

Research Cell

Hot cell for research on PET-radiopharmaceuticals

This research hot cell is designed for the development of new radiopharmaceuticals based on short-lived positron-emitters. It is used for the implementation of fully- or semi-automated synthesis devices for PET-radiopharmaceuticals. The set up is especially suitable for PET centres which provide daily routine products, like FDG, on the one hand, and on the other hand carry out innovative research activities, for example on ^{68}Ga based radiopharmaceuticals. The cell is offered as a single hot cell or in combination with other hot cells as a functional complex.

We are happy to customize the design and all dimensions of the research cell on request for your intended process and/or physical conditions.

We offer a special solution for the handling of ^{68}Ga featuring acid resistant coating of the inner cell with polyethylene and a shielded generator storage under the hot cell.



Eckert & Ziegler

Isotope Technologies Dresden

Research Cell

Technical Data

Dimensions

Outer dimensions (WxDxH) ca. 1400x1400x2600 (±30) mm

Inner dimensions (WxDxH) ca. 1000x1000x800 mm

Weight ca. 9000 kg

Material Inner cell stainless steel (1.4541)

Shielding

Sides, front and back 75 mm of lead

Ceiling and bottom 75 mm of lead

Door/lifting element

Implementation Electromechanical lifting door, at front side

Control Two-hand safety control

Lead glass window 300 x 300 mm, 100 mm lead-equivalent

Tightness

Inner cell Leakage <0.25 %/h acc. to ISO10648-2 class 2

Ventilation system

In-air H13 filter, DNport 50

Exhaust-air H13 filter with charcoal, port DN 50

Negative pressure adjustment Manually operated ball valves

Air monitoring system Differential pressure

Electrical/pneumatical specification

Electrical connection 3x230/400 V 50 Hz TN-S, 16 A pre-fuse

Consumption approx. 1 kW

Sockets 4 pcs. inside (IP54), external switchable

2 pcs. above and below the cell

Compressed air > 6 bar

Covering

Material Powder-coated steel plates

Colour Pure white (RAL 9010) or according to customers' request

Options

- **Shielding up to 100 mm of lead and customization of lead glass window on request**
- **Additional lifting element on the back side of the cell, also with lead glass window possible**
- **Double-door lock for inactive material**
- **Double-door lock in the bottom or shielded product storage under the hot cell to lock out of the radiopharmaceuticals**
- **Integrated dose rate monitoring and dose calibrator**
- **Especially for 68Ga: cid resistant polyethylene coating of the inner cell, Shielded generator storage under the cell with sealed fit to the inner cell**

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