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Reaction of 5-benzalbarbituric acid with trimethyl phosphite and tri(dimethylamino) phosphine

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Abstract

1. Trimethyl phosphite at -14° adds to 5-benzalbarbituric acid to give the (1:1) adduct with a bipolar structure, which then isomerizes to the methyl ester of the enol form of the dimethyl ester of barbituryl-5-benzylphosphonic acid. The latter is also formed by running the reaction at room temperature. 2. In the presence of glacial acetic acid, trimethyl phosphite reacts with 5-benzalbarbituric acid to give the dimethyl ester of barbituryl-5-benzylphosphonic acid in the enol form. 3. The reaction of tri(dimethylamino)phosphine with 5-benzalbarbituric acid gave the crystalline (1:1) adduct, which has the structure of a bipolar ion containing the P-C bond. © 1971 Consultants Bureau.

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