C08B

POLYSACCHARIDES; DERIVATIVES THEREOF (polysaccharides containing less than six saccharide radicals attached to each other by glycosidic linkages C07H; fermentation or enzyme-using processes C12P 19/00; sugar industry C13; production of cellulose D21)

Definition statement

This place covers:

- Polysaccharides per se or their derivatives, with six or more repeating units, i.e. saccharide radicals attached to each other by glycosidic linkages.
- Processes of extraction, preparation, derivatisation, fractionation, isolation, purification or degradation.
- Covalently or ionically crosslinked gels of polysaccharides.

Relationships with other classification places

Relationship with other subclasses C08 and C09

Macromolecular compounds obtained by reactions only involving carbon-to-carbon unsaturated bonds, i.e. addition polymers, are classified in subclass C08F.

Macromolecular compounds obtained otherwise than by reactions only involving carbon-to-carbon unsaturated bonds, e.g. condensation polymers, are classified in subclass C08G.

Derivatives of natural macromolecular polymers, e.g. derived from proteins, lignin, ligno-cellulosic materials or vulcanised oils, are classified in subclass C08H.

Working-up, general processes of compounding and after-treatment of macromolecular compounds are classified in subclass C08J, including in particular the making of hydrogels is classified in C08J 3/075.

The use or choice of inorganic or non-macromolecular organic materials as compounding agents are classified in subclass C08K

Polysaccharides or derivatives thereof in solution, or together with other macromolecular compounds, or together with an inorganic or non-macromolecular organic additive are considered as a composition and are thus classified according to the rules of C08L.

Coating compositions based on macromolecular compounds and other polymer compositions for similar uses, e.g. paints, inks, woodstains and printing pastes, are classified in subclass C09D.

Adhesives or binders based on macromolecular compounds, as well as adhesive processes, are classified in subclass C09J.

Multiple Classification

Biocidal, pest repellant, pest attractant, or plant growth regulatory activity of chemical compounds or preparations is further classified in A01P.

Therapeutic activity of chemical compounds or medicinal preparations is further classified in subclass A61P.

Uses of cosmetics or similar toilet preparations are further classified in subclass A61Q.

References

Limiting references

This place does not cover:

Layered products	B32B
Mono-, di- or oligosaccharides with five or less saccharide radicals	C07H
Grafted polysaccharides obtained by reaction of an unsaturated monomer onto a polysaccharide	C08F 251/00
Grafted polysaccharides obtained by reaction of an unsaturated monomer onto a cellulose or derivative thereof	C08F 251/02
Grafted or block polysaccharides obtained by reaction of a polymer with a polysaccharide	C08G 81/00
Fermentation or enzyme-using processes to synthesize polysaccharides	C12P 19/04
Production of cellulose	D21

Application-oriented references

Examples of places where the subject matter of this place is covered when specially adapted, used for a particular purpose, or incorporated in a larger system:

Application of polysaccharide compositions as pesticides, biocides, disinfectants and herbicides	A01N
Treatment or baking of flour or dough	A21D
Animal feeding-stuffs	A23K 10/00
Foodstuffs or non-alcoholic beverages	A23L 29/20
Use of polysaccharides in preparations for dentistry, e.g. artificial teeth	A61K 6/898
Application of polysaccharide compositions or derivatives thereof in cosmetics or other toilet preparations	A61K 8/73
Use of polysaccharides in medicinal preparations characterised by special physical form, e.g. tablets, coated or not, or size	A61K 9/00
Medicinal preparations containing polysaccharides as active ingredient	A61K 31/715
Medicinal preparations containing material from algae, lichens, fungi or plants	A61K 36/00
Vaccines containing polysaccharides	A61K 39/00
Use of polysaccharides in medicinal preparations characterised by the non-active ingredients	A61K 47/36
Medicinal preparations characterised by the non-active ingredient being chemically bound to the active ingredient, e.g. conjugates	A61K 47/50
Application of polysaccharide compositions in pyrotechnic and as explosive compositions	C06B
Application of polysaccharide compositions in coating compositions	C09D
Application of polysaccharide compositions in adhesive compositions	C09J
Application of polysaccharide compositions for drilling of boreholes or wells	C09K 8/00
Detergents containing polysaccharide compositions	C11D 3/00
Sugar industry	C13

