

Title (en)

CRYSTAL GROWTH IN A SOLUTION IN STATIONARY CONDITIONS

Title (de)

ZIEHEN VON KRISTALLEN IN EINER LÖSUNG UNTER STATIONÄREN BEDINGUNGEN

Title (fr)

CROISSANCE CRISTALLINE EN SOLUTION DANS DES CONDITIONS STATIONNAIRES.

Publication

EP 2108061 A2 20091014 (FR)

Application

EP 07871782 A 20071203

Priority

- FR 2007001980 W 20071203
- FR 0655343 A 20061206

Abstract (en)

[origin: FR2909687A1] The process for preparing a potassium dihydrogen phosphate or deuterated potassium dihydrogen phosphate crystal (1), comprises producing a crystalline solution with a part of supersaturated solution of the compound, growing the crystal in a chamber maintained at 15-25[deg] C, making a continuous circulation of a solution to ultrasounds associated to heating or cooling of the solution between the crystallization and saturation chambers (10, 20) while maintaining a constant supersaturation (higher than 10%) in the crystallization chamber, and treating the solution. The process for preparing a potassium dihydrogen phosphate or deuterated potassium dihydrogen phosphate crystal (1), comprises producing a crystalline solution with a part of supersaturated solution of the compound, growing the crystal in a chamber maintained at 15-25[deg] C, making a continuous circulation of a solution to ultrasounds associated to heating or cooling of the solution between the crystallization and saturation chambers (10, 20) while maintaining a constant supersaturation (higher than 10%) in the crystallization chamber, and treating the solution to eliminate or inhibit the formation of aggregates. The crystallization chamber is in fluid communication with the saturation chamber having an excess of compound with a solid nourishing body and having a constant temperature. Solubility of the compound in the solution at saturation temperature is higher than solubility of the compound in the solution at crystallization temperature. The temperature difference between the saturation chamber and crystallization chamber is 2-30[deg] C. Independent claims are included for: (1) a deuterated potassium dihydrogen phosphate monocrystal; and (2) a device for preparing a deuterated potassium dihydrogen phosphate crystal.

IPC 8 full level

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CPC (source: EP US)

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Citation (search report)

See references of WO 2008081103A2

Citation (examination)

- US 2459869 A 19490125 - CHRISTENSEN CARL J, et al
- JP S623090 A 19870109 - KURODA HIROTO, et al
- LEIGH HAGENSON THOMPSON ET AL: "The rate enhancing effect of ultrasound by inducing supersaturation in a solid|liquid system", CHEMICAL ENGINEERING SCIENCE, 1 January 2000 (2000-01-01), pages 3085 - 3090, XP055609155, Retrieved from the Internet <URL:https://www.sciencedirect.com/science/article/pii/S0009250999004819/pdf?md5=7c1ae4777f0ad112e7b327c8d516ae&pid=1-s2.0-S0009250999004819-main.pdf>

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DOCDB simple family (application)

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