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## CHROMATOGRAPHIC BEHAVIOUR OF TETRADENTATE SCHIFF BASES AND CORRESPONDING COPPER(II) AND NICKEL(II) COMPLEXES BY NP- AND RP-TLC

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Schiff bases play an important role in inorganic chemistry as they easily form stable complexes with majority of transition metal ions. Complexes of Schiff bases have been recognized as models for biologically important species. The aim of this work is to investigate chromatographic behaviour of series of 12 tetradentate Schiff bases and corresponding copper(II) and nickel(II) complexes by normal- and reversed-phase thin layer chromatography, and optimization of chromatographic conditions for their separation. Chromatographic methods have been frequently applied for determination of retention parameter ( $R_M$ ), which is used for quantitative relationships between chemical structure and retention. The chemical structures of investigated compounds can be characterized by molecular descriptors. Quantitative structure-retention relationship (QSRR) describes how molecular structure affects chromatographic retention. In the case of thin layer chromatography, the QSRR studies are usually based on  $R_M$  value, which is defined by Bate-Smith and Westall equation. In this study we used two stationary and twenty two mobile phases. Also, in this work we used multivariate regression analysis to confirm the optimal chromatographic conditions.

**KEYWORDS:** Thin layer chromatography, Schiff bases, Principal Component Analysis

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