

MCNP4C estimations of Specific Absorbed Fractions from internal photon sources in ORNL analytical adult phantom

One of the most important quantities in internal dosimetry is the specific absorbed fraction Φ . According to MIRD schema, the specific absorbed fraction, Φ , is the fraction of the energy emitted by radionuclides in the source region that is absorbed in a target volume per unit mass. So the mean absorbed dose to the target volume \bar{D} would be in the form:

$$\bar{D} = \tilde{A} \Delta \Phi$$

where Δ is the mean energy per nuclear transition and \tilde{A} is the temporal aspect. The temporal aspect includes biologic uptake and clearance of the radionuclide in the source region and physical decay of the radionuclide.

Since SAF is independent of biological and physical radionuclide half-life, one would be able to estimate mean absorbed dose for different radionuclides by using SAF estimation at some energies corresponding to radionuclide energy spectra and related temporal aspects to estimate mean absorbed dose.

Specific Absorbed Fractions (SAFs) were calculated based on Cristy and Eckerman's analytical adult phantom, by MCNP4C Monte Carlo code. SAFs were estimated with uncertainty less than 3%, for about 600 source organ – target organ pairs at 12 photon energies.

SAF values, which are estimated by MCNP4C F6 tally, for the adult phantom are listed in tables 1 to 27.

Table 1. Specific Absorbed Fraction of photon energy in kg^{-1} when the source organ is the adrenals

Target Organs	Photon energy (keV)											
	10	15	20	30	50	100	200	500	1000	1500	2000	4000
Adrenals	4.99E+01	3.20E+01	1.85E+01	6.86E+00	2.21E+00	1.35E+00	1.49E+00	1.60E+00	1.50E+00	1.37E+00	1.26E+00	1.01E+00
Bone Surface	2.11E-05	2.23E-03	1.04E-02	2.89E-02	3.33E-02	1.70E-02	9.58E-03	7.19E-03	6.36E-03	5.84E-03	5.47E-03	4.63E-03
Brain	0.00E+00	0.00E+00	0.00E+00	1.44E-07	4.17E-06	1.84E-05	3.10E-05	5.59E-05	9.27E-05	1.20E-04	1.40E-04	1.77E-04
Breasts	0.00E+00	0.00E+00	6.35E-06	4.70E-04	2.04E-03	2.58E-03	2.68E-03	2.90E-03	2.93E-03	2.85E-03	2.75E-03	2.41E-03
Esophagus	0.00E+00	0.00E+00	0.00E+00	4.09E-07	5.88E-06	3.23E-05	6.06E-05	1.31E-04	1.99E-04	2.49E-04	2.80E-04	3.20E-04
GB_Wall ^a	0.00E+00	5.77E-06	6.99E-04	1.04E-02	2.06E-02	1.88E-02	1.65E-02	1.50E-02	1.35E-02	1.25E-02	1.17E-02	9.66E-03
Heart Wall	0.00E+00	6.77E-07	4.36E-04	7.55E-03	1.60E-02	1.49E-02	1.33E-02	1.22E-02	1.13E-02	1.05E-02	9.83E-03	8.21E-03
Kidneys	4.12E-04	1.17E-02	3.84E-02	6.39E-02	5.20E-02	3.76E-02	3.50E-02	3.36E-02	3.08E-02	2.84E-02	2.64E-02	2.16E-02
Liver	1.24E-04	3.55E-03	1.34E-02	2.85E-02	2.97E-02	2.29E-02	2.06E-02	1.93E-02	1.77E-02	1.63E-02	1.52E-02	1.26E-02
LLI_Wall ^b	0.00E+00	0.00E+00	3.08E-08	3.16E-05	3.95E-04	8.16E-04	9.41E-04	1.09E-03	1.19E-03	1.21E-03	1.21E-03	1.14E-03
Lungs	6.14E-07	4.91E-04	4.52E-03	1.43E-02	1.59E-02	1.24E-02	1.11E-02	1.04E-02	9.49E-03	8.74E-03	8.15E-03	6.70E-03
Bone Marrow	7.79E-06	7.57E-04	3.40E-03	9.60E-03	1.36E-02	1.24E-02	1.11E-02	1.05E-02	9.92E-03	9.26E-03	8.71E-03	7.40E-03
Ovaries	0.00E+00	0.00E+00	3.13E-09	1.66E-05	4.14E-04	1.04E-03	1.28E-03	1.46E-03	1.55E-03	1.59E-03	1.58E-03	1.46E-03
Pancreas	0.00E+00	9.90E-04	2.15E-02	8.11E-02	8.04E-02	5.67E-02	5.01E-02	4.60E-02	4.14E-02	3.77E-02	3.49E-02	2.84E-02
S-intestine ^c	0.00E+00	0.00E+00	1.65E-06	3.69E-04	2.40E-03	3.66E-03	3.68E-03	3.69E-03	3.61E-03	3.48E-03	3.34E-03	2.92E-03
Spleen	0.00E+00	8.23E-05	4.08E-03	2.52E-02	3.21E-02	2.47E-02	2.20E-02	2.06E-02	1.88E-02	1.74E-02	1.62E-02	1.34E-02
Stomach Wall	0.00E+00	2.25E-06	4.09E-04	7.39E-03	1.59E-02	1.47E-02	1.30E-02	1.20E-02	1.10E-02	1.02E-02	9.59E-03	8.00E-03
Thymus	0.00E+00	0.00E+00	1.15E-06	2.36E-04	1.94E-03	2.93E-03	2.86E-03	2.92E-03	2.93E-03	2.86E-03	2.78E-03	2.46E-03
Thyroid	0.00E+00	0.00E+00	0.00E+00	9.94E-06	1.98E-04	4.42E-04	5.03E-04	6.09E-04	7.15E-04	7.51E-04	7.72E-04	7.90E-04
Testes	0.00E+00	0.00E+00	0.00E+00	4.09E-07	5.88E-06	3.23E-05	6.06E-05	1.31E-04	1.99E-04	2.49E-04	2.80E-04	3.20E-04
UB_Wall ^d	0.00E+00	0.00E+00	0.00E+00	1.21E-06	8.47E-05	2.98E-04	4.04E-04	5.61E-04	6.86E-04	7.44E-04	7.70E-04	7.62E-04
ULI_Wall ^e	0.00E+00	0.00E+00	2.33E-06	5.31E-04	3.07E-03	4.30E-03	4.20E-03	4.13E-03	3.99E-03	3.82E-03	3.66E-03	3.18E-03
Uterus	0.00E+00	0.00E+00	1.56E-08	1.48E-05	3.73E-04	9.62E-04	1.15E-03	1.34E-03	1.45E-03	1.48E-03	1.48E-03	1.37E-03

^aGall Bladder Wall

^bLower Large Intestine

^cSmall Intestine

^dUrinary Bladder Wall

^eUpper Large Intestine

Table 2. Specific Absorbed Fraction of photon energy in kg^{-1} when the source organ is the brain

Target Organs	Photon energy (keV)											
	10	15	20	30	50	100	200	500	1000	1500	2000	4000
Adrenals	0.00E+00	0.00E+00	0.00E+00	1.08E-07	4.99E-06	2.18E-05	3.56E-05	6.53E-05	1.01E-04	1.25E-04	1.44E-04	1.73E-04
Bone Surface	3.22E-03	1.17E-02	2.68E-02	5.04E-02	4.06E-02	1.58E-02	8.66E-03	7.03E-03	6.35E-03	5.83E-03	5.43E-03	4.55E-03
Brain	6.85E-01	6.42E-01	5.67E-01	3.81E-01	1.91E-01	1.17E-01	1.15E-01	1.16E-01	1.07E-01	9.80E-02	9.06E-02	7.30E-02
Breasts	0.00E+00	0.00E+00	1.07E-07	4.43E-06	3.38E-05	8.20E-05	1.26E-04	2.21E-04	3.15E-04	3.66E-04	3.94E-04	4.24E-04
Esophagus	0.00E+00	0.00E+00	0.00E+00	4.82E-06	1.02E-04	2.54E-04	3.30E-04	4.54E-04	5.64E-04	6.16E-04	6.39E-04	1.65E-05
GB_Wall ^a	0.00E+00	0.00E+00	0.00E+00	1.56E-08	1.67E-06	8.66E-06	1.58E-05	3.31E-05	5.75E-05	7.60E-05	8.44E-05	1.15E-04
Heart Wall	0.00E+00	0.00E+00	0.00E+00	4.03E-07	2.00E-05	7.37E-05	1.08E-04	1.72E-04	2.44E-04	2.89E-04	3.14E-04	3.53E-04
Kidneys	0.00E+00	0.00E+00	0.00E+00	1.41E-07	2.17E-06	8.71E-06	1.61E-05	3.59E-05	6.44E-05	8.59E-05	1.04E-04	1.32E-04
Liver	0.00E+00	0.00E+00	0.00E+00	1.83E-07	6.95E-06	2.54E-05	4.28E-05	8.39E-05	1.33E-04	1.63E-04	1.82E-04	2.10E-04
LLI_Wall ^b	0.00E+00	0.00E+00	0.00E+00	1.25E-08	2.66E-07	9.30E-07	1.62E-06	4.76E-06	1.16E-05	1.92E-05	2.54E-05	4.12E-05
Lungs	0.00E+00	0.00E+00	7.69E-09	7.90E-06	1.18E-04	2.47E-04	3.16E-04	4.51E-04	5.59E-04	6.04E-04	6.18E-04	6.12E-04
Bone Marrow	0.00E+00	2.05E-09	2.27E-06	1.75E-04	9.60E-04	1.32E-03	1.32E-03	1.40E-03	1.45E-03	1.43E-03	1.40E-03	1.28E-03
Ovaries	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.48E-07	8.83E-07	1.75E-06	5.52E-06	1.39E-05	2.30E-05	2.72E-05	4.94E-05
Pancreas	0.00E+00	0.00E+00	0.00E+00	2.67E-08	4.36E-06	2.05E-05	3.42E-05	6.41E-05	1.01E-04	1.28E-04	1.46E-04	1.75E-04
S-intestine ^c	0.00E+00	0.00E+00	0.00E+00	3.00E-08	4.72E-07	2.16E-06	4.33E-06	1.14E-05	2.45E-05	3.67E-05	4.48E-05	6.74E-05
Spleen	0.00E+00	0.00E+00	0.00E+00	1.83E-07	7.06E-06	2.64E-05	4.56E-05	9.41E-05	1.49E-04	1.82E-04	2.02E-04	2.26E-04
Stomach Wall	0.00E+00	0.00E+00	0.00E+00	8.67E-08	3.80E-06	1.60E-05	2.72E-05	5.37E-05	8.96E-05	1.14E-04	1.30E-04	1.58E-04
Thymus	0.00E+00	0.00E+00	0.00E+00	2.46E-06	7.07E-05	1.98E-04	2.73E-04	4.19E-04	5.52E-04	6.18E-04	6.54E-04	6.70E-04
Thyroid	0.00E+00	0.00E+00	0.00E+00	1.29E-04	1.36E-03	2.12E-03	2.33E-03	2.76E-03	2.97E-03	2.97E-03	2.93E-03	2.64E-03
Testes	0.00E+00	0.00E+00	0.00E+00	1.21E-07	4.19E-07	5.17E-07	5.20E-07	7.95E-07	2.62E-06	5.16E-06	8.61E-06	1.63E-05
UB_Wall ^d	0.00E+00	0.00E+00	0.00E+00	5.15E-08	3.86E-07	6.59E-07	9.01E-07	2.46E-06	6.68E-06	1.17E-05	1.62E-05	3.01E-05
ULI_Wall ^e	0.00E+00	0.00E+00	0.00E+00	2.00E-08	6.08E-07	2.73E-06	5.40E-06	1.42E-05	2.95E-05	4.30E-05	5.28E-05	7.69E-05
Uterus	0.00E+00	0.00E+00	0.00E+00	3.46E-08	2.30E-07	9.30E-07	1.67E-06	4.69E-06	1.16E-05	1.90E-05	2.51E-05	4.40E-05

^aGall Bladder Wall

^cSmall Intestine

^bLower Large Intestine

^dUrinary Bladder Wall

^eUpper Large Intestine

Table 3. Specific Absorbed Fraction of photon energy in kg^{-1} when the source organ is the breasts

Target Organs	Photon energy (keV)											
	10	15	20	30	50	100	200	500	1000	1500	2000	4000
Adrenals	0.00E+00	0.00E+00	1.50E-05	5.24E-04	2.16E-03	2.73E-03	2.80E-03	3.01E-03	3.01E-03	2.92E-03	2.79E-03	2.44E-03
Bone Surface	3.19E-05	1.23E-03	4.80E-03	1.00E-02	9.48E-03	4.75E-03	2.86E-03	2.41E-03	2.30E-03	2.20E-03	2.10E-03	1.87E-03
Brain	0.00E+00	0.00E+00	6.57E-08	4.08E-06	3.49E-05	8.54E-05	1.29E-04	2.28E-04	3.24E-04	3.74E-04	3.99E-04	4.23E-04
Breasts	2.69E+00	2.32E+00	1.78E+00	8.98E-01	3.36E-01	2.01E-01	2.16E-01	2.30E-01	2.15E-01	1.97E-01	1.82E-01	1.46E-01
Esophagus	0.00E+00	2.16E-09	9.47E-06	9.98E-04	3.94E-03	4.48E-03	4.41E-03	4.55E-03	4.52E-03	4.35E-03	4.17E-03	2.20E-04
GB_Wall ^a	0.00E+00	0.00E+00	3.26E-07	1.61E-04	9.76E-04	1.42E-03	1.58E-03	1.91E-03	2.13E-03	2.20E-03	2.17E-03	2.00E-03
Heart Wall	0.00E+00	3.59E-05	1.31E-03	1.09E-02	1.70E-02	1.37E-02	1.30E-02	1.33E-02	1.27E-02	1.20E-02	1.13E-02	9.47E-03
Kidneys	0.00E+00	0.00E+00	6.50E-08	6.30E-05	5.51E-04	9.51E-04	1.08E-03	1.31E-03	1.46E-03	1.48E-03	1.47E-03	1.35E-03
Liver	0.00E+00	5.48E-07	6.32E-05	1.36E-03	3.52E-03	3.53E-03	3.49E-03	3.72E-03	3.72E-03	3.61E-03	3.48E-03	3.04E-03
LLI_Wall ^b	0.00E+00	0.00E+00	0.00E+00	5.77E-06	4.58E-05	1.00E-04	1.35E-04	2.17E-04	2.96E-04	3.43E-04	3.71E-04	3.94E-04
Lungs	1.82E-07	3.55E-04	4.74E-03	1.75E-02	1.73E-02	1.19E-02	1.13E-02	1.13E-02	1.06E-02	9.84E-03	9.20E-03	7.60E-03
Bone Marrow	1.18E-05	4.18E-04	1.56E-03	3.30E-03	3.72E-03	3.29E-03	3.15E-03	3.32E-03	3.36E-03	3.25E-03	3.13E-03	2.77E-03
Ovaries	0.00E+00	0.00E+00	0.00E+00	2.52E-07	4.31E-05	1.08E-04	1.53E-04	2.51E-04	3.57E-04	3.90E-04	4.18E-04	4.52E-04
Pancreas	0.00E+00	0.00E+00	1.85E-06	5.07E-04	2.58E-03	3.18E-03	3.17E-03	3.38E-03	3.38E-03	3.30E-03	3.17E-03	2.79E-03
S-intestine ^c	0.00E+00	0.00E+00	1.11E-07	1.28E-05	1.45E-04	3.17E-04	4.00E-04	5.53E-04	6.78E-04	7.35E-04	7.60E-04	7.57E-04
Spleen	0.00E+00	0.00E+00	1.16E-05	5.60E-04	2.04E-03	2.34E-03	2.36E-03	2.55E-03	2.59E-03	2.53E-03	2.45E-03	2.17E-03
Stomach Wall	0.00E+00	6.14E-07	6.21E-05	1.12E-03	2.97E-03	3.09E-03	3.11E-03	3.38E-03	3.45E-03	3.38E-03	3.27E-03	2.88E-03
Thymus	0.00E+00	1.91E-05	4.39E-04	7.80E-03	1.47E-02	1.24E-02	1.23E-02	1.29E-02	1.27E-02	1.21E-02	1.15E-02	9.77E-03
Thyroid	0.00E+00	2.45E-07	9.03E-06	1.45E-04	9.76E-04	1.42E-03	1.58E-03	1.91E-03	2.13E-03	2.20E-03	2.17E-03	2.00E-03
Testes	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
UB_Wall ^d	0.00E+00	0.00E+00	1.02E-06	1.09E-05	3.30E-05	5.47E-05	7.88E-05	1.44E-04	2.18E-04	2.58E-04	2.87E-04	3.19E-04
ULI_Wall ^e	0.00E+00	0.00E+00	3.01E-07	2.19E-05	2.18E-04	4.15E-04	5.11E-04	6.78E-04	8.11E-04	8.70E-04	8.93E-04	8.76E-04
Uterus	0.00E+00	0.00E+00	0.00E+00	5.63E-06	3.58E-05	1.12E-04	1.52E-04	2.41E-04	3.26E-04	3.84E-04	4.21E-04	4.45E-04

^aGall Bladder Wall

^cSmall Intestine

^bLower Large Intestine

^dUrinary Bladder Wall

^eUpper Large Intestine

Table 4. Specific Absorbed Fraction of photon energy in kg^{-1} when the source organ is the esophagus

