

Figure: 25 TAC §289.257(ee)(7)

Table 257-4 - Exempt Material Activity Concentrations and Exempt Consignment Activity Limits for Radionuclides

Symbol of radionuclide	Element and atomic number	Activity concentration for exempt material (Bq/g)	Activity concentration for exempt material (Ci/g)	Activity limit for exempt consignment (Bq)	Activity limit for exempt consignment (Ci)
Ac-225	Actinium (89)	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>4</sup>	2.7X10 <sup>-7</sup>
Ac-227		1.0X10 <sup>-1</sup>	2.7X10 <sup>-12</sup>	1.0X10 <sup>3</sup>	2.7X10 <sup>-8</sup>
Ac-228		1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Ag-105	Silver (47)	1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Ag-108m (b)		1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Ag-110m		1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Ag-111		1.0X10 <sup>3</sup>	2.7X10 <sup>-8</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Al-26	Aluminum (13)	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>5</sup>	2.7X10 <sup>-6</sup>
Am-241	Americium (95)	1.0	2.7X10 <sup>-11</sup>	1.0X10 <sup>4</sup>	2.7X10 <sup>-7</sup>
Am-242m (b)		1.0	2.7X10 <sup>-11</sup>	1.0X10 <sup>4</sup>	2.7X10 <sup>-7</sup>
Am-243 (b)		1.0	2.7X10 <sup>-11</sup>	1.0X10 <sup>3</sup>	2.7X10 <sup>-8</sup>
Ar-37	Argon (18)	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>	1.0X10 <sup>8</sup>	2.7X10 <sup>-3</sup>
Ar-39		1.0X10 <sup>7</sup>	2.7X10 <sup>-4</sup>	1.0X10 <sup>4</sup>	2.7X10 <sup>-7</sup>
Ar-41		1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>9</sup>	2.7X10 <sup>-2</sup>
As-72	Arsenic (33)	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>5</sup>	2.7X10 <sup>-6</sup>
As-73		1.0X10 <sup>3</sup>	2.7X10 <sup>-8</sup>	1.0X10 <sup>7</sup>	2.7X10 <sup>-4</sup>
As-74		1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>

Symbol of radionuclide	Element and atomic number	Activity concentration for exempt material (Bq/g)	Activity concentration for exempt material (Ci/g)	Activity limit for exempt consignment (Bq)	Activity limit for exempt consignment (Ci)
As-76		$1.0 \times 10^2$	$2.7 \times 10^{-9}$	$1.0 \times 10^5$	$2.7 \times 10^{-6}$
As-77		$1.0 \times 10^3$	$2.7 \times 10^{-8}$	$1.0 \times 10^6$	$2.7 \times 10^{-5}$
At-211	Astatine (85)	$1.0 \times 10^3$	$2.7 \times 10^{-8}$	$1.0 \times 10^7$	$2.7 \times 10^{-4}$
Au-193	Gold (79)	$1.0 \times 10^2$	$2.7 \times 10^{-9}$	$1.0 \times 10^7$	$2.7 \times 10^{-4}$
Au-194		$1.0 \times 10^1$	$2.7 \times 10^{-10}$	$1.0 \times 10^6$	$2.7 \times 10^{-5}$
Au-195		$1.0 \times 10^2$	$2.7 \times 10^{-9}$	$1.0 \times 10^7$	$2.7 \times 10^{-4}$
Au-198		$1.0 \times 10^2$	$2.7 \times 10^{-9}$	$1.0 \times 10^6$	$2.7 \times 10^{-5}$
Au-199		$1.0 \times 10^2$	$2.7 \times 10^{-9}$	$1.0 \times 10^6$	$2.7 \times 10^{-5}$
Ba-131	Barium (56)	$1.0 \times 10^2$	$2.7 \times 10^{-9}$	$1.0 \times 10^6$	$2.7 \times 10^{-5}$
Ba-133		$1.0 \times 10^2$	$2.7 \times 10^{-9}$	$1.0 \times 10^6$	$2.7 \times 10^{-5}$
Ba-133m		$1.0 \times 10^2$	$2.7 \times 10^{-9}$	$1.0 \times 10^6$	$2.7 \times 10^{-5}$
Ba-140 (b)		$1.0 \times 10^1$	$2.7 \times 10^{-10}$	$1.0 \times 10^5$	$2.7 \times 10^{-6}$
Be-7	Beryllium (4)	$1.0 \times 10^3$	$2.7 \times 10^{-8}$	$1.0 \times 10^7$	$2.7 \times 10^{-4}$
Be-10		$1.0 \times 10^4$	$2.7 \times 10^{-7}$	$1.0 \times 10^6$	$2.7 \times 10^{-5}$
Bi-205	Bismuth (83)	$1.0 \times 10^1$	$2.7 \times 10^{-10}$	$1.0 \times 10^6$	$2.7 \times 10^{-5}$
Bi-206		$1.0 \times 10^1$	$2.7 \times 10^{-10}$	$1.0 \times 10^5$	$2.7 \times 10^{-6}$
Bi-207		$1.0 \times 10^1$	$2.7 \times 10^{-10}$	$1.0 \times 10^6$	$2.7 \times 10^{-5}$
Bi-210		$1.0 \times 10^3$	$2.7 \times 10^{-8}$	$1.0 \times 10^6$	$2.7 \times 10^{-5}$
Bi-210m		$1.0 \times 10^1$	$2.7 \times 10^{-10}$	$1.0 \times 10^5$	$2.7 \times 10^{-6}$
Bi-212 (b)		$1.0 \times 10^1$	$2.7 \times 10^{-10}$	$1.0 \times 10^5$	$2.7 \times 10^{-6}$

