Patents related to active beads containing encapsulated ingredients

US 6,325,859  Make emulsions of oil-in-water & encapsulate with alginate by dripping in CaCl₂ bath
US 6,238,690  Core-shell material for food products: shell comprising glassy state carbohydrate (e.g. sucrose, glucose, fructose, sorbitol, maltitol, xylitol, etc) & core comprising flavourings, oil-based materials or confectionery fillings.
US 5,855,826  Encapsulates fat-soluble actives in collagen / alginate / agar / gelatin / chitin, and then encapsulate microcapsules in gellan gum matrix
US 5,620,707  Beadlets for flavouring beverage: shell from gelatin / PVA / waxes / gums. Core contains flavour / sweetener components in oily carrier. Beads formed through co-extrusion of heated material into cooler environment.
US 4,888,140  Round, fluid-filled microcapsules through co-extrusion through concentric nozzle of shell (gelatin) and core (triglyceride carrier)
US 4,426,337  Co-extrusion of shell (gelatin) and core (oral refrigerant or spice condiment)
US 4,332,790  Nestlé patent on manufacturing fat microcapsules containing micro-organisms

Patents cited by International Search Report on previous application

US 5,543,162  Polymeric capsule containing at least two polymers
US 5,545,410  Controlled release encapsulated carbohydrate
EP 0 494 417  Encapsulates active ingredients in cross-linked gelatin
JP vol. 018, no. 288 (Patent abstracts)

US Patents related to suspension of inclusions in beverages

The following is an incomplete list of US patents in the period 1996 to 2001 relating to the use of gellan gum for suspension of inclusions in beverages or for stabilization of beverages.

US 5,376,396  Uses CMC and gellan
US 5,597,604  0.01-0.15% gellan + sequestrant in beverage
US 5,654,027  Calls the pre-gel a “concentrated gum dispersion” with gellan, sequestrant and optionally a calcium salt.
US 6,042,854  Gellan 10-500 ppm for liquid nutritional products
US 6,106,883  Uses pre-gel solution of gellan, sequestrant