**The Versatility of Mannich Reaction: An Overview**

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**Abstract:** - One of the most significant processes for creating carbon-carbon bonds in organic synthesis is the Mannich reaction. It offers amino carbonyl compounds, crucial synthetic building blocks for many medicines. Active hydrogen compounds are combined with formaldehyde, and primary and/or secondary amines to create Mannich bases. An acid, phenol, ketone, amide, etc. may be among the active hydrogen compounds.

This contribution involved the synthesis of 3,5 dimethyl carboxamide using a number of biologically active sulphonamides, which was followed by elemental analysis and spectrum analyses using UV, IR, and 1HNMR. E. coli, S. aureus, and B. subtilis were among the pathogenic microorganisms tested for the compounds' antibacterial efficacy at different doses. We examined the bactericidal effectiveness of parent sulphonamides and derived Mannish bases. To establish whether synthetic Mannish bases were dangerous, the LD50 test was utilised.

**Keywords**: 3,5 Dimethyl pyrazole-1-carboxamide, Sulphonamides, Mannich reaction, Antibacterial activity, LD50 test.