Status: Point in time view as at 01/06/2018. Changes to legislation: Radioactive Substances Act 1993, SCHEDULE 1A is up to date with all changes known to be in force on or before 02 July 2024. There are changes that may be brought into force at a future date. Changes that have been made appear in the content and are referenced with annotations. (See end of Document for details)

# SCHEDULES

# [<sup>F1</sup>SCHEDULE 1A

Section 1A-D

### TABLES OF NORM INDUSTRIAL ACTIVITIES, RADIONUCLIDES AND SUMMATION RULES

#### **Textual Amendments**

F1 Sch. 1A substituted for Sch. 1 (S.) (1.10.2011) by The Radioactive Substances Act 1993 Amendment (Scotland) Regulations 2011 (S.S.I. 2011/207), regs. 1(1), 7, sch.; and (N.I.) (1.10.2011) by The Radioactive Substances Act 1993 (Amendment) Regulations (Northern Ireland) 2011 (S.R. 2011/290), reg. 1, Sch.

### Table 1

## NORM INDUSTRIAL ACTIVITIES

#### Part 1

Production and use of thorium, or thorium compounds, and the production of products where thorium is deliberately added

Production and use of uranium or uranium compounds, and the production of products where uranium is deliberately added

#### PART 2

Extraction, production and use of rare earth elements and rare earth element alloys

Mining and processing of ores other than uranium ore

Production of oil and gas

Removal and management of radioactive scales and precipitates from equipment associated with industrial activities

Any industrial activity utilising phosphate ore

Manufacture of titanium dioxide pigments

The extraction and refining of zircon and manufacture of zirconium compounds

Production of tin, copper, aluminium, zinc, lead and iron and steel

Activities related to coal mine de-watering plants

Water treatment associated with provision of drinking water and the remediation of contamination from other NORM industrial activities

China clay extraction

[<sup>F2</sup>Geothermal energy production]

Changes to legislation: Radioactive Substances Act 1993, SCHEDULE 1A is up to date with all changes known to be in force on or before 02 July 2024. There are changes that may be brought into force at a future date. Changes that have been made appear in the content and are referenced with annotations. (See end of Document for details)

#### **Textual Amendments**

F2 Words in Sch. 1A inserted (N.I.) (1.6.2018) by The Radioactive Substances (Modification of Enactments) Regulations (Northern Ireland) 2018 (S.R. 2018/116), regs. 1(1), 2(8)(a)

## [<sup>F3</sup>Table 2

## CONCENTRATION OF RADIONUCLIDES: NORM INDUSTRIAL ACTIVITIES

Radionuclide	Solid or relevant liquid Concentration in becquerels per gram (Bq/g)	Any other liquid concentration in becquerels per litre (Bq/l)	Gaseous concentration in becquerels per cubic metre (Bq/m3)
U-238sec	0.5	0.1	0.001
U-238+	5	10	0.01
U-234	5	10	0.01
Th-230	10	10	0.001
Ra-226+	0.5	1	0.01
Pb-210+	5	0.1	0.01
Po-210	5	0.1	0.01
U-235sec	1	0.1	0.0001
U-235+	5	10	0.01
Pa-231	5	1	0.001
Ac-227+	1	0.1	0.001
Th-232sec	0.5	0.1	0.001
Th-232	5	10	0.001
Ra-228+	1	0.1	0.01
Th-228+	0.5	1	0.001

(ii) column 3 of Table 2 where the substance or article is any other liquid; or

(iii) column 4 of Table 2 where the substance or article is a gas.]

#### **Textual Amendments**

F3 Sch. 1A Table 2 substituted (N.I.) (1.6.2018) by The Radioactive Substances (Modification of Enactments) Regulations (Northern Ireland) 2018 (S.R. 2018/116), regs. 1(1), 2(8)(b)

Changes to legislation: Radioactive Substances Act 1993, SCHEDULE 1A is up to date with all changes known to be in force on or before 02 July 2024. There are changes that may be brought into force at a future date. Changes that have been made appear in the content and are referenced with annotations. (See end of Document for details)

# [<sup>F3</sup>Table 2

## CONCENTRATION OF RADIONUCLIDES: NORM INDUSTRIAL ACTIVITIES

Radionuclide	Solid or relevant liquid concentration in becquerels per gram (Bq/g)	Any other liquid concentration in becquerels per litre (Bq/l)	Gaseous concentration in becquerels per cubic metre (Bq/m <sup>3</sup> )
U-238sec	1	0.1	0.001
U-238+	5	10	0.01
U-234	5	10	0.01
Th-230	10	10	0.001
Ra-226+	1	1	0.1
Pb-210+	5	0.1	0.1
Po-210	5	0.1	0.1
U-235sec	1	0.1	0.0001
U-235+	5	10	0.01
Pa-231	5	1	0.001
Ac-227+	1	0.1	0.001
Th-232sec	1	0.1	0.001
Th-232	5	10	0.001
Ra228+	1	0.1	0.01
Th-228+	1	1	0.001]

