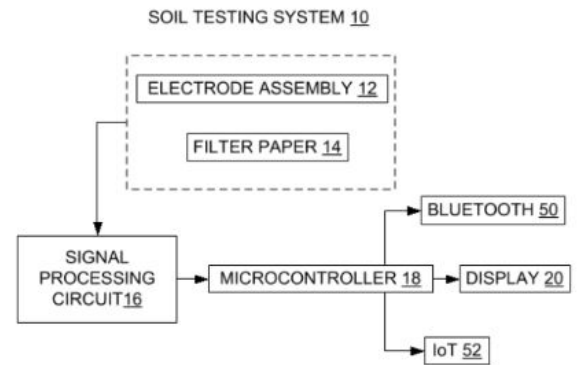




PENDING

(IN202311042662)

Point-of-care soil testing system & device



NEED

Soil health is vital for agricultural productivity. Current testing methods are lab-based, time-consuming, and require expensive equipment. Farmers need an easy, portable solution to assess soil health quickly and accurately.

TECHNOLOGY OVERVIEW

The disclosed soil testing system offers a portable, point-of-care solution for determining ionic concentration in soil. It uses a filter paper to extract ionic fluid, followed by voltammetric analysis and data transmission via a microcontroller for real-time ionic concentration determination.

TECHNOLOGY KEY FEATURES

Portable, point-of-care soil testing, voltammetric analysis, microcontroller-based ionic concentration measurement, filter paper for fluid extraction, easy data transmission, compact, cost-effective, suitable for farmers and field use, non-lab-based.

[Read more here](#)

MARKET ANALYSIS

The global soil testing market is expected to grow at a CAGR of 9.5%, reaching \$3.6 billion by 2033 (source: MarketsandMarkets, 2023). Drivers include growing demand for precision agriculture, rising awareness of soil health, and need for sustainable farming practices.

Target Industries

Agriculture, environmental monitoring, and precision farming. , Agricultural technology providers, soil analysis and testing service providers, and companies focused on mobile solutions for field testing and data analysis in agriculture.

AT A GLANCE

- SDG 2 (Zero Hunger), SDG 12 (Responsible Consumption and Production)

Technology is available for licensing/ co-development.

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