Symbol of radionuclide	Element and atomic number	Activity concentration for exempt material (Bq/g)	Activity concentration for exempt material (Ci/g)	Activity limit for exempt consignment (Bq)	Activity limit for exempt consignment (Ci)
Bk-247	Berkelium (97)	1.0	$2.7 \times 10^{-11}$	$1.0 \times 10^4$	$2.7 \times 10^{-7}$
Bk-249		$1.0 \times 10^3$	$2.7 \times 10^{-8}$	$1.0 \times 10^6$	$2.7 \times 10^{-5}$
Br-76	Bromine (35)	$1.0 \times 10^1$	$2.7 \times 10^{-10}$	$1.0 \times 10^5$	$2.7 \times 10^{-6}$
Br-77		$1.0 \times 10^2$	$2.7 \times 10^{-9}$	$1.0 \times 10^6$	$2.7 \times 10^{-5}$
Br-82		$1.0 \times 10^1$	$2.7 \times 10^{-10}$	$1.0 \times 10^6$	$2.7 \times 10^{-5}$
C-11	Carbon (6)	$1.0 \times 10^1$	$2.7 \times 10^{-10}$	$1.0 \times 10^6$	$2.7 \times 10^{-5}$
C-14		$1.0 \times 10^4$	$2.7 \times 10^{-7}$	$1.0 \times 10^7$	$2.7 \times 10^{-4}$
Ca-41	Calcium (20)	$1.0 \times 10^5$	$2.7 \times 10^{-6}$	$1.0 \times 10^7$	$2.7 \times 10^{-4}$
Ca-45		$1.0 \times 10^4$	$2.7 \times 10^{-7}$	$1.0 \times 10^7$	$2.7 \times 10^{-4}$
Ca-47		$1.0 \times 10^1$	$2.7 \times 10^{-10}$	$1.0 \times 10^6$	$2.7 \times 10^{-5}$
Cd-109	Cadmium (48)	$1.0 \times 10^4$	$2.7 \times 10^{-7}$	$1.0 \times 10^6$	$2.7 \times 10^{-5}$
Cd-113m		$1.0 \times 10^3$	$2.7 \times 10^{-8}$	$1.0 \times 10^6$	$2.7 \times 10^{-5}$
Cd-115		$1.0 \times 10^2$	$2.7 \times 10^{-9}$	$1.0 \times 10^6$	$2.7 \times 10^{-5}$
Cd-115m		$1.0 \times 10^3$	$2.7 \times 10^{-8}$	$1.0 \times 10^6$	$2.7 \times 10^{-5}$
Ce-139	Cerium (58)	$1.0 \times 10^2$	$2.7 \times 10^{-9}$	$1.0 \times 10^6$	$2.7 \times 10^{-5}$
Ce-141		$1.0 \times 10^2$	$2.7 \times 10^{-9}$	$1.0 \times 10^7$	$2.7 \times 10^{-4}$
Ce-143		$1.0 \times 10^2$	$2.7 \times 10^{-9}$	$1.0 \times 10^6$	$2.7 \times 10^{-5}$
Ce-144 (b)		$1.0 \times 10^2$	$2.7 \times 10^{-9}$	$1.0 \times 10^5$	$2.7 \times 10^{-6}$
Cf-248	Californium (98)	$1.0 \times 10^1$	$2.7 \times 10^{-10}$	$1.0 \times 10^4$	$2.7 \times 10^{-7}$
Cf-249		1.0	$2.7 \times 10^{-11}$	$1.0 \times 10^3$	$2.7 \times 10^{-8}$

Symbol of radionuclide	Element and atomic number	Activity concentration for exempt material (Bq/g)	Activity concentration for exempt material (Ci/g)	Activity limit for exempt consignment (Bq)	Activity limit for exempt consignment (Ci)
Cf-250		1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>4</sup>	2.7X10 <sup>-7</sup>
Cf-251		1.0	2.7X10 <sup>-11</sup>	1.0X10 <sup>3</sup>	2.7X10 <sup>-8</sup>
Cf-252		1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>4</sup>	2.7X10 <sup>-7</sup>
Cf-253		1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>5</sup>	2.7X10 <sup>-6</sup>
Cf-254		1.0	2.7X10 <sup>-11</sup>	1.0X10 <sup>3</sup>	2.7X10 <sup>-8</sup>
Cl-36	Chlorine (17)	1.0X10 <sup>4</sup>	2.7X10 <sup>-7</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Cl-38		1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>5</sup>	2.7X10 <sup>-6</sup>
Cm-240	Curium (96)	1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>5</sup>	2.7X10 <sup>-6</sup>
Cm-241		1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Cm-242		1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>5</sup>	2.7X10 <sup>-6</sup>
Cm-243		1.0	2.7X10 <sup>-11</sup>	1.0X10 <sup>4</sup>	2.7X10 <sup>-7</sup>
Cm-244		1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>4</sup>	2.7X10 <sup>-7</sup>
Cm-245		1.0	2.7X10 <sup>-11</sup>	1.0X10 <sup>3</sup>	2.7X10 <sup>-8</sup>
Cm-246		1.0	2.7X10 <sup>-11</sup>	1.0X10 <sup>3</sup>	2.7X10 <sup>-8</sup>
Cm-247		1.0	2.7X10 <sup>-11</sup>	1.0X10 <sup>4</sup>	2.7X10 <sup>-7</sup>
Cm-248		1.0	2.7X10 <sup>-11</sup>	1.0X10 <sup>3</sup>	2.7X10 <sup>-8</sup>
Co-55	Cobalt (27)	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Co-56		1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>5</sup>	2.7X10 <sup>-6</sup>
Co-57		1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Co-58		1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>

