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Evaluation of Antioxidant and Antimicrobial Potential of Synthesized 4-Formyl-2,6-Dimethoxyphenylacetate

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Abstract—*Syringaldehyde (4-Hydroxy-3,5-dimethoxybenzaldehyde) is an auspicious aromatic aldehyde which exist as a chemical component in agricultural wastes like corn stem (3.2%), wheat straw (3.2-4.3%) etc. Syringaldehyde and its derivatives possess important bioactive properties like antioxidant, antifungal, antibacterial and antioncogenic etc. 4-Formyl-2,6-dimethoxyphenylacetate, an ester derivative was prepared via two synthetic routes i.e. reaction of syringaldehyde with acetic anhydride or acetic acid in presence of catalytic amount of aqueous sodium hydroxide. The synthesized compound was confirmed by physical data (yield, color, melting point, R_f) and spectroscopic characterization (UV, IR, ^{1}H-NMR, ^{13}C- NMR). 4-Formyl-2,6-dimethoxyphenylacetate along with its precursor was further evaluated for their antioxidant and antimicrobial potential along with their respective standards.*