

26. Title: A Saliva Based non-invasive Glucometer

Inventor: Prof. Sandeep K. Jha, Centre for Biomedical Engineering

Keywords: Saliva analyzer, Glucometer, Non-invasive glucometer

Domain: Healthcare (Diagnostics)

Summary: The conventional glucose monitoring machines generally use invasive techniques for glucose monitoring. In order, to monitor blood glucose level using such machines, one needs to apply blood sample onto a monitoring strip and the strip may then be subjected to the said machine to detect blood glucose level. The patient always needs to prick his/her finger to get blood sample for glucose monitoring and thus, conventional machines provide a painful method for glucose monitoring. Moreover, conventional machines are not available to masses in underdeveloped and developing nations, because of their cost.

The current technology relates to a handheld non-invasive glucose monitoring based on saliva. The device uses color variation for detecting glucose. The technology is based on GOD-POD-Dye standard method and optical detection and test medium is saliva. The developed handheld standard glucometer device had the detection accuracy upto satisfaction

Advantages:

- » Non-invasive glucose monitoring: just have to spit in a holder attached to the test strip and insert it into glucometer
- » No need for finger prick and no itching due to constant wearing of gluco-patch.
- » Cost effective
- » Device is portable

Applications: Life science (Medical Diagnostics – non-invasive glucose monitoring)

Scale of Development: Prototype has been developed and invitro studies have been done

Technology Readiness Level: 4

IP Status: Granted Indian Patent 359606, Granted Indian Patent 361927