertaste, and mouthfeel. In the case of acidity and sweetness, assessors should record their own descriptors for those sections, even though they do not include a CATA list.

6.3.1 Fragrance and Aroma Box

This box is located below the intensity scales for fragrance and aroma. It includes a single list meant to encompass both orthonasal sections (fragrance and aroma). Up to five descriptors that best represent the coffee should be selected in this list, encompassing both fragrance and aroma.

6.3.2 Flavor and Aftertaste Box

This box contains two lists (Figure 2). One is for

retronasal perceptions, and the other is for gustatory perceptions. As the retronasal list (on the left-hand side) refers to the olfactory dimension of coffee, the descriptors used are the same as for the fragrance and aroma CATA list, and the way to use it is the same as 6.3.1 (select up to five options that best represent the coffee). On the main tastes list, on the right-hand side, the taster shall record up to two main tastes that best represent the coffee from both the flavor and aftertaste sections. Though all coffees have bitterness, if bitterness stands out, this box should be selected. It is the same case for the other tastes: if a taste stands out in the sample, especially in the context of other coffees tasted, it should be selected.

Figure 2. Portion of the "Flavor" and "Aftertaste" category section on the descriptive assessment form. CATA boxes for retronasal perceptions are on the left and gustatory perception (Main Tastes) on the right.

Flavor Intensity		Aftertaste Intensity	
LOW	MEDIUM	LOW	MEDIUM
0	5	0	5
10	15	10	15

<input type="checkbox"/> Floral	<input type="checkbox"/> Roasted	<input type="checkbox"/> Cereal	<input type="checkbox"/> Burnt	<input type="checkbox"/> Tobacco	Main Tastes (2) <input type="checkbox"/> Salty <input type="checkbox"/> Bitter <input type="checkbox"/> Sour <input type="checkbox"/> Umami <input type="checkbox"/> Sweet
<input type="checkbox"/> Fruity	<input type="checkbox"/> Berry	<input type="checkbox"/> Dried Fruit	<input type="checkbox"/> Citrus Fruit	<input type="checkbox"/> Nutty	
<input type="checkbox"/> Sour/Fermented	<input type="checkbox"/> Sour	<input type="checkbox"/> Fermented	<input type="checkbox"/> Nutty/Cocoa	<input type="checkbox"/> Cocoa	
<input type="checkbox"/> Green/Vegetative	<input type="checkbox"/> Musty/Earthy	<input type="checkbox"/> Woody	<input type="checkbox"/> Spice	<input type="checkbox"/> Vanilla/Vanillin	
<input type="checkbox"/> Other	<input type="checkbox"/> Chemical	<input type="checkbox"/> Sweet	<input type="checkbox"/> Brown Sugar		

6.3.3 Mouthfeel Box

This box includes one CATA list, from which up to two options shall be selected. Note these options describe the mouthfeel quality, as its intensity (in the form of body level or thickness) has been rated on the corresponding scale.

6.3.4 Freely Elicited Descriptors

All the descriptive sections, including acidity and sweetness, allow tasters to write down freely elicited descriptors. There are three situations when a written descriptor should be used:

- When there are no CATA boxes to check (i.e., in acidity and sweetness).
- When there is a very precise descriptor for the category box marked. Here, the descriptor expands the meaning of the selected descriptor. As an example, if a conspicuous blueberry flavor is found, the taster should mark "berry" (as well as "fruity") and write down "blueberry" in the flavor and aftertaste box.
- When there is a clear note that does not belong to any category. As an example, if a rare, dried tomato note is found, the taster should write "dried tomato" in the relevant cupping section.

7 Recording the Assessment Results

The use of a cupping app or cupping platform, specifically designed for the Coffee Value Assessment data structure, is recommended. In cases where the use of a digital CVA cupping platform is not practical or is unavailable, tasters should use the form in 8.1.

8 Appendices (Informative)

8.1 Olfactory Category Examples

All category examples are indicated in order of most ideal to helpful. Please note this list is still in development/ratification and is expected to function as a “living document,” where additional examples may be added over time as the use of the value assessment system indicates new descriptors are becoming increasingly important or valuable. For the latest full list of category examples, please see Appendix 15 of *A System to Assess Coffee Value Understanding the Specialty Coffee Association’s Coffee Value Assessment*. Suggested brands are provided for each reference, if available.

