

PAT Toolbox

Process Train Coverage

		Currently Available PAT Technologies								
		Near Infrared Spectroscopy	Turbidimetry	Refractometry	Viscometry	Ultra Violet Photometry	Laser Diffraction	Mass Spectroscopy	Mid Infrared Spectroscopy ⁽¹⁾	Raman Spectroscopy ⁽²⁾
Process unit operations	Dispensing	⊞								⊞
	Dissolution	⊞	⊞	⊞	⊞				⊞	⊞
	Suspension Prep.	⊞	⊞		⊞	⊞			⊞	⊞
	Distillation	⊞		⊞					⊞	⊞
	Reaction	⊞							⊞	⊞
	Crystallization	⊞	⊞	⊞	⊞	⊞			⊞	⊞
	Column Purification			⊞			⊞		⊞	⊞
	Wet-milling					⊞			⊞	⊞
	Jet-milling						⊞			⊞
	Spray-Drying	⊞				⊞	⊞			⊞
	Drying	⊞						⊞		⊞
	Blending									
	Tableting	⊞								
Coating									⊞	
Process Development Steps	Familiarization								⊞	⊞
	Industrialization	⊞	⊞	⊞	⊞	⊞	⊞	⊞	⊞	⊞
	Scale-Up	⊞	⊞	⊞	⊞	⊞	⊞	⊞	⊞	⊞
	Commercial Mnfg. Start-Up	⊞	⊞	⊞	⊞	⊞	⊞	⊞	⊞	⊞
	Commercial Routine Mnfg	⊞	⊞	⊞	⊞	⊞	⊞	⊞	⊞	⊞
	Continuous Improvement	⊞				⊞		⊞	⊞	⊞

⁽¹⁾ A lab equipment with remote sensing capabilities is available; ⁽²⁾ Currently only for RM dispensing (hand-held unit).