

NATURAL ROCK SAMPLE RADON CALIBRATION

Natural Rock Sample SN: _____	Average of four readings: _____	pCi/L
		_____ Bq/m³

This Natural Rock Sample was kept sealed for 30 - 50 days. A recently calibrated, standard RAD7 was first purged with dry, ambient air for not less than 10 minutes. The RAD7 was connected to the Natural Rock Sample with a standard Natural Rock Sample Tubing Set and a Small Drying Tube connected between the RAD7 outlet and the return connection to the Natural Rock Sample. The RAD7 protocol was set to 1-day and 'Recycle' set to 06. The RAD7 was switched OFF and then ON and allowed to print out a header. The ball valves on the Natural Rock Sample were opened and a test started.

After completion of the run (three hours later), the Small Drying Tube was substituted with a Laboratory Drying Unit, the pump switched to ON (Setup, Pump ON [ENTER]), the display switched to the third status window and the RH monitored. This drying process was continued until the RH measured 4% or less, after which the pump was returned to Auto, the ball valves were closed and the date of closure noted on the Natural Rock Sample. Of the six half-hour readings, the last four were averaged. The data is presented below.

RAD7 Cal. Date (D/M/Y): _____ Ambient Rn Concentration: _____ pCi/L
_____ Bq/m³

RAD7 Serial Number: _____ RAD7 RH: _____% Temp: _____ °C

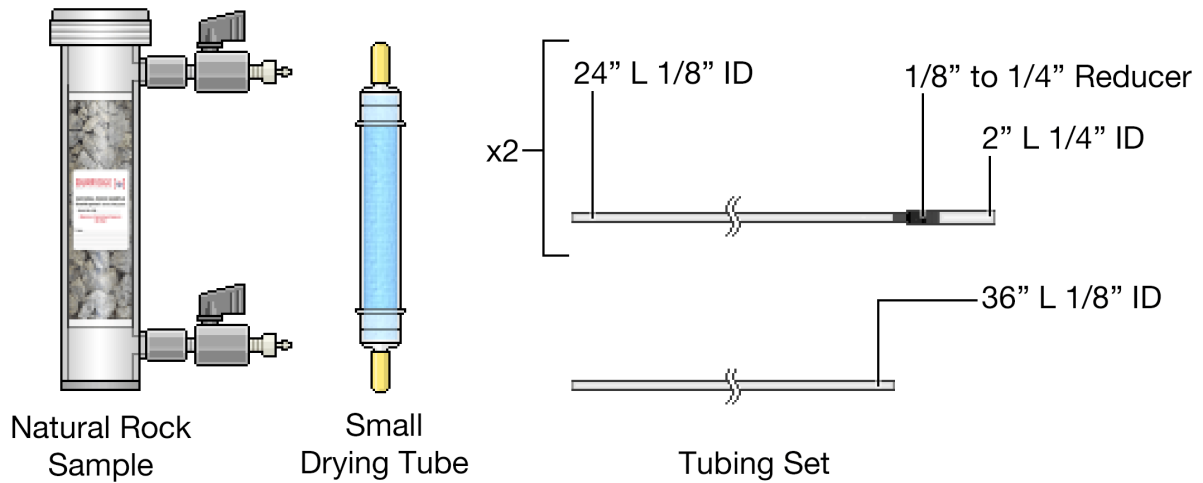
Any standard RAD7 that is in calibration will give the same result to within 15% provided that:

- 1) the Natural Rock Sample was thoroughly dried after the previous use,
- 2) the Natural Rock Sample has been sealed for between 30 and 50 days,
- 3) exactly the same setup, as described above, is used.

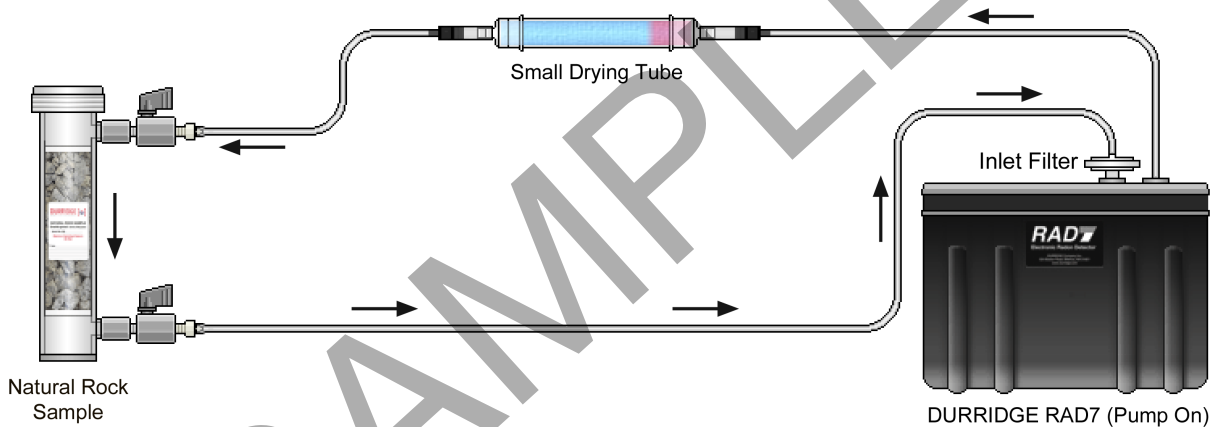
Signature: _____ Date (D/M/Y): _____

Notes on Natural Rock Sample Calibration

1. Natural Rock Sample Components Used:

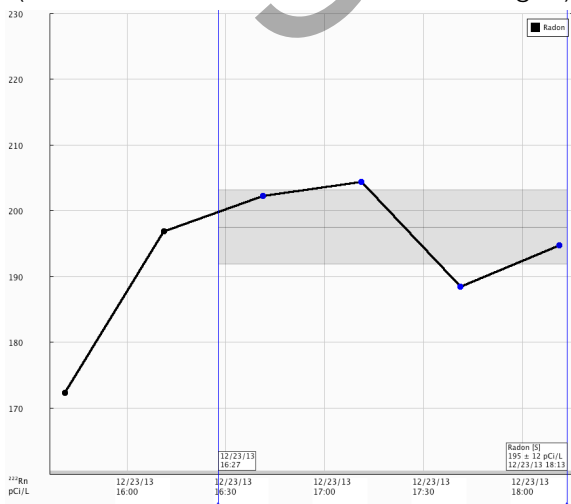


2. Natural Rock Sample Test Configuration:



3. Analysis Using CAPTURE Software

(Last four records examined and averaged):



4. Non-Standard Setups

If V_{setup} is the total volume of the standard setup and R_{av} is the measured average concentration with the standard setup, the total radon in the system is $R_{\text{av}} * V_{\text{setup}}$. For a non-standard setup, with different total volume, the average radon concentration of the four specified readings, R_{avNew} , will be:

$$R_{\text{avNew}} = R_{\text{av}} * (V_{\text{setup}} / V_{\text{setupNew}})$$

The standard setup component volumes are: Natural Rock Sample 432ml, Tubing Set 4ml, Small Drying Tube 24ml and RAD7 800ml. Thus the total standard setup volume, V_{setup} , is 1,260ml.