iMiGiNE PMB

personalized molecular imaging

iMiLAB® Radiopharmaceutical Synthesis

Data sheet

About iMiLAB

The radiochemistry module iMiLAB is compact and self-shielded. Entirely robotized and GMP compliant, the iMiLAB radiochemistry room utilizes micro-fluidic techniques capable of producing diversified radiopharmaceuticals in an automated synthesis box and in sterile cartridges with precursors and solvents. It is capable of synthetizing multiple radiopharmaceuticals on a same-day basis, with a minimum need in staff.

iMiLAB Radiochemistry

iMiLAB is primarily designed for the production of radiopharmaceuticals used for molecular imaging applications. It offers unique characteristics due to its architecture.

Versatile

With a unique microfluidic cartridge architecture, iMiLAB can produce multiple radiopharmaceuticals based on ^{18}F, ^{11}C, ^{68}Ga and ^{13}N, within the same day. Single-use cartridges prevent cross contamination. Thanks to microfluidic technologies, reagents and precursors consumption is low, synthesis is quick and the parameters are better controlled.

One-dose production is designed for one patient, in the case of personalized molecular imaging.

Innovative synthesis process

iMiLAB's synthesis process is fully automated, from radiopharmaceutical selection to syringe-filling.

At the end of the synthesis process, ready-to-use syringes are made available to the radiopharmacist : one for the patient and one for QC, with precise radioactivity measurements. Moreover, a QC analysis is also made.

Fully automated

Because iMiLAB is designed for fully automated operation, using it requires only few personnel and the staff is exposed to a low level of radioactivity.

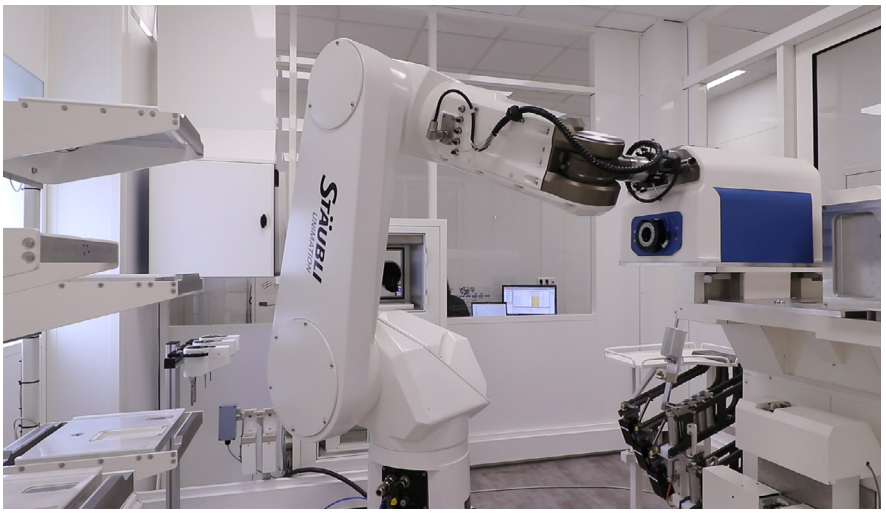
Furthermore, all the equipment inside the radiochemistry room is easily accessible for maintenance operation.

Easy to use

The user interface is intuitive and designed to give the operator all the information required, depending on their expertise and training levels.

Easy to install

iMiLAB can be installed within new or existing buildings and requires 70 cm thick concrete walls.



GENERAL INFORMATION

Manufacturer	PMB-ALCEN
Synthetizer's name	iMiLAB

RADIOPHARMACEUTICALS

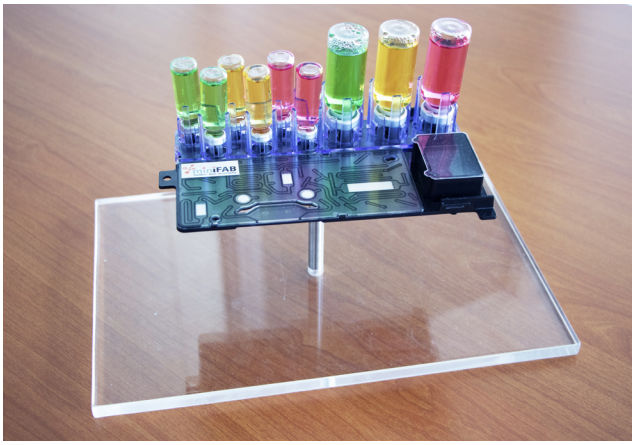
Available	^{18}F-Fallypride, ^{18}F-DPA714, ^{11}C-Raclopride, ^{11}C-SSR180575, ^{11}C-Methionine, ^{11}C-Choline, ^{68}Ga-Dotanoc
Under development	^{18}F-FET, ^{18}F-Flumazenil, ^{11}C-Flumazenil, ^{11}C-PE2I, ^{11}C-Metomidate ^{11}C-PSMA, ^{11}C-Hydroxyephedrine, ^{11}C-CGP12177, ^{68}Ga-PSMA, ^{68}Ga-Dotatoc, ^{15}O-H_2O, ^{13}N-NH_4

AUTOMATED PROCESSES

Cartridge and HPLC conditioning	Yes
Synthesis steps	Yes
HPLC purification	Yes
Formulation	Yes
Sterile filtration	Yes
Syringe-filling	Yes
Quality control	Yes

SITE REQUIREMENTS

Radiochemistry room weight, without shielding	3 000 kg
Quality control room weight	500 kg
Radiochemistry room	12 m²
Quality control room	13 m²
Power requirements	10 kW, 240-480 V



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PMB designs, manufactures and commercializes high-technology products used in the medical, nuclear power, research, defense & security and industry fields. Its expertise lies in the brazing of complex mechanical assemblies, as well as in the design and manufacture of linear accelerators and cyclotrons.

PMB

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