

### The scenario

<b>Subject</b>	<b>Carbon in organic compounds</b>
<b>Length</b>	4,27 min.
<b>Main objectives</b>	Learning about the structure of organic compounds
<b>Detailed objectives</b>	Observation of changes taking place during the heating of saccharose. Analysis of carbohydrate breakdown products.
<b>Structure and description of experiments:</b>	
<b>Introduction</b>	Description: Organic compounds contain carbon. The inclusion of charred residue and the presence of soot during combustion can be used to confirm that the sample contains organic compounds. In the case of saccharose, thermal decomposition results in the release of carbon and water vapor.
<b>Main subject</b>	Description: Learning about the structure of organic compounds.
<b>Experiment</b>	<p><b>Equipment:</b> test tube, metal clamp with a stand, gas burner</p> <p><b>Reagents:</b> saccharose.</p> <p><b>Description:</b> Add a pinch of saccharose to the test tube. Heat the test tube carefully in the burner flame. Note the wall at the mouth of the tube during heating. After heating, compare the appearance of the contents of both test tubes.</p> <p><b>Questions:</b></p> <ol style="list-style-type: none"> <li>1. Write down the changes taking place in the test tube.</li> <li>2. What is the final product of the transformation in the test tube?</li> <li>3. What could be the applications of this process?</li> </ol> <p><b>Conclusions:</b> Organic compounds contain carbon in their composition. The presence of carbon in the residue after heating the sample proves its organic origin. Saccharose is a carbohydrate, so for every carbon atom, there are two hydrogen atoms and an oxygen atom in its molecule. During the thermal decomposition of carbohydrates, carbon and water are released.</p> <p><b>Level:</b> Secondary school</p>