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Specific Absorbed Fractions of Energy at Various Ages from Internal Photon Sources. VI. Newborn.

M. Cristy
K. F. Eckerman

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Health and Safety Research Division

SPECIFIC ABSORBED FRACTIONS OF ENERGY AT VARIOUS AGES FROM INTERNAL PHOTON SOURCES. VI. NEWBORN.

M. Cristy and K. F. Eckerman
Metabolism and Dosimetry Research Group

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ABSTRACT

This report is the sixth volume of a series in which specific absorbed fractions (Φ's) in various organs of the body ("target organs") from sources of monoenergetic photons in various other organs ("source organs") are tabulated. The first volume (ORNL/TM-8381:Vol. 1) outlines various methods used to compute the Φ-values and describes how the "best" estimates recommended by us are chosen. In this volume Φ-values are tabulated for a newborn or 3.4-kg person. In companion volumes Φ-values are tabulated for ages 1, 5, 10, and 15 years, for an adult female, and for an adult male. These Φ-values can be used in calculating the photon component of the dose-equivalent rate in a given target organ from a given radionuclide that is present in a given source organ. The methods used to calculate Φ are similar to those used by Snyder et al. (1974) for an adult. However, an important difference involves the dosimetry for radiosensitive tissues in the skeleton. The International Commission on Radiological Protection recognizes, in the radiation protection system of its Publication 26 (1977), that the endosteal, or "bone surface," cells are the tissue at risk for bone cancer. We have applied the dosimetry methods that Spiers and co-workers developed for beta-emitting radionuclides deposited in bone to follow the transport of secondary electrons (freed by photon interactions) through the microscopic structure of the skeleton. With these methods we can estimate Φ in the endosteal cells and can better estimate Φ in the active marrow; the latter is overestimated with the methods of Snyder et al. at photon energies below 200 keV.

INTRODUCTION

This report gives tables of specific absorbed fractions (Φ's) in various organs of the body ("target organs") from sources of monoenergetic photons in various other organs ("source organs") for a newborn or 3.4-kg person. These Φ-values can be used in calculating the photon component of the dose-equivalent rate in a given target organ from a given radionuclide that is present in a given source organ. A companion report (Cristy and Eckerman 1987a) describes the procedures used in choosing the "best" estimate of Φ from the estimates generated by several methods for a given source-target pair—that report should be consulted for that and other background information. The Φ-values calculated by these methods and the "best" estimates recommended by us are published in this report for the newborn and in other companion reports (Cristy and Eckerman 1987b-g) for ages 1, 5, 10, and 15 years, for an adult female, and for an adult male. Note that from here forward the text is the same as that given in the reports for the other ages; it is reprinted in each volume for convenience.

The tables of specific absorbed fractions are available on diskettes for personal computers, by request.

The methods used to calculate Φ are similar to those used by Snyder, Ford, Warner, and Watson (1974) for an adult. Simple equations describing the geometry of the body and its organs ("mathematical phantoms") are used (1) with a computer program that simulates radiation transport with Monte Carlo methods or (2) with a computer program that integrates the point-source kernel equation (including buildup) over the volumes of the source and target organs. The source of the photons is assumed to be distributed uniformly in a given source organ. One important difference between our methods and that of Snyder et al. is that a better method to calculate the specific absorbed fraction in the active marrow and the endosteal cells of the skeleton has been employed; if the initial photon energy is less than 200 keV, the earlier method substantially overestimates Φ when active marrow is the target organ. Also, we have made more use of the converse Monte Carlo estimate, Φ(source organ$\leftarrow$target organ), as an approximation to the direct Monte Carlo estimate, Φ(target organ$\leftarrow$source organ), sometimes in conjunction with a correction factor; and we have made more extensive use of empirical correction factors for the estimates generated by the point-source kernel method. These methods are discussed in chapters II and III of Cristy and Eckerman (1987a).

The mathematical phantoms used in our work are designed like the adult phantom of Snyder et al. (1974) and have different densities and chemical compositions for lung, skeletal, and soft tissues. (We use the term "soft tissues" to mean near-unit-density tissues, i.e., density $\simeq 1$ g/cm^3.) These phantoms have been described by Cristy (1980), but several changes have been made in our phantoms since the 1980 report: (1) the age 15 phantom of Cristy (1980) has been redesigned so that it now represents both a 15-year-old male and an adult female; (2) the adult phantom of Cristy (1980) has been modified slightly and is now labeled "adult male," although it is hermaphroditic and could also represent a larger than average adult female; (3) the densities and chemical compositions of the tissues have been changed in all of the phantoms; and (4) the densities and compositions of the skeletal and soft tissues of the newborn phantom are now different from those at other ages. The equations describing the phantoms, as amended, and the newer data on densities and compositions are given in Appendix A of Cristy and Eckerman (1987a).

Because of the change in tissue densities in the phantoms, the organ and whole-body masses have also changed slightly. As explained in Appendix B of Cristy and Eckerman (1987a), the

design of the phantom series was viewed as a geometry problem where volume, not mass, values were of prime interest; and furthermore, if the design approach had been to obtain correct (numerical value) masses at the expense of correct (numerical) volumes, the errors in the specific absorbed fraction would have been larger than with this approach. The magnitude of the changes in mass is also trivial. For the purpose of estimating specific absorbed fractions from photons, we view the adult male phantom simply as a model for the 70-kg Reference Man, the fifteen-year-old-male/adult-female phantom as a model for either the 58-kg Reference Woman or a 55-kg fifteen-year-old male, the age 10 phantom as a model for a 32-to-33-kg male or female child, and so on, even though the masses of organs in the phantoms and the masses of the phantoms themselves may be slightly different from values in ICRP Publication 23 (1975). A comparison of whole-body masses between the phantoms and humans is given in Table 1; in the tables of specific absorbed fractions for each age we give the nominal value of mass rather than the actual mass of the phantom in the identifying heading. We recommend use of the organ masses from ICRP Publication 23 (1975), especially for the 70-kg adult male, for all other purposes, e.g., for computing Φ-values from non-penetrating radiations. If masses of organs in children are not available, the masses in the phantoms could be used with little error. The masses of the organs of the phantoms are given in Appendix B of Cristy and Eckerman (1987a); the centroids of the organs are given in Appendix C of that report.

Table 1. Comparison of whole-body masses

Phantom	Whole-body mass of phantom (kg)		Age	Whole-body mass of human (kg)[e]	
	Actual	Nominal		Female	Male
Newborn	3.6	3.4	Newborn	3.4	3.4[f]
Age 1	9.7	9.8	1 year	9.5	10.1
Age 5	19.8	19	5 years	18.6	18.8
Age 10	33.2	32	10 years	31.9	32.7
15-AF[a]	56.8[b]	55-58[d]	15 years	51.6	54.5
Adult male	73.7[c]	70	Adult	56.7 (58)[g]	71.7 (70)[g]

[a]Age-15-male/adult-female phantom.
[b]56.4 kg without the female breasts.
[c]73.3 kg without the female breasts.
[d]55 kg for age 15 male and 58 kg for adult female.
[e]Data for ages newborn to 15 years are from Watson and Lowrey (1967). Data for adults are from ICRP Publication 23, p.13.
[f]3.5 kg for newborn male is given in ICRP Publication 23.
[g]Reference whole-body masses were rounded to 58 and 70 kg for adult females and males in ICRP Publication 23.

TABLES OF RECOMMENDED VALUES OF Φ (APPENDIX A) AND TABLES OF RAW DATA AND RECOMMENDED VALUES (APPENDIX B).

The tables of recommended values comprise Appendix A. The Φ-values as calculated by the various methods [direct Monte Carlo estimate, Φ(target←source); converse Monte Carlo estimate, Φ(source←target); and point-source kernel estimate, Φ(target↔source)] comprise Appendix B; and the recommended values are also reprinted for convenience. Note that the units are kg^{-1}. Because Φ-values smaller than 10^{-10} kg^{-1} are zero for all practical purposes, they are given as 0.0 in Appendix A, but in Appendix B the values are given as calculated by the computer programs. Φ-values

with coefficients of variation (C.V.) greater than 50% were never used in deriving recommended values, but these data are given in Appendix B. Blank entries in the tables of Appendix B indicate that no data are available.

The source and target organs are arranged alphabetically in the appendices. The meanings of abbreviations are given in Table 2. The recommended values for the organ "MUSCLE" in Appendix A are taken from the data for the "remaining tissue" compartment of the phantom; these data are listed under "REMAINING TISSUE" in Appendix B.

Table 2. Abbreviations used in Appendices A and B

Abbreviation	Meaning
BL	Bladder
CONT	Contents
GI	Gastrointestinal
LLI	Lower large intestine
SI	Small intestine
ULI	Upper large intestine
MC(2<-1)	Monte Carlo estimate of Φ(organ 2←organ 1)
MC(1<-2)	Monte Carlo estimate of Φ(organ 1←organ 2)
PK(2<->1)	Point-source kernel estimate of Φ(organ 2↔organ 1)
RECOM'D(2<-1)	Recommended value of Φ(organ 2←organ 1)
RECOM'D(1<-2)	Recommended value of Φ(organ 1←organ 2)
1.2E-03 (for example)	1.2×10^{-3}

In Appendix B the organs are labeled as "ORGAN 1" and "ORGAN 2" rather than as source and target organs. Which is source and which is target depend upon the context. For example, on the first page of Appendix B under "ORGAN 1 = ADRENALS" and "ORGAN 2 = BRAIN" are listed values for "MC(2<-1)", "MC(1<-2)", "PK(2<->1)", "RECOM'D(2<-1)", and "RECOM'D(1<-2)". The symbols like "<-" should be read as arrows, and the abbreviations have the following meanings, respectively: (1) Monte Carlo estimate of Φ for source = organ 1 and target = organ 2; (2) Monte Carlo estimate of Φ for source = organ 2 and target = organ 1; (3) Point-source kernel estimate of Φ, where either can be designated source or target; (4) Recommended value of Φ for source = organ 1 and target = organ 2; and (5) Recommended value of Φ for source = organ 2 and target = organ 1. Note that if one is interested in the raw data for source = brain and target = adrenals, one must look under "ORGAN 1 = ADRENALS" and "ORGAN 2 = BRAIN" in the tables. There is no listing for "ORGAN 1 = BRAIN" and "ORGAN 2 = ADRENALS"; for each "organ 1" there follow only those "organs 2" which follow "organ 1" alphabetically, to avoid redundancy.

The entries in the tables for active marrow can be confusing if not considered carefully, because Φ-values for active marrow **as a target** are computed by two different methods. As explained in detail in the companion volume on methods (Cristy and Eckerman 1987a), we have used new methods to calculate Φ-values for the active marrow and the endosteal cells of the skeleton as **target organs**; and these values are given as the recommended values in Appendix A, under the heading "TARGET" and labeled "SKELETON: ACTIVE MARROW" and "SKELETON: BONE SURFACES;" these values do not appear in Appendix B. (We use the terms "endosteal cells" and "bone surfaces" synonymously.)

We also compute Φ-values for active marrow as a **target** in the old way, i.e., with the method used by Snyder et al. (1974). These values are given only in Appendix B and labeled as either

"ORGAN 1 = SKELETON: ACTIVE MARROW" (when the context indicates that organ 1 is the target) or "ORGAN 2 = SKELETON: ACTIVE MARROW" (when the context indicates that organ 2 is the target). These values are given because they are useful as converse Monte Carlo estimates in developing the recommended values when active marrow is the source organ (see Cristy and Eckerman 1987a).

If the active marrow or the skeleton as a whole ("SKELETON: WHOLE SKELETON" in the appendices) is the **source organ**, the method used to compute Φ is like that used by Snyder et al. (1974). No data are given in either appendix for endosteal cells as a source organ.

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APPENDIX A

TABLES OF SPECIFIC ABSORBED FRACTIONS--RECOMMENDED VALUES

SPECIFIC ABSORBED FRACTION OF PHOTON ENERGY IN kg^{-1} : RECOMMENDED VALUES FOR THE NEWBORN (3.4 kg)

SOURCE = ADRENALS

TARGET	ENERGY (MeV) 0.010	0.015	0.020	0.030	0.050	0.100	0.200	0.500	1.000	1.500	2.000	4.000
ADRENALS	1.4E+02	8.3E+01	4.6E+01	1.6E+01	5.2E+00	3.0E+00	3.4E+00	3.5E+00	3.2E+00	3.0E+00	2.8E+00	2.3E+00
BRAIN	0.0	0.0	1.2E-06	4.6E-04	1.5E-03	2.2E-03	2.4E-03	3.3E-03	3.8E-03	3.9E-03	3.8E-03	3.7E-03
BREASTS	0.0	1.6E-05	3.9E-03	4.2E-02	4.5E-02	2.6E-02	2.7E-02	3.0E-02	2.7E-02	2.4E-02	2.2E-02	1.9E-02
GALL BL WALL	1.6E-05	2.5E-02	1.8E-01	3.8E-01	2.5E-01	1.3E-01	1.4E-01	1.3E-01	1.1E-01	1.0E-01	9.7E-02	8.1E-02
GI TRACT :												
LLI WALL	0.0	2.8E-05	3.1E-03	2.2E-02	2.5E-02	2.6E-02	2.4E-02	2.2E-02	2.0E-02	1.8E-02	1.7E-02	1.5E-02
SI WALL	7.9E-10	7.9E-04	1.7E-02	8.6E-02	9.2E-02	5.5E-02	5.1E-02	5.0E-02	4.9E-02	4.4E-02	4.0E-02	3.1E-02
STOMACH WALL	9.2E-07	9.7E-03	7.3E-02	2.1E-01	1.5E-01	9.0E-02	8.7E-02	8.5E-02	7.7E-02	7.4E-02	7.0E-02	5.6E-02
ULI WALL	2.2E-10	6.9E-04	1.7E-02	7.6E-02	9.9E-02	5.4E-02	4.7E-02	4.3E-02	4.5E-02	4.4E-02	4.2E-02	3.4E-02
HEART WALL	6.4E-07	9.0E-03	7.2E-02	1.9E-01	1.4E-01	7.6E-02	7.7E-02	7.9E-02	7.5E-02	6.5E-02	5.8E-02	5.1E-02
KIDNEYS	3.4E-01	1.3E+00	1.7E+00	1.3E+00	5.6E-01	3.2E-01	3.3E-01	3.4E-01	3.1E-01	3.0E-01	2.8E-01	2.0E-01
LIVER	2.3E-02	2.1E-01	3.9E-01	4.2E-01	2.3E-01	1.3E-01	1.3E-01	1.3E-01	1.2E-01	1.1E-01	1.0E-01	7.8E-02
LUNGS	3.2E-02	2.8E-01	4.8E-01	3.9E-01	2.1E-01	1.2E-01	1.2E-01	1.1E-01	1.1E-01	9.4E-02	8.5E-02	7.2E-02
MUSCLE	8.0E-02	1.5E-01	1.7E-01	1.4E-01	7.5E-02	4.6E-02	4.7E-02	4.9E-02	4.6E-02	4.3E-02	4.0E-02	3.2E-02
OVARIES	0.0	1.4E-05	3.8E-03	4.4E-02	4.0E-02	3.6E-02	3.2E-02	2.6E-02	2.3E-02	2.0E-02	1.9E-02	1.7E-02
PANCREAS	2.0E-02	4.8E-01	1.3E+00	1.2E+00	5.5E-01	3.0E-01	2.9E-01	3.4E-01	3.0E-01	2.7E-01	2.5E-01	2.0E-01
SKELETON :												
ACTIVE MARROW	4.9E-03	4.6E-02	1.0E-01	1.2E-01	7.8E-02	5.2E-02	5.2E-02	5.3E-02	5.0E-02	4.5E-02	4.1E-02	3.3E-02
BONE SURFACES	2.5E-02	2.7E-01	6.5E-01	8.4E-01	4.8E-01	1.4E-01	8.0E-02	7.2E-02	6.9E-02	6.2E-02	5.7E-02	4.6E-02
SKIN	4.4E-04	7.7E-03	2.3E-02	4.1E-02	2.9E-02	2.1E-02	2.2E-02	2.5E-02	2.5E-02	2.2E-02	2.0E-02	1.8E-02
SPLEEN	5.3E-03	3.7E-01	7.8E-01	8.4E-01	4.1E-01	2.2E-01	2.2E-01	2.3E-01	2.2E-01	2.0E-01	1.8E-01	1.5E-01
TESTES	0.0	1.3E-09	2.9E-05	3.0E-03	7.7E-03	8.0E-03	8.2E-03	8.3E-03	8.0E-03	7.7E-03	7.5E-03	6.2E-03
THYMUS	0.0	5.0E-06	1.9E-03	2.8E-02	3.1E-02	2.7E-02	2.4E-02	2.4E-02	2.3E-02	2.1E-02	2.0E-02	1.7E-02
THYROID	0.0	9.4E-08	2.6E-04	1.0E-02	1.8E-02	1.7E-02	1.6E-02	1.4E-02	1.3E-02	1.2E-02	1.1E-02	9.6E-03
URINARY BL WALL	0.0	2.8E-07	4.2E-04	1.3E-02	1.4E-02	1.5E-02	1.5E-02	1.6E-02	1.4E-02	1.3E-02	1.2E-02	1.1E-02
UTERUS	0.0	8.2E-06	2.8E-03	3.2E-02	3.1E-02	2.9E-02	2.7E-02	2.4E-02	2.2E-02	2.1E-02	2.0E-02	1.8E-02
WHOLE BODY	2.8E-01	2.8E-01	2.6E-01	2.0E-01	1.0E-01	5.7E-02	5.5E-02	5.7E-02	5.3E-02	5.0E-02	4.6E-02	3.7E-02

SPECIFIC ABSORBED FRACTION OF PHOTON ENERGY IN kg^{-1} : RECOMMENDED VALUES FOR THE NEWBORN (3.4 kg)

