

# GABI NOVA

## RADIO FLOW MONITOR FOR SPECT AND PET

THE BEST CHOICE FOR ISOTOPE  
DETECTION AND FLOW ANALYSIS.

- LARGE DYNAMIC RANGE
- HIGH COUNT RATE
- BEST SENSITIVITY
- GMP / GLP / CFR PART 11  
COMPLIANT



The GABI Nova is a versatile state-of-the-art radio flow monitor. A large range of detector probes allow the measurement of nearly every isotope, ensuring the GABI Nova is ideally suited for radio flow measurements in nuclear medicine, SPECT or PET laboratories.

Multiple flow cells for different volumes in conjunction with different probes enable the system to be configured for all types of activities and energy ranges. The right combination will ensure best detection capabilities and the best signal to noise ratio for each application.

Flow monitoring of radiolabelled compounds separated by chromatographic techniques has been established as one of the most powerful tools in many medical chemistry related areas. The GABI Nova represents the latest enhancement in flow detectors for Radio HPLC. Different cell sizes can be used to adapt for flow rates and signal intensities.



## Models

The GABI Nova has been developed to ensure a large versatility and the best possible integration into your radio-HPLC system. To optimise lab space we propose 3 different housings. The general housing is build to carry the entire lead castle and is placed directly under the lead shielding. Two other housings have been designed to incorporate the GABI Nova housing directly into the Agilent or the Shimadzu HPLC tower.

## Detectors

The type of activity, the amount of activity and the flow rate depend on your application and will set the physical limit of the measurement. To get the best possible performance for all type of activities and isotopes, it is mandatory to adjust the detector setup to your application.

We have a complete line of new-generation probes, using different scintillator materials, well-established PMT tubes as well as totally new digital detection technologies. The right combination of detector, scintillator, cell volume and shielding allow the best detection for each application.

With the GABI Nova we have introduced the Elysia Communication Protocol (ECP), a completely new communication protocol with a new type of connector. Simply change the detector/probe and the system will recognize the type and the serial number of your detector. This will give you perfect documentation of your setup and enhance your GxP tools.

The new connection and communication protocol provides even more versatility, it allows you to exchange probes with all other measuring instruments like the TLC or the multichannel analyser using the ECP (Elysia Communication Protocol). The new ECP also allow advanced control and diagnostic of your probes to ensure a better performance and enable remote diagnostics.

Model	Energy range	Application	Shielding	Probe
Mid Energy	60-600 keV	Analytical HPLC	5 cm	2x2" NaI-PMT
High Energy	60-1300 keV	Analytical HPLC	5 cm	3x3" NaI-PMT
PET Standard	for PET	Analytical HPLC	Yes	Non-crystal scintillator - PMT - Digital detector
Prep Probe	60-600 keV	Preparative HPLC	Yes	Mini crystal - Digital detector
PET Prep	For PET	Preparative HPLC	No	Non-Crystal scintillator - 2D Digital detector



## Software

Direct control with our software ensures digital signal transfer and a complete integrated solution according to GMP/GLP standards.

The can be controlled by our well known GINA software as well as by the Clarity software. Both evaluation software give full control of the GABI Nova, digital transfer and data storage as well as the possibility to control the entire HPLC.

The GABI Nova can also be added as a standalone system to existing radio-HPLC systems in combination with software packages from other suppliers.

A background subtraction, a half-life-time correction and a dead time correction are foreseen and can even be used with the standalone version.

### GINA X



### Monitoring



### GABI Control



### Integration



## GABI Nova mid energy probe extended lead shielding

Ref: 08005025

Available for high energy on request.

### Description:

The extended lead castle for the GABINOVA mid energy probe is made of 7 lead rings that surround completely the detector. In this extended version the detector head is protected by a lead cap to block the emission coming from above the detector. This lead shielding is useful in laboratory where the ambient radioactivity is especially high by example in hospital where the QC laboratory is close to patient injection room. The inferior lead ring is specially designed with specific openings and cell seat to install the Elysia-Raytest GABI NOVA flow cell. In the inferior part of the shielding where the scintillator is located, 6 cm of leads surround the detector while in the superior part which is less critical we have 3 m of lead protection.



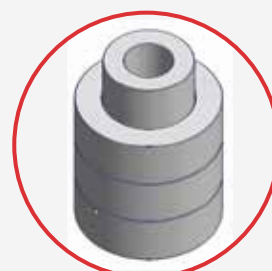
## GABI NOVA standard lead shielding

Ref 08005020 for mid energy probe

Ref 08005010 for high energy probe

### Description:

The standard lead castle is made of 4 painted lead rings of 5 cm width. It allows to reach background inferior to 10 CPS in standard laboratories. As the lead castle is made of rings, it is easy to move or adapt.



## Technical Specifications

2 simultaneous counting channels

Spectrum scan

Energy range

10 – 2000 keV

Detector voltage range

500 – 1200 V (0,5V setting precision)

Count rate

0 – 2.500.000 cps

Linearity

0 – 1.000.000 cps  $r^2 \geq 0.99$

Data output

USB2.0

10/100 Ethernet

2 analog outputs (0-2.5V, resolution 20 bit)

Digital I/O interface:

3 inputs

5 relays outputs (500mA, 200V)

Flow cells

5 $\mu$ l to 1500 $\mu$ l



## Physical Specifications

### Dimensions

Stand-alone

L278 x W266 x H84 mm

For Agilent

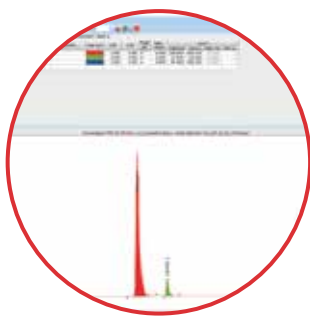
L440 x W325 x 84 mm

For Shimadzu

L420 x W260 x 84 mm

### Detector

264 mm (standing height) x 74 mm (diameter)



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