ECLA EUROPEAN CLASSIFICATION

C08B POLYSACCHARIDES; DERIVATIVES THEREOF (polysaccharides containing less than six saccharide radicals attached to each other by glycosidic linkages C07H; fermentation or enzyme-using processes C12P19/00; sugar industry C13; production of cellulose D21) [C9805]

[N: **WARNING** [1202]
The following IPC groups are not used in the internal ECLA classification scheme. Subject matter covered by these groups is classified in the following ECLA groups:

- C08B 37/06 covered by C08B37/00M5
- C08B 37/10 covered by C08B37/00P2G
- C08B37/12 covered by C08B37/00M4B

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Guide heading: **Preparation**

C08B1/00 **Preparatory treatment of cellulose for making derivatives thereof, [N. e.g. pre-treatment, pre-soaking, activation]** [C1202]

C08B1/00B . [N: Preparation of cellulose solutions, i.e. dopes, with different possible solvents, e.g. ionic liquids (solutions used in the manufacture of monocomponent artificial filaments or cellulose or derivatives thereof D01F2/02)]

C08B1/00D . [N: Preparation of cuprammonium cellulose solutions]

C08B1/02 . Rendering cellulose suitable for esterification [N: (esterification per se, C08B3/00, C08B5/00, C08B7/00 or C08B9/00)] [C1202]

C08B1/04 . . for the preparation of cellulose nitrate

C08B1/06 . Rendering cellulose suitable for etherification [N: (etherification per se C08B11/00)] [C1202]

C08B1/08 . Alkali cellulose

C08B1/10 . . Apparatus for the preparation of alkali cellulose

C08B1/12 . . . Steeping devices

C08B1/14 . . . Ripening devices

C08B3/00 **Preparation of cellulose esters of organic acids** [N: (rendering cellulose suitable for esterification C08B1/02)] [C1202]

C08B3/02 . Catalysts used for the esterification

C08B3/04 . Cellulose formate

C08B3/06 . Cellulose acetate, [N : e.g. mono-acetate, di-acetate or tri-acetate] [C1202]

C08B3/08 . of monobasic organic acids with 3 or more carbon atoms, [N: e.g. propionate or butyrate] [C1202]

C08B3/10 . . with five or more carbon-atoms, [N: e.g. valerate] [C1202]

C08B3/12 . of polybasic organic acids

C08B3/14 . in which the organic acid residue contains substituents, e.g. NH2, Cl

C08B3/16 . Preparation of mixed organic cellulose esters, [N: e.g. cellulose aceto-formate or cellulose aceto-propionate] [C1202]

C08B3/18 . . Aceto-butyrates

C08B3/20 . Esterification with maintenance of the fibrous structure of the cellulose (surface esterification of textiles D06M13/00)

C08B3/22 . Post-esterification treatments, including purification

C08B3/24 . . Hydrolysis or ripening

C08B3/26 . . Isolation of the cellulose ester

C08B3/28 . . . by precipitation

C08B3/30 . . Stabilising (by addition of stabilisers C08K) [C9807]

C08B5/00 **Preparation of cellulose esters of inorganic acids,** [N: e.g. phosphates (rendering cellulose suitable for esterification C08B1/02)] [C1202]

C08B5/02 . Cellulose nitrate, [N: i.e. nitrocellulose (rendering cellulose suitable for the preparation of cellulose nitrate C08B1/04)] [C1202]

C08B5/04 . . Post-esterification treatments, [N: e.g. densification of powders], including purification [C1202]

C08B5/06 . . . Isolation of the cellulose nitrate

C08B5/08 . . . Stabilisation (by addition of stabilisers C08K); [N: Post-treatment, e.g. phlegmatisation] [C1202]

C08B5/10 . . . Reducing the viscosity

C08B5/12 . . . Replacing the water by organic liquids

C08B5/14 . Cellulose sulfate

C08B7/00 **Preparation of cellulose esters of both organic and inorganic acids** [N: (rendering cellulose suitable for esterification C08B1/02)] [C1202]

C08B9/00 **Cellulose xanthate; Viscose** [N: (formation of films C08J5/18; formation of fibres D01F; rendering cellulose suitable for esterification C08B1/02)] [C1202]

C08B9/02 . Sulfidisers; Dissolvers

C08B9/04 . Continuous processes

C08B9/06 . Single-stage processes

C08B11/00 **Preparation of cellulose ethers** [N: (rendering cellulose suitable for etherification C08B1/06)] [C1202]

