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 Octadecil 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 ?g/L for cork, 3.0 ?g/L for
montmorillonite clay and 6.0 ?g/L for Octad