

Title (en)  
Sugar beet membrane filtration process

Title (de)  
Membranfiltrierungsverfahren für Zuckerrüben

Title (fr)  
Procédé de filtration sur membrane de betterave à sucre

Publication  
**EP 1788100 A2 20070523 (EN)**

Application  
**EP 07003542 A 20000815**

Priority  
• EP 00957444 A 20000815  
• US 37602699 A 19990819  
• US 61883100 A 20000718  
• US 61841600 A 20000718

Abstract (en)  
The present invention relates to a process for producing sugar from beets, comprising the steps of: (e) slicing sugar beets into cossettes and obtaining a sucrose-containing feed juice therefrom by diffusion, wherein the feed juice also comprises ash and invert sugars; (f) filtering the sucrose-containing feed juice through a first ultrafiltration membrane that has a first molecular weight cutoff of at least about 2,000 daltons and a pore size no greater than about 0.1 microns, thereby producing a first ultrafiltration permeate and a first ultrafiltration retentate; (g) filtering the first ultrafiltration permeate through a second ultrafiltration membrane that has a second molecular weight cutoff that is lower than the first molecular weight cutoff and is between about 500-5,000 daltons; thereby producing a second ultrafiltration permeate and a second ultrafiltration retentate; and (h) filtering the second ultrafiltration permeate through a nanofiltration membrane; thereby producing a nanofiltration permeate and a nanofiltration retentate, wherein the nanofiltration retentate has a higher concentration of sucrose on a dry solids basis than the feed juice in step (c), and wherein the nanofiltration permeate comprises at least about 30% of the ash and at least about 30% by weight of the invert sugars present in the second ultrafiltration permeate.

IPC 8 full level  
**C13B 10/00** (2011.01); **C13B 20/00** (2011.01); **C13B 20/14** (2011.01); **C13B 20/16** (2011.01)

CPC (source: EP)  
**C13B 10/00** (2013.01); **C13B 20/00** (2013.01); **C13B 20/165** (2013.01)

Cited by  
US9587285B2

Designated contracting state (EPC)  
AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE

DOCDB simple family (publication)  
**WO 0114594 A2 20010301**; **WO 0114594 A3 20011206**; AT E358187 T1 20070415; AU 6906300 A 20010319; CZ 2002570 A3 20021113; DE 60034127 D1 20070510; DE 60034127 T2 20071206; EP 1204767 A2 20020515; EP 1204767 B1 20070328; EP 1788099 A2 20070523; EP 1788100 A2 20070523; HU P0204353 A2 20030528; HU P0204353 A3 20041228; PL 353772 A1 20031201; SK 3772002 A3 20021106

DOCDB simple family (application)  
**US 0022301 W 20000815**; AT 00957444 T 20000815; AU 6906300 A 20000815; CZ 2002570 A 20000815; DE 60034127 T 20000815; EP 00957444 A 20000815; EP 07003541 A 20000815; EP 07003542 A 20000815; HU P0204353 A 20000815; PL 35377200 A 20000815; SK 3772002 A 20000815