



How to Make Great Tasting Espressos and Lattes

Explore, Learn & Experiment

Course Approach

- Lecture
- Espresso Lab
- Steam Milk Lab

Course Outline

- About Black Point Coffee
- Understand the different types of Espresso drinks and their ratios.
- Identify coffee beans that are great for making Espresso drinks.
- Understanding the difference between acidity and bitterness in espressos.
- Identify the different types of Espresso machines.
- Identify all the parts of the Espresso machine and the Espresso grinder.
- Creating Espresso recipes (dose, yield, time).
- How to dial in extraction time, adjusting grind and dose.
- How to pull shots, distribution, tamping and avoiding channeling.
- How to steam milk and apply basic techniques.
- Clean and maintain Espresso machines and grinders.



About Black Point Coffee

Black Point Coffee is a specialty coffee roaster located on Black Point Road in Scarborough Maine.

Our mission is to seek out great coffee growers, roast and share their beans with our customers



Different Types of Coffee Drinks



Definition of Espresso, Cappuccino and Latte



- Espresso is a 25–35 ml beverage prepared from 7–9 grams of coffee through which clean water of 90.5-96.1°C has been forced at 9–10 atmospheres of pressure, and where the grind of the coffee is such that the brew time is 20–30 seconds. Double Espresso (50 ml)
- Latte has two shots of espresso and steamed milk. Injecting air into the milk creates a creamy and velvety milk with a very rich taste. The late foam is like paint, without large bubbles. It blends with the espresso drink in a harmony of flavors.
- Cappuccino also has two shots, but a distinct layered distribution of espresso, steamed milk, and a thick airy layer of foam on top.

Espresso



- Unique brewing method
- Concentrated (1:2 vs 1:18 ratio)
- More dissolved solids (8-12% vs 1.3%), more sour/bitter
- 8-10x stronger
- Brewed under pressure in 30 seconds vs 3-4 minutes for a pour-over
- Often the base of a milk drink
- Crema is the creamy top layer of microbubbles
- Coffee is ground very precisely to achieve 50 ML in 30 sec.
 - Pressurized Espresso machines can use pre-ground coffee

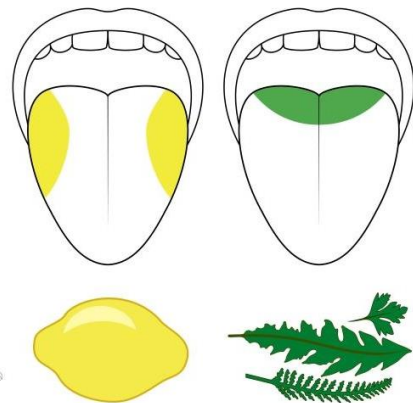
Espresso Bean Paradox



- Lower altitude and inferior beans can taste great extracted as espresso
- Even beans are boring and ashy in a pour-over can work well
- Roasted dark but not shining surface, “medium dark” or “full city” roast
- Less dark (medium) more acidity, more fruit in the cup, better without milk
- Grind one to four weeks after roast (older coffee produces less crema)
- Espressos can be a blend of Arabica and Robusta

Dialing In Espresso

- 18g in, 50ml out in 25-30 sec.
- Sour vs Bitter
- Sour is under-extracted: lengthen time (grind finer)
- Bitter is over-extracted: reduce time (grind courser)



