Multiplelabs
Turnkey Laboratories Solutions

Analytical®
Technologies Limited

DM - 3000

3D DIGITAL MICROSCOPE

EPCC / PRODUCTS / APPLICATION / SOFTWARE / ACCESSORIES / CONSUMABLES / SERVICES

Analytical Technologies Limited

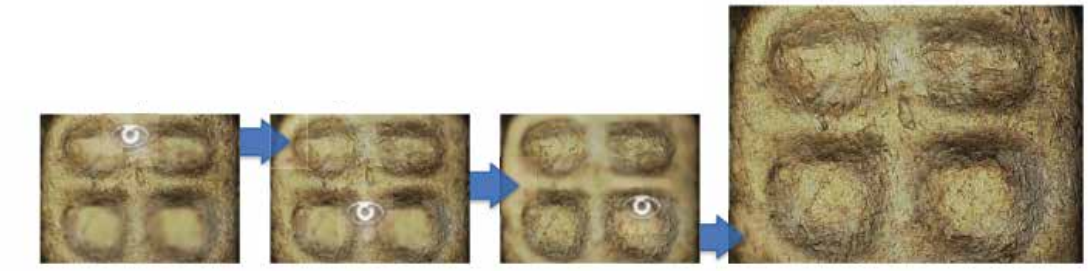
An ISO 9001 Certified Company

www.analyticalgroup.net

High quality observation

Auto focus - Multifocus

Ultra fast auto-focus and multi-focus! Get a fully focussed image with one click thanks to our high speed algorithm and very accurate motorized Z-axi movements (50 nano-meters per step).



High Dynamic Range (HDR)

Save time by quickly optimizing the image. With 1 click, the HDR function creates an image with the perfect exposition by combining many levels of light intensity: all information in the highlights and the dark areas is captured without any difficulty.

2D Measurement

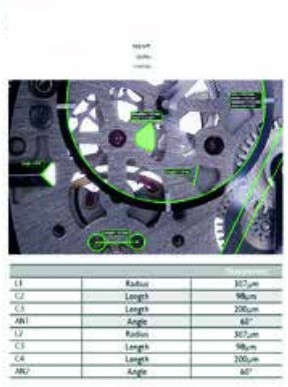
The DM-3000 offers accurate and calibrated measurements in real-time, including length, area, angle, diameter or automatic surface area. The combination of encoded optics and powerful software eliminates any human errors by automatically selecting and displaying the correct lens, adapter and scale on the screen at any time. In addition, the actual dimension and measurement results can be saved on the captured image or as a CSV file.

Auto count functions

Advanced software algorithm allows automatic detection and count of particles, based on contrast or color values: with 1 click the system automatically counts parts that have similar colors, with advanced statistics.

Statistics & Excel reports

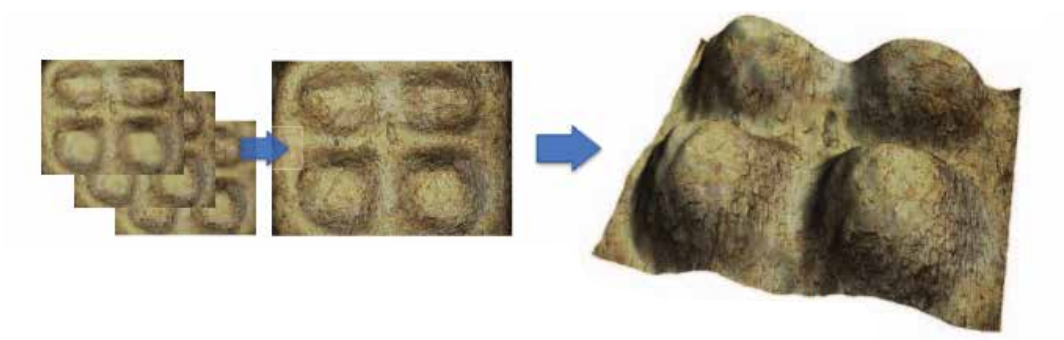
Save time by installing Microsoft Excel and automatically create reports including images, lens and magnification details, as well as measurement information.Several templates are available or customizable to your taste. Reports can be printed, saved, or exported to spreadsheet applications.



