

## **$\beta$ - keto phosphonic esters Communication 2. Esters of the aromatic and carbocyclic series**

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### **Abstract**

1. With the object of studying their tautomerism, the following compounds were synthesized for the first time: diethyl  $\alpha$ ,  $\alpha$ -dimethylphenacylphosphonate, diethyl 1-methyl 2-oxocyclohexylphosphonate, diethyl 2-oxocyclopentylphosphonate, and diethyl 3-camphorylphosphonate; their degrees of unsaturation were determined by the K. Meyer method of bromine titration. The constants of diethyl phenacylphosphonate prepared from triethyl phosphite differ from the constants of the diethyl phenacylphosphonate prepared by the Michaelis-Becker method. 2. The ultraviolet absorption spectra of the synthesized compounds were determined. The absorption spectra of phenacylphosphonic and  $\alpha$ -methylphenacylphosphonic esters indicate the presence of enol forms and, in presence of sodium methoxide, the formation of enol anions. The spectra of phenacylphosphonic ester prepared via triethyl phosphite and of the same ester prepared by the Michaelis-Becker reaction differ from one another. The causes of this difference were elucidated. © 1958 Consultants Bureau, Inc.

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