SOURCE = BRAIN

TARGET	ENERGY (MeV) 0.010	0.015	0.020	0.030	0.050	0.100	0.200	0.500	1.000	1.500	2.000	4.000
ADRENALS	0.0	0.0	1.2E-06	4.6E-04	1.5E-03	2.2E-03	2.4E-03	3.3E-03	3.8E-03	3.9E-03	3.8E-03	3.7E-03
BRAIN	2.7E+00	2.5E+00	2.1E+00	1.2E+00	4.8E-01	2.7E-01	2.8E-01	3.0E-01	2.8E-01	2.6E-01	2.4E-01	1.9E-01
BREASTS	0.0	7.8E-10	1.4E-05	7.9E-04	2.4E-03	3.2E-03	3.3E-03	5.2E-03	5.5E-03	5.6E-03	5.5E-03	5.1E-03
GALL BL WALL	0.0	0.0	2.6E-07	2.5E-04	1.2E-03	1.4E-03	1.5E-03	2.1E-03	2.4E-03	2.6E-03	2.6E-03	2.5E-03
GI TRACT :												
LLI WALL	0.0	0.0	3.6E-09	2.1E-05	1.7E-04	3.8E-04	5.2E-04	7.5E-04	8.9E-04	9.8E-04	1.0E-03	1.3E-03
SI WALL	0.0	0.0	1.8E-08	5.8E-05	3.6E-04	4.9E-04	7.0E-04	1.1E-03	1.3E-03	1.5E-03	1.6E-03	1.7E-03
STOMACH WALL	0.0	0.0	4.9E-07	3.7E-04	1.1E-03	1.6E-03	1.8E-03	2.4E-03	2.8E-03	3.0E-03	3.0E-03	2.7E-03
ULI WALL	0.0	0.0	2.6E-08	6.8E-05	3.5E-04	8.2E-04	9.5E-04	1.5E-03	1.7E-03	1.7E-03	1.7E-03	1.8E-03
HEART WALL	0.0	6.2E-09	2.7E-05	1.6E-03	3.9E-03	4.5E-03	4.9E-03	5.9E-03	6.2E-03	5.8E-03	5.4E-03	4.5E-03
KIDNEYS	0.0	0.0	2.1E-07	2.0E-04	9.2E-04	1.4E-03	1.7E-03	2.2E-03	2.9E-03	3.3E-03	3.3E-03	2.4E-03
LIVER	0.0	0.0	7.3E-07	3.5E-04	1.4E-03	2.0E-03	2.1E-03	2.9E-03	3.3E-03	3.2E-03	3.1E-03	3.2E-03
LUNGS	0.0	1.8E-07	1.3E-04	3.4E-03	6.9E-03	5.6E-03	5.6E-03	7.3E-03	7.9E-03	7.7E-03	7.3E-03	6.4E-03
MUSCLE	1.7E-04	5.3E-03	1.9E-02	3.4E-02	2.4E-02	1.6E-02	1.6E-02	1.7E-02	1.7E-02	1.6E-02	1.5E-02	1.2E-02
OVARIES	0.0	0.0	3.1E-09	2.5E-05	2.5E-04	3.7E-04	5.1E-04	7.5E-04	9.6E-04	1.1E-03	1.2E-03	1.4E-03
PANCREAS	0.0	0.0	7.2E-07	3.5E-04	1.3E-03	2.3E-03	2.3E-03	2.9E-03	3.6E-03	3.8E-03	3.8E-03	3.4E-03
SKELETON :												
ACTIVE MARROW	4.5E-02	1.2E-01	1.7E-01	1.6E-01	9.6E-02	5.8E-02	5.1E-02	5.2E-02	4.9E-02	4.5E-02	4.2E-02	3.4E-02
BONE SURFACES	1.5E-01	4.2E-01	6.3E-01	6.1E-01	2.9E-01	8.3E-02	4.7E-02	4.4E-02	4.3E-02	4.0E-02	3.7E-02	3.0E-02
SKIN	6.8E-04	1.4E-02	4.3E-02	5.4E-02	3.2E-02	2.1E-02	2.4E-02	2.5E-02	2.4E-02	2.3E-02	2.1E-02	1.6E-02
SPLEEN	0.0	0.0	6.0E-07	4.3E-04	2.2E-03	2.4E-03	2.8E-03	3.3E-03	3.1E-03	3.2E-03	3.3E-03	3.3E-03
TESTES	0.0	0.0	0.0	3.4E-06	1.1E-04	2.2E-04	3.8E-04	6.1E-04	7.3E-04	7.9E-04	8.1E-04	8.6E-04
THYMUS	0.0	7.7E-07	3.8E-04	5.1E-03	1.2E-02	9.0E-03	1.0E-02	1.2E-02	1.1E-02	1.1E-02	1.1E-02	1.0E-02
THYROID	0.0	1.1E-04	3.7E-03	3.1E-02	3.9E-02	2.6E-02	2.6E-02	2.7E-02	2.5E-02	2.4E-02	2.3E-02	2.0E-02
URINARY BL WALL	0.0	0.0	6.5E-10	1.1E-05	1.8E-04	2.8E-04	4.2E-04	6.4E-04	8.3E-04	9.3E-04	9.9E-04	1.1E-03
UTERUS	0.0	0.0	2.5E-09	2.3E-05	2.3E-04	3.1E-04	4.6E-04	8.0E-04	1.1E-03	1.2E-03	1.3E-03	1.4E-03
WHOLE BODY	2.8E-01	2.7E-01	2.5E-01	1.7E-01	7.9E-02	4.3E-02	4.3E-02	4.5E-02	4.3E-02	4.0E-02	3.7E-02	3.0E-02

SPECIFIC ABSORBED FRACTION OF PHOTON ENERGY IN kg^{-1} : RECOMMENDED VALUES FOR THE NEWBORN (3.4 kg)

SOURCE = BREASTS

TARGET	ENERGY (MeV) 0.010	0.015	0.020	0.030	0.050	0.100	0.200	0.500	1.000	1.500	2.000	4.000
ADRENALS	0.0	1.6E-05	3.9E-03	4.2E-02	4.5E-02	2.6E-02	2.7E-02	3.0E-02	2.7E-02	2.4E-02	2.2E-02	1.9E-02
BRAIN	0.0	7.8E-10	1.4E-05	7.9E-04	2.4E-03	3.2E-03	3.3E-03	5.2E-03	5.5E-03	5.6E-03	5.5E-03	5.1E-03
BREASTS	4.5E+03	1.7E+03	7.6E+02	2.3E+02	6.9E+01	4.0E+01	4.5E+01	5.0E+01	4.9E+01	4.6E+01	4.3E+01	3.5E+01
GALL BL WALL	0.0	7.9E-05	9.3E-03	6.4E-02	4.7E-02	3.4E-02	3.1E-02	3.4E-02	3.3E-02	3.1E-02	3.0E-02	2.5E-02
GI TRACT :												
LLI WALL	0.0	9.7E-08	1.4E-04	4.9E-03	7.0E-03	9.0E-03	9.8E-03	9.5E-03	8.9E-03	8.6E-03	8.2E-03	6.8E-03
SI WALL	0.0	5.6E-07	5.5E-04	1.0E-02	1.5E-02	1.4E-02	1.3E-02	1.3E-02	1.3E-02	1.3E-02	1.2E-02	1.2E-02
STOMACH WALL	7.9E-09	2.2E-03	2.3E-02	8.2E-02	7.8E-02	4.4E-02	4.7E-02	5.0E-02	4.0E-02	3.5E-02	3.3E-02	3.3E-02
ULI WALL	0.0	1.6E-06	1.0E-03	9.3E-03	2.0E-02	1.4E-02	1.3E-02	1.6E-02	1.8E-02	1.6E-02	1.5E-02	1.3E-02
HEART WALL	5.2E-03	2.0E-01	5.6E-01	5.7E-01	2.7E-01	1.7E-01	1.7E-01	1.9E-01	1.7E-01	1.7E-01	1.6E-01	1.3E-01
KIDNEYS	0.0	1.2E-06	9.0E-04	8.6E-03	2.5E-02	1.9E-02	1.7E-02	1.7E-02	1.6E-02	1.6E-02	1.6E-02	1.4E-02
LIVER	4.5E-08	4.2E-03	3.6E-02	9.9E-02	7.3E-02	4.5E-02	4.6E-02	5.0E-02	4.6E-02	4.4E-02	4.1E-02	3.3E-02
LUNGS	7.1E-03	1.4E-01	3.2E-01	2.9E-01	1.4E-01	8.1E-02	8.4E-02	8.5E-02	8.5E-02	8.4E-02	8.0E-02	6.0E-02
MUSCLE	7.1E-02	9.5E-02	9.5E-02	7.2E-02	4.0E-02	2.6E-02	2.8E-02	3.1E-02	3.1E-02	2.9E-02	2.7E-02	2.2E-02
OVARIES	0.0	9.9E-09	8.3E-05	5.2E-03	1.2E-02	1.1E-02	1.0E-02	1.0E-02	9.9E-03	9.5E-03	9.2E-03	7.6E-03
PANCREAS	0.0	1.6E-04	1.3E-02	4.3E-02	7.0E-02	6.2E-02	4.8E-02	4.0E-02	3.6E-02	3.5E-02	3.3E-02	2.7E-02
SKELETON :												
ACTIVE MARROW	7.0E-03	3.6E-02	4.7E-02	4.0E-02	2.5E-02	1.7E-02	2.0E-02	2.1E-02	2.1E-02	2.0E-02	1.9E-02	1.6E-02
BONE SURFACES	4.6E-02	2.6E-01	3.7E-01	3.3E-01	1.7E-01	5.2E-02	3.4E-02	3.2E-02	3.2E-02	3.0E-02	2.9E-02	2.5E-02
SKIN	1.4E+00	8.9E-01	5.1E-01	1.9E-01	6.8E-02	4.2E-02	4.9E-02	5.7E-02	5.2E-02	4.7E-02	4.3E-02	3.8E-02
SPLEEN	0.0	4.3E-05	1.4E-02	3.6E-02	4.5E-02	3.4E-02	3.5E-02	3.5E-02	2.7E-02	2.2E-02	2.0E-02	1.9E-02
THYMUS	1.2E-06	2.1E-02	9.9E-02	2.5E-01	1.6E-01	1.0E-01	9.7E-02	1.2E-01	1.1E-01	9.1E-02	8.3E-02	7.8E-02
THYROID	0.0	6.9E-05	9.1E-03	4.1E-02	3.7E-02	3.3E-02	3.2E-02	3.4E-02	3.3E-02	3.2E-02	3.0E-02	2.5E-02
URINARY BL WALL	0.0	1.3E-09	2.7E-05	2.8E-03	8.6E-03	8.0E-03	7.9E-03	8.2E-03	7.8E-03	7.5E-03	7.2E-03	6.0E-03
UTERUS	0.0	8.6E-09	8.0E-05	5.1E-03	1.2E-02	1.2E-02	1.1E-02	1.0E-02	9.9E-03	9.5E-03	9.3E-03	7.6E-03
WHOLE BODY	2.3E-01	1.7E-01	1.4E-01	9.5E-02	4.9E-02	2.9E-02	3.1E-02	3.4E-02	3.3E-02	3.1E-02	2.9E-02	2.4E-02

SPECIFIC ABSORBED FRACTION OF PHOTON ENERGY IN kg^{-1} : RECOMMENDED VALUES FOR THE NEWBORN (3.4 kg)

SOURCE = GALL BL CONT

TARGET	ENERGY (MeV) 0.010	0.015	0.020	0.030	0.050	0.100	0.200	0.500	1.000	1.500	2.000	4.000
ADRENALS	1.5E-05	3.2E-02	1.5E-01	3.6E-01	2.5E-01	1.4E-01	1.3E-01	1.3E-01	1.2E-01	1.1E-01	9.9E-02	8.2E-02
BRAIN	0.0	0.0	2.7E-07	2.2E-04	8.4E-04	1.5E-03	1.7E-03	2.1E-03	2.4E-03	2.6E-03	2.7E-03	2.5E-03
BREASTS	0.0	7.6E-05	9.3E-03	6.3E-02	4.8E-02	3.7E-02	3.4E-02	3.6E-02	3.5E-02	3.3E-02	3.0E-02	2.5E-02
GALL BL WALL	1.5E+02	1.1E+02	6.7E+01	2.5E+01	7.9E+00	4.4E+00	4.7E+00	5.2E+00	5.1E+00	4.7E+00	4.3E+00	3.2E+00
GI TRACT :												
LLI WALL	2.4E-08	2.5E-03	3.3E-02	1.2E-01	1.0E-01	5.5E-02	5.3E-02	5.5E-02	4.5E-02	4.6E-02	4.6E-02	3.5E-02
SI WALL	3.5E-02	1.5E-01	4.7E-01	6.5E-01	3.5E-01	1.9E-01	1.8E-01	1.8E-01	1.7E-01	1.6E-01	1.5E-01	1.2E-01
STOMACH WALL	1.1E-02	5.2E-01	1.2E+00	1.2E+00	5.8E-01	3.1E-01	2.9E-01	2.8E-01	2.8E-01	2.7E-01	2.6E-01	2.0E-01
ULI WALL	3.3E-01	9.7E-01	1.4E+00	1.2E+00	5.4E-01	2.9E-01	3.0E-01	3.1E-01	2.9E-01	2.7E-01	2.5E-01	1.8E-01
HEART WALL	2.0E-06	1.1E-02	9.9E-02	2.2E-01	1.4E-01	9.0E-02	8.1E-02	8.2E-02	8.6E-02	8.1E-02	7.4E-02	5.0E-02
KIDNEYS	5.7E-08	3.8E-03	1.0E-01	2.9E-01	2.0E-01	1.1E-01	1.1E-01	1.0E-01	1.1E-01	9.1E-02	8.0E-02	6.7E-02
LIVER	9.9E-02	7.9E-01	1.4E+00	1.2E+00	5.2E-01	2.8E-01	2.8E-01	2.9E-01	2.7E-01	2.5E-01	2.3E-01	1.9E-01
LUNGS	2.7E-07	2.9E-03	4.4E-02	1.3E-01	9.1E-02	5.7E-02	5.1E-02	5.0E-02	4.7E-02	4.4E-02	4.1E-02	3.4E-02
MUSCLE	6.4E-02	1.5E-01	1.8E-01	1.6E-01	8.6E-02	5.2E-02	5.2E-02	5.3E-02	5.0E-02	4.6E-02	4.3E-02	3.5E-02
OVARIES	4.6E-10	1.5E-03	4.6E-02	1.7E-01	1.5E-01	9.6E-02	8.2E-02	7.4E-02	6.6E-02	6.0E-02	5.6E-02	4.5E-02
PANCREAS	1.7E+00	4.8E+00	5.7E+00	3.2E+00	1.3E+00	6.9E-01	6.5E-01	7.3E-01	6.9E-01	5.9E-01	5.3E-01	4.8E-01
SKELETON :												
ACTIVE MARROW	1.6E-07	3.0E-04	6.8E-03	3.2E-02	3.4E-02	2.5E-02	2.4E-02	2.3E-02	2.3E-02	2.1E-02	1.9E-02	1.6E-02
BONE SURFACES	1.1E-07	2.3E-03	5.2E-02	2.4E-01	2.3E-01	7.9E-02	4.1E-02	3.3E-02	3.2E-02	2.9E-02	2.7E-02	2.3E-02
SKIN	1.7E-08	8.1E-04	8.3E-03	3.1E-02	2.7E-02	1.9E-02	1.8E-02	2.0E-02	2.1E-02	2.0E-02	1.8E-02	1.7E-02
SPLEEN	3.8E-07	1.3E-02	1.0E-01	3.0E-01	2.1E-01	1.2E-01	1.2E-01	1.1E-01	1.0E-01	1.0E-01	9.8E-02	7.0E-02
TESTES	0.0	4.4E-07	5.3E-04	1.3E-02	2.2E-02	2.0E-02	1.8E-02	1.7E-02	1.5E-02	1.4E-02	1.3E-02	1.1E-02
THYMUS	0.0	7.3E-06	2.0E-03	2.6E-02	3.2E-02	2.4E-02	1.9E-02	1.8E-02	1.5E-02	1.4E-02	1.4E-02	1.5E-02
THYROID	0.0	2.7E-08	1.2E-04	6.1E-03	1.4E-02	1.4E-02	1.0E-02	1.1E-02	1.1E-02	1.0E-02	9.7E-03	8.0E-03
URINARY BL WALL	0.0	1.3E-04	9.9E-03	5.1E-02	8.0E-02	4.5E-02	3.5E-02	3.7E-02	3.6E-02	3.3E-02	3.0E-02	2.4E-02
UTERUS	9.7E-10	1.9E-03	3.8E-02	1.6E-01	1.8E-01	8.7E-02	7.6E-02	6.9E-02	6.6E-02	6.8E-02	6.6E-02	4.3E-02
WHOLE BODY	6.4E-02	1.5E-01	2.1E-01	1.9E-01	1.1E-01	6.0E-02	5.7E-02	5.8E-02	5.6E-02	5.1E-02	4.7E-02	3.9E-02

SPECIFIC ABSORBED FRACTION OF PHOTON ENERGY IN kg^{-1} : RECOMMENDED VALUES FOR THE NEWBORN (3.4 kg)

SOURCE = GI TRACT : LLI CONT

TARGET	ENERGY (MeV) 0.010	0.015	0.020	0.030	0.050	0.100	0.200	0.500	1.000	1.500	2.000	4.000
ADRENALS	0.0	3.6E-05	4.1E-03	2.5E-02	3.3E-02	3.0E-02	2.4E-02	2.2E-02	2.1E-02	2.0E-02	2.0E-02	1.7E-02
BRAIN	0.0	0.0	4.9E-09	2.6E-05	3.5E-04	4.4E-04	5.4E-04	7.1E-04	8.8E-04	1.0E-03	1.1E-03	1.3E-03
BREASTS	0.0	1.3E-07	1.8E-04	6.1E-03	7.0E-03	8.3E-03	9.5E-03	1.0E-02	9.9E-03	9.5E-03	9.2E-03	7.6E-03
GALL BL WALL	2.4E-08	3.3E-03	4.0E-02	1.2E-01	1.2E-01	7.0E-02	5.5E-02	6.4E-02	5.4E-02	5.4E-02	5.4E-02	3.7E-02
GI TRACT :												
LLI WALL	2.0E+01	2.3E+01	1.6E+01	6.7E+00	2.2E+00	1.3E+00	1.3E+00	1.5E+00	1.4E+00	1.3E+00	1.2E+00	9.1E-01
SI WALL	2.7E-01	1.2E+00	1.5E+00	1.1E+00	4.9E-01	2.6E-01	2.7E-01	2.8E-01	2.6E-01	2.4E-01	2.2E-01	1.7E-01
STOMACH WALL	3.2E-04	2.9E-02	1.1E-01	2.2E-01	1.5E-01	8.0E-02	7.4E-02	8.3E-02	7.5E-02	6.8E-02	6.3E-02	5.0E-02
ULI WALL	4.2E-01	6.3E-01	6.7E-01	5.1E-01	2.7E-01	1.5E-01	1.4E-01	1.5E-01	1.4E-01	1.3E-01	1.2E-01	8.9E-02
HEART WALL	0.0	2.9E-06	8.2E-04	1.2E-02	1.9E-02	1.5E-02	1.3E-02	1.5E-02	1.4E-02	1.3E-02	1.2E-02	1.0E-02
KIDNEYS	1.1E-09	6.5E-04	1.5E-02	6.6E-02	6.5E-02	4.0E-02	4.2E-02	4.0E-02	3.7E-02	3.4E-02	3.2E-02	2.9E-02
LIVER	0.0	1.4E-04	5.6E-03	3.8E-02	4.3E-02	2.9E-02	2.6E-02	2.9E-02	2.5E-02	2.4E-02	2.3E-02	2.0E-02
LUNGS	0.0	2.8E-06	6.4E-04	9.5E-03	1.3E-02	1.2E-02	1.0E-02	1.1E-02	1.1E-02	1.1E-02	1.1E-02	9.0E-03
MUSCLE	1.5E-02	8.8E-02	1.6E-01	1.7E-01	9.2E-02	5.5E-02	5.5E-02	5.7E-02	5.3E-02	4.9E-02	4.6E-02	3.7E-02
OVARIES	6.3E-01	3.5E+00	4.2E+00	2.4E+00	8.8E-01	5.1E-01	5.5E-01	5.2E-01	5.0E-01	4.4E-01	3.9E-01	3.1E-01
PANCREAS	2.3E-10	7.1E-04	1.8E-02	7.9E-02	8.2E-02	4.6E-02	4.3E-02	4.6E-02	3.5E-02	3.2E-02	3.0E-02	2.7E-02
SKELETON :												
ACTIVE MARROW	5.0E-03	5.0E-02	9.0E-02	9.0E-02	5.7E-02	3.7E-02	3.6E-02	3.7E-02	3.5E-02	3.3E-02	3.2E-02	2.7E-02
BONE SURFACES	2.2E-02	2.5E-01	4.9E-01	5.6E-01	3.2E-01	9.8E-02	5.4E-02	4.7E-02	4.4E-02	4.2E-02	4.1E-02	3.4E-02
SKIN	7.0E-03	1.2E-02	2.2E-02	4.2E-02	3.3E-02	2.2E-02	2.2E-02	2.8E-02	2.5E-02	2.2E-02	2.0E-02	1.6E-02
SPLEEN	8.3E-09	1.3E-03	3.2E-02	8.5E-02	7.8E-02	4.3E-02	3.9E-02	5.1E-02	5.2E-02	4.5E-02	4.0E-02	3.1E-02
TESTES	2.0E-05	2.7E-02	1.8E-01	2.8E-01	1.6E-01	9.9E-02	9.9E-02	9.8E-02	9.0E-02	7.4E-02	6.5E-02	6.2E-02
THYMUS	0.0	2.6E-09	2.3E-05	2.0E-03	3.8E-03	4.6E-03	5.1E-03	6.8E-03	7.3E-03	6.9E-03	6.4E-03	5.0E-03
THYROID	0.0	0.0	1.7E-06	5.7E-04	3.1E-03	3.7E-03	4.1E-03	4.2E-03	4.1E-03	4.0E-03	3.9E-03	3.3E-03
URINARY BL WALL	2.9E-03	1.9E-01	5.5E-01	6.9E-01	3.5E-01	1.8E-01	1.9E-01	2.1E-01	1.8E-01	1.6E-01	1.5E-01	1.2E-01
UTERUS	1.3E-04	1.3E-01	5.7E-01	8.2E-01	4.7E-01	2.5E-01	2.3E-01	2.0E-01	2.0E-01	1.8E-01	1.6E-01	1.2E-01
WHOLE BODY	6.1E-02	1.5E-01	2.0E-01	1.8E-01	9.8E-02	5.4E-02	5.2E-02	5.4E-02	5.0E-02	4.6E-02	4.4E-02	3.5E-02