# [<sup>F4</sup>Table 3

### CONCENTRATION OF RADIONUCLIDES

Radionuclide	Concentration in becquerels per gram (Bq/g)
Н-3	10 <sup>2</sup>
Be-7	10
C-14	10
F-18	1
Na-22	0.1
Na-24	0.1

Changes to legislation: Radioactive Substances Act 1993, SCHEDULE 1A is up to date with all changes known to be in force on or before 02 July 2024. There are changes that may be brought into force at a future date. Changes that have been made appear in the content and are referenced with annotations. (See end of Document for details)

P-32   10 <sup>2</sup> P-33   10 <sup>2</sup> S-35   10 <sup>2</sup> Cl-36   1     Cl-37   1     K-42   10     K-43   1     Ca-45   10 <sup>2</sup> Ca-45   10 <sup>2</sup> Ca-47   1     Sc-46   0.1     Sc-47   10     Sc-48   0.1     V-48   0.1     Cr-51   10     Mn-51   1     Mn-52   0.1     Mn-52m   1     Mn-53   10 <sup>3</sup> Mn-54   0.1     Mn-55   10 <sup>2</sup> Fe-55   1	Radionuclide	Concentration in becquerels per gram (Bq/g)
P-33   10 <sup>2</sup> S-35   10 <sup>2</sup> Cl-36   1     Cl-38   1     K-42   10     K-43   1     Ca-45   10 <sup>2</sup> Ca-47   1     Sc-46   0.1     Sc-47   10     Sc-48   0.1     V-48   0.1     Cr-51   10     Mn-52   0.1     Mn-52   0.1     Mn-53   10 <sup>3</sup> Mn-54   0.1     Mn-55   1     Fe-55   10 <sup>2</sup> Fe-55   0.1     Co-56   0.1     Co-57   1	Si-31	10 <sup>2</sup>
S-35   10 <sup>2</sup> Cl-36   1     Cl-38   1     K-42   10     K-43   1     Ca-45   10 <sup>2</sup> Ca-47   1     Sc-46   0.1     Sc-47   0     Sc-48   0.1     V-48   0.1     Cr-51   10     Mn-51   1     Mn-52   0.1     Mn-53   10 <sup>3</sup> Mn-54   0.1     Mn-55   1     Fe-55   10 <sup>2</sup> Fe-55   10 <sup>2</sup> Co-55   1     Co-56   0.1     Co-57   1	P-32	10 <sup>2</sup>
CI-36   1     CI-38   1     K-42   10     K-43   1     Ca-45   10 <sup>2</sup> Ca-47   1     Sc-46   0.1     Sc-47   10     Sc-48   0.1     V-48   0.1     Cr-51   10     Mn-51   1     Mn-52   0.1     Mn-52   0.1     Mn-53   10 <sup>3</sup> Mn-54   0.1     Mn-56   1     Fe-52+   1     Fe-55   10 <sup>2</sup> Fe-59   0.1     Co-56   0.1     Co-57   1	P-33	10 <sup>2</sup>
Cl-38   1     K-42   10     K-43   1     Ca-45   10 <sup>2</sup> Ca-47   1     Sc-46   0.1     Sc-47   10     Sc-48   0.1     V-48   0.1     Cr-51   10     Mn-51   1     Mn-52   0.1     Mn-52   0.1     Mn-53   10 <sup>3</sup> Mn-54   0.1     Mn-55   1     Fe-52+   1     Fe-55   10 <sup>2</sup> Fe-59   0.1     Co-55   1     Co-56   0.1     Co-57   1	S-35	10 <sup>2</sup>
K-42   10     K-43   1     Ca-45   10 <sup>2</sup> Ca-47   1     Sc-46   0.1     Sc-47   10     Sc-48   0.1     V-48   0.1     Cr-51   10     Mn-51   1     Mn-52   0.1     Mn-53   10 <sup>3</sup> Mn-54   0.1     Mn-55   1     Fe-52+   1     Fe-55   10 <sup>2</sup> Fe-55   10 <sup>2</sup> Fe-59   0.1     Co-55   1     Co-56   0.1     Co-57   1	Cl-36	1
K-43   1     Ca-45   10 <sup>2</sup> Ca-47   1     Sc-46   0.1     Sc-47   10     Sc-48   0.1     V-48   0.1     Cr-51   10     Mn-51   1     Mn-52   0.1     Mn-52   0.1     Mn-53   10 <sup>3</sup> Mn-54   0.1     Mn-56   1     Fe-52+   1     Fe-55   10 <sup>2</sup> Fe-59   0.1     Co-55   1     Co-56   0.1     Co-57   1	Cl-38	1
