

Influence of fining agents on the sensorial characteristics and volatile composition of mead

Pascoal A., Oliveira J.M., Pereira A.P., Féas X., Anjos O., Estevinho L., 2017. Journal of the Institute of Brewing. 123(4): 562–571. DOI: 10.1002/jib.445

<http://onlinelibrary.wiley.com/doi/10.1002/jib.445/full>



Abstract

Mead, one of the oldest fermented drinks, is derived from the fermentation of diluted honey by yeasts. In the context of wine production, several procedures are applied to stabilize the beverage and to improve its organoleptic properties. This study aims to evaluate the impact of adding fining agents on the production of mead. In general, the best results were obtained for the samples containing just one fining agent instead of two combined. However, the best performance was obtained for the combined fining agents (bentonite + gelatine + egg albumin). Tannins decreased significantly the content of volatile compounds. On the other hand, silica appears to be the best fining agent, resulting in the lowest loss of volatile compounds. Thirty-six volatile compounds were determined by gas chromatograph–flame ionization detector and gas chromatography–mass spectrometry, including alcohols (42.5%), carbonyl compounds (40.4%), acetates (14.4%) and esters (1.8%). Eleven volatile compounds had odour activity values >1 , representing those with a major impact on the aroma of mead. Significant differences ($p < 0.05$) were found in 10 volatile compounds independently to the type of treatment used and no differences ($p > 0.05$) were observed for remaining compounds.

Keywords: mead; fining agents; sensorial analysis; volatile compounds; odour activity values