C08B11/02 . Alkyl or cycloalkyl ethers
C08B11/04 . . with substituted hydrocarbon radicals
C08B11/06 . . . with halogen-substituted hydrocarbon radials
C08B11/08 . . . with hydroxylated hydrocarbon radicals; Esters, ethers, or acetals thereof
C08B11/10 . . . substituted with acid radicals
C08B11/12 . . . . substituted with carboxylic radicals, [N: e.g. carboxymethylcellulose (CMC)] [C1202]
C08B11/14 . . . with nitrogen-containing groups
C08B11/145 . . . . with basic nitrogen, e.g. aminoalkyl ethers
C08B11/15 . . . . with carbamoyl groups, [N: i.e. -CO-NH2] [C1202]
C08B11/155 . . . . with cyano groups, e.g. cyanoalkyl ethers

C08B11/16 . Aryl or aralkyl ethers
C08B11/18 . . with substituted hydrocarbon radicals

C08B11/187 . with olefinic unsaturated groups

C08B11/193 . Mixed ethers, i.e. ethers with two or more different etherifying groups

C08B11/20 . Post-etherification treatments of chemical or physical type, [N: e.g. mixed etherification in two steps], including purification [C1202]
C08B11/22 . . Isolation

C08B13/00 **Preparation of cellulose ether-esters**

C08B13/02 . Cellulose ether xanthates

C08B15/00 **Preparation of other cellulose derivatives or modified cellulose,** [N: e.g. complexes] [C1202]

C08B15/00B . [N: Crosslinking of cellulose derivatives]

C08B15/02 . Oxy-cellulose; Hydrocellulose; Cellulosehydrate [N : e.g. microcrystalline cellulose] [C1202]
C08B15/04 . . Carboxycellulose, e.g. prepared by oxidation with nitrogen dioxide

C08B15/05 . Derivatives containing elements other than carbon, hydrogen, oxygen, halogens or sulfur (esters or phosphorous acids C08B5/00)
C08B15/06 . . containing nitrogen, [N: e.g. carbamates] [C1202]

C08B15/08 . Fractionation of cellulose, e.g. separation of cellulose crystallites

C08B15/10 . Crosslinking of cellulose

C08B16/00 **Regeneration of cellulose**

C08B17/00 **Apparatus for esterification or etherification of cellulose** [C9606]

C08B17/02 . for making organic esters of cellulose

C08B17/04 . for making cellulose nitrate

C08B17/06 . for making cellulose ethers

C08B30/00 **Preparation of starch, degraded or non-chemically modified starch, amylose, or amylopectin**

C08B30/02 . Preparatory treatment, e.g. crushing of raw materials [N: or steeping process] (machines for preliminary washing A23N)] [C1202]

C08B30/04 . Extraction or purification

C08B30/04B . . from cereals or grains

C08B30/04B2 . . . from corn or maize

C08B30/04B4 . . . from wheat

C08B30/04D . . from potatoes

C08B30/06 . Drying; Forming

C08B30/08 . Concentration of starch suspensions

C08B30/10 . Working-up residues from the starch extraction, [N: e.g. potato peel or steeping water], including pressing water from the starch-extracted material [C1202]

C08B30/12 . Degraded, [N: destructured] or non-chemically modified starch [N: e.g. mechanically, enzymatically or by irradiation; Bleaching of starch (preparation of chemical derivatives of starch C08B31/00)] [C1202]

C08B30/14 . . Cold water dispersible or pregelatinised starch

C08B30/16 . . Apparatus therefor

C08B30/18 . . Dextrin, [N: e.g. yellow canari, white dextrin, amylodextrin or maltodextrin; Methods of depolymerisation, e.g. by irradiation or mechanically] [C1202]

C08B30/20 . Amylose or amylopectin (chemical derivatives thereof C08B33/00, C08B35/00)

C08B31/00 **Preparation of derivatives of starch** (derivatives of amylose C08B33/00; derivatives of amylopectin C08B35/00)

C08B31/00B . [N: Crosslinking of starch]

C08B31/00B2 . . [N: Crosslinking of derivatives of starch]

C08B31/02 . Esters

C08B31/04 . . of organic acids, [N: e.g. alkenyl-succinated starch] [C1202]

C08B31/06 . . of inorganic acids

C08B31/06B . . . [N: Starch sulfates]

C08B31/06D . . . [N: Starch phosphates, e.g. phosphorylated starch] [C1202]

C08B31/08 . Ethers

C08B31/10 . . Alkyl or cycloalkyl ethers

C08B31/12 . . having alkyl or cycloalkyl radicals substituted by heteroatoms, [N: e.g. hydroxyalkyl or carboxyalkyl starch] [C1202]