SPECIFIC ABSORBED FRACTION OF PHOTON ENERGY IN kg^{-1} : RECOMMENDED VALUES FOR THE NEWBORN (3.4 kg)

SOURCE = GI TRACT : SI CONT

TARGET	ENERGY (MeV) 0.010	0.015	0.020	0.030	0.050	0.100	0.200	0.500	1.000	1.500	2.000	4.000
ADRENALS	7.9E-10	7.9E-04	1.7E-02	8.6E-02	9.2E-02	5.5E-02	5.1E-02	5.0E-02	4.9E-02	4.4E-02	4.0E-02	3.1E-02
BRAIN	0.0	0.0	1.8E-08	5.8E-05	3.6E-04	4.9E-04	7.0E-04	1.1E-03	1.3E-03	1.5E-03	1.6E-03	1.7E-03
BREASTS	0.0	5.6E-07	5.5E-04	1.0E-02	1.5E-02	1.4E-02	1.3E-02	1.3E-02	1.3E-02	1.3E-02	1.2E-02	1.2E-02
GALL BL WALL	1.0E-02	1.4E-01	4.9E-01	6.5E-01	3.4E-01	1.9E-01	1.8E-01	1.8E-01	1.7E-01	1.5E-01	1.3E-01	1.1E-01
GI TRACT :												
LLI WALL	9.8E-01	1.4E+00	1.4E+00	9.4E-01	4.2E-01	2.4E-01	2.4E-01	2.5E-01	2.2E-01	2.0E-01	1.8E-01	1.5E-01
SI WALL	3.1E+00	4.7E+00	4.1E+00	2.2E+00	8.3E-01	4.4E-01	4.7E-01	5.2E-01	4.7E-01	4.3E-01	4.0E-01	3.0E-01
STOMACH WALL	1.4E-02	7.0E-02	1.9E-01	3.2E-01	2.0E-01	1.1E-01	1.0E-01	1.0E-01	9.9E-02	8.7E-02	7.8E-02	6.6E-02
ULI WALL	2.7E+00	3.8E+00	3.7E+00	2.2E+00	8.7E-01	4.8E-01	4.9E-01	5.0E-01	4.6E-01	4.2E-01	3.9E-01	3.1E-01
HEART WALL	0.0	1.8E-05	2.6E-03	2.6E-02	3.6E-02	2.5E-02	2.3E-02	2.5E-02	2.3E-02	2.1E-02	2.0E-02	1.6E-02
KIDNEYS	1.7E-05	1.6E-02	9.8E-02	2.2E-01	1.6E-01	9.5E-02	9.2E-02	8.9E-02	8.4E-02	7.9E-02	7.4E-02	5.8E-02
LIVER	1.4E-02	5.1E-02	1.3E-01	2.2E-01	1.5E-01	8.5E-02	7.9E-02	8.0E-02	8.0E-02	7.2E-02	6.5E-02	5.2E-02
LUNGS	0.0	2.7E-05	2.6E-03	2.6E-02	3.2E-02	1.9E-02	1.9E-02	2.0E-02	1.9E-02	1.9E-02	1.9E-02	1.5E-02
MUSCLE	3.3E-02	8.5E-02	1.4E-01	1.5E-01	8.9E-02	5.3E-02	5.2E-02	5.3E-02	5.0E-02	4.6E-02	4.2E-02	3.5E-02
OVARIES	2.8E-01	1.4E+00	2.1E+00	1.5E+00	6.7E-01	3.7E-01	3.7E-01	3.9E-01	3.4E-01	3.2E-01	3.0E-01	2.4E-01
PANCREAS	5.6E-07	5.6E-03	8.4E-02	2.3E-01	1.6E-01	9.6E-02	8.7E-02	8.3E-02	7.9E-02	7.2E-02	6.5E-02	5.2E-02
SKELETON :												
ACTIVE MARROW	6.2E-03	1.7E-02	3.5E-02	5.8E-02	4.7E-02	3.1E-02	3.0E-02	3.1E-02	2.8E-02	2.6E-02	2.5E-02	2.0E-02
BONE SURFACES	2.7E-02	8.6E-02	2.0E-01	3.8E-01	2.7E-01	8.7E-02	4.7E-02	4.1E-02	3.6E-02	3.5E-02	3.3E-02	2.6E-02
SKIN	2.3E-06	1.8E-03	1.1E-02	3.3E-02	2.9E-02	1.9E-02	2.0E-02	2.3E-02	2.0E-02	1.9E-02	1.8E-02	1.6E-02
SPLEEN	4.9E-06	5.1E-03	5.3E-02	1.5E-01	1.1E-01	6.5E-02	6.7E-02	6.7E-02	6.2E-02	5.7E-02	5.3E-02	4.3E-02
TESTES	0.0	7.5E-05	5.3E-03	4.7E-02	5.3E-02	3.6E-02	3.4E-02	3.1E-02	3.4E-02	3.6E-02	3.5E-02	2.3E-02
THYMUS	0.0	1.9E-08	8.3E-05	3.6E-03	8.7E-03	9.2E-03	9.3E-03	9.9E-03	8.9E-03	8.6E-03	8.5E-03	7.9E-03
THYROID	0.0	0.0	6.1E-06	1.7E-03	3.2E-03	4.3E-03	4.4E-03	5.1E-03	5.1E-03	4.9E-03	4.7E-03	4.5E-03
URINARY BL WALL	2.3E-05	2.8E-02	1.6E-01	3.3E-01	2.1E-01	1.2E-01	1.1E-01	1.1E-01	1.0E-01	9.5E-02	8.8E-02	6.4E-02
UTERUS	2.8E-02	7.4E-01	1.6E+00	1.3E+00	6.2E-01	3.4E-01	3.3E-01	3.4E-01	3.2E-01	2.9E-01	2.6E-01	2.2E-01
WHOLE BODY	6.1E-02	1.4E-01	1.9E-01	1.9E-01	1.0E-01	5.7E-02	5.5E-02	5.6E-02	5.2E-02	4.8E-02	4.5E-02	3.7E-02

SPECIFIC ABSORBED FRACTION OF PHOTON ENERGY IN kg^{-1} : RECOMMENDED VALUES FOR THE NEWBORN (3.4 kg)

SOURCE = GI TRACT : STOMACH CONT

TARGET	ENERGY (MeV) 0.010	0.015	0.020	0.030	0.050	0.100	0.200	0.500	1.000	1.500	2.000	4.000
ADRENALS	2.5E-07	7.0E-03	7.9E-02	2.0E-01	1.6E-01	9.1E-02	8.2E-02	8.1E-02	7.7E-02	7.2E-02	6.8E-02	5.6E-02
BRAIN	0.0	0.0	4.4E-07	3.4E-04	1.2E-03	1.4E-03	1.8E-03	2.5E-03	2.6E-03	2.6E-03	2.7E-03	2.7E-03
BREASTS	1.6E-09	1.3E-03	3.4E-02	6.6E-02	6.9E-02	4.7E-02	5.5E-02	5.5E-02	4.7E-02	4.3E-02	4.0E-02	3.5E-02
GALL BL WALL	4.6E-03	4.0E-01	1.1E+00	1.2E+00	5.6E-01	3.2E-01	3.2E-01	2.9E-01	2.8E-01	2.6E-01	2.4E-01	1.9E-01
GI TRACT :												
LLI WALL	4.7E-05	1.9E-02	6.4E-02	1.3E-01	1.1E-01	6.3E-02	5.6E-02	5.0E-02	4.8E-02	4.5E-02	4.3E-02	3.9E-02
SI WALL	2.7E-03	3.7E-02	1.5E-01	2.9E-01	1.8E-01	1.1E-01	1.0E-01	9.9E-02	8.7E-02	8.0E-02	7.6E-02	6.5E-02
STOMACH WALL	1.5E+01	2.0E+01	1.6E+01	7.3E+00	2.5E+00	1.4E+00	1.4E+00	1.6E+00	1.5E+00	1.4E+00	1.3E+00	9.9E-01
ULI WALL	2.5E-03	1.6E-01	4.4E-01	4.2E-01	2.3E-01	1.3E-01	1.3E-01	1.3E-01	1.2E-01	1.1E-01	1.0E-01	7.4E-02
HEART WALL	5.6E-04	5.6E-02	2.0E-01	3.4E-01	2.0E-01	1.1E-01	1.0E-01	1.1E-01	1.0E-01	9.2E-02	8.6E-02	7.4E-02
KIDNEYS	1.9E-08	3.3E-03	3.8E-02	1.6E-01	1.3E-01	7.7E-02	6.8E-02	6.9E-02	6.8E-02	6.2E-02	5.5E-02	3.7E-02
LIVER	2.5E-03	7.8E-02	2.7E-01	3.5E-01	2.0E-01	1.2E-01	1.1E-01	1.1E-01	1.0E-01	9.8E-02	9.3E-02	7.5E-02
LUNGS	1.3E-04	2.9E-02	8.2E-02	1.5E-01	9.8E-02	5.5E-02	5.3E-02	5.2E-02	4.9E-02	4.4E-02	4.0E-02	3.5E-02
MUSCLE	1.2E-02	8.5E-02	1.5E-01	1.4E-01	7.8E-02	4.6E-02	4.7E-02	4.9E-02	4.6E-02	4.2E-02	3.9E-02	3.2E-02
OVARIES	0.0	4.3E-04	1.9E-02	8.9E-02	8.9E-02	4.7E-02	4.2E-02	4.1E-02	4.1E-02	3.8E-02	3.5E-02	3.1E-02
PANCREAS	2.2E-02	7.8E-01	1.8E+00	1.5E+00	6.7E-01	3.7E-01	3.8E-01	3.7E-01	3.5E-01	3.2E-01	2.9E-01	2.2E-01
SKELETON :												
ACTIVE MARROW	6.0E-05	2.6E-03	1.3E-02	3.3E-02	3.1E-02	2.2E-02	2.1E-02	2.3E-02	2.3E-02	2.0E-02	1.8E-02	1.5E-02
BONE SURFACES	2.2E-04	2.0E-02	1.0E-01	2.6E-01	2.1E-01	7.0E-02	3.7E-02	3.2E-02	3.2E-02	2.9E-02	2.7E-02	2.1E-02
SKIN	2.6E-05	5.0E-03	2.2E-02	4.5E-02	3.1E-02	2.0E-02	2.2E-02	2.2E-02	2.4E-02	2.4E-02	2.3E-02	1.8E-02
SPLEEN	1.1E-04	8.7E-02	4.4E-01	6.5E-01	3.4E-01	1.9E-01	1.9E-01	1.9E-01	1.8E-01	1.6E-01	1.5E-01	1.1E-01
TESTES	0.0	1.1E-07	2.4E-04	8.3E-03	1.2E-02	1.3E-02	1.3E-02	1.3E-02	1.3E-02	1.2E-02	1.1E-02	9.3E-03
THYMUS	0.0	2.5E-05	3.5E-03	3.2E-02	3.1E-02	2.8E-02	2.5E-02	2.3E-02	2.2E-02	2.1E-02	2.0E-02	1.9E-02
THYROID	0.0	8.8E-08	2.1E-04	8.7E-03	1.1E-02	1.1E-02	1.0E-02	9.9E-03	9.6E-03	9.4E-03	9.2E-03	8.9E-03
URINARY BL WALL	0.0	2.6E-05	3.9E-03	2.7E-02	4.3E-02	2.6E-02	2.3E-02	2.9E-02	2.7E-02	2.7E-02	2.7E-02	1.8E-02
UTERUS	0.0	2.6E-04	1.5E-02	8.1E-02	8.9E-02	5.1E-02	4.0E-02	4.4E-02	3.8E-02	3.3E-02	3.1E-02	3.1E-02
WHOLE BODY	3.4E-02	1.0E-01	1.5E-01	1.5E-01	8.7E-02	4.9E-02	4.7E-02	4.9E-02	4.6E-02	4.2E-02	3.9E-02	3.2E-02

SPECIFIC ABSORBED FRACTION OF PHOTON ENERGY IN kg^{-1} : RECOMMENDED VALUES FOR THE NEWBORN (3.4 kg)

SOURCE = GI TRACT : ULI CONT

TARGET	ENERGY (MeV) 0.010	0.015	0.020	0.030	0.050	0.100	0.200	0.500	1.000	1.500	2.000	4.000
ADRENALS	1.0E-10	6.0E-04	2.8E-02	8.1E-02	8.8E-02	5.4E-02	5.2E-02	5.5E-02	5.4E-02	5.2E-02	4.8E-02	3.4E-02
BRAIN	0.0	0.0	2.5E-08	6.8E-05	4.2E-04	7.6E-04	1.0E-03	1.4E-03	1.7E-03	1.9E-03	2.0E-03	1.8E-03
BREASTS	0.0	1.5E-06	9.8E-04	1.3E-02	1.5E-02	1.6E-02	1.6E-02	1.6E-02	1.5E-02	1.5E-02	1.4E-02	1.3E-02
GALL BL WALL	7.5E-02	7.3E-01	1.3E+00	1.1E+00	5.1E-01	2.8E-01	2.8E-01	2.8E-01	2.6E-01	2.4E-01	2.2E-01	1.5E-01
GI TRACT :												
LLI WALL	6.1E-02	3.0E-01	4.3E-01	3.8E-01	2.1E-01	1.3E-01	1.2E-01	1.3E-01	1.2E-01	1.0E-01	9.7E-02	8.7E-02
SI WALL	6.8E-01	2.4E+00	3.0E+00	1.9E+00	8.0E-01	4.4E-01	4.4E-01	4.6E-01	4.2E-01	3.9E-01	3.6E-01	2.9E-01
STOMACH WALL	1.7E-02	2.6E-01	5.2E-01	5.0E-01	2.5E-01	1.4E-01	1.3E-01	1.5E-01	1.3E-01	1.1E-01	9.9E-02	9.0E-02
ULI WALL	1.4E+01	1.7E+01	1.2E+01	5.5E+00	1.9E+00	1.1E+00	1.1E+00	1.2E+00	1.1E+00	1.0E+00	9.4E-01	7.4E-01
HEART WALL	0.0	4.4E-05	4.2E-03	3.4E-02	4.4E-02	2.9E-02	2.8E-02	2.3E-02	2.2E-02	2.4E-02	2.4E-02	2.0E-02
KIDNEYS	8.1E-08	4.6E-03	4.5E-02	1.7E-01	1.3E-01	8.1E-02	7.2E-02	7.4E-02	6.7E-02	6.2E-02	6.0E-02	5.3E-02
LIVER	1.5E-02	1.5E-01	3.4E-01	4.0E-01	2.2E-01	1.3E-01	1.2E-01	1.2E-01	1.1E-01	1.1E-01	1.0E-01	7.7E-02
LUNGS	0.0	4.7E-05	4.1E-03	3.1E-02	3.6E-02	2.3E-02	2.1E-02	2.4E-02	2.2E-02	1.9E-02	1.8E-02	1.6E-02
MUSCLE	9.9E-03	6.2E-02	1.2E-01	1.4E-01	8.3E-02	4.9E-02	4.9E-02	5.0E-02	4.7E-02	4.4E-02	4.1E-02	3.3E-02
OVARIES	1.2E-01	1.0E+00	1.6E+00	1.1E+00	5.1E-01	2.7E-01	2.7E-01	2.8E-01	2.6E-01	2.5E-01	2.4E-01	1.9E-01
PANCREAS	4.6E-07	1.1E-02	9.3E-02	2.5E-01	1.8E-01	9.1E-02	9.7E-02	9.3E-02	9.3E-02	7.7E-02	6.7E-02	6.1E-02
SKELETON :												
ACTIVE MARROW	1.1E-03	1.3E-02	3.2E-02	5.0E-02	4.0E-02	2.7E-02	2.6E-02	2.7E-02	2.6E-02	2.4E-02	2.2E-02	1.9E-02
BONE SURFACES	4.9E-03	6.4E-02	1.8E-01	3.1E-01	2.3E-01	7.7E-02	4.1E-02	3.5E-02	3.3E-02	3.1E-02	2.9E-02	2.5E-02
SKIN	8.0E-07	1.7E-03	1.5E-02	3.8E-02	3.0E-02	2.0E-02	2.1E-02	2.2E-02	2.0E-02	2.0E-02	2.0E-02	1.7E-02
SPLEEN	3.0E-07	4.5E-03	5.1E-02	1.2E-01	9.9E-02	5.9E-02	5.6E-02	5.6E-02	5.3E-02	5.1E-02	4.8E-02	3.8E-02
TESTES	0.0	7.3E-05	6.9E-03	3.7E-02	5.3E-02	3.1E-02	3.2E-02	3.6E-02	3.2E-02	3.1E-02	3.0E-02	2.3E-02
THYMUS	0.0	5.2E-08	1.5E-04	7.2E-03	9.7E-03	9.4E-03	8.8E-03	1.0E-02	1.1E-02	1.1E-02	1.1E-02	8.7E-03
THYROID	0.0	2.0E-10	9.7E-06	1.6E-03	4.6E-03	8.1E-03	8.5E-03	7.2E-03	6.2E-03	5.9E-03	5.8E-03	4.8E-03
URINARY BL WALL	1.1E-05	2.3E-02	1.0E-01	2.4E-01	1.7E-01	1.0E-01	9.3E-02	9.2E-02	9.4E-02	8.8E-02	8.2E-02	6.1E-02
UTERUS	1.1E-04	7.9E-02	3.9E-01	6.6E-01	3.6E-01	2.0E-01	2.0E-01	1.9E-01	1.8E-01	1.6E-01	1.4E-01	1.3E-01
WHOLE BODY	6.0E-02	1.4E-01	1.9E-01	1.8E-01	9.9E-02	5.5E-02	5.3E-02	5.5E-02	5.1E-02	4.7E-02	4.4E-02	3.6E-02

SPECIFIC ABSORBED FRACTION OF PHOTON ENERGY IN kg^{-1} : RECOMMENDED VALUES FOR THE NEWBORN (3.4 kg)

