Spinsolve Carbon

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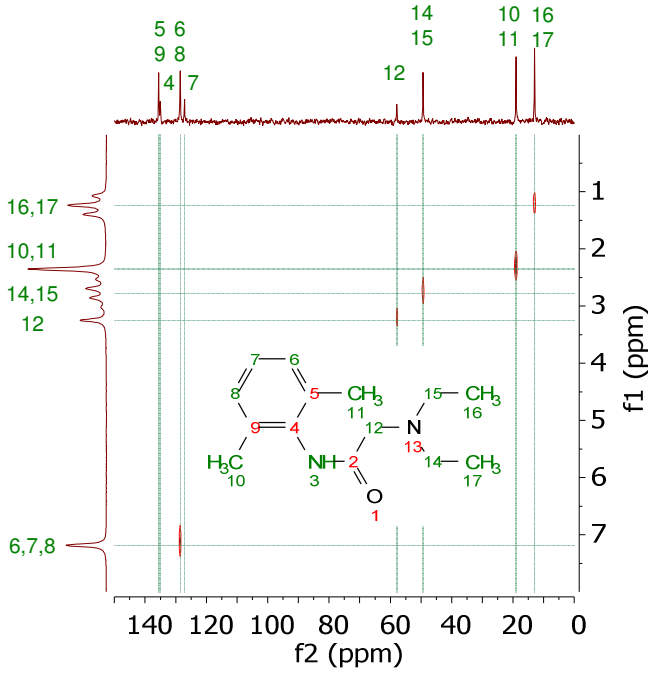
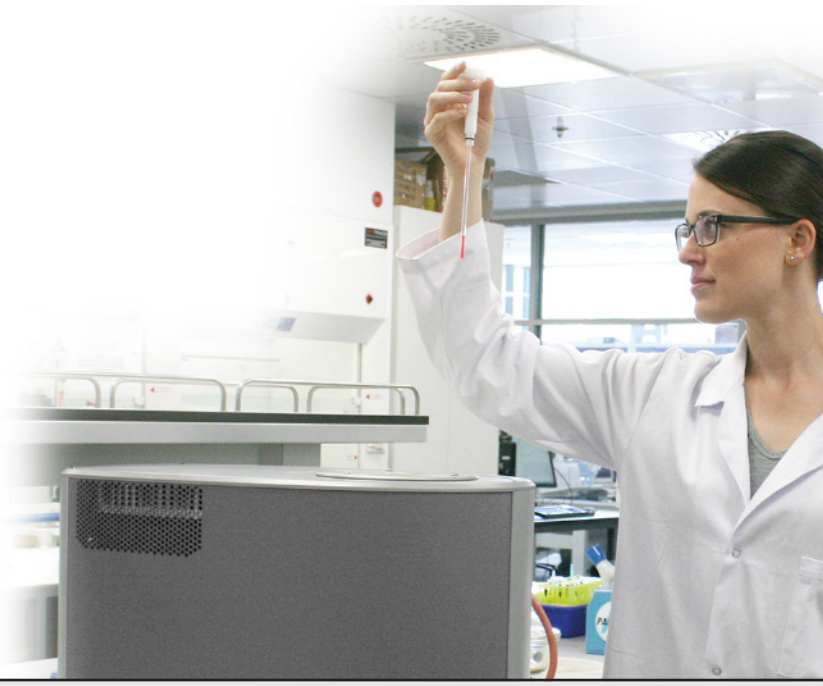
Carbon-13 benchtop NMR

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



HETCOR spectrum of lidocaine



Who

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

Why

- No cryogens
- Fast
- Convenient
- Low cost
- Accessible
- Robust
- Low maintenance
- Easy to operate
- Exceptional performance

