Version No. 003

Radiation Regulations 2007

S.R. No. 89/2007

Version incorporating amendments as at 1 February 2009

TABLE OF PROVISIONS

Version No. 003

Radiation Regulations 2007

S.R. No. 89/2007

Version incorporating amendments as at 1 February 2009

1 Objectives

The objectives of these Regulations are to—

(a) prescribe the activity concentration and activity of material that spontaneously emits ionising radiation and the prescribed circumstances for the purposes of the definition of radioactive material; and

(b) prescribe radiation dose limits; and

(c) prescribe the radiation sources that require a current certificate of compliance prior to use of the source; and

(d) prescribe the date of expiry for certificates of compliance issued in respect of prescribed radiation sources; and

(e) exempt for a limited time certain radiation sources from the requirement to have a certificate of compliance issued in respect of them; and

(f) prescribe fees; and

(g) prescribe other matters required to give effect to the Act.

2 Authorising provision

These Regulations are made under section 139 of the **Radiation Act 2005**.

3 Commencement

These Regulations come into operation on 1 September 2007.

4 Definitions

In these Regulations—

Reg. 4 def. of *commercial tanning unit* inserted by S.R. No. 167/2008 reg. 5(1).

commercial tanning unit means a tanning unit that is not a domestic tanning unit;

Reg. 4 def. of *domestic tanning unit* inserted by S.R. No. 167/2008 reg. 5(1).

domestic tanning unit means a tanning unit that is—

(a) located at residential premises; and

(b) not used for fee or reward;

effective dose means the sum of the weighted equivalent doses in all the tissues and organs of the body and is determined by the formula—

$$E = \sum_{T} w_T \, \mathrm{H}_T$$

where E is the effective dose,

W_T is the tissue weighting factor for tissue or organ T,

and H_T is the equivalent dose in tissue or organ T;

equivalent dose means the absorbed dose averaged over a tissue or organ modified by the radiation weighting factor, W_R and is determined by the formula—

$$H_T = \sum_R w_R \, D_{T,\,R}$$

where H_T is the equivalent dose in tissue or organ T,

and $D_{T,R}$ is the absorbed dose averaged over the tissue or organ T, due to radiation R;

medical exposure means—

(a) the receipt of a radiation dose by a patient during the course of, or for the purposes of, a diagnosis or treatment of an injury or illness of the patient; or

(b) an exposure of a person to an emission of radiation (other than occupational exposure) knowingly incurred by that person while supporting and comforting a patient receiving a radiation dose during the course of, or for the purposes of a diagnosis or treatment of, an injury or illness of the patient; or

(c) the receipt of a radiation dose by a volunteer during the course of medical research;

occupational exposure means the exposure to an emission of radiation of a person using a radiation source or directly conducting a radiation practice;

public exposure means the exposure of a person to an emission of radiation that is not occupational exposure or medical exposure;

Reg. 4 def. of *tanning unit* inserted by S.R. No. 148/2007 reg. 5, substiuted by S.R No. 167/2008 reg. 5(2).

tanning unit means an electrically powered apparatus designed to produce tanning of the human skin by utilising ultraviolet radiation;

the Act means the **Radiation Act 2005**.

5 Radioactive material—Prescribed activity concentration and activity level for the purposes of paragraph (a) of the definition

For the purposes of paragraph (a) of the definition of ***radioactive material*** in section 3(1) of the Act—

(a) the prescribed activity concentration for a material that is a radionuclide specified in column 1 of Schedule 1 is the activity concentration specified in column 2 of that Schedule opposite that radionuclide; and

(b) the prescribed activity for a material that is a radionuclide specified in column 1 of Schedule 1 is the activity specified in column 3 of that Schedule opposite that radionuclide.

6 Radioactive material—Prescribed activity concentration and activity level for combinations of radionuclides

For the purposes of paragraph (b) of the definition of ***radioactive material*** in section 3(1) of the Act—

(a) the prescribed activity concentration for a material that is a radionuclide specified in column 1 of Schedule 1 is the activity concentration specified in column 2 of that Schedule opposite that radionuclide;

(b) the prescribed activity for a material that is a radionuclide specified in column 1 of Schedule 1 is the activity specified on column 3 of that Schedule opposite that radionuclide; and

(c) the prescribed circumstance is that there are 2 or more materials that are radionuclides specified in column 1 of Schedule 1 occurring in combination and—

(i) the sum of the fractions obtained by dividing the activity concentration of each radionuclide present by the activity concentration specified in column 2 of that Schedule opposite each radionuclide, is equal to, or, exceeds 1; and

(ii) the sum of the fractions obtained by dividing the activity of each radionuclide present by the activity specified on column 3 of that Schedule opposite each radionuclide is equal to, or, exceeds 1.

6A Non-ionising radiation apparatus

Reg. 6A inserted by S.R. No. 148/2007 reg. 6, substituted by S.R. No. 167/2008 reg. 6.

