

Synthra RNplus Research (Catalog No. 004r)

Synthra RNplus Research is a flexible and completely automated radio synthesis system for routine production of wide variety of [^{18}F]fluorine labeled compounds by nucleophilic substitution, with automated sequences for compounds like [^{18}F]F-DOPA, [^{18}F]FDG, [^{18}F]FLT, [^{18}F]FHBG, [^{18}F]FDDNP, [^{18}F]MISO, [^{18}F]FAZA and [^{18}F]Fluorocholine. As the bigger sibling, this module offers additional HPLC and SPE units and overall greater versatility for the production of your desired [^{18}F]tracer. For any other [^{18}F]labeled customer compounds an automated sequence will be generated. With the easy-to-use configuration software SynthraView, the Synthra RNplus Research module offers both, fully automatic and manual modes of operation

[^{18}F]Labeling Possibilities

- ✓ Synthesis of [^{18}F]F-DOPA, [^{18}F]FDG, [^{18}F]FLT, [^{18}F]FHBG, [^{18}F]FDDNP, [^{18}F]MISO, [^{18}F]FAZA, [^{18}F]Fluorocholine and others
- ✓ The synthesis unit includes all components needed for preparation, purification and formulation of [^{18}F]fluorine labeled compounds.
- ✓ Simple creation of user-defined synthesis methods
- ✓ Uses a dedicated sub system for the **recovery and collection of [^{18}O]H $_2$ O** for the purification of the cyclotron produced [^{18}F]fluoride.
- ✓ The target activity is measured with a separated detector.

General Features

- ✓ **Heating and Cooling Capabilities**
 - 3 heating zones with cooling capabilities
 - Temperature range: -50 °C – 250 °C
- ✓ **Detectors and Controllers**
 - 5 shielded radiation detectors
 - 3 Pressure sensors + 1 filter test unit
- ✓ Built-in **Radio-HPLC** with quaternary gradient pump, fixed wavelength LED detector with 254 nm or 280 nm, column switching valve, two HPLC columns and two solid phase extraction (SPE)
- ✓ **Dispensers and Valves**
 - HR-dispenser (up to 50.000 steps, 5 mL) for transfer to the HPLC injection valve
 - 3 spare valves for customization
 - Chemically inert valves with small dead volume < 35 μL , 5 bar rated



- ✓ **Liquid nitrogen trap** for radioactive volatiles and to protect built-in vacuum pump
- ✓ **Self-Cleaning System**

Synthesis Features

- ✓ Two glassy carbon **reaction vessels** (one is 5ml, conic shape and the other 11 ml) and one **column oven** for a solid support reaction zone, allowing multiple step (homogenous and heterogeneous) synthesis reactions
- ✓ **16 reagent vials**
 - Eight small (1 – 3 mL) and eight large (10 – 15 mL) volume glass vials for reagents
- ✓ **8 Cartridge holders** for in-process purification
- ✓ **SPE Unit** for final product formulation
- ✓ **Further Option:**
 - ➔ Product vial heater option (Catalog No. 000ph)
 - ➔ Mass flow controller option (Catalog No. 004mfc)
 - ➔ Variable wavelength UV Detector option (Catalog No. 000vuv)

Synthra C-11 Family

Product Description and Technical Specifications

synthra

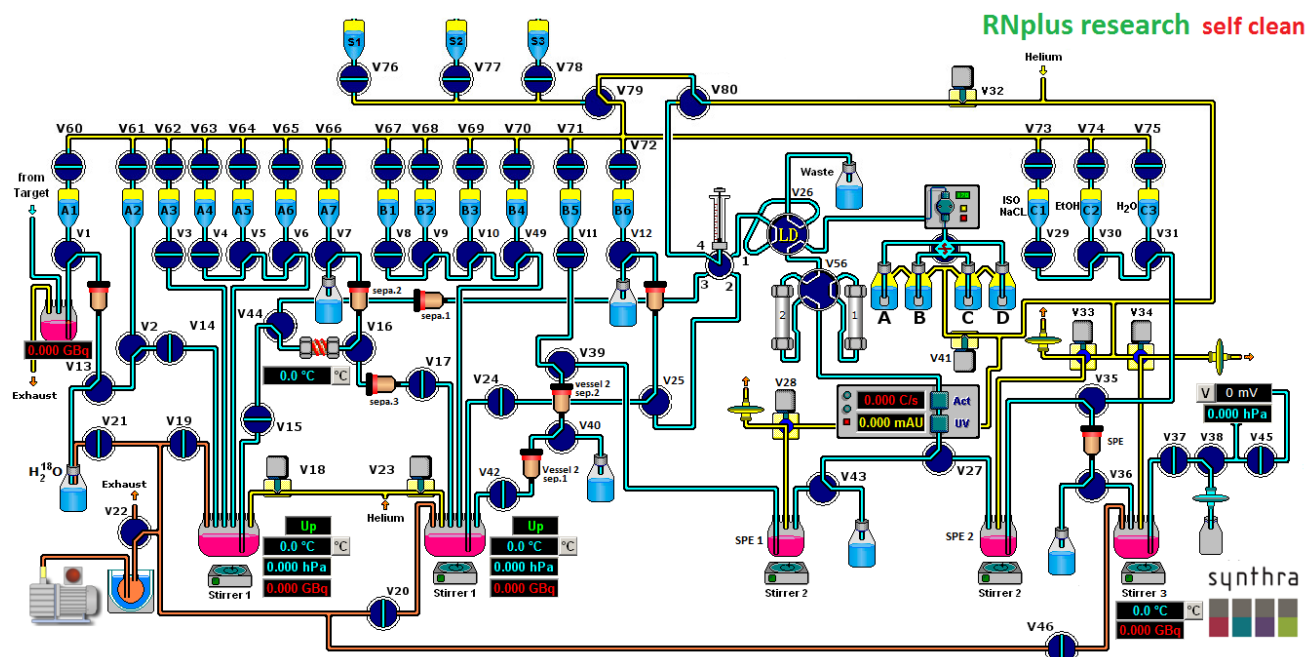


GMP Features

- ✓ Synthesis files for various tracers
- ✓ **GMP compliant.** Electronic control and data collection (27/18 channels)
- ✓ **21CFRpart11** & **LIMS** compatible

Terminal Control

- ✓ **A Laptop (Win 10 Pro) and SynthraView are included**



The Graphical User Interface (GUI) of the SynthraView software