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BOOK OF ABSTRACTS

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P337. Activity of *Dekkera bruxellensis* and the effect on the aroma profile of monovarietal wines

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The problem of wine contamination by *Dekkera bruxellensis* is mainly due to the production of flavours associated with vinylphenols and especially ethylphenols. But this yeast can also produce several other metabolites such as acetic acid, isovaleric acid, 2-methylbutyric acid and isobutyric acid which can influence the quality of the wine and the perception of volatile phenols. Substrates other than hydroxycinnamic acids, such as amino acids, can be used to make a wide variety of other aroma- active compounds contributing to the complexity of the "Brett character". This work aimed at characterizing the metabolic profile of two *D. bruxellensis* strains in wines of two grape varieties (Touriga Nacional and Cabernet Sauvignon) focusing on families of aroma compounds such as esters, higher alcohols and volatile fatty acids. The two strains of *D. bruxellensis* involved showed different capacities to produce volatile phenols. Different volatile phenols profiles were obtained depending on the wine and on the yeast strain. The concentration of ethyl esters, including ethyl acetate, was higher in the inoculated wines of both grape varieties than in the control wines. On the contrary, isoamyl acetate was lower in most of the treated wines. The fatty acids isovaleric acid and caprylic acid increased in the inoculated wines, specially on Cabernet Sauvignon wines, and, as also happened for the esters, *D. bruxellensis* PYCC4801 produced higher values than the wine isolated strain 21. The concentration of the three monoterpenes analysed increased in the Cabernet Sauvignon wines but not in Touriga Nacional wines. The grape variety effect observed can be related with different compositions of glycosidically bound terpenes subjected to the ß-glycosidase activity of *D. bruxellensis*. Besides the production of volatile phenols, *D. bruxellensis* was able to modify the composition of wines through the production of metabolites of other chemical families.