



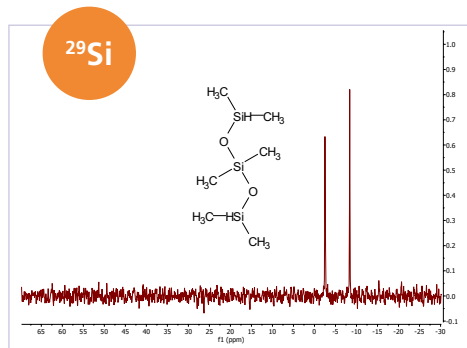
# X-Pulse

Bringing broadband NMR to your benchtop

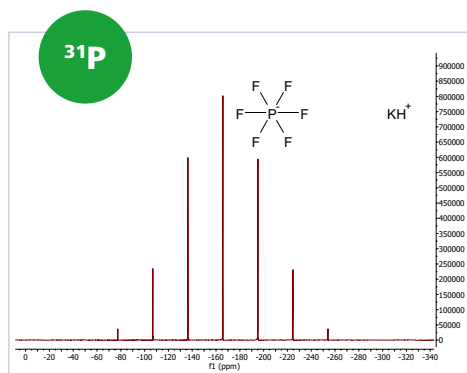


# True X-Nuclei

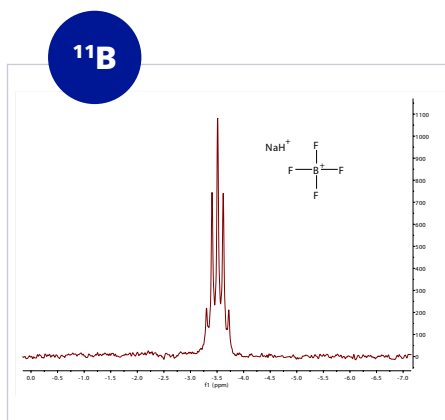
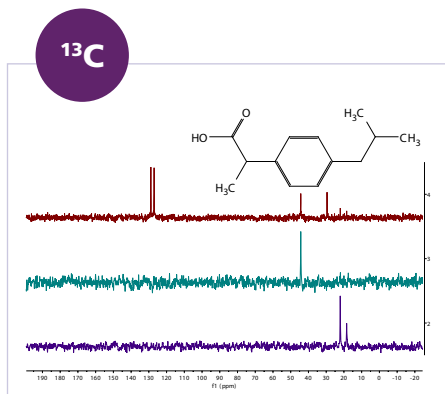
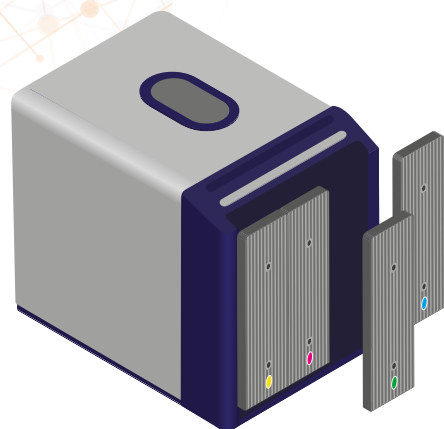
Tunable broadband preamplifier allows you to select nuclei from  $^{29}\text{Si}$  to  $^{31}\text{P}$ , whatever your experiment needs.



No compromises! **X-Pulse** lets you maximise your signal-to-noise ratio with optional interchangeable **X-Pods** for specific nuclei.

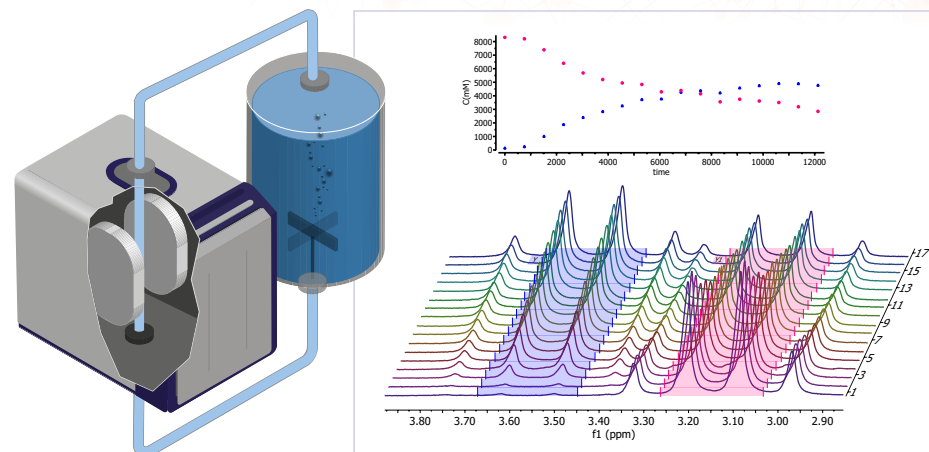


Learn more at:  
[nmr.oxinst.com/x-pulse](http://nmr.oxinst.com/x-pulse)