Symbol of radionuclide	Element and atomic number	Activity concentration for exempt material (Bq/g)	Activity concentration for exempt material (Ci/g)	Activity limit for exempt consignment (Bq)	Activity limit for exempt consignment (Ci)
Co-58m		1.0X10 <sup>4</sup>	2.7X10 <sup>-7</sup>	1.0X10 <sup>7</sup>	2.7X10 <sup>-4</sup>
Co-60		1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>5</sup>	2.7X10 <sup>-6</sup>
Cr-51	Chromium (24)	1.0X10 <sup>3</sup>	2.7X10 <sup>-8</sup>	1.0X10 <sup>7</sup>	2.7X10 <sup>-4</sup>
Cs-129	Cesium (55)	1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>5</sup>	2.7X10 <sup>-6</sup>
Cs-131		1.0X10 <sup>3</sup>	2.7X10 <sup>-8</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Cs-132		1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>5</sup>	2.7X10 <sup>-6</sup>
Cs-134		1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>4</sup>	2.7X10 <sup>-7</sup>
Cs-134m		1.0X10 <sup>3</sup>	2.7X10 <sup>-8</sup>	1.0X10 <sup>5</sup>	2.7X10 <sup>-6</sup>
Cs-135		1.0X10 <sup>4</sup>	2.7X10 <sup>-7</sup>	1.0X10 <sup>7</sup>	2.7X10 <sup>-4</sup>
Cs-136		1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>5</sup>	2.7X10 <sup>-6</sup>
Cs-137 (b)		1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>4</sup>	2.7X10 <sup>-7</sup>
Cu-64	Copper (29)	1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Cu-67		1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Dy-159	Dysprosium (66)	1.0X10 <sup>3</sup>	2.7X10 <sup>-8</sup>	1.0X10 <sup>7</sup>	2.7X10 <sup>-4</sup>
Dy-165		1.0X10 <sup>3</sup>	2.7X10 <sup>-8</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Dy-166		1.0X10 <sup>3</sup>	2.7X10 <sup>-8</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Er-169	Erbium (68)	1.0X10 <sup>4</sup>	2.7X10 <sup>-7</sup>	1.0X10 <sup>7</sup>	2.7X10 <sup>-4</sup>
Er-171		1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Eu-147	Europium (63)	1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Eu-148		1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>

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Eu-149		1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>7</sup>	2.7X10 <sup>-4</sup>
Eu-150 (short lived)		1.0X10 <sup>3</sup>	2.7X10 <sup>-8</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Eu-150 (long lived)		1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Eu-152		1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Eu-152m		1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Eu-154		1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Eu-155		1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>7</sup>	2.7X10 <sup>-4</sup>
Eu-156		1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
F-18	Fluorine (9)	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Fe-52	Iron (26)	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Fe-55		1.0X10 <sup>4</sup>	2.7X10 <sup>-7</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Fe-59		1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Fe-60		1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>5</sup>	2.7X10 <sup>-6</sup>
Ga-67	Gallium (31)	1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Ga-68		1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>5</sup>	2.7X10 <sup>-6</sup>
Ga-72		1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>5</sup>	2.7X10 <sup>-6</sup>
Gd-146	Gadolinium (64)	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Gd-148		1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>4</sup>	2.7X10 <sup>-7</sup>
Gd-153		1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>7</sup>	2.7X10 <sup>-4</sup>
Gd-159		1.0X10 <sup>3</sup>	2.7X10 <sup>-8</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>

Symbol of radionuclide	Element and atomic number	Activity concentration for exempt material (Bq/g)	Activity concentration for exempt material (Ci/g)	Activity limit for exempt consignment (Bq)	Activity limit for exempt consignment (Ci)
Ge-68	Germanium (32)	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>5</sup>	2.7X10 <sup>-6</sup>
Ge-71		1.0X10 <sup>4</sup>	2.7X10 <sup>-7</sup>	1.0X10 <sup>8</sup>	2.7X10 <sup>-3</sup>
Ge-77		1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>5</sup>	2.7X10 <sup>-6</sup>
Hf-172	Hafnium (72)	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Hf-175		1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Hf-181		1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Hf-182		1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Hg-194	Mercury (80)	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Hg-195m		1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Hg-197		1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>7</sup>	2.7X10 <sup>-4</sup>
Hg-197m		1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Hg-203		1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>5</sup>	2.7X10 <sup>-6</sup>
Ho-166	Holmium (67)	1.0X10 <sup>3</sup>	2.7X10 <sup>-8</sup>	1.0X10 <sup>5</sup>	2.7X10 <sup>-6</sup>
Ho-166m		1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
I-123	Iodine (53)	1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>7</sup>	2.7X10 <sup>-4</sup>
I-124		1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
I-125		1.0X10 <sup>3</sup>	2.7X10 <sup>-8</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
I-126		1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
I-129		1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>5</sup>	2.7X10 <sup>-6</sup>
I-131		1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>

Symbol of radionuclide	Element and atomic number	Activity concentration for exempt material (Bq/g)	Activity concentration for exempt material (Ci/g)	Activity limit for exempt consignment (Bq)	Activity limit for exempt consignment (Ci)
I-132		1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>5</sup>	2.7X10 <sup>-6</sup>
I-133		1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
I-134		1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>5</sup>	2.7X10 <sup>-6</sup>
I-135		1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
In-111	Indium (49)	1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
In-113m		1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
In-114m		1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
In-115m		1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Ir-189	Iridium (77)	1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>7</sup>	2.7X10 <sup>-4</sup>
Ir-190		1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Ir-192		1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>4</sup>	2.7X10 <sup>-7</sup>
Ir-194		1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>5</sup>	2.7X10 <sup>-6</sup>
K-40	Potassium (19)	1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
K-42		1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
K-43		1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Kr-79	Krypton (36)	1.0X10 <sup>3</sup>	2.7X10 <sup>-8</sup>	1.0X10 <sup>5</sup>	2.7X10 <sup>-6</sup>
Kr-81		1.0X10 <sup>4</sup>	2.7X10 <sup>-7</sup>	1.0X10 <sup>7</sup>	2.7X10 <sup>-4</sup>
Kr-85		1.0X10 <sup>5</sup>	2.7X10 <sup>-6</sup>	1.0X10 <sup>4</sup>	2.7X10 <sup>-7</sup>
Kr-85m		1.0X10 <sup>3</sup>	2.7X10 <sup>-8</sup>	1.0X10 <sup>10</sup>	2.7X10 <sup>-1</sup>
Kr-87		1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>9</sup>	2.7X10 <sup>-2</sup>



