

Contamination, Irradiation & Dangers

Irradiation

[4 marks]

Irradiation is when an object or person is **exposed to** ionising radiation — alpha, beta or gamma — from a source **outside** them. The object does **not** become radioactive.

the two ways to reduce it

☐ increase distance ☐ decrease time

1 increase _____ 2 decrease _____

how?

(2) how?

(2)

how?

(2)

Contamination

[4 marks]

Contamination is when a **radioactive isotope** gets **on or into** a person or object. The object **does** become radioactive, and keeps decaying until it is removed.

*the two ways to reduce it — both stop you **touching** the isotope*

☐ tongs ☐ plastic gloves

1 use _____ 2 wear _____

why does it help?

(2)

why does it help?

(2)

Exam-style question

[5 marks]

A school technician takes a radioactive source out of its lead-lined box to use in a lesson. Describe how the technician can **reduce the danger** to themselves and to the students.

(5)

tick each key word as you use it

☐ irradiation ☐ contamination ☐ distance ☐ time ☐ touch

Why is it dangerous?

complete the chain

nuclear
radiationionises
atomsmutates
cellscan cause
cancer

Radiation is still used in hospitals every day. Give **one example** where the **benefit outweighs the risk**: _____