Ca-45   10 <sup>2</sup> Ca-47   1     Sc-46   0.1     Sc-47   10     Sc-48   0.1     V-48   0.1     Ct-51   10     Mn-51   1     Mn-52   0.1     Mn-52   0.1     Mn-53   10 <sup>3</sup> Mn-54   0.1     Mn-55   1     Fe-52+   1     Fe-55   10 <sup>2</sup> Fe-59   0.1     Co-55   1     Co-56   0.1     Co-57   1	K-42	10
Ca-47   1     Sc-46   0.1     Sc-47   10     Sc-48   0.1     V-48   0.1     Cr-51   10     Mn-51   1     Mn-52   0.1     Mn-52m   1     Mn-53   10 <sup>3</sup> Mn-54   0.1     Mn-56   1     Fe-52+   1     Fe-55   10 <sup>2</sup> Fe-59   0.1     Co-55   1     Co-56   0.1     Co-57   1	K-43	1
Sc-46     0.1       Sc-47     10       Sc-48     0.1       V-48     0.1       Cr-51     10       Mn-51     1       Mn-52     0.1       Mn-52     0.1       Mn-52     0.1       Mn-52     0.1       Mn-52     0.1       Mn-53     10 <sup>3</sup> Mn-54     0.1       Mn-56     1       Fe-52+     1       Fe-55     10 <sup>2</sup> Fe-55     0.1       Co-55     1       Co-56     0.1       Co-57     1	Ca-45	10 <sup>2</sup>
Sc-47   10     Sc-48   0.1     V-48   0.1     Cr-51   10     Mn-51   1     Mn-52   0.1     Mn-52m   1     Mn-53   10 <sup>3</sup> Mn-54   0.1     Mn-56   1     Fe-52+   1     Fe-55   10 <sup>2</sup> Fe-59   0.1     Co-56   0.1     Co-57   1	Ca-47	1
Sc-48   0.1     V-48   0.1     Cr-51   10     Mn-51   1     Mn-52   0.1     Mn-52m   1     Mn-53   10 <sup>3</sup> Mn-54   0.1     Mn-56   1     Fe-52+   1     Fe-55   10 <sup>2</sup> Fe-59   0.1     Co-55   1     Co-56   0.1     Co-57   1	Sc-46	0.1
V-48   0.1     Cr-51   10     Mn-51   1     Mn-52   0.1     Mn-52m   1     Mn-53   10 <sup>3</sup> Mn-54   0.1     Mn-56   1     Fe-52+   1     Fe-55   10 <sup>2</sup> Fe-59   0.1     Co-55   1     Co-56   0.1     Co-57   1	Sc-47	10
Cr-51   10     Mn-51   1     Mn-52   0.1     Mn-52m   1     Mn-53   10 <sup>3</sup> Mn-54   0.1     Mn-56   1     Fe-52+   1     Fe-55   0.1     Co-55   1     Co-55   0.1     Co-57   1	Sc-48	0.1
Mn-51   1     Mn-52   0.1     Mn-52m   1     Mn-53   10 <sup>3</sup> Mn-54   0.1     Mn-56   1     Fe-52+   1     Fe-55   10 <sup>2</sup> Fe-59   0.1     Co-55   1     Co-56   0.1     Co-57   1	V-48	0.1
Mn-52   0.1     Mn-52m   1     Mn-53   10 <sup>3</sup> Mn-54   0.1     Mn-56   1     Fe-52+   1     Fe-55   10 <sup>2</sup> Fe-59   0.1     Co-55   1     Co-56   0.1     Co-57   1	Cr-51	10
Mn-52m   1     Mn-53   10 <sup>3</sup> Mn-54   0.1     Mn-56   1     Fe-52+   1     Fe-55   10 <sup>2</sup> Fe-59   0.1     Co-55   1     Co-56   0.1     Co-57   1	Mn-51	1
Mn-53   10 <sup>3</sup> Mn-54   0.1     Mn-56   1     Fe-52+   1     Fe-55   10 <sup>2</sup> Fe-59   0.1     Co-55   1     Co-56   0.1     Co-57   1	Mn-52	0.1
Mn-54   0.1     Mn-56   1     Fe-52+   1     Fe-55   10 <sup>2</sup> Fe-59   0.1     Co-55   1     Co-56   0.1     Co-57   1	Mn-52m	1
Mn-56   1     Fe-52+   1     Fe-55   10 <sup>2</sup> Fe-59   0.1     Co-55   1     Co-56   0.1     Co-57   1	Mn-53	10 <sup>3</sup>
Fe-52+   1     Fe-55   10 <sup>2</sup> Fe-59   0.1     Co-55   1     Co-56   0.1     Co-57   1	Mn-54	0.1
Fe-55 10 <sup>2</sup> Fe-59 0.1   Co-55 1   Co-56 0.1   Co-57 1	Mn-56	1
Fe-59   0.1     Co-55   1     Co-56   0.1     Co-57   1	Fe-52+	1
Co-55 1   Co-56 0.1   Co-57 1	Fe-55	10 <sup>2</sup>
Co-56     0.1       Co-57     1	Fe-59	0.1
Co-57 1	Co-55	1
	Co-56	0.1
Co-58 0.1	Co-57	1
	Co-58	0.1

