

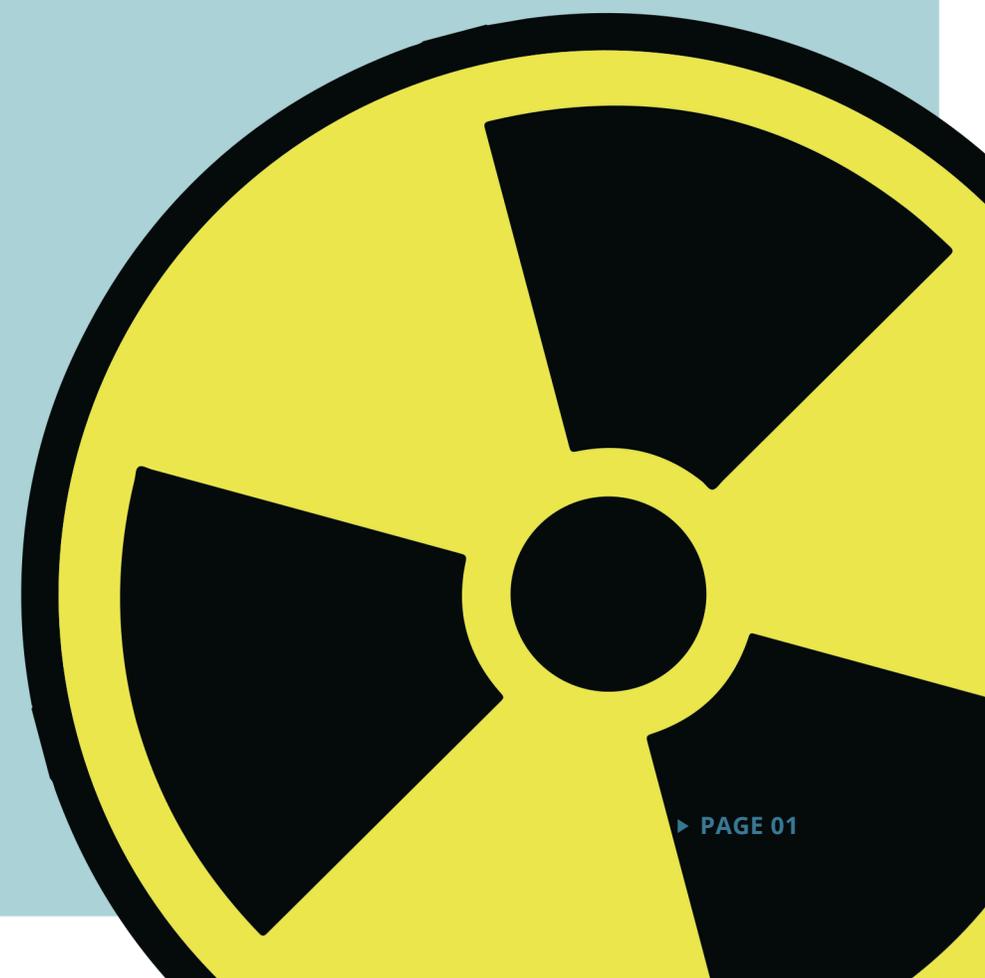
PRODUCT BROCHURES

Beijing Jovvi Medi ENG Co., Ltd

ABOUT US

Modern nuclear medicine techniques include PET-CT, SPECT, etc., which are widely used in disease diagnosis and treatment. Nuclear medicine has its roots in the discovery of radioactivity by Henri Becquerel in 1896 and the subsequent work of Marie and Pierre Curie.

Accidental releases of radioactive materials can have far-reaching consequences for public health and the environment. We, Beijing Jovvi Medi ENG Co., Ltd was established to the development concept of "integrity all over the world and conducts all continents", adheres to the business policy of "strive to create greater value for customers", and is committed to providing Nuclear Medicine Radiation Protection systematic solutions, through technological innovation and professional services, create safe and reliable hot cells and related projects for the medical imaging field to protect the health and safety of medical staff and patients.