Fastest way to create 3D Model

Smoother, and more accurate scanning with 0.05μm/pulse precision

When capturing 10 image planes, it only takes 1 second to display a high quality 3D model. The integrated stepping motor allows for faster, smoother, and more accurate scanning with 0.05μm/pulse precision and 30mm of automated travel.

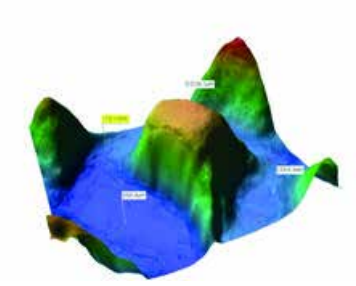


3D Display

3D model information can be displayed as original color, pseudo, or as a wireframe, maximizing the amount of information that can be taken from a 3D model. Original and pseudo color can be mixed on the 3D model.

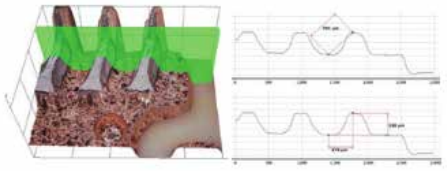
Point Height Measurement

Display point height by simply clicking on the 3D model. With each click, height value labels are displayed from a standard zero point or a zero point can be set (new reference point) from a specific position on the model. Point height measurements are possible in both 2D and 3D rendered images.



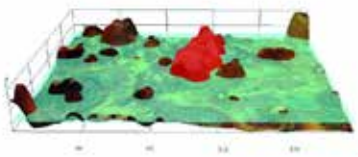
Profiling

Simply adjust the slicer to visualize and measure any details on the 3D object: the profile created is like a virtual vertical cross section allowing precise measurements.



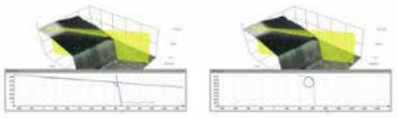
Volume and area

Volume and area can also be measured on the 3D object by adjusting the horizontal cross section and clicking on the area of interest



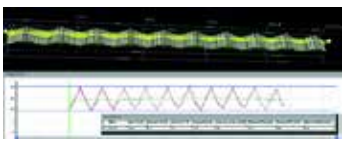
Angle/radius in 3D

Using the profile measurement function, it's very simple to measure any radius on a 3D object by simply "drawing" a circle with 3 points or any angle by selecting 2 lines crossing each other.



Roughness (Ra, Rz, Rzjis)

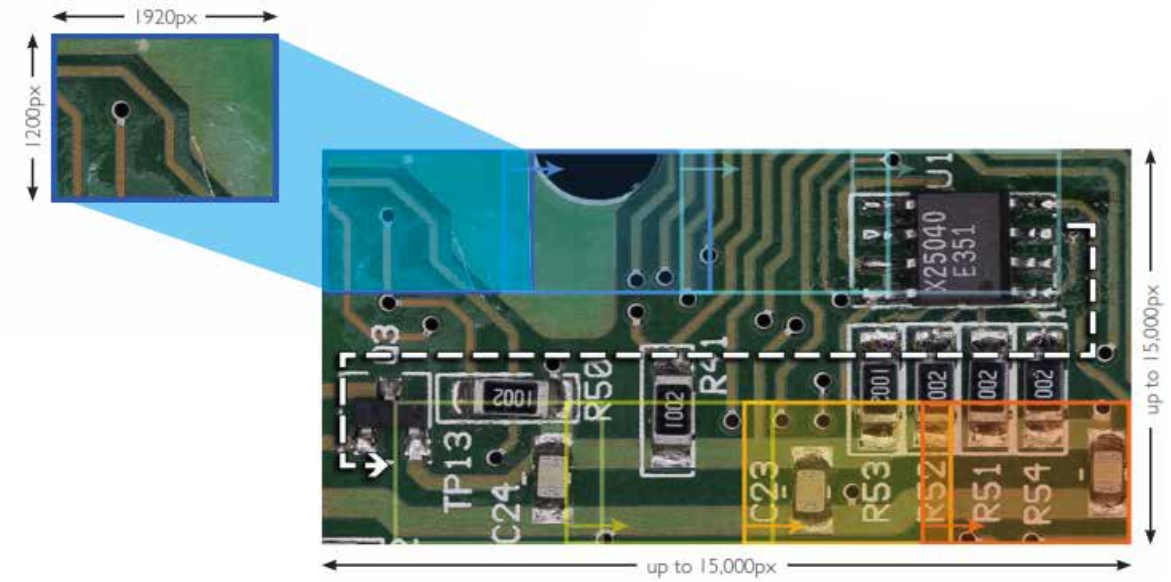
The powerful 3D software enables accurate line roughness measurement Ra and Rz and is compatible with optional surface roughness measurements (Sa, Sq, and many more).



