Table B1. Calculated transmission factors using DS02 Hiroshima fluences for Straume et al. concrete and granite cores

Motoyasu Bridge pillar core (bridge)

Depth	39K	35Cl	151Eu
0.1	0.55	0.77	0.78
5	0.19	0.60	0.61
10	0.10	0.48	0.48
15	0.06	0.38	0.38
20	0.03	0.31	0.31
25	0.02	0.26	0.26
35	0.01	0.20	0.20

Motoyasu Bridge pillar core (river)

Depth	39K	35Cl	151Eu
0.1	0.49	0.84	0.83
5	0.17	0.62	0.63
10	0.10	0.49	0.49
15	0.05	0.39	0.39
20	0.03	0.31	0.31
25	0.02	0.26	0.26
35	0.01	0.20	0.20

Gokoku core

Depth	39K	35Cl	151Eu
0.1	1.01	0.93	0.94
5	0.71	1.02	0.99
10	0.40	0.83	0.80
20	0.16	0.41	0.39
40	0.04	0.04	0.04
60	0.00	0.00	0.00
Granite 3	0.91	0.79	0.80
Granite 9	0.68	0.67	0.68

Motoyasu Bridge railing

Depth	39K	35Cl	151Eu
1	1.01	0.84	0.86
4	0.81	0.80	0.81

Shirakami Shrine core (w/tree)

Depth	39K	35Cl	151Eu
0.1	0.57	1.07	1.03
5	0.40	0.79	0.76
10	0.27	0.56	0.54
15	0.17	0.37	0.36
20	0.10	0.27	0.26
30	0.05	0.14	0.14
40	0.02	0.07	0.07
50	0.01	0.04	0.04

Shirakami Shrine core (w/o tree)

Depth	39K	35Cl	151Eu
0.1	1.02	0.73	0.76
5	0.71	0.66	0.69
10	0.47	0.58	0.59
15	0.29	0.49	0.50
20	0.21	0.41	0.41
30	0.08	0.27	0.27
40	0.03	0.16	0.17
50	0.02	0.10	0.10

Kirin core

Depth	39K	35Cl	151Eu
0.1	1.07	0.99	0.99
5	0.60	0.99	0.97
10	0.34	0.77	0.75
15	0.21	0.53	0.51
20	0.13	0.33	0.32
30	0.05	0.16	0.15
air	1.13	0.82	0.84

Hiroshima Bank

Depth	39K	35Cl	151Eu
3	0.48	0.94	0.93

Aioi Bridge pillar

Depth	39K	35Cl	151Eu
1	0.97	0.87	0.89

Suiseko abutment

Depth	39K	35Cl	151Eu
5	0.73	0.61	0.63

Chugoku

Depth	39K	35Cl	151Eu
2	0.76	0.86	0.86

City Hall core

Depth	39K	35Cl	151Eu
0.1	1.04	1.04	1.03
5	0.63	0.97	0.95
10	0.38	0.77	0.75
15	0.24	0.56	0.54
20	0.14	0.38	0.37
30	0.06	0.15	0.15
40	0.02	0.06	0.06
50	0.01	0.05	0.04

City Hall core (w/wetter concrete)

Depth	39K	35Cl	151Eu
0.1	1.01	1.06	1.05
5	0.56	1.04	1.01
10	0.34	0.76	0.73
15	0.22	0.51	0.49
20	0.13	0.32	0.30
30	0.05	0.11	0.10
40	0.02	0.03	0.03
50	0.01	0.02	0.02

Elementary School core

Depth	39K	35Cl	151Eu
0.1	1.01	0.93	0.94
5	0.68	0.97	0.96
10	0.44	0.82	0.81
15	0.27	0.66	0.64
20	0.18	0.50	0.48
air	1.07	0.81	0.83

Red Cross Hospital core (9m)

Depth	39K	35Cl	151Eu
0.1	1.03	0.98	0.98
5	0.57	1.04	1.02
10	0.34	0.86	0.83
15	0.20	0.63	0.60
20	0.14	0.43	0.41
30	0.06	0.21	0.20
air	1.01	0.86	0.87

Red Cross Holspital core (20m)

Depth	39K	35Cl	151Eu
0.1	1.04	0.90	0.91
5	0.68	1.10	1.08
10	0.43	0.93	0.91
15	0.26	0.72	0.69
20	0.15	0.49	0.47
30	0.06	0.20	0.19
air	1.09	0.75	0.78

