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LETTERS TO THE EDITOR

Reaction of 2-Thioxothiazolidin-4-one with Amines

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Alkali metal and ammonium salts of 2-thioxothiazolidin-4-one are widely used as synthetic precursors of various biologically active compounds of the azolidine series [1]. However, their liquid-phase synthesis is accompanied by hydrolysis of the substrate with the cleavage of the heteroring, which results in decreased (to 50%) yield of the target product.

To attain high yields, we attempted for the first time to prepare ammonium salts of thiazolidin-4-ones by a solid-phase procedure. A weighed portion of the starting 2-thioxothiazolidin-4-one was placed in a glass tube through which an amine vapor was passed until the substrate was completely converted to the salt. The reaction progress was monitored by TLC (disappearance of the spot of the starting compound) [2].

Triethylammonium salt of 2-thioxothiazolidin-4-one. Yield 98%, mp 104°C. Found, %: C 46.32; H 7.72; N 11.80; O 6.86; S 27.30. $C_9H_{18}N_2OS_2$. Calculated, %: C 46.15; H 7.69; N 11.96; O 6.84; S 27.36.

Diethylammonium salt of 5-benzylidene-2-thioxothiazolidin-4-one. Yield 98%, mp 158°C. Found, %: C 57.2; H 6.0; N 9.6; O 5.7; S 21.7. $C_{14}H_{18}N_2OS_2$. Calculated, %: C 57.1; H 6.1; N 9.5; O 5.6; S 21.8.

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REFERENCES

1. Brown, F.C., *Chem. Rev.*, 1961, vol. 61, no. 5, p. 508.
2. Ginak, A.I., V'yunov, K.A., Volkova, A.A., and Sochilin, E.G., *Zh. Prikl. Khim.*, 1971, vol. 44, no. 6, p. 2123.

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