

# Exploiting green sorbents in rotating-disk sorptive extraction for the determination of parabens by high-performance liquid chromatography with tandem electrospray ionization triple quadrupole mass spectrometry

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© 2018 WILEY-VCH Verlag GmbH & Co. KGaA, Weinheim In this study, the viability of applying cork and montmorillonite clay modified with ionic liquid as biosorbents in the rotating-disk sorptive extraction technique was investigated. Specifically, this was aimed at the determination of methyl paraben, ethyl paraben, propyl paraben, and isobutyl paraben, with separation/determination by high-performance liquid chromatography coupled with mass spectrometry. The optimization of the method for both biosorbents was performed using multivariate procedures. The extraction efficiencies for the target compounds in aqueous matrices were compared to those obtained using the commercial sorbent Octadecyl Silano-C18. The optimum extraction conditions for both natural sorbents were the use of an ammonia solution (pH 10) as desorption solvent and an extraction time of 30 min. The proposed methods show limits of quantification of 0.8 µg/L for cork, 3.0 µg/L for montmorillonite clay and 6.0 µg/L for Octad