Teishin core

Depth	39K	35Cl	151Eu
0.1	1.03	1.08	1.07
5	0.65	1.08	1.06
10	0.39	0.95	0.92
15	0.30	0.79	0.76
20	0.19	0.68	0.65
30	0.12	0.45	0.43

Post Office core (42)

Depth	39K	35Cl	151Eu
0.1	1.06	1.00	1.01
5	0.68	1.13	1.11
10	0.40	0.96	0.93
15	0.26	0.71	0.68
20	0.15	0.48	0.46
30	0.05	0.20	0.19
air	1.11	0.82	0.84

Post Office core (44)

Depth	39K	35Cl	151Eu
0.1	1.02	0.96	0.96
5	0.62	1.08	1.06
10	0.38	0.88	0.85
15	0.23	0.66	0.63
20	0.14	0.45	0.44
30	0.05	0.18	0.17
air	1.04	0.78	0.79

Table B2. Calculated transmission factors using DS02 Hiroshima fluences for Rühm et al. concrete cores and granite surfaces

Faculty of Science core 1

Depth	^{39}K	^{35}Cl	^{151}Eu
0.1	0.92	0.94	0.93
5	0.64	0.85	0.84
10	0.42	0.75	0.74
15	0.24	0.68	0.66
20	0.17	0.57	0.55
25	0.10	0.44	0.42

Faculty of Science core 2

Depth	^{39}K	^{35}Cl	^{151}Eu
0.1	0.96	0.94	0.94
5	0.61	0.84	0.83
10	0.39	0.74	0.73
15	0.28	0.67	0.65
20	0.16	0.56	0.54
25	0.10	0.42	0.40

Faculty of Science core 3

Depth	^{39}K	^{35}Cl	^{151}Eu
0.1	0.97	0.93	0.93
5	0.68	0.83	0.82
10	0.42	0.75	0.74
15	0.24	0.69	0.67
20	0.17	0.56	0.54
25	0.09	0.44	0.42

Faculty of Science core 4

Depth	^{39}K	^{35}Cl	^{151}Eu
0.1	0.93	1.07	1.05
5	0.67	1.07	1.04
10	0.42	0.91	0.88
15	0.27	0.71	0.68
20	0.17	0.54	0.52
25	0.12	0.38	0.37

Faculty of Science core 5

Depth	^{39}K	^{35}Cl	^{151}Eu
0.1	0.99	1.06	1.06
5	0.69	1.05	1.02
10	0.43	0.92	0.89
15	0.27	0.71	0.68
20	0.18	0.52	0.50
25	0.09	0.38	0.37

Faculty of Science core 6

Depth	^{39}K	^{35}Cl	^{151}Eu
0.1	1.03	1.03	1.03
5	0.66	1.06	1.04
10	0.42	0.92	0.89
15	0.27	0.73	0.71
20	0.18	0.52	0.50
25	0.09	0.38	0.36

Faculty of Science gutter samples

Depth	^{39}K	^{35}Cl	^{151}Eu
sample 1	0.87	0.85	0.85
sample 2	0.87	0.85	0.86
sample 3	0.85	0.87	0.87
sample 4	0.88	0.85	0.85
sample 5	0.13	0.64	0.64

Postal Office stair

Depth	^{39}K	^{35}Cl	^{151}Eu
1	0.88	0.89	0.88

Grave a top: (gravestone on soil)

GR	Depth	^{39}K	^{35}Cl	^{151}Eu
0	2	1.01	0.83	0.84
500	2	0.95	0.82	0.84
1000	2	0.88	0.81	0.83
2000	2	0.82	0.80	0.81

Grave a side: (gravestone on soil)

GR	Depth	^{39}K	^{35}Cl	^{151}Eu
0	2	0.42	0.89	0.89
500	2	0.78	0.92	0.92
1000	2	0.89	0.93	0.93
2000	2	0.90	0.93	0.93

Grave b top: (gravestone on granite)

GR	Depth	^{39}K	^{35}Cl	^{151}Eu
0	2	0.920	0.758	0.786
500	2	1.008	0.755	0.782
1000	2	0.990	0.739	0.766
2000	2	0.899	0.715	0.740

Grave b side: (gravestone on granite)

GR	Depth	^{39}K	^{35}Cl	^{151}Eu
0	2	0.49	0.71	0.73
500	2	0.82	0.74	0.76
1000	2	0.93	0.73	0.76
2000	2	0.95	0.71	0.74

