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June 8, 2011

## Fatty Acids In Red Wine Make It Taste Fruity

**Food Chemistry: Compounds known to create undesirable smells in wine also boost an important flavor**

[Lucas Laursen](#)



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RED, RED WINE Compounds that produce wine's odors associated with cheese and sweat also give it a fruity bouquet.

The quality of a wine is still in the palate of the beholder, but tasters agree that fruitiness is an important contributor. Spanish researchers now report that chemicals responsible for a wine's foul, sweaty smells also produce its fruity flavor (*J. Agric. Food Chem.*, DOI: [10.1021/jf1048657](https://doi.org/10.1021/jf1048657)).

Ana Escudero of the [Laboratory for Flavor Analysis and Enology](#) at the [University of Zaragoza](#), and her colleagues previously analyzed 25 high-end Spanish wines to find chemical components that correlated with ratings from taste tests. They found that fruity esters and compounds derived from wood barrels correlate with higher quality ratings, while compounds such as acetic acid and phenylacetaldehyde generally harm a wine's taste

In the current study, the team set out to determine which chemicals created the essential fruity flavor. To understand the role certain chemicals play in a wine's flavor, the researchers mixed wines with resins that destroy major flavor compounds. They then added different compounds and asked tasters to rate and describe the resulting test wine's flavor.

The scientists were surprised to find that fatty acids such as branched and linear fatty acids—which are known to be responsible for the smells of cheese, sweat, and butter—helped wines win fruity ratings. But another fruity class of compounds called norisoprenoids, which smell sweet, had diminishing returns: At the highest concentration, they overpowered the other components and made the wines taste rancid. A wine's smell and taste, the researchers say, stems as much from the ratio of its components as the absolute concentration.

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- [Quality and Aromatic Sensory Descriptors \(Mainly Fresh and Dry Fruit Character\) of Spanish Red Wines can be Predicted from their Aroma-Active Chemical Composition](#)  
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Chemical & Engineering News

ISSN 0009-2347

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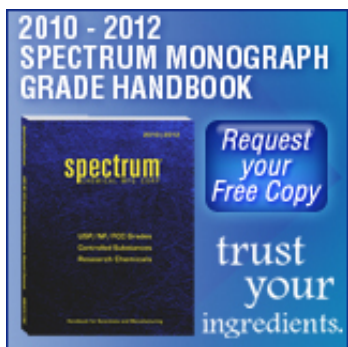
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