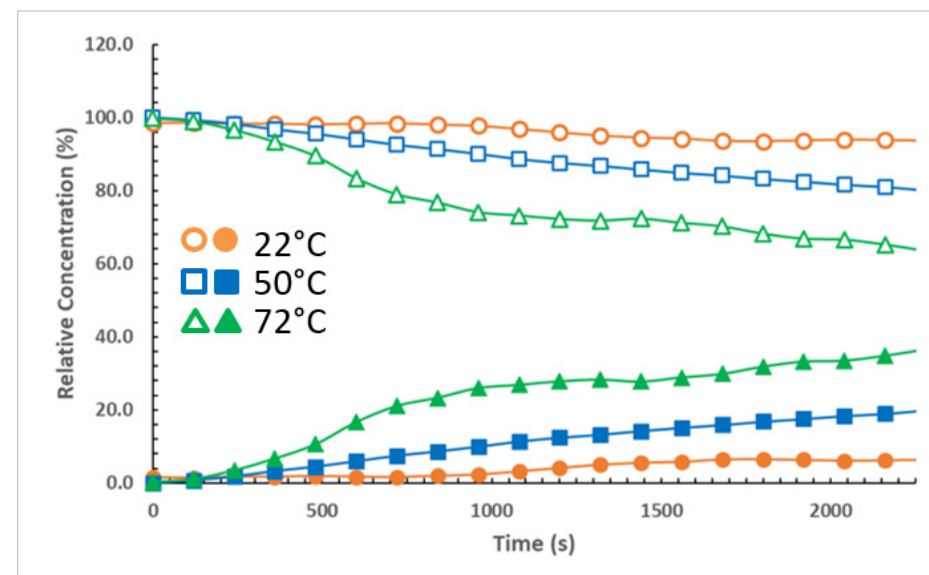


# Reaction Monitoring

Monitor your reactions as they happen.



Observe your reaction at temperatures from 20°C to 70°C and with the variable temperature probe.



# X-Pulse

## Choose your nuclei

Measure the nuclei you need for your experiment with the world's first broadband benchtop NMR spectrometer

## No need to compromise

Interchangeable **X-Pods** allow you to optimise signal-to-noise ratio for specific nuclei

## Easy operation

Quick experiments turn complex pulse sequences into a single click allowing anyone to access the power of NMR

## Clearer spectra

New shimming technology allows spectral resolution of  $<0.35\text{Hz}/10\text{Hz}$  as standard

## Easy to maintain

Removable and easy-to-access probe for cleaning

## Benchtop convenience

No requirement for special facilities or liquid cryogenics allowing you to use the instrument wherever is most convenient

## Ultimate stability

Flow liquid samples at variable temperature ( $20^{\circ}\text{C} - 70^{\circ}\text{C}$ ) without spectral artefacts. Run high duty cycle pulse sequences without destabilising the magnet