Easy 2D and 3D Tiling

Combining wide-view and high-resolution images

Until now, it was a constant challenge for optical microscopes to capture images with a high optical resolution and a wide field of view simultaneously. new process does not require a specified position to match tile to tile. The image will automatically begin tiling seamlessly in real-time just by moving the XY stage. This new method increases the field of view up to more than 350 times while retaining a high optical resolution.



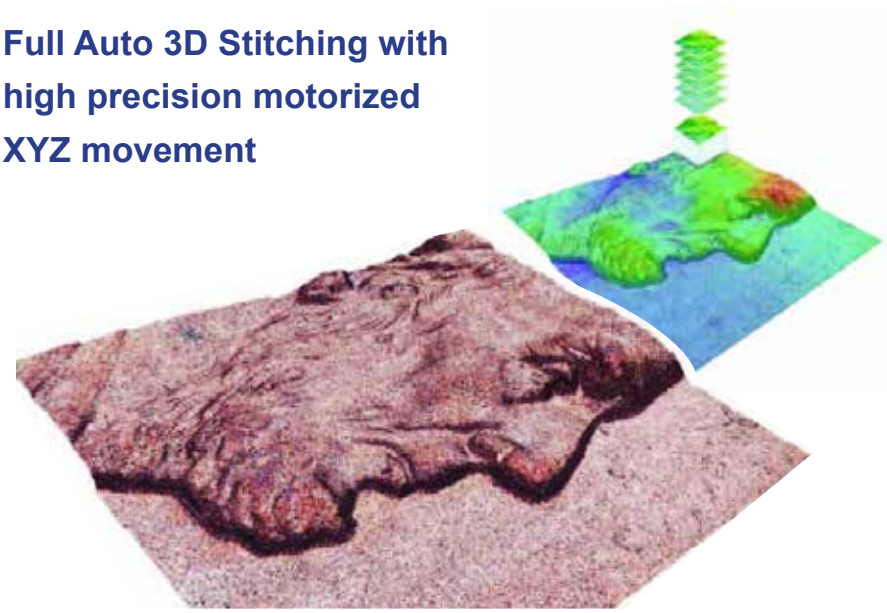
Easy panorama at micro scale:

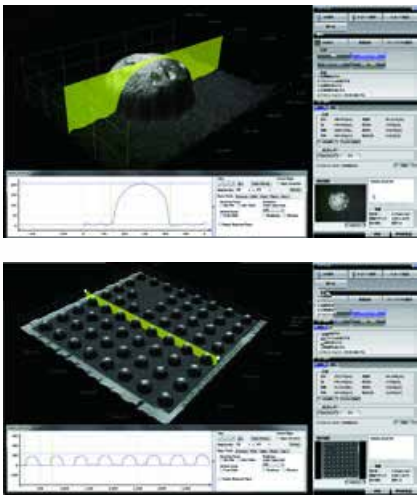
discover a new relationship between Field Of View (FOV) and magnification: the new technology easily allows detailed observation allowing fine measurement while getting the advantages of wide field of view.

Volume and area

Volume and area can also be measured on the 3D object by adjusting the horizontal cross section and clicking on the area of interest

Full Auto 3D Stitching with high precision motorized XYZ movement





3D stitching of BGA balls

High quality optics

All lenses include high-performance zoom incorporated technologies, as well as highgrade built in illumination, and precision mechanism designs, crafted with pride by the lens manufacturer.

