

HEALTH AND SAFETY

Table 7. Instrument Comparisons for Surface Contamination Levels in Table 6.

Instrument	Probe (area, in cm ²)	Activity (μCi/m ²)	Instrument indication
AN-PDR-56	*DT224B (17)	6.0	~10,200 cpm
ADM-300	#ASP 100 (100)	6.0	~26,500 cpm
E-600	‡SHP 380 (100)	6.0	~66,500 cpm
AN-PDR-56	*DT224B (17)	60	~100,000 cpm
ADM-300	#ASP 100 (100)	60	~250,000 cpm
E-600	‡SHP 380 (100)	60	~650,000 cpm
AN-PDR-56	*DT224B (17)	300	~500,000 cpm
ADM-300	#ASP (100)	300	~1,300,000 cpm
E-600	‡SHP 380 (100)	600	**Off Scale (>1.0E6 cpm)

**The instruments with 100/square cm scintillation probes are incapable of measuring deposited activities much greater than 60 microcuries/square meter, because the instrument goes off-scale high.

*assumed α efficiency (4π) for DT224B is 45%

#assumed α efficiency (4π) for ASP 100 is 20%

‡assumed α efficiency (4π) for SHP380 is 50%

If α efficiencies are different from those assumed above, instrument indications must be re-calculated. Additionally, the use of activity, instead of instrument-specific count rates, will eliminate problems associated with inconsistencies in instrument calibration from facility to facility or from service to service (Air Force, Navy, National Lab, etc.).