

New guidelines to harmonize studies on heat resistance of bacteria

December 2 2014

Using a common methodology to measure heat resistance of bacteria is crucial, so that the results of different studies can be compared. The International Dairy Federation (IDF) has produced a set of guidelines and considerations in the *International Journal of Food Microbiology* that will serve as a valuable resource for researchers studying heat resistance.

Even if these guidelines are not compulsory, their implementation would contribute to an improved comparability of published results on heat resistance and to a better reliability of the mathematical quantitative risk assessment models that will be developed in the future. These recommendations will also help to get a better understanding of the variety of factors that need to be considered in heat resistance studies, according to Dr Kieran Jordan and Choreh Farrokh, two experts at the IDF involved in the scientific paper's development.

A more harmonized testing approach

This paper contains a review of the literature relevant towards establishing such a harmonized protocol, identifies critical issues for establishing internationally agreed protocols, and provides a harmonized framework for reporting and interpretation of heat inactivation studies of potentially pathogenic bacteria.

Dr Kieran Jordan also commented that these guidelines are a start and that they will be useful in guiding researchers towards relevant primary

factors to consider when undertaking experimental studies to determine the heat resistance of bacteria.

Appropriate risk management

An agreement on harmonized protocols for the measurement of [heat resistance](#) of bacteria in milk in the laboratory, and validation at the pilot-plant or industrial-scale level would allow international agreement on appropriate risk management of emerging potential hazards for human and animal health.

More information: "Guidelines for experimental design protocol and validation procedure for the measurement of heat resistance of microorganisms in milk." *International Journal of Food Microbiology* 192 (2015) 20-25

Provided by IDF (International Dairy Federation)

Citation: New guidelines to harmonize studies on heat resistance of bacteria (2014, December 2) retrieved 10 May 2024 from <https://medicalxpress.com/news/2014-12-guidelines-harmonize-resistance-bacteria.html>

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