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Exploiting the cyanation ability of O-tosyl hydroxyl amine with variety of aldehydes

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Abstract : The Present article emphasis the prominent and smooth conversions of aldehydes to cyanides by simply heating aldehydes and O-Tosyl hydroxyl amine (NH₂OTs) as a nitrogen donor using toluene as a solvent. The scheme accomplished with excellent yields for a variety of straight chain and aromatic aldehydes, as well as for sterically crowded and conjugated ones with excellent purity and productivity. The reaction conditions worked out well in presence of wide range of functionalities. The advantages of this protocol such as simple and moderate conditions, excellent yields, and good functional group tolerance, may lead to application of this method for the synthesis of nitriles in the synthetic chemistry area.

Keywords : Aldehydes, Cyanation, O-Tosyl hydroxyl amine, synelimination.

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