

Wine symposium explores everything you wanted to know about the mighty grape

August 10 2014



Grapes

Location. Location. Location. The popular real estate mantra also turns out to be equally important for growing wine grapes in fields and storing bottles of the beverage at home or in restaurants, according to researchers.

Those are just two of the topics that will be covered in a symposium titled, "Advances in Wine Research," that will run today through Tuesday at the 248th National Meeting & Exposition of the American Chemical Society (ACS). A brand-new ACS video on the topics is available below.

"In this symposium, we will be evaluating components that affect flavor,

taste, mouthfeel and also color, as well as sustainable vineyard and winemaking variables that impact the composition of the [wine](#)," says symposium organizer Susan E. Ebeler, Ph.D. "The San Francisco location is ideal for this symposium, being located near the heart of the U.S. wine-growing region of Napa Valley. The symposium is expected to draw a high level of interest from local wineries, food industries and government agencies."

One study being presented during the symposium, of which Ebeler is a co-author, finds that it really does matter where the same grapes are grown when it comes to taste and aroma.

The Argentinean Malbecs tended to have more ripe fruit characteristics, sweetness and higher alcohol levels, while those from California were more bitter, and had more artificial fruit and citrus aromas, Ebeler says.

Overall, the study covered the chemical and sensory effects of different regions using 41 research lots of Californian and Argentinean Malbec wines. In addition to having trained panelists evaluate the wines, the team conducted a gas chromatographic analysis of the wine volatiles—mostly those compounds that would be smelled when sniffing the beverage.

Another study in the [symposium](#) found dramatic differences in the aging of wine depending on where the [bottles](#) were stored. This team placed 400 bottles from 20 different lots of Sangiovese wine for 24 months either in a professional wine cellar with strictly controlled temperature (59-62 degrees Fahrenheit) or in conditions mimicking a dark room in a [home](#) (68-80 degrees Fahrenheit) for different seasons.

"We discovered that a relatively small difference in the temperature speeds up several chemical reactions associated with wine aging and even promotes new reactions that are not observed at lower

temperatures," says study leader Fulvio Mattivi, who is a researcher at Fondazione Edmund Mach, Research and Innovation Centre, San Michele all'Adige, Italy. "After six months under domestic conditions, the wine in the bottle was approximately as 'old' as a bottle from the same producer and lot stored for two years under cellar conditions. The house-stored wine was aging approximately four times faster!"

When tested, the wine stored in the dark room had fewer healthful antioxidants and less red pigmentation than the cellar versions, making it less flavorful, he reported.

Provided by American Chemical Society

Citation: Wine symposium explores everything you wanted to know about the mighty grape (2014, August 10) retrieved 18 April 2024 from <https://phys.org/news/2014-08-wine-symposium-explores-mighty-grape.html>

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