Changes to legislation: Radioactive Substances Act 1993, SCHEDULE 1A is up to date with all changes known to be in force on or before 02 July 2024. There are changes that may be brought into force at a future date. Changes that have been made appear in the content and are referenced with annotations. (See end of Document for details)

Radionuclide	Concentration in becquerels per gram (Bq/g)
Co-58m	10 <sup>2</sup>
Co-60	0.1
Co-60m	10 <sup>3</sup>
Co-61	10 <sup>2</sup>
Co-62m	1
Ni-59	10 <sup>2</sup>
Ni-63	10 <sup>2</sup>
Ni-65	1
Cu-64	10
Zn-65	1
Zn-69	10 <sup>2</sup>
Zn-69m+	1
Ga-72	1
Ge-71	10 <sup>4</sup>
As-73	10 <sup>2</sup>
As-74	1
As-76	1
As-77	10 <sup>2</sup>
Se-75	1
Br-82	0.1
Rb-86	10
Sr-85	1
Sr-85m	10
Sr-87m	10
Sr-89	10
Sr-90+	1
Sr-91+	1
Sr-92	1

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Radionuclide	Concentration in becquerels per gram (Bq/g)
Y-90	10 <sup>2</sup>
Y-91	10
Y-91m	1
Y-92	10
Y-93	10
Zr-93	10
Zr-95+	0.1
Zr-97+	1
Nb-93m	10 <sup>2</sup>
Nb-94	0.1
Nb-95	1
Nb-97+	1
Nb-98	1
Mo-90	1
Mo-93	10
Mo-99+	1
Mo-101+	1
Tc-96	0.1
Tc-96m	10
Tc-97	10
Tc-97m	10
Tc-99	1
Tc-99m	10 <sup>2</sup>
Ru-97	1
Ru-103+	1
Ru-105+	1
Ru-106+	1
Rh-103m	10 <sup>4</sup>
Rh-105	10

Changes to legislation: Radioactive Substances Act 1993, SCHEDULE 1A is up to date with all changes known to be in force on or before 02 July 2024. There are changes that may be brought into force at a future date. Changes that have been made appear in the content and are referenced with annotations. (See end of Document for details)

Radionuclide	Concentration in becquerels per gram (Bq/g)
Pd-103+	10 <sup>3</sup>
Pd-109+	10 <sup>2</sup>
Ag-105	1
Ag-108m+	0.1
Ag-110m+	0.1
Ag-111	10
Cd-109+	10
Cd-115+	1
Cd-115m+	10
In-111	1
In-113m	10
In-114m+	1
In-115m	10
Sn-113+	1
Sn-125	1
Sb-122	1
Sb-124	0.1
Sb-125+	1
Te-123m	1
Te-125m	10 <sup>2</sup>
Te-127	10 <sup>2</sup>
Te-127m+	10
Te-129	10
Te-129m+	10
Te-131	10
Te-131m+	1
Te-132+	0.1
Te-133+	1
Te-133m+	1

Changes to legislation: Radioactive Substances Act 1993, SCHEDULE 1A is up to date with all changes known to be in force on or before 02 July 2024. There are changes that may be brought into force at a future date. Changes that have been made appear in the content and are referenced with annotations. (See end of Document for details)

Radionuclide	Concentration in becquerels per gram (Bq/g)
Te-134	1
I-123	10
I-125	1
I-126	1
I-129	0.1
I-130	1
I-131+	1
I-132	1
I-133	1
I-134	1
I-135	1
Cs-129	1
Cs-131	10 <sup>3</sup>
Cs-132	1
Cs-134	0.1
Cs-134m	10 <sup>3</sup>
Cs-135	10
Cs-136	0.1
Cs-137+	1
Cs-138	1
Ba-131	1
Ba-140	0.1
La-140	0.1
Ce-139	1
Ce-141	10
Ce-143	1
Ce-144+	10
Pr-142	10
Pr-143	10 <sup>2</sup>

