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 α-diketones and diamines or α-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, acetoxylated, nitrated and arylated(or alkylated) pyrazines, and the reaction mechanisum of these reactions was discussed with relation to the MO-calculation.