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DEPARTMENT OF
SCIENCE & TECHNOLOGY
सत्यमेव जयते

BITS Pilani
TECHNOLOGY
ENABLING
CENTRE
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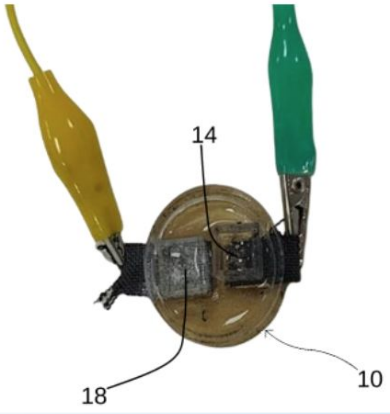
PENDING

(IN202311038759)
Miniaturized 2D nanomaterial-based dual-hormone sensor for simultaneous dopamine and insulin



NEED

With rising healthcare concerns and an increasing demand for accurate hormone monitoring, a device that can detect multiple hormones like dopamine and insulin in human blood offers a significant advancement in diagnostics.

MARKET ANALYSIS

The global hormone testing market is projected to grow at a CAGR of 5.8% from 2023 to 2033. Increased prevalence of hormone-related disorders, rising demand for point-of-care diagnostics, and advancements in miniaturized medical devices will drive this growth.

TECHNOLOGY OVERVIEW

This two-electrode device offers a simple and efficient method to detect multiple hormones, including dopamine and insulin, in human blood. It uses a carbon cloth working electrode, an acrylic base, and a reference electrode, ensuring accuracy and reliability in hormone detection.

Target Industries

1) Healthcare device manufacturers, 2) Diagnostic kit producers, 3) Medical research institutions focused on hormone disorders.

TECHNOLOGY KEY FEATURES

Dual electrode system for hormone detection, carbon cloth electrode, titanium dioxide nanofiber coating for enhanced sensitivity, circular acrylic base, hormone detection for dopamine and insulin, low charge transfer resistance.

AT A GLANCE

- SDG 3 (Good Health and Well-Being), SDG 9 (Industry, Innovation, and Infrastructure), SDG 10 (Reduced Inequality), SDG 17 (Partnerships for the Goals)

Read more here

Technology is available for licensing/ co-development.

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