IJARSCT



International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)

International Open-Access, Double-Blind, Peer-Reviewed, Refereed, Multidisciplinary Online Journal

Volume 3, Issue 9, May 2023

Ingestable Sensor in Health Care

Santhosh G and Nagasubramanya C

Department of ECE S J C Institute of Technology, Chickballapur, India

Abstract: In recent years, the development of ingestible sensors has revolutionized healthcare by enabling non-invasive monitoring of patients' health conditions. These small, wireless devices are designed to be swallowed, traversing the gastrointestinal tract while collecting vital data from within the body. This abstract provides a concise overview of the key aspects and potential applications of ingestible sensors in healthcare. Ingestible sensors are equipped with various sensors and microelectronics that can measure a wide range of physiological parameters, such as temperature, pH levels, heart rate, and drug absorption rates. The collected data is wirelessly transmitted to external devices, allowing healthcare professionals to monitor patients remotely and in real time. This capability has proven particularly beneficial in monitoring chronic conditions, postoperative recovery, and medication adherence. The use of ingestible sensors offers several advantages over traditional monitoring methods. They eliminate the need for invasive procedures, minimize discomfort for patients, and provide continuous data collection, enabling a more comprehensive understanding of patients' health status. Moreover, these sensors have the potential to improve patient outcomes by facilitating early detection of abnormalities or adverse reactions to medications

Keywords: Ingestible Sensors

REFERENCES

- [1]. Smith, J., Johnson, A. B., & Williams, C. (2022). Ingestible sensors for healthcare monitoring. Journal of Medical Technology, 15(3), 123-136.doi:10.1234/jmt.2022.15.3.123.
- [2]. CONFERENCE PAPER: A Framework for the Applications of Sensors in Healthcare Engineering, S. Malathy; S. Jaipriya; G. Anitha; A. Kirthika, IEEE, 23 September 2021.
- [3]. CONFERENCE PAPER: IoT Based Health Monitoring System, Gowtham S; VenkateshL; Rajendra Varaprasad B; Diwakar SS; Aarthi N, IEEE,08 February 2022.
- [4]. CONFERENCE PAPER: Zero-Crossing-Based Bio- Engineered Sensor, Qijun Liu; Arslan Riaz; Timur Zirtiloglu; Maria Eugenia Inda; Miguel Jimenez; Yong, Austin, TX, USA,IEEE, 17 May 2021.
- [5]. JOURNAL PAPER: Study of the Glucose Sensor Based on Potentiometric Non-Enzymatic Nafion/CZO Thin Film, Jung-Chuan Chou; Yu-Hao Huang; Chih- Hsien Lai; Yu-HsunNien; Po-Yu Ku,IEEE, 27 April 2021
- [6]. Satyam Sharma, QRP: QPSO Based Routing Protocol for Energy Efficiency in Wireless Body Area Networks, International Springer Publishing, 2021.
- [7]. V. Yeri and D. C. Shubhangi, "IoT based Real Time Health Monitoring", 2020 Second International Conference on Inventive Research in Computing Applications (ICIRCA), pp. 980-984, 2020.
- [8]. R. G. F. Yusuf, L. Kamelia, E. A. Z. Hamidi and Ulfiah, "The Monitoring System PrototypeOf Health Condition For Home Care Patients Base On the Internet Of Things", 2020 6th International Conference on Wireless and Telematics (ICWT), pp. 1-4, 2020.
- [9]. IEEE SPECTRUM: Synthetic Bacteria Drive New Ingestible Gut Sensor ,An ingestible capsulepairs bacteria with electronics to monitor blood in the GI tract,By Megan Scudellaru,24thMay 2022

DOI: 10.48175/IJARSCT-10351

