

OPTIMIZATION AND IMPROVEMENT OF CHROMATOGRAPHIC TECHNIQUES FOR BISPHENOL EXTRACTION AND CHARACTERIZATION FROM INFANT BOTTLES

FOUAD ECHERFAOUI, WAFAA BENKAYBA, AIMEN EL ORCHE, MOUNIR EL KACEMI, KHADIJA EL BOURAKADI, ABDELHAFID BENOMAR, CASIMIR ADADE, AMINE LAOUNI, MUSTAPHA BOUATIA, MILOUD EL KARBANE

References:

1. Huang, Y., et al., Bisphenol A (BPA) in China: a review of sources, environmental levels, and potential human health impacts. *Environment international*, 2012. 42: p. 91-99.
2. Hoekstra, E.J. and C. Simoneau, Release of bisphenol A from polycarbonate—a review. *Critical reviews in food science and nutrition*, 2013. 53(4): p. 386-402.
3. Schug, T.T., et al., Minireview: Endocrine Disruptors: Past Lessons and Future Directions. *Mol Endocrinol*, 2016. 30(8): p. 833-47.
4. Usman, A., S. Ikhlās, and M. Ahmad, Occurrence, toxicity and endocrine disrupting potential of Bisphenol-B and Bisphenol-F: A mini-review. *Toxicol Lett*, 2019. 312: p. 222-227.
5. Hengstler, J.G., et al., Critical evaluation of key evidence on the human health hazards of exposure to bisphenol A. *Crit Rev Toxicol*, 2011. 41(4): p. 263-91.
6. Kienitz, A.-T., Marine debris in the coastal environment of Iceland's nature reserve, Hornstrandir: sources, consequences and prevention measures. 2013.
7. Ezoji, H. and M. Rahimnejad, Electrochemical behavior of the endocrine disruptor bisphenol A and in situ investigation of its interaction with DNA. *Sensors and Actuators B: Chemical*, 2018. 274: p. 370-380.
8. Dillingh, J. and J. Smith, Containers, in *Practical Pharmaceutics*. 2015, Springer. p. 501-536.
9. Lee, K.T., Quality and safety aspects of meat products as affected by various physical manipulations of packaging materials. *Meat science*, 2010. 86(1): p. 138-150.
10. Kubwabo, C., et al., Migration of bisphenol A from plastic baby bottles, baby bottle liners and reusable polycarbonate drinking bottles. *Food Addit Contam Part A Chem Anal Control Expo Risk Assess*, 2009. 26(6): p. 928-37.
11. Tian, L., L. Lin, and S. Bayen, Optimization of the post-acquisition data processing for the non-targeted screening of trace leachable residues from reusable plastic bottles by high performance liquid chromatography coupled to hybrid quadrupole time of flight mass spectrometry. *Talanta*, 2019. 193: p. 70-76.
12. Fiala, F. and P.B. Poulsen, Chemical requirements for child use and care articles. 2014.
13. Sibanda, W. and P. Pretorius, Comparative study of the application of central composite face-centred (CCF) and Box–Behnken designs (BBD) to study the effect of demographic characteristics on HIV risk in South Africa. *Network Modeling Analysis in Health Informatics and Bioinformatics*, 2013. 2(3): p. 137-146.
14. Schneider, A., G. Hommel, and M. Blettner, Linear regression analysis: part 14 of a series on evaluation of scientific publications. *Deutsches Ärzteblatt International*, 2010. 107(44): p. 776.
15. Yang, K., J. Tu, and T. Chen, Homoscedasticity: An overlooked critical assumption for linear regression. *General psychiatry*, 2019. 32(5).
16. Baraskar, S., S. Banwait, and S. Laroia, Multi-objective optimisation of electrical discharge machining process using Derringer's desirability function approach. *International Journal of Materials Engineering Innovation*, 2011. 2(3-4): p. 203-221.
17. Bourguignon, B. and D. Massart, Simultaneous optimization of several chromatographic performance goals using Derringer's desirability function. *Journal of Chromatography A*, 1991. 586(1): p. 11-20.
18. Aranda, E.O., et al., Development of a methodology to quantify tamoxifen and endoxifen in breast cancer patients by micellar liquid chromatography and validation according to the ICH guidelines. *Talanta*, 2011. 84(2): p. 314-318.
19. Sahu, K., et al., Comparative study of forced degradation behavior of telmisartan by UPLC and HPLC and development of validated stability indicating assay method according to ICH guidelines. *J Chromat Separation Techniq*, 2012. 3(129): p. 2.
20. Hubert, P., et al., Harmonization of strategies for the validation of quantitative analytical procedures: A SFSTP proposal: Part IV. Examples of application. *Journal of Pharmaceutical and Biomedical Analysis*, 2008. 48(3): p. 760-771.
21. Rujiralai, T. and W. Cheewasedtham, An effective extraction method for estimation of total antioxidant and mercaptobenzothiazole residues in baby nipples. *Eur. J. Sci. Res*, 2011. 64: p. 277-284.
22. Cook, R.D. and S. Weisberg, *Residuals and influence in regression*. 1982: New York: Chapman and Hall.
23. McNeil, A.J. and R. Frey, Estimation of tail-related risk measures for heteroscedastic financial time series: an extreme value approach. *Journal of empirical finance*, 2000. 7(3-4): p. 271-300.
24. Juliano, S.A., *Nonlinear curve fitting: predation and functional response curves*, in *Design and analysis of ecological experiments*. 2020, Chapman and Hall/CRC. p. 159-182.