



Trees Organic

COFFEE & ROASTING HOUSE

***An
Introduction
to Coffee***

COFFEE ROASTING

How coffee beans are roasted can have a huge impact on the taste of the coffee in the cup. There is no perfect roast, however, different beans can greatly benefit from different roasting techniques and degrees of roast. Thus the art of roasting and the never ending quest for the perfect cup of coffee.

Lighter roasts, often referred to as a cinnamon or light city roast, produce a sharp and acidic taste. Medium roasts, such as City or Full City, generally bring out more flavour in coffee and is a popular middle-of-the-road choice of roasting styles today.

Darker roasts, such as light french, espresso, and French have a fuller flavour often with caramel overtones and with a bittersweet tang developing.

Very dark roasts, such as Italian, dark French and Spanish have a smoky and often burnt-like flavour. The darker the roast the less likely you are to taste the flavour nuances of the coffee and the more likely the char of the bean.

DEGREES OF ROAST

- CINNAMON - light brown and dry surface, tastes like toasted grain with sour acid notes.
- LIGHT CITY - medium light brown, traditional norm for eastern US market.
- CITY or MEDIUM - medium brown, normal for Western US and all of Canada, good to taste varietal character of bean.
- FULL CITY - medium dark brown, oil drops starting on surface, good for varietal character, bittersweet notes starting.
- LIGHT FRENCH, ESPRESSO - darker brown with oily spots or some surface oil, more bittersweet caramel flavours, acidity muted.
- FRENCH - shiny with oil, also popular for espresso, burned undertones, low acidity.
- DARK FRENCH or ITALIAN - very shiny with oil, charcoal tones evident, very low acid.
- SPANISH - nearly black, charcoal tones dominate, flat taste.

COFFE TASTING TERMS

ACIDITY

Acidity is generally desirable in coffee. It has nothing to do with heartburn! Acidity is the tartness, the tang, and the snap which one feels in the back of the mouth. It provides a bright, clear vibrant quality. Low acid coffees such as Sumatra tend to have a flat taste. High acidity, as in Ethiopian coffee, is called winey taste. Aged coffee from India or Bali may be sweet or mellow. Brazilian coffees are prized for their "right" amount of acid, called richness. The darker the roast the less the acidity, which is why dark roasts often taste flat. 'High' and 'low' acidity are relative terms: all coffee is low on the acidity scale - an apple is more acidic than a cup of coffee!

BODY

No coffee is 'heavier' than another, but many somehow feel heavier in the mouth. This is body. It is the heaviness, thickness and richness that the tongue perceives. Coffee from Indonesia, especially Sumatran, is heavier and has good body. Central American coffees tend toward a lighter body. The best Brazilians are in the middle. With light-bodied coffees the flavour is delicate - one should never add milk. Brewing with too little coffee or too coarse a grind will also result in too light a body.

AROMA

This is a combination of acidity and flavour. Aroma comes from the perception of the gases released during the brewing cycle. Aroma is greatest in the middle roasts but is quickly overpowered by carbony smells in dark roasts. Low acid coffees smell 'flat', richly-flavoured coffees smell, well, richly-flavoured. Some coffees are more fragrant than others. For the most aroma, Sumatran and Colombian are ideal.

FLAVOUR

Flavour can be described endlessly. It is the overall perception in the mouth. Flavour, above all else, is what coffee is all about. Some drinkers enjoy a very distinctive flavour, as in a earthy Ethiopian or chocolaty Yemen coffee. Sumatran coffee has a rich flavour. Brazilian coffee is sometimes preferred because it has no real distinctive flavour but blends well. Some wild or mellow coffees have little acidity or tang but do have good body. On the other end of the scale are harsh coffees (often canned, supermarket coffees containing some robusta) . These may be sharp and unpleasant but sometimes a bit of harsh coffee in a otherwise bland blend brings out certain flavour characteristics.

Professional coffee tasters use terms that are in a class of their own - hidey, sour, muddy, grassy, musty, mucky and fermented! These terms are often used for the lowest grades of coffee.

CAFFEINE AND DECAFFENATION

CAFFEINE

Possibly the most important thing to know about coffee and caffeine is that the strength of a coffee's taste has little to do with how much caffeine it contains! While caffeine has a slightly bitter taste, our perception of strength comes basically from the degree of roast (the darker the "stronger") and the ratio of coffee to water used during the brewing process that creates the actual strength of the coffee.

