

The Antaris™ Target, from Thermo Electron Corporation, is a dedicated pharmaceutical blend analyzer providing the flexibility, robustness, and accuracy needed for tablet manufacturing processes.

Antaris Target Blend Analyzer

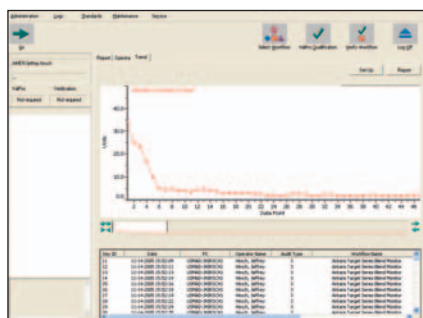
Complete monitoring package for lab and manufacturing pharmaceutical processes



The cost of poor quality can put tremendous strain on the bottom line when a product's manufacturing process is not well controlled. Control strategies making use of real-time analytics hold great promise for both continuous and batch processes. Whether a process is new or existing, control begins with understanding. Whether investigative work gets done in process engineering or in product development, if the ultimate goal is to apply control to full-scale production, the choice of analytical technology must be carefully investigated.

Thermo offers the Antaris Target, a dedicated pharmaceutical blend analyzer that provides continuity and scalability between product development and operations, and facilitates the implementation of control strategies.

The Antaris Target analyzer is the result of a collaborative effort between Thermo and pharmaceutical leaders to use the best technologies for pharmaceutical blending and design them into a total monitoring package that can be used in the lab and in operations. The result is the most complete, reliable, and suitable blending analytics package available for tablet manufacturing processes. This includes traceable design borrowed from quality system requirements in the highly regulated medical device industry.



RESULT software controls real-time blend uniformity measurements and concentration analysis and handles data archival, reporting and control system I/O in a 21 CFR Part 11 compliant package.

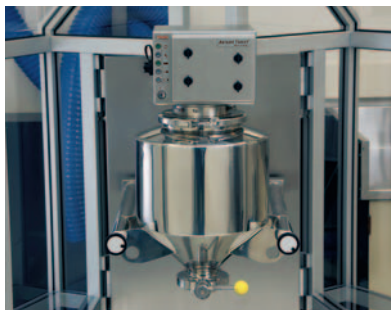
User Friendly

The Antaris Target blend analyzer was designed closely with pharmaceutical industry partners to solve technological and mechanical challenges of blend analysis. The result is an analyzer that is easy to mount and move – and with performance matched to the task.



High Performance




The Antaris Target blend analyzer provides outstanding spectral performance. The spectral resolution is the best available revealing non-uniformity in blends and facilitating component assay. Spectral range into longer wavelengths provides critical analysis of lubricants.



Reliability

The Antaris Target blend analyzer uses solid-state technology that does not use any moving parts. Its source technology is based on a proven 25 year reliability standard driven by industries with critical long life and uptime requirements. It is the most reliable

Antaris Target Specifications

Source Stability	Constant luminance over battery charge life
Battery Life	90 minutes Two rechargeable batteries included with the system Battery swap out without removal from blender allows standby battery use Battery charging station available
Indicator Lights	Power, battery low, battery medium, battery high, data acquisition
Optical Engine and Source	MEMS microtechnology, semiconductor-based NIR tuneable source
Source Life	Ultra long life, qualified at > ten years
Enclosure	NEMA4X, hose washable
Weight (with battery)	< 7 kg
Dimensions	8" H x 10.5" W x 9.5" D
Communications	802.11b wireless Ethernet
Regulatory Approvals	  

Performance

Spectral Range	7400 cm ⁻¹ to 5550 cm ⁻¹ (1350 nm to 1800 nm)
Spectral Resolution	3.5 cm ⁻¹ across spectral range (1.6 nm at 1800 nm)

spectroscopic technology available and includes an unprecedented three-year warranty. The reliability is the first of its kind for near-infrared sensor technology and helps to define a new standard for reliability and cost of ownership for pharmaceutical PAT.

