For organic chemists $^{13}$C NMR forms the backbone of routine molecular analysis. Spinsolve Carbon has outstanding resolution and a high sensitivity that enables the power of proton-carbon NMR in a benchtop instrument. This spectrometer is the most flexible and cost effective way to get carbon-13 NMR in your laboratory.

Who
- Organic Chemists
- Medicinal and Pharmaceutical Chemists
- Small Molecule Research Scientists
- Synthetic Chemists monitoring reactions
- Academics running practical laboratory classes
- Post Graduate Chemistry Students

Why
- No cryogens
- Low cost
- Fast
- Low maintenance
- Convenient
- Accessible
- Robust
- Easy to operate
- Exceptional performance
Example NMR Spectra of Lidocaine using Spinsolve Carbon

1D Proton with peak assignments.

1D Carbon shows peaks of all carbons (top). Spectral editing using DEPT selects signals of CH₃, CH₂ and CH groups (rows 2-4).

2D HSQC-ME shows single-bond proton-carbon correlations.

2D HMBC shows long-range proton-carbon correlations.
The power of simplicity

- Uncomplicated one-button operation
- Simple intuitive graphical interface
- Automated and easy to use
- Minimal user controlled parameters
- Traditional NMR complexities are hidden

Features

- 1D $^1$H, $^{19}$F and $^{13}$C experiments
- Standard 5 mm NMR tubes
- 2D COSY and homonuclear j-resolved spectroscopy
- $T_1$ and $T_2$ relaxation experiments
- Spectral editing with DEPT
- Composite pulse decoupling
- 2D heteronuclear correlation experiments HETCOR, HMQC, HMBC

DEPT-45, DEPT-90, and DEPT-135 spectra of 1 M lidocaine in d-chloroform.
Specifications

- Frequency: 43 MHz Proton, 10.8 MHz Carbon
- Resolution: 50% linewidth < 0.5 Hz (12 ppb)
- Linewidth: 0.55% linewidth < 20 Hz
- Hardware lock (does not require deuterated solvent)
- Dimensions: 58 x 43 x 40 cm
- Weight: 55 kg
- Magnet: Permanent and cryogen free
- Stray field: < 2 G all around system

Other Spinsolve products

Spinsolve for education

- 1D Proton only system
- Budget friendly price
- Upgradeable

Spinsolve

- 1H and 19F nuclei
- Relaxation time experiments
- 2D COSY and JRES
- Reaction monitoring

“Now the students are able to acquire their own NMR spectra as well as carry out the analysis of the compounds they have made. This makes their undergraduate experiment more applicable to both research and industry settings and increases their enthusiasm for Chemistry.”

Professor Frances Separovic, Head of Chemistry, University of Melbourne

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