



Accessible. Affordable. Automatable.

Benchtop NMR

Distributed By:



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 **nanalysis**[™]

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Why **benchtop** NMR spectrometers?

Nanalysis' benchtop NMR spectrometers add another layer of NMR technology to increase accessibility and affordability within your teaching, research, processing or industrial QA/QC lab.

Contact us for more information or talk to our team about the feasibility of your application.

sales@gpescientific.co.uk

- >> **Structural elucidation**
- >> **Check for impurities in starting materials**
- >> **Reaction completeness**
- >> **Byproduct formation**
- >> **Product purity**
- >> **Routine QA/QC**
- >> **qNMR**

Variety of Options

Select the model, nuclei and resolution that fit with your need and budget!

Rapid Results

Discover how high-performance NMR spectra located directly on your bench can improve your productivity!

Low Maintenance

With no required cryogenics, these permanent magnet NMR spectrometers can significantly reduce operating expenditures.

Simple Sample Prep

Using industry standard 5 mm NMR tubes, sample preparation is simple and can be used on other spectrometers without requiring additional preparation.

Automatable

With an autosampler and optional software, an easy-to-use interface that can be customized for data acquisition and processing by technicians.

100 MHz

Benchtop NMR

Technical specifications overview



100e

(¹H/¹⁹F)

100 MHz



100PRO

Multi-nuclear

100 MHz

Customizable Experience

With the same ease of use and convenience as our 60 MHz product line, the 100 MHz is a robust, compact NMR magnet platform with modifiable acquisition/processing parameters and an ergonomic touchscreen.

High Performance

With a powerful 2.35 Tesla magnet at 100 MHz, the Nanalysis 100 represents the highest performing benchtop NMR spectrometer. This affords better peak separation and superior sensitivity, while still maintaining an accessible, all-in-one, easy-to-use footprint.

Operating Frequency

100 MHz (2.35 T)

Magnet

Permanent, no cryogenics

User Interface

- **Built-in touchscreen and remote access**
- **Connect to external computer if desired**

Nuclei

100e

e.g., ¹H/¹⁹F

100PRO

e.g., ¹H/¹⁹F/¹³C, ¹H/¹⁹F/³¹P

Please inquire about additional pulse sequences or experiment designer.

Lock

Internal ²H

Sample

Standard 5 mm NMR tubes

Compatibility third party softwares such as:

Software: **Mnova, ACD/Labs, Delta, TopSpin, MATLAB, SPINit, NMRfx, etc.**

File: **JCAMP-DX and CSV**

Resolution

LW(50%) < 0.7 Hz (<0.007 ppm)

Sensitivity

>220 : 1

(1% Ethylbenzene, 1 scan)

Stray Field

2 Gauss line contained within enclosure

Operating Temperature

18 – 26 °C

Power Supply

100 – 240 VAC, 50 – 60 Hz

Connectivity

Ethernet/WiFi, USB, Serial, HDMI

Dimensions with screen (wxhxd)

17 x 15.3 x 32"

43.2 x 38.7 x 81.3 cm

Screen size and resolution

15.6", 16:9, 1920x1080

Weight

243 lbs /110 kg

* Specifications are subject to change without notice

60 MHz



60e

(¹H/¹⁹F)

60 MHz



60PRO

Multi-nuclear

60 MHz

Compact and Accessible

60e is a 60 MHz NMR spectrometer. It can easily address one of the most important components of teaching NMR – gaining access to an NMR spectrometer.

Multinuclear Capability

60PRO is a dual-channel, all-in-one benchtop NMR spectrometer. It is lightweight and easy to site with its small footprint. Quick and easy-to-use.

Operating Frequency
60 MHz (1.4 T)

Magnet
Permanent, no cryogenics

User Interface
Built-in touchscreen or Windows, Mac or Linux compatible. It can connect to external computer, if desired.

Nuclei
60e
e.g., ¹H/¹⁹F

60PRO
e.g., ¹H/¹⁹F/¹³C, ¹H/¹⁹F/³¹P

Please inquire about custom options

Lock
Deuterium & non-deuterium options

Sample
Standard 5 mm NMR tubes, flow options

Compatibility third party softwares such as:
Software: **Mnova, ACD/Labs, Delta, TopSpin, MATLAB, SPINit, NMRfX, etc.**

File: **JCAMP-DX and CSV**
Resolution & Lineshape
LW(50%) <0.7 Hz (<0.011 ppm)

Sensitivity
100 : 1
(1% Ethylbenzene, 1 scan)

Stray Field
2 Gauss line contained within enclosure

Operating Temperature
18 – 26 °C

Power Supply
100 – 240 VAC, 50 – 60 Hz

Connectivity
Ethernet/WiFi, USB, Serial, HDMI

Dimensions
11.8 x 11 x 19.2"
30 x 28 x 49 cm

Weight
58 lbs / 26.3 kg

FEATURED ACCESSORIES

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Automate routine work

AUTOsample-60 & AUTOsample-100

A top mounting autosampler that is compatible with 60e or 60PRO, 100e or 100PRO benchtop NMR spectrometer. This allows for painless interconversion between autosampler and manual modes, while still maintaining the notably minimal footprint. Data acquisition and processing is controlled via the onboard software.