Sour vs Bitter



Dialing In Espresso

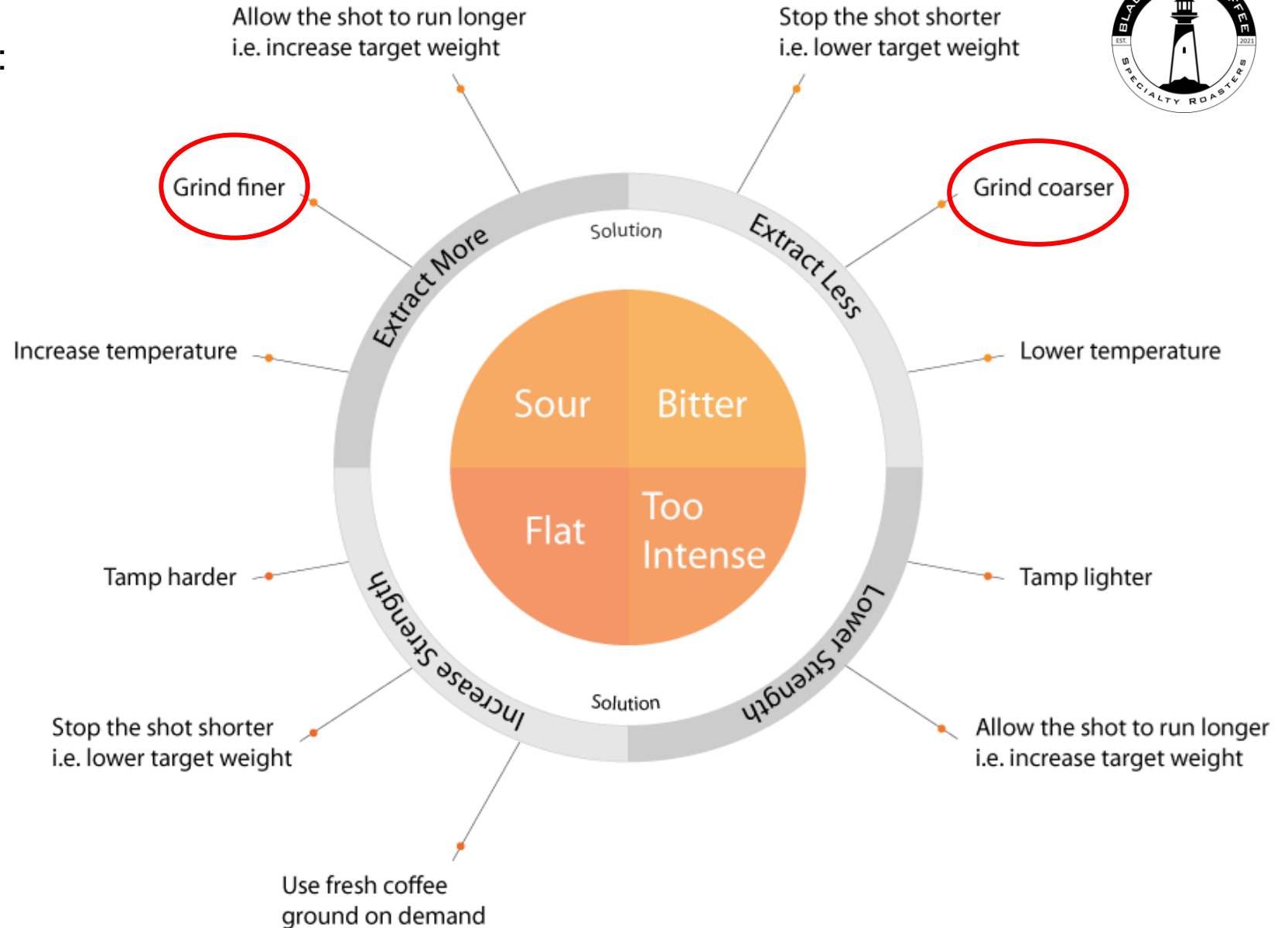


Under-Extracted	Perfect	Over-Extracted
Bland Coffee, lacking aroma and finish	Balanced tasted with sweet long finish	Unbalanced, persistent bitterness
Thin, unstable crema	Stable crema, thick, elastic, no visible bubbles	Thin, unstable crema, disappears quickly
Light color	Slightly marbled hazelnut color	Dark, burnt color
Extraction too short (<20 sec)	Extraction time (20-30 sec)	Extraction too long (> 30 sec)
Grind is too course	Perfect grind dose	Grind is too fine
Light or no tamping	Tamped to 30 lbs. pressure	Tamped too firm
Water temp too low	Water temp 197-205F	Water temp too high

