ADANI
from ideas to solutions

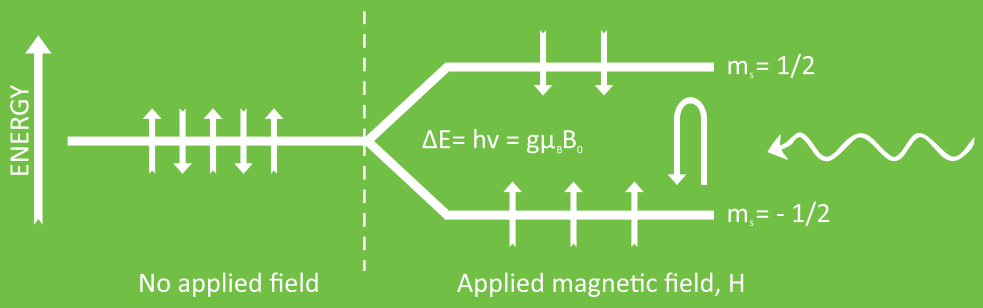
BENCH-TOP
RESEARCH GRADE
ELECTRON PARAMAGNETIC RESONANCE
SPECTROMETER

SPINSCAN

ADANI is pleased to announce the capability of new generation of bench top X-band Electron Paramagnetic Resonance (EPR) spectrometer. To meet new demands ADANI SPINSCAN brings together our more than 40 year experience in EPR and state-of-the-art digital and microwave technologies.

ADANI SPINSCAN EPR spectrometer is unique bench top instrument available for the examination of the free radicals and paramagnetic centers concentration in liquid or solid phases.

Electron Paramagnetic Resonance (EPR), or Electron Spin Resonance (ESR) spectroscopy utilizes microwave radiation to probe species with unpaired electrons, such as radicals, radical cations, and triplets in the presence of an externally applied magnetic field.



Product key features

- Fast and precise analysis
- Compact, ergonomic design with a small footprint
- Does not require any complicated or time-consuming sample preparation
- Ready-to-plug-in instrument
- Robust functionality in routine procedures
- Sampling, measurement and rinse cycles can be performed automatically
- PC-controlled and fully automated operation with optimized software package
- Service-friendly – online technical support
- Upgradable

Highlights

- COMPACT DESIGN OF ELECTROMAGNET AND MICROWAVE BRIDGE
- HIGH SENSITIVITY AND RESOLUTION – RESEARCH GRADE EPR SPECTROMETER
- BUILD-IN FREQUENCY COUNTER, MAGNETIC FIELD AND TEMPERATURE SENSORS
- COMPUTER CONTROLLED g-FACTOR MEASUREMENT
- OPTIMIZED MAGNET FIELD: ACCURATE, STABILE AND HOMOGENEOUS

Today ADANI SPINSCAN allows EPR technique to be available for any lab making routine or educational research due to its compact size, high capability and reasonable price.

Upgraded benefits

- Cavity Q-factor and MW power measurement
- Magnetic field modulation – 10 kHz-250 kHz
- Phase detection range – 0-360^0
- First and second harmonics detection (in phase and out of phase)

- Amplitude resolution - 24 bit
- Broad signal channel dynamic range - digitization up to 140 dB per one scan
- High magnetic field resolution - up to 256 000 pts for any sweep range
- Automatic self-test of the system

- 2D, 3D - experiments (magnet field vs MW power, temperature, angle)
- Interface via Ethernet
- ADANI e-SPINOZA software - the new comprehensive user-focused software kit with acquisition and mathematic treatment functions
- New ergonomic design

Optional

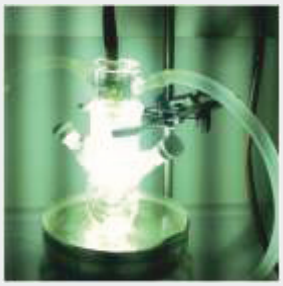
- Build-in temperature controller from -180°C to 600°C
- ENDOR & pulse ready
- All available accessories for X-band EPR spectroscopy

Sensitivity	8 x 10^{13} spins/T
Resolution	0,006 mT
Maximum magnetic field	0,7 T
Sweep width	10^{-4} - 0,65 T
Operating Frequency	X-band
Microwave power	0,01 - 200 mW
Magnetic field modulation	10 - 250 kHz

Microwave tuning	Automatic
Cavity	TE102
Q unloaded	5000
Amplitude resolution	24 bit
Dimensions	470 x 380 x 260 mm 18 x 15 x 11 "
Weight	45 kg 100 lb

EPR technique appears at the crossroad of life science, chemistry and physics.
Use this interdisciplinarity to look toward the future.

Ready solutions for various applications:



- ELECTROCHEMISTRY - EPR electrolytic cell
- PHOTOCHEMISTRY - window for UV irradiation
- CONTINUOUS FLOW CHEMISTRY – flow-through system
- REDOX KINETIC MEASUREMENTS – stopped-flow system
- EDUCATION KIT

To whom EPR can be interesting

LABORATORY CHEMISTS, PHYSICISTS,
BIOLOGISTS, MATERIAL SCIENTISTS

QUALITY FOOD CONTROL LABS -
ANYONE INVOLVED IN FREE RADICALS ANALYSIS
AND FOOD DOSIMETRY

FREE RADICAL CHEMISTRY
AND BIOTECHNOLOGY GROUPS

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TEACHERS, GRADUATE
AND POSTGRADUATE STUDENTS

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