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Neutron Therapeutics Turnkey Service

Create Value for our Customers

Tomo Therapy Projects Turnkey Service





PART 01 Hot Cell Related Project 05

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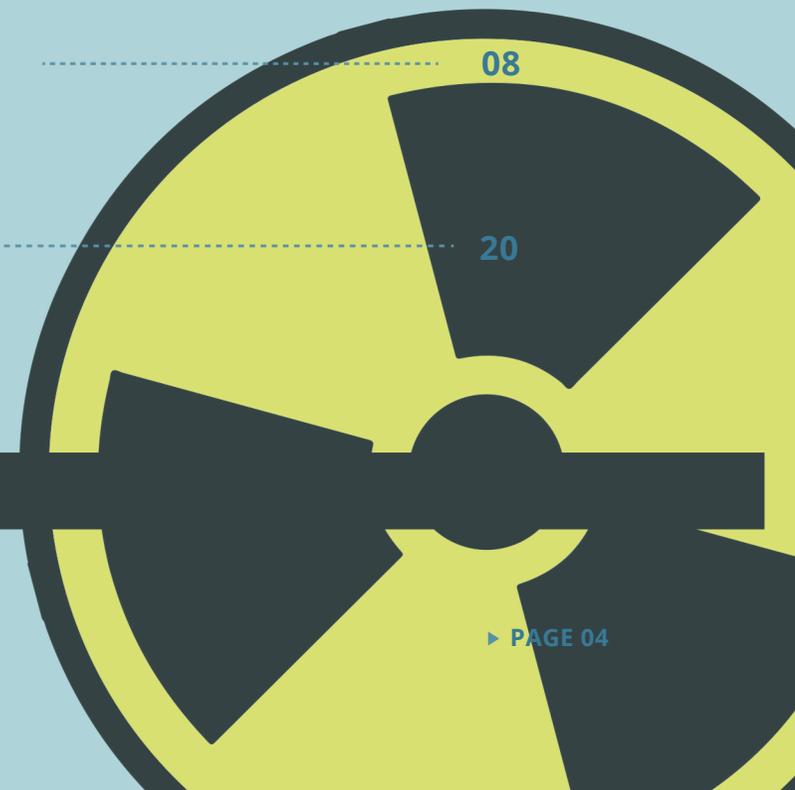
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PART 01



Hot Cell Related Project

TomoTherapy
ACCURAY

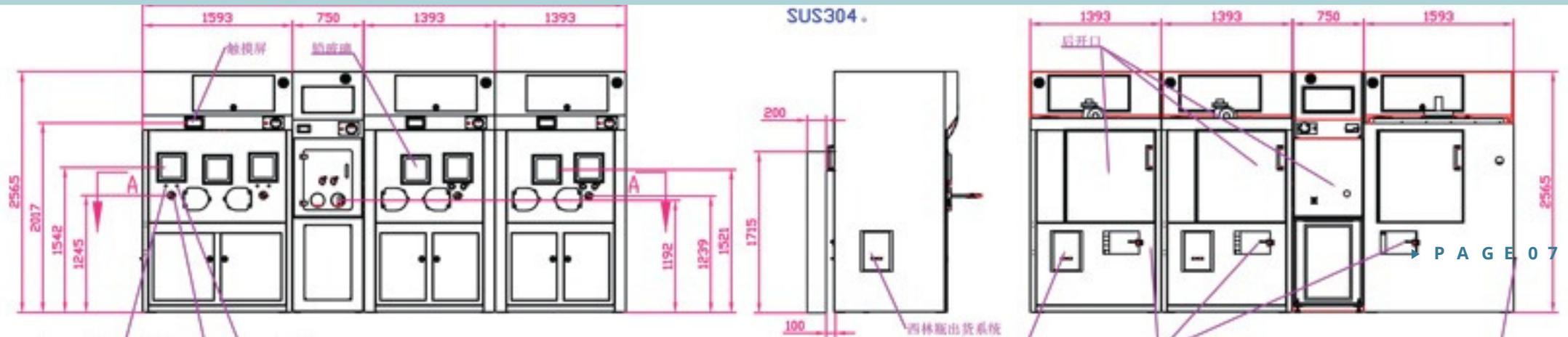


Hospital Radiopharmacy Hot cell



Radioactive Source Storage Cabinet is made of lead and SS304, double-layer stainless steel, with easy & quickly open or close protective door, equipped with double-lock control, for safe temporary storage of radioactive sources, is one of the necessary protective equipment for nuclear medicine.

