

Spins⊙lve[™] 60

Unmatched Performance Meets Unbeatable Affordability

Premium performance at a price that makes best-in-class NMR accessible to everyone



Outstanding Features

- 60 MHz ¹H frequency
- High sensitivity:

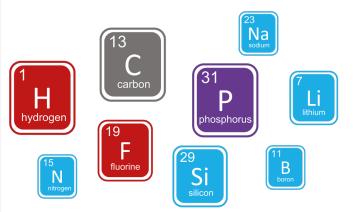
single channel: > **200**:1 for 1% Ethyl Benzene dual channel : > 130:1 for 1% Ethyl Benzene

• High resolution:

Classic: 50 / 0.55 % < 0.50 / 20 Hz Plus: 50 / 0.55 % < 0.35 / 10 Hz

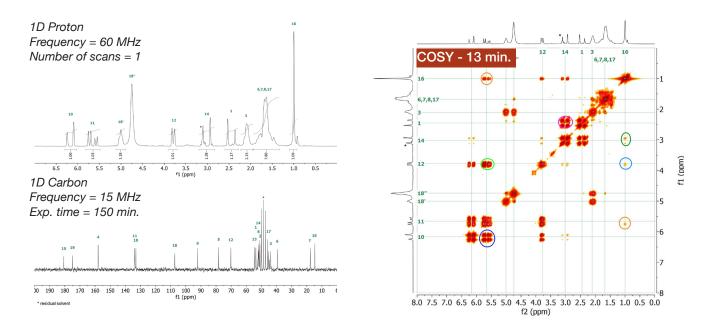
- ULTRA: 50 / 0.55 / 0.11% < 0.20 / 7 / 14 Hz
- 5 mm standard NMR tubes
- No sample spinning required
- Advanced methods like COSY, HSQC-ME, HMBC, NOAH, NUS (all gradient assisted)
- · Benchtop footprint and weight
- No cryogens
- Available with automatic sample changer
- On-line reaction monitoring

NEW broadband autotunable Multi-X Probe



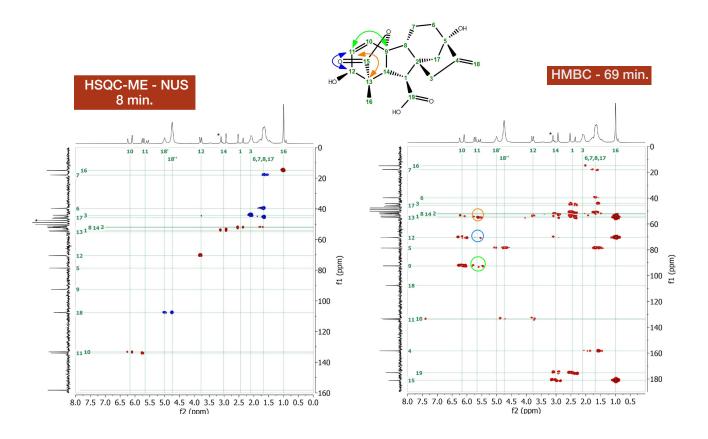
Measure multiple nuclei in a fully automatic way without requiring any user intervention and preserving full calibrations of all channels

Fast and powerful, advanced multi-nuclear methods for structure confirmation



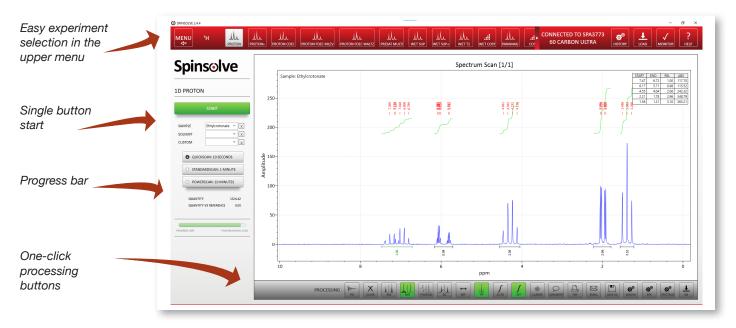
60 MHz NMR spectra of Gibberelic acid at 250 mMolar concentration

The HSQC is a powerful sequence widely used to correlate ¹H with the one-bond coupled ¹³C nuclei, respectivelly. The Spinsolve is equipped with a multiplicity edited version (HSQC-ME) of this method. It provides the editing power of the DEPT-135 sequence, which is useful to differentiate the signals of CH₂ groups (blue) from CH and CH₃ groups (red). To obtain long-range ¹H-¹³C correlations through two or three bond couplings, the Heteronuclear Multiple Bond Correlation (HMBC) experiment can be used. As an example, we show below the long-range correlations of proton 11 with carbons 13 (orange), 12 (blue) and 9 (green) are marked with circles. The experiment shows the correlation with quaternary carbons, too.



Software

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



00

QUEU

O[©]

RMX

.....

aNMF

DB

SYSTEM

...!

Simple menu structure

- 1. Click to choose nucleus
- 2. Click to choose experiment
- 3. Click Start (watch status on the progress bar)
- 4. Click any processing you wish to apply

MENU

M

Full Automation

Increase your sample measurement throughput by integrating the new fully automated autosampler carousel with your Spinsolve. The autosampler fits directly on the top of the Spinsolve and can easily be added or removed for transportation. The queue of protocols to be run for each sample can be entered in just a few seconds and it can be edited by the user at any time, even while data is being collected.

