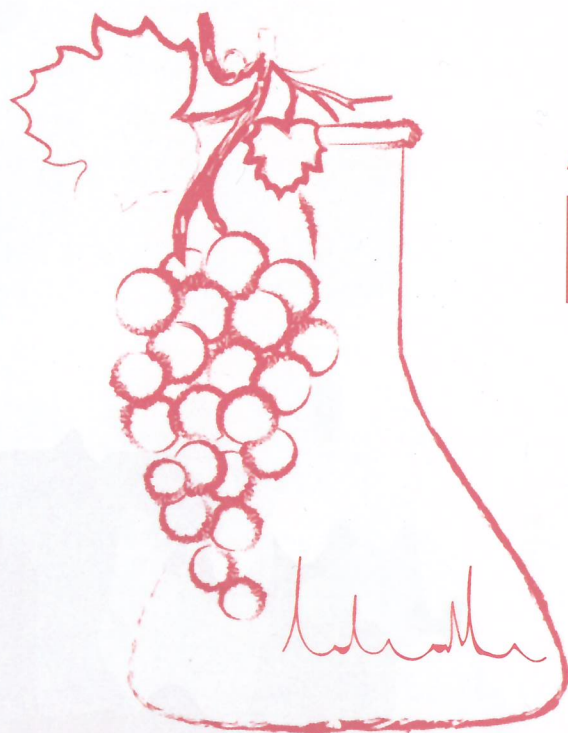


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ABSTRACTS
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Investigation of volatile and non-volatile compounds of wines obtained from interspecific hybrids cultivated in Italy and Germany

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The continuous use of pesticides in viticulture is an important issue in the general attempt to reduce the impact of phytochemicals in the environment. Interspecific hybrids of *V. vinifera*, which combine the resistant traits to fungal diseases of wild American *Vitis* species and the wine quality of European grapevines (*V. vinifera* L.), represent the most promising and suitable choice for a more sustainable viticulture. A relative large number of so-called fungus-resistant PIWI varieties (from the German word 'pilzwiderstandsfähig') are gaining attention for the production of wines. This study aimed to investigate non-volatile and volatile composition of red and white wines obtained from a selection of interspecific hybrids grown in two experimental fields, in Italy and Germany. Also high quality *V. vinifera* cultivars were considered as references. The profile of non-volatile compounds was studied using UHPLC-MS/MS methods [1, 2] to study the phenolic composition (simple phenols, tannins and anthocyanins), AAS method to analyse the mineral content, NMR [3] and FTIR [4] to investigate different parameters (sugars, acids, alcohols, fermentation products, total acid, volatile acid and total SO₂). The volatile profile was studied combining GC-MS [5] and HS-GC-PFPD [6]. Diglucosides were found in variable amounts in red wines. Multivariate methods were applied to visualize and evaluate similarities and differences in the composition of the varieties studied. The findings of this study provide a clear picture of the chemical profile of wines from different PIWI varieties identifying the most peculiar aspects of their composition.

Acknowledgments

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