Symbol of radionuclide	Element and atomic number	Activity concentration for exempt material (Bq/g)	Activity concentration for exempt material (Ci/g)	Activity limit for exempt consignment (Bq)	Activity limit for exempt consignment (Ci)
La-137	Lanthanum (57)	1.0X10 <sup>3</sup>	2.7X10 <sup>-8</sup>	1.0X10 <sup>7</sup>	2.7X10 <sup>-4</sup>
La-140		1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>5</sup>	2.7X10 <sup>-6</sup>
Lu-172	Lutetium (71)	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Lu-173		1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>7</sup>	2.7X10 <sup>-4</sup>
Lu-174		1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>7</sup>	2.7X10 <sup>-4</sup>
Lu-174m		1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>7</sup>	2.7X10 <sup>-4</sup>
Lu-177		1.0X10 <sup>3</sup>	2.7X10 <sup>-8</sup>	1.0X10 <sup>7</sup>	2.7X10 <sup>-4</sup>
Mg-28	Magnesium (12)	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>5</sup>	2.7X10 <sup>-6</sup>
Mn-52	Manganese (25)	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>5</sup>	2.7X10 <sup>-6</sup>
Mn-53		1.0X10 <sup>4</sup>	2.7X10 <sup>-7</sup>	1.0X10 <sup>9</sup>	2.7X10 <sup>-2</sup>
Mn-54		1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Mn-56		1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>5</sup>	2.7X10 <sup>-6</sup>
Mo-93	Molybdenum (42)	1.0X10 <sup>3</sup>	2.7X10 <sup>-8</sup>	1.0X10 <sup>8</sup>	2.7X10 <sup>-3</sup>
Mo-99		1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
N-13	Nitrogen (7)	1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>9</sup>	2.7X10 <sup>-2</sup>
Na-22	Sodium (11)	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Na-24		1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>5</sup>	2.7X10 <sup>-6</sup>
Nb-93m	Niobium (41)	1.0X10 <sup>4</sup>	2.7X10 <sup>-7</sup>	1.0X10 <sup>7</sup>	2.7X10 <sup>-4</sup>
Nb-94		1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Nb-95		1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>

Symbol of radionuclide	Element and atomic number	Activity concentration for exempt material (Bq/g)	Activity concentration for exempt material (Ci/g)	Activity limit for exempt consignment (Bq)	Activity limit for exempt consignment (Ci)
Nb-97		1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Nd-147	Neodymium (60)	1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Nd-149		1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Ni-59	Nickel (28)	1.0X10 <sup>4</sup>	2.7X10 <sup>-7</sup>	1.0X10 <sup>8</sup>	2.7X10 <sup>-3</sup>
Ni-63		1.0X10 <sup>5</sup>	2.7X10 <sup>-6</sup>	1.0X10 <sup>8</sup>	2.7X10 <sup>-3</sup>
Ni-65		1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Np-235	Neptunium (93)	1.0X10 <sup>3</sup>	2.7X10 <sup>-8</sup>	1.0X10 <sup>7</sup>	2.7X10 <sup>-4</sup>
Np-236 (short-lived)		1.0X10 <sup>3</sup>	2.7X10 <sup>-8</sup>	1.0X10 <sup>7</sup>	2.7X10 <sup>-4</sup>
Np-236 (long-lived)		1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>5</sup>	2.7X10 <sup>-6</sup>
Np-237 (b)		1.0	2.7X10 <sup>-11</sup>	1.0X10 <sup>3</sup>	2.7X10 <sup>-8</sup>
Np-239		1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>7</sup>	2.7X10 <sup>-4</sup>
Os-185	Osmium (76)	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Os-191		1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>7</sup>	2.7X10 <sup>-4</sup>
Os-191m		1.0X10 <sup>3</sup>	2.7X10 <sup>-8</sup>	1.0X10 <sup>7</sup>	2.7X10 <sup>-4</sup>
Os-193		1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Os-194		1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>5</sup>	2.7X10 <sup>-6</sup>
P-32	Phosphorus (15)	1.0X10 <sup>3</sup>	2.7X10 <sup>-8</sup>	1.0X10 <sup>5</sup>	2.7X10 <sup>-6</sup>
P-33		1.0X10 <sup>5</sup>	2.7X10 <sup>-6</sup>	1.0X10 <sup>8</sup>	2.7X10 <sup>-3</sup>
Pa-230	Protactinium (91)	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Pa-231		1.0	2.7X10 <sup>-11</sup>	1.0X10 <sup>3</sup>	2.7X10 <sup>-8</sup>

Symbol of radionuclide	Element and atomic number	Activity concentration for exempt material (Bq/g)	Activity concentration for exempt material (Ci/g)	Activity limit for exempt consignment (Bq)	Activity limit for exempt consignment (Ci)
Pa-233		1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>7</sup>	2.7X10 <sup>-4</sup>
Pb-201	Lead (82)	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Pb-202		1.0X10 <sup>3</sup>	2.7X10 <sup>-8</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Pb-203		1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Pb-205		1.0X10 <sup>4</sup>	2.7X10 <sup>-7</sup>	1.0X10 <sup>7</sup>	2.7X10 <sup>-4</sup>
Pb-210 (b)		1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>4</sup>	2.7X10 <sup>-7</sup>
Pb-212 (b)		1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>5</sup>	2.7X10 <sup>-6</sup>
Pd-103	Palladium (46)	1.0X10 <sup>3</sup>	2.7X10 <sup>-8</sup>	1.0X10 <sup>8</sup>	2.7X10 <sup>-3</sup>
Pd-107		1.0X10 <sup>5</sup>	2.7X10 <sup>-6</sup>	1.0X10 <sup>8</sup>	2.7X10 <sup>-3</sup>
Pd-109		1.0X10 <sup>3</sup>	2.7X10 <sup>-8</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Pm-143	Promethium (61)	1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Pm-144		1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Pm-145		1.0X10 <sup>3</sup>	2.7X10 <sup>-8</sup>	1.0X10 <sup>7</sup>	2.7X10 <sup>-4</sup>
Pm-147		1.0X10 <sup>4</sup>	2.7X10 <sup>-7</sup>	1.0X10 <sup>7</sup>	2.7X10 <sup>-4</sup>
Pm-148m		1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Pm-149		1.0X10 <sup>3</sup>	2.7X10 <sup>-8</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Pm-151		1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Po-210	Polonium (84)	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>4</sup>	2.7X10 <sup>-7</sup>
Pr-142	Praseodymium (59)	1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>5</sup>	2.7X10 <sup>-6</sup>
Pr-143		1.0X10 <sup>4</sup>	2.7X10 <sup>-7</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>

