



Fourier Transform Infrared Spectroscopy in Food Microbiology

By Avelino Alvarez-Ordóñez, Miguel Prieto

Springer-Verlag New York Inc., United States, 2012. Paperback. Book Condition: New. 2012 ed.. 246 x 150 mm. Language: English . Brand New Book. Vibrational spectroscopy techniques, which have traditionally been used to provide non-destructive, rapid, and relevant information on microbial systematics, are useful for classification and identification. In conjunction with advanced chemometrics, infrared spectroscopy enables the biochemical signatures from microbiological structures to be extracted and analysed. In addition, a number of recent studies have shown that Fourier Transform Infrared (FT-IR) spectroscopy can help to understand the molecular basis of events, such as the adaptive tolerance responses expressed by bacteria when exposed to stress conditions in the environment, i.e. environments that cells confront in food and during food processing. The proposed Brief will discuss the published experimental techniques, data-processing algorithms, and approaches used in FT-IR spectroscopy to assist in the characterization and identification of microorganisms, to assess the mechanisms of bacterial inactivation by food processing technologies and antimicrobial compounds, to monitor the spore and membrane properties of foodborne pathogens in changing environments, to detect stress-injured microorganisms in food-related environments, to assess dynamic changes in bacterial populations, and to study bacterial tolerance responses.



READ ONLINE
[7.92 MB]

Reviews

A brand new e-book with a brand new standpoint. it was actually writtern extremely properly and valuable. I am just quickly can get a pleasure of looking at a published ebook.

-- Prof. Garett Schmitt

Complete guide for publication enthusiasts. I have read and i am sure that i will going to study again once again in the future. Your way of life period will be transform once you total looking over this publication.

-- Shayne O'Conner