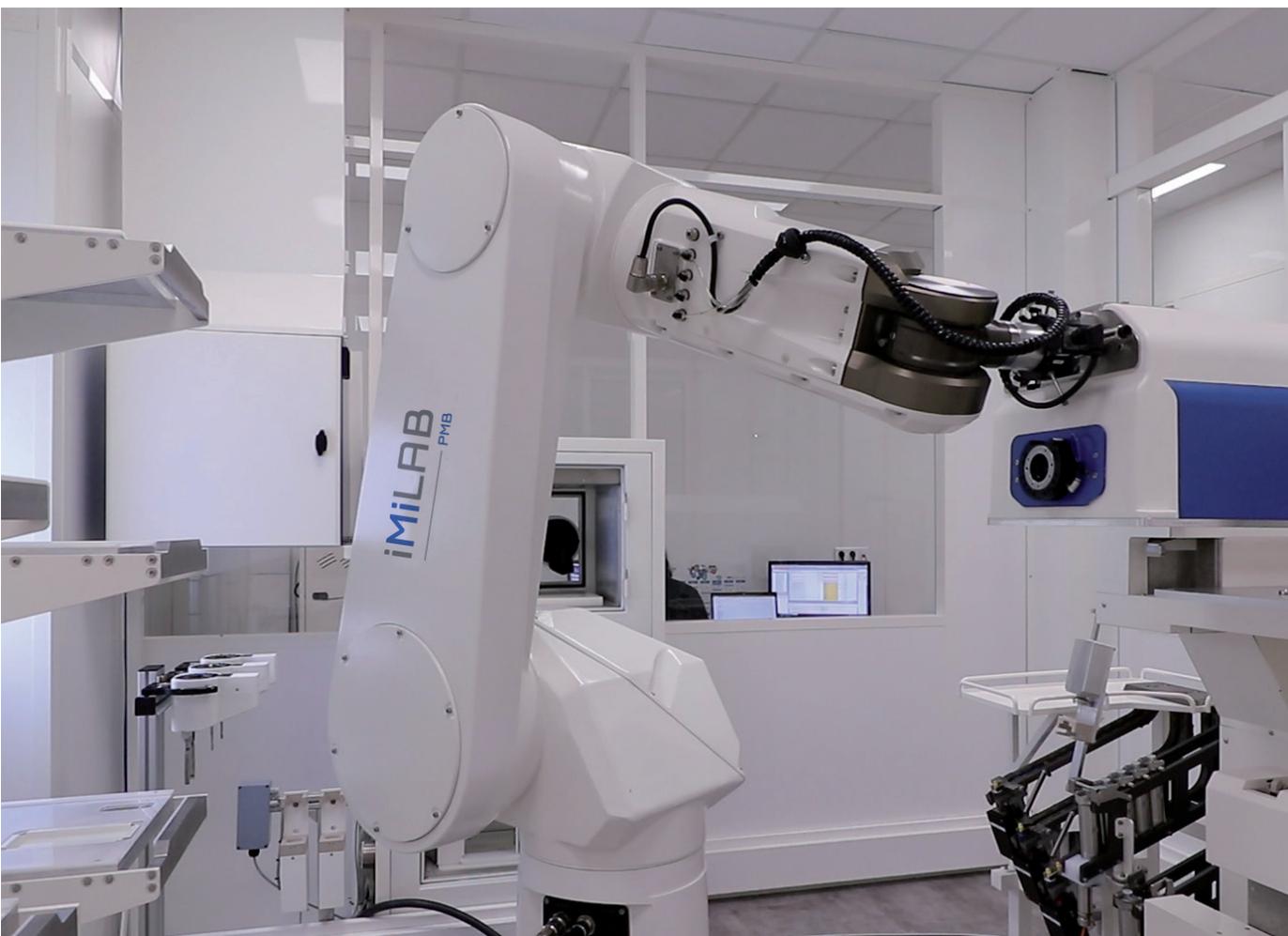


iMiLAB® Radiopharmaceuticals Production

Datasheet

One room to produce the radiopharmaceuticals you need

The radiochemistry system iMiLAB is compact and self-shielded. Entirely robotized and GMP compliant, the iMiLAB radiochemistry room utilizes microfluidic techniques capable of producing diversified radiopharmaceuticals in an automated synthesizer and cartridges with precursors and solvents. It is capable of synthesizing multiple radiopharmaceuticals on a same-day basis, with a minimum need in staff.



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

Versatile

Based on a unique microfluidic cartridge architecture, iMiLAB can produce multiple radiopharmaceuticals based on ^{18}F , ^{11}C , ^{68}Ga , within the same day. Single use cartridges and dedicated synthesizers prevent cross contamination.

Microfluidic advantages

Thanks to our unique cassette based on microfluidics :

- Low use and consumption of reagents allowing to save costs and minimize waste
- Faster reaction rate even at lower temperature
- Fully integrated valves, channels, reaction chamber and SPE chambers minimizing dead volumes
- Completely closed consumable preventing contamination, especially from long half-life radioisotopes
- Very easy-to-use cassette without any need for extra tubing and all the fluidic connections made in one movement



Innovative synthesis process

iMiLAB's synthesis process is fully automated, from radiopharmaceutical selection to sterile filter integrity test and 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.

Fully automated

Because iMiLAB is designed for fully automated operation, its use requires only few personnel and the staff is exposed to a lower level of radioactivity. Furthermore, all the equipment inside the production 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. The user manages the production from the control room. The production room is separated and confined avoiding unnecessary contamination of the final products and limiting the radiation exposure of the operators.

GENERAL INFORMATION

Manufacturer	PMB-ALCEN
Product name	iMiLAB

RADIOPHARMACEUTICALS

^{11}C - labeled tracers	[^{11}C] flumazenil, [^{11}C] L-deprenyl, [^{11}C] Methionine, [^{11}C] Choline
^{18}F - labeled tracers	[^{18}F] DPA-714, [^{18}F] NaF, [^{18}F] AIF-PSMA-11
^{68}Ga - labeled tracers	[^{68}Ga] Ga-FAPI-46, [^{68}Ga] Ga-PSMA-11, [^{68}Ga] Ga-DOTA-TOC, [^{68}Ga] Ga-citrate

AUTOMATED PROCESSES

Synthesis steps	Yes
HPLC purification	Yes
Formulation	Yes
Sterile filtration	Yes
Syringe-filling	Yes
Filter integrity test	Yes

SITE REQUIREMENTS

Production room	12 m ²
Wall thickness of production room	Down to 70 cm of concrete
Control room	10 m ²
Power requirements	10 kW, 240-480 V



iMiGiNE

PMB

PMB

ALCEN

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.



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