nanalysis™

Benchtop NMR

100 MHz

60 MHz
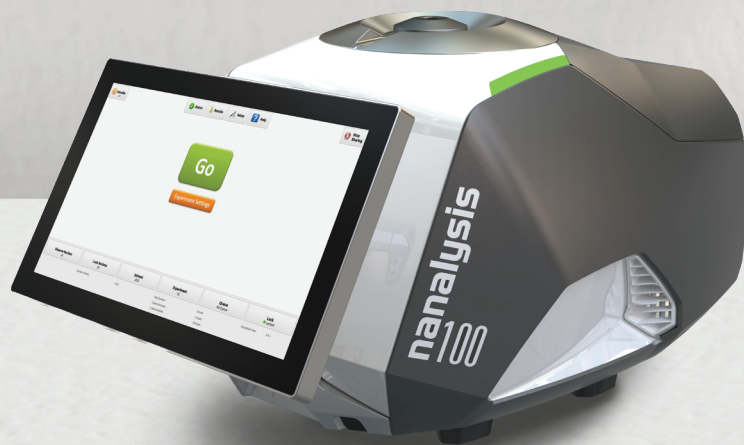
Nanalysis-100

Nanalysis-60

Technical Specifications

	Nanalysis-60	Nanalysis-100
Operating Frequency	60 MHz (1.40 T)	100 MHz (2.35 T)
Resolution LW (50%) LW (0.55%)	< 0.5 Hz (< 0.008 ppm) < 10 Hz (< 0.17 ppm)	< 0.5 Hz (< 0.005 ppm) < 10 Hz (< 0.10 ppm)
Sensitivity 1% Ethylbenzene, 1 scan	> 180:1 single channel > 130:1 dual channel	> 250:1 single channel > 220:1 dual channel
Dimensions with screen w x h x d	13 x 12.25 x 23.75" 33.02 x 31.1 x 60.3 cm	17 x 15.25 x 32" 43.2 x 38.74 x 81.28 cm
Screen size and resolution	13.3", 16:9, 1920 x 1080	15.6", 16:9, 1920 x 1080
Weight	96.5 lbs / 43.8 kg	243 lbs / 110 kg
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 ^{1}H and ^{2}H options	
Sample	Standard 5 mm NMR tubes, optional flow cell	
Compatibility	File: JCAMP-DX, and CSV Software: Mnova, ACD/Labs, Delta, TopSpin, MATLAB, Spinit, NMRFx, etc.	
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	

* Specifications are subject to change without notice

Optional Software Add-ons

qNMR module – An automated, easy-to-use software module that lets you create and edit methods to automate routine assays and allows technicians to collect quantitative data effortlessly.

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

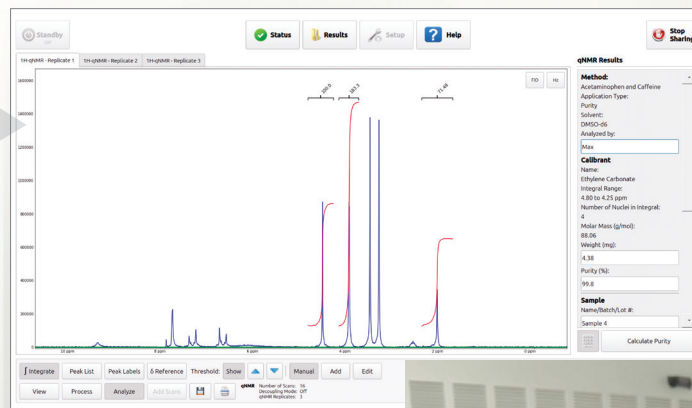**Proton Lock** – Allow the user to acquire data without deuterated solvent.

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).

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.
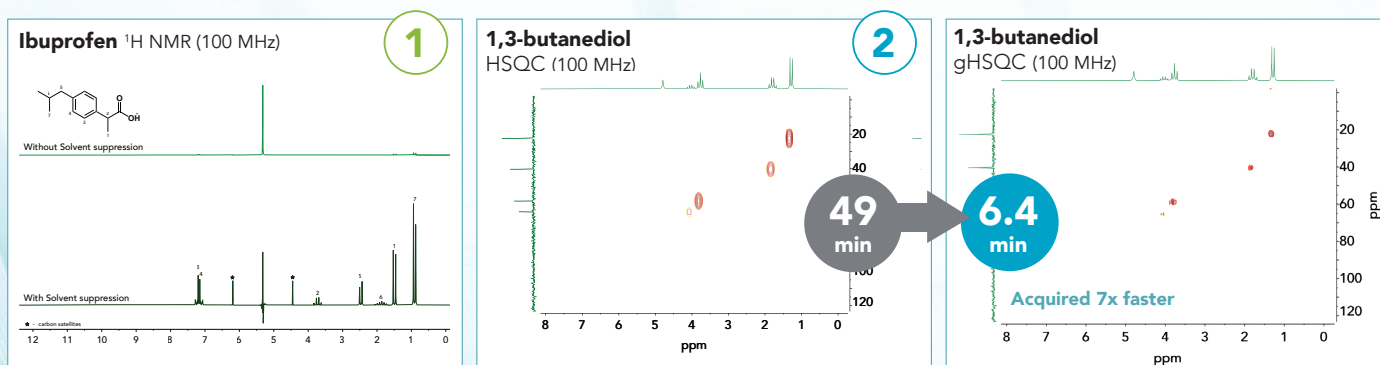
Pulsed Field Gradients (PFGs)