For the purpose of paragraph (b) of the definition of ***non-ionising radiation apparatus*** in section 3(1) of the Act, a commercial tanning unit is prescribed to be a non-ionising radiation apparatus.

7 Radiation dose limits

(1) For the purposes of section 22(1) and (2) of the Act the prescribed radiation dose limit is—

(a) unless paragraph (c) applies, in the case of occupational exposure—the relevant limit specified in Table A of Schedule 2;

(b) in the case of public exposure—the relevant limit specified in Table B of Schedule 2;

(c) in the case of a pregnant woman using a radiation source or directly conducting a radiation practice who has notified the relevant management licence holder that she is pregnant—

(i) in relation to all parts of the woman's body except her uterus—the relevant limit specified in Table A of Schedule 2; and

(ii) in relation to the woman's uterus—the relevant limit specified in Table B of Schedule 2.

(2) In regulation 7(1)(c) ***relevant management licence holder*** means the management licence holder who conducts a radiation practice in relation to the radiation source—

(a) being used by the pregnant woman; or

(b) in relation to which the pregnant woman directly conducts the radiation practice.

8 Radiation sources

For the purposes of section 24 of the Act, the prescribed radiation sources are the radiation sources that are used for human diagnostic purposes specified in Schedule 3.

9 Certificates of compliance

For the purposes of section 33 of the Act, the prescribed expiry date for a certificate issued in respect of a prescribed radiation source is the date specified in column 2 of Schedule 4 opposite the prescribed radiation source specified in Column 1 of that Schedule.

10 Exemption from requirement to have a certificate of compliance

Section 36 of the Act does not apply in respect of a radiation source specified in column 1 of Schedule 5 before the day specified in column 2 of that Schedule.

11 Application for use licence—fee

For the purposes of section 38(c)(ii) of the Act, the prescribed fee for an application for a use licence is the sum of—

(a) the application processing component of 4·5 fee units; and

(b) if the application for a licence is for—

(i) one year—5 fee units;

(ii) 2 years—9·5 fee units;

(iii) 3 years—13·5 fee units.

12 Application for management licence—fee

(1) For the purposes of section 38(c)(ii) of the Act, the prescribed fee for an application for a management licence to possess one radiation source specified in column 1 of Schedule 6 is the sum of—

(a) the application processing component of 9 fee units; and

(b) if the application is for the possession of that radiation source for—

(i) one year—the fee unit specified in column 2 of Schedule 6 opposite that source;

(ii) 2 years—the fee unit specified in column 3 of Schedule 6 opposite that source;

(iii) 3 years—the fee unit specified in column 4 of Schedule 6 opposite that source.

(2) For the purposes of section 38(c)(ii) of the Act, the prescribed fee for an application for a management licence to possess more than one radiation source specified in column 1 of Schedule 6 is the sum of—

(a) the application processing component of 9 fee units; and

(b) if the application is for the possession of those radiation sources for—

(i) one year—the sum of the fee units specified in column 2 of Schedule 6 opposite each of those sources;

(ii) 2 years—the sum of the fee units specified in column 3 of Schedule 6 opposite each of those sources;

(iii) 3 years—the sum of the fee units specified in column 4 of Schedule 6 opposite each of those sources.

(3) For the purposes of section 38(c)(ii) of the Act, the prescribed fee for an application for a management licence to conduct a radiation practice (other than to possess a radiation source) is the sum of—

(a) the application processing component of 9 fee units; and

(b) if the application is for the conduct of that practice for—

(i) one year—10 fee units;

(ii) 2 years—19 fee units;

(iii) 3 years—27 fee units.

13 Application for a tester's approval—fee

For the purposes of section 38(c)(ii) of the Act, the prescribed fee for an application for a tester's approval is the sum of—

(a) the application processing component of 4·5 fee units; and

(b) if the application is for an approval for—

(i) one year—10 fee units;

(ii) 2 years—19 fee units;

(iii) 3 years—27 fee units.

14 Renewal of a use licence—fee

For the purposes of section 51(3)(b)(ii) of the Act, the prescribed fee for an application to renew a use licence is, if the application is for the renewal of that licence for—

(a) one year—5 fee units;

(b) 2 years—9·5 fee units;

(c) 3 years—13·5 fee units.

15 Renewal of a management licence—fee

(1) For the purposes of section 51(3)(b)(ii) of the Act, the prescribed fee for an application to renew a management licence to possess one radiation source specified in column 1 of Schedule 6 is, if the application is for the renewal of that licence for—

(a) one year—the fee unit specified in column 2 of Schedule 6 opposite that source;

(b) 2 years—the fee unit specified in column 3 of Schedule 6 opposite that source;

(c) 3 years—the fee unit specified in column 4 of Schedule 6 opposite that source.

