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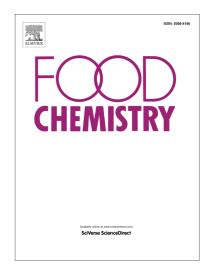
PII: S0308-8146(18)30353-4

DOI: https://doi.org/10.1016/j.foodchem.2018.02.115

Reference: FOCH 22499

To appear in: Food Chemistry

Received Date: 25 October 2017 Revised Date: 19 February 2018 Accepted Date: 21 February 2018



Please cite this article as: Siebert, T.E., Barter, S.R., de Barros Lopes, M.A., Herderich, M.J., Leigh Francis, I., Investigation of 'stone fruit' aroma in Chardonnay, Viognier and botrytis Semillon wines, *Food Chemistry* (2018), doi: https://doi.org/10.1016/j.foodchem.2018.02.115

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ACCEPTED MANUSCRIPT

Investigation of 'stone fruit' aroma in Chardonnay, Viognier and botrytis Semillon wines

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Abstract

Despite numerous studies, the identity of the compounds that are responsible for 'stone fruit' aroma in wine has not been conclusively established. This study focussed on wine varieties that often display peach and apricot characters, such as Chardonnay, Viognier and botrytis-affected sweet Semillon wines. Wines with high and low 'stone fruit' aroma were evaluated by gas chromatography-olfactometry-mass spectrometry (GC-O-MS) using extracts representative of the aroma of the wine in a glass. No aroma-active zone was described as 'stone fruit' aroma across all three wine varietals. However, for the individual varieties, terpenes, such as linalool and geraniol, in the Viognier wines, several esters in the Chardonnay wines, and γ -nonalactone in the botrytis Semillon were associated with 'stone fruit' aroma. Notably, this is the first study assessing the aroma profile of Viognier wine by GC-O. In addition, an extension study of Viognier grape monoterpene profiles clarified its classification as an aromatic variety.

Keywords

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