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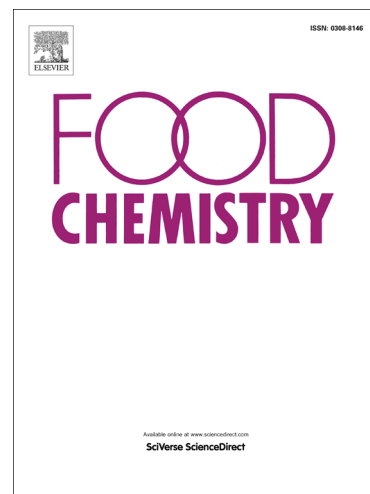
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# Volatile and sensory characterization of roast coffees – effects of cherry maturity

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## Abstract

Immature coffee cherries produce roast coffees with lower hedonic scores than those produced from mature cherries, but variation in volatile and sensory characteristics over a range of maturities is not well studied. In this work, cherries from two coffee cultivars (Caturra, Catimor) were sorted into seven maturity stages from fully immature (Stage 1, green) to fully overripe (Stage 7, purple). Volatile profiles of Stage 1 roast coffee had lower concentrations of carbohydrate degradation products and higher concentrations of N-heterocycles and phenols. Differences in volatiles among Stage 2 (partially immature, yellow-green) and subsequent stages were insignificant ( $p > 0.05$ ) or else minor. Principle component analysis of the volatile data set also distinguished Stage 1 from other stages. Similarly, a trained cupping panel reported significantly lower sensory scores for Stage 1 as compared to Stages 2-7, but few differences among Stages 2-7. Thus, partially mature and overripe cherries may be appropriate for specialty coffee.

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