Study finds new way to increase antioxidant levels in coffee with wine production waste

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A study published in the *Journal of Food Science* found that adding a small amount of Chardonnay grape seed pomace (GSP), a waste stream of wine production, to coffee may augment the antioxidant capacity of the beverage without significantly altering the appearance, taste or aroma.

Researchers at Washington State University conducted two consumer panels to assess the acceptance of coffee with additions of GSP values of 0% (control), 6.25%, 12.50%, 18.75% or 25%. The first consumer panel assessed the coffee samples served "black." The second panel assessed the coffee samples with sweeteners, milk and cream options available.

Consumer sensory evaluation involved evaluating the five treatments individually for acceptance of appearance, aroma, taste/flavor, and overall acceptance using a 9-point hedonic scale. A check-all-that-apply questionnaire surveyed the sensory attributes describing aroma, appearance, and taste/flavor of the samples. Oxygen radical absorbance capacity was used to measure the effects of antioxidant levels in GSP coffee samples.

The researchers found that GSP could be added at 6.25% replacement without significantly affecting the overall consumer acceptance of coffee compared to the control. Above 6.25% GSP supplementation, the coffee beverage was described as more tan, milky, watery/dilute, and mild, and was generally less accepted by the consumers. GSP also increased the antioxidant capacity of the coffee compared to the control

(0% GSP), with no significant differences among replacement values.

The researchers concluded that the results may be "useful in the development of a new coffee beverage, in addition to developing other avenues for use of grape seed pomace." They noted that further in vivo investigation may substantiate the free-radical scavenging capacity of GSP coffee and its potential health benefits.

More information: Thuy Nguyen et al. Consumer Acceptance of a Polyphenolic Coffee Beverage, *Journal of Food Science* (2016). DOI: 10.1111/1750-3841.13521

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