

Crystallization: A Tornado and Technobis Integrated Solution

HIGHER RAMAN SENSITIVITY THAN EVER BEFORE POSSIBLE

Sensitivity, Speed and Safety

CRYSTALLIZATION MONITORING

By coupling the Tornado Process Raman Spectrometer to a highquality complementary tool, the Crystalline Parallel Crystallizer from Technobis Crystallization Systems, it is possible to monitor the crystallization process and hence accelerate the development of drug products to the market.



Process Guardian Raman™ 'PGR' Analyzer

LOW VOLUME REQUIREMENT

Because of the sensitivity of the Tornado Process Raman Analyzers monitoring can be achieved even at the low working volumes. While the smallest commercial vessel where Raman spectroscopy and insolution microscopy can be used as PAT tools need 100ml, it is possible to obtain the same data while working at scales as low as 2.5 ml.



Tornado Crystalline probe

MORE ACCURATE IDENTIFICATION AND QUANTITATION

The Crystalline RR gives the user access to real time Raman spectroscopy, in combination with a sophisticated parallel crystallizer with turbidity measurement. to monitor and track polymorphism and morphology at low working volumes.



Our patented technology is employed in the HyperFlux[™] PRO Plus and the next generation analyzer - the PGR, offering Higher Raman Sensitivity Than Ever Before Possible



Crystalline



HIGH THROUGHPUT VIRTUAL SLIT (HTVS™)

Tornado's proprietary HTVS[™] design eliminates spectrometer slit losses while maintaining high spectral resolution. This allows for the best possible combinations of signal strength and spectral resolution in a dispersive spectrometer and results in an order of magnitude improvement in sensitivity.









