

Phenolic compounds in apple juices - Method of quantification by UHPLC-UV and by UHPLC-MS/MS

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R sum  en anglais An UPHLC-UV/MS/MS method was developed for separation and quantification of major polyphenolic compounds present in apple juice. The main classes of polyphenols studied here are monomeric or polymeric flavan-3-ols, phenolic acids, flavonols and dihydrochalcones. compounds were quantified simultaneously with the two detection systems, *i.e.* with UV-PDA detection and ESI-triple quadrupole mass detection used in the selected reaction monitoring (SRM) mode. Each method (UHPLC-UV and UHPLC-SRM) was assessed with 2 different apple juice samples and linearity, limit of detection and quantification (LOD and LOQ), accuracy and precision tests were realized on the 15 major compounds.

Despite the validation of the UHPLC-UV and UHPLC-SRM methods, significantly different results were obtained by comparing UHPLC-UV and UHPLC-SRM quantifications. Three groups of polyphenols were observed, the first one with equivalent results between the two quantification methods (in most cases), and the two others with overestimated or underestimated results when comparing UHPLC-UV and UHPLC-SRM quantifications.

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