



UNCERTAINTY ESTIMATION-CASE STUDY FOR PHENOLIC COMPOUNDS DETERMINATION IN MUNICIPAL WASTEWATERS

Carmen Dima^{1*}, Cristina Jelescu^{1,2}, Camelia Draghici²

¹*Apa Company, Brasov, 13 Vlad Tepes Str., 500092, Brasov, Romania*

²*Transilvania University, 29 Eroilor Blvd, 500036, Brasov, Romania*

Abstract

The Romanian standard for the analytical method for phenols measurements in aquatic media was subject of internal validation procedure, adapted to the specific concentration domain of the laboratory. Method performance criteria were investigated on standard samples measurements: selectivity, linearity domain, precision, accuracy, limit of detection, limit of quantification and robustness. The validated method was further used on real samples of domestic and industrial wastewaters from the Wastewater Treatment Plant of Brasov, Romania. As a novelty, even not required in the Romanian standard, sources of uncertainties were identified, and uncertainty was estimated for both measurements on standard and wastewater samples. The results showed that the method is suitable for phenolic compounds determination from wastewaters, with a very low uncertainty level.

Key words: method validation, municipal wastewaters, phenolic compounds, uncertainties estimation

* Author to whom all correspondence should be addressed: e-mail: lvcarmen2003@yahoo.com