

Title (en)
METHOD OF ISOLATION OF BETA-GLUCANE OF WHEAT

Title (de)
VERFAHREN ZUR ISOLIERUNG VON BETA-GLUCAN AUS WEIZEN

Title (fr)
PROCÉDÉ D'ISOLEMENT DU BÉTA-GLUCANE DE BLÉ

Publication
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Application
EP 15813610 A 20151026

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Abstract (en)
[origin: WO2016068738A1] The invention consists in using cavitation in at least one operation during the process of beta-glucane isolation from wheat (raw material), preferably oats or barley. The wheat material, in particular grain, milled grain or its fractions, such as flour or bran are subject to defatting in conditions enabling occurrence of cavitation in a solution of water : organic solvent, in particular the ethyl alcohol, in proportions 1:1 to 1:5, preferably 1:3, in the temperature from 0° C to 60 °C, preferably 25 °C. Defatted raw material is subject to water extraction, with the application of cavitation, in a mass proportion from 5:1 to 20:1, preferably 10:1. PH of the extraction process ranges from 6,0 to 8,0, preferably 7,0, the temperature of the extraction process ranges from 1 °C to 60 °C, preferably 30 °C, and the water extract is separated from the insoluble suspension by means of typical methods, such as filtration, centrifuging, sedimentation or flocculation. Denaturation of proteins occurs during the process of cavitation, in particular sonic cavitation, the duration of the process is 10-60 minutes, preferably 30 minutes; the de-proteinised filtrate containing water extract of beta-glucane is subject to precipitation of beta-glucane aided by the cavitation, in particular sonic cavitation, in the presence of an organic solvent, in particular ethyl alcohol, in the ratio: from 1:0,1 to 1:0,3, preferably 1:0,2, in the temperature from 0 °C to 30 °C, preferably from 25 °C.

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