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**Technical Specifications for Benchtop ESR Spectrometer**

External PC controlled Benchtop ESR Spectrometer with essential software should be able to study the free radicals, transition metal complexes etc. in liquid as well as solid samples at room and liquid nitrogen temperatures.

Technical specifications are given below:

1. Operating frequency: X-band with approximate range (9.2 to 9.6 GHz).
2. Microwave power: 1uW -100 mW.
3. Sensitivity: $8 \times 10^9 / 0.1 \text{mT}$  (at 100 kHz modulation)
4. S/N ratio: 600:1
5. Field Modulation: 1uT-1mT
6. Field sweep range: 0 to 625mT
7. Field homogeneity: +/- 5uT within sample region
8. Field stability: 1.0 uT/h
9. Modulation frequency: 10kHz and 100 kHz
10. Magnetic field range: 0 to 650 mT
11. Sweep resolution (field & time): >125,000 points
12. Electro magnet: Air cooled with magnetic field control.
13. Cold Finger Dewar with holder for measurement at liquid nitrogen temperature.
14. Software for data processing/evaluation, Computer controlled operation of spectrometer, automatic tuning, integration & differentiation of spectra, data management/report generation, print-out etc.
15. Standard reference samples weak & strong pitch, DPPH or any other free radicals.
16. Warranty :One year from the date of successful installation/commissioning of equipment.