

BENCH-TOP RESEARCH GRADE
ELECTRON PARAMAGNETIC
RESONANCE SPECTROMETER



CMS 8400

Modern technology of the EPR system







ADANI's CMS 8400 is small, compact and easy to handle and maintain EPR Spectrometer.

The CMS 8400 model is intended for EPR spectra registration in liquid or solid phases to detect paramagnetic species or free radicals.

The main distinctive features of CMS 8400 are a compact electromagnet and a microwave bridge. The instrument's high sensitivity and resolution can only be enhanced by systems many times its price and size.

The CMS 8400 EPR is provided with a fully computer controlled system including a comprehensive software package. Built-in frequency meter, magnetic field and temperature sensors, g-factor calculation and a broad dynamic range on the amplifier and the AD converter increase competitive advantages of the CMS 8400 and give unique solution for scientific and technological purposes.

Highlights:

-  Built-in frequency counter, magnetic field and temperature sensors
-  Computer controlled g-value measurement
-  Optimized magnet field: accuracy, stability and homogeneity
-  Broad dynamic range of amplifier and AD
-  User-friendly software EPR Commander 6.0
-  Online technical support



Applications

Chemistry: oxidation and reduction processes, kinetics of radical reactions, spin trapping, organometallic complex, catalysis and reaction of polymerization, petrol chemistry

Physics: magnetic susceptibility, magneto-optic properties, transition metal, conduction electrons in conductors and semiconductors, defects in crystals, recombination at low temperature, nanostructure

Life sciences: free radicals and antioxidants, enzyme reactions, photosynthesis, metalloprotein, photochemical generation of radicals, NO in biological systems

Industrial Research: degradation effects, polymer properties, defects in diamond and optical fibers, Impurities/defects in semiconductors, food dosimetry, oil and water quality control, brewery lag time, processing control, alanine and EPR dosimetry

Sensitivity	8 • 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
Microwave tuning	Automatic
Cavity	TE ₁₀₂
Q unloaded	5000
Dimensions	530 x 420 x 350mm
Weight	56 kg

CMS 8400

1 μM TEMPOL in water



For your ESR research needs:

- ▶ Variable temperature control systems for wide temperature range
- ▶ Automatic sample changer
- ▶ Continuous-flow system
- ▶ Different X-band accessories (capillaries, tubes etc.)

