

SEGMENTED GAMMA SCANNER (SGS) WITH ALL ACCESSORIES

KEY FEATURES OF THE REQUIRED SYSTEM:

- Segmented gamma scanning of radioactive waste in MS drums
- Both compactable and non compactable waste drums are to be assayed with the system
- Quantitative and qualitative gamma analysis for fission products and TRU (alpha) radionuclides
- NDA-2000 or other suitable software provides setup
- The system must be factory calibrated for accurate operation, and includes QA check source and holder
- Fully integrated PLC-based
- Electromechanical control system
- CE compliant
- The system have automatic weighing system for matrix attenuation corrections due to sample density
- Manual and automatic LN2 fill system
- Electrically-assisted drum turn table

TECHNICAL SPECIFICATIONS:

1. Sample to be analyzed
 - a. Radioactive Waste packed in cylindrical MS Drum having the following specifications;
 - Internal volume of the MS Drum~225L (internal dia~570mm, internal height~880mm) or comparable
 - Wall thickness of MS sheet~1.2mm
 - b. Weight of filled MS drums to be assayed: 1000lb or comparable
2. Detector Assembly
 - Two or more High Purity Germanium Detectors for detection of the gamma emitting nuclides from the radioactive waste drums. The coaxial detectors accompanied the system should have good relative efficiency and resolution better than 2.0keV at 1332keV.
3. Radiation To Be Detected In The Waste Drums: fission products and Transuranic (TRU) waste
4. Gamma Energy To Be Measured In The Solid Waste Packed In the MS Drum (Drum Wall Thickness: 1.2mm): Gamma energies of fission products and Transuranics (TRU) waste
5. Performance
 - Minimum detection activity (MDA): approximately $1\mu\text{Ci}$ for Cs-137
 - Maximum detection activity: Low and intermediate level waste
 - The system should have suitable assay time
6. Electrically Assisted Base, Turntable, And Elevator Assembly
7. The system should compatible with core i-3 and above laptop/PC
8. Power supply: operable with ~220 volts (AC), 50Hz
9. ACCESSORIES:

The system should accompany complete set of all necessary accessories including;

 - a. Liquid nitrogen container with Automatic LN2 fill system
 - b. NDA-2000 or other suitable software provides setup on USB and CD (in English language)
 - c. All cables and connectors
 - d. QA Check source and sample holder
 - e. All necessary documents (Operational manual, Maintenance manual etc) in English language.
10. Quantity Required: 01Unit complete set with all accessories.