(2) For the purposes of section 51(3)(b)(ii) of the Act, the prescribed fee for an application to renew a management licence to possess more than one radiation source specified in column 1 of Schedule 6 is, if the application is for the renewal of that licence for—

(a) one year—the sum of the fee units specified in column 2 of Schedule 6 opposite each of those sources;

(b) 2 years—the sum of the fee units specified in column 3 of Schedule 6 opposite each of those sources;

(c) 3 years—the sum of the fee units specified in column 4 of Schedule 6 opposite each of those sources.

(3) For the purposes of section 51(3)(b)(ii) of the Act, the prescribed fee for an application to renew a management licence to conduct a radiation practice (other than to possess a radiation source) is, if the application is for the renewal of that licence for—

(a) one year—10 fee units;

(b) 2 years—19 fee units;

(c) 3 years—27 fee units.

16 Renewal of a tester's approval—fee

For the purposes of section 51(3)(b)(ii) of the Act, the prescribed fee for the renewal of a tester's approval is, if the application for renewal of that approval is for—

(a) one year—10 fee units;

(b) 2 years—19 fee units;

(c) 3 years—27 fee units.

17 Refund of authority fee component if application refused or withdrawn

(1) The Secretary must refund the relevant authority fee component to an authority applicant if—

(a) the Secretary refuses to issue or renew the authority; or

(b) the authority applicant withdraws his or her application for the authority or renewal of the authority before the Secretary makes his or her decision whether to issue or renew the authority.

(2) In this regulation—

authority applicant means a person who applies for an authority under section 37 of the Act or a person who applies for the renewal of an authority under section 51 of the Act;

relevant authority fee component means—

(a) in the case of an application for a use licence—the relevant fee specified in regulation 11(b);

(b) in the case of an application for a management licence to possess one radiation source—the relevant fee specified in regulation 12(1)(b);

(c) in the case of an application for a management licence to possess more than one radiation source—the relevant fee specified in regulation 12(2)(b);

(d) in the case of an application for a management licence to conduct a radiation practice (other than to possess a radiation source)—the relevant fee specified in regulation 12(3)(b);

(e) in the case of an application for a tester's approval—the relevant fee specified in regulation 13(b);

(f) in the case of an application to renew a use licence—the relevant fee specified in regulation 14;

(g) in the case of an application to renew a management licence to possess one radiation source—the relevant fee specified in regulation 15(1);

(h) in the case of an application to renew a management licence to possess more than one radiation source—the relevant fee specified in regulation 15(2);

(i) in the case of an application to renew a management licence to conduct a radiation practice (other than to possess a radiation source)—the relevant fee specified in regulation 15(3);

(j) in the case of an application to renew a tester's approval—the relevant fee specified in regulation 16.

18 Transfer fees

For the purposes of section 64(2)(b)(ii) of the Act, the prescribed fee for transfer of a management licence is 4·5 fee units.

19 Variation of a use licence—fees

For the purposes of section 66(2)(b)(ii) of the Act, the prescribed fee for an application to vary a use licence or the conditions of a use licence is 2·3 fee units.

20 Variation of a management licence—fees

For the purposes of section 66(2)(b)(ii) of the Act, the prescribed fee for an application to vary a management licence or the conditions of a management licence is 2·3 fee units.

21 Variation of a tester's approval—fees

For the purposes of section 66(2)(b)(ii) of the Act, the prescribed fee for an application to vary a tester's approval or the conditions of a tester's approval is 2·3 fee units.

22 Secretary may reduce, waive or refund payment of application use licence fee

Reg. 22 inserted by S.R. No. 167/2008 reg. 7.

The Secretary may, in relation to an application for a use licence—

(a) reduce; or

(b) waive; or

(c) refund payment in whole or in part—

the application processing component of the prescribed fee referred to in regulation 11(a).

SCHEDULES

SCHEDULE 1

Regulations 5, 6

ACTIVITY CONCENTRATIONS AND ACTIVITIES OF RADIONUCLIDES

Column 1 *Radionuclide*	*Column 2* *Activity Concentration (Bq/g)*	*Column 3* *Activity (Bq)*
H-3 (tritiated compounds, including OBT)	1×10^6	1×10^9
H-3 (elemental)	1×10^6	1×10^9
Be-7	1×10^3	1×10^7
C-11	1×10^1	1×10^6
C-14	1×10^4	1×10^7
N-13	1×10^2	1×10^9
0-15	1×10^2	1×10^9
F-18	1×10^1	1×10^6
Na-22	1×10^1	1×10^6
Na-24	1×10^1	1×10^5
Mg-28	1×10^1	1×10^5
Si-31	1×10^3	1×10^6
P-32	1×10^3	1×10^5
P-33	1×10^5	1×10^8
S-35	1×10^5	1×10^8
Cl-36	1×10^4	1×10^6
Cl-38	1×10^1	1×10^5
Ar-37	1×10^6	1×10^8
Ar-41	1×10^2	1×10^9