Warranty and Support

Warranty	3 year warranty (1 year on-site/2 year depot)
Applications Development	Full suite of applications development services available

Adaptability

Different tablet products may require different approaches to blend analysis. The Antaris Target analyzer provides optional access to different spot sizes to represent different tablet sizes and compression rates. The optional configuration can provide the most accurate representation of blend uniformity specific to the end product in questions.

Because of its size, internal battery capability, and mounting mechanism, the Antaris Target analyzer is easily mounted and removed. This makes it possible to quickly move the analyzer from one blender to another, maximizing utility and return on investment.



Application

Sampling Spot Size	10 mm or 40 mm
Sampling Spot Energy Distribution	Uniform beam for even sample spot illumination
Working Distance	18 mm
Calibration	Calibration free endpoint determination Chemometric modeling available with TQ Analyst™ or Camo's The Unscrambler® software
Data Trigger	Switch-free automatic sampling at powder contact point (patent pending) Remote start/stop via wireless workflow control Bin position continuously monitored
Data Acquisition	High-speed scanning allows statistical snapshot measurement
Background/Referencing	Internal automatic reference data collection External references are also available
Blender Compatibility	Size and interfacing compatible from laboratory scale to product scale blenders
Interfacing	Blender lid interface kit supplied by Thermo Third party and blender manufacturer installation supported Installation service available

Control and Communications

Software Options	RESULT™ software suite include RESULT Integration, RESULT Operation, and TQ Analyst Method Developer software* Camo's The Unscrambler software for optional chemometric modeling
Control Communications	RESULT OPC and OPC PLC Bridge from control PC
I/O	Modular PLC-based analog and digital output options

* RESULT software directly reads calibration files from TQ Analyst, Camo's The Unscrambler, InfoMetrix's Pirouette®, and GRAMS™ PLS/IQ software packages

Regulatory

System Qualification	ValPro™ system qualification platform
21 CFR Part 11	RESULT Workflow control for cGMP based operation control Complete 21 CFR Part 11 ready design

About the Antaris Line of Analyzers and Sensors

Solving industrial analytical challenges requires bringing the right tools to the job. The cumulative years of reliable spectroscopic technology from Thermo Electron Corporation have been combined with the know-how of experts and everyday users in industry to produce a range of analyzers that set a new standard in task suitability. Thermo is pleased to offer a full line of analyzers with common platform elements in software, validation tools, methodology, support and implementation. The Antaris product line represents an industry-driven migration of spectroscopy from science to industry, in a solution that connects the lab and the plant for the first time.



Antaris II
FT-NIR analyzer



Antaris Target
blend analyzer



Antaris IGS
FT-IR gas analyzer



Antaris EX FT-NIR
process analyzer



Antaris MX FT-NIR
process analyzer

Our Technology

Fourier transform (FT) spectroscopy is only one of the near-infrared (NIR) technologies used in the Antaris analyzer line. While FT-NIR is proving to be one of the most reliable, repeatable and broadly capable technologies for routine or process analyzers today, every application is different. Thermo carefully matches technology to task, while ensuring a connectivity between platforms that facilitates implementation, validation, and overall cost of ownership. From interferometry to miniature MEMS technology, the Antaris series can match the right mix of size, performance, and reliability to each critical point along your operational processes.

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Thermo Electron Scientific Instruments LLC, Madison, WI USA is ISO Certified.

Australia +61 2 8844 9500
Austria +43 1 333 50340
Belgium +32 2 482 30 30
Canada +1 800 532 4752
China +86 10 5850 3588

France +33 1 60 92 48 00
Germany +49 6103 4080
India +91 22 2778 1101
Italy +39 02 950 591
Japan +81 45 453 9100

Netherlands +31 76 587 98 88
Scandinavia +46 8 556 468 00
South Africa +27 11 570 1840
Spain +34 91 657 4930
Switzerland +41 61 48784 00

UK +44 1442 233555
USA +1 800 532 4752

www.thermo.com

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