



Cupping Protocols & Procedures

Cupping is the coffee industry's more-or-less standardized practice for sensory evaluation. Using aromas and flavors it is possible to determine the quality potential of a given coffee, the success of a roast, and/or the presence of sensory defects. Cupping is an integral component of green and roasted coffee transactions. It provides a common set of tools and procedures by which coffee community members across the supply chain may evaluate and converse about quality.

Here's our all-in-one guide to set up and participate in a great cupping:

Materials:

- A scale
 - Preferably one with accurate measurement to 0.1 g
 - SCA standards: 8.25 g whole bean coffee to 150 mL water, roughly 1:18 ratio; ground after weighing. This translates to 1.63g / 1 fl. oz. or .055g / 1mL
- A grinder
 - Use a standard grind size. An ideal scenario might include a dedicated grinder whose settings do not change and is only used for cupping
 - SCA standards: 70 - 75 % of grounds pass through #20 sieve
- Water
 - Freshly boiled
 - Filtered water will improve your results
 - SCA standards:
 - clean/fresh, odor free, clear color, 0 ppm Chlorine
 - Ideal: 150 ppm TDS, 4 grains/68 ppm Calcium, 40 ppm total Alkalinity, 7.0 pH, 10 ppm Sodium
 - Acceptable range: 75 - 250 ppm TDS, 1-5 grains (17 - 85 ppm) Calcium, 6.5 - 7.5 pH
 - 200° F (+/- 2° F) or 92.2° - 94.4° C
- Kettles
 - For pouring water
- Cups
 - For SCA standard cupping = 5 cups per coffee sample, 7-9 fl oz, or 207-266 mL, top diameter 3-3.5 in (76-89 mm), with lids.
 - In a less formal setting, 2 or 3 cups is often sufficient.
 - Rinse cups should be offered, 1 per sample set is a convenient starting number
- Spoons
 - For tasting - wide and relatively shallow; more like soup spoons, less like teaspoons.
 - SCA standard: 4-5 mL capacity, non-reactive metal
- One or more timers



- Towels - for spills, drying spoons, etc.
- Sufficient Surface Area
 - SCA standard: 10 sq feet for every 6 persons, stationary table
 - Room no smaller than 110 sq feet
 - Minimum 36 in space surrounding the table
 - 60 in radius between multiple tables
- Pen(cil)s, paper, cupping form(s)
- Spittoons or other appropriate receptacle

Some Setup tips:

- When weighing coffee, keep in mind that the SCA ratio is of coffee to water, not glass capacity.
 - Ground coffee will displace some water: for example, 11.5 g of coffee in a 200 mL capacity glass displaces about 15 mL worth of space, so the actual water being added to the glass is closer to 185 mL.
- **SCA standards for roasting** include the following guidelines:
 - 8 - 12 minute roast duration, to take place 8 - 24 hours prior to cupping
 - Roast level measured between 30 minutes and 4 hours after roasting using coffee ground to the SCA Standard Grind for Cupping, at room temperature. The coffee shall meet the following measurements with a tolerance of ± 1.0 units: Agtron "Gourmet": 63.0 / Agtron "Commercial": 48.0 / Colortrack: 62.0 / Probat Colorette 3b: 96.0
 - Not everyone adheres to the SCA's color recommendations. Cuppers should determine the roast level that best reflects their interests, taking into consideration that a roast too light may not properly develop volatile aromatic compounds, but a roast too dark may obscure flavors and mask defects.
- **Selecting an order for your cupping can affect results**
 - Context can influence quality perception, so in some cases a purely randomized table order isn't desirable.
 - Discretion should be used, taking into account the purpose of a cupping and the effect of strong flavors on a cupper (i.e., roast degree, acidity, bitterness, etc).
- Many cuppers prefer to taste coffee without knowing any details about it. In cases like these, a code and a key should be made in advance to help avoid confusion. **Coding coffees with a randomly generated alphanumeric code may help prevent cupper bias.**
- Many cuppers appreciate a grounds sheet or whole beans samples of the green or roasted coffee to accompany the table. These visual aides may influence a cupper's opinion, but they may also provide insight into roast levels or green coffee preparation, and as such should be used at the discretion of the host and attendees.
- Prior to cupping, **avoiding strong smells and strongly flavored foods is recommended.** Salt, fat/grease, spice, sweet, and sour flavors all negatively impact a cupper's sensory skills.
- Cupping is time-consuming, so plan accordingly. It can take 10 - 15 minutes to grind coffee, 20 - 30 minutes to heat large kettles. A typical cupping will last an hour or more from fragrance to finish, especially if discussion ensues.



