

## **$\beta$ -Keto phosphonic esters Communication 4. Infrared spectra of the products of the reaction of $\alpha$ -halo ketones with triethyl phosphite and with sodium diethyl phosphite**

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### **Abstract**

1. Study of the infrared spectra of products of reaction of bromoacetone, of 3-bromo-2-butanone, and of 1-bromo-2-butanone with triethyl phosphite confirmed that they are  $\beta$ -keto phosphonic esters (carbonyl absorption band at 5.84-5.85  $\mu$ ). 2. The spectra of the products of reaction of bromoacetone and of 3-bromo-2-butanone with sodium diethyl phosphite indicate that they are epoxy phosphonic esters (absence of a carbonyl absorption band and presence of absorption bands characteristic of the epoxy grouping at 11.80 and 11.98  $\mu$ , respectively). 3. The infrared spectra do not enable us to come to definite conclusions regarding the occurrence of enolization in the  $\beta$ -keto phosphonic esters studied. © 1960 Consultants Bureau Inc.

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