Symbol of radionuclide	Element and atomic number	Activity concentration for exempt material (Bq/g)	Activity concentration for exempt material (Ci/g)	Activity limit for exempt consignment (Bq)	Activity limit for exempt consignment (Ci)
Pt-188	Platinum (78)	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Pt-191		1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Pt-193		1.0X10 <sup>4</sup>	2.7X10 <sup>-7</sup>	1.0X10 <sup>7</sup>	2.7X10 <sup>-4</sup>
Pt-193m		1.0X10 <sup>3</sup>	2.7X10 <sup>-8</sup>	1.0X10 <sup>7</sup>	2.7X10 <sup>-4</sup>
Pt-195m		1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Pt-197		1.0X10 <sup>3</sup>	2.7X10 <sup>-8</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Pt-197m		1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Pu-236	Plutonium (94)	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>4</sup>	2.7X10 <sup>-7</sup>
Pu-237		1.0X10 <sup>3</sup>	2.7X10 <sup>-8</sup>	1.0X10 <sup>7</sup>	2.7X10 <sup>-4</sup>
Pu-238		1.0	2.7X10 <sup>-11</sup>	1.0X10 <sup>4</sup>	2.7X10 <sup>-7</sup>
Pu-239		1.0	2.7X10 <sup>-11</sup>	1.0X10 <sup>4</sup>	2.7X10 <sup>-7</sup>
Pu-240		1.0	2.7X10 <sup>-11</sup>	1.0X10 <sup>3</sup>	2.7X10 <sup>-8</sup>
Pu-241		1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>5</sup>	2.7X10 <sup>-6</sup>
Pu-242		1.0	2.7X10 <sup>-11</sup>	1.0X10 <sup>4</sup>	2.7X10 <sup>-7</sup>
Pu-244		1.0	2.7X10 <sup>-11</sup>	1.0X10 <sup>4</sup>	2.7X10 <sup>-7</sup>
Ra-223 (b)	Radium (88)	1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>5</sup>	2.7X10 <sup>-6</sup>
Ra-224 (b)		1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>5</sup>	2.7X10 <sup>-6</sup>
Ra-225		1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>5</sup>	2.7X10 <sup>-6</sup>
Ra-226 (b)		1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>4</sup>	2.7X10 <sup>-7</sup>
Ra-228 (b)		1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>5</sup>	2.7X10 <sup>-6</sup>

Symbol of radionuclide	Element and atomic number	Activity concentration for exempt material (Bq/g)	Activity concentration for exempt material (Ci/g)	Activity limit for exempt consignment (Bq)	Activity limit for exempt consignment (Ci)
Rb-81	Rubidium (37)	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Rb-83		1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Rb-84		1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Rb-86		1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>5</sup>	2.7X10 <sup>-6</sup>
Rb-87		1.0X10 <sup>4</sup>	2.7X10 <sup>-7</sup>	1.0X10 <sup>7</sup>	2.7X10 <sup>-4</sup>
Rb(nat)		1.0X10 <sup>4</sup>	2.7X10 <sup>-7</sup>	1.0X10 <sup>7</sup>	2.7X10 <sup>-4</sup>
Re-184	Rhenium (75)	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Re-184m		1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Re-186		1.0X10 <sup>3</sup>	2.7X10 <sup>-8</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Re-187		1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>	1.0X10 <sup>9</sup>	2.7X10 <sup>-2</sup>
Re-188		1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>5</sup>	2.7X10 <sup>-6</sup>
Re-189		1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Re(nat)		1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>	1.0X10 <sup>9</sup>	2.7X10 <sup>-2</sup>
Rh-99	Rhodium (45)	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Rh-101		1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>7</sup>	2.7X10 <sup>-4</sup>
Rh-102		1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Rh-102m		1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Rh-103m		1.0X10 <sup>4</sup>	2.7X10 <sup>-7</sup>	1.0X10 <sup>8</sup>	2.7X10 <sup>-3</sup>
Rh-105		1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>7</sup>	2.7X10 <sup>-4</sup>
Rn-222 (b)	Radon (86)	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>8</sup>	2.7X10 <sup>-3</sup>

Symbol of radionuclide	Element and atomic number	Activity concentration for exempt material (Bq/g)	Activity concentration for exempt material (Ci/g)	Activity limit for exempt consignment (Bq)	Activity limit for exempt consignment (Ci)
Ru-97	Ruthenium (44)	1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>7</sup>	2.7X10 <sup>-4</sup>
Ru-103		1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Ru-105		1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Ru-106 (b)		1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>5</sup>	2.7X10 <sup>-6</sup>
S-35	Sulfur (16)	1.0X10 <sup>5</sup>	2.7X10 <sup>-6</sup>	1.0X10 <sup>8</sup>	2.7X10 <sup>-3</sup>
Sb-122	Antimony (51)	1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>4</sup>	2.7X10 <sup>-7</sup>
Sb-124		1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Sb-125		1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Sb-126		1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>5</sup>	2.7X10 <sup>-6</sup>
Sc-44	Scandium (21)	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>5</sup>	2.7X10 <sup>-6</sup>
Sc-46		1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Sc-47		1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Sc-48		1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>5</sup>	2.7X10 <sup>-6</sup>
Se-75	Selenium (34)	1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Se-79		1.0X10 <sup>4</sup>	2.7X10 <sup>-7</sup>	1.0X10 <sup>7</sup>	2.7X10 <sup>-4</sup>
Si-31	Silicon (14)	1.0X10 <sup>3</sup>	2.7X10 <sup>-8</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Si-32		1.0X10 <sup>3</sup>	2.7X10 <sup>-8</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Sm-145	Samarium (62)	1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>7</sup>	2.7X10 <sup>-4</sup>
Sm-147		1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>4</sup>	2.7X10 <sup>-7</sup>
Sm-151		1.0X10 <sup>4</sup>	2.7X10 <sup>-7</sup>	1.0X10 <sup>8</sup>	2.7X10 <sup>-3</sup>

