RECOGNITION OF ADULTERATED *ASZÚ WINE* BY THE ELECTRONIC TONGUE

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Aszú wine (AW) is produced from botyrized berries (noble) and is recognized in Hungary for its remarkable taste but with a growing concern for its quality. Addition of must concentrate (M.C) and exclusion of botyrized berries in AW production is considered as an adulteration but methods for monitoring this are often laborious and expensive, hence the need for advanced but cheaper approaches. The electronic tongue (ET) is a rapid, high sensitivity tool that has been hailed for food authentication. The capability of the ET to discriminate AW adulterated with M.C was tested in this study. Wines were adulterated with M.C at four different concentrations to mimic the concentrations of non-adulterated AW*:* (98.9, 130.2, 168.2, 254.5) g/L. For complexity, AW adulterated with sucrose before re-fermentation was included. All samples, were prepared in triplicates and each, measured in four repeats using an Alpha Astree ET. Principal component analysis (PCA) showed clear separation of the groups of the tested wine samples. The sample with sucrose was closer to the non-adulterated samples, proving its easy susceptibility. Discriminant analysis (LDA) provided 100 % correct classification throughout. The capability of the ET to discriminate adulterated AW was demonstrated, this is important for monitoring and evaluation purposes.

Keywords: Wine, electronic-tongue, adulteration, multivariate statistics