

Summaries of UK Patent Applications

Insolubilized Biocompatible Hyaluronic Acid Preparations. GB 2151-244A. Filed 13 August 1984, published 17 July 1985. Applicants – Biomatrix Inc., New Jersey, USA.

Water insoluble, biocompatible hyaluronic acid preparations are made by subjecting hyaluronic acid to treatment with a cross-linking agent selected from formaldehyde, dimethylolethylene urea, ethylene oxide, a polyaziridine, a polyisocyanate and divinyl sulphone. The preparations may be used in such *in vivo* applications as artificial heart valves, vascular grafts, etc. (see GB 2151246A, GB 2151247A).

Low Dusting Powdery Alginate Impression Material for Dental Use. GB 2151245A. Filed 31 October 1984, published 17 July 1985. Applicants – G-C Shika Kogyo Kabushiki Kaisha, Tokyo, Japan.

The object of the invention is to produce an alginate based dental impression material that has low dusting properties, good storage stability and a gypsum mould with a smooth high definition surface. It is claimed that this can be achieved by the incorporation of polyvinylpyrrolidone, a hydrophobic liquid such as a hydrocarbon or silicone oil and a metal oxide, fluoride or hydroxide.

Biocompatible Polymeric Articles. GB 2151247A. Filed 6 November 1984, published 17 July 1985. Applicants – Biomatrix Inc., New Jersey, USA.

Hyaluronic acid is included in other polymeric materials such as polyurethanes, polyesters, polyolefins, polyamides, etc. The inclusion of the

hyaluronic acid improves biocompatibility. The mixed polymer can be used in various prosthetic devices such as heart valves (see GB 2151244A and GB 2151247A).

Biocompatible Polymeric Articles. GB 2151247A. Filed 6 November 1985, published 17 July 1985. Applicants – Biomatrix Inc., New Jersey, USA.

Similar to GB 2151246A above. Poly(2-hydroxyethyl methacrylate) modified by the inclusion of hyaluronic acid is also mentioned (see also GB 2151244A).

Cellulose Solutions. GB 2151632A. Filed 20 December 1984, published 24 July 1985. Applicants – Tachikawa Research Institute, Kyoto-fu, Japan.

A method for preparing cellulose solutions by dissolving the cellulose in a mixed solvent in the temperature range 50–100°C is described. The solvent consisted essentially of an aliphatic quaternary ammonium halide, containing a lower alkyl group and another solvent capable of dissolving the halide, e.g. dimethyl sulphoxide.

Production of Single Cell Protein and Sucrose. GB 2151635A. Filed 19 November 1984, published 24 July 1985. Applicants – ICI, London, UK.

A process for producing single cell protein or single cell protein plus sucrose using sugar cane as a raw material is described.

Interpolymer Gels. GB 2151638A. Filed 21 December 1984, published 24 July 1985. Applicants – Colgate-Palmolive Co., New York, USA.

Water soluble and insoluble gels can be formed by reacting cationic and anionic polymers. The anionic polymer is either alginic acid or sulphonic acid and the cationic polymer is a quaternized ammonium polyelectro-

lyte. The water insoluble gels are clear and of extremely high viscoelasticity.

Destabilization of Sludge with Hydrolyzed Yam Starch Flocculants. GB 2151644A. Filed 21 August 1984, published 24 July 1985. Applicants – Suncor Inc. (Canada), Ontario, Canada.

Hydrolysates prepared from particular types of yam starch are surprisingly effective when used in the treatment of bituminous tar sands tailing and in phosphate slimes. The hydrolysates are prepared by heating aqueous suspensions of the starch at about 90°C in the presence of soluble metal salts which will form an insoluble salt *in situ* (see also GB 2151645A and GB 2151646A).

Destabilization of Sludge with Hydrolysed Cassava Starch Flocculants. GB 2151645A. Filed 21 August 1984, published 24 July 1985. Applicants – Suncor Inc. (Canada), Ontario, Canada.

Hydrolysates prepared from cassava starch as described in GB 2151644A above are claimed to be surprisingly effective for destabilizing dilute as well as thick sludge suspensions (see also GB 2151646A).

Destabilization of Sludge with Hydrolyzed Dasheen Starch Flocculants. GB 2151646A. Filed 21 August 1984, published 24 July 1985. Applicants – Suncor Inc. (Canada), Ontario, Canada.

Dasheen starch hydrolysates are claimed to be particularly effective for destabilizing dilute as well as thick sludge suspensions (see also GB 2151644A and GB 2151645A).

Process for the Preparation of Cyclodextrins. GB 2151647A. Filed 21 December 1984, published 24 July 1985. Applicants – Chinoin Gyogyszer es Vegyezeti Termekek Gyara Rt, Budapest, Hungary.

