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## NIR spectroscopy as a PAT tool for solid dosage continuous manufacturing

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### ABSTRACT

Near infrared (NIR) spectrometers have long been the PAT tools of choice for pharmaceutical and industrial scientists seeking to gain both physical and chemical information from a sample. More recently, the development of fast and inexpensive miniature NIR instruments have made possible the real-time monitoring of individual unit operations within a process. For continuous manufacturing operations this means that, NIR-based multivariate models can be used as supervisory tools for closed loop control and eventually real-time release of the drug product. In this presentation we will discuss different case studies for which the implementation of NIR spectrometers of low wavelength ranges (950–1650 nm) aided in formulation, process trouble-shooting and ultimately, how these were used as PAT tools for the continuous manufacturing of tablets and orodispersible polymer films.