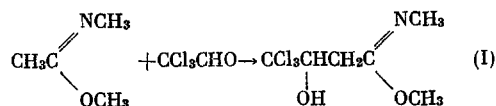


# REACTION OF METHYL ESTER OF N-METHYLIMIDOACETIC ACID WITH CHLORAL

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UDC 542.91:547.298.2:547.446.1

We found that the reaction of the methyl ester of N-methylimidoacetic acid with chloral in ether solution gives the methyl ester of N-methylimido- $\beta$ -hydroxy- $\gamma,\gamma,\gamma$ -trichlorobutyric acid (I) in 32.5% yield, mp 105° (from CCl<sub>4</sub>).



Found: C 30.86; H 4.43; Cl 44.94; N 6.14%. C<sub>6</sub>H<sub>10</sub>Cl<sub>3</sub>NO<sub>2</sub>. Calculated: C 30.73; H 4.90; Cl 45.36; N 5.97%. The structure of (I) was confirmed by the IR and NMR spectra, and also by aqueous hydrolysis to the methyl ester of  $\beta$ -hydroxy- $\gamma,\gamma,\gamma$ -trichlorobutyric acid (II), mp 61–62° (from petroleum ether). From [1]: mp 62–63°. Found: C 27.10; H 3.25%. C<sub>5</sub>H<sub>7</sub>Cl<sub>3</sub>O<sub>3</sub>. Calculated: C 27.08; H 3.19%. The structure of (II) was also confirmed by the NMR spectrum. As a result, the reaction goes by the aldol condensation scheme, and not by the expected (2 + 2)-cycloaddition scheme, as in the reaction of chloral with the structurally close ketene dimethyl acetal [1].

## LITERATURE CITED

1. L. V. Nesterov and R. A. Saibirova, *Izv. Akad. Nauk SSSR, Ser. Khim.*, 668 (1972).

A. E. Arbuzov Institute of Organic and Physical Chemistry, Kazan' Branch, Academy of Sciences of the USSR. Translated from *Izvestiya Akademii Nauk SSSR, Seriya Khimicheskaya*, No. 4, pp. 979–980, April, 1975. Original article submitted January 9, 1975.

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