

## **Bi-Functional Natural Carboxylic Acid Catalysts for the Synthesis of Diethyl $\alpha$ -Aminophosphonates in Aqueous Media**

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**Abstract :** A new, convenient, and high yielding procedure for the preparation of diethyl  $\alpha$ -aminophosphonates in water via Kabachnik-Fields reaction by one-pot reaction of aromatic aldehydes, ortho-aminophenols, and dialkylphosphites in the presence of a low catalytic amount of citric, malic, tartaric, and oxalic acids as a natural, bi-functional, and highly stable catalyst is described, the obtained products were characterized by elemental analyses, molar conductance, magnetic susceptibility, FTIR, Uv-Vis spectral data, NMR-C, NMR-H, and NMR-P analyses.

**Keywords :**  $\alpha$ -aminophosphonates, aminophenols, natural acids, aqueous media, Kabachnik-Fields reaction

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