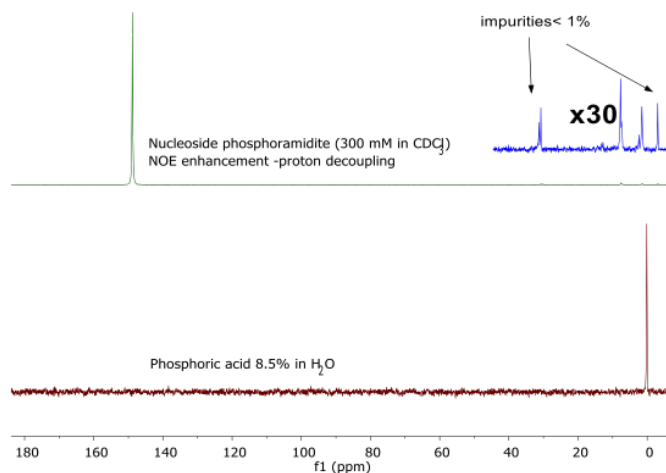


Spinsolve Phosphorus

Phosphorus-31 benchtop NMR

Phosphorus is commonly found in many organic compounds, for example in biological membranes or DNA. The ^{31}P nucleus has a 100% natural isotopic abundance and a large chemical shift range, making it one of the most commonly used nuclei in biological NMR.



Who

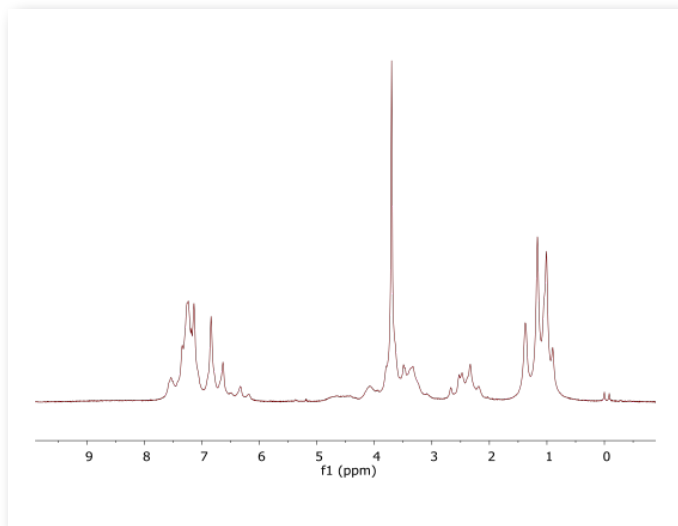
- Medicinal Chemists
- Pharmaceutical Chemists
- Structure Elucidation
- Purity Assessment

Why

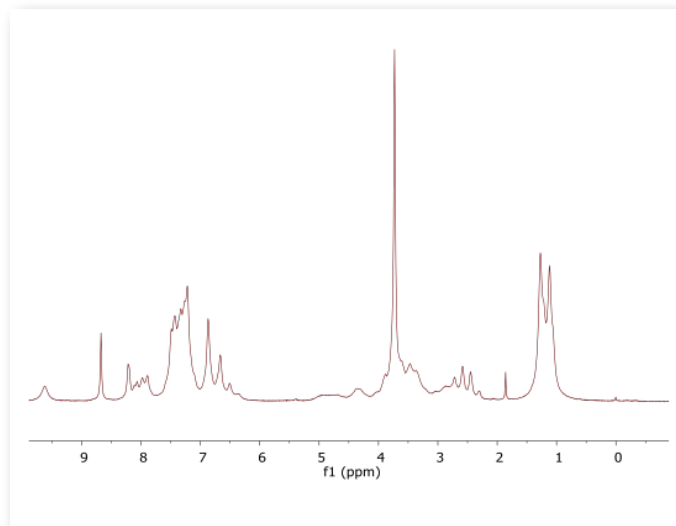
- No cryogenics
- Fast
- Convenient
- Low cost
- Accessible
- Robust
- Low maintenance
- Easy to operate
- Exceptional performance

^{31}P NMR Spectroscopy

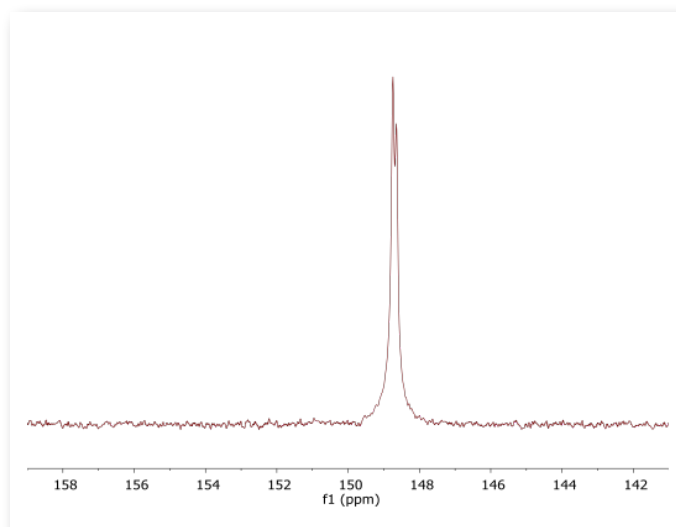
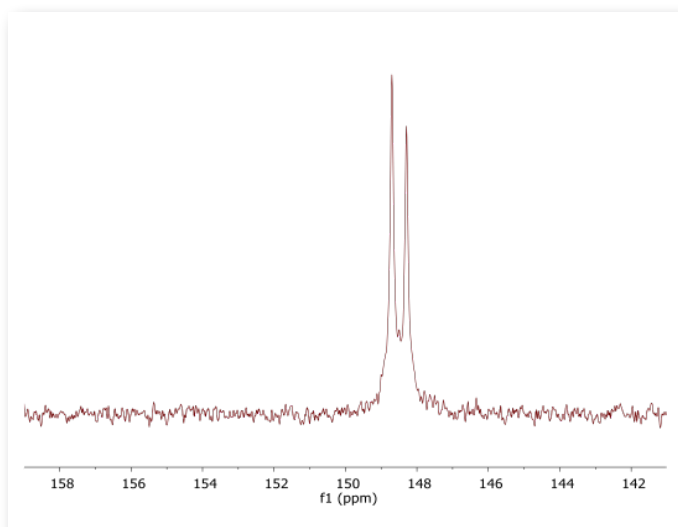
Example NMR Spectra of Phosphoramidites using Spinsolve Phosphorus.



