# nanalysis™

## 100
### Benchtop NMR

# Nanalysis-100

**Market-leading benchtop NMR resolution and sensitivity**

POWERED BY CAM4

SEE THE DIFFERENCE.

# Nanalysis-100

- The highest field strength available on the bench
- Easy-to-site and low-maintenance
- Customize the use to be as manual or automated as you need for your data acquisition - whether it be research or QA/QC
- Advanced features such as phase-sensitive experiments, and pulsed field gradients

**Quick and Easy-to-use**

Configure
Acquire
Analyze

> Simple operation
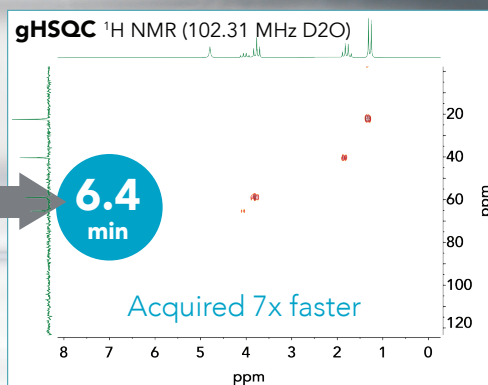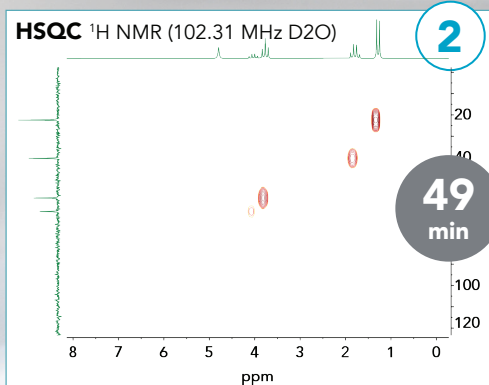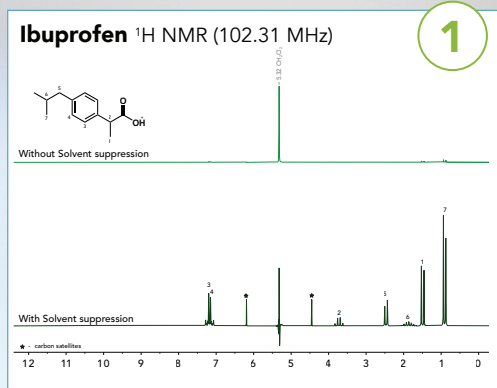> Accurate, precise, repeatable
> Quick data collection

# Pulsed Field Gradients (PFGs)

**(1)** **Enhance solvent suppression routines**
Solvent suppression routines are used to suppress strong signals, typically solvent, in the spectrum. Gradient-based approaches, such as WET, often yield a higher-quality suppression signal.

**(2)** **Speed up 2D NMR data acquisition**
The advantage of using gradient-based pulse programs to acquire your 2D NMR spectra is that data can typically be acquired faster and with fewer artifacts than conventional sequences.



**Ibuprofen** $^1$H NMR (102.31 MHz)

Without Solvent suppression

With Solvent suppression

★ – carbon satellites

**HSQC** $^1$H NMR (102.31 MHz D2O)

**gHSQC** $^1$H NMR (102.31 MHz D2O)

49 min → 6.4 min

Acquired 7x faster

**Example gradient sequences available:** WET, 1D-CPMG-filter-WET, gCOSY, gTOCSY, gHSQC, gHSQC-ME, gHMQC, gHMBC

# Optional Advanced Software Add-ons

**Are you looking for a software package to optimize your analysis?**
**Some examples of optional modules to aid your analysis:**

**Kinetics** – Automatically run scheduled 1D experiments over a set period of time (e.g., reaction monitoring).

**Queuing** – Set up multiple experiments to be run automatically with or without an autosampler.

**Solvent Suppression** – A number of optional pulse programs to optimize the suppression of a strong signal (often solvent).

**Proton Lock** – To allow the user to acquire data without deuterated solvent.

**Experiment Designer** – Advanced module allowing expert users to design and/or modify their own NMR pulse sequences.

**API Access** – An application programmatic interface to allow users to create their own applications to interface with the benchtop NMR.

**IQ/OQ** – Installation Qualification/Operational Qualification to help ensure your instrument is working well and compliant with GxP and regulatory requirements.

**qNMR software module**
An automated, easy-to-use software module to allow you to create and edit method to automate routine assays and allow technicians to collect quantitative data effortlessly.