Target Organs	Photon energy (keV)											
	10	15	20	30	50	100	200	500	1000	1500	2000	4000
Adrenals	0.00E+00	1.35E-03	1.78E-02	4.86E-02	4.53E-02	3.35E-02	3.07E-02	2.90E-02	2.63E-02	2.41E-02	2.24E-02	1.54E-03
Bone Surface	3.47E-03	1.35E-02	2.32E-02	3.61E-02	3.75E-02	3.47E-04	1.08E-02	8.26E-03	7.32E-03	6.71E-03	6.26E-03	5.39E-04
Brain	0.00E+00	0.00E+00	0.00E+00	4.82E-06	1.02E-04	2.54E-04	3.30E-04	4.54E-04	5.64E-04	6.16E-04	6.39E-04	1.65E-05
Breasts	0.00E+00	2.16E-09	9.47E-06	9.98E-04	3.94E-03	4.48E-03	4.41E-03	4.55E-03	4.52E-03	4.35E-03	4.17E-03	2.20E-04
Esophagus	1.74E+01	1.09E+01	6.21E+00	2.35E+00	7.89E-01	4.86E-01	5.27E-01	5.60E-01	5.21E-01	4.75E-01	4.38E-01	2.64E-02
GB_Wall ^a	0.00E+00	1.34E-06	2.39E-04	3.74E-03	8.26E-03	7.90E-03	6.97E-03	6.41E-03	5.94E-03	5.56E-03	5.25E-03	3.50E-04
Heart Wall	4.77E-03	2.38E-02	4.18E-02	6.13E-02	5.25E-02	3.67E-02	3.28E-02	3.08E-02	2.80E-02	2.57E-02	2.39E-02	1.64E-03
Kidneys	0.00E+00	4.50E-07	1.51E-04	2.83E-03	6.53E-03	6.69E-03	6.27E-03	6.04E-03	5.72E-03	5.39E-03	5.13E-03	3.14E-04
Liver	8.32E-07	2.56E-04	2.27E-03	8.94E-03	1.24E-02	1.05E-02	9.36E-03	8.72E-03	8.05E-03	7.49E-03	7.03E-03	4.68E-04
LLI_Wall ^b	0.00E+00	0.00E+00	0.00E+00	1.57E-05	1.84E-04	3.61E-04	4.22E-04	5.01E-04	5.75E-04	6.10E-04	6.22E-04	2.12E-05
Lungs	1.12E-08	2.77E-04	5.78E-03	2.44E-02	2.75E-02	2.01E-02	1.74E-02	1.60E-02	1.44E-02	1.32E-02	1.23E-02	8.71E-04
Bone Marrow	1.28E-03	4.58E-03	7.55E-03	1.20E-02	1.54E-02	1.41E-02	1.28E-02	1.23E-02	1.16E-02	1.07E-02	1.01E-02	6.41E-04
Ovaries	0.00E+00	0.00E+00	0.00E+00	4.79E-06	1.44E-04	3.87E-04	4.83E-04	5.96E-04	6.91E-04	7.36E-04	7.39E-04	2.49E-05
Pancreas	8.15E-03	6.19E-02	1.24E-01	1.33E-01	8.06E-02	5.06E-02	4.67E-02	4.48E-02	4.07E-02	3.73E-02	3.45E-02	2.33E-03
S-intestine ^c	0.00E+00	0.00E+00	2.08E-07	1.10E-04	8.50E-04	1.38E-03	1.43E-03	1.50E-03	1.54E-03	1.53E-03	1.50E-03	7.14E-05
Spleen	0.00E+00	1.37E-05	1.01E-03	9.40E-03	1.50E-02	1.24E-02	1.09E-02	1.02E-02	9.32E-03	8.65E-03	8.10E-03	5.44E-04
Stomach Wall	3.36E-03	1.61E-02	2.62E-02	3.12E-02	2.47E-02	1.75E-02	1.58E-02	1.50E-02	1.37E-02	1.27E-02	1.18E-02	7.93E-04
Thymus	0.00E+00	4.17E-08	2.31E-04	6.96E-03	1.58E-02	1.41E-02	1.25E-02	1.17E-02	1.08E-02	1.01E-02	9.48E-03	6.25E-04
Thyroid	0.00E+00	2.66E-05	1.91E-03	1.24E-02	1.58E-02	1.22E-02	1.10E-02	1.06E-02	9.90E-03	9.22E-03	8.67E-03	5.51E-04
Testes	0.00E+00	0.00E+00	0.00E+00	4.09E-07	5.88E-06	3.23E-05	6.06E-05	1.31E-04	1.99E-04	2.49E-04	2.80E-04	3.20E-04
UB_Wall ^d	0.00E+00	0.00E+00	0.00E+00	4.71E-07	3.04E-05	1.15E-04	1.62E-04	2.38E-04	3.09E-04	3.53E-04	3.74E-04	7.95E-06
ULI_Wall ^e	0.00E+00	0.00E+00	5.93E-07	1.86E-04	1.17E-03	1.70E-03	1.70E-03	1.74E-03	1.75E-03	1.72E-03	1.68E-03	8.52E-05
Uterus	0.00E+00	0.00E+00	0.00E+00	4.21E-06	1.29E-04	3.57E-04	4.36E-04	5.50E-04	6.43E-04	6.79E-04	6.86E-04	2.20E-05

^aGall Bladder Wall

^bLower Large Intestine

^cSmall Intestine

^dUrinary Bladder Wall

^eUpper Large Intestine

Table 5. Specific Absorbed Fraction of photon energy in $\text{kg}^{-1} \text{kg}^{-1}$ when the source organ is the gall bladder contents

Target Organs	Photon energy (keV)											
	10	15	20	30	50	100	200	500	1000	1500	2000	4000
Adrenals	0.00E+00	1.78E-06	1.45E-04	5.34E-03	1.42E-02	1.41E-02	1.27E-02	1.17E-02	1.08E-02	1.00E-02	9.39E-03	7.84E-03
Bone Surface	0.00E+00	6.75E-07	1.36E-04	3.10E-03	9.55E-03	7.73E-03	4.54E-03	3.06E-03	2.67E-03	2.50E-03	2.37E-03	2.09E-03
Brain	0.00E+00	0.00E+00	0.00E+00	2.33E-08	1.12E-06	5.50E-06	1.07E-05	2.53E-05	4.74E-05	6.44E-05	7.90E-05	1.08E-04
Breasts	0.00E+00	0.00E+00	4.02E-07	1.06E-04	7.52E-04	1.18E-03	1.32E-03	1.60E-03	1.76E-03	1.80E-03	1.80E-03	1.68E-03
Esophagus	0.00E+00	0.00E+00	0.00E+00	5.13E-06	7.44E-05	2.15E-04	3.09E-04	4.53E-04	5.85E-04	6.58E-04	6.95E-04	7.14E-04
GB_Wall ^a	3.81E+00	5.00E+00	4.37E+00	2.38E+00	9.45E-01	5.48E-01	5.58E-01	5.73E-01	5.29E-01	4.82E-01	4.45E-01	3.55E-01
Heart Wall	0.00E+00	0.00E+00	3.10E-06	7.06E-04	3.73E-03	4.66E-03	4.41E-03	4.32E-03	4.22E-03	4.06E-03	3.89E-03	3.39E-03
Kidneys	0.00E+00	2.08E-06	7.83E-04	1.25E-02	2.37E-02	2.03E-02	1.78E-02	1.62E-02	1.48E-02	1.36E-02	1.28E-02	1.06E-02
Liver	2.44E-04	8.76E-03	3.30E-02	6.67E-02	6.09E-02	4.16E-02	3.66E-02	3.41E-02	3.09E-02	2.84E-02	2.63E-02	2.15E-02
LLI_Wall ^b	0.00E+00	0.00E+00	1.68E-06	3.40E-04	2.06E-03	2.89E-03	2.86E-03	2.87E-03	2.82E-03	2.73E-03	2.64E-03	2.33E-03
Lungs	0.00E+00	0.00E+00	5.28E-06	6.50E-04	2.69E-03	3.14E-03	2.97E-03	2.98E-03	2.93E-03	2.81E-03	2.69E-03	2.34E-03
Bone Marrow	0.00E+00	2.29E-07	4.43E-05	9.92E-04	3.49E-03	4.42E-03	4.08E-03	3.83E-03	3.70E-03	3.54E-03	3.40E-03	3.02E-03
Ovaries	0.00E+00	0.00E+00	1.41E-06	9.89E-04	5.34E-03	6.50E-03	6.04E-03	5.71E-03	5.37E-03	5.07E-03	4.84E-03	4.13E-03
Pancreas	0.00E+00	1.55E-04	4.85E-03	2.88E-02	3.89E-02	2.98E-02	2.55E-02	2.29E-02	2.06E-02	1.88E-02	1.75E-02	1.44E-02
S-intestine ^c	2.17E-06	6.35E-04	5.34E-03	2.39E-02	3.26E-02	2.54E-02	2.20E-02	1.99E-02	1.80E-02	1.65E-02	1.54E-02	1.26E-02
Spleen	0.00E+00	0.00E+00	3.23E-06	8.40E-04	4.69E-03	5.96E-03	5.56E-03	5.29E-03	5.04E-03	4.79E-03	4.55E-03	3.92E-03
Stomach Wall	0.00E+00	1.00E-06	2.45E-04	6.52E-03	1.57E-02	1.44E-02	1.26E-02	1.16E-02	1.06E-02	9.89E-03	9.29E-03	7.77E-03
Thymus	0.00E+00	0.00E+00	9.70E-09	2.59E-05	4.89E-04	9.77E-04	1.09E-03	1.29E-03	1.42E-03	1.49E-03	1.46E-03	1.37E-03
Thyroid	0.00E+00	0.00E+00	0.00E+00	2.16E-06	4.14E-05	1.10E-04	1.57E-04	2.36E-04	2.99E-04	3.49E-04	3.86E-04	4.14E-04
Testes	0.00E+00	0.00E+00	0.00E+00	5.13E-06	7.44E-05	2.15E-04	3.09E-04	4.53E-04	5.85E-04	6.58E-04	6.95E-04	7.14E-04
UB_Wall ^d	0.00E+00	0.00E+00	5.84E-08	1.14E-04	1.20E-03	2.03E-03	2.12E-03	2.25E-03	2.32E-03	2.30E-03	2.25E-03	2.03E-03
ULI_Wall ^e	1.80E-05	5.00E-03	2.91E-02	6.91E-02	6.40E-02	4.36E-02	3.82E-02	3.52E-02	3.18E-02	2.91E-02	2.70E-02	2.20E-02
Uterus	0.00E+00	0.00E+00	4.87E-06	9.29E-04	5.10E-03	6.44E-03	5.92E-03	5.57E-03	5.28E-03	5.00E-03	4.75E-03	4.07E-03

^aGall Bladder Wall

^cSmall Intestine

^bLower Large Intestine

^dUrinary Bladder Wall

^eUpper Large Intestine

Table 6. Specific Absorbed Fraction of photon energy in kg^{-1} when the source organ is the gall bladder wall

Target Organs	Photon energy (keV)											
	10	15	20	30	50	100	200	500	1000	1500	2000	4000
Adrenals	0.00E+00	3.32E-06	1.44E-04	5.16E-03	1.35E-02	1.36E-02	1.23E-02	1.13E-02	1.04E-02	9.69E-03	9.07E-03	7.57E-03
Bone Surface	0.00E+00	1.14E-06	1.54E-04	3.13E-03	9.44E-03	7.61E-03	4.47E-03	3.02E-03	2.64E-03	2.47E-03	2.35E-03	2.07E-03
Brain	0.00E+00	0.00E+00	0.00E+00	7.53E-08	1.18E-06	5.49E-06	1.13E-05	2.54E-05	4.82E-05	6.66E-05	8.02E-05	1.09E-04
Breasts	0.00E+00	0.00E+00	1.15E-06	1.07E-04	7.71E-04	1.18E-03	1.32E-03	1.59E-03	1.77E-03	1.80E-03	1.80E-03	1.68E-03
Esophagus	0.00E+00	1.34E-06	2.39E-04	3.74E-03	8.26E-03	7.90E-03	6.97E-03	6.41E-03	5.94E-03	5.56E-03	5.25E-03	3.50E-04
GB_Wall ^a	4.40E+01	2.06E+01	1.10E+01	4.25E+00	1.46E+00	8.86E-01	9.58E-01	1.02E+00	9.49E-01	8.67E-01	7.99E-01	6.37E-01
Heart Wall	0.00E+00	0.00E+00	5.26E-06	7.29E-04	3.67E-03	4.59E-03	4.33E-03	4.27E-03	4.15E-03	3.99E-03	3.83E-03	3.33E-03
Kidneys	0.00E+00	3.85E-06	8.24E-04	1.23E-02	2.28E-02	1.96E-02	1.72E-02	1.58E-02	1.44E-02	1.33E-02	1.24E-02	1.03E-02
Liver	1.77E-03	2.01E-02	4.82E-02	7.60E-02	6.41E-02	4.32E-02	3.84E-02	3.60E-02	3.27E-02	3.00E-02	2.79E-02	2.27E-02
LLI_Wall ^b	0.00E+00	0.00E+00	2.15E-06	3.51E-04	2.07E-03	2.89E-03	2.85E-03	2.86E-03	2.83E-03	2.74E-03	2.64E-03	2.33E-03
Lungs	0.00E+00	8.30E-08	9.98E-06	6.77E-04	2.70E-03	3.11E-03	2.94E-03	2.95E-03	2.90E-03	2.79E-03	2.67E-03	2.32E-03
Bone Marrow	0.00E+00	3.87E-07	4.99E-05	1.00E-03	3.43E-03	4.34E-03	4.01E-03	3.77E-03	3.65E-03	3.50E-03	3.36E-03	2.98E-03
Ovaries	0.00E+00	0.00E+00	5.13E-06	1.17E-03	5.50E-03	6.72E-03	6.14E-03	5.80E-03	5.50E-03	5.16E-03	4.86E-03	4.18E-03
Pancreas	0.00E+00	1.34E-04	4.26E-03	2.59E-02	3.60E-02	2.78E-02	2.39E-02	2.15E-02	1.93E-02	1.77E-02	1.65E-02	1.36E-02
S-intestine ^c	1.37E-05	1.39E-03	7.58E-03	2.68E-02	3.41E-02	2.62E-02	2.27E-02	2.06E-02	1.86E-02	1.71E-02	1.59E-02	1.31E-02
Spleen	0.00E+00	0.00E+00	3.02E-06	7.73E-04	4.43E-03	5.64E-03	5.28E-03	5.07E-03	4.84E-03	4.60E-03	4.40E-03	3.79E-03
Stomach Wall	0.00E+00	1.06E-06	2.27E-04	6.12E-03	1.49E-02	1.38E-02	1.21E-02	1.12E-02	1.03E-02	9.57E-03	8.99E-03	7.52E-03
Thymus	0.00E+00	0.00E+00	1.85E-08	2.60E-05	5.07E-04	9.54E-04	1.07E-03	1.24E-03	1.41E-03	1.46E-03	1.45E-03	1.37E-03
Thyroid	0.00E+00	0.00E+00	0.00E+00	1.40E-06	3.51E-05	1.20E-04	1.68E-04	2.29E-04	3.06E-04	3.68E-04	3.81E-04	4.12E-04
Testes	0.00E+00	0.00E+00	0.00E+00	4.59E-06	8.03E-05	2.22E-04	3.18E-04	4.68E-04	6.07E-04	6.78E-04	7.06E-04	7.25E-04
UB_Wall ^d	0.00E+00	0.00E+00	3.15E-07	1.18E-04	1.26E-03	2.10E-03	2.17E-03	2.31E-03	2.37E-03	2.34E-03	2.28E-03	2.06E-03
ULI_Wall ^e	9.21E-05	1.09E-02	4.28E-02	8.04E-02	6.86E-02	4.61E-02	4.07E-02	3.78E-02	3.42E-02	3.12E-02	2.90E-02	2.36E-02
Uterus	0.00E+00	0.00E+00	3.87E-06	9.91E-04	5.34E-03	6.58E-03	6.06E-03	5.71E-03	5.39E-03	5.09E-03	4.84E-03	4.13E-03

^aGall Bladder Wall

^bLower Large Intestine

^cSmall Intestine

^dUrinary Bladder Wall

^eUpper Large Intestine

Table 7. Specific Absorbed Fraction of photon energy in kg^{-1} when the source organ is the heart contents

Target Organs	Photon energy (keV)											
	10	15	20	30	50	100	200	500	1000	1500	2000	4000
Adrenals	0.00E+00	2.35E-07	2.00E-04	5.17E-03	1.31E-02	1.28E-02	1.16E-02	1.09E-02	1.00E-02	9.37E-03	8.78E-03	7.38E-03
Bone Surface	0.00E+00	1.14E-06	1.54E-04	3.13E-03	9.44E-03	7.61E-03	4.47E-03	3.02E-03	2.64E-03	2.47E-03	2.35E-03	2.07E-03
Brain	0.00E+00	0.00E+00	0.00E+00	3.09E-07	1.69E-05	6.79E-05	1.03E-04	1.74E-04	2.54E-04	3.02E-04	3.34E-04	3.74E-04
Breasts	0.00E+00	8.39E-06	5.42E-04	7.66E-03	1.42E-02	1.21E-02	1.16E-02	1.19E-02	1.15E-02	1.09E-02	1.03E-02	8.72E-03
Esophagus	0.00E+00	1.84E-06	2.31E-04	6.08E-03	1.50E-02	1.40E-02	1.21E-02	1.11E-02	1.02E-02	9.52E-03	8.94E-03	7.48E-03
GB_Wall ^a	0.00E+00	1.78E-08	1.71E-05	9.84E-04	4.51E-03	5.33E-03	4.96E-03	4.78E-03	4.57E-03	4.35E-03	4.17E-03	3.60E-03
Heart Wall	1.73E-01	4.00E-01	5.17E-01	4.39E-01	2.36E-01	1.41E-01	1.34E-01	1.32E-01	1.21E-01	1.10E-01	1.02E-01	8.19E-02
Kidneys	0.00E+00	0.00E+00	1.58E-06	3.67E-04	2.30E-03	3.26E-03	3.27E-03	3.34E-03	3.34E-03	3.24E-03	3.13E-03	2.76E-03
Liver	2.61E-08	7.10E-05	1.28E-03	8.42E-03	1.37E-02	1.15E-02	1.02E-02	9.53E-03	8.83E-03	8.23E-03	7.73E-03	6.46E-03
LLI_Wall ^b	0.00E+00	0.00E+00	1.65E-10	2.40E-06	6.87E-05	1.94E-04	2.56E-04	3.60E-04	4.57E-04	5.05E-04	5.26E-04	5.40E-04
Lungs	3.89E-06	1.53E-03	1.19E-02	3.65E-02	3.69E-02	2.48E-02	2.14E-02	1.97E-02	1.79E-02	1.64E-02	1.52E-02	1.24E-02
Bone Marrow	0.00E+00	3.87E-07	4.99E-05	1.00E-03	3.43E-03	4.34E-03	4.01E-03	3.77E-03	3.65E-03	3.50E-03	3.36E-03	2.98E-03
Ovaries	0.00E+00	0.00E+00	0.00E+00	8.62E-07	6.87E-05	2.18E-04	3.07E-04	4.39E-04	5.37E-04	6.03E-04	6.33E-04	6.33E-04
Pancreas	0.00E+00	1.84E-06	2.31E-04	6.08E-03	1.50E-02	1.40E-02	1.21E-02	1.11E-02	1.02E-02	9.52E-03	8.94E-03	7.48E-03
S-intestine ^c	0.00E+00	0.00E+00	5.16E-08	1.80E-05	3.54E-04	7.96E-04	9.18E-04	1.08E-03	1.19E-03	1.22E-03	1.23E-03	1.16E-03
Spleen	0.00E+00	4.62E-09	3.59E-05	1.64E-03	5.86E-03	6.35E-03	5.75E-03	5.46E-03	5.19E-03	4.92E-03	4.68E-03	4.01E-03
Stomach Wall	0.00E+00	9.38E-06	4.26E-04	4.47E-03	9.48E-03	8.84E-03	7.97E-03	7.62E-03	7.21E-03	6.79E-03	6.44E-03	5.46E-03
Thymus	6.60E-05	5.69E-03	2.94E-02	7.39E-02	6.79E-02	4.53E-02	4.06E-02	3.85E-02	3.53E-02	3.24E-02	3.01E-02	2.45E-02
Thyroid	0.00E+00	0.00E+00	1.79E-07	2.16E-04	1.75E-03	2.46E-03	2.49E-03	2.68E-03	2.76E-03	2.74E-03	2.68E-03	2.41E-03
Testes	0.00E+00	0.00E+00	0.00E+00	9.34E-07	5.10E-06	8.54E-06	1.91E-05	4.43E-05	8.46E-05	1.12E-04	1.31E-04	1.78E-04
UB_Wall ^d	0.00E+00	0.00E+00	0.00E+00	7.56E-07	1.66E-05	7.08E-05	1.12E-04	1.91E-04	2.74E-04	3.20E-04	3.52E-04	3.86E-04
ULI_Wall ^e	0.00E+00	0.00E+00	1.16E-07	3.42E-05	5.26E-04	1.04E-03	1.15E-03	1.30E-03	1.41E-03	1.43E-03	1.42E-03	1.32E-03
Uterus	0.00E+00	0.00E+00	0.00E+00	1.45E-06	5.99E-05	2.14E-04	2.97E-04	4.23E-04	5.28E-04	5.81E-04	6.08E-04	6.20E-04