dT Phosphoramidite



dA(bz) Phosphoramidite

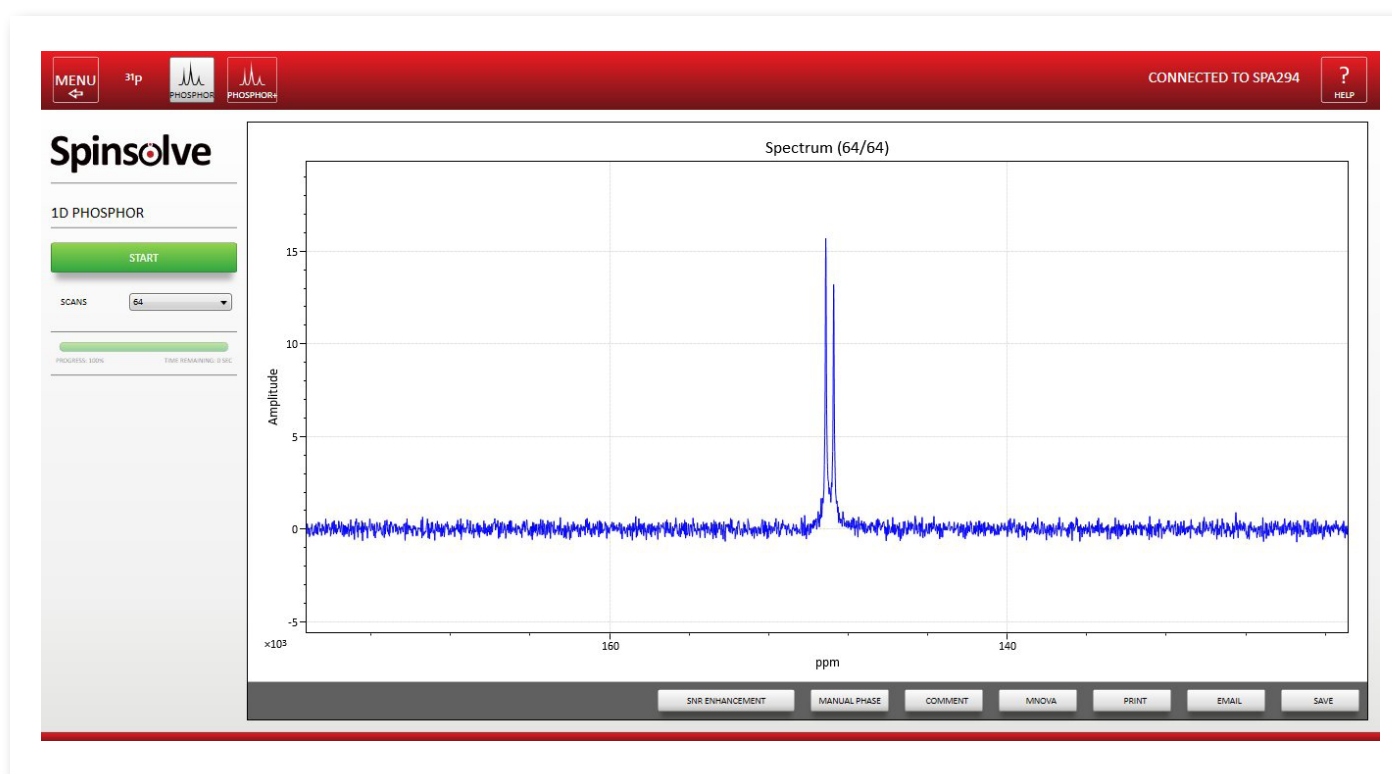


^1H (top) and ^{31}P (bottom) spectra of two phosphoramidite solutions (200 mM in CDCl_3). These molecules play an important role in DNA synthesis. The measurement time for the ^{31}P spectra was 7 minutes.

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



Features

- 1D ^1H , ^{19}F and ^{31}P experiments
- Standard 5 mm NMR tubes
- 2D COSY and homonuclear j-resolved spectroscopy
- T_1 and T_2 relaxation experiments
- Composite pulse decoupling

Spinsolve Phosphorus



Specifications

- Frequency: 42.5 MHz Proton, 17.4 MHz Phosphorus
- ^1H Resolution: 50% linewidth < 0.5 Hz
- ^1H 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[®]



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

Spinsolve[®] Carbon



- ^1H , ^{19}F and ^{13}C nuclei
- Spectral editing with DEPT
- Composite pulse decoupling
- 2D heteronuclear correlation experiments HECTOR, HMQC, NMBC, HSQC

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Website: www.magritek.com/contact-us

GERMANY +49 241 9278 7270

UNITED KINGDOM +44 7468 529 615

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