

SYNTHESES OF NATURALLY OCCURRING ALKYLPIRAZINES CARRYING
A HYDROXYL GROUP AT THE α -POSITION OF THE SIDE CHAIN

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Among the naturally occurring hydroxypyrazines and 2-hydroxypyrazine 1-oxides, the ones carrying a tertiary hydroxyl group on the side chain are of interest synthetically. In this work, a simple method of the introduction of a hydroxyl group, especially the tertiary one, to the α -position of the side chain on the pyrazine ring is described.

The treatment of 2,5-dialkylpyrazine 1-oxides (5a-c) with oxygen in the presence of a base resulted in affording the corresponding 2-hydroxypyrazine 1-oxides (6a-c) and dimers (7a-c). However, on occasion of the same treatment of 2-chloro-3,6-dialkylpyrazine 1-oxides (8a-c), the hydroxylation occurred on the side chain and the aimed hydroxylated compounds (9a-c and 10a-c) were obtained in satisfactory yields. The formers (9a-c) were converted to the latter (10a-c) quantitatively by an alkaline hydrolysis. Compounds 6a and 6c were also treated under the same conditions to give 10a and 10c, respectively. In consequence, neohydroxyaspergillic acid was conveniently prepared.

