Title (en)

Process for the production of hydrogels in the form of spherically shaped beads with larger diameters.

Title (de)

Verfahren zur Herstellung von Hydrogelen in Form kugelförmiger Perlen grösseren Durchmessers.

Title (fr)

Procédé de préparation d'hydrogels sous forme de perles sphériques de plus grand diamètre.

Publication

EP 0000507 A1 19790207 (DE)

Application

EP 78100375 A 19780712

Priority

US 81740477 A 19770720

Abstract (en)

1. A process for producing essentially uniform spherical beads of up to 5 mm diameter of a cross-linked, waterinsoluble hydrogel by suspension polymerisation of (A) 95-30% by weight, relative to the hydrogel, of at least one watersoluble, monoolefinic monomer, which can be replaced to the extent of up to 70% by weight, relative to the total amount of the monomer, by at least one water-insoluble monomeric compound, the hydrogel containing at most 60% by weight of the water-insoluble monomeric compound, and at least 5% by weight of the total monomer consisting of a hydroxyl-substituted, hydrophilic vinyl monomer, with (B) 5 to 70% by weight, relative to the hydrogel, of a terminal diolefinic, crosslinking compound having a molecular weight of 400-8000, in the presence of a polymerisation catalyst in a concentrated, aqueous inorganic salt solution, and of a dispersing agent, and also by treatment of the hydrogel with an acid, characterised in that there is used, as dispersing agent, 0.01-5% by weight, based on the hydrogel, of at least one water-insoluble, gelatinous, water-binding, inorganic metal hydroxide or metal hydroxide salt in the absence of excess alkali or free hydroxyl ions.

Abstract (de)

Die vorliegende Erfindung betrifft ein verbessertes Verfahren zur Herstellung einheitlicher, kugelförmiger Perlen mit einem Durchmesser bis zu 5 mm, welche aus einem vernetzten, wasserunlöslichen Hydrogel bestehen. Hydrogele dieser Art werden mittels suspendierter Polymerisation in konzentrierten Lösungen eines Salzes, in denen monoolefinische Monomere und endständig diolefinische Macromere enthalten sind, in Gegenwart eines wasserunlöslichen, gallertartigen, stark wasserbindenden anorganischen Metallhydroxids als Suspensionsmittel in Abwesenheit von überschüssigem Alkali hergestellt. Hydrogele dieser Art können in vielfacher Weise für pharmazeutische und industrielle Zwecke verwendet werden.

IPC 1-7

C08F 220/28; A61K 9/00; C08F 291/00

IPC 8 full level

A61K 9/58 (2006.01); **C08F 2/00** (2006.01); **C08F 2/18** (2006.01); **C08F 220/28** (2006.01); **C08F 290/00** (2006.01); **C08F 290/06** (2006.01); **C08F 291/00** (2006.01); **C08F 299/00** (2006.01)

CPC (source: EP)

C08F 220/20 (2013.01); **C08F 290/06** (2013.01); **C08F 291/00** (2013.01)

Citation (search report)

- [A] FR 2276063 A1 19760123 - CIBA GEIGY AG [CH]
- [AD] US 2801992 A 19570806 - MALCOLM HUTCHINSON HENRY, et al

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Designated contracting state (EPC)

BE CH DE FR GB NL SE

DOCDB simple family (publication)

EP 0000507 A1 19790207; **EP 0000507 B1 19820929**; AT 366066 B 19820310; AT A523278 A 19810715; CA 1136317 A 19821123; DE 2862045 D1 19821111; DK 149002 B 19851216; DK 149002 C 19860825; DK 322778 A 19790121; ES 471862 A1 19790201; JP S5440891 A 19790331; JP S614401 B2 19860210

DOCDB simple family (application)

EP 78100375 A 19780712; AT 523278 A 19780719; CA 307599 A 19780718; DE 2862045 T 19780712; DK 322778 A 19780719; ES 471862 A 19780719; JP 8778278 A 19780720