

Title (en)  
PROCESS FOR THE PRODUCTION OF WHOLE GRAIN MEAL

Title (de)  
VERFAHREN ZUR HERSTELLUNG EINER VOLLKORNMAHLZEIT

Title (fr)  
PROCÉDÉ DE PRODUCTION DE FARINE DE GRAINS ENTIERS

Publication  
**EP 3541521 A1 20190925 (EN)**

Application  
**EP 17811208 A 20171116**

Priority  
• IT 201600117537 A 20161121  
• EP 2017079517 W 20171116

Abstract (en)  
[origin: WO2018091615A1] Process for the production of a whole grain cereal meal, which comprises the steps of: a) grinding cereal caryopses into particles of diameter of not less than 2 mm; b) feeding a continuous flow of said ground caryopses into a wet heat treatment reactor comprising a cylindrical tubular body (1) with horizontal axis, having inlet openings (5, 6, 10) for the ground caryopses and for water, a discharge opening (7), a heating jacket (4) and a rotor (8), comprising a shaft provided with radially projecting elements and set in rotation at a speed greater than or equal to 150 rpm, feeding also a continuous flow of water which is dispersed into minute droplets; c) centrifuging these flows against the inner wall of the reactor, while they advance in substantial contact with the inner wall of the reactor towards the discharge opening (7), and discharging from the discharge opening a continuous flow of wet ground caryopses particles (moisture content 20-30%); feeding these particles into a thermal dehydration and treatment reactor, with a structure similar to that of the wet heat treatment reactor, through an inlet opening (105), the inner wall of the reactor being kept at a temperature of at least 100°C by means of a heating jacket (104) and the rotor (108) being rotated at a speed of at least 150 rpm; e) centrifuging and causing these wet ground caryopses to advance inside the reactor by means of the action of this rotor and discharging from the discharge opening (107) of the reactor a continuous flow of ground caryopses with a moisture content of between 2% and 15%; f) subjecting these ground caryopses to a further grinding step, to reduce the particle size to a value less than or equal to 0.5 mm, thus obtaining the whole grain meal.

IPC 8 full level  
**B02B 1/06** (2006.01); **B02B 1/08** (2006.01); **B02B 5/02** (2006.01)

CPC (source: EP)  
**B02B 1/06** (2013.01); **B02B 1/08** (2013.01); **B02B 5/02** (2013.01)

Citation (search report)  
See references of WO 2018091615A1

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

Designated extension state (EPC)  
BA ME

DOCDB simple family (publication)  
**WO 2018091615 A1 20180524**; EP 3541521 A1 20190925; EP 3541521 B1 20211229; ES 2909591 T3 20220509;  
IT 201600117537 A1 20180521; PL 3541521 T3 20220425

DOCDB simple family (application)  
**EP 2017079517 W 20171116**; EP 17811208 A 20171116; ES 17811208 T 20171116; IT 201600117537 A 20161121; PL 17811208 T 20171116