

# SM150L

## Portable magnetic susceptibility meter

### GENERAL

SM150L magnetic susceptibility meter is designed to measure sample with volume up to 25 cm<sup>3</sup>. It is calibrated for cylinder with diameter 25,4×22 mm. Adjusting frequency and field intensity broaden information of measured sample. Thanks to built-in scales we can measure mass susceptibility too.

Operation is straightforward. Sample in the plastic pot is placed into measuring coil for analysis, which is carried out under instruction from personal computer. The SM150L is connected to PC with cable to USB port. The result is available in several seconds and is conventionally stored and displayed on this PC. Flexibility and user friendliness have been the main criteria in the design of the SM150L software.

The instrument is calibrated in the factory on 16 kHz range by means of coil. Then auxiliary standard with 16 g Gd<sub>2</sub>O<sub>3</sub> is measured on all ranges. Value from 16 kHz range is then used for adjusting remaining ranges to display 16 kHz value too. Gd<sub>2</sub>O<sub>3</sub> standard is supplied with the instrument.

### FEATURES

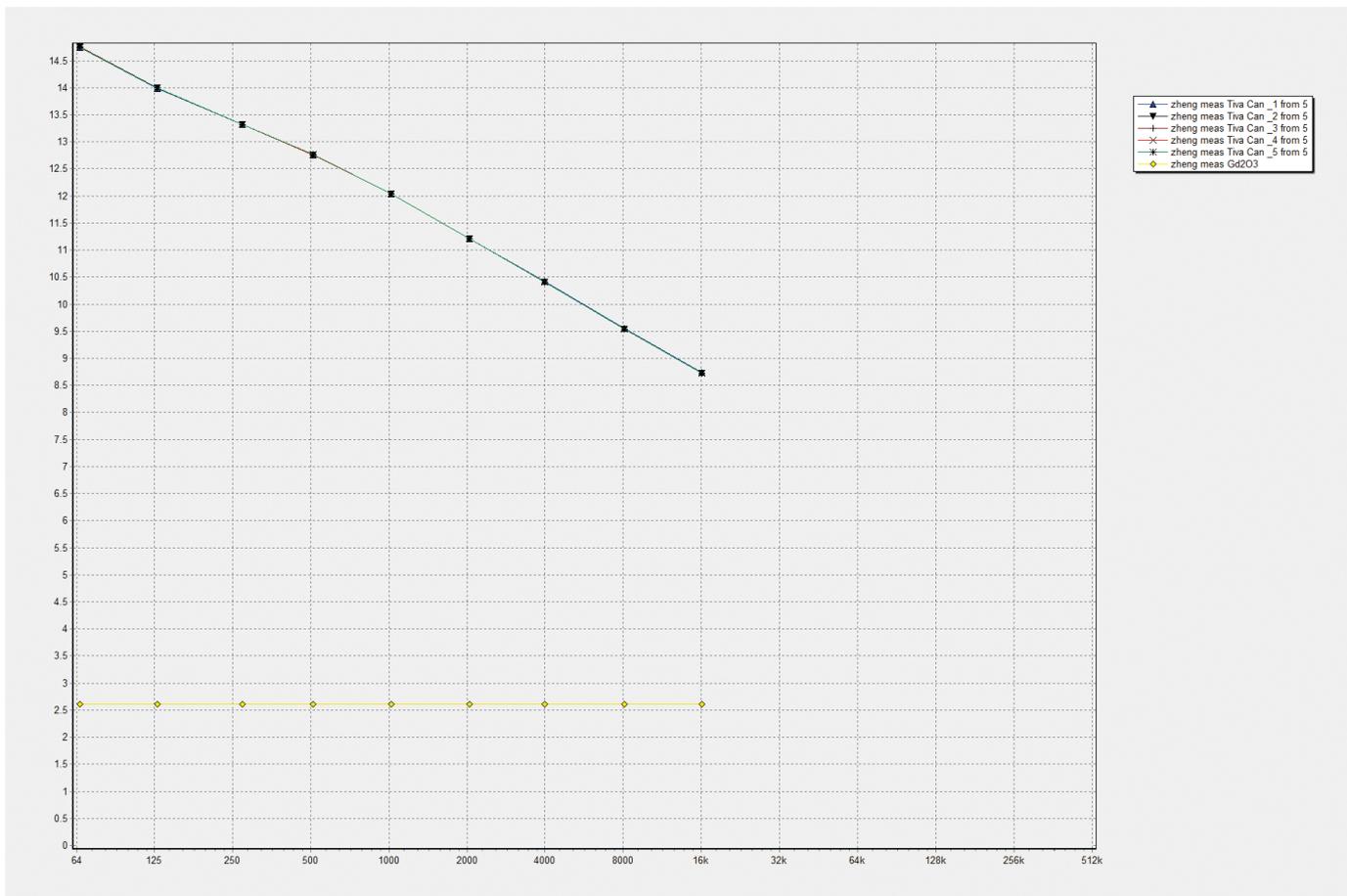
- **ADJUSTABLE FREQUENCY AND FIELD INTENSITY**  
65 Hz - 16 kHz, 10 A/m - 320 A/m, effective value
- **HIGH HOMOGENEITY OF MAGNETIC FIELD**  
measurement not sensitive on shape of the sample
- **BUILT-IN SCALE FOR MEASURING SAMPLE WEIGHT**  
scale is used to initiate measurement
- **HIGH SENSITIVITY** up to 1×E<sup>-6</sup> SI



### SPECIFICATION

Operating frequency	65 Hz, 125 Hz, 250 Hz, 500 Hz, 1000 Hz, 2000 Hz, 4000 Hz, 8000 Hz, 16000 Hz
Field intensity	10 A/m, 20 A/m, 40 A/m, 80 A/m, 160 A/m, 320 A/m
Sensitivity for sample 11,148 cm <sup>3</sup> (Cylinder dia. 25,4 x 22 mm)	2×10 <sup>-6</sup> SI Units at 65, 125 and 250 Hz 1×10 <sup>-6</sup> SI Units at remaining frequencies
Measurement time	8 s
Inner diameter of the pick-up	38 mm
PC interface	USB
Power	12 V accumulator + charger 4 W
Dimensions	Ø90 mm × 200 mm

Picture attached depicts two graphs measured with SM150L instrument. Lower graph belongs to Gd2O3 sample, which is frequency independent. The upper is Tiva Canyon Tuff.



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susceptibility meter

