## Synthra Various Radiosynthesizers Product Description and Technical Specifications

# Synthra MChelate (Catalog No. 013)

Synthra MChelate is a completely automated synthesis system for routine production of [<sup>68</sup>Ga], [<sup>90</sup>Y], [<sup>177</sup>Lu] and [<sup>89</sup>Zr] labeled peptides. With the easy-to-use configuration software SynthraView it's simple to automate the synthesis. The Synthra MChelate 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.
  - [<sup>68</sup>Ga] Labeling: The automated synthesis takes about 20 minutes with a decay-corrected yield of about 50%.
  - [<sup>177</sup>Lu] Labeling: The automated synthesis takes about 15 minutes with a decay-corrected yield of >70%.
- ✓ [<sup>89</sup>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.

### **General Features**

- Heating and cooling capabilities
  - One heating zone with cooling capabilities
  - Temperature range: RT 200 °C

#### Detectors and controllers

- Two shielded radiation detectors
- One pressure sensor
- ✓ Build-in vacuum pump (< 250 mbar)</p>
- Dispensers and valves
  - HR-dispenser (up to 50.000 steps, 2.5/5 mL)
  - Chemically inert valves with small dead volume < 35  $\mu\text{L},$  5 bar rated
- ✓ Dimensions (w x d x h): 24 × 30 × 35 cm
- ✓ Weight: approx. 15 kg



#### Synthesis Features

- ✓ Six reagent vials
  - Four small (1 3 mL) and two large (10 15 mL) volume glass vials for reagents
- Two cartridge holders
- ✓ SPE unit for final product formulation

#### Additional Synthesis Options

- Product solvent evaporator (Catalog No. 000pse)
- → [<sup>18</sup>F] option with [<sup>18</sup>O]water recovery system (Catalog No. 013f)

#### **GMP** Features

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

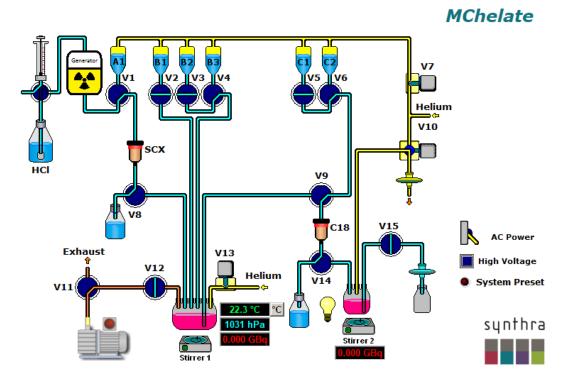
#### **Terminal Control**

- ✓ A laptop (Win 10 Pro) with preinstalled controlling software SynthraView is included
- ✓ Four digital inputs for communication with external devices upon request



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

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