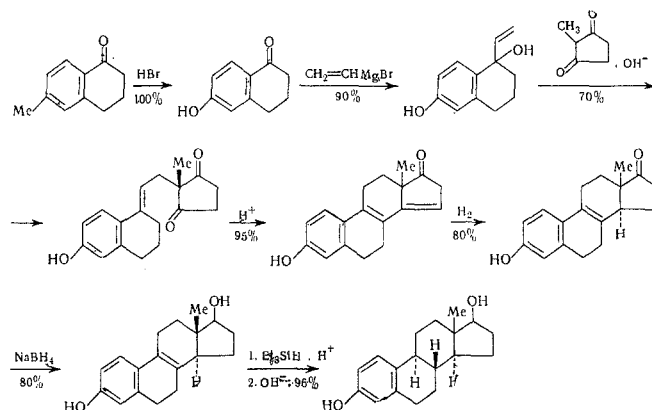


NEW VARIATION OF SYNTHESIS OF d,l-ESTRA-3,17 β -DIOL

T. A. Serebryakova, A. V. Zakharychev,
M. A. Mal'gina, S. N. Ananchenko,
and I. V. Torgov

UDC 542.91:547.92

One of the important steps in the total synthesis of natural estrogens is the trans-reduction of the $\Delta^8(9)$ double bond, which is accomplished by the Birch method. However, the latter is not applicable to 3-hydroxysteroids [1, 2]. We established that the ionic reduction of $\Delta^8(9)$ -dehydroestradiol with a mixture of Et_3SiH and CF_3COOH , with subsequent saponification of the formed trifluoroacetates, gives d,l-estradiol in 96% yield. These data made it possible to propose a new variation for the total synthesis of d,l-estradiol, starting with 6-methoxytetralone, by the following scheme*



The overall yield of d,l-estradiol is 37% when based on 6-methoxytetralone, which exceeds the yields of the known methods.

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*The first compound is 6-methoxytetralone.

M. M. Shemyakin Institute of the Chemistry of Natural Compounds, Academy of Sciences of the USSR. Translated from *Izvestiya Akademii Nauk SSSR, Seriya Khimicheskaya*, No. 8, pp. 1916-1917, August, 1973. Original article submitted April 24, 1973.

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