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विज्ञान एवं प्रौद्योगिकी विभाग
DEPARTMENT OF
SCIENCE & TECHNOLOGY
सत्यमेव जयते

BITS Pilani
TECHNOLOGY
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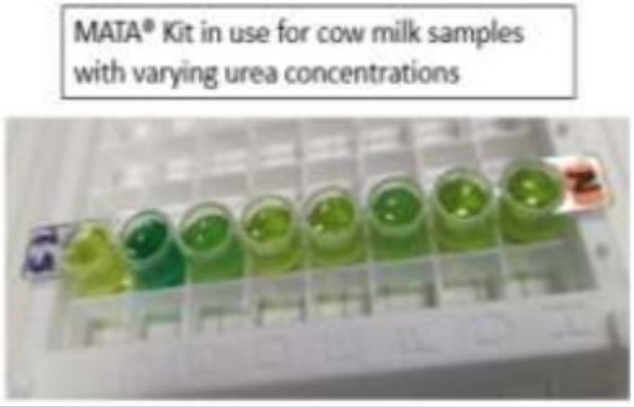
PENDING

(IN202311052491) Milk adulteration testing and analysis (mataa®) kit, a field operable adulteration testing kit for cow milk



NEED

Milk adulteration is a widespread problem in the dairy industry, with harmful substances like urea affecting milk quality. Traditional detection methods are costly, complex, and require expertise.

MARKET ANALYSIS

The global dairy testing market is projected to grow at a CAGR of 8.5%, reaching $5 billion by 2033 (source: Market Research Future, 2023). The key drivers include the increasing demand for food safety, health concerns, and regulatory standards.

TECHNOLOGY OVERVIEW

The PoC device offers a cost-effective, simple solution for detecting urea adulteration in cow milk. Using urease enzyme immobilized on an 8-well polystyrene strip, it detects as little as 1.5 µg of urea, providing quick results with 85-90% accuracy.

Target Industries

Dairy industry, food safety testing, agriculture. , Dairy product manufacturers, food safety labs, quality control services, packaging companies, and agriculture-based enterprises focusing on milk adulteration detection and safety compliance.

TECHNOLOGY KEY FEATURES

Simple, low-cost detection, colorimetric analysis, reusable (up to 30 times), detects 1.5 µg of urea, 90-day shelf life, no expertise required.

AT A GLANCE

- SDG 2 (Zero Hunger), SDG 3 (Good Health and Well-being), SDG 12 (Responsible Consumption and Production)

Read more here

Technology is available for licensing/ co-development.

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