Execution

1. Grind coffee immediately prior to cupping, or if grinding in advance, cover the glassware with a lid to preserve aromatics. Use a flush cup (a few grams of the sample) prior to each new coffee to cleanse any remaining grounds in the machine.
2. Evaluate ground coffee fragrance
3. Pour water (200° F (+/- 2° F) or 92.2° - 94.4° C) and start the timer
4. 4 minutes is the standard time before “breaking the crust”
 - a. Using a spoon, push back gently but firmly against the coffee grounds that have risen to the top of the glass.
 - b. Rinse the spoon between each glass
 - c. “Breaking” releases trapped aromas, but the steam will be hot, so use caution
 - d. Ensure that all the grounds from the surface have broken apart and all that remains is a caramel-colored foam
5. Skim the foam from the surface of the glasses prior to tasting, using one or two spoons. Take care not to greatly disturb the grinds resting at the bottom of the glass.
6. Allow the coffee to cool. 170° F is a common tasting temperature, in many cases this may mean waiting for 10 to 15 minutes after pouring. Allowing the timer to continue running after the break may assist a cupper’s ability to assess if a coffee is too hot to taste. Tasting a coffee a second or third time as it cools allows the cupper to experience changes associated with either temperature reduction or extraction, and may provide additional insight into a coffee’s character.
7. Slurping has become the accepted method of gustation during cupping. Aspirating the coffee across the palate can be beneficial for a number of reasons:
 - a. It cools hot coffee a bit prior to hitting the palate
 - b. By introducing oxygen, complex flavors may ‘open’ and be easier to identify
 - c. It allows the coffee to strike most of the palate nearly simultaneously
8. Spitting is encouraged, as overcaffeination can be unpleasant and negatively affect sensory skills
9. Recording notes and scores, frequently on a cupping evaluation form, is common and will most certainly aid in evaluation practices.
 - Coffee is typically scored on a 100 point scale with a few clearly defined ranges:
 - < 69.9 = defective
 - 70 - 79.9 = commercial/commodity grade
 - 80+ = specialty
 - 90+ = ‘super’ specialty
 - Group discussion is frequently employed to assist with cupper calibration. From time to time, returning to the table to retaste a coffee in the light of a colleague’s comments is appropriate. Some cuppers may adjust their scores as a result.



Etiquette

- Cuppers frequently desire cupping rooms to remain free from distractions. In extreme cases, some cuppers prefer sensory vacuums, but a quiet environment free from aromas will suffice in most cases.
- Discussion, in general, should be reserved until the end to help prevent influencing taste.
- Sickness, in general, should not be tolerated at a cupping table. If a cupper is ill, they should not participate as their decision to cup may negatively affect the health of others. In some cases, using a second spoon or limiting tasting to one glass in each set may be acceptable, but the cupper in question should always ask permission of the rest of the group before proceeding.
- Keeping track of a spoon, spittoon, pen(cil) and paper, and other personal effects is a courtesy. Avoid leaving spittoons and spoons lying around if possible. In many cases, it's considered rude to place a spoon in or around a spittoon. Awareness of surroundings and other cuppers will help with the flow of the room and subsequently the ability for everyone to evaluate the coffees fairly.