

# VITICULTURE AND OENOLOGY COVERAGE IN FSTA®

Trusted by researchers, scientists, students and government bodies in over 150 countries across the globe, FSTA is the definitive way to search over fifty years of historic and emerging research in the sciences of food and health.

Covering a wide range of interdisciplinary material, FSTA includes a wealth of international viticulture and oenology content including:

**All aspects of viticulture impacting on the quality, composition and safety of table grapes, winemaking grapes and the resultant wines**

**The complete winemaking process: from viniculture, harvest and storage of grapes, through maceration, fermentation and ageing to bottling. Includes quality control and fermentation modelling, and treatment of processing wastes**

**All types of wines are covered including:**

- Conventional grape wines (still and sparkling)
- Fortified wines
- Low-alcohol wines
- Fruit and palm wines

**Factors affecting the properties of grapes and wine, including quality, physicochemical properties, composition and sensory properties:**

- Pre-harvest factors, such as climate, soil, fertilizers, rootstocks, canopy management and irrigation
- Geographic origin
- Cultivar/variety
- Pre- and post-harvest diseases and disorders
- Grape composition
- Ripening
- Processing techniques

**Microbiological and food safety aspects:**

- Wine yeasts
- Spoilage and spoilage microorganisms
- Microbiological and non-microbiological contamination
- Toxins
- Adulteration
- Shelf life

**Analytical techniques:**

- Analysis of the components of grapes and wines
- Monitoring and detection of contaminants and adulterants throughout the winemaking process

**Sensory analysis and consumer research:**

- Sensory analysis techniques
- Consumer preferences and trends
- Consumer intake and drinking habits

**Effects of wine on health and disease:**

- Impacts on cardiovascular health, metabolic syndrome and cancer risk
- Guidelines and recommendations

**Wine packaging:**

- Bottles and other packaging types
- Labels and labelling
- Branding
- Closures

**Winery equipment:**

- Processing equipment
- Packaging equipment
- Cleaning systems

**Business and economic aspects:**

- Policy
- Production and consumption
- Sales
- Trade
- Pricing
- Markets and marketing
- Product development
- Company developments
- Business strategies
- Retail
- Distribution

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## USING FSTA FOR YOUR VITICULTURE AND OENOLOGY RESEARCH

### Example search questions

- How does the toasting level of oak barrels influence wine aroma? (*Sample record on following page*)
- What are effective methods for controlling spoilage caused by *Dekkera bruxellensis*?
- What factors influence consumer willingness to pay more for wines?
- Does foliar nitrogen application on Cabernet Sauvignon vines affect the wine's sensory properties?

## SOURCE EXAMPLES

Viticulture and oenology content is drawn from a wide variety of sources including journals, patents, books, reports and more. Here are just some of the many viticulture and oenology focused journals included within FSTA, chosen to illustrate the diversity and breadth of content:

- American Journal of Enology and Viticulture
- Australian Journal of Grape and Wine Research
- Journal of Wine Research
- Journal of Agricultural and Food Chemistry
- Wine & Viticulture Journal
- South African Journal of Enology and Viticulture
- Food & Fermentation Industries
- Vitis

## SAMPLE FSTA RECORD FOCUSED ON VITICULTURE AND OENOLOGY

**Influence of aging in different oak barrels on volatile sulfur compounds in wines.**

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**Source:** Food Science, China, Volume: 41, Issue: 6, Pages: 285-291

**DOI:** 10.7506/spkx1002-6630-20190117-204

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**Document Type:** Journal Article

**Abstract:** The influence of different geographic origins (the United States, Hungary and France) and toasting levels (light and medium) of oak barrels on the evolution of volatile sulfur compounds (VSCs) in wine during maturation was investigated in this study. Wines aged in stainless steel tanks were used as the control. Gas chromatography with flame photometric detection (GC-PFD) was used to monitor the changes of 16 VSCs in wines during the year of aging, and 7 VSCs were quantified in all samples. Most VSCs tended to decline or changed slightly during the aging process, while the contents of dimethyl sulfide and ethyl thioacetate were found to increase. After one-year aging, the levels of most VSCs were lower in the wines aged in oak barrels than in stainless steel tanks.

Multi-way analysis of variance (ANOVA) showed that the geographic origin of oak barrels significantly influenced the concentrations of S-methyl thioacetate and 2-methyltetrahydrothiophen-3-one ( $P < 0.001$ ), while the toasting level of oak barrels significantly influenced the concentration of 2-(methylthio) ethanol ( $P < 0.001$ ).

This study reported the evolution of VSCs in wines during oak barrel aging and evaluated the influence of oak barrel types on it, which would provide wine-makers with useful information for wine oak barrel aging.

**Keywords:** AGEING; ALCOHOLS; AROMA COMPOUNDS; BARRELS; DIMETHYL SULFIDE; GEOGRAPHICAL ORIGIN; METHIONOL; OAK; ORGANIC SULFUR COMPOUNDS; SOLVENTS; SULFIDES; THIOLS; WINES; WOOD

## FURTHER INFORMATION

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If you would like more detailed information or to set up a training session, please contact Angela Ball [a.ball@ifis.org](mailto:a.ball@ifis.org) (existing customers) or Carol Durham [c.durham@ifis.org](mailto:c.durham@ifis.org) (non-customers).



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