Enlaces glucosidicos alfa y beta pdf

Disaccharides apply when two monosaccharides are chemically combined. Consider three of the most important disaccharides: maltose, lactose and sucrose. These three-rooted hydrosis produces a different combination of monosaccharides: glucose maltos + glucose lactose + glucose gactose sucrose + fructose A monosaccharide combined with others and forming acetal. Remember that hemiacetales are not so stable and can respond with other alcohol molecules to produce a more stable, acetal molecule. In this equation anomics carbon atoms, or hemiacetalic carbon are combined with ethanol molecules to produce glycose, acetal glucose. In the binding that is formed is known as glucosidic binding, which is acetalic glucose binding. Generally, this link is called binding to glycosis, the acetalic bond of any carbohydrate, not just glucose. Bon Glycosidic is also called alpha or beta, depending on whether the oxygen atom in the acetal is below (alpha) or up (beta) ring. To synthesize the most disaccharides molecules, the carbon atom anomérico (carbon atom 1) one of the monosaccharides responds with a collection of -OH fourth or sixth monosacchaid carbon atoms (see reaction). Maltose maltose or malt sugar exists in small quantities in the natural world. However, maltose is very important because it is one of the kanji hydrolytic products. When maltos occurred in the ducts, it was hydrorolized to provide two glucose molecules. Gllycosidic binds to A-1.4 binding to two glucose molecules (3d view). Lactose Lactose is the most important incompetence in milk: therefore, it is sometimes called milk sugar. Hydrolysis causes lactose to produce glucose and gal lactose. The lactose structure (3d view) is somewhat different from maltos. Galctose annotsteric carbon atoms are bound to the fourth glucose atom by the s-1.4 glycosis bond. Sucrose sucrose or table sugar is the most widely used sweetener in the world. It is known by names such as sau sugar, cane sugar, or simply sugar. Hydraulic sucrose produces glucose and fructose. Compared to maltose and lactose, sucrose has a unique set of properties; it has no mutarrotation and not reduces sugar. These properties are the result of having a glycosis bond a-1,2 instead of a glycosis bond. Anomic carbon atoms of both sugars are accompanied by a glycosis bond of a-1.2; therefore, no anomics carbon atoms undergo mutarrotasi or oxidation (see 3d). Sucrose has specifically for -66.5o, but if hydrolyzed it produces the same amount of glucose and fructose. Since a balanced mixture of glucose has a special round of higher negative (-92.4) than a balanced mixture of glucose that has a positive spin (-52.7o), the net round of the product is levorrotatory. Sucrose is probably the best-selling organic in the world. Refined sugar is a white crystalline pepejal; Raw sugar is brown chocolate and contains between 96 and 98% sucrose, the rest is melasses. Carbohydrate Monosaccharides Disaccharides Rizab Polysaccharides Link [Main] [Above] [Structure Of Things] [Biomolecules] [Lipids] [Sugars] [DNA] [RNA] [Amino Acids] [Protein Structures] [Proteins] [Phospholipids] Know the elements of the back structure Mengiktiraf various types of monosaccharides, disaccharides, polysaccharides Carbohydrates or carbohydrates Form a group of compounds containing carbon (C), hydrogen (H) and oxygen (O). They are the most organic in the natural world. Green herbs and photosynthesis bacteria produce them in a process known as photosynthesis, in which they absorb carbon dioxide from the air and, by the action of solar energy, produce glucose and other chemical compounds necessary for organisms to continue to live and develop. Than the easiest back, monosaccharides, the most important of which is glucose. Two accompanying monosaccharides produce disacchaid, the most important examples being sucrose, lactose and maltose. Polysaccharides are large molecules formed by one or more types of monosaccharides units. In living organisms carbohydrates have the function of structure and energy storage. In the functioning of the structure we have for example: cellulose which is the main intestinal acid structure in plants, up to 40% in the cell wall, while in animal invertebrate polyaccharide chitin is the basic component of exoskeleton arthropods and in the cell layer of connecting tissue contains carbohydrates Between glycoid energy storage plants using animal kanji and glycogen; (when energy is needed, enzymes break them into glucose). The main thing to remember and understand about sugars is: They are metabolically important. They are the greatest source of stored life power. The carbon ring contains a large amount of power. For example, glucose is completely metabolized: secretes 686 kcal / mol. There are two ways in which Sugar is polymerized: alpha or bon beta: Alpha Links Beta Links To distinguish between alpha bon and beta, check the position of hydrogen in the first carbon molecule. In the alpha link it is represented up, and in beta down. Sugar monosaccharides are characterized by the hydroxyl (OH) group and the aldehyde or ketone group. They are described by the formula $(CH_2O)n$, where n is an integer of no less than three and no more than eight (3 < n< 8). This condition gives rise to the term carbohydrates (or carbohydrates) for sugars and molecules consisting of sugar subunits. This can be burned or dioxide to carbon dioxide (CO_2) and water (H_2O), in a response that produces energy, a capacity that has been utilized by many living holes that degrade glucose, and utilizes separate energy by storing it in the form of ATP (adenosine triphosphate). Glucose: a white crystalline drinker, somewhat less sweet than the sugar intended for use. This six-carbon monosacchaid sugar, formula $C_6H_{12}O_6$, is characterized by having hydroxyl function (OH) (alcohol characteristic) in each carbon, except initially where it has aldehyde function. It is found in honey and a lot of fruit juice. It is produced in hydroalysis of various natural glycosides. Glucose is present in the blood of the haiwan, a method of transport to circulate to these intestinal acids throughout the body, to enter it into cells and produce cellular breathing (glycolysis - Krebs cycle - the transport of electrons). This Disaccharides Sebatian consists of the unity of two monosaccharides. For example: sucrose (ordinary sugar – cane sugar) consists of glucose and fructose (a six-carbon monosaccharide that has the function of ketone in carbon 2), formula $C_{12}H_{22}O_{11}$. Sucrose dissacarid is the main way sugar is transported through floema (sap's leading vessel in vegetables), from the leaves to the refinery site where they are needed. It is water soluble and slightly soluble in alcohol and ether. Crystallizes in long form, thin needles become dextrogira. Hydrolysis (separation of water as a water molecule necessary to complete both monosaccharides) produces a mixture of glucose and fructose, which levogira, so this mixture is known as songsang sugar. Let us remember that it is designated as levógiro if it obliterates polar light to the left and dextrogy if it does so on the right. In the small intestine (human), secession and separation apply thanks to accidental enzyme intervention and sacarase. When it is at temperatures exceeding 180 oC, sucrose is converted into an aefatic, amber and thick, consistency-like shingles, called caramel. Another important disaccharide is lactose, a sugar that appears only in milk, where glucose is combined with gactose (hexose which has hydroxyl function and aldehyde function). Polysaccharides sucroses are monosaccharides accompanied together by glycosidic joints in long chains. They may or may not have the same type of monosaccha as the links in the chain. The main are: kanji, cellulose and glycogen. Starch is the main form of glucose storage in most herbs. It is produced by greenery during photosynthesis. It is part of the cell wall of vegetation and fibers of strong vegetation. Furthermore it serves as a storehouse of energy in vegetation, releasing energy during the oxidation process in carbon dioxide and water. Plant granules have a certain size, shape and features of plant species in which the kanji have formed they exist in two forms: In the beginning, amylose, which makes up 20% of the ordinary kanji, are arranged in the form of continuing chains and longing, just like a rope roll; in the second type, amylopectin, an important lateral branch of the molecule applies, but both consist of glucose units bound together by bon glycose 1-4 alpha 1-4. Starch Starch seeds in Glycogen plant cells lentil seeds are the main way glucose is stored in higher animals. The structure is very similar to amylopectin, unless it is more branched (one branch every 8 or 10 units of glucose). It is stored in liver and muscle tissues. Another very important polystyrene is cellulose, it is a polymer unit of glucose. It is different from kanji and glycogen because the unit is equally bound to beta 1-4. Instead they form a two-dimensional structure, with hydrogen bridge between adjacent polymers, which adds stability to these molecules. Cellulose should not be suppressed in the human digestive tract that does not have the enzymes necessary to hydrorolize beta 1-4 binding. Some such anai-anai have symbiote bacteria in their digestive tract that have enzymes (cellulite) for cellulite digestion. Ruminant, because the ox has bacteria, protozoa and kulat involved in cellulose hydrolysis in its digestive tract (reticle and rumen). The only structural difference between amylose and cellulose is the type of binding between glucose molecules (alpha for amylose and beta for cellulose) but sebatian has very different. Cellulose is a resistant substance that forms the walls of plant cells, while amylose (one of the starch components) is water soluble and is used by plants as reserve materials. The formation of policeakards from monosaccharides requires energy; when cells need energy it hydroposizes them to release the monosacchaid, which is oxidized to provide the necessary energy for cellular work. [Back] [Main] [Above] [Next] Translation diagram and diagram by: Dr. Ana Maria Gonzalez amgonza@unne.edu.ar Dr. Jorge S. Raisman, lito@unne.edu.ar Updated Friday, October 22, 2004 2004