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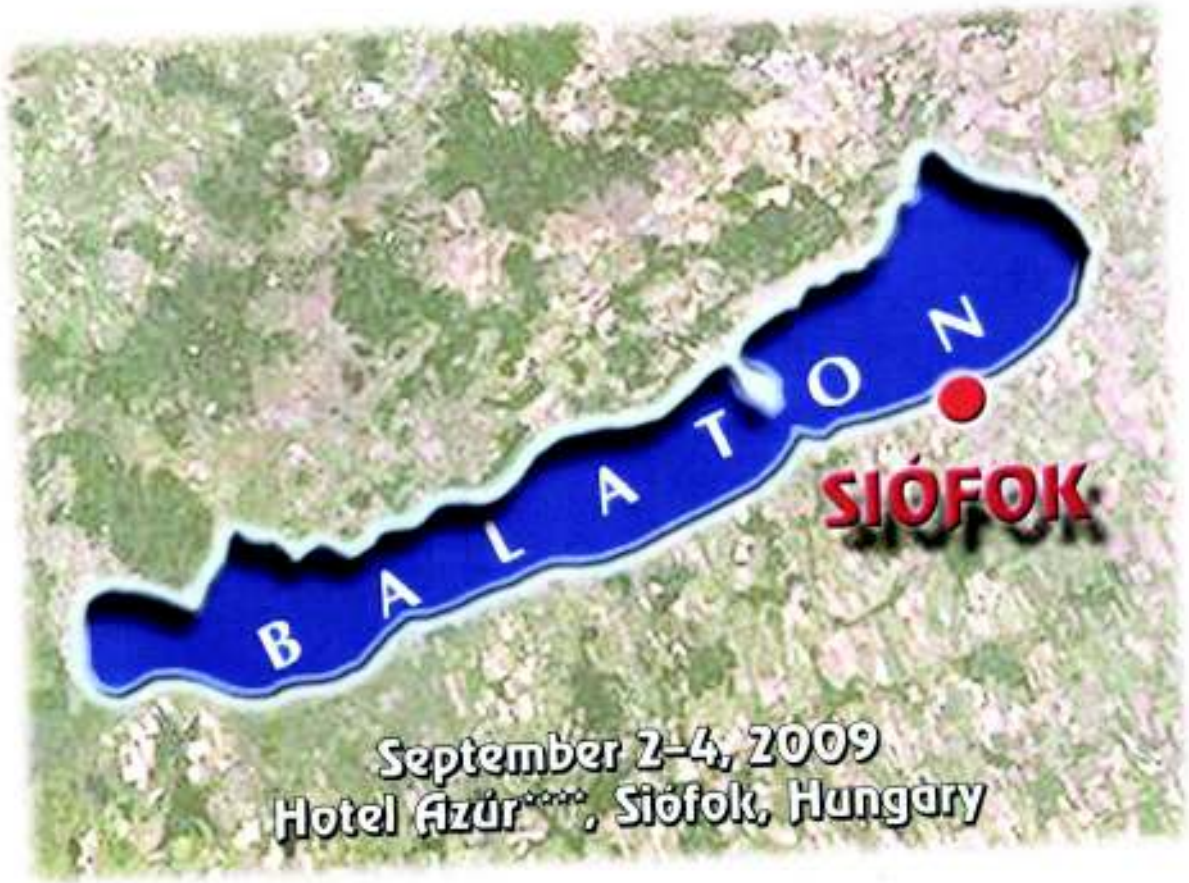

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Aroma profile of Macedonian and Hungarian Wines Assessed by GC-MS

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The aroma compounds of five Macedonian wines (vintage 2008): Vranec, Merlot, Cabernet Sauvignon, Temjanika and Chardonnay and three Hungarian wines (vintage 2007): Portugiser, Cuve (Portugiser and Kékfrankos) and Tokaji have been studied. In order to identify and quantify the content of free volatile compounds, gas chromatography/mass spectrometry (GC/MS) technique was used. Liquid-liquid extraction of a 50 mL volume of wine was performed with 25 mL of dichloromethane and the extract (1 μL) was injected in the splitless mode in the GC system, using polar Carbowax capillary column. 1-octanol was used as an internal standard for calibration. Under those conditions, the presence of forty-nine volatile compounds was confirmed using the NIST Mass spectral library for identification. Linalol and terpineol were detected only in Chardonnay and Tokaji wines, while the concentration of butyrolactone was highest in the Hungarian red wines, Portugiser and Cuve. The main volatile component was phenyl ethyl alcohol present in concentrations ranging from 558.8 to 657.3 mg/L in the white wines and 1697.7 to 2253.6 mg/L in red wines. Statistical treatment including one-way ANOVA, followed with Student-Newman-Keuls test was performed in order to ascertain possible significant differences between the studied wines.

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