

Title (en)

LYOPHILIZING INSTALLATION HAVING TWO SERIES OF RACKS

Publication

EP 0069005 B1 19840725 (FR)

Application

EP 82401135 A 19820622

Priority

FR 8112926 A 19810701

Abstract (en)

[origin: US4449305A] Apparatus for freeze-drying products comprises an enclosure within which are mounted shelves provided with cooling and heating means and in which vessels for containing the products are located. These shelves are arranged in two series, viz a first series maintained at a temperature lower than 0 DEG C. and a second series maintained at a temperature higher than 0 DEG C. in operation and a transfer mechanism is incorporated to cause the vessels to travel from the shelves of the first series to those of the second series, the enclosure being under vacuum. The invention is applicable for the freeze-drying of food products, biological substances, among others.

IPC 1-7

F26B 5/06

IPC 8 full level

F26B 15/14 (2006.01); **F26B 5/06** (2006.01)

CPC (source: EP US)

F26B 5/06 (2013.01 - EP US)

Cited by

EP0442107A1

Designated contracting state (EPC)

AT BE CH DE FR GB IT LI NL SE

DOCDB simple family (publication)

EP 0069005 A1 19830105; EP 0069005 B1 19840725; EP 0069005 B2 19890719; AT E8707 T1 19840815; CA 1189319 A 19850625; DE 3260464 D1 19840830; FR 2508993 A1 19830107; FR 2508993 B1 19831104; JP S5849884 A 19830324; US 4449305 A 19840522

DOCDB simple family (application)

EP 82401135 A 19820622; AT 82401135 T 19820622; CA 405696 A 19820622; DE 3260464 T 19820622; FR 8112926 A 19810701; JP 11263682 A 19820701; US 38940582 A 19820617