

Synthra F-DOPA (Catalog No. 002)

Synthra F-DOPA is a flexible and completely automated radio synthesis system for routine production of 6- ^{18}F fluoro-L-Dopa and a variety of Fluorine-18 labeled compounds by electrophilic fluorination. Automating the synthesis is simple with the easy-to-use configuration software SynthraView. The Synthra F-DOPA module offers both, fully automatic and manual modes of operation.

^{18}F Labeling Possibilities

- ✓ **Synthesis of ^{18}F F-DOPA**
 - Two synthesis reaction vessels allowing trapping of the ^{18}F F₂ target gas in separated glass reaction vessel for optimized reaction yields
 - Liquid transfer is performed with two built-in dispensers.
 - Includes a column for an in-process purification step to trap the tin
 - The fluorinated protected F-Dopa is eluted from the silica column with ether into the second reaction vessel. The ether is evaporated and the hydrolysis process performed. After neutralization the reaction mixture is transferred to the injection valve and the F-Dopa product is purified by Radio-HPLC.
- ✓ **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**
- ✓ **The target activity is measured with a separated detector.**

General Features

- ✓ **Heating and Cooling Capabilities**
 - 2 heating zones with cooling capabilities
 - Temperature range: -100 °C – 300 °C
- ✓ **Detectors and Controllers**
 - 4 shielded radiation detectors
 - 3 Pressure sensors + 1 filter test unit
- ✓ **Liquid nitrogen trap** for radioactive volatiles and to protect built-in vacuum pump



- ✓ Built-in **Radio-HPLC** with isocratic gradient pump, fixed wavelength LED detector with 254 nm or 280 nm, one HPLC column and one solid phase extraction (SPE)
- ✓ **Self-Cleaning System**
- ✓ **Automated cleaning program**
- ✓ **Dispensers and Valves**
 - Two HR-dispenser (up to 50.000 steps, 2.5/5 mL) for liquid transfer
 - Chemically inert valves with small dead volume < 35 µL, 5 bar rated

Synthesis Features

- ✓ Two reaction vessels, one glass vial for trapping the fluorine gas and one closed glassy carbon reaction with 11 ml volume (-50 °C – 300 °C), with integrated cooling to reduce synthesis time
- ✓ **6 reagent vials**
 - Three small (1 – 3 mL) and three large (10 – 15 mL) volume glass vials for reagents
- ✓ **Synthesis Options:**
 - ➔ Product Vial Heater Option (Catalog No. 000ph)
 - ➔ Variable wavelength UV Detector option (Catalog No. 000vuv)

Synthra F-18 Family

Product Description and Technical Specifications

synthra

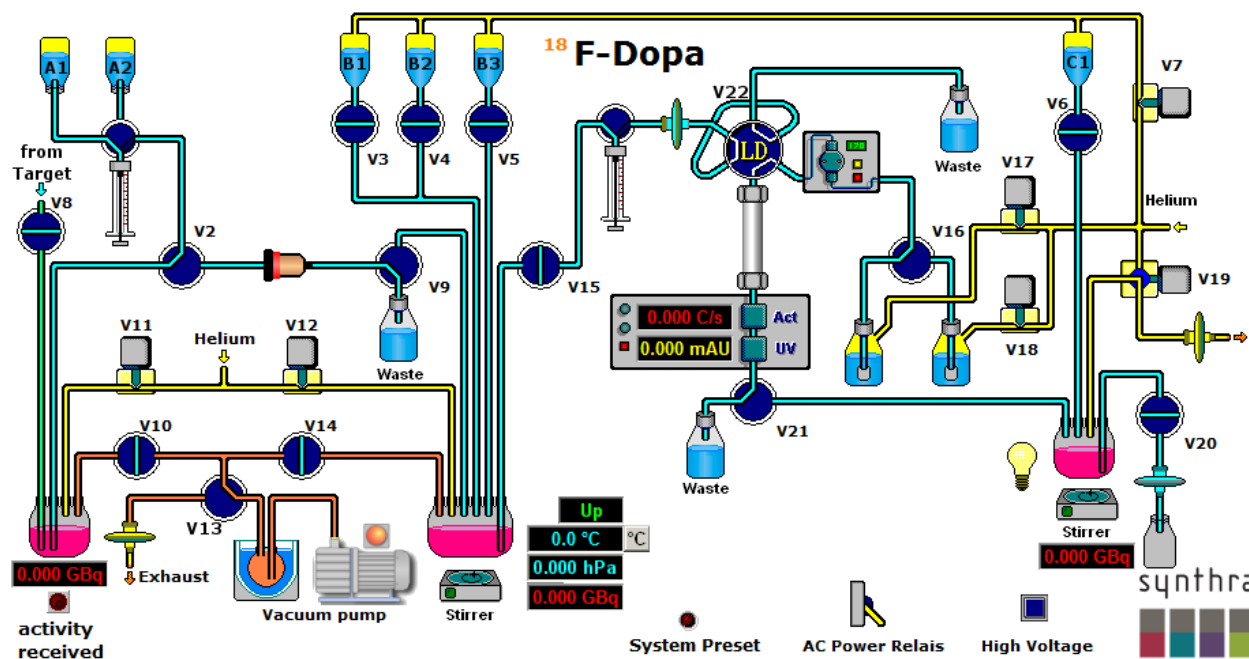


GMP Features

- ✓ Synthesis files for F-DOPA
- ✓ **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