C13K

SACCHARIDES OBTAINED FROM NATURAL SOURCES OR BY HYDROLYSIS OF NATURALLY OCCURRING DISACCHARIDES, OLIGOSACCHARIDES OR POLYSACCHARIDES (chemically synthesised sugars or sugar derivatives C07H; polysaccharides, e.g. starch, derivatives thereof C08B; malt C12C; fermentation or enzyme-using processes for preparing compounds containing saccharide radicals C12P 19/00; production of sucrose C13B)

Definition statement

This place covers:

Saccharides obtained by hydrolysis of naturally-occurring di-, oligo- or polysaccarides,

Glucose; Glucose-containing syrups,

Invert sugar; Separation of glucose or fructose from invert sugar,

Lactose,

Maltose,

Fructose,

Other naturally-occurring mono-, di- and oligosaccharides, or

Production and crystallisation methods.

Relationships with other classification places

Carbohydrate syrups or sugar in foods or foodstuffs is classified in A23L 29/30.

Chemically synthesised sugars or sugar derivatives are classified in C07H.

Polysaccharides are classified in C08B.

Preparation of (bio)ethanol by fermentation from monosaccharides/hydrolysed polysaccharides (cellulosic material) is classified in C12P 7/00

Malt for brewing is classified in C12C.

Malt product for food use is classified in A23L 7/20.

Production of sucrose is classified in C13B.

Obtaining or extracting cellulose for the purpose of making paper is classified in D21C.

Enzymatic hydrolysis of saccharides is classified in C13K and C12P 19/00.

References

Limiting references

This place does not cover:

Preserving or chemical ripening of fruits or vegetables with sugar	A23B 7/08
Sweetmeats, confectionery	A23G 3/00
Animal feeding stuff from vegetable matter	A23K 10/30

Manufacture of fodder	A23K 10/32
Artificial sweetening agents	A23L 27/00, A23L 27/30
Modifying nutritive qualities of food, dietetic products	A23L 33/00
Cosmetics or similar toilet preparations containing sugars	A61K 8/60
Medical preparations containing sugars	A61K 31/70

Glossary of terms

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

Aldose	An aldose is a monosaccharide (a simple sugar) containing one aldehyde group per molecule and having a chemical formula of the form $C_n(H_2O)_n$ ($n \geq 3$). With only 3 carbon atoms, glyceraldehyde is the simplest of all aldoses.Aldoses isomerise to ketoses in the Lobry-de Bruyn-van Ekenstein transformation. Aldose differs from ketose in that it has a carbonyl group at the end of the carbon chain whereas the carbonyl group of a ketose is in the middle; this fact allows them to be chemically differentiated through Seliwanoff's test.
Disaccharide	A disaccharide is a sugar (a carbohydrate) composed of two monosaccharides.'Disaccharide' is one of the four chemical groupings of carbohydrates (monosaccharide, disaccharide, oligosaccharide and polysaccharide).
Hexose	A hexose is a monosaccharide with six carbon atoms having the chemical formula $C_6H_{12}O_6$.
Invert sugar	mixture of glucose and fructose, obtaining by splliting sucrose (hydrolysis) into these two components
Ketose	A ketose is a sugar containing one ketone group per molecule.With 3 carbon atoms, dihydroxyacetone is the simplest of all ketoses and is the only one having no optical activity. Ketoses can isomerise into an aldose when the carbonyl group is located at the end of the molecule. Such ketoses are reducing sugars.
Monosaccharide	Monosaccharides (from Greek monos: single, sacchar: sugar) are the most basic unit of carbohydrates. They consist of one sugar and are usually colorless, water-soluble, crystalline solids. Some monosaccharides have a sweet taste. Examples of monosaccharides include glucose (dextrose), fructose, galactose, xylose and ribose. Monosaccharides are the building blocks of disaccharides such as sucrose (common sugar) and polysaccharides (such as cellulose and starch).
Oligosaccharide	An oligosaccharide is a saccharide containing less than six monosaccharides. The name derived from the Greek oligos, meaning "a few".
Pentose	A pentose is a monosaccharide with five carbon atoms.

Polysaccharide	Polysaccharides are polymers containing more than five monosaccharides joined together by glycosidic bonds. They are therefore very large, often branched, macromolecules. They tend to be amorphous, insoluble in water and have no sweet taste. When all the monosaccharides in a polysaccharide are the same type, the polysaccharide is called a homopolysaccharide, but when more than one type of monosaccharide is present, they are called heteropolysaccharides.Examples include storage polysaccharides such as starch and glycogen and structural polysaccharides such as cellulose and chitin.
Saccharose	Synonym for sucrose
Sucrose	Sucrose (common name: table sugar, also called saccharose) is a disaccharide of glucose and fructose, with the molecular formula $C_{12}H_{22}O_{11}$. Its systematic name is α-D-glucopyranosyl- (1↔2)-β-D-fructofuranoside (ending in "oside", because it's not a reducing sugar).
Sugar	Sugar is a class of edible crystalline water-soluble carbohydrates that vary widely in sweetness and typically are optically active, including the mono-, di- and oligosaccharides (e. g. sucrose, lactose, and fructose). Sugar as a basic food carbohydrate primarily comes from sugar cane and from sugar beet, but also appears in fruit, honey, sorghum, sugar maple (in maple syrup), and in many other sources. It forms the main ingredient in much candy.In non-scientific use, the term sugar refers to sucrose (also called "table sugar" or "saccharose") — a white crystalline solid disaccharide. In this informal sense, the word "sugar" principally refers to crystalline sugars.