M

M

M

MENI	J ¹ H ¹² C 43 MHz		¹⁹ F 31p	QNMR SYSTEM SCRIPTS QUEUE		HANGE DELAY	00:05:00	AUTOSAMPLER	INSERT	80 CARBON	HISTORY	LOAD
					NEW PRO	FOCOL DELAY	00:00:30	QUEUE	RUNNING	ST	rop	EMERGENCY
1	2 3	4	5	6 7 8 9	10	11	12	13 14	15	16 17	18	19
Slot	Protocol	StartTime	EndTime									-
1	SHIM++	12:53:27	12:55:54	Spinsolve				Spectrum So	an [3163/81	.921		
7	1D CARBON+ WALTZ	13:01:05	22:07:13	Shure		Data anual in	"el projectel e	ata\2018\12\05\130		-		
1	SHIM++	13:01:24	13:01:24	·		Data saved in	c. (projects (c	ata (2010/12/05/13)	TO CARBOI	AT MOLIZ		
7	DEPT WALTZ	13:06:54	15:57:34	1D CARBON+ WALTZ								
1	SHIM++	16:03:04	16:03:04		4							
7	HSQC-ME-WALTZ	16:08:34	18:26:20	SOLVENT VX SAMPLE S7 VX								
1	SHIM++	18:31:50	18:31:50	SAMPLE S7 V X								
	COSY 2D	18:37:20	19:15:40	SCANS 8192 V								
	1D EXTENDED+	19:16:10	19:16:25	REPETITION TIME 4 s V	e 2.					1		
1	1D EXTENDED+	19:16:55	19:20:55	PULSE ANGLE 45 V	Amplitude							
	1D EXTENDED+	19:21:25	19:29:25	BANDWIDTH 333 ppm ~	ldm		- T		1	n i loh ohi	I I	
1	SHIM++	19:34:55	19:34:55	CENTER FREQUENCY 110 ppm	<							
	1D EXTENDED+	19:40:25	19:41:05	NOE ENHANCEMENT	0-	Havilling in the	white and the	Asperiphen public the states	may Maningminian	Here have been have been a start of the second	Water and Minin	
8	COSY+	19:41:35	20:16:01	1H DECOUPLE				and the second				
	1D CARBON+ WALTZ	20:16:31	01:57:51									
1	SHIM++	02:03:21	02:03:21									
8	HSQC-ME-WALTZ	02:08:51	06:42:37	PROGRESS: 38% TIME REMAINING: 5 HOUR, 35 MIN, 13 SEC	-2-	1						
1	SHIM++	06:48:07	06:48:07		-21							
8	HMBC WALTZ	06:53:37	11:27:13			L,						
1	SHIM++	11:32:43	11:32:43			150		100	ppm	50	ò	

Spins⊙lve[™] 60



- Operating frequency: 60 MHz (¹H)
- Nuclei: ¹H, ¹⁹F, ¹³C, ³¹P, ⁷Li, ¹¹B, ²⁹Si, ¹²⁹Xe, ²D, ¹⁵N (more available)
- ¹H Linewidth Classic: 50 / 0.55 % < 0.50 / 20 Hz
 - Plus: 50 / 0.55 % < 0.35 / 10 H

ULTRA: 50 / 0.55 / 0.11% < 0.2 /

- ¹H Sensitivity single channel: >200:1 for 1% Ethyl dual channel : >130:1 for 1% Ethyl
- Operating Temperature Range: 18° C to 28° C (6
- Dimensions: 58 x 43 x 40 cm (23" x 17" x16")
- Weight: 60 kg (132 lb)
- Stray Field: < 2 G all around the enclosure
- Voltage Requirement: 100-240 VAC, 50/60 Hz
- Available with automatic sample changer
- · Compatible with the reaction monitoring kit
- · 3D pulsed field gradients optimized for modern p

Optional diffusion PFG

Pulse sequences available on the Spinsolve



ΗZ	
Ηz	
/ 7 / 14 Hz	
yl Benzene /l Benzene 65° F to 82° F)	gritek Spinsolve cator
pulse sequences e 60	
	Carbon
¹ H decoupling	1D Carbon with ¹ H and ¹⁹ F decoupling
	DEPT
	APT
	HETCOR

Proton	Fluorine	Carbon
1D with ¹⁹ F and ¹³ C decoupling	1D Fluorine with ¹ H decoupling	1D Carbon with ¹ H and ¹⁹ F decoupling
1D paramagnetic	2D F - COSY	DEPT
2D gs-COSY*, gs-JRES	2D F - JRES	APT
2D gs-TOCSY, and gs-ROESY	2D FH - COSY	HETCOR
1D solvent suppression (Presat and WET)	T ₁ , T ₂	gs-HSQC
1D solvent suppression with T_2 filter	PFG-DOSY	gs-HSQC-ME*
2D gs-COSY with solvent suppression	Reaction Monitoring	gs-HMQC
T_1, T_2		gs-HMBC*
PFG-DOSY		gs-NOAH*
Reaction Monitoring		*Non-Uniform Sampling (NUS) available
Other sequences available contact M	agritek for details	·

available, contact Magritek for details

Contact us now for a quote, to request a demo or to measure your samples

Email:	sales@magritek.com		
Website:	www.magritek.com/contact-us		
GERMANY	+49 241 9278 7270	UNITED STATES	+1 855 667 6835
UNITED KI	NGDOM +44 7468 529 615	NEW ZEALAND	+64 4 477 7096

For a complete listing of our global offices and distributors visit: www.magritek.com/about-us/distributors/