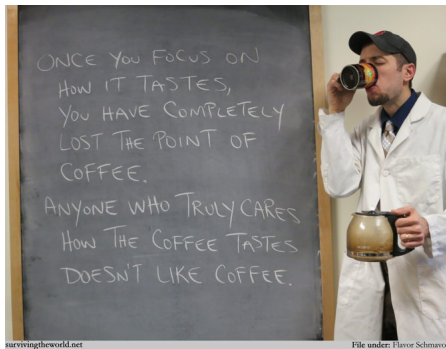


# Home coffee roasting

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File under: Flavor Schmor



# Where does coffee come from?

- Coffee “beans” are seeds
- Grown around the world: Central and South America, Middle East, Africa, SE Asia, Australia, islands
- Harvested as ripe berries, 1 or 2 beans/berry
- Some combination of milling, fermentation, drying to remove the flesh and make green coffee
- Taste depends on altitude, climate, varietal, processing



# Why do we roast?

- Water evaporates
- Sugars caramelize: lose sweetness, gain flavor
- Bitter chemicals (trigonelline) decompose to aromatics
- Acids evaporate or decompose
- Caffeine and oils mostly unaffected

# Why should I roast?

- Roasted coffee goes stale in a couple of weeks; green coffee keeps for months
  - ▶ Volatile aromatics evaporate
  - ▶ Oils migrate to surface and go rancid
  - ▶ Ground coffee has basically no shelf life — grind your own, even if you don't roast
- Green coffee is cheap (today's Kenya AB: \$6.55/lb from [sweetmarias.com](http://sweetmarias.com))
- More variety in green coffee and in your roasts
- Roast to your own taste and brewing method

#### AIR-ROASTING STARTER KIT A

Put a coffee work on the path to next-level addiction by getting her into home roasting. This kit has it all: an entry-level roaster, hand grinder, and four pounds of raw beans. \$224; [sweetmarias.com](http://sweetmarias.com)



# What if I don't want to roast?

- Buy roasted coffee locally
  - ▶ Get beans at a place where you like the coffee
  - ▶ Around here: Moksha (supplies ZombieRunner), Dana Street Roasting Company
- Be careful with blends
  - ▶ Big producers use blending for consistency, not quality
  - ▶ If it tastes the same every time, it probably doesn't taste very good
- Grind your own — mills are cheap

# How?

- Need to get beans up to 200+ °C gradually and uniformly
  - ▶ Heating: convection or conduction
  - ▶ Mixing: air or mechanical
- Free: oven, wok
  - ▶ Scorching, overroasting
- Cheap: popcorn popper
  - ▶ Not designed for this temperature or mass
- Home roasters: air roasters, drum roasters
  - ▶ Capacity, speed, control, smoke, noise ...



# Roast levels

- Two audible “cracks” mark roast stages
- First crack ( $\sim 205^{\circ}\text{C}$ ): sucrose decomposes
  - ▶ Beans puff up visibly
  - ▶ Color goes from mottled brown to uniform
- Roasts between 1st and 2nd crack (City, Full City) have most coffee flavor
- Second crack ( $\sim 225^{\circ}\text{C}$ ): “cellular matrix” decomposes
  - ▶ Oily sheen, chipping
- Roasts during/after 2nd crack (Vienna, French) emphasize roast flavor over coffee flavor



Sweet Maria's Coffee