SOURCE = HEART CONT

TARGET	ENERGY (MeV) 0.010	0.015	0.020	0.030	0.050	0.100	0.200	0.500	1.000	1.500	2.000	4.000
ADRENALS	1.3E-07	8.2E-03	7.2E-02	1.9E-01	1.4E-01	7.8E-02	7.8E-02	8.1E-02	7.0E-02	6.7E-02	6.3E-02	4.4E-02
BRAIN	0.0	6.3E-09	3.2E-05	1.8E-03	4.5E-03	4.7E-03	4.9E-03	6.9E-03	6.8E-03	6.7E-03	6.6E-03	5.8E-03
BREASTS	1.7E-04	5.9E-02	2.7E-01	4.2E-01	2.2E-01	1.3E-01	1.4E-01	1.6E-01	1.4E-01	1.2E-01	1.1E-01	9.3E-02
GALL BL WALL	1.1E-07	4.3E-03	5.3E-02	1.8E-01	1.3E-01	7.3E-02	7.2E-02	6.9E-02	5.9E-02	5.5E-02	5.3E-02	4.7E-02
GI TRACT :												
LLI WALL	0.0	6.6E-07	3.4E-04	7.4E-03	1.2E-02	1.1E-02	1.0E-02	1.2E-02	1.1E-02	1.0E-02	9.9E-03	8.9E-03
SI WALL	0.0	6.2E-06	2.0E-03	2.1E-02	3.2E-02	2.2E-02	2.0E-02	2.1E-02	2.0E-02	1.9E-02	1.8E-02	1.5E-02
STOMACH WALL	4.5E-05	2.0E-02	9.4E-02	2.1E-01	1.4E-01	7.8E-02	7.6E-02	7.8E-02	7.3E-02	6.8E-02	6.4E-02	4.9E-02
ULI WALL	0.0	1.6E-05	4.1E-03	2.6E-02	3.8E-02	2.6E-02	2.3E-02	2.4E-02	2.4E-02	2.4E-02	2.4E-02	1.8E-02
HEART WALL	3.9E+00	6.3E+00	5.9E+00	3.2E+00	1.2E+00	6.6E-01	6.9E-01	7.2E-01	6.7E-01	6.1E-01	5.7E-01	4.6E-01
KIDNEYS	0.0	1.1E-04	9.3E-03	4.9E-02	5.5E-02	3.7E-02	3.5E-02	3.8E-02	3.3E-02	3.3E-02	3.2E-02	2.5E-02
LIVER	7.3E-04	4.0E-02	1.7E-01	2.6E-01	1.6E-01	8.8E-02	8.7E-02	9.0E-02	8.0E-02	7.7E-02	7.3E-02	5.5E-02
LUNGS	3.1E-02	3.3E-01	7.2E-01	6.6E-01	2.9E-01	1.6E-01	1.6E-01	1.6E-01	1.5E-01	1.4E-01	1.3E-01	1.0E-01
MUSCLE	7.7E-03	5.0E-02	1.0E-01	1.1E-01	6.7E-02	4.1E-02	4.0E-02	4.2E-02	4.0E-02	3.7E-02	3.4E-02	2.8E-02
OVARIES	0.0	1.1E-07	2.5E-04	1.2E-02	1.3E-02	1.3E-02	1.2E-02	1.1E-02	1.1E-02	1.1E-02	1.0E-02	1.0E-02
PANCREAS	6.6E-07	7.4E-03	1.1E-01	2.7E-01	1.8E-01	1.1E-01	1.0E-01	9.5E-02	9.7E-02	8.1E-02	7.0E-02	6.5E-02
SKELETON :												
ACTIVE MARROW	8.3E-05	3.7E-03	2.1E-02	4.7E-02	3.9E-02	2.7E-02	2.6E-02	2.6E-02	2.5E-02	2.3E-02	2.2E-02	1.8E-02
BONE SURFACES	5.6E-04	2.6E-02	1.5E-01	3.7E-01	2.6E-01	8.5E-02	4.5E-02	3.8E-02	3.6E-02	3.3E-02	3.1E-02	2.5E-02
SKIN	4.1E-04	3.7E-03	1.8E-02	4.0E-02	3.1E-02	2.1E-02	2.2E-02	2.4E-02	2.3E-02	2.0E-02	1.9E-02	1.6E-02
SPLEEN	1.1E-09	9.4E-04	3.0E-02	1.1E-01	9.2E-02	5.6E-02	5.4E-02	5.4E-02	5.0E-02	4.5E-02	4.2E-02	3.8E-02
TESTES	0.0	0.0	3.9E-06	1.0E-03	2.1E-03	3.5E-03	4.5E-03	5.2E-03	5.2E-03	5.0E-03	4.8E-03	4.2E-03
THYMUS	7.3E-03	1.9E-01	5.4E-01	6.2E-01	3.3E-01	1.7E-01	1.7E-01	1.9E-01	1.7E-01	1.5E-01	1.4E-01	1.1E-01
THYROID	3.8E-10	7.4E-04	2.3E-02	1.0E-01	1.0E-01	5.6E-02	5.5E-02	5.4E-02	5.0E-02	4.5E-02	4.2E-02	3.6E-02
URINARY BL WALL	0.0	7.8E-09	5.6E-05	3.4E-03	7.4E-03	7.6E-03	7.8E-03	7.6E-03	8.2E-03	8.6E-03	8.4E-03	6.7E-03
UTERUS	0.0	9.0E-08	2.3E-04	1.1E-02	1.3E-02	1.3E-02	1.2E-02	1.3E-02	1.2E-02	1.2E-02	1.1E-02	1.0E-02
WHOLE BODY	3.4E-02	8.7E-02	1.4E-01	1.4E-01	8.2E-02	4.6E-02	4.3E-02	4.5E-02	4.2E-02	3.9E-02	3.7E-02	3.0E-02

SPECIFIC ABSORBED FRACTION OF PHOTON ENERGY IN kg^{-1} : RECOMMENDED VALUES FOR THE NEWBORN (3.4 kg)

SOURCE = HEART WALL

TARGET	ENERGY (MeV) 0.010	0.015	0.020	0.030	0.050	0.100	0.200	0.500	1.000	1.500	2.000	4.000
ADRENALS	6.4E-07	9.0E-03	7.2E-02	1.9E-01	1.4E-01	7.6E-02	7.7E-02	7.9E-02	7.5E-02	6.5E-02	5.8E-02	5.1E-02
BRAIN	0.0	6.2E-09	2.7E-05	1.6E-03	3.9E-03	4.5E-03	4.9E-03	5.9E-03	6.2E-03	5.8E-03	5.4E-03	4.5E-03
BREASTS	5.2E-03	2.0E-01	5.6E-01	5.7E-01	2.7E-01	1.7E-01	1.7E-01	1.9E-01	1.7E-01	1.7E-01	1.6E-01	1.3E-01
GALL BL WALL	2.5E-06	9.0E-03	8.1E-02	2.1E-01	1.4E-01	8.7E-02	8.0E-02	8.1E-02	8.5E-02	7.6E-02	6.7E-02	5.0E-02
GI TRACT :												
LLI WALL	0.0	2.1E-06	6.2E-04	1.1E-02	1.3E-02	1.3E-02	1.3E-02	1.3E-02	1.3E-02	1.2E-02	1.1E-02	9.1E-03
SI WALL	0.0	1.8E-05	2.6E-03	2.6E-02	3.6E-02	2.5E-02	2.3E-02	2.5E-02	2.3E-02	2.1E-02	2.0E-02	1.6E-02
STOMACH WALL	2.4E-03	9.2E-02	2.7E-01	3.5E-01	2.1E-01	1.1E-01	1.2E-01	1.2E-01	1.1E-01	9.7E-02	8.7E-02	7.7E-02
ULI WALL	0.0	4.6E-05	5.3E-03	3.1E-02	4.2E-02	2.6E-02	2.5E-02	2.8E-02	2.8E-02	2.6E-02	2.4E-02	1.9E-02
HEART WALL	2.9E+01	1.8E+01	1.1E+01	4.8E+00	1.7E+00	9.6E-01	1.0E+00	1.1E+00	1.0E+00	9.6E-01	8.8E-01	6.9E-01
KIDNEYS	0.0	1.8E-04	1.2E-02	5.2E-02	5.6E-02	3.7E-02	3.3E-02	3.6E-02	3.9E-02	3.5E-02	3.1E-02	2.8E-02
LIVER	8.3E-03	1.1E-01	2.5E-01	2.9E-01	1.7E-01	9.7E-02	9.9E-02	1.0E-01	9.3E-02	8.6E-02	7.9E-02	6.2E-02
LUNGS	8.9E-02	4.3E-01	7.1E-01	5.9E-01	2.7E-01	1.5E-01	1.5E-01	1.5E-01	1.4E-01	1.3E-01	1.2E-01	9.1E-02
MUSCLE	5.4E-02	1.0E-01	1.3E-01	1.2E-01	6.9E-02	4.1E-02	4.2E-02	4.3E-02	4.1E-02	3.8E-02	3.6E-02	2.9E-02
OVARIES	0.0	2.8E-07	3.8E-04	1.2E-02	1.5E-02	1.4E-02	1.3E-02	1.2E-02	1.2E-02	1.1E-02	1.1E-02	1.0E-02
PANCREAS	1.9E-05	3.2E-02	2.0E-01	3.9E-01	2.1E-01	1.2E-01	1.2E-01	1.3E-01	1.1E-01	1.0E-01	9.6E-02	7.5E-02
SKELETON :												
ACTIVE MARROW	8.3E-05	3.7E-03	2.1E-02	4.7E-02	3.9E-02	2.7E-02	2.6E-02	2.6E-02	2.5E-02	2.3E-02	2.2E-02	1.8E-02
BONE SURFACES	5.6E-04	2.6E-02	1.5E-01	3.7E-01	2.6E-01	8.5E-02	4.5E-02	3.8E-02	3.6E-02	3.3E-02	3.1E-02	2.5E-02
SKIN	1.2E-03	9.8E-03	2.5E-02	4.4E-02	3.2E-02	2.0E-02	2.3E-02	2.5E-02	2.3E-02	2.3E-02	2.2E-02	1.7E-02
SPLEEN	2.8E-08	2.8E-03	4.3E-02	1.5E-01	1.1E-01	6.2E-02	6.1E-02	6.2E-02	5.1E-02	5.0E-02	4.9E-02	4.3E-02
TESTES	0.0	0.0	6.2E-06	1.3E-03	1.9E-03	2.4E-03	3.0E-03	4.6E-03	5.5E-03	5.5E-03	5.3E-03	4.4E-03
THYMUS	3.5E-02	3.0E-01	5.9E-01	5.9E-01	3.0E-01	1.7E-01	1.6E-01	1.7E-01	1.7E-01	1.5E-01	1.3E-01	1.0E-01
THYROID	8.0E-10	7.5E-04	1.7E-02	8.6E-02	8.0E-02	5.0E-02	4.5E-02	4.6E-02	4.9E-02	4.4E-02	3.9E-02	3.2E-02
URINARY BL WALL	0.0	2.0E-08	8.8E-05	5.9E-03	6.6E-03	7.6E-03	8.3E-03	8.7E-03	8.6E-03	8.5E-03	8.3E-03	7.9E-03
UTERUS	0.0	2.4E-07	3.5E-04	8.9E-03	1.4E-02	1.4E-02	1.3E-02	1.5E-02	1.4E-02	1.4E-02	1.3E-02	1.1E-02
WHOLE BODY	2.8E-01	2.8E-01	2.6E-01	1.9E-01	9.7E-02	5.4E-02	5.3E-02	5.6E-02	5.3E-02	4.9E-02	4.5E-02	3.7E-02

SPECIFIC ABSORBED FRACTION OF PHOTON ENERGY IN kg^{-1} : RECOMMENDED VALUES FOR THE NEWBORN (3.4 kg)

SOURCE = KIDNEYS

TARGET	ENERGY (MeV) 0.010	0.015	0.020	0.030	0.050	0.100	0.200	0.500	1.000	1.500	2.000	4.000
ADRENALS	3.4E-01	1.3E+00	1.7E+00	1.3E+00	5.6E-01	3.2E-01	3.3E-01	3.4E-01	3.1E-01	3.0E-01	2.8E-01	2.0E-01
BRAIN	0.0	0.0	2.1E-07	2.0E-04	9.2E-04	1.4E-03	1.7E-03	2.2E-03	2.9E-03	3.3E-03	3.3E-03	2.4E-03
BREASTS	0.0	1.2E-06	9.0E-04	8.6E-03	2.5E-02	1.9E-02	1.7E-02	1.7E-02	1.6E-02	1.6E-02	1.6E-02	1.4E-02
GALL BL WALL	1.0E-07	9.3E-03	1.1E-01	2.8E-01	1.9E-01	1.1E-01	1.2E-01	1.0E-01	1.0E-01	8.8E-02	7.8E-02	6.5E-02
GI TRACT :												
LLI WALL	2.7E-09	5.7E-04	1.1E-02	5.3E-02	6.0E-02	3.7E-02	3.5E-02	3.5E-02	3.5E-02	3.3E-02	3.1E-02	2.5E-02
SI WALL	1.7E-05	1.6E-02	9.8E-02	2.2E-01	1.6E-01	9.5E-02	9.2E-02	8.9E-02	8.4E-02	7.9E-02	7.4E-02	5.8E-02
STOMACH WALL	8.8E-08	4.5E-03	4.9E-02	1.6E-01	1.3E-01	7.3E-02	6.9E-02	7.2E-02	6.4E-02	6.1E-02	5.9E-02	4.6E-02
ULI WALL	2.2E-07	2.3E-03	5.9E-02	1.8E-01	1.3E-01	7.5E-02	7.1E-02	6.5E-02	6.4E-02	6.3E-02	6.1E-02	5.5E-02
HEART WALL	0.0	1.8E-04	1.2E-02	5.2E-02	5.6E-02	3.7E-02	3.3E-02	3.6E-02	3.9E-02	3.5E-02	3.1E-02	2.8E-02
KIDNEYS	3.8E+01	2.8E+01	1.7E+01	7.0E+00	2.3E+00	1.3E+00	1.4E+00	1.6E+00	1.4E+00	1.3E+00	1.2E+00	9.9E-01
LIVER	5.7E-03	8.0E-02	2.0E-01	2.7E-01	1.7E-01	9.8E-02	9.8E-02	9.8E-02	8.9E-02	7.9E-02	7.3E-02	6.2E-02
LUNGS	2.1E-06	6.2E-03	4.4E-02	1.0E-01	7.4E-02	4.6E-02	4.6E-02	5.0E-02	4.1E-02	4.0E-02	3.9E-02	3.1E-02
MUSCLE	4.8E-02	1.1E-01	1.4E-01	1.2E-01	7.1E-02	4.4E-02	4.4E-02	4.7E-02	4.4E-02	4.1E-02	3.8E-02	3.1E-02
OVARIES	0.0	5.5E-04	1.3E-02	7.6E-02	9.0E-02	6.0E-02	5.2E-02	5.5E-02	5.7E-02	5.2E-02	4.6E-02	3.5E-02
PANCREAS	1.7E-05	4.3E-02	2.9E-01	5.0E-01	2.8E-01	1.6E-01	1.6E-01	1.6E-01	1.4E-01	1.3E-01	1.2E-01	1.1E-01
SKELETON :												
ACTIVE MARROW	3.3E-03	2.3E-02	5.2E-02	7.5E-02	5.6E-02	3.7E-02	3.8E-02	3.8E-02	3.7E-02	3.5E-02	3.3E-02	2.5E-02
BONE SURFACES	2.7E-02	1.9E-01	4.5E-01	6.3E-01	3.8E-01	1.1E-01	6.4E-02	5.7E-02	5.6E-02	5.3E-02	4.9E-02	3.8E-02
SKIN	2.9E-03	2.5E-02	4.6E-02	5.1E-02	3.3E-02	2.3E-02	2.4E-02	2.6E-02	2.6E-02	2.6E-02	2.4E-02	1.9E-02
SPLEEN	8.6E-02	6.7E-01	1.2E+00	9.3E-01	4.2E-01	2.3E-01	2.4E-01	2.3E-01	2.3E-01	2.1E-01	2.0E-01	1.6E-01
TESTES	0.0	3.5E-08	1.5E-04	5.8E-03	7.9E-03	1.0E-02	1.1E-02	1.1E-02	1.0E-02	9.7E-03	9.3E-03	8.4E-03
THYMUS	0.0	1.7E-07	3.0E-04	8.6E-03	1.4E-02	1.5E-02	1.3E-02	1.2E-02	1.2E-02	1.1E-02	1.1E-02	1.1E-02
THYROID	0.0	3.0E-09	3.9E-05	3.7E-03	8.2E-03	8.5E-03	7.6E-03	8.4E-03	9.0E-03	8.4E-03	8.0E-03	6.4E-03
URINARY BL WALL	0.0	6.4E-06	2.0E-03	2.3E-02	2.9E-02	2.5E-02	2.2E-02	2.2E-02	2.3E-02	2.2E-02	2.0E-02	1.7E-02
UTERUS	0.0	2.5E-04	9.5E-03	6.5E-02	7.3E-02	4.7E-02	4.7E-02	4.4E-02	4.0E-02	3.7E-02	3.5E-02	3.1E-02
WHOLE BODY	2.8E-01	2.7E-01	2.5E-01	1.8E-01	9.6E-02	5.4E-02	5.2E-02	5.5E-02	5.1E-02	4.8E-02	4.5E-02	3.6E-02

SPECIFIC ABSORBED FRACTION OF PHOTON ENERGY IN kg^{-1} : RECOMMENDED VALUES FOR THE NEWBORN (3.4 kg)

