

PHOTOCHEMICAL RING CONTRACTION of 4-PYRIMIDONE.
FORMATION of β -LACTAM

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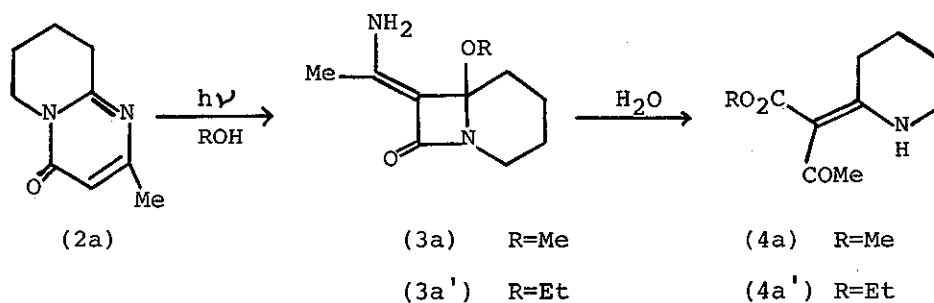
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In the previous paper, we reported on the photochemical reaction of 6,7,8,9-tetrahydro-2-methyl-4H-pyrido[1,2-a]pyrimidin-4-one in alcoholic solution.¹⁾ After the paper had been published, we noticed that the spiro-type structure might be merely one among possible structures supported by ¹H and ¹³C NMR spectral data; the IR, UV, and NMR spectral data were not sufficient to determine the structure of the photochemical product.

Then, X-ray crystallographic analysis was undertaken in order to give the decisive conclusion on the structure of the product (3a). The X-ray data provided us a β -lactam structure, 7-aminoethylidene-6-methoxy-8-oxo-1-azabicyclo[4.2.0]octane with the amino group oriented trans to the carbonyl group. Now, we wish to correct the chemical structures of (3) and (4) in the

previous paper.¹⁾ The product (3a') is 7-aminoethylidene-6-ethoxy-8-oxo-1-azabicyclo[4.2.0]octane. The products (4a) and (4a') obtained by the hydrolysis of (3a) and (3a') are methyl 2-piperidylideneacetoacetate and ethyl 2-piperidylideneacetoacetate, respectively. The structures of (4a) and (4a') were confirmed by the direct comparison with authentic samples.²⁾

A full report on this study will be presented in the near future.



REFERENCES

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