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Title **(EN)** INTEGRATED PROCESS FOR EXTRACTING PROTEINS AND ARABINOXYLANS FROM BREWER'S SPENT GRAIN
(FR) PROCÉDÉ INTÉGRÉ D'EXTRACTION DE PROTÉINES ET D'ARABINOXYLANES À PARTIR DE DRÊCHES DE BRASSERIE
(PT) PROCESSO INTEGRADO DE EXTRACÇÃO DE PROTEÍNAS E ARABINOXYLANAS DA DRECHE CERVEJEIRA
Abstract: **(EN)**The present invention proposes an integrated process for extracting proteins and arabinoxylans from brewer's spent grain, without the need to subject the spent grains to any pre-treatment, through the use of alkaline reagents followed by selective precipitation by acidification of the medium and addition of ethanol. The present invention is applicable in the areas of reuse or valorization of brewer's spent grain, with the aim to obtain products that can be used as ingredients in the food industry, and in the production of dietetic and pharmaceutical products. The final residue obtained after extraction of the proteins and arabinoxylans can be used as a source of cellulose, as an insoluble dietetic fiber or, possibly, as a fuel or raw material for the paper-making industry.
(FR)La présente invention concerne un procédé d'extraction intégré de protéines et d'arabinoxylanes à partir de drêches de brasserie, sans que les drêches soient soumises à un prétraitement quelconque, par utilisation de réactifs alcalins, puis par précipitation sélective par acidification du milieu et addition d'éthanol. La présente invention trouve une application dans les domaines de la mise à profit ou de la valorisation des drêches de brasserie, en vue de l'obtention de produits susceptibles d'être utilisés comme ingrédients dans l'industrie alimentaire, de produits diététiques et de produits pharmaceutiques. Le résidu final obtenu après l'extraction des protéines et des arabinoxylanes peut être utilisé comme source de cellulose, comme fibre diététique insoluble ou, éventuellement, comme combustible ou comme matière première destinée à l'industrie du papier.
(PT)O presente invento propõe um processo de extracção integrado das proteínas e das arabinoxilanas da dreche cervejeira sem que a dreche tenha sido submetida a qualquer tipo de pré-tratamento, através da utilização de reagentes alcalinos seguida de precipitação selectiva por acidificação do meio e adição de etanol. A presente invenção tem aplicação nas áreas de aproveitamento/valorização da dreche cervejeira, com vista à obtenção de produtos passíveis de serem usados como ingredientes na indústria alimentar, de produtos dietéticos e farmacêuticos. O resíduo final obtido depois da extracção das proteínas e arabinoxilanas pode ser usado como fonte de celulose, como fibra dietética insolúvel ou, eventualmente, como combustível ou como matéria-prima para a indústria do papel.
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