

Real-time sample monitoring during continuous manufacturing is critical to ensure product quality and achieve efficient manufacturing.

The Thermo Scientific TruProcess analyzer provides a Near Infrared (NIR) solution for small batch processes to large scale production.

Thermo Scientific TruProcess

Next Generation Process NIR for PAT Applications



The Thermo Scientific TruProcess analyzer is the next generation Near-Infrared (NIR) spectrometer for real-time blend analysis, drying, and other Process Analytical Technology (PAT) applications.

Utilizing NIR spectroscopy, the TruProcess™ analyzer contains the capabilities of a benchtop system in a small, lightweight form factor making it ideal for global deployment. Providing fast, reliable, real-time process analysis, the analyzer optimizes manufacturing throughput while improving product quality and lowering production costs.

The TruProcess analyzer is ideal for use with processing equipment of all sizes. The small and lightweight enclosure allows for complete process scalability from small-scale laboratory blending equipment through pilot scale-up, to large-scale production.



Key Benefits Include:

Non-Destructive

Non-contact, diffuse reflectance measurement with programmable acquisition trigger allow for non-destructive measurements.

Fast, accurate monitoring

Complete with wireless communications, real-time data analysis and storage, spectral measurement times less than 1.5 seconds and blender rates up to 25 rpms.

Advanced Technology

Micro-electro-mechanical systems (MEMS) technology transforms traditional NIR spectroscopy into a process-line NIR sensor.

Customizable

The analyzer is compatible with Thermo Scientific Method Development software which allows for both qualitative and quantitative applications including; drying, blending and moisture analysis.

Thermo Scientific TruProcess Specifications

Spectral Range	1600 – 2400 nm (6250 – 4100 cm ⁻¹)
Absolute Wavelength Accuracy	+/- 0.1 nm
Wavelength Calibration	Internal software controlled wavelength standard for on-the-fly calibration and qualification
Measurement time	<1.5 sec. per spectrum (< 1 second for multiple scan averaging)
Sampling Mode	Non-contact diffuse reflectance
Working Distance	Nominal working distance: 35 – 50 mm Maximum recommended working distance: 100 mm
Sampling area	25 mm @ 50 mm working distance
Size	177 mm (l) x 127 mm (w) x 158 mm (h) standard configuration
Weight	2.95 kgs (6.5 lbs)
Enclosure & materials	Aluminum, dust and waterproof, o-ring sealed enclosure with durable and cleanable powder coated surface, stainless steel tri-clover fitting, and sapphire isolation window
A/D Converter	24 bit
Position Trigger	Integrated MEMS accelerometer for dynamic blending applications
Detector	Single InGaAs w/2 stage cooling
Source	Dual 5 watt tungsten NIR source
Software included	SpectralCode Plus™ and SpectralCode Direct Command Set
Operating Systems	Windows XP and Windows 7
Computer Interface	Ethernet, RS232 serial, USB, and wireless with router
Operating Temp Range	0 to 35°C (non-condensing)
Storage Temp Range	-30 to +60°C
Power	Batteries: 2 x 5AH 7.2 Lithium Ion (4.5 hour run-time) External Power: 7 – 14 Volt DC (2.5 amps max)

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