Lu-177 Production Line



PART 02



Nuclear Medical Radiation Protection Accessories

I. Positronic Radiopharmaceutical Dispensing/Transfer/Injection/Radioactive Waste Collection



PET Synthesis Hot Cell



PET Synthesis Hot Cell



FDG Automatic Dispenser



FDG Manual Dispenser



Transporting Injection Protection Canister



Radiopharmacy Injection Protection Kits (Tungsten Alloy)



Transport Protection Canister



PET Injection Window



Mobile Injection Cart



Lead Screen



Radioactive Waste Storage Barrel

II. Single-photon Radiopharmaceutical Drenching/Transfer/Injection/Radioactive Waste Collection



Tc99m Fume Hoods



Radioactive Elution Canister



Injection Protection Kits



Lead Protection Carrying Case



SPECT Injection Window



Mobile Injection Cart



Lead Screen



Radioactive Waste Storage Barrel

III. Nuclide Therapy (I131) Dispensing/Delivery/Radioactive Waste Collection



I131 Fume Hoods



Iodine Dosing Window



I131 Dispenser



I131 Radioactive Waste Storage Barrel



I131 Therapeutic Mouthpiece Collection Box



I131 Radioactive Wastage Decaying Chamber

Radioactive Source Storage Cabinet

Radioactive Source Storage Cabinet is made of lead and SS304, double-layer stain- less steel, with easy & quickly open or close protective door, equipped with double-lock control, for safe temporary storage of radioactive sources, is one of the necessary protective equipment for nuclear medicine.



Radioactive Source Canister

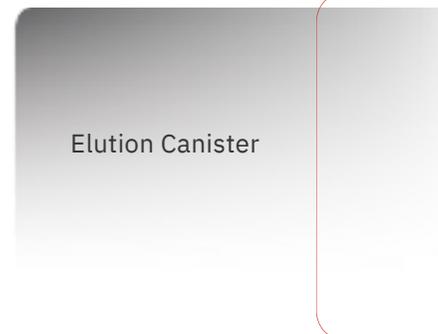
Source storage canister is used for FDG radiopharmaceutical transfers. Elution canisters is used for protection during drenching Mo-Tc generator drugs. Triple-part canister can be used with syringe protectors of 2cc, 2.5cc, 3cc, and 5cc models, which reduces the unnecessary radiation dose during injection.



Triple-part Canister



Source Storage Canister



Elution Canister



Dispenser



The I131 dispenser is suitable for dispensing medication for thyroid cancer and hyperthyroidism treatment, either into oral cups or into syringe vials. The automatic model does not require any manual operation. After the drug canister is delivered to the designated location, the system remotely controls the automatic insertion of needles, flushing, measuring and transferring, minimizing the occupational exposure of the operator.



FDG Dispensing Guards



The dispensing guard is made of lead and stainless steel, and can be filled with various sizes of product bottles, equipped with a flip-fastening bracket for manual dispensing of FDG drugs. Automatic dispensing device is also available.

Radioactive Meter



Radioactive meter can quickly measure the activity of various radiopharmaceuticals, such as TC99m, I131, TI201, Sm153, Ga67, Sr89, P32, F18, C11, N13, O15, I125 and other common nuclides, as well as other nuclides, with self-diagnostics and automatic measurement functions of reproducibility, accuracy, and linearity, to ensure that product stability and accuracy during the working period.

Iodine Dosing Window



Manual



Automatic

It is used for iodine 131 protection fume hood, after iodine water is loaded, it is transferred to the iodine serving window through the motorized transfer port. The surface is made of 304 stainless steel with anti-fingerprint treatment. Manual and electric push-pull opening methods are available to facilitate the opening and closing of medical personnel.

Fume Hoods & Biomedical Cabinets & Glove Boxes



Equipped with intelligent AI human-computer interaction control platform, it can non-contact intelligent control of the fume hood's lighting, sterilization, negative pressure ventilation, drug lifting table, switches and sockets, door and machine interlocks, etc., which meets the process protection of PET-CT drug dispensing or SPECT nuclide drenching, labeling, or I131 nuclide iodine automatic and manual dispensing operations. Internal high radiation dose warning and seamless compatibility with a variety of actuators, real-time reading of the actuator display.

Radiopharmacy Injection Window



Injection window can be used in the injection of radiopharmaceuticals to prevent radiation effectively. Inject integrated protection device, reduce 90% of the exposure to radiation of the operator, can be adjusted according to the use site and customer requirements of the equivalent protection standard; With high lead glass observation window, easy injection operation observation, equipped with lighting. Used for radioactive injection, drug delivery process protection.

