

Spinsolve®



Spinsolve Benchtop Spectrometers High Quality NMR in your Laboratory



Affordable, powerful, compact NMR that saves you time, space and money

Spinsolve is a revolutionary benchtop NMR spectrometer that provides exceptional performance in a low-cost, convenient and compact package. It has beautiful software that makes it easy and convenient to operate. The Spinsolve NMR spectrometer is ideal for chemistry education, synthetic chemists, reaction monitoring, industrial quality assurance (QA) and quality control (QC).

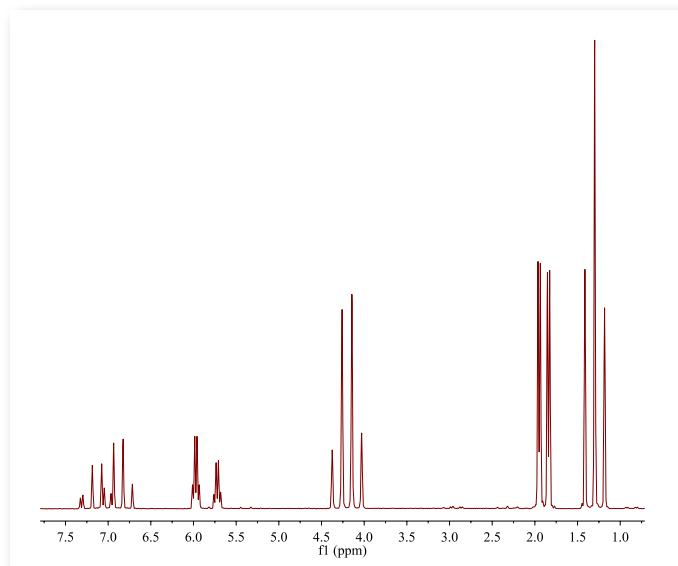
This advanced system now includes options for ^1H , ^{19}F , ^{13}C , and ^{31}P nuclei capability, and a wide range of 2D methods such as HSQC, HMQC, HETCOR, COSY and JRES.

About Magritek

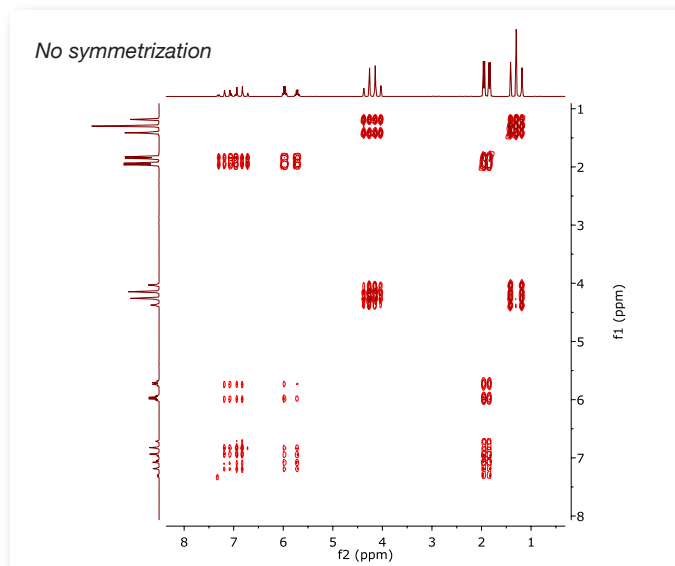
Magritek designs and builds cryogen-free, compact Nuclear Magnetic Resonance (NMR) and Magnetic Resonance Imaging (MRI) systems that fit easily into the standard laboratory. Magritek instruments are versatile, high performance and easy to use. They are also very affordable and very low maintenance.

Magritek is a global company providing worldwide sales, service and support from our three fully staffed offices in Aachen Germany, San Diego USA, and Wellington New Zealand, and from our trained and qualified distributors.

