

3701:1-40-11

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## Appendix

## Exempt Quantities

Radionuclide	Kilobecquerels (kBq)	Microcuries ( $\mu$ Ci)
Antimony-122 (Sb-122)	3700	100
Antimony-124 (Sb-124)	370	10
Antimony-125 (Sb-125)	370	10
Arsenic-73 (As-73)	3700	100
Arsenic-74 (As-74)	370	10
Arsenic-76 (As-76)	370	10
Arsenic-77 (As-77)	3700	100
Barium-131 (Ba-131)	370	10
Barium-133 (Ba-133)	370	10
Barium-140 (Ba-140)	370	10
Bismuth-210 (Bi-210)	37	1
Bromine-82 (Br-82)	370	10
Cadmium-109 (Cd-109)	370	10
Cadmium-115m (Cd-115M)	370	10
Cadmium-115 (Cd-115)	3700	100
Calcium-45 (Ca-45)	370	10
Calcium-47 (Ca-47)	370	10
Carbon-14 (C-14)	3700	100
Cerium-141 (Ce-141)	3700	100
Cerium-143 (Ce-143)	3700	100
Cerium-144 (Ce-144)	37	1
Cesium-129 (Cs-129)	3700	100
Cesium-131 (Cs-131)	37000	1,000
Cesium-134m (Cs-134m)	3700	100
Cesium-134 (Cs-134)	37	1

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Radionuclide	Kilobecquerels (kBq)	Microcuries ( $\mu$ Ci)
Cesium-135 (Cs-135)	370	10
Cesium-136 (Cs-136)	370	10
Cesium-137 (Cs-137)	370	10
Chlorine-36 (Cl-36)	370	10
Chlorine-38 (Cl-38)	370	10
Chromium-51 (Cr-51)	37000	1,000
Cobalt-57 (Co-57)	3700	100
Cobalt-58m (Co-58m)	370	10
Cobalt-58 (Co-58)	370	10
Cobalt-60 (Co-60)	37	1
Copper-64 (Cu-64)	3700	100
Dysprosium-165 (Dy-165)	370	10
Dysprosium-166 (Dy-166)	3700	100
Erbium-169 (Er-169)	3700	100
Erbium-171 (Er-171)	3700	100
Europium-152 (Eu-152) 9.2 h	3700	100
Europium-152 (Eu-152) 13 yr	37	1
Europium-154 (Eu-154)	37	1
Europium-155 (Eu-155)	370	10
Fluorine-18 (F-18)	37000	1,000
Gadolinium-153 (Gd-153)	370	10
Gadolinium-159 (Gd-159)	3700	100
Gallium-67 (Ga-67)	3700	100
Gallium-72 (Ga-72)	370	10
Germanium-68 (Ge-68)	370	10
Germanium-71 (Ge71)	3700	100

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Radionuclide	Kilobecquerels (kBq)	Microcuries ( $\mu$ Ci)
Gold-195 (Au-195)	370	10
Gold-198 (Au-198)	3700	100
Gold-199 (Au-199)	3700	100
Hafnium-181 (Hf-181)	370	10
Holmium-166 (Ho-166)	3700	100
Hydrogen-3 (H-3)	37000	1,000
Indium-111 (In-111)	3700	100
Indium-113M (In-113M)	3700	100
Indium-114M (In-114M)	370	10
Indium-115M (In-115M)	3700	100
Indium-115 (In-115)	370	10
Iodine-123 (I-123)	3700	100
Iodine-125 (I-125)	37	1
Iodine-126 (I-126)	37	1
Iodine-129 (I-129)	3.7	0.1
Iodine-131 (I-131)	37	1
Iodine-132 (I-132)	370	10
Iodine-133 (I-133)	37	1
Iodine-134 (I-134)	370	10
Iodine-135 (I-135)	370	10
Iridium-192 (Ir-192)	370	10
Iridium-194 (Ir-194)	3700	100
Iron-52 (Fe-52)	370	10
Iron-55 (Fe-55)	3700	100
Iron-59 (Fe-59)	370	10
Krypton-85 (Kr-85)	3700	100

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Krypton-87 (Kr-87)	370	10
Lanthanum-140 (La-140)	370	10
Lutetium-177 (Lu-177)	3700	100
Manganese-52 (Mn-52)	370	10
Manganese-54 (Mn-54)	370	10
Manganese-56 (Mn-56)	370	10
Mercury-197m (Hg-197m)	3700	100
Mercury-197 (Hg-197)	3700	100
Mercury-203 (Hg-203)	370	10
Molybdenum-99 (Mo-99)	3700	100
Neodymium-147 (Nd-147)	3700	100
Neodymium-149 (Nd-149)	3700	100
Nickel-59 (Ni-59)	3700	100
Nickel-63 (Ni-63)	370	10
Nickel-65 (Ni-65)	3700	100
Niobium-93m (Nb-93m)	370	10
Niobium-95 (Nb-95)	370	10
Niobium-97 (Nb-97)	370	10
Osmium-185 (Os-185)	370	10
Osmium-191m (Os-191m)	3700	100
Osmium-191 (Os-191)	3700	100
Osmium-193 (Os-193)	3700	100
Palladium-103 (Pd-103)	3700	100
Palladium-109 (Pd-109)	3700	100
Phosphorus-32 (P-32)	370	10
Platinum-191 (Pt-191)	3700	100

