

StandFAST II . . .

The Solution to Fast, Stand-up Whole Body Screening

StandFAST II is a stand-up whole body counter system for rapid screening of workers to identify and quantify fission and activation product radionuclides within the body. It represents a significant innovation in fast screening, whole-body counters.

- Hexagonal walk-through shield design optimizes placement in either corners or open-space and provides efficient throughput of subjects.
- Computer-optimized shielding provides maximum interior space to achieve improved detection limits while minimize system weight.
- Windows® based system software, with integral subject database facility, easily interfaces to other computer systems as needed. Subject prompting and interleaving allow for maximum throughput during periods of high demand such as reactor outages.
- 150 Bq (4 nCi) ⁶⁰Co LLD with individual in scanner.
- Quality Assurance function guarantees result validity.
- Gain stabilized, computer-controlled electronics.
- Segmented construction eases assembly in tight locations.

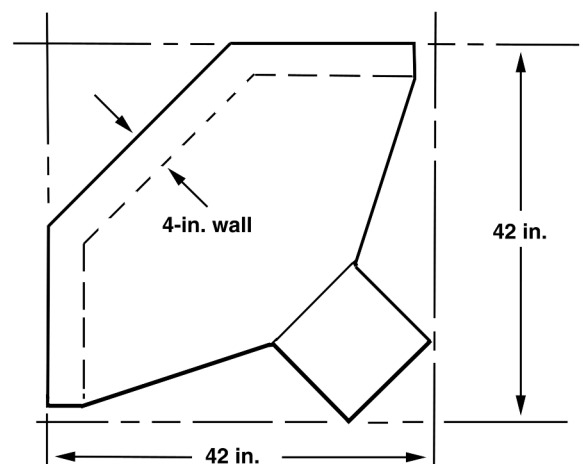
System Design and Operation

The system incorporates three major components: the counter (shield and detector), application software, and signal processing hardware. The hexagonal shape of the StandFAST II Counter is the optimum configuration predicted by the DOE Monte Carlo code, MCNP, for advanced computer modeling of radiation shielding. Dual 4" x 4" x 16" NaI detectors in a shielded column at the front of the counter deliver the best solution for typical fission and activation product counting. The two large NaI detectors are mated to PMT preamplifier bases with integral high-voltage supplies, entirely eliminating long HV cable runs. The analog signals are processed allowing separate spectrum storage and providing digital spectrum stabilization.

StandFAST II is capable of processing subjects at a high rate while still supporting the requirements of ANSI N13.30. In a nominal analysis, spectra from both detectors are analyzed. In this fashion, data for one subject can be analyzed while a count is in progress for the second subject, and while a third subject is being processed into the system for counting.

Supervisor and Operator modes with password protection provide data security. An 'EASY-CALIBRATION' procedure makes StandFAST II simple to set up, while the built-in Quality Assurance utility program guarantees result validity.

Subject results are automatically stored in the industry-standard Subject Database, so that recounts are easily achieved with minimum data entry. Results may be easily transferred to other remote systems (typically via Ethernet), and products such as Microsoft Access® may be used to generate custom reports directly from the database.



System Specifications

Composed of selected low-background materials (including virgin DOE RUN lead, virgin plastic, ⁶⁰Co-free steel, and OFHC copper). Easy-to-clean, epoxy-painted outer surfaces, cleanable, or easily replaceable, interior plastic liner.

SHIELD

- Total Weight: 3855 kg (8500 lb.)
- Heaviest Item: 1043 kg (2300 lb.)
- Overall Height: 221 cm (87 in.)
- Maximum separation between shield and computer ~ 30m

DETECTORS

- Dual 4" x 4" x 16" NaI(Tl) detectors including ORTEC's latest NaI electronics.

CONTROL LIGHTS

- Highly visible control lights indicate "Ready to Count", "Counting", and "Alarm Condition".

Ordering Information

Model	Description
StandFAST II	Includes shield, 2 NaI detectors (4" x 4" x 16"), ORTEC's latest NaI electronics, PC, Printer, and Renaissance software
Options	
Installation and Training	Onsite Installation and Training
Calibration	Onsite Calibration
Microsoft Access	Single copy of Microsoft Access
Phantom	Polyethylene constructed to model the 95% man
Sources	Based on type of counter (HPGe or NaI) and energy range of interest
Upgrade	Upgrade existing stand-up counter to modern PC and software (exact details depend on existing system)

Specifications subject to change
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