^a Gall Bladder Wall

^b Lower Large Intestine

^c Small Intestine

^d Urinary Bladder Wall

^e Upper Large Intestine

Table 8. Specific Absorbed Fraction of photon energy in kg^{-1} when the source organ is the heart wall

Target Organs	Photon energy (keV)											
	10	15	20	30	50	100	200	500	1000	1500	2000	4000
Adrenals	0.00E+00	1.87E-06	4.57E-04	7.53E-03	1.57E-02	1.45E-02	1.31E-02	1.22E-02	1.13E-02	1.04E-02	9.82E-03	8.21E-03
Bone Surface	0.00E+00	0.00E+00	0.00E+00	3.05E-07	1.55E-05	6.00E-05	9.27E-05	1.57E-04	2.30E-04	2.78E-04	3.06E-04	3.47E-04
Brain	0.00E+00	0.00E+00	0.00E+00	3.05E-07	1.55E-05	6.00E-05	9.27E-05	1.57E-04	2.30E-04	2.78E-04	3.06E-04	3.47E-04
Breasts	0.00E+00	4.01E-05	1.30E-03	1.05E-02	1.61E-02	1.31E-02	1.26E-02	1.30E-02	1.25E-02	1.18E-02	1.12E-02	9.42E-03
Esophagus	4.77E-03	2.38E-02	4.18E-02	6.13E-02	5.25E-02	3.67E-02	3.28E-02	3.08E-02	2.80E-02	2.57E-02	2.39E-02	1.64E-03
GB_Wall ^a	0.00E+00	2.01E-08	2.00E-05	1.44E-03	5.40E-03	6.11E-03	5.63E-03	5.37E-03	5.13E-03	4.87E-03	4.65E-03	3.99E-03
Heart Wall	2.70E+00	2.00E+00	1.41E+00	7.52E-01	3.30E-01	1.98E-01	1.99E-01	2.03E-01	1.87E-01	1.71E-01	1.58E-01	1.26E-01
Kidneys	0.00E+00	0.00E+00	4.50E-06	5.43E-04	2.85E-03	3.78E-03	3.72E-03	3.77E-03	3.72E-03	3.60E-03	3.46E-03	3.02E-03
Liver	3.86E-06	5.36E-04	3.35E-03	1.13E-02	1.49E-02	1.20E-02	1.08E-02	1.02E-02	9.42E-03	8.78E-03	8.24E-03	6.88E-03
LLI_Wall ^b	0.00E+00	0.00E+00	5.74E-10	4.60E-06	9.98E-05	2.58E-04	3.26E-04	4.41E-04	5.44E-04	5.89E-04	6.08E-04	6.14E-04
Lungs	5.35E-05	3.72E-03	1.70E-02	3.79E-02	3.52E-02	2.35E-02	2.04E-02	1.90E-02	1.73E-02	1.58E-02	1.47E-02	1.20E-02
Bone Marrow	5.99E-06	1.60E-04	7.28E-04	2.97E-03	5.80E-03	5.99E-03	5.38E-03	5.08E-03	4.88E-03	4.62E-03	4.40E-03	3.84E-03
Ovaries	0.00E+00	0.00E+00	0.00E+00	2.70E-06	8.63E-05	2.86E-04	3.71E-04	5.20E-04	6.27E-04	6.91E-04	6.97E-04	7.05E-04
Pancreas	0.00E+00	7.46E-06	9.86E-04	1.22E-02	2.22E-02	1.85E-02	1.60E-02	1.47E-02	1.34E-02	1.24E-02	1.16E-02	9.62E-03
S-intestine ^c	0.00E+00	0.00E+00	8.53E-09	2.98E-05	4.74E-04	9.76E-04	1.09E-03	1.25E-03	1.36E-03	1.38E-03	1.38E-03	1.29E-03
Spleen	0.00E+00	1.34E-07	1.21E-04	3.25E-03	8.89E-03	8.62E-03	7.65E-03	7.17E-03	6.73E-03	6.32E-03	5.99E-03	5.09E-03
Stomach Wall	8.33E-09	1.64E-04	2.32E-03	1.12E-02	1.64E-02	1.34E-02	1.19E-02	1.13E-02	1.06E-02	9.86E-03	9.27E-03	7.76E-03
Thymus	6.84E-04	1.06E-02	3.10E-02	6.06E-02	5.47E-02	3.71E-02	3.36E-02	3.23E-02	2.97E-02	2.74E-02	2.55E-02	2.08E-02
Thyroid	0.00E+00	0.00E+00	1.01E-07	1.79E-04	1.45E-03	2.08E-03	2.08E-03	2.27E-03	2.38E-03	2.38E-03	2.36E-03	2.14E-03
Testes	0.00E+00	0.00E+00	1.84E-07	1.88E-06	4.97E-06	1.21E-05	2.01E-05	5.01E-05	9.30E-05	1.22E-04	1.48E-04	1.87E-04
UB_Wall ^d	0.00E+00	0.00E+00	9.46E-08	8.13E-07	2.18E-05	8.23E-05	1.29E-04	2.16E-04	3.07E-04	3.58E-04	3.87E-04	4.17E-04
ULI_Wall ^e	0.00E+00	0.00E+00	3.02E-08	5.48E-05	6.90E-04	1.26E-03	1.35E-03	1.49E-03	1.59E-03	1.60E-03	1.59E-03	1.46E-03
Uterus	0.00E+00	0.00E+00	0.00E+00	2.28E-06	7.51E-05	2.54E-04	3.48E-04	4.81E-04	5.90E-04	6.46E-04	6.69E-04	6.72E-04

^aGall Bladder Wall

^cSmall Intestine

^bLower Large Intestine

^dUrinary Bladder Wall

^eUpper Large Intestine

Table 9. Specific Absorbed Fraction of photon energy in kg^{-1} when the source organ is the kidneys

Target Organs	Photon energy (keV)											
	10	15	20	30	50	100	200	500	1000	1500	2000	4000
Adrenals	5.14E-04	1.15E-02	3.83E-02	6.42E-02	5.17E-02	3.73E-02	3.49E-02	3.37E-02	3.09E-02	2.84E-02	2.64E-02	2.16E-02
Bone Surface	2.82E-05	4.23E-04	2.89E-03	1.15E-02	1.68E-02	9.67E-03	5.56E-03	3.88E-03	3.61E-03	3.46E-03	3.30E-03	2.78E-03
Brain	0.00E+00	0.00E+00	0.00E+00	3.61E-08	1.79E-06	8.08E-06	1.45E-05	3.34E-05	6.19E-05	8.46E-05	9.91E-05	1.29E-04
Breasts	0.00E+00	0.00E+00	5.43E-09	5.51E-05	5.12E-04	8.71E-04	1.01E-03	1.26E-03	1.41E-03	1.45E-03	1.44E-03	1.34E-03
Esophagus	0.00E+00	0.00E+00	0.00E+00	3.82E-07	2.74E-05	1.07E-04	1.67E-04	2.79E-04	3.95E-04	4.49E-04	4.85E-04	5.12E-04
GB_Wall ^a	0.00E+00	3.16E-06	9.58E-04	1.40E-02	2.56E-02	2.17E-02	1.90E-02	1.72E-02	1.56E-02	1.44E-02	1.34E-02	1.11E-02
Heart Wall	0.00E+00	2.02E-10	3.82E-06	5.58E-04	2.94E-03	3.91E-03	3.80E-03	3.81E-03	3.75E-03	3.61E-03	3.48E-03	3.04E-03
Kidneys	3.12E+00	2.63E+00	1.97E+00	9.89E-01	3.88E-01	2.32E-01	2.40E-01	2.48E-01	2.30E-01	2.10E-01	1.94E-01	1.55E-01
Liver	8.66E-06	6.23E-04	3.87E-03	1.42E-02	1.89E-02	1.53E-02	1.38E-02	1.30E-02	1.20E-02	1.12E-02	1.05E-02	8.73E-03
LLI_Wall ^b	0.00E+00	9.11E-07	1.61E-05	5.37E-04	1.99E-03	2.60E-03	2.62E-03	2.70E-03	2.70E-03	2.63E-03	2.54E-03	2.25E-03
Lungs	0.00E+00	1.23E-07	5.49E-05	1.26E-03	3.26E-03	3.46E-03	3.33E-03	3.41E-03	3.35E-03	3.21E-03	3.06E-03	2.64E-03
Bone Marrow	1.77E-06	2.53E-04	1.49E-03	4.94E-03	7.75E-03	7.51E-03	6.82E-03	6.54E-03	6.27E-03	5.92E-03	5.62E-03	4.87E-03
Ovaries	0.00E+00	0.00E+00	1.72E-06	4.12E-04	2.47E-03	3.58E-03	3.68E-03	3.62E-03	3.62E-03	3.50E-03	3.35E-03	2.93E-03
Pancreas	0.00E+00	4.47E-05	2.82E-03	2.30E-02	3.37E-02	2.70E-02	2.38E-02	2.17E-02	1.97E-02	1.81E-02	1.69E-02	1.39E-02
S-intestine ^c	0.00E+00	1.18E-05	6.10E-04	5.86E-03	1.18E-02	1.13E-02	1.03E-02	9.67E-03	8.96E-03	8.36E-03	7.87E-03	6.59E-03
Spleen	9.99E-05	7.45E-03	3.24E-02	6.30E-02	5.09E-02	3.39E-02	3.07E-02	2.94E-02	2.69E-02	2.48E-02	2.30E-02	1.88E-02
Stomach Wall	0.00E+00	1.37E-06	4.53E-04	7.48E-03	1.52E-02	1.36E-02	1.21E-02	1.12E-02	1.03E-02	9.57E-03	8.98E-03	7.51E-03
Thymus	0.00E+00	0.00E+00	1.59E-09	2.79E-05	3.92E-04	8.36E-04	9.52E-04	1.11E-03	1.23E-03	1.27E-03	1.27E-03	1.19E-03
Thyroid	0.00E+00	0.00E+00	0.00E+00	7.42E-07	5.05E-05	1.41E-04	1.91E-04	2.79E-04	3.80E-04	4.17E-04	4.49E-04	4.64E-04
Testes	0.00E+00	0.00E+00	0.00E+00	3.82E-07	2.74E-05	1.07E-04	1.67E-04	2.79E-04	3.95E-04	4.49E-04	4.85E-04	5.12E-04
UB_Wall ^d	0.00E+00	0.00E+00	5.67E-08	2.22E-05	4.24E-04	9.47E-04	1.11E-03	1.30E-03	1.43E-03	1.45E-03	1.44E-03	1.33E-03
ULI_Wall ^e	0.00E+00	9.11E-07	2.79E-04	5.14E-03	1.16E-02	1.12E-02	1.01E-02	9.36E-03	8.66E-03	8.08E-03	7.60E-03	6.38E-03
Uterus	0.00E+00	0.00E+00	2.31E-07	2.59E-04	1.99E-03	3.14E-03	3.23E-03	3.28E-03	3.27E-03	3.17E-03	3.05E-03	2.68E-03

^aGall Bladder Wall

^bLower Large Intestine

^cSmall Intestine

^dUrinary Bladder Wall

^eUpper Large Intestine

Table 10. Specific Absorbed Fraction of photon energy in kg^{-1} when the source organ is the lungs

Target Organs	Photon energy (keV)											
	10	15	20	30	50	100	200	500	1000	1500	2000	4000
Adrenals	5.53E-07	3.89E-04	3.85E-03	1.28E-02	1.43E-02	1.16E-02	1.08E-02	1.03E-02	9.39E-03	8.68E-03	8.12E-03	6.67E-03
Bone Surface	3.22E-05	9.28E-04	4.99E-03	1.69E-02	2.05E-02	1.05E-02	5.84E-03	4.38E-03	3.92E-03	3.62E-03	3.40E-03	2.90E-03
Brain	0.00E+00	0.00E+00	2.55E-09	6.60E-06	1.00E-04	2.22E-04	3.02E-04	4.43E-04	5.54E-04	5.99E-04	6.13E-04	6.04E-04
Breasts	4.14E-07	3.13E-04	4.23E-03	1.54E-02	1.52E-02	1.12E-02	1.09E-02	1.11E-02	1.05E-02	9.79E-03	9.16E-03	7.56E-03
Esophagus	6.10E-05	3.53E-03	1.55E-02	3.41E-02	3.22E-02	2.26E-02	2.02E-02	1.89E-02	1.72E-02	1.58E-02	1.47E-02	1.20E-02
GB_Wall ^a	0.00E+00	6.75E-08	1.81E-05	1.05E-03	3.44E-03	3.81E-03	3.59E-03	3.56E-03	3.44E-03	3.27E-03	3.10E-03	2.67E-03
Heart Wall	6.10E-05	3.53E-03	1.55E-02	3.41E-02	3.22E-02	2.26E-02	2.02E-02	1.89E-02	1.72E-02	1.58E-02	1.47E-02	1.20E-02
Kidneys	0.00E+00	1.14E-07	4.95E-05	1.15E-03	2.98E-03	3.27E-03	3.25E-03	3.39E-03	3.34E-03	3.20E-03	3.06E-03	2.64E-03
Liver	1.15E-04	2.95E-03	8.84E-03	1.53E-02	1.39E-02	1.02E-02	9.28E-03	8.86E-03	8.16E-03	7.53E-03	7.03E-03	5.79E-03
LLI_Wall ^b	0.00E+00	0.00E+00	8.68E-09	3.23E-06	6.49E-05	1.67E-04	2.22E-04	3.20E-04	4.07E-04	4.55E-04	4.70E-04	4.79E-04
Lungs	9.13E-01	7.26E-01	5.06E-01	2.37E-01	9.24E-02	5.27E-02	5.18E-02	5.21E-02	4.77E-02	4.34E-02	4.00E-02	3.20E-02
Bone Marrow	1.19E-05	3.15E-04	1.61E-03	5.40E-03	7.80E-03	7.01E-03	6.27E-03	6.01E-03	5.72E-03	5.37E-03	5.08E-03	4.34E-03
Ovaries	0.00E+00	0.00E+00	0.00E+00	2.36E-06	6.08E-05	1.95E-04	2.71E-04	4.06E-04	5.06E-04	5.59E-04	5.64E-04	5.62E-04
Pancreas	0.00E+00	8.30E-06	7.14E-04	6.20E-03	1.04E-02	9.09E-03	8.16E-03	7.62E-03	7.01E-03	6.49E-03	6.09E-03	5.06E-03
S-intestine ^c	0.00E+00	0.00E+00	2.57E-08	2.35E-05	3.34E-04	6.60E-04	7.66E-04	9.26E-04	1.03E-03	1.06E-03	1.06E-03	9.86E-04
Spleen	1.52E-05	9.13E-04	4.33E-03	1.06E-02	1.08E-02	8.29E-03	7.63E-03	7.31E-03	6.76E-03	6.27E-03	5.88E-03	4.87E-03
Stomach Wall	9.92E-06	5.57E-04	2.36E-03	5.81E-03	7.17E-03	6.09E-03	5.63E-03	5.48E-03	5.15E-03	4.83E-03	4.55E-03	3.82E-03
Thymus	0.00E+00	4.76E-06	1.26E-03	1.29E-02	1.93E-02	1.49E-02	1.34E-02	1.27E-02	1.17E-02	1.09E-02	1.02E-02	8.41E-03
Thyroid	0.00E+00	3.23E-07	9.45E-05	2.45E-03	5.46E-03	5.08E-03	4.80E-03	4.88E-03	4.73E-03	4.48E-03	4.25E-03	3.63E-03
Testes	0.00E+00	0.00E+00	0.00E+00	4.59E-07	2.62E-06	7.86E-06	1.59E-05	4.28E-05	7.97E-05	1.13E-04	1.27E-04	1.64E-04
UB_Wall ^d	0.00E+00	0.00E+00	0.00E+00	5.46E-07	1.43E-05	6.09E-05	9.60E-05	1.72E-04	2.48E-04	2.94E-04	3.17E-04	3.47E-04
ULI_Wall ^e	0.00E+00	0.00E+00	3.22E-08	4.45E-05	4.82E-04	8.46E-04	9.48E-04	1.10E-03	1.20E-03	1.21E-03	1.20E-03	1.11E-03
Uterus	0.00E+00	0.00E+00	0.00E+00	5.39E-07	5.39E-05	1.85E-04	2.51E-04	3.75E-04	4.76E-04	5.22E-04	5.39E-04	5.47E-04

