

Title (en)

CRYOTROPIC HYDROGELS AND THEIR USE AS FILTERS

Title (de)

KRYOTROPE HYDROGELE UND IHRE VERWENDUNG ALS FALTER

Title (fr)

HYDROGELS CRYOTROPES ET LEUR UTILISATION COMME FILTRES

Publication

EP 2411113 A4 20141029 (EN)

Application

EP 10753772 A 20100316

Priority

- SE 2010050285 W 20100316
- SE 0950156 A 20090316

Abstract (en)

[origin: WO2010107375A1] There is provided a particle-filter comprising at least one hydrogel formed in aqueous solution at a temperature below 0 °C. The filter can arrest particulates of smoke by physisorption on the solid surface of the gel or by chemisorption if the gel is suitably functionalized. The effectiveness of filter in arresting the solid particles and the pressure drop can be controlled by varying the porosity and the pore size distribution of the filter which in turn can be modulated by varying the monomer to water and monomer to cross-linker ratio in the pre-polymer solution. The filter is able to reduce the particle content of the smoke. There is further provided a cigarette comprising at least one particle-filter according as well as a method for the filtration of smoke.

IPC 8 full level

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CPC (source: EP US)

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Citation (search report)

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- [A] ERA JAIN ET AL: "Macroporous interpenetrating cryogel network of poly(acrylonitrile) and gelatin for biomedical applications", JOURNAL OF MATERIALS SCIENCE: MATERIALS IN MEDICINE, KLUWER ACADEMIC PUBLISHERS, BO, vol. 20, no. 1, 3 July 2008 (2008-07-03), pages 173 - 179, XP019770650, ISSN: 1573-4838
- See references of WO 2010107375A1

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