

Bulletin of the Academy of Sciences of the USSR Division of Chemical Science 1969 vol.18 N12,
pages 2596-2600

Oxidation of 3-carene by lead tetraacetate in acetic acid

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Abstract

1. The oxidation of 3-carene with $P(OAc)_4$ in acetic acid was studied. The following were found in the reaction products: m-methylisopropenylbenzene; 3,6,6-trimethylcycloheptadiene-2,4-diene-1; 3-acetyl-6,6-dimethylbicyclo-[3,1,0]-hexane; the acetate of carene-4(7)-ol-3; an acetate with the presumed structure of the acetate of p-menthadiene-1,8(9)-ol-5; the acetate of 2-tolylpropanol-2; the acetate of trans-2,4-caranediol. 2. During the reaction there are rearrangements of the carene structure to p- and m-menthadiene, bicyclo-[3,1,0]-hexane, and cycloheptadiene systems. 3. The difference in the course of the oxidation of 3-carene with $Pb(OAc)_4$ in acetic acid and in benzene was obtained by the influence of temperature and solvent. © 1970 Consultants Bureau.

<http://dx.doi.org/10.1007/BF00912550>
