Title

Sugar for Turkish delight

Author

Valentina Ruskovski, applied sciences teacher

Table of activities

School subject	*Applied sciences*
Topic	*Food technology- sucrose*
Age	*17 years*
Required time fo the acitivity	*90 minutes*
Required materials	*Water, granulated sugar, starch, walnuts, rose, food coloring, lemon juice*
Cultural concept	*Coffee without Turkish delight is irreplaceable for many, and this delicacy comes from Turkey.*

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Teaching concept

In this activity, we will be using the physical and chemical properties of sucrose to prepare various confectionery products.

Cultural concept

Turkish delight, known as "ratluk" in Serbia, was first created by a Turkish merchant named Bekir Effendi in 1776, who opened a shop specializing in Turkish delight. Over time, this sweet treat has become a popular traditional accompaniment to coffee in many countries, including Serbia, and remains popular to this day.

Applied science concept

To produce Turkish delight, a mixture of sugar, water, citric acid, and starch is boiled together. The sucrose crystals dissolve in the water, and under the acidic conditions provided by the citric acid, sucrose is hydrolyzed into its constituent glucose and fructose, also known as invert sugar.

Aim of activity

In this activity, the students will participate in a Turkish delight production workshop, aimed at familiarizing them with the fundamental properties of sucrose.

Activities

The student activity consists of three phases that will help them become more familiar with the characteristics of sucrose and its application in the food industry. In the first phase, students will research the recipe and prepare for the delight production workshop. The second phase involves the actual production of the Turkish delight, which requires patience and attention to detail to ensure the final product has satisfactory characteristics. The third phase focuses on expanding knowledge about the characteristics of sucrose and how it is used in other branches of the food industry.

To prepare the Turkish delight, students will need to dissolve 1 kilogram of sugar in half a liter of water and add 1 tablespoon of lemon juice to invert the sucrose into invert sugar. Starch is added to thicken the mixture, and the whole mixture is cooked until a certain thickness is reached. Walnuts or rose aroma are then added for flavor, and the mixture is cooled.

By learning about the characteristics of sucrose through the production of Turkish delight, students can apply this knowledge to other food products that contain sucrose. It is important to follow all steps in the preparation and cooking process to ensure a successful final product with satisfactory characteristics.

Additional materials

Figure 1 Ingredients for delight

Figure 2 Served delight