



ENGINEERING



Eckert & Ziegler

Isotope Technologies Dresden



<sup>192</sup>Ir

<sup>177</sup>Lu

<sup>18</sup>F

<sup>225</sup>Ac

<sup>99m</sup>Tc

# Leading Technology for Customized Hot Cells

Crafted in  
Germany

<sup>67</sup>Cu

<sup>131</sup>I

<sup>90</sup>Y

<sup>68</sup>Ga

<sup>161</sup>Tb

# The ITD Experience

ITD – Isotope Technologies Dresden

1

**Radiopharmaceutical  
Production**

2

**Radiochemical  
Production**

3

**Handling of  
Industrial Materials**



## Scientific Consultancy

Your project is mentored by our team of experienced scientists, radiochemists, technologists and practitioners with special expertise in targetry, target chemistry, radiopharmacy and GMP.



## Design & Manufacturing

Your requirements are translated into dedicated solutions by our experienced design team. During the manufacturing process, our multidisciplinary team assembles your solution using components from leading suppliers.



## Project Management

You are supported at every stage of the collaboration by our project managers. All actions are coordinated and each project is monitored and controlled according to the parameters of schedule, cost and scope.

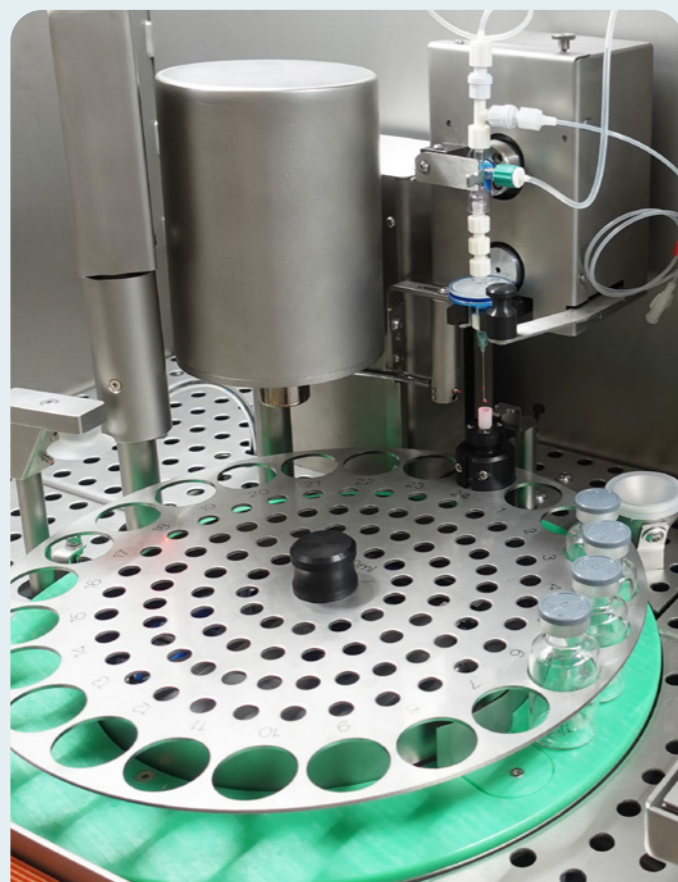


## After Sales

Your process reliability, planning security for budgets and maintenance measures, risk minimization, and short downtimes are always our top priority and secured by a wide range of available services.

# 1

# Radiopharmaceutical Production



## Turn-key lines for radiochemical processes and materials research

International markets recognize ITD as the leading specialist for customized turn-key production lines, supplying not only hot cell equipment but also process know-how if required. The close cooperation between you and our application specialists lead to most efficient configurations considering GMP requirements. Decades of experience make ITD your number one partner.

## Hot cells for the research on radiopharmaceuticals

Research hot cells are designed for maximum flexibility in the development of new radiopharmaceuticals. They are suitable for use with synthesis modules and other processing devices. Their design is completely open for conducting innovative research activities on radiopharmaceuticals. Stand-alone hot cells and connected hot cell lines are available to suit your individual requirements.

