

Title Theory and application of near infrared reflectance spectroscopy in determination of food quality

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Abstract

Near infrared reflectance spectroscopy (NIRS) is a non-destructive and rapid technique applied increasingly for food quality evaluation in recent years. It provides us more information to research the quality of food products. This review intends to give an overview of the type of information that can be obtained based on some developed theory and food research of NIRS. It includes the principle of NIRS technique, the specific techniques with chemometrics for data pre-processing methods, qualitative and quantitative analysis and model transfer, and the wide applications of NIRS in food science. In addition, the promise of NIRS technique for food quality evaluation is demonstrated, and some problems which need to be solved or investigated further are also discussed.