Dialing In Espresso: Dose, Yield and Time

Adjust one variable at a time:

- Just the grind size
 - Same grams in
 - Same volume out
 - Same shot time



Identify coffee beans that are great for making Espresso drinks

Espresso Beans	Roast Type	Beans Origin	Flavors
Coffee Bros Espresso Roast Medium	Medium	Ethiopia and Colombia	Strawberry, sugar cane, vanilla
Illy Classico Espresso Ground	Medium	Not specified	Caramel, orange blossom, jasmine
Intelligentsia Black Cat Espresso Blend	Dark	Brazil, Colombia	Chocolate, molasses
Lavazza Espresso Italiano	Medium	Central and South America	Hazelnut, chocolate
Lavazza Qualita Rossa	Medium-dark	Brazil and Africa	Cacao nibs

Different Types of Espresso Machines



Super Automatic	Automatic	Semiautomatic
Built-in grinder	May include grinder	No built-in grinder
Button makes variety of drinks	Button makes different sized drinks	Button replaces lever to activate piston
Set preferred strength, volume and temperature	Do not have to press button again to stop flow	Stop and start to adjust volume, exact temp control
Automatic milk frothier	Manual steam wand, single boiler	Manual steam wand, separate boiler

I like to drink...



...lattes, cappuccinos, espressos with different single origins.

Then by...



...a double boiler.



...lattes and cappuccinos with the same espresso blend.



...a heat exchanger.



...espressos and americanos.



...a single boiler.

Different Parts of Semi-Automatic Espresso Machines



Espresso Machine Water

- Hard water destroys machine
- Causes lime scale build up
- Softening pouches sit in the water reservoir
- Using distilled water can destroy machine
- Mineral packets are added to distilled water
- Packets balance water chemistry, improve coffee flavors



Water Softening Pouch



Minerals added to distilled water

Different Parts of Portafilters



- The standard portafilter size for commercial espresso machines is 58 mm
- Higher-end home machines sometimes use this size.
- Many home espresso machines (including some high-end ones) use smaller portafilters
- Common home espresso machine portafilter sizes range from 49 mm to 58 mm.
- Pressurized machines have baskets with just a few holes
- Double spouted vs bottomless portafilter