SOURCE = LIVER

TARGET	ENERGY (MeV) 0.010	0.015	0.020	0.030	0.050	0.100	0.200	0.500	1.000	1.500	2.000	4.000
ADRENALS	2.3E-02	2.1E-01	3.9E-01	4.2E-01	2.3E-01	1.3E-01	1.3E-01	1.3E-01	1.2E-01	1.1E-01	1.0E-01	7.8E-02
BRAIN	0.0	0.0	7.3E-07	3.5E-04	1.4E-03	2.0E-03	2.1E-03	2.9E-03	3.3E-03	3.2E-03	3.1E-03	3.2E-03
BREASTS	4.5E-08	4.2E-03	3.6E-02	9.9E-02	7.3E-02	4.5E-02	4.6E-02	5.0E-02	4.6E-02	4.4E-02	4.1E-02	3.3E-02
GALL BL WALL	2.1E-01	9.2E-01	1.5E+00	1.2E+00	5.2E-01	2.9E-01	2.8E-01	3.0E-01	2.8E-01	2.5E-01	2.3E-01	1.9E-01
GI TRACT :												
LLI WALL	1.0E-10	1.1E-04	4.7E-03	2.9E-02	3.8E-02	2.6E-02	2.4E-02	2.5E-02	2.4E-02	2.4E-02	2.3E-02	1.7E-02
SI WALL	1.4E-02	5.1E-02	1.3E-01	2.2E-01	1.5E-01	8.5E-02	7.9E-02	8.0E-02	8.0E-02	7.2E-02	6.5E-02	5.2E-02
STOMACH WALL	9.8E-03	1.3E-01	3.0E-01	3.7E-01	2.0E-01	1.2E-01	1.1E-01	1.1E-01	1.1E-01	1.0E-01	9.1E-02	6.7E-02
ULI WALL	5.1E-02	1.8E-01	3.3E-01	3.9E-01	2.2E-01	1.2E-01	1.2E-01	1.3E-01	1.2E-01	1.1E-01	1.0E-01	8.3E-02
HEART WALL	8.3E-03	1.1E-01	2.5E-01	2.9E-01	1.7E-01	9.7E-02	9.9E-02	1.0E-01	9.3E-02	8.6E-02	7.9E-02	6.2E-02
KIDNEYS	5.7E-03	8.0E-02	2.0E-01	2.7E-01	1.7E-01	9.8E-02	9.8E-02	9.8E-02	8.9E-02	7.9E-02	7.3E-02	6.2E-02
LIVER	7.7E+00	6.5E+00	4.9E+00	2.5E+00	9.2E-01	5.2E-01	5.4E-01	5.8E-01	5.3E-01	4.9E-01	4.6E-01	3.6E-01
LUNGS	4.3E-02	2.1E-01	3.2E-01	2.8E-01	1.4E-01	7.8E-02	7.7E-02	8.1E-02	7.4E-02	6.6E-02	6.0E-02	5.3E-02
MUSCLE	2.6E-02	6.2E-02	9.3E-02	9.8E-02	6.0E-02	3.7E-02	3.7E-02	3.9E-02	3.7E-02	3.4E-02	3.2E-02	2.6E-02
OVARIES	7.2E-10	5.5E-04	1.3E-02	7.5E-02	6.9E-02	4.4E-02	4.1E-02	3.9E-02	3.5E-02	3.5E-02	3.4E-02	2.7E-02
PANCREAS	2.4E-03	1.6E-01	4.7E-01	5.5E-01	2.9E-01	1.6E-01	1.6E-01	1.6E-01	1.4E-01	1.3E-01	1.2E-01	1.0E-01
SKELETON :												
ACTIVE MARROW	2.4E-03	1.2E-02	2.8E-02	4.4E-02	3.7E-02	2.5E-02	2.4E-02	2.5E-02	2.5E-02	2.3E-02	2.2E-02	1.8E-02
BONE SURFACES	1.5E-02	8.8E-02	2.1E-01	3.5E-01	2.4E-01	7.9E-02	4.2E-02	3.7E-02	3.6E-02	3.3E-02	3.1E-02	2.5E-02
SKIN	1.2E-03	1.2E-02	3.4E-02	5.0E-02	3.2E-02	2.1E-02	2.4E-02	2.6E-02	2.5E-02	2.3E-02	2.2E-02	1.8E-02
SPLEEN	2.5E-09	8.9E-04	2.3E-02	9.8E-02	8.5E-02	5.2E-02	4.9E-02	5.2E-02	4.7E-02	4.2E-02	3.9E-02	3.5E-02
TESTES	0.0	1.4E-07	2.2E-04	5.8E-03	1.0E-02	9.1E-03	9.0E-03	1.1E-02	1.2E-02	1.2E-02	1.2E-02	9.4E-03
THYMUS	0.0	8.8E-05	6.3E-03	4.0E-02	4.0E-02	2.6E-02	2.7E-02	2.9E-02	2.5E-02	2.3E-02	2.1E-02	1.9E-02
THYROID	0.0	2.4E-07	3.2E-04	1.1E-02	1.8E-02	1.4E-02	1.3E-02	1.3E-02	1.3E-02	1.3E-02	1.2E-02	1.0E-02
URINARY BL WALL	0.0	3.0E-05	3.7E-03	2.6E-02	3.8E-02	2.4E-02	2.4E-02	2.5E-02	2.4E-02	2.2E-02	2.1E-02	1.9E-02
UTERUS	0.0	2.8E-04	8.9E-03	6.4E-02	6.4E-02	4.0E-02	3.8E-02	4.0E-02	3.5E-02	3.5E-02	3.3E-02	2.6E-02
WHOLE BODY	2.8E-01	2.7E-01	2.6E-01	1.9E-01	9.6E-02	5.4E-02	5.3E-02	5.6E-02	5.3E-02	4.9E-02	4.5E-02	3.7E-02

SPECIFIC ABSORBED FRACTION OF PHOTON ENERGY IN kg^{-1} : RECOMMENDED VALUES FOR THE NEWBORN (3.4 kg)

SOURCE = LUNGS

TARGET	ENERGY (MeV) 0.010	0.015	0.020	0.030	0.050	0.100	0.200	0.500	1.000	1.500	2.000	4.000
ADRENALS	3.1E-02	2.7E-01	4.6E-01	3.8E-01	2.0E-01	1.2E-01	1.2E-01	1.1E-01	1.1E-01	9.4E-02	8.5E-02	7.2E-02
BRAIN	0.0	1.7E-07	1.2E-04	3.2E-03	6.7E-03	5.6E-03	5.6E-03	7.3E-03	7.9E-03	7.7E-03	7.3E-03	6.4E-03
BREASTS	6.8E-03	1.3E-01	3.1E-01	2.8E-01	1.3E-01	8.1E-02	8.4E-02	8.5E-02	8.5E-02	8.4E-02	8.0E-02	6.0E-02
GALL BL WALL	4.3E-07	3.2E-03	4.3E-02	1.3E-01	8.7E-02	5.5E-02	5.1E-02	5.0E-02	5.0E-02	4.4E-02	3.9E-02	3.4E-02
GI TRACT :												
LLI WALL	0.0	2.1E-06	4.8E-04	7.9E-03	1.1E-02	9.2E-03	8.8E-03	1.1E-02	1.2E-02	1.2E-02	1.1E-02	8.2E-03
SI WALL	0.0	2.6E-05	2.5E-03	2.4E-02	3.1E-02	1.9E-02	1.9E-02	2.0E-02	1.9E-02	1.9E-02	1.9E-02	1.5E-02
STOMACH WALL	2.0E-03	3.8E-02	1.1E-01	1.6E-01	9.7E-02	6.0E-02	5.7E-02	5.8E-02	4.7E-02	4.5E-02	4.4E-02	3.6E-02
ULI WALL	0.0	4.9E-05	6.1E-03	2.9E-02	3.2E-02	2.2E-02	2.1E-02	2.3E-02	1.9E-02	1.9E-02	1.9E-02	1.6E-02
HEART WALL	8.5E-02	4.1E-01	6.8E-01	5.6E-01	2.6E-01	1.5E-01	1.5E-01	1.5E-01	1.4E-01	1.3E-01	1.2E-01	9.1E-02
KIDNEYS	2.1E-06	5.9E-03	4.2E-02	9.8E-02	7.2E-02	4.6E-02	4.6E-02	5.0E-02	4.1E-02	4.0E-02	3.9E-02	3.1E-02
LIVER	4.1E-02	2.0E-01	3.1E-01	2.6E-01	1.3E-01	7.8E-02	7.7E-02	8.1E-02	7.4E-02	6.6E-02	6.0E-02	5.3E-02
LUNGS	1.5E+01	8.7E+00	4.9E+00	1.8E+00	6.1E-01	3.4E-01	3.5E-01	3.9E-01	3.6E-01	3.3E-01	3.0E-01	2.3E-01
MUSCLE	9.7E-02	1.8E-01	2.0E-01	1.4E-01	7.1E-02	4.2E-02	4.3E-02	4.5E-02	4.3E-02	4.0E-02	3.7E-02	2.9E-02
OVARIES	0.0	4.9E-07	4.3E-04	6.0E-03	1.6E-02	1.2E-02	1.3E-02	1.6E-02	1.5E-02	1.3E-02	1.2E-02	9.6E-03
PANCREAS	1.1E-04	4.8E-02	1.8E-01	2.7E-01	1.5E-01	9.1E-02	9.0E-02	8.7E-02	8.3E-02	7.8E-02	7.4E-02	6.4E-02
SKELETON :												
ACTIVE MARROW	2.9E-03	2.9E-02	6.7E-02	8.0E-02	5.2E-02	3.4E-02	3.5E-02	3.5E-02	3.2E-02	3.0E-02	2.7E-02	2.3E-02
BONE SURFACES	1.9E-02	2.1E-01	5.1E-01	6.4E-01	3.4E-01	1.0E-01	5.8E-02	5.2E-02	4.7E-02	4.3E-02	4.0E-02	3.5E-02
SKIN	3.7E-03	1.4E-02	3.7E-02	5.0E-02	3.3E-02	2.1E-02	2.3E-02	2.4E-02	2.3E-02	2.2E-02	2.1E-02	1.9E-02
SPLEEN	2.0E-02	1.6E-01	3.2E-01	2.8E-01	1.5E-01	7.9E-02	7.7E-02	7.9E-02	7.3E-02	6.5E-02	5.8E-02	4.7E-02
TESTES	0.0	0.0	5.0E-06	9.9E-04	2.4E-03	3.3E-03	3.7E-03	4.0E-03	4.2E-03	4.3E-03	4.3E-03	4.2E-03
THYMUS	1.3E-04	3.8E-02	1.6E-01	2.5E-01	1.4E-01	8.1E-02	7.8E-02	7.8E-02	7.8E-02	6.9E-02	6.1E-02	4.9E-02
THYROID	1.1E-07	2.9E-03	5.1E-02	1.3E-01	9.2E-02	4.9E-02	4.7E-02	5.0E-02	4.6E-02	4.3E-02	4.0E-02	3.1E-02
URINARY BL WALL	0.0	1.7E-08	6.8E-05	3.5E-03	6.1E-03	7.5E-03	7.9E-03	8.3E-03	8.1E-03	7.8E-03	7.4E-03	6.5E-03
UTERUS	0.0	2.6E-07	3.2E-04	6.6E-03	1.6E-02	1.0E-02	1.1E-02	1.3E-02	1.2E-02	1.1E-02	1.0E-02	9.2E-03
WHOLE BODY	2.8E-01	2.7E-01	2.5E-01	1.8E-01	8.6E-02	4.7E-02	4.6E-02	4.8E-02	4.5E-02	4.2E-02	3.9E-02	3.1E-02

SPECIFIC ABSORBED FRACTION OF PHOTON ENERGY IN kg^{-1} : RECOMMENDED VALUES FOR THE NEWBORN (3.4 kg)

SOURCE = MUSCLE

TARGET	ENERGY (MeV) 0.010	0.015	0.020	0.030	0.050	0.100	0.200	0.500	1.000	1.500	2.000	4.000
ADRENALS	8.0E-02	1.5E-01	1.7E-01	1.4E-01	7.5E-02	4.6E-02	4.7E-02	4.9E-02	4.6E-02	4.3E-02	4.0E-02	3.2E-02
BRAIN	1.7E-04	5.3E-03	1.9E-02	3.4E-02	2.4E-02	1.6E-02	1.6E-02	1.7E-02	1.7E-02	1.6E-02	1.5E-02	1.2E-02
BREASTS	7.1E-02	9.5E-02	9.5E-02	7.2E-02	4.0E-02	2.6E-02	2.8E-02	3.1E-02	3.1E-02	2.9E-02	2.7E-02	2.2E-02
GALL BL WALL	1.7E-01	2.0E-01	2.1E-01	1.6E-01	8.9E-02	5.3E-02	5.2E-02	5.5E-02	5.2E-02	4.8E-02	4.5E-02	3.6E-02
GI TRACT :												
LLI WALL	7.1E-02	1.4E-01	1.9E-01	1.8E-01	9.7E-02	5.7E-02	5.7E-02	6.0E-02	5.6E-02	5.1E-02	4.7E-02	3.9E-02
SI WALL	3.3E-02	8.5E-02	1.4E-01	1.5E-01	8.9E-02	5.3E-02	5.2E-02	5.3E-02	5.0E-02	4.6E-02	4.2E-02	3.5E-02
STOMACH WALL	9.5E-02	1.7E-01	1.9E-01	1.6E-01	8.2E-02	4.9E-02	5.0E-02	5.2E-02	4.9E-02	4.5E-02	4.2E-02	3.3E-02
ULI WALL	3.1E-02	8.6E-02	1.4E-01	1.4E-01	8.4E-02	5.0E-02	5.0E-02	5.1E-02	4.8E-02	4.5E-02	4.1E-02	3.3E-02
HEART WALL	5.4E-02	1.0E-01	1.3E-01	1.2E-01	6.9E-02	4.1E-02	4.2E-02	4.3E-02	4.1E-02	3.8E-02	3.6E-02	2.9E-02
KIDNEYS	4.8E-02	1.1E-01	1.4E-01	1.2E-01	7.1E-02	4.4E-02	4.4E-02	4.7E-02	4.4E-02	4.1E-02	3.8E-02	3.1E-02
LIVER	2.6E-02	6.2E-02	9.3E-02	9.8E-02	6.0E-02	3.7E-02	3.7E-02	3.9E-02	3.7E-02	3.4E-02	3.2E-02	2.6E-02
LUNGS	1.0E-01	1.9E-01	2.1E-01	1.5E-01	7.3E-02	4.2E-02	4.3E-02	4.5E-02	4.3E-02	4.0E-02	3.7E-02	2.9E-02
MUSCLE	3.9E-01	3.3E-01	2.7E-01	1.7E-01	8.0E-02	4.9E-02	5.1E-02	5.3E-02	5.1E-02	4.7E-02	4.3E-02	3.6E-02
OVARIES	1.6E-01	2.3E-01	2.4E-01	2.0E-01	1.1E-01	6.3E-02	6.2E-02	6.4E-02	6.1E-02	5.6E-02	5.2E-02	4.2E-02
PANCREAS	9.8E-02	2.0E-01	2.3E-01	1.8E-01	9.4E-02	5.6E-02	5.6E-02	5.8E-02	5.5E-02	5.0E-02	4.6E-02	3.7E-02
SKELETON :												
ACTIVE MARROW	3.2E-02	6.4E-02	8.5E-02	8.3E-02	5.0E-02	3.3E-02	3.4E-02	3.7E-02	3.5E-02	3.2E-02	3.0E-02	2.5E-02
BONE SURFACES	1.4E-01	3.3E-01	4.9E-01	5.5E-01	3.0E-01	1.0E-01	6.3E-02	4.8E-02	4.6E-02	4.2E-02	3.9E-02	3.2E-02
SKIN	1.2E-01	1.4E-01	1.2E-01	8.2E-02	4.2E-02	2.7E-02	2.9E-02	3.2E-02	3.2E-02	2.9E-02	2.7E-02	2.3E-02
SPLEEN	5.1E-02	1.3E-01	1.8E-01	1.5E-01	7.9E-02	4.8E-02	4.9E-02	5.0E-02	4.7E-02	4.4E-02	4.1E-02	3.3E-02
TESTES	1.0E-01	1.9E-01	2.1E-01	1.6E-01	7.6E-02	4.6E-02	4.8E-02	5.2E-02	5.0E-02	4.5E-02	4.2E-02	3.4E-02
THYMUS	5.5E-02	1.3E-01	1.7E-01	1.5E-01	7.6E-02	4.5E-02	4.6E-02	4.9E-02	4.6E-02	4.3E-02	4.0E-02	3.1E-02
THYROID	1.3E-01	2.6E-01	3.1E-01	2.4E-01	1.1E-01	6.5E-02	6.6E-02	6.8E-02	6.4E-02	5.9E-02	5.5E-02	4.4E-02
URINARY BL WALL	1.3E-01	2.1E-01	2.4E-01	1.9E-01	9.8E-02	5.7E-02	5.8E-02	6.1E-02	5.7E-02	5.3E-02	4.9E-02	3.9E-02
UTERUS	8.3E-02	1.8E-01	2.3E-01	2.0E-01	1.1E-01	6.2E-02	6.2E-02	6.4E-02	6.0E-02	5.5E-02	5.1E-02	4.0E-02
WHOLE BODY	2.7E-01	2.4E-01	2.2E-01	1.6E-01	7.9E-02	4.6E-02	4.5E-02	4.7E-02	4.5E-02	4.1E-02	3.8E-02	3.1E-02

SPECIFIC ABSORBED FRACTION OF PHOTON ENERGY IN kg^{-1} : RECOMMENDED VALUES FOR THE NEWBORN (3.4 kg)

SOURCE = OVARIES

TARGET	ENERGY (MeV) 0.010	0.015	0.020	0.030	0.050	0.100	0.200	0.500	1.000	1.500	2.000	4.000
ADRENALS	0.0	1.4E-05	3.8E-03	4.4E-02	4.0E-02	3.6E-02	3.2E-02	2.6E-02	2.3E-02	2.0E-02	1.9E-02	1.7E-02
BRAIN	0.0	0.0	3.1E-09	2.5E-05	2.5E-04	3.7E-04	5.1E-04	7.5E-04	9.6E-04	1.1E-03	1.2E-03	1.4E-03
BREASTS	0.0	9.9E-09	8.3E-05	5.2E-03	1.2E-02	1.1E-02	1.0E-02	1.0E-02	9.9E-03	9.5E-03	9.2E-03	7.6E-03
GALL BL WALL	6.3E-10	1.6E-03	4.6E-02	1.7E-01	1.3E-01	9.5E-02	7.1E-02	5.7E-02	5.5E-02	5.2E-02	5.1E-02	4.1E-02
GI TRACT :												
LLI WALL	1.8E+00	3.8E+00	3.8E+00	2.1E+00	7.8E-01	4.4E-01	4.3E-01	4.8E-01	4.2E-01	4.1E-01	4.0E-01	3.3E-01
SI WALL	2.8E-01	1.4E+00	2.1E+00	1.5E+00	6.7E-01	3.7E-01	3.7E-01	3.9E-01	3.4E-01	3.2E-01	3.0E-01	2.4E-01
STOMACH WALL	4.3E-10	6.9E-04	2.1E-02	7.5E-02	8.4E-02	5.0E-02	5.0E-02	5.3E-02	4.2E-02	3.8E-02	3.5E-02	2.9E-02
ULI WALL	8.5E-01	1.9E+00	2.1E+00	1.3E+00	5.5E-01	3.2E-01	3.2E-01	3.4E-01	3.1E-01	2.8E-01	2.5E-01	2.0E-01
HEART WALL	0.0	2.8E-07	3.8E-04	1.2E-02	1.5E-02	1.4E-02	1.3E-02	1.2E-02	1.2E-02	1.1E-02	1.1E-02	1.0E-02
KIDNEYS	0.0	5.5E-04	1.3E-02	7.6E-02	9.0E-02	6.0E-02	5.2E-02	5.5E-02	5.7E-02	5.2E-02	4.6E-02	3.5E-02
LIVER	7.2E-10	5.5E-04	1.3E-02	7.5E-02	6.9E-02	4.4E-02	4.1E-02	3.9E-02	3.5E-02	3.5E-02	3.4E-02	2.7E-02
LUNGS	0.0	5.1E-07	4.5E-04	6.4E-03	1.7E-02	1.2E-02	1.3E-02	1.6E-02	1.5E-02	1.3E-02	1.2E-02	9.6E-03
MUSCLE	1.6E-01	2.3E-01	2.4E-01	2.0E-01	1.1E-01	6.3E-02	6.2E-02	6.4E-02	6.1E-02	5.6E-02	5.2E-02	4.2E-02
OVARIES	1.8E+03	7.8E+02	3.6E+02	1.1E+02	3.3E+01	1.9E+01	2.1E+01	2.3E+01	2.2E+01	2.0E+01	1.9E+01	1.6E+01
PANCREAS	0.0	9.8E-05	1.1E-02	7.3E-02	6.7E-02	5.5E-02	4.6E-02	3.8E-02	3.4E-02	3.3E-02	3.1E-02	2.6E-02
SKELETON :												
ACTIVE MARROW	2.4E-04	1.6E-02	5.7E-02	8.1E-02	5.6E-02	3.6E-02	3.5E-02	3.6E-02	3.2E-02	3.2E-02	3.1E-02	2.3E-02
BONE SURFACES	2.0E-04	7.5E-02	3.0E-01	4.8E-01	3.1E-01	9.7E-02	5.1E-02	4.5E-02	4.0E-02	3.9E-02	3.8E-02	2.9E-02
SKIN	3.6E-10	5.2E-04	7.0E-03	3.1E-02	2.8E-02	2.1E-02	1.9E-02	2.3E-02	2.2E-02	2.0E-02	1.9E-02	1.8E-02
SPLEEN	0.0	1.1E-04	8.8E-03	4.0E-02	6.2E-02	4.4E-02	3.6E-02	3.0E-02	3.0E-02	2.9E-02	2.7E-02	2.2E-02
THYMUS	0.0	3.5E-10	1.3E-05	1.9E-03	3.6E-03	6.0E-03	7.0E-03	6.9E-03	6.6E-03	6.4E-03	6.2E-03	5.1E-03
THYROID	0.0	0.0	9.8E-07	5.3E-04	3.1E-03	3.9E-03	4.1E-03	4.4E-03	4.3E-03	4.1E-03	4.0E-03	3.4E-03
URINARY BL WALL	2.1E-04	1.5E-01	4.6E-01	7.1E-01	3.9E-01	2.3E-01	1.9E-01	2.3E-01	2.2E-01	1.8E-01	1.6E-01	1.3E-01
UTERUS	3.7E-02	1.5E+00	3.5E+00	2.5E+00	1.1E+00	5.6E-01	5.6E-01	6.0E-01	5.7E-01	5.1E-01	4.6E-01	3.3E-01
WHOLE BODY	2.8E-01	2.8E-01	2.7E-01	2.2E-01	1.1E-01	6.3E-02	6.0E-02	6.2E-02	5.8E-02	5.4E-02	5.0E-02	4.0E-02

