SYNTHESIS OF RHODANINE DERIVATIVES WITH A POSSIBLE ANTIMETABOLITE ACTIVITY

IX. Esters of 3-(α,γ-Dicarboxypropyl)Rhodanine and Their Derivatives

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The boiling of alcoholic solutions of 3-(α,γ-dicarboxypropyl)rhodanine with the simultaneous passage of gaseous HCl leads to the formation of esters with yields of 77.1–95%. The ethyl, n-propyl, n-butyl, and isoamyl esters are liquids distilling at $2-4 \times 10^{-1}$ mm without decomposition. The methyl ester $C_{10}H_{13}NO_5S_2$ melts at 52–53° C and the benzyl ester $C_{22}H_{21}NO_5S_2$ at 39–41° C. The UV absorption spectra of the substances are characterized by three absorption maxima at 258–260 nm (log ε 3.94–4.19), 295–296 nm (log ε 3.95–4.09), and 375–378 nm (log ε 1.68–1.79). The condensation of the esters of 3-(α,γ-dicarboxypropyl)rhodanine with benzaldehyde and with isatin in an ammoniacal buffer solution leads to the formation of 5-substituted derivatives with yields of 70.2 to 91.0%. The UV spectra of the 5-substituted derivatives of the esters are characterized by four absorption bands: at about 234 nm (log ε 3.93–4.15), at 257–275 nm (log ε 3.95–4.07), at 292–297 nm (log ε 3.43–3.62), and at 377–421 nm (log ε 4.31–4.58).

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