Radiopharmacy Injection Tray



Radiopharmacy injection tray is suitable for SPECT injection 99mTc drug, in line with the ICRP radiation environment safety lead protection. Bullhead injection 50mmPb, equipped with lighting, UV lamp, socket switch, shouting device, other protective devices optional.

Radiopharmacy Injection Trolley



Radiopharmacy injection trolley is composed of an L-shaped protective screen and a SS304 injection trolley, equipped with a fixed stainless steel tray, a 10mmpb lead waste garbage can and 4 load-bearing universal casters with locking, which can be moved or placed in a fixed position, and the lead equivalent can be customized according to the needs of use.

Radiopharmacy Injection Transit Cylinder



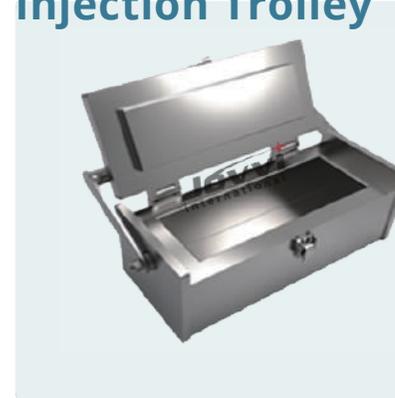
Radiopharmacy Transit Cylinders are made of lead and PVC or stainless steel, for protection during the transfer of single doses of radiopharmaceuticals and are secured by wire fasteners at the interface for portability. The standard equivalent is 6 mmPb and its weight is 1.6 kg.

Radiopharmacy Injection Protection Kits



Radiopharmacy injection protection kits is made of high specific gravity tungsten alloy, specially processed and treated with a bright and clean surface, and is used to reduce the radiation exposure of the hand during dispensing and injection, which can reduce the radiation dose of TC99m and other radioisotopes commonly used in nuclear medicine by 95%.Al Alloy, Wooden and Stainless Steel Frame available.

Radiopharmacy Injection Trolley



Lead Protective Carrying Case is specially made from lead and SS304, is used for the protection of single dose radiopharmaceuticals during transit. The lid is designed to be docked and the box is equipped with stainless steel handles for easy carrying.

Radioactive Waste Storage Tank/Cart



Radioactive waste storage cart is specially made of lead and SS304, with foot-operated, swivel-open and slide-open methods to avoid hand-contact staining, as well as 4 load-bearing universal casters with locking, which can be moved or placed in a fixed position, and the appearance of fingerprint-resistant treatment, with no marks on the surface.

Lead Can Transporting Cart



Lead can transporting cart is made of 304 stainless steel and high-equivalent lead, mainly used for protection during the transfer of source storage lead canisters, and can store 1 pc inside. It is designed as a trolley for easy pushing and pulling.

Lead Screen



Lead Screen is made of galvanized steel or stainless steel with different surface treatment, anti-static, anti-bacterial and durable. Equipped with 4 load-bearing universal wheels with locking, on the basis of meeting the protection function, it is flexible to move, noiseless, easy to operate and smooth to run. Single, double and triple optional, size, color and lead equivalent can be customized.

Lead Transfer Interlocking Protection Windows



Lead transfer interlocking protection window for the transfer of doctor's medication, patient's meal transfer window with interlocking function. The main material is lead, lead glass and 304 stainless steel, the appearance must have anti-fingerprint function, double door interlocking, effectively blocking the intake of rays.

Lead Protection Suit



Lead protection suit is the protective gear used by doctors when injecting drugs, made of ultra-soft raw material and polyamide printed fabric, light lead or lead-free, complete with ultra-soft split overskirt, ultra-soft lead cap, ultra-soft lead bib, lead gloves, and large-rimmed lead glasses.

Radioactive Waste Gas Device



Radioactive waste gas treatment device made of 304 stainless steel and lead plate, is a radiation area dedicated to radioactive exhaust gas filtration device, the protection standard is 5-20mmPb., fan size can be customized, air volume 3000-30000m³/h.

Radiation-proof lead manhole cover



The I131 dispenser is suitable for dispensing medication for thyroid cancer and hyperthyroidism treatment, either into oral cups or into syringe vials. The automatic model does not require any manual operation. After the drug canister is delivered to the designated location, the system remotely controls the automatic insertion of needles, flushing, measuring and transferring, minimizing the occupational exposure of the operator.