SPECIFIC ABSORBED FRACTION OF PHOTON ENERGY IN kg^{-1} : RECOMMENDED VALUES FOR THE NEWBORN (3.4 kg)

SOURCE = PANCREAS

TARGET	ENERGY (MeV) 0.010	0.015	0.020	0.030	0.050	0.100	0.200	0.500	1.000	1.500	2.000	4.000
ADRENALS	2.0E-02	4.8E-01	1.3E+00	1.2E+00	5.5E-01	3.0E-01	2.9E-01	3.4E-01	3.0E-01	2.7E-01	2.5E-01	2.0E-01
BRAIN	0.0	0.0	7.2E-07	3.5E-04	1.3E-03	2.3E-03	2.3E-03	2.9E-03	3.6E-03	3.8E-03	3.8E-03	3.4E-03
BREASTS	0.0	1.6E-04	1.3E-02	4.3E-02	7.0E-02	6.2E-02	4.8E-02	4.0E-02	3.6E-02	3.5E-02	3.3E-02	2.7E-02
GALL BL WALL	3.9E+00	6.0E+00	5.9E+00	3.3E+00	1.3E+00	6.8E-01	6.9E-01	7.5E-01	6.7E-01	6.1E-01	5.7E-01	5.2E-01
GI TRACT :												
LLI WALL	2.4E-10	5.4E-04	1.6E-02	6.7E-02	6.6E-02	3.9E-02	4.3E-02	3.8E-02	3.4E-02	3.3E-02	3.1E-02	2.4E-02
SI WALL	5.6E-07	5.6E-03	8.4E-02	2.3E-01	1.6E-01	9.6E-02	8.7E-02	8.3E-02	7.9E-02	7.2E-02	6.5E-02	5.2E-02
STOMACH WALL	1.4E-01	1.2E+00	2.2E+00	1.6E+00	7.2E-01	3.9E-01	3.7E-01	3.9E-01	3.6E-01	3.3E-01	3.0E-01	2.7E-01
ULI WALL	9.2E-07	1.0E-02	1.1E-01	2.6E-01	1.8E-01	1.0E-01	1.0E-01	8.8E-02	7.8E-02	7.9E-02	7.8E-02	6.1E-02
HEART WALL	1.9E-05	3.2E-02	2.0E-01	3.9E-01	2.1E-01	1.2E-01	1.2E-01	1.3E-01	1.1E-01	1.0E-01	9.6E-02	7.5E-02
KIDNEYS	1.7E-05	4.3E-02	2.9E-01	5.0E-01	2.8E-01	1.6E-01	1.6E-01	1.6E-01	1.4E-01	1.3E-01	1.2E-01	1.1E-01
LIVER	2.4E-03	1.6E-01	4.7E-01	5.5E-01	2.9E-01	1.6E-01	1.6E-01	1.6E-01	1.4E-01	1.3E-01	1.2E-01	1.0E-01
LUNGS	1.2E-04	5.0E-02	1.9E-01	2.8E-01	1.6E-01	9.1E-02	9.0E-02	8.7E-02	8.3E-02	7.8E-02	7.4E-02	6.4E-02
MUSCLE	9.8E-02	2.0E-01	2.3E-01	1.8E-01	9.4E-02	5.6E-02	5.6E-02	5.8E-02	5.5E-02	5.0E-02	4.6E-02	3.7E-02
OVARIES	0.0	9.8E-05	1.1E-02	7.3E-02	6.7E-02	5.5E-02	4.6E-02	3.8E-02	3.4E-02	3.3E-02	3.1E-02	2.6E-02
PANCREAS	2.7E+02	1.6E+02	8.5E+01	3.0E+01	9.3E+00	5.3E+00	5.8E+00	6.3E+00	6.0E+00	5.5E+00	5.1E+00	4.2E+00
SKELETON :												
ACTIVE MARROW	6.5E-05	3.4E-03	2.0E-02	5.2E-02	4.7E-02	3.2E-02	3.1E-02	3.2E-02	2.9E-02	2.7E-02	2.5E-02	2.1E-02
BONE SURFACES	8.1E-05	2.2E-02	1.4E-01	4.0E-01	3.1E-01	9.9E-02	5.3E-02	4.5E-02	4.1E-02	3.8E-02	3.6E-02	2.9E-02
SKIN	3.0E-08	6.4E-04	8.7E-03	2.9E-02	2.8E-02	1.9E-02	2.1E-02	2.1E-02	2.0E-02	1.9E-02	1.8E-02	1.3E-02
SPLEEN	2.1E-01	1.5E+00	2.4E+00	1.7E+00	7.3E-01	4.2E-01	4.0E-01	4.2E-01	3.9E-01	3.5E-01	3.2E-01	2.8E-01
TESTES	0.0	1.3E-08	9.6E-05	5.6E-03	1.3E-02	1.5E-02	1.0E-02	1.1E-02	1.0E-02	9.8E-03	9.5E-03	7.8E-03
THYMUS	0.0	1.7E-05	3.6E-03	2.5E-02	4.7E-02	3.0E-02	2.5E-02	2.3E-02	2.5E-02	2.5E-02	2.4E-02	2.0E-02
THYROID	0.0	1.1E-07	2.8E-04	9.8E-03	1.2E-02	1.4E-02	1.4E-02	1.4E-02	1.3E-02	1.2E-02	1.2E-02	9.9E-03
URINARY BL WALL	0.0	3.2E-06	1.5E-03	2.2E-02	3.0E-02	2.9E-02	2.5E-02	2.1E-02	1.9E-02	1.9E-02	1.8E-02	1.5E-02
UTERUS	0.0	6.9E-05	8.8E-03	5.0E-02	7.4E-02	4.4E-02	3.5E-02	3.3E-02	3.1E-02	3.1E-02	3.0E-02	2.4E-02
WHOLE BODY	2.8E-01	2.8E-01	2.7E-01	2.2E-01	1.1E-01	6.4E-02	6.1E-02	6.3E-02	5.9E-02	5.4E-02	5.0E-02	4.1E-02

SPECIFIC ABSORBED FRACTION OF PHOTON ENERGY IN kg^{-1} : RECOMMENDED VALUES FOR THE NEWBORN (3.4 kg)

SOURCE = SKELETON : ACTIVE MARROW

TARGET	ENERGY (MeV) 0.010	0.015	0.020	0.030	0.050	0.100	0.200	0.500	1.000	1.500	2.000	4.000
ADRENALS	5.9E-03	5.5E-02	1.1E-01	1.3E-01	7.8E-02	4.7E-02	5.0E-02	5.3E-02	5.0E-02	4.5E-02	4.1E-02	3.3E-02
BRAIN	5.6E-02	1.3E-01	1.8E-01	1.5E-01	7.7E-02	4.6E-02	4.8E-02	5.2E-02	4.9E-02	4.5E-02	4.2E-02	3.5E-02
BREASTS	8.0E-03	4.2E-02	5.8E-02	4.3E-02	2.5E-02	1.6E-02	1.9E-02	2.1E-02	2.1E-02	2.0E-02	1.9E-02	1.6E-02
GALL BL WALL	5.9E-08	4.5E-04	7.9E-03	3.6E-02	3.5E-02	2.5E-02	2.4E-02	2.3E-02	2.3E-02	2.0E-02	1.8E-02	1.6E-02
GI TRACT :												
LLI WALL	2.0E-02	6.9E-02	1.0E-01	9.4E-02	5.7E-02	3.5E-02	3.4E-02	3.8E-02	3.7E-02	3.4E-02	3.1E-02	2.5E-02
SI WALL	7.4E-03	2.0E-02	4.0E-02	6.2E-02	4.8E-02	3.0E-02	3.0E-02	3.1E-02	2.8E-02	2.6E-02	2.5E-02	2.0E-02
STOMACH WALL	2.6E-04	4.9E-03	1.8E-02	3.6E-02	3.3E-02	2.2E-02	2.1E-02	2.2E-02	2.0E-02	2.0E-02	1.9E-02	1.6E-02
ULI WALL	7.7E-03	2.5E-02	4.3E-02	5.5E-02	4.2E-02	2.8E-02	2.7E-02	2.9E-02	2.6E-02	2.4E-02	2.2E-02	1.8E-02
HEART WALL	7.5E-04	9.0E-03	2.8E-02	4.8E-02	3.8E-02	2.5E-02	2.5E-02	2.6E-02	2.4E-02	2.2E-02	2.1E-02	1.8E-02
KIDNEYS	4.3E-03	2.5E-02	5.8E-02	8.2E-02	5.6E-02	3.5E-02	3.6E-02	3.8E-02	3.7E-02	3.5E-02	3.3E-02	2.5E-02
LIVER	2.8E-03	1.4E-02	3.1E-02	4.7E-02	3.7E-02	2.5E-02	2.4E-02	2.5E-02	2.5E-02	2.3E-02	2.2E-02	1.8E-02
LUNGS	3.7E-03	3.6E-02	7.9E-02	8.9E-02	5.3E-02	3.1E-02	3.3E-02	3.5E-02	3.2E-02	2.9E-02	2.7E-02	2.3E-02
MUSCLE	3.2E-02	6.4E-02	8.5E-02	8.3E-02	5.0E-02	3.3E-02	3.4E-02	3.7E-02	3.5E-02	3.3E-02	3.0E-02	2.4E-02
OVARIES	8.9E-05	1.9E-02	6.3E-02	9.0E-02	5.8E-02	3.5E-02	3.4E-02	3.6E-02	3.2E-02	3.2E-02	3.1E-02	2.3E-02
PANCREAS	2.3E-05	3.8E-03	2.1E-02	5.5E-02	4.8E-02	3.1E-02	3.0E-02	3.2E-02	2.9E-02	2.7E-02	2.5E-02	2.1E-02
SKELETON :												
ACTIVE MARROW	9.6E-01	7.4E-01	5.6E-01	3.2E-01	1.5E-01	9.9E-02	1.0E-01	1.1E-01	1.0E-01	9.1E-02	8.4E-02	6.8E-02
BONE SURFACES	3.8E+00	3.3E+00	2.6E+00	1.6E+00	6.2E-01	1.8E-01	1.1E-01	1.1E-01	1.0E-01	9.4E-02	8.6E-02	7.1E-02
SKIN	3.9E-02	7.4E-02	8.9E-02	7.4E-02	4.1E-02	2.6E-02	2.8E-02	3.3E-02	3.3E-02	3.1E-02	2.9E-02	2.2E-02
SPLEEN	1.1E-03	1.3E-02	3.8E-02	6.0E-02	4.6E-02	2.9E-02	2.9E-02	3.2E-02	2.9E-02	2.7E-02	2.5E-02	2.1E-02
TESTES	1.1E-08	3.8E-04	6.1E-03	2.4E-02	2.4E-02	1.5E-02	1.7E-02	1.7E-02	1.6E-02	1.6E-02	1.6E-02	1.3E-02
THYMUS	1.8E-03	2.1E-02	4.1E-02	4.6E-02	3.3E-02	2.1E-02	2.2E-02	2.4E-02	2.3E-02	2.1E-02	1.9E-02	1.6E-02
THYROID	1.2E-06	1.4E-03	1.2E-02	3.7E-02	3.5E-02	2.4E-02	2.2E-02	2.3E-02	2.1E-02	2.0E-02	1.9E-02	1.6E-02
URINARY BL WALL	9.5E-08	9.9E-04	1.0E-02	3.2E-02	2.9E-02	2.0E-02	1.8E-02	1.9E-02	1.8E-02	1.8E-02	1.8E-02	1.3E-02
UTERUS	8.0E-08	1.3E-03	1.8E-02	4.9E-02	4.2E-02	2.8E-02	2.6E-02	2.6E-02	2.5E-02	2.2E-02	2.0E-02	1.8E-02
WHOLE BODY	2.8E-01	2.6E-01	2.4E-01	1.7E-01	7.9E-02	4.1E-02	4.0E-02	4.2E-02	4.1E-02	3.8E-02	3.5E-02	2.8E-02

SPECIFIC ABSORBED FRACTION OF PHOTON ENERGY IN kg^{-1} : RECOMMENDED VALUES FOR THE NEWBORN (3.4 kg)

SOURCE = SKELETON : WHOLE SKELETON

TARGET	ENERGY (MeV) 0.010	0.015	0.020	0.030	0.050	0.100	0.200	0.500	1.000	1.500	2.000	4.000
ADRENALS	6.0E-03	5.6E-02	1.2E-01	1.4E-01	8.8E-02	5.5E-02	5.7E-02	6.0E-02	5.7E-02	5.2E-02	4.7E-02	3.8E-02
BRAIN	3.7E-02	8.8E-02	1.2E-01	1.0E-01	5.4E-02	3.2E-02	3.4E-02	3.7E-02	3.5E-02	3.3E-02	3.1E-02	2.5E-02
BREASTS	1.0E-02	5.4E-02	7.4E-02	5.6E-02	3.2E-02	2.0E-02	2.5E-02	2.6E-02	2.6E-02	2.5E-02	2.4E-02	2.1E-02
GALL BL WALL	6.7E-08	5.8E-04	1.0E-02	4.1E-02	4.2E-02	2.9E-02	2.9E-02	2.7E-02	2.7E-02	2.3E-02	2.1E-02	1.9E-02
GI TRACT :												
LLI WALL	1.8E-02	6.1E-02	9.5E-02	9.5E-02	6.2E-02	3.9E-02	3.7E-02	4.1E-02	4.0E-02	3.7E-02	3.4E-02	2.7E-02
SI WALL	6.4E-03	1.8E-02	3.8E-02	6.3E-02	5.2E-02	3.3E-02	3.2E-02	3.4E-02	3.0E-02	2.9E-02	2.8E-02	2.2E-02
STOMACH WALL	3.3E-04	6.3E-03	2.3E-02	4.4E-02	3.9E-02	2.7E-02	2.6E-02	2.6E-02	2.4E-02	2.3E-02	2.2E-02	1.9E-02
ULI WALL	6.6E-03	2.2E-02	3.9E-02	5.5E-02	4.5E-02	3.1E-02	2.9E-02	3.1E-02	2.8E-02	2.6E-02	2.4E-02	2.0E-02
HEART WALL	1.0E-03	1.1E-02	3.5E-02	6.1E-02	4.8E-02	3.1E-02	3.0E-02	3.2E-02	2.9E-02	2.7E-02	2.5E-02	2.2E-02
KIDNEYS	6.9E-03	3.7E-02	8.3E-02	1.1E-01	7.1E-02	4.4E-02	4.5E-02	4.8E-02	4.7E-02	4.4E-02	4.1E-02	3.1E-02
LIVER	3.7E-03	1.8E-02	3.9E-02	5.9E-02	4.6E-02	3.0E-02	2.9E-02	3.1E-02	3.0E-02	2.8E-02	2.6E-02	2.1E-02
LUNGS	4.7E-03	4.5E-02	1.0E-01	1.1E-01	6.6E-02	3.9E-02	4.1E-02	4.4E-02	3.9E-02	3.6E-02	3.4E-02	2.9E-02
MUSCLE	3.0E-02	6.2E-02	8.7E-02	9.0E-02	5.6E-02	3.6E-02	3.7E-02	4.0E-02	3.8E-02	3.5E-02	3.3E-02	2.7E-02
OVARIES	7.3E-05	1.7E-02	5.5E-02	8.2E-02	5.8E-02	3.7E-02	3.5E-02	3.7E-02	3.4E-02	3.3E-02	3.1E-02	2.4E-02
PANCREAS	2.9E-05	4.4E-03	2.6E-02	6.8E-02	5.8E-02	3.7E-02	3.6E-02	3.8E-02	3.4E-02	3.2E-02	3.0E-02	2.4E-02
SKELETON :												
ACTIVE MARROW	7.5E-01	5.8E-01	4.4E-01	2.6E-01	1.3E-01	8.4E-02	8.6E-02	8.9E-02	8.6E-02	7.8E-02	7.2E-02	5.9E-02
BONE SURFACES	3.8E+00	3.4E+00	2.8E+00	1.8E+00	6.9E-01	1.9E-01	1.2E-01	1.2E-01	1.1E-01	1.0E-01	9.4E-02	7.7E-02
SKIN	3.8E-02	6.7E-02	8.0E-02	6.8E-02	4.0E-02	2.5E-02	2.8E-02	3.3E-02	3.2E-02	2.9E-02	2.7E-02	2.2E-02
SPLEEN	1.4E-03	1.7E-02	4.9E-02	7.5E-02	5.7E-02	3.6E-02	3.6E-02	3.9E-02	3.5E-02	3.2E-02	3.0E-02	2.5E-02
TESTES	7.0E-08	9.4E-04	1.2E-02	4.1E-02	3.5E-02	2.2E-02	2.4E-02	2.4E-02	2.4E-02	2.2E-02	2.1E-02	1.8E-02
THYMUS	2.3E-03	2.7E-02	5.2E-02	5.8E-02	4.1E-02	2.5E-02	2.6E-02	2.9E-02	2.8E-02	2.4E-02	2.2E-02	1.9E-02
THYROID	5.2E-07	1.5E-03	1.2E-02	3.9E-02	3.8E-02	2.6E-02	2.4E-02	2.4E-02	2.3E-02	2.1E-02	2.0E-02	1.7E-02
URINARY BL WALL	8.7E-08	9.9E-04	1.0E-02	3.7E-02	3.4E-02	2.4E-02	2.2E-02	2.3E-02	2.1E-02	2.1E-02	2.0E-02	1.6E-02
UTERUS	6.8E-08	1.2E-03	1.6E-02	4.9E-02	4.5E-02	3.0E-02	2.8E-02	2.9E-02	2.8E-02	2.5E-02	2.2E-02	1.9E-02
WHOLE BODY	2.8E-01	2.6E-01	2.4E-01	1.7E-01	8.5E-02	4.3E-02	4.2E-02	4.4E-02	4.2E-02	3.9E-02	3.6E-02	3.0E-02

SPECIFIC ABSORBED FRACTION OF PHOTON ENERGY IN kg^{-1} : RECOMMENDED VALUES FOR THE NEWBORN (3.4 kg)

