

Datasheet
Sens AC Hyster™

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Automate magnetometer for sensitive
AC magnetization measurements
of magnetic nanoparticles at room
temperature

A C M A G N E T O M E T R Y

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Sens Series

AC Hyster™ series perform sensitive and calibrated magnetization and magnetic losses measurements of magnetic nanoparticles dispersed in liquid media, or inside biological matrices under alternating magnetic fields. AC Hyster™ is benchtop, and can be directly plugged into the mains to operate.



The **Sens AC Hyster™** system is an automate magnetometer that allows to select single or several field conditions for programming individual or multiple magnetization measurements in short times (< 3 minutes). The system generates alternating magnetic fields at three different frequencies ranging from 10 to 100 KHz and field intensities up to 32 kA/m.

The **Sens AC Hyster™ magnetometer** acquires AC hysteresis loops from which the specific absorption rate (SAR) value can be determined with outstanding accuracy and reliability (>95%). The high sensitivity allows to measure magnetization signals **down to 300 nAm²**. This is essential for probing magnetic phenomena under AC magnetic fields or quantifying SAR values in biological matrix (cells or tissues).

AC Hyster™ series are run by **Manyetic™**, an user-friendly interface adapted to GMP regulation, providing distinct measurement modes suitable for different user needs. Manyetic™ determines the average and standard deviation values of several magnetic parameters (coercivity, remanence, area, SAR,...) out of three repetitions of magnetization cycles. Also, odd magnetization harmonics (amplitude and phase) are analysed. Raw and/or analysed magnetic data are recorded into txt files.



INSTALLATION REQUIREMENTS

Surface of 120x60 cm onto a flat and solid non-metallic table to avoid vibrations.

Two electrical sockets 220/230V -50Hz connected to a continuous supply secured by differential protection.

Avoid direct exposure to sunlight.

Room should be at constant temperature, ideally around 25°C.

TECHNICAL SPECIFICATIONS

Magnetic field conditions

Up to 8 frequency values (kHz) ranging from 10 till 100

Intensity values

up to 32 kA/m for all available frequencies, varying every 4 kA/m

Weight and dimensions

5 kg, 53x40x19 cm

Electrical power consumption

Up to 150 W

Magnetization units

Am²

External magnetic field units

kA/m

Supplied with calibrated SI magnetic units

Supplied with cooling Unit, PC and user-friendly interfaces (**Manyetic™**, Calibration and maGraphics)