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Determination of the Lipophilicity Parameters R_{M0} and $\text{Log}P$ of New Azaphenothiazines by Reversed-Phase Thin-Layer Chromatography[†]

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Abstract

The lipophilicity parameters (R_{M0} and $\text{log}P_{\text{TLC}}$) of three types of azaphenothiazines 1–3 were determined by reversed-phase thin-layer chromatography on RP-18 silica plates with acetone-aqueous TRIS (tris(hydroxymethyl)aminomethane) buffer as the mobile phase. The R_M values were linearly dependent on the concentration of acetone, and extrapolated to 0% of acetone, gave the lipophilicity parameter R_{M0} . The parameter R_{M0} and specific hydrophobic surface area b were significantly intercorrelated showing a congeneric class of azaphenothiazines 1–3. The parameter $\text{log}P_{\text{TLC}}$ was determined from the R_{M0} values by use of a calibration curve obtained for five standards. The determined parameters were discussed in the terms of structure lipophilicity relationships and compared with data obtained from seven calculation programs.

Keywords:

- Lipophilicity parameters
- R_{M0}
- LogP
- Azaphenothiazines
- Reversed-phase
- TLC

Notes

[†]Part XCI in the series of Azinyl Sulfides.

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