

عنوان مقاله:

Solvent-free synthesis for imidazole-1-yl-acetic acid hydrochloride: an intermediate for zoledronic acid

محل انتشار:

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خلاصه مقاله:

A convenient and environmentally-friendly protocol for the preparation of imidazol-1-yl-acetic acid hydrochloride is described via solvent-free N-alkylation of imidazole by tert-butyl chloroacetate, the obtained imidazol-1-yl-acetic acid tert-butyl ester was hydrolyzed in water and treated with hydrochloric acid to get imidazol-1-yl-acetic acid hydrochloride in good yields. Unlike the previously reported methods, this two step process is completely free from the use of hazardous solvents, besides, it has high yielding and been characterized by simple and easy work-up procedure. Imidazol-1-yl-acetic acid hydrochloride produced by the described method is converted into zoledronic acid monohydrate of medicinal use.

کلمات کلیدی:

Imidazol-1-yl-acetic acid hydrochloride, N-alkylation, Solvent-free, Hydrolysis, zoledronic acid

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