2022 Datasheet
Sens AC Hyster

AC MAGNETOMETRY

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

Nanotech Solutions

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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 24 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 needings. 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.

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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 24 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
Am^2

External magnetic field units
kA/m

Supplied with calibrated SI magnetic units

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