

## Worksheet 2: Carbohydrates as providers of energy for metabolism – Starch and sugar

### The passage of food through the human body

- 1 Our body cannot directly use the nutrients found in food. They have to be processed at various places in the body.  
The first stage of digestion already begins
- 5 in the mouth. The teeth grind the food and thus create a smaller surface area for the further decomposition of nutrients. The saliva in the mouth coats the food and makes it easier to slide down the esophagus. In addition, the saliva contains the enzyme amylase. It divides the long polysaccharides (e.g. starch) into smaller monosaccharides (e.g. maltose). You can demonstrate this process by adding iodine solution and saliva to a starch solution. After shaking you should observe that the solution has turned a more intense purple.
- 15 The stomach forces the mashed food in small portions into the large intestine.
- 25 Here more enzymes break down the disaccharides (e.g. maltose or sucrose) into the monosaccharides (e.g. glucose). The cells of the intestinal wall absorb the glucose molecules and pass them into the blood. The blood then transports the glucose to the individual cells (e.g. muscle cells). Here the glucose is reduced, producing water and carbon dioxide. The water and carbon dioxide leave the body during exhalation and excretion.
- 30

### Task

A total of five errors are hidden in the text. Find and correct them.

Line	Incorrect text	Corrected text