

A QUÍMICA DOS COSMÉTICOS ORGÂNICOS

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RESUMO: A contextualização é uma forma de diminuir as dificuldades que os alunos encontram no estudo de Química e atraí-los a busca por conhecimentos. Seguindo este pensamento o estudo dos cosméticos é uma forma interessante de integrar a disciplina com o contexto do aluno, estudando a Química envolvida na produção e nas propriedades de produtos naturais para os cabelos, tais como óleo de cenoura e a Aloe Vera.

Palavras-chave: Contextualização; Química; Cosméticos Orgânicos.

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THE CHEMISTRY OF ORGANIC COSMETICS

ABSTRACT: Contextualization is a way to reduce the difficulties that students encounter in the study of chemistry and attract them to the search for knowledge. Following this thought the study of cosmetics is an interesting way to integrate the discipline with the student's context by studying the chemistry involved in the production and properties of natural hair products such as carrot oil and Aloe Vera.

Keywords: Contextualization; Chemistry; Organic Cosmetics.

INTRODUCTION

Chemistry involves a lot of complex knowledge that requires a lot from the student, making him not interested in this subject. In order to rescue this student and show how necessary and pleasurable their study is, it is necessary to use new ways of teaching, seeking themes that students identify with. In this proposal contextualized themes that are of interest to the student are necessary.

Following these thoughts, cosmetics are an interesting way to integrate the discipline with the student's context, it is a very broad subject that attracts the attention of both females and males. The female sex has a greater tendency to accept this study due to all the historical context, but more and more men are becoming interested in this subject, making it a point of impact.

Cosmetics are used as substances, mixtures or formulations. The origin of its word comes from the Greek word *kosmetikós*, which means “skilled in adorning”. They are used to improve or protect the appearance or odor of the human body. Regarding the history of cosmetics, there is archaeological evidence of the use of cosmetics for beautification and personal hygiene since 4000 years before Christ (GOIÁS, 2018).

MAIN GOAL

Study the chemistry involved in the production and properties of natural hair care products.

Specific objectives

- Understand the functioning of some natural substances for hair hydration such as: carrot oil and Aloe Vera commonly known as aloe.
- Research and carry out the production process of natural hair products.
- Understand the chemistry involved in the active principles of these compounds, contextualizing the knowledge, uniting popular knowledge with the scientific knowledge explained in the studied literature.

METHODOLOGY

Together with the students, the advisor professor and the Chemistry residents reflected on how the human being invests in beauty products, specifically in hair products, emphasizing the care to be taken with the hair and how it would be easily done with simple and easily accessible products. From this, the students themselves researched and gave suggestions for products that could be used for the production of hair cosmetics, according to their effectiveness and easy availability of price and availability.

After the discussion, the products chosen were carrot for the manufacture of carrot oil and Aloe Vera to produce a moisturizing cream. In the manufacture of carrot oil, 2 carrots and 200 ml of extra virgin olive oil were used, a recipe easily found on the internet. The carrots were grated and mixed with the oil, mixed until the carrot released its characteristic color. After 2 hours of rest, the oil was ready for use and should be strained to remove the oil from the solid part. It can be used as a repairer for ends, for wetting (treatment where the product is applied to dry hair and left to act for a few hours) or combined with a common treatment cream to enhance it.

The manufacture of the treatment cream with Aloe Vera is done by removing its gelatinous interior, it can be used alone or together with a treatment cream. Because it has a very characteristic and strong odor, in this research it was chosen to use it together with the cream to ensure that its use is tolerable. After the products were produced, the student

researchers and 10 more colleagues used the products for testing for 1 month, with at least 1 application per week. In sequence, their reports were collected, studied and explained which active principles and their chemical functions generate such immediate and long-term results.

RELEVANCE OF THE PROJECT

The project manages to unite scientific knowledge with the students' previous knowledge, contextualizing using a broad topic that everyone already knows. It stimulates the study and the search for knowledge using generating themes that are interesting in the eyes of students and that also attract the attention of the community in general.

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PROJECT/RESEARCH IMPACT

After the application of the project, the students were able to understand the function of each compound used, associate them with chemical properties, correlating them with previous knowledge already established. It instigated the curiosity of the school community in the production of natural products, seeking information on the effectiveness of each compound and the specificities necessary for the individual hair style and structure.

RESEARCH RESULT

The oil extracted from carrots is mainly composed of fatty acids, beta-carotene (Fights aging and weakening of the threads), Vitamins C (Antioxidant), D (Known for controlling the roughness of the hair and offering extra protection), pro-vitamins A (It is essential for the development of wires, as it prevents the degeneration of cells), among other vitamins, thus ensuring the health of the hair and scalp (GOIÁS, 2018).

Aloe Vera is nourishing, moisturizing, regenerating, anti-inflammatory, soothing, anti-allergic and healing. It has vitamin A, B1, B2, B3 and B6, 10 minerals and 20 amino acids. These components help to maintain healthy hair, both if ingested or used externally (TEIXEIRA ET AL., 2011). In the research carried out at the school, all the hair that used the Aloe Vera-based mask instantly showed hydration and softness. According to a study published by Dal'Belo et al. (2006) its moisturizing power on the skin is probably due to a wetting mechanism and this can also be applied to the hair.

FINAL CONSIDERATIONS

Generative themes provide more interactive ways of learning, promoting the connection between prior knowledge and scientific knowledge that complement each other and have a practical application in the student's daily life. In this sense, the student can identify the importance of Chemistry and how it presents itself in their life.

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