The patented motorized rotary head creates a unique 360° «helicopter» view over an object :discover inaccessible details, without any manipulation.

Low Range High Resolution Zoom Lens

The high-performance zoom lens has a compact body, provides a high resolution image, and offers a large optical depth-of-field with the ability to utilize an even larger digital depth-of-field. The lens can be handheld and accommodates numerous applications through the attachment of 13 various adapters covering a magnification range of 6x-320x.

Magnification	20~160x
Field of view	15.4~2.0mm (H)
Working distance	44mm

Dual Illumination Revolver Zoom Lens

Incredibly wide zoom range with a triple objective turret. The dual illumination mechanism provides both co-axial and ring lighting. The operator is free to choose either setting or a mix of both in order to cover a multitude of applications. The lighting system is integrated into the lens and no additional cables are required

	Low-Range	Mid-Range	High-Range
Magnification	35~250x	140~1000x	350~2500x
Field of view	8.71~1.22mm (H)	2.18~0.31mm (H)	0.87~0.12mm (H)
Working distance	10.0mm	10.0mm	10.0mm

	Low-Range	Mid-Range	High-Range
Magnification	35~250x	140~1000x	700~5000x
Field of view	8.71~1.22mm (H)	2.18~0.31mm (H)	0.43~0.06mm (H)
Working distance	10.0mm	10.0mm	3.4mm

High Resolution Zoom Lens with Optical 3D Rotation

This universal lens can be equipped with a wide selection of optical adapters. Attaching the rotary head adapter allows 360 Degree revolution with the ability to inspect at multiple angles. The various exclusive adapters snap-on, allowing one-touch replacement and a magnification range that expands observation from 20x-800x.

Magnification	50~400x
Field of view	6.1~0.78mm (H)
Working distance	54mm (RZ) /63mm (SZ)

High Range / High Resolution 10x Co-Axial Zoom Lens

The high range optical zoom lens incorporates high expandability and the highest resolution in the MD series. With six interchangeable objective lenses, the lens covers a magnification range of 35x-7000x. A directional lighting adapter is provided for co-axial vertical lighting to achieve intricate optical observation.

Magnification	35~350x	70~700x	140~1400x	140~1400x	350~3500x	700~7000x	1000~10,000x
Field of view	9.83~1.05mm (H)	4.42~0.47mm (H)	2.46~0.26mm (H)	2.21~0.23mm (H)	0.88~0.09mm (H)	0.44~0.04mm (H)	0.3~0.03mm (H)
Working distance	34mm	21mm	30.5mm	12mm	10.6mm	3.4mm	1mm

High performance stands

A high performance lens requires a high performance stand to show its' power while being operated. It is the stand that connects the lens to the operator's hand, meaning that the stand must have a high level of precision and be easy to use. Combine this stand with the optional Electronic Focus Block (0.05µm/-pulse) for 3D observation and height measurements.

Dynamic Focus Control (Z-Axis)

With the motor controller built into the main unit, the stand is able to easily achieve extremely high precision. The stand also has an incredibly long travel range with 30mm of motor controlled travel and 85mm of manually controlled travel.

Inclination stand

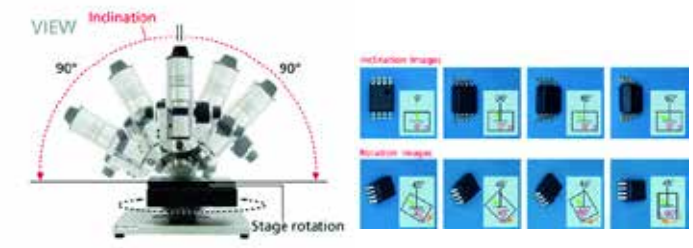
Choose up to 180 degrees of inclination with stage rotation for target observation.