Spinsolve Proton Spectra



Proton spectrum of 1 M Ethyl Crotonate (Spinsolve 60, 1 minute)

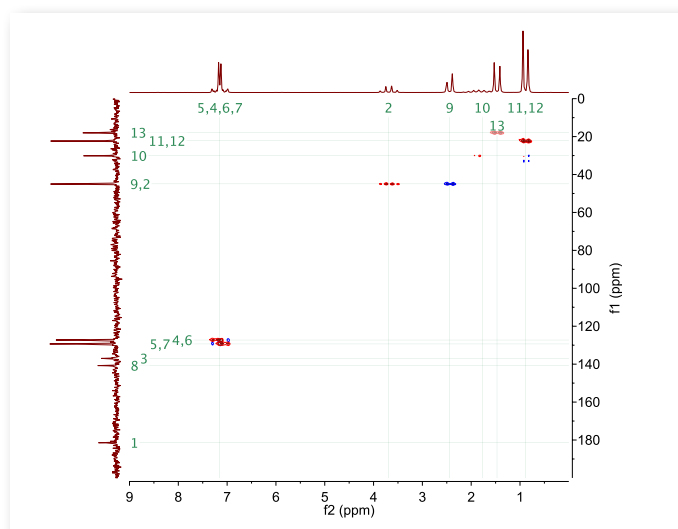


COSY spectrum of 1 M Ethyl Crotonate (Spinsolve 60, 38 minutes)

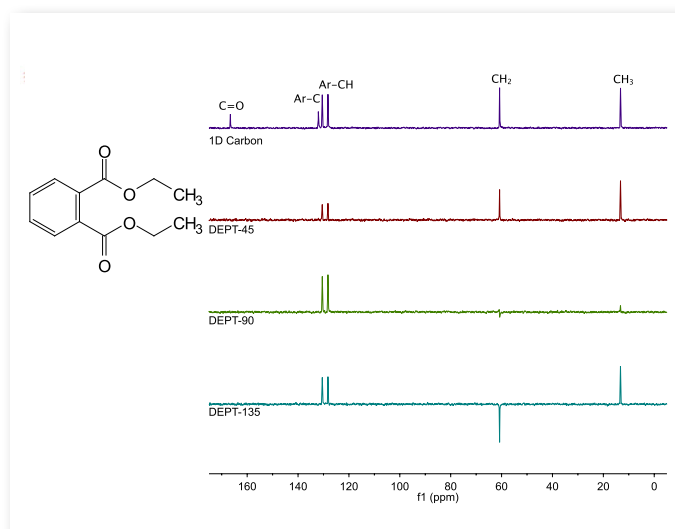
The Spinsolve Standard model comes with ¹H and ¹⁹F capability

¹ H	1D	2D-COSY	2D-JRES	2D-TOCSY	Reaction Monitoring	Paramagnetic	T1	T2
¹⁹ F	1D	2D-F-COSY	2D-F-JRES	2D-FH-COSY	Reaction Monitoring			

Spinsolve Carbon Spectra



HSQC-ME of 2 M Ibuprofen
(Spinsolve 60 Carbon, ~ 1 Hour)



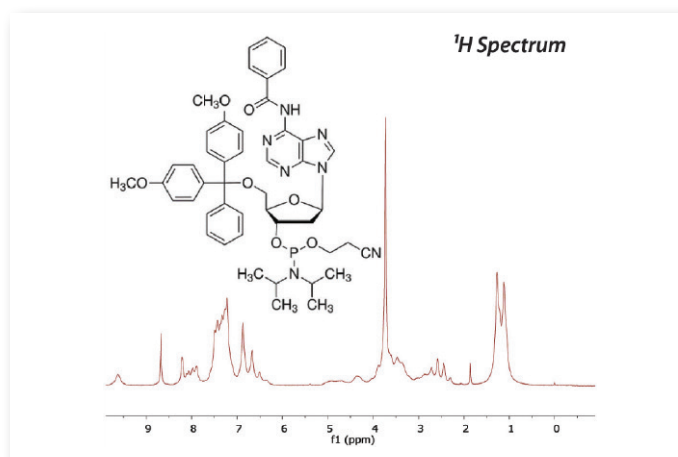
Neat Diethyl phthalate. 1D Carbon and DEPT
(Spinsolve 60 Carbon, 10 minutes)

