REACTION OF SILYL ENOL ETHERS WITH CYANOGEN CHLORIDE

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Cyanogen chloride reacts with enamines [1] and keteneacetals [2] with the formation of the corresponding mono- and disubstituted triazines. Silyl enol ethers, as shown previously [3], are capable of introducing the CH_2COR group into C-electrophiles. It was of interest to elucidate whether silyl enol ethers react with cyanogen chloride and the number of CH_2COR groups which may be thereby introduced into the triazine ring.

We have shown that cyanogen chloride reacts with silyl ethers of acetophenone and methyl cyclopropyl ketone with the formation of only monoketo derivatives of triazine. The reaction process with a 1:3 mole ratio of cyanogen chloride and the silyl enol ether at 100-120°C over 3-4 h.



When $R = cyclo-C_3H_5$, the product yield is 70%, mp 39-40°C. When R = Ph, the product yield is 90%, mp 147-148°C. The reaction with the silyl ether of acetone does not proceed due to the impossibility of maintaining the indicated temperature. The triazinylketones obtained exist as a mixture of ketone and enol fornms as indicated by ¹H and ¹³C NMR spectroscopy. The ketone/enol product ratio was 1:2 when R = cyclopropyl and 1:4 when R = phenyl.

The product structures were indicated by modern physicochemical methods and elemental analysis.

LITERATURE CITED

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