## Automated dispensing systems for radiopharmaceuticals

The automated dispensing system UniFill fills radiopharmaceutical and radiochemical solutions into open and/or closed vials. Formulation and activity measurement of the product solution take place automatically. For each vial the activity is automatically measured. Finally, the vial is dropped into a lead container via an integrated ventilated air lock.



# 2

## Radiochemical Production

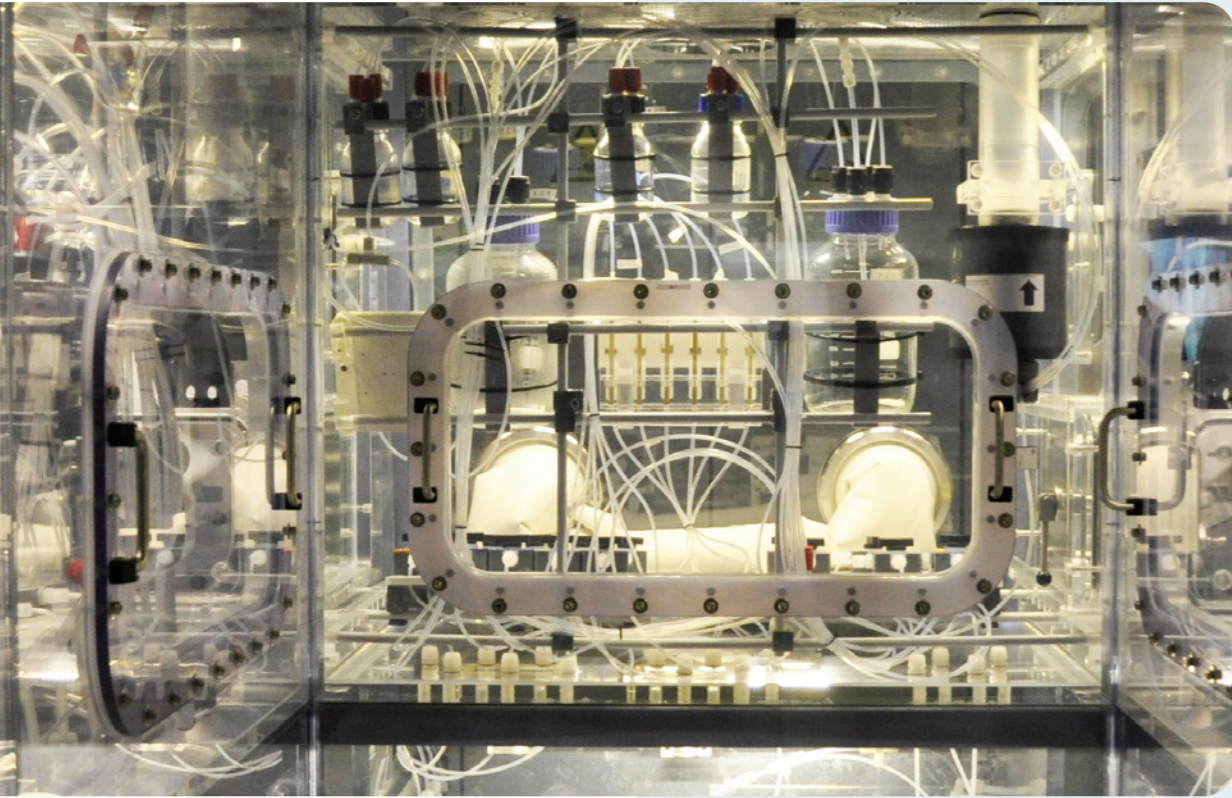
### <sup>225</sup>Ac production lines

With the increased demand of alpha emitters for targeted alpha therapy ITD offers outstanding technology to produce <sup>225</sup>Ac as API in large quantities. For both the <sup>226</sup>Ra( $\gamma$ ,n)<sup>225</sup>Ra  $\rightarrow$  <sup>225</sup>Ac or <sup>226</sup>Ra(p,2n)<sup>225</sup>Ac production routes ITD can supply the complete package from target manufacturing, irradiation station, target processing and Rn retention.