Column 1 *Radionuclide*	*Column 2* *Activity Concentration (Bq/g)*	*Column 3* *Activity (Bq)*
K-40	1×10^2	1×10^6
K-42	1×10^2	1×10^6
K-43	1×10^1	1×10^6
Ca-45	1×10^4	1×10^7
Ca-47	1×10^1	1×10^6
Sc-46	1×10^1	1×10^6
Sc-47	1×10^2	1×10^6
Sc-48	1×10^1	1×10^5
V-48	1×10^1	1×10^5
Cr-51	1×10^3	1×10^7
Mn-51	1×10^1	1×10^5
Mn-52	1×10^1	1×10^5
Mn-52m	1×10^1	1×10^5
Mn-53	1×10^4	1×10^9
Mn-54	1×10^1	1×10^6
Mn-56	1×10^1	1×10^5
Fe-52	1×10^1	1×10^6
Fe-55	1×10^4	1×10^6
Fe-59	1×10^1	1×10^6
Co-55	1×10^1	1×10^6
Co-56	1×10^1	1×10^5
Co-57	1×10^2	1×10^6
Co-58	1×10^1	1×10^6
Co-58m	1×10^4	1×10^7
Co-60	1×10^1	1×10^5
Co-60m	1×10^3	1×10^6
Co-61	1×10^2	1×10^6

Column 1 *Radionuclide*	*Column 2* *Activity Concentration (Bq/g)*	*Column 3* *Activity (Bq)*
Co-62m	1×10^1	1×10^5
Ni-59	1×10^4	1×10^8
Ni-63	1×10^5	1×10^8
Ni-65	1×10^1	1×10^6
Cu-64	1×10^2	1×10^6
Cu-67	1×10^2	1×10^6
Zn-65	1×10^1	1×10^6
Zn-69	1×10^4	1×10^6
Zn-69m	1×10^2	1×10^6
Ga-67	1×10^2	1×10^6
Ga-72	1×10^1	1×10^5
Ge-68	1×10^1	1×10^5
Ge-71	1×10^4	1×10^8
As-73	1×10^3	1×10^7
As-74	1×10^1	1×10^6
As-76	1×10^2	1×10^5
As-77	1×10^3	1×10^6
Se-73	1×10^1	1×10^6
Se-75	1×10^2	1×10^6
Br-75	1×10^1	1×10^6
Br-76	1×10^1	1×10^5
Br-82	1×10^1	1×10^6
Kr-74	1×10^2	1×10^9
Kr-76	1×10^2	1×10^9
Kr-77	1×10^2	1×10^9
Kr-79	1×10^3	1×10^5
Kr-81	1×10^4	1×10^7

Column 1 *Radionuclide*	*Column 2* *Activity Concentration (Bq/g)*	*Column 3* *Activity (Bq)*
Kr-83m	1×10^5	1×10^{12}
Kr-85	1×10^5	1×10^4
Kr-85m	1×10^3	1×10^{10}
Kr-87	1×10^2	1×10^9
Kr-88	1×10^2	1×10^9
Rb-81	1×10^1	1×10^6
Rb-86	1×10^2	1×10^5
Sr-85	1×10^2	1×10^6
Sr-85m	1×10^2	1×10^7
Sr-87m	1×10^2	1×10^6
Sr-89	1×10^3	1×10^6
Sr-90[a]	1×10^2	1×10^4
Sr-91	1×10^1	1×10^5
Sr-92	1×10^1	1×10^6
Y-88	1×10^1	1×10^6
Y-90	1×10^3	1×10^5
Y-91	1×10^3	1×10^6
Y-91m	1×10^2	1×10^6
Y-92	1×10^2	1×10^5
Y-93	1×10^2	1×10^5
Zr-93[a]	1×10^3	1×10^7
Zr-95	1×10^1	1×10^6
Zr-97[a]	1×10^1	1×10^5
Nb-93m	1×10^4	1×10^7
Nb-94	1×10^1	1×10^6
Nb-95	1×10^1	1×10^6
Nb-97	1×10^1	1×10^6

Column 1 *Radionuclide*	*Column 2* *Activity Concentration (Bq/g)*	*Column 3* *Activity (Bq)*
Nb-98	1×10^1	1×10^5
Mo-90	1×10^1	1×10^6
Mo-93	1×10^3	1×10^8
Mo-99	1×10^2	1×10^6
Mo-101	1×10^1	1×10^6
Tc-95m	1×10^1	1×10^6
Tc-96	1×10^1	1×10^6
Tc-96m	1×10^3	1×10^7
Tc-97	1×10^3	1×10^8
Tc-97m	1×10^3	1×10^7
Tc-99	1×10^4	1×10^7
Tc-99m	1×10^2	1×10^7
Ru-97	1×10^2	1×10^7
Ru-103	1×10^2	1×10^6
Ru-105	1×10^1	1×10^6
Ru-106[a]	1×10^2	1×10^5
Rh-103m	1×10^4	1×10^8
Rh-105	1×10^2	1×10^7
Pd-103	1×10^3	1×10^8
Pd-109	1×10^3	1×10^6
Ag-105	1×10^2	1×10^6
Ag-108m	1×10^1	1×10^6
Ag-110m	1×10^1	1×10^6
Ag-111	1×10^3	1×10^6
Cd-109	1×10^4	1×10^6
Cd-115	1×10^2	1×10^6
Cd-115m	1×10^3	1×10^6