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Platinum-193m (Pt-193m)	3700	100
Platinum-193 (Pt-193)	3700	100
Platinum-197m (Pt-197m)	3700	100
Platinum-197 (Pt-197)	3700	100
Polonium-210 (Po-210)	3.7	0.1
Potassium-42 (K-42)	370	10
Potassium-43 (K-43)	370	10
Praseodymium-142 (Pr-142)	3700	100
Praseodymium-143 (Pr-143)	3700	100
Promethium-147 (Pm-147)	370	10
Promethium-149 (Pm-149)	370	10
Radium-224, -228 (Ra-224, -228)	3.7	0.1
Rhenium-186 (Re-186)	3700	100
Rhenium-188 (Re-188)	3700	100
Rhodium-103m (Rh-103m)	3700	100
Rhodium-105 (Rh-105)	3700	100
Rubidium-81 (Rb-81)	370	10
Rubidium-86 (Rb-86)	370	10
Rubidium-87 (Rb-87)	370	10
Ruthenium-97 (Ru-97)	3700	100
Ruthenium-103 (Ru-103)	370	10
Ruthenium-105 (Ru-105)	370	10
Ruthenium-106 (Ru-106)	37	1
Samarium-151 (Sm-151)	370	10
Samarium-153 (Sm-153)	3700	100
Scandium-46 (Sc-46)	370	10

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Scandium-47 (Sc-47)	3700	100
Scandium-48 (Sc-48)	370	10
Selenium-75 (Se-75)	370	10
Silicon-31 (Si-31)	3700	100
Silver-105 (Ag-105)	370	10
Silver-110m (Ag-110m)	37	1
Silver-111 (Ag-111)	3700	100
Sodium-22 (Na-22)	370	10
Sodium-24 (Na-24)	370	10
Strontium-85 (Sr-85)	370	10
Strontium-89 (Sr-89)	37	1
Strontium-90 (Sr-90)	3.7	0.1
Strontium-91 (Sr-91)	370	10
Strontium-92 (Sr-92)	370	10
Sulphur-35 (S-35)	3700	100
Tantalum-182 (Ta-182)	370	10
Technetium-96 (Tc-96)	370	10
Technetium-97m (Tc-97m)	3700	100
Technetium-97 (Tc-97)	3700	100
Technetium-99m (Tc-99m)	3700	100
Technetium-99 (Tc-99)	370	10
Tellurium-125m (Te-125m)	370	10
Tellurium-127m (Te-127m)	370	10
Tellurium-127 (Te-127)	3700	100
Tellurium-129m (Te-129m)	370	10
Tellurium-129 (Te-129)	3700	100

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Tellurium-131m (Te-131m)	370	10
Tellurium-132 (Te-132)	370	10
Terbium-160 (Tb-160)	370	10
Thallium-200 (Tl-200)	3700	100
Thallium-201 (Tl-201)	3700	100
Thallium-202 (Tl-202)	3700	100
Thallium-204 (Tl-204)	370	10
Thulium-170 (Tm-170)	370	10
Thulium-171 (Tm-171)	370	10
Tin-113 (Sn-113)	370	10
Tin-125 (Sn-125)	370	10
Tungsten-181 (W-181)	370	10
Tungsten-185 (W-185)	370	10
Tungsten-187 (W-187)	3700	100
Vanadium-48 (V-48)	370	10
Xenon-131m (Xe-131m)	37000	1,000
Xenon-133 (Xe-133)	3700	100
Xenon-135 (Xe-135)	3700	100
Ytterbium-175 (Yb-175)	3700	100
Yttrium-87 (Y-87)	370	10
Yttrium-88 (Y-88)	370	10
Yttrium-90 (Y-90)	370	10
Yttrium-91 (Y-91)	370	10
Yttrium-92 (Y-92)	3700	100
Yttrium-93 (Y-93)	3700	100
Zinc-65 (Zn-65)	370	10

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Zinc-69m (Zn-69m)	3700	100
Zinc-69 (Zn-69)	37000	1,000
Zirconium-93 (Zr-93)	370	10
Zirconium-95 (Zr-95)	370	10
Zirconium-97 (Zr-97)	370	10
Any radioactive material not listed above other than alpha emitting radioactive material.	3.7	0.1