

Summaries of UK Patent Applications

Post-treatment of Synthetic Fibre Fabrics. GB 2164949A. Filed 10 September 1985, published 3 April 1986. Applicants — Dai-Ichi Kogyo Seiyaku Co. Ltd, Kyoto, Japan.

The preparation of a thermally reactive blocked isocyanate group-containing polysaccharide derivative is described. Examples where starch and cellulose were the starting materials are given.

Pellicle Structure for Transmission of Mid Ultra Violet Light. GB 2165545A. Filed 25 September 1985, published 16 April 1986. Applicants — Tau Laboratories Inc. (USA — Delaware), New York, USA.

The formation of a freely standing thin pellicle film of cellulose acetate butyrate is described. This can transmit radiation in the ultra violet range from wavelengths of 240 nm and above.

Branched Cyclodextrins. GB 2165549A. Filed 1 February 1965, published 16 April 1986. Applicants — Director of National Food Research Institute, Ibaraki-ken, Japan.

A disadvantage of cyclodextrins for many practical applications is their low solubility. Branched cyclodextrins have a higher solubility. This patent describes a method of preparing branched cyclodextrins and comprises applying a branch-splitting enzyme to a mixture of cyclodextrin and maltose. The branch-splitting enzyme is preferably pullanase or isoamylase.

Methods and Composition for the Treatment of Pipelines. GB 2167078A. Filed 14 November 1984, published 21 May 1986. Applicants — Services Dowell Schlumberger (Panama), London.

A non-aqueous gel composition is described in which a polysaccharide, especially xanthan gum, is dissolved in a water-miscible organic liquid,

especially monoethylene glycol, and then crosslinked by a metal ion. Ferric ions in the form of ammonium ferric sulphate are particularly effective. The gel can be used in pipeline cleaning.

Process for the Degradation of a Viscous Microbial Polysaccharide Formulation, a Process for Preparing an Acid Degradable Polysaccharide Formulation and a Polysaccharide Formulation thereby Obtained. GB 2167079A. Filed 7 November 1985, published 21 May 1986. Applicants — Shell Internationale Research Maatschappi BV, The Hague, The Netherlands.

The rate of degradation of a polysaccharide on addition of acid increases rapidly when the temperature is close to the transition temperature at which the biopolymer conformation changes to a less-ordered state. This temperature can be lowered by the addition of salts such as CaBr_2 or ZnBr_2 . Examples are given with succinoglucan- and xanthan-type polysaccharides.

Macromolecular Compound with Platinum Containing Anti-tumour Activity. GB 2168063A. Filed November 1985, published 11 June 1986. Applicants — Československá Akademie VED (Czechoslovakia), Praha, Czechoslovakia.

The compound is prepared by acylation of the polymer-carrying alcohol groups with chloride anhydride of trimellitic acid hydrolysing the anhydride and bonding an atom of bivalent platinum carrying an amino ligand to the formed vicinal carboxylic groups. Polysaccharides are one of the classes of polymers to which the process is applicable.

Cross-linked Hyaluronic Acid Gels. GB 2168067A. Filed 13 May 1985, published 11 June 1986. Applicants — Biomatrix Inc. (USA Delaware), New Jersey, USA.

Crosslinked gels are prepared by reacting hyaluronic acid with divinyl sulphone. The swelling ratio of these hyaluronic acid gels is substantially higher than those formed with other polysaccharides. Mixed gels

can be prepared by including other biopolymers. The products formed are useful in such applications as cosmetic formulations and drug delivery systems.

Acylglycans Extracted from *Klebsiella*. GB 2168365A. Filed 6 December 1985, published 18 June 1986. Applicants — Roussel-Uclaf (France), Paris, France.

Polysaccharides with a molecular weight of about 10 000 extracted from *Klebsiella* are described. Component sugars are galactose (β 1-3 linked), glucose, mannose and heptose. Some pharmaceutical compositions containing these materials are described.

Gellable Polysaccharide Gum Compositions. GB 2168366A. Filed 11 December 1985, published 18 June 1986. Applicants — Mars GB Ltd, London, UK.

A gellable composition consisting of three components, (i) gellan gum, (ii) xanthan gum and (iii) a galactomannan or glucomannan, is described. The gels prepared have advantages both in terms of strength and elasticity compared with two-component systems.

Dyeing Composition. GB 2168727A. Filed 20 December 1985, published 25 June 1986. Applicants — L'Oreal, Paris, France.

A hair dye is described containing at least one oxidation dye precursor and at least one water-soluble bio-heteropolysaccharide in a cosmetically acceptable medium, for use with an oxidising agent which develops the oxidation dye precursors. The preferred microbial polysaccharide is xanthan gum, though others are described.

Polypeptide Possessing Cyclomaltodextrin Glucanotransferase Activity. GB 2169902A. Filed 3 December 1985, published 23 July 1986. Applicants — Kabushiki Kaisha Hayashibara Seibutsu Kagaku Kenkyujo (Japan), Okayama, Japan.

The sequence of the cyclomaltodextrin glucotransferase gene is described. A recombinant DNA carrying this gene is introduced into a host microorganism of the species *Bacillus subtilis* or *Escherichia coli*. In this way large amounts of the enzymes can be produced. The enzymes are used to produce glycosides having low calorie, low cariogenic properties.

Process for Removing Nucleic Acids and Purine Bases from Gelatin. GB 2169903A. Filed 19 December 1985, published 23 July 1986. Applicants — Forte Fotokemiai Ipar (Hungary), Budapest, Hungary.

A process where nucleic acids and purine bases are removed from gelatin by use of a cyclodextrin bead column is described.

Process for the Purification of Proteins from a Liquid such as Milk. GB 2171102A. Filed 29 January 1986, published 20 August 1986. Applicants — Oleofina SA (Belgium), Bruxelles, Belgium.

A process for the recovery of proteins with isoelectric points greater than 7.5 is described. Milk proteins, e.g. lactoferrin and lactoperoxydase, in particular, can be recovered. The liquid is passed over particles of a gellable acidic polysaccharide. Preferred polysaccharides are alginates and carrageenans. The gel particles must have a shortest dimension of not less than 0.5 mm. The protein can be recovered by treating the gel with a salt solution.