The Spinsolve Carbon spectrometers come with all the ¹H and ¹⁹F capability of the Spinsolve Standard, plus:

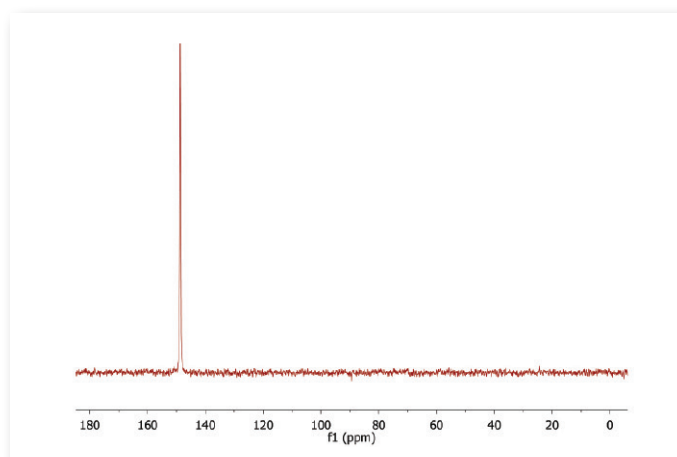
¹³ C	1D	DEPT	HETCOR	HMBC	HMQC	HSQC	HSQC-ME
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Spinsolve Phosphorus Spectra

^{31}P is a 100% natural abundance nucleus commonly found in many organic compounds. The high NMR sensitivity of ^{31}P combined with its large chemical shift range, simple spectra, and absence of impurities in the background spectrum make ^{31}P NMR very useful for routine purity assessment and reaction monitoring.



Proton spectrum and Phosphorus spectrum of dA(bz) Phosphoramidite in CDCl_3 (200 mM)



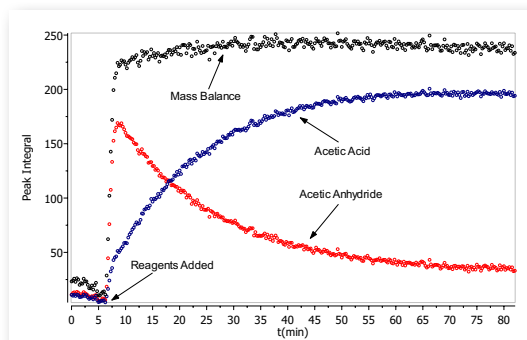
Proton spectrum and Phosphorus spectrum of dA(bz) Phosphoramidite in CDCl_3 (200 mM)

The Spinsolve Phosphorus spectrometer comes with all the ^1H and ^{19}F capability of the Spinsolve Standard, plus:

^{31}P 1D NOE (on/off) Proton Decoupling (on/off) Reaction Monitoring

On-line Benchtop NMR Reaction Monitoring

NMR spectra are chemically specific enabling the measurements to be sensitive to molecular structure and reaction kinetics. The measurements are quantitative with only minimal calibration. The signal has a linear response to concentration and it is generally not sensitive to the matrix. The measurement is of the complete sample and is non destructive.