Column 1 *Radionuclide*	*Column 2* *Activity Concentration (Bq/g)*	*Column 3* *Activity (Bq)*
In-111	1×10^2	1×10^6
In-113m	1×10^2	1×10^6
In-114m	1×10^2	1×10^6
In-115m	1×10^2	1×10^6
Sn-113	1×10^3	1×10^7
Sn-117m	1×10^2	1×10^6
Sn-121	1×10^5	1×10^7
Sn-125	1×10^2	1×10^5
Sb-122	1×10^2	1×10^4
Sb-124	1×10^1	1×10^6
Sb-125	1×10^2	1×10^6
Te-123m	1×10^2	1×10^7
Te-125m	1×10^3	1×10^7
Te-127	1×10^3	1×10^6
Te-127m	1×10^3	1×10^7
Te-129	1×10^2	1×10^6
Te-129m	1×10^3	1×10^6
Te-131	1×10^2	1×10^5
Te-131m	1×10^1	1×10^6
Te-132	1×10^2	1×10^7
Te-133	1×10^1	1×10^5
Te-133m	1×10^1	1×10^5
Te-134	1×10^1	1×10^6
I-123	1×10^2	1×10^7
I-124	1×10^1	1×10^6
I-125	1×10^3	1×10^6
I-126	1×10^2	1×10^6

Column 1 *Radionuclide*	*Column 2* *Activity Concentration (Bq/g)*	*Column 3* *Activity (Bq)*
-129	1×10^2	1×10^5
-130	1×10^1	1×10^6
I-131	1×10^2	1×10^6
I-132	1×10^1	1×10^5
I-133	1×10^1	1×10^6
I-134	1×10^1	1×10^5
I-135	1×10^1	1×10^6
Xe-131m	1×10^4	1×10^4
Xe-133	1×10^3	1×10^4
Xe-135	1×10^3	1×10^{10}
Cs-129	1×10^2	1×10^5
Cs-131	1×10^3	1×10^6
Cs-132	1×10^1	1×10^5
Cs-134m	1×10^3	1×10^5
Cs-134	1×10^1	1×10^4
Cs-135	1×10^4	1×10^7
Cs-136	1×10^1	1×10^5
Cs-137[a]	1×10^1	1×10^4
Cs-138	1×10^1	1×10^4
Ba-131	1×10^2	1×10^6
Ba-133	1×10^2	1×10^6
Ba-140[a]	1×10^1	1×10^5
La-140	1×10^1	1×10^5
Ce-139	1×10^2	1×10^6
Ce-141	1×10^2	1×10^7
Ce-143	1×10^2	1×10^6
Ce-144[a]	1×10^2	1×10^5

Column 1 *Radionuclide*	*Column 2* *Activity Concentration (Bq/g)*	*Column 3* *Activity (Bq)*
Pr-142	1×10^2	1×10^5
Pr-143	1×10^4	1×10^6
Nd-147	1×10^2	1×10^6
Nd-149	1×10^2	1×10^6
Pm-147	1×10^4	1×10^7
Pm-149	1×10^3	1×10^6
Sm-147	1×10^1	1×10^4
Sm-151	1×10^4	1×10^8
Sm-153	1×10^2	1×10^6
Eu-152	1×10^1	1×10^6
Eu-152m	1×10^2	1×10^6
Eu-154	1×10^1	1×10^6
Eu-155	1×10^2	1×10^7
Gd-153	1×10^2	1×10^7
Gd-159	1×10^3	1×10^6
Tb-160	1×10^1	1×10^6
Dy-165	1×10^3	1×10^6
Dy-166	1×10^3	1×10^6
Ho-166	1×10^3	1×10^5
Ho-166m	1×10^1	1×10^6
Er-161	1×10^1	1×10^6
Er-169	1×10^4	1×10^7
Er-171	1×10^2	1×10^6
Tm-170	1×10^3	1×10^6
Tm-171	1×10^4	1×10^8
Yb-169	1×10^2	1×10^7
Yb-175	1×10^3	1×10^7
Lu-177	1×10^3	1×10^7

