## **Summaries of UK Patent Applications**

**Extraction of Biological Substance.** GB 2179 952A. Filed 7 August 1986, published 18 March 1987. Applicants — Perstorp AB, S-284 80 Perstorp, Sweden.

A composition for use in a 2 phase or a multi-phase system for extraction, purification, concentration and/or separation of biological substances. It contains hydroxyalkyl starch of defined degree of substitution and molecular weight. An aqueous solution is made with the composition and another polymer such as polyethylene glycol, which separates into two phases on standing.

**Hyaluronic Acid Gels.** GB 2181 147A. Filed 13 May 1985, published 15 April 1987. Applicants — Biomatrix Inc., New Jersey, USA.

The patent describes a gel formed by crosslinking hyaluronic acid with divinyl suphone. A unique property claimed for these gels is a swelling ratio substantially higher than that of other polysaccharides crosslinked under comparable reaction conditions. Other biopolymers such as cellulose derivatives, xanthan gum and collagen can be incorporated into these gels. They can contain low molecular weight materials which have been covalently reacted with the gel network or filled with various water insoluble materials. Uses include drug delivery devices and in cosmetic formulations.

Controlled Release Biological Compositions. GB 2181 148A. Filed 13 May 1985, published 15 April 1987. Applicants — Biomatrix Inc., New Jersey, USA.

Patent almost identical to GB 2181 147A (above) except that claims narrower and relate mainly to use of hyaluronic acid gels in drug delivery systems.

**Process For Treating Carbohydrates.** GB 2181 444A. Filed 7 October 1986, published 23 April 1987. Applicants — Pentlands Scotch Whisky Research Ltd, Edinburgh, Scotland.

Materials such as cereals rice and sorghum are mixed with water and heated to relatively low temperatures (~70-90°C) in the presence of a surfactant, particularly a non-ionic detergent prior to fermentation to produce alcohol. This process eliminates the need for a conventional high pressure/high temperature treatment of the material.

**Buffered Thickening Agents For Protective Cleansing Lotions.** GB 2182 339A. Filed 29 August 1985, published 13 May 1987. Applicants — Avent Medical Ltd, Hong Kong.

The thickening system comprises a naturally occurring gum particularly xanthan gum and an orthophosphate buffer which acts to increase the viscosity of the former. This increase in viscosity allows higher ionic concentrations to be tolerated without destabilising the emulsion. A secondary thickener, particularly an alginate, can be included. On contact with calcium ions in urine this will precipitate and become non-irritant. These cleansing lotions are used primarily in infant care.