Title (en)

METHOD FOR THE PRODUCTION OF 2,6-DICHLORO-5-FLUORONICOTINONITRILE AND THE CHEMICAL COMPOUND 3-CYANO-2-HYDROXY-5-FLUOROPYRIDE-6-ONE-MONOSODIUM SALT AND ITS TAUTOMERS

Title (de)

VERFAHREN ZUR HERSTELLUNG VON 2,6-DICHLOR-5-FLUORNICOTINONITRIL UND DIE CHEMISCHE VERBINDUNG 3-CYANO-2-HYDROXY-5-FLUORPYRID-6-ON-MONONATRIUMSALZ SOWIE DESSEN TAUTOMERE

Title (fr)

PROCEDE DE PREPARATION DE 2,6-DICHLORO-5-FLUORONICOTINONITRILE ET COMPOSE CHIMIQUE 3-CYANO-2-HYDROXY-5-FLUOROPYRIDE-6-ONE-SEL MONOSODIQUE AINSI QUE SES TAUTOMERES

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Application

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Abstract (en)

[origin: US6197964B1] The process according to the invention can be illustrated by way of example by the following equation:The monosodium salt of the 3-cyano-2-hydroxy-5-fluoropyrid-6-one (cf. Formula (I)) and/or tautomers thereof are preferably employed in the process according to the invention.The use of a basic catalyst enables significantly lower amounts of chlorinating agent to be employed in the chlorination according to the invention than is necessary, for example, for chlorination of the free dihydroxy compound according to EP-A 333 020. Furthermore, the product 2,6-dichloro-5-fluoronicotinonitrile is obtained in a high purity and high yields after hydrolysis, which is not the case if the conditions according to EP-A 333 020 are applied.Basic catalysts which can be used for the process according to the invention are, for example, organic bases, for example aliphatic and aromatic amines and amides, and also inorganic bases, for example basic compounds of nitrogen and phosphorus and salts thereof. Preferred basic catalysts are: pyridine, pyridines alkylated with 1 to 3 C1-C6-alkyl groups, piperidine, piperidines, imidazoles and indoles alkylated with 1 to 3 C1-C6-alkyl groups, N-C1-C6-alkylaminopyridines, N-di-C1-C6-alkylated anilines, tertiary N-C1-C6-alkylamines, urea and urea derivatives. Particularly preferred basic catalysts are triethylamine, urea and ethylpiperidine.

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