## Recommended Procedure for Testing Malabar Gold® Premium European Espresso

1. Test the Equipment: First, make sure the espresso machine is functioning properly dispensing a little more than an ounce of water (for a single shot) at a temperature of 205-209 (measured in the porta-filter) degrees Fahrenheit and pressure of 9 atmospheres. It will read about 5 deg F less if measured in a cup held against the dispersion screen. Both the temperature range and Pressure are important.

Porta-filter baskets designed for single espresso do not function properly; so do all the tests with a "double basket". Use two shot glasses, each with a mark at 1 oz, to draw the espresso into. With 14-18 gms of ground coffee in the porta-filter the machine should dispense 0.75 -1.00 oz of espresso (after crema is gone) into each of the two shot glasses when drawing a double.

- 2. Season the Porta Filter: Run some hot water thru the empty Porta-Filter, long enough for the porta filter to reach operating temperature. Wipe it dry and get all the water out. Shake it, if necessary. Now dose the basket as described below and draw an espresso. This is to "season" the porta-filter. Discard the espresso. From now on, do not rinse the porta-filter after each draw; only wipe it clean. This leaves the oils on during the test.
- 3. Initially Set the Grinder: Do not plan to use the doser on the grinder for these tests. If you grind enough beans at each setting to be able to use the doser, you will run out of beans before you can do the tests. At whatever setting you want to start from, grind just enough beans to flush

out the previously ground coffee residing in the grinder chute. Discard this ground coffee.

Now grind just enough fresh beans to fill the porta-filter at each setting. You may have to pull the doser handle many times to get all the ground coffee out of the doser. Do not leave any ground coffee in the doser. It will absorb moisture.

4. Dose and Pack the Porta-Filter: Dose the basket up to the rim using a wooden or plastic spatula to shave off the excess. If the basket is properly designed, the quantity of ground coffee would be about 15 grams. Pack the grind to the same force every time, using a bathroom scale if necessary.



Malabar Gold oozes out like warm honey; never squirts out like water

Tap the Porta Filter with the tamper once to dislodge all loose ground particles. Pack it with a final twisting motion of the tamper to polish the surface of the ground coffee.

Use a packing pressure between 30 lbs. and 50 lbs. to get a good espresso shot. A pressure of 50 lbs. is recommended for these tests. As a standard procedure, pressing it to 50 lbs. may be hard on one's wrist if one has to do it for 4 to 8 hours. One could back the pressure down to 30 lbs. in that case.

5. Draw the Espresso: Turn the pressure switch on for a "short double". For machines with pre-infusion cycle, the first droplet should appear in 4 to 8 seconds after the switch is turned on. Watch the pour; it should ooze out like honey or thick syrup. If the espresso is gushing out of the porta-filter, the grind is too coarse.

It is best to override the machine with a manual shutoff even if it is fully automatic. Watch the extraction and turn it off as the brew turns whitish, indicating over extraction. Check how long it took for that shot. Monitor the extraction time and re-adjust the grinder, if necessary. If it took less than 30 seconds for that shot, the grind is too coarse and need to be made finer. If that shot took longer than 30 seconds, the grind is too fine and will have to be made coarser.

6. Check the Shot Volume: Check how much espresso was collected in each shot glass. It should be around 1 oz in each. Larger shot volumes do not get you more coffee flavor; just more bitterness.

Crema is the single most important indicator of a well made espresso



Chemistry of coffee is counter-intuitive. It behaves differently than you think. The sweet, desirable components in the ground coffee are extremely soluble in water and are extracted by the first ounce or two flowing through it. Running additional

water through the ground coffee does not extract more coffee flavors; there is not much left there to extract.

The less desirable components, such as bitterness, caffeine, and acids, are not as soluble in water and only a small portion is extracted by the first ounce or two.

Running more water through the ground coffee extracts more of these bitterness and caffeine without any accompanying coffee flavors. Thus, stronger, short espresso shots are sweet and the weaker, long shots are bitter.

- 7. Adjust the Grinder: Adjust the grinder till it takes about 30 seconds, no less than 25 and no more than 35 seconds, to deliver the espresso shots. Do this adjustment slowly, one step or notch at a time. Be very patient. Every time the grinder is adjusted, remember to flush out all ground coffee remaining in the grinder and the doser and discard it. As you know grind is very critical and if you are not getting a thick, rich crema, then something is not working in the extraction process.
- 8. Taste the Espresso: Crema should be reddish brown, plentiful, rich, and persistent. It is not unusual for the *crema* to last over twenty minutes before it breaks in the middle. *Crema*, which captures the aroma and flavor of the fresh ground coffee, is as important as the brew beneath. Linger with your nose over the cup as the *crema* releases the aroma of the freshly ground coffee. Taste it straight, without sugar or milk. Note how smooth, sweet and low acid the espresso is, with no unpleasant bitterness and not even a hint of sourness, and with lots and lots of body. Enjoy!!

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