NANOTECH-BASED REAGENT FOR ENHANCED BIOSENSING DIAGNOSTIC

A nanotechnology-enabled reagent that improves sensitivity and performance in point-of-care diagnostic tests

Problem / Market Need

Point-of-care (POC) diagnostic technologies are vital for timely and accurate disease detection, particularly in decentralized or resource-limited settings. However, many diagnostic platforms suffer from limited sensitivity and inconsistent test performance. There is a growing demand for novel reagents that can improve the accuracy and efficiency of biosensing systems across global health markets.

Description of Solution / Technology

Developed by Prof. Chris Vorster and his team at North-West University, this nanotech reagent significantly enhances detection sensitivity and signal consistency in POC diagnostics. Its superior performance stems from a specialised synthesis method and proprietary know-how. This expertise is essential for the reagent's successful reproduction, formulation, and integration into diagnostic platforms.

Key Benefits / Advantages

- Enhanced sensitivity and accuracy in biosensing
- Improved consistency for reliable diagnostic results
- Adaptable across various POC diagnostic formats
- Backed by proprietary know-how and technical expertise

Applications / Relevant Industries

The nanotech-based reagent has been proven to be highly sensitive and is multifunctional with tunable properties. The reagent can be used as a tool for detecting specific substances. It has diverse applications, including:

- Specialty Chemicals: Production of nanomaterials with specific properties.
- Biotechnology: Development of medical diagnostics and therapeutics.
- Biomedical imaging: For enhanced light absorbing properties and multifunctionality

Stage of Development

Describe the current development status (e.g., concept, working prototype, validated in lab, tested in real-world conditions). Mention any studies, pilot programs, funding, or collaborations if available.

Intellectual Property Status

Licensing is based on proprietary know-how and technical expertise, with NWU providing access to critical synthesis methods and application support under license.

Opportunity

North-West University invites diagnostic companies, biotech developers, and investors to license this high-performance nanotech reagent. Licensing options include exclusive or non-exclusive agreements tailored to different applications and markets. NWU offers collaborative support to facilitate technology transfer and product integration.

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