Changes to legislation: Radioactive Substances Act 1993, SCHEDULE 1A is up to date with all changes known to be in force on or before 02 July 2024. There are changes that may be brought into force at a future date. Changes that have been made appear in the content and are referenced with annotations. (See end of Document for details)

Radionuclide	Concentration in becquerels per gram (Bq/g)
Nd-147	10
Nd-149	10
Pm-147	10 <sup>2</sup>
Pm-149	10 <sup>2</sup>
Sm-151	10 <sup>2</sup>
Sm-153	10
Eu-152	0.1
Eu-152m	10
Eu-154	0.1
Eu-155	10
Gd-153	10
Gd-159	10
Tb-160	0.1
Dy-165	10 <sup>2</sup>
Dy-166	10
Но-166	10
Er-169	10 <sup>2</sup>
Er-171	10
Tm-170	10
Tm-171	10 <sup>2</sup>
Yb-175	10
Lu-177	10
Hf-181	1
Ta-182	0.1
W-181	10
W-185	10 <sup>2</sup>
W-187	1
Re-186	10 <sup>2</sup>

Changes to legislation: Radioactive Substances Act 1993, SCHEDULE 1A is up to date with all changes known to be in force on or before 02 July 2024. There are changes that may be brought into force at a future date. Changes that have been made appear in the content and are referenced with annotations. (See end of Document for details)

Radionuclide	Concentration in becquerels per gram (Bq/g)
Re-188	10
Os-185	1
Os-191	10
Os-191m	10 <sup>3</sup>
Os-193	10
Ir-190	0.1
Ir-192	0.1
Ir-194	10
Pt-191	1
Pt-193m	10 <sup>2</sup>
Pt-197	10 <sup>2</sup>
Pt-197m	10 <sup>2</sup>
Au-198	1
Au-199	10
Hg-197	10
Hg-197m	10
Hg-203	1
Tl-200	1
Tl-201	10
TI-202	1
T1-204	10
Pb-203	1
Pb-210+	0.01
Pb-212+	1
Bi-206	0.1
Bi-207	0.1
Bi-210	10
Bi-212+	1
Po-203	1

Changes to legislation: Radioactive Substances Act 1993, SCHEDULE 1A is up to date with all changes known to be in force on or before 02 July 2024. There are changes that may be brought into force at a future date. Changes that have been made appear in the content and are referenced with annotations. (See end of Document for details)

Radionuclide	Concentration in becquerels per gram (Bq/g)
Po-205	1
Po-207	1
Po-210	0.01
At-211	10 <sup>2</sup>
Ra-223+	1
Ra-224+	1
Ra-225	1
Ra-226+	0.01
Ra-227	10
Ra-228+	0.01
Ac-227+	0.01
Ac-228	1
Th-226+	10 <sup>2</sup>
Th-227	1
Th-228+	0.1
Th-229+	0.1
Th-230	0.1
Th-231	10 <sup>2</sup>
Th-232	0.01
Th-232+	0.01
Th-232sec	0.01
Th-234+	10
Pa-230	1
Pa-231	0.01
Pa-233	1
U-230+	1
U-231	10
U-232+	0.1
U-233	1

Changes to legislation: Radioactive Substances Act 1993, SCHEDULE 1A is up to date with all changes known to be in force on or before 02 July 2024. There are changes that may be brought into force at a future date. Changes that have been made appear in the content and are referenced with annotations. (See end of Document for details)

Radionuclide	Concentration in becquerels per gram (Bq/g)
U-234	1
U-235+	1
U-235sec	0.01
U-236	1
U-237	10
U-238+	1
U-238sec	0.01
U-239	10 <sup>2</sup>
U-240+	10
Np-237+	0.1
Np-239	10
Np-240	1
Pu-234	10 <sup>2</sup>
Pu-235	10 <sup>2</sup>
Pu-236	0.1
Pu-237	10
Pu-238	0.1
Pu-239	0.1
Pu-240	0.1
Pu-241	1
Pu-242	0.1
Pu-243	$10^{2}$
Pu-244+	0.1
Am-241	0.1
Am-242	10 <sup>2</sup>
Am-242m+	0.1
Am-243+	0.1
Cm-242	1
Cm-243	0.1

Changes to legislation: Radioactive Substances Act 1993, SCHEDULE 1A is up to date with all changes known to be in force on or before 02 July 2024. There are changes that may be brought into force at a future date. Changes that have been made appear in the content and are referenced with annotations. (See end of Document for details)