SOURCE = SPLEEN

TARGET	ENERGY (MeV) 0.010	0.015	0.020	0.030	0.050	0.100	0.200	0.500	1.000	1.500	2.000	4.000
ADRENALS	5.3E-03	3.7E-01	7.8E-01	8.4E-01	4.1E-01	2.2E-01	2.2E-01	2.3E-01	2.2E-01	2.0E-01	1.8E-01	1.5E-01
BRAIN	0.0	0.0	6.0E-07	4.3E-04	2.2E-03	2.4E-03	2.8E-03	3.3E-03	3.1E-03	3.2E-03	3.3E-03	3.3E-03
BREASTS	0.0	4.3E-05	1.4E-02	3.6E-02	4.5E-02	3.4E-02	3.5E-02	3.5E-02	2.7E-02	2.2E-02	2.0E-02	1.9E-02
GALL BL WALL	6.5E-07	1.4E-02	1.0E-01	3.0E-01	2.0E-01	1.2E-01	1.1E-01	1.1E-01	9.7E-02	9.1E-02	8.7E-02	7.1E-02
GI TRACT :												
LLI WALL	1.3E-08	1.1E-03	1.7E-02	6.4E-02	5.9E-02	3.6E-02	4.0E-02	4.1E-02	3.6E-02	3.0E-02	2.7E-02	2.7E-02
SI WALL	4.9E-06	5.1E-03	5.3E-02	1.5E-01	1.1E-01	6.5E-02	6.7E-02	6.7E-02	6.2E-02	5.7E-02	5.3E-02	4.3E-02
STOMACH WALL	6.0E-04	1.3E-01	4.9E-01	6.9E-01	3.3E-01	1.9E-01	1.9E-01	1.9E-01	1.7E-01	1.6E-01	1.5E-01	1.1E-01
ULI WALL	7.2E-07	5.0E-03	5.3E-02	1.3E-01	1.0E-01	6.2E-02	5.7E-02	5.5E-02	5.6E-02	5.3E-02	4.9E-02	3.8E-02
HEART WALL	2.8E-08	2.8E-03	4.3E-02	1.5E-01	1.1E-01	6.2E-02	6.1E-02	6.2E-02	5.1E-02	5.0E-02	4.9E-02	4.3E-02
KIDNEYS	8.6E-02	6.7E-01	1.2E+00	9.3E-01	4.2E-01	2.3E-01	2.4E-01	2.3E-01	2.3E-01	2.1E-01	2.0E-01	1.6E-01
LIVER	2.5E-09	8.9E-04	2.3E-02	9.8E-02	8.5E-02	5.2E-02	4.9E-02	5.2E-02	4.7E-02	4.2E-02	3.9E-02	3.5E-02
LUNGS	2.1E-02	1.7E-01	3.4E-01	2.9E-01	1.5E-01	7.9E-02	7.7E-02	7.9E-02	7.3E-02	6.5E-02	5.8E-02	4.7E-02
MUSCLE	5.1E-02	1.3E-01	1.8E-01	1.5E-01	7.9E-02	4.8E-02	4.9E-02	5.0E-02	4.7E-02	4.4E-02	4.1E-02	3.3E-02
OVARIES	0.0	1.1E-04	8.8E-03	4.0E-02	6.2E-02	4.4E-02	3.6E-02	3.0E-02	3.0E-02	2.9E-02	2.7E-02	2.2E-02
PANCREAS	2.1E-01	1.5E+00	2.4E+00	1.7E+00	7.3E-01	4.2E-01	4.0E-01	4.2E-01	3.9E-01	3.5E-01	3.2E-01	2.8E-01
SKELETON :												
ACTIVE MARROW	8.3E-04	1.1E-02	3.3E-02	5.7E-02	4.6E-02	3.1E-02	3.1E-02	3.2E-02	2.9E-02	2.7E-02	2.5E-02	2.1E-02
BONE SURFACES	5.4E-03	8.0E-02	2.6E-01	4.5E-01	3.0E-01	9.3E-02	5.2E-02	4.6E-02	4.1E-02	3.9E-02	3.7E-02	3.0E-02
SKIN	8.5E-05	6.5E-03	2.6E-02	4.5E-02	3.2E-02	2.1E-02	2.3E-02	2.6E-02	2.5E-02	2.3E-02	2.2E-02	1.8E-02
SPLEEN	9.6E+01	6.8E+01	4.2E+01	1.6E+01	5.1E+00	2.9E+00	3.2E+00	3.5E+00	3.3E+00	3.0E+00	2.7E+00	2.2E+00
TESTES	0.0	7.7E-09	6.5E-05	4.4E-03	8.3E-03	9.4E-03	9.6E-03	8.9E-03	9.3E-03	9.3E-03	9.0E-03	7.1E-03
THYMUS	0.0	2.4E-06	1.2E-03	2.0E-02	2.8E-02	1.8E-02	1.9E-02	1.7E-02	2.0E-02	1.9E-02	1.8E-02	1.5E-02
THYROID	0.0	3.7E-08	1.4E-04	1.0E-02	1.6E-02	1.5E-02	1.4E-02	1.3E-02	1.2E-02	1.1E-02	1.0E-02	8.3E-03
URINARY BL WALL	0.0	1.4E-06	8.7E-04	1.3E-02	2.6E-02	2.4E-02	1.7E-02	2.0E-02	1.9E-02	1.8E-02	1.6E-02	1.2E-02
UTERUS	0.0	2.9E-05	5.0E-03	4.8E-02	4.5E-02	4.1E-02	3.7E-02	3.2E-02	2.9E-02	2.7E-02	2.5E-02	2.2E-02
WHOLE BODY	2.8E-01	2.8E-01	2.6E-01	1.9E-01	9.7E-02	5.4E-02	5.3E-02	5.5E-02	5.2E-02	4.8E-02	4.5E-02	3.7E-02

SPECIFIC ABSORBED FRACTION OF PHOTON ENERGY IN kg^{-1} : RECOMMENDED VALUES FOR THE NEWBORN (3.4 kg)

SOURCE = TESTES

TARGET	ENERGY (MeV) 0.010	0.015	0.020	0.030	0.050	0.100	0.200	0.500	1.000	1.500	2.000	4.000
ADRENALS	0.0	1.3E-09	2.9E-05	3.0E-03	7.7E-03	8.0E-03	8.2E-03	8.3E-03	8.0E-03	7.7E-03	7.5E-03	6.2E-03
BRAIN	0.0	0.0	0.0	3.4E-06	1.1E-04	2.2E-04	3.8E-04	6.1E-04	7.3E-04	7.9E-04	8.1E-04	8.6E-04
GALL BL WALL	0.0	4.4E-07	5.3E-04	1.3E-02	2.2E-02	1.6E-02	1.5E-02	1.6E-02	1.5E-02	1.4E-02	1.4E-02	1.1E-02
GI TRACT :												
LLI WALL	7.8E-05	5.7E-02	2.5E-01	4.1E-01	2.3E-01	1.2E-01	1.1E-01	1.4E-01	1.2E-01	1.0E-01	9.3E-02	8.1E-02
SI WALL	0.0	7.5E-05	5.3E-03	4.7E-02	5.3E-02	3.6E-02	3.4E-02	3.1E-02	3.4E-02	3.6E-02	3.5E-02	2.3E-02
STOMACH WALL	0.0	1.7E-07	2.8E-04	1.0E-02	1.5E-02	1.5E-02	1.3E-02	1.2E-02	1.2E-02	1.2E-02	1.1E-02	9.4E-03
ULI WALL	0.0	7.7E-05	7.0E-03	3.3E-02	5.6E-02	3.7E-02	3.0E-02	2.8E-02	2.8E-02	2.6E-02	2.4E-02	2.1E-02
HEART WALL	0.0	0.0	6.2E-06	1.3E-03	1.9E-03	2.4E-03	3.0E-03	4.6E-03	5.5E-03	5.5E-03	5.3E-03	4.4E-03
KIDNEYS	0.0	3.5E-08	1.5E-04	5.8E-03	7.9E-03	1.0E-02	1.1E-02	1.1E-02	1.0E-02	9.7E-03	9.3E-03	8.4E-03
LIVER	0.0	1.4E-07	2.2E-04	5.8E-03	1.0E-02	9.1E-03	9.0E-03	1.1E-02	1.2E-02	1.2E-02	1.2E-02	9.4E-03
LUNGS	0.0	0.0	5.3E-06	1.0E-03	2.4E-03	3.3E-03	3.7E-03	4.0E-03	4.2E-03	4.3E-03	4.3E-03	4.2E-03
MUSCLE	1.0E-01	1.9E-01	2.1E-01	1.6E-01	7.6E-02	4.6E-02	4.8E-02	5.2E-02	5.0E-02	4.5E-02	4.2E-02	3.4E-02
PANCREAS	0.0	1.3E-08	9.6E-05	5.6E-03	1.3E-02	1.5E-02	1.0E-02	1.1E-02	1.0E-02	9.8E-03	9.5E-03	7.8E-03
SKELETON :												
ACTIVE MARROW	3.0E-08	3.8E-04	5.3E-03	2.3E-02	2.3E-02	1.6E-02	1.7E-02	1.7E-02	1.6E-02	1.6E-02	1.6E-02	1.3E-02
BONE SURFACES	1.9E-07	5.4E-03	6.5E-02	2.4E-01	1.9E-01	5.9E-02	3.5E-02	2.9E-02	2.8E-02	2.7E-02	2.5E-02	2.2E-02
SKIN	2.2E-01	4.0E-01	3.6E-01	1.9E-01	7.5E-02	4.6E-02	4.8E-02	5.5E-02	5.4E-02	4.7E-02	4.3E-02	3.6E-02
SPLEEN	0.0	7.7E-09	6.5E-05	4.4E-03	8.3E-03	9.4E-03	9.6E-03	8.9E-03	9.3E-03	9.3E-03	9.0E-03	7.1E-03
TESTES	8.4E+02	4.4E+02	2.2E+02	7.3E+01	2.2E+01	1.3E+01	1.3E+01	1.6E+01	1.5E+01	1.4E+01	1.3E+01	1.0E+01
THYMUS	0.0	0.0	2.8E-07	2.7E-04	2.0E-03	2.9E-03	3.0E-03	3.2E-03	3.3E-03	3.2E-03	3.1E-03	2.7E-03
THYROID	0.0	0.0	1.9E-08	7.3E-05	9.4E-04	1.6E-03	2.0E-03	2.2E-03	2.2E-03	2.2E-03	2.2E-03	1.9E-03
URINARY BL WALL	8.1E-04	2.0E-01	7.7E-01	9.1E-01	3.9E-01	2.5E-01	2.5E-01	2.2E-01	2.4E-01	2.1E-01	1.9E-01	1.6E-01
WHOLE BODY	2.7E-01	2.4E-01	2.1E-01	1.5E-01	7.2E-02	4.1E-02	4.2E-02	4.5E-02	4.3E-02	4.0E-02	3.7E-02	3.0E-02

SPECIFIC ABSORBED FRACTION OF PHOTON ENERGY IN kg^{-1} : RECOMMENDED VALUES FOR THE NEWBORN (3.4 kg)

SOURCE = THYMUS

TARGET	ENERGY (MeV) 0.010	0.015	0.020	0.030	0.050	0.100	0.200	0.500	1.000	1.500	2.000	4.000
ADRENALS	0.0	5.0E-06	1.9E-03	2.8E-02	3.1E-02	2.7E-02	2.4E-02	2.4E-02	2.3E-02	2.1E-02	2.0E-02	1.7E-02
BRAIN	0.0	7.7E-07	3.8E-04	5.1E-03	1.2E-02	9.0E-03	1.0E-02	1.2E-02	1.1E-02	1.1E-02	1.1E-02	1.0E-02
BREASTS	1.2E-06	2.1E-02	9.9E-02	2.5E-01	1.6E-01	1.0E-01	9.7E-02	1.2E-01	1.1E-01	9.1E-02	8.3E-02	7.8E-02
GALL BL WALL	0.0	7.5E-06	2.0E-03	3.0E-02	3.1E-02	2.5E-02	2.0E-02	1.8E-02	1.5E-02	1.5E-02	1.4E-02	1.5E-02
GI TRACT :												
LLI WALL	0.0	2.1E-09	1.8E-05	1.7E-03	3.3E-03	5.1E-03	5.6E-03	5.9E-03	6.0E-03	5.8E-03	5.5E-03	4.6E-03
SI WALL	0.0	1.9E-08	8.3E-05	3.6E-03	8.7E-03	9.2E-03	9.3E-03	9.9E-03	8.9E-03	8.6E-03	8.5E-03	7.9E-03
STOMACH WALL	0.0	3.8E-05	4.2E-03	2.1E-02	3.6E-02	2.5E-02	2.4E-02	3.0E-02	2.6E-02	2.3E-02	2.2E-02	1.7E-02
ULI WALL	0.0	5.5E-08	1.5E-04	4.3E-03	9.4E-03	1.1E-02	9.3E-03	9.2E-03	1.0E-02	1.0E-02	9.6E-03	7.9E-03
HEART WALL	3.5E-02	3.0E-01	5.9E-01	5.9E-01	3.0E-01	1.7E-01	1.6E-01	1.7E-01	1.7E-01	1.5E-01	1.3E-01	1.0E-01
KIDNEYS	0.0	1.7E-07	3.0E-04	8.6E-03	1.4E-02	1.5E-02	1.3E-02	1.2E-02	1.2E-02	1.1E-02	1.1E-02	1.1E-02
LIVER	0.0	8.8E-05	6.3E-03	4.0E-02	4.0E-02	2.6E-02	2.7E-02	2.9E-02	2.5E-02	2.3E-02	2.1E-02	1.9E-02
LUNGS	1.3E-04	4.0E-02	1.7E-01	2.6E-01	1.4E-01	8.1E-02	7.8E-02	7.8E-02	7.8E-02	6.9E-02	6.1E-02	4.9E-02
MUSCLE	5.5E-02	1.3E-01	1.7E-01	1.5E-01	7.6E-02	4.5E-02	4.6E-02	4.9E-02	4.6E-02	4.3E-02	4.0E-02	3.1E-02
OVARIES	0.0	3.5E-10	1.3E-05	1.9E-03	3.6E-03	6.0E-03	7.0E-03	6.9E-03	6.6E-03	6.4E-03	6.2E-03	5.1E-03
PANCREAS	0.0	1.7E-05	3.6E-03	2.5E-02	4.7E-02	3.0E-02	2.5E-02	2.3E-02	2.5E-02	2.5E-02	2.4E-02	2.0E-02
SKELETON :												
ACTIVE MARROW	1.6E-03	1.9E-02	3.6E-02	4.5E-02	3.4E-02	2.2E-02	2.3E-02	2.4E-02	2.3E-02	2.1E-02	1.9E-02	1.6E-02
BONE SURFACES	1.0E-02	1.3E-01	2.7E-01	3.5E-01	2.2E-01	6.6E-02	3.8E-02	3.5E-02	3.3E-02	2.9E-02	2.6E-02	2.3E-02
SKIN	1.8E-03	2.3E-02	5.9E-02	6.6E-02	3.6E-02	2.3E-02	2.6E-02	2.9E-02	2.8E-02	2.6E-02	2.3E-02	1.9E-02
SPLEEN	0.0	2.4E-06	1.2E-03	2.0E-02	2.8E-02	1.8E-02	1.9E-02	1.7E-02	2.0E-02	1.9E-02	1.8E-02	1.5E-02
TESTES	0.0	0.0	2.8E-07	2.7E-04	2.0E-03	2.9E-03	3.0E-03	3.2E-03	3.3E-03	3.2E-03	3.1E-03	2.7E-03
THYMUS	7.7E+01	5.4E+01	3.3E+01	1.3E+01	4.2E+00	2.4E+00	2.5E+00	2.8E+00	2.6E+00	2.4E+00	2.2E+00	1.8E+00
THYROID	1.1E-02	4.4E-01	9.6E-01	1.0E+00	4.7E-01	2.6E-01	2.6E-01	2.8E-01	2.5E-01	2.4E-01	2.4E-01	2.0E-01
URINARY BL WALL	0.0	0.0	3.6E-06	9.5E-04	2.5E-03	4.3E-03	5.5E-03	5.5E-03	5.1E-03	5.0E-03	4.8E-03	4.0E-03
UTERUS	0.0	3.4E-10	1.2E-05	1.9E-03	2.8E-03	4.4E-03	5.9E-03	6.8E-03	6.6E-03	6.3E-03	6.1E-03	5.1E-03
WHOLE BODY	2.8E-01	2.7E-01	2.5E-01	1.7E-01	8.6E-02	4.8E-02	4.8E-02	5.1E-02	4.9E-02	4.5E-02	4.2E-02	3.4E-02

SPECIFIC ABSORBED FRACTION OF PHOTON ENERGY IN kg^{-1} : RECOMMENDED VALUES FOR THE NEWBORN (3.4 kg)

SOURCE = THYROID

TARGET	ENERGY (MeV) 0.010	0.015	0.020	0.030	0.050	0.100	0.200	0.500	1.000	1.500	2.000	4.000
ADRENALS	0.0	9.4E-08	2.6E-04	1.0E-02	1.8E-02	1.7E-02	1.6E-02	1.4E-02	1.3E-02	1.2E-02	1.1E-02	9.6E-03
BRAIN	0.0	1.1E-04	3.7E-03	3.1E-02	3.9E-02	2.6E-02	2.6E-02	2.7E-02	2.5E-02	2.4E-02	2.3E-02	2.0E-02
BREASTS	0.0	6.9E-05	9.1E-03	4.1E-02	3.7E-02	3.3E-02	3.2E-02	3.4E-02	3.3E-02	3.2E-02	3.0E-02	2.5E-02
GALL BL WALL	0.0	2.8E-08	1.2E-04	6.1E-03	1.4E-02	1.1E-02	1.1E-02	1.1E-02	1.1E-02	1.0E-02	9.7E-03	8.0E-03
GI TRACT :												
LLI WALL	0.0	0.0	1.3E-06	4.6E-04	2.6E-03	3.3E-03	3.6E-03	3.9E-03	3.8E-03	3.7E-03	3.6E-03	3.0E-03
SI WALL	0.0	0.0	6.1E-06	1.7E-03	3.2E-03	4.3E-03	4.4E-03	5.1E-03	5.1E-03	4.9E-03	4.7E-03	4.5E-03
STOMACH WALL	0.0	1.3E-07	2.4E-04	1.3E-02	1.5E-02	1.3E-02	1.3E-02	1.3E-02	1.2E-02	1.1E-02	1.1E-02	8.9E-03
ULI WALL	0.0	2.2E-10	9.9E-06	1.6E-03	4.1E-03	6.3E-03	6.2E-03	6.1E-03	6.1E-03	5.9E-03	5.8E-03	4.8E-03
HEART WALL	8.0E-10	7.5E-04	1.7E-02	8.6E-02	8.0E-02	5.0E-02	4.5E-02	4.6E-02	4.9E-02	4.4E-02	3.9E-02	3.2E-02
KIDNEYS	0.0	3.0E-09	3.9E-05	3.7E-03	8.2E-03	8.5E-03	7.6E-03	8.4E-03	9.0E-03	8.4E-03	8.0E-03	6.4E-03
LIVER	0.0	2.4E-07	3.2E-04	1.1E-02	1.8E-02	1.4E-02	1.3E-02	1.3E-02	1.3E-02	1.3E-02	1.2E-02	1.0E-02
LUNGS	1.2E-07	3.1E-03	5.3E-02	1.3E-01	9.5E-02	4.9E-02	4.7E-02	5.0E-02	4.6E-02	4.3E-02	4.0E-02	3.1E-02
MUSCLE	1.3E-01	2.6E-01	3.1E-01	2.4E-01	1.1E-01	6.5E-02	6.6E-02	6.8E-02	6.4E-02	5.9E-02	5.5E-02	4.4E-02
OVARIES	0.0	0.0	9.8E-07	5.3E-04	3.1E-03	3.9E-03	4.1E-03	4.4E-03	4.3E-03	4.1E-03	4.0E-03	3.4E-03
PANCREAS	0.0	1.1E-07	2.8E-04	9.8E-03	1.2E-02	1.4E-02	1.4E-02	1.4E-02	1.3E-02	1.2E-02	1.2E-02	9.9E-03
SKELETON :												
ACTIVE MARROW	3.2E-06	1.1E-03	1.1E-02	3.8E-02	3.7E-02	2.6E-02	2.3E-02	2.3E-02	2.1E-02	2.0E-02	1.9E-02	1.6E-02
BONE SURFACES	1.4E-06	5.9E-03	6.5E-02	2.3E-01	2.0E-01	6.8E-02	3.5E-02	2.9E-02	2.7E-02	2.5E-02	2.4E-02	2.1E-02
SKIN	7.1E-07	2.0E-03	1.8E-02	4.5E-02	3.2E-02	2.0E-02	2.1E-02	2.2E-02	2.2E-02	2.0E-02	1.9E-02	1.9E-02
SPLEEN	0.0	3.7E-08	1.4E-04	1.0E-02	1.6E-02	1.5E-02	1.4E-02	1.3E-02	1.2E-02	1.1E-02	1.0E-02	8.3E-03
TESTES	0.0	0.0	1.9E-08	7.3E-05	9.4E-04	1.6E-03	2.0E-03	2.2E-03	2.2E-03	2.2E-03	2.2E-03	1.9E-03
THYMUS	1.1E-02	4.4E-01	9.6E-01	1.0E+00	4.7E-01	2.6E-01	2.6E-01	2.8E-01	2.5E-01	2.4E-01	2.4E-01	2.0E-01
THYROID	5.3E+02	2.8E+02	1.4E+02	4.9E+01	1.5E+01	8.7E+00	9.4E+00	1.0E+01	9.9E+00	9.0E+00	8.3E+00	6.8E+00
URINARY BL WALL	0.0	0.0	2.4E-07	2.5E-04	2.0E-03	2.8E-03	3.1E-03	3.4E-03	3.3E-03	3.2E-03	3.2E-03	2.7E-03
UTERUS	0.0	0.0	8.7E-07	5.0E-04	3.0E-03	3.8E-03	4.0E-03	4.3E-03	4.2E-03	4.0E-03	3.9E-03	3.3E-03
WHOLE BODY	2.8E-01	2.8E-01	2.7E-01	2.0E-01	1.0E-01	5.6E-02	5.5E-02	5.7E-02	5.4E-02	5.0E-02	4.7E-02	3.8E-02