# Technical Specifications

**Operating Frequency**
100 MHz (2.35 T)

**Magnet**
Permanent, no cryogens

**User Interface**
Built-in touchscreen and optional remote access. Connectable to external computer if desired.

**Nuclei**
$^1$H/$^{19}$F, $^1$H/$^{19}$F/$^{13}$C, $^1$H/$^{19}$F/$^7$Li, $^1$H/$^{19}$F/$^{31}$P
Please inquire about custom options

**Lock**
Internal $^2$H or $^1$H

**Sample**
Standard 5 mm NMR tubes

**Compatibility**
File: JCAMP-DX, and CSV.
Software: Mnova, ACD/Labs, Delta, TopSpin, MATLAB, Spinit, NMRFx, etc.

**Resolution**
LW (50%): < 0.5 Hz (0.005 ppm)
LW (0.11%): < 20 Hz (0.2 ppm)

**Sensitivity**
> 220:1 dual, > 250:1 single

**Stray Field**
< 2 Gauss line outside the enclosure

**Operating Temperature**
18 – 26 °C

**Power Supply**
100 – 240 VAC, 50 – 60 Hz

**Connectivity**
Ethernet/WiFi, USB, Serial, HDMI

**Dimensions with screen (w x h x d)**
17 x 15.25 x 32"
43.2 x 38.74 x 81.28 cm

**Screen size and resolution**
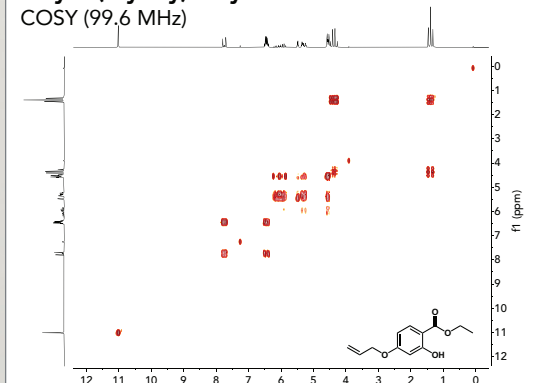15.6", 16:9, 1920 x 1080

**Weight**
243 lbs /110 kg

## Example Experiments Available

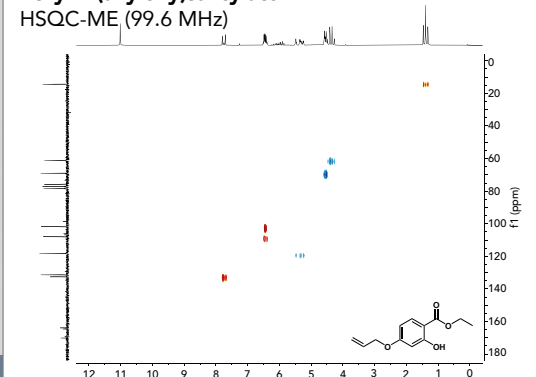| | |
|---|---|
| 1D | HSQC |
| 1D{$^1$H} | HSQC-ME |
| COSY | HMBC |
| TOCSY | NOESY |
| JRES | ROESY |
| $T_1$ | PRESAT |
| $T_2$ | NOESY-PRESAT |
| DEPT | DANTE |
| APT | WET |
| HETCOR | Nutation |

Default experiments are bolded

**Ethyl 4-(allyloxy)salicylate**
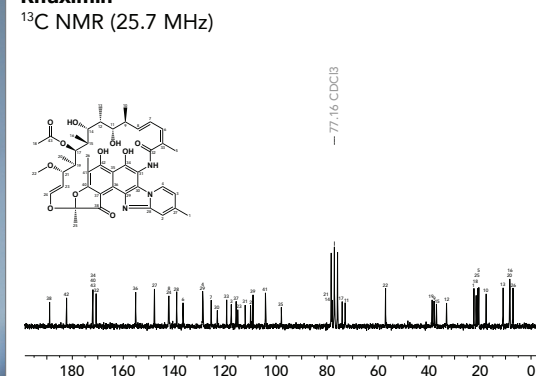COSY (99.6 MHz)

**Ethyl 4-(allyloxy)salicylate**
HSQC-ME (99.6 MHz)

**Rifaximin**
$^{13}$C NMR (25.7 MHz)

### Simple Reaction Monitoring
# Flow Kit

The flow kit allows easy interconversion of any Nanalysis-100 benchtop NMR spectrometer into an online detector either as a stand-alone tool or in conjunction with other analytical techniques.