Motorized XY-Axis Stage

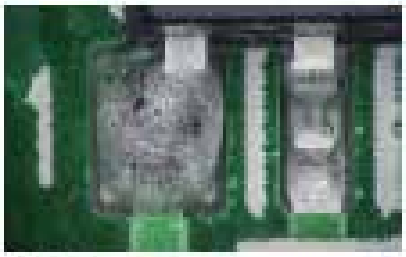
Designed with a compact body and integrated motor drivers, it can be easily controlled by joystick or dragging mouse. 40mm x 40mm work ing range with high precision of 0.04 µm step.

Interactive 3D Controller

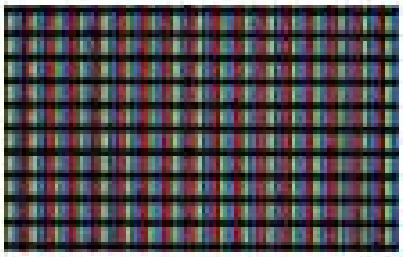
Redefining ease of use: control with one hand the auto XYZ movement, capture images and much more!



PCB & Micro Electronics



Soldering



LCD Screen

Watch Making

Watch anchor escapement

Material Sciences

Broken composite

Welding

Metal fracture

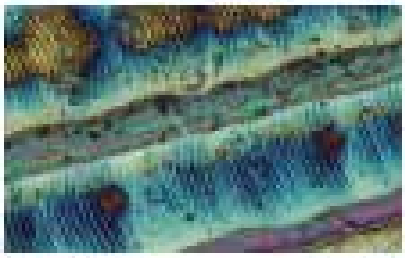
Forensics

Document falsification

Art Restoration

Detail of a painting

Nano Technology



Fabric structure

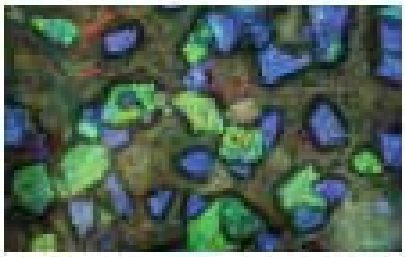
Cosmetics

Hair surface

Metallography

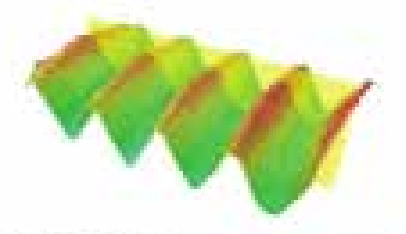
Metal crystals

Security printing

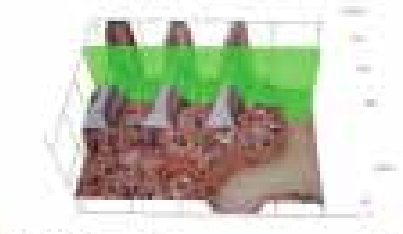


Ink pigments

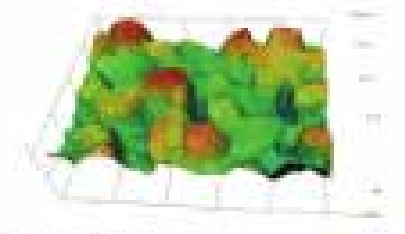
3D View and measurement



Thread of a screw



Hybrid Component



Copper abrasive

Specifications

Basic Functions: Camera Control Unit

Camera	Imaging Device	1/1.9-inch 2.38 Mega-pixel CMOS Image Sensor
	Total Pixels	1952 (H) ×1241 (V)
	Effective Pixels	1945 (H) ×1225 (V)
	Visual Pixels	1920 (H) ×1200 (V)
	Scanning Method	Progressive Scan
	Frame Rate	50 Frame/Sec (Max) at 1920 x 1200 Resolution
		100 Frame/Sec (Max) at Binning
	Electronic Shutter	Auto (1/24 ~1/100000)
		Manual 1~1/50000
	Supercharge Shutter	Preference Setup (17 ~ 1/100000)
	Gain	Auto / Manual 0dB~12dB
	White Balance	AUTO (One Push), MANUAL (R, B)
	Back Focus	NOT Required
Light Source	Lamp	High Intensity LED
	Lamp Life	30,000 hours (Average)
	Color Temperature	5700K (Typical)
Output	Camera	USB 3.0 Series B
	MyCom Contoller	USB 2.0 Series B
		ACS, Rotary, External Devices, Others
Input	Motorized Z-Axis	5 Phase Step Motor Driver Integrated
	External	Foot Switch (Capture / Capture Image)
	USB Ports	USB 2.0 Series A / 2Types
Interface	Through PC	LAN, USB 3.0 / 2.0, HDMI, Others
Power	Supply Voltage	AC100V~240V 50/60Hz
	Consumption	120 VA
Environmental Resistance	Ambient Temperature	5~40 (41~104F)
	Relative Humidity	20~80% RH (No Condensation)
	Atmosphere	Corrosive Gas Prohibited
	Altitude	Below 2000 Meter
	Storage Temperature	15 C~50 C (No Condensation)
	Contamination Degree	2
	Overvoltage Level	II
Weight	Main Unit	3.6 Kg (7.94lb)
	Camera Unit	1.0 Kg (2.20lb)
Dimension	Main Unit	270mm (W) × 75mm (H) × 230mm (D)
		10.63" (W) × 2.95" (H) × 9.06" (D)

