

Title (en)
SUBLIMATION APPARATUS AND FREEZE-DRYING PROCESS

Title (de)
SUBLIMATIONSVORRICHTUNG UND GREFRIERTROCKNUNGSPROZESS

Title (fr)
DISPOSITIF DE SUBLIMATION ET PROCÉDÉ DE LYOPHILISATION

Publication
EP 3443286 B1 20210127 (FR)

Application
EP 17719667 A 20170410

Priority

- FR 1653298 A 20160414
- FR 1653297 A 20160414
- FR 2017050848 W 20170410

Abstract (en)
[origin: WO2017178740A1] The invention relates to a freeze-drying device comprising: – an evaporation chamber (5) comprising heating means (15, 16), – a condensing chamber (10) communicating with the said evaporation chamber, – the said evaporation chamber (5) and the said condensing chamber (10) being mounted secured to one another about an axle (30) capable of rotating, characterized in that the device further comprises: – a products inlet and outlet (1, 8) which are connected to the said evaporation chamber (5) by flexible connectors, the products inlet and outlet (1, 8) being mounted fixedly with respect to the evaporation chamber, and – a motor (12) driving the said axle (30) on itself with the following back-and-forth movement: – a first movement driving the said axle (30) in a first direction of rotation with an angle of rotation (α_1) of between 5° and 90°, and – a second movement driving the said axle (30) in a second direction of rotation, opposite to the first angle of rotation, with an angle of rotation (α_2) of between -5° and -90°.

IPC 8 full level
F26B 11/04 (2006.01); **F26B 11/02** (2006.01)

CPC (source: EP IL US)
F26B 11/026 (2013.01 - EP IL US); **F26B 11/0445** (2013.01 - EP IL US); **F26B 11/049** (2013.01 - EP IL US)

Cited by
US2023122361A1; FR3133228A1; WO2023165937A1

Designated contracting state (EPC)
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

DOCDB simple family (publication)
WO 2017178740 A1 20171019; CA 3057608 A1 20171019; CA 3057608 C 20240213; CN 108885057 A 20181123; CN 108885057 B 20210430; EP 3443286 A1 20190220; EP 3443286 B1 20210127; IL 262182 A 20181129; IL 262182 B 20210930; JP 2019513969 A 20190530; JP 6894450 B2 20210630; US 10627162 B2 20200421; US 2019145705 A1 20190516

DOCDB simple family (application)
FR 2017050848 W 20170410; CA 3057608 A 20170410; CN 201780022441 A 20170410; EP 17719667 A 20170410; IL 26218218 A 20181007; JP 2018553433 A 20170410; US 201716088874 A 20170410