* Specifications are subject to change without notice

# Connectivity

Ethernet | WiFi | USB | Serial | HDMI

## Quick Access
In addition to USB, ethernet, and WiFi connections in the rear; quick access USB ports and the power button are located at front

## Innovative Magnet Design
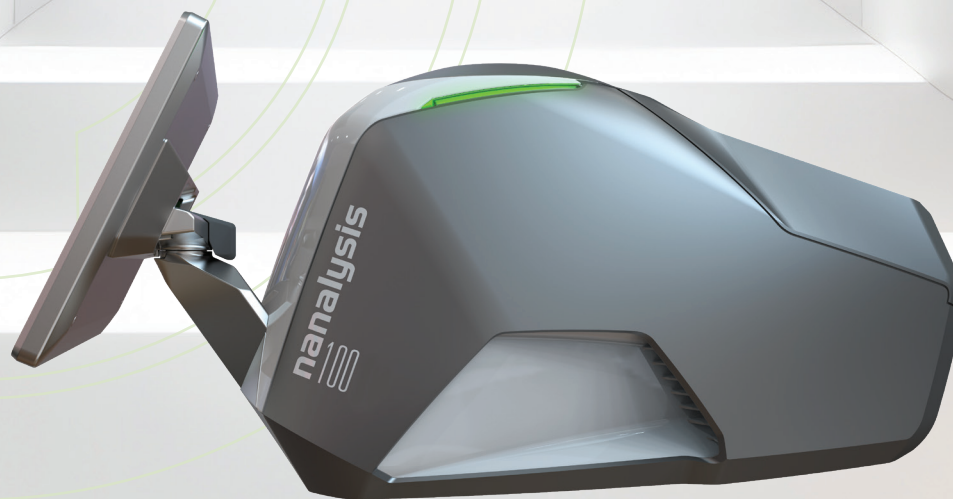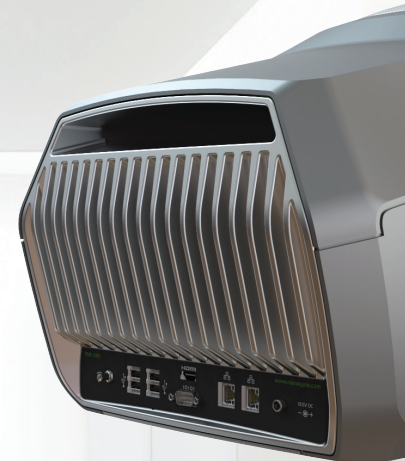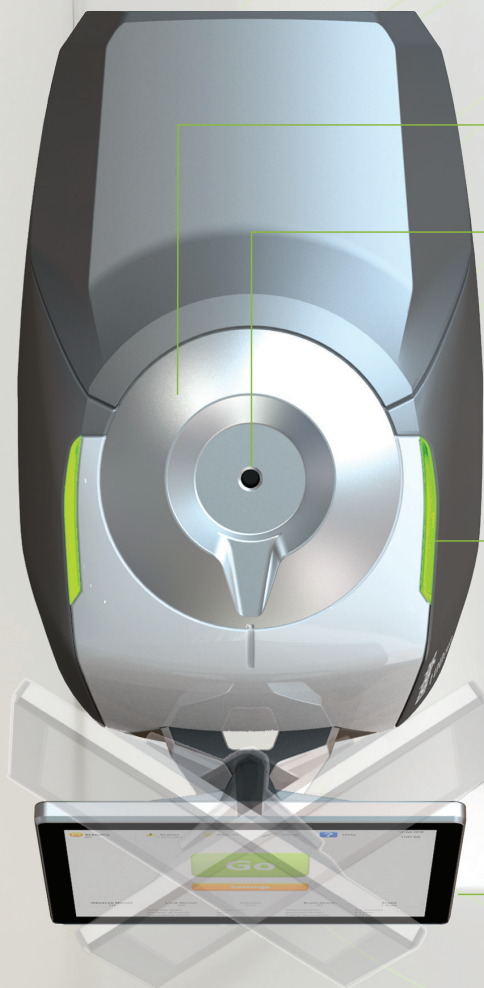Highest field strength available

## Sample Access Port
5 mm NMR tubes

## Progress Indicator
Light to help you monitor the status of your instrument from anywhere within the lab

## Ergonomic Display
State-of-the-art, external customizable screen for easy data acquisition and processing

Ethernet
Wi-Fi → Local Network Internet

- Shared Folder
- Network Printing
- Remote Control
- Live Help
- Monitoring
- Updates

**sales@nanalysis.com**

### Superior Resolution

The highest field on the market, the Nanalysis-100 allows you to extract more information from your spectrum with better peak dispersion and resolution.

### Rapid Results

Discover how high-performance benchtop NMR located directly in your lab can improve your productivity!

### Low Maintenance

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

### Easy-to-Use

The instrument facilitates quick data collection and processing at any level, with an ergonomic display and an easy-to-use software interface.

### Configurable

Advanced graphical pulse programming capabilities, the 100 MHz spectrometer allows the user to run experiments exactly as they want.

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