

REACTIONS OF CARBONYL-VINYL-STABILIZED SULFUR YLIDES
WITH ALKOXIDES, AND ITS THERMOLYSES

Sunao Furukawa, Toshio Kinoshita, Mitsuaki Watanabe, and Mitsuki Baba
Faculty of Pharmaceutical Sciences, Nagasaki University,
Bunkyo-machi, Nagasaki 852

Reaction of dimethyloxo-(and dimethyl-)sulfonium phenacylide(1 and 2) with ethoxymethylene acetylacetone gave dimethyloxo-(and dimethyl-)sulfonium 1-benzoyl-3,3-diacetyl allylide(5a and 6a) in the presence of triethylamine. Similarly, dimethyloxo-(and dimethyl-)sulfonium 1-benzoyl-3-acetyl-3-ethoxycarbonyl allylide (5b and 6b) were prepared by the reaction of 1 and 2 with ethoxymethylene ethyl acetoacetate.

Treatment of 5a, 6a and 5b with dilute hydrochloric acid gave dimethyloxo-(and dimethyl-)sulfonium 1-benzoyl-3-acetyl allylide(10a and 11a) and dimethyloxo-sulfonium 1-benzoyl-3-ethoxycarbonyl allylide(10b), respectively.

When 5a was treated with sodium ethoxide in ethanol, 1,5-dimethyl-4-acetylthiabenzene 1-oxide(13) and 1,5-dimethyl-2-benzoyl-4-acetylthiabenzene 1-oxide(14) were obtained. On the other hand, by the same treatment of 6a gave 2-methylthio-4-acetyl-5-hydroxybiphenyl(22).

The thermolysis of 5a or 6a afforded 2-methyl-3-acetyl-5-benzoylfuran(27) which was obtained also by the irradiation of these ylides. In the case of 5b or 6b, thermolyses of these ylides gave 2-methyl-3-ethoxycarbonyl-5-benzoylfuran(30) as sole product while a mixture of 30 and 2-ethoxy-3-acetyl-5-benzoylfuran(31) were obtained by the irradiation of the same ylides.