Caffeine content for an 8 ounce cup of coffee can range from 90 to 250 mg. depending on the types of coffee used in the blend and strength of the coffee. Caffeine varies between the two main species of coffee. Arabica coffees (most gourmet coffees) contain about 1% caffeine by weight in green form, Robusta coffee, often found in canned, supermarket blends can have double the caffeine content of the Arabica coffee beans in the display bins next to it!

Caffeine content of a 1-1/2 ounce cup of espresso will range from 90 to 120 mg., but also is dependent on the type of coffee used in the blends and strength of the brew.

The roasting process alters caffeine very little. It is readily water-soluble at temperatures above 170 F and consequently is fully released into the finished beverage during brewing.

DECAFFEINATION

There are three basic methods of extracting caffeine and three "agents of decaffeination". Some of the terms, methods and names are interchangeable, to confuse matters more.

A great deal of confusion and rumour surrounds the various methods used. Their safety and effectiveness are worth examining in some detail. All methods currently employed by the coffee industry carry no known or documented health hazards.

DIRECT CONTACT PROCESS

This is the original decaffeinating process and still widely employed. The green beans are first softened by steam for about 30 minutes. Then they are repeatedly rinsed - for about 10 hours - with methylene chloride solvent that soaks through the beans (comes in direct contact with the bean). Caffeine in the beans is drawn out, and bonds with the solvent, leaving the coffee 97 - 99% caffeine free. The solvent is drained off, the beans are steamed a second time, for 8 to 12 hours, then heated and blown dry, evaporating all traces of the methylene chloride. Numerous tests of methylene chloride have not linked it to any known disorder. Although methylene chloride can be used for this process, it is becoming increasingly popular to use another solvent - ethyl acetate. The use of this organic solvent, which is a natural derivative found in many fruits, including apples, peaches and pears, is often referred to as "natural-process"

decaffeination.

It seems highly unlikely that even if some minute traces of solvent remained after decaffeination, that any trace of solvent could remain after roasting and brewing, since it vaporizes at 104 F. Coffee is roasted at over 400 F. for 15 minutes, then brewed at 200 F.

The U. S. Food and Drug Administration (F.D.A.) sets a limit of 10 parts per million of solvent traces in ground coffee. The primary direct contact decaffeination plant in the world, K.V.W. in Hamburg, Germany routinely delivers coffee with less than 0.1 p.p.m. of solvent. Independent labs testing K.V.W's coffee verify that often the coffee tests out at 5 parts per billion (2000 times less than the F.D.A. limit). This is before roasting and brewing.

INDIRECT CONTACT PROCESS

Unroasted coffee beans are steeped in hot water for a long period of time. Gradually, the water dissolves and draws out the caffeine, along with important flavour elements and oils in the coffee. The water is separated from the beans and treated with either methylene chloride or ethyl acetate. The solvent absorbs the caffeine, which is then removed by the process of heat and evaporation. The water, containing only the flavour components found in coffee, is reunited with the coffee beans which absorb their original oils.

The indirect method of decaffeination - because of its use of water - is referred to by some roasters and retailers as "water-process" or "French water-process".

SWISS WATER DECAF PROCESS

Green beans are soaked in hot water for several hours until at least 97% of the caffeine is removed. The resulting solution, which contains caffeine as well as other essential coffee elements, is passed through activated charcoal or carbon filters to remove the caffeine. Then, as in other methods, the water is added back to the beans, which are then dried. Unfortunately, charcoal is less selective than other decaffeination agents, and as a result, removes more of the essential coffee oils. It is also the most expensive method, since the caffeine, unlike the other methods, cannot be recovered and sold separately as a component of soft drinks and medicinal products. Lastly the activated charcoal cannot be reused.

WHAT IS ESPRESSO?

The word "espresso" refers to a method of brewing coffee that is unique in two important ways:

Hot Water under high-pressure is forced through a packed layer of precisely ground coffee to extract a thick, flavourful essence in a concentrated form

Each individual serving is prepared fresh to order, with the consumer waiting on the coffee rather than the coffee waiting on the consumer. This makes every cup taste exquisitely fresh providing that the espresso beans were freshly roasted and freshly ground.

Espresso is from 1 to 1- 1/2 ounces of dark, heavy-bodied aromatic bitter-sweet coffee topped with a reddish-brown mantle of crema. This crema is actually the emulsified coffee oils, which are forced out under high pressure (8-10 bar) generated by commercial and high-quality home espresso machines. These oils normally don't mix with water (drip coffee being the obvious example) and this emulsification under pressure is what distinguishes espresso from strong coffee.