Symbol of radionuclide	Element and atomic number	Activity concentration for exempt material (Bq/g)	Activity concentration for exempt material (Ci/g)	Activity limit for exempt consignment (Bq)	Activity limit for exempt consignment (Ci)
Sm-153		$1.0 \times 10^2$	$2.7 \times 10^{-9}$	$1.0 \times 10^6$	$2.7 \times 10^{-5}$
Sn-113	Tin (50)	$1.0 \times 10^3$	$2.7 \times 10^{-8}$	$1.0 \times 10^7$	$2.7 \times 10^{-4}$
Sn-117m		$1.0 \times 10^2$	$2.7 \times 10^{-9}$	$1.0 \times 10^6$	$2.7 \times 10^{-5}$
Sn-119m		$1.0 \times 10^3$	$2.7 \times 10^{-8}$	$1.0 \times 10^7$	$2.7 \times 10^{-4}$
Sn-121m		$1.0 \times 10^3$	$2.7 \times 10^{-8}$	$1.0 \times 10^7$	$2.7 \times 10^{-4}$
Sn-123		$1.0 \times 10^3$	$2.7 \times 10^{-8}$	$1.0 \times 10^6$	$2.7 \times 10^{-5}$
Sn-125		$1.0 \times 10^2$	$2.7 \times 10^{-9}$	$1.0 \times 10^5$	$2.7 \times 10^{-6}$
Sn-126		$1.0 \times 10^1$	$2.7 \times 10^{-10}$	$1.0 \times 10^5$	$2.7 \times 10^{-6}$
Sr-82	Strontium (38)	$1.0 \times 10^1$	$2.7 \times 10^{-10}$	$1.0 \times 10^5$	$2.7 \times 10^{-6}$
Sr-85		$1.0 \times 10^2$	$2.7 \times 10^{-9}$	$1.0 \times 10^6$	$2.7 \times 10^{-5}$
Sr-85m		$1.0 \times 10^2$	$2.7 \times 10^{-9}$	$1.0 \times 10^7$	$2.7 \times 10^{-4}$
Sr-87m		$1.0 \times 10^2$	$2.7 \times 10^{-9}$	$1.0 \times 10^6$	$2.7 \times 10^{-5}$
Sr-89		$1.0 \times 10^3$	$2.7 \times 10^{-8}$	$1.0 \times 10^6$	$2.7 \times 10^{-5}$
Sr-90 (b)		$1.0 \times 10^2$	$2.7 \times 10^{-9}$	$1.0 \times 10^4$	$2.7 \times 10^{-7}$
Sr-91		$1.0 \times 10^1$	$2.7 \times 10^{-10}$	$1.0 \times 10^5$	$2.7 \times 10^{-6}$
Sr-92		$1.0 \times 10^1$	$2.7 \times 10^{-10}$	$1.0 \times 10^6$	$2.7 \times 10^{-5}$
T(H-3)	Tritium (1)	$1.0 \times 10^6$	$2.7 \times 10^{-5}$	$1.0 \times 10^9$	$2.7 \times 10^{-2}$
Ta-178 (long-lived)	Tantalum (73)	$1.0 \times 10^1$	$2.7 \times 10^{-10}$	$1.0 \times 10^6$	$2.7 \times 10^{-5}$
Ta-179		$1.0 \times 10^3$	$2.7 \times 10^{-8}$	$1.0 \times 10^7$	$2.7 \times 10^{-4}$
Ta-182		$1.0 \times 10^1$	$2.7 \times 10^{-10}$	$1.0 \times 10^4$	$2.7 \times 10^{-7}$

Symbol of radionuclide	Element and atomic number	Activity concentration for exempt material (Bq/g)	Activity concentration for exempt material (Ci/g)	Activity limit for exempt consignment (Bq)	Activity limit for exempt consignment (Ci)
Tb-157	Terbium (65)	1.0X10 <sup>4</sup>	2.7X10 <sup>-7</sup>	1.0X10 <sup>7</sup>	2.7X10 <sup>-4</sup>
Tb-158		1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Tb-160		1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Tc-95m	Technetium (43)	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Tc-96		1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Tc-96m		1.0X10 <sup>3</sup>	2.7X10 <sup>-8</sup>	1.0X10 <sup>7</sup>	2.7X10 <sup>-4</sup>
Tc-97		1.0X10 <sup>3</sup>	2.7X10 <sup>-8</sup>	1.0X10 <sup>8</sup>	2.7X10 <sup>-3</sup>
Tc-97m		1.0X10 <sup>3</sup>	2.7X10 <sup>-8</sup>	1.0X10 <sup>7</sup>	2.7X10 <sup>-4</sup>
Tc-98		1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Tc-99		1.0X10 <sup>4</sup>	2.7X10 <sup>-7</sup>	1.0X10 <sup>7</sup>	2.7X10 <sup>-4</sup>
Tc-99m		1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>7</sup>	2.7X10 <sup>-4</sup>
Te-121	Tellurium (52)	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Te-121m		1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Te-123m		1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>7</sup>	2.7X10 <sup>-4</sup>
Te-125m		1.0X10 <sup>3</sup>	2.7X10 <sup>-8</sup>	1.0X10 <sup>7</sup>	2.7X10 <sup>-4</sup>
Te-127		1.0X10 <sup>3</sup>	2.7X10 <sup>-8</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Te-127m		1.0X10 <sup>3</sup>	2.7X10 <sup>-8</sup>	1.0X10 <sup>7</sup>	2.7X10 <sup>-4</sup>
Te-129		1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Te-129m		1.0X10 <sup>3</sup>	2.7X10 <sup>-8</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Te-131m		1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>