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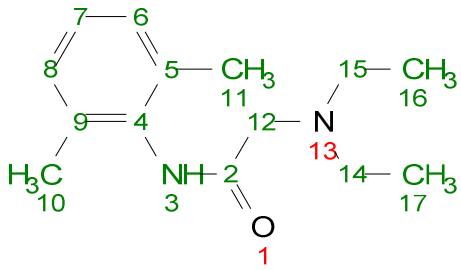
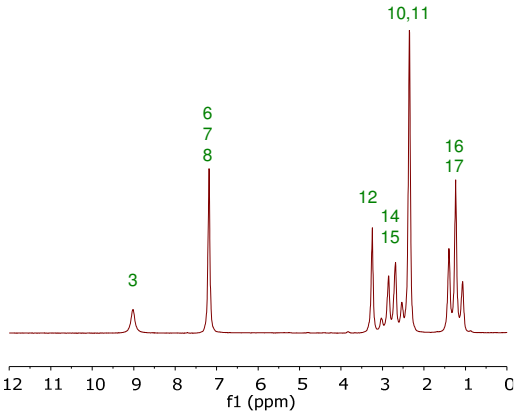
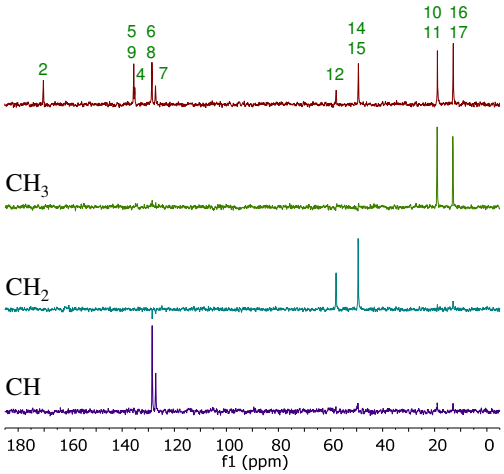
Example NMR Spectra of Lidocaine using Spinsolve Carbon

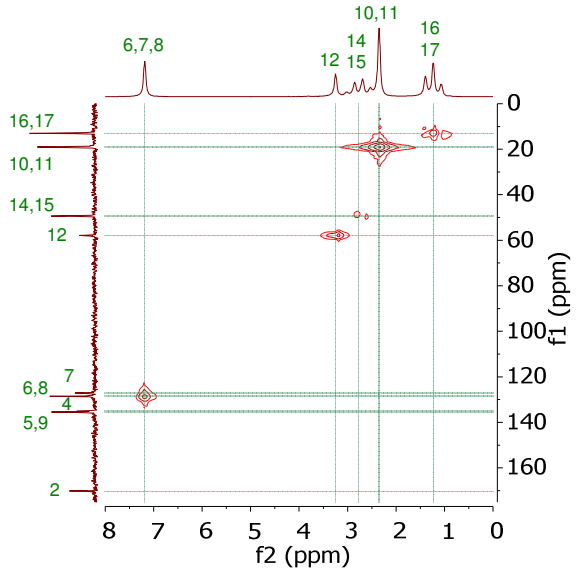




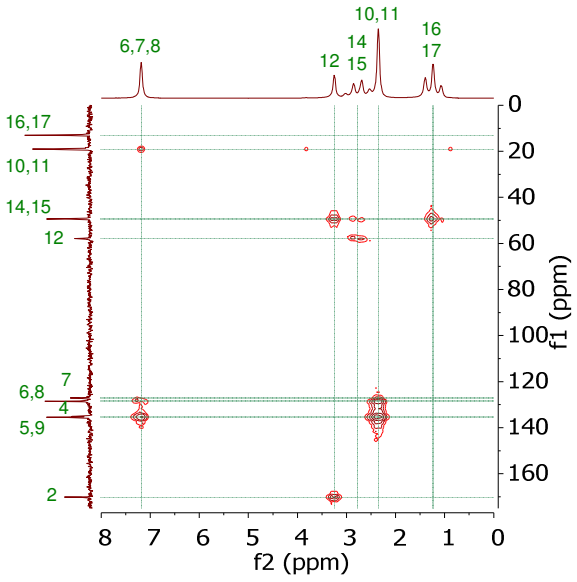
1D Proton with peak assignments.



1D Carbon shows peaks of all carbons (top). Spectral editing using DEPT selects signals of CH_3, CH_2 and CH groups (rows 2-4)



2D HMQC shows single-bond proton-carbon correlations.



2D HMBC shows long-range proton-carbon correlations.

