

# FlowSafe



Leading the way in PET tracer  
production and development



# FlowSafe

Compact, advanced system for the

Fully automated production of standard radiotracers e.g.  $^{18}\text{F}$ -FDG,  $^{18}\text{F}$ -FLT,  $^{18}\text{F}$ -MPPF and  $^{18}\text{F}$ -FMISO

Advanced controlled drying of  $^{18}\text{F}$

Integrated design: no large external housing for e.g. cooling, heating and control electronics

Unique design for excellent serviceability

Low operational costs due to re-using of components

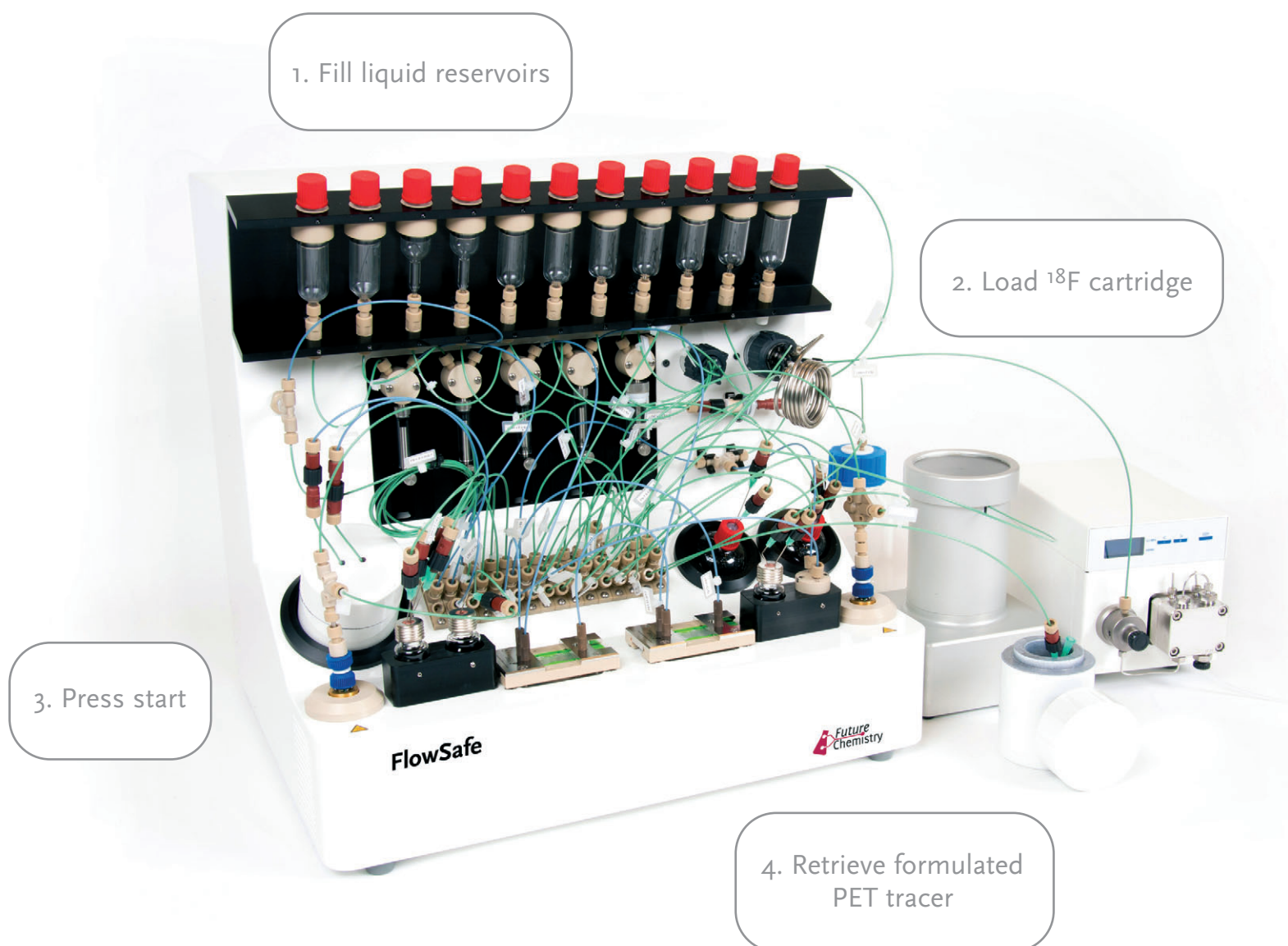
Plug-and-play

Flexible design allows combining drying, reacting, purifying and formulating steps yielding a ready-to-use PET-tracer