AUTOsample-60 and **AUTOsample-100** allows users to:

- » Maximize efficiency by improving throughput during or after work hours
- » Run a series of 1D experiments or set up basic structural elucidation routines through queuing module (e.g., ¹H, COSY, HSQC, DEPT-135, ¹³C{¹H} etc.)
- » Acquire and save data automatically
- » Integrate the benchtop spectrometer into a centralized laboratory system

System Requirements

**60e, 60PRO,
100e or 100PRO**

Dimensions

60 MHz
10.3 x 10.3 x 14.2"
26 x 26 x 36 cm
100 MHz
14" x 16.5"
35.6 cm x 41.9 cm

Weight

60 MHz
12 lbs / 5.5 kg
100 MHz
18 lbs / 8.2 kg

Carousels
2

Voltage
24 V

Time per Tube Change
~20 sec



Easy-to-mount on both
60 MHz & 100 MHz

- >> **Simple operation**
- >> **Easy-to-mount and install**
- >> **Safe, accurate and fast**

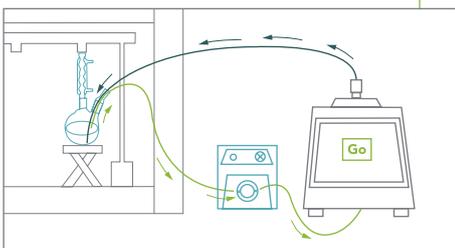
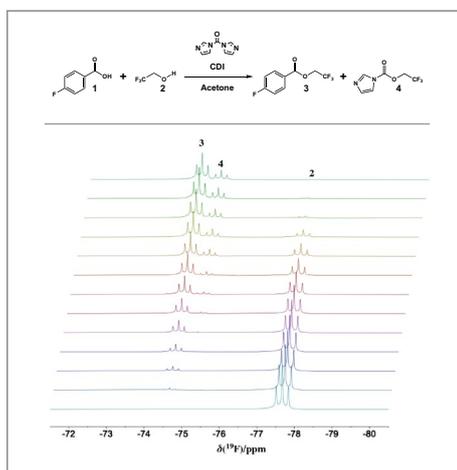
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Nanalysis Benchtop NMR

Optional Software Packages

Every benchtop NMR comes with NMR software to allow easy and modifiable spectral acquisition and processing. However, there are a number of optional software modules that can be added:

- » **NMRReady-CONNECT** – an application programmatic interface to allow users to communicate with their spectrometer programmatically
- » **Experiment Designer** – advanced module allowing expert users to design and/or modify their own NMR pulse programs
- » **Queuing** – allows users to run a series of experiments on the same tube in succession
- » **Kinetics** – allows users to run multiple scheduled 1D NMR experiments and track reaction progress over a set period of time
- » **Installation Qualification/Operational Qualification (IQ/OQ)** – helps user understand and qualify their benchtop NMR spectrometer over time to help with regulatory and GxP compliance
- » **Remote Access** – for those that want to control their spectrometer externally



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Reaction Monitoring NMRReady-flow cell kit

The NMRReady-flow cell kit allows easy interconversion of any Nanalysis-60 benchtop spectrometer into an NMR online detector either as a stand-alone tool or in conjunction with other analytical techniques.

For more information, check out nanalysis.com/nmready-flow

NMRReady-flow allows users to:

- » Understand and optimize chemical reactions in real time
- » Improve reaction yield and safety
- » Automate repeated syntheses
- » Integrate the 60 MHz benchtop NMR spectrometer in a centralized Laboratory System

If you would like further information about any of the featured accessories, please contact

sales@gpescientific.co.uk

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“The fact that the NMRReady-60 leaves a very small footprint, and is portable, is an incredible asset. We can use it in whichever lab we need it in. If we develop new experiments in a different course that needs the instrument we can transport it to that lab and we can set it up basically where we need to.”

Nicholas Oakley, Chem Technician
Department of Chemistry, University of Calgary
Academic Teaching

“Purchasing an instrument is often a complex interplay of multiple criteria, including cost, quality, ease of use, and maintenance. For Southwestern College, the NMRReady-60e was the perfect match for our criteria, and we have no regrets about our choice.”

Dr. Michael Tessmer, Professor
Department of Chemistry, Southwestern College
Academic Teaching

“Our Benchtop NMR 60 works just as great now as it did 4 years ago when it was purchased. Its compact size makes it easy to accommodate in a teaching lab and the experiments are so easy to run. This instrument is a valuable tool for our small liberal arts students to learn from and we couldn't be happier with it!”

Dr. Teather Sundstrom, Assistant Professor
Department of Science, Valley City State University
Academic Teaching

“Nanalysis has gone out of its way to aid us technically, without question, the best manufacturer support for our analytical equipment.”

Dave Horton
Chief Technology Officer, CES Energy Solutions
Chemical Processing

“It is great to add benchtop NMR to our characterization toolbox. The instrument has saved us time and money, and has allowed us to view structural information more quickly.”

Dr. Ng Chee Mang, Managing Director
Penchem Technologies Sdn Bhd
Polymers/Materials

“Our catalogue contains more than 10000 complex organic molecules. Spirochem specializes in the design, synthesis and production of novel building blocks to accelerate drug discovery. Despite open and unrestricted access to high-field NMR, we knew we could increase our productivity and maximize our workflow through the incorporation of benchtop NMR directly in the lab. We still use high-field NMR, of course, but our use is down as much as 80% meaning that we are saving both money AND time by using the benchtop NMR. Nanalysis™ has made an extremely positive impact on my business”

Dr. Thomas Fessard
Chief Executive Officer, SpiroChem
Contract Research Organization (CRO)

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