PERFECTING YOUR COFFEE CRAFT

Understanding Extraction

When it comes to coffee brewing, extraction is the most important factor when it comes to taste. When roasted coffee is in water, the water-soluble compounds - such as caffeine, carbohydrates, sugars, fats & lipids, and acids - are extracted into the water, creating what we know as brewed coffee. The extent to which these compounds are dissolved into the water, or the Total Dissolved Solids (TDS), effect nearly everything about way that the coffee will taste, and overall is the most important variable for understanding extraction. There are also parts of roasted coffee that do not dissolve, but are still present in the brewed coffee; they will make contributions to factors such as viscosity and mouth-feel.

The water-soluble compounds cannot be dissolved very well if we are simply throwing whole coffee beans into the water. As you know, we grind coffee in order to more efficiently dissolve these compounds. When we grind roasted coffee, we are greatly increasing the surface area of the beans, allowing these compounds significantly more access to the water.

Knowing that, one might be tempted to grind coffee into as fine a powder as possible, allowing maximum surface area, therefore maximum extraction. Unfortunately, not all of these flavors that are being dissolved into the water are tasty, and having too many dissolved solids can lead to an astringent and extremely bitter coffee. Extraction is complex, many different factors contribute to how it changes, and more is being learned about its relationship to coffee every year; for the sake of using extraction to better understand tasting coffee, we’re going to break it down into a simple scale: Under-extracted, well-extracted, and over-extracted. These are very easy to taste, and being able to discern between these tells you what to do to achieve an ideal extraction.

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Understanding Extraction (Cont.)

Under-extracted coffee will have a distinctly sour taste, not to be confused with the acidity that we want out of a well extracted coffee, this sourness will obliterate the sweetness of the brew, and contribute to an unpleasant mouth-feel. You may also notice that the finish, or the taste of the coffee as you finish your sip, is very brief.

Over-extracted coffee is, as we mentioned earlier, extremely bitter and astringent, which means to possess a “drying” mouth-feel. The finish is intense and unpleasant.

Well-extracted coffee is the perfect in-between of these two extremes, and is what you are aiming for when brewing any coffee. It will be sweet, and its complex flavors with shine clearly. If you have perfectly extracted a coffee, the finish will seem to last forever.

Everything that happens in the roasting and brewing process is to achieve this optimal balance of extraction. At Coffeehaus, we are constantly evolving our understanding of how extraction works and how it can be applied to make our coffee taste even better.