

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

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Application

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Priority

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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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