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标题: Prediction of dissolution time and coating thickness of sustained release formulations using Raman spectroscopy and terahertz pulsed imaging

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摘要: Raman spectroscopy was implemented successfully as a non-invasive and rapid process analytical technology (PAT) tool for in-line quantitative monitoring of functional coating. Coating experiments were performed at which diprophylline tablets were coated with a sustained release formulation based on Kollicoat (R) SR 30 D. Using PLS a multivariate model was constructed by correlating Raman spectral data with the mean dissolution time as determined by dissolution testing and the coating thickness as measured by terahertz pulsed imaging.

By performing in-line measurements it was possible to monitor the progress of the coating process and to detect the end point of the process, where the acquired coating amount was achieved for the desired MDT or coating thickness. (C) 2011 Elsevier B.V. All rights reserved.

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