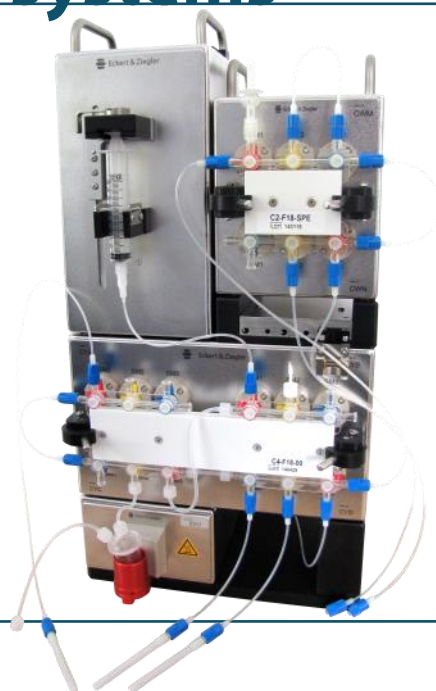


# Overview of available $^{18}\text{F}$ systems

Based on the Modular-Lab technology



The Modular-Lab technology offers a reliable and versatile way for the synthesis of Fluor-18 based tracers.

**We offer synthesis solutions for  $[^{18}\text{F}]\text{FECh}$ ,  $[^{18}\text{F}]\text{FLT}$ ,  $[^{18}\text{F}]\text{FET}$ ,  $[^{18}\text{F}]\text{FMISO}$ ,  $[^{18}\text{F}]\text{NaF}$  as well as  $[^{18}\text{F}]\text{FDG}$ .**

## General Facts

Eckert & Ziegler offers a wide range of Modular-Lab systems for the production of Fluorine-18 based tracers. All tracers are produced using sterile disposable synthesis cassettes. By changing the configuration or adding modules the systems can also be used for the production of further tracers based on other nuclides such as Gallium-68, Lutetium-177, Yttrium-90 or Carbon-11.

The Modular-Lab PharmTracer based approach uses SPE purification for the production of most  $[^{18}\text{F}]$  tracers. HPLC purification is required for the production of  $[^{18}\text{F}]\text{FMISO}$ ,  $[^{18}\text{F}]\text{FLT}$  and as an optional part for the other tracers. The appropriate system will be provided on request and is fully compliant with the Modular-Lab software.

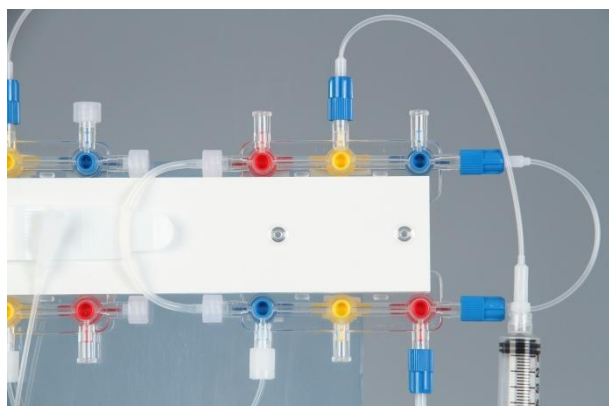
- All components are being tested in-house before delivery
- A performance qualification of the complete system will be provided on-site on request
- Extensive documentation will be provided upon request

## Routine Production with Modular-Lab PharmTracer - Key Features

- Easy and fully automated synthesis
- Sterile single-use cassettes guarantee sterile fluid path without need of cleaning
- Simple cassette handling through click'n'start technology
- Cassettes are assembled under controlled conditions
- Multiple Tracer production of different tracers on a single system configuration
- Compact size and small footprint
- Freely programmable software for in-house development of new tracers
- High and stable yields
- Short synthesis time
- Compliance with the latest regulatory standards (GMP, GAMP5)
- Reasonable prices for cost-efficient production

The production of  $[^{18}\text{F}]$  tracers is also available on our research and development system **Modular-Lab Standard**.

# Overview of available $^{18}\text{F}$ systems



## Technical Data

### Module Characteristics

Footprint of entire system	Dimensions: 300 x 300 x 516 mm (W x D x H) incl. cables and accessories
2-fold Modular-Lab PharmTracer (SLM-2)	Dimensions: 130 x 198 x 191 mm (W x D x H); Weight: 2.7 kg
4-fold Modular-Lab PharmTracer (SLM-4)	Dimensions: 262 x 198 x 191 mm (W x D x H); Weight: 5.0 kg
Syringe Dispensing Module (SYM)	Dimensions: 130 x 184 x 268 mm (W x D x H); Weight: 3.8 kg Responsible for liquid transport
Heater Reaction Module (HRM)	Dimensions: 130 x 194 x 113 mm (W x D x H); Weight: 1.7 kg Heating via heating cartridge from room temperature to 180 °C
HPLC (optional) <i>mandatory for [<math>^{18}\text{F}</math>]FMISO, [<math>^{18}\text{F}</math>]FLT</i>	The semi-preparative HPLC comes with Fluid detector, Multi-Range Activity Detector, HPLC Pump, Sample Loop, Columns and UV-detector. It is fully controllable with the Modular-Lab software.
Vacuum Pump	Dimensions: 90 x 164 x 141 mm (W x D x H); Weight: 1.9 kg 230 V, Single-head, dry-running device, 5 °C to 140 °C, 100 mbar
Pressure	Max. 2 bar
Cassettes	C4-F18-00 in connection with C2-F18-SPE or C4-F18-HPLC

### Main Unit

Power supply	Electrical Cabinet (EC) / Power Interface Module (PIM): 115 V ~ 60 Hz or 230 V ~ 50 Hz
Power consumption	EC: Standard 480 W, 2 x bus 1,050 W, extension to 2,100 W possible PIM: Standard 180 W; Type of external power supply depends on the setup
Environment temperature	+10 °C to +40 °C
Environment humidity	Max. 70 % rel.

### Unit Control

Software	Modular-Lab Software / Modular-Lab SoftPLC
Interfaces	Ethernet / USB

*Before delivery all components are being tested in-house. If requested, a performance qualification of the complete system will be provided on-site. Extensive documentation will be provided upon request. Module dimensions include handles.*

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