Informative references

Attention is drawn to the following places, which may be of interest for search:

Bandages and dressings	A61F 13/00
Use of polysaccharides for bandages, dressings or absorbent pads, e.g. diapers	A61L 15/00
Material for surgical sutures	A61L 17/00
Material for prosthesis	A61L 27/00
Chemical apparatus	B01J, B01L
Wood treatment	B27K, B27N
Edible or biodegradable packaging containing polysaccharides	B65D 65/46
Making solutions of polysaccharides	C08J 3/02
Gels of polysaccharides	C08J 3/075
Making powders of or granulating polysaccharides	C08J 3/12
Compounding polysaccharides	C08J 3/20
Crosslinking of polysaccharides	C08J 3/24
Treatment of polysaccharides by wave-energy or radiation	C08J 3/28
Films of polysaccharides	C08J 5/18
Coatings or multilayers of polysaccharides	C08J 7/00
Making porous, cellular or foamed material of polysaccharides	C08J 9/00
Recovery or working-up of waste-material of polysaccharides	C08J 11/00
Manufacture of artificial filaments, threads, fibres	D01F
Treatment of fibres, threads, yarns, fabrics, feathers (finishing)	D06M
Optical elements characterised by the material of which they are made, e.g. contact lenses	G02B 1/00

Special rules of classification

- The subject-matter disclosed in both the claims and the examples of a patent document is to be classified.
- In case of doubt, it is recommended to classify as much data as possible.
- Compositions containing a polysaccharide and an inorganic or non-macromolecular organic additive as compounding agent are not classified in C08K contrary to what is indicated in the rules for C08L or C08K, but in the corresponding C08L subclass together with the corresponding Indexing Code(s) in C08K.

Covalently or ionically crosslinked gels containing a polysaccharide are classified in the corresponding C08B as they are considered as polysaccharide derivatives per se.

Ex. Hydrogel of alginate are classified in C08L 5/04, C08J 3/075 and C08J 2305/04 .

Glossary of terms

In this place, the following terms or expressions are used with the meaning indicated:

Saccharide radical	Saccharide radicals are monosaccharide repeating units.

Glycosodic linkage	A glycosidic bond is a type of covalent bond that joins a carbohydrate molecule to another group, which may or may not be another carbohydrate. A glycosidic bond is formed between the hemiacetal group of a saccharide (or a molecule derived from a saccharide) and the hydroxyl group of some organic compound. If the group attached to the carbohydrate residue is not another saccharide it is referred to as an aglycone. If it is another saccharide, the resulting units can be termed as being at the reducing end or the terminal end of the structure. The reducing end of the di- or polysaccharide is towards the last anomeric carbon of the structure, and the terminal end is in the opposite direction.One distinguishes between α- and β-glycosidic bonds based on the relative stereochemistry of the anomeric position and the stereocentre furthest from C1 in the saccharide. In D-hexose sugars in their pyranose forms, an α-glycosidic bond is formed in an axial orientation, whereas a β-glycosidic bond will be oriented equatorially.

C08B 1/00

Preparatory treatment of cellulose for making derivatives thereof {, e.g. pre-treatment, pre-soaking, activation}

Definition statement

This place covers:

The preparation of cellulose solutions, i.e. dopes, with different possible solvents, e.g. the preparation of cuprammonium cellulose solutions

The preparation of cellulose suitable for esterification or etherification, e.g. preparation of cellulose nitrate

Alkali cellulose and the apparatus therefor

C08B 3/00

Preparation of cellulose esters of organic acids {(rendering cellulose suitable for esterification C08B 1/02)}

Definition statement

This place covers:

The preparation of cellulose esters of organic acid, e.g. cellulose formate, cellulose acetate, mixed organic cellulose esters.

The catalysts used for the esterification.

The esterification with maintenance of the fibrous structure of the cellulose .

Post-esterification treatments.