Radionuclide	Concentration in becquerels per gram (Bq/g)
Cm-244	0.1
Cm-245	0.1
Cm-246	0.1
Cm-247+	0.1
Cm-248	0.1
Bk-249	10
Cf-246	10
Cf-248	1
Cf-249	0.1
Cf-250	0.1
Cf-251	0.1
Cf-252	0.1
Cf-253	1
Cf-253+	1
Cf-254	0.1
Es-253	1
Es-254+	0.1
Es-254m+	1
Fm-254	10 <sup>2</sup>
Fm-255	10
Any other solid or non-aqueous liquid radionuclide that is not of natural terrestrial or cosmic origin	0.01, unless the concentration which gives rise to the same 10 $\mu$ Sv/ year dose criteria as used in column 2 of this table can be calculated using guidance by Euratom in RP 122 part 1 or any successor Euratom guidance or decision applying to the derivation of the concentrations in this table, in which case that concentration.

**Changes to legislation:** Radioactive Substances Act 1993, SCHEDULE 1A is up to date with all changes known to be in force on or before 02 July 2024. There are changes that may be brought into force at a future date. Changes that have been made appear in the content and are referenced with annotations. (See end of Document for details)

### **Textual Amendments**

F4 Sch. 1A Table 3 substituted (N.I.) (1.6.2018) by The Radioactive Substances (Modification of Enactments) Regulations (Northern Ireland) 2018 (S.R. 2018/116), regs. 1(1), 2(8)(c)

# [<sup>F4</sup>Table 3

Radionuclide	Concentration in becque	rels per gram (Bq/g)
Н-3	10 <sup>2</sup>	
Be-7	10	
C-14	10	
F-18	10	
Na-22	0.1	
Na-24	1	
Si-31	10 <sup>3</sup>	
P-32	$10^{3}$	
P-33	10 <sup>3</sup>	
S-35	10 <sup>2</sup>	
CI-36	1	
CI-38	10	
K-42	$10^{2}$	
K-43	10	
Ca-45	$10^{2}$	
Ca-47	10	
Sc-46	0.1	
Sc-47	$10^{2}$	
Sc-48	1	
V-48	1	
Cr-51	$10^{2}$	
Mn-51	10	
Mn-52	1	
Mn-52m	10	
Mn-53	$10^{2}$	
Mn-54	0.1	

## CONCENTRATION OF RADIONUCLIDES

Radionuclide	Concentration in becquerels per gram (Bq/g
Mn-56	10
Fe-52+	10
Fe-55	10 <sup>3</sup>
Fe-59	1
Co-55	10
Co-56	0.1
Co-57	1
Co-58	1
Co-58m	$10^{4}$
Co-60	0.1
Co-60m	10 <sup>3</sup>
Co-61	$10^{2}$
Co-62m	10
Ni-59	10 <sup>2</sup>
Ni-63	$10^{2}$
Ji-65	10
Cu-64	$10^{2}$
Zn-65	0.1
Zn-69	$10^{3}$
Zn-69m <sup>+</sup>	10
Ga-72	10
Ge-71	$10^{4}$
As-73	$10^{3}$
As-74	10
As-76	10
As-77	$10^{3}$
Se-75	1
Br-82	1
Rb-86	$10^{2}$
Sr-85	1
Sr-85m	$10^{2}$
	-

Radionuclide	Concentration in becquerels per gram (Bq/g)
Sr-89	10 <sup>3</sup>
Sr-90+	1
Sr-91+	10
Sr-92	10
Y-90	10 <sup>3</sup>
Y-91	$10^{2}$
Y-91m	$10^{2}$
Y-92	10 <sup>2</sup>
Y-93	$10^{2}$
Zr-93	10
Zr-95+	1
Zr-97+	10
Nb-93m	10
Nb-94	0.1
Nb-95	1
Nb-97+	10
Nb-98	10
Mo-90	10
Mo-93	10
Mo-99+	10
Mo-101+	10
Гс-96	1
Гс-96m	10 <sup>3</sup>
Гс-97	10
Гс-97m	10
Гс-99	1
Tc-99m	$10^{2}$
Ru-97	10
Ru-103+	1
Ru-105+	10
Ru-106+	0.1
Rh-103m	$10^{4}$
Rh-105	10 <sup>2</sup>

Radionuclide	Concentration in becquerels per grad	m (Bq/g)
Pd-103+	10 <sup>3</sup>	
Pd-109+	$10^{2}$	
Ag-105	1	
Ag-108m+	0.1	
Ag-110m+	0.1	
Ag-111	10	
Cd-109+	1	
Cd-115+	$10^{2}$	
Cd-115m+	$10^{2}$	
In-111	10	
In-113m	$10^{2}$	
In-114m	10	
In-115m	10 <sup>2</sup>	
Sn-113+	1	
Sn-125	10	
Sb-122	10	
Sb-124	1	
Sb-125+	0.1	
Te-123m	1	
Te-125m	$10^{3}$	
Te-127	10 <sup>3</sup>	
Te-127m+	10	
Te-129	$10^{2}$	
Te-129m+	10	
Te-131	$10^{2}$	
Te-131m+	10	
Te-132+	1	
Te-133+	10	
Te-133m+	10	
Te-134	10	
I-123	$10^{2}$	
I-125	10 <sup>2</sup>	
	- v	