Basic Functions: Motorized XYZ Stage

XY Axis	Effective Stroke	40 x 40 mm (1.57" x 1.57")
	Maximum Speed	8 mm / Sec
	Load Capasity	3.0 kg
	Resolution / Lost Motion	0.04 um / Within 0.020 mm
	Dimension	195 mm (W) x 209 mm (D) x 53 mm (H)
	Weight	3.9 kg
Z Axis	Effective Stroke	30 mm (1.18") Motor
		85 mm (3.35") Manual
	Resolution	0.05 um / pulse - 5 Phases Motor
		0.002 Mil / pulse - 5 Phases Motor
	Repeatability	0.5 um (0.23 Mil)
	Weight	1 kg

Standard Software

Observation Functions	Camera Setup Preview
	Mode Function (save camera settings)
	My Com Communication (ACS)
	Gamma Correction / Edge Enhancement
	Hue / Chroma Correction and Chroma ON/OFF
	Brightness Level
	Live Anti-Halation / HDR
	Camera Shake Correction
	Auto Brightness / Tone Curve Adjustment
Observation Tool	Focus Control / Focus Indicator
	Light Shift (Full, Partial, Lateral and Others)
	LED Lamp ON/OFF
	Real-Time Digital Zoom / Rotary Head Control
	Grid Settings (Various Functions are available)
	Custom Tool Bar and Quick Function Key
	Split Monitor (Horizontal, Vertical, 4 window)
	Cropping Image / Turning Over, ±90 Rotation
Various Fuctions	Full Focus / Auto-Focus
	Quick Extended Depth of Field
	Auto Multi-Focus 3D Merge Depth Composition
	Auto-Positioning Depth Composition
	3D Multi-Focus / 3D Model Preview Function
Enhanced Digital Processing	High-Resolution Image (10560×6600 ~ 2400×1800)
	High Dynamic Range (HDR) / Anti-Halation Function
	Image Adjustment: Contrast, Edge, Hue/Chroma Correction
	Image Improvement: Auto Brightness / Tone Curve, Noise Removal
Measurement Functions	Auto Calibration Select (ACS): Recognize Lens, Zoom, Objective Lens, Adapter
	Distance, Angle, Radius, Diameter, Area and Other Tools
	Automatic Measurement: Auto-Count, Auto-Area, Auto-Edge Detection
	Scale Display (Various Setup Available in Metric/Inch)
	Statistic Result Data CSV or MS Office Output
	Wide Image Measurement
Recording	Image Format: Exif-JPEG (compressed), Exif-TFF (non-compressed)
	Capture Still Image (1920×1200 ~ 768×480)
	Maximum Non-Tiled Resolution Image: 10560 (H) × 6600 (V)
	Maximum Tiled Resolution Image 15000 (H) × 15000 (V)
	Movie - 1920x1200 (25FPS), 860x600 (50FPS)
	Time Lapse at Specified Time Interval (Minimum 0.1 Sec)
	Auto Cordinate Axis / Position Capture
Utility	Image Data Parameter
	Comments / Annotation / Scale / Date / Image Information
	Easy Report Function and Export to MS Office
	Password Protection (Calibration / User setup)
	Language (ENG, JPN, FRN, GER, ITA, SPA, KOR, CHN, RUS)
	Help (Pop-up User Guide / Manual)

