

A New Color Based Method for Detection of Detergent In Milk.

The test can detect 20 mg of laboratory detergent in 100 ml milk in 100 seconds



Technology Description

§ A rapid test for detection of detergent in milk has been developed. The test can detect all the commercially available detergent added in milk. § Test just requires mixing of two solutions & milk and colour is observed in lower layer. Blue colour indicates presence of detergent while purple colour confirms absence of detergent. § Test can be easily used at milk collection centres, reception docks of dairy industries § Test has been validated at a NABL accredited laboratory and in a

Name Of institute:
National Dairy research Institute, Karnal
Stage of development:
Ready for Commercialization
Patent status: Filed

Scientific Experts:
Dr. Y. S. Rajput

Background

§ Newspaper report and reporting through TV channel suggest that milk is being adulterated with synthetic milk. It is believed that detergents are used in preparation of synthetic milk (to emulsify the extraneously added non-milk fat to milk) and therefore adulteration of milk with synthetic milk can be checked by ascertaining presence or absence of anionic detergent in milk. § Test will assist dairy industries in ascertaining quality of milk § Law enforcement agencies can also adopt the test in confiscated milk samples

Benefits / Utility

§ Detection of adulteration of milk with so called synthetic milk § Detects all brands of commercial detergent available in the market § Simple to perform § Easily acceptable § No equipment required § No false positive or false negative results § Detection solutions are prepared from inexpensive ingredients / chemicals

Country Context

The test can find market in India and other countries like Sri Lanka, Nepal, Pakistan, Bangladesh, Bhutan in the sub region.

Scalability

§ The test kit can be made for 100 samples, 200 samples and 500 samples. There is no problem associated with scalability § 8-10 commercial business operators throughout the country with a capacity to produce 50,000 units per operator

Business and Commercial Potential

More than 700 dairy plants and 15 State Cooperative Milk Marketing Federations can be prospective buyers of the technology

Potential investors to this technical innovation

§ Dairy Industries § Milk processing industry § State Cooperative Milk Marketing Federations § Food Laboratories § Entrepreneurs



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Financials

§ Total Capital Investment (excluding Land and licensing fees) : Rs 4.8 Lakh
§ Break of capital investment § Building : Rs 4 lakh § Weighing balance: Rs 0.3 Lakh § Furniture : Rs. 0.5 Lakhs § Variable cost (per kit) for 250 samples: Rs 825 § Break of variable cost § Solutions and reagents : Rs. 275 § Micro-centrifuge tubes: Rs. 400 § Reagent Bottles : Rs. 50 § Dispenser tips: Rs. 100
§ Expected sale/unit: Rs (can take selling price of a similar product): No such product is available in the market § No. of units to be sold for

Target Market / Customer

§ Common person consuming milk is concerned about quality of milk and their concern will influence adoption of technology. § All commercial dairy plants / federations § All manufacturer of kits § Dairy equipments manufacturers

Social impact of the technology

The test will act as deterrent for people involved in adulteration. It will help to ensure quality of milk and people will be able to consume milk fearlessly

Any other relevant information

There may be need of one time purchase of dispensers for dispensing measured volume of reagents / milk, if not available at the place of

