SENSORY SKILLS

Sensory skills

SCAE
COFFEE
DIPLOMA

SENSORY FOUNDATION

BLOOMS TAXONOMY: Remembering / Understanding.

SUB CODE	KNOWLEDGE/SKILL REQUIRED	STANDARDS	REFERENCE
1.0 THEORETICAL PRINCIPLES			
1.01.01	**WHAT IS SENSORY ANALYSIS** A scientific discipline that evokes, measures, analyses and interprets reactions to those characteristics of foods and materials as they are perceived by the senses of sight, smell, taste, touch and hearing It relies on trained and regular tasters, standardised preparation protocol and questionnaire, decision rules Give examples during training including: Touch – wool samples Sight – optical illusions Identify different senses Recognise that sensory analysis in coffee requires a standard protocol	L1	Meilgaard, M & Co (1999) Sensory evaluation technicques. 3rd Edition, CRC Press LLC, Boca Raton, FL Lawless and Heymann (2011), 2nd Edition, if the references are to be made to baristas. It is the most recent and up-to-date regarding current knowledge and practices. Carpenter, R.P. & Co. (2000) Guidelines for Sensory Analysis in Food Product Development and Quality Control. 2nd Edition. Aspen Publishers, Gaithersburg, MD
1.02.01	**WHY IS SENSORY IMPORTANT IN COFFEE** Cupping seeks to: • identify potential defects and taints • identify pleasant flavours and their quality • evaluate intensity • record the results It establishes a general picture of a coffee's potential that can be refined and adjusted to various blending and brewing practices Technic widely used in food industry extended to others (car, pharma, …), in the high gastronomy product. For QC, NPD, Premiumness evaluation	L2	Muñoz, AM, Civille, GV and Carr, BT (1992). Sensory Evaluation In Quality Control. Van Nostrand Reinhold, New York Yantis, JE [Ed.] (1992) The Role of Sensory Analysis in Quality Control. ASTM. West Conshohocken, PA
1.02.02	Cup speciality vs non-speciality coffee Prove a is different to b Discuss different tastes in two coffees Try two speciality coffees and compare Acknowledge that the aim of sensory analysis in coffee is to be able to distinguish, recognise and distinguish between different attributes, whether we personally like them or not	L2	Muñoz, AM, Civille, GV and Carr, BT (1992). Sensory Evaluation In Quality Control. Van Nostrand Reinhold, New York Yantis, JE [Ed.] (1992) The Role of Sensory Analysis in Quality Control. ASTM. West Conshohocken, PA

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2.0 PHYSIOLOGY AND SENSORY ATTRIBUTES			
2.01.01	**PHYSIOLOGY** Olfaction and gustation are the two key senses used in coffee cupping Taste buds in the mouth Not all papillae have taste buds Flavour is a multi-modal experience: integrating gustatory, retronasal olfaction and somatosensory systems In training use a sugar flavoured with cinnamon or vanilla and do the pinch test on nose	L1	Meilgaard Handbook of olfaction and gustation Edited by Richard L Doty (1995)
2.01.02	Distinguish the difference between taste and flavour Recognise that taste exists in the oral cavity Recognise that flavour is primarily driven by the olfactory bulb	L1	Meilgaard Handbook of olfaction and gustation. Edited by Richard L Doty (1995)
2.02.01	**BASIC TASTES** There are 5 basic tastes All coffees are naturally acid, bitter and have a sweet perception (more than they are physically sweet) Speciality coffee is not expected to have too high a perceived saltiness Umami is not a taste usually associated with brewed coffee Relationship between individual sensations will vary depending on their individually perceived strength A group practical session before test in training shows 25% stronger solutions than the final test	L2	ISO standard 8586.1-1993
2.02.02	List the 5 basic tastes Identify the 5 basic tastes in a blind assessment Recognise differences in taste sensations between two coffees in the practical pairs test – see 3.0	L2	ISO standard 8586.1-1993
2.03.01	**BASIC AROMAS** There are three main categories of aroma: • Enzematic • Sugar Browning • Dry Distillation These aromas will be present in the dry fragrance through to the brewed coffee Carry out a simple category exploration as a group of enzematic, sugar browning and dry distillation. Use picture boards with aroma vials to make stronger cognitive links	L1	Lingle 'Coffee Cuppers Handbook'