Cyclodextrins, particularly high-purity γ - and α -cyclodextrin, are prepared starting from a starch substrate of low reducing capacity

prepared by the use of α -amylase. The cyclodextrin is prepared by converting the starch substrate with cyclodextrin glucosyl transferase, and an aliphatic ketone and/or an aromatic alcohol or hydrocarbon is used as a precipitating agent.

Porous Cellulose Acetate Particles. GB 2152936A. Filed 24 January 1985, published 14 August 1985. Applicants – Diacel Chemical Industries Ltd, Osaka, Japan.

A process for producing porous cellulose acetate particles is described.

Cellulose Acetate Graft Copolymer and Yarn Formed Therefrom. GB 2152944A. Filed 22 January 1985, published 14 August 1985. Applicants – Diacel Chemical Industries Ltd, Osaka, Japan.

Cellulose acetate with free hydroxyl groups is modified by the ring-opening graft polymerization of a cyclic ester such as a lactone, particularly E-carprolactone. The modified cellulose acetate is particularly suitable in the production of a yarn.

Fluid Compositions. GB 2153372A. Filed 24 January 1985, published 21 August 1985. Applicants – National Research and Development Corporation, London, UK.

Electro-rheological fluids exhibiting the Winslow effect (an increase in apparent viscosity on application of an electric field) are described. The fluid consists of a hydrophobic liquid in which solid particles are dispersed. The particles can be starch or other carbohydrate polymers.

A Process for the Production of a Starch Dispersible in Boiling Water. GB 2153374A. Filed 28 January 1985, published 21 August 1985. Applicants – Société des Produits Nestlé S A, Vevey, Switzerland.

The process is particularly applicable to potato starch and typically involves heating the starch in the presence of emulsifiers and about

25% water for 20 min at 90°C. The resulting product has an excellent dispersibility in boiling water and gives stable Brabender viscosities when held at 95°C.

Fibrous Serum Milk Protein Concentrates. GB 2153650A. Filed 31 December 1984, published 29 August 1985. Applicants – Kraft Inc., Illinois, USA.

Fibres are formed from mixtures of whey protein and xanthan gum by adjusting the pH, normally by acid addition. The fibres can be stabilised by heating at a minimum of 70°C and used in simulated meat compositions (see also GB 2154420A).

Microbial Enhancement of Polymer Viscosity. GB 2153834A. Filed 20 December 1984, published 29 August 1985. Applicants – Standard Oil Company, Ohio, USA.

The viscosity of a polymer solution is increased by combining it with a microorganism under conditions favourable to microbial growth. The microorganism should be incapable of *de novo* synthesis of the polymer but capable of increasing its solution viscosity. Polymers mentioned include guar gum, locust bean gum, cellulose derivatives and xanthan. Suggested uses are in oil recovery, water clarification and paper production.

Fibrous Protein Complexes. GB 2154420A. Filed 31 December 1984, published 11 September 1985. Applicants – Kraft Inc., Illinois, USA.

The production of fibres with xanthan gum and various proteins, e.g. soy protein, egg protein and casein, is considered in some detail. The factors governing fibre yield and quality, such as pH, temperature, gum-protein ratio and ionic strength, are investigated using statistically designed experiments and predictive equations presented. Examples of the use of the fibres in various food dishes are given (see also GB 2153650A).

Peritoneal Dialysis and Composition for Use Therein. GB 2154469A. Filed 15 February 1985, published 11 September 1985. Applicants – Milner Research Ireland Ltd, Tipperary, Republic of Ireland.

A peritoneal dialysis composition containing an osmotic agent comprising a glucose polymer mixture including at least 50% by weight of glucose polymers, of degree of polymerisation greater than 12, is described.

Production of Cellulose Carbamate. GB 2155479A. Filed 12 March 1985, published 25 September 1985. Applicants – Neste Oy, Espoo, Finland.

A procedure for manufacturing cellulose carbamate by reacting isocyanic acid and cellulose at elevated temperature is described.

Powder Compositions for Producing Tile Adhesives and Grouts. GB 2155944A. Filed 27 February 1984, published 2 October 1985. Applicants – Building Adhesives Ltd, Stoke, UK.

The powder compositions comprise water soluble polymers and inorganic fillers. The water soluble polymer can be a cellulose derivative or a starch derivative. Examples of hydroxy propyl methyl cellulose ether inclusion are given.

Dispersed Absorbent Products and Method of Use. GB 2156370A. Filed 27 March 1985, published 9 October 1985. Applicants – Personal Products Co., New Jersey, USA.

The use of starch or cellulose graft copolymers, e.g. starch acrylate and cellulose acrylate polymers, cross-linked carboxymethyl cellulose and natural polysaccharides such as guar gum as part of an absorbent product, is described. The polymer in particulate form is dispersed in an inert organic carrier. The composition can be used in nappies, sanitary towels, etc.