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IMPROVED PROCESS FOR THE SYNTHESIS OF N-[3-1H-IMIDAZOL-1-YL)PHENYL-4-(SUBSTITUTED)-2-PYRIMIDINAMINES

ABSTRACT

The invention provides a novel process for producing N-[3-(1H-imidazol-1-yl-4-(substituted-2-pyrimidinamine compounds in which the substituent is a 2-pyridinyl, 3-pyrindinyl, 4-pyridinyl, 2-furanyl or 2-thienyl group. The process includes the steps of (1) reacting a 3-(1H-imidazol-1-yl)benzamine with cyanamide and a halogen acid while controlling the pH of the reaction between pH about 2 to about 3.5 and recovering a [3-(1H-imidazol-1-yl)phenyl] guanidine dihydrohalide and (2) reacting the [3-(1H-imidazol-1-yl)phenyl] quanidine dihydrohalide so recovered with an appropriately substituted 3-dimethylamino-1-(substituted)-2-propen-1-one and a base at a pH of from about 10.5 to about 11.5 and recovering the N-[3-(1H-imidazol-1-yl)phenyl-4-(substituted)-2-pyrimidamine compound so produced. The novel process provides improved yield and purity by adhering to the stated crucial pH ranges.