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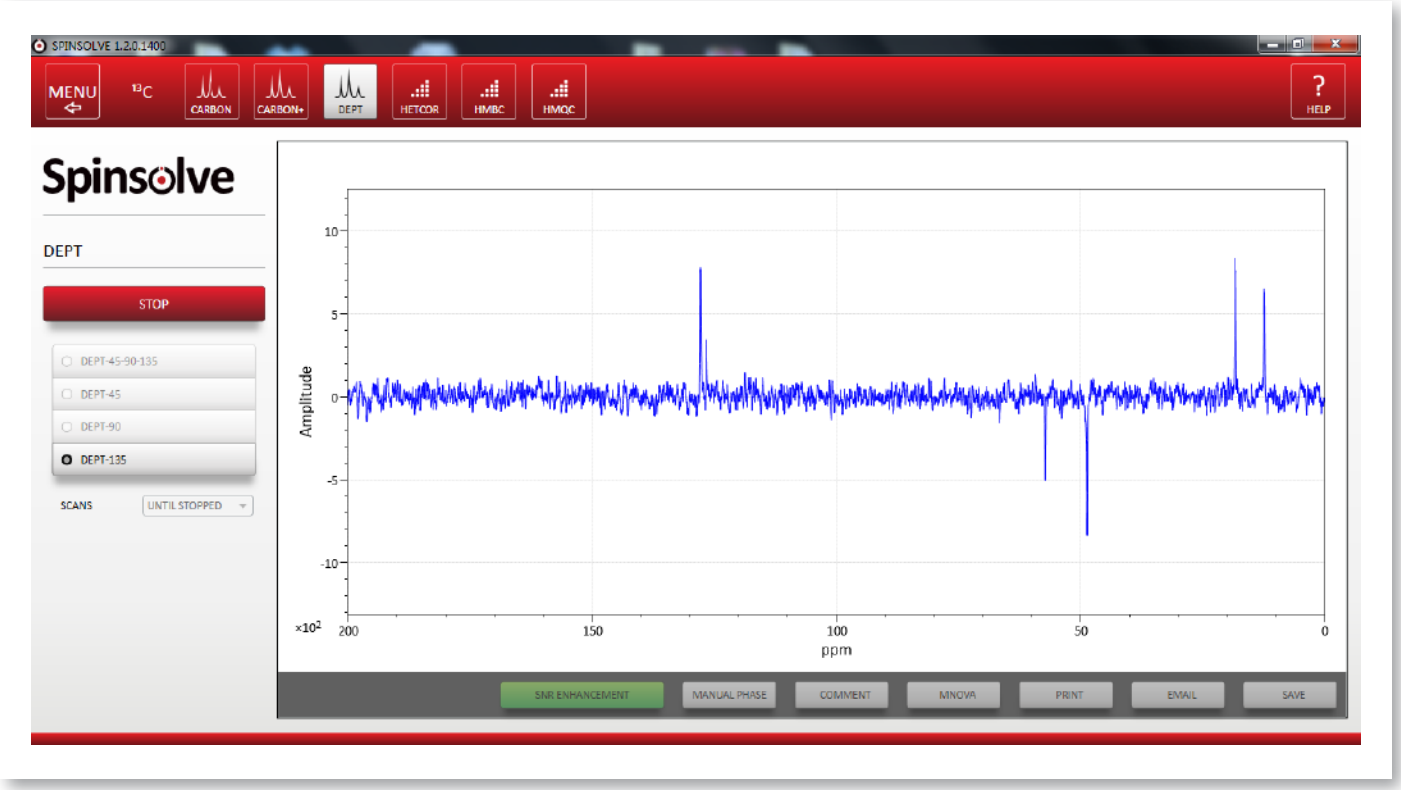
Software

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



DEPT-135 spectrum of 2 M lidocaine in d-chloroform. The inverted peaks are the CH_2 carbons.

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

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Spinsolve® Carbon

Specifications

- Frequency: 42.5 MHz Proton, 10.8 MHz Carbon
- Resolution: 50% linewidth < 0.7 Hz (16 ppb)
- Lineshape: 0.55% linewidth < 20 Hz
- 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®

- ^{1}H and ^{19}F 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

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

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