Decaying chamber



The radioactive decaying chamber is made of lead and other heavy metal materials, which can effectively block a variety of rays (such as α , β , γ rays) released by radioactive elements, ensuring the safety of the surrounding environment and personnel. Equipped with pulleys, which can be lifted or dragged, making it easy to move and stack, and improving work efficiency. It can also be equipped with a radiation monitoring module to monitor real-time radioactivity data on the body surface, which provides important security for emergency personnel.

Radioactive Environmental Monitoring Probes



Radioactive environmental monitoring probe is equipped with energy-compensated GM detector, which can detect X and γ rays, with a measurement range of 0.01uSv/h to 10mSv/h, and an energy range of 50keV to 3MeV, with a built-in alarm and a manually closable audible alarm; and also equipped with an intelligent voice announcement.

Radioactive Source Decontamination Toolkit



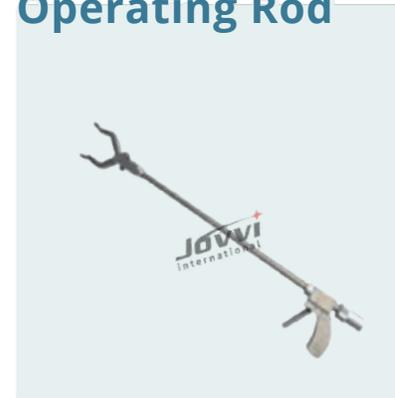
Complete radioactive source decontamination tool kit, for radioactive contamination treatment, containing imported radioactive special cleaning cleaners.

Wastewater Probes



The detector of the radioactive wastewater probe is a high sensitivity scintillator detector, which is put directly into the bottom of the decay cell and placed vertically and smoothly; the detector measurement angle is 360 degrees in the axial direction.

Radioactive Source Operating Rod



Radioactive source operating rod for radioactive source container lid, radioactive materials, radioactive canisters and other heavy objects removed, handle length 1100mm, clamping rod tool made of stainless steel, can ensure that the distance between the center part of the operator and the radioactive source > 1200mm.

PART 03



Radiation Monitoring System

Whole-body Dynamic Radioactive Monitoring System



The Whole Body Dynamic Radiation Monitoring System allows single photon image processing of the collected information to provide a basis for subsequent acquisition of measurements. The system automatically completes the calculation and analysis of the single-photon image signals through the pre-scaling, and obtains the activity of I131 stored in the whole body, which provides a quantitative basis for the assessment of the activity of I131 stored in the body of the patient before discharge from the hospital. The system is suitable for use in departments that carry out I131 treatment for thyroid cancer, and the equipment is usually placed at the exit of the nuclide ward.

D-D Radiation Dose Rate Meter



The detector of the radiation dose rate meter is NaI scintillation crystal + solid state photomultiplier. Sensitivity N28 degree, $1\mu\text{Sv/h} \geq 350\text{CPS}$. cumulative dose is $0.00\mu\text{Sv} \sim 99999\mu\text{Sv}$, energy range is $30\text{keV} \sim 3\text{MeV}$, relative error $\leq \pm 10\%$. Equipped with rechargeable lithium battery, the whole machine power consumption is less than 80mW.

Radiation Measuring Instrument



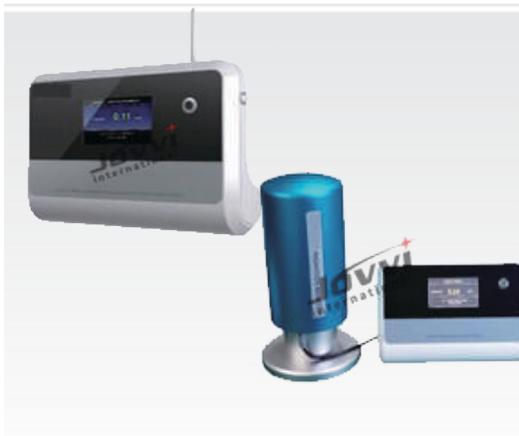
The detector of the radiation measuring instrument is a scintillator detector, which mainly detects ray X and γ rays. The relative intrinsic error does not exceed $\pm 10\%$, the energy range is $20\text{keV} \sim 10\text{MeV}$, the alarm response is ≤ 2 seconds, the theoretical working time is 500h, and the protection level is IP67.