^aGall Bladder Wall

^cSmall Intestine

^bLower Large Intestine

^dUrinary Bladder Wall

^eUpper Large Intestine

Table 11. Specific Absorbed Fraction of photon energy in kg^{-1} when the source organ is the lower large intestine contents

Target Organs	Photon energy (keV)											
	10	15	20	30	50	100	200	500	1000	1500	2000	4000
Adrenals	0.00E+00	0.00E+00	5.96E-07	4.31E-05	5.71E-04	1.10E-03	1.26E-03	1.41E-03	1.51E-03	1.54E-03	1.52E-03	1.39E-03
Bone Surface	3.05E-05	2.44E-03	1.04E-02	2.51E-02	2.65E-02	1.38E-02	7.81E-03	5.67E-03	4.96E-03	4.55E-03	4.26E-03	3.63E-03
Brain	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.38E-07	1.07E-06	1.96E-06	5.27E-06	1.37E-05	2.25E-05	2.97E-05	4.71E-05
Breasts	0.00E+00	0.00E+00	2.29E-07	9.20E-06	5.56E-05	1.18E-04	1.68E-04	2.61E-04	3.55E-04	4.07E-04	4.34E-04	4.65E-04
Esophagus	0.00E+00	1.60E-06	2.49E-04	4.09E-03	7.64E-03	6.86E-03	6.38E-03	6.32E-03	6.04E-03	5.73E-03	5.44E-03	4.65E-03
GB_Wall ^a	0.00E+00	0.00E+00	3.96E-07	4.20E-04	2.60E-03	3.55E-03	3.42E-03	3.35E-03	3.26E-03	3.15E-03	3.04E-03	2.65E-03
Heart Wall	0.00E+00	0.00E+00	9.85E-09	7.79E-06	1.62E-04	3.82E-04	4.73E-04	5.99E-04	7.14E-04	7.62E-04	7.75E-04	7.63E-04
Kidneys	0.00E+00	9.27E-09	1.73E-05	8.31E-04	2.95E-03	3.58E-03	3.49E-03	3.51E-03	3.46E-03	3.33E-03	3.21E-03	2.81E-03
Liver	0.00E+00	0.00E+00	7.61E-08	3.03E-05	4.39E-04	8.81E-04	9.90E-04	1.14E-03	1.24E-03	1.27E-03	1.27E-03	1.19E-03
LLI_Wall ^b	5.01E-01	1.07E+00	1.11E+00	6.79E-01	2.95E-01	1.77E-01	1.77E-01	1.78E-01	1.64E-01	1.50E-01	1.38E-01	1.11E-01
Lungs	0.00E+00	0.00E+00	7.71E-09	6.39E-06	1.07E-04	2.45E-04	3.06E-04	4.13E-04	5.12E-04	5.55E-04	5.74E-04	5.73E-04
Bone Marrow	1.13E-05	8.28E-04	3.39E-03	8.30E-03	1.05E-02	9.39E-03	8.35E-03	7.79E-03	7.29E-03	6.80E-03	6.40E-03	5.45E-03
Ovaries	1.95E-06	5.79E-03	4.97E-02	9.74E-02	7.37E-02	4.90E-02	4.38E-02	4.09E-02	3.71E-02	3.38E-02	3.13E-02	2.54E-02
Pancreas	0.00E+00	0.00E+00	1.36E-06	3.39E-04	2.09E-03	2.91E-03	2.84E-03	2.85E-03	2.82E-03	2.72E-03	2.63E-03	2.31E-03
S-intestine ^c	2.38E-03	2.30E-02	5.53E-02	7.25E-02	5.31E-02	3.62E-02	3.29E-02	3.10E-02	2.81E-02	2.58E-02	2.39E-02	1.94E-02
Spleen	0.00E+00	7.65E-09	1.44E-05	7.48E-04	3.08E-03	3.61E-03	3.43E-03	3.45E-03	3.38E-03	3.27E-03	3.15E-03	2.76E-03
Stomach Wall	0.00E+00	2.76E-05	8.03E-04	5.29E-03	8.73E-03	7.68E-03	6.97E-03	6.65E-03	6.27E-03	5.89E-03	5.55E-03	4.70E-03
Thymus	0.00E+00	0.00E+00	0.00E+00	2.76E-07	1.73E-05	7.10E-05	1.08E-04	1.74E-04	2.51E-04	2.94E-04	3.05E-04	3.51E-04
Thyroid	0.00E+00	0.00E+00	0.00E+00	1.42E-08	3.24E-06	1.03E-05	1.79E-05	3.56E-05	7.03E-05	9.11E-05	1.07E-04	1.36E-04
Testes	0.00E+00	1.60E-06	2.49E-04	4.09E-03	7.64E-03	6.86E-03	6.38E-03	6.32E-03	6.04E-03	5.73E-03	5.44E-03	4.65E-03
UB_Wall ^d	0.00E+00	2.21E-04	4.49E-03	2.21E-02	2.94E-02	2.29E-02	1.99E-02	1.82E-02	1.65E-02	1.52E-02	1.42E-02	1.17E-02
ULI_Wall ^e	8.19E-03	2.43E-02	3.29E-02	3.26E-02	2.38E-02	1.73E-02	1.60E-02	1.53E-02	1.41E-02	1.30E-02	1.21E-02	9.96E-03
Uterus	0.00E+00	1.48E-06	7.55E-04	1.37E-02	2.76E-02	2.38E-02	2.03E-02	1.80E-02	1.62E-02	1.49E-02	1.39E-02	1.15E-02

^aGall Bladder Wall

^cSmall Intestine

^bLower Large Intestine

^dUrinary Bladder Wall

^eUpper Large Intestine

Table 12. Specific Absorbed Fraction of photon energy in kg^{-1} when the source organ is the large intestine wall

Target Organs	Photon energy (keV)											
	10	15	20	30	50	100	200	500	1000	1500	2000	4000
Adrenals	0.00E+00	0.00E+00	9.83E-08	3.85E-05	3.80E-04	7.80E-04	9.06E-04	1.07E-03	1.18E-03	1.23E-03	1.22E-03	1.15E-03
Bone Surface	6.70E-04	5.92E-03	1.45E-02	2.77E-02	2.77E-02	1.44E-02	8.26E-03	6.05E-03	5.30E-03	4.86E-03	4.55E-03	3.87E-03
Brain	0.00E+00	0.00E+00	0.00E+00	1.04E-07	1.98E-07	6.92E-07	1.28E-06	4.45E-06	1.19E-05	1.90E-05	2.49E-05	4.06E-05
Breasts	0.00E+00	0.00E+00	1.48E-07	6.39E-06	4.31E-05	8.77E-05	1.21E-04	1.99E-04	2.75E-04	3.26E-04	3.50E-04	3.86E-04
Esophagus	0.00E+00	0.00E+00	0.00E+00	1.57E-05	1.84E-04	3.61E-04	4.22E-04	5.01E-04	5.75E-04	6.10E-04	6.22E-04	2.12E-05
GB_Wall ^a	0.00E+00	0.00E+00	5.57E-07	2.38E-04	1.68E-03	2.50E-03	2.50E-03	2.52E-03	2.51E-03	2.46E-03	2.37E-03	2.12E-03
Heart Wall	0.00E+00	0.00E+00	9.51E-10	4.18E-06	1.05E-04	2.63E-04	3.34E-04	4.42E-04	5.40E-04	5.91E-04	6.10E-04	6.12E-04
Kidneys	0.00E+00	1.91E-07	1.01E-05	5.17E-04	1.94E-03	2.51E-03	2.51E-03	2.60E-03	2.62E-03	2.56E-03	2.48E-03	2.20E-03
Liver	0.00E+00	0.00E+00	1.36E-07	1.94E-05	2.90E-04	6.27E-04	7.32E-04	8.80E-04	9.89E-04	1.03E-03	1.03E-03	9.90E-04
LLI_Wall ^b	4.90E+00	3.27E+00	2.10E+00	9.52E-01	3.69E-01	2.26E-01	2.34E-01	2.43E-01	2.24E-01	2.05E-01	1.89E-01	1.51E-01
Lungs	0.00E+00	0.00E+00	3.52E-08	3.17E-06	7.01E-05	1.69E-04	2.17E-04	3.11E-04	3.99E-04	4.41E-04	4.62E-04	4.74E-04
Bone Marrow	2.48E-04	2.01E-03	4.73E-03	9.15E-03	1.11E-02	9.96E-03	8.93E-03	8.36E-03	7.82E-03	7.28E-03	6.85E-03	5.81E-03
Ovaries	0.00E+00	2.13E-03	2.38E-02	5.88E-02	5.20E-02	3.66E-02	3.25E-02	3.00E-02	2.71E-02	2.48E-02	2.30E-02	1.88E-02
Pancreas	0.00E+00	0.00E+00	5.83E-07	2.12E-04	1.36E-03	1.97E-03	1.98E-03	2.05E-03	2.07E-03	2.05E-03	1.98E-03	1.77E-03
S-intestine ^c	2.72E-02	5.13E-02	5.82E-02	5.26E-02	3.69E-02	2.63E-02	2.43E-02	2.31E-02	2.11E-02	1.94E-02	1.80E-02	1.47E-02
Spleen	0.00E+00	6.13E-09	5.20E-06	5.05E-04	2.02E-03	2.50E-03	2.45E-03	2.49E-03	2.51E-03	2.45E-03	2.37E-03	2.11E-03
Stomach Wall	0.00E+00	1.25E-05	4.39E-04	3.10E-03	5.50E-03	5.09E-03	4.70E-03	4.59E-03	4.39E-03	4.17E-03	3.98E-03	3.41E-03
Thymus	0.00E+00	0.00E+00	0.00E+00	2.87E-07	1.18E-05	4.68E-05	7.01E-05	1.26E-04	1.94E-04	2.35E-04	2.68E-04	3.02E-04
Thyroid	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.14E-07	7.84E-06	1.27E-05	3.15E-05	5.55E-05	7.99E-05	9.47E-05	1.16E-04
Testes	0.00E+00	3.42E-06	4.84E-04	7.14E-03	1.25E-02	1.05E-02	9.57E-03	9.30E-03	8.80E-03	8.28E-03	7.80E-03	6.56E-03
UB_Wall ^d	0.00E+00	7.60E-04	9.39E-03	3.45E-02	3.98E-02	2.94E-02	2.56E-02	2.34E-02	2.12E-02	1.95E-02	1.81E-02	1.48E-02
ULI_Wall ^e	1.01E-03	6.88E-03	1.26E-02	1.58E-02	1.37E-02	1.10E-02	1.02E-02	9.69E-03	8.98E-03	8.35E-03	7.83E-03	6.53E-03
Uterus	0.00E+00	1.81E-07	4.36E-04	1.14E-02	2.48E-02	2.18E-02	1.87E-02	1.66E-02	1.49E-02	1.37E-02	1.28E-02	1.06E-02

^aGall Bladder Wall

^bLower Large Intestine

^cSmall Intestine

^dUrinary Bladder Wall

^eUpper Large Intestine

Table 13. Specific Absorbed Fraction of photon energy in kg^{-1} when the source organ is the liver

Target Organs	Photon energy (keV)											
	10	15	20	30	50	100	200	500	1000	1500	2000	4000
Adrenals	1.77E-04	3.39E-03	1.33E-02	2.85E-02	2.92E-02	2.24E-02	2.04E-02	1.93E-02	1.77E-02	1.64E-02	1.53E-02	1.26E-02
Bone Surface	1.05E-04	1.04E-03	3.94E-03	1.15E-02	1.51E-02	8.69E-03	4.95E-03	3.61E-03	3.23E-03	3.01E-03	2.85E-03	2.48E-03
Brain	0.00E+00	0.00E+00	0.00E+00	1.77E-07	5.96E-06	2.20E-05	3.93E-05	7.80E-05	1.27E-04	1.58E-04	1.77E-04	2.04E-04
Breasts	0.00E+00	2.77E-07	5.97E-05	1.28E-03	3.24E-03	3.29E-03	3.32E-03	3.60E-03	3.64E-03	3.55E-03	3.43E-03	3.01E-03
Esophagus	8.32E-07	2.56E-04	2.27E-03	8.94E-03	1.24E-02	1.05E-02	9.36E-03	8.72E-03	8.05E-03	7.49E-03	7.03E-03	4.68E-04
GB_Wall ^a	1.56E-03	1.89E-02	4.75E-02	7.87E-02	6.73E-02	4.53E-02	4.01E-02	3.74E-02	3.39E-02	3.11E-02	2.88E-02	2.35E-02
Heart Wall	3.97E-06	5.31E-04	3.34E-03	1.12E-02	1.48E-02	1.20E-02	1.07E-02	1.01E-02	9.41E-03	8.77E-03	8.23E-03	6.88E-03
Kidneys	1.03E-05	6.23E-04	3.81E-03	1.40E-02	1.86E-02	1.51E-02	1.36E-02	1.29E-02	1.20E-02	1.11E-02	1.04E-02	8.69E-03
Liver	5.10E-01	4.74E-01	4.15E-01	2.84E-01	1.49E-01	9.19E-02	8.82E-02	8.74E-02	8.03E-02	7.34E-02	6.79E-02	5.47E-02
LLI_Wall ^b	0.00E+00	0.00E+00	0.00E+00	2.41E-05	3.30E-04	6.81E-04	7.94E-04	9.43E-04	1.05E-03	1.08E-03	1.08E-03	1.03E-03
Lungs	1.26E-04	3.31E-03	9.92E-03	1.70E-02	1.51E-02	1.06E-02	9.40E-03	8.90E-03	8.17E-03	7.53E-03	7.03E-03	5.79E-03
Bone Marrow	3.83E-05	3.22E-04	1.10E-03	3.01E-03	4.64E-03	4.62E-03	4.22E-03	4.08E-03	3.97E-03	3.80E-03	3.64E-03	3.20E-03
Ovaries	0.00E+00	0.00E+00	4.11E-07	1.18E-04	1.12E-03	1.86E-03	1.92E-03	2.03E-03	2.11E-03	2.09E-03	2.06E-03	1.82E-03
Pancreas	1.51E-06	5.40E-04	4.85E-03	1.98E-02	2.59E-02	2.02E-02	1.76E-02	1.62E-02	1.47E-02	1.36E-02	1.27E-02	1.05E-02
S-intestine ^c	7.69E-05	2.79E-04	7.00E-04	2.76E-03	5.87E-03	6.04E-03	5.59E-03	5.39E-03	5.13E-03	4.86E-03	4.62E-03	3.95E-03
Spleen	0.00E+00	0.00E+00	4.87E-06	5.20E-04	2.75E-03	3.66E-03	3.53E-03	3.54E-03	3.47E-03	3.36E-03	3.23E-03	2.83E-03
Stomach Wall	0.00E+00	3.88E-05	6.09E-04	4.12E-03	8.01E-03	7.67E-03	6.99E-03	6.71E-03	6.36E-03	6.00E-03	5.69E-03	4.83E-03
Thymus	0.00E+00	0.00E+00	3.50E-06	5.36E-04	2.53E-03	3.00E-03	2.92E-03	3.02E-03	3.03E-03	2.93E-03	2.85E-03	2.51E-03
Thyroid	0.00E+00	0.00E+00	0.00E+00	1.12E-05	2.30E-04	4.41E-04	5.07E-04	6.47E-04	7.37E-04	7.84E-04	7.83E-04	7.41E-04
Testes	0.00E+00	0.00E+00	0.00E+00	5.59E-07	1.87E-05	6.21E-05	1.01E-04	1.84E-04	2.77E-04	3.37E-04	3.73E-04	4.06E-04
UB_Wall ^d	0.00E+00	0.00E+00	3.90E-09	1.42E-05	2.35E-04	5.48E-04	6.67E-04	8.27E-04	9.62E-04	1.02E-03	1.02E-03	9.86E-04
ULI_Wall ^e	1.89E-05	4.22E-04	1.91E-03	7.03E-03	1.12E-02	9.88E-03	8.92E-03	8.46E-03	7.90E-03	7.40E-03	6.98E-03	5.87E-03
Uterus	0.00E+00	0.00E+00	1.69E-07	8.68E-05	9.06E-04	1.61E-03	1.72E-03	1.85E-03	1.91E-03	1.91E-03	1.87E-03	1.70E-03

^aGall Bladder Wall

^bLower Large Intestine

^cSmall Intestine

^dUrinary Bladder Wall

^eUpper Large Intestine

Table 14. Specific Absorbed Fraction of photon energy in kg^{-1} when the source organ is the ovaries