Grave c top: (gravestones on soil)

GR	Depth	^{39}K	^{35}Cl	^{151}Eu
0	2	0.95	0.83	0.84
500	2	0.94	0.82	0.84
1000	2	0.81	0.81	0.83
2000	2	0.73	0.80	0.82

Grave c side: (gravestones on soil)

GR	Depth	^{39}K	^{35}Cl	^{151}Eu
0	2	0.43	0.86	0.86
500	2	0.78	0.88	0.88
1000	2	0.78	0.89	0.89
2000	2	0.76	0.89	0.89

Grave d top: (gravestones on granite)

GR	Depth	^{39}K	^{35}Cl	^{151}Eu
0	2	0.98	0.75	0.77
500	2	0.96	0.74	0.77
1000	2	0.83	0.73	0.75
2000	2	0.75	0.70	0.73

Grave d side: (gravestones on granite)

GR	Depth	^{39}K	^{35}Cl	^{151}Eu
0	2	0.46	0.70	0.72
500	2	0.78	0.72	0.74
1000	2	0.79	0.71	0.74
2000	2	0.80	0.70	0.72

Over soil – No gravestone

GR	Depth	^{39}K	^{35}Cl	^{151}Eu
0	2	0.98	1.01	1.01
500	2	1.00	1.02	1.01
1000	2	1.01	1.01	1.01
2000	2	1.00	1.01	1.01

Over granite – No gravestone

GR	Depth	^{39}K	^{35}Cl	^{151}Eu
0	2	1.06	0.75	0.77
500	2	1.11	0.75	0.77
1000	2	1.10	0.74	0.76
2000	2	1.07	0.72	0.74

Table B3. Calculated transmission factors using DS02 Hiroshima fluences for Rühm et al. Saikoji gravestone cores

	Saikoji gravestone core					
Depth	^{39}K	^{35}Cl	^{151}Eu	^{59}Co	^{40}Ca	^{153}Eu
0.1	1.08	0.78	0.80	0.87	0.79	0.98
5	0.83	0.73	0.76	0.82	0.74	0.91
10	0.58	0.69	0.71	0.76	0.69	0.85
15	0.42	0.66	0.67	0.73	0.66	0.81
20	0.32	0.64	0.66	0.71	0.64	0.78
30	0.21	0.63	0.64	0.68	0.63	0.76
40	0.18	0.62	0.63	0.67	0.62	0.75
50	0.16	0.59	0.60	0.64	0.59	0.72
60	0.14	0.54	0.55	0.58	0.54	0.65
80	0.09	0.40	0.41	0.42	0.40	0.47
100	0.05	0.27	0.27	0.27	0.27	0.30
120	0.02	0.18	0.18	0.17	0.18	0.19
140	0.01	0.16	0.16	0.15	0.16	0.16

Table B4. Calculated transmission factors for various models of the Straume et al. City Hall concrete cores

City Hall core using DS86 Fluences[1]				City Hall core using DS02 Fluences[2] Without trace poisons				City Hall core using DS02 Fluences[3]			
Depth	^{39}K	^{35}Cl	^{151}Eu	Depth	^{39}K	^{35}Cl	^{151}Eu	Depth	^{39}K	^{35}Cl	^{151}Eu
0.1	0.97	1.03	1.02	0.1	1.02	1.07	1.06	0.1	1.04	1.04	1.03
5	0.60	0.98	0.95	5	0.64	1.10	1.07	5	0.63	0.97	0.95
10	0.39	0.78	0.75	10	0.40	0.92	0.88	10	0.38	0.77	0.75
15	0.23	0.55	0.53	15	0.23	0.68	0.65	15	0.24	0.56	0.54
20	0.16	0.39	0.37	20	0.15	0.48	0.46	20	0.14	0.38	0.37
30	0.06	0.16	0.16	30	0.06	0.21	0.20	30	0.06	0.15	0.15
40	0.02	0.07	0.07	40	0.02	0.10	0.09	40	0.02	0.06	0.06
50	0.01	0.05	0.04	50	0.01	0.07	0.07	50	0.01	0.05	0.04

1) with DS86 Hiroshima Fluences
2) with DS02 Hiroshima Fluences - Trace Elements (Sm, Eu, Gd, and Dy) removed
3) with DS02 Hiroshima Fluences (same as in Table B1 above)

Table B5. Calculated transmission factors for Hashizume et al. ^{60}Co samples using DS02 Hiroshima fluences

