



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

$[^{89}\text{Zr}]$ solution 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**
 - One heating zone with cooling capabilities
 - Temperature range: -50 °C – 200 °C
- ✓ **Detectors and controllers**
 - Four shielded radiation detectors
 - Two pressure sensors
- ✓ **Built-in preparative radio/UV-HPLC system,** fixed wavelength LED detector with 255 nm or 280 nm, HPLC column and solid phase extraction (SPE)
- ✓ **Self-cleaning system**
- ✓ **Liquid nitrogen trap** for radioactive volatiles and to protect built-in vacuum pump



✓ **Dispensers and valves**

- HR-dispenser (up to 50.000 steps, 2.5/5 mL)
- HPLC pneumatic injection valve (3 mL sample loop)
- Three spare valves for customization
- Chemically inert valves with small dead volume < 35 μL , 5 bar rated

✓ **Dimensions** (w x d x h): 52 x 50 x 48 cm

✓ **Weight:** approx. 35 kg

Synthesis Features

✓ **Eight reagent vials**

- Six small (1 – 3 mL) and two large (10 – 15 mL) volume glass vials for reagents

✓ **Three cartridge holders** for in-process purification

✓ **SPE unit** for final product formulation

Additional Synthesis options

➔ **Product solvent evaporator**

(Catalog No. 000pse)

➔ **$[^{18}\text{F}]$ option** with $[^{18}\text{O}]$ water recovery system (Catalog No. 013f)

Synthra Various Radiosynthesizer

Product Description and Technical Specifications

synthra



→ Variable wavelength UV detector

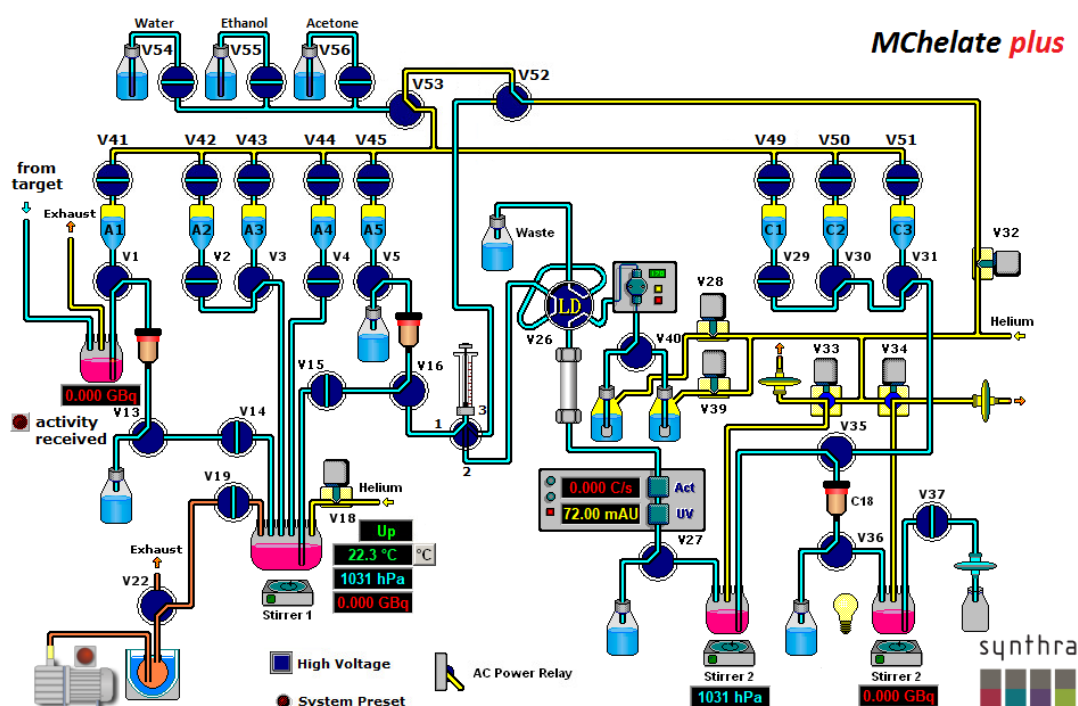
(Catalog No. 000vuv)

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) with preinstalled controlling software SynthraView is included
- ✓ Four digital inputs for communication with external devices upon request



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