

The scenario

Subject	Saccharose dehydration
Length	6,32 min.
Main objectives	Learning about the structure of organic compounds. Hygroscopic properties of sulfuric acid (VI)
Detailed objectives	Observation of changes taking place in saccharose under the influence of sulfuric acid.
Structure and description of experiments:	
Introduction	Description: Carbohydrates are organic chemical compounds belonging to the group of sugars. Their name derives from their molecular structure, in which there is a water molecule for every carbon atom (two hydrogen atoms and one oxygen atom). Under the action of concentrated sulfuric acid (VI), carbon and water are separated from them.
Main subject	Description: Learning about the structure of sugars.
Experiment	<p>Equipment: test tubes, Pasteur pipettes, test tube holder, gas burner.</p> <p>Reagents: concentrated sulfuric acid(VI), saccharose.</p> <p>Precautions: work with gloves and protective glasses!</p> <p>Description: Add a pinch of saccharose to the test tube. Then add a few drops of concentrated sulfuric acid (VI) to the test tube using a Pasteur pipette (careful! It is highly caustic!) and set it aside. Note the upper part of the tube during heating.</p> <p>Questions:</p> <ol style="list-style-type: none"> Note down your observations of the transformation taking place in the test tube. What is the final product of the transformation in the test tube? How could this process be used? <p>Conclusions: Concentrated sulfuric acid (VI) is a highly hygroscopic substance. Hygroscopic substances absorb water from the environment, so they can be used for drying. Under the influence of concentrated sulfuric acid (VI), saccharose decomposes with the release of carbon and water. This confirms the common name of this group of compounds: carbohydrates.</p> <p>Level: Secondary School</p>