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MANNOPROTEIN CONTENT AND VOLATILE MOLECULE PROFILES OF TREBBIANO WINES OBTAINED BY *S. CEREVISIAE* AND *S. BAYANUS* STRAINS

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The production of volatile compounds is become one of the major technological character for yeast selection. In fact, although the wine flavour is the sum of varietal, pre-fermentative, fermentative and post-fermentative flavours, volatiles from fermentation dominate wine flavour, since yeasts affect the quality of the grape prior to harvest and, during fermentation, metabolising grape sugars and other components into alcohols, esters, organic acids and aldehydes. Among the new technological features, also the production of mannoprotein has gained interest. In this perspective, main aim of this work was to characterize 8 strains of *S. cerevisiae* and 2 strains of *S. bayanus* for their volatile molecule profiles and the release of mannoproteins in trebbiano wines. The strains were inoculated in Trebbiano must and incubated at 15°C at the end of fermentation the wines were evaluated by GC/MS/SPME for their volatile profiles and mannoprotein content by FTIR. The strains, inoculated at level of 4.9 and 6.3 log cfu/ml but only the strains L318 and 12233X6167 were able to reach values of 7.5 log cfu/ml. The volatile molecule profiles were characterized by a great amount of alcohols and in any case, the profiles obtained can be considered as a strain fingerprinting. According to the principal component analysis, the strains L288, L234 and L318 were characterized by the presence of propanoic acid, butanol, octanoic acid and 3 methyl pentanol while the strain 12233_35G2 was characterized by the presence of decanoic acid ethyl ester, eptanoic acid ethyl ester, acetic acid 2 phenetyl ester. Regarding mannoproteins, the strain 12233_6167 produced 104 mg/l in trebbiano wine. The data permitted to select the strains endowed with the best volatile molecule profiles for Trebbiano wine and able to release the major content of mannoproteins. Moreover, the good potential of the infra-red spectroscopy was demonstrated for mannoprotein evaluation.