

ZEEMAN EFFECT

ZE-3075



EPC / PRODUCTS / APPLICATION / SOFTWARE / ACCESSORIES / CONSUMABLES / SERVICES

Analytical Technologies Limited

An ISO 9001 Certified Company

www.analyticalgroup.net

►► Principle and Working :

The Zeeman effect is the splitting of atomic energy levels, under application of external magnetic field, which are additionally characterized by the orbital and spin angular momentum or Bohr's Magneton. In this set up the normal Zeeman effect is investigated which characterizes the splitting of energy levels observed by the spectral lines of corresponding electron transitions. A line triplet perpendicular to the magnetic field and a line doublet parallel to the magnetic field having very small difference in wavelength is observed instead of a single line without magnetic field. The splitting of 546.1 nm wavelength from Mercury light source under strong magnetic field in transverse and longitudinal direction is observed through CCD camera on computer. The Bohr's Magneton can be calculated from the measurements in experiment.

Item Name	Qty.
Optical Bench	1
Transverse saddle	3
Convex lens in holder 5cm & 10cm	2
Polarizer filter	1
Quarter wave filter	1
Electromagnet	1
Power supply for electromagnet	1
Mercury lamp with supply	1
Mercury lamp holder	1
Fabry-Perot etalon	1
USB camera	1
Digital Gauss meter	1
Color filter with holder	1
Micrometer Eyepiece	1

Electromagnet ATL-541

SPECIFICATIONS	
Coils	500 turns.
Coil Current	5Amp (Max.)
Connection	4mm safety socket.
U Core	150x130mm(LxH), 40x40mm cross section.
I Core	Length=150mm, 40x40mm cross section.
Core material	Ferromagnetic.
Supplied with 4 support legs with leveling knob.	



Optical Bench ATL-214

SPECIFICATIONS	
Material	Aluminium alloy
Type	Hexagonal section
Scale	0-100cm
Least count	1mm



Febry Perot Etalon ATL-935

SPECIFICATIONS	
Mirror optics	Lamda/20
Mirror gap	3 mm, adjustable
Filter	532nm, Green Interference Filter
Clear view	40mm dia
Rod	10 mm dia.



USB Camera ATL-9448

SPECIFICATIONS	
Sensor	CMOS
Output	VGA
Connector	BNC
Power	5V DC
Focus	Manual adjustment



Power Supply 0-30V DC, 5A ATL-1044

SPECIFICATIONS	
Input Voltage	AC 220V $\pm 5\%$
Output Voltage	0-30V
Output Current	0-5Amp
Voltage Display	3½ Digit LED
Current Display	3½ Digit LED



Polarizer Filter ATL-801

SPECIFICATIONS	
Angle	Adjustable (0°-90°)
Aperture	21mm dia.
Frame	130mm dia., to avoids scattering of lights
Rod	10 mm dia.



Transverse Saddle ATL-436

SPECIFICATIONS	
Material	Aluminium
Locking	Spring loaded
Motion	X-Y axis
Holder	10mm dia.



Convex Lens in Holder ATL-754

SPECIFICATIONS	
Focal Length	100mm
Diameter of Lens	50 mm
Frame Diameter	130 mm to avoids scattering of lights
Rod Diameter	10 mm



Quarter Wave Plate ATL-499

SPECIFICATIONS	
Angle	Adjustable (0°-90°)
Aperture	15mm dia.
Frame	130mm dia., to avoids scattering of lights
Polarization	Circular Polarized
Rod	10 mm dia.



►► 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 PLC principles, operations, troubleshooting.
Validations	:Validations :We have protocols for carrying out periodic Validations as per GLP/ GMP/U SFDA norms.
Instruments	:Instruments :We offer instruments / Renting Services Modules like pumps, detector etc. on Rent.



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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 globe. 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



►► Regulatory compliances



►► Corporate Social Responsibility

Analytical Foundation is a Nonprofit Organization (NGO) found for the purpose of:



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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

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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