Carbohydrate Polymers **12** (1990) 101–103

Summaries of UK Patent Applications

Immobilized Antibodies. GB 2212 500A. Filed 11 November 1988, published 26 July 1989. Applicants — Rohm GmbH, Darmstadt, FRG.

Antibodies are immobilized by a site-specific formation of conjugates of antibodies containing oligosaccharides via an oxidative modification of the carbohydrate region of the antibody. The antibody is immobilized on a matrix polymer which is conveniently a crosslinked polymer of acrylamide or methacrylate which preferably consists of bead particles. The carbohydrate part of the antibody is subjected to periodate or enzymic oxidation to give formyl groups.

Composition of Filler and Temporary Binder. GB 2215 2501A. Filed 16 November 1988, published 26 July 1989. Applicants — Shinwa Industrial Co. Ltd, Tokyo, Japan.

A temporary binder consists of an enzyme and a glue which is a substrate for the enzyme (e.g. starch/amylase, casein or gelatin/protease, cellulose/cellulase).

Increasing the Filterability of a Polysaccharide Wort and its Use in Enhanced Oil Recovery. GB 2212 811A. Filed 11 November 1988, published 2 August 1989. Applicants — Institut Francais du Petrole, Rueil-Malmaison, France.

A polysaccharide wort is purified to increase its filterability, by first filtering off any insoluble material and then by treatment with a siliceous material, e.g. sand at a temperature of at least 50°C to remove proteinaceous impurities. The purified wort may be xanthan, scleroglucan or schizophyllan.

Method of Producing Destructurized Starch. GB 2214 516A. Filed 25 January 1988, published 6 September 1989. Applicants — Warner-Lambert Company, New Jersey, USA.

This patent describes an endothermic transition in starch which it claims has not been previously reported. The endothermic transition occurs at temperatures just below the endothermic changes characteristic of oxidative and degradative transitions and can be detected by the observation of a relatively narrow peak on differential scanning calorimetry thermograms. For potato starch containing 17% water the transition occurs at a nominal temperature of 183°C. This temperature depends on the concentration of starch and the species of cation present. Melts formed by heating above the transition temperature are transparent and can be processed into solid articles by for example, extrusion or injection moulding, more easily than 'melts' formed at lower temperatures.

Polymeric Material Made from Detructurized Starch and at Least One Synthetic Polymeric Material. GB 2214 918A. Filed 3 February 1988, published 13 September 1989. Applicants — Warner-Lambert Company, New Jersey, USA.

A polymeric material obtained from a melt comprising a water-containing destructurized starch and at least one thermoplastic polymer is described. The material is prepared by heating the starch and polymer and then subjecting them to a shaping process, e.g. injection moulding, blow moulding, extrusion, etc. Synthetic polymers include polyvinylchloride, polyamide, polyester, etc. The product is film forming and may be used for the encapsulation of pharmaceutical and agricultural products.

Method for Producing Destructurized Modified Starch. GB 2214 919A. Filed 3 February 1988, published 13 September 1989. Applicants — Warner-Lambert Company, New Jersey, USA.

Starch with a water content in the range 5–30% by weight, is heated at elevated temperatures and pressures in the presence of at least one organosilane capable of reacting with a hydroxyl group. Examples of silanes include methyltriethoxysilane and propyltrimethoxysilane. Moulded articles prepared in this way show improved water repellance without loss of strength.

Polymeric Material Made from Destructurized Starch and Zein. GB 2214 920A. Filed 3 February 1988, published 13 September 1989. Applicants — Warner-Lambert Company, New Jersey, USA.

A polymeric material characterized by melting together a water-containing destructurized starch and zein is described. Articles prepared from the mixed system are claimed to have improved properties. The addition of silanes to this system is also discussed (see above patent).

Denture Protection. GB 2215 730A. Filed 13 February 1988, published 27 September 1989. Applicants — National Research Development Corporation, London, UK.

A method of providing dentures with a protective coating by applying a non-self supporting, initially adhesive, but subsequently sacrificial coating of a non-toxic, negatively charged, polysaccharide which, when subjected to an in-vitro bacterial adhesion test, reduces the adhesion of *Streptococcus salvarius* cells to denture acrylic by at least 50%, is described. Sodium alginates, carrageenan, gum karaya and carboxymethyl cellulose are particularly suitable.