SYNTHESIS OF RHODANINE DERIVATIVES WITH A POSSIBLE ANTIMETABOLITE ACTIVITY

VIII. Esters of 3-(β-Carboxy-α-Phenylethyl)Rhodanine and Their Derivatives

B. M. Turkevich

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The passage of gaseous HCl through a boiling solution of 3-(β-carboxy-α-phenylethyl)rhodanine in an alcohol leads to the formation of the corresponding ester with a yield of 93.0–98.1%. The methyl, ethyl, n-propyl, n-butyl, and isoamyl esters are liquids boiling at $2-4 \times 10^{-1}$ mm without decomposition. The benzyl ester is a crystalline substance with mp 86–87° C. The UV spectra of the esters are characterized by three absorption maxima, at 257–261 nm (log ε 3.78–4.04), 292–297 nm (log ε 3.67–4.00), and 377–379 nm (log ε 1.52–1.88). The condensation of the esters of 3-(β-carboxy-α-phenylethyl)rhodanine with benzaldehyde, acetone, cyclohexanone, and isatin in the presence of a solution of NH_4OH and NH_4Cl leads to the 5-substituted derivatives with yields of 65.1–98.1%. The 5-substituted derivatives of esters of 3-(β-carboxy-α-phenylethyl)rhodanine are crystalline substances with four absorption maxima: at about 231 nm (log ε 4.18–4.26), at 255–274 nm (log ε 3.89–4.15), at 272–294 nm (log ε 3.54–3.95), and at 345–420 nm (log ε 4.22–4.54). In some cases, the absorption maxima are transformed into inflections or disappear. The IR spectra of individual substances have two peaks in the fourth band.

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L'vov Scientific-Research Institute of Hematology and
Blood Transfusion