Remarkably, in a properly made espresso, maximum flavour is extracted from the bean while much of the caffeine and excess acids are left behind. This is a result of a combination of high pressure, small volume of water and the speed at which it is prepared.

CREMA

In the espresso extraction process, water-soluble substances are dissolved from the ground coffee, the same as in regular coffee brewing. Additionally, under the 8 - 10 bar of espresso machine pressure, non-soluble oils in the ground espresso are emulsified and it is this pressure that forces the oils out and into the cup as crema. It transforms the properties of the coffee in terms of its mouth feel, density, viscosity, aroma and taste. Since the oils in the ground coffee have to be emulsified to be an espresso, a **thick, crema is the single most important indicator of espresso quality**. It should be rich, velvety, and plentiful with the aroma and fragrance captured in it. Moreover, **the colour of the crema is the single most important indicator of the freshness of the coffee. Reddish-brown crema indicates an excellent espresso** made from high-quality coffee, recently roasted, and properly ground just prior to infusion. The older the coffee is from the roast date and/or the longer the espresso has been in ground form and in contact with the enemy oxygen, the lighter the colour of the crema and the less desirable the espresso will be. A light golden colour crema indicates a poor quality espresso.

Espresso beverages

Water between 88 and 92°C. (190-197°F.) is forced under 8 - 10 Bar (atmospheres) of pressure through 6- 9 grams of finely ground coffee so that 1 to 2 fluid oz. of brew are delivered into a small cup in 18 - 25 seconds. Espresso is usually served in a "demitasse". Demitasse means "half cup" in French and generally has the capacity of holding 3 oz. of liquid.

BASIC ESPRESSO	A single shot (approximately 1 to 1-1/2 oz of espresso). The Italian tradition is to ceremoniously drink the espresso "solo" in a single gulp to enjoy the fullest espresso flavor while the beverage is at its peak of freshness. It is fairly common in Italy to add sugar to the espresso. Italian aficionados will tell you that the true test of a superb espresso is that the sugar must be able to sit on the surface of the crema for 30 seconds before sinking!
ESPRESSO RISTRETTO	Use the same preparation method as a basic espresso except dispense only 1 oz. (or less) water through the espresso grounds with an extraction time of 18-20 seconds. Ideally, the grind is adjusted slightly finer; however the slow extraction can be accomplished by tamping or pressing the coffee with extra pressure. This process yields an intense espresso flavor.
DOPPIO	A double shot of espresso. (Doppio means <i>double</i> in Italian).
ESPRESSO LUNGO	A single serving of espresso, "pulled long" to yield a larger serving. Dispense 2 to 3 oz of water through the espresso grounds with a longer extraction time of 25 - 40 seconds.
AMERICANO	To one shot of espresso add hot water to make a full cup. Unlike traditional espresso, this beverage is often consumed in the "American style" with milk and/or sugar.
ESPRESSO CON PANNA	A single espresso topped with a dollop of whipped cream.
ESPRESSO MACCHIATO	A single serving of espresso topped with a dollop of frothed milk.
ESPRESSO BREVE	A single shot of espresso with heated half & half milk added.
ESPRESSO ROMANO	Make the basic espresso and serve with a twist or slice of lemon. Although this presentation is often thought to be Italian, Italians refuse to claim this tradition as their own. Many coffee aficionados believe the lemon interferes with the espresso's delicate flavour balance.
ESPRESSO CUBANO	Double short shots brewed with raw sugar.
TRADITIONAL GRANITA	Espresso that has been frozen and crushed. Adding sugar to the espresso before it is frozen prevents "solid freezing", hence the "granularity". Served in a cup with a spoon.

Cappuccino Drinks

BASIC CAPPUCCINO

Although ratios may vary to taste, a common recipe for a traditional 6 oz. cappuccino is: 1/3 espresso, 1/3 steamed milk, and 1/3 frothed milk. Purists consider this recipe complete as is. Powdered cocoa or cinnamon may be sprinkled on top as a garnish.

To layer the milk and espresso, it is necessary to allow the freshly frothed milk a moment to rest and thus separate (foam on top and milk on the bottom). Brew the espresso into a 3 oz. stainless pitcher (ceramic or glass will absorb too much heat of the espresso). Pour steamed milk into the bottom third of the cup. Pour the espresso slowly into the steamed milk. Spoon frothed milk on top to fill cup. Done in this order, the espresso should settle between the milk and the foam. Properly frothed milk should be approximately 150°F to 170°F. It is a matter of personal preference and may be slightly hotter or cooler.