Column 1 *Radionuclide*	*Column 2* *Activity Concentration (Bq/g)*	*Column 3* *Activity (Bq)*
Hf-181	1×10^1	1×10^6
Ta-182	1×10^1	1×10^4
W-181	1×10^3	1×10^7
W-185	1×10^4	1×10^7
W-187	1×10^2	1×10^6
W-188	1×10^2	1×10^5
Re-186	1×10^3	1×10^6
Re-188	1×10^2	1×10^5
Os-185	1×10^1	1×10^6
Os-191	1×10^2	1×10^7
Os-191m	1×10^3	1×10^7
Os-193	1×10^2	1×10^6
Ir-190	1×10^1	1×10^6
Ir-192	1×10^1	1×10^4
Ir-194	1×10^2	1×10^5
Pt-191	1×10^2	1×10^6
Pt-193m	1×10^3	1×10^7
Pt-197	1×10^3	1×10^6
Pt-197m	1×10^2	1×10^6
Au-198	1×10^2	1×10^6
Au-199	1×10^2	1×10^6
Hg-195m	1×10^2	1×10^6
Hg-197	1×10^2	1×10^7
Hg-197m	1×10^2	1×10^6
Hg-203	1×10^2	1×10^5
Tl-200	1×10^1	1×10^6
Tl-201	1×10^2	1×10^6

Column 1 *Radionuclide*	*Column 2* *Activity Concentration (Bq/g)*	*Column 3* *Activity (Bq)*
Tl-202	1×10^2	1×10^6
Tl-204	1×10^4	1×10^4
Pb-203	1×10^2	1×10^6
Pb-210[a]	1×10^1	1×10^4
Pb-212[a]	1×10^1	1×10^5
Bi-206	1×10^1	1×10^5
Bi-207	1×10^1	1×10^6
Bi-210	1×10^3	1×10^6
Bi-212[a]	1×10^1	1×10^5
Bi-213	1×10^2	1×10^6
Po-203	1×10^1	1×10^6
Po-205	1×10^1	1×10^6
Po-207	1×10^1	1×10^6
Po-210	1×10^1	1×10^4
At-211	1×10^3	1×10^7
Rn-220[a]	1×10^4	1×10^7
Rn-222[a]	1×10^1	1×10^8
Ra-223[a]	1×10^2	1×10^5
Ra-224[a]	1×10^1	1×10^5
Ra-225	1×10^2	1×10^5
Ra-226[a]	1×10^1	1×10^4
Ra-227	1×10^2	1×10^6
Ra-228[a]	1×10^1	1×10^5
Ac-225	1×10^1	1×10^4
Ac-227	1×10^{-1}	1×10^3
Ac-228	1×10^1	1×10^6
Th-226[a]	1×10^3	1×10^7

Column 1 *Radionuclide*	*Column 2* *Activity Concentration (Bq/g)*	*Column 3* *Activity (Bq)*
Th-227	1×10^1	1×10^4
Th-228[a]	1×10^0	1×10^4
Th-229[a]	1×10^0	1×10^3
Th-230	1×10^0	1×10^4
Th-231	1×10^3	1×10^7
Th-nat (incl. Th-232)	1×10^0	1×10^3
Th-234[a]	1×10^3	1×10^5
Pa-230	1×10^1	1×10^6
Pa-231	1×10^0	1×10^3
Pa-233	1×10^2	1×10^7
U-230[a]	1×10^1	1×10^5
U-231	1×10^2	1×10^7
U-232[a]	1×10^0	1×10^3
U-233	1×10^1	1×10^4
U-234	1×10^1	1×10^4
U-235[a]	1×10^1	1×10^4
U-236	1×10^1	1×10^4
U-237	1×10^2	1×10^6
U-238[a]	1×10^1	1×10^4
U-nat	1×10^0	1×10^3
U-239	1×10^2	1×10^6
U-240	1×10^3	1×10^7
U-240[a]	1×10^1	1×10^6
Np-237[a]	1×10^0	1×10^3
Np-239	1×10^2	1×10^7
Np-240	1×10^1	1×10^6

Column 1 *Radionuclide*	*Column 2* *Activity Concentration (Bq/g)*	*Column 3* *Activity (Bq)*
Pu-234	1×10^2	1×10^7
Pu-235	1×10^2	1×10^7
Pu-236	1×10^1	1×10^4
Pu-237	1×10^3	1×10^7
Pu-238	1×10^0	1×10^4
Pu-239	1×10^0	1×10^4
Pu-240	1×10^0	1×10^3
Pu-241	1×10^2	1×10^5
Pu-242	1×10^0	1×10^4
Pu-243	1×10^3	1×10^7
Pu-244	1×10^0	1×10^4
Am -241	1×10^0	1×10^4
Am-242	1×10^3	1×10^6
Am-242m[a]	1×10^0	1×10^4
Am-243[a]	1×10^0	1×10^3
Cm-242	1×10^2	1×10^5
Cm-243	1×10^0	1×10^4
Cm-244	1×10^1	1×10^4
Cm-245	1×10^0	1×10^3
Cm-246	1×10^0	1×10^3
Cm-247	1×10^0	1×10^4
Cm-248	1×10^0	1×10^3
Bk-249	1×10^3	1×10^6
Cf-246	1×10^3	1×10^6
Cf-248	1×10^1	1×10^4
Cf-249	1×10^0	1×10^3
Cf-250	1×10^1	1×10^4