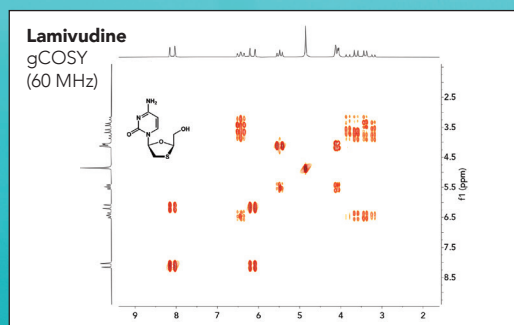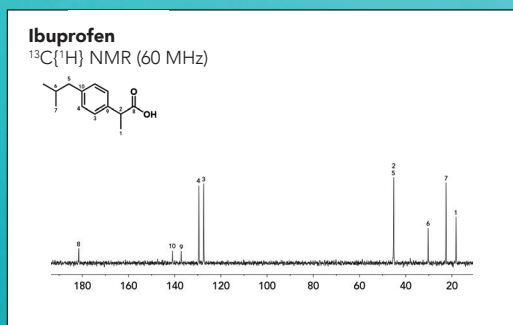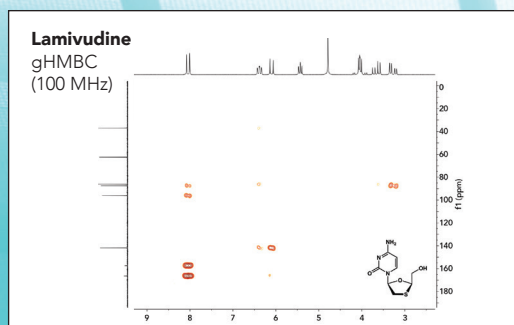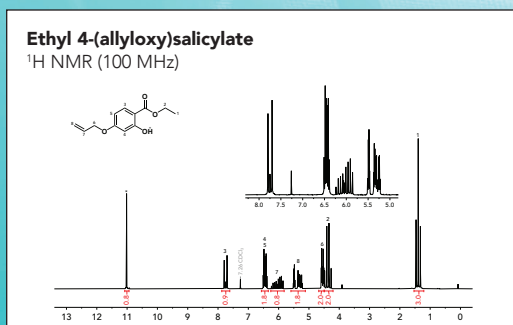**1** **Enhance solvent suppression routines** — Solvent suppression routines are used to suppress strong signals, typically the solvent in the spectrum. Gradient-based approaches, such as WET, often yield a higher-quality suppression signal.

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 (100 MHz) **①**

Without Solvent suppression

With Solvent suppression

* = carbon satellites

1,3-butanediol HSQC (100 MHz) **②**

49 min → **6.4 min**

1,3-butanediol gHSQC (100 MHz)

Acquired 7x faster

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

Ethyl 4-(allyloxy)salicylate ^{1}H NMR (100 MHz)

Lamivudine gHMBC (100 MHz)

Ibuprofen ^{13}C{^{1}H} NMR (60 MHz)

Lamivudine gCOSY (60 MHz)

Example Experiments Available

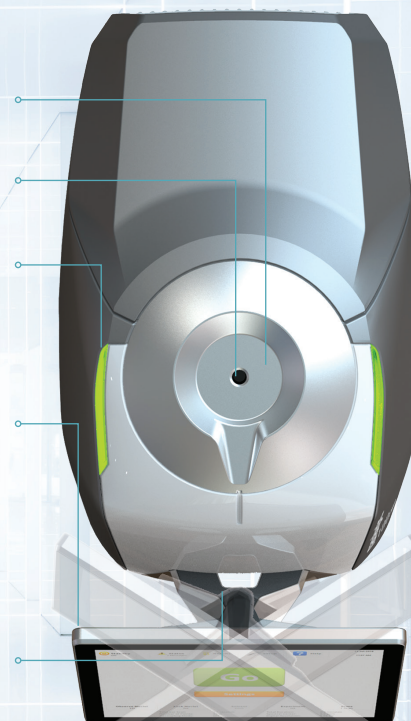|	
1D	**HSQC**
1D{^{1}H}	**HSQC-ME**
COSY	**HMBC**
TOCSY	**Nutation**
JRES	NOESY
T_1	ROESY
T_2	PRESAT
DEPT	NOESY-PRESAT
APT	DANTE
HETCOR	WET

