

Title (en)

HIGH MOLECULAR WEIGHT POLYMER BASED ON N,N-DIMETHYLACRYLAMIDE

Title (de)

HOCHMOLEKULARGEWICHTPOLYMER AUF BASIS VON N,N-DIMETHYLACRYLAMID

Title (fr)

POLYMERE DE HAUT POIDS MOLECULAIRE A BASE N,N-DIMETHYLACRYLAMIDE

Publication

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Application

EP 05739585 A 20050310

Priority

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- FR 0402630 A 20040315

Abstract (en)

[origin: FR2867479A1] Polymer, comprising a probe molecule copolymerized with N,N-[dialkyl(C1-C4)acrylamide], is new. A polymer comprises a substituted probe molecule obtained by copolymerization of a monomer (N, N-[dialkyl](C1-C4) acrylamide) (A) and a monomer (B) chosen from: (a) monomers (B1) comprising at least one reactive group able to form a covalent bond with a complementary group of a probe molecule; and (b) monomers comprising probes functionalized by a copolymerizable monomer (monomer B2). The probe molecules are chosen from proteins, polysaccharides, oligosaccharides, nucleic acids, and small organic molecules. The number of side group substituents is at least two per molecule of copolymer. The probe molecule has a molecular mass of more than 500000 g/mole, and the incorporation of the probe molecules is less than 30% of the total number of the acrylamide monomers. Independent claims are also included for: (1) use of the polymer in preparation of a solid support material (I) comprising a surface functionalized by the probe molecule; (2) preparation of (I) comprising at least a surface functionalized by a layer of polymer comprises contacting (I) with a solution in a compatible solvent of a polymer, incubating the surface with the polymer solution till the polymer adsorbs to the solid support surface, washing the solid support surface with a solvent free from polymer; (3) use of (I) for the immobilization and screening of supplementary target molecules (II) in a solution or for the determination of biochemical, chemical or biological reactions on solid support; and (4) immobilization and screening of (II) comprises contacting (I) (comprising a surface functionalized by the probe molecule) with a liquid sample susceptible to contain targeting molecules till the realization or immobilization of the reaction occur and subjecting the layer of polymer of (I) to desorption by washing (I) with an alkaline solution or a solvent.

IPC 8 full level

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