Symbol of radionuclide	Element and atomic number	Activity concentration for exempt material (Bq/g)	Activity concentration for exempt material (Ci/g)	Activity limit for exempt consignment (Bq)	Activity limit for exempt consignment (Ci)
Te-132		1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>7</sup>	2.7X10 <sup>-4</sup>
Th-227	Thorium (90)	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>4</sup>	2.7X10 <sup>-7</sup>
Th-228 (b)		1.0	2.7X10 <sup>-11</sup>	1.0X10 <sup>4</sup>	2.7X10 <sup>-7</sup>
Th-229 (b)		1.0	2.7X10 <sup>-11</sup>	1.0X10 <sup>3</sup>	2.7X10 <sup>-8</sup>
Th-230		1.0	2.7X10 <sup>-11</sup>	1.0X10 <sup>4</sup>	2.7X10 <sup>-7</sup>
Th-231		1.0X10 <sup>3</sup>	2.7X10 <sup>-8</sup>	1.0X10 <sup>7</sup>	2.7X10 <sup>-4</sup>
Th-232		1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>4</sup>	2.7X10 <sup>-7</sup>
Th-234 (b)		1.0X10 <sup>3</sup>	2.7X10 <sup>-8</sup>	1.0X10 <sup>5</sup>	2.7X10 <sup>-6</sup>
Th (nat) (b)		1.0	2.7X10 <sup>-11</sup>	1.0X10 <sup>3</sup>	2.7X10 <sup>-8</sup>
Ti-44	Titanium (22)	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>5</sup>	2.7X10 <sup>-6</sup>
Tl-200	Thallium (81)	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Tl-201		1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Tl-202		1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Tl-204		1.0X10 <sup>4</sup>	2.7X10 <sup>-7</sup>	1.0X10 <sup>4</sup>	2.7X10 <sup>-7</sup>
Tm-167	Thulium (69)	1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Tm-170		1.0X10 <sup>3</sup>	2.7X10 <sup>-8</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Tm-171		1.0X10 <sup>4</sup>	2.7X10 <sup>-7</sup>	1.0X10 <sup>8</sup>	2.7X10 <sup>-3</sup>
U-230 (fast lung absorption) (b),(d)	Uranium (92)	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>5</sup>	2.7X10 <sup>-6</sup>
U-230 (medium lung absorption) (e)		1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>4</sup>	2.7X10 <sup>-7</sup>

Symbol of radionuclide	Element and atomic number	Activity concentration for exempt material (Bq/g)	Activity concentration for exempt material (Ci/g)	Activity limit for exempt consignment (Bq)	Activity limit for exempt consignment (Ci)
U-230 (slow lung absorption) (f)		$1.0 \times 10^1$	$2.7 \times 10^{-10}$	$1.0 \times 10^4$	$2.7 \times 10^{-7}$
U-232 (fast lung absorption) (b),(d)		1.0	$2.7 \times 10^{-11}$	$1.0 \times 10^3$	$2.7 \times 10^{-8}$
U-232 (medium lung absorption) (e)		$1.0 \times 10^1$	$2.7 \times 10^{-10}$	$1.0 \times 10^4$	$2.7 \times 10^{-7}$
U-232 (slow lung absorption) (f)		$1.0 \times 10^1$	$2.7 \times 10^{-10}$	$1.0 \times 10^4$	$2.7 \times 10^{-7}$
U-233 (fast lung absorption) (d)		$1.0 \times 10^1$	$2.7 \times 10^{-10}$	$1.0 \times 10^4$	$2.7 \times 10^{-7}$
U-233 (medium lung absorption) (e)		$1.0 \times 10^2$	$2.7 \times 10^{-9}$	$1.0 \times 10^5$	$2.7 \times 10^{-6}$
U-233 (slow lung absorption) (f)		$1.0 \times 10^1$	$2.7 \times 10^{-10}$	$1.0 \times 10^5$	$2.7 \times 10^{-6}$
U-234 (fast lung absorption) (d)		$1.0 \times 10^1$	$2.7 \times 10^{-10}$	$1.0 \times 10^4$	$2.7 \times 10^{-7}$
U-234 (medium lung absorption) (e)		$1.0 \times 10^2$	$2.7 \times 10^{-9}$	$1.0 \times 10^5$	$2.7 \times 10^{-6}$
U-234 (slow lung absorption) (f)		$1.0 \times 10^1$	$2.7 \times 10^{-10}$	$1.0 \times 10^5$	$2.7 \times 10^{-6}$
U-235 (all lung absorption types) (b),(d),(e),(f)		$1.0 \times 10^1$	$2.7 \times 10^{-10}$	$1.0 \times 10^4$	$2.7 \times 10^{-7}$

Symbol of radionuclide	Element and atomic number	Activity concentration for exempt material (Bq/g)	Activity concentration for exempt material (Ci/g)	Activity limit for exempt consignment (Bq)	Activity limit for exempt consignment (Ci)
U-236 (fast lung absorption) (d)		1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>4</sup>	2.7X10 <sup>-7</sup>
U-236 (medium lung absorption) (e)		1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>5</sup>	2.7X10 <sup>-6</sup>
U-236 (slow lung absorption) (f)		1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>4</sup>	2.7X10 <sup>-7</sup>
U-238 (all lung absorption types) (b),(d),(e),(f)		1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>4</sup>	2.7X10 <sup>-7</sup>
U (nat) (b)		1.0	2.7X10 <sup>-11</sup>	1.0X10 <sup>3</sup>	2.7X10 <sup>-8</sup>
U (enriched to 20% or less) (g)		1.0	2.7X10 <sup>-11</sup>	1.0X10 <sup>3</sup>	2.7X10 <sup>-8</sup>
U (dep)		1.0	2.7X10 <sup>-11</sup>	1.0X10 <sup>3</sup>	2.7X10 <sup>-8</sup>
V-48	Vanadium (23)	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>5</sup>	2.7X10 <sup>-6</sup>
V-49		1.0X10 <sup>4</sup>	2.7X10 <sup>-7</sup>	1.0X10 <sup>7</sup>	2.7X10 <sup>-4</sup>
W-178	Tungsten (74)	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
W-181		1.0X10 <sup>3</sup>	2.7X10 <sup>-8</sup>	1.0X10 <sup>7</sup>	2.7X10 <sup>-4</sup>
W-185		1.0X10 <sup>4</sup>	2.7X10 <sup>-7</sup>	1.0X10 <sup>7</sup>	2.7X10 <sup>-4</sup>
W-187		1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
W-188		1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>5</sup>	2.7X10 <sup>-6</sup>
Xe-122	Xenon (54)	1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>9</sup>	2.7X10 <sup>-2</sup>
Xe-123		1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>9</sup>	2.7X10 <sup>-2</sup>

