INSTABRIGHT e-GAZETTE
ISSN: 2704-3010
Volume V, Issue IV
May 2024
Available online at https://www.instabrightgazette.com

****

FEASIBILITY OF CHICKEN EGGSHELLS AS ALTERNATIVE TOOTHPASTE

Santiaguel, Ricelle Anne V.
Alday, Eraiza L.
Arada, Ma. Katrina Angeline B.
Rosario, Andrei Steven L.
Dime, Michael Ray C.
Guinto, Aldrin V.
Balayan Senior High School

ABSTRACT

Oral health is integral to overall well-being, enabling essential functions such as biting, tearing, crushing, or grinding food. Despite its significance, it is frequently overlooked as it is seen as a trivial matter. Dental issues such as cavities, gum disease, halitosis, and tooth loss are among the conditions that often arise from poor oral hygiene. If not prevented or treated, it could potentially escalate to serious health complications. It not only leads to personal discomfort and embarrassment but also presents a significant public health concern, particularly for those who face barriers to accessing proper oral care due to socio-economic challenges. Upon recognizing this concern, the researchers explored the feasibility of utilizing chicken eggshells as an alternative toothpaste due to their high calcium carbonate content, known to aid tooth remineralization and potentially offer an affordable solution for oral health concerns. The study incorporated chicken eggshell-derived calcium carbonate into toothpaste formulations across four groups: Treatment

****

****

INSTABRIGHT e-GAZETTE
ISSN: 2704-3010
Volume V, Issue IV
May 2024
Available online at https://www.instabrightgazette.com

A, B, C, and a control group. These treatments, with concentrations ranging from 15 percent, 20 percent, and 25 percent calcium carbonate, were provided equal amounts of glycerin, coconut oil, and sodium lauryl sulfate. Over a three-day period, the alternative toothpaste was used to clean the human-extracted teeth with the use of a finger-rubbing technique. Subsequently, the toothpaste's fineness, foaming capacity, and pH level were evaluated. The results indicated that formulations with 20% and 15% calcium carbonate concentrations were the most effective, exhibiting optimal pH levels, fineness, and foaming properties. After three days of use, all samples treated with various concentrations displayed visibly whiter enamel and improved surface cleanliness, in contrast with the control group, where no effects were observed.