

THE LEAK TEST(S) INDICATED BY THE CHECKED BOX(ES) WAS(WERE) APPLIED TO DETERMINE THE INTEGRITY OF THE SOURCE(S) DESCRIBED ON THE FRONT SIDE. THE LEAK TEST(S) INDICATED BELOW WERE EITHER TAKEN FROM ISO 9978:1992 OR DERIVED FROM THE LEAK TEST METHODS LISTED IN ISO 9978:1992 WHEN AN ALTERNATIVE TEST WAS NOT SPECIFICALLY LISTED.

Standard Wipe Test

The source was wiped over its entire surface with a moistened filter paper disk. After drying, the disk was checked for activity using a scintillation detector. There was $<0.001 \mu\text{Ci}$ beta-gamma and $<0.0001 \mu\text{Ci}$ alpha of removable activity.

Special Wipe Test

The source was wiped over its entire surface with moistened polystyrene. The polystyrene was then dissolved in a liquid scintillation cocktail and counted in a liquid scintillation counter. There was $<0.001 \mu\text{Ci}$ beta-gamma and $<0.0001 \mu\text{Ci}$ alpha of removable activity.

Distilled Water Soak Test

The source was immersed in distilled water and maintained at $50^{\circ}\text{C} \pm 5^{\circ}\text{C}$ for a minimum of four hours or room temperature ($20^{\circ}\text{C} \pm 5^{\circ}\text{C}$) for 24 hours. After removal of the source, the liquid was a) checked for activity using a liquid scintillation counter, or b) evaporated in a planchet and the residue checked for activity using a windowless proportional counter or end-window G.M. tube. There was $<0.001 \mu\text{Ci}$ beta-gamma and $<0.0001 \mu\text{Ci}$ alpha of removable activity.

Liquid Scintillation Soak Test

The source was immersed for a minimum of 3 hours at room temperature in a liquid scintillation cocktail, which does not attack the source's outer surface material. The source was stored away from light to avoid photoluminescence. The sealed source was then removed and the activity of the liquid scintillation cocktail was measured. There was $<0.001 \mu\text{Ci}$ beta-gamma and $<0.0001 \mu\text{Ci}$ alpha of removable activity.

Gas Source Test

The source was placed in a vacuum desiccator and maintained at a pressure of $<10 \text{ mm Hg}$ for not less than 12 hours. The activity was checked by introducing air into the desiccator and monitoring the air with an end-window G.M. tube. There was $<0.001 \mu\text{Ci}$ beta-gamma of removable activity.

Ampoule Leak Test

The ampoule was kept in an inverted position on a filter paper disk or polystyrene wipe for a minimum of 16 hours. The wipe was then checked for activity using a scintillation detector or liquid scintillation counter. There was $<0.001 \mu\text{Ci}$ beta-gamma and $<0.0001 \mu\text{Ci}$ alpha of removable activity.

Bubble Leak Test

The container was pressurized to its fill pressure; then soapy water was applied over its valve and neck or, the valve and neck of the vessel were immersed in water. If no growing bubbles were observed, the container was considered leak free.

Wipe Test for Industrial Ni-63 Sources

The sources were wipe tested by an approved sampling plan, which called for either 100% of the batch to be individually wipe tested, or, a subset thereof. The wipe test(s) used to test for removable contamination and the results of those tests are recorded on the front of this form.

Pressure Test for Triotech Kr-85 Sources

Prior to filling the vessel with Kr-85 gas, the vessel was evacuated to $<5 \text{ mm Hg}$, the gas manifold system shut off and the system allowed to stand for a minimum of 30 minutes. A vacuum difference not greater than the known vacuum loss of the manifold system itself signified the vessel did not leak.

Leak Test Not Applicable

The active area of the source is uncovered or is protected by a very thin coating. Although the deposit is adherent, it is not designed or certified to pass a standard leak test. The inactive portions of the source have been checked using the standard wipe test or special wipe test depending on the nuclide. There was $<0.001 \mu\text{Ci}$ beta-gamma and $<0.0001 \mu\text{Ci}$ alpha of removable activity.

Other Leak Test