α-Aminophosphonates are structural analogues of natural amino acids. They have been the subject of considerable attention due to their potential biological activities. They may be applied as enzyme inhibitors, antibacterial agents, antitumour agents or antiviral agents [4]. α-Aminophosphonates can be synthesized via the Kabachnik–Fields reaction [5] by the coupling of a carbonyl, an amine and a dialkyl phosphate unit. We report here the synthesis and crystal structures of four diethyl [(arylamino)(4-ethynylphenyl) methyl] phosphonate derivatives, namely diethyl [(4-bromoanilino)(4-ethynyl-phenyl) methyl] phosphonate, (I), diethyl ((4-chloro-2-methyl-anilino) [4-[2-(trimethylsilyl) ethynyl] phenyl] methyl) phosphonate, (II), diethyl ((4-fluoroanilino) [4-[2-(trimethyl-silyl) ethynyl] phenyl] methyl) phosphonate, (III), and diethyl [(4-ethynylphenyl) (naphthalen-2-ylamino) methyl] phosphonate, (IV). The X-ray analysis confirms the structures found (Fig. I-IV), the products was crystallized by slow evaporation of ethyl acetate/n-hexane solution [3].


Keywords: Aminophosphonate, Structural characterization, Crystal