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## **EFFECT OF HOME GRINDING ON BREWED COFFEE PROPERTIES**

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We have explored the degree to which the qualities of brewed coffee may be affected by changing the time spent grinding beans using a blade-type grinder. We present measurements of particle size distribution, density, loss of coffee on brewing and caffeine content in brewed coffee (as measured using Fourier Transform Infrared Spectroscopy) as a function of grinding time using a blade-type grinder. In general, there is not a strong dependence of coffee properties on grinding for grinding times in excess of 42 s, but mass loss on brewing and caffeine content are both dramatically increased with grinding times between 0 and 42 s. We present a general recommendation for determining equivalency between small amounts of finely ground coffee and larger amounts of coarser-ground coffee, determined based on the increasing amount of caffeine extractable from finer particles. We also examine the extent to which the increase in caffeine can be attributed to increased surface area of finer coffee particles and increased amounts of coffee passing through the filter.

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