

Synthra MChelateplus (Catalog No. 013p)

Synthra MChelateplus is a flexible and completely automated radio synthesis system for routine production of a wide variety of Metal- ($[^{64}\text{Cu}]$, $[^{89}\text{Zr}]$, $[^{44}\text{Sc}]$, $[^{68}\text{Ga}]$, $[^{86}\text{Y}]$, $[^{177}\text{Lu}]$) labeled compounds e.g. M-DOTA-, M-NOTA-, M-TE2A-, M-TETA-, M-ATSM-, M-PTSM-based radiotracers. Automating the synthesis is simple, with the easy-to-use configuration software SynthraView. The Synthra MChelateplus module offers both, fully automatic and manual modes of operation.

Labeling Possibility Examples

Peptide application: DOTATOC or DOTATATE can be labeled by heating 50 nmol of peptide at pH 3.5 - 4.2 for 5 min at 95 °C. For purification, the reaction mixture is passed over a C-18 cartridge to avoid any potential metal breakthrough.

- **$[^{68}\text{Ga}]$ Labeling:** The automated synthesis takes about 20 minutes with a decay-corrected yield of about 50%.
- **$[^{177}\text{Lu}]$ Labelling:** The automated synthesis takes about 15 minutes with a decay-corrected yield of >70%.

$[^{89}\text{Zr}]$ application: Monoclonal antibodies (mAbs) conjugated with DFO can be labeled fully automated at room temperature in 60 min. The reaction mixture can be purified and desalted using a PD-10 SEC column. The automated synthesis takes about 80 minutes with isolated yield of >70%.

General Features

- ✓ **Heating and Cooling Capabilities**
 - 1 heating zone with cooling capabilities
 - Temperature range: -50 °C – 250 °C
- ✓ **Detectors and Controllers**
 - 4 shielded radiation detectors
 - 2 Pressure sensors + 1 filter test unit
- ✓ **Liquid nitrogen trap** for radioactive volatiles and to protect built-in vacuum pump
- ✓ Built-in **Radio-HPLC** with quaternary gradient pump, fixed wavelength LED detector with 254 nm or 280 nm, HPLC column and one solid phase extraction (SPE)
- ✓ **Self-Cleaning System**



✓ **Dispensers and Valves**

- HR-dispenser (up to 50.000 steps, 2.5/5 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

Synthesis Features

- ✓ **8 reagent vials**
 - Six small (1 – 3 mL) and two large (10 - 15 mL) volume glass vials for reagents
- ✓ **3 Cartridge holders** for in-process purification
- ✓ **SPE Unit** for final product formulation
- ✓ **Synthesis Options:**
 - ➔ Product Vial Heater Option (Catalog No. 000ph)
 - ➔ $[^{18}\text{F}]$ option (Catalog No.013f) with $[^{18}\text{O}]$ water recovery system
 - ➔ Variable wavelength UV Detector option

Synthra Various Radiosynthesizer

Product Description and Technical Specifications

synthra

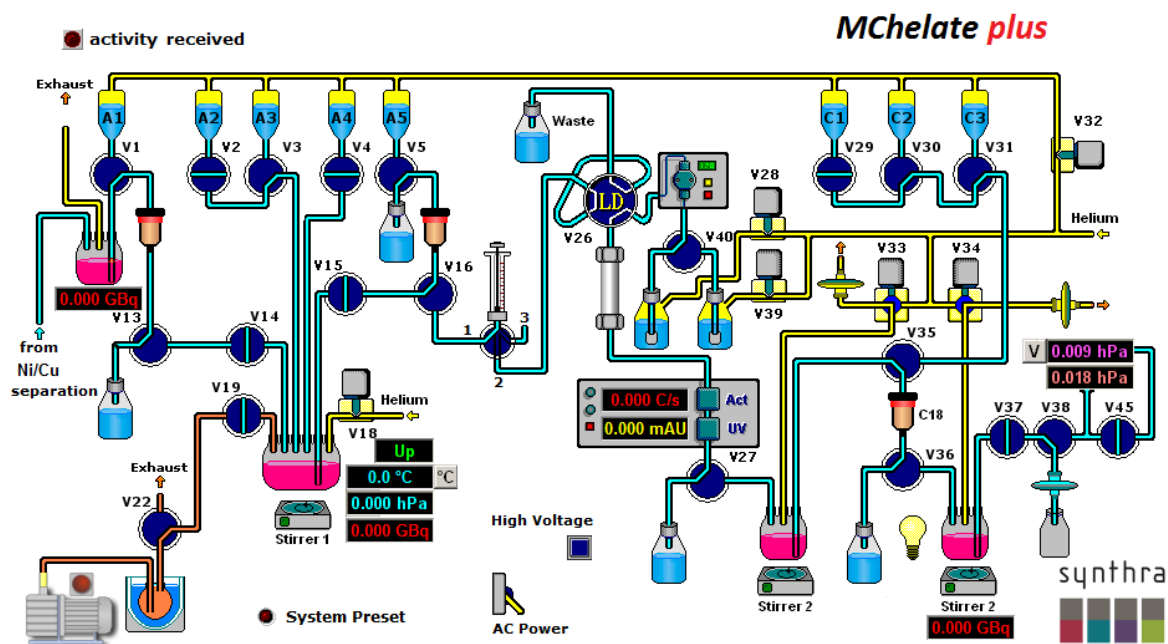


GMP Features

- ✓ 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**



Example of the Graphical User Interface (GUI) of the SynthraView software