### Customization for your requirements

ITD is a specialist for customized radionuclide handling and individual production lines for common and new radionuclides and corresponding radiopharmaceuticals for nuclear medicine. These can be stand-alone modules for the separation of radionuclides from irradiated target material or complete production systems on an industrial scale. All lines can be designed with different shielding thickness to accommodate medium to high activities of irradiated material. Realized projects include complete solutions for <sup>99</sup>Mo/<sup>99m</sup>Tc generators or for <sup>131</sup>I from reactor-irradiated TeO<sub>2</sub> targets.



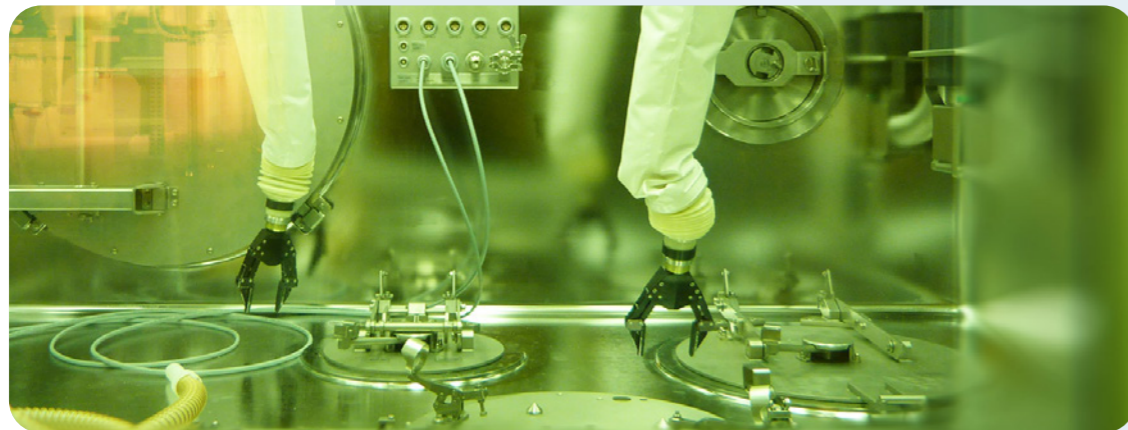


# 3

## Handling of Industrial Materials

### Non-pharma applications

Material testing or the production of sealed radiation sources usually involves high levels of activity. Our customers want to integrate proven processes and research equipment into their new hot cell system. Likewise, standard and customized transport containers are often to be docked. At the same time, there are requests for the design and technical optimization of the systems. ITD masters the challenge of making all requirements possible and orientates itself to the needs of the customer.



# Facts About Us



- » Isotope Technologies Dresden represents the plant engineering business unit of Eckert & Ziegler Medical. Customers benefit from profound process knowledge based on synergies in radionuclide production by Eckert & Ziegler and systems engineering.
- » Although Eckert & Ziegler Medical is composed of several companies, we act as one. The internal exchange of knowledge is the basis of our daily work and the key to our success in this group.

## One Group

- » The Eckert & Ziegler Group is one of the world's largest providers of isotope technology for medical, scientific and industrial use. The core businesses of the Group are cancer therapy, industrial radiometry and nuclear-medical imaging. The company's offices and subsidiaries are located throughout Europe, Asia and the United States.

- » Highest quality is our claim. This not only guides our action and decision-making processes, but also applies to the execution of all development and production steps as well as their verification within the framework of our quality management.

330  
Colleagues

- » People with expertise in a wide range of fields work together to master the most complex challenges.



60 Years

- » In 1964 we started manufacturing and commissioning hot cell solutions.
- » Focus on radiopharma markets since 2008
- » Since 2017, ITD is part of the Eckert & Ziegler group.



# Eckert & Ziegler

Isotope Technologies Dresden



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