Accessories



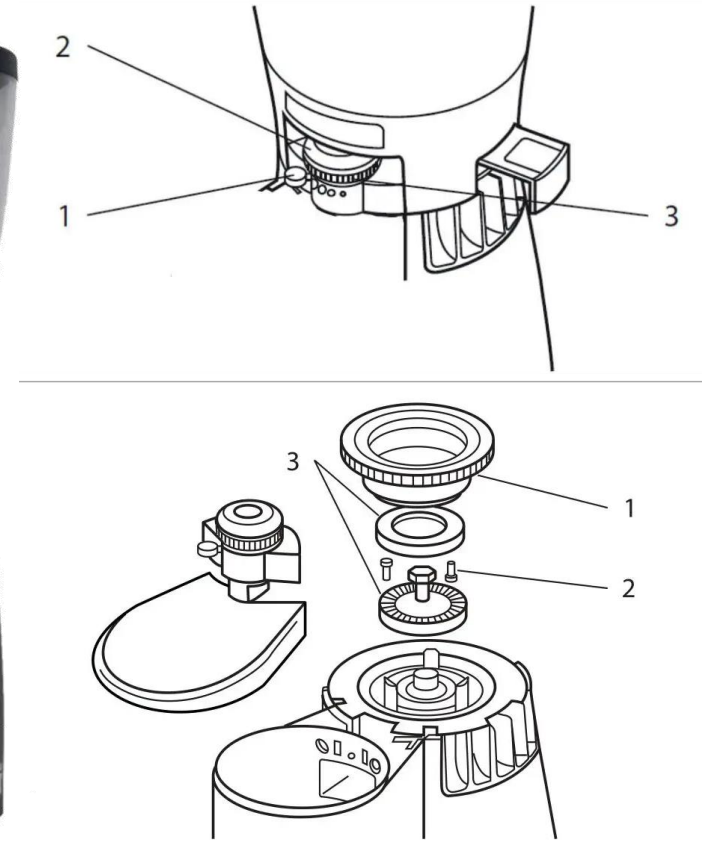
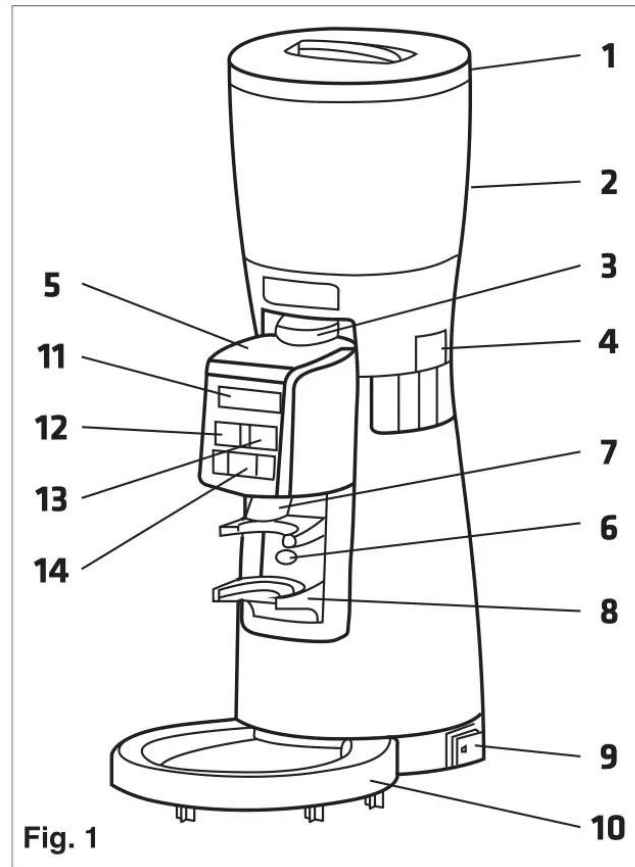
1. Tamper
2. Angled Tamper
3. Double Tamer Mat
4. Dosing Ring
5. Weiss Distribution Tool (WDT)
6. Towel
7. Milk Jug
8. Single Tamper Mat
9. Gram Scale



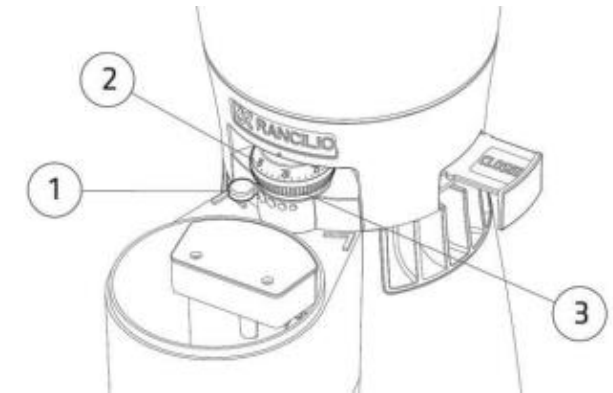
Different Parts of On-Demand (OD) Grinder



1. Hopper lid
2. Bean Hopper
3. Adjustment Knob
4. Hopper locking slide
5. Projection Lid
6. Filter holder button
7. Coffee Outlet
8. Filter Holder Fork
9. Power Switch
10. Grounds Tray
11. Display
12. Single dose button
13. Double dose button
14. Customized dose button



Grinding Espresso Beans to Recipe



Assess the results:

- Too Sour, extend time
- Too bitter, reduce time
- Purge after making adjustment to clear the hopper of older grind

