

# **XRD - 3000 SC**

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## **Single Crystal XRD For Diamond**



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

**Analytical Technologies Limited**

An ISO 9001 Certified Company

[www.analyticalgroup.net](http://www.analyticalgroup.net)

## ►► Features:

**Compact design:** manual handling of very small crystals down to ~1 mm diameter

**Customized for industrial crystals:** fully automated analysis and orientation determination of more than 100 different materials

**Measurement accuracy:**  $\pm 0.01^\circ$  or better

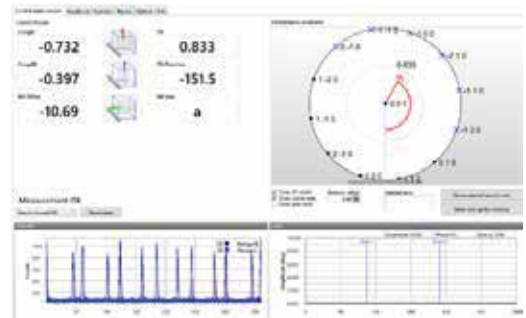
**Ultra-fast measurements:** all desired crystal orientation parameters are captured in one sample rotation i.e. within 5 seconds

**Repeatability:** > 99.5%

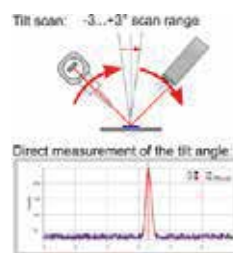
**Theta-scan capability:** for sophisticated research and material characterization

**Transfer technology:** up to 10 orientated crystals on one slicing beam

**Accessibility:** IP based system allows remote operation and technical support from anywhere in the world



XRDStudio – operating and evaluation software



Theta-scan



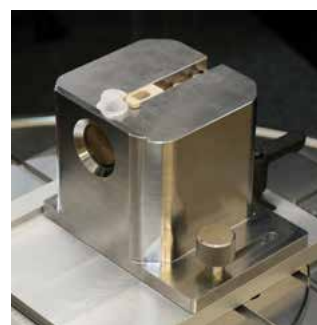
Mapping



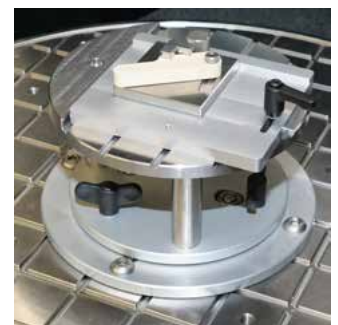
Multiple ingot stacking unit



Mapping stage



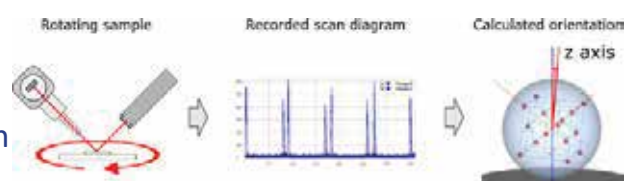
Horizontal holder for small samples



Vertical holder for small samples

## ►► Advantages of Omega-scan:

- › ultra-fast measurement: < 5 s
- › precise measurement results:  $\pm 0.01^\circ$
- › determination of all tilt components in one rotation
- › absolute measurement, no calibration needed
- › integration of customized sample holders
- › specialized for manufacturing process of pre-defined material(s) quality control and data transfer in accordance with customer's demands



## ►► Few examples of measurable materials:

### › Zinc blende structure:

Diamond, Si, Ge, GaAs, GaSb, GaP, InAs, InP, InSb, AlAs, AlP, AlSb, ZnTe, CdTe, SiC 3C, etc.

### › FCC metals:

Ag, Au, Ni, Pt, etc.

### › Rock salt structures:

NaCl, AgCl, PbS, PbTe, SnTe, MgO, LiF, etc.

### › Other cubic/special orientation:

Ag, Au, Ni, MgAl<sub>2</sub>O<sub>4</sub>, SrTiO<sub>3</sub>, LaTiO<sub>3</sub>, CaF<sub>2</sub>, etc.

### › Tetragonal:

MgF<sub>2</sub>, TiO<sub>2</sub>, SrLaAlO<sub>4</sub>, etc.

### › Hexagonal / Trigonal:

SiC (2H, 4H, 6H, 15R), GaN, ZnO, LiNbO<sub>3</sub>, SiO<sub>2</sub>(quartz), Al<sub>2</sub>O<sub>3</sub>(sapphire), GaPO<sub>4</sub>, La<sub>3</sub>Ga<sub>5</sub>SiO<sub>14</sub>, etc.

### › Orthorhombic:

Mg<sub>2</sub>SiO<sub>4</sub>, NdGaO<sub>3</sub>, etc.

## ►► Technical specifications :

<b>X-ray source :</b>	30 W air-cooled X-ray tube, Cu anode
<b>Detectors :</b>	two scintillation counters
<b>Sample holder :</b>	Precise turntable, setting accuracy 0.01°, customized sample holders
<b>Sample diameter :</b>	down to 2 mm ø, up to 200 mm
<b>Ambient temperature :</b>	≤ 30 °C
<b>Laptop or PC requirements :</b>	Windows 7 or latest, .NET Framework update, 2 Ethernet ports
<b>Power requirements :</b>	100 to 230 V, single phase, 500 W
<b>Dimensions :</b>	600 mm (L) x 600 mm (B) x 840 mm (H)
<b>Weight :</b>	ca. 100 kg

## 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 Maintenance 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, Manufacturing, 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.

## Our Products & Technologies



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Chromatograph  
2979 Plus



Flash  
Chromatograph



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



Fully Automated  
CLIA



NOVA-2100  
Chemistry Analyzer



PCR/Gradient PCR/  
RTPCR



TOC  
Analyzer



Laser Particle  
Size Analyzer



Ion Chromatograph



Water purification  
system

## Regulatory compliances



## Corporate Social Responsibility

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



**Analytical**  
**Foundation**

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 personalities 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](mailto:Info@analyticalfoundation.org)

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

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

## Reach us @



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