

4731.3410 PROTOTYPE TESTS; CALIBRATION OR REFERENCE SOURCES CONTAINING AMERICIUM-241 OR RADIUM-226.

An applicant for a license under part 4731.3365 must, for any type of source that is designed to contain more than 0.005 microcurie (0.185 kBq) of americium-241 or radium-226, conduct prototype tests, in the order listed, on each of five prototypes of such source that contains more than 0.005 microcurie (0.185 kBq) of americium-241 or radium-226 as follows:

A. an initial measurement. The quantity of radioactive material deposited on the source must be measured by direct counting of the source;

B. a dry wipe test. The entire radioactive surface of the source must be wiped with filter paper with the application of moderate finger pressure. Removal of radioactive material from the source must be determined by measuring the radioactivity on the filter paper or by direct measurement of the radioactivity on the source following the dry wipe;

C. a wet wipe test. The entire radioactive surface of the source must be wiped with filter paper moistened with water, with the application of moderate finger pressure. Removal of radioactive material from the source must be determined by measuring the radioactivity on the filter paper after it has dried or by direct measurement of the radioactivity on the source following the wet wipe;

D. a water soak test. The source must be immersed in water at room temperature for 24 consecutive hours. The source must then be removed from the water. Removal of radioactive material from the source must be determined by direct measurement of the radioactivity on the source after it has dried or by measuring the radioactivity in the residue obtained by evaporation of the water in which the source was immersed;

E. a dry wipe test. On completion of the preceding tests under items A to D, the dry wipe test described in item B must be repeated; and

F. observations. Removal of more than 0.005 microcurie of radioactivity in any test prescribed by this part must be cause for rejection of the source design. Results of prototype tests submitted to the commissioner must be given in terms of radioactivity in microcuries and percent of removal from the total amount of radioactive material deposited on the source.

Statutory Authority: *MS s 144.1202; 144.1203*

History: *29 SR 755; 33 SR 1440*

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