C08B 5/00

Preparation of cellulose esters of inorganic acids {, e.g. phosphates (rendering cellulose suitable for esterification C08B 1/02)}

Definition statement

This place covers:

The preparation of cellulose esters of inorganic acids, e.g. cellulose nitrate, i.e. nitrocellulose.

Post-esterification treatments.

C08B 7/00

Preparation of cellulose esters of both organic and inorganic acids {(rendering cellulose suitable for esterification C08B 1/02)}

Definition statement

This place covers:

Mixed cellulose esters wherein residues of organic and inorganic acids are simultaneously present

C08B 9/00

Cellulose xanthate; Viscose {(formation of films C08J 5/18; formation of fibres D01F; rendering cellulose suitable for esterification C08B 1/02)}

Definition statement

This place covers:

Cellulose xanthate.

Viscose.

Their process of preparation.

Glossary of terms

In this place, the following terms or expressions are used with the meaning indicated:

Viscose	A solution of cellulose xanthate made by treating a cellulose compound with sodium hydroxide and carbon disulfide

C08B 11/00

Preparation of cellulose ethers {(rendering cellulose suitable for etherification C08B 1/06)}

Definition statement

This place covers:

The preparation of cellulose ethers, e.g. alkyl or cycloalkyl ethers, aryl or aralkyl ethers or mixed ethers.

Post-etherification treatments of chemical or physical type, e.g. purification or isolation.

C08B 13/00

Preparation of cellulose ether-esters

Definition statement

This place covers:

e.g. preparation of cellulose ether xanthates.

The preparation of cellulose derivatives comprising simultaneously ether and ester substituents

C08B 15/00

Preparation of other cellulose derivatives or modified cellulose {, e.g. complexes}

Definition statement

This place covers:

Preparation of oxy-cellulose, hydrocellulose, cellulosehydrate or carboxycellulose.

Crosslinking of cellulose or cellulose derivatives.

C08B 16/00

Regeneration of cellulose

Definition statement

This place covers:

Methods for regenerating cellulose, e.g. from solution.

Regenerated cellulose as such.

C08B 17/00

Apparatus for esterification or etherification of cellulose

Definition statement

This place covers:

Apparatus and equipment for the preparation of cellulose ethers or cellulose esters, e.g. reactors, mixing devices, tubing, feeders, etc.

C08B 30/00

Preparation of starch, degraded or non-chemically modified starch, amylose, or amylopectin

Definition statement

This place covers:

The extraction or purification of starch, amylose and amylopectin from raw materials.

The working-up of residues of starch extraction.

The degradation of starch and its products (e.g. dextrin, cold water dispersible starch).

The modification of starch by non-chemical means (ie, mechanical, enzymatic, by irradiation)

C08B 31/00

Preparation of derivatives of starch (derivatives of amylose C08B 33/00; derivatives of amylopectin C08B 35/00)

Definition statement

This place covers:

The preparation of starch ethers, starch esters, ether-ester.

The crosslinking of starch and starch derivatives.

Oxidation of starch and oxidised starch.

C08B 33/00

Preparation of derivatives of amylose

Definition statement

This place covers:

The preparation of amylose ethers, amylose esters, ether-ester.

Oxidised amylose.

C08B 35/00

Preparation of derivatives of amylopectin

Definition statement

This place covers:

The preparation of amylopectin ethers, amylopectin esters, ether-ester.

Oxidised amylopectin.

C08B 37/00

Preparation of polysaccharides not provided for in groups C08B 1/00 - C08B 35/00; Derivatives thereof (cellulose D21; {microbiological processes C12P})

Definition statement

This place covers:

Extraction, preparation, derivatisation or degradation of polysaccharides per se, including homopolysaccharides (C08B 37/0006) and heteropolysaccharides (C08B 37/006), possibly combined with the extraction / fractionation / isolation / purification of said polysaccharides (C08B 37/0003).

Relationships with other classification places

Multiple classification

Polyrotaxanes, e.g. inclusion compounds are classified in C08G 83/007.

Medicinal preparations characterised by the non-active ingredient, e.g. inclusion compounds with cyclodextrins are classified in A61K 47/6951.