C08B31/12B . . . [N: having a substitutent containing at least one nitrogen atom, e.g. cationic starch] [C1202]

C08B31/14 . . Aryl or aralkyl ethers

C08B31/16 . Ether-esters

C08B31/18 . Oxidised starch

C08B31/18B . . [N: Derivatives of oxidised starch, e.g. crosslinked oxidised starch] [C1202]

C08B33/00 **Preparation of derivatives of amylose**

C08B33/02 . Esters

C08B33/04 . Ethers

C08B33/06 . Ether-esters

C08B33/08 . Oxidised amylose

C08B35/00 **Preparation of derivatives of amylopectin**

C08B35/02 . Esters

C08B35/04 . Ethers

C08B35/06 . Ether-esters

C08B35/08 . Oxidised amylopectin

C08B37/00 **Preparation of polysaccharides not provided for in groups C08B1/00 to C08B35/00; Derivatives thereof** (cellulose D21; [N: microbiological processes C12P])

C08B37/00K . [N: General processes for their isolation or fractionation, e.g. purification or extraction from biomass] [C1202]

C08B37/00M . [N: Homoglycans, i.e. polysaccharides having a main chain consisting of one single sugar, e.g. colominic acid] [C1202]

C08B37/00M2 . . [N: alpha-D-Glucans, e.g. polydextrose, alternan, glycogen; (alpha-1,4)(alpha-1,6)-D-Glucans; (alpha-1,3)(alpha-1,4)-D-Glucans, e.g. isolichenan or nigeran; (alpha-1,4)-D-Glucans; (alpha-1,3)-D-Glucans, e.g. pseudonigeran; Derivatives thereof] [C1202]

C08B37/00M2B . . . [N: Cyclodextrin (CD), e.g. cycle with 6 units (alpha), with 7 units (beta) and with 8 units (gamma), large-ring cyclodextrin or cycloamylose with 9 units or more; Derivatives thereof] [C1202]

C08B37/00M2B2 . . . . [N: Inclusion compounds, i.e. host-guest compounds, e.g. polyrotaxanes] [C1202]

C08B37/00M2D . . . [N: Pullulan, i.e. (alpha-1,4)(alpha-1,6)-D-glucan; Derivatives thereof] [C1202]

C08B37/00M2F . . . [N: Dextran, i.e. (alpha-1,4)-D-glucan; Derivatives thereof, e.g. Sephadex, i.e. crosslinked dextran] [C1202]

C08B37/00M3 . . [N: beta-D-Glucans; (beta-1,3)-D-Glucans, e.g. paramylon, coriolan, sclerotan, pachyman, callose, scleroglucan, schizophyllan, laminaran, lentinan or curdlan; (beta-1,6)-D-Glucans, e.g. pustulan; (beta-1,4)-D-Glucans; (beta-1,3)(beta-1,4)-D-Glucans, e.g. lichenan; Derivatives thereof] [C1202]

C08B37/00M3B . . . [N: 2-Acetamido-2-deoxy-beta-glucans; Derivatives thereof]

C08B37/00M3B2 . . . . [N: Chitin, i.e. 2-acetamido-2-deoxy-(beta-1,4)-D-glucan or N-acetyl-beta-1,4-D-glucosamine; Chitosan i.e. deacetylated product of chitin or (beta-1,4)-D-glucosamine; Derivatives thereof] [C1202]

C08B37/00M3D . . . [N: Xanthan, i.e. D-glucose, D-mannose and D-glucuronic acid units, saubstituted with acetate and pyruvate, with a main chain of (beta-1,4)-D-glucose units; Derivatives thereof] [C1202]

C08B37/00M4 . . [N: Galactans; Derivatives thereof]

C08B37/00M4B . . . [N: Agar; Agarose, i.e. D-galactose, 3,6-anhydro-D-galactose, methylated, sulfated, e.g. from the red algae Gelidium and Gracilaria; Agaropectin; Derivatives thereof, e.g. Sepharose, i.e.crosslinked agarose] [C1202]

C08B37/00M4D . . . [N: Carragenan or carragen, i.e. D-galactose and 3,6-anhydro-D-galactose, both partially sulfated, e.g. from red algae Chondrus crispus or Gigantia stellata; kappa-Carragenan; iota-Carragenan; lambda-Carragenan; Derivatives thereof] [C1203]

