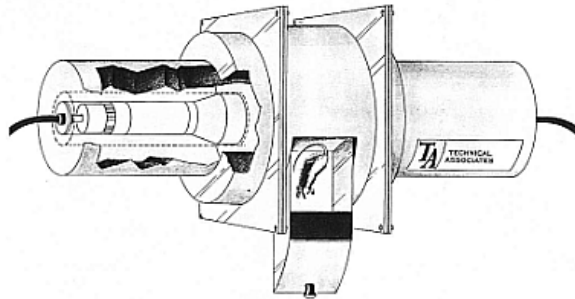


SMALL ANIMAL WHOLE BODY COUNTER FOR LIVE ANIMALS

Model # LIVE-1



LIVE-1 Schematic

COUNTING CHAMBERS

Consists of a 12" diameter cylinder with horizontal axis roughly 30" long, and mounted to a base. The animal chamber is then 6" in diameter by 6" long. Ventilation ports are provided. A drawer in the side of shield provides a 4 3/4" x 4" opening⁽¹⁾ to insert and remove the animal. The chamber has a removable stainless steel liner for ease of cleaning, and a removable grating is provided for the animal to stand on, and for the droppings to fall through. The thin metal windows on the two detectors are protected by metal grills with a high percentage of open area. Each detector is surrounded by 2" of lead on all sides. The detectors are also recessed for their own protection and to minimize effects of animal position on the count rate.

DETECTORS

Two each 3" diameter x 1" thick NaI crystals with a thin window 0.020" (0.5mm) to accept low energy radiation such as that from I-125 as well as higher energies. Each detector is optically coupled via a light pipe to a high quality photomultiplier tube.

Counting efficiencies excluding geometry are approximately:

- Approx. 36% for Zn-65 at 1.1MeV X-rays.
- Approx. 36% for Fe-59 at 1.1 & 1.3MeV Gammas.
- Approx. 85% for Tc-99m at 0.14MeV Gammas.

ELECTRONICS: FS-5T2D (all solid state)

A precision automatic lab scaler incorporating a single channel analyzer which can be used to keep the background count rate from natural radiation very low. The single channel analyzer also allows the count of one isotope to the exclusion of another.

All of the above are tested as a system at the factory.

OPTIONS: (Available upon Request)

- ⁽¹⁾Larger chamber and loading port are available upon request.
- Other window material and thicknesses.
- Thinner or thicker lead (Pb) shield.

TA

TECHNICAL ASSOCIATES

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