Radionuclide	Concentration in becquerels per gram $(Bq/2)$
I-126	10
I-129	0.01
I-130	10
I-131+	10
I-132	10
I-133	10
I-134	10
I-135	10
Cs-129	10
Cs-131	10 <sup>3</sup>
Cs-132	10
Cs-134	0.1
Cs-134m	10 <sup>3</sup>
Cs-135	$10^{2}$
Cs-136	1
Cs-137+	1
Cs-138	10
Ba-131	10
Ba-140	1
La-140	1
Ce-139	1
Ce-141	100
Ce-143	10
Ce-144+	10
Pr-142	10 <sup>2</sup>
Pr-143	10 <sup>3</sup>
Nd-147	$10^{2}$
Nd-149	$10^{2}$
Pm-147	$10^{3}$
Pm-149	10 <sup>3</sup>
Sm-151	10 <sup>3</sup>
Sm-153	10
Eu-152	0.1

Radionuclide	Concentration in becquerels per gram (Bq/g)
Eu-152m	10
Eu-154	0.1
Eu-155	1
Gd-153	10
Gd-159	$10^{2}$
Tb-160	1
Dy-165	10 <sup>3</sup>
Dy-166	10 <sup>2</sup>
Ho-166	10 <sup>2</sup>
Er-169	10 <sup>3</sup>
Er-171	$10^{2}$
Tm-170	$10^{2}$
Tm-171	$10^{3}$
Yb-175	10 <sup>2</sup>
Lu-177	$10^{2}$
Hf-181	1
Ta-182	0.1
W-181	10
W-185	10 <sup>3</sup>
W-187	10
Re-186	10 <sup>3</sup>
Re-188	$10^{2}$
Os-185	$10^{3}$
Os-191	$10^{2}$
Os-191m	$10^{3}$
Os-193	$10^{2}$
Ir-190	1
Ir-192	1
Ir-194	$10^{2}$
Pt-191	10
Pt-193m	$10^{3}$

Radionuclide	Concentration in becquerels per gram (Bq/g)
Pt-197	10 <sup>3</sup>
Pt-197m	$10^{2}$
Au-198	10
Au-199	$10^{2}$
Hg-197	$10^{2}$
Hg-197m	$10^{2}$
Hg-203	10
TI-200	10
TI-201	$10^{2}$
TI-202	10
TI-204	1
Pb-203	10
Pb-210+	0.01
Pb-212+	1
Bi-206	1
Bi-207	0.1
Bi-210	10
Bi-212+	1
Po-203	10
Po-205	10
Po-207	10
Po-210	0.01
At-211	$10^{3}$
Ra-223+	1
Ra-224+	1
Ra-225	10
Ra-226+	0.01
Ra-227	$10^{2}$
Ra-228+	0.01
Ac-227+	0.01
Ac-228	1
Th-226+	$10^{3}$
Th-227	1

Radionuclide	Concentration in becquerels per gram (Bq/g)
Th-228+	0.1
Th-229	0.1
Th-230	0.1
Th-231	$10^{2}$
Th-232	0.01
Th-232+	0.01
Th-232sec	0.01
Th-234+	10
Pa-230	10
Pa-231	0.01
Pa-233	10
U-230	10
U-231	10 <sup>2</sup>
U-232+	0.1
U-233	1
U-234	1
U-235+	1
U-235sec	0.01
U-236	10
U-237	10 <sup>2</sup>
U-238+	1
U-238sec	0.01
U-239	$10^{2}$
U-240+	$10^{2}$
Np-237+	1
Np-239	$10^{2}$
Np-240	10
Pu-234	$10^{3}$
Pu-235	$10^{2}$
Pu-236	1
Pu-237	$10^{2}$
Pu-238	0.1
Pu-239	0.1

Changes to legislation: Radioactive Substances Act 1993, SCHEDULE 1A is up to date with all changes known to be in force on or before 02 July 2024. There are changes that may be brought into force at a future date. Changes that have been made appear in the content and are referenced with annotations. (See end of Document for details)