Batch reactors and flow microreactors: combining best of both worlds



# production of PET tracers



The FlowSafe automates production of PET tracers, using an  $^{18}\text{F}$  solution directly from a cyclotron target or  $^{18}\text{F}$  trapped on cartridges

Four independent reaction stations allow separate control over drying, fluorination, deprotection and formulation

Comecer Absynth software enables you to set up a fully cGMP workflow: Built-in audit trail, user controlled access, history of synthesis development and logging of all process parameters during a production. All data and actions are fully registered.

## Boutique PET tracer development... with FutureChemistry and FlowSafe **you can!**

Flow chemistry technology enables high throughput reaction screening which greatly speeds up development of new PET tracers

Our dedicated team of qualified and experienced PhD radiochemists and chemists can assist you with the development of your PET tracers. FutureChemistry has access to the infrastructure for the production and development of PET tracers

Give yourself a head start with FlowSafe together with the our PET tracer team and contact us today

### **FlowSafe**

Safe, flexible and reliable PET tracer production

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## System characteristics

### Size

465 mm x 424 mm x 372 mm (WxHxD)

### Weight

28.5 kg

### Control electronics

All integrated into synthesizer

### Program control

By PC software (Comecer Absynth)

## System components

### Components included

2 batch reaction stations up to 200 °C  
2 microreactor stations 1 to 140 °C  
back pressure regulator  
pressure sensor  
vacuum pump with vacuum sensor  
liquid dosing systems for accurate control  
SPE cartridge holder  
11 liquid reservoirs

## Electrical specifications

### FlowSafe

### Voltage

110-120 VAC / 60 Hz or  
220-230 VAC / 50 or 60 Hz

### Power consumption

< 770W

## HPLC integration

### Components included

HPLC pump  
HPLC injector valve  
HPLC injection loop  
HPLC column  
HPLC radioactivity detector



FlowSafe's two microreactor stations enable:

1. Synthesis above boiling point of solvent
2. High control over reagents give access to shorter reaction times and increased reliability and reproducibility
3. Shorter reaction times allow working with unstable precursors and intermediates

# ABOUT US

- Excellence in both flow chemistry and radiochemistry
- Dedicated to deliver a solution, not just the equipment
- Scientific collaborations with leading radiochemistry groups

Founded in 2007 by chemists for chemists, FutureChemistry is a worldwide technology leader in flow chemistry. We develop, implement and sell microreactor hardware and procedures for optimizing and screening chemical reactions and processes for multiple applications. FutureChemistry is a world leading manufacturer of microreactor systems with a distributor network and customers in over 20 countries.

## Strong knowledge base

FutureChemistry is based at the Technology and Science Park of the Radboud University Nijmegen and has a strong connection to this university. Collaborating with FutureChemistry's strategic partner Comecer, instruments are built by European high-end manufacturing partners, finished, configured and thoroughly tested by FutureChemistry in house. This strong knowledge network ensures fast implementation of scientific and technological breakthroughs for your benefit.

## Products and services

Besides complete flow chemistry systems to perform your chemistry, we offer several other services such as production of nanoparticles and process development.

## Radiolabeling service

Our experienced and dedicated team will gladly assist you with the FlowSafe production of all your standard and boutique PET-tracers. FutureChemistry has developed and produced PET tracers in several classes using state-of-the-art methodology including aromatic nucleophilic  $^{18}\text{F}$  chemistry.

Give yourself a head start in PET tracer production and contact FutureChemistry today!

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