Making Espresso



1 Remove

The porta-filter from the machine



2 Empty

The ground coffee puck



3 Clean

and dry the porta-filter



4 Dose

the freshly ground coffee



5 Level

the surface of the grounds for an uniform extraction



6 Tamp

the coffee down with 20 kg of pressure



7 Swipe

the rim of the porta-filter with your hand to clean



8 Purge

the showerhead in order to remove any coffee grounds



9 Clean up

the grill to avoid any grounds under the cups



10 Place

the porta-filter on the grouphead



11 Start

the extraction immediately

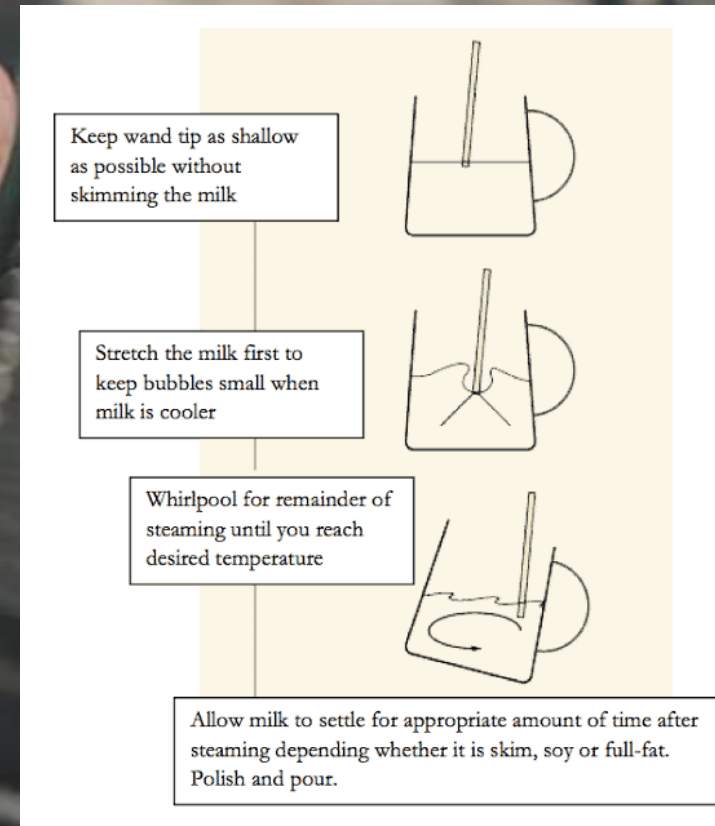


12 Position

the cups underneath the spouts

Milk Foaming

- Wet paint consistency
- Position the wand
- Vortex
- Pouring late art



Tips for Making Steamed Milk and Foam



- Use very cold milk
- Use the right size pitcher with the right shaped spout
- Fill pitcher to 1/3 full, milk will expand in volume as it steams
- 4% milk will create better foam than whole milk
- Use a thermometer (max 150F)
- Practice wand placement using dishwashing liquid
- Practice latte art using hot chocolate

How to Make Steamed Milk For Latte

1. Purge the steam wand using damp towel
2. Move wand into position
3. Use wand to guide pitcher spout into the right position
4. Put wand just below the surface of the milk
5. Turn on steam to enough pressure to create vortex
6. Stretch the milk (aeration)
7. Listen for tearing paper, frying on grill, do not move pitcher up or down
8. Move pitcher up slightly to stop stretching (warm)
9. Keep vortex going to blend
10. Stop @ hot (Michael Jackson)
11. Wipe wand and purge
12. Polish and pour



Common Mistakes When Steaming Milk



- Not Stretching or too much stretching
- Too little steam pressure and/or not maintaining the vortex
- Moving the pitcher (use both hands)
- Too much steam pressure (large bubbles, lots of noise)
- Too hot, scalds milk
- Forgetting to wipe the wand after steaming
- Not keeping the milk swirling after steaming to keep it from separating
- Not tapping the pitcher to diminish bubbles

Late Art



Late Art





Late Art



Pouring Toulip



Create the base,
stop at 2/3 full

Keep cup at angle, pour into
center, spout just above surface,
pitcher parallel to surface



Create small circle,
then stop. Create
second circle, bring
pitcher up at end to
create heart