## Flexible software

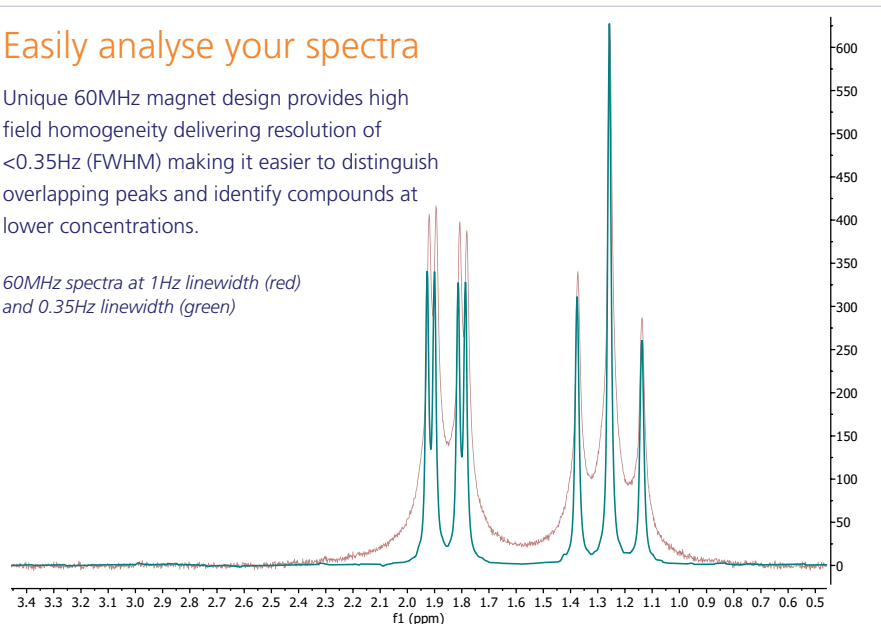
**SpinFlow** advanced mode allows you to define your own experiments, your way



## Easily analyse your spectra

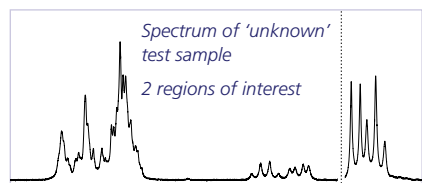
Unique 60MHz magnet design provides high field homogeneity delivering resolution of <0.35Hz (FWHM) making it easier to distinguish overlapping peaks and identify compounds at lower concentrations.

60MHz spectra at 1Hz linewidth (red) and 0.35Hz linewidth (green)

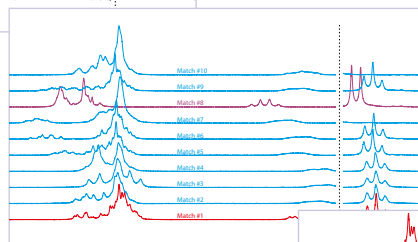


## Unleash the power of QA/QC in your benchtop NMR

Quickly identify compounds, even in mixtures, or low concentration adulterants using chemometric fingerprinting from your own custom-built database. This allows you to ensure the consistency of your products and processes while spotting any contaminants.

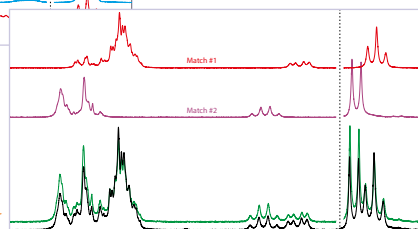


Compare unknown spectra against user-defined database to get top matches.



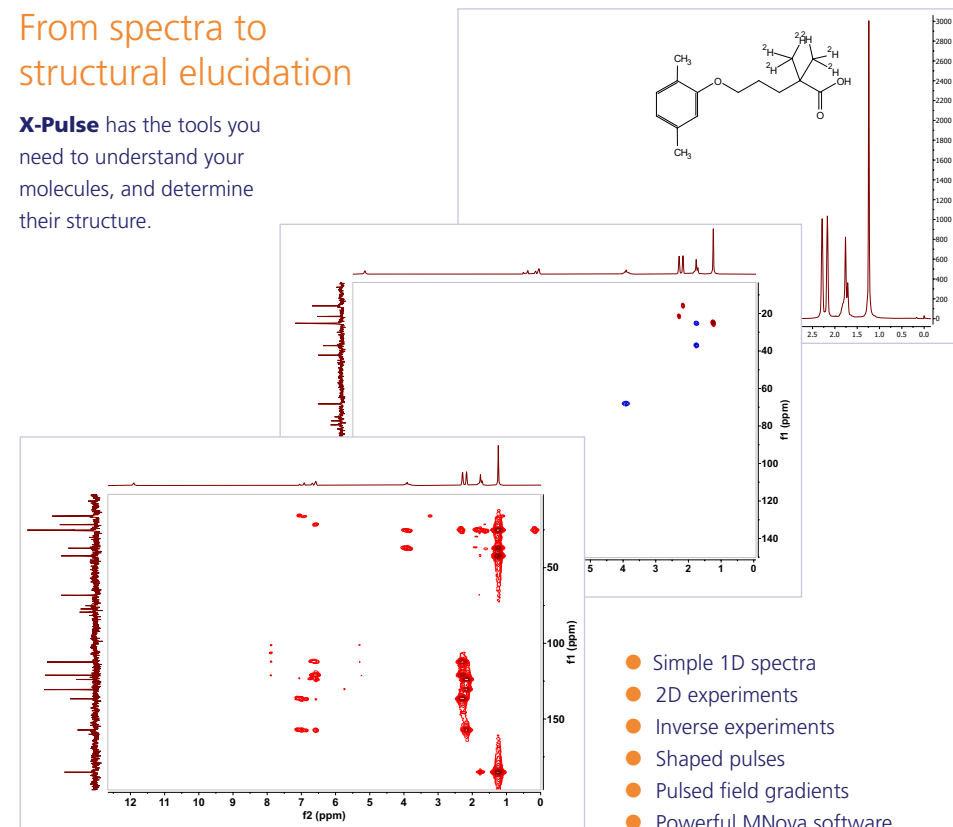
Generate synthetic mixtures of combinations to match the original unknown spectrum.

