

Article

Investigating the Effect of Cold Soak Duration on Phenolic Extraction during Cabernet Sauvignon Fermentation

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Abstract: The impact of increasing cold soak (CS) duration (0, 1, 4, 7, and 10 days at 10 °C) on the extraction of phenolic compounds during the CS period and primary fermentation as well as the final composition of Cabernet Sauvignon wine was investigated. The results showed that CS duration had no effect on hydroxycinnamate and flavonol extractions. Greater amounts of gallic acid, (+)-catechin, (–)-epicatechin, and total tannins were extracted with increasing CS duration, with differences maintained during bottle aging. Anthocyanin extraction and color density increased with longer periods of CS; however, by the end of primary fermentation, as well as three months’ bottle aging, there were no significant differences due to CS duration. The wines made with seven and 10 days of CS had higher seed tannin contributions and total tannin compared to the non-CS wine, which could potentially result in increased astringency.

Keywords: cold soak; phenolics; extraction; wine; Cabernet Sauvignon
