



Title

B-vitamins and Filipinas

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Table of activities

School subject	<i>Chemistry</i>
Topic	<i>B vitamins</i>
Age	<i>15 years</i>
Required time fo the activity	<i>90 minutes</i>
Required materials	<i>Rice, water</i>
Cultural concept	<i>Rice is used in worldwide, but in this lesson we observe how rice is used in Filipines.</i>



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Teaching concept

The aim of this activity is to educate students about the chemical content of B vitamins, specifically in relation to rice. Rice is a staple food in many cuisines worldwide, making it an excellent example to explore the importance of B vitamins in our diet.

Through this activity, students will learn about the benefits of B vitamins for our health, as well as the different types of B vitamins and their specific roles in the body.

Cultural concept

The Filipino proverb "Be like a rice paddy, the more grains it produces, the lower it bows" emphasizes the importance of being humble and productive.

Rice is a small but mighty grain with a rich history and a significant impact on global food culture. It is widely used in Asian cuisine, and the rituals of gastronomy and cooking in the region revolve around rice. This activity aims to explore the chemical content related to B vitamins found in rice and how it contributes to our health.

Chemical concept

B vitamins.

Aim of the activity

The aim of the activity is to help students apply their knowledge of chemistry to understand the properties of B vitamins.

Activities

This activity is divided into three parts.

The first segment aims to help students understand the chemical properties of B vitamins. Vitamins are essential organic compounds that play a vital role in metabolism and have various biochemical functions. B complex vitamins, in particular, are involved in transferring electrons and chemical groups, and each B vitamin has a specific function. For example, Vitamin B1 helps in the elimination of CO₂ from the body, while vitamins B2 and B3 are involved in oxidation-reduction reactions. Since the human body cannot synthesize vitamins, it is essential to consume them through food.

The second segment focuses on rice, which is a cereal that contains a large amount of B vitamins. Cereals, in general, are a significant source of vitamins, and whole grains, in

particular, are rich in B complex vitamins. Rice is the second most commonly used cereal in the world, and it is a healthy, filling, and easy-to-digest food. It is also rich in carbohydrates, little protein, and has a low-fat content. The husk of rice contains a treasure trove of vitamins, minerals, and plant fibers, and it is recommended to consume brown rice to obtain these nutrients. Brown rice is unrefined, and it is a nutritionally richer source of vitamins and minerals.

In the final segment, students will explore a recipe for Filipino rice cake, which is made from rice, coconut milk, sugar, salt, and vanilla extract.

Additional materials



Figure 1 White rice



Figure 2 Integral rice