Radiation Environmental Monitoring System



Radiation environment monitoring system is designed for SPECT-CT environment use, configured with 7-inch industrial-grade color touch LCD screen, which can display three different states of normal/overload/failure, and at the same time is equipped with sound and light alarm mode at the same time, can also be connected to multiple alarm lights, and has a fault self-recovery function.

X-Y Regional radiation monitoring system



Regional radiation monitoring system is widely used in nuclear medicine department and radiotherapy department, which can match one or more suitable alarms according to the actual needs, such as X, γ dosimeter, neutron dosimeter, etc. It can be connected wirelessly, networked freely, and monitored online in real time, realizing the visualization, gridded and intelligentization of radiation. There is also a system dedicated to the Radiology Department, a split design with high sensitivity for detecting gas pedal pulsar ray beams, see the right picture.

Survey Meter



Survey meter is mainly used for monitoring the dose rate of X and γ rays in the environment and the accumulated dose in a specific time period. The instrument is characterized by high sensitivity, good energy response and orientation response. Low consumption, simple operation, easy to carry.

Nuclide identification type survey meter using lanthanum bromide detector, not only can be used for ordinary environmental monitoring, but also can be used for monitoring gas pedal and other pulsed ray beams, but also can identify the type of nuclide, higher sensitivity, stable reliable measurement results.

Staining Meter



The α, β surface staining meter can continuously monitor the α, β rays in the environment, and provide real-time α, β dose rate values. The instrument adopts large-size touch screen to realize α, β ray data acquisition, processing, storage, transmission and management, and the visualization interface is simple to operate and easy for users to learn and master. All data can be summarized and stored for relevant personnel to view at any time.

Radiation Environmental Monitoring System



This Contamination Measurement System monitors surface contamination on the hands and soles of the feet of staff members coming from the control area and, when contamination is detected, promptly identifies the type of contaminating nuclide in order to detect the contamination in time and prevent its transfer. This instrument is an important equipment in the field of nuclear radiation protection and is an important detection instrument for medical personnel to avoid radioactive contamination.

X-Y Regional radiation monitoring system



Radioactive Aerosol Continuous Monitoring System is to continuously monitor the concentration of radioactive I131 aerosol in the ambient air of nuclear facilities and nuclear medicine etc. through continuous sampling, and give real-time activity concentration, when the activity concentration of the measured gas exceeds the set threshold, the equipment sends out light and sound alarm signals to warn the on-site staffs, so as to ensure the safety of the staffs.

Fully automatic online monitoring system for decaying chamber activity concentration **Personal Dose Alarm**



Nuclear medicine online monitoring system for decaying chamber activity concentration through the shielding body of the waste liquid radionuclide spectral screening and activity measurements, the activity concentration of the waste liquid in the activity decay pool, to guide the decay pool of reasonable and scientific discharge time.

- Dose rate: 0.01 $\mu\text{Sv/h}$ ~ 5000 $\mu\text{Sv/h}$
- Accumulated dose: 0.00 μSv ~ 9999Sv
- Sensitivity: 1.5cps /($\mu\text{Sv/h}$)
- Protective alarm response time: ≤ 5 seconds
- Dose rate: $\mu\text{Sv/h}$, mSv/h, Sv/h Automatic switching
- Accumulated dose: μSv , mSv, Sv Automatic switching
- Working environment: Temperature -30°C- + 50°C.



Radionuclide purity detection system

Radionuclide purity is the radioactivity of a specific radionuclide as a percentage of the total radioactivity. It is particularly in demand for applications in the preparation of radiopharmaceuticals. Energy range: 30keV-3MeV. Identifies single radionuclides: I131, Tc99m, F18, Cs137, Co57, Co60, Ba133, Am241, Eu152, Ra226, C11, N13, O15, Ga68, Zr89, Lu177, and others. Calculate the radioactive nuclear purity of specified samples: F18, C11, N13, O15, Ga68, Zr89, Tc99m, Lu177, I131, Y90.



Neutron Dosimeter



The neutron dosimeter is used for continuous monitoring of environmental neutron radiation, and can also be connected to multiple neutron dosimeters to monitor neutron radiation in specific regions, providing real-time radiation dose rate values in the environment, and providing a data basis for the management decisions of the monitoring center. It can issue sound and light alarm signals according to the predetermined alarm threshold to warn the site staff and ensure the safety of personnel. The instrument adopts highly sensitive imported ^3He tube with large size polyethylene ball as detector, with fast response speed and good anti- γ performance.