CLASSIC CAPPUCCINO

It is particularly common in Italy, and more and more in North America, to see a cappuccino made with only espresso topped with frothed milk. This is a classic cappuccino. Top 1-1/2 oz. espresso with 1-1/2 oz. to 2 oz. foam. Very similar to an Espresso Machiatto.

Cafe au lait vs. Latte

The difference between cafe latte and cafe au lait is the fact that the former beverage is Italian in origin and the latter is French. Also, typically the French Cafe au Lait is actually made with strong brewed coffee and not espresso.

BASIC CAFE LATTE

Make a single shot of espresso. Add steamed milk to fill an 8 to 10 oz. latte mug (preferably clear). Lattes are frequently flavored with Italian syrups. Nut flavors such as hazelnut and almond are among the most popular additions.

CAFE LATTE AU LAIT (French)

To make a French cafe au lait, brew strong, dark roast coffee using the drip method. Serve with a separate pitcher of heated (not frothed) milk. In France, cafe au lait is often served in a bowl instead of a cup. This open-mouthed vessel is convenient for dunking brioche and croissants. It is also useful for warming one's hands while seated outdoors. Traditionally, cafe au lait is consumed at breakfast. The coffee and steamed milk are mixed by the customer to change strength and proportioned as desired.

CAFE CON LECHE

Similar to cafe au lait, but a Spanish beverage. Dark roast coffee is brewed by drip method then mixed with sugar and served with heated milk. It is customary to serve cafe con leche with warm, buttered bread.

Creative Espresso Interpretations

CAFE CONQUISTADOR	Cappuccino with 1oz. of Kahlua™ topped with whipped cream and shaved chocolate.
CAPPUCCINO ROYALE	Make a basic cappuccino. Add 1 oz. of liqueur of your choice (the favorites include Grand Marnier™, Frangelico™, Amaretto™, or any chocolate based liqueur). Top with whipped cream.
ESPRESSO ANISE	Espresso with a touch of anisette syrup.
FLAVOURED LATTE	A latte made with flavour added to it. The most popular flavors are almond, hazelnut and vanilla yet flavors such as coconut, raspberry and caramel are also used.
LATTE ROYALE	Basic Latte with 1 oz. of fruit-flavored liqueur, topped with whipped cream and a maraschino cherry.
CAFE NAPOLEON	Cappuccino with 1 oz. of cognac topped with whipped cream and shaved chocolate.
CAFE YUCATAN	Espresso with 1 oz. creme de cacao, topped with whipped cream, nutmeg and an orange peel.
CAFE HELENE	Espresso with 1oz. brandy and one teaspoon of sugar added. Top with whipped cream and chocolate shavings.
BON BON	Cappuccino with 1 oz. chocolate mint liqueur topped with whipped cream, shaved white chocolate and a maraschino cherry.
AFFOGATTO	Vanilla Gelato or ice cream "drowned" in espresso. A simple, tasty dessert.

Creativity is the key. Use your imagination to develop and creatively name your own signature beverages. The possibilities are endless.

IGLOO ESPRESSO	A single espresso with sugar and ice blended at very high speed and topped with whipped cream.
CAPPUCCINO CIOCOLOCINO	Regular cappuccino topped with vanilla, chocolate or coffee ice cream.
CAFE CORRETTO	Traditionally made with espresso and Grappa - however can be made with any liqueur.

Espresso based Specialty Drinks

MOCHACCINO	A single shot of espresso mixed to taste with chocolate syrup or powder and 5 oz. steamed milk. Top with peaked milk foam.
CAFE MOCHA	A single espresso poured into a tall glass filled with steamed milk to which a spoonful of chocolate syrup is added. Top with whipped cream and garnish with chocolate flakes.
ICED CAPPUCCINO	Pour one shot of freshly brewed espresso over ice and add cold milk. Espresso loses its flavor quite rapidly therefore, using prepared espresso is not recommended. Spoon foamed milk on top to create a layer of foam. Sweeten to taste.
NIENTA (or a Why Bother)	Decaffeinated cappuccino with nonfat milk.
ESPRESSO LACHINO (aka a Wet Cappuccino)	Espresso topped with approx. 50/50 foamed milk and steamed milk.