

PCTWORLD INTELLECTUAL PROPERTY ORGANIZATION
International Bureau

INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification ⁶ : C07C 51/43, 63/24	A1	(11) International Publication Number: WO 99/57090 (43) International Publication Date: 11 November 1999 (11.11.99)
(21) International Application Number: PCT/US99/08800 (22) International Filing Date: 20 April 1999 (20.04.99) (30) Priority Data: 60/084,426 6 May 1998 (06.05.98) US 09/229,789 13 January 1999 (13.01.99) US (71) Applicant: HFM INTERNATIONAL, INC. [US/US]; 2020 South Dairy Ashford, Houston, TX 77077 (US). (72) Inventors: LEE, Fu-Ming; 2102 Cherrington Drive, Katy, TX 77450 (US). LAMSHING, Wiston; 22810 Whitewater Creek Circle, Katy, TX 77450 (US). WYTCHERLEY, Randi, Wright; 6933 Springhill Community Road, Belgrade, MT 59714 (US). (74) Agents: CANTRELL, Thomas, L. et al.; Jenkins & Gilchrist, P.C., Suite 3200, 1445 Ross Avenue, Dallas, TX 75202 (US).		(81) Designated States: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, 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, UZ, VN, YU, ZA, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG). Published <i>With international search report.</i>
(54) Title: PROCESS FOR PURIFYING ISOPHTHALIC ACID BY CRYSTALLIZATION		
(57) Abstract Disclosed is a method for preparing isophthalic acid from metaxylene and especially for purifying crude isophthalic acid (IPA) produced in the course of such method, or otherwise, from a liquid dispersion thereof also containing impurities selected from unreacted starting materials, solvents, products of side reactions and/or other undesired materials. The purifying portion of the method comprises the step of: (1) filtering the dispersion to form a crude IPA filter cake; (2) dissolving the filter cake in a selective crystallization solvent at an elevated temperature to form a solution; (3) crystallizing purified IPA from the solution in the crystallization solvent by reducing the temperature, or pressure, or both of the solution; (4) separating the crystallized purified IPA from the solution; and (5) re-dissolving or soaking the washed purified IPA cake at elevated temperature, to remove the final traces of the crystallization solvent and obtain the desirable particle sizes and shape. Preferably, the selective crystallization solvent is N-methyl pyrrolidone.		