Synonyms and Keywords

In patent documents, the following words/expressions are often used with the meaning indicated:

"saccharose"	"sucrose"

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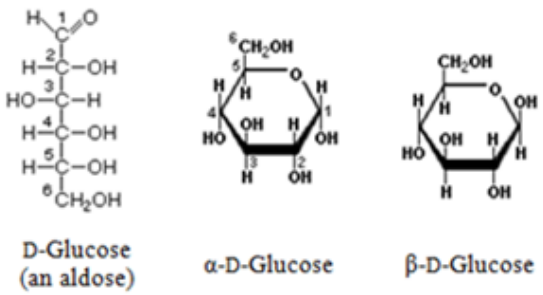
Glucose (separation from invert sugar C13K 3/00); Glucose-containing syrups

Definition statement

This place covers:

Glucose or syrups containing mainly glucose

Glucose is also known as blood sugar, dextrose, corn-sugar, grape sugar



References

Limiting references

This place does not cover:

Separation of glucose from invert sugar	C13K 3/00

C13K 3/00

Invert sugar; Separation of glucose or fructose from invert sugar

Definition statement

This place covers:

A mixture of glucose and fructose obtained by the hydrolysis of sucrose

Separation processes of glucose or fructose from invert sugar, e.g by ion exchange, chromatographic separation

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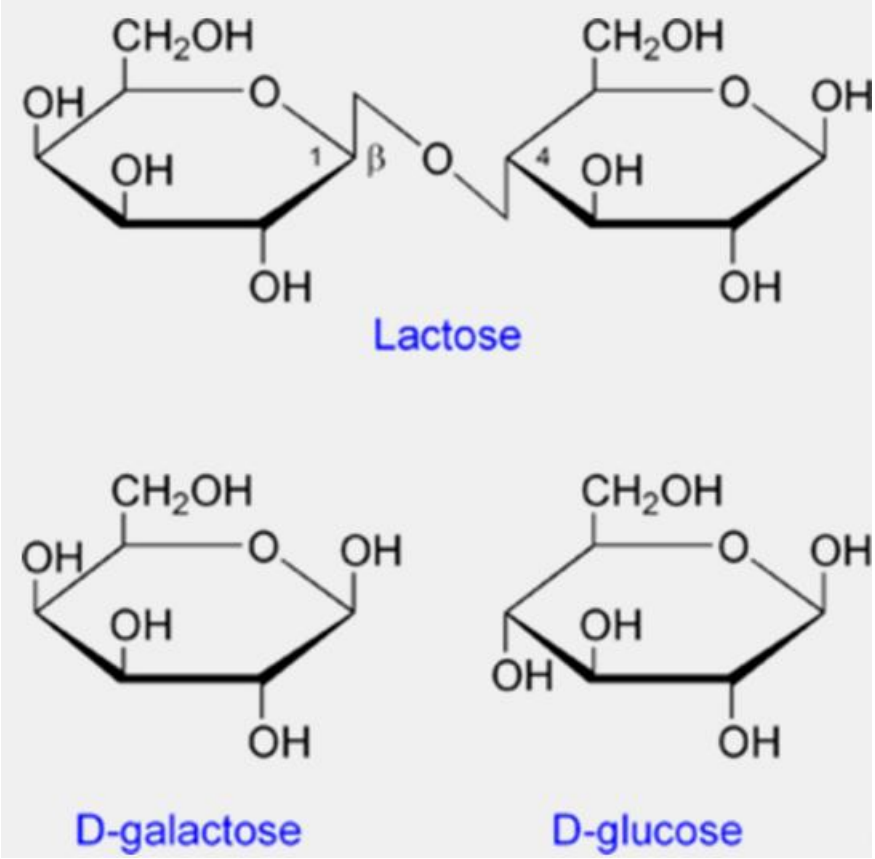
Lactose

Definition statement

This place covers:

Lactose : disaccharide sugar derived from galactose and glucose, also called mik sugar

IPUAC name : β-D-galactopyranosyl-(1→4)-D-glucose



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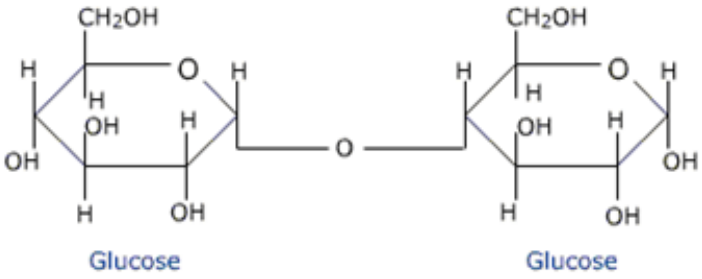
Maltose

Definition statement

This place covers:

Maltose that is a disaccharide formed from two units of glucose joitn with a bond formed from a condensation reaction, called also 4-O-α-D-Glucopyranosyl-D-glucose

IPUAC name : 2-(hydroxymethyl)-6-[4,5,6-trihydroxy-2-(hydroxymethyl)oxan-3-yl]oxyox ane-3,4,5-triol



C13K 11/00

Fructose (separation from invert sugar C13K 3/00)

Definition statement

This place covers:

Fructose that is a simple monosaccharide, also called fruit sugar, levulose, D-fructofuranose, D-arabino-hexulose