



**RESONANCE
SYSTEMS**



Tracking excellence in every measurement

Spin Track is your go-to TD-NMR spectrometer for high-definition scientific and industrial applications. It is suitable for all possible TD-NMR experiments from analyzing solid fat content to recording Double Quantum build-up curves. This user-friendly and high-quality instrument ensures precise, efficient, and reliable results every time

Spin Track compact *uno* edition TD-NMR Spectrometer



Resonance Systems GmbH

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Spin Track compact *uno* edition

TD-NMR Spectrometer

Spin Track is your way to precision

Food industry

- Determination of solid fat content (SFC) in fats, oils and margarines ISO 8292
- Simultaneous express determination of oil and water in seeds which complies with ISO 10565
- Rapid determination of fats, sugar and water in chocolate and cacao products
- Sodium content
- Estimation of protein, carbohydrate and fat content in milk-based products

Textile industry

Spin finish / Oil Pick-Up (OPU) measurements on artificial fibers within 1 minute. No solvents or complicated sample preparation required

Petrochemical industry

- Rock core analysis (porosity, permeability)
- Hydrocarbons in petroleum and refined petroleum products: Medium-resolution spectroscopy
- Hydrogen in fuels according to ASTM D7171

Rubber and polymer industry

- Curing degree and elasticity analysis
- Process monitoring
- Crystallinity, density, phase compositions and transition temperatures

Pharma

- Vaccine stability
- Protein aggregation
- Insulin fingerprinting

Nano Technologies and Batteries

- Surface area, wettability, stability of compounds
- Surfactants' activity and quality

Science

Applicable to various scientific fields like: Physics, chemistry, biology, food engineering, material science, geophysics, medical science and pharmacology, environmental research etc.

Education

The "Spin Track" NMR spectrometer can be directly used in demonstrations and practical training of students in quantum physics, chemistry, physical chemistry, geochemistry, electronics and signal processing

nmr-design.com



Specifications

Mainboard

Frequency range: 1 kHz - 100 MHz
Sequence time resolution: 10 ns
Frequency resolution: 0.1 Hz
Pulse sequence: fully programmable cycles, events, duration, phase shifts
ADC bits: 14 or 16
PC connection: high speed USB 2.0

Magnet and Probe

Tubes OD: 10, 18 mm
Resonance frequencies: from 17 to 22 MHz
Sample temperature: from -60 up to 200° C
Quick probe replacement option

Gradients/shims

4 channels with 16 bit modulation

Preamplifier

Gain: 90 dB
Input / Output impedance: 50 Ω
Noise figure: < 1 dB
Ringing time for complete system: < 8 μ s

Power Amplifier

Input / Output impedance: 50 Ω
Maximal output power: 300 W

Power Requirements

24 V DC or 100-240 VAC
Averaged power consumption < 30 W

Relax Software

Pulse sequence: fully programmable cycles, events, durations, phase shifts
Supported OS: Windows 7, 8, 10, 11
Data compatibility: ANSI values columns, Microsoft Excel®
Device operational library available for the third-party programs

Dimensions and Weight

354 x 204 x 168 mm;
24 kg

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