

Volatile compounds responsible for aroma of Jutrzenka liqueur wine.

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Streszczenie

Jutrzenka is a sweet liqueur wine produced in Poland from the grape variety of the same name, developed in Poland to withstand the harsh climate of winery regions. Jutrzenka wine has a characteristic aroma with strong fruity and flowery notes, which make it unique among other liqueur wines as demonstrated in sensory profile analysis. The work was aimed at characterization of volatile compounds in this wine, with the emphasis on characterization of compounds responsible for its unique aroma. Gas chromatography-olfactometry (GC-O) was applied to identify the key odorants using aroma extract dilution analysis (AEDA) approach. To facilitate free and bound terpenes and C(13)-norisoprenoids identification solid phase extraction (SPE) was used followed by GC/MS. Among identified key odorants β -damascenone was the compound having the highest FD (4096), followed by isoamyl alcohol, 4-mercapto-4-methyl-2-pentanone (FD=2048), methional, linalool, ethyl decanoate (FD=1024) and ethyl hexanoate, furaneol (FD=512). Other significant compounds were ethyl 2-methyl propanoate, ethyl 2-methylbutanoate and phenyl ethyl alcohol. Determination of odor activity values (OAV) showed the highest values for β -damascenone (566), 4-mercapto-4-methyl-2-pentanone (288) ethyl hexanoate (32) and linalool (7). Jutrzenka exhibited also a rich profile of free, and to lesser extent bound terpenes.

Słowa kluczowe

Wine, Jutrzenka grapes, Liqueur wine, GC–O, GC $\times$ GC–ToF-MS, Key odorants

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