Target Organs	Photon energy (keV)											
	10	15	20	30	50	100	200	500	1000	1500	2000	4000
Adrenals	0.00E+00	0.00E+00	8.43E-09	2.61E-05	4.82E-04	1.12E-03	1.34E-03	1.53E-03	1.66E-03	1.67E-03	1.66E-03	1.52E-03
Bone Surface	0.00E+00	3.98E-05	1.72E-03	1.38E-02	2.22E-02	1.31E-02	7.28E-03	4.96E-03	4.26E-03	3.91E-03	3.67E-03	3.15E-03
Brain	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.33E-07	1.02E-06	1.62E-06	5.21E-06	1.32E-05	2.19E-05	2.83E-05	4.73E-05
Breasts	0.00E+00	0.00E+00	0.00E+00	3.56E-06	3.88E-05	1.01E-04	1.47E-04	2.45E-04	3.46E-04	4.00E-04	4.32E-04	4.69E-04
Esophagus	0.00E+00	0.00E+00	0.00E+00	4.79E-06	1.44E-04	3.87E-04	4.83E-04	5.96E-04	6.91E-04	7.36E-04	7.39E-04	2.49E-05
GB_Wall ^a	0.00E+00	0.00E+00	3.90E-06	1.23E-03	5.62E-03	6.83E-03	6.27E-03	5.83E-03	5.47E-03	5.19E-03	4.94E-03	4.23E-03
Heart Wall	0.00E+00	0.00E+00	0.00E+00	1.89E-06	9.95E-05	3.11E-04	4.09E-04	5.46E-04	6.70E-04	7.26E-04	7.48E-04	7.44E-04
Kidneys	0.00E+00	0.00E+00	1.94E-06	5.04E-04	2.82E-03	3.95E-03	3.96E-03	4.02E-03	3.95E-03	3.82E-03	3.66E-03	3.19E-03
Liver	0.00E+00	0.00E+00	8.29E-07	1.89E-04	1.35E-03	2.08E-03	2.14E-03	2.26E-03	2.30E-03	2.27E-03	2.22E-03	1.99E-03
LLI_Wall ^b	9.14E-03	8.09E-02	1.44E-01	1.41E-01	8.48E-02	5.47E-02	5.09E-02	4.88E-02	4.45E-02	4.06E-02	3.76E-02	3.04E-02
Lungs	0.00E+00	0.00E+00	0.00E+00	2.20E-06	7.69E-05	2.24E-04	2.97E-04	4.21E-04	5.32E-04	5.81E-04	6.01E-04	6.02E-04
Bone Marrow	0.00E+00	1.35E-05	5.60E-04	4.58E-03	8.72E-03	8.51E-03	7.43E-03	6.74E-03	6.27E-03	5.87E-03	5.54E-03	4.76E-03
Ovaries	9.23E+01	5.71E+01	3.17E+01	1.13E+01	3.54E+00	2.16E+00	2.41E+00	2.60E+00	2.43E+00	2.22E+00	2.05E+00	1.63E+00
Pancreas	0.00E+00	0.00E+00	9.72E-08	1.01E-04	1.26E-03	2.27E-03	2.36E-03	2.43E-03	2.45E-03	2.40E-03	2.33E-03	2.08E-03
S-intestine ^c	4.81E-03	3.82E-02	8.78E-02	1.19E-01	8.77E-02	5.78E-02	5.17E-02	4.83E-02	4.37E-02	3.99E-02	3.69E-02	2.99E-02
Spleen	0.00E+00	0.00E+00	3.25E-07	9.94E-05	1.02E-03	1.77E-03	1.88E-03	2.01E-03	2.09E-03	2.08E-03	2.04E-03	1.85E-03
Stomach Wall	0.00E+00	0.00E+00	3.94E-06	4.69E-04	2.51E-03	3.40E-03	3.30E-03	3.28E-03	3.25E-03	3.13E-03	3.02E-03	2.65E-03
Thymus	0.00E+00	0.00E+00	0.00E+00	5.25E-08	9.03E-06	6.10E-05	9.69E-05	1.64E-04	2.50E-04	3.04E-04	3.42E-04	3.74E-04
Thyroid	0.00E+00	0.00E+00	0.00E+00	1.02E-09	1.77E-06	7.55E-06	1.87E-05	4.07E-05	6.99E-05	9.14E-05	1.12E-04	1.46E-04
Testes	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
UB_Wall ^d	0.00E+00	3.43E-06	1.44E-03	1.85E-02	3.17E-02	2.57E-02	2.20E-02	1.97E-02	1.78E-02	1.64E-02	1.53E-02	1.26E-02
ULI_Wall ^e	1.01E-02	8.46E-02	1.33E-01	1.19E-01	7.38E-02	4.88E-02	4.51E-02	4.31E-02	3.93E-02	3.59E-02	3.33E-02	2.69E-02
Uterus	0.00E+00	1.71E-03	3.52E-02	1.27E-01	1.19E-01	7.74E-02	6.67E-02	6.06E-02	5.43E-02	4.94E-02	4.57E-02	3.70E-02

^aGall Bladder Wall

^cSmall Intestine

^bLower Large Intestine

^dUrinary Bladder Wall

^eUpper Large Intestine

Table 15. Specific Absorbed Fraction of photon energy in kg^{-1} when the source organ is the pancreas

Target Organs	Photon energy (keV)											
	10	15	20	30	50	100	200	500	1000	1500	2000	4000
Adrenals	0.00E+00	9.17E-04	2.24E-02	8.09E-02	7.91E-02	5.59E-02	4.98E-02	4.59E-02	4.14E-02	3.78E-02	3.50E-02	2.84E-02
Bone Surface	0.00E+00	3.98E-05	1.72E-03	1.38E-02	2.22E-02	1.31E-02	7.28E-03	4.96E-03	4.26E-03	3.91E-03	3.67E-03	3.15E-03
Brain	0.00E+00	0.00E+00	0.00E+00	1.34E-08	3.85E-06	1.60E-05	2.97E-05	5.58E-05	9.14E-05	1.19E-04	1.36E-04	1.70E-04
Breasts	0.00E+00	0.00E+00	2.73E-06	4.86E-04	2.33E-03	2.89E-03	2.95E-03	3.20E-03	3.28E-03	3.20E-03	3.11E-03	2.75E-03
Esophagus	0.00E+00	0.00E+00	0.00E+00	4.20E-07	1.36E-05	6.53E-05	1.04E-04	1.96E-04	2.89E-04	3.40E-04	3.73E-04	4.10E-04
GB_Wall ^a	1.70E-05	4.79E-03	2.85E-02	6.49E-02	6.08E-02	4.21E-02	3.68E-02	3.36E-02	3.02E-02	2.77E-02	2.56E-02	2.09E-02
Heart Wall	0.00E+00	1.06E-05	9.96E-04	1.22E-02	2.22E-02	1.85E-02	1.61E-02	1.47E-02	1.34E-02	1.24E-02	1.17E-02	9.68E-03
Kidneys	0.00E+00	3.47E-05	2.80E-03	2.29E-02	3.32E-02	2.65E-02	2.34E-02	2.15E-02	1.96E-02	1.80E-02	1.68E-02	1.38E-02
Liver	1.54E-06	5.19E-04	4.89E-03	1.99E-02	2.58E-02	2.02E-02	1.76E-02	1.62E-02	1.47E-02	1.36E-02	1.27E-02	1.05E-02
LLI_Wall ^b	0.00E+00	0.00E+00	1.12E-06	2.12E-04	1.33E-03	1.95E-03	1.97E-03	2.05E-03	2.06E-03	2.03E-03	1.97E-03	1.77E-03
Lungs	0.00E+00	1.11E-05	7.72E-04	6.87E-03	1.13E-02	9.40E-03	8.22E-03	7.61E-03	7.00E-03	6.49E-03	6.08E-03	5.06E-03
Bone Marrow	4.45E-09	2.35E-05	3.73E-04	2.72E-03	6.34E-03	6.86E-03	6.15E-03	5.70E-03	5.42E-03	5.12E-03	4.86E-03	4.23E-03
Ovaries	0.00E+00	0.00E+00	8.11E-08	9.74E-05	1.01E-03	1.97E-03	2.13E-03	2.16E-03	2.22E-03	2.19E-03	2.14E-03	1.93E-03
Pancreas	9.61E+00	7.55E+00	5.21E+00	2.39E+00	8.90E-01	5.28E-01	5.51E-01	5.74E-01	5.32E-01	4.85E-01	4.47E-01	3.57E-01
S-intestine ^c	0.00E+00	2.16E-08	3.59E-05	1.71E-03	6.35E-03	7.26E-03	6.65E-03	6.17E-03	5.78E-03	5.44E-03	5.15E-03	4.39E-03
Spleen	2.01E-03	3.61E-02	1.01E-01	1.45E-01	1.05E-01	6.67E-02	5.98E-02	5.65E-02	5.13E-02	4.69E-02	4.34E-02	3.51E-02
Stomach Wall	2.89E-03	3.52E-02	8.75E-02	1.30E-01	9.99E-02	6.47E-02	5.76E-02	5.40E-02	4.89E-02	4.46E-02	4.13E-02	3.35E-02
Thymus	0.00E+00	0.00E+00	4.21E-07	2.25E-04	1.95E-03	2.83E-03	2.80E-03	2.86E-03	2.92E-03	2.88E-03	2.77E-03	2.48E-03
Thyroid	0.00E+00	0.00E+00	0.00E+00	4.20E-07	1.36E-05	6.53E-05	1.04E-04	1.96E-04	2.89E-04	3.40E-04	3.73E-04	4.10E-04
Testes	0.00E+00	0.00E+00	0.00E+00	4.20E-07	1.36E-05	6.53E-05	1.04E-04	1.96E-04	2.89E-04	3.40E-04	3.73E-04	4.10E-04
UB_Wall ^d	0.00E+00	0.00E+00	5.49E-10	7.89E-06	2.23E-04	5.77E-04	7.05E-04	8.69E-04	9.93E-04	1.04E-03	1.05E-03	1.00E-03
ULI_Wall ^e	0.00E+00	4.34E-07	8.18E-05	2.88E-03	8.55E-03	8.80E-03	7.85E-03	7.20E-03	6.67E-03	6.25E-03	5.90E-03	4.99E-03
Uterus	0.00E+00	0.00E+00	2.82E-08	6.44E-05	9.51E-04	1.86E-03	1.97E-03	2.07E-03	2.11E-03	2.10E-03	2.04E-03	1.83E-03

^aGall Bladder Wall

^cSmall Intestine

^bLower Large Intestine

^dUrinary Bladder Wall

^eUpper Large Intestine

Table 16. Specific Absorbed Fraction of photon energy in kg^{-1} when the source organ is the small intestine

Target Organs	Photon energy (keV)											
	10	15	20	30	50	100	200	500	1000	1500	2000	4000
Adrenals	0.00E+00	0.00E+00	1.90E-06	3.45E-04	2.26E-03	3.52E-03	3.60E-03	3.68E-03	3.65E-03	3.51E-03	3.36E-03	2.93E-03
Bone Surface	3.56E-04	1.15E-03	2.99E-03	1.02E-02	1.69E-02	1.08E-02	6.16E-03	4.24E-03	3.67E-03	3.39E-03	3.20E-03	2.76E-03
Brain	0.00E+00	0.00E+00	0.00E+00	9.94E-08	3.97E-07	1.51E-06	3.66E-06	1.05E-05	2.22E-05	3.39E-05	4.32E-05	6.51E-05
Breasts	0.00E+00	0.00E+00	2.59E-07	1.21E-05	1.27E-04	2.68E-04	3.55E-04	5.10E-04	6.44E-04	7.08E-04	7.38E-04	7.44E-04
Esophagus	0.00E+00	0.00E+00	2.08E-07	1.10E-04	8.50E-04	1.38E-03	1.43E-03	1.50E-03	1.54E-03	1.53E-03	1.50E-03	7.14E-05
GB_Wall ^a	6.30E-05	1.04E-03	5.69E-03	2.15E-02	2.94E-02	2.34E-02	2.02E-02	1.83E-02	1.65E-02	1.52E-02	1.42E-02	1.17E-02
Heart Wall	0.00E+00	0.00E+00	9.90E-09	2.99E-05	4.75E-04	9.66E-04	1.08E-03	1.24E-03	1.36E-03	1.39E-03	1.38E-03	1.29E-03
Kidneys	0.00E+00	1.30E-05	6.15E-04	5.90E-03	1.16E-02	1.11E-02	1.02E-02	9.58E-03	8.91E-03	8.33E-03	7.85E-03	6.61E-03
Liver	7.55E-05	2.84E-04	7.13E-04	2.77E-03	5.87E-03	6.04E-03	5.58E-03	5.38E-03	5.13E-03	4.87E-03	4.64E-03	3.98E-03
LLI_Wall ^b	2.63E-02	5.63E-02	6.99E-02	6.44E-02	4.33E-02	2.99E-02	2.77E-02	2.64E-02	2.41E-02	2.21E-02	2.06E-02	1.67E-02
Lungs	0.00E+00	0.00E+00	1.59E-08	2.58E-05	3.47E-04	6.66E-04	7.57E-04	9.09E-04	1.02E-03	1.05E-03	1.05E-03	9.85E-04
Bone Marrow	1.32E-04	3.91E-04	9.72E-04	3.35E-03	6.52E-03	6.84E-03	6.12E-03	5.64E-03	5.32E-03	5.01E-03	4.76E-03	4.12E-03
Ovaries	2.46E-03	2.00E-02	5.30E-02	8.63E-02	7.10E-02	4.83E-02	4.29E-02	3.96E-02	3.58E-02	3.27E-02	3.03E-02	2.46E-02
Pancreas	0.00E+00	6.69E-07	3.15E-05	1.68E-03	6.41E-03	7.30E-03	6.66E-03	6.18E-03	5.79E-03	5.47E-03	5.20E-03	4.43E-03
S-intestine ^c	7.53E-02	1.75E-01	2.15E-01	1.97E-01	1.19E-01	6.90E-02	6.17E-02	5.76E-02	5.39E-02	4.95E-02	4.69E-02	3.68E-02
Spleen	0.00E+00	9.85E-07	6.20E-05	1.40E-03	4.52E-03	5.19E-03	4.86E-03	4.71E-03	4.54E-03	4.32E-03	4.12E-03	3.55E-03
Stomach Wall	3.28E-04	1.29E-03	2.91E-03	8.28E-03	1.27E-02	1.12E-02	9.96E-03	9.35E-03	8.67E-03	8.09E-03	7.61E-03	6.39E-03
Thymus	0.00E+00	0.00E+00	0.00E+00	3.80E-07	5.17E-05	1.86E-04	2.63E-04	3.91E-04	4.85E-04	5.65E-04	5.74E-04	5.99E-04
Thyroid	0.00E+00	0.00E+00	0.00E+00	3.39E-07	5.71E-06	2.42E-05	4.29E-05	8.11E-05	1.30E-04	1.67E-04	1.84E-04	2.19E-04
Testes	0.00E+00	0.00E+00	6.22E-07	5.09E-05	6.26E-04	1.17E-03	1.29E-03	1.56E-03	1.71E-03	1.74E-03	1.73E-03	1.60E-03
UB_Wall ^d	0.00E+00	2.54E-06	2.13E-04	4.84E-03	1.20E-02	1.16E-02	1.02E-02	9.39E-03	8.68E-03	8.10E-03	7.63E-03	6.41E-03
ULI_Wall ^e	7.06E-02	1.47E-01	1.84E-01	1.71E-01	1.08E-01	6.93E-02	6.36E-02	6.07E-02	5.52E-02	5.04E-02	4.66E-02	3.76E-02
Uterus	0.00E+00	2.15E-03	1.96E-02	6.08E-02	6.30E-02	4.42E-02	3.81E-02	3.46E-02	3.11E-02	2.84E-02	2.63E-02	2.14E-02

^aGall Bladder Wall

^cSmall Intestine

^bLower Large Intestine

^dUrinary Bladder Wall

^eUpper Large Intestine

Table 17. Specific Absorbed Fraction of photon energy in kg^{-1} when the source organ is the spleen

Target Organs	Photon energy (keV)											
	10	15	20	30	50	100	200	500	1000	1500	2000	4000
Adrenals	0.00E+00	8.92E-05	3.91E-03	2.50E-02	3.17E-02	2.44E-02	2.19E-02	2.06E-02	1.89E-02	1.74E-02	1.63E-02	1.35E-02
Bone Surface	2.85E-06	4.33E-04	2.92E-03	1.09E-02	1.52E-02	8.80E-03	4.97E-03	3.62E-03	3.25E-03	3.03E-03	2.88E-03	2.51E-03
Brain	0.00E+00	0.00E+00	0.00E+00	1.53E-07	5.99E-06	2.33E-05	4.28E-05	9.17E-05	1.46E-04	1.79E-04	1.99E-04	2.22E-04
Breasts	0.00E+00	0.00E+00	1.12E-05	5.38E-04	1.86E-03	2.14E-03	2.21E-03	2.44E-03	2.52E-03	2.47E-03	2.41E-03	2.13E-03
Esophagus	0.00E+00	1.37E-05	1.01E-03	9.40E-03	1.50E-02	1.24E-02	1.09E-02	1.02E-02	9.32E-03	8.65E-03	8.10E-03	5.44E-04
GB_Wall ^a	0.00E+00	0.00E+00	1.02E-05	1.20E-03	5.75E-03	6.90E-03	6.36E-03	5.99E-03	5.63E-03	5.32E-03	5.05E-03	4.32E-03
Heart Wall	0.00E+00	6.78E-07	1.16E-04	3.35E-03	9.05E-03	8.74E-03	7.74E-03	7.25E-03	6.80E-03	6.40E-03	6.05E-03	5.14E-03
Kidneys	1.02E-04	7.49E-03	3.23E-02	6.30E-02	5.07E-02	3.36E-02	3.06E-02	2.94E-02	2.69E-02	2.48E-02	2.30E-02	1.88E-02
Liver	0.00E+00	0.00E+00	5.29E-06	5.21E-04	2.75E-03	3.66E-03	3.55E-03	3.54E-03	3.49E-03	3.36E-03	3.24E-03	2.84E-03
LLI_Wall ^b	0.00E+00	2.42E-09	5.24E-06	4.26E-04	1.84E-03	2.32E-03	2.30E-03	2.38E-03	2.42E-03	2.37E-03	2.29E-03	2.04E-03
Lungs	1.60E-05	1.02E-03	4.90E-03	1.17E-02	1.18E-02	8.59E-03	7.70E-03	7.35E-03	6.80E-03	6.30E-03	5.90E-03	4.89E-03
Bone Marrow	1.05E-06	1.47E-04	9.32E-04	3.20E-03	4.97E-03	4.85E-03	4.40E-03	4.25E-03	4.14E-03	3.96E-03	3.79E-03	3.34E-03
Ovaries	0.00E+00	0.00E+00	8.79E-08	8.81E-05	8.50E-04	1.56E-03	1.71E-03	1.87E-03	1.95E-03	1.97E-03	1.89E-03	1.69E-03
Pancreas	1.97E-03	3.58E-02	1.01E-01	1.45E-01	1.05E-01	6.69E-02	6.00E-02	5.66E-02	5.13E-02	4.69E-02	4.34E-02	3.51E-02
S-intestine ^c	0.00E+00	1.87E-07	5.36E-05	1.37E-03	4.55E-03	5.20E-03	4.87E-03	4.72E-03	4.53E-03	4.31E-03	4.12E-03	3.55E-03
Spleen	5.17E+00	4.47E+00	3.45E+00	1.80E+00	7.19E-01	4.21E-01	4.30E-01	4.44E-01	4.10E-01	3.74E-01	3.45E-01	2.76E-01
Stomach Wall	7.87E-08	6.16E-04	1.15E-02	5.03E-02	5.74E-02	4.02E-02	3.48E-02	3.20E-02	2.90E-02	2.66E-02	2.47E-02	2.02E-02
Thymus	0.00E+00	0.00E+00	9.85E-08	1.27E-04	1.12E-03	1.72E-03	1.75E-03	1.84E-03	1.92E-03	1.90E-03	1.88E-03	1.71E-03
Thyroid	0.00E+00	0.00E+00	0.00E+00	1.53E-05	1.99E-04	3.93E-04	4.65E-04	5.91E-04	6.66E-04	7.11E-04	7.10E-04	6.79E-04
Testes	0.00E+00	0.00E+00	0.00E+00	6.91E-07	1.04E-05	5.20E-05	8.89E-05	1.61E-04	2.47E-04	3.03E-04	3.38E-04	3.83E-04
UB_Wall ^d	0.00E+00	0.00E+00	2.97E-10	5.82E-06	1.55E-04	4.34E-04	5.47E-04	7.12E-04	8.46E-04	8.92E-04	9.13E-04	8.89E-04
ULI_Wall ^e	0.00E+00	7.68E-08	6.21E-05	1.72E-03	4.95E-03	5.26E-03	4.84E-03	4.63E-03	4.41E-03	4.19E-03	4.00E-03	3.43E-03
Uterus	0.00E+00	0.00E+00	1.17E-08	3.67E-05	6.57E-04	1.35E-03	1.45E-03	1.62E-03	1.71E-03	1.71E-03	1.69E-03	1.55E-03