SPECIFIC ABSORBED FRACTION OF PHOTON ENERGY IN kg^{-1} : RECOMMENDED VALUES FOR THE NEWBORN (3.4 kg)

SOURCE = URINARY BL CONT

TARGET	ENERGY (MeV) 0.010	0.015	0.020	0.030	0.050	0.100	0.200	0.500	1.000	1.500	2.000	4.000
ADRENALS	0.0	2.2E-07	3.9E-04	9.9E-03	1.6E-02	1.8E-02	1.6E-02	1.6E-02	1.6E-02	1.5E-02	1.4E-02	1.1E-02
BRAIN	0.0	0.0	6.1E-10	1.1E-05	1.7E-04	3.2E-04	4.4E-04	6.7E-04	8.8E-04	9.6E-04	1.0E-03	1.1E-03
BREASTS	0.0	1.0E-09	2.6E-05	2.8E-03	4.1E-03	5.8E-03	7.1E-03	7.7E-03	7.4E-03	7.1E-03	6.8E-03	6.0E-03
GALL BL WALL	0.0	9.7E-05	9.1E-03	4.8E-02	7.0E-02	4.2E-02	4.0E-02	3.6E-02	3.5E-02	3.5E-02	3.5E-02	2.6E-02
GI TRACT :												
LLI WALL	3.1E-03	2.1E-01	6.3E-01	7.9E-01	3.9E-01	2.1E-01	2.1E-01	2.1E-01	1.9E-01	1.7E-01	1.6E-01	1.4E-01
SI WALL	5.9E-06	2.2E-02	1.5E-01	3.3E-01	2.1E-01	1.2E-01	1.1E-01	1.1E-01	1.1E-01	1.0E-01	9.2E-02	6.5E-02
STOMACH WALL	0.0	3.1E-05	4.3E-03	2.7E-02	4.4E-02	3.1E-02	2.4E-02	2.7E-02	2.9E-02	2.6E-02	2.4E-02	2.0E-02
ULI WALL	8.6E-06	7.9E-03	9.3E-02	2.4E-01	1.7E-01	1.0E-01	9.5E-02	9.2E-02	7.5E-02	7.3E-02	7.3E-02	5.9E-02
HEART WALL	0.0	1.6E-08	8.3E-05	3.2E-03	7.8E-03	8.9E-03	8.2E-03	8.7E-03	8.6E-03	8.5E-03	8.4E-03	7.9E-03
KIDNEYS	0.0	4.8E-06	1.8E-03	1.8E-02	2.9E-02	2.5E-02	2.1E-02	2.2E-02	1.9E-02	1.8E-02	1.7E-02	1.7E-02
LIVER	0.0	2.4E-05	2.1E-03	2.7E-02	3.5E-02	2.4E-02	2.2E-02	2.4E-02	2.2E-02	2.0E-02	1.9E-02	1.6E-02
LUNGS	0.0	1.4E-08	6.7E-05	4.7E-03	6.7E-03	7.2E-03	6.6E-03	6.9E-03	7.7E-03	7.7E-03	7.5E-03	6.5E-03
MUSCLE	2.3E-02	1.1E-01	1.8E-01	1.8E-01	9.3E-02	5.5E-02	5.5E-02	5.7E-02	5.4E-02	4.9E-02	4.5E-02	3.7E-02
OVARIES	5.6E-05	9.9E-02	4.6E-01	6.8E-01	3.8E-01	2.0E-01	1.9E-01	2.0E-01	1.9E-01	1.7E-01	1.6E-01	1.3E-01
PANCREAS	0.0	2.6E-06	1.4E-03	2.3E-02	2.5E-02	2.5E-02	2.2E-02	2.1E-02	1.9E-02	1.8E-02	1.7E-02	1.5E-02
SKELETON :												
ACTIVE MARROW	1.4E-07	4.3E-04	7.1E-03	2.8E-02	2.7E-02	1.9E-02	1.9E-02	1.9E-02	1.8E-02	1.8E-02	1.8E-02	1.3E-02
BONE SURFACES	6.8E-08	2.4E-03	4.5E-02	2.0E-01	1.8E-01	6.3E-02	3.3E-02	2.8E-02	2.5E-02	2.6E-02	2.5E-02	1.9E-02
SKIN	4.1E-05	8.1E-03	3.0E-02	5.4E-02	3.6E-02	2.2E-02	2.3E-02	2.6E-02	2.5E-02	2.4E-02	2.2E-02	1.6E-02
SPLEEN	0.0	1.1E-06	8.2E-04	1.5E-02	1.9E-02	2.1E-02	2.0E-02	1.9E-02	1.8E-02	1.7E-02	1.6E-02	1.2E-02
TESTES	2.5E-04	1.6E-01	6.8E-01	9.0E-01	4.2E-01	2.3E-01	2.4E-01	2.7E-01	2.4E-01	2.1E-01	2.0E-01	1.8E-01
THYMUS	0.0	0.0	3.4E-06	9.4E-04	2.2E-03	2.9E-03	3.6E-03	4.6E-03	5.0E-03	4.9E-03	4.8E-03	4.1E-03
THYROID	0.0	0.0	2.2E-07	2.5E-04	2.0E-03	2.8E-03	3.1E-03	3.1E-03	3.0E-03	2.9E-03	2.9E-03	2.7E-03
URINARY BL WALL	2.0E+01	2.2E+01	1.7E+01	7.6E+00	2.6E+00	1.4E+00	1.5E+00	1.6E+00	1.5E+00	1.4E+00	1.3E+00	1.0E+00
UTERUS	6.2E-02	1.3E+00	2.5E+00	1.9E+00	8.2E-01	4.4E-01	4.5E-01	4.5E-01	4.3E-01	4.0E-01	3.7E-01	2.9E-01
WHOLE BODY	3.1E-02	9.4E-02	1.5E-01	1.5E-01	8.4E-02	4.7E-02	4.5E-02	4.7E-02	4.4E-02	4.1E-02	3.8E-02	3.0E-02

SPECIFIC ABSORBED FRACTION OF PHOTON ENERGY IN kg^{-1} : RECOMMENDED VALUES FOR THE NEWBORN (3.4 kg)

SOURCE = UTERUS

TARGET	ENERGY (MeV) 0.010	0.015	0.020	0.030	0.050	0.100	0.200	0.500	1.000	1.500	2.000	4.000
ADRENALS	0.0	8.2E-06	2.8E-03	3.2E-02	3.1E-02	2.9E-02	2.7E-02	2.4E-02	2.2E-02	2.1E-02	2.0E-02	1.8E-02
BRAIN	0.0	0.0	2.5E-09	2.3E-05	2.3E-04	3.1E-04	4.6E-04	8.0E-04	1.1E-03	1.2E-03	1.3E-03	1.4E-03
BREASTS	0.0	8.6E-09	8.0E-05	5.1E-03	1.2E-02	1.2E-02	1.1E-02	1.0E-02	9.9E-03	9.5E-03	9.3E-03	7.6E-03
GALL BL WALL	1.2E-09	2.0E-03	3.1E-02	1.7E-01	1.5E-01	7.3E-02	7.8E-02	7.3E-02	6.6E-02	7.3E-02	7.4E-02	4.3E-02
GI TRACT :												
LLI WALL	2.8E-04	1.1E-01	5.4E-01	8.0E-01	4.3E-01	2.2E-01	2.1E-01	2.4E-01	2.2E-01	1.9E-01	1.8E-01	1.4E-01
SI WALL	2.8E-02	7.4E-01	1.6E+00	1.3E+00	6.2E-01	3.4E-01	3.3E-01	3.4E-01	3.2E-01	2.9E-01	2.6E-01	2.2E-01
STOMACH WALL	0.0	4.1E-04	1.5E-02	6.8E-02	8.9E-02	5.4E-02	4.5E-02	4.3E-02	4.8E-02	4.6E-02	4.2E-02	3.1E-02
ULI WALL	4.6E-04	9.3E-02	4.3E-01	7.0E-01	3.7E-01	2.0E-01	1.9E-01	1.8E-01	1.8E-01	1.6E-01	1.5E-01	1.1E-01
HEART WALL	0.0	2.4E-07	3.5E-04	8.9E-03	1.4E-02	1.4E-02	1.3E-02	1.5E-02	1.4E-02	1.4E-02	1.3E-02	1.1E-02
KIDNEYS	0.0	2.5E-04	9.5E-03	6.5E-02	7.3E-02	4.7E-02	4.7E-02	4.4E-02	4.0E-02	3.7E-02	3.5E-02	3.1E-02
LIVER	0.0	2.8E-04	8.9E-03	6.4E-02	6.4E-02	4.0E-02	3.8E-02	4.0E-02	3.5E-02	3.5E-02	3.3E-02	2.6E-02
LUNGS	0.0	2.7E-07	3.4E-04	6.9E-03	1.6E-02	1.0E-02	1.1E-02	1.3E-02	1.2E-02	1.1E-02	1.0E-02	9.2E-03
MUSCLE	8.3E-02	1.8E-01	2.3E-01	2.0E-01	1.1E-01	6.2E-02	6.2E-02	6.4E-02	6.0E-02	5.5E-02	5.1E-02	4.0E-02
OVARIES	3.7E-02	1.5E+00	3.5E+00	2.5E+00	1.1E+00	5.6E-01	5.6E-01	6.0E-01	5.7E-01	5.1E-01	4.6E-01	3.3E-01
PANCREAS	0.0	6.9E-05	8.8E-03	5.0E-02	7.4E-02	4.4E-02	3.5E-02	3.3E-02	3.1E-02	3.1E-02	3.0E-02	2.4E-02
SKELETON :												
ACTIVE MARROW	2.2E-07	1.4E-03	1.7E-02	4.5E-02	4.0E-02	2.8E-02	2.6E-02	2.6E-02	2.5E-02	2.2E-02	2.0E-02	1.8E-02
BONE SURFACES	1.9E-07	7.2E-03	9.2E-02	2.9E-01	2.4E-01	8.0E-02	4.1E-02	3.4E-02	3.3E-02	2.9E-02	2.7E-02	2.3E-02
SKIN	4.5E-08	8.2E-04	9.6E-03	3.5E-02	3.0E-02	1.9E-02	2.0E-02	2.3E-02	2.3E-02	2.2E-02	2.1E-02	1.6E-02
SPLEEN	0.0	2.9E-05	5.0E-03	4.8E-02	4.5E-02	4.1E-02	3.7E-02	3.2E-02	2.9E-02	2.7E-02	2.5E-02	2.2E-02
THYMUS	0.0	3.4E-10	1.2E-05	1.9E-03	2.8E-03	4.4E-03	5.9E-03	6.8E-03	6.6E-03	6.3E-03	6.1E-03	5.1E-03
THYROID	0.0	0.0	8.7E-07	5.0E-04	3.0E-03	3.8E-03	4.0E-03	4.3E-03	4.2E-03	4.0E-03	3.9E-03	3.3E-03
URINARY BL WALL	2.7E-01	2.0E+00	2.9E+00	2.0E+00	8.5E-01	4.6E-01	4.9E-01	4.5E-01	4.9E-01	4.1E-01	3.6E-01	3.2E-01
UTERUS	2.1E+02	1.3E+02	7.2E+01	2.6E+01	8.1E+00	4.6E+00	5.0E+00	5.4E+00	5.2E+00	4.8E+00	4.4E+00	3.4E+00
WHOLE BODY	2.8E-01	2.8E-01	2.7E-01	2.2E-01	1.1E-01	6.3E-02	6.1E-02	6.3E-02	5.9E-02	5.5E-02	5.0E-02	4.0E-02

SPECIFIC ABSORBED FRACTION OF PHOTON ENERGY IN kg^{-1} : RECOMMENDED VALUES FOR THE NEWBORN (3.4 kg)

SOURCE = WHOLE BODY

TARGET	ENERGY (MeV) 0.010	0.015	0.020	0.030	0.050	0.100	0.200	0.500	1.000	1.500	2.000	4.000
ADRENALS	2.8E-01	2.8E-01	2.5E-01	1.8E-01	9.3E-02	5.4E-02	5.5E-02	5.7E-02	5.3E-02	5.0E-02	4.6E-02	3.7E-02
BRAIN	2.8E-01	2.7E-01	2.4E-01	1.5E-01	7.0E-02	4.1E-02	4.3E-02	4.5E-02	4.3E-02	4.0E-02	3.7E-02	3.0E-02
BREASTS	2.3E-01	1.7E-01	1.3E-01	8.5E-02	4.4E-02	2.8E-02	3.0E-02	3.4E-02	3.3E-02	3.1E-02	2.9E-02	2.4E-02
GALL BL WALL	2.8E-01	2.8E-01	2.6E-01	1.9E-01	1.0E-01	6.0E-02	6.1E-02	6.4E-02	6.0E-02	5.5E-02	5.2E-02	4.2E-02
GI TRACT :												
LLI WALL	2.8E-01	2.8E-01	2.6E-01	1.8E-01	9.4E-02	5.5E-02	5.6E-02	5.9E-02	5.5E-02	5.1E-02	4.7E-02	3.8E-02
SI WALL	2.8E-01	2.8E-01	2.6E-01	1.9E-01	1.0E-01	5.9E-02	6.1E-02	6.2E-02	5.8E-02	5.4E-02	5.0E-02	4.1E-02
STOMACH WALL	2.8E-01	2.8E-01	2.5E-01	1.7E-01	8.8E-02	5.3E-02	5.5E-02	5.7E-02	5.3E-02	5.0E-02	4.6E-02	3.7E-02
ULI WALL	2.8E-01	2.8E-01	2.6E-01	1.8E-01	9.5E-02	5.7E-02	5.9E-02	6.1E-02	5.7E-02	5.3E-02	4.9E-02	3.9E-02
HEART WALL	2.8E-01	2.8E-01	2.5E-01	1.7E-01	8.7E-02	5.1E-02	5.3E-02	5.6E-02	5.3E-02	4.9E-02	4.5E-02	3.7E-02
KIDNEYS	2.8E-01	2.7E-01	2.4E-01	1.6E-01	8.6E-02	5.1E-02	5.2E-02	5.5E-02	5.1E-02	4.8E-02	4.5E-02	3.6E-02
LIVER	2.8E-01	2.7E-01	2.5E-01	1.7E-01	8.6E-02	5.1E-02	5.3E-02	5.6E-02	5.3E-02	4.9E-02	4.5E-02	3.7E-02
LUNGS	2.9E-01	2.9E-01	2.6E-01	1.7E-01	7.9E-02	4.4E-02	4.6E-02	4.8E-02	4.5E-02	4.2E-02	3.9E-02	3.1E-02
MUSCLE	2.7E-01	2.4E-01	2.1E-01	1.4E-01	7.0E-02	4.3E-02	4.5E-02	4.7E-02	4.5E-02	4.1E-02	3.8E-02	3.1E-02
OVARIES	2.8E-01	2.8E-01	2.6E-01	1.9E-01	1.0E-01	6.0E-02	6.0E-02	6.2E-02	5.8E-02	5.4E-02	5.0E-02	4.0E-02
PANCREAS	2.8E-01	2.8E-01	2.6E-01	1.9E-01	1.0E-01	6.0E-02	6.1E-02	6.3E-02	5.9E-02	5.4E-02	5.0E-02	4.1E-02
SKELETON :												
ACTIVE MARROW	9.7E-02	1.1E-01	1.2E-01	1.0E-01	6.4E-02	4.2E-02	4.1E-02	4.3E-02	4.0E-02	3.7E-02	3.4E-02	2.8E-02
BONE SURFACES	4.8E-01	6.0E-01	6.8E-01	6.2E-01	3.2E-01	1.0E-01	5.6E-02	5.3E-02	5.1E-02	4.6E-02	4.3E-02	3.6E-02
SKIN	1.9E-01	1.6E-01	1.3E-01	8.4E-02	4.3E-02	2.6E-02	2.9E-02	3.2E-02	3.1E-02	2.9E-02	2.7E-02	2.2E-02
SPLEEN	2.8E-01	2.8E-01	2.5E-01	1.7E-01	8.7E-02	5.1E-02	5.3E-02	5.5E-02	5.2E-02	4.8E-02	4.5E-02	3.7E-02
TESTES	2.7E-01	2.4E-01	2.0E-01	1.3E-01	6.4E-02	3.9E-02	4.1E-02	4.5E-02	4.3E-02	4.0E-02	3.7E-02	3.0E-02
THYMUS	2.8E-01	2.7E-01	2.4E-01	1.6E-01	7.7E-02	4.6E-02	4.8E-02	5.1E-02	4.9E-02	4.5E-02	4.2E-02	3.4E-02
THYROID	2.8E-01	2.8E-01	2.6E-01	1.8E-01	9.0E-02	5.3E-02	5.5E-02	5.7E-02	5.4E-02	5.0E-02	4.7E-02	3.8E-02
URINARY BL WALL	2.8E-01	2.8E-01	2.5E-01	1.7E-01	8.6E-02	5.1E-02	5.3E-02	5.6E-02	5.2E-02	4.9E-02	4.5E-02	3.6E-02
UTERUS	2.8E-01	2.8E-01	2.6E-01	1.9E-01	1.0E-01	6.0E-02	6.1E-02	6.3E-02	5.9E-02	5.5E-02	5.0E-02	4.0E-02
WHOLE BODY	2.7E-01	2.6E-01	2.3E-01	1.7E-01	8.1E-02	4.5E-02	4.5E-02	4.8E-02	4.5E-02	4.2E-02	3.9E-02	3.2E-02

APPENDIX B

TABLES OF SPECIFIC ABSORBED FRACTIONS—

RAW DATA AND RECOMMENDED VALUES

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