

# Synthesis and Study of New Adamantane-Containing Compounds via Multicomponent Reactions

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## Annotation

The synthesis of a series of new biologically active adamantane-based compounds was carried out by multicomponent (Ugi-4CR & Passerini-3CRs) reactions. In the Ugi-4CR reaction, 1-isocyanoadamantane and ethylisocyanoacetate, aromatic/aliphatic oxo compounds, aromatic/aliphatic amines and carboxylic acids were used as reactive components. In the Passerini-3CRs adamantane-1-carboxylic acid, phenylglyoxal and aromatic/aliphatic carboxylic acids were selected as reactive components. Experimental studies using different solvents and solvent mixtures at different temperatures were carried out to determine the optimum conditions for the Ugi & Passerini reactions. The structures of the synthesized compounds were determined based on the physicochemical study. Within this research is implemented synthesized compounds antimicrobial study.