^aGall Bladder Wall

^cSmall Intestine

^bLower Large Intestine

^dUrinary Bladder Wall

^eUpper Large Intestine

Table 18. Specific Absorbed Fraction of photon energy in kg^{-1} when the source organ is the stomach contents

Target Organs	Photon energy (keV)											
	10	15	20	30	50	100	200	500	1000	1500	2000	4000
Adrenals	0.00E+00	8.78E-07	4.15E-04	7.42E-03	1.56E-02	1.43E-02	1.29E-02	1.19E-02	1.10E-02	1.02E-02	9.60E-03	8.01E-03
Bone Surface	4.16E-06	4.60E-04	2.29E-03	7.22E-03	1.10E-02	7.22E-03	4.20E-03	2.99E-03	2.67E-03	2.51E-03	2.39E-03	2.10E-03
Brain	0.00E+00	0.00E+00	0.00E+00	1.76E-08	3.18E-06	1.27E-05	2.30E-05	4.93E-05	8.42E-05	1.08E-04	1.24E-04	1.54E-04
Breasts	0.00E+00	4.08E-07	5.32E-05	1.09E-03	2.75E-03	2.88E-03	2.98E-03	3.29E-03	3.40E-03	3.33E-03	3.24E-03	2.87E-03
Esophagus	3.36E-03	1.61E-02	2.62E-02	3.12E-02	2.47E-02	1.75E-02	1.58E-02	1.50E-02	1.37E-02	1.27E-02	1.18E-02	7.93E-04
GB_Wall ^a	0.00E+00	4.66E-07	3.53E-04	7.94E-03	1.77E-02	1.59E-02	1.39E-02	1.26E-02	1.16E-02	1.07E-02	1.01E-02	8.39E-03
Heart Wall	0.00E+00	2.10E-04	2.65E-03	1.19E-02	1.69E-02	1.37E-02	1.22E-02	1.16E-02	1.08E-02	1.01E-02	9.50E-03	7.94E-03
Kidneys	0.00E+00	1.05E-06	4.79E-04	7.55E-03	1.50E-02	1.34E-02	1.19E-02	1.11E-02	1.03E-02	9.57E-03	8.99E-03	7.51E-03
Liver	2.53E-09	3.31E-05	5.98E-04	4.04E-03	7.96E-03	7.62E-03	6.96E-03	6.69E-03	6.33E-03	5.97E-03	5.67E-03	4.82E-03
LLI_Wall ^b	0.00E+00	1.17E-05	4.20E-04	3.11E-03	5.38E-03	4.97E-03	4.62E-03	4.51E-03	4.32E-03	4.11E-03	3.92E-03	3.35E-03
Lungs	1.07E-05	6.61E-04	2.71E-03	6.61E-03	7.93E-03	6.36E-03	5.73E-03	5.52E-03	5.19E-03	4.86E-03	4.58E-03	3.85E-03
Bone Marrow	1.54E-06	1.56E-04	7.45E-04	2.28E-03	3.89E-03	4.12E-03	3.79E-03	3.67E-03	3.59E-03	3.45E-03	3.31E-03	2.93E-03
Ovaries	0.00E+00	0.00E+00	5.76E-06	3.65E-04	2.19E-03	3.01E-03	2.98E-03	3.03E-03	2.99E-03	2.89E-03	2.77E-03	2.48E-03
Pancreas	2.99E-03	3.66E-02	8.93E-02	1.31E-01	1.00E-01	6.48E-02	5.77E-02	5.41E-02	4.89E-02	4.46E-02	4.13E-02	3.35E-02
S-intestine ^c	3.32E-04	1.34E-03	2.95E-03	8.50E-03	1.29E-02	1.13E-02	1.01E-02	9.42E-03	8.72E-03	8.13E-03	7.65E-03	6.41E-03
Spleen	7.39E-08	6.39E-04	1.17E-02	5.06E-02	5.75E-02	4.02E-02	3.48E-02	3.20E-02	2.90E-02	2.66E-02	2.47E-02	2.02E-02
Stomach Wall	5.20E+00	3.45E+00	2.20E+00	1.03E+00	4.17E-01	2.52E-01	2.58E-01	2.67E-01	2.47E-01	2.25E-01	2.08E-01	1.66E-01
Thymus	0.00E+00	0.00E+00	1.88E-07	1.95E-04	1.44E-03	2.01E-03	2.07E-03	2.25E-03	2.35E-03	2.36E-03	2.31E-03	2.10E-03
Thyroid	0.00E+00	0.00E+00	0.00E+00	6.50E-06	1.13E-04	2.46E-04	2.88E-04	3.94E-04	4.92E-04	5.46E-04	5.67E-04	5.79E-04
Testes	0.00E+00	0.00E+00	0.00E+00	3.26E-06	3.55E-05	1.04E-04	1.55E-04	2.60E-04	3.69E-04	4.31E-04	4.62E-04	5.06E-04
UB_Wall ^d	0.00E+00	0.00E+00	9.04E-09	3.29E-05	4.75E-04	9.27E-04	1.05E-03	1.22E-03	1.34E-03	1.38E-03	1.37E-03	1.29E-03
ULI_Wall ^e	3.45E-04	5.53E-03	1.38E-02	2.23E-02	2.08E-02	1.54E-02	1.39E-02	1.31E-02	1.21E-02	1.12E-02	1.05E-02	8.65E-03
Uterus	0.00E+00	0.00E+00	5.21E-07	2.39E-04	1.84E-03	2.75E-03	2.73E-03	2.78E-03	2.78E-03	2.71E-03	2.63E-03	2.32E-03

^aGall Bladder Wall

^cSmall Intestine

^bLower Large Intestine

^dUrinary Bladder Wall

^eUpper Large Intestine

Table 19. Specific Absorbed Fraction of photon energy in kg^{-1} when the source organ is the stomach wall

Target Organs	Photon energy (keV)											
	10	15	20	30	50	100	200	500	1000	1500	2000	4000
Adrenals	0.00E+00	2.71E-06	4.31E-04	7.43E-03	1.56E-02	1.43E-02	1.30E-02	1.20E-02	1.10E-02	1.02E-02	9.60E-03	8.03E-03
Bone Surface	4.06E-06	4.59E-04	2.31E-03	7.28E-03	1.11E-02	7.22E-03	4.20E-03	2.99E-03	2.68E-03	2.51E-03	2.39E-03	2.11E-03
Brain	0.00E+00	0.00E+00	0.00E+00	2.22E-07	3.21E-06	1.31E-05	2.38E-05	4.99E-05	8.36E-05	1.09E-04	1.27E-04	1.56E-04
Breasts	0.00E+00	3.38E-07	4.88E-05	1.06E-03	2.74E-03	2.86E-03	2.97E-03	3.29E-03	3.39E-03	3.33E-03	3.24E-03	2.87E-03
Esophagus	3.36E-03	1.61E-02	2.62E-02	3.12E-02	2.47E-02	1.75E-02	1.58E-02	1.50E-02	1.37E-02	1.27E-02	1.18E-02	7.93E-04
GB_Wall ^a	0.00E+00	1.13E-06	3.97E-04	8.25E-03	1.81E-02	1.61E-02	1.40E-02	1.28E-02	1.17E-02	1.09E-02	1.02E-02	8.51E-03
Heart Wall	1.49E-08	1.97E-04	2.50E-03	1.16E-02	1.67E-02	1.36E-02	1.21E-02	1.15E-02	1.07E-02	1.00E-02	9.41E-03	7.87E-03
Kidneys	0.00E+00	2.19E-06	4.65E-04	7.48E-03	1.50E-02	1.34E-02	1.19E-02	1.11E-02	1.03E-02	9.55E-03	8.97E-03	7.50E-03
Liver	4.11E-10	3.17E-05	6.02E-04	4.10E-03	8.05E-03	7.68E-03	7.01E-03	6.72E-03	6.36E-03	6.00E-03	5.69E-03	4.84E-03
LLI_Wall ^b	0.00E+00	1.19E-05	4.26E-04	3.03E-03	5.25E-03	4.89E-03	4.55E-03	4.46E-03	4.28E-03	4.06E-03	3.88E-03	3.33E-03
Lungs	1.23E-05	6.34E-04	2.63E-03	6.48E-03	7.84E-03	6.31E-03	5.68E-03	5.48E-03	5.15E-03	4.83E-03	4.55E-03	3.83E-03
Bone Marrow	1.50E-06	1.56E-04	7.51E-04	2.30E-03	3.90E-03	4.12E-03	3.80E-03	3.67E-03	3.59E-03	3.45E-03	3.31E-03	2.94E-03
Ovaries	0.00E+00	2.05E-10	2.83E-06	3.84E-04	2.17E-03	3.00E-03	2.95E-03	3.00E-03	2.98E-03	2.89E-03	2.78E-03	2.47E-03
Pancreas	2.87E-03	3.54E-02	8.74E-02	1.30E-01	1.00E-01	6.49E-02	5.77E-02	5.40E-02	4.89E-02	4.47E-02	4.14E-02	3.35E-02
S-intestine ^c	3.31E-04	1.31E-03	2.87E-03	8.28E-03	1.28E-02	1.12E-02	9.99E-03	9.34E-03	8.66E-03	8.07E-03	7.59E-03	6.36E-03
Spleen	8.77E-09	6.14E-04	1.15E-02	5.04E-02	5.75E-02	4.01E-02	3.47E-02	3.20E-02	2.90E-02	2.66E-02	2.47E-02	2.02E-02
Stomach Wall	5.18E+00	3.44E+00	2.19E+00	1.03E+00	4.17E-01	2.51E-01	2.58E-01	2.66E-01	2.46E-01	2.25E-01	2.08E-01	1.66E-01
Thymus	0.00E+00	0.00E+00	4.86E-07	2.07E-04	1.42E-03	1.99E-03	2.06E-03	2.19E-03	2.30E-03	2.31E-03	2.24E-03	2.06E-03
Thyroid	0.00E+00	0.00E+00	0.00E+00	8.28E-06	1.12E-04	2.39E-04	3.05E-04	3.97E-04	4.89E-04	5.31E-04	5.44E-04	5.74E-04
Testes	0.00E+00	0.00E+00	0.00E+00	2.46E-06	3.61E-05	1.04E-04	1.58E-04	2.64E-04	3.78E-04	4.40E-04	4.65E-04	5.01E-04
UB_Wall ^d	0.00E+00	0.00E+00	2.09E-07	3.62E-05	4.75E-04	9.30E-04	1.05E-03	1.22E-03	1.34E-03	1.37E-03	1.37E-03	1.29E-03
ULI_Wall ^e	3.47E-04	5.34E-03	1.33E-02	2.17E-02	2.05E-02	1.53E-02	1.37E-02	1.30E-02	1.20E-02	1.11E-02	1.04E-02	8.56E-03
Uterus	0.00E+00	0.00E+00	8.05E-07	2.39E-04	1.82E-03	2.72E-03	2.73E-03	2.77E-03	2.78E-03	2.70E-03	2.61E-03	2.31E-03

^aGall Bladder Wall

^bLower Large Intestine

^cSmall Intestine

^dUrinary Bladder Wall

^eUpper Large Intestine

Table 20. Specific Absorbed Fraction of photon energy in kg^{-1} when the source organ is the thymus

Target Organs	Photon energy (keV)											
	10	15	20	30	50	100	200	500	1000	1500	2000	4000
Adrenals	0.00E+00	0.00E+00	2.65E-07	2.48E-04	1.93E-03	2.80E-03	2.89E-03	2.96E-03	2.97E-03	2.89E-03	2.80E-03	2.49E-03
Bone Surface	1.14E-06	6.97E-04	4.43E-03	1.13E-02	1.32E-02	7.56E-03	4.36E-03	3.27E-03	2.97E-03	2.78E-03	2.64E-03	2.30E-03
Brain	0.00E+00	0.00E+00	0.00E+00	1.79E-06	6.00E-05	1.76E-04	2.56E-04	4.06E-04	5.40E-04	6.05E-04	6.38E-04	6.58E-04
Breasts	0.00E+00	5.66E-06	5.06E-04	7.47E-03	1.39E-02	1.20E-02	1.20E-02	1.28E-02	1.26E-02	1.20E-02	1.14E-02	9.67E-03
Esophagus	0.00E+00	1.05E-05	1.36E-03	1.42E-02	2.12E-02	1.57E-02	1.36E-02	1.28E-02	1.18E-02	1.09E-02	1.02E-02	8.45E-03
GB_Wall ^a	0.00E+00	0.00E+00	2.98E-08	5.24E-05	6.94E-04	1.28E-03	1.40E-03	1.54E-03	1.67E-03	1.68E-03	1.65E-03	1.54E-03
Heart Wall	7.92E-04	1.08E-02	3.07E-02	6.01E-02	5.45E-02	3.70E-02	3.36E-02	3.22E-02	2.96E-02	2.72E-02	2.53E-02	2.07E-02
Kidneys	0.00E+00	0.00E+00	2.41E-09	2.23E-05	3.97E-04	8.14E-04	9.35E-04	1.12E-03	1.23E-03	1.28E-03	1.28E-03	1.20E-03
Liver	0.00E+00	0.00E+00	3.77E-06	5.66E-04	2.57E-03	3.06E-03	2.97E-03	3.05E-03	3.03E-03	2.94E-03	2.84E-03	2.49E-03
LLI_Wall ^b	0.00E+00	0.00E+00	1.24E-07	2.97E-07	1.28E-05	4.84E-05	7.72E-05	1.34E-04	2.00E-04	2.42E-04	2.67E-04	3.01E-04
Lungs	0.00E+00	1.05E-05	1.36E-03	1.42E-02	2.12E-02	1.57E-02	1.36E-02	1.28E-02	1.18E-02	1.09E-02	1.02E-02	8.45E-03
Bone Marrow	4.20E-07	2.36E-04	1.44E-03	3.76E-03	5.23E-03	5.04E-03	4.63E-03	4.58E-03	4.48E-03	4.27E-03	4.08E-03	3.57E-03
Ovaries	0.00E+00	0.00E+00	0.00E+00	4.02E-08	8.85E-06	6.04E-05	9.07E-05	1.62E-04	2.38E-04	2.79E-04	3.24E-04	3.52E-04
Pancreas	0.00E+00	0.00E+00	6.51E-08	2.27E-04	2.01E-03	2.91E-03	2.88E-03	2.96E-03	2.96E-03	2.88E-03	2.80E-03	2.49E-03
S-intestine ^c	0.00E+00	0.00E+00	6.88E-08	1.18E-06	6.04E-05	1.97E-04	2.70E-04	3.87E-04	4.99E-04	5.54E-04	5.79E-04	5.98E-04
Spleen	0.00E+00	0.00E+00	4.99E-08	1.24E-04	1.16E-03	1.75E-03	1.77E-03	1.86E-03	1.91E-03	1.90E-03	1.88E-03	1.71E-03
Stomach Wall	0.00E+00	0.00E+00	1.28E-06	2.05E-04	1.44E-03	2.03E-03	2.07E-03	2.26E-03	2.35E-03	2.34E-03	2.29E-03	2.08E-03
Thymus	4.18E+01	3.00E+01	1.88E+01	7.56E+00	2.52E+00	1.50E+00	1.64E+00	1.75E+00	1.63E+00	1.49E+00	1.37E+00	1.09E+00
Thyroid	0.00E+00	7.29E-09	5.00E-05	2.87E-03	8.56E-03	8.29E-03	7.83E-03	7.97E-03	7.76E-03	7.39E-03	7.05E-03	6.01E-03
Testes	0.00E+00	0.00E+00	1.42E-07	8.51E-07	4.91E-06	6.91E-06	6.90E-06	1.78E-05	3.57E-05	5.53E-05	6.97E-05	1.02E-04
UB_Wall ^d	0.00E+00	0.00E+00	0.00E+00	2.06E-06	7.02E-06	1.91E-05	3.54E-05	6.90E-05	1.24E-04	1.59E-04	1.81E-04	2.23E-04
ULI_Wall ^e	0.00E+00	0.00E+00	0.00E+00	2.48E-06	8.94E-05	2.61E-04	3.42E-04	4.71E-04	5.86E-04	6.42E-04	6.66E-04	6.77E-04
Uterus	0.00E+00	0.00E+00	0.00E+00	8.08E-07	1.04E-05	5.30E-05	8.58E-05	1.53E-04	2.31E-04	2.78E-04	3.06E-04	3.47E-04

^aGall Bladder Wall

^cSmall Intestine

^bLower Large Intestine

^dUrinary Bladder Wall

^eUpper Large Intestine

Table 21. Specific Absorbed Fraction of photon energy in kg^{-1} when the source organ is the testes

