

HYDROLYSIS OF THE ETHER LINK – TOPIC TEST 1

QUESTION 1

Hydrolysis of cellulose molecules would produce:

- A. $C_5H_{11}O_2N$ monomers
- B. $C_6H_{12}O_6$ monomers
- C. $CH_3(CH_2)_{14}CHCHCOOH$ monomers
- D. $C_3H_8O_3$ monomers

QUESTION 2

Hydrolysis of Starch molecules would produce:

- A. $C_5H_{11}O_2N$ monomers
- B. $C_6H_{12}O_6$ monomers
- C. $CH_3(CH_2)_{14}CHCHCOOH$ monomers
- D. $C_3H_8O_3$ monomers

QUESTION 3

How many water molecules would be needed to hydrolyse two glycogen polymers, each containing 1000 glucose units?

- A. 2000
- B. 1999
- C. 1998
- D. 1000

QUESTION 4

When starch is completely hydrolysed into its simplest sugars, the functional present in the remaining molecules will be the

- A. hydroxyl group
- B. carboxyl group
- C. ether link
- D. ester link

QUESTION 5

When you eat a piece of white bread, it may not initially taste sweet. However, after a few minutes in your mouth, the taste quickly becomes sweet. Why?

Solution

QUESTION 6

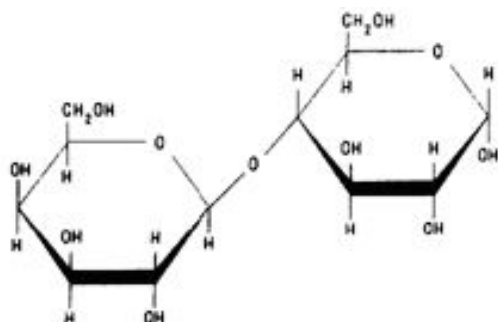
A student placed a sample of starch into two different test tubes. To the first was added some $\text{HCl}_{(aq)}$ and to the second some saliva. What test could be used to determine the effectiveness of the acid/saliva in breaking down the starch?

Solution

QUESTION 7

Using structural formulae, show the hydrolysis of the disaccharide shown below.

Solution



SOLUTIONS

QUESTION 1 Answer is B

QUESTION 2 Answer is B

QUESTION 3 Answer is C

QUESTION 4 Answer is A

QUESTION 5

The bread tastes sweeter after a few minutes in your mouth since the starch it contains is hydrolysed into smaller sugar units (eg maltose).

QUESTION 6

Add iodine to both test tubes. If starch is present, the solution will turn blue.

QUESTION 7

