

FLOW THRU SCINTILLATION SYSTEM

Model # SSS-13

FEATURES:

- COMPLETELY SHIELDED WELL COUNTER.
- UNIVERSALLY USEFUL WITH STANDARD SCALERS, RATEMETERS, AND SPECTROMETERS
- ACCEPTS BEAKERS, FLASKS, PLANCHETS, ETC., IN ADDITION TO TEST TUBES

When the **SSS-13** is used with a suitable readout system such as **FS-5T** or a member of the FM-7 modular ratemeter recorder series with alarm capability (e.g. FIL-7WE), it functions as an automatic column fraction separator. The output relay of the alarm may be set to operate a fraction cutter or a stepping solenoid valve whenever an active component passes through the detector.



Figure 1: SSS-13

Thus for extremely long slow elutions, the apparatus may be left unattended with assurance that each active component will be separately collected.

Liquid being monitored passes through a cell packed with carefully graded anthracene or CaF_2 (Eu) scintillator. The cell is optically coupled to a selected photomultiplier tube and gives counting efficiencies for H-3 of up to 20%, for C-14 of 25% to 40% where the liquid passing through the cell is essentially colorless.

Both CaF_2 (Eu) and anthracene scintillator are completely insoluble in most organic solvents and is essentially insoluble in aqueous solutions in which the pH is not too low, so sample liquid remains pristine.

Optional metering pump and mixing chamber mixes controlled amount of liquid scintillator with sample to give higher sensitivity for C-14 and S-35. (Please use Model SSS-33 for Tritium.)

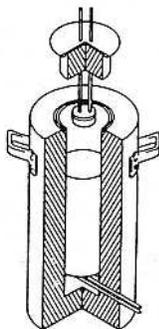
The probe operates at approximately 1150 Volts from well regulated DC supply. "O" ring seal on cell simplifies cleaning and/or replacement of crystals. Cell liquid capacities are available down to 0.05cc for analytic runs and 1cc for preparative runs (or 1/2, 2, 5 or 10cc).

Background is 50cpm per 1ml capacity detector, shielded in LS-22 shield.

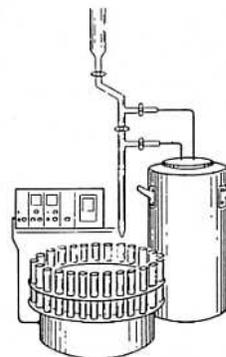
Replacement cells are available.

Selected graded CaF_2 (Eu) and anthracene are available in 100 gram lots.

The **SSS-13** scintillation counting system is fully compatible with all scalers and ratemeters of the FS and FM series, allowing (with use of single channel analyzer module MGA-5) accurate determination of many nuclides at or below background counting rate and in the presence of appreciable amounts of radioimpurities.



Schematic of SSS-13



HPLC Schematic

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