Default experiments are bolded
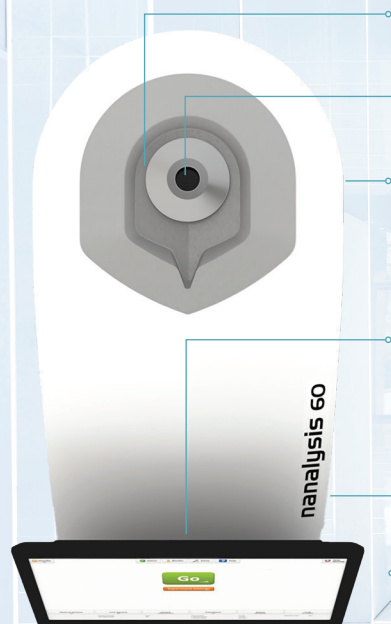
Innovative Magnet Design

Sample Access Port
5 mm NMR tubes

Progress Indicator
Color changing 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. The Nanalysis-100 can be tilted up and down and side to side, and the Nanalysis-60 can be tilted up and down.

Easy Access Connectivity
For Nanalysis-100, in addition to USB, ethernet, and WiFi, etc. connections in the rear, USB ports and the power button are located at the front. For the Nanalysis-60 the entire connectivity panel is located near the front on the side of the instrument.

Nanalysis-60

Nanalysis-100

WiFi · USB · HDMI

Ethernet
Wi-Fi

Local Network
Internet

Shared Folder
Network Printing
Remote Control
Live Help
Monitoring
Updates

Accessories

AUTOsample

These top mounting autosamplers can easily be added to your Nanalysis-60 or Nanalysis-100 to allow rapid interconversion between manual and automatic sampling modes without requiring additional space on the bench. It comes with 2 carousels, each with a 25-tube capacity. With simple setup and calibration and onboard queuing software, the user can easily assign experiments to each tube and acquire data automatically.
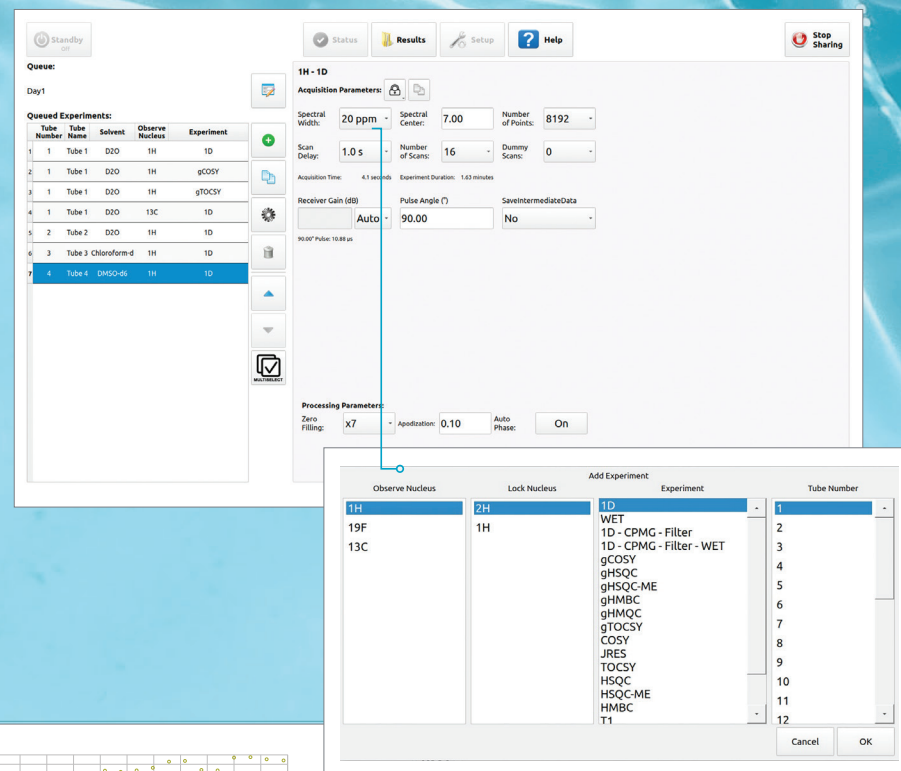
Flow Kit
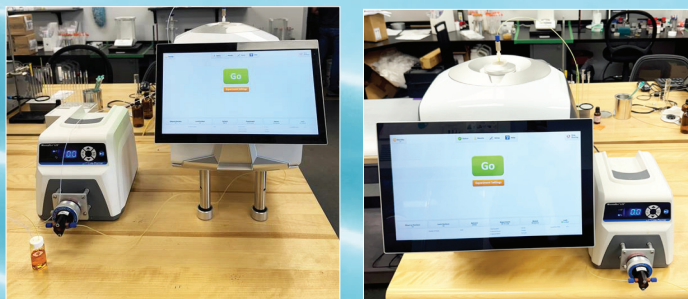
This flow cell kit allows easy interconversion of the Nanalysis-60 or Nanalysis-100 benchtop spectrometer into an NMR online detector either as a stand-alone tool or in conjunction with other analytical techniques.

Contact us at sales@nanalysis.com