Rebar Samples	^{39}K	^{35}Cl	^{151}Eu	^{59}Co
Hiroshima Bank	0.23	0.67	0.66	0.62
Sentry Box	0.43	0.79	0.77	0.72
Water Trough	0.56	0.92	0.90	0.86
Powder Magazine	0.49	0.88	0.85	0.81

Ring Samples	^{39}K	^{35}Cl	^{151}Eu	^{59}Co
Chiyoda	0.88	0.72	0.74	0.77
Chamber of Commerce	0.62	0.67	0.68	0.70
Fukoku Life	0.89	0.71	0.73	0.77
Honkawa Elementary	0.79	0.71	0.73	0.74
Fukuromachi School	1.00	0.72	0.74	0.78
Kirin Beer Hall[a]	1.00	0.72	0.74	0.78
Kodokan	0.88	0.74	0.76	0.80
City Hall	1.00	0.69	0.71	0.76

[a]Sample location is uncertain. Fukuromachi School TF used.

Table B6. Calculation of *in situ* ^{36}Cl activation and FIA equivalent measurement for Nagashima et al. ^{36}Cl samples (Chapter 8, Part F)

Sample ID	Note	Location	Depth, distance & height MD	OGR	86GR	02GR	02SR	Ht	Net meas ^{36}Cl	SD	K K/Cl	DS02 FIA activation ^{39}K	^{35}Cl	^{151}Eu	Shield model	Transmission factor ^{39}K	^{35}Cl	^{151}Eu	DS02 *in situ* activation ^{39}K	^{35}Cl	SUM	FIA meas
	Int	Motoyasu Bridge railing	3	146	145	134	614	1.0	2.13-10*	1.40-11	300	1.92-15	2.15-10	1.11+02	motoyasu rail	0.90	0.82	0.84	5.20-13	1.77-10	1.77-10	2.59-10
	Int	Motoyasu Bridge railing	3	146	145	134	614	1.0	2.09-10	1.30-11	300	1.92-15	2.15-10	1.11+02	motoyasu rail	0.90	0.82	0.84	5.20-13	1.77-10	1.77-10	2.54-10
	Int	Motoyasu Bridge railing	3	146	145	134	614	1.0	1.89-10	1.30-11	300	1.92-15	2.15-10	1.11+02	motoyasu rail	0.90	0.82	0.84	5.20-13	1.77-10	1.77-10	2.30-10
	Int	Motoyasu Bridge railing	3	146	145	134	614	1.0	1.71-10	1.20-11	300	1.92-15	2.15-10	1.11+02	motoyasu rail	0.90	0.82	0.84	5.20-13	1.77-10	1.77-10	2.08-10
	Int	Motoyasu Bridge railing	2	146	145	134	614	1.0	1.54-10	2.60-11	300	1.92-15	2.15-10	1.11+02	motoyasu rail	0.97	0.83	0.85	5.60-13	1.79-10	1.80-10	1.84-10
	Int	Shirakami Shrine fence	3	496	496	504	783	1.0	2.83-11	2.60-12	300	7.14-16	3.65-11	1.87+01	grave c: top	0.94	0.82	0.84	2.01-13	3.00-11	3.02-11	3.42-11
	Int	Shirakami Shrine fence	2	496	496	504	783	1.0	2.20-11	1.80-12	300	7.14-16	3.65-11	1.87+01	grave c: top	0.94	0.82	0.84	2.01-13	3.00-11	3.02-11	2.65-11
	Int	Shirakami Shrine fence	2	496	496	504	783	1.0	2.15-11	1.50-12	300	7.14-16	3.65-11	1.87+01	grave c: top	0.94	0.82	0.84	2.01-13	3.00-11	3.02-11	2.59-11
	Int	Shirakami Shrine fence	2	496	496	504	783	1.0	1.92-11	1.40-12	300	7.14-16	3.65-11	1.87+01	grave c: top	0.94	0.82	0.84	2.01-13	3.00-11	3.02-11	2.31-11
	Int	Myocho ji	2	654	654	639	876	1.0	1.05-11	9.91-13	300	4.03-16	1.42-11	7.27+00	grave c: top	0.90	0.82	0.84	1.08-13	1.16-11	1.17-11	1.27-11
	Int	Old Prefectural Office	1	881	881	877	1062	1.0	2.41-12	2.07-13	300	1.36-16	2.34-12	1.20+00	grave c: top	0.84	0.82	0.83	3.43-14	1.91-12	1.95-12	2.90-12