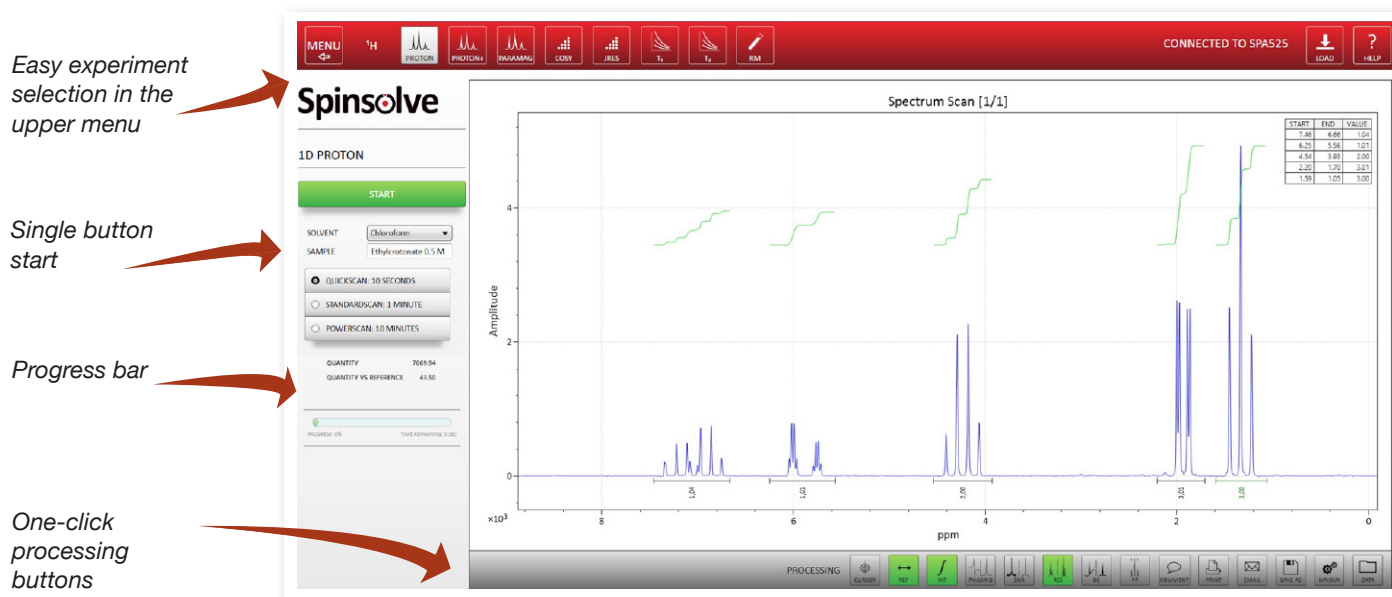


Hydrolysis of acetic anhydride with mass balance (see Magritek Application Note 9)

- Large sample volume with high sensitivity for fast measurements with high signal to noise
- High spectral resolution with narrow base width for accurate component integrals
- High stability for long measurement times with no user intervention
- Easy to use - does not require a dedicated technician for operation

Spinsolve Software

The Spinsolve software is beautifully simple and easy to use, with a clean and intuitive user interface



Spinsolve Models

Parameter	Spinsolve Education	Spinsolve	Spinsolve Carbon	Spinsolve Phosphorus	Spinsolve 60	Spinsolve 60 Carbon
Nuclei	¹ H	¹ H, ¹⁹ F	¹ H, ¹⁹ F, ¹³ C	¹ H, ¹⁹ F, ³¹ P	¹ H, ¹⁹ F	¹ H, ¹⁹ F, ¹³ C
Operating frequency (¹ H)	43 MHz	43 MHz	43 MHz	43 MHz	60 MHz	60 MHz
¹ H 50% Linewidth	< 0.5 Hz	< 0.5 Hz	< 0.5 Hz	< 0.5 Hz	< 0.5 Hz	< 0.5 Hz
¹ H 0.55% Linewidth	< 20 Hz	< 20 Hz	< 20 Hz	< 20 Hz	< 20 Hz	< 20 Hz
¹ H Sensitivity (1% EB)	>100:1	>100:1	>70:1	>70:1	>180:1	>120:1
Operating Temperature	20 °C to 25 °C (60 °F to 78 °F)					
Dimensions	58 x 43 x 40 cm (23" x 17" x 16")					
Weight	55 kg (120 lb)				60 kg (130 lb)	
Stray Field	2 Gauss line is within the spectrometer enclosure					

Contact us now for a quote, or to arrange a demo or sample measurement.

CONTACT INFORMATION

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