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Ethyl Anthranilate, Ethyl Cinnamate, 2,3-Dihydrocinnamate, and Methyl Anthranilate: Four Important Odorants Identified in Pinot noir Wines of Burgundy

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Abstract

Ethyl anthranilate (ethyl 2-aminobenzoate), ethyl cinnamate (ethyl 3-phenyl-2-propenoate), ethyl 2,3-dihydrocinnamate (ethyl 3-phenylpropanoate), and methyl anthranilate (methyl 2-aminobenzoate) were identified, by coupled gas chromatographic-mass spectrometric analysis, as minor constituents in Burgundy Pinot noir wines. The four potent odorants were identified in a volatile fraction obtained by adsorption chromatography on silica gel of the total organic extract of wine. The results of gas-chromatography/ olfactometry analysis revealed that ethyl anthranilate was the most intense flavor compound of the isolated fraction among the four odorants identified. The second most intense flavor compound was ethyl cinnamate, followed by ethyl 2,3-dihydrocinnamate, and finally by methyl anthranilate. Ethyl anthranilate and ethyl 2,3-dihydrocinnamate were identified for the first time in any wine, and methyl anthranilate, was identified for the first time in a wine produced from a *Vitis vinifera* cultivar. The high olfactometric index found for ethyl cinnamate in the case of Pinot noir wine confirms the importance of this odorant in the wine flavor. The four odorant esters identified can influence the characteristic flavor quality exhibited by Pinot noir wines of Burgundy.

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