Column 1 *Radionuclide*	*Column 2* *Activity Concentration (Bq/g)*	*Column 3* *Activity (Bq)*
Cf-251	1×10^0	1×10^3
Cf-252	1×10^1	1×10^4
Cf-253	1×10^2	1×10^5
Cf-254	1×10^0	1×10^3
Es-253	1×10^2	1×10^5
Es-254	1×10^1	1×10^4
Es-254m	1×10^2	1×10^6
Fm-254	1×10^4	1×10^7
Fm-255	1×10^3	1×10^6
Alpha-emitting radionuclide not mentioned in this Table	1×10^0	1×10^3
Radionuclide that is not alpha-emitting and not mentioned in this Table	1×10^1	1×10^4

[a] The levels given in this Schedule for the following radionuclides are for the parent radionuclides, which are assumed to be in secular equilibrium with the progeny listed below—

Parent	*Progeny*
Sr-80	Rb-80
Sr-90	Y-90
Zr-93	Nb-93m
Zr-97	Nb-97
Ru-106	Rh-106
Ag-108m	Ag-108
Cs-137	Ba-137m
Ce-134	La-134
Ce-144	Pr-144
Ba-140	La-140

Parent	*Progeny*
Bi-212	TI-208 (0·36), Po-212 (0·64)
Bi-212	TI-208 (0·36), Po-212 (0·64)
Pb-210	Bi-210, Po-210
Pb-212	Bi-212, TI-208 (0·36), Po-212 (0·64)
Rn-220	Po-216
Rn-222	Po-218, Pb-214, Bi-214, Po-214
Ra-223	Rn-219, Po-215, Pb-211, Bi-211, TI-207
Ra-224	Rn-220, Po-216, Pb-12, Bi-212, TI-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-226	Ra-222, Rn-218, Po-214
Th-228	Ra-224, Rn-220, Po-216, Pb-212, Bi-212, TI-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 (incl. Th-232)	Ra-228, Ac-228, Th-228, Ra-224, Rn-220, Po-216, Pb-212, Bi-212, TI-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, TI-208 (0·36), Po-212 (0·64)
U-235	Th-231
U-238	Th-234, Pa-234m

Parent	*Progeny*
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

SCHEDULE 2

Regulation 7

RADIATION DOSE LIMITS

TABLE A

IONISING RADIATION DOSE LIMITS FOR OCCUPATIONAL EXPOSURE

Circumstance	*Dose limit*
Receipt of ionising radiation doses in 5 consecutive calendar years	Effective dose of 20 millisievert per year averaged over the 5 year period
Receipt of ionising radiation doses in a consecutive 12 month period	Effective dose of 50 millisievert
Receipt of ionising radiation to the lens of an eye of a person in a consecutive 12 month period	Equivalent dose of 150 millisievert
Receipt of ionising radiation to the skin of a person in a consecutive 12 month period	Equivalent dose of 500 millisievert averaged over $1cm^2$ of any part of the skin regardless of the total area exposed
Receipt of ionising radiation to the hands and feet of a person in a consecutive 12 month period	Equivalent dose of 500 millisievert

TABLE B

IONISING RADIATION DOSE LIMITS FOR PUBLIC EXPOSURE

Circumstance	*Dose limit*
Receipt of ionising radiation doses in a consecutive 12 month period	Effective dose of 1 millisievert
Receipt of ionising radiation to the lens of an eye of a person in a consecutive 12 month period	Equivalent dose of 15 millisievert
Receipt of ionising radiation to the skin of a person in a consecutive 12 month period	Equivalent dose of 50 millisievert averaged over 1cm^2 of any part of the skin regardless of the total area exposed

SCHEDULE 3

Regulation 8

PRESCRIBED RADIATION SOURCES USED FOR HUMAN DIAGNOSTIC PURPOSES

Plain Film Radiographic X-ray equipment

Fluoroscopic X-ray equipment

Computed Tomographic Scanners

Mammography X-ray equipment

SCHEDULE 4

Regulation 9

CERTIFICATES OF COMPLIANCE

Column 1	*Column 2*
Radiation Source Type (used for human diagnostic purposes)	*Date of expiry*
Plain Film Radiographic X-ray equipment	2 years after issue
Fluoroscopic X-ray equipment	2 years after issue
Computed Tomography Scanners	12 months after issue
Mammography X-ray equipment	12 months after issue

SCHEDULE 5

Regulation 10

LIMITED EXEMPTION FROM REQUIREMENT FOR CERTIFICATE OF COMPLIANCE

Column 1	*Column 2*
Radiation source	*Day*
Plain Film Radiographic X-ray Equipment	1 September 2008
Fluoroscopic X-ray equipment	1 September 2009
Computed Tomography Scanners	1 September 2009
Mammography X-ray equipment	1 September 2008

SCHEDULE 6

Sch. 6 amended by S.R. Nos 148/2007 reg. 7, 167/2008 reg. 8.

