

Synthra RNplus (Catalog No. 004)

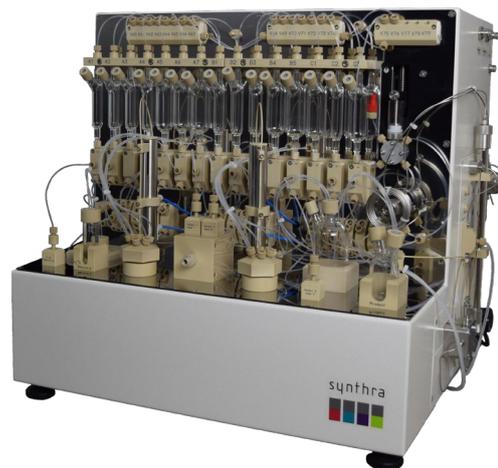
Synthra RNplus is a flexible and completely automated radio synthesis system for routine production of wide variety of [^{18}F]fluorine labeled compounds by nucleophilic substitution with an automated sequence created for any compound. Automating the synthesis is simple, with the easy-to-use configuration software SynthraView, the Synthra RNplus module offers both fully automatic and manual modes of operation.

[^{18}F] Labeling Possibilities

- ✓ Synthesis of [^{18}F]-labeled compounds like **F-DOPA, FDG, FLT, NaF, FET, FHBG, PSMA 1007, MISO, FAZA, FES and Fluorocholine**
- ✓ Simple creation of user-defined synthesis methods
- ✓ Uses a dedicated sub-system for the **recovery and collection of [^{18}O]H $_2$ O**.
- ✓ The target activity is measured with a separate detector.

General Features

- ✓ **Heating and cooling capabilities**
 - Three heating zones with cooling capabilities
 - Temperature range: -50 °C – 200 °C
- ✓ **Detectors and controllers**
 - Five shielded radiation detectors
 - Three pressure sensors
- ✓ **Build-in vacuum pump** (< 5 mbar)
- ✓ **Liquid nitrogen trap** for protecting the vacuum pump from radioactive volatiles
- ✓ **Built-in preparative radio/UV-HPLC system** with isocratic pump, fixed wavelength LED detector with 255 nm or 280 nm, HPLC column and one solid phase extraction (SPE)
- ✓ **Dispensers and valves**
 - High-resolution dispenser (up to 24.000 steps, 5 mL)
 - Pneumatic injection valve for HPLC (3 mL sample loop)
 - Three spare valves for customization
 - Chemically inert valves with small dead volume < 35 μL , 5 bar rated



- ✓ **Self-Cleaning System**
- ✓ **Dimensions** (w x d x h): 52 x 50 x 48 cm
- ✓ **Weight**: approx. 35 kg

Synthesis Features

- ✓ Two glassy carbon **reaction vessels** (7 ml, conical shape and 11 ml, cylindrical shape) and one **column oven** for a solid support reaction zone, enabling multistep (homogenous and heterogeneous) synthesis reactions
- ✓ **15 reagent vials**
 - Seven small (1 - 3 mL) and eight large (10 - 15 mL) volume glass vials for reagents
- ✓ **Five cartridge holders** for in-process purification
- ✓ **SPE unit** for final product formulation

Additional Synthesis Options

- ➔ **Product solvent evaporator**
(Catalog No. 000pse)
- ➔ **Variable wavelength UV detector**
(Catalog No. 000vuv)
- ➔ **Quaternary gradient HPLC pump**
(Catalog No. 000qgp)

Synthra F-18 Family

Product Description and Technical Specifications

synthra

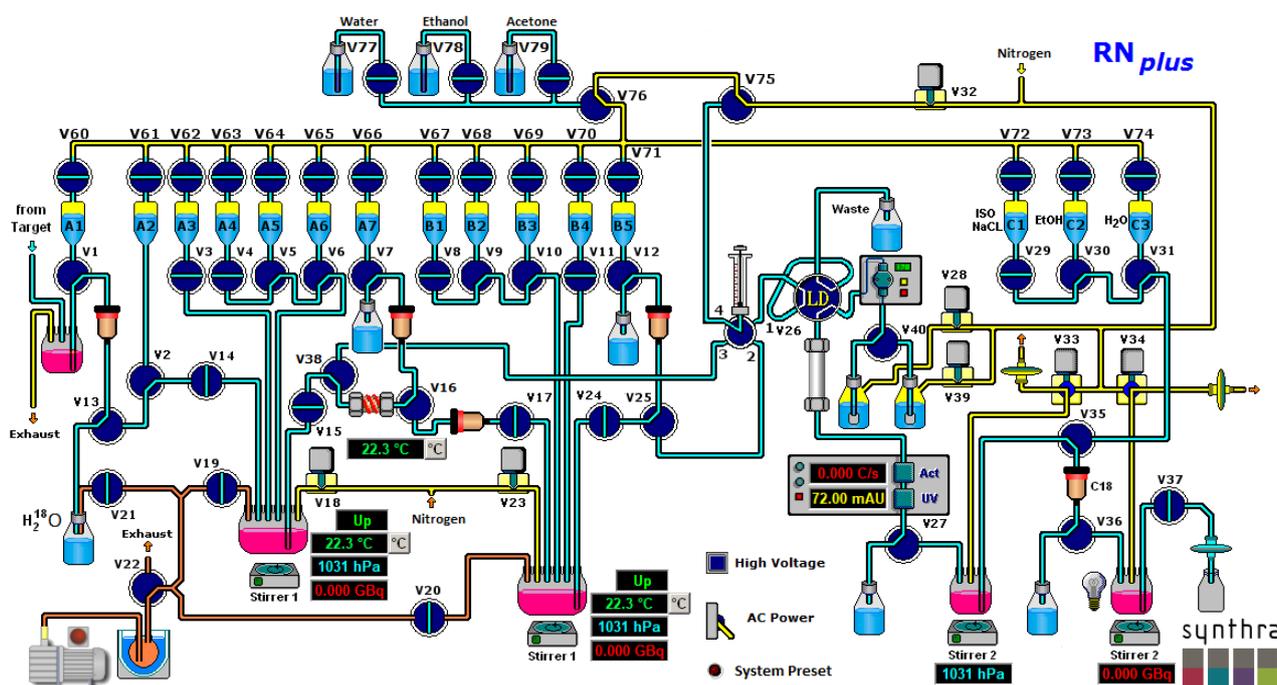


GMP Features

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

Terminal Control

- ✓ A laptop (Win 11 Pro) with preinstalled controlling software SynthraView is included
- ✓ Four Digital inputs for communication with external devices upon request



Exemplary Graphical User Interface (GUI) of the SynthraView software.