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On The Table #19

The Perfect Pour

Dear cyber reader, What does a master barista do to maintain the quality of each shot he or she pours while working the bar?

Obviously, tasting each shot, or even a sampling of shots on a busy shift, is not possible. So what is the feedback from the coffee to the barista to keep the grind and pack perfect? The answer is the appearance of the espresso as it comes out of the espresso machine.



Fig. 1: 26 seconds and 1 7/8 oz. volume. Color is maintained and texture is apparent"

An espresso coffee can easily be read by an experienced eye, a good shot looks like the one in the photograph to the left. The barista is watching each shot, in endless pursuit of the perfect pour.

Using a double porta-filter and 17 grams of freshly ground coffee, perfection is a deep red-brown color that is maintained in the extraction for over 25 seconds and up to two ounces, and a thick texture giving the pour a hanging quality like honey running off the end of a butter knife. Time and quantity are intimately related in an espresso extraction. The slow pour captures more flavor.

In the photograph to the right, take a look at a pour that is not so perfect. The color is lighter. The density and viscosity are not as great, leading to a higher surface tension in the emulsion which causes it to cling to the spout, hooking inward rather than streaming straight down. The tricky part is that a host of errors can produce the same looking pour. In truth a barista monitors the pour for perfection but it is very difficult to know which factor is affecting your coffee. This thinner pour just means less flavor is going into the cup. The flavor is in the heavy oils which give a great pour the characteristic thick heavy look, and in my experience, color is related to sweetness. If your blend is capable of a sweet espresso that will always be a deep red-brown in the cup and as it oozes out of the machine.



Fig. 2: Less flavor creates lower viscosity, making the coffee cling to the spout.

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However, the chief culprits producing such a pour are the following, listed in order of probability.

- 1. Stale coffee, either pre-ground or roasted more than ten days ago.**
- 2. Grinding problems, either the burrs are dull or the grinder has heated up from usage.**
- 3. Packing/distribution problems.**
- 4. Dirty equipment.**

Although isolation of problems by looking at the pour is not an absolute science, some visual attributes are more likely to have a certain cause than others.

Symptom: My pour is thick, hanging straight down from the spouts but the color is never a deep brown, it is more of a cinnamon color.

It is likely that your machines brewing water temperature is changing during the brewing cycle. (Measure your water temperature using the Fluke rig with the bead probe up on the surface of the packed coffee during brewing.)

Also, an acidic blend of coffee can produce this look. Taste for acidity in the straight espresso, it is like a lemony flavor.

Symptom: My pour is coming out of the machine too quickly, I am getting two ounces in 12 seconds. (Conversely, it is too slow

and is drip, drip, dripping out.

Your grind needs to be adjusted to get a good elapsed time for your shot.

Symptom: My pour is very dark brown with large bubbles in it and the crema doesn't last very long.

Brewing water much too hot, over the boiling point. Note: Water will out-gas (boil) at lower temperatures when you heat it at higher altitudes. This affect becomes apparent at above 2,000 feet elevation.

Symptom: My pour is whitish with a thin, dark brown streak in it. (It may feature a corkscrew look as it comes out as well.)

Packed coffee is fractured or the seal between the side of the basket and the coffee is broken. Review packing techniques.

Symptom: My pour doesn't look anything like the photos. It looks like gushing brown water.

Turbulence in an espresso pour is a gross failure to produce even resistance to pressurized brewing water. You see this with completely stale coffee, a cracked coffee basket, failure to pack at all, or a grind set very coarse.

It is very likely that once your program is in control you will notice that your pour starts out looking good for the first ounce or so (again referring to a double shot) but the color turns white too quickly. This indicated imprecise technique or slightly dull grinder burrs. A program that is not dead but just needs a tune for the ultimate result. The master barista is one who can push the envelope: grinding and packing so perfectly that the total elapsed time that you see a perfect color is extended in comparison with a less skilled barista.

As I have explained in the past, espresso is a cuisine of interlocking factors from the grind and machine tuning, and freshness of the coffee, to the hand of the expert in dosing and packing each shot. Results like you see in the first picture can only be achieved if all these factors are controlled. And, more devilish yet, you will not see an change in color and texture by improving your pack, for example, if your grinder burrs are dull.

Fine tuning your program can only be achieved once gross tuning is accomplished. That is to say you have gone through each factor, you are using a fine blend that is fresh, you have control of

temperature and pressure, and on and on. For complete list of factors and their control see my book ["Espresso Coffee: Professional Techniques."](#)

Ciao for now!

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