

Detection of Cause of Pink Discolouration Effect in Cheeses

Teagasc is seeking partners within the diagnostics industry to exploit a novel qPCR-based test for supply of assay/kit for detection of the bacterial cause of pinking discolouration defect, to the dairy and cheese industry.

Summary

Teagasc researchers have developed a novel q-PCR based test capable of detecting the bacterial cause of pinking discolouration defect in the dairy and cheese industry for the first time. This technology helps to solve a significant problem for the global dairy industry and will be of interest to the diagnostics industry.

Value Proposition

Pinking discolouration defect, primarily in cheese, is a global problem for dairy producers. Such pinking defect, which can manifest itself in various forms, on block surfaces or below the surface, can lead to downgrading or rejection of cheeses, and hence significant economic losses to the producer. To date, the cause of the defect has been unknown, but subject to much debate. By understanding and being able to identify the cause and origin of such a defect, this would facilitate removal/treatment of the cause at the source, thereby significantly reducing the occurrence of costly pinking defect discolouration events and increasing efficiencies and quality of cheese manufacturing plants. This hasn't been possible to date, as the cause of such discolouration defect remained unknown.

Technology & Opportunity

By discovering the source of pink discolouration to be bacteria not associated with cheese production, and developing an assay to identify sources of such defect through identification of the causing bacteria, this invention provides a method of assaying cheese manufacturing plants, at ingredients and cheese processing plants level to identify the source of the pinking defect. Such testing of cheese systems, for the risk of pinking in cheese, will allow timely treatment of either ingredient or machinery/plant surfaces to eliminate the bacteria, before the defect arises, thereby minimizing/avoiding the occurrence of such pinking discolouration defects at commercial scale.

Competitive Advantage of Technology

1. A novel method of determining presence in cheese sample of source of pink discolouration defect.
2. A method of testing a cheese manufacturing system for a risk of pinking discolouration, allowing modification of system to remove/ treat the origin of the defect.
3. Resulting qPCR assay, and/or a kit comprising a diagnostic reagent, to detect the source.

Opportunity

This technology would be a valuable addition to laboratories providing diagnostic solutions to dairy industry to develop kits/assay based on this invention, and is available to licence.

Intellectual Property Status

A patent application was filed in 2014, (UK Application No. 1410948.2), claiming a method to determine the presence of such a source, due to the presence of the novel bacteria.

Funding

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How to Proceed:

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