Target Organs	Photon energy (keV)											
	10	15	20	30	50	100	200	500	1000	1500	2000	4000
Adrenals	0.00E+00	0.00E+00	0.00E+00	2.71E-08	7.04E-06	3.97E-05	7.58E-05	1.58E-04	2.25E-04	2.73E-04	3.14E-04	3.37E-04
Bone Surface	1.20E-09	2.39E-07	2.77E-05	1.54E-03	6.72E-03	6.20E-03	3.89E-03	2.83E-03	2.56E-03	2.41E-03	2.31E-03	2.05E-03
Brain	0.00E+00	0.00E+00	0.00E+00	1.09E-07	3.74E-07	4.35E-07	4.27E-07	8.73E-07	2.72E-06	5.29E-06	8.02E-06	1.70E-05
Breasts	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Esophagus	0.00E+00	0.00E+00	0.00E+00	4.09E-07	5.88E-06	3.23E-05	6.06E-05	1.31E-04	1.99E-04	2.49E-04	2.80E-04	3.20E-04
GB_Wall ^a	0.00E+00	0.00E+00	3.35E-07	1.38E-06	9.03E-05	2.57E-04	3.49E-04	5.07E-04	6.31E-04	6.92E-04	7.20E-04	7.24E-04
Heart Wall	0.00E+00	0.00E+00	2.15E-07	1.26E-06	5.33E-06	1.45E-05	2.61E-05	5.96E-05	1.04E-04	1.39E-04	1.64E-04	2.06E-04
Kidneys	0.00E+00	0.00E+00	0.00E+00	6.55E-07	3.28E-05	1.26E-04	2.00E-04	3.30E-04	4.51E-04	5.07E-04	5.36E-04	5.62E-04
Liver	0.00E+00	4.43E-09	3.13E-07	2.00E-06	2.30E-05	7.89E-05	1.26E-04	2.18E-04	3.14E-04	3.68E-04	4.02E-04	4.40E-04
LLI_Wall ^b	0.00E+00	3.88E-06	6.21E-04	8.22E-03	1.43E-02	1.19E-02	1.07E-02	1.03E-02	9.62E-03	8.98E-03	8.45E-03	7.07E-03
Lungs	0.00E+00	0.00E+00	3.39E-08	1.59E-06	3.65E-06	1.09E-05	1.96E-05	4.59E-05	8.71E-05	1.16E-04	1.37E-04	1.73E-04
Bone Marrow	2.71E-10	4.95E-08	8.55E-06	4.68E-04	2.29E-03	3.30E-03	3.21E-03	3.12E-03	3.04E-03	2.92E-03	2.80E-03	2.48E-03
Ovaries	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Pancreas	0.00E+00	0.00E+00	0.00E+00	4.08E-07	2.01E-05	7.81E-05	1.32E-04	2.26E-04	3.24E-04	3.79E-04	4.04E-04	4.38E-04
S-intestine ^c	0.00E+00	0.00E+00	3.59E-08	7.04E-05	8.31E-04	1.45E-03	1.60E-03	1.82E-03	1.96E-03	1.96E-03	1.93E-03	1.77E-03
Spleen	0.00E+00	0.00E+00	0.00E+00	4.32E-07	1.38E-05	6.43E-05	1.07E-04	1.88E-04	2.79E-04	3.28E-04	3.64E-04	3.97E-04
Stomach Wall	0.00E+00	0.00E+00	7.87E-07	3.56E-06	4.33E-05	1.34E-04	1.94E-04	3.07E-04	4.23E-04	4.76E-04	5.05E-04	5.40E-04
Thymus	0.00E+00	0.00E+00	0.00E+00	4.59E-07	2.75E-06	6.12E-06	8.12E-06	1.82E-05	4.64E-05	6.56E-05	7.86E-05	1.08E-04
Thyroid	0.00E+00	0.00E+00	0.00E+00	1.90E-06	1.29E-06	1.69E-06	2.13E-06	4.27E-06	1.14E-05	2.02E-05	2.66E-05	5.16E-05
Testes	2.30E+01	1.79E+01	1.21E+01	5.21E+00	1.79E+00	1.06E+00	1.15E+00	1.22E+00	1.14E+00	1.04E+00	9.60E-01	7.67E-01
UB_Wall ^d	0.00E+00	1.71E-05	2.03E-03	2.11E-02	3.12E-02	2.37E-02	2.14E-02	2.06E-02	1.91E-02	1.78E-02	1.66E-02	1.38E-02
ULI_Wall ^e	0.00E+00	0.00E+00	5.13E-08	5.98E-05	6.44E-04	1.12E-03	1.29E-03	1.53E-03	1.68E-03	1.70E-03	1.69E-03	1.57E-03
Uterus	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

^aGall Bladder Wall

^cSmall Intestine

^bLower Large Intestine

^dUrinary Bladder Wall

^eUpper Large Intestine

Table 22. Specific Absorbed Fraction of photon energy in kg^{-1} when the source organ is the thyroid

Target Organs	Photon energy (keV)											
	10	15	20	30	50	100	200	500	1000	1500	2000	4000
Adrenals	0.00E+00	0.00E+00	0.00E+00	8.44E-06	1.85E-04	4.28E-04	5.20E-04	6.28E-04	7.38E-04	7.73E-04	7.91E-04	7.79E-04
Bone Surface	2.40E-06	5.01E-04	3.38E-03	1.35E-02	1.85E-02	9.79E-03	5.52E-03	4.27E-03	3.89E-03	3.63E-03	3.43E-03	2.95E-03
Brain	0.00E+00	6.18E-10	1.33E-07	1.16E-04	1.24E-03	2.02E-03	2.29E-03	2.73E-03	2.95E-03	2.96E-03	2.91E-03	2.62E-03
Breasts	3.63E-09	1.23E-06	8.96E-06	1.32E-04	9.16E-04	1.33E-03	1.50E-03	1.85E-03	2.08E-03	2.13E-03	2.13E-03	1.99E-03
Esophagus	0.00E+00	0.00E+00	0.00E+00	6.32E-06	1.47E-04	3.74E-04	4.51E-04	5.56E-04	6.49E-04	6.94E-04	7.10E-04	7.06E-04
GB_Wall ^a	0.00E+00	0.00E+00	0.00E+00	1.09E-06	5.02E-05	1.60E-04	2.07E-04	2.81E-04	3.58E-04	4.04E-04	4.31E-04	4.55E-04
Heart Wall	0.00E+00	0.00E+00	8.66E-07	1.80E-04	1.47E-03	2.13E-03	2.14E-03	2.31E-03	2.41E-03	2.40E-03	2.35E-03	2.13E-03
Kidneys	0.00E+00	0.00E+00	0.00E+00	1.45E-06	4.92E-05	1.39E-04	1.95E-04	2.89E-04	3.79E-04	4.24E-04	4.48E-04	4.68E-04
Liver	0.00E+00	0.00E+00	3.31E-08	2.02E-05	2.39E-04	4.56E-04	5.29E-04	6.65E-04	7.64E-04	7.96E-04	8.03E-04	7.66E-04
LLI_Wall ^b	0.00E+00	0.00E+00	0.00E+00	4.23E-08	1.83E-06	7.31E-06	1.37E-05	3.09E-05	5.42E-05	7.39E-05	8.98E-05	1.21E-04
Lungs	1.87E-03	5.09E-03	7.23E-03	7.38E-03	5.05E-03	3.45E-03	3.34E-03	3.40E-03	3.21E-03	3.00E-03	2.81E-03	2.34E-03
Bone Marrow	8.89E-07	1.70E-04	1.10E-03	4.47E-03	7.29E-03	6.71E-03	6.09E-03	5.97E-03	5.76E-03	5.44E-03	5.16E-03	4.45E-03
Ovaries	0.00E+00	0.00E+00	0.00E+00	2.14E-09	1.56E-06	8.77E-06	1.79E-05	3.79E-05	7.10E-05	8.57E-05	1.05E-04	1.44E-04
Pancreas	0.00E+00	0.00E+00	0.00E+00	6.32E-06	1.47E-04	3.74E-04	4.51E-04	5.56E-04	6.49E-04	6.94E-04	7.10E-04	7.06E-04
S-intestine ^c	0.00E+00	0.00E+00	0.00E+00	1.38E-07	5.40E-06	2.76E-05	4.58E-05	8.46E-05	1.31E-04	1.63E-04	1.85E-04	2.20E-04
Spleen	0.00E+00	0.00E+00	0.00E+00	1.47E-05	1.98E-04	3.88E-04	4.70E-04	5.96E-04	6.84E-04	7.09E-04	7.20E-04	6.88E-04
Stomach Wall	0.00E+00	0.00E+00	0.00E+00	5.08E-06	1.09E-04	2.62E-04	3.13E-04	4.09E-04	4.97E-04	5.45E-04	5.67E-04	5.81E-04
Thymus	0.00E+00	6.81E-09	4.33E-05	2.88E-03	8.64E-03	8.32E-03	7.80E-03	7.99E-03	7.80E-03	7.47E-03	7.09E-03	6.05E-03
Thyroid	4.12E+01	2.83E+01	1.73E+01	6.86E+00	2.28E+00	1.37E+00	1.50E+00	1.60E+00	1.49E+00	1.36E+00	1.26E+00	1.00E+00
Testes	0.00E+00	0.00E+00	0.00E+00	4.77E-07	1.04E-06	1.76E-06	1.62E-06	4.78E-06	1.19E-05	1.93E-05	2.75E-05	4.75E-05
UB_Wall ^d	0.00E+00	0.00E+00	5.65E-07	6.46E-07	1.18E-06	3.58E-06	6.67E-06	1.68E-05	3.50E-05	5.10E-05	6.51E-05	9.23E-05
ULI_Wall ^e	0.00E+00	0.00E+00	0.00E+00	2.75E-07	8.63E-06	3.59E-05	5.74E-05	1.01E-04	1.52E-04	1.88E-04	2.08E-04	2.45E-04
Uterus	0.00E+00	0.00E+00	0.00E+00	7.97E-08	1.85E-06	8.47E-06	1.48E-05	3.52E-05	6.45E-05	8.64E-05	1.02E-04	1.36E-04

^aGall Bladder Wall

^cSmall Intestine

^bLower Large Intestine

^dUrinary Bladder Wall

^eUpper Large Intestine

Table 23. Specific Absorbed Fraction of photon energy in kg^{-1} when the source organ is the urinary bladder contents

Target Organs	Photon energy (keV)											
	10	15	20	30	50	100	200	500	1000	1500	2000	4000
Adrenals	0.00E+00	0.00E+00	0.00E+00	4.16E-07	7.60E-05	2.82E-04	3.84E-04	5.56E-04	6.99E-04	7.60E-04	7.72E-04	7.63E-04
Bone Surface	0.00E+00	4.48E-08	2.49E-05	1.80E-03	7.90E-03	7.30E-03	4.44E-03	2.95E-03	2.56E-03	2.39E-03	2.27E-03	2.01E-03
Brain	0.00E+00	0.00E+00	4.84E-08	2.35E-07	3.45E-07	4.91E-07	7.79E-07	2.10E-06	5.97E-06	1.09E-05	1.56E-05	2.96E-05
Breasts	0.00E+00	0.00E+00	9.42E-07	1.07E-05	2.77E-05	4.75E-05	7.11E-05	1.29E-04	1.99E-04	2.44E-04	2.71E-04	3.09E-04
Esophagus	0.00E+00	0.00E+00	0.00E+00	4.71E-07	3.04E-05	1.15E-04	1.62E-04	2.38E-04	3.09E-04	3.53E-04	3.74E-04	7.95E-06
GB_Wall ^a	0.00E+00	0.00E+00	8.94E-08	8.22E-05	1.04E-03	1.85E-03	1.95E-03	2.09E-03	2.17E-03	2.14E-03	2.10E-03	1.89E-03
Heart Wall	0.00E+00	0.00E+00	6.24E-08	6.43E-07	2.07E-05	8.56E-05	1.29E-04	2.15E-04	3.04E-04	3.55E-04	3.85E-04	4.24E-04
Kidneys	0.00E+00	0.00E+00	4.50E-09	2.10E-05	3.96E-04	8.95E-04	1.06E-03	1.26E-03	1.39E-03	1.43E-03	1.43E-03	1.34E-03
Liver	0.00E+00	0.00E+00	6.78E-08	1.04E-05	2.30E-04	5.35E-04	6.53E-04	8.22E-04	9.57E-04	1.01E-03	1.02E-03	9.86E-04
LLI_Wall ^b	0.00E+00	2.51E-04	5.99E-03	3.21E-02	4.10E-02	3.05E-02	2.64E-02	2.40E-02	2.17E-02	1.99E-02	1.85E-02	1.52E-02
Lungs	0.00E+00	0.00E+00	0.00E+00	6.29E-07	1.49E-05	5.85E-05	9.29E-05	1.64E-04	2.43E-04	2.87E-04	3.13E-04	3.42E-04
Bone Marrow	0.00E+00	1.52E-08	8.12E-06	5.94E-04	2.99E-03	4.20E-03	3.94E-03	3.64E-03	3.47E-03	3.30E-03	3.16E-03	2.79E-03
Ovaries	0.00E+00	2.19E-05	1.74E-03	2.11E-02	3.64E-02	2.88E-02	2.45E-02	2.19E-02	1.98E-02	1.81E-02	1.70E-02	1.39E-02
Pancreas	0.00E+00	0.00E+00	4.59E-10	6.31E-06	2.06E-04	5.78E-04	7.03E-04	8.84E-04	1.01E-03	1.04E-03	1.05E-03	1.01E-03
S-intestine ^c	0.00E+00	3.59E-07	1.47E-04	4.35E-03	1.18E-02	1.14E-02	1.02E-02	9.33E-03	8.60E-03	8.02E-03	7.55E-03	6.34E-03
Spleen	0.00E+00	0.00E+00	1.61E-10	4.56E-06	1.52E-04	4.21E-04	5.34E-04	6.87E-04	8.19E-04	8.74E-04	9.05E-04	8.77E-04
Stomach Wall	0.00E+00	0.00E+00	5.08E-08	3.07E-05	4.52E-04	9.10E-04	1.02E-03	1.21E-03	1.33E-03	1.36E-03	1.36E-03	1.28E-03
Thymus	0.00E+00	0.00E+00	0.00E+00	9.27E-07	9.22E-06	1.62E-05	3.44E-05	7.18E-05	1.12E-04	1.46E-04	1.79E-04	2.19E-04
Thyroid	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.67E-07	3.63E-06	6.71E-06	1.71E-05	3.49E-05	4.84E-05	6.56E-05	9.44E-05
Testes	0.00E+00	8.46E-06	8.50E-04	1.39E-02	2.39E-02	1.91E-02	1.74E-02	1.69E-02	1.59E-02	1.49E-02	1.39E-02	1.16E-02
UB_Wall ^d	7.51E-01	1.28E+00	1.34E+00	9.30E-01	4.37E-01	2.56E-01	2.49E-01	2.49E-01	2.29E-01	2.09E-01	1.92E-01	1.54E-01
ULI_Wall ^e	0.00E+00	8.07E-07	1.04E-04	2.61E-03	7.73E-03	8.10E-03	7.41E-03	7.00E-03	6.58E-03	6.19E-03	5.86E-03	4.98E-03
Uterus	8.74E-07	3.32E-03	3.45E-02	1.06E-01	1.00E-01	6.59E-02	5.70E-02	5.22E-02	4.69E-02	4.28E-02	3.96E-02	3.21E-02

^aGall Bladder Wall

^bLower Large Intestine

^cSmall Intestine

^dUrinary Bladder Wall

^eUpper Large Intestine

Table 24. Specific Absorbed Fraction of photon energy in kg^{-1} when the source organ is the urinary bladder wall

Target Organs	Photon energy (keV)											
	10	15	20	30	50	100	200	500	1000	1500	2000	4000
Adrenals	0.00E+00	0.00E+00	0.00E+00	1.28E-06	7.69E-05	2.85E-04	4.03E-04	5.49E-04	6.84E-04	7.33E-04	7.85E-04	7.72E-04
Bone Surface	0.00E+00	4.79E-08	4.07E-05	2.07E-03	8.23E-03	7.39E-03	4.47E-03	2.99E-03	2.59E-03	2.42E-03	2.30E-03	2.03E-03
Brain	0.00E+00	0.00E+00	0.00E+00	8.00E-08	3.73E-07	4.68E-07	6.94E-07	2.13E-06	6.17E-06	1.05E-05	1.53E-05	2.84E-05
Breasts	0.00E+00	5.00E-08	1.31E-06	9.14E-06	3.01E-05	4.95E-05	7.12E-05	1.31E-04	2.01E-04	2.44E-04	2.73E-04	3.15E-04
Esophagus	0.00E+00	0.00E+00	0.00E+00	4.71E-07	3.04E-05	1.15E-04	1.62E-04	2.38E-04	3.09E-04	3.53E-04	3.74E-04	7.95E-06
GB_Wall ^a	0.00E+00	0.00E+00	1.05E-07	1.04E-04	1.07E-03	1.88E-03	1.95E-03	2.08E-03	2.16E-03	2.14E-03	2.10E-03	1.90E-03
Heart Wall	0.00E+00	0.00E+00	0.00E+00	9.10E-07	2.20E-05	8.43E-05	1.30E-04	2.14E-04	3.02E-04	3.55E-04	3.86E-04	4.22E-04
Kidneys	0.00E+00	0.00E+00	5.15E-09	2.06E-05	4.02E-04	8.95E-04	1.06E-03	1.27E-03	1.40E-03	1.42E-03	1.42E-03	1.33E-03
Liver	0.00E+00	0.00E+00	1.95E-08	1.23E-05	2.35E-04	5.39E-04	6.54E-04	8.28E-04	9.60E-04	1.01E-03	1.03E-03	9.90E-04
LLI_Wall ^b	1.41E-07	7.57E-04	9.77E-03	3.71E-02	4.28E-02	3.13E-02	2.73E-02	2.49E-02	2.25E-02	2.07E-02	1.92E-02	1.57E-02
Lungs	0.00E+00	0.00E+00	0.00E+00	4.18E-07	1.55E-05	5.90E-05	9.24E-05	1.63E-04	2.41E-04	2.89E-04	3.14E-04	3.44E-04
Bone Marrow	0.00E+00	1.63E-08	1.33E-05	6.83E-04	3.12E-03	4.28E-03	3.99E-03	3.69E-03	3.52E-03	3.35E-03	3.21E-03	2.83E-03
Ovaries	0.00E+00	3.34E-05	2.70E-03	2.45E-02	3.76E-02	2.93E-02	2.50E-02	2.25E-02	2.03E-02	1.86E-02	1.72E-02	1.42E-02
Pancreas	0.00E+00	0.00E+00	4.09E-10	7.41E-06	2.18E-04	5.83E-04	7.18E-04	8.66E-04	9.94E-04	1.05E-03	1.05E-03	1.00E-03
S-intestine ^c	0.00E+00	4.16E-07	2.22E-04	4.81E-03	1.20E-02	1.15E-02	1.02E-02	9.41E-03	8.69E-03	8.10E-03	7.62E-03	6.40E-03
Spleen	0.00E+00	0.00E+00	3.55E-10	5.93E-06	1.53E-04	4.23E-04	5.39E-04	6.97E-04	8.24E-04	8.80E-04	8.95E-04	8.74E-04
Stomach Wall	0.00E+00	0.00E+00	1.53E-08	2.94E-05	4.68E-04	9.11E-04	1.03E-03	1.21E-03	1.32E-03	1.36E-03	1.37E-03	1.29E-03
Thymus	0.00E+00	0.00E+00	0.00E+00	6.23E-07	5.70E-06	1.86E-05	3.11E-05	7.12E-05	1.25E-04	1.64E-04	1.83E-04	2.24E-04
Thyroid	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.31E-07	2.02E-06	6.80E-06	1.64E-05	3.16E-05	4.80E-05	5.83E-05	8.67E-05
Testes	0.00E+00	8.79E-06	1.29E-03	1.56E-02	2.44E-02	1.92E-02	1.76E-02	1.72E-02	1.62E-02	1.51E-02	1.42E-02	1.18E-02
UB_Wall ^d	1.35E+01	7.30E+00	4.16E+00	1.75E+00	6.57E-01	3.98E-01	4.18E-01	4.37E-01	4.06E-01	3.71E-01	3.42E-01	2.73E-01
ULI_Wall ^e	0.00E+00	8.26E-07	1.49E-04	2.96E-03	8.02E-03	8.21E-03	7.49E-03	7.08E-03	6.66E-03	6.26E-03	5.92E-03	5.04E-03
Uterus	3.10E-05	1.03E-02	5.56E-02	1.21E-01	1.03E-01	6.72E-02	5.88E-02	5.44E-02	4.90E-02	4.47E-02	4.14E-02	3.35E-02

