



## DEVELOPMENT OF MAGIC FRUIT-INFUSED GUMMY CANDY TO IMPROVE MEDICATION PALATABILITY FOR CHILDREN

DE JESUS, GIAN MIGUEL A.  
NOCHE, KIAN LORD D.  
TANCINCO, CHARLEMAGNE GENO T.  
CUDIAMAT, PAUL IVAN  
BIRON, JOHN KRISMARTH  
Balayan Senior High School

### ABSTRACT

This study explores the development of Magic Fruit-Infused Gummy Candy as a solution to improve medication palatability for children. Many children struggle with taking bitter-tasting medicine, often leading to non-compliance and missed doses, which can affect their recovery. To address this, the research focuses on utilizing *Synsepalum dulcificum*, commonly known as Magic Fruit, which contains miraculin, a glycoprotein that temporarily alters taste perception by transforming sour and bitter flavors into sweetness. The study follows a true experimental design, incorporating quantitative methods to assess the effectiveness of miraculin-infused gummy candy. The extraction process of miraculin involved blending Magic Fruit pulp with distilled water in a 2:1 ratio, followed by filtration. The gummy candy was formulated by incorporating the extract into an agar-based mixture to create a chewable and palatable product. The effectiveness of the candy was tested using an experimental setup where the response of test subjects (rats) to bitter substances was observed before and after consuming the formulated gummy. Results indicate that the miraculin-infused gummy significantly enhanced palatability by masking bitterness, leading to

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increased consumption of bitter substances. The findings suggest that this innovation can improve medication compliance among children, making treatment more effective and reducing medication-related distress. Overall, this research highlights the potential of Magic Fruit as a natural taste modifier in pediatric healthcare. Future studies should explore further optimization, long-term stability, and human trials to validate its effectiveness on a broader scale.



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