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Near-infrared spectroscopy for the detection and quantification of bacterial contaminations in pharmaceutical products

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ABSTRACT

Accurate detection and quantification of microbiological contaminations remains an issue mainly due the lack of rapid and precise analytical techniques. Standard methods are expensive and time-consuming being associated to high economic losses and public health threats. In the context of pharmaceutical industry, the development of fast analytical techniques able to overcome these limitations is crucial and spectroscopic techniques might constitute a reliable alternative. In this work we proved the ability of Fourier transform near infrared spectroscopy (FT-NIRS) to detect and quantify bacteria (*Bacillus subtilis, Escherichia coli, Pseudomonas fluorescens, Salmonella enterica,*