^aGall Bladder Wall

^cSmall Intestine

^bLower Large Intestine

^dUrinary Bladder Wall

^eUpper Large Intestine

Table 25. Specific Absorbed Fraction of photon energy in kg^{-1} when the source organ is the upper large intestine contents

Target Organs	Photon energy (keV)											
	10	15	20	30	50	100	200	500	1000	1500	2000	4000
Adrenals	0.00E+00	0.00E+00	3.95E-06	5.00E-04	2.87E-03	4.11E-03	4.12E-03	4.10E-03	3.98E-03	3.80E-03	3.64E-03	3.17E-03
Bone Surface	1.55E-06	2.90E-04	1.99E-03	8.56E-03	1.44E-02	9.45E-03	5.41E-03	3.73E-03	3.25E-03	3.02E-03	2.85E-03	2.48E-03
Brain	0.00E+00	0.00E+00	0.00E+00	6.59E-08	5.83E-07	2.08E-06	4.57E-06	1.23E-05	2.86E-05	4.18E-05	5.12E-05	7.50E-05
Breasts	0.00E+00	0.00E+00	5.50E-07	2.18E-05	1.81E-04	3.59E-04	4.50E-04	6.27E-04	7.68E-04	8.26E-04	8.53E-04	8.53E-04
Esophagus	0.00E+00	0.00E+00	5.93E-07	1.86E-04	1.17E-03	1.70E-03	1.70E-03	1.74E-03	1.75E-03	1.72E-03	1.68E-03	8.52E-05
GB_Wall ^a	5.06E-06	3.72E-03	2.48E-02	6.02E-02	5.72E-02	3.96E-02	3.46E-02	3.18E-02	2.87E-02	2.63E-02	2.44E-02	1.99E-02
Heart Wall	0.00E+00	0.00E+00	4.28E-08	5.34E-05	6.93E-04	1.24E-03	1.35E-03	1.50E-03	1.59E-03	1.61E-03	1.59E-03	1.47E-03
Kidneys	0.00E+00	5.66E-07	2.17E-04	4.81E-03	1.13E-02	1.09E-02	9.84E-03	9.21E-03	8.57E-03	8.01E-03	7.54E-03	6.34E-03
Liver	8.40E-07	1.96E-04	1.55E-03	6.93E-03	1.14E-02	1.00E-02	9.02E-03	8.55E-03	7.99E-03	7.49E-03	7.06E-03	5.95E-03
LLI_Wall ^b	7.34E-05	3.50E-03	1.08E-02	1.64E-02	1.47E-02	1.16E-02	1.07E-02	1.02E-02	9.43E-03	8.76E-03	8.22E-03	6.84E-03
Lungs	0.00E+00	0.00E+00	7.20E-08	4.69E-05	5.00E-04	8.61E-04	9.37E-04	1.08E-03	1.19E-03	1.21E-03	1.19E-03	1.11E-03
Bone Marrow	5.72E-07	9.86E-05	6.48E-04	2.75E-03	5.35E-03	5.71E-03	5.14E-03	4.78E-03	4.55E-03	4.31E-03	4.10E-03	3.58E-03
Ovaries	8.36E-05	1.32E-02	4.85E-02	7.33E-02	5.60E-02	3.83E-02	3.45E-02	3.21E-02	2.91E-02	2.66E-02	2.47E-02	2.01E-02
Pancreas	0.00E+00	4.45E-07	7.09E-05	2.84E-03	8.54E-03	8.82E-03	7.86E-03	7.20E-03	6.68E-03	6.26E-03	5.91E-03	4.99E-03
S-intestine ^c	4.95E-03	4.43E-02	1.08E-01	1.44E-01	1.01E-01	6.49E-02	5.84E-02	5.50E-02	4.98E-02	4.54E-02	4.20E-02	3.40E-02
Spleen	0.00E+00	1.68E-07	5.78E-05	1.65E-03	4.85E-03	5.23E-03	4.78E-03	4.62E-03	4.39E-03	4.19E-03	3.99E-03	3.43E-03
Stomach Wall	2.22E-05	2.22E-03	9.76E-03	2.01E-02	2.00E-02	1.50E-02	1.35E-02	1.27E-02	1.17E-02	1.08E-02	1.01E-02	8.40E-03
Thymus	0.00E+00	0.00E+00	0.00E+00	3.33E-06	9.44E-05	2.57E-04	3.29E-04	4.44E-04	5.70E-04	6.31E-04	6.54E-04	6.79E-04
Thyroid	0.00E+00	0.00E+00	0.00E+00	2.10E-08	6.78E-06	3.33E-05	4.99E-05	9.78E-05	1.49E-04	1.85E-04	2.13E-04	2.46E-04
Testes	0.00E+00	0.00E+00	2.71E-08	4.62E-05	4.79E-04	8.99E-04	1.04E-03	1.31E-03	1.47E-03	1.51E-03	1.51E-03	1.42E-03
UB_Wall ^d	0.00E+00	5.71E-07	1.19E-04	2.76E-03	7.85E-03	8.15E-03	7.38E-03	6.97E-03	6.54E-03	6.16E-03	5.84E-03	4.95E-03
ULI_Wall ^e	3.17E-01	7.22E-01	8.11E-01	5.49E-01	2.57E-01	1.53E-01	1.49E-01	1.49E-01	1.37E-01	1.25E-01	1.15E-01	9.23E-02
Uterus	0.00E+00	1.05E-05	9.30E-04	1.28E-02	2.50E-02	2.14E-02	1.84E-02	1.64E-02	1.48E-02	1.37E-02	1.28E-02	1.05E-02

^aGall Bladder Wall

^bLower Large Intestine

^cSmall Intestine

^dUrinary Bladder Wall

^eUpper Large Intestine

Table 26. Specific Absorbed Fraction of photon energy in kg^{-1} when the source organ is the upper large intestine wall

Target Organs	Photon energy (keV)											
	10	15	20	30	50	100	200	500	1000	1500	2000	4000
Adrenals	0.00E+00	0.00E+00	2.11E-06	5.14E-04	2.92E-03	4.15E-03	4.10E-03	4.11E-03	3.95E-03	3.81E-03	3.66E-03	3.19E-03
Bone Surface	1.55E-06	2.90E-04	1.99E-03	8.56E-03	1.44E-02	9.45E-03	5.41E-03	3.73E-03	3.25E-03	3.02E-03	2.85E-03	2.48E-03
Brain	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.11E-07	2.20E-06	4.62E-06	1.31E-05	2.70E-05	4.00E-05	5.15E-05	7.51E-05
Breasts	0.00E+00	0.00E+00	7.45E-07	2.05E-05	1.84E-04	3.56E-04	4.51E-04	6.25E-04	7.72E-04	8.30E-04	8.55E-04	8.55E-04
Esophagus	0.00E+00	0.00E+00	5.93E-07	1.86E-04	1.17E-03	1.70E-03	1.70E-03	1.74E-03	1.75E-03	1.72E-03	1.68E-03	8.52E-05
GB_Wall ^a	7.63E-05	8.02E-03	3.14E-02	6.27E-02	5.75E-02	3.97E-02	3.47E-02	3.21E-02	2.90E-02	2.66E-02	2.47E-02	2.01E-02
Heart Wall	0.00E+00	0.00E+00	4.33E-08	5.78E-05	6.86E-04	1.25E-03	1.33E-03	1.49E-03	1.59E-03	1.61E-03	1.59E-03	1.47E-03
Kidneys	0.00E+00	2.18E-06	2.81E-04	5.18E-03	1.15E-02	1.10E-02	9.95E-03	9.32E-03	8.66E-03	8.09E-03	7.61E-03	6.41E-03
Liver	1.96E-05	4.07E-04	1.90E-03	7.12E-03	1.13E-02	9.95E-03	8.98E-03	8.52E-03	7.97E-03	7.48E-03	7.05E-03	5.94E-03
LLI_Wall ^b	1.91E-03	9.16E-03	1.53E-02	1.81E-02	1.51E-02	1.19E-02	1.10E-02	1.05E-02	9.74E-03	9.04E-03	8.48E-03	7.04E-03
Lungs	0.00E+00	0.00E+00	8.09E-09	4.77E-05	5.09E-04	8.65E-04	9.37E-04	1.09E-03	1.19E-03	1.21E-03	1.20E-03	1.11E-03
Bone Marrow	5.72E-07	9.86E-05	6.48E-04	2.75E-03	5.35E-03	5.71E-03	5.14E-03	4.78E-03	4.55E-03	4.31E-03	4.10E-03	3.58E-03
Ovaries	6.57E-03	5.62E-02	9.27E-02	9.13E-02	6.08E-02	4.11E-02	3.77E-02	3.57E-02	3.25E-02	2.97E-02	2.75E-02	2.23E-02
Pancreas	0.00E+00	8.51E-08	7.24E-05	2.91E-03	8.59E-03	8.84E-03	7.86E-03	7.23E-03	6.70E-03	6.28E-03	5.93E-03	5.01E-03
S-intestine ^c	7.10E-02	1.48E-01	1.85E-01	1.72E-01	1.09E-01	6.95E-02	6.38E-02	6.09E-02	5.54E-02	5.05E-02	4.67E-02	3.77E-02
Spleen	0.00E+00	7.11E-08	6.66E-05	1.70E-03	4.94E-03	5.25E-03	4.81E-03	4.61E-03	4.41E-03	4.20E-03	4.01E-03	3.46E-03
Stomach Wall	3.22E-04	5.34E-03	1.33E-02	2.17E-02	2.04E-02	1.52E-02	1.37E-02	1.30E-02	1.20E-02	1.11E-02	1.04E-02	8.59E-03
Thymus	0.00E+00	0.00E+00	0.00E+00	5.49E-06	9.20E-05	2.40E-04	3.40E-04	4.66E-04	5.61E-04	6.41E-04	6.87E-04	6.66E-04
Thyroid	0.00E+00	0.00E+00	0.00E+00	2.49E-08	7.00E-06	3.14E-05	5.60E-05	9.95E-05	1.54E-04	1.82E-04	2.05E-04	2.49E-04
Testes	0.00E+00	0.00E+00	2.60E-08	4.16E-05	5.00E-04	9.01E-04	1.04E-03	1.28E-03	1.47E-03	1.51E-03	1.51E-03	1.43E-03
UB_Wall ^d	0.00E+00	4.95E-07	1.33E-04	2.78E-03	7.78E-03	8.09E-03	7.34E-03	6.95E-03	6.54E-03	6.15E-03	5.83E-03	4.95E-03
ULI_Wall ^e	3.70E+00	2.48E+00	1.61E+00	7.66E-01	3.13E-01	1.91E-01	1.94E-01	1.99E-01	1.84E-01	1.68E-01	1.55E-01	1.24E-01
Uterus	0.00E+00	1.85E-05	1.33E-03	1.40E-02	2.56E-02	2.16E-02	1.85E-02	1.66E-02	1.50E-02	1.38E-02	1.29E-02	1.07E-02

^aGall Bladder Wall

^bLower Large Intestine

^cSmall Intestine

^dUrinary Bladder Wall

^eUpper Large Intestine

Table 27. Specific Absorbed Fraction of photon energy in kg^{-1} when the source organ is the Uterus

Target Organs	Photon energy (keV)											
	10	15	20	30	50	100	200	500	1000	1500	2000	4000
Adrenals	0.00E+00	0.00E+00	7.34E-10	7.90E-06	3.67E-04	8.93E-04	1.08E-03	1.30E-03	1.47E-03	1.50E-03	1.46E-03	1.37E-03
Bone Surface	0.00E+00	4.10E-07	1.08E-04	3.81E-03	1.20E-02	9.45E-03	5.47E-03	3.59E-03	3.07E-03	2.84E-03	2.68E-03	2.34E-03
Brain	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.42E-07	7.96E-07	1.40E-06	3.96E-06	1.02E-05	1.68E-05	2.26E-05	4.00E-05
Breasts	0.00E+00	0.00E+00	1.27E-07	5.02E-06	3.77E-05	8.79E-05	1.28E-04	2.18E-04	3.12E-04	3.69E-04	3.99E-04	4.29E-04
Esophagus	0.00E+00	0.00E+00	0.00E+00	4.21E-06	1.29E-04	3.57E-04	4.36E-04	5.50E-04	6.43E-04	6.79E-04	6.86E-04	2.20E-05
GB_Wall ^a	0.00E+00	0.00E+00	9.42E-06	8.29E-04	4.57E-03	5.80E-03	5.40E-03	5.10E-03	4.84E-03	4.61E-03	4.36E-03	3.78E-03
Heart Wall	0.00E+00	0.00E+00	0.00E+00	1.60E-06	7.81E-05	2.48E-04	3.37E-04	4.70E-04	5.90E-04	6.48E-04	6.72E-04	6.76E-04
Kidneys	0.00E+00	0.00E+00	5.91E-07	2.47E-04	1.91E-03	3.00E-03	3.09E-03	3.21E-03	3.20E-03	3.13E-03	3.03E-03	2.67E-03
Liver	0.00E+00	0.00E+00	2.29E-08	8.11E-05	8.83E-04	1.55E-03	1.66E-03	1.81E-03	1.90E-03	1.90E-03	1.87E-03	1.70E-03
LLI_Wall ^b	0.00E+00	1.97E-05	1.61E-03	1.83E-02	3.16E-02	2.59E-02	2.23E-02	1.99E-02	1.79E-02	1.65E-02	1.53E-02	1.26E-02
Lungs	0.00E+00	0.00E+00	2.51E-08	1.04E-06	5.58E-05	1.73E-04	2.39E-04	3.53E-04	4.56E-04	5.05E-04	5.30E-04	5.40E-04
Bone Marrow	0.00E+00	1.39E-07	3.53E-05	1.26E-03	4.62E-03	5.68E-03	5.12E-03	4.64E-03	4.37E-03	4.13E-03	3.93E-03	3.44E-03
Ovaries	0.00E+00	2.48E-03	4.13E-02	1.37E-01	1.24E-01	8.04E-02	6.97E-02	6.36E-02	5.71E-02	5.20E-02	4.80E-02	3.89E-02
Pancreas	0.00E+00	0.00E+00	2.70E-08	7.09E-05	9.43E-04	1.84E-03	1.95E-03	2.08E-03	2.11E-03	2.09E-03	2.05E-03	1.85E-03
S-intestine ^c	1.27E-06	2.13E-03	1.97E-02	6.07E-02	6.27E-02	4.39E-02	3.79E-02	3.44E-02	3.09E-02	2.83E-02	2.62E-02	2.14E-02
Spleen	0.00E+00	0.00E+00	1.74E-08	4.11E-05	6.25E-04	1.28E-03	1.41E-03	1.59E-03	1.67E-03	1.69E-03	1.67E-03	1.53E-03
Stomach Wall	0.00E+00	0.00E+00	1.53E-06	2.32E-04	1.81E-03	2.67E-03	2.67E-03	2.75E-03	2.75E-03	2.68E-03	2.59E-03	2.30E-03
Thymus	0.00E+00	0.00E+00	0.00E+00	4.62E-08	1.29E-05	4.98E-05	8.35E-05	1.47E-04	2.20E-04	2.66E-04	2.98E-04	3.39E-04
Thyroid	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.98E-06	7.25E-06	1.48E-05	3.55E-05	6.60E-05	8.48E-05	1.02E-04	1.33E-04
Testes	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
UB_Wall ^d	3.74E-05	1.02E-02	5.58E-02	1.21E-01	1.03E-01	6.69E-02	5.86E-02	5.42E-02	4.89E-02	4.46E-02	4.13E-02	3.35E-02
ULI_Wall ^e	0.00E+00	2.58E-05	1.42E-03	1.42E-02	2.57E-02	2.16E-02	1.86E-02	1.68E-02	1.52E-02	1.40E-02	1.30E-02	1.08E-02
Uterus	1.17E+01	9.71E+00	7.02E+00	3.33E+00	1.24E+00	7.28E-01	7.59E-01	7.90E-01	7.31E-01	6.67E-01	6.15E-01	4.91E-01

^aGall Bladder Wall

^cSmall Intestine

^bLower Large Intestine

^dUrinary Bladder Wall

^eUpper Large Intestine