	Int	Old Prefectural Office	3	881	881	877	1062	1.0	2.29-12	1.60-13	300	1.36-16	2.34-12	1.20+00	grave c: top	0.84	0.82	0.83	3.43-14	1.91-12	1.95-12	2.76-12
	Int	Old Prefectural Office	1	881	881	877	1062	1.0	2.24-12	1.88-13	300	1.36-16	2.34-12	1.20+00	grave c: top	0.84	0.82	0.83	3.43-14	1.91-12	1.95-12	2.70-12
	Int	Old Prefectural Office	3	881	881	877	1062	1.0	2.16-12	5.23-13	300	1.36-16	2.34-12	1.20+00	grave c: top	0.84	0.82	0.83	3.43-14	1.91-12	1.95-12	2.60-12
	Int	Honkei ji	2	893	893	896	1078	1.0	1.27-12	1.14-13	300	1.25-16	2.02-12	1.04+00	grave c: top	0.84	0.82	0.83	3.13-14	1.65-12	1.68-12	1.51-12
	Int	Honkei ji	3	893	893	896	1078	1.0	1.11-12	1.32-13	300	1.25-16	2.02-12	1.04+00	grave c: top	0.84	0.82	0.83	3.13-14	1.65-12	1.68-12	1.32-12
	Int	Enryu ji	2	912	912	925	1102	1.0	1.62-12	2.66-13	300	1.06-16	1.61-12	8.27-01	grave c: top	0.83	0.82	0.83	2.66-14	1.32-12	1.34-12	1.95-12
	Int	Shingyo ji	2	927	927	915	1094	1.0	1.01-12	1.69-13	300	1.12-16	1.74-12	8.93-01	grave c: top	0.83	0.82	0.83	2.80-14	1.42-12	1.45-12	1.20-12
	Int	City Hall pavement	2	1016	1018	1022	1185	0.0	3.02-13	7.60-14	300	6.08-17	7.59-13	3.89-01	grave c: top	0.81	0.81	0.83	1.48-14	6.18-13	6.33-13	3.53-13
	Int	City Hall pavement	3	1016	1018	1022	1185	0.0	2.42-13	8.18-14	300	6.08-17	7.59-13	3.89-01	grave c: top	0.81	0.81	0.83	1.48-14	6.18-13	6.33-13	2.79-13
	Int	City Hall pavement	2	1016	1018	1022	1185	0.0	2.34-13	6.32-14	300	6.08-17	7.59-13	3.89-01	grave c: top	0.81	0.81	0.83	1.48-14	6.18-13	6.33-13	2.69-13
	Int	City Hall pavement	2	1016	1018	1022	1185	0.0	1.97-13	7.88-14	300	6.08-17	7.59-13	3.89-01	grave c: top	0.81	0.81	0.83	1.48-14	6.18-13	6.33-13	2.24-13
	Int	Kozen ji	1	1163	1163	1177	1321	1.0	4.91-14	6.88-14	300	2.73-17	2.31-13	1.18-01	grave c: top	0.80	0.81	0.83	6.53-15	1.87-13	1.94-13	5.24-14
	Int	Hiroshima University Faculty of Science ("E" Bldg) c1	1	1377	1377	1385	1509	1.2	4.71-14	5.88-14	300	8.49-18	4.77-14	2.45-02	grave c: top	0.78	0.81	0.83	1.99-15	3.86-14	4.06-14	5.57-14
	Int	Hiroshima University Faculty of Science ("E" Bldg) c1	1	1377	1377	1385	1509	1.2	1.71-14	6.37-14	300	8.49-18	4.77-14	2.45-02	grave c: top	0.78	0.81	0.83	1.99-15	3.86-14	4.06-14	1.87-14
	Int	Kikkawa Hotel (Ryokan)	1	0	1411	1424	1545	1.2	-4.39-14	5.60-14	300	6.93-18	3.57-14	1.83-02	grave c: top	0.95	0.83	0.84	1.97-15	2.95-14	3.14-14	-5.55-14

Note Definitions and units of each column are given in text.
*2.13-10 is read as 2.13×10^{-10}.
"Int" indicates this is an intercomparison measurement.
For the distant granite samples, a weighted average of the distant measurements ($1.6 \times 10^{-13} \pm 0.5 \times 10^{-13}$) was subtracted from the gross measurement to obtain the corresponding net values.

Next Page