Create third circle,
finish by lifting jug
and running through



Milk Steaming and Latte Videos



- [Milks Steaming for Latte Art Barista Tutorial Chris Baca](#)
- [Learn Latte Art in 8 Minutes Lance Hedrick](#)
- [The ultimate guide to latte art](#)
- [Learn to steam silky milky in 5 minutes](#)
- [How to steam milk for latte art](#)

Workstation Cleaning



The three rags 'live' system

- One for the counter
- One for the espresso
- One for the steam wand
- In many cases staff keep their own counter rag, and the two rags for the machine stay with the machine - then get rotated out as needed

Cleaning the Espresso Machine

CLEANING THE STEAM WAND

1

Mix Cleaning Solution

Fill the cleaning container with 500ml of cold water and add 30ml of milk frother cleaner.



2

Submerge Steam Wand in Cleaning Solution and Engage Wand

Submerge the steam wand in the cleaning solution. Engage the steam wand for 5 seconds and then turn it off again. Repeat 7 times. Remove the steam wand from the solution and wipe thoroughly with a clean cloth.

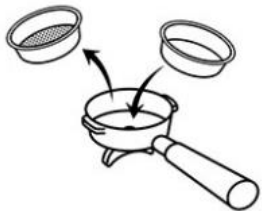


3

Repeat Step 2 with Clean Cold Water



1.



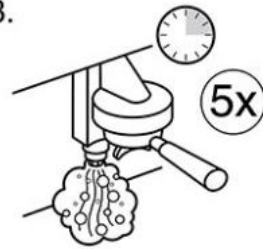
Replace the normal filter with "Blind" filter (No Holes).

2.



Place 1/2 tsp (3g) or less of JoeGlo Backflush Detergent onto "Blind" filter.

3.



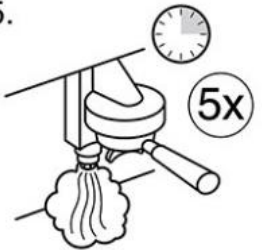
With portafilter attached to the group, backflush machine by running the group five times in 15 second start/stop intervals.

4.



Remove Portafilter, discard leftover bits and run the group. Use a Coffeetool to get rid of coffee oils & loose grinds.

5.



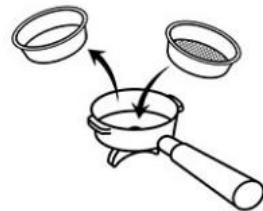
With portafilter attached to group, backflush machine by running the group five times in 15 second start/stop intervals.

6.



Remove portafilter and run the group to thoroughly rinse clean.

7.



Remove the "Blind" filter and replace the normal filter.

8.

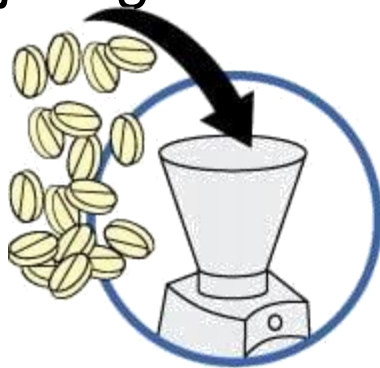


Pull and discard two test shots before serving.

Cleaning the Coffee Grinder



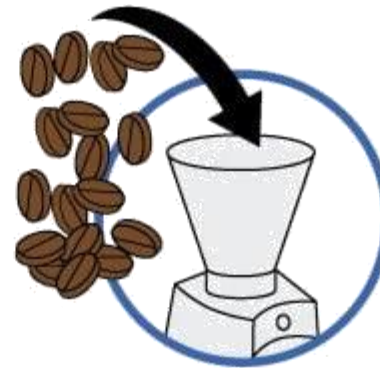
- Empty hopper of any old coffee, wipe clean
- Adjust grind to 3-4 steps coarser
- Add grinder cleaning tablets (Grindz) to empty grinder
- Grind through and discard
- Add 40 grams of old coffee to hopper
- Grind coffee to push through any tablet in burs, discard
- Re-adjust grind size



1



2



3



4



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