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(57) Abstract :

ABSTRACT: Title: Portable Biosensor for Type 2 Diabetes The present disclosure proposes a portable biosensor to determine glucagon like peptide-1 (GLP-1) in type 2 diabetes. The portable biosensor 100 comprises a light source 101, a detachable sample plate 102, a photo detector 104, a sample injection window 105 and a pair of two way USB ports. The sample plate is coated with silver and anti GLP-1 antibodies that resonate when a light of threshold wavelength is incident upon it. When a sample is injected on the sample plate, the protein-antibody interactions cause a shift in SPR light. The shift is captured by the webcam and the spectrum of the shift is analyzed using a software. The software analysis yields the GLP-1 levels and aids to detect type 1 diabetes. The GLP-1 based detection of type 2 diabetes represents a new and attractive alternate approach.

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