

SYNTHESIS AND SOME REACTIONS OF MONO-ALKYL  
AND ARYL SUBSTITUTED PYRAZINES

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During the course of an investigation on pyrazines, some mono substituted pyrazines were prepared by condensation of  $\alpha$ -diketones and diamines or  $\alpha$ -amino acid amides.

While by N-oxidation of mono alkyl pyrazines with peracetic or permaleic acid was obtained a mixture of 1-, 4- and di-oxides, the same treatment of phenylpyrazine gave only the 4-oxide. 2-Phenylpyrazine-1-oxide was prepared starting from the 4-oxide via several steps.

The reaction of mono substituted pyrazine N-oxides with phosphorylchloride, acetic anhydride, nitric acid and Grignard reagents gave chlorinated, acetoxyated, nitrated and arylated( or alkylated ) pyrazines, and the reaction mechanism of these reactions was discussed with relation to the MO-calculation.