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Effect of Use of Pure Yeast Culture (*Saccharomyces cerevisiae*-K1) on Aromatic Compounds of Emir Wine

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Abstract: In this study, aroma compounds of the wines obtained from white Emir grapes grown in Nevşehir-Ürgüp region by spontaneous fermentation and by use of pure culture of "*Saccharomyces cerevisiae*-K1" were investigated. Aroma compounds were extracted by Amberlit XAD-2 resin and were eluted by pentan/dichloromethane (2/1) solvent and then analysed by gas chromatography and identified by gas chromatography mass spectrometry (GC-MS). A comparison of the aroma compounds of the wines obtained by spontaneous fermentation and by use of pure culture showed that the latter contained higher amount of high alcohols and carbonyl compounds, and lower amount of volatile phenols, esters being at the same level. Additionally, it was found that 4-vinylphenol and 4-vinylguaiacol formed by "*Saccharomyces cerevisiae*-K1" was very low because of the poor decarboxylase activity of this strain. Statistical analysis of sensory evaluation showed that there was a significant difference between the wines. However, the difference between the wines in terms of the preference of the panel members was not significant.

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