Regulations 12, 15

POSSESSION OF RADIATION SOURCES LICENCE FEES

Column 1	*Column 2*	*Column 3*	*Column 4*
Radiation source	*1 year licence*	*2 year licence*	*3 year licence*
Possession of any of the following— • Dental X-ray unit, • Dental Panoramic X-ray unit, • Cephalometric X-ray unit, • Mobile medical plain X-ray unit, • Bone Densitometry (DEXA) unit, • Veterinary X-ray unit, • X-ray gauge, • Cabinet X-ray equipment, • Other ionising radiation apparatus not specified in this Schedule	10 fee units for each radiation source	19 fee units for each radiation source	27 fee units for each radiation source

Column 1	*Column 2*	*Column 3*	*Column 4*
Radiation source	*1 year licence*	*2 year licence*	*3 year licence*
Possession of any of the following ionising radiation apparatus— • Industrial radiography X-ray unit, • Fixed medical plain X-ray unit, • Mammography X-ray unit, • X-ray analysis unit, • Chiropractic X-ray unit, • Fluoroscopic X-ray unit, • Medical therapy simulator, • X-ray therapy unit	20 fee units per apparatus	38 fee units per apparatus	54 fee units per apparatus
Possession of any of the following ionising radiation apparatus— • Computer tomography unit, • Cyclotron, • Linear or Particle accelerator	40 fee units per apparatus	76 fee units per apparatus	108 fee units apparatus

Column 1	*Column 2*	*Column 3*	*Column 4*
Radiation source	*1 year licence*	*2 year licence*	*3 year licence*
Possession of sealed source with activity less than or equal to 40MBq	5 fee units per source	9·5 fee units per source	13·5 fee units per source
Possession of sealed source with activity greater than 40 MBq but less than or equal to 40 GBq	10 fee units per source	19 fee units per source	27 fee units per source
Possession of sealed source with activity greater than 40 GBq but less than or equal to 400 GBq	20 fee units per source	38 fee units per source	54 fee units per source
Possession of sealed source with activity greater than 400 GBq	40 fee units per source	76 fee units per source	108 fee units per source
Possession of a non-ionising radiation apparatus that is a commercial tanning unit	10 fee units per apparatus	19 fee units per apparatus	27 fee units per apparatus
Possession of sealed source apparatus containing radioactive material with a total activity less than or equal to 40MBq	5 fee units per apparatus	9·5 fee units per apparatus	13·5 fee units per apparatus

Column 1 *Radiation source*	*Column 2* *1 year licence*	*Column 3* *2 year licence*	*Column 4* *3 year licence*
Possession of sealed source apparatus containing radioactive material with a total activity greater than 40 MBq but less than or equal to 40 GBq	10 fee units per apparatus	19 fee units per apparatus	27 fee units per apparatus
Possession of sealed source apparatus containing radioactive material with a total activity greater than 40 GBq but less than or equal to 400 GBq	20 fee units per apparatus	38 fee units per apparatus	54 fee units per apparatus
Possession of sealed source apparatus containing radioactive material with a total activity greater than 400 GBq	40 fee units per apparatus	76 fee units per apparatus	108 fee units per apparatus
Possession of radioactive material with a total activity of less than or equal to 40GBq	10 fee units	19 fee units	27 fee units

Column 1	*Column 2*	*Column 3*	*Column 4*
Radiation source	*1 year licence*	*2 year licence*	*3 year licence*
Possession of radioactive material with a total activity of less than or equal to 400GBq	20 fee units	38 fee units	54 fee units
Possession of radioactive material with a total activity of greater than 400GBq	40 fee units	76 fee units	108 fee units

ENDNOTES

1. General Information

The Radiation Regulations 2007, S.R. No. 89/2007 were made on 28 August 2007 by the Governor in Council under section 139 of the **Radiation Act 2005**, No. 62/2005 and came into operation on 1 September 2007: regulation 3.

The Radiation Regulations 2007 will sunset 10 years after the day of making on 28 August 2017 (see section 5 of the **Subordinate Legislation Act 1994**).

2. Table of Amendments

This Version incorporates amendments made to the Radiation Regulations 2007 by statutory rules, subordinate instruments and Acts.

Radiation (Tanning Units Amendment) Interim Regulations 2007, S.R. No. 148/2007
Date of Making: 18.12.07
Date of Commencement: Regs 5–7 on 1.2.08: reg. 3(1)

Radiation Amendment (Tanning Units and Fees) Regulations 2008, S.R. No. 167/2008
Date of Making: 16.12.08
Date of Commencement: Regs 5–8 on 1.2.09: reg. 3(1)

---

3. Explanatory Details

No entries at date of publication.