



FT-RAMAN methodology for the monitoring of honeys' spirit distillation process

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Highlights

- Application of FT-RAMAN methodology towards monitoring honeys' spirit.
- Volatile composition of honeys' spirit during the distillation.
- Differentiation of different raw materials and distillation fraction in honeys' spirit by FT-RAMAN

Abstract

Honey spirit is an alcoholic beverage produced by fermentation followed by distillation of the honey must, which has distinct organoleptic characteristics derived mostly from the raw material used. In order to accurately monitor the quality of the product throughout the distillation process (head, heart and tail stages), FT-RAMAN spectroscopy was applied. Dark honey, light honey and honey obtained following waxes' wash was used to produce honey spirit. The pH, alcoholic strength, methanol content, acetaldehyde content, ethyl acetate content and higher alcohols content were evaluated during the distillation process. The FT-RAMAN technique was used to obtain spectral information for all fractions collected during beverage production. The results suggest that the honey spirit had good quality concerning the volatile composition and methanol was not detected in any sample. FT-RAMAN is promising for the online monitoring of the distillation process in order to improve the final quality of this beverage.