

Eberline Portable Particulate Noble Gas Monitor Calibration Sheet

PARTICULATE CHAMBER CALIBRATION

Beta Chamber

Source SN: _____ Activity: _____ μCi
Count rate from readout scale: _____ cpm Is subtraction occurring? Y / N
Disintegration rate of source: _____ dpm Efficiency: _____

Alpha Chamber

Source SN: _____ Activity: _____ μCi
Count rate from readout scale: _____ cpm Is subtraction occurring? Y / N
Disintegration rate of source: _____ dpm Efficiency: _____

NOBLE GAS CHAMBER CALIBRATION

Source SN: _____ Activity: _____ μCi
Count rate from noble gas chamber: _____ cpm Is subtraction occurring? Y / N
Disintegration rate of source: _____ dpm Efficiency: _____

AMBIENT RADIATION CALIBRATION

600 cpm

Distance from detector to source _____ Exposure rate _____ Efficiency _____

6000 cpm

Distance from detector to source _____ Exposure rate _____ Efficiency _____

60 K cpm

Distance from detector to source _____ Exposure rate _____ Efficiency _____

600 K cpm

Distance from detector to source _____ Exposure rate _____ Efficiency _____

BACKGROUND SUBTRACTION CALIBRATION

$$\text{Counts per minute} = (\text{DAC})(3.7 \times 10^7)(\text{Efficiency})(\text{Corrected Flow Rate})(\text{Yield})$$

Flow rate: _____ lpm

Background meter reading (90%): _____ cpm

Adjusted background meter reading (10%): _____ cpm

Noble gas meter reading: _____ cpm

Adjusted noble gas meter reading: _____ cpm

ALARM SETPOINTS

Alert alarm set point (twice background): _____ cpm Does yellow lamp turn on? Y / N

High alarm set point (from DAC value): _____ cpm Does red lamp turn on? Y / N

SAMPLE FLOW

$$\text{Standard Flow} = \text{Observed Flow} \sqrt{\frac{\text{operating absolute pressure}}{29.92 \text{ inches Hg}}}$$

Observed flow: _____ lpm

Operating absolute pressure: _____ inches Hg

Standard flow: _____ lpm

Calibrated by _____ Date _____

Radiation Safety Officer _____ Date _____