



- Unique portable beta spectrometer
- Compatible with all MICROSPEC™ analyzers
- Spectroscopy/Dosimetry modes
- β Spectroscopy from 100 keV to > 3 MeV
- Gamma rejection ratio of ~ 100:1
- Accurate measurement of beta dose, Hs(0.07)
- Automatic calibration
- On-board library of β end-point energies

Bubble Technology Industries' MICROSPEC systems were the first truly portable spectroscopic instruments providing the two essential pieces of information required by health physicists - dose rate and radionuclide identification. In addition to an extensive line of photon probes, BTI offers the only commercially available portable beta spectrometer, the B-probe.

Skin dose measurements using traditional thin-window GM counters have been extremely difficult for three reasons: GM counters do not provide any spectral information; the detector efficiency depends on beta energy; and GM detectors do not differentiate against low-energy photons. The BTI B-Probe solves all these deficiencies using a unique phoswich scintillator. The radiation doses displayed using the B-Probe are calculated directly from the measured spectral information.

As shown in the three figures below, the spectra measured by the B-Probe agree very accurately with calculated beta spectra and doses agree within five percent. Since beta particles with energies less than a few hundred keV are not a significant concern in health physics, the B-Probe operates from approximately 100 keV to 3 MeV. Truly accurate values of Hs (0.07) and radionuclide identification are quickly determined with this easy-to-use portable instrument.

Technical Specifications

DETECTOR TYPE: Phoswich scintillator

SIZE (without handle): 26.0 x 16.0 x 14.5 cm (10.2 x 6.3 x 5.7 in.)

GAMMA REJECTION: Approximately 100:1

DOSE CONVENTIONS: Hs (0.07), H_{max}

SPECTRAL RANGE: 100 keV to 3 MeV

WEIGHT: 3.4 kg (7.5 lbs)

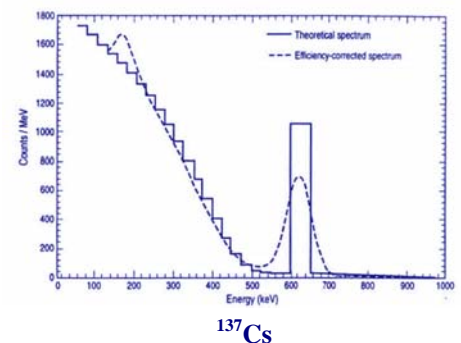
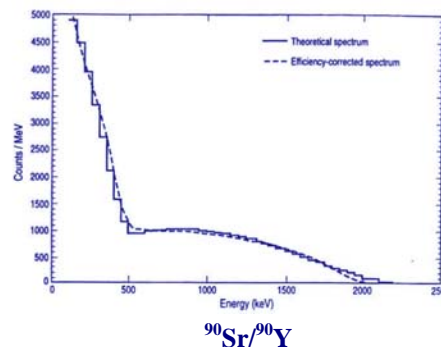
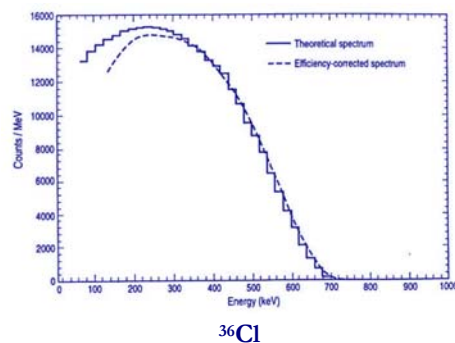
DOSE RATE (Max.): ~ 15 mSv/hr (1.5 rem/hr)

COMPATIBLE ANALYZERS: MICROSPEC-2

MICROSPEC-3

Mobile MICROSPEC

*Photon and neutron probes also available



Courtesy of Health Physics Measurement Group, LANL