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(54) Title: PROCESS FOR THE PREPARATION OF 4-AMINO-3-QUINOLINECARBONITRILES

(57) Abstract: This invention discloses a process for the preparation of a 4-amino-3quinolinecarbonitrile comprising combining an amine compound with a cyanoacetic acid and an acid catalyst to yield a cyanoacetamide; condensing the cyanoacetamide with an optionally up-to tetra-substituted aniline in an alcoholic solvent and a trialkylorthoformate to yield an 2-amino-2-cyanoacrylamide; combining the 3-amino2-cyanoacrylamide with phosphorus oxychloride in acetonitrile, butyronitrile, toluene or xylene, optionally in the presence of a catalyst to yield a 4-amino-3quinolinecarbonitrile and also discloses a process for the preparation of a 7-amino-thieno[3,2-b]pyridine6-carbonitrile comprising combining a 3-amino thiophene with a cyanoacetamide and trial kylorthoformate in an alcoholic solvent to obtain a 3-amino2-cyanoacrylamide; and combining the 3-amino-2-cyanoacrylamide with phosphorus oxychloride and acetonitrile, butyronitrile, toluene or xylene, optionally in the presence of a catalyst to yield a 7-amino-thieno[3,2-b]pyridine-6-carbonitrile and also discloses a process for the preparation of a 4 amino-3-quinolinecarbonitrile comprising: combining an amine compound with cyanoacetic acid and a peptide coupling reagent to obtain a suspension; filtering the suspension; to yield cyanoacetamide; condensing the cyanoacetamide with an optionally up to tetra-substituted aniline with an alcoholic solvent to yield a 4-amino-3-quinolinecarbonitrile, and the invention discloses a process for obtaining a cyanoacetamide.

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