

tick the correct box

☐ A medical X-rays

☐ C nuclear power stations

☐ B cosmic rays from space

☐ D nuclear weapons testing

☐ A radon gas from rocks

☐ C cosmic rays from space

☐ B food and drink

☐ D medical tracers used in hospitals

EXAMPLE

Measurement	Count in 5 minutes
Background	300
With source	2100

Count-rate of source = 6 Bq

Measurement	Count in 10 minutes
Background (source removed)	1200
Source present	7200

Count-rate of source = _____ Bq

[6 marks]

Location	Count in 30 minutes
Cornwall (granite rock)	5400
London (clay soil)	1800

count-rate = _____ Bq

(c) In Cornwall the student then puts a radioactive source next to the detector and records **9000 counts in 30 minutes**. Calculate the count-rate of the **source alone**, in Bq. (2)

count-rate of source = _____ Bq