



NovaUCD

Technology Licensing Opportunity

Novel Lactose Detection Method using Ultrasound

- *Monitoring of lactose with high precision*



Opportunity:

Lactose is the major carbohydrate in bovine milk and is an important indicator of quality, contributing to the sensory and functional properties of milk. Determination of the concentration of lactose in milk, and other dairy products, is required for compliance with food safety regulations.

Lactose is used as a component of animal feed, as an ingredient within sports nutrition and dietary supplements, within infant milk formula alongside applications in the pharmaceutical industry.

Researchers at University College Dublin have developed a novel assay for the accurate detection of lactose using High Resolution Ultrasonic Spectroscopy. The method allows for real-time, non-destructive monitoring of lactose with high precision and can be used in conjunction with opaque substrates.

Applications:

Analytical method for the precise determination of lactose concentration which can also be used to confirm the absence of lactose in lactose-free products.

Key Features/Advantages:

- The quantification of lactose with high precision.
- Eliminates the need for sample preparation, complex calibrations, saving time, costs, and reagents.
- Does not require the substrate to be transparent.

Value Proposition:

The determination of lactose concentration with high precision. The method is applicable to native and opaque samples (such as milk and cheese), as ultrasonic waves can propagate through these substrates.

Market:

Analytical companies, dairy processing companies, companies producing lactose-free products.

Lead Inventor:

Professor Vitaly Buckin
UCD School of Chemistry.

IP Status/Publication:

A UK patent application was filed on 21st December 2021 (GB21186630).



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