Alkyl and selenderivatives of 6-methyluracil

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Among the derivatives of uracils there have been found out biologically active compounds of wide spectrum of action to which you can refer methyluracil, which is included to the composition of many medicines, as a remedy stimulating.

It's well-known that selenorganic complexes have antiswelling, radioprotectoring, antibacterial activity and they are effective light- and thermostabilizers of polymer materials. Involving the atom of selenium into the molecule of methyluracil will make its biologic activity much stronger and therefore, the elaboration of new methods of alkyl- and selenderivatives of methyluracil have a scientific and theoretical interest.

We held researches on synthesis of alkyl-derivatives of 6-methyluracil by the reaction of natrium salt of the latter with dibormethylene (I), epichlorohydrine (II), 1,3-dichloropropanol (III), bromic allyl (IV) at the presence of catalysts for interphase catalyst-triethylbenzylammoniumchloride (TEBAC) and 18-crown-6-ether (18-K-6):

\[
\text{R} = \text{CH}_2 - \text{CH}_2 - \text{Br} \quad \text{(Ia)}; \\
\text{CH}_2\text{CH(OH)CH}_2\text{Cl} \quad \text{(IIIa)};
\]

There have been studied the catalytic activity of TEBAC and 18-K-6 and it was shown that in the found optimum conditions 18-K-6 displayed a great effectiveness.

Going on with the investigations held before there have obtained the selencontaining derivatives of some alkylmethanuracils synthesized by us, bis-(6-methyluracil-1) selenoxomethane (V) and bis[3-(methyluracil-1)-2oxipropyl] selenide (VI):

The synthesized compounds (Ia- IVa, V, VI) are crystalline compounds, the structure of which has been proved by IR-and PMR-spectroscopies.