

Title (en)  
PROCESS AND APPARATUS FOR PREPARING DRY PRODUCTS FROM SUGAR SYRUPS

Publication  
**EP 0153447 A3 19871104 (DE)**

Application  
**EP 84112248 A 19841011**

Priority  
DE 3407374 A 19840229

Abstract (en)  
[origin: US4651715A] To convert syrups deriving from sugar production and other foodstuffs into a powder or granulated form subsequent to appropriate preliminary concentration and while preserving the product subject to the most extensive possible maintenance of the original composition, a sugar solution with at least 70% dry matter and up to 15% non-sucrose materials in the dry matter is brought by product-preserving rapid heating to a high temperature. Subsequently the vapors are allowed to escape to a dry-matter content of at least 90% and the thickened syrup is converted into a dry and pourable product just by cooling and sudden extraction of the residual water through crystallization. This preferably occurs in equipment comprising a steam-heated spiral-tube heat exchanger with a spiral tube that tapers out to 150 to 200% of its original free cross-section and has built-in twist generating baffles, a vapor precipitator to atmospheric pressure, and a crystallizer below the precipitator.

IPC 1-7  
**C13F 3/00**; **C13F 1/02**; **C13F 5/00**

IPC 8 full level  
**C13B 30/02** (2011.01); **C13B 40/00** (2011.01); **C13B 50/00** (2011.01)

CPC (source: EP US)  
**C13B 40/002** (2013.01 - EP US)

Citation (search report)  
• [A] GB 1163694 A 19690910 - AMERICAN SUGAR [US]  
• [A] FR 2268077 A1 19751114 - TATE & LYLE LTD [GB]  
• [A] FR 2451718 A1 19801017 - RICHTER GEDEON VEGYESZET [HU]

Cited by  
DE3842751A1; EP3804531A1

Designated contracting state (EPC)  
AT BE CH DE FR GB IT LI LU NL SE

DOCDB simple family (publication)  
**EP 0153447 A2 19850904**; **EP 0153447 A3 19871104**; **EP 0153447 B1 19900627**; AT E54171 T1 19900715; DE 3407374 A1 19850829; DE 3482596 D1 19900802; US 4651715 A 19870324

DOCDB simple family (application)  
**EP 84112248 A 19841011**; AT 84112248 T 19841011; DE 3407374 A 19840229; DE 3482596 T 19841011; US 70653585 A 19850227