Symbol of radionuclide	Element and atomic number	Activity concentration for exempt material (Bq/g)	Activity concentration for exempt material (Ci/g)	Activity limit for exempt consignment (Bq)	Activity limit for exempt consignment (Ci)
Xe-127		$1.0 \times 10^3$	$2.7 \times 10^{-8}$	$1.0 \times 10^5$	$2.7 \times 10^{-6}$
Xe-131m		$1.0 \times 10^4$	$2.7 \times 10^{-7}$	$1.0 \times 10^4$	$2.7 \times 10^{-7}$
Xe-133		$1.0 \times 10^3$	$2.7 \times 10^{-8}$	$1.0 \times 10^4$	$2.7 \times 10^{-7}$
Xe-135		$1.0 \times 10^3$	$2.7 \times 10^{-8}$	$1.0 \times 10^{10}$	$2.7 \times 10^{-1}$
Y-87	Yttrium (39)	$1.0 \times 10^1$	$2.7 \times 10^{-10}$	$1.0 \times 10^6$	$2.7 \times 10^{-5}$
Y-88		$1.0 \times 10^1$	$2.7 \times 10^{-10}$	$1.0 \times 10^6$	$2.7 \times 10^{-5}$
Y-90		$1.0 \times 10^3$	$2.7 \times 10^{-8}$	$1.0 \times 10^5$	$2.7 \times 10^{-6}$
Y-91		$1.0 \times 10^3$	$2.7 \times 10^{-8}$	$1.0 \times 10^6$	$2.7 \times 10^{-5}$
Y-91m		$1.0 \times 10^2$	$2.7 \times 10^{-9}$	$1.0 \times 10^6$	$2.7 \times 10^{-5}$
Y-92		$1.0 \times 10^2$	$2.7 \times 10^{-9}$	$1.0 \times 10^5$	$2.7 \times 10^{-6}$
Y-93		$1.0 \times 10^2$	$2.7 \times 10^{-9}$	$1.0 \times 10^5$	$2.7 \times 10^{-6}$
Yb-169	Ytterbium (70)	$1.0 \times 10^2$	$2.7 \times 10^{-9}$	$1.0 \times 10^7$	$2.7 \times 10^{-4}$
Yb-175		$1.0 \times 10^3$	$2.7 \times 10^{-8}$	$1.0 \times 10^7$	$2.7 \times 10^{-4}$
Zn-65	Zinc (30)	$1.0 \times 10^1$	$2.7 \times 10^{-10}$	$1.0 \times 10^6$	$2.7 \times 10^{-5}$
Zn-69		$1.0 \times 10^4$	$2.7 \times 10^{-7}$	$1.0 \times 10^6$	$2.7 \times 10^{-5}$
Zn-69m		$1.0 \times 10^2$	$2.7 \times 10^{-9}$	$1.0 \times 10^6$	$2.7 \times 10^{-5}$
Zr-88	Zirconium (40)	$1.0 \times 10^2$	$2.7 \times 10^{-9}$	$1.0 \times 10^6$	$2.7 \times 10^{-5}$
Zr-93 (b)		$1.0 \times 10^3$	$2.7 \times 10^{-8}$	$1.0 \times 10^7$	$2.7 \times 10^{-4}$
Zr-95		$1.0 \times 10^1$	$2.7 \times 10^{-10}$	$1.0 \times 10^6$	$2.7 \times 10^{-5}$
Zr-97 (b)		$1.0 \times 10^1$	$2.7 \times 10^{-10}$	$1.0 \times 10^5$	$2.7 \times 10^{-6}$

<sup>a</sup>[Reserved]

<sup>b</sup> Parent nuclides and their progeny included in secular equilibrium are listed in the following:

Sr-90	Y-90
Zr-93	Nb-93m
Zr-97	Nb-97
Ru-106	Rh-106
Cs-137	Ba-137m
Ce-144	Pr-144
Ba-140	La-140
Bi-212	Tl-208 (0.36), Po-212 (0.64)
Pb-210	Bi-210, Po-210
Pb-212	Bi-212, Tl-208 (0.36), Po-212 (0.64)
Rn-222	Po-218, Pb-214, Bi-214, Po-214
Ra-223	Rn-219, Po-215, Pb-211, Bi-211, Tl-207
Ra-224	Rn-220, Po-216, Pb-212, Bi-212, Tl-208(0.36), Po-212 (0.64)
Ra-226	Rn-222, Po-218, Pb-214, Bi-214, Po-214, Pb-210, Bi-210, Po-210
Ra-228	Ac-228
Th-228	Ra-224, Rn-220, Po-216, Pb-212, Bi-212, Tl-208 (0.36), Po-212 (0.64)
Th-229	Ra-225, Ac-225, Fr-221, At-217, Bi-213, Po-213, Pb-209
Th-nat	Ra-228, Ac-228, Th-228, Ra-224, Rn-220, Po-216, Pb-212, Bi-212, Tl-208 0.36), Po-212 (0.64)
Th-234	Pa-234m
U-230	Th-226, Ra-222, Rn-218, Po-214
U-232	Th-228, Ra-224, Rn-220, Po-216, Pb-212, Bi-212, Tl-208 (0.36), Po-212 (0.64)
U-235	Th-231
U-238	Th-234, Pa-234m
U-nat	Th-234, Pa-234m, U-234, Th-230, Ra-226, Rn-222, Po-218, Pb-214, Bi-214, Po-214, Pb-210, Bi-210, Po-210
U-240	Np-240m
Np-237	Pa-233
Am-242m	Am-242
Am-243	Np-239

<sup>c</sup>[Reserved]

<sup>d</sup> These values apply only to compounds of uranium that take the chemical form of  $\text{UF}_6$ ,  $\text{UO}_2\text{F}_2$  and  $\text{UO}_2(\text{NO}_3)_2$  in both normal and accident conditions of transport.

<sup>e</sup> These values apply only to compounds of uranium that take the chemical form of  $\text{UO}_3$ ,  $\text{UF}_4$ ,  $\text{UCl}_4$  and hexavalent compounds in both normal and accident conditions of transport.

<sup>f</sup> These values apply to all compounds of uranium other than those specified in notes (d) and (e) of this table.

<sup>g</sup> These values apply to unirradiated uranium only.