8.2 Descriptive Form


SCA Coffee Value Assessment

Descriptive
Form

Name

Date

Purpose



SAMPLE NO.

ROAST LEVEL

Fragrance

Intensity

LOW

MEDIUM

HIGH

0

5

10

15

Aroma

Intensity

LOW

MEDIUM

HIGH

0

5

10

15

☐Floral

☐Fruity ☐Berry ☐Dried Fruit ☐Citrus Fruit

☐Sour/Fermented ☐Sour ☐Fermented

☐Green/Vegetative

☐Other ☐Chemical ☐Musty/Earthy ☐Woody

☐Roasted ☐Cereal ☐Burnt ☐Tobacco

☐Nutty/Cocoa ☐Nutty ☐Cocoa

☐Spice

☐Sweet ☐Vanilla/Vanillin ☐Brown Sugar

Main Tastes (2)

☐Salty ☐Bitter

☐Sour ☐Umami

☐Sweet

Flavor

Intensity

LOW

MEDIUM

HIGH

0

5

10

15

Aftertaste

Intensity

LOW

MEDIUM

HIGH

0

5

10

15

☐Floral

☐Fruity ☐Berry ☐Dried Fruit ☐Citrus Fruit

☐Sour/Fermented ☐Sour ☐Fermented

☐Green/Vegetative

☐Other ☐Chemical ☐Musty/Earthy ☐Woody

☐Roasted ☐Cereal ☐Burnt ☐Tobacco

☐Nutty/Cocoa ☐Nutty ☐Cocoa

☐Spice

☐Sweet ☐Vanilla/Vanillin ☐Brown Sugar

Main Tastes (2)

☐Salty ☐Bitter

☐Sour ☐Umami

☐Sweet

Acidity

Intensity

LOW

MEDIUM

HIGH

0

5

10

15

Sweetness

Intensity

LOW

MEDIUM

HIGH

0

5

10

15

Mouthfeel

Intensity

LOW

MEDIUM

HIGH

0

5

10

15

☐Rough (Gritty, Chalky, Sandy)

☐Smooth (Velvety, Silky, Syrupy)

☐Metallic

☐Oily

☐Mouth-Drying

Notes

SAMPLE NO.

ROAST LEVEL

Fragrance

Intensity

LOW

MEDIUM

HIGH

0

5

10

15

Aroma

Intensity

LOW

MEDIUM

HIGH

0

5

10

15

☐Floral

☐Fruity ☐Berry ☐Dried Fruit ☐Citrus Fruit

☐Sour/Fermented ☐Sour ☐Fermented

☐Green/Vegetative

☐Other ☐Chemical ☐Musty/Earthy ☐Woody

☐Roasted ☐Cereal ☐Burnt ☐Tobacco

☐Nutty/Cocoa ☐Nutty ☐Cocoa

☐Spice

☐Sweet ☐Vanilla/Vanillin ☐Brown Sugar

Main Tastes (2)

☐Salty ☐Bitter

☐Sour ☐Umami

☐Sweet

Flavor

Intensity

LOW

MEDIUM

HIGH

0

5

10

15

Aftertaste

Intensity

LOW

MEDIUM

HIGH

0

5

10

15

☐Floral

☐Fruity ☐Berry ☐Dried Fruit ☐Citrus Fruit

☐Sour/Fermented ☐Sour ☐Fermented

☐Green/Vegetative

☐Other ☐Chemical ☐Musty/Earthy ☐Woody

☐Roasted ☐Cereal ☐Burnt ☐Tobacco

☐Nutty/Cocoa ☐Nutty ☐Cocoa

☐Spice

☐Sweet ☐Vanilla/Vanillin ☐Brown Sugar

Main Tastes (2)

☐Salty ☐Bitter

☐Sour ☐Umami

☐Sweet

Acidity

Intensity

LOW

MEDIUM

HIGH

0

5

10

15

Sweetness

Intensity

LOW

MEDIUM

HIGH

0

5

10

15

Mouthfeel

Intensity

LOW

MEDIUM

HIGH

0

5

10

15

☐Rough (Gritty, Chalky, Sandy)

☐Smooth (Velvety, Silky, Syrupy)

☐Metallic

☐Oily

☐Mouth-Drying

Notes

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8.3 SCA/WCR/UC Davis Flavor Wheel

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Coffee Taster's Flavor Wheel





505 Technology Drive
Suite 340
Irvine
California, 92618
United States

sca.coffee