Advanced Software

3D Measurement Functions	3D Display (Original Color / Wireframe / Pseudo Color Display)
	3D Profile Measurement (Height, Length, Angle, Radius, Others
	3D Model Illumination Simulation
	3D Profile Roughness Measurement
	3D Volume and Area Measurement
	3D Image Height Point Measurement
	HDR / Anti-Halation 3D Model
	2D Image 3D Profile Measurement
	3D Image Map CSV Output (Import to Various 3D application Software)
	Noise Filter and Removal
	3D Model Level Correction

Tiling	2D Tiling (Up to 15000 x 15000 pixels)
	Up to
	3D Tiling (Up to 10000 x 10000 pixels)
	Up to

Additional Software for Other PCs / Non-Licensed

E-Z View	Refer to Stardard Software Features
3D Viewer	Free 3D Image File Viewing Software

Recommended PC Specification

CPU	4th Generation Intel® Core™ i5 Processor or Higher
RAM	8GB Memory or Higher
HDD	500 GB or Higher
Monitor	Must be 1920 x 1080 Resolution or Higher (8:5 Ratio)
OS	Windows 7 - 64 bit or Higher

Analytical®
Technologies Limited

HPLC Servicing, Validation, Trainings and Preventive Maintenance :

HPLC Servicing :HPLC Servicing : We have team of service engineers who can attend to any make of HPLC promptly @the most affordable cost.

Trainings :We also take up preventive Maintenace to reduce downtime of HPLC's Trainings.

AMC's/CMC :AMC's/CMC :We offer user training both in-House and at customer sites on HPLC principles, operations, trouble-shooting.

Validations :Validations :We have protocols for carrying out periodic Validations as per GLP/GMP/USFDA norms.

Instruments :Instruments :We offer instruments/Renting Services Modules like pumps,detector etc. on Rent.

About Analytical Technologies

Analytical Technologies is synonymous for offering technologies for doing analysis and is the Fastest Growing Global Brand having presence in at least 96 countries across the global. Analytical Technologies Limited is an ISO:9001 Certified Company engaged in Designing, Manufaturing, Marketing & providing Services for the Analytical, Chromatography, Spectroscopy, Bio Technology, Bio Medical, Clinical Diagnostics, Material Science & General Laboratory Instrumentation. Analytical Technologies, India has across the Country operations with at least 4 Regional Offices, 6 Branch Offices & Service Centers. Distributors & Channel partners worldwide.

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Optima Gas Chromatograph 2979 Plus

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Atomic Absorption Spectrophotometer

Liquid Partical Counter

Optical Emission Spectrophotometer

DSC/TGA

Semi Auto Bio Chemistry Analyzer

HEMA 2062 Hematology Analyzer

Micro Plate Reader/Washer

URINOVA 2800 Urine Analyzer

Total Organic Carbon 3800

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PCR/Gradient PCR/ RTPCR

TOC Analyzer

Laser Particle Size Analyzer

Ion Chromatograph

Water purification system

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Analytical Foundation is a nonprofit organization (NGO) found for the purpose of:

1.Research & Innovation Scientist's awards/QC Professional Award : Quality life is possible by innovation only and the innovation is possible by research only, hence ANALYTICAL FOUNDATION is committed to identify such personallities for their contributions across various field of Science and Technology and awarding them yearly. To participate for award, send us your details of research / testing / publication at Info@analyticalfoundation.org

2. Improving quality of life by offering YOGA Training courses, Work shops/Seminars etc.

3. ANALYTICAL FOUNDATION aims to DETOXIFY human minds,souls and body by means of yoga, Meditation, Ayurveda, Health Care, Awards, Media, Events, Camps etc.

Reach us @

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