C08B37/00M5 . . [N: alpha-D-Galacturonans, e.g. methyl ester of (alpha-1,4)-linked D-galacturonic acid units, i.e. pectin, or hydrolysis product of methyl ester of alpha-1,4-linked D-galacturonic acid units, i.e. pectinic acid; Derivatives thereof] [C1202]

C08B37/00M5B . . . [N: Processes of extraction from organic materials]

C08B37/00M6 . . [N: beta-D-Fructofuranans, e.g. beta-2,6-D-fructofuranan, i.e. levan; Derivatives thereof] [C1202]

C08B37/00M6B . . . [N : Inulin, i.e. beta-2,1-D-fructofuranan; Derivatives thereof] [C1202]

C08B37/00M7 . . [N: beta-D-Xylans, i.e. xylosaccharide, e.g. arabinoxylan, arabinofuronan, pentosans; (beta-1,3)(beta-1,4)-D-Xylans, e.g. rhodymenans; Hemicellulose; Derivatives thereof] [C1202]

C08B37/00P . [N: Heteroglycans, i.e. polysaccharides having more than one sugar residue in the main chain in either alternating or less regular sequence; Gellans; Succinoglycans; Arabinogalactans; Tragacanth or gum tragacanth or traganth from Astragalus; Gum Karaya from Sterculia urens; Gum Ghatti from Anogeissus latifolia; Derivatives thereof] [C1202]

C08B37/00P2 . . [N: Glycosaminoglycans or mucopolysaccharides, e.g. keratan sulfate; Derivatives thereof, e.g. fucoidan] [C1202]

C08B37/00P2B . . . [N: Isolation or extraction of proteoglycans from organs]

C08B37/00P2D . . . [N: Chondroitin-4-sulfate, i.e. chondroitin sulfate A ; Dermatan sulfate, i.e. chondroitin sulfate B or beta-heparin ; Chondroitin-6-sulfate, i.e. chondroitin sulfate C; Derivatives thereof] [C1202]

C08B37/00P2F . . . [N: Hyaluronic acid, i.e. HA or hyaluronan; Derivatives thereof, e.g. crosslinked hyaluronic acid (hylan) or hyaluronates] [C1202]

C08B37/00P2G . . . [N: Heparin; Heparan sulfate; Derivatives thereof, e.g. heparosan; Purification or extraction methods thereof] [C1202]

C08B37/00P2G2 . . . . [N: Degradation products]

C08B37/00P2G4 . . . . [N: Reaction with amino acids, peptides, or proteins]

C08B37/00P4 . . [N: Guluromannuronans, e.g. alginic acid, i.e. D-mannuronic acid and D-guluronic

acid units linked with alternating alpha- and beta-1,4-glycosidic bonds; Derivatives thereof, e.g. alginates] [C1202]

C08B37/00P6 . . [N: Glucomannans or galactomannans; Tara or tara gum, i.e. D-mannose and D-galactose units, e.g. from Cesalpinia spinosa; Tamarind gum, i.e. D-galactose, D-glucose and D-xylose units, e.g. from Tamarindus indica; Gum Arabic, i.e. L-arabinose, L-rhamnose, D-galactose and D-glucuronic acid units, e.g. from Acacia Senegal or Acacia Seyal; Derivatives thereof] [C1202]

C08B37/00P6B . . . [N: Konjac gum or konjac mannan, i.e. beta-D-glucose and beta-D-mannose units linked by 1,4 bonds, e.g. from Amorphophallus species; Derivatives thereof] [C1202]

C08B37/00P6D . . . [N: Locust bean gum, i.e. carob bean gum, with (beta-1,4)-D-mannose units in the main chain branched with D-galactose units in (alpha-1,6), e.g. from the seeds of carob tree or Ceratonia siliqua; Derivatives thereof] [C1202]

C08B37/00P6F . . . [N: Guar, guar gum, guar flour, guaran, i.e. (beta-1,4) linked D-mannose units in the main chain branched with D-galactose units in (alpha-1,6), e.g. from Cyamopsis Tetragonolobus; Derivatives thereof] [C1202]

C08B37/12 . Agar-agar; Derivatives thereof (not used)

C08B37/12B . . [N: Other polysaccharides of algae such as carragenan] (not used)

C08B37/14 . Hemicellulose; Derivatives thereof (not used)

C08B37/14B . . [N: composed by pentose units, e.g. xylose, xylan, pentosans, arabinose)] (not used)

C08B37/14D . . [N: composed by gluco and/or galactomannans, for example guar gum, locust bean gum] (not used)

C08B37/18 . Reserve carbohydrates, e.g. glycogen, inulin, laminarin; Derivatives thereof (not used)