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3.0 DETECTING SENSORIAL QUALITIES IN COFFEE			
3.01.01	**DEFINE TASTES AND BODY IN COFFEE** In coffee, basic tastes and aromas do not exist in isolation and they need to be recognised within the brewed coffee itself The body of the coffee describes the apparent viscosity, fullness and weight in the mouth ranging from "thin, watery" to "thick, heavy" Combine the basic tastes and aromas learned and apply recognition of these to pairs of different coffees Different coffees will have different perceived tastes and body	L2	
3.01.02	Identify the following key attributes in pairs of coffee: • Acidity • Bitterness • Body Acknowledge that acidity, bitterness and body are origin and process dependent	L2	
3.02.01	**DEFINE AROMAS IN COFFEE** Recognise and categorise key positive aromas from coffee	L2	
3.02.02	Identify simple category differences in aroma groups in a practical blind test Recall aroma categories in a written test	L2	
3.03.01	**COMMUNICATING THE RESULTS** Cuppers use a consistent standardised language to aid communication between themselves	L2	
3.03.02	Recognise that standard terminology is used to aid clear communication Repeat key terms used in cupping, such as acidity and body. Mention astringency and balance (TBD in intermediate) Distinguish the difference between positive and negative key terms	L2	
4.0 CUPPING PROTOCOL			
4.01.01	**WHAT IS CUPPING** It is a sensory analysis process specific to coffee “Coffee cupping is a method used to systematically evaluate the aroma and taste characteristics of a sample of coffee beans” – (Ted Lingle 2001)	L1	SCAA Lingle ‘Coffee Cuppers Handbook’

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4.01.02	Repeat a definition of cupping	L1	SCAA Lingle 'Coffee Cuppers Handbook'
4.02.01	**KEY TERMINOLOGY/SENSORY VOCABULARY** Cupping coffee with: **Eye**: colour, froth, crema **Nose**: aroma categories (see point 5) **Mouth**: basic taste and mouthfeel	L2	Coffee – Sensorial Analysis – Vocabulary ISO TC 34/SC 15N 2113
4.02.02	Group example comparing milk and water to show mouthfeel	L2	Coffee – Sensorial Analysis – Vocabulary ISO TC 34/SC 15N 2113
4.03.01	**CORE CUPPING PROTOCOL** Set out the standard procedure for preparing and brewing a cupping session Define the correct brew ratios Define the key protocol terms: • Dry • Crust • Break	L1	SCAA Lingle 'Coffee Cuppers Handbook'
4.03.02	Memorise and repeat the standard process of setting up a cupping batch Define key terms used in a cupping session Recall standard measurements and protocol in a written test	L1	SCAA Lingle 'Coffee Cuppers Handbook'
5.0 EQUIPMENT AND MAINTENANCE			
5.01.01	**CORE SENSORY EQUIPMENT** Define core equipment for coffee sensory analysis Understand the importance of hygienic odour-free work space for cupping	L1	
5.01.02	Identify equipment that is necessary or superfluous to a cupping session from a list See test in 4.0		

Key Terminology

Word or Term	Proposed Description	Source
Acidity	A basic taste characterised by the solution of an organic acid. A desirable sharp and pleasing taste … as opposed to an over-fermented sour taste	ICO, 1991
Aftertaste	The sensation produced by the lingering taste and aroma	Cappuccio, 2005
Aroma	The sensation of the gases released from brewed coffee, as they are inhaled through the nose by sniffing	Lingle, 2011
Astringent	An aftertaste sensation consistent with a dry feeling in the mouth, undesirable in coffee	ICO, 1991
Balance	A pleasing combination of two or more primary taste sensations	Lingle,2011
Basic Tastes	The five basic tastes of sweet, sour, bitter, salty and umami	
Body	The physical properties of the beverage. A strong, but pleasant, full mouthfeel characteristic	ICO, 1991
Break	Aromatic assessment of the crust as it is broken three times	
Clean	Free from flavour taints or faults	Lingle, 2011
Crust	Aromatic assessment of the crust of wet coffee grounds that forms on the top of the brew surface immediately after brewing	
Cupping	A method used to systematically evaluate the aroma and taste characteristics of a sample of coffee beans	Lingle, 2011
Cupping Glasses/Bowls	All cups or glasses used should be of the same volume, dimensions and material of manufacture: **Cupping Glasses** 5 to 6 oz tempered glass **Porcelain bouillon bowls** of 175-225ml clean cups should be clean with no apparent fragrance and at room temperature	SCAA, 2009
Cupping Grind	Coarser than filter grind with 70% to 75% passing through a 850mμ sieve	SCAA, 2009
Cupping Roast	Sample roast targets: • Time: 8 – 12 minutes depending on roaster size • Colour: Agtron 60 – 65 (M-Basic)/Probat 105– 125 (colourette) • Coffees cupped 8 - 24 hours after roasting	SCAA, 2009
Dry	Assessment of the fragrance of the dry coffee grounds after grinding and prior to brewing	
Flavour	The sensation in mouth the coffee gives by the combination of Tastes and Aromas in the liquid phase	

Fragrance / Aroma	The sensation of the gases released from roasted and ground coffee beans, as the aromatic compounds are inhaled through the nose by sniffing	Lingle, 2011
Gustation	“The detection of stimuli dissolved in water, oil, or saliva, by the taste buds”	Meilgaard et al, 2007
Mouthfeel	The tactile sense derived from physical sensations in the mouth during and after ingestion	Lingle, 2011
Olfaction	The sense of smell allowing the perception of aroma, fragrance, scents in gas / air using the nose	