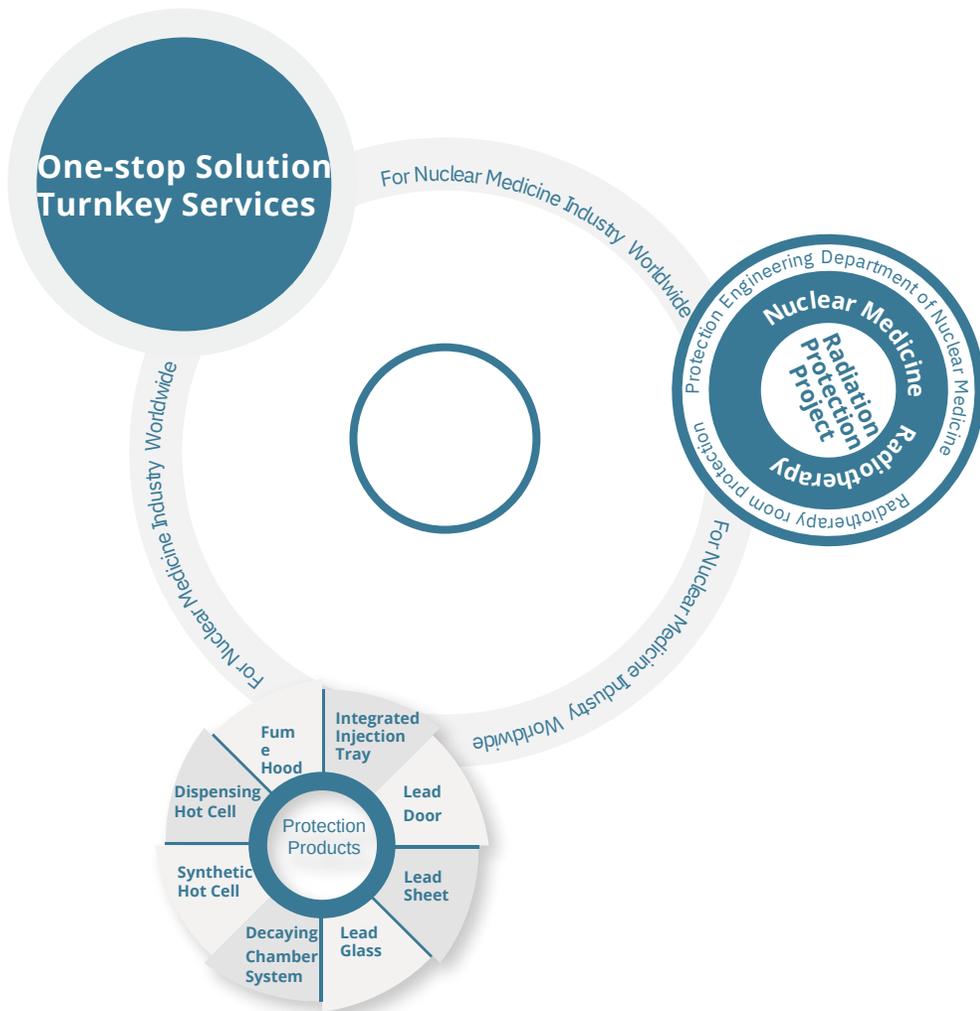
Radioactive Nasal Swab Detector



Radioactive Nasal Swab Detector is an innovative device, mainly used in the front line of war nuclear emergency and CDC around the world, the main advantage of the device is the portable design, easy to carry, can quickly confirm whether to touch the radioactive material, and to confirm what kind of nuclides, to facilitate the rapid confirmation of the emergence of the reason for the emergency situation, and according to the actual situation of the precise response.

Radiation Protection Services :

- ◇ Design team: project planning and drawing designing.
- ◇ Pre-sale and after-sale: pre-sale technical support and after-sale maintenance service.
- ◇ Material customisation: tailor-made protection products according to requirements.
- ◇ Engineering construction: professional construction team, one-stop overall solution service.





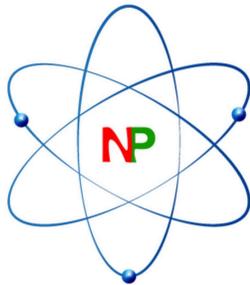
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