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(21) International application number: PCT/EP98/01617 (22) International filing date: 19 March 1998 (19.03.98) (30) Data relating to the priority: 197 13 506.4 1 April 1997 (01.04.97) DE (71) Applicant (for all designated States except US): BAYER AKTIENGESELLSCHAFT [DE/DE]; D-51368 Leverkusen (DE). (72) Inventors; and (75) Inventors/Applicants (US only): SATTLER, Andreas [DE/DE]; Grüner Weg 48, D-40229 Düsseldorf (DE). STEFFAN, Guido [DE/DE]; Im Herzogenfeld 52, D-51519 Odenthal (DE). GRIEHSEL, Bernd [DE/DE]; In der Schanze 53, D-46242 Bottrop (DE). (74) Joint Representative: BAYER AKTIENGE- SELLSCHAFT; D-51368 Leverkusen (DE).		(81) Designated states: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, ARIPO Patent (GH, GM, KE, LS, MW, SD, SZ, UG, ZW), Eurasian Patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European Patent (AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI Patent (BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG). Published With the International Search Report. Before expiry of the period provided for amending the claims. Further publication will be made if such amendments are received.
As printed (54) Title: 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 (54) Bezeichnung: 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 (57) Abstract The invention relates to 2,6-dichloro-5-fluoronicotinitrile which can be advantageously obtained by reacting 3-cyano-2-hydroxy-5-fluoropyrid-6-one and/or its tautomers and/or its salts and/or their tautomers with phosphorus trichlo- ride and chloric gas in a solvent with addition of a basic catalyst at temperatures between 30 and 300 °C, and then by hydrolysis. The 3-cyano-2-hydroxy-5-fluoropyrid-6-one-monosodium salt which can be used is a new chemical compound that is easy to obtain from 3-cyano-2-hydroxy-5-fluoropyrid-6-one and/or its tautomers by reaction with alcoholate and precipitation with a moderately weak acid. (57) Zusammenfassung 2,6-Dichlor-5-fluornicotinonitril ist in einer vorteilhaften Weise zugänglich durch Umsetzung von 3-Cyano-2-hydroxy-5-fluorpyrid-6-on und/oder seine Tautomeren und/oder seine Salze und/oder deren Tautomere mit Phos- phortrichlorid und Chlorgas in einem Lösungsmittel unter Zusatz eines basischen Katalysators bei Temperaturen von 30-300 °C und anschließender Hydrolyse. Das einsetzbare 3-Cyano-2-hydroxy-5-fluorpyrid-6-on-mononatriumsalz ist eine neue chemische Verbindung, die auf einfache Weise aus 3-Cyano-2-hydroxy-5-fluorpyrid-6-on und/oder dessen Tautomeren durch Umsetzung mit einem Alkoholat und Ausfällung mit einer mittelstarken Säure zugänglich ist.		