Synthesised mixture of matches #1 and #6 gives best match to original unknown spectrum.

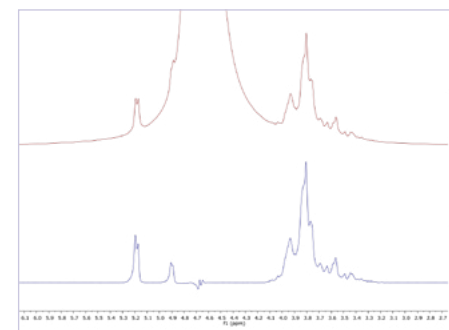


## From spectra to structural elucidation

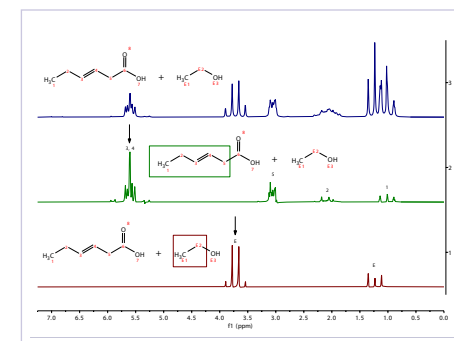
**X-Pulse** has the tools you need to understand your molecules, and determine their structure.



Shaped RF pulses unlock advanced pulse sequences and allow you to improve your solvent suppression.



Shaped pulses combined with the improved linewidth of the **X-Pulse** make removing solvent peaks more effective than ever.



Advanced pulse sequences like the selective 1D TOCSY can be used in place of some 2D experiments, simplifying spectral analysis and allowing you to obtain your results more quickly.



## We're here to help you!

OIService aims to keep your instrument working as hard as you do. Our global network of service hubs provides a full range of technical support:



### **Consumables and accessories**

Range of sample tubes and other accessories available.



### **Extended warranties**

Avoid unplanned costs.



### **Online diagnostics**

In-depth support over the internet.



### **Maintenance contracts**

Ensures your analyser produces the right result every time.



### **Repairs**

Fast and efficient turnaround.



### **Telephone help-desks**

For a fast response to your problem.

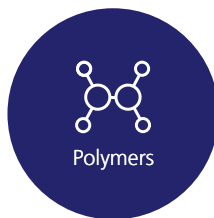


### **Training**

Understand your analyser and its features.



Petrochemicals



Polymers



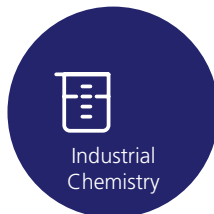
Pharmaceuticals



Chemistry  
Education



Research



Industrial  
Chemistry

This brochure provides only a glimpse into the technology of **X-Pulse** and its applications.

Find out more at:

**[nmr.oxinst.com/x-pulse](http://nmr.oxinst.com/x-pulse)**

This publication is the copyright of Oxford Instruments plc and provides outline information only, which (unless agreed by the company in writing) may not be used, applied or reproduced for any purpose or form part of any order or contract or regarded as the representation relating to the products or services concerned. Oxford Instruments' policy is one of continued improvement. The company reserves the right to alter, without notice the specification, design or conditions of supply of any product or service. Oxford Instruments acknowledges all trademarks and registrations. © Oxford Instruments plc, 2019. All rights reserved. Part no: MR/215/0919