Radionuclide	Concentration in becquerels per gram $(Bq/g)$
Pu-240	0.1
Pu-241	10
Pu-242	0.1
Pu-243	$10^{3}$
Pu-244+	0.1
Am-241	0.1
Am-242	$10^{3}$
Am-242m+	0.1
Am-243+	0.1
Cm-242	10
Cm-243	1
Cm-244	1
Cm-245	0.1
Cm-246	0.1
Cm-247+	0.1
Cm-248	0.1
Bk-249	$10^{2}$
Cf-246	10 <sup>3</sup>
Cf-248	1
Cf-249	0.1
Cf-250	1
Cf-251	0.1
Cf-252	1
Cf-253	10 <sup>2</sup>
Cf-253+	10 <sup>2</sup>
Cf-254	1
Es-253	$10^{2}$
Es-254+	0.1
Es-254m+	10
Fm-254	$10^{4}$
Fm-255	$10^{2}$
	0.01 unless the concentration which gives rise to the sam

Any other solid or non-aqueous 0.01, unless the concentration which gives rise to the same 10 liquid radionuclide that is not  $\mu$ Sv/year dose criteria as used in column 2 of this table can be calculated by reference to the IAEA publication "Application

**Changes to legislation:** Radioactive Substances Act 1993, SCHEDULE 1A is up to date with all changes known to be in force on or before 02 July 2024. There are changes that may be brought into force at a future date. Changes that have been made appear in the content and are referenced with annotations. (See end of Document for details)

Radionuclide	Concentration in becquerels per gram (Bq/g)
	of the Concepts of Exclusion, Exemption and Clearance" IAEA Safety Standards Series NO. RS-G-1.7.]

## Table 4

## RADIONUCLIDES IN SECULAR EQUILIBRIUM

Parent radionuclide	Daughter radionuclides
Ac-227+	Th-227, Fr-223, Ra-223, Rn-219, Po-215, Pb-211, Bi-211, Tl-207, Po-211
Ag-108m+	Ag-108
Ag-110m+	Ag-110
Am-242m+	Np-238
Am-243+	Np-239
Bi-212+	T1-208
Cd-109+	Ag-109m
Cd-115+	In-115m
Cd-115m+	In-115m
Ce-144+	Pr-144, Pr-144m
Cf-253+	Cm-249
Cm-247+	Pu-243
Cs-137+	Ba-137m
Es-254+	Bk-250
Es-254m+	Fm-254
Fe-52+	Mn-52m
I-131+	Xe-131m
In-114m+	In-114
Mo-99+	Tc-99m
Mo-101+	Tc-101
Nb-97+	Nb-97m
Np-237+	Pa-233
Pb-210+	Bi-210, Po-210
Pb-212+	Bi-212, Tl-208
Pd-103+	Rh-103m
Pd-109+	Ag-109m
Pu-244+	U-240, Np-240m, Np-240

Parent radionuclide	Daughter radionuclides
Ra-223+	Rn-219, Po-215, Pb-211, Bi-211, Tl-207
Ra-224+	Rn-220, Po-216, Pb-212, Bi-212, Tl-208
Ra-226+	Rn-222, Po-218, Pb-214, Bi-214, Po-214
Ra-228+	Ac-228
Ru-103+	Rh-103m
Ru-105+	Rh-105m
Ru-106+	Rh-106
Sb-125+	Te-125m
Sn-113+	In-113m
Sr-90+	Y-90
Sr-91+	Y-91m
Te-127m+	Te-127
Te-129m+	Te-129
Te-131m+	Te-131
Te-132+	I-132
Te-133+	I-133, Xe-133m, Xe-133
Te-133m+	Te-133, I-133, Xe-133m, Xe-133
Th-226+	Ra-222, Rn-218, Po-214
Th-228+	Ra-224, Rn-220, Po-216, Pb-212, Bi-212, Tl-208
Th-229+	Ra-225, Ac-225, Fr-221, At-217, Bi-213, Tl-209, Pb-209
Th-232+	Ra-228, Ac-228, Th-228, Ra-224, Rn-220, Po-216, Pb-212, Bi-212, Tl-208
Th-232sec	Ra-228, Ac-228, Th-228, Ra-224, Rn-220, Po-216, Pb-212, Bi-212, Po-212, Tl-208
Th-234+	Pa-234m, Pa-234
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
U-235+	Th-231
U-235sec	Th-231, Pa-231, Ac-227, Th-227, Fr-223, Ra-223, Rn-219, Po-215, Pb-211, Bi-211, Tl-207, Po-211
U-238+	Th-234, Pa-234m, Pa-234
U-238sec	Th-234, Pa-234m, Pa-234, 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-240
Zn-69m+	Zn-69

Parent radionuclide	Daughter radionuclides
Zr-95+	Nb-95m
Zr-97+	Nb-97m, Nb-97]

# Status:

Point in time view as at 01/06/2018.

### Changes to legislation: