

A Comprehensive Diabetes Monitoring Device for Enhanced Health Management

Ruwaidy Mat Rasul

Department of Industrial Design, Universiti Sultan Zainal Abidin, Terengganu Malaysia

Siti Nursyahidah Binti Syed Hussin

Product Design Cluster, Universiti Sultan Zainal Abidin, Terengganu Malaysia

Mohd Shahir Kasim

Faculty of Innovative Design and Technology, Universiti Sultan Zainal Abidin, Terengganu Malaysia

Siti Nurul Akmal Yusof

Faculty of Innovative Design and Technology, Universiti Sultan Zainal Abidin, Terengganu Malaysia

Abstract:

Diabetes mellitus (DM) is a prevalent global health concern, necessitating effective monitoring and management solutions. This study introduces a novel Comprehensive Diabetes Monitoring Device (CDMD) and a dietary monitoring device, designed to enhance health management for individuals with diabetes and those seeking to improve their dietary habits. The CDMD integrates continuous glucose monitoring with personalized health insights and activity tracking, providing real-time data for informed health decisions. Similarly, the dietary monitoring device aims to simplify the process of dietary monitoring, allowing users to effortlessly track their food intake and make informed decisions based on consumption data. Both devices prioritize userfriendliness and portability, aiming to seamlessly integrate into users' daily lives and enhance their overall quality of life. Through thorough analysis and user feedback, these devices offer promising solutions to current monitoring challenges and contribute to the ongoing efforts to improve health management.

Keywords:

Diabetes mellitus, Comprehensive Diabetes Monitoring Device (CDMD), Dietary monitoring device, Health management, Continuous glucose monitoring, Nutritional management, Userfriendly design, Real-time data insights, Portability, Quality of life.