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人体組織と組織等価材の減弱係数

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Pu肺モニタ校正のための精密ファントムの開発は1988年に終了した。精密ファントムの製作には，筋肉等価材，脂肪等価材その他多くの種類の人体組織等価材が新たに開発された。

その開発のために，はじめに，ＩＣＲＰ Reference Manデータに記載されている人体組織と臓器の減弱係数を，８keV-１MeV のエネルギー範囲の光子に対して算出した。次に，同じエネルギー範囲で，開発した軟組織等価材（ＳＺ－シリーズ）と骨等価材（ＥＺ－シリーズ）の減弱係数も計算した。さらに，比較のため，ファントム材として既に使われる各種プラスチック材，ＩＣＲＵ球ファントム，Griffith ファントムなどの減弱係数も同様に算出した。

本報告書は，これらの算出した質量および線減弱係数値を，一覧表にまとめたものである。

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Attenuation Coefficients of Human Tissues and Tissue Substitutes

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Development of realistic torso phantom for the calibration of Pu chest counting system was completed in 1987. In order to manufacture the phantom, many human tissue substitutes (tissue equivalent materials) were newly developed.

For the development, firstly, attenuation coefficients for 8 keV-1MeV photons were calculated for human tissues and organs listed in ICRP Reference Man document. Attenuation coefficients of the produced soft tissue substitutes (SZ-series) and bone substitutes (EZ-series) were also calculated in the same energy range. Moreover, for comparison, the calculations of attenuation coefficients for the existing plastics used as phantom materials, ICRU spherical phantom, Griffith phantom and others were carried out in the same way.

In this report, the calculated mass and linear attenuation coefficients of these materials, and human tissues and organs are compiled.

Keywords: Phantom, Phantom Materials, Tissue Substitutes, Tissue Equivalent Materials, Cross Sections, Human Tissues

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1. 序

Pu 肺モニタの校正に用いる精密ファントムの開発は、素材の開発・改良と平行しながら３体製作し、1987年と 1988 年に論文[1),2)] を発表して最終的に終了した。

ファントムの製作には人体組織等価材(tissue substitute) の開発が最も重要であるが、そのためには、まず、光子に対する人体組織と臓器の減弱係数を、必要なエネルギー領域で算出しておかなければならない。この組織と臓器の減弱係数を、低エネルギー範囲 8 keV－1 MeV で算出した。開発したそれぞれの組織等価材は、対応する人体組織・臓器の減弱係数に等しくなるように作られているが、これらの組織等価材の減弱係数もまた同じエネルギー範囲で算出した。製作したすべての組織等価材について、光子透過率を測定し、計算により求めた透過率と比較し検討してきた。この実験には、^{93m}Nb(16.6 keV KX-ray), ^{241}Am (平均 17.2 keV LX-rays, 60 keVγ-ray) 、および^{239}Pu (平均 17.2 keV LX-rays)線源を用い、低エネルギー領域での透過率を求めた。また、X線 CT を用いて CT 値を求め線減弱係数を算出した。これらの実験から求めた透過率は計算による透過率とよく一致し、優れた特性をもち、ファントムに使用して問題のないことは発表論文に示す通りである（このファントムは ICRU-Report[3)] 掲載されており、また、IAEAが購入し、アジア各国の肺モニタの校正実験に使われることが予定されている）。

本報告書は、筆者が計算した最終ファントムに使用した各種組織等価材および人体組織と臓器の減弱係数を一覧表にまとめたものである。また、比較、参考のために、現在でも組織等価材として広く使われている各種プラスチック材、水、放射線医学で現在も使われている Mix-D[5)]、その他に、ICRU 球ファントム[3),7)]、 Griffith ファントム[3),8)]などの減弱係数も算出してあるのでこゝに付した。なお、水溶液軟組織等価材の開発[12)] もおこなっているが、本報告書では省略する。

2. 減弱係数の算出

組織等価材の減弱係数の算出には、その等価材の元素組成が明確であり、必要なエネルギー点で、各構成元素の断面積が求められていなければならない。　人体組織についても同様である。

1) 一般に、物質を構成している i番目の元素と光子との相互作用の断面積をσ_i (E)(cm^2 /g) とするとき、n 種類の元素から構成されている物質の断面積はσ(E) は、

$$\sigma(E) = \sum_{i=1}^{n} \omega_i \sigma_i (E) \quad \cdots\cdots\cdots\cdots \quad (1)$$

と与えられる。ここに、ω_i はi 番目の元素の重量割合で、

$$\sum_{i=1}^{n} \omega_i = 1 \quad \cdots\cdots\cdots\cdots\cdots\cdots \quad (2)$$

である。

その物質の密度をρ(g/cm^3) とするとき、$\mu = \rho\sigma$(E) を線減弱係数(cm^{-1})と呼び、μ/ρをまた質量減弱係数(cm^2 /g)とも呼ぶ。

2) 組織等価材の各元素の断面積σ_i (E) には、McMaster[3]の編纂したX線断面積表を用い、計算は 8 keV -1 MeV のエネルギー範囲と Pu LX線(13.6, 17.2 および 20.2 keV)、および^{93m}Nb (16.6 keV) など必要なエネルギー点での減弱係数を求めた。 1 MeV以下では電子対創生は生じないので、弾性散乱減弱係数 (coherent scattering attenuation coefficient)μ_{ch}(E),光電減弱係数 (photoelectric absorption attenuation coefficient) μ_p (E) およびコンプトン散乱減弱係数 (Compton scattering attenuation coefficient) μ_c (E) を求めた。

3) Pu LX 線、Nbの KX 線、その他断面積表に記載されていない断面積は内挿によって求めた。一部の元素では、 8 keV － 1 MeVの範囲にKまたはL吸収端が含まれるので、内挿関数はこの広いエネルギー領域を一つの式でカバーするのではなく、断面積表の隣り合う３～４点を含

む狭い範囲に分割して使うことにし、

$$\sigma(E) = aE^{b} \quad \cdots\cdots\cdots\cdots\cdots\cdots \quad (3)$$

と簡単な一項のべき関数とした。

(3) 式の係数 a, b は、人体組織を構成する 48 の各元素について最小二乗法で求めたが、すべての元素について、光電減弱係数に対する相関係数は r＝0.9999以上であり、コンプトン散乱減弱係数に対しては、水素で r＝ 0.7667 であったが、それ以外はすべて r＝0.99以上となった。しかし、光電吸収に比べ、コンプトン散乱の影響は小さいので、ファントム設計上まったく問題のない精度である。

4) 以上のように、まず人体組織を構成する 48 元素について必要な断面積を(3) 式で算出し、それらの断面積を用いて人体組織および対応する組織等価材の質量および線減弱係数を算出した。なお、筋肉、脂肪その他各臓器の元素組成比は、ICRPの Reference Man[5] データを用いて求めた。

5) 表には、Photo(μ_P (E))、 Compton (μ_C (E))、Coherent (μ_{Ch}(E))、Photo + Compton (μ_P (E) + μ_C (E))、および total (μ_{Ch}(E) + μ_P (E) + μ_C (E))の数値を示した。

3. 原研ファントム人体組織等価材の減弱係数

精密ファントム用の組織等価材は、人体主要構成元素である水素、炭素、窒素、酸素から成るベース材に、ベース材より高い実効原子番号をもつ化合物の添加剤を、人体組織・臓器の減弱係数にほぼ等しくなるように、最適量を加えて作られている。

1) 軟組織等価材のベース材には、可塑性の優れたポリウレタンを用いているが、このポリウレタンはA液（ポリイソシアネート）とB液（ポリオール）を混合して作られており、その混合割合は0.7 : 1.0 である。添加剤には、密度はベース材よりやや高い液体のトリスクロロエチルホスヘイトを採用した。　肺材は、トリスクロロエチルホスヘイトを添加した硬質ポリウレタンを発泡化して用いた。
2) 骨格材には、高硬度エポキシ樹脂をベース材に採用し、密度の高い炭酸カルシウムを添加剤に用いた。

これらの素材を用いて製作した原研ファントムは第１号から第３号まであり、第１号と第２号の骨格は人骨を使用したが、その後人工骨を開発し、第３号およびそれ以降製作されたファントムはすべて人工骨を用いている。

3) 開発した組織等価材は各ファントムごとに若干の改良を加え、その名称を変更（例えば第２号ファントムの筋肉等価材はSZ-139[1]であるが、第３号ではSZ-208[2]と改称）しているが、本報告では、主として最終の第３号ファントムの組織等価材を示した。
4) Table 1 にベース材と添加剤の名称と物理データ示し、Table 2 には各組織等価材の名称、対応する人体組織名、密度および元素組成を示す。これらの各素材の減弱係数値は、前章に述べた計算法に従って算出された。
5) Table 2 に示した各組織等価材の元素組成は、製造ごとに若干の相違を生じるので代表的組成（nominal composition)である。また、実際に測定した密度は、A、B液と添加剤量の正確さ、環境条件（温度、湿度など）に微妙に依存して数%は変化するため、線減弱係数値も若干変化している。特に、肺材は発泡密度の正確なコントロールは容易

ではなく、実際には製品ごとにある程度のバラツキが生じるのは避けられない。表に示した値は設計目標値である。

従って、これらの組織等価材を低エネルギーで精密な実験に使用する場合は、前もって実験から透過率を求め、適切に選択するか、または計算値からのズレを明確にし必要に応じて補正することが大切である。

肺の密度は、実際に空気を吸入したときの平均密度であり、空気吸入量により大きく変化するので、肺材の密度は0.26 － 0.32 g/cm^3 の範囲であればよいので、線減弱係数値もその程度の変動範囲で許される。

なお、計算と実験から求めた透過率曲線の例、X線 CT から求めた線減弱係数値、添加剤の最適量決定法の詳細とファントムの性能については論文[1),2)] を参照されたい。

Table 1 ベース材と添加剤

名称		実測密度 (g/cm³)	元素組成（w%）または化学式
ベース材	ＳＺ－５０*	1.059	H=8.73, C=72.27 N=4.14, O=14.86
	L_b －１**	0.280	H=6.20, C=60.05 N=5.65, O=28.15
	ＥＺ－１００***	1.162	H=7.74, C=71.99 N=1.79, O=18.49
添加剤	トリス・クロロエチル・ホスヘイト'	1.429	$(C_2H_4ClO)_3PO$
	炭酸カルシウム++	2.720	$CaCO_3$

密度は製品ごとに若干の幅がある。上記の値は１例である。

* ポリウレタン、軟組織用ベース材

** 硬質ポリウレタンを発泡化したもの、肺組織用ベース材

*** エポキシ樹脂、骨材用ベース材

' Tris chloroethyl phosphate、軟組織用添加剤

'' 骨材用添加剤

Table 2 主要な人体組織等価材

組織等価材の名称	対応する人体組織	実測密度 (g/cm^3)	元素組成 (w%)
ＳＺ－２０７	平均全軟組織*	1.067	H=8.43, C=69.22 N=3.87, O=15.35 P=0.71, Cl=2.42
ＳＺ－２０８	筋　肉	1.075	H=8.33, C=68.17 N=3.78, O=15.51 P=0.94, Cl=3.27
ＳＺ－２２０	筋肉＋10% 脂肪	1.069	H=8.38, C=68.73 N=3.84, O=15.43 P=0.82 Cl=2.81
ＳＺ－１６０	軟　骨	1.117	H=8.31, C=67.90 N=3.76, O=15.56 P=1.01 Cl=3.46
Ｌ－１	肺	0.280	H=6.12, C=58.66 N=5.38, O=29.92 P=0.43 Cl=1.49
ＥＺ－１２９	骨　格	1.623	H=5.46, C=54.35 N=1.26, O=29.40 Ca=11.77

* ICRP Publication 23 に示される Total soft tissueを指し、
（筋肉＋23% 脂肪）組織とほぼ等価な減弱係数をもつ。

4. 既存の人体組織等価材の減弱係数

精密な人体組織等価材開発に先立ち、これまでファントムに使われてきた数多くの素材を、さまざまな視点から再検討し、さらにそれらの元素組成を調べ減弱係数を算出し検討を行った。

1) 本報告書には、開発した SZ, EZ シリーズファントム材と人体組織・臓器の減弱係数値の他に、比較参考のためにTable 3 に示すように、現在も使われることが多いプラスチック材を選び、その減弱係数を示した。さらに、水、Mix-D [6]、ICRU球ファントム[3)7)]とGriffith[3)8)]ファントムの人体組織等価材などの減弱係数も算出してあるので、ここに掲げることにした。

2) 市販のプラスチック材は、その製造過程において、微量に他の化合物（着色剤、硬化剤その他の添加剤、不純物など）を含むものもあり、また、密度も軟質のものから硬質のものまでいろいろ異なっている。この表では、不純物を含まず、密度は平均的な値で計算してある。従って、市販のプラスチック材を、低エネルギー領域で、精密な実験に使用する場合には、密度を正確に測定したり、透過率を正確に実測したりして、線減弱係数を修正し、より正確に決定しておくことが大切である。

Table 3　ファントム用プラスチック材と
既存ファントム材の元素組成

組織等価材の名称	密　度 g/cm^3	単体量化学式または 元素組成(w%)
ルサイト	1.18	$CH_2=C(CH_3)COOCH_3$
アクリル	0.97	$CH_2=CHCOOCH_2$
ポリエチレン	0.94	$CH_2=CH_2$
ポリ塩化ビニル	1.40	$CHCl=CH_2$
ポリスチレン	1.05	$C_6H_5CH=CH_2$
ポリプロピレン	0.91	$CH_3-CH=CH_2$
パラフィン	0.93	$CH_2-CH_2-CH_2$
水	1.00	H_2O
Ｍｉｘ－Ｄ	0.98	H=13.11, C=78.10, O=3.50, Mg=3.86, Ti=1.44
ICRU球ファントム	1.00	H=10.1, C=11.1, N=2.6, O=76.2
Griffith-phantom		
* muscle	1.09	H=9.03, C=61.9, N=3.00, O=24.4, Ca=1.72
* 50% muscle + 50% adipose	1.08	H=9.24, C=62.8, N=3.06, O=23.8, Ca=0.84
* cartilage	1.10	H=8.89, C=61.1, N=2.95, O=24.7, Ca=2.32
* bone	1.27	H=6.37, C=47.2, N=2.11, O=31.3, Ca=13.0

＊ポリウレタンとエポキシ樹脂は Table 1の SZ-50, EZ-100と同じ。

5. 人体組織・臓器の減弱係数

各種人体組織等価材は、指定するエネルギーで、それぞれ対応する人体組織または臓器の減弱係数に等しくなるように作られるため、組織等価材開発に先立ち人体組織と臓器の減弱係数を算出した。

1) 本報告書に示す減弱係数の算出には、組織や臓器の元素組成として、ICRP Reference Man[5]のデータを用いた（人体構成元素は最大 48 であり、組織・臓器ごとに各元素重量が示されている。Table 4 参照）。この文献に記載のない組織では適時他の文献を使用した。

2) ICRPデータの元素重量分析値はすべて緒外国でのデータであり、体格、食生活の異なる日本人についての分析データはないので、日本人に適用した場合の誤差については論じられない。

3) 計算した組織・臓器は、全軟組織、筋肉、脂肪、肝臓、腎臓、肺、乳房、甲状腺、皮膚、睾丸、ひ臓、軟骨、肋骨、骨格および（筋肉＋X%脂肪）組織であるが、本報告書には Table 4に示す組織・臓器および乳房と肋骨、それに（筋肉＋X%脂肪）組織の各減弱係数を示した。

＊全軟組織(total soft tissue) とは、骨格を除く全組織の平均で、（筋肉＋23% 脂肪）組織とほぼ同じ減弱係数をもつ。

＊骨格とは、皮質骨・骨髄・軟骨などすべての骨成分の平均である。

＊乳房の元素組成は文献 8) から、H: 11.7, C: 38.04, O: 50.26 w%、密度 0.96 として計算した。

＊肋骨の元素組成としては、文献 10)に示されている値として、H: 7,03, C: 13.79, N: 3.72, O: 59.52, Na: 0.07, Mg: 0.11, P: 4.85, S: 0.41, K: 0.16, Ca: 10.33 w% を使用した。 密度は1.27である。減弱係数値は骨格と大きな違いはない。

4) （筋肉＋x % 脂肪）組織（X=5-70）の減弱係数は、各個人の皮下脂肪割合を補正のための必要性から計算したもので、必ずしも現実にある組織ではない。

Table 4　人体組織・臓器の密度と元素組成

人体組織・臓器の密度(g/cm³) と元素重量(g)

	全軟組織	筋　肉	脂　肪	肝　臓	腎　臓	肺	甲状腺	軟　骨	骨　格
密度	1.02	1.04	0.92	1.05	1.05	0.28	1.02	1.10	1.44
H	6.8E+3	2.8E+3	1.8E+3	1.8E+2	3.2E+1	9.9E+1	2.0E+0	1.1E+2	7.2E+2
Li	6.7E-4	1.7E-4	0	5.1E-5	3.0E-6	5.0E-5	3.2E-7	0	0
Be	2.7E-5	4.5E-6	0	7.9E-7	2.4E-7	7.3E-6	0	0	9.5E-6
B	1.4E-2	8.1E-3	1.1E-3	1.6E-4	9.9E-5	1.3E-4	2.2E-6	0	7.4E-3
C	1.4E+4	3.0E+3	9.6E+3	2.6E+2	4.0E+1	1.0E+2	2.1E+0	1.1E+2	2.5E+3
N	1.5E+3	7.7E+2	1.2E+2	5.1E+1	8.5E+0	2.8E+1	4.4E-1	2.9E+1	3.0E+2
O	3.8E+4	2.1E+4	3.5E+3	1.2E+3	2.3E+2	7.4E+2	14.0E+0	8.0E+2	4.7E+3
F	2.9E-2	1.5E-2	0	2.5E-3	7.1E-4	2.1E-3	8.0E-5	0	2.5E+0
Na	6.8E+1	2.1E+1	7.6E+0	1.8E+0	6.2E-1	1.8E+0	4.4E-2	6.0E+0	3.2E+1
Mg	7.8E+0	5.3E+0	3.0E-1	3.1E-1	4.0E-2	7.1E-2	2.0E-3	0	1.1E+1
Al	4.0E-2	5.6E-3	5.2E-3	1.2E-3	8.4E-5	1.2E-2	1.7E-4	7.7E-4	2.1E-2
P	8.0E+1	5.0E+1	2.4E+0	4.7E+0	5.0E-1	7.8E-1	1.5E-2	0	7.0E+2
S	1.2E+2	6.7E+1	1.1E+1	5.2E+0	0	2.2E+0	0	6.6E+0	1.7E+1
Cl	8.1E+1	2.2E+1	1.8E+1	3.6E+0	7.4E-1	2.6E+0	3.4E-2	2.6E+0	1.4E+1
K	1.2E+2	8.4E+1	4.8E+0	4.5E+0	5.9E-1	1.9E+0	2.4E-2	0	1.5E+1
Ca	1.4E+1	8.7E-1	3.4E-1	9.0E-2	2.9E-2	8.7E-2	7.0E-3	0	1.0E+3
Ti	9.0E-3	1.7E-3	4.7E-4	1.2E-4	1.7E-5	2.4E-3	1.4E-6	2.0E-4	0
V	1.8E-2	3.4E-4	2.2E-2	2.3E-5	3.4E-6	1.3E-5	2.2E-7	1.2E-4	0
Cr	1.8E-3	3.4E-4	3.2E-4	1.6E-5	3.1E-6	9.2E-5	2.7E-7	5.5E-5	4.8E-3
Mn	7.2E-3	1.5-3	5.0E-4	2.5E-3	2.8E-4	1.2E-4	4.0E-6	2.2E-4	5.2E-3
Fe	3.3E-0	1.1E-0	3.6E-1	3.2E-1	2.3E-2	3.6E-1	1.1E-3	0	8.1E-1
Co	1.2E-3	2.0E-4	3.6E-4	1.1E-4	4.0E-6	2.0E-5	2.2E-7	6.5E-5	2.8E-4
Ni	5.3E-3	1.7E-3	5.2E-4	1.2E-4	1.7E-5	4.7E-5	1.2E-6	2.3E-4	5.0E-3
Cu	6.5E-2	2.5E-2	3.6E-3	1.2E-2	9.0E-4	1.2E-3	2.2E-5	7.7E-4	7.2E-3
Zn	1.8E-0	1.5E-0	2.7E-2	8.5E-2	1.5E-2	1.1E-2	6.2E-4	1.1E-2	4.8E-1
Ga	0	0	0	0	0	2.6E-7	0	0	0
As	1.8E-2	0	0	1.8E-4	9.3E-6	2.5E-4	0	0	1.0E-4
Se	1.3E-2	5.0E-3	0	1.2E-3	2.9E-5	1.8E-4	0	0	0

Br	1.7E-1	1.2E-1	6.4E-3	4.7E-3	1.7E-3	4.7E-3	4.0E-4	5.5E-4	2.8E-2
Rb	4.7E-1	1.7E-1	0	5.5E-2	2.7E-3	9.2E-3	1.2E-4	0	2.1E-1
Sr	3.3E-3	4.2E-4	3.7E-4	3.2E-5	1.8E-5	5.7E-5	2.6E-6	7.2E-4	3.2E-1
Y	0	0	0	1.6E-3	1.0E-4	0	8.7E-5	0	0
Zr	4.2E-1	7.3E-2	2.8E-1	1.1E-2	8.4E-4	0	0	0	0
Nb	1.1E-1	0	2.6E-2	8.3E-3	1.5E-4	0	0	0	0
Mo	4.5E-3	1.3E-3	8.8E-5	1.8E-3	1.1E-5	3.1E-5	9.0E-7	6.0E-6	4.8E-3
Ag	7.9E-4	3.4E-5	2.0E-5	2.0E-5	3.4E-7	7.6E-7	2.7E-8	0	0
Cd	3.8E-2	1.7E-2	7.0E-4	4.0E-3	9.9E-3	3.5E-4	1.4E-5	1.4E-4	1.2E-2
Sn	5.8E-3	1.7E-3	7.0E-4	5.8E-4	5.9E-5	2.8E-4	3.4E-6	1.5E-4	1.2E-2
Sb	5.9E-3	0	0	3.6E-4	9.3E-5	6.0E-5	0	0	2.0E-3
Te	8.2E-3	2.7E-5	0	5.9E-4	1.2E-4	5.2E-5	0	0	0
I	0	3.0E-4	0	3.4E-4	0	0	1.2E-2	0	0
Cs	1.4E-3	5.7E-4	0	2.0E-5	2.3E-6	6.2E-6	1.5E-7	0	1.6E-4
Ba	1.8E-3	1.4E-4	4.5E-4	5.8E-6	4.7E-6	1.6E-4	1.6E-6	4.4E-5	2.0E-2
Au	5.0E-3	3.4E-3	1.7E-4	2.3E-4	3.4E-5	6.3E-5	2.4E-6	1.4E-4	4.8E-3
Hg	1.3E-2	4.2E-3	4.5E-3	5.4E-4	8.7E-4	5.8E-4	0	0	0
Pb	1.1E-2	1.7E-3	6.0E-4	3.1E-3	3.4E-4	3.9E-4	2.4E-6	5.2E-4	1.1E-1
Bi	2.3E-4	6.7E-4	6.0E-5	4.7E-5	7.4E-6	1.8E-5	4.7E-7	1.4E-4	0
U	3.1E-5	5.3E-6	9.0E-6	4.5E-7	7.0E-6	1.0E-6	0	0	5.9E-5

(ICRP Publication 23, Reference man Data より引用)

6. 減弱係数の精度

1) 人体組織と組織等価材について算出されたすべての減弱係数の正しさは、第一に、すべて元素組成比の正しさと密度の測定精度に依存し、第二に使用した元素断面積の精度に依存し、第三には、内挿を行った部分はその精度に依存する。

2) 元素断面積は、どのデータを使うかによってすなわち発表者によって数値が若干異なっているので、計算された減弱係数も当然異なった値になる。特に低エネルギーでは断面積精度が低下するので注意が必要である。例えば、Radiological Health Handbook[11] に掲載されている水の 10, 100, 1000 keVに対する全減弱係数は、それぞれ、 5.18, 0.171, 0.0707 cm^2 /gであり、筆者の計算値（34頁参照）より、それぞれ 2%, 0.14%, 0.08% 程大きい。これは元素断面積の違いに由来している。しかし、最も大きく問題となるのは、人体組織・臓器の密度と元素組成の正確さである。この密度と元素組成は、研究者により、発表年度により、若干異なった値になっているので、どの数値を使うかによって減弱係数も当然異なった値になる。例えば、筋肉の密度は1.04から1.07まで、文献によってかなり異なっている。

3) どの数値が最も正しいか、という比較は必ずしも意味があるとはいえない。水、ビーフなど動物の組織の密度を測定し、透過率曲線を実験から正確に求めて、線減弱係数を算出し、それと比較することは正しさの目安にはなる（論文[1),2)] 参照）。

筆者は、人体組織や素材の線減弱係数をこれまでに何度か計算しているが、発表時期により若干異なっている。それは上に述べた理由で、元素組成や密度の異なった数値を用いたからである。特に密度の違いが大きい。本報告書では、一部の例外を除きICRP Reference Man[5)]のデータに統一した計算結果を示してある。

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付録1　原研ファントム人体組織等価材減弱係数表

BASE MATERIAL of Soft Tissue: SZ-50

	Energy (keV)	Photo	Compton	Coherent	Photo + Compton	Total
	8.0	4.72468E+00	1.45489E-01	2.26589E-01	4.87017E+00	5.09686E+00
	10.0	2.28542E+00	1.53235E-01	1.72899E-01	2.43866E+00	2.61156E+00
	13.6	8.29399E-01	1.63972E-01	1.12353E-01	9.93371E-01	1.10572E+00
	15.0	6.02117E-01	1.69223E-01	1.02910E-01	7.71340E-01	8.74250E-01
	16.6	4.29623E-01	1.70883E-01	8.51476E-02	6.00506E-01	6.85653E-01
MAC	17.2	3.82146E-01	1.72204E-01	8.10363E-02	5.54349E-01	6.35386E-01
	20.0	2.31896E-01	1.76560E-01	6.81056E-02	4.08456E-01	4.76562E-01
	20.2	2.24821E-01	1.78069E-01	6.47893E-02	4.02890E-01	4.67679E-01
	30.0	6.01651E-02	1.80979E-01	3.56103E-02	2.41144E-01	2.76754E-01
	40.0	2.31201E-02	1.80233E-01	2.16982E-02	2.03353E-01	2.25052E-01
	50.0	1.10361E-02	1.77518E-01	1.45485E-02	1.88555E-01	2.03103E-01
	60.0	6.04809E-03	1.73969E-01	1.04187E-02	1.80017E-01	1.90435E-01
	80.0	2.35752E-03	1.66506E-01	6.07756E-03	1.68863E-01	1.74941E-01
	100.0	1.14363E-03	1.59375E-01	3.96365E-03	1.60519E-01	1.64482E-01
	8.0	5.00344E+00	1.54072E-01	2.40063E-01	5.15751E+00	5.39757E+00
	10.0	2.42026E+00	1.62276E-01	1.83100E-01	2.58254E+00	2.76564E+00
	13.6	8.78333E-01	1.73647E-01	1.18982E-01	1.05198E+00	1.17096E+00
	15.0	6.37642E-01	1.79207E-01	1.08981E-01	8.16849E-01	9.25830E-01
	16.6	4.54970E-01	1.80965E-01	9.01713E-02	6.35935E-01	7.26107E-01
LAC	17.2	4.04692E-01	1.82364E-01	8.58174E-02	5.87056E-01	6.72873E-01
	20.0	2.45577E-01	1.86978E-01	7.21238E-02	4.32555E-01	5.04679E-01
	20.2	2.38085E-01	1.88575E-01	6.86119E-02	4.26660E-01	4.95272E-01
	30.0	6.37148E-02	1.91657E-01	3.77113E-02	2.55372E-01	2.93083E-01
	40.0	2.44842E-02	1.90867E-01	2.29784E+00	2.15351E-01	2.38330E-01
	50.0	1.16873E-02	1.87992E-01	1.54068E-02	1.99679E-01	2.15086E-01
	60.0	6.40492E-03	1.84233E-01	1.10334E-02	1.90638E-01	2.01671E-01
	80.0	2.49662E-03	1.76330E-01	6.43614E-03	1.78826E-01	1.85262E-01
	100.0	1.21111E-03	1.68778E-01	4.19750E-03	1.69989E-01	1.74187E-01

MAC = Mass Attenuation Coefficient (cm^2/g), LAC = Linear Attenuation Coefficient (cm^-1)

BASE MATERIAL of SOFT TISSUE: SZ-50

	Energy (keV)	Photo	Compton	Coherent	Photo + Compton	Total
	150	3.13735E-04	1.44207E-01	1.79800E-03	1.44521E-01	1.46319E-01
	200	1.27870E-04	1.32436E-01	1.01946E-03	1.32563E-01	1.33583E-01
	279	4.65932E-05	1.18066E-01	5.26422E-04	1.18112E-01	1.18639E-01
	300	3.73694E-05	1.15339E-01	4.52067E-04	1.15376E-01	1.15828E-01
	364	2.19046E-05	1.05986E-01	3.04709E-04	1.06008E-01	1.06312E-01
MCA	400	1.60675E-05	1.03389E-01	2.56147E-04	1.03405E-01	1.03661E-01
	500	8.50322E-06	9.43990E-02	1.59682E-04	9.44075E-02	9.45672E-02
	511	8.36370E-06	9.23540E-02	1.51725E-04	9.23624E-02	9.25141E-02
	600	5.12329E-06	8.73668E-02	1.12219E-04	8.73720E-02	8.74842E-02
	662	4.01133E-06	8.31408E-02	8.90926E-05	8.31449E-02	8.32339E-02
	800	2.36219E-06	7.67532E-02	6.14810E-05	7.67555E-02	7.68170E-02
	1000	1.32687E-06	6.90089E-02	3.64226E-05	6.90103E-02	6.90467E-02
	150	3.32246E-04	1.52715E-01	1.90408E-03	1.53048E-01	1.54952E-01
	200	1.35414E-04	1.40249E-01	1.07961E-03	1.40385E-01	1.41464E-01
	279	4.93422E-05	1.25032E-01	5.57481E-04	1.25081E-01	1.25638E-01
	300	3.95742E-05	1.22144E-01	4.78739E-04	1.22183E-01	1.22662E-01
	364	2.31970E-05	1.12239E-01	3.22687E-04	1.12262E-01	1.12585E-01
LAC	400	1.70155E-05	1.09489E-01	2.71259E-04	1.09506E-01	1.09777E-01
	500	9.00491E-06	9.99686E-02	1.69103E-04	9.99776E-02	1.00147E-01
	511	8.85716E-06	9.78029E-02	1.60677E-04	9.78118E-02	9.79724E-02
	600	5.42556E-06	9.25215E-02	1.18840E-04	9.25269E-02	9.26458E-02
	662	4.24799E-06	8.80462E-02	9.43490E-03	8.80504E-02	8.81447E-02
	800	2.50156E-06	8.12816E-02	6.51084E-05	8.12841E-02	8.13492E-02
	1000	1.40515E-06	7.30805E-02	3.85715E-05	7.30819E-02	7.31204E-02

MAC = Mass Attenuation Coefficient (cm^2/g), LAC = Linear Attenuation Coefficient (cm^-1)

BASE MATERIAL of Lung: Lb-1

	Energy (keV)	Photo	Compton	Coherent	Photo + Compton	Total
	8.0	5.76993E+00	1.38075E-01	2.51269E-01	5.90800E+00	6.15927E+00
	10.0	2.80382E+00	1.46362E-01	1.90578E-01	2.95018E+00	3.14076E+00
	13.6	1.02334E+00	1.57458E-01	1.23714E-01	1.18080E+00	1.30451E+00
	15.0	7.44389E-01	1.62838E-01	1.12697E-01	9.07228E-01	1.01992E+00
	16.6	5.32011E-01	1.64634E-01	9.36468E-02	6.96645E-01	7.90292E-01
MAC	17.2	4.73521E-01	1.66010E-01	8.91008E-02	6.39531E-01	7.28632E-01
	20.0	2.88112E-01	1.70575E-01	7.46737E-02	4.58686E-01	5.33360E-01
	20.2	2.79400E-01	1.72108E-01	7.11680E-02	4.51508E-01	5.22676E-01
	30.0	7.52320E-02	1.75616E-01	3.91724E-02	2.50848E-01	2.90020E-01
	40.0	2.90238E-02	1.75297E-01	2.39066E-02	2.04321E-01	2.28227E-01
	50.0	1.38936E-02	1.72880E-01	1.60404E-02	1.86774E-01	2.02814E-01
	60.0	7.63030E-03	1.69554E-01	1.15008E-02	1.77185E-01	1.88685E-01
	80.0	2.98299E-03	1.62427E-01	6.71525E-03	1.65410E-01	1.72125E-01
	100.0	1.44975E-03	1.55555E-01	4.38427E-03	1.57004E-01	1.61389E-01
	8.0	1.61558E+00	3.86609E-02	7.03554E-02	1.65424E+00	1.72460E+00
	10.0	7.85068E-01	4.09814E-02	5.33618E-02	8.26050E-01	8.79412E-01
	13.6	2.86536E-01	4.40881E-02	3.46399E-02	3.30624E-01	3.65264E-01
	15.0	2.08429E-01	4.55947E-02	3.15552E-02	2.54024E-01	2.85579E-01
	16.6	1.48963E-01	4.60975E-02	2.62211E-02	1.95061E-01	2.21282E-01
LAC	17.2	1.32586E-01	4.64829E-02	2.49482E-02	1.79069E-01	2.04017E-01
	20.0	8.06713E-02	4.77610E-02	2.09086E-02	1.28432E-01	1.49341E-01
	20.2	7.82320E-02	4.81902E-02	1.99270E-02	1.26422E-01	1.46349E-01
	30.0	2.10650E-02	4.91724E-02	1.09683E-02	7.02374E-02	8.12057E-02
	40.0	8.12666E-03	4.90831E-02	6.69719E-01	5.72098E-02	6.39036E-02
	50.0	3.89020E-03	4.84065E-02	4.49131E-03	5.22967E-02	5.67880E-02
	60.0	2.13649E-03	4.74752E-02	3.22021E-03	4.96117E-02	5.28319E-02
	80.0	8.35237E-04	4.54794E-02	1.88027E-03	4.63147E-02	4.81949E-02
	100.0	4.05931E-04	4.35553E-02	1.22760E-03	4.39612E-02	4.51888E-02

MAC = Mass Attenuation Coefficient (cm^2/g), LAC = Linear Attenuation Coefficient (cm^-1)

BASE MATERIAL of LUNG TISSUE: Lb-1

	Energy (keV)	Photo	Compton	Coherent	Photo + Compton	Total
	150	3.98776E-04	1.40830E-01	1.99150E-03	1.41229E-01	1.43221E-01
	200	1.62733E-04	1.29358E-01	1.12940E-03	1.29521E-01	1.30650E-01
	279	5.93287E-05	1.15328E-01	5.83352E-04	1.15387E-01	1.15971E-01
	300	4.75951E-05	1.12667E-01	5.01620E-04	1.12714E-01	1.13216E-01
	364	2.78742E-05	1.03541E-01	3.38035E-04	1.03569E-01	1.03907E-01
MCA	400	2.04606E-05	1.01008E-01	2.83680E-04	1.01028E-01	1.01312E-01
	500	1.08216E-05	9.22327E-02	1.77940E-04	9.22435E-02	9.24215E-02
	511	1.06329E-05	9.02292E-02	1.68548E-04	9.02398E-02	9.04084E-02
	600	6.51589E-06	8.53631E-02	1.24115E-04	8.53696E-02	8.54937E-02
	662	5.09647E-06	8.12308E-02	9.90829E-05	8.12359E-02	8.13350E-02
	800	2.99909E-06	7.49907E-02	6.81984E-05	7.49937E-02	7.50619E-02
	1000	1.68146E-06	6.74282E-02	4.07888E-05	6.74299E-02	6.74707E-02
	150	1.11657E-04	3.94325E-02	5.57621E-04	3.95442E-02	4.01018E-02
	200	4.55653E-05	3.62203E-02	3.16233E-04	3.62659E-02	3.65821E-02
	279	1.66120E-05	3.22918E-02	1.63339E-04	3.23084E-02	3.24718E-02
	300	1.33266E-05	3.15467E-02	1.40454E-04	3.15600E-02	3.17005E-02
	364	7.80477E-06	2.89915E-02	9.46498E-05	2.89993E-02	2.90940E-02
LAC	400	5.72897E-06	2.82822E-02	7.94303E-05	2.82880E-02	2.83674E-02
	500	3.03004E-06	2.58252E-02	4.98233E-05	2.58282E-02	2.58780E-02
	511	2.97722E-06	2.52642E-02	4.71933E-05	2.52672E-02	2.53143E-02
	600	1.82445E-06	2.39017E-02	3.47523E-05	2.39035E-02	2.39382E-02
	662	1.42701E-06	2.27446E-02	2.77571E-03	2.27461E-02	2.27738E-02
	800	8.39744E-07	2.09974E-02	1.90956E-05	2.09982E-02	2.10173E-02
	1000	4.70809E-07	1.88799E-02	1.14209E-05	1.88804E-02	1.88918E-02

MAC = Mass Attenuation Coefficient (cm^2/g), LAC = Linear Attenuation Coefficient (cm^-1)

BASE MATERIAL of Bone: EZ-100

	Energy (keV)	Photo	Compton	Coherent	Photo + Compton	Total
	8.0	4.94156E+00	1.42958E-01	2.32221E-01	5.08452E+00	5.31674E+00
	10.0	2.39306E+00	1.50749E-01	1.76951E-01	2.54381E+00	2.72076E+00
	13.6	8.69710E-01	1.61626E-01	1.14972E-01	1.03134E+00	1.14631E+00
	15.0	6.31703E-01	1.66938E-01	1.05194E-01	7.98642E-01	9.03835E-01
	16.6	4.50920E-01	1.68532E-01	8.71182E-02	6.19552E-01	7.06670E-01
MAC	17.2	4.01154E-01	1.69974E-01	8.29071E-02	5.71128E-01	6.54036E-01
	20.0	2.43595E-01	1.74400E-01	6.96282E-02	4.17995E-01	4.87623E-01
	20.2	2.36183E-01	1.75924E-01	6.62755E-02	4.12107E-01	4.78382E-01
	30.0	6.33047E-02	1.78997E-01	3.64371E-02	2.42302E-01	2.78739E-01
	40.0	2.43512E-02	1.78386E-01	2.22138E-02	2.02737E-01	2.24951E-01
	50.0	1.16324E-02	1.75767E-01	1.48971E-02	1.87399E-01	2.02296E-01
	60.0	6.37836E-03	1.72291E-01	1.06714E-02	1.78669E-01	1.89340E-01
	80.0	2.48820E-03	1.64941E-01	6.22654E-03	1.67429E-01	1.73655E-01
	100.0	1.20761E-03	1.57899E-01	4.06181E-03	1.59107E-01	1.63168E-01
	8.0	5.74209E+00	1.66118E-01	2.69841E-01	5.90821E+00	6.17805E+00
	10.0	2.78073E+00	1.75171E-01	2.05617E-01	2.95590E+00	3.16152E+00
	13.6	1.01060E+00	1.87809E-01	1.33598E-01	1.19841E+00	1.33201E+00
	15.0	7.34039E-01	1.93982E-01	1.22235E-01	9.28021E-01	1.05026E+00
	16.6	5.23969E-01	1.95950E-01	1.01231E-01	7.19919E-01	8.21151E-01
LAC	17.2	4.66141E-01	1.97510E-01	9.63380E-02	6.63651E-01	7.59989E-01
	20.0	2.83058E-01	2.02653E-01	8.09080E-02	4.85710E-01	5.66618E-01
	20.2	2.74444E-01	2.04424E-01	7.70122E-02	4.78868E-01	5.55880E-01
	30.0	7.35601E-02	2.07994E-01	4.23399E-02	2.81555E-01	3.23894E-01
	40.0	2.82961E-02	2.07285E-01	2.58150E+00	2.35581E-01	2.61393E-01
	50.0	1.35168E-02	2.04241E-01	1.73104E-02	2.17758E-01	2.35068E-01
	60.0	7.41165E-03	2.00202E-01	1.24002E-02	2.07613E-01	2.20013E-01
	80.0	2.89128E-03	1.91661E-01	7.23524E-03	1.94552E-01	2.01788E-01
	100.0	1.40325E-03	1.83479E-01	4.71983E-03	1.84882E-01	1.89602E-01

MAC = Mass Attenuation Coefficient (cm^2/g), LAC = Linear Attenuation Coefficient (cm^-1)

BASE MATERIAL of BONE: EZ-100

	Energy (keV)	Photo	Compton	Coherent	Photo + Compton	Total
	150	3.31527E-04	1.42892E-01	1.84324E-03	1.43224E-01	1.45067E-01
	200	1.35168E-04	1.31236E-01	1.04519E-03	1.31372E-01	1.32417E-01
	279	4.92613E-05	1.16999E-01	5.39808E-04	1.17049E-01	1.17588E-01
	300	3.95122E-05	1.14298E-01	4.63589E-04	1.14338E-01	1.14801E-01
	364	2.31563E-05	1.05031E-01	3.12480E-04	1.05054E-01	1.05366E-01
MCA	400	1.69891E-05	1.02458E-01	2.62620E-04	1.02475E-01	1.02738E-01
	500	8.98976E-06	9.35500E-02	1.63950E-04	9.35590E-02	9.37230E-02
	511	8.84008E-06	9.15229E-02	1.55606E-04	9.15318E-02	9.16874E-02
	600	5.41574E-06	8.65821E-02	1.15028E-04	8.65875E-02	8.67025E-02
	662	4.23928E-06	8.23933E-02	9.13770E-05	8.23976E-02	8.24889E-02
	800	2.49604E-06	7.60631E-02	6.30128E-05	7.60656E-02	7.61286E-02
	1000	1.40145E-06	6.83896E-02	3.73788E-05	6.83910E-02	6.84284E-02
	150	3.85234E-04	1.66041E-01	2.14184E-03	1.66426E-01	1.68568E-01
	200	1.57065E-04	1.52497E-01	1.21451E-03	1.52654E-01	1.53868E-01
	279	5.72416E-05	1.35953E-01	5.27257E-04	1.36011E-01	1.36638E-01
	300	4.59132E-05	1.32814E-01	5.38690E-04	1.32860E-01	1.33399E-01
	364	2.69076E-05	1.22046E-01	3.63101E-04	1.22072E-01	1.22436E-01
LAC	400	1.97413E-05	1.19056E-01	3.05165E-04	1.19076E-01	1.19381E-01
	500	1.04461E-05	1.08705E-01	1.90510E-04	1.08716E-01	1.08906E-01
	511	1.02722E-05	1.06350E-01	1.80814E-04	1.06360E-01	1.06541E-01
	600	6.29309E-06	1.00608E-01	1.33662E-04	1.00615E-01	1.00748E-01
	662	4.92604E-06	9.57410E-02	1.06191E-02	9.57460E-02	9.58521E-02
	800	2.90040E-06	8.83853E-02	7.32209E-05	8.83882E-02	8.84614E-02
	1000	1.62849E-06	7.94687E-02	4.34342E-05	7.94703E-02	7.95138E-02

MAC = Mass Attenuation Coefficient (cm^2/g), LAC = Linear Attenuation Coefficient (cm^-1)

ADDITIVE: Tris Chloroethyl Phosphate

	Energy (keV)	Photo	Compton	Coherent	Photo + Compton	Total
	8.0	5.26746E+01	1.16126E-01	5.86181E-01	5.27907E+01	5.33769E+01
	10.0	2.76637E+01	1.26373E-01	4.61431E-01	2.77901E+01	2.82515E+01
	13.6	1.10200E+01	1.38525E-01	2.99361E-01	1.11586E+01	1.14579E+01
	15.0	8.28403E+00	1.44215E-01	2.76938E-01	8.42824E+00	8.70518E+00
	16.6	6.05490E+00	1.46601E-01	2.28310E-01	6.20150E+00	6.42981E+00
MAC	17.2	5.44220E+00	1.48139E-01	2.17560E-01	5.59034E+00	5.80790E+00
	20.0	3.44169E+00	1.53590E-01	1.82565E-01	3.59528E+00	3.77784E+00
	20.2	3.35806E+00	1.55153E-01	1.74851E-01	3.51321E+00	3.68806E+00
	30.0	9.75451E-01	1.61185E-01	9.72154E-02	1.13664E+00	1.23385E+00
	40.0	3.94361E-01	1.62768E-01	6.01400E-02	5.57129E-01	6.17269E-01
	50.0	1.94703E-01	1.61796E-01	4.06864E-02	3.56499E-01	3.97186E-01
	60.0	1.09291E-01	1.59634E-01	2.92803E-02	2.68925E-01	2.98206E-01
	80.0	4.40088E-02	1.54086E-01	1.70966E-02	1.98095E-01	2.15192E-01
	100.0	2.18051E-02	1.48181E-01	1.12035E-02	1.69986E-01	1.81190E-01
	8.0	7.52720E+01	1.65945E-01	8.37653E-01	7.54379E+01	7.62756E+01
	10.0	3.95315E+01	1.80587E-01	6.59385E-01	3.97121E+01	4.03714E+01
	13.6	1.57476E+01	1.97952E-01	4.27787E-01	1.59456E+01	1.63734E+01
	15.0	1.18379E+01	2.06084E-01	3.95744E-01	1.20440E+01	1.24397E+01
	16.6	8.65245E+00	2.09493E-01	3.26255E-01	8.86194E+00	9.18820E+00
LAC	17.2	7.77690E+00	2.11691E-01	3.10893E-01	7.98859E+00	8.29948E+00
	20.0	4.91817E+00	2.19481E-01	2.60885E-01	5.13765E+00	5.39853E+00
	20.2	4.79866E+00	2.21713E-01	2.49861E-01	5.02037E+00	5.27024E+00
	30.0	1.39392E+00	2.30334E-01	1.38921E-01	1.62425E+00	1.76317E+00
	40.0	5.63543E-01	2.32595E-01	8.59400E+00	7.96138E-01	8.82078E-01
	50.0	2.78231E-01	2.31206E-01	5.81408E-02	5.09438E-01	5.67578E-01
	60.0	1.56177E-01	2.28117E-01	4.18415E-02	3.84295E-01	4.26136E-01
	80.0	6.28886E-02	2.20189E-01	2.44310E-02	2.83078E-01	3.07509E-01
	100.0	3.11594E-02	2.11751E-01	1.60099E-02	2.42910E-01	2.58920E-01

MAC = Mass Attenuation Coefficient (cm^2/g), LAC = Linear Attenuation Coefficient (cm^-1)

ADDITIVE: Tris Chloroethyl Phosphate

	Energy (keV)	Photo	Compton	Coherent	Photo + Compton	Total
	150	6.17324E-03	1.34919E-01	5.11701E-03	1.41092E-01	1.46209E-01
	200	2.56364E-03	1.24207E-01	2.90733E-03	1.26771E-01	1.29678E-01
	279	9.51506E-04	1.10899E-01	1.50292E-03	1.11850E-01	1.13353E-01
	300	7.66959E-04	1.08385E-01	1.29909E-03	1.09152E-01	1.10451E-01
	364	4.54955E-04	9.96360E-02	8.76584E-04	1.00091E-01	1.00968E-01
MCA	400	3.35100E-04	9.72654E-02	7.30820E-04	9.76005E-02	9.83313E-02
	500	1.79696E-04	8.88672E-02	4.65565E-04	8.90469E-02	8.95124E-02
	511	1.77501E-04	8.68964E-02	4.40778E-04	8.70739E-02	8.75146E-02
	600	1.09510E-04	8.22641E-02	3.21909E-04	8.23736E-02	8.26955E-02
	662	8.65268E-05	7.82771E-02	2.60818E-04	7.83636E-02	7.86244E-02
	800	5.15841E-05	7.22920E-02	1.78550E-04	7.23436E-02	7.25221E-02
	1000	2.95077E-05	6.50036E-02	1.10590E-04	6.50331E-02	6.51437E-02
	150	8.82156E-03	1.92799E-01	7.31220E-03	2.01620E-01	2.08933E-01
	200	3.66345E-03	1.77492E-01	4.15457E-03	1.81155E-01	1.85310E-01
	279	1.35970E-03	1.58474E-01	2.14768E-03	1.59834E-01	1.61982E-01
	300	1.09598E-03	1.54882E-01	1.85640E-03	1.55978E-01	1.57834E-01
	364	6.50131E-04	1.42380E-01	1.25264E-03	1.43030E-01	1.44283E-01
LAC	400	4.78858E-04	1.38992E-01	1.04434E-03	1.39471E-01	1.40515E-01
	500	2.56786E-04	1.26991E-01	6.65292E-04	1.27248E-01	1.27913E-01
	511	2.53650E-04	1.24175E-01	6.29872E-04	1.24429E-01	1.25058E-01
	600	1.56490E-04	1.17555E-01	4.60009E-04	1.17712E-01	1.18172E-01
	662	1.23647E-04	1.11858E-01	3.72708E-02	1.11982E-01	1.12354E-01
	800	7.37137E-05	1.03305E-01	2.55148E-04	1.03379E-01	1.03634E-01
	1000	4.21665E-05	9.28902E-02	1.58033E-04	9.29323E-02	9.30903E-02

MAC = Mass Attenuation Coefficient (cm^2/g), LAC = Linear Attenuation Coefficient (cm^-1)

ADDITIVE: Calcium Carbonate

	Energy (keV)	Photo	Compton	Coherent	Photo + Compton	Total
MAC	8.0	7.47342E+01	1.07530E-01	6.59951E-01	7.48417E+01	7.55017E+01
	10.0	3.97385E+01	1.17870E-01	5.17843E-01	3.98563E+01	4.03742E+01
	13.6	1.61897E+01	1.30386E-01	3.43775E-01	1.63201E+01	1.66639E+01
	15.0	1.22423E+01	1.36114E-01	3.20252E-01	1.23784E+01	1.26987E+01
	16.6	9.03062E+00	1.38798E-01	2.64575E-01	9.16941E+00	9.43399E+00
	17.2	8.13900E+00	1.40374E-01	2.52490E-01	8.27937E+00	8.53186E+00
	20.0	5.21108E+00	1.46123E-01	2.15525E-01	5.35720E+00	5.57273E+00
	20.2	5.08394E+00	1.47599E-01	2.04425E-01	5.23154E+00	5.43597E+00
	30.0	1.53092E+00	1.54817E-01	1.15002E-01	1.68574E+00	1.80074E+00
	40.0	6.35594E-01	1.57062E-01	7.07989E-02	7.92656E-01	8.63455E-01
	50.0	3.20279E-01	1.56567E-01	4.77135E-02	4.76846E-01	5.24559E-01
	60.0	1.82716E-01	1.54748E-01	3.42806E-02	3.37464E-01	3.71745E-01
	80.0	7.53775E-02	1.49657E-01	2.00562E-02	2.25035E-01	2.45091E-01
	100.0	3.79827E-02	1.44150E-01	1.31232E-02	1.82133E-01	1.95256E-01
LAC	8.0	2.03277E+02	2.92481E-01	1.79507E+00	2.03569E+02	2.05364E+02
	10.0	1.08089E+02	3.20605E-01	1.40853E+00	1.08409E+02	1.09818E+02
	13.6	4.40361E+01	3.54649E-01	9.35069E-01	4.43907E+01	4.53258E+01
	15.0	3.32991E+01	3.70229E-01	8.71086E-01	3.36693E+01	3.45404E+01
	16.6	2.45633E+01	3.77531E-01	7.19645E-01	2.49408E+01	2.56604E+01
	17.2	2.21381E+01	3.81818E-01	6.86773E-01	2.25199E+01	2.32067E+01
	20.0	1.41741E+01	3.97454E-01	5.86227E-01	1.45716E+01	1.51578E+01
	20.2	1.38283E+01	4.01468E-01	5.56035E-01	1.42298E+01	1.47858E+01
	30.0	4.16410E+00	4.21101E-01	3.12804E-01	4.58520E+00	4.89801E+00
	40.0	1.72882E+00	4.27209E-01	1.92573E+01	2.15602E+00	2.34860E+00
	50.0	8.71158E-01	4.25862E-01	1.29781E-01	1.29702E+00	1.42680E+00
	60.0	4.96989E-01	4.20915E-01	9.32432E-02	9.17903E-01	1.01115E+00
	80.0	2.05027E-01	4.07068E-01	5.45530E-02	6.12094E-01	6.66647E-01
	100.0	1.03313E-01	3.92088E-01	3.56950E-02	4.95401E-01	5.31096E-01

MAC = Mass Attenuation Coefficient (cm^2/g), LAC = Linear Attenuation Coefficient (cm^-1)

ADDITIVE: Calcium Carbonate

	Energy (keV)	Photo	Compton	Coherent	Photo + Compton	Total
MCA	150	1.10331E-02	1.31483E-01	5.97222E-03	1.42516E-01	1.48488E-01
	200	4.63963E-03	1.21131E-01	3.38609E-03	1.25771E-01	1.29157E-01
	279	1.73454E-03	1.08212E-01	1.74754E-03	1.09946E-01	1.11694E-01
	300	1.40029E-03	1.05792E-01	1.51076E-03	1.07192E-01	1.08703E-01
	364	8.22114E-04	9.72529E-02	1.02028E-03	9.80750E-02	9.90953E-02
	400	6.10939E-04	9.49565E-02	8.49712E-04	9.55675E-02	9.64172E-02
	500	3.25461E-04	8.67798E-02	5.42121E-04	8.71053E-02	8.76474E-02
	511	3.17155E-04	8.48414E-02	5.13514E-04	8.51585E-02	8.56721E-02
	600	1.96599E-04	8.03338E-02	3.73653E-04	8.05304E-02	8.09041E-02
	662	1.53336E-04	7.64423E-02	3.04085E-04	7.65956E-02	7.68997E-02
	800	9.05910E-05	7.05943E-02	2.07605E-04	7.06849E-02	7.08925E-02
	1000	5.06459E-05	6.34939E-02	1.29962E-04	6.35446E-02	6.36745E-02
LAC	150	3.00100E-02	3.57633E-01	1.62444E-02	3.87643E-01	4.03888E-01
	200	1.26198E-02	3.29477E-01	9.21018E-03	3.42097E-01	3.51307E-01
	279	4.71795E-03	2.94335E-01	4.75330E-03	2.99053E-01	3.03807E-01
	300	3.80878E-03	2.87753E-01	4.10926E-03	2.91562E-01	2.95671E-01
	364	2.23615E-03	2.64528E-01	2.77516E-03	2.66764E-01	2.69539E-01
	400	1.66175E-03	2.58282E-01	2.31122E-03	2.59944E-01	2.62255E-01
	500	8.85253E-04	2.36041E-01	1.47457E-03	2.36926E-01	2.38401E-01
	511	8.62661E-04	2.30769E-01	1.39676E-03	2.31631E-01	2.33028E-01
	600	5.34749E-04	2.18508E-01	1.01634E-03	2.19043E-01	2.20059E-01
	662	4.17074E-04	2.07923E-01	8.27111E-02	2.08340E-01	2.09167E-01
	800	2.46408E-04	1.92016E-01	5.64685E-04	1.92263E-01	1.92828E-01
	1000	1.37757E-04	1.72703E-01	3.53498E-04	1.72841E-01	1.73195E-01

MAC = Mass Attenuation Coefficient (cm^2/g), LAC = Linear Attenuation Coefficient (cm^-1)

TISSUE SUBSTITUTE: SZ-207

	Energy (keV)	Photo	Compton	Coherent	Photo + Compton	Total
	8.0	7.84362E+00	1.43562E-01	2.50088E-01	7.98718E+00	8.23727E+00
	10.0	3.93613E+00	1.51470E-01	1.91679E-01	4.08760E+00	4.27928E+00
	13.6	1.49222E+00	1.62300E-01	1.24525E-01	1.65452E+00	1.77905E+00
	15.0	1.10176E+00	1.67580E-01	1.14237E-01	1.26934E+00	1.38358E+00
	16.6	7.95497E-01	1.69287E-01	9.44657E-02	9.64784E-01	1.05925E+00
MAC	17.2	7.11256E-01	1.70622E-01	8.99223E-02	8.81878E-01	9.71801E-01
	20.0	4.40661E-01	1.75051E-01	7.55555E-02	6.15711E-01	6.91267E-01
	20.2	4.28606E-01	1.76563E-01	7.19529E-02	6.05169E-01	6.77122E-01
	30.0	1.19694E-01	1.79677E-01	3.96200E-02	2.99371E-01	3.38991E-01
	40.0	4.72647E-02	1.79083E-01	2.42003E-02	2.26348E-01	2.50548E-01
	50.0	2.29812E-02	1.76482E-01	1.62497E-02	1.99464E-01	2.15713E-01
	60.0	1.27626E-02	1.73023E-01	1.16463E-02	1.85786E-01	1.97432E-01
	80.0	5.06634E-03	1.65686E-01	6.79476E-03	1.70752E-01	1.77547E-01
	100.0	2.48735E-03	1.58636E-01	4.43487E-03	1.61123E-01	1.65558E-01
	8.0	8.36914E+00	1.53180E-01	2.66844E-01	8.52232E+00	8.78917E+00
	10.0	4.19985E+00	1.61619E-01	2.04522E-01	4.36147E+00	4.56599E+00
	13.6	1.59220E+00	1.73175E-01	1.32868E-01	1.76537E+00	1.89824E+00
	15.0	1.17558E+00	1.78808E-01	1.21891E-01	1.35439E+00	1.47628E+00
	16.6	8.48795E-01	1.80629E-01	1.00795E-01	1.02942E+00	1.13022E+00
LAC	17.2	7.58910E-01	1.82054E-01	9.59471E-02	9.40964E-01	1.03691E+00
	20.0	4.70185E-01	1.86779E-01	8.06177E-02	6.56964E-01	7.37582E-01
	20.2	4.57323E-01	1.88392E-01	7.67737E-02	6.45715E-01	7.22489E-01
	30.0	1.27713E-01	1.91715E-01	4.22745E-02	3.19428E-01	3.61703E-01
	40.0	5.04314E-02	1.91082E-01	2.58217E+00	2.41513E-01	2.67335E-01
	50.0	2.45210E-02	1.88307E-01	1.73384E-02	2.12828E-01	2.30166E-01
	60.0	1.36177E-02	1.84616E-01	1.24266E-02	1.98234E-01	2.10660E-01
	80.0	5.40579E-03	1.76787E-01	7.25001E-03	1.82193E-01	1.89443E-01
	100.0	2.65401E-03	1.69264E-01	4.73201E-03	1.71918E-01	1.76650E-01

MAC = Mass Attenuation Coefficient (cm^2/g), LAC = Linear Attenuation Coefficient (cm^-1)

TISSUE SUBSTITUTE: SZ-207

	Energy (keV)	Photo	Compton	Coherent	Photo + Compton	Total
	150	6.94805E-04	1.43593E-01	2.01402E-03	1.44288E-01	1.46302E-01
	200	2.86279E-04	1.31891E-01	1.14234E-03	1.32177E-01	1.33320E-01
	279	1.05444E-04	1.17591E-01	5.89980E-04	1.17697E-01	1.18287E-01
	300	8.48178E-05	1.14878E-01	5.07197E-04	1.14963E-01	1.15470E-01
	364	5.00680E-05	1.05565E-01	3.41931E-04	1.05615E-01	1.05957E-01
MCA	400	3.68157E-05	1.02983E-01	2.87042E-04	1.03020E-01	1.03307E-01
	500	1.96367E-05	9.40325E-02	1.79591E-04	9.40522E-02	9.42318E-02
	511	1.93636E-05	9.19925E-02	1.70539E-04	9.20119E-02	9.21824E-02
	600	1.19121E-05	8.70288E-02	1.25868E-04	8.70407E-02	8.71666E-02
	662	9.37774E-06	8.28186E-02	1.00270E-04	8.28280E-02	8.29283E-02
	800	5.56336E-06	7.64576E-02	6.91007E-05	7.64632E-02	7.65323E-02
	1000	3.15963E-06	6.87435E-02	4.12497E-05	6.87467E-02	6.87879E-02
	150	7.41357E-04	1.53213E-01	2.14896E-03	1.53955E-01	1.56104E-01
	200	3.05460E-04	1.40728E-01	1.21887E-03	1.41033E-01	1.42252E-01
	279	1.12508E-04	1.25470E-01	6.29509E-04	1.25582E-01	1.26212E-01
	300	9.05006E-05	1.22575E-01	5.41179E-04	1.22666E-01	1.23207E-01
	364	5.34225E-05	1.12638E-01	3.64840E-04	1.12691E-01	1.13056E-01
LAC	400	3.92823E-05	1.09883E-01	3.06274E-04	1.09922E-01	1.10228E-01
	500	2.09524E-05	1.00333E-01	1.91624E-04	1.00354E-01	1.00545E-01
	511	2.06609E-05	9.81560E-02	1.81965E-04	9.81767E-02	9.83586E-02
	600	1.27102E-05	9.28597E-02	1.34301E-04	9.28724E-02	9.30067E-02
	662	1.00061E-05	8.83675E-02	1.05988E-02	8.83775E-02	8.84845E-02
	800	5.93611E-06	8.15803E-02	7.37305E-05	8.15862E-02	8.16599E-02
	1000	3.37133E-06	7.33494E-02	4.40134E-05	7.33527E-02	7.33967E-02

MAC = Mass Attenuation Coefficient (cm^2/g), LAC = Linear Attenuation Coefficient (cm^-1)

TISSUE SUBSTITUTE: SZ-208

	Energy (keV)	Photo	Compton	Coherent	Photo + Compton	Total
MAC	8.0	8.92396E+00	1.42905E-01	2.58159E-01	9.06687E+00	9.32503E+00
	10.0	4.50805E+00	1.50869E-01	1.98160E-01	4.65892E+00	4.85708E+00
	13.6	1.72193E+00	1.61731E-01	1.28726E-01	1.88366E+00	2.01239E+00
	15.0	1.27493E+00	1.67020E-01	1.18148E-01	1.44196E+00	1.56010E+00
	16.6	9.22317E-01	1.68744E-01	9.76825E-02	1.09106E+00	1.18874E+00
	17.2	8.25336E-01	1.70084E-01	9.29900E-02	9.95420E-01	1.08841E+00
	20.0	5.13034E-01	1.74537E-01	7.81280E-02	6.87570E-01	7.65698E-01
	20.2	4.99254E-01	1.76050E-01	7.44263E-02	6.75304E-01	7.49731E-01
	30.0	1.40336E-01	1.79234E-01	4.10046E-02	3.19570E-01	3.60575E-01
	40.0	5.56384E-02	1.78692E-01	2.50642E-02	2.34331E-01	2.59395E-01
	50.0	2.71244E-02	1.76131E-01	1.68370E-02	2.03255E-01	2.20092E-01
	60.0	1.50918E-02	1.72703E-01	1.20701E-02	1.87794E-01	1.99865E-01
	80.0	6.00606E-03	1.65408E-01	7.04234E-03	1.71414E-01	1.78457E-01
	100.0	2.95353E-03	1.58385E-01	4.59753E-03	1.61339E-01	1.65936E-01
LAC	8.0	9.59326E+00	1.53623E-01	2.77521E-01	9.74689E+00	1.00244E+01
	10.0	4.84615E+00	1.62185E-01	2.13022E-01	5.00834E+00	5.22136E+00
	13.6	1.85107E+00	1.73861E-01	1.38381E-01	2.02494E+00	2.16332E+00
	15.0	1.37056E+00	1.79547E-01	1.27009E-01	1.55010E+00	1.67711E+00
	16.6	9.91490E-01	1.81400E-01	1.05009E-01	1.17289E+00	1.27790E+00
	17.2	8.87236E-01	1.82840E-01	9.99642E-02	1.07008E+00	1.17004E+00
	20.0	5.51511E-01	1.87627E-01	8.39876E-02	7.39138E-01	8.23126E-01
	20.2	5.36699E-01	1.89254E-01	8.00083E-02	7.25952E-01	8.05960E-01
	30.0	1.50861E-01	1.92676E-01	4.40799E-02	3.43538E-01	3.87618E-01
	40.0	5.98113E-02	1.92094E-01	2.69440E+00	2.51906E-01	2.78850E-01
	50.0	2.91588E-02	1.89341E-01	1.80998E-02	2.18499E-01	2.36599E-01
	60.0	1.62236E-02	1.85655E-01	1.29754E-02	2.01879E-01	2.14854E-01
	80.0	6.45652E-03	1.77814E-01	7.57051E-03	1.84270E-01	1.91841E-01
	100.0	3.17505E-03	1.70264E-01	4.94235E-03	1.73439E-01	1.78382E-01

MAC = Mass Attenuation Coefficient (cm^2/g), LAC = Linear Attenuation Coefficient (cm^-1)

TISSUE SUBSTITUTE: SZ-208

	Energy (keV)	Photo	Compton	Coherent	Photo + Compton	Total
MCA	150	8.27024E-04	1.43385E-01	2.08859E-03	1.44212E-01	1.46301E-01
	200	3.41242E-04	1.31707E-01	1.18475E-03	1.32048E-01	1.33233E-01
	279	1.25863E-04	1.17431E-01	6.11916E-04	1.17557E-01	1.18169E-01
	300	1.01281E-04	1.14723E-01	5.26224E-04	1.14824E-01	1.15350E-01
	364	5.98394E-05	1.05423E-01	3.54777E-04	1.05483E-01	1.05838E-01
	400	4.40146E-05	1.02846E-01	2.97705E-04	1.02890E-01	1.03188E-01
	500	2.34995E-05	9.39090E-02	1.86462E-04	9.39324E-02	9.41189E-02
	511	2.31799E-05	9.18706E-02	1.77032E-04	9.18938E-02	9.20708E-02
	600	1.42674E-05	8.69148E-02	1.30578E-04	8.69290E-02	8.70596E-02
	662	1.12395E-05	8.27100E-02	1.04127E-04	8.27212E-02	8.28253E-02
	800	6.67393E-06	7.63579E-02	7.17307E-05	7.63646E-02	7.64363E-02
	1000	3.79542E-06	6.86541E-02	4.29157E-05	6.86579E-02	6.87008E-02
LAC	150	8.89051E-04	1.54139E-01	2.24523E-03	1.55028E-01	1.57273E-01
	200	3.66835E-04	1.41585E-01	1.27360E-03	1.41952E-01	1.43226E-01
	279	1.35303E-04	1.26238E-01	6.57809E-04	1.26374E-01	1.27032E-01
	300	1.08877E-04	1.23327E-01	5.65691E-04	1.23436E-01	1.24002E-01
	364	6.43274E-05	1.13330E-01	3.81385E-04	1.13394E-01	1.13776E-01
	400	4.73157E-05	1.10560E-01	3.20033E-04	1.10607E-01	1.10927E-01
	500	2.52620E-05	1.00952E-01	2.00446E-04	1.00977E-01	1.01178E-01
	511	2.49184E-05	9.87609E-02	1.90309E-04	9.87858E-02	9.89761E-02
	600	1.53375E-05	9.34334E-02	1.40372E-04	9.34487E-02	9.35891E-02
	662	1.20825E-05	8.89132E-02	1.11937E-02	8.89253E-02	8.90372E-02
	800	7.17447E-06	8.20848E-02	7.71105E-05	8.20920E-02	8.21691E-02
	1000	4.08008E-06	7.38031E-02	4.61344E-05	7.38072E-02	7.38533E-02

MAC = Mass Attenuation Coefficient (cm^2/g), LAC = Linear Attenuation Coefficient (cm^-1)

TISSUE SUBSTITUTE: SZ-220

	Energy (keV)	Photo	Compton	Coherent	Photo + Compton	Total
MAC	8.0	8.34309E+00	1.43247E-01	2.53840E-01	8.48634E+00	8.74018E+00
	10.0	4.20049E+00	1.51182E-01	1.94690E-01	4.35167E+00	4.54636E+00
	13.6	1.59837E+00	1.62027E-01	1.26477E-01	1.76040E+00	1.88688E+00
	15.0	1.18178E+00	1.67311E-01	1.16053E-01	1.34909E+00	1.46514E+00
	16.6	8.54094E-01	1.69026E-01	9.59599E-02	1.02312E+00	1.11908E+00
	17.2	7.63966E-01	1.70363E-01	9.13472E-02	9.34329E-01	1.02568E+00
	20.0	4.74097E-01	1.74803E-01	7.67502E-02	6.48900E-01	7.25650E-01
	20.2	4.61245E-01	1.76316E-01	7.31016E-02	6.37561E-01	7.10652E-01
	30.0	1.29229E-01	1.79463E-01	4.02630E-02	3.08692E-01	3.48955E-01
	40.0	5.11321E-02	1.78894E-01	2.46015E-02	2.30026E-01	2.54628E-01
	50.0	2.48946E-02	1.76312E-01	1.65225E-02	2.01206E-01	2.17729E-01
	60.0	1.38382E-02	1.72867E-01	1.18431E-02	1.86706E-01	1.98549E-01
	80.0	5.50026E-03	1.65550E-01	6.90974E-03	1.71051E-01	1.77960E-01
	100.0	2.70260E-03	1.58513E-01	4.51042E-03	1.61216E-01	1.65726E-01
LAC	8.0	8.91877E+00	1.53131E-01	2.71355E-01	9.07190E+00	9.34325E+00
	10.0	4.49032E+00	1.61613E-01	2.08124E-01	4.65193E+00	4.86006E+00
	13.6	1.70866E+00	1.73207E-01	1.35204E-01	1.88187E+00	2.01707E+00
	15.0	1.26332E+00	1.78855E-01	1.24061E-01	1.44218E+00	1.56624E+00
	16.6	9.13027E-01	1.80689E-01	1.02581E-01	1.09372E+00	1.19630E+00
	17.2	8.16679E-01	1.82118E-01	9.76501E-02	9.98797E-01	1.09645E+00
	20.0	5.06809E-01	1.86865E-01	8.20459E-02	6.93674E-01	7.75720E-01
	20.2	4.93071E-01	1.88481E-01	7.81456E-02	6.81552E-01	7.59698E-01
	30.0	1.38145E-01	1.91846E-01	4.30412E-02	3.29991E-01	3.73032E-01
	40.0	5.46602E-02	1.91238E-01	2.63016E+00	2.45898E-01	2.72197E-01
	50.0	2.66123E-02	1.88477E-01	1.76625E-02	2.15090E-01	2.32752E-01
	60.0	1.47930E-02	1.84795E-01	1.26603E-02	1.99588E-01	2.12249E-01
	80.0	5.87978E-03	1.76973E-01	7.38651E-03	1.82853E-01	1.90240E-01
	100.0	2.88908E-03	1.69450E-01	4.82164E-03	1.72340E-01	1.77161E-01

MAC = Mass Attenuation Coefficient (cm^2/g), LAC = Linear Attenuation Coefficient (cm^-1)

TISSUE SUBSTITUTE: SZ-220

	Energy (keV)	Photo	Compton	Coherent	Photo + Compton	Total
MCA	150	7.55851E-04	1.43491E-01	2.04866E-03	1.44247E-01	1.46295E-01
	200	3.11655E-04	1.31800E-01	1.16203E-03	1.32112E-01	1.33274E-01
	279	1.14871E-04	1.17512E-01	6.00168E-04	1.17627E-01	1.18227E-01
	300	9.24186E-05	1.14802E-01	5.16034E-04	1.14894E-01	1.15410E-01
	364	5.45793E-05	1.05495E-01	3.47897E-04	1.05550E-01	1.05898E-01
	400	4.01393E-05	1.02915E-01	2.91994E-04	1.02956E-01	1.03248E-01
	500	2.14201E-05	9.39715E-02	1.82782E-04	9.39929E-02	9.41757E-02
	511	2.11255E-05	9.19323E-02	1.73555E-04	9.19534E-02	9.21270E-02
	600	1.29995E-05	8.69724E-02	1.28055E-04	8.69854E-02	8.71135E-02
	662	1.02373E-05	8.27649E-02	1.02061E-04	8.27752E-02	8.28772E-02
	800	6.07609E-06	7.64083E-02	7.03223E-05	7.64144E-02	7.64847E-02
	1000	3.45317E-06	6.86993E-02	4.20236E-05	6.87028E-02	6.87448E-02
LAC	150	8.08004E-04	1.53392E-01	2.19001E-03	1.54200E-01	1.56390E-01
	200	3.33159E-04	1.40895E-01	1.24221E-03	1.41228E-01	1.42470E-01
	279	1.22797E-04	1.25621E-01	6.41580E-04	1.25743E-01	1.26385E-01
	300	9.87955E-05	1.22723E-01	5.51641E-04	1.22822E-01	1.23373E-01
	364	5.83453E-05	1.12774E-01	3.71902E-04	1.12833E-01	1.13205E-01
	400	4.29089E-05	1.10017E-01	3.12142E-04	1.10060E-01	1.10372E-01
	500	2.28981E-05	1.00456E-01	1.95394E-04	1.00478E-01	1.00674E-01
	511	2.25832E-05	9.82756E-02	1.85530E-04	9.82982E-02	9.84837E-02
	600	1.38965E-05	9.29735E-02	1.36891E-04	9.29874E-02	9.31243E-02
	662	1.09437E-05	8.84757E-02	1.09115E-02	8.84866E-02	8.85957E-02
	800	6.49535E-06	8.16805E-02	7.51745E-05	8.16870E-02	8.17622E-02
	1000	3.69144E-06	7.34396E-02	4.49233E-05	7.34433E-02	7.34882E-02

MAC = Mass Attenuation Coefficient (cm^2/g), LAC = Linear Attenuation Coefficient (cm^-1)

TISSUE SUBSTITUTE: L-1

	Energy (keV)	Photo	Compton	Coherent	Photo + Compton	Total
MAC	8.0	7.70320E+00	1.36773E-01	2.66539E-01	7.83998E+00	8.10651E+00
	10.0	3.82532E+00	1.45187E-01	2.02717E-01	3.97051E+00	4.17323E+00
	13.6	1.43283E+00	1.56352E-01	1.31572E-01	1.58918E+00	1.72076E+00
	15.0	1.05288E+00	1.61757E-01	1.19963E-01	1.21463E+00	1.33460E+00
	16.6	7.57821E-01	1.63584E-01	9.96506E-02	9.21405E-01	1.02106E+00
	17.2	6.76606E-01	1.64971E-01	9.48237E-02	8.41577E-01	9.36400E-01
	20.0	4.16851E-01	1.69584E-01	7.94572E-02	5.86435E-01	6.65892E-01
	20.2	4.05054E-01	1.71122E-01	7.57742E-02	5.76176E-01	6.51950E-01
	30.0	1.11896E-01	1.74767E-01	4.17499E-02	2.86663E-01	3.28413E-01
	40.0	4.38845E-02	1.74552E-01	2.55150E-02	2.18437E-01	2.43952E-01
	50.0	2.12427E-02	1.72212E-01	1.71337E-02	1.93455E-01	2.10588E-01
	60.0	1.17603E-02	1.68946E-01	1.22902E-02	1.80706E-01	1.92996E-01
	80.0	4.64852E-03	1.61900E-01	7.17678E-03	1.66548E-01	1.73725E-01
	100.0	2.27575E-03	1.55081E-01	4.68765E-03	1.57356E-01	1.62044E-01
LAC	8.0	2.15690E+00	3.82963E-02	7.46308E-02	2.19519E+00	2.26982E+00
	10.0	1.07109E+00	4.06524E-02	5.67609E-02	1.11174E+00	1.16850E+00
	13.6	4.01193E-01	4.37785E-02	3.68402E-02	4.44971E-01	4.81812E-01
	15.0	2.94805E-01	4.52920E-02	3.35897E-02	3.40097E-01	3.73687E-01
	16.6	2.12190E-01	4.58034E-02	2.79022E-02	2.57993E-01	2.85896E-01
	17.2	1.89450E-01	4.61918E-02	2.65506E-02	2.35642E-01	2.62192E-01
	20.0	1.16718E-01	4.74836E-02	2.22480E-02	1.64202E-01	1.86450E-01
	20.2	1.13415E-01	4.79141E-02	2.12168E-02	1.61329E-01	1.82546E-01
	30.0	3.13308E-02	4.89348E-02	1.16900E-02	8.02655E-02	9.19555E-02
	40.0	1.22877E-02	4.88746E-02	7.28709E-01	6.11623E-02	6.83065E-02
	50.0	5.94796E-03	4.82194E-02	4.79744E-03	5.41673E-02	5.89648E-02
	60.0	3.29287E-03	4.73048E-02	3.44125E-03	5.05977E-02	5.40389E-02
	80.0	1.30159E-03	4.53319E-02	2.00950E-03	4.66335E-02	4.86430E-02
	100.0	6.37211E-04	4.34226E-02	1.31254E-03	4.40598E-02	4.53723E-02

MAC = Mass Attenuation Coefficient (cm^2/g), LAC = Linear Attenuation Coefficient (cm^-1)

TISSUE SUBSTITUTE: L-1

	Energy (keV)	Photo	Compton	Coherent	Photo + Compton	Total
MCA	150	6.32941E-04	1.40437E-01	2.13066E-03	1.41070E-01	1.43201E-01
	200	2.60050E-04	1.29010E-01	1.20855E-03	1.29270E-01	1.30479E-01
	279	9.54711E-05	1.15024E-01	6.24303E-04	1.15120E-01	1.15744E-01
	300	7.67329E-05	1.12372E-01	5.37150E-04	1.12449E-01	1.12986E-01
	364	4.51633E-05	1.03272E-01	3.62013E-04	1.03317E-01	1.03679E-01
	400	3.31976E-05	1.00749E-01	3.03580E-04	1.00782E-01	1.01085E-01
	500	1.76540E-05	9.19985E-02	1.90795E-04	9.20162E-02	9.22069E-02
	511	1.73821E-05	8.99981E-02	1.80664E-04	9.00155E-02	9.01962E-02
	600	1.06808E-05	8.51471E-02	1.32888E-04	8.51578E-02	8.52907E-02
	662	8.38787E-06	8.10248E-02	1.06280E-04	8.10332E-02	8.11395E-02
	800	4.96187E-06	7.48017E-02	7.30964E-05	7.48066E-02	7.48797E-02
	1000	2.80462E-06	6.72587E-02	4.38997E-05	6.72615E-02	6.73054E-02
LAC	150	1.77224E-04	3.93225E-02	5.96585E-04	3.94997E-02	4.00963E-02
	200	7.28139E-05	3.61228E-02	3.38395E-04	3.61956E-02	3.65340E-02
	279	2.67319E-05	3.22067E-02	1.74805E-04	3.22335E-02	3.24083E-02
	300	2.14852E-05	3.14641E-02	1.50402E-04	3.14856E-02	3.16360E-02
	364	1.26457E-05	2.89162E-02	1.01364E-04	2.89289E-02	2.90303E-02
	400	9.29532E-06	2.82096E-02	8.50024E-05	2.82189E-02	2.83039E-02
	500	4.94312E-06	2.57596E-02	5.34227E-05	2.57645E-02	2.58179E-02
	511	4.86698E-06	2.51995E-02	5.05859E-05	2.52043E-02	2.52549E-02
	600	2.99064E-06	2.38412E-02	3.72086E-05	2.38442E-02	2.38814E-02
	662	2.34860E-06	2.26869E-02	3.03536E-03	2.26893E-02	2.27191E-02
	800	1.38932E-06	2.09445E-02	2.04670E-05	2.09459E-02	2.09663E-02
	1000	7.85294E-07	1.88324E-02	1.22919E-05	1.88332E-02	1.88455E-02

MAC = Mass Attenuation Coefficient (cm^2/g), LAC = Linear Attenuation Coefficient (cm^-1)

TISSUE SUBSTITUTE: SZ-160

	Energy (keV)	Photo	Compton	Coherent	Photo + Compton	Total
	8.0	9.18001E+00	1.42755E-01	2.60098E-01	9.32276E+00	9.58286E+00
	10.0	4.64346E+00	1.50733E-01	1.99713E-01	4.79419E+00	4.99391E+00
	13.6	1.77626E+00	1.61602E-01	1.29732E-01	1.93786E+00	2.06759E+00
	15.0	1.31588E+00	1.66894E-01	1.19082E-01	1.48277E+00	1.60185E+00
	16.6	9.52290E-01	1.68621E-01	9.84520E-02	1.12091E+00	1.21936E+00
MAC	17.2	8.52295E-01	1.69962E-01	9.37237E-02	1.02226E+00	1.11598E+00
	20.0	5.30129E-01	1.74421E-01	7.87425E-02	7.04550E-01	7.83292E-01
	20.2	5.15941E-01	1.75935E-01	7.50175E-02	6.91875E-01	7.66893E-01
	30.0	1.45207E-01	1.79135E-01	4.13354E-02	3.24342E-01	3.65677E-01
	40.0	5.76130E-02	1.78606E-01	2.52707E-02	2.36219E-01	2.61490E-01
	50.0	2.81010E-02	1.76053E-01	1.69775E-02	2.04154E-01	2.21132E-01
	60.0	1.56406E-02	1.72632E-01	1.21715E-02	1.88273E-01	2.00445E-01
	80.0	6.22741E-03	1.65348E-01	7.10158E-03	1.71575E-01	1.78677E-01
	100.0	3.06331E-03	1.58331E-01	4.63647E-03	1.61395E-01	1.66031E-01
	8.0	1.02541E+01	1.59457E-01	2.90529E-01	1.04135E+01	1.07041E+01
	10.0	5.18674E+00	1.68369E-01	2.23080E-01	5.35511E+00	5.57819E+00
	13.6	1.98408E+00	1.80510E-01	1.44911E-01	2.16459E+00	2.30950E+00
	15.0	1.46983E+00	1.86421E-01	1.33015E-01	1.65625E+00	1.78927E+00
	16.6	1.06371E+00	1.88350E-01	1.09971E-01	1.25206E+00	1.36203E+00
LAC	17.2	9.52014E-01	1.89848E-01	1.04689E-01	1.14186E+00	1.24655E+00
	20.0	5.92154E-01	1.94828E-01	8.79554E-02	7.86982E-01	8.74937E-01
	20.2	5.76306E-01	1.96519E-01	8.37946E-02	7.72825E-01	8.56619E-01
	30.0	1.62196E-01	2.00094E-01	4.61716E-02	3.62290E-01	4.08462E-01
	40.0	6.43538E-02	1.99503E-01	2.82274E+00	2.63856E-01	2.92084E-01
	50.0	3.13889E-02	1.96651E-01	1.89639E-02	2.28040E-01	2.47004E-01
	60.0	1.74706E-02	1.92830E-01	1.35956E-02	2.10301E-01	2.23897E-01
	80.0	6.95602E-03	1.84694E-01	7.93246E-03	1.91650E-01	1.99582E-01
	100.0	3.42172E-03	1.76856E-01	5.17893E-03	1.80278E-01	1.85457E-01

MAC = Mass Attenuation Coefficient (cm^2/g), LAC = Linear Attenuation Coefficient (cm^-1)

TISSUE SUBSTITUTE: SZ-160

	Energy (keV)	Photo	Compton	Coherent	Photo + Compton	Total
	150	8.58148E-04	1.43341E-01	2.10644E-03	1.44199E-01	1.46305E-01
	200	3.54180E-04	1.31668E-01	1.19490E-03	1.32022E-01	1.33217E-01
	279	1.30670E-04	1.17397E-01	6.17170E-04	1.17528E-01	1.18145E-01
	300	1.05156E-04	1.14690E-01	5.30782E-04	1.14795E-01	1.15326E-01
	364	6.21399E-05	1.05393E-01	3.57854E-04	1.05455E-01	1.05813E-01
MCA	400	4.57092E-05	1.02817E-01	3.00259E-04	1.02863E-01	1.03163E-01
	500	2.44089E-05	9.38828E-02	1.88108E-04	9.39073E-02	9.40954E-02
	511	2.40785E-05	9.18448E-02	1.78587E-04	9.18689E-02	9.20474E-02
	600	1.48220E-05	8.68907E-02	1.31706E-04	8.69055E-02	8.70372E-02
	662	1.16780E-05	8.26870E-02	1.05051E-04	8.26987E-02	8.28037E-02
	800	6.93547E-06	7.63369E-02	7.23605E-05	7.63438E-02	7.64162E-02
	1000	3.94519E-06	6.86352E-02	4.33151E-05	6.86391E-02	6.86824E-02
	150	9.58551E-04	1.60112E-01	2.35289E-03	1.61070E-01	1.63423E-01
	200	3.95619E-04	1.47073E-01	1.33471E-03	1.47469E-01	1.48803E-01
	279	1.45958E-04	1.31133E-01	6.89379E-04	1.31278E-01	1.31968E-01
	300	1.17460E-04	1.28109E-01	5.92884E-04	1.28226E-01	1.28819E-01
	364	6.94102E-05	1.17724E-01	3.99723E-04	1.17794E-01	1.18193E-01
LAC	400	5.10572E-05	1.14847E-01	3.35389E-04	1.14898E-01	1.15233E-01
	500	2.72648E-05	1.04867E-01	2.10117E-04	1.04894E-01	1.05105E-01
	511	2.68957E-05	1.02591E-01	1.99482E-04	1.02618E-01	1.02817E-01
	600	1.65562E-05	9.70569E-02	1.47116E-04	9.70735E-02	9.72206E-02
	662	1.30443E-05	9.23614E-02	1.17342E-02	9.23744E-02	9.24918E-02
	800	7.74692E-06	8.52683E-02	8.08257E-05	8.52761E-02	8.53569E-02
	1000	4.40678E-06	7.66655E-02	4.83830E-05	7.66699E-02	7.67183E-02

MAC = Mass Attenuation Coefficient (cm^2/g), LAC = Linear Attenuation Coefficient (cm^-1)

TISSUE SUBSTITUTE: EZ-129

	Energy (keV)	Photo	Compton	Coherent	Photo + Compton	Total
	8.0	2.51336E+01	1.32156E-01	3.58051E-01	2.52658E+01	2.56238E+01
	10.0	1.31928E+01	1.40748E-01	2.76993E-01	1.33335E+01	1.36105E+01
	13.6	5.29780E+00	1.52132E-01	1.82055E-01	5.44993E+00	5.63199E+00
	15.0	3.98706E+00	1.57580E-01	1.68133E-01	4.14464E+00	4.31278E+00
	16.6	2.93005E+00	1.59569E-01	1.39108E-01	3.08962E+00	3.22872E+00
MAC	17.2	2.63691E+00	1.60985E-01	1.32583E-01	2.79789E+00	2.93048E+00
	20.0	1.67860E+00	1.65810E-01	1.12317E-01	1.84441E+00	1.95672E+00
	20.2	1.63656E+00	1.67324E-01	1.06719E-01	1.80389E+00	1.91061E+00
	30.0	4.87083E-01	1.71643E-01	5.94294E-02	6.58725E-01	7.18155E-01
	40.0	2.00805E-01	1.71893E-01	3.64338E-02	3.72698E-01	4.09131E-01
	50.0	1.00717E-01	1.69911E-01	2.45021E-02	2.70629E-01	2.95131E-01
	60.0	5.72690E-02	1.66931E-01	1.75828E-02	2.24200E-01	2.41783E-01
	80.0	2.35204E-02	1.60259E-01	1.02756E-02	1.83779E-01	1.94055E-01
	100.0	1.18179E-02	1.53679E-01	6.71518E-03	1.65497E-01	1.72212E-01
	8.0	4.07919E+01	2.14490E-01	5.81117E-01	4.10063E+01	4.15875E+01
	10.0	2.14119E+01	2.28435E-01	4.49560E-01	2.16403E+01	2.20899E+01
	13.6	8.59833E+00	2.46911E-01	2.95476E-01	8.84524E+00	9.14072E+00
	15.0	6.47101E+00	2.55752E-01	2.72880E-01	6.72676E+00	6.99964E+00
	16.6	4.75547E+00	2.58981E-01	2.25772E-01	5.01445E+00	5.24022E+00
LAC	17.2	4.27971E+00	2.61278E-01	2.15181E-01	4.54098E+00	4.75617E+00
	20.0	2.72436E+00	2.69110E-01	1.82291E-01	2.99347E+00	3.17576E+00
	20.2	2.65614E+00	2.71567E-01	1.73206E-01	2.92771E+00	3.10092E+00
	30.0	7.90536E-01	2.78576E-01	9.64539E-02	1.06911E+00	1.16557E+00
	40.0	3.25906E-01	2.78982E-01	6.04567E+00	6.04888E-01	6.64020E-01
	50.0	1.63464E-01	2.75766E-01	3.97669E-02	4.39231E-01	4.78997E-01
	60.0	9.29476E-02	2.70929E-01	2.85368E-02	3.63877E-01	3.92414E-01
	80.0	3.81736E-02	2.60100E-01	1.66773E-02	2.98273E-01	3.14951E-01
	100.0	1.91805E-02	2.49421E-01	1.08987E-02	2.68602E-01	2.79500E-01

MAC = Mass Attenuation Coefficient (cm^2/g), LAC = Linear Attenuation Coefficient (cm^-1)

TISSUE SUBSTITUTE of BONE: EZ-129

	Energy (keV)	Photo	Compton	Coherent	Photo + Compton	Total
	150	3.41864E-03	1.39379E-01	3.05256E-03	1.42798E-01	1.45850E-01
	200	1.43447E-03	1.28119E-01	1.73083E-03	1.29554E-01	1.31285E-01
	279	5.35338E-04	1.14284E-01	8.93579E-04	1.14820E-01	1.15713E-01
	300	4.31987E-04	1.11668E-01	7.70355E-04	1.12100E-01	1.12871E-01
	364	2.53587E-04	1.02627E-01	5.19804E-04	1.02880E-01	1.03400E-01
MCA	400	1.88287E-04	1.00138E-01	4.34578E-04	1.00326E-01	1.00761E-01
	500	1.00259E-04	9.14553E-02	2.74782E-04	9.15556E-02	9.18304E-02
	511	9.77582E-05	8.94554E-02	2.60437E-04	8.95541E-02	8.98146E-02
	600	6.05513E-05	8.46486E-02	1.90745E-04	8.47092E-02	8.48999E-02
	662	4.72373E-05	8.05516E-02	1.53678E-04	8.05988E-02	8.07525E-02
	800	2.79012E-05	7.43701E-02	1.05351E-04	7.43980E-02	7.45034E-02
	1000	1.56026E-05	6.68740E-02	6.44996E-05	6.68897E-02	6.69542E-02
	150	5.54845E-03	2.26212E-01	4.95430E-03	2.31760E-01	2.36715E-01
	200	2.32815E-03	2.07938E-01	2.80914E-03	2.10266E-01	2.13075E-01
	279	8.68854E-04	1.85483E-01	1.45028E-03	1.86352E-01	1.87803E-01
	300	7.01114E-04	1.81238E-01	1.25029E-03	1.81939E-01	1.83189E-01
	364	4.11572E-04	1.66563E-01	8.43642E-04	1.66975E-01	1.67818E-01
LAC	400	3.05591E-04	1.62524E-01	7.05319E-04	1.62830E-01	1.63535E-01
	500	1.62720E-04	1.48432E-01	4.45972E-04	1.48595E-01	1.49041E-01
	511	1.58662E-04	1.45188E-01	4.22690E-04	1.45346E-01	1.45769E-01
	600	9.82748E-05	1.37385E-01	3.09579E-04	1.37483E-01	1.37793E-01
	662	7.66562E-05	1.30735E-01	2.55007E-04	1.30812E-01	1.31061E-01
	800	4.52837E-05	1.20703E-01	1.70984E-04	1.20748E-01	1.20919E-01
	1000	2.53230E-05	1.08537E-01	1.04683E-04	1.08562E-01	1.08667E-01

MAC = Mass Attenuation Coefficient (cm^2/g), LAC = Linear Attenuation Coefficient (cm^-1)

付録2　ファントム用プラスチック材と既存ファントム材の減弱係数表

TISSUE SUBSTITUTE: Lucite

	Energy (keV)	Photo	Compton	Coherent	Photo + Compton	Total
MAC	8.0	5.79222E+00	1.41990E-01	2.49836E-01	5.93421E+00	6.18405E+00
	10.0	2.81714E+00	1.50277E-01	1.89282E-01	2.96742E+00	3.15670E+00
	13.6	1.02935E+00	1.61301E-01	1.22791E-01	1.19066E+00	1.31345E+00
	15.0	7.49063E-01	1.66699E-01	1.11731E-01	9.15762E-01	1.02749E+00
	16.6	5.35521E-01	1.68413E-01	9.29099E-02	7.03934E-01	7.96843E-01
	17.2	4.76704E-01	1.69780E-01	8.83899E-02	6.46484E-01	7.34874E-01
	20.0	2.90198E-01	1.74269E-01	7.39980E-02	4.64467E-01	5.38465E-01
	20.2	2.81444E-01	1.75825E-01	7.05776E-02	4.57270E-01	5.27847E-01
	30.0	7.58722E-02	1.79057E-01	3.88347E-02	2.54929E-01	2.93764E-01
	40.0	2.92931E-02	1.78583E-01	2.37115E-02	2.07876E-01	2.31588E-01
	50.0	1.40304E-02	1.76043E-01	1.59112E-02	1.90073E-01	2.05984E-01
	60.0	7.70863E-03	1.72611E-01	1.14106E-02	1.80320E-01	1.91730E-01
	80.0	3.01541E-03	1.65306E-01	6.66372E-03	1.68321E-01	1.74985E-01
	100.0	1.46605E-03	1.58289E-01	4.35138E-03	1.59755E-01	1.64107E-01
LAC	8.0	6.83482E+00	1.67548E-01	2.94806E-01	7.00237E+00	7.29718E+00
	10.0	3.32423E+00	1.77327E-01	2.23353E-01	3.50156E+00	3.72491E+00
	13.6	1.21464E+00	1.90335E-01	1.44893E-01	1.40497E+00	1.54987E+00
	15.0	8.83895E-01	1.96705E-01	1.31843E-01	1.08060E+00	1.21244E+00
	16.6	6.31914E-01	1.98727E-01	1.09634E-01	8.30642E-01	9.40275E-01
	17.2	5.62511E-01	2.00341E-01	1.04300E-01	7.62851E-01	8.67151E-01
	20.0	3.42434E-01	2.05638E-01	8.73176E-02	5.48071E-01	6.35389E-01
	20.2	3.32104E-01	2.07474E-01	8.32815E-02	5.39578E-01	6.22860E-01
	30.0	8.95292E-02	2.11287E-01	4.58249E-02	3.00816E-01	3.46641E-01
	40.0	3.45659E-02	2.10728E-01	2.79795E+00	2.45294E-01	2.73274E-01
	50.0	1.65558E-02	2.07730E-01	1.87753E-02	2.24286E-01	2.43062E-01
	60.0	9.09618E-03	2.03681E-01	1.34645E-02	2.12777E-01	2.26242E-01
	80.0	3.55818E-03	1.95061E-01	7.86319E-03	1.98619E-01	2.06482E-01
	100.0	1.72994E-03	1.86781E-01	5.13463E-03	1.88511E-01	1.93646E-01

MAC = Mass Attenuation Coefficient (cm^2/g), LAC = Linear Attenuation Coefficient (cm^-1)

TISSUE SUBSTITUTE: Lucite

	Energy (keV)	Photo	Compton	Coherent	Photo + Compton	Total
MCA	150	4.03486E-04	1.43285E-01	1.97722E-03	1.43688E-01	1.45655E-01
	200	1.64702E-04	1.31606E-01	1.12134E-03	1.31771E-01	1.32892E-01
	279	6.00562E-05	1.17327E-01	5.79321E-04	1.17387E-01	1.17966E-01
	300	4.81820E-05	1.14618E-01	4.98106E-04	1.14666E-01	1.15164E-01
	364	2.82151E-05	1.05334E-01	3.35601E-04	1.05362E-01	1.05698E-01
	400	2.07142E-05	1.02756E-01	2.81749E-04	1.02777E-01	1.03059E-01
	500	1.09550E-05	9.38270E-02	1.76762E-04	9.38380E-02	9.40147E-02
	511	1.07624E-05	9.17908E-02	1.67270E-04	9.18016E-02	9.19689E-02
	600	6.59590E-06	8.68391E-02	1.23185E-04	8.68457E-02	8.69689E-02
	662	5.15825E-06	8.26358E-02	9.83032E-05	8.26410E-02	8.27393E-02
	800	3.03520E-06	7.62870E-02	6.76025E-05	7.62901E-02	7.63577E-02
	1000	1.70127E-06	6.85939E-02	4.04416E-05	6.85956E-02	6.86361E-02
LAC	150	4.76113E-04	1.69076E-01	2.33312E-03	1.69552E-01	1.71885E-01
	200	1.94348E-04	1.55295E-01	1.32318E-03	1.55490E-01	1.56813E-01
	279	7.08663E-05	1.38446E-01	6.83599E-04	1.38517E-01	1.39200E-01
	300	5.68548E-05	1.35249E-01	5.87764E-04	1.35306E-01	1.35893E-01
	364	3.32938E-05	1.24294E-01	3.96009E-04	1.24327E-01	1.24724E-01
	400	2.44428E-05	1.21252E-01	3.32464E-04	1.21277E-01	1.21609E-01
	500	1.29269E-05	1.10716E-01	2.08579E-04	1.10729E-01	1.10937E-01
	511	1.26996E-05	1.08313E-01	1.97378E-04	1.08326E-01	1.08523E-01
	600	7.78317E-06	1.02470E-01	1.45358E-04	1.02478E-01	1.02623E-01
	662	6.08674E-06	9.75103E-02	1.15998E-02	9.75163E-02	9.76323E-02
	800	3.58153E-06	9.00187E-02	7.97709E-05	9.00223E-02	9.01020E-02
	1000	2.00750E-06	8.09408E-02	4.77211E-05	8.09428E-02	8.09906E-02

MAC = Mass Attenuation Coefficient (cm^2/g), LAC = Linear Attenuation Coefficient (cm^-1)

TISSUE SUBSTITUTE: Acrylic Resine

	Energy (keV)	Photo	Compton	Coherent	Photo + Compton	Total
	8.0	6.25964E+00	1.36547E-01	2.61810E-01	6.39619E+00	6.65800E+00
	10.0	3.04834E+00	1.45019E-01	1.98040E-01	3.19336E+00	3.39140E+00
	13.6	1.11558E+00	1.56285E-01	1.28460E-01	1.27186E+00	1.40032E+00
	15.0	8.12248E-01	1.61768E-01	1.16692E-01	9.74016E-01	1.09071E+00
	16.6	5.80953E-01	1.63574E-01	9.71754E-02	7.44526E-01	8.41702E-01
MAC	17.2	5.17236E-01	1.64978E-01	9.24416E-02	6.82214E-01	7.74655E-01
	20.0	3.15100E-01	1.69607E-01	7.73263E-02	4.84707E-01	5.62033E-01
	20.2	3.05618E-01	1.71177E-01	7.37967E-02	4.76795E-01	5.50592E-01
	30.0	8.25253E-02	1.74799E-01	4.06319E-02	2.57324E-01	2.97956E-01
	40.0	3.18952E-02	1.74607E-01	2.48240E-02	2.06502E-01	2.31326E-01
	50.0	1.52882E-02	1.72270E-01	1.66623E-02	1.87558E-01	2.04220E-01
	60.0	8.40443E-03	1.68996E-01	1.19542E-02	1.77401E-01	1.89355E-01
	80.0	3.29013E-03	1.61936E-01	6.98363E-03	1.65226E-01	1.72209E-01
	100.0	1.60040E-03	1.55112E-01	4.56197E-03	1.56712E-01	1.61274E-01
	8.0	6.07185E+00	1.32450E-01	2.53956E-01	6.20430E+00	6.45826E+00
	10.0	2.95689E+00	1.40669E-01	1.92099E-01	3.09756E+00	3.28966E+00
	13.6	1.08211E+00	1.51596E-01	1.24606E-01	1.23371E+00	1.35831E+00
	15.0	7.87881E-01	1.56915E-01	1.13191E-01	9.44796E-01	1.05799E+00
	16.6	5.63524E-01	1.58667E-01	9.42601E-02	7.22190E-01	8.16451E-01
LAC	17.2	5.01719E-01	1.60029E-01	8.96683E-02	6.61747E-01	7.51416E-01
	20.0	3.05647E-01	1.64519E-01	7.50065E-02	4.70166E-01	5.45172E-01
	20.2	2.96450E-01	1.66041E-01	7.15828E-02	4.62491E-01	5.34074E-01
	30.0	8.00496E-02	1.69555E-01	3.94129E-02	2.49604E-01	2.89017E-01
	40.0	3.09383E-02	1.69369E-01	2.40793E+00	2.00307E-01	2.24386E-01
	50.0	1.48295E-02	1.67101E-01	1.61625E-02	1.81931E-01	1.98093E-01
	60.0	8.15230E-03	1.63926E-01	1.15956E-02	1.72079E-01	1.83674E-01
	80.0	3.19142E-03	1.57077E-01	6.77412E-03	1.60269E-01	1.67043E-01
	100.0	1.55239E-03	1.50459E-01	4.42511E-03	1.52011E-01	1.56436E-01

MAC = Mass Attenuation Coefficient (cm^2/g), LAC = Linear Attenuation Coefficient (cm^-1)

TISSUE SUBSTITUTE: Acrylic resine

	Energy (keV)	Photo	Compton	Coherent	Photo + Compton	Total
	150	4.40768E-04	1.40456E-01	2.07391E-03	1.40897E-01	1.42971E-01
	200	1.79979E-04	1.29024E-01	1.17629E-03	1.29204E-01	1.30381E-01
	279	6.56362E-05	1.15031E-01	6.07786E-04	1.15096E-01	1.15704E-01
	300	5.26620E-05	1.12376E-01	5.22767E-04	1.12429E-01	1.12952E-01
	364	3.08316E-05	1.03279E-01	3.52228E-04	1.03309E-01	1.03662E-01
MCA	400	2.26393E-05	1.00753E-01	2.95509E-04	1.00776E-01	1.01072E-01
	500	1.19712E-05	9.20015E-02	1.85834E-04	9.20134E-02	9.21993E-02
	511	1.17575E-05	9.00024E-02	1.75640E-04	9.00141E-02	9.01898E-02
	600	7.20655E-06	8.51506E-02	1.29169E-04	8.51578E-02	8.52869E-02
	662	5.63431E-06	8.10273E-02	1.03262E-04	8.10330E-02	8.11362E-02
	800	3.31471E-06	7.48026E-02	7.09547E-05	7.48059E-02	7.48768E-02
	1000	1.85703E-06	6.72613E-02	4.25728E-05	6.72631E-02	6.73057E-02
	150	4.27545E-04	1.36242E-01	2.01170E-03	1.36670E-01	1.38682E-01
	200	1.74579E-04	1.25154E-01	1.14100E-03	1.25328E-01	1.26469E-01
	279	6.36671E-05	1.11580E-01	5.89552E-04	1.11643E-01	1.12233E-01
	300	5.10822E-05	1.09005E-01	5.07084E-04	1.09056E-01	1.09563E-01
	364	2.99066E-05	1.00180E-01	3.41661E-04	1.00210E-01	1.00552E-01
LAC	400	2.19601E-05	9.77308E-02	2.86644E-04	9.77527E-02	9.80394E-02
	500	1.16121E-05	8.92414E-02	1.80259E-04	8.92530E-02	8.94333E-02
	511	1.14048E-05	8.73023E-02	1.70371E-04	8.73137E-02	8.74841E-02
	600	6.99035E-06	8.25960E-02	1.25294E-04	8.26030E-02	8.27283E-02
	662	5.46528E-06	7.85965E-02	1.00164E-02	7.86020E-02	7.87021E-02
	800	3.21527E-06	7.25585E-02	6.88261E-05	7.25617E-02	7.26305E-02
	1000	1.80132E-06	6.52434E-02	4.12956E-05	6.52452E-02	6.52865E-02

MAC = Mass Attenuation Coefficient (cm^2/g), LAC = Linear Attenuation Coefficient (cm^-1)

TISSUE SUBSTITUTE: Polyethylene

	Energy (keV)	Photo	Compton	Coherent	Photo + Compton	Total
	8.0	3.37280E+00	1.60122E-01	1.92526E-01	3.53292E+00	3.72544E+00
	10.0	1.61701E+00	1.67238E-01	1.47991E-01	1.78425E+00	1.93224E+00
	13.6	5.80252E-01	1.77359E-01	9.62427E-02	7.57611E-01	8.53854E-01
	15.0	4.19578E-01	1.82415E-01	8.88353E-02	6.01993E-01	6.90828E-01
	16.6	2.98389E-01	1.83811E-01	7.30376E-02	4.82201E-01	5.55238E-01
MAC	17.2	2.65073E-01	1.85039E-01	6.95336E-02	4.50112E-01	5.19645E-01
	20.0	1.59985E-01	1.89020E-01	5.86468E-02	3.49006E-01	4.07652E-01
	20.2	1.55018E-01	1.90506E-01	5.56567E-02	3.45524E-01	4.01180E-01
	30.0	4.09639E-02	1.92322E-01	3.05066E-02	2.33286E-01	2.63793E-01
	40.0	1.56130E-02	1.90814E-01	1.85441E-02	2.06427E-01	2.24971E-01
	50.0	7.40822E-03	1.87550E-01	1.24197E-02	1.94958E-01	2.07378E-01
	60.0	4.04154E-03	1.83573E-01	8.87810E-03	1.87615E-01	1.96493E-01
	80.0	1.56556E-03	1.75450E-01	5.17118E-03	1.77016E-01	1.82187E-01
	100.0	7.56401E-04	1.67801E-01	3.36695E-03	1.68557E-01	1.71924E-01
	8.0	3.17043E+00	1.50515E-01	1.80975E-01	3.32094E+00	3.50192E+00
	10.0	1.51999E+00	1.57204E-01	1.39111E-01	1.67719E+00	1.81630E+00
	13.6	5.45437E-01	1.66718E-01	9.04681E-02	7.12155E-01	8.02623E-01
	15.0	3.94404E-01	1.71470E-01	8.35052E-02	5.65873E-01	6.49379E-01
	16.6	2.80486E-01	1.72783E-01	6.86554E-02	4.53269E-01	5.21924E-01
LAC	17.2	2.49168E-01	1.73937E-01	6.53616E-02	4.23105E-01	4.88467E-01
	20.0	1.50386E-01	1.77679E-01	5.51280E-02	3.28065E-01	3.83193E-01
	20.2	1.45717E-01	1.79076E-01	5.23173E-02	3.24792E-01	3.77110E-01
	30.0	3.85060E-02	1.80783E-01	2.86762E-02	2.19289E-01	2.47965E-01
	40.0	1.46762E-02	1.79365E-01	1.74314E+00	1.94041E-01	2.11473E-01
	50.0	6.96372E-03	1.76297E-01	1.16745E-02	1.83261E-01	1.94935E-01
	60.0	3.79904E-03	1.72559E-01	8.34541E-03	1.76358E-01	1.84703E-01
	80.0	1.47163E-03	1.64923E-01	4.86091E-03	1.66395E-01	1.71256E-01
	100.0	7.11017E-04	1.57733E-01	3.16493E-03	1.58444E-01	1.61609E-01

MAC = Mass Attenuation Coefficient (cm^2/g), LAC = Linear Attenuation Coefficient (cm^-1)

TISSUE SUBSTITUTE: Polyethylene

	Energy (keV)	Photo	Compton	Coherent	Photo + Compton	Total
	150	2.06313E-04	1.51702E-01	1.52421E-03	1.51908E-01	1.53432E-01
	200	8.38606E-05	1.39277E-01	8.63915E-04	1.39361E-01	1.40225E-01
	279	3.05225E-05	1.24151E-01	4.45940E-04	1.24182E-01	1.24628E-01
	300	2.44676E-05	1.21278E-01	3.82164E-04	1.21302E-01	1.21684E-01
	364	1.43704E-05	1.11430E-01	2.57603E-04	1.11445E-01	1.11702E-01
MCA	400	1.05251E-05	1.08694E-01	2.17242E-04	1.08704E-01	1.08922E-01
	500	5.57767E-06	9.92323E-02	1.34008E-04	9.92379E-02	9.93719E-02
	511	5.49886E-06	9.70907E-02	1.27951E-04	9.70962E-02	9.72242E-02
	600	3.36559E-06	9.18381E-02	9.53051E-05	9.18415E-02	9.19368E-02
	662	2.64107E-06	8.74005E-02	7.49782E-05	8.74031E-02	8.74781E-02
	800	1.55774E-06	8.06839E-02	5.19277E-05	8.06855E-02	8.07374E-02
	1000	8.78627E-07	7.25378E-02	3.02983E-05	7.25386E-02	7.25689E-02
	150	1.93934E-04	1.42599E-01	1.43275E-03	1.42793E-01	1.44226E-01
	200	7.88290E-05	1.30921E-01	8.12080E-04	1.31000E-01	1.31812E-01
	279	2.86911E-05	1.16702E-01	4.19184E-04	1.16731E-01	1.17150E-01
	300	2.29995E-05	1.14001E-01	3.59234E-04	1.14024E-01	1.14383E-01
	364	1.35082E-05	1.04744E-01	2.42147E-04	1.04758E-01	1.05000E-01
LAC	400	9.89364E-06	1.02172E-01	2.04207E-04	1.02182E-01	1.02386E-01
	500	5.24301E-06	9.32784E-02	1.25968E-04	9.32836E-02	9.34096E-02
	511	5.16893E-06	9.12653E-02	1.20274E-04	9.12704E-02	9.13907E-02
	600	3.16365E-06	8.63278E-02	8.95867E-05	8.63310E-02	8.64206E-02
	662	2.48261E-06	8.21564E-02	7.04795E-03	8.21589E-02	8.22294E-02
	800	1.46428E-06	7.58429E-02	4.88121E-05	7.58444E-02	7.58932E-02
	1000	8.25910E-07	6.81855E-02	2.84804E-05	6.81863E-02	6.82148E-02

MAC = Mass Attenuation Coefficient (cm^2/g), LAC = Linear Attenuation Coefficient (cm^-1)

TISSUE SUBSTITUTE: Polyvinyl Chloride

	Energy (keV)	Photo	Compton	Coherent	Photo + Compton	Total
MAC	8.0	6.37417E+01	1.16696E-01	6.26820E-01	6.38584E+01	6.44852E+01
	10.0	3.36719E+01	1.26472E-01	4.98734E-01	3.37984E+01	3.42971E+01
	13.6	1.35002E+01	1.38397E-01	3.24735E-01	1.36386E+01	1.39633E+01
	15.0	1.01720E+01	1.43907E-01	3.02838E-01	1.03159E+01	1.06188E+01
	16.6	7.44698E+00	1.46319E-01	2.48473E-01	7.59329E+00	7.84177E+00
	17.2	6.69799E+00	1.47831E-01	2.36927E-01	6.84583E+00	7.08275E+00
	20.0	4.24737E+00	1.53253E-01	1.99684E-01	4.40062E+00	4.60031E+00
	20.2	4.14581E+00	1.54748E-01	1.90914E-01	4.30056E+00	4.49148E+00
	30.0	1.21076E+00	1.60830E-01	1.06334E-01	1.37159E+00	1.47792E+00
	40.0	4.91103E-01	1.62412E-01	6.57593E-02	6.53515E-01	7.19274E-01
	50.0	2.42990E-01	1.61499E-01	4.44652E-02	4.04489E-01	4.48954E-01
	60.0	1.36594E-01	1.59408E-01	3.19612E-02	2.96002E-01	3.27963E-01
	80.0	5.51138E-02	1.53988E-01	1.86569E-02	2.09101E-01	2.27758E-01
	100.0	2.73408E-02	1.48122E-01	1.22167E-02	1.75462E-01	1.87679E-01
LAC	8.0	8.92384E+01	1.63374E-01	8.77549E-01	8.94017E+01	9.02793E+01
	10.0	4.71407E+01	1.77061E-01	6.98228E-01	4.73178E+01	4.80160E+01
	13.6	1.89002E+01	1.93755E-01	4.54630E-01	1.90940E+01	1.95486E+01
	15.0	1.42408E+01	2.01470E-01	4.23973E-01	1.44423E+01	1.48663E+01
	16.6	1.04258E+01	2.04846E-01	3.47863E-01	1.06306E+01	1.09785E+01
	17.2	9.37719E+00	2.06963E-01	3.31697E-01	9.58416E+00	9.91585E+00
	20.0	5.94632E+00	2.14554E-01	2.79557E-01	6.16087E+00	6.44043E+00
	20.2	5.80414E+00	2.16648E-01	2.67279E-01	6.02079E+00	6.28807E+00
	30.0	1.69506E+00	2.25162E-01	1.48868E-01	1.92022E+00	2.06909E+00
	40.0	6.87544E-01	2.27376E-01	9.20630E+00	9.14920E-01	1.00698E+00
	50.0	3.40186E-01	2.26098E-01	6.22512E-02	5.66284E-01	6.28536E-01
	60.0	1.91231E-01	2.23171E-01	4.47456E-02	4.14403E-01	4.59148E-01
	80.0	7.71593E-02	2.15583E-01	2.61196E-02	2.92742E-01	3.18861E-01
	100.0	3.82772E-02	2.07370E-01	1.71033E-02	2.45647E-01	2.62751E-01

MAC = Mass Attenuation Coefficient (cm^2/g), LAC = Linear Attenuation Coefficient (cm^-1)

TISSUE SUBSTITUTE: Polyvinyl chloride

	Energy (keV)	Photo	Compton	Coherent	Photo + Compton	Total
MCA	150	7.75621E-03	1.34956E-01	5.57369E-03	1.42712E-01	1.48286E-01
	200	3.22221E-03	1.24290E-01	3.16571E-03	1.27512E-01	1.30678E-01
	279	1.19643E-03	1.11009E-01	1.63593E-03	1.12205E-01	1.13841E-01
	300	9.64537E-04	1.08496E-01	1.41392E-03	1.09461E-01	1.10875E-01
	364	5.72060E-04	9.97289E-02	9.54318E-04	1.00301E-01	1.01255E-01
	400	4.21486E-04	9.73641E-02	7.95516E-04	9.77855E-02	9.85811E-02
	500	2.26002E-04	8.89586E-02	5.06146E-04	8.91846E-02	8.96907E-02
	511	2.23187E-04	8.69848E-02	4.80081E-04	8.72080E-02	8.76881E-02
	600	1.37708E-04	8.23533E-02	3.50986E-04	8.24910E-02	8.28420E-02
	662	1.08794E-04	7.83640E-02	2.84143E-04	7.84728E-02	7.87570E-02
	800	6.48557E-05	7.23782E-02	1.94745E-04	7.24431E-02	7.26378E-02
	1000	3.70844E-05	6.50763E-02	1.20500E-04	6.51134E-02	6.52339E-02
LAC	150	1.08587E-02	1.88938E-01	7.80316E-03	1.99797E-01	2.07600E-01
	200	4.51109E-03	1.74006E-01	4.43199E-03	1.78517E-01	1.82949E-01
	279	1.67500E-03	1.55412E-01	2.29030E-03	1.57087E-01	1.59378E-01
	300	1.35035E-03	1.51895E-01	1.97948E-03	1.53245E-01	1.55225E-01
	364	8.00884E-04	1.39620E-01	1.33605E-03	1.40421E-01	1.41757E-01
	400	5.90081E-04	1.36310E-01	1.11372E-03	1.35900E-01	1.38013E-01
	500	3.16403E-04	1.24542E-01	7.08604E-04	1.24858E-01	1.25567E-01
	511	3.12462E-04	1.21779E-01	6.72114E-04	1.22091E-01	1.22763E-01
	600	1.92792E-04	1.15295E-01	4.91381E-04	1.15487E-01	1.15979E-01
	662	1.52311E-04	1.09710E-01	3.97799E-02	1.09862E-01	1.10260E-01
	800	9.07980E-05	1.01330E-01	2.72644E-04	1.01420E-01	1.01693E-01
	1000	5.19182E-05	9.11068E-02	1.68700E-04	9.11588E-02	9.13275E-02

MAC = Mass Attenuation Coefficient (cm^2/g), LAC = Linear Attenuation Coefficient (cm^-1)

TISSUE SUBSTITUTE: Polystyrene

	Energy (keV)	Photo	Compton	Coherent	Photo + Compton	Total
MAC	8.0	3.63352E+00	1.45489E-01	2.04600E-01	3.77900E+00	3.98360E+00
	10.0	1.74201E+00	1.52459E-01	1.57544E-01	1.89447E+00	2.05202E+00
	13.6	6.25111E-01	1.63124E-01	1.02635E-01	7.88235E-01	8.90870E-01
	15.0	4.52017E-01	1.68339E-01	9.48157E-02	6.20355E-01	7.15171E-01
	16.6	3.21458E-01	1.69968E-01	7.79652E-02	4.91426E-01	5.69391E-01
	17.2	2.85566E-01	1.71275E-01	7.42370E-02	4.56841E-01	5.31078E-01
	20.0	1.72354E-01	1.75588E-01	6.26707E-02	3.47942E-01	4.10613E-01
	20.2	1.67003E-01	1.77080E-01	5.94638E-02	3.44083E-01	4.03547E-01
	30.0	4.41311E-02	1.79811E-01	3.26347E-02	2.23942E-01	2.56577E-01
	40.0	1.68202E-02	1.78952E-01	1.98476E-02	1.95773E-01	2.15620E-01
	50.0	7.98103E-03	1.76179E-01	1.32963E-02	1.84160E-01	1.97457E-01
	60.0	4.35404E-03	1.72607E-01	9.50632E-03	1.76961E-01	1.86467E-01
	80.0	1.68662E-03	1.65141E-01	5.53828E-03	1.66827E-01	1.72365E-01
	100.0	8.14892E-04	1.58021E-01	3.60638E-03	1.58836E-01	1.62442E-01
LAC	8.0	3.81519E+00	1.52764E-01	2.14830E-01	3.96795E+00	4.18278E+00
	10.0	1.82911E+00	1.60082E-01	1.65421E-01	1.98920E+00	2.15462E+00
	13.6	6.56366E-01	1.71281E-01	1.07767E-01	8.27647E-01	9.35414E-01
	15.0	4.74617E-01	1.76756E-01	9.95565E-02	6.51373E-01	7.50930E-01
	16.6	3.37531E-01	1.78466E-01	8.18635E-02	5.15997E-01	5.97861E-01
	17.2	2.99845E-01	1.79838E-01	7.79489E-02	4.79683E-01	5.57632E-01
	20.0	1.80972E-01	1.84367E-01	6.58042E-02	3.65339E-01	4.31143E-01
	20.2	1.75353E-01	1.85934E-01	6.24370E-02	3.61287E-01	4.23724E-01
	30.0	4.63376E-02	1.88802E-01	3.42664E-02	2.35139E-01	2.69406E-01
	40.0	1.76612E-02	1.87900E-01	2.08400E+00	2.05561E-01	2.26401E-01
	50.0	8.38008E-03	1.84988E-01	1.39611E-02	1.93368E-01	2.07330E-01
	60.0	4.57174E-03	1.81237E-01	9.98164E-03	1.85809E-01	1.95791E-01
	80.0	1.77095E-03	1.73398E-01	5.81519E-03	1.75169E-01	1.80984E-01
	100.0	8.55636E-04	1.65922E-01	3.78670E-03	1.66778E-01	1.70564E-01

MAC = Mass Attenuation Coefficient (cm^2/g), LAC = Linear Attenuation Coefficient (cm^-1)

TISSUE SUBSTITUTE: Polystyrene

	Energy (keV)	Photo	Compton	Coherent	Photo + Compton	Total
MCA	150	2.22267E-04	1.42936E-01	1.63297E-03	1.43159E-01	1.44792E-01
	200	9.03460E-05	1.31261E-01	9.25720E-04	1.31352E-01	1.32278E-01
	279	3.28831E-05	1.17024E-01	4.77935E-04	1.17057E-01	1.17535E-01
	300	2.63600E-05	1.14323E-01	4.09443E-04	1.14349E-01	1.14758E-01
	364	1.54819E-05	1.05037E-01	2.76191E-04	1.05052E-01	1.05328E-01
	400	1.13392E-05	1.02460E-01	2.32676E-04	1.02471E-01	1.02704E-01
	500	6.00913E-06	9.35436E-02	1.43922E-04	9.35496E-02	9.36935E-02
	511	5.92423E-06	9.15227E-02	1.37245E-04	9.15286E-02	9.16658E-02
	600	3.62594E-06	8.65757E-02	1.02222E-04	8.65793E-02	8.66816E-02
	662	2.84539E-06	8.23907E-02	8.04498E-05	8.23936E-02	8.24740E-02
	800	1.67826E-06	7.60601E-02	5.57344E-05	7.60617E-02	7.61175E-02
	1000	9.46608E-07	6.83826E-02	3.25133E-05	6.83836E-02	6.84161E-02
LAC	150	2.33381E-04	1.50083E-01	1.71462E-03	1.50317E-01	1.52031E-01
	200	9.48633E-05	1.37825E-01	9.72006E-04	1.37919E-01	1.38891E-01
	279	3.45273E-05	1.22875E-01	5.01831E-04	1.22910E-01	1.23411E-01
	300	2.76780E-05	1.20039E-01	4.29915E-04	1.20066E-01	1.20496E-01
	364	1.62560E-05	1.10289E-01	2.90001E-04	1.10305E-01	1.10595E-01
	400	1.19062E-05	1.07583E-01	2.44309E-04	1.07595E-01	1.07839E-01
	500	6.30958E-06	9.82208E-02	1.51118E-04	9.82271E-02	9.83782E-02
	511	6.22044E-06	9.60988E-02	1.44108E-04	9.61050E-02	9.62491E-02
	600	3.80724E-06	9.09045E-02	1.07333E-04	9.09083E-02	9.10156E-02
	662	2.98766E-06	8.65102E-02	8.44723E-03	8.65132E-02	8.65977E-02
	800	1.76217E-06	7.98631E-02	5.85211E-05	7.98648E-02	7.99233E-02
	1000	9.93938E-07	7.18017E-02	3.41389E-05	7.18027E-02	7.18369E-02

MAC = Mass Attenuation Coefficient (cm^2/g), LAC = Linear Attenuation Coefficient (cm^-1)

TISSUE SUBSTITUTE: Polypropylene

	Energy (keV)	Photo	Compton	Coherent	Photo + Compton	Total
MAC	8.0	3.37280E+00	1.60122E-01	1.92526E-01	3.53292E+00	3.72544E+00
	10.0	1.61701E+00	1.67238E-01	1.47991E-01	1.78425E+00	1.93224E+00
	13.6	5.80252E-01	1.77360E-01	9.62427E-02	7.57611E-01	8.53854E-01
	15.0	4.19578E-01	1.82415E-01	8.88353E-02	6.01993E-01	6.90828E-01
	16.6	2.98389E-01	1.83811E-01	7.30376E-02	4.82201E-01	5.55238E-01
	17.2	2.65073E-01	1.85039E-01	6.95336E-02	4.50112E-01	5.19645E-01
	20.0	1.59985E-01	1.89020E-01	5.86468E-02	3.49006E-01	4.07652E-01
	20.2	1.55018E-01	1.90506E-01	5.56567E-02	3.45524E-01	4.01180E-01
	30.0	4.09639E-02	1.92322E-01	3.05066E-02	2.33286E-01	2.63793E-01
	40.0	1.56130E-02	1.90814E-01	1.85441E-02	2.06427E-01	2.24971E-01
	50.0	7.40822E-03	1.87550E-01	1.24197E-02	1.94958E-01	2.07378E-01
	60.0	4.04154E-03	1.83573E-01	8.87810E-03	1.87615E-01	1.96493E-01
	80.0	1.56556E-03	1.75451E-01	5.17118E-03	1.77016E-01	1.82187E-01
	100.0	7.56401E-04	1.67801E-01	3.36695E-03	1.68557E-01	1.71924E-01
LAC	8.0	3.06924E+00	1.45711E-01	1.75199E-01	3.21496E+00	3.39015E+00
	10.0	1.47148E+00	1.52187E-01	1.34672E-01	1.62367E+00	1.75834E+00
	13.6	5.28029E-01	1.61397E-01	8.75809E-02	6.89426E-01	7.77007E-01
	15.0	3.81816E-01	1.65997E-01	8.08401E-02	5.47814E-01	6.28654E-01
	16.6	2.71534E-01	1.67268E-01	6.64642E-02	4.38803E-01	5.05267E-01
	17.2	2.41216E-01	1.68385E-01	6.32756E-02	4.09602E-01	4.72877E-01
	20.0	1.45587E-01	1.72008E-01	5.33686E-02	3.17595E-01	3.70964E-01
	20.2	1.41066E-01	1.73360E-01	5.06476E-02	3.14427E-01	3.65074E-01
	30.0	3.72771E-02	1.75013E-01	2.77610E-02	2.12291E-01	2.40052E-01
	40.0	1.42078E-02	1.73641E-01	1.68751E+00	1.87848E-01	2.04724E-01
	50.0	6.74148E-03	1.70671E-01	1.13019E-02	1.77412E-01	1.88714E-01
	60.0	3.67780E-03	1.67052E-01	8.07907E-03	1.70730E-01	1.78809E-01
	80.0	1.42466E-03	1.59660E-01	4.70577E-03	1.61085E-01	1.65790E-01
	100.0	6.88325E-04	1.52699E-01	3.06393E-03	1.53387E-01	1.56451E-01

MAC = Mass Attenuation Coefficient (cm^2/g), LAC = Linear Attenuation Coefficient (cm^-1)

TISSUE SUBSTITUTE: Polypropylene

	Energy (keV)	Photo	Compton	Coherent	Photo + Compton	Total
MCA	150	2.06313E-04	1.51702E-01	1.52421E-03	1.51908E-01	1.53432E-01
	200	8.38506E-05	1.39277E-01	8.63915E-04	1.39361E-01	1.40225E-01
	279	3.05225E-05	1.24151E-01	4.45940E-04	1.24182E-01	1.24628E-01
	300	2.44676E-05	1.21278E-01	3.82164E-04	1.21302E-01	1.21684E-01
	364	1.43704E-05	1.11430E-01	2.57603E-04	1.11445E-01	1.11702E-01
	400	1.05251E-05	1.08694E-01	2.17242E-04	1.08704E-01	1.08922E-01
	500	5.57767E-06	9.92323E-02	1.34008E-04	9.92379E-02	9.93719E-02
	511	5.49886E-06	9.70907E-02	1.27951E-04	9.70962E-02	9.72241E-02
	600	3.36559E-06	9.18381E-02	9.53051E-05	9.18415E-02	9.19368E-02
	662	2.64107E-06	8.74005E-02	7.49782E-05	8.74031E-02	8.74781E-02
	800	1.55774E-06	8.06840E-02	5.19277E-05	8.06855E-02	8.07374E-02
	1000	8.78627E-07	7.25378E-02	3.02983E-05	7.25386E-02	7.25689E-02
LAC	150	1.87745E-04	1.38048E-01	1.38703E-03	1.38236E-01	1.39623E-01
	200	7.63132E-05	1.26742E-01	7.86163E-04	1.26819E-01	1.27605E-01
	279	2.77754E-05	1.12978E-01	4.05806E-04	1.13005E-01	1.13411E-01
	300	2.22655E-05	1.10363E-01	3.47769E-04	1.10385E-01	1.10733E-01
	364	1.30770E-05	1.01401E-01	2.34419E-04	1.01415E-01	1.01649E-01
	400	9.57788E-06	9.89113E-02	1.97690E-04	9.89209E-02	9.91186E-02
	500	5.07568E-06	9.03014E-02	1.21948E-04	9.03065E-02	9.04284E-02
	511	5.00396E-06	8.83525E-02	1.16435E-04	8.83575E-02	8.84740E-02
	600	3.06268E-06	8.35727E-02	8.67276E-05	8.35757E-02	8.36625E-02
	662	2.40337E-06	7.95344E-02	6.82301E-03	7.95368E-02	7.96051E-02
	800	1.41754E-06	7.34224E-02	4.72542E-05	7.34238E-02	7.34711E-02
	1000	7.99551E-07	6.60094E-02	2.75715E-05	6.60102E-02	6.60377E-02

MAC = Mass Attenuation Coefficient (cm^2/g), LAC = Linear Attenuation Coefficient (cm^-1)

TISSUE SUBSTITUTE: Paraffin Wax

	Energy (keV)	Photo	Compton	Coherent	Photo + Compton	Total
MAC	8.0	3.37280E+00	1.60122E-01	1.92526E-01	3.53292E+00	3.72544E+00
	10.0	1.61701E+00	1.67238E-01	1.47991E-01	1.78425E+00	1.93224E+00
	13.6	5.80252E-01	1.77360E-01	9.62427E-02	7.57611E-01	8.53854E-01
	15.0	4.19578E-01	1.82415E-01	8.88353E-02	6.01993E-01	6.90828E-01
	16.6	2.98389E-01	1.83811E-01	7.30376E-02	4.82201E-01	5.55238E-01
	17.2	2.65073E-01	1.85039E-01	6.95336E-02	4.50112E-01	5.19645E-01
	20.0	1.59985E-01	1.89020E-01	5.86468E-02	3.49006E-01	4.07652E-01
	20.2	1.55018E-01	1.90506E-01	5.56567E-02	3.45524E-01	4.01180E-01
	30.0	4.09639E-02	1.92322E-01	3.05066E-02	2.33286E-01	2.63793E-01
	40.0	1.56130E-02	1.90814E-01	1.85441E-02	2.06427E-01	2.24971E-01
	50.0	7.40822E-03	1.87550E-01	1.24197E-02	1.94958E-01	2.07378E-01
	60.0	4.04154E-03	1.83573E-01	8.87810E-03	1.87615E-01	1.96493E-01
	80.0	1.56556E-03	1.75451E-01	5.17118E-03	1.77016E-01	1.82187E-01
	100.0	7.56401E-04	1.67801E-01	3.36695E-03	1.68557E-01	1.71924E-01
LAC	8.0	3.13670E+00	1.48913E-01	1.79049E-01	3.28561E+00	3.46466E+00
	10.0	1.50382E+00	1.55531E-01	1.37632E-01	1.65935E+00	1.79698E+00
	13.6	5.39634E-01	1.64944E-01	8.95057E-02	7.04578E-01	7.94084E-01
	15.0	3.90208E-01	1.69646E-01	8.26168E-02	5.59853E-01	6.42470E-01
	16.6	2.77502E-01	1.70945E-01	6.79250E-02	4.48447E-01	5.16372E-01
	17.2	2.46518E-01	1.72086E-01	6.46662E-02	4.18604E-01	4.83270E-01
	20.0	1.48786E-01	1.75789E-01	5.45416E-02	3.24575E-01	3.79117E-01
	20.2	1.44166E-01	1.77171E-01	5.17607E-02	3.21337E-01	3.73098E-01
	30.0	3.80964E-02	1.78860E-01	2.83711E-02	2.16956E-01	2.45327E-01
	40.0	1.45201E-02	1.77457E-01	1.72460E+00	1.91977E-01	2.09223E-01
	50.0	6.88964E-03	1.74422E-01	1.15503E-02	1.81311E-01	1.92862E-01
	60.0	3.75863E-03	1.70723E-01	8.25663E-03	1.74482E-01	1.82739E-01
	80.0	1.45598E-03	1.63169E-01	4.80920E-03	1.64625E-01	1.69434E-01
	100.0	7.03453E-04	1.56055E-01	3.13126E-03	1.56758E-01	1.59889E-01

MAC = Mass Attenuation Coefficient (cm^2/g), LAC = Linear Attenuation Coefficient (cm^-1)

TISSUE SUBSTITUTE: Paraffin Wax

	Energy (keV)	Photo	Compton	Coherent	Photo + Compton	Total
MCA	150	2.06313E-04	1.51702E-01	1.52421E-03	1.51908E-01	1.53432E-01
	200	8.38606E-05	1.39277E-01	8.63915E-04	1.39361E-01	1.40225E-01
	279	3.05225E-05	1.24151E-01	4.45940E-04	1.24182E-01	1.24628E-01
	300	2.44676E-05	1.21278E-01	3.82164E-04	1.21302E-01	1.21684E-01
	364	1.43704E-05	1.11430E-01	2.57603E-04	1.11445E-01	1.11702E-01
	400	1.05251E-05	1.08694E-01	2.17242E-04	1.08704E-01	1.08922E-01
	500	5.57767E-06	9.92323E-02	1.34008E-04	9.92379E-02	9.93719E-02
	511	5.49886E-06	9.70907E-02	1.27951E-04	9.70962E-02	9.72241E-02
	600	3.36559E-06	9.18381E-02	9.53051E-05	9.18415E-02	9.19368E-02
	662	2.64107E-06	8.74005E-02	7.49782E-05	8.74031E-02	8.74781E-02
	800	1.55774E-06	8.06840E-02	5.19277E-05	8.06855E-02	8.07374E-02
	1000	8.78627E-07	7.25378E-02	3.02983E-05	7.25386E-02	7.25689E-02
LAC	150	1.91871E-04	1.41082E-01	1.41751E-03	1.41274E-01	1.42692E-01
	200	7.79904E-05	1.29528E-01	8.03441E-04	1.29606E-01	1.30409E-01
	279	2.83859E-05	1.15461E-01	4.14724E-04	1.15489E-01	1.15904E-01
	300	2.27549E-05	1.12788E-01	3.55412E-04	1.12811E-01	1.13166E-01
	364	1.33645E-05	1.03630E-01	2.39571E-04	1.03643E-01	1.03883E-01
	400	9.78838E-06	1.01085E-01	2.02035E-04	1.01095E-01	1.01297E-01
	500	5.18724E-06	9.22860E-02	1.24628E-04	9.22912E-02	9.24159E-02
	511	5.11394E-06	9.02944E-02	1.18995E-04	9.02995E-02	9.04185E-02
	600	3.13000E-06	8.54094E-02	8.86337E-05	8.54126E-02	8.55012E-02
	662	2.45620E-06	8.12824E-02	6.97297E-03	8.12849E-02	8.13546E-02
	800	1.44870E-06	7.50361E-02	4.82928E-05	7.50375E-02	7.50858E-02
	1000	8.17123E-07	6.74601E-02	2.81774E-05	6.74609E-02	6.74891E-02

MAC = Mass Attenuation Coefficient (cm^2/g), LAC = Linear Attenuation Coefficient (cm^-1)

TISSUE SUBSTITUTE: Mix-D

	Energy (keV)	Photo	Compton	Coherent	Photo + Compton	Total
	8.0	7.96008E+00	1.54984E-01	2.32800E-01	8.11507E+00	8.34787E+00
	10.0	4.04854E+00	1.62539E-01	1.79183E-01	4.21108E+00	4.39027E+00
	13.6	1.56436E+00	1.72929E-01	1.16170E-01	1.73729E+00	1.85346E+00
	15.0	1.16286E+00	1.78020E-01	1.05771E-01	1.34088E+00	1.44765E+00
	16.6	8.45068E-01	1.79587E-01	8.81825E-02	1.02465E+00	1.11284E+00
MAC	17.2	7.57433E-01	1.80851E-01	8.39538E-02	9.38283E-01	1.02224E+00
	20.0	4.74160E-01	1.84996E-01	7.06324E-02	6.59156E-01	7.29788E-01
	20.2	4.61620E-01	1.86506E-01	6.72198E-02	6.48126E-01	7.15346E-01
	30.0	1.32300E-01	1.88767E-01	3.70177E-02	3.21067E-01	3.58085E-01
	40.0	5.32378E-02	1.87607E-01	2.26533E-02	2.40845E-01	2.63498E-01
	50.0	2.62574E-02	1.84596E-01	1.52545E-02	2.10854E-01	2.26108E-01
	60.0	1.47472E-02	1.80814E-01	1.09555E-02	1.95561E-01	2.06517E-01
	80.0	5.95469E-03	1.72963E-01	6.38784E-03	1.78917E-01	1.85305E-01
	100.0	2.95963E-03	1.65507E-01	4.17180E-03	1.68467E-01	1.72638E-01
	8.0	7.80088E+00	1.51884E-01	2.28144E-01	7.95277E+00	8.18091E+00
	10.0	3.96757E+00	1.59288E-01	1.75600E-01	4.12686E+00	4.30246E+00
	13.6	1.53307E+00	1.69470E-01	1.13846E-01	1.70254E+00	1.81639E+00
	15.0	1.13960E+00	1.74459E-01	1.04635E-01	1.31406E+00	1.41869E+00
	16.6	8.28167E-01	1.75995E-01	8.64189E-02	1.00416E+00	1.09058E+00
LAC	17.2	7.42284E-01	1.77234E-01	8.22748E-02	9.19518E-01	1.00179E+00
	20.0	4.64677E-01	1.81296E-01	6.92198E-02	6.45972E-01	7.15192E-01
	20.2	4.52388E-01	1.82776E-01	6.58754E-02	6.35164E-01	7.01039E-01
	30.0	1.29654E-01	1.84991E-01	3.62773E-02	3.14646E-01	3.50923E-01
	40.0	5.21730E-02	1.83855E-01	2.22025E+00	2.36028E-01	2.58228E-01
	50.0	2.57322E-02	1.80904E-01	1.49494E-02	2.06637E-01	2.21586E-01
	60.0	1.44522E-02	1.77198E-01	1.07364E-02	1.91650E-01	2.02386E-01
	80.0	5.83560E-03	1.69504E-01	6.26009E-03	1.75339E-01	1.81599E-01
	100.0	2.90043E-03	1.62197E-01	4.08837E-03	1.65097E-01	1.69186E-01

MAC = Mass Attenuation Coefficient (cm^2/g), LAC = Linear Attenuation Coefficient (cm^-1)

TISSUE SUBSTITUTE: Mix-D

	Energy (keV)	Photo	Compton	Coherent	Photo + Compton	Total
	150	2.51618E-03	1.33172E-01	2.73394E-03	1.35688E-01	1.38422E-01
	200	1.05757E-03	1.22401E-01	1.55339E-03	1.23458E-01	1.25012E-01
	279	3.96394E-04	1.09187E-01	8.02949E-04	1.09583E-01	1.10386E-01
	300	3.20172E-04	1.06687E-01	6.91352E-04	1.07008E-01	1.07699E-01
	364	1.89652E-04	9.80330E-02	4.66739E-04	9.82226E-02	9.86894E-02
MCA	400	1.40514E-04	9.56519E-02	3.90967E-04	9.57924E-02	9.61834E-02
	500	7.54502E-05	8.73483E-02	2.45848E-04	8.74237E-02	8.76696E-02
	511	7.40381E-05	8.54446E-02	2.33620E-04	8.55187E-02	8.57523E-02
	600	4.59374E-05	8.08482E-02	1.72065E-04	8.08942E-02	8.10662E-02
	662	3.61193E-05	7.69363E-02	1.37743E-04	7.69724E-02	7.71102E-02
	800	2.15145E-05	7.10324E-02	9.48480E-05	7.10539E-02	7.11488E-02
	1000	1.22167E-05	6.38680E-02	5.72817E-05	6.38803E-02	6.39375E-02
	150	2.46586E-03	1.30508E-01	2.67926E-03	1.32974E-01	1.35653E-01
	200	1.03642E-03	1.19953E-01	1.52232E-03	1.20989E-01	1.22511E-01
	279	3.88466E-04	1.07003E-01	7.86890E-04	1.07392E-01	1.08179E-01
	300	3.13769E-04	1.04554E-01	6.77525E-04	1.04867E-01	1.05545E-01
	364	1.85859E-04	9.60723E-02	4.57404E-04	9.62582E-02	9.67156E-02
LAC	400	1.37703E-04	9.37389E-02	3.83148E-04	9.38766E-02	9.42597E-02
	500	7.39412E-05	8.56013E-02	2.40931E-04	8.56752E-02	8.59162E-02
	511	7.25574E-05	8.37357E-02	2.28947E-04	8.38083E-02	8.40372E-02
	600	4.50187E-05	7.92313E-02	1.68624E-04	7.92763E-02	7.94449E-02
	662	3.53969E-05	7.53976E-02	1.34988E-02	7.54330E-02	7.55680E-02
	800	2.10842E-05	6.96117E-02	9.29510E-05	6.96328E-02	6.97258E-02
	1000	1.19724E-05	6.25907E-02	5.61361E-05	6.26027E-02	6.26588E-02

MAC = Mass Attenuation Coefficient (cm^2/g), LAC = Linear Attenuation Coefficient (cm^-1)

TISSUE SUBSTITUTE: Water

	Energy (keV)	Photo	Compton	Coherent	Photo + Compton	Total
	8.0	9.52994E+00	1.41462E-01	3.25588E-01	9.67140E+00	9.99699E+00
	10.0	4.68058E+00	1.52150E-01	2.42009E-01	4.83273E+00	5.07474E+00
	13.6	1.73083E+00	1.63598E-01	1.56150E-01	1.89443E+00	2.05058E+00
	15.0	1.26473E+00	1.69262E-01	1.39486E-01	1.43399E+00	1.57347E+00
	16.6	9.07245E-01	1.71037E-01	1.17570E-01	1.07828E+00	1.19585E+00
MAC	17.2	8.08660E-01	1.72480E-01	1.11730E-01	9.81140E-01	1.09287E+00
	20.0	4.94965E-01	1.77154E-01	9.25770E-02	6.72118E-01	7.64695E-01
	20.2	4.80310E-01	1.78820E-01	8.88611E-02	6.59130E-01	7.47991E-01
	30.0	1.31090E-01	1.82586E-01	4.90328E-02	3.13676E-01	3.62709E-01
	40.0	5.10061E-02	1.82544E-01	3.00758E-02	2.33550E-01	2.63625E-01
	50.0	2.45660E-02	1.80226E-01	2.02207E-02	2.04792E-01	2.25013E-01
	60.0	1.35530E-02	1.76887E-01	1.45527E-02	1.90440E-01	2.04993E-01
	80.0	5.33150E-03	1.69612E-01	8.52238E-03	1.74944E-01	1.83466E-01
	100.0	2.60136E-03	1.62572E-01	5.58315E-03	1.65174E-01	1.70757E-01
	8.0	9.52994E+00	1.41462E-01	3.25588E-01	9.67140E+00	9.99699E+00
	10.0	4.68058E+00	1.52150E-01	2.42009E-01	4.83273E+00	5.07474E+00
	13.6	1.73083E+00	1.63598E-01	1.56150E-01	1.89443E+00	2.05058E+00
	15.0	1.26473E+00	1.69262E-01	1.39486E-01	1.43399E+00	1.57347E+00
	16.6	9.07245E-01	1.71037E-01	1.17570E-01	1.07828E+00	1.19585E+00
LAC	17.2	8.08660E-01	1.72480E-01	1.11730E-01	9.81140E-01	1.09287E+00
	20.0	4.94965E-01	1.77154E-01	9.25770E-02	6.72118E-01	7.64695E-01
	20.2	4.80310E-01	1.78820E-01	8.88611E-02	6.59130E-01	7.47991E-01
	30.0	1.31090E-01	1.82586E-01	4.90328E-02	3.13676E-01	3.62709E-01
	40.0	5.10061E-02	1.82544E-01	3.00758E+00	2.33550E-01	2.63625E-01
	50.0	2.45660E-02	1.80226E-01	2.02207E-02	2.04792E-01	2.25013E-01
	60.0	1.35530E-02	1.76887E-01	1.45527E-02	1.90440E-01	2.04993E-01
	80.0	5.33150E-03	1.69612E-01	8.52238E-03	1.74944E-01	1.83466E-01
	100.0	2.60136E-03	1.62572E-01	5.58315E-03	1.65174E-01	1.70757E-01

MAC = Mass Attenuation Coefficient (cm^2/g), LAC = Linear Attenuation Coefficient (cm^-1)

TISSUE SUBSTITUTE: Water

	Energy (keV)	Photo	Compton	Coherent	Photo + Compton	Total
	150	7.19568E-04	1.47316E-01	2.54712E-03	1.48035E-01	1.50582E-01
	200	2.94417E-04	1.35340E-01	1.44519E-03	1.35634E-01	1.37080E-01
	279	1.07464E-04	1.20640E-01	7.47180E-04	1.20748E-01	1.21495E-01
	300	8.62554E-05	1.17850E-01	6.45172E-04	1.17936E-01	1.18581E-01
	364	5.04280E-05	1.08352E-01	4.34023E-04	1.08402E-01	1.08836E-01
MCA	400	3.70705E-05	1.05710E-01	3.63018E-04	1.05747E-01	1.06110E-01
	500	1.95832E-05	9.65455E-02	2.31308E-04	9.65650E-02	9.67964E-02
	511	1.92013E-05	9.44352E-02	2.17049E-04	9.44544E-02	9.46714E-02
	600	1.17766E-05	8.93560E-02	1.57773E-04	8.93677E-02	8.95255E-02
	662	9.19210E-06	8.50218E-02	1.27925E-04	8.50310E-02	8.51590E-02
	800	5.40157E-06	7.84906E-02	8.72278E-05	7.84960E-02	7.85832E-02
	1000	3.01695E-06	7.05872E-02	5.36797E-05	7.05902E-02	7.06439E-02
	150	7.19568E-04	1.47316E-01	2.54712E-03	1.48035E-01	1.50582E-01
	200	2.94417E-04	1.35340E-01	1.44519E-03	1.35634E-01	1.37080E-01
	279	1.07464E-04	1.20640E-01	7.47180E-04	1.20748E-01	1.21495E-01
	300	8.62554E-05	1.17850E-01	6.45172E-04	1.17936E-01	1.18581E-01
	364	5.04280E-05	1.08352E-01	4.34023E-04	1.08402E-01	1.08836E-01
LAC	400	3.70705E-05	1.05710E-01	3.63018E-04	1.05747E-01	1.06110E-01
	500	1.95832E-05	9.65455E-02	2.31308E-04	9.65650E-02	9.67964E-02
	511	1.92013E-05	9.44352E-02	2.17049E-04	9.44544E-02	9.46714E-02
	600	1.17766E-05	8.93560E-02	1.57773E-04	8.93677E-02	8.95255E-02
	662	9.19210E-06	8.50218E-02	1.27925E-02	8.50310E-02	8.51590E-02
	800	5.40157E-06	7.84906E-02	8.72278E-05	7.84960E-02	7.85832E-02
	1000	3.01695E-06	7.05872E-02	5.36797E-05	7.05902E-02	7.06439E-02

MAC = Mass Attenuation Coefficient (cm^2/g), LAC = Linear Attenuation Coefficient (cm^-1)

TISSUE SUBSTITUTE: ICRU Spherical Phantom

	Energy (keV)	Photo	Compton	Coherent	Photo + Compton	Total
	8.0	8.79213E+00	1.40563E-01	3.11130E-01	8.93269E+00	9.24382E+00
	10.0	4.31200E+00	1.50800E-01	2.32020E-01	4.46280E+00	4.69482E+00
	13.6	1.59174E+00	1.62171E-01	1.49859E-01	1.75391E+00	1.90377E+00
	15.0	1.16239E+00	1.67768E-01	1.34307E-01	1.33016E+00	1.46447E+00
	16.6	8.33430E-01	1.69556E-01	1.12934E-01	1.00299E+00	1.11592E+00
MAC	17.2	7.42725E-01	1.70984E-01	1.07345E-01	9.13709E-01	1.02105E+00
	20.0	4.54251E-01	1.75639E-01	8.91221E-02	6.29890E-01	7.19012E-01
	20.2	4.40763E-01	1.77273E-01	8.54352E-02	6.18037E-01	7.03472E-01
	30.0	1.20085E-01	1.81014E-01	4.71255E-02	3.01099E-01	3.48224E-01
	40.0	4.66725E-02	1.80925E-01	2.88797E-02	2.27598E-01	2.56477E-01
	50.0	2.24611E-02	1.78595E-01	1.94097E-02	2.01056E-01	2.20466E-01
	60.0	1.23846E-02	1.75265E-01	1.39602E-02	1.87650E-01	2.01610E-01
	80.0	4.86797E-03	1.68030E-01	8.17130E-03	1.72898E-01	1.81070E-01
	100.0	2.37400E-03	1.61032E-01	5.35011E-03	1.63407E-01	1.68757E-01
	8.0	8.79213E+00	1.40563E-01	3.11130E-01	8.93269E+00	9.24382E+00
	10.0	4.31200E+00	1.50800E-01	2.32020E-01	4.46280E+00	4.69482E+00
	13.6	1.59174E+00	1.62171E-01	1.49859E-01	1.75391E+00	1.90377E+00
	15.0	1.16239E+00	1.67768E-01	1.34307E-01	1.33016E+00	1.46447E+00
	16.6	8.33430E-01	1.69556E-01	1.12934E-01	1.00299E+00	1.11592E+00
LAC	17.2	7.42725E-01	1.70984E-01	1.07345E-01	9.13709E-01	1.02105E+00
	20.0	4.54251E-01	1.75639E-01	8.91221E-02	6.29890E-01	7.19012E-01
	20.2	4.40763E-01	1.77273E-01	8.54352E-02	6.18037E-01	7.03472E-01
	30.0	1.20085E-01	1.81014E-01	4.71255E-02	3.01099E-01	3.48224E-01
	40.0	4.66725E-02	1.80925E-01	2.88797E+00	2.27598E-01	2.56477E-01
	50.0	2.24611E-02	1.78595E-01	1.94097E-02	2.01056E-01	2.20466E-01
	60.0	1.23846E-02	1.75265E-01	1.39602E-02	1.87650E-01	2.01610E-01
	80.0	4.86797E-03	1.68030E-01	8.17130E-03	1.72898E-01	1.81070E-01
	100.0	2.37400E-03	1.61032E-01	5.35011E-03	1.63407E-01	1.68757E-01

MAC = Mass Attenuation Coefficient (cm^2/g), LAC = Linear Attenuation Coefficient (cm^-1)

TISSUE SUBSTITUTE: ICRU Spherical Phantom

	Energy (keV)	Photo	Compton	Coherent	Photo + Compton	Total
	150	6.56208E-04	1.45897E-01	2.43898E-03	1.46553E-01	1.48992E-01
	200	2.68402E-04	1.34032E-01	1.38371E-03	1.34301E-01	1.35684E-01
	279	9.79530E-05	1.19479E-01	7.15250E-04	1.19577E-01	1.20292E-01
	300	7.86161E-05	1.16716E-01	6.17230E-04	1.16795E-01	1.17412E-01
	364	4.59713E-05	1.07301E-01	4.15343E-04	1.07347E-01	1.07762E-01
MCA	400	3.37879E-05	1.04683E-01	3.47552E-04	1.04717E-01	1.05064E-01
	500	1.78517E-05	9.56047E-02	2.20898E-04	9.56225E-02	9.58434E-02
	511	1.75080E-05	9.35170E-02	2.07629E-04	9.35345E-02	9.37421E-02
	600	1.07368E-05	8.84847E-02	1.51222E-04	8.84955E-02	8.86467E-02
	662	8.38269E-06	8.41944E-02	1.22331E-04	8.42028E-02	8.43251E-02
	800	4.92677E-06	7.77269E-02	8.35484E-05	7.77318E-02	7.78153E-02
	1000	2.75304E-06	6.98980E-02	5.11919E-05	6.99008E-02	6.99520E-02
	150	6.56208E-04	1.45897E-01	2.43898E-03	1.46553E-01	1.48992E-01
	200	2.68402E-04	1.34032E-01	1.38371E-03	1.34301E-01	1.35684E-01
	279	9.79530E-05	1.19479E-01	7.15250E-04	1.19577E-01	1.20292E-01
	300	7.86161E-05	1.16716E-01	6.17230E-04	1.16795E-01	1.17412E-01
	364	4.59713E-05	1.07301E-01	4.15343E-04	1.07347E-01	1.07762E-01
LAC	400	3.37879E-05	1.04683E-01	3.47552E-04	1.04717E-01	1.05064E-01
	500	1.78517E-05	9.56047E-02	2.20898E-04	9.56225E-02	9.58434E-02
	511	1.75080E-05	9.35170E-02	2.07629E-04	9.35345E-02	9.37421E-02
	600	1.07368E-05	8.84847E-02	1.51222E-04	8.84955E-02	8.86467E-02
	662	8.38269E-06	8.41944E-02	1.22331E-02	8.42028E-02	8.43251E-02
	800	4.92677E-06	7.77269E-02	8.35484E-05	7.77318E-02	7.78153E-02
	1000	2.75304E-06	6.98980E-02	5.11919E-05	6.99008E-02	6.99520E-02

MAC = Mass Attenuation Coefficient (cm^2/g), LAC = Linear Attenuation Coefficient (cm^-1)

TISSUE SUBSTITUTE: Griffith-Muscle

	Energy (keV)	Photo	Compton	Coherent	Photo + Compton	Total
	8.0	8.22645E+00	1.44330E-01	2.55083E-01	8.37078E+00	8.62586E+00
	10.0	4.14103E+00	1.52501E-01	1.94484E-01	4.29353E+00	4.48802E+00
	13.6	1.58223E+00	1.63363E-01	1.26561E-01	1.74560E+00	1.87216E+00
	15.0	1.17054E+00	1.68674E-01	1.15767E-01	1.33921E+00	1.45498E+00
	16.6	8.48416E-01	1.70373E-01	9.60014E-02	1.01879E+00	1.11479E+00
MAC	17.2	7.59406E-01	1.71714E-01	9.13771E-02	9.31120E-01	1.02250E+00
	20.0	4.72972E-01	1.76145E-01	7.67904E-02	6.49117E-01	7.25907E-01
	20.2	4.59958E-01	1.77671E-01	7.31138E-02	6.37629E-01	7.10743E-01
	30.0	1.30684E-01	1.80797E-01	4.03168E-02	3.11480E-01	3.51797E-01
	40.0	5.23180E-02	1.80215E-01	2.46188E-02	2.32533E-01	2.57152E-01
	50.0	2.57221E-02	1.77608E-01	1.65229E-02	2.03330E-01	2.19853E-01
	60.0	1.44151E-02	1.74130E-01	1.18452E-02	1.88545E-01	2.00390E-01
	80.0	5.80265E-03	1.66749E-01	6.91580E-03	1.72551E-01	1.79467E-01
	100.0	2.87734E-03	1.59664E-01	4.51486E-03	1.62542E-01	1.67057E-01
	8.0	8.96683E+00	1.57320E-01	2.78040E-01	9.12415E+00	9.40219E+00
	10.0	4.51372E+00	1.66226E-01	2.11987E-01	4.67995E+00	4.89194E+00
	13.6	1.72463E+00	1.78066E-01	1.37951E-01	1.90270E+00	2.04065E+00
	15.0	1.27589E+00	1.83854E-01	1.26186E-01	1.45974E+00	1.58593E+00
	16.6	9.24773E-01	1.85707E-01	1.04642E-01	1.11048E+00	1.21512E+00
LAC	17.2	8.27752E-01	1.87169E-01	9.96010E-02	1.01492E+00	1.11452E+00
	20.0	5.15539E-01	1.91998E-01	8.37015E-02	7.07537E-01	7.91239E-01
	20.2	5.01354E-01	1.93661E-01	7.96941E-02	6.95015E-01	7.74710E-01
	30.0	1.42445E-01	1.97068E-01	4.39453E-02	3.39513E-01	3.83459E-01
	40.0	5.70266E-02	1.96434E-01	2.68479E+00	2.53461E-01	2.80295E-01
	50.0	2.80371E-02	1.93593E-01	1.80100E-02	2.21630E-01	2.39640E-01
	60.0	1.57125E-02	1.89802E-01	1.29112E-02	2.05514E-01	2.18425E-01
	80.0	6.32488E-03	1.81756E-01	7.53823E-03	1.88081E-01	1.95619E-01
	100.0	3.13630E-03	1.74034E-01	4.92120E-03	1.77171E-01	1.82092E-01

MAC = Mass Attenuation Coefficient (cm^2/g), LAC = Linear Attenuation Coefficient (cm^-1)

TISSUE SUBSTITUTE: Griffith-Muscle

	Energy (keV)	Photo	Compton	Coherent	Photo + Compton	Total
	150	8.16320E-04	1.44532E-01	2.05044E-03	1.45348E-01	1.47399E-01
	200	3.38956E-04	1.32753E-01	1.16269E-03	1.33092E-01	1.34255E-01
	279	1.25420E-04	1.18356E-01	6.00447E-04	1.18482E-01	1.19082E-01
	300	1.00990E-04	1.15625E-01	5.16440E-04	1.15726E-01	1.16242E-01
	364	5.92391E-05	1.06257E-01	3.48081E-04	1.06316E-01	1.06664E-01
MCA	400	4.38012E-05	1.03658E-01	2.92090E-04	1.03702E-01	1.03994E-01
	500	2.32685E-05	9.46508E-02	1.83138E-04	9.46740E-02	9.48572E-02
	511	2.27528E-05	9.25961E-02	1.73647E-04	9.26189E-02	9.27925E-02
	600	1.40388E-05	8.76009E-02	1.27880E-04	8.76149E-02	8.77428E-02
	662	1.09633E-05	8.33622E-02	1.02121E-04	8.33731E-02	8.34752E-02
	800	6.46746E-06	7.69586E-02	7.02591E-05	7.69650E-02	7.70353E-02
	1000	3.62068E-06	6.91962E-02	4.21342E-05	6.91998E-02	6.92419E-02
	150	8.89789E-04	1.57540E-01	2.23498E-03	1.58429E-01	1.60664E-01
	200	3.69473E-04	1.44701E-01	1.26733E-03	1.45071E-01	1.46338E-01
	279	1.36708E-04	1.29008E-01	6.54487E-04	1.29145E-01	1.29799E-01
	300	1.10079E-04	1.26031E-01	5.62919E-04	1.26141E-01	1.26704E-01
	364	6.45706E-05	1.15820E-01	3.79408E-04	1.15884E-01	1.16264E-01
LAC	400	4.77433E-05	1.12987E-01	3.18379E-04	1.13035E-01	1.13353E-01
	500	2.53627E-05	1.03169E-01	1.99620E-04	1.03195E-01	1.03394E-01
	511	2.48006E-05	1.00930E-01	1.89275E-04	1.00955E-01	1.01144E-01
	600	1.53023E-05	9.54849E-02	1.39389E-04	9.55003E-02	9.56396E-02
	662	1.19500E-05	9.08648E-02	1.11368E-02	9.08767E-02	9.09880E-02
	800	7.04954E-06	8.38848E-02	7.65824E-05	8.38919E-02	8.39685E-02
	1000	3.94654E-06	7.54238E-02	4.59263E-05	7.54278E-02	7.54737E-02

MAC = Mass Attenuation Coefficient (cm^2/g), LAC = Linear Attenuation Coefficient (cm^-1)

TISSUE SUBSTITUTE: Griffith-(50%Muscle+50%Adipose)

	Energy (keV)	Photo	Compton	Coherent	Photo + Compton	Total
	8.0	6.70430E+00	1.45241E-01	2.45780E-01	6.84954E+00	7.09532E+00
	10.0	3.32635E+00	1.53364E-01	1.87053E-01	3.47972E+00	3.66677E+00
	13.6	1.24794E+00	1.64186E-01	1.21568E-01	1.41213E+00	1.53370E+00
	15.0	9.17168E-01	1.69486E-01	1.11067E-01	1.08665E+00	1.19772E+00
	16.6	6.61172E-01	1.71162E-01	9.21269E-02	8.32334E-01	9.24461E-01
MAC	17.2	5.90530E-01	1.72497E-01	8.76740E-02	7.63027E-01	8.50701E-01
	20.0	3.64546E-01	1.76896E-01	7.36014E-02	5.41442E-01	6.15043E-01
	20.2	3.54144E-01	1.78423E-01	7.00957E-02	5.32567E-01	6.02663E-01
	30.0	9.86419E-02	1.81451E-01	3.86003E-02	2.80093E-01	3.18693E-01
	40.0	3.89710E-02	1.80802E-01	2.35575E-02	2.19773E-01	2.43330E-01
	50.0	1.89819E-02	1.78144E-01	1.58062E-02	1.97126E-01	2.12932E-01
	60.0	1.05640E-02	1.74626E-01	1.13296E-02	1.85190E-01	1.96520E-01
	80.0	4.21062E-03	1.67189E-01	6.61385E-03	1.71400E-01	1.78014E-01
	100.0	2.07405E-03	1.60067E-01	4.31706E-03	1.62141E-01	1.66458E-01
	8.0	7.24065E+00	1.56861E-01	2.65442E-01	7.39751E+00	7.66295E+00
	10.0	3.59246E+00	1.65633E-01	2.02017E-01	3.75810E+00	3.96011E+00
	13.6	1.34778E+00	1.77321E-01	1.31294E-01	1.52510E+00	1.65639E+00
	15.0	9.90542E-01	1.83045E-01	1.19952E-01	1.17359E+00	1.29354E+00
	16.6	7.14066E-01	1.84855E-01	9.94970E-02	8.98921E-01	9.98418E-01
LAC	17.2	6.37772E-01	1.86297E-01	9.46879E-02	8.24069E-01	9.18757E-01
	20.0	3.93709E-01	1.91048E-01	7.94895E-02	5.84757E-01	6.64247E-01
	20.2	3.82475E-01	1.92697E-01	7.57033E-02	5.75172E-01	6.50876E-01
	30.0	1.06533E-01	1.95967E-01	4.16884E-02	3.02500E-01	3.44189E-01
	40.0	4.20887E-02	1.95266E-01	2.53759E+00	2.37355E-01	2.62797E-01
	50.0	2.05005E-02	1.92396E-01	1.70707E-02	2.12896E-01	2.29967E-01
	60.0	1.14091E-02	1.88596E-01	1.22360E-02	2.00006E-01	2.12242E-01
	80.0	4.54747E-03	1.80565E-01	7.14295E-03	1.85112E-01	1.92255E-01
	100.0	2.23998E-03	1.72872E-01	4.66242E-03	1.75112E-01	1.79774E-01

MAC = Mass Attenuation Coefficient (cm^2/g), LAC = Linear Attenuation Coefficient (cm^-1)

TISSUE SUBSTITUTE: Griffith-(50%Muscle+50%Adipose)

	Energy (keV)	Photo	Compton	Coherent	Photo + Compton	Total
	150	5.82541E-04	1.44873E-01	1.96033E-03	1.45455E-01	1.47416E-01
	200	2.40559E-04	1.33058E-01	1.11160E-03	1.33299E-01	1.34410E-01
	279	8.86003E-05	1.18623E-01	5.74089E-04	1.18711E-01	1.19285E-01
	300	7.12598E-05	1.15884E-01	4.93595E-04	1.15955E-01	1.16448E-01
	364	4.17832E-05	1.06493E-01	3.32636E-04	1.06535E-01	1.06868E-01
MCA	400	3.08241E-05	1.03887E-01	2.79278E-04	1.03918E-01	1.04197E-01
	500	1.63538E-05	9.48584E-02	1.74890E-04	9.48748E-02	9.50497E-02
	511	1.60164E-05	9.28005E-02	1.65839E-04	9.28165E-02	9.29824E-02
	600	9.86149E-06	8.77926E-02	1.22232E-04	8.78025E-02	8.79247E-02
	662	7.70552E-06	8.35448E-02	9.74812E-05	8.35525E-02	8.36499E-02
	800	4.54255E-06	7.71266E-02	6.71032E-05	7.71311E-02	7.71982E-02
	1000	2.54465E-06	6.93468E-02	4.01173E-05	6.93493E-02	6.93894E-02
	150	6.29144E-04	1.56463E-01	2.11716E-03	1.57092E-01	1.59209E-01
	200	2.59804E-04	1.43703E-01	1.20053E-03	1.43963E-01	1.45163E-01
	279	9.56883E-05	1.28113E-01	6.20016E-04	1.28208E-01	1.28828E-01
	300	7.69606E-05	1.25154E-01	5.33082E-04	1.25231E-01	1.25764E-01
	364	4.51258E-05	1.15013E-01	3.59247E-04	1.15058E-01	1.15417E-01
LAC	400	3.32900E-05	1.12198E-01	3.01620E-04	1.12231E-01	1.12533E-01
	500	1.76621E-05	1.02447E-01	1.88881E-04	1.02465E-01	1.02654E-01
	511	1.72977E-05	1.00225E-01	1.79106E-04	1.00242E-01	1.00421E-01
	600	1.06504E-05	9.48160E-02	1.32011E-04	9.48267E-02	9.49587E-02
	662	8.32196E-06	9.02283E-02	1.05006E-02	9.02367E-02	9.03419E-02
	800	4.90596E-06	8.32967E-02	7.24714E-05	8.33016E-02	8.33741E-02
	1000	2.74822E-06	7.48945E-02	4.33267E-05	7.48973E-02	7.49406E-02

MAC = Mass Attenuation Coefficient (cm^2/g), LAC = Linear Attenuation Coefficient (cm^-1)

TISSUE SUBSTITUTE: Griffith-Cartilage

	Energy (keV)	Photo	Compton	Coherent	Photo + Compton	Total
MAC	8.0	9.26712E+00	1.43780E-01	2.61353E-01	9.41090E+00	9.67226E+00
	10.0	4.69818E+00	1.51984E-01	1.99499E-01	4.85016E+00	5.04966E+00
	13.6	1.81093E+00	1.62870E-01	1.29931E-01	1.97380E+00	2.10373E+00
	15.0	1.34390E+00	1.68187E-01	1.18943E-01	1.51208E+00	1.63103E+00
	16.6	9.76537E-01	1.69901E-01	9.86183E-02	1.14644E+00	1.24506E+00
	17.2	8.74963E-01	1.71246E-01	9.38783E-02	1.04621E+00	1.14009E+00
	20.0	5.47174E-01	1.75697E-01	7.89455E-02	7.22871E-01	8.01816E-01
	20.2	5.32374E-01	1.77221E-01	7.51531E-02	7.09596E-01	7.84749E-01
	30.0	1.52618E-01	1.80409E-01	4.14769E-02	3.33027E-01	3.74504E-01
	40.0	6.14561E-02	1.79870E-01	2.53361E-02	2.41326E-01	2.66663E-01
	50.0	3.03373E-02	1.77295E-01	1.70074E-02	2.07633E-01	2.24640E-01
	60.0	1.70523E-02	1.73843E-01	1.21936E-02	1.90895E-01	2.03089E-01
	80.0	6.89295E-03	1.66496E-01	7.11988E-03	1.73389E-01	1.80509E-01
	100.0	3.42750E-03	1.59436E-01	4.64854E-03	1.62863E-01	1.67512E-01
LAC	8.0	1.01938E+01	1.58158E-01	2.87488E-01	1.03520E+01	1.06395E+01
	10.0	5.16800E+00	1.67182E-01	2.19449E-01	5.33518E+00	5.55463E+00
	13.6	1.99202E+00	1.79157E-01	1.42924E-01	2.17118E+00	2.31410E+00
	15.0	1.47828E+00	1.85005E-01	1.30838E-01	1.66329E+00	1.79413E+00
	16.6	1.07419E+00	1.86892E-01	1.08480E-01	1.26108E+00	1.36956E+00
	17.2	9.62459E-01	1.88370E-01	1.03266E-01	1.15083E+00	1.25410E+00
	20.0	6.01892E-01	1.93266E-01	8.68401E-02	7.95158E-01	8.81998E-01
	20.2	5.85612E-01	1.94943E-01	8.26684E-02	7.80555E-01	8.63224E-01
	30.0	1.67880E-01	1.98450E-01	4.56246E-02	3.66330E-01	4.11954E-01
	40.0	6.76017E-02	1.97857E-01	2.78585E+00	2.65459E-01	2.93329E-01
	50.0	3.33711E-02	1.95025E-01	1.87082E-02	2.28396E-01	2.47104E-01
	60.0	1.87575E-02	1.91227E-01	1.34130E-02	2.09984E-01	2.23397E-01
	80.0	7.58224E-03	1.83145E-01	7.83186E-03	1.90728E-01	1.98560E-01
	100.0	3.77025E-03	1.75379E-01	5.11340E-03	1.79149E-01	1.84263E-01

MAC = Mass Attenuation Coefficient (cm^2/g), LAC = Linear Attenuation Coefficient (cm^-1)

TISSUE SUBSTITUTE: Griffith-Cartilage

	Energy (keV)	Photo	Compton	Coherent	Photo + Compton	Total
MCA	150	9.76450E-04	1.44340E-01	2.11134E-03	1.45316E-01	1.47428E-01
	200	4.06375E-04	1.32583E-01	1.19721E-03	1.32989E-01	1.34186E-01
	279	1.50642E-04	1.18207E-01	6.18257E-04	1.18358E-01	1.18976E-01
	300	1.21356E-04	1.15481E-01	5.31877E-04	1.15602E-01	1.16134E-01
	364	7.11971E-05	1.06125E-01	3.58518E-04	1.06196E-01	1.06554E-01
	400	5.26912E-05	1.03530E-01	3.00749E-04	1.03583E-01	1.03884E-01
	500	2.80055E-05	9.45356E-02	1.88710E-04	9.45636E-02	9.47523E-02
	511	2.73677E-05	9.24826E-02	1.78924E-04	9.25099E-02	9.26888E-02
	600	1.69006E-05	8.74945E-02	1.31697E-04	8.75114E-02	8.76431E-02
	662	1.31951E-05	8.32609E-02	1.05257E-04	8.32741E-02	8.33793E-02
	800	7.78617E-06	7.68654E-02	7.23920E-05	7.68732E-02	7.69456E-02
	1000	4.35785E-06	6.91128E-02	4.34980E-05	6.91171E-02	6.91606E-02
LAC	150	1.07409E-03	1.58774E-01	2.32247E-03	1.59848E-01	1.62170E-01
	200	4.47012E-04	1.45841E-01	1.31693E-03	1.46288E-01	1.47605E-01
	279	1.65706E-04	1.30028E-01	6.80083E-04	1.30194E-01	1.30874E-01
	300	1.33492E-04	1.27029E-01	5.85065E-04	1.27162E-01	1.27747E-01
	364	7.83168E-05	1.16737E-01	3.94370E-04	1.16815E-01	1.17210E-01
	400	5.79603E-05	1.13883E-01	3.30824E-04	1.13941E-01	1.14272E-01
	500	3.08061E-05	1.03989E-01	2.07581E-04	1.04020E-01	1.04228E-01
	511	3.01044E-05	1.01731E-01	1.96817E-04	1.01761E-01	1.01958E-01
	600	1.85906E-05	9.62440E-02	1.44867E-04	9.62625E-02	9.64074E-02
	662	1.45146E-05	9.15870E-02	1.15737E-02	9.16015E-02	9.17173E-02
	800	8.56479E-06	8.45520E-02	7.96312E-05	8.45606E-02	8.46402E-02
	1000	4.79363E-06	7.60240E-02	4.78478E-05	7.60288E-02	7.60767E-02

MAC = Mass Attenuation Coefficient (cm^2/g), LAC = Linear Attenuation Coefficient (cm^-1)

TISSUE SUBSTITUTE: Griffith-Bone

	Energy (keV)	Photo	Compton	Coherent	Photo + Compton	Total
MAC	8.0	2.78057E+01	1.33505E-01	3.74244E-01	2.79393E+01	2.83135E+01
	10.0	1.46207E+01	1.42314E-01	2.89659E-01	1.47630E+01	1.50526E+01
	13.6	5.88261E+00	1.53662E-01	1.90495E-01	6.03627E+00	6.22677E+00
	15.0	4.43003E+00	1.59096E-01	1.75956E-01	4.58912E+00	4.76508E+00
	16.6	3.25723E+00	1.61085E-01	1.45619E-01	3.41831E+00	3.56393E+00
	17.2	2.93193E+00	1.62495E-01	1.38799E-01	3.09443E+00	3.23323E+00
	20.0	1.86786E+00	1.67314E-01	1.17626E-01	2.03517E+00	2.15280E+00
	20.2	1.82125E+00	1.68825E-01	1.11764E-01	1.99007E+00	2.10184E+00
	30.0	5.42912E-01	1.73154E-01	6.22997E-02	7.16066E-01	7.78366E-01
	40.0	2.24035E-01	1.73404E-01	3.82115E-02	3.97439E-01	4.35651E-01
	50.0	1.12440E-01	1.71419E-01	2.57037E-02	2.83859E-01	3.09562E-01
	60.0	6.39632E-02	1.68429E-01	1.84489E-02	2.32392E-01	2.50841E-01
	80.0	2.62856E-02	1.61722E-01	1.07836E-02	1.88007E-01	1.98791E-01
	100.0	1.32124E-02	1.55101E-01	7.04863E-03	1.68314E-01	1.75362E-01
LAC	8.0	3.53133E+01	1.69552E-01	4.75290E-01	3.54828E+01	3.59581E+01
	10.0	1.85683E+01	1.80739E-01	3.67866E-01	1.87490E+01	1.91169E+01
	13.6	7.47092E+00	1.95151E-01	2.41928E-01	7.66607E+00	7.90800E+00
	15.0	5.62613E+00	2.02051E-01	2.23464E-01	5.82818E+00	6.05165E+00
	16.6	4.13668E+00	2.04578E-01	1.84936E-01	4.34125E+00	4.52619E+00
	17.2	3.72356E+00	2.06369E-01	1.76275E-01	3.92992E+00	4.10620E+00
	20.0	2.37218E+00	2.12488E-01	1.49385E-01	2.58467E+00	2.73405E+00
	20.2	2.31298E+00	2.14407E-01	1.41940E-01	2.52739E+00	2.66933E+00
	30.0	6.89498E-01	2.19906E-01	7.91207E-02	9.09404E-01	9.88525E-01
	40.0	2.84524E-01	2.20224E-01	4.85190E+00	5.04748E-01	5.53276E-01
	50.0	1.42799E-01	2.17702E-01	3.26436E-02	3.60501E-01	3.93144E-01
	60.0	8.12333E-02	2.13905E-01	2.34300E-02	2.95138E-01	3.18568E-01
	80.0	3.33828E-02	2.05386E-01	1.36951E-02	2.38769E-01	2.52464E-01
	100.0	1.67798E-02	1.96979E-01	8.95177E-03	2.13758E-01	2.22710E-01

MAC = Mass Attenuation Coefficient (cm^2/g), LAC = Linear Attenuation Coefficient (cm^-1)

TISSUE SUBSTITUTE: Griffith-Bone

	Energy (keV)	Photo	Compton	Coherent	Photo + Compton	Total
MCA	150	3.82417E-03	1.40694E-01	3.20478E-03	1.44518E-01	1.47723E-01
	200	1.60510E-03	1.29335E-01	1.81713E-03	1.30941E-01	1.32758E-01
	279	5.99151E-04	1.15373E-01	9.38081E-04	1.15972E-01	1.16910E-01
	300	4.83508E-04	1.12733E-01	8.09106E-04	1.13217E-01	1.14026E-01
	364	2.83832E-04	1.03609E-01	5.45936E-04	1.03892E-01	1.04438E-01
	400	2.10769E-04	1.01099E-01	4.56221E-04	1.01310E-01	1.01766E-01
	500	1.12235E-04	9.23360E-02	2.88800E-04	9.24483E-02	9.27371E-02
	511	1.09426E-04	9.03155E-02	2.73684E-04	9.04250E-02	9.06986E-02
	600	6.77853E-05	8.54637E-02	2.00221E-04	8.55315E-02	8.57317E-02
	662	5.28784E-05	8.13271E-02	1.61567E-04	8.13800E-02	8.15416E-02
	800	3.12338E-05	7.50869E-02	1.10686E-04	7.51182E-02	7.52288E-02
	1000	1.74651E-05	6.75192E-02	6.79855E-05	6.75367E-02	6.76047E-02
LAC	150	4.85670E-03	1.78681E-01	4.07007E-03	1.83538E-01	1.87608E-01
	200	2.03847E-03	1.64256E-01	2.30775E-03	1.66294E-01	1.68602E-01
	279	7.60922E-04	1.46523E-01	1.19136E-03	1.47284E-01	1.48476E-01
	300	6.14055E-04	1.43171E-01	1.02756E-03	1.43785E-01	1.44813E-01
	364	3.60467E-04	1.31583E-01	6.93339E-04	1.31943E-01	1.32637E-01
	400	2.67676E-04	1.28396E-01	5.79401E-04	1.28663E-01	1.29243E-01
	500	1.42539E-04	1.17267E-01	3.66776E-04	1.17409E-01	1.17776E-01
	511	1.38971E-04	1.14701E-01	3.47578E-04	1.14840E-01	1.15187E-01
	600	8.60873E-05	1.08539E-01	2.54281E-04	1.08625E-01	1.08879E-01
	662	6.71556E-05	1.03285E-01	2.05149E-02	1.03353E-01	1.03558E-01
	800	3.96669E-05	9.53604E-02	1.40571E-04	9.54001E-02	9.55406E-02
	1000	2.21807E-05	8.57494E-02	8.63415E-05	8.57716E-02	8.58580E-02

MAC = Mass Attenuation Coefficient (cm^2/g), LAC = Linear Attenuation Coefficient (cm^-1)

付録３　人体組織・臓器の減弱係数表

HUMAN TISSUE: Total Soft Tissue

	Energy (keV)	Photo	Compton	Coherent	Photo + Compton	Total
	8.0	8.68064E+00	1.42760E-01	2.97422E-01	8.82340E+00	9.12083E+00
	10.0	4.28908E+00	1.52504E-01	2.22892E-01	4.44158E+00	4.66448E+00
	13.6	1.59563E+00	1.63706E-01	1.44112E-01	1.75934E+00	1.90345E+00
	15.0	1.16887E+00	1.69221E-01	1.29713E-01	1.33809E+00	1.46780E+00
	16.6	8.41549E-01	1.70966E-01	1.08735E-01	1.01252E+00	1.12125E+00
MAC	17.2	7.49785E-01	1.72367E-01	1.03382E-01	9.22152E-01	1.02553E+00
	20.0	4.60951E-01	1.76940E-01	8.60211E-02	6.37891E-01	7.23912E-01
	20.2	4.47542E-01	1.78548E-01	8.23634E-02	6.26090E-01	7.08454E-01
	30.0	1.23021E-01	1.82057E-01	4.54180E-02	3.05078E-01	3.50496E-01
	40.0	4.81021E-02	1.81793E-01	2.78185E-02	2.29895E-01	2.57713E-01
	50.0	2.32433E-02	1.79354E-01	1.86944E-02	2.02597E-01	2.21291E-01
	60.0	1.28544E-02	1.75954E-01	1.34375E-02	1.88809E-01	2.02246E-01
	80.0	5.07444E-03	1.68629E-01	7.86069E-03	1.73703E-01	1.81564E-01
	100.0	2.48410E-03	1.61564E-01	5.14391E-03	1.64048E-01	1.69192E-01
	150.0	6.89940E-04	1.46341E-01	2.34345E-03	1.47031E-01	1.49374E-01
	8.0	8.85426E+00	1.45615E-01	3.03371E-01	8.99987E+00	9.30324E+00
	10.0	4.37486E+00	1.55555E-01	2.27349E-01	4.53042E+00	4.75777E+00
	13.6	1.62755E+00	1.66980E-01	1.46994E-01	1.79453E+00	1.94152E+00
	15.0	1.19225E+00	1.72605E-01	1.32308E-01	1.36485E+00	1.49716E+00
	16.6	8.58380E-01	1.74386E-01	1.10910E-01	1.03277E+00	1.14368E+00
LAC	17.2	7.64780E-01	1.75815E-01	1.05450E-01	9.40595E-01	1.04605E+00
	20.0	4.70170E-01	4.70170E-01	8.77415E-02	6.50648E-01	7.38390E-01
	20.2	4.56493E-01	1.82119E-01	8.40106E-02	6.38612E-01	7.22623E-01
	30.0	1.25481E-01	1.85698E-01	4.63264E-02	3.11179E-01	3.57506E-01
	40.0	4.90642E-02	1.85429E-01	2.83749E-02	2.34493E-01	2.62868E-01
	50.0	2.37082E-02	1.82941E-01	1.90683E-02	2.06649E-01	2.25717E-01
	60.0	1.31115E-02	1.79473E-01	1.37063E-02	1.92585E-01	2.06291E-01
	80.0	5.17593E-03	1.72001E-01	8.01791E-03	1.77177E-01	1.85195E-01
	100.0	2.53378E-03	1.64795E-01	5.24679E-03	1.67329E-01	1.72576E-01
	150.0	7.03738E-04	1.49268E-01	2.39031E-03	1.49971E-01	1.52362E-01

MAC = Mass Attenuation Coefficient (cm^2/g), LAC = Linear Attenuation Coefficient (cm^-1)

HUMAN TISSUE: Total Soft Tissue

	Energy (keV)	Photo	Compton	Coherent	Photo + Compton	Total
	200	2.83292E-04	1.34431E-01	1.32948E-03	1.34714E-01	1.36044E-01
	279	1.03824E-04	1.19838E-01	6.87105E-04	1.19941E-01	1.20629E-01
	300	8.34128E-05	1.17067E-01	5.92556E-04	1.17151E-01	1.17743E-01
	364	4.89524E-05	1.07614E-01	3.98865E-04	1.07663E-01	1.08062E-01
	400	3.60012E-05	1.04986E-01	3.33974E-04	1.05022E-01	1.05356E-01
MAC	500	1.90950E-05	9.58771E-02	2.11640E-04	9.58962E-02	9.61078E-02
	511	1.87589E-05	9.37866E-02	1.99313E-04	9.38054E-02	9.40047E-02
	600	1.15245E-05	8.87364E-02	1.45518E-04	8.87480E-02	8.88935E-02
	662	9.09687E-06	8.44363E-02	1.17390E-04	8.44454E-02	8.45628E-02
	800	5.32446E-06	7.79502E-02	8.02947E-05	7.79555E-02	7.80358E-02
	1000	2.99450E-06	7.00958E-02	4.89789E-05	7.00988E-02	7.01478E-02
	200	2.88958E-04	1.37120E-01	1.35607E-03	1.37409E-01	1.38765E-01
	279	1.05900E-04	1.22234E-01	7.00847E-04	1.22340E-01	1.23041E-01
	300	8.50811E-05	1.19409E-01	6.04407E-04	1.19494E-01	1.20098E-01
	364	4.99314E-05	1.09766E-01	4.06842E-04	1.09816E-01	1.10223E-01
	400	3.67213E-05	1.07086E-01	3.40653E-04	1.07123E-01	1.07464E-01
LAC	500	1.94769E-05	9.77946E-02	2.15873E-04	9.78141E-02	9.80300E-02
	511	1.91341E-05	9.56624E-02	2.03299E-04	9.56815E-02	9.58848E-02
	600	1.17550E-05	9.05112E-02	1.48428E-04	9.05229E-02	9.06713E-02
	662	9.27881E-06	8.61250E-02	1.19737E-04	8.61343E-02	8.62540E-02
	800	5.43095E-06	7.95092E-02	8.19006E-05	7.95147E-02	7.95966E-02
	1000	3.05439E-06	7.14977E-02	4.99584E-05	7.15008E-02	7.15507E-02

MAC = Mass Attenuation Coefficient (cm^2/g), LAC = Linear Attenuation Coefficient (cm^-1)

HUMAN TISSUE: Muscle

	Energy (keV)	Photo	Compton	Coherent	Photo + Compton	Total
MAC	8.0	9.66706E+00	1.40231E-01	3.16916E-01	9.80729E+00	1.01242E+01
	10.0	4.78895E+00	1.50490E-01	2.36737E-01	4.93944E+00	5.17618E+00
	13.6	1.78559E+00	1.61873E-01	1.52945E-01	1.94746E+00	2.10040E+00
	15.0	1.30900E+00	1.67470E-01	1.37217E-01	1.47647E+00	1.61369E+00
	16.6	9.42526E-01	1.69270E-01	1.15311E-01	1.11180E+00	1.22711E+00
	17.2	8.40166E-01	1.70700E-01	1.09616E-01	1.01087E+00	1.12048E+00
	20.0	5.16548E-01	1.75368E-01	9.10469E-02	6.91916E-01	7.82963E-01
	20.2	5.01586E-01	1.77001E-01	8.72748E-02	6.78588E-01	7.65862E-01
	30.0	1.38101E-01	1.80785E-01	4.81600E-02	3.18885E-01	3.67045E-01
	40.0	5.40463E-02	1.80725E-01	2.95249E-02	2.34771E-01	2.64296E-01
	50.0	2.61322E-02	1.78418E-01	1.98488E-02	2.04550E-01	2.24399E-01
	60.0	1.44588E-02	1.75107E-01	1.42768E-02	1.89566E-01	2.03843E-01
	80.0	5.71125E-03	1.67898E-01	8.35610E-03	1.73609E-01	1.81965E-01
	100.0	2.79613E-03	1.60916E-01	5.47139E-03	1.63712E-01	1.69183E-01
	150.0	7.77024E-04	1.45804E-01	2.49452E-03	1.46581E-01	1.49076E-01
LAC	8.0	1.00537E+01	1.45840E-01	3.29593E-01	1.01996E+01	1.05292E+01
	10.0	4.98051E+00	1.56510E-01	2.46206E-01	5.13702E+00	5.38323E+00
	13.6	1.85701E+00	1.68348E-01	1.59062E-01	2.02536E+00	2.18442E+00
	15.0	1.36136E+00	1.74169E-01	1.42706E-01	1.53553E+00	1.67823E+00
	16.6	9.80227E-01	1.76040E-01	1.19924E-01	1.15627E+00	1.27619E+00
	17.2	8.73773E-01	1.77528E-01	1.14000E-01	1.05130E+00	1.16530E+00
	20.0	5.37210E-01	5.37210E-01	9.46888E-02	7.19593E-01	8.14282E-01
	20.2	5.21650E-01	1.84081E-01	9.07657E-02	7.05731E-01	7.96497E-01
	30.0	1.43625E-01	1.88016E-01	5.00864E-02	3.31641E-01	3.81727E-01
	40.0	5.62082E-02	1.87954E-01	3.07059E-02	2.44162E-01	2.74868E-01
	50.0	2.71775E-02	1.85555E-01	2.06427E-02	2.12732E-01	2.33375E-01
	60.0	1.50372E-02	1.82111E-01	1.48479E-02	1.97148E-01	2.11996E-01
	80.0	5.93970E-03	1.74613E-01	8.69034E-03	1.80553E-01	1.89243E-01
	100.0	2.90797E-03	1.67352E-01	5.69025E-03	1.70260E-01	1.75951E-01
	150.0	8.08105E-04	1.51636E-01	2.59430E-03	1.52444E-01	1.55039E-01

MAC = Mass Attenuation Coefficient (cm^2/g), LAC = Linear Attenuation Coefficient (cm^-1)

HUMAN TISSUE: Muscle

	Energy (keV)	Photo	Compton	Coherent	Photo + Compton	Total
MAC	200	3.19115E-04	1.33951E-01	1.41531E-03	1.34270E-01	1.35686E-01
	279	1.16974E-04	1.19410E-01	7.31578E-04	1.19527E-01	1.20258E-01
	300	9.39833E-05	1.16650E-01	6.31385E-04	1.16744E-01	1.17375E-01
	364	5.51560E-05	1.07240E-01	4.24916E-04	1.07295E-01	1.07720E-01
	400	4.05670E-05	1.04625E-01	3.55499E-04	1.04666E-01	1.05021E-01
	500	2.15174E-05	9.55526E-02	2.25985E-04	9.55741E-02	9.58001E-02
	511	2.11370E-05	9.34653E-02	2.12474E-04	9.34864E-02	9.36989E-02
	600	1.29868E-05	8.84367E-02	1.54753E-04	8.84497E-02	8.86045E-02
	662	1.01695E-05	8.41488E-02	1.25212E-04	8.41590E-02	8.42842E-02
	800	5.99976E-06	7.76852E-02	8.55151E-05	7.76912E-02	7.77767E-02
	1000	3.37400E-06	6.98606E-02	5.24344E-05	6.98639E-02	6.99164E-02
LAC	200	3.31880E-04	1.39309E-01	1.47193E-03	1.39641E-01	1.41113E-01
	279	1.21653E-04	1.24186E-01	7.60841E-04	1.24308E-01	1.25069E-01
	300	9.77426E-05	1.21316E-01	6.56640E-04	1.21414E-01	1.22070E-01
	364	5.73622E-05	1.11530E-01	4.41912E-04	1.11587E-01	1.12029E-01
	400	4.21897E-05	1.08810E-01	3.69719E-04	1.08852E-01	1.09222E-01
	500	2.23780E-05	9.93747E-02	2.35024E-04	9.93971E-02	9.96321E-02
	511	2.19825E-05	9.72039E-02	2.20973E-04	9.72259E-02	9.74468E-02
	600	1.35063E-05	9.19742E-02	1.60943E-04	9.19877E-02	9.21487E-02
	662	1.05763E-05	8.75148E-02	1.30221E-04	8.75253E-02	8.76556E-02
	800	6.23975E-06	8.07926E-02	8.89357E-05	8.07988E-02	8.08878E-02
	1000	3.50896E-06	7.26550E-02	5.45318E-05	7.26585E-02	7.27130E-02

MAC = Mass Attenuation Coefficient (cm^2/g), LAC = Linear Attenuation Coefficient (cm^-1)

HUMAN TISSUE: Adipose

	Energy (keV)	Photo	Compton	Coherent	Photo + Compton	Total
	8.0	5.34698E+00	1.51570E-01	2.32835E-01	5.49855E+00	5.73138E+00
	10.0	2.60738E+00	1.59630E-01	1.76908E-01	2.76701E+00	2.94391E+00
	13.6	9.55742E-01	1.70230E-01	1.14762E-01	1.12597E+00	1.24073E+00
	15.0	6.96454E-01	1.75479E-01	1.04723E-01	8.71933E-01	9.76656E-01
	16.6	4.98369E-01	1.77038E-01	8.68702E-02	6.75407E-01	7.62277E-01
MAC	17.2	4.43824E-01	1.78341E-01	8.26541E-02	6.22165E-01	7.04819E-01
	20.0	2.71887E-01	1.82589E-01	6.92869E-02	4.54476E-01	5.23763E-01
	20.2	2.63764E-01	1.84121E-01	6.60220E-02	4.47885E-01	5.13907E-01
	30.0	7.14763E-02	1.86694E-01	3.62937E-02	2.58170E-01	2.94464E-01
	40.0	2.76956E-02	1.85739E-01	2.21409E-02	2.13435E-01	2.35576E-01
	50.0	1.32985E-02	1.82851E-01	1.48525E-02	1.96150E-01	2.11002E-01
	60.0	7.32009E-03	1.79147E-01	1.06447E-02	1.86467E-01	1.97111E-01
	80.0	2.87110E-03	1.71414E-01	6.21275E-03	1.74285E-01	1.80498E-01
	100.0	1.39993E-03	1.64057E-01	4.05468E-03	1.65457E-01	1.69512E-01
	150.0	3.86553E-04	1.48431E-01	1.86414E-03	1.48817E-01	1.50682E-01
	8.0	4.91922E+00	1.39444E-01	2.14209E-01	5.05866E+00	5.27287E+00
	10.0	2.39879E+00	1.46859E-01	1.62755E-01	2.54565E+00	2.70840E+00
	13.6	8.79283E-01	1.56611E-01	1.05581E-01	1.03589E+00	1.14147E+00
	15.0	6.40738E-01	1.61440E-01	9.63453E-02	8.02178E-01	8.98523E-01
	16.6	4.58500E-01	1.62875E-01	7.99206E-02	6.21374E-01	7.01295E-01
LAC	17.2	4.08318E-01	1.64074E-01	7.60417E-02	5.72392E-01	6.48433E-01
	20.0	2.50136E-01	2.50136E-01	6.37440E-02	4.18118E-01	4.81862E-01
	20.2	2.42663E-01	1.69391E-01	6.07402E-02	4.12054E-01	4.72794E-01
	30.0	6.57582E-02	1.71758E-01	3.33902E-02	2.37517E-01	2.70907E-01
	40.0	2.54800E-02	1.70880E-01	2.03697E-02	1.96360E-01	2.16730E-01
	50.0	1.22346E-02	1.68223E-01	1.36643E-02	1.80458E-01	1.94122E-01
	60.0	6.73448E-03	1.64815E-01	9.79308E-03	1.71549E-01	1.81342E-01
	80.0	2.64141E-03	1.57701E-01	5.71573E-03	1.60342E-01	1.66058E-01
	100.0	1.28794E-03	1.50933E-01	3.73031E-03	1.52221E-01	1.55951E-01
	150.0	3.55629E-04	1.36556E-01	1.71501E-03	1.36912E-01	1.38627E-01

MAC = Mass Attenuation Coefficient (cm^2/g), LAC = Linear Attenuation Coefficient (cm^-1)

HUMAN TISSUE: Adipose

	Energy (keV)	Photo	Compton	Coherent	Photo + Compton	Total
	200	1.58158E-04	1.36307E-01	1.04398E-03	1.36465E-01	1.37509E-01
	279	5.78334E-05	1.21508E-01	5.39216E-04	1.21566E-01	1.22106E-01
	300	4.64312E-05	1.18698E-01	4.63442E-04	1.18745E-01	1.19208E-01
	364	2.72601E-05	1.09079E-01	3.12214E-04	1.09106E-01	1.09418E-01
	400	2.00205E-05	1.06406E-01	2.62383E-04	1.06426E-01	1.06689E-01
MAC	500	1.06174E-05	9.71550E-02	1.63979E-04	9.71657E-02	9.73296E-02
	511	1.04444E-05	9.50502E-02	1.55524E-04	9.50606E-02	9.52161E-02
	600	6.40875E-06	8.99173E-02	1.14763E-04	8.99237E-02	9.00385E-02
	662	5.09137E-06	8.55677E-02	9.13568E-05	8.55728E-02	8.56641E-02
	800	2.96406E-06	7.89931E-02	6.29037E-05	7.89960E-02	7.90589E-02
	1000	1.66945E-06	7.10237E-02	3.74781E-05	7.10254E-02	7.10629E-02
	200	1.45505E-04	1.25402E-01	9.60462E-04	1.25548E-01	1.26508E-01
	279	5.32067E-05	1.11788E-01	4.96079E-04	1.11841E-01	1.12337E-01
	300	4.27167E-05	1.09202E-01	4.26367E-04	1.09245E-01	1.09672E-01
	364	2.50793E-05	1.00353E-01	2.87237E-04	1.00378E-01	1.00665E-01
	400	1.84188E-05	9.78938E-02	2.41392E-04	9.79122E-02	9.81536E-02
LAC	500	9.76803E-06	8.93826E-02	1.50861E-04	8.93924E-02	8.95433E-02
	511	9.60882E-06	8.74462E-02	1.43082E-04	8.74558E-02	8.75989E-02
	600	5.89605E-06	8.27239E-02	1.05582E-04	8.27298E-02	8.28354E-02
	662	4.68406E-06	7.87223E-02	8.40483E-05	7.87270E-02	7.88110E-02
	800	2.72694E-06	7.26736E-02	5.78714E-05	7.26764E-02	7.27342E-02
	1000	1.53589E-06	6.53418E-02	3.44798E-05	6.53434E-02	6.53778E-02

MAC = Mass Attenuation Coefficient (cm^2/g), LAC = Linear Attenuation Coefficient (cm^-1)

HUMAN TISSUE: Liver

	Energy (keV)	Photo	Compton	Coherent	Photo + Compton	Total
	8.0	9.55975E+00	1.41806E-01	3.10663E-01	9.70155E+00	1.00122E+01
	10.0	4.74483E+00	1.51879E-01	2.32468E-01	4.89671E+00	5.12918E+00
	13.6	1.77318E+00	1.63165E-01	1.50227E-01	1.93634E+00	2.08657E+00
	15.0	1.30110E+00	1.68720E-01	1.34980E-01	1.46982E+00	1.60480E+00
	16.6	9.39235E-01	1.70492E-01	1.13306E-01	1.10973E+00	1.22303E+00
MAC	17.2	8.37942E-01	1.71907E-01	1.07719E-01	1.00985E+00	1.11757E+00
	20.0	5.16554E-01	1.76526E-01	8.95374E-02	6.93081E-01	7.82618E-01
	20.2	5.01663E-01	1.78148E-01	8.57927E-02	6.79811E-01	7.65603E-01
	30.0	1.38691E-01	1.81795E-01	4.73355E-02	3.20486E-01	3.67821E-01
	40.0	5.44277E-02	1.81633E-01	2.90131E-02	2.36061E-01	2.65074E-01
	50.0	2.63644E-02	1.79259E-01	1.95042E-02	2.05623E-01	2.25127E-01
	60.0	1.46070E-02	1.75900E-01	1.40261E-02	1.90507E-01	2.04533E-01
	80.0	5.78089E-03	1.68623E-01	8.20749E-03	1.74404E-01	1.82611E-01
	100.0	2.84192E-03	1.61589E-01	5.37308E-03	1.64431E-01	1.69804E-01
	150.0	7.91330E-04	1.46394E-01	2.44914E-03	1.47185E-01	1.49634E-01
	8.0	1.00377E+01	1.48897E-01	3.26196E-01	1.01866E+01	1.05128E+01
	10.0	4.98207E+00	1.59473E-01	2.44092E-01	5.14155E+00	5.38564E+00
	13.6	1.86183E+00	1.71324E-01	1.57738E-01	2.03316E+00	2.19090E+00
	15.0	1.36616E+00	1.77156E-01	1.41729E-01	1.54331E+00	1.68504E+00
	16.6	9.86196E-01	1.79017E-01	1.18972E-01	1.16521E+00	1.28419E+00
LAC	17.2	8.79839E-01	1.80503E-01	1.13105E-01	1.06034E+00	1.17345E+00
	20.0	5.42382E-01	5.42382E-01	9.40142E-02	7.27735E-01	8.21749E-01
	20.2	5.26746E-01	1.87055E-01	9.00823E-02	7.13801E-01	8.03883E-01
	30.0	1.45625E-01	1.90885E-01	4.97022E-02	3.36510E-01	3.86212E-01
	40.0	5.71491E-02	1.90715E-01	3.04638E-02	2.47864E-01	2.78328E-01
	50.0	2.76827E-02	1.88221E-01	2.04794E-02	2.15904E-01	2.36384E-01
	60.0	1.53373E-02	1.84695E-01	1.47274E-02	2.00032E-01	2.14760E-01
	80.0	6.06993E-03	1.77054E-01	8.61786E-03	1.83124E-01	1.91742E-01
	100.0	2.98402E-03	1.69668E-01	5.64174E-03	1.72652E-01	1.78294E-01
	150.0	8.30896E-04	1.53714E-01	2.57159E-03	1.54544E-01	1.57116E-01

MAC = Mass Attenuation Coefficient (cm^2/g), LAC = Linear Attenuation Coefficient (cm^-1)

HUMAN TISSUE: Liver

	Energy (keV)	Photo	Compton	Coherent	Photo + Compton	Total
	200	3.25891E-04	1.34488E-01	1.38962E-03	1.34814E-01	1.36203E-01
	279	1.19710E-04	1.19888E-01	7.18248E-04	1.20008E-01	1.20726E-01
	300	9.52353E-05	1.17117E-01	6.19750E-04	1.17213E-01	1.17833E-01
	364	5.65694E-05	1.07666E-01	4.17124E-04	1.07722E-01	1.08139E-01
	400	4.16253E-05	1.05039E-01	3.49068E-04	1.05081E-01	1.05430E-01
MAC	500	2.21194E-05	9.59288E-02	2.21642E-04	9.59509E-02	9.61726E-02
	511	2.17437E-05	9.38347E-02	2.08549E-04	9.38565E-02	9.40650E-02
	600	1.33726E-05	8.87846E-02	1.52025E-04	8.87979E-02	8.89500E-02
	662	1.06778E-05	8.44808E-02	1.22884E-04	8.44915E-02	8.46144E-02
	800	6.19839E-06	7.79917E-02	8.39728E-05	7.79979E-02	7.80819E-02
	1000	3.49676E-06	7.01348E-02	5.14088E-05	7.01383E-02	7.01897E-02
	200	3.42186E-04	1.41212E-01	1.45910E-03	1.41554E-01	1.43013E-01
	279	1.25695E-04	1.25883E-01	7.54160E-04	1.26008E-01	1.26763E-01
	300	1.01047E-04	1.22973E-01	6.50738E-04	1.23074E-01	1.23725E-01
	364	5.93979E-05	1.13049E-01	4.37980E-04	1.13108E-01	1.13546E-01
	400	4.37065E-05	1.10291E-01	3.66522E-04	1.10335E-01	1.10701E-01
LAC	500	2.32254E-05	1.00725E-01	2.32724E-04	1.00748E-01	1.00981E-01
	511	2.28309E-05	9.85264E-02	2.18977E-04	9.85493E-02	9.87682E-02
	600	1.40412E-05	9.32238E-02	1.59626E-04	9.32378E-02	9.33975E-02
	662	1.12117E-05	8.87048E-02	1.29028E-04	8.87160E-02	8.88451E-02
	800	6.50830E-06	8.18913E-02	8.81715E-05	8.18978E-02	8.19860E-02
	1000	3.67160E-06	7.36415E-02	5.39792E-05	7.36452E-02	7.36991E-02

MAC = Mass Attenuation Coefficient (cm^2/g), LAC = Linear Attenuation Coefficient (cm^-1)

HUMAN TISSUES: Kidney

	Energy (keV)	Photo	Compton	Coherent	Photo + Compton	Total
	8.0	9.35387E+00	1.40875E-01	3.12731E-01	9.49475E+00	9.80748E+00
	10.0	4.62717E+00	1.51051E-01	2.33642E-01	4.77822E+00	5.01186E+00
	13.6	1.72283E+00	1.62394E-01	1.50953E-01	1.88522E+00	2.03618E+00
	15.0	1.26243E+00	1.67975E-01	1.35466E-01	1.43040E+00	1.56587E+00
	16.6	9.08301E-01	1.69760E-01	1.13813E-01	1.07806E+00	1.19187E+00
MAC	17.2	8.10030E-01	1.71184E-01	1.08192E-01	9.81214E-01	1.08941E+00
	20.0	4.97704E-01	1.75830E-01	8.98786E-02	6.73534E-01	7.63413E-01
	20.2	4.83241E-01	1.77459E-01	8.61433E-02	6.60700E-01	7.46843E-01
	30.0	1.33847E-01	1.81177E-01	4.75284E-02	3.15025E-01	3.62553E-01
	40.0	5.24264E-02	1.81071E-01	2.91334E-02	2.33498E-01	2.62631E-01
	50.0	2.53635E-02	1.78732E-01	1.95848E-02	2.04096E-01	2.23681E-01
	60.0	1.40400E-02	1.75399E-01	1.40861E-02	1.89439E-01	2.03525E-01
	80.0	5.54958E-03	1.68159E-01	8.24395E-03	1.73708E-01	1.81952E-01
	100.0	2.73278E-03	1.61154E-01	5.39760E-03	1.63887E-01	1.69284E-01
	150.0	7.48209E-04	1.46009E-01	2.46066E-03	1.46757E-01	1.49217E-01
	8.0	9.82157E+00	1.47919E-01	3.28368E-01	9.96949E+00	1.02979E+01
	10.0	4.85853E+00	1.58603E-01	2.45324E-01	5.01713E+00	5.26245E+00
	13.6	1.80897E+00	1.70513E-01	1.58501E-01	1.97948E+00	2.13798E+00
	15.0	1.32555E+00	1.76374E-01	1.42239E-01	1.50192E+00	1.64416E+00
	16.6	9.53716E-01	1.78248E-01	1.19503E-01	1.13196E+00	1.25147E+00
LAC	17.2	8.50531E-01	1.79743E-01	1.13602E-01	1.03027E+00	1.14388E+00
	20.0	5.22590E-01	5.22590E-01	9.43725E-02	7.07211E-01	8.01584E-01
	20.2	5.07403E-01	1.86332E-01	9.04504E-02	6.93735E-01	7.84185E-01
	30.0	1.40540E-01	1.90236E-01	4.99049E-02	3.30776E-01	3.80681E-01
	40.0	5.50477E-02	1.90125E-01	3.05901E-02	2.45172E-01	2.75762E-01
	50.0	2.66317E-02	1.87669E-01	2.05641E-02	2.14301E-01	2.34865E-01
	60.0	1.47420E-02	1.84169E-01	1.47904E-02	1.98911E-01	2.13701E-01
	80.0	5.82705E-03	1.76567E-01	8.65615E-03	1.82394E-01	1.91050E-01
	100.0	2.86942E-03	1.69212E-01	5.66748E-03	1.72081E-01	1.77749E-01
	150.0	7.85620E-04	1.53309E-01	2.58370E-03	1.54095E-01	1.56678E-01

MAC = Mass Attenuation Coefficient (cm^2/g), LAC = Linear Attenuation Coefficient (cm^-1)

HUMAN TISSUE: Kidney

	Energy (keV)	Photo	Compton	Coherent	Photo + Compton	Total
	200	3.12919E-04	1.34136E-01	1.39613E-03	1.34449E-01	1.35845E-01
	279	1.14909E-04	1.19574E-01	7.21652E-04	1.19688E-01	1.20410E-01
	300	9.23708E-05	1.16809E-01	6.22748E-04	1.16902E-01	1.17524E-01
	364	5.43021E-05	1.07385E-01	4.19111E-04	1.07439E-01	1.07859E-01
	400	3.99537E-05	1.04766E-01	3.50692E-04	1.04806E-01	1.05156E-01
MAC	500	2.12342E-05	9.56799E-02	2.22819E-04	9.57012E-02	9.59240E-02
	511	2.08768E-05	9.35906E-02	2.09546E-04	9.36115E-02	9.38211E-02
	600	1.28410E-05	8.85544E-02	1.52678E-04	8.85672E-02	8.87199E-02
	662	1.00910E-05	8.42612E-02	1.23475E-04	8.42713E-02	8.43947E-02
	800	5.95574E-06	7.77888E-02	8.43489E-05	7.77948E-02	7.78791E-02
	1000	3.36245E-06	6.99532E-02	5.16752E-05	6.99565E-02	7.00082E-02
	200	3.28565E-04	1.40843E-01	1.46594E-03	1.41171E-01	1.42637E-01
	279	1.20655E-04	1.25552E-01	7.57735E-04	1.25673E-01	1.26431E-01
	300	9.69893E-05	1.22650E-01	6.53886E-04	1.22747E-01	1.23401E-01
	364	5.70172E-05	1.12754E-01	4.40066E-04	1.12811E-01	1.13252E-01
	400	4.19514E-05	1.10004E-01	3.68227E-04	1.10046E-01	1.10414E-01
LAC	500	2.22959E-05	1.00464E-01	2.33950E-04	1.00486E-01	1.00720E-01
	511	2.19207E-05	9.82702E-02	2.20023E-04	9.82921E-02	9.85121E-02
	600	1.34831E-05	9.29821E-02	1.60312E-04	9.29956E-02	9.31559E-02
	662	1.05955E-05	8.84742E-02	1.29649E-04	8.84848E-02	8.86145E-02
	800	6.25353E-06	8.16783E-02	8.85664E-05	8.16845E-02	8.17731E-02
	1000	3.53058E-06	7.34508E-02	5.42590E-05	7.34544E-02	7.35086E-02

MAC = Mass Attenuation Coefficient (cm^2/g), LAC = Linear Attenuation Coefficient (cm^-1)

HUMAN TISSUE: Lung

	Energy (keV)	Photo	Compton	Coherent	Photo + Compton	Total
	8.0	9.77288E+00	1.40307E-01	3.17781E-01	9.91318E+00	1.02310E+01
	10.0	4.83788E+00	1.50591E-01	2.37357E-01	4.98847E+00	5.22583E+00
	13.6	1.80606E+00	1.61972E-01	1.53339E-01	1.96804E+00	2.12138E+00
	15.0	1.32468E+00	1.67569E-01	1.37553E-01	1.49225E+00	1.62980E+00
	16.6	9.53810E-01	1.69367E-01	1.15606E-01	1.12318E+00	1.23878E+00
MAC	17.2	8.50931E-01	1.70798E-01	1.09895E-01	1.02173E+00	1.13162E+00
	20.0	5.23363E-01	1.75465E-01	9.12721E-02	6.98829E-01	7.90101E-01
	20.2	5.08248E-01	1.77099E-01	8.74958E-02	6.85347E-01	7.72843E-01
	30.0	1.40147E-01	1.80881E-01	4.82849E-02	3.21028E-01	3.69313E-01
	40.0	5.49097E-02	1.80821E-01	2.96034E-02	2.35731E-01	2.65334E-01
	50.0	2.65706E-02	1.78513E-01	1.99025E-02	2.05084E-01	2.24986E-01
	60.0	1.47099E-02	1.75201E-01	1.43160E-02	1.89911E-01	2.04227E-01
	80.0	5.81526E-03	1.67989E-01	8.37925E-03	1.73805E-01	1.82184E-01
	100.0	2.85151E-03	1.61004E-01	5.48676E-03	1.63856E-01	1.69343E-01
	150.0	7.93334E-04	1.45886E-01	2.50164E-03	1.46679E-01	1.49181E-01
	8.0	2.73641E+00	3.92860E-02	8.89786E-02	2.77569E+00	2.86467E+00
	10.0	1.35461E+00	4.21654E-02	6.64601E-02	1.39677E+00	1.46323E+00
	13.6	5.05698E-01	4.53520E-02	4.29350E-02	5.51050E-01	5.93985E-01
	15.0	3.70910E-01	4.69192E-02	3.85148E-02	4.17829E-01	4.56344E-01
	16.6	2.67067E-01	4.74229E-02	3.23697E-02	3.14490E-01	3.46859E-01
LAC	17.2	2.38261E-01	4.78233E-02	3.07707E-02	2.85084E-01	3.16855E-01
	20.0	1.46542E-01	1.46542E-01	2.55562E-02	1.95672E-01	2.21228E-01
	20.2	1.42309E-01	4.95876E-02	2.44988E-02	1.91897E-01	2.16396E-01
	30.0	3.92411E-02	5.06467E-02	1.35198E-02	8.98878E-02	1.03408E-01
	40.0	1.53747E-02	5.06299E-02	8.28896E-03	6.60046E-02	7.42936E-02
	50.0	7.43976E-03	4.99838E-02	5.57269E-03	5.74235E-02	6.29962E-02
	60.0	4.11878E-03	4.90564E-02	4.00849E-03	5.31752E-02	5.71836E-02
	80.0	1.62827E-03	4.70370E-02	2.34619E-03	4.86653E-02	5.10115E-02
	100.0	7.98422E-04	4.50812E-02	1.53629E-03	4.58797E-02	4.74159E-02
	150.0	2.22134E-04	4.08480E-02	7.00460E-04	4.10701E-02	4.17706E-02

MAC = Mass Attenuation Coefficient (cm^2/g), LAC = Linear Attenuation Coefficient (cm^-1)

HUMAN TISSUE: Lung

	Energy (keV)	Photo	Compton	Coherent	Photo + Compton	Total
	200	3.25955E-04	1.34027E-01	1.41939E-03	1.34353E-01	1.35772E-01
	279	1.19538E-04	1.19477E-01	7.33683E-04	1.19597E-01	1.20330E-01
	300	9.60562E-05	1.16715E-01	6.33231E-04	1.16811E-01	1.17444E-01
	364	5.63759E-05	1.07301E-01	4.26158E-04	1.07357E-01	1.07783E-01
	400	4.14751E-05	1.04684E-01	3.56524E-04	1.04726E-01	1.05082E-01
MAC	500	2.20029E-05	9.56068E-02	2.26658E-04	9.56288E-02	9.58554E-02
	511	2.16110E-05	9.35181E-02	2.13108E-04	9.35397E-02	9.37528E-02
	600	1.32813E-05	8.84868E-02	1.55202E-04	8.85001E-02	8.86553E-02
	662	1.04001E-05	8.41964E-02	1.25592E-04	8.42068E-02	8.43324E-02
	800	6.13680E-06	7.77292E-02	8.57703E-05	7.77353E-02	7.78211E-02
	1000	3.45124E-06	6.99001E-02	5.26058E-05	6.99036E-02	6.99562E-02
	200	9.12674E-05	3.75274E-02	3.97429E-04	3.76187E-02	3.80161E-02
	279	3.34705E-05	3.34536E-02	2.05431E-04	3.34870E-02	3.36925E-02
	300	2.68957E-05	3.26803E-02	1.77305E-04	3.27072E-02	3.28845E-02
	364	1.57853E-05	3.00442E-02	1.19324E-04	3.00600E-02	3.01793E-02
	400	1.16130E-05	2.93116E-02	9.98268E-05	2.93232E-02	2.94230E-02
LAC	500	6.16082E-06	2.67699E-02	6.34643E-05	2.67761E-02	2.68395E-02
	511	6.05108E-06	2.61851E-02	5.96701E-05	2.61911E-02	2.62508E-02
	600	3.71877E-06	2.47763E-02	4.34565E-05	2.47800E-02	2.48235E-02
	662	2.91203E-06	2.35750E-02	3.51656E-05	2.35779E-02	2.36131E-02
	800	1.71830E-06	2.17642E-02	2.40157E-05	2.17659E-02	2.17899E-02
	1000	9.66348E-07	1.95720E-02	1.47296E-05	1.95730E-02	1.95877E-02

MAC = Mass Attenuation Coefficient (cm^2/g), LAC = Linear Attenuation Coefficient (cm^-1)

HUMAN TISSUE: Thyroid

	Energy (keV)	Photo	Compton	Coherent	Photo + Compton	Total
	8.0	9.45172E+00	1.41778E-01	3.14711E-01	9.59350E+00	9.90821E+00
	10.0	4.67668E+00	1.52008E-01	2.35067E-01	4.82869E+00	5.06375E+00
	13.6	1.74626E+00	1.63329E-01	1.51931E-01	1.90959E+00	2.06152E+00
	15.0	1.28023E+00	1.68909E-01	1.36306E-01	1.44914E+00	1.58544E+00
	16.6	9.21831E-01	1.70678E-01	1.14573E-01	1.09251E+00	1.20708E+00
MAC	17.2	8.22694E-01	1.72100E-01	1.08919E-01	9.94794E-01	1.10371E+00
	20.0	5.06025E-01	1.76728E-01	9.04932E-02	6.82753E-01	7.73246E-01
	20.2	4.91344E-01	1.78361E-01	8.67379E-02	6.69704E-01	7.56442E-01
	30.0	1.35731E-01	1.82029E-01	4.78903E-02	3.17760E-01	3.65650E-01
	40.0	6.51369E-02	1.81892E-01	2.93657E-02	2.47029E-01	2.76394E-01
	50.0	3.24430E-02	1.79527E-01	1.97445E-02	2.11970E-01	2.31715E-01
	60.0	1.83436E-02	1.76171E-01	1.42032E-02	1.94514E-01	2.08718E-01
	80.0	7.50228E-03	1.68890E-01	8.31416E-03	1.76392E-01	1.84707E-01
	100.0	3.75881E-03	1.61852E-01	5.44433E-03	1.65611E-01	1.71055E-01
	150.0	1.08411E-03	1.46639E-01	2.48237E-03	1.47723E-01	1.50206E-01
	8.0	9.64076E+00	1.44614E-01	3.21005E-01	9.78537E+00	1.01064E+01
	10.0	4.77021E+00	1.55048E-01	2.39768E-01	4.92526E+00	5.16503E+00
	13.6	1.78119E+00	1.66595E-01	1.54969E-01	1.94778E+00	2.10275E+00
	15.0	1.30583E+00	1.72287E-01	1.39032E-01	1.47812E+00	1.61715E+00
	16.6	9.40267E-01	1.74092E-01	1.16864E-01	1.11436E+00	1.23122E+00
LAC	17.2	8.39148E-01	1.75542E-01	1.11097E-01	1.01469E+00	1.12579E+00
	20.0	5.16146E-01	5.16146E-01	9.23031E-02	6.96408E-01	7.88711E-01
	20.2	5.01171E-01	1.81928E-01	8.84726E-02	6.83099E-01	7.71571E-01
	30.0	1.38446E-01	1.85670E-01	4.88481E-02	3.24115E-01	3.72963E-01
	40.0	6.64396E-02	1.85530E-01	2.99531E-02	2.51969E-01	2.81922E-01
	50.0	3.30919E-02	1.83118E-01	2.01394E-02	2.16210E-01	2.36349E-01
	60.0	1.87105E-02	1.79694E-01	1.44873E-02	1.98405E-01	2.12892E-01
	80.0	7.65232E-03	1.72268E-01	8.48044E-03	1.79920E-01	1.88401E-01
	100.0	3.83399E-03	1.65089E-01	5.55322E-03	1.68923E-01	1.74476E-01
	150.0	1.10579E-03	1.49572E-01	2.53202E-03	1.50678E-01	1.53210E-01

MAC = Mass Attenuation Coefficient (cm^2/g), LAC = Linear Attenuation Coefficient (cm^-1)

HUMAN TISSUE: Thyroid

	Energy (keV)	Photo	Compton	Coherent	Photo + Compton	Total
	200	4.55730E-04	1.34714E-01	1.40847E-03	1.35170E-01	1.36578E-01
	279	1.71247E-04	1.20088E-01	7.28044E-04	1.20259E-01	1.20987E-01
	300	1.38556E-04	1.17311E-01	6.28342E-04	1.17450E-01	1.18078E-01
	364	8.28883E-05	1.07848E-01	4.22870E-04	1.07930E-01	1.08353E-01
	400	6.12731E-05	1.05217E-01	3.53815E-04	1.05278E-01	1.05632E-01
MAC	500	3.32029E-05	9.60920E-02	2.24871E-04	9.61252E-02	9.63501E-02
	511	3.29091E-05	9.39937E-02	2.11456E-04	9.40266E-02	9.42381E-02
	600	2.04453E-05	8.89358E-02	1.54025E-04	8.89562E-02	8.91102E-02
	662	1.62869E-05	8.46240E-02	1.24614E-04	8.46403E-02	8.47649E-02
	800	9.81745E-06	7.81237E-02	8.51088E-05	7.81336E-02	7.82187E-02
	1000	5.73186E-06	7.02545E-02	5.21870E-05	7.02602E-02	7.03124E-02
	200	4.64844E-04	1.37408E-01	1.43664E-03	1.37873E-01	1.39310E-01
	279	1.74672E-04	1.22490E-01	7.42605E-04	1.22664E-01	1.23407E-01
	300	1.41327E-04	1.19657E-01	6.40909E-04	1.19799E-01	1.20440E-01
	364	8.45460E-05	1.10004E-01	4.31328E-04	1.10089E-01	1.10520E-01
	400	6.24986E-05	1.07321E-01	3.60892E-04	1.07384E-01	1.07745E-01
LAC	500	3.38670E-05	9.80139E-02	2.29368E-04	9.80477E-02	9.82771E-02
	511	3.35673E-05	9.58736E-02	2.15685E-04	9.59071E-02	9.61228E-02
	600	2.08542E-05	9.07145E-02	1.57106E-04	9.07353E-02	9.08924E-02
	662	1.66127E-05	8.63165E-02	1.27107E-04	8.63331E-02	8.64602E-02
	800	1.00138E-05	7.96862E-02	8.68109E-05	7.96962E-02	7.97830E-02
	1000	5.84649E-06	7.16596E-02	5.32307E-05	7.16654E-02	7.17186E-02

MAC = Mass Attenuation Coefficient (cm^2/g), LAC = Linear Attenuation Coefficient (cm^-1)

HUMAN TISSUE: Breast

	Energy (keV)	Photo	Compton	Coherent	Photo + Compton	Total
MAC	8.0	6.89158E+00	1.47638E-01	2.69417E-01	7.03921E+00	7.30863E+00
	10.0	3.36720E+00	1.56756E-01	2.02454E-01	3.52396E+00	3.72642E+00
	13.6	1.23729E+00	1.67700E-01	1.30986E-01	1.40499E+00	1.53598E+00
	15.0	9.02136E-01	1.73120E-01	1.18286E-01	1.07526E+00	1.19354E+00
	16.6	6.45991E-01	1.74762E-01	9.88879E-02	8.20752E-01	9.19640E-01
	17.2	5.75398E-01	1.76122E-01	9.40319E-02	7.51520E-01	8.45552E-01
	20.0	3.51186E-01	1.80538E-01	7.83779E-02	5.31724E-01	6.10102E-01
	20.2	3.40686E-01	1.82127E-01	7.49486E-02	5.22813E-01	5.97761E-01
	30.0	9.23853E-02	1.85167E-01	4.12709E-02	2.77552E-01	3.18823E-01
	40.0	3.58016E-02	1.84574E-01	2.52416E-02	2.20375E-01	2.45617E-01
	50.0	1.71936E-02	1.81910E-01	1.69497E-02	1.99104E-01	2.16053E-01
	60.0	9.46544E-03	1.78348E-01	1.21721E-02	1.87813E-01	1.99985E-01
	80.0	3.71273E-03	1.70791E-01	7.11599E-03	1.74504E-01	1.81620E-01
	100.0	1.80820E-03	1.63556E-01	4.65264E-03	1.65364E-01	1.70017E-01
LAC	8.0	6.61591E+00	1.41732E-01	2.58640E-01	6.75765E+00	7.01629E+00
	10.0	3.23252E+00	1.50486E-01	1.94356E-01	3.38300E+00	3.57736E+00
	13.6	1.18780E+00	1.60992E-01	1.25747E-01	1.34879E+00	1.47454E+00
	15.0	8.66051E-01	1.66196E-01	1.13555E-01	1.03225E+00	1.14580E+00
	16.6	6.20151E-01	1.67771E-01	9.49324E-02	7.87922E-01	8.82855E-01
	17.2	5.52382E-01	1.69077E-01	9.02707E-02	7.21459E-01	8.11730E-01
	20.0	3.37138E-01	1.73317E-01	7.52428E-02	5.10455E-01	5.85698E-01
	20.2	3.27058E-01	1.74842E-01	7.19507E-02	5.01900E-01	5.73851E-01
	30.0	8.86899E-02	1.77760E-01	3.96201E-02	2.66450E-01	3.06070E-01
	40.0	3.43696E-02	1.77191E-01	2.42319E+00	2.11560E-01	2.35792E-01
	50.0	1.65059E-02	1.74634E-01	1.62718E-02	1.91139E-01	2.07411E-01
	60.0	9.08683E-03	1.71214E-01	1.16852E-02	1.80301E-01	1.91986E-01
	80.0	3.56422E-03	1.63959E-01	6.83135E-03	1.67523E-01	1.74355E-01
	100.0	1.73588E-03	1.57014E-01	4.46654E-03	1.58750E-01	1.63216E-01

MAC = Mass Attenuation Coefficient (cm^2/g), LAC = Linear Attenuation Coefficient (cm^-1)

HUMAN SUBSTITUTE: Breast

	Energy (keV)	Photo	Compton	Coherent	Photo + Compton	Total
MCA	150	4.98876E-04	1.48057E-01	2.11740E-03	1.48566E-01	1.50683E-01
	200	2.03873E-04	1.35995E-01	1.20100E-03	1.36199E-01	1.37400E-01
	279	7.43762E-05	1.21227E-01	6.20627E-04	1.21302E-01	1.21922E-01
	300	5.96838E-05	1.18423E-01	5.34594E-04	1.18483E-01	1.19017E-01
	364	3.49225E-05	1.08847E-01	3.59888E-04	1.08882E-01	1.09242E-01
	400	2.56550E-05	1.06185E-01	3.01770E-04	1.06211E-01	1.06513E-01
	500	1.35605E-05	9.69637E-02	1.90376E-04	9.69773E-02	9.71677E-02
	511	1.33094E-05	9.48557E-02	1.79596E-04	9.48690E-02	9.50485E-02
	600	8.15982E-06	8.97414E-02	1.31567E-04	8.97496E-02	8.98812E-02
	662	6.37534E-06	8.53956E-02	1.05662E-04	8.54020E-02	8.55076E-02
	800	3.74892E-06	7.88347E-02	7.24055E-05	7.88384E-02	7.89108E-02
	1000	2.09770E-06	7.08875E-02	4.38217E-05	7.08896E-02	7.09334E-02
LAC	150	4.78921E-04	1.42144E-01	2.03271E-03	1.42623E-01	1.44656E-01
	200	1.95718E-04	1.30555E-01	1.15296E-03	1.30751E-01	1.31904E-01
	279	7.14012E-05	1.16378E-01	5.95802E-04	1.16450E-01	1.17045E-01
	300	5.72965E-05	1.13686E-01	5.13210E-04	1.13743E-01	1.14257E-01
	364	3.35256E-05	1.04493E-01	3.45493E-04	1.04527E-01	1.04872E-01
	400	2.46288E-05	1.01938E-01	2.89699E-04	1.01963E-01	1.02252E-01
	500	1.30181E-05	9.30852E-02	1.82761E-04	9.30982E-02	9.32810E-02
	511	1.27770E-05	9.10615E-02	1.72412E-04	9.10743E-02	9.12467E-02
	600	7.83343E-06	8.61518E-02	1.26304E-04	8.61596E-02	8.62859E-02
	662	6.12033E-06	8.19798E-02	1.01435E-02	8.19859E-02	8.20873E-02
	800	3.59896E-06	7.55813E-02	6.95093E-05	7.55849E-02	7.57544E-02
	1000	2.01379E-06	6.80520E-02	4.20689E-05	6.80540E-02	6.80961E-02

MAC = Mass Attenuation Coefficient (cm^2/g), LAC = Linear Attenuation Coefficient (cm^-1)

HUMAN TISSUE: Cartilage

	Energy (keV)	Photo	Compton	Coherent	Photo + Compton	Total
	8.0	9.69393E+00	1.40708E-01	3.17972E-01	9.83463E+00	1.01526E+01
	10.0	4.78821E+00	1.51003E-01	2.37509E-01	4.93921E+00	5.17672E+00
	13.6	1.78233E+00	1.62372E-01	1.53365E-01	1.94471E+00	2.09807E+00
	15.0	1.30570E+00	1.67967E-01	1.37554E-01	1.47367E+00	1.61122E+00
	16.6	9.38515E-01	1.69759E-01	1.15602E-01	1.10827E+00	1.22388E+00
MAC	17.2	8.37222E-01	1.71187E-01	1.09888E-01	1.00841E+00	1.11830E+00
	20.0	5.14161E-01	1.75847E-01	9.12334E-02	6.90008E-01	7.81241E-01
	20.2	4.99181E-01	1.77481E-01	8.74759E-02	6.76663E-01	7.64139E-01
	30.0	1.37224E-01	1.81237E-01	4.82609E-02	3.18462E-01	3.66722E-01
	40.0	5.36568E-02	1.81160E-01	2.95926E-02	2.34817E-01	2.64410E-01
	50.0	2.59313E-02	1.78840E-01	1.98978E-02	2.04771E-01	2.24669E-01
	60.0	1.43427E-02	1.75518E-01	1.43137E-02	1.89860E-01	2.04174E-01
	80.0	5.66303E-03	1.68288E-01	8.37734E-03	1.73951E-01	1.82328E-01
	100.0	2.77345E-03	1.61288E-01	5.48581E-03	1.64061E-01	1.69547E-01
	150.0	7.70633E-04	1.46140E-01	2.50150E-03	1.46911E-01	1.49413E-01
	8.0	1.06633E+01	1.54779E-01	3.49770E-01	1.08181E+01	1.11679E+01
	10.0	5.26703E+00	1.66103E-01	2.61260E-01	5.43313E+00	5.69439E+00
	13.6	1.96057E+00	1.78609E-01	1.68701E-01	2.13918E+00	2.30788E+00
	15.0	1.43627E+00	1.84764E-01	1.51310E-01	1.62104E+00	1.77234E+00
	16.6	1.03237E+00	1.86735E-01	1.27162E-01	1.21910E+00	1.34626E+00
LAC	17.2	9.20944E-01	1.88306E-01	1.20877E-01	1.10925E+00	1.23013E+00
	20.0	5.65577E-01	5.65577E-01	1.00357E-01	7.59008E-01	8.59365E-01
	20.2	5.49100E-01	1.95230E-01	9.62235E-02	7.44329E-01	8.40553E-01
	30.0	1.50946E-01	1.99361E-01	5.30870E-02	3.50308E-01	4.03395E-01
	40.0	5.90225E-02	1.99276E-01	3.25519E-02	2.58299E-01	2.90851E-01
	50.0	2.85244E-02	1.96724E-01	2.18875E-02	2.25248E-01	2.47136E-01
	60.0	1.57770E-02	1.93069E-01	1.57451E-02	2.08846E-01	2.24591E-01
	80.0	6.22934E-03	1.85117E-01	9.21507E-03	1.91346E-01	2.00561E-01
	100.0	3.05079E-03	1.77417E-01	6.03439E-03	1.80467E-01	1.86502E-01
	150.0	8.47697E-04	1.60754E-01	2.75165E-03	1.61602E-01	1.64354E-01

MAC = Mass Attenuation Coefficient (cm^2/g), LAC = Linear Attenuation Coefficient (cm^-1)

HUMAN TISSUE: Cartilage

	Energy (keV)	Photo	Compton	Coherent	Photo + Compton	Total
	200	3.16247E-04	1.34260E-01	1.41940E-03	1.34576E-01	1.35996E-01
	279	1.15804E-04	1.19685E-01	7.33694E-04	1.19801E-01	1.20535E-01
	300	9.30206E-05	1.16918E-01	6.33258E-04	1.17011E-01	1.17645E-01
	364	5.44969E-05	1.07487E-01	4.26182E-04	1.07542E-01	1.07968E-01
	400	4.00921E-05	1.04866E-01	3.56549E-04	1.04906E-01	1.05262E-01
MAC	500	2.12312E-05	9.57725E-02	2.26655E-04	9.57937E-02	9.60203E-02
	511	2.08303E-05	9.36803E-02	2.13133E-04	9.37011E-02	9.39142E-02
	600	1.27929E-05	8.86401E-02	1.55234E-04	8.86529E-02	8.88081E-02
	662	1.00011E-05	8.43424E-02	1.25613E-04	8.43524E-02	8.44780E-02
	800	5.89042E-06	7.78640E-02	8.57803E-05	7.78699E-02	7.79557E-02
	1000	3.30126E-06	7.00211E-02	5.26247E-05	7.00244E-02	7.00771E-02
	200	3.47872E-04	1.47686E-01	1.56134E-03	1.48034E-01	1.49595E-01
	279	1.27384E-04	1.31654E-01	8.07064E-04	1.31781E-01	1.32588E-01
	300	1.02323E-04	1.28610E-01	6.96584E-04	1.28713E-01	1.29409E-01
	364	5.99465E-05	1.18236E-01	4.68801E-04	1.18296E-01	1.18764E-01
	400	4.41013E-05	1.15352E-01	3.92203E-04	1.15396E-01	1.15789E-01
LAC	500	2.33543E-05	1.05350E-01	2.49321E-04	1.05373E-01	1.05622E-01
	511	2.29134E-05	1.03048E-01	2.34447E-04	1.03071E-01	1.03306E-01
	600	1.40722E-05	9.75041E-02	1.70757E-04	9.75182E-02	9.76889E-02
	662	1.10012E-05	9.27767E-02	1.38174E-04	9.27877E-02	9.29258E-02
	800	6.47946E-06	8.56504E-02	9.43583E-05	8.56569E-02	8.57513E-02
	1000	3.63138E-06	7.70232E-02	5.78871E-05	7.70269E-02	7.70848E-02

MAC = Mass Attenuation Coefficient (cm^2/g), LAC = Linear Attenuation Coefficient (cm^-1)

HUMAN TISSUE: Rib Bone

	Energy (keV)	Photo	Compton	Coherent	Photo + Compton	Total
MCA	150	3.75750E-03	1.41281E-01	3.59000E-03	1.45038E-01	1.48628E-01
	200	1.57299E-03	1.29899E-01	2.03705E-03	1.31472E-01	1.33509E-01
	279	5.86108E-04	1.15872E-01	1.05232E-03	1.16458E-01	1.17511E-01
	300	4.72774E-04	1.13221E-01	9.09043E-04	1.13693E-01	1.14602E-01
	364	2.77937E-04	1.04080E-01	6.12945E-04	1.04358E-01	1.04971E-01
	400	2.06044E-04	1.01558E-01	5.11608E-04	1.01764E-01	1.02275E-01
	500	1.09807E-04	9.27774E-02	3.25709E-04	9.28872E-02	9.32129E-02
	511	1.07294E-04	9.07330E-02	3.07582E-04	9.08403E-02	9.11479E-02
	600	6.64022E-05	8.58694E-02	2.24065E-04	8.59358E-02	8.61598E-02
	662	5.19003E-05	8.17135E-02	1.81741E-04	8.17654E-02	8.19471E-02
	800	3.06938E-05	7.54455E-02	1.24157E-04	7.54762E-02	7.56004E-02
	1000	1.72252E-05	6.78475E-02	7.69052E-05	6.78647E-02	6.79416E-02
LAC	150	4.77202E-03	1.79427E-01	4.55930E-03	1.84199E-01	1.88758E-01
	200	1.99770E-03	1.64971E-01	2.58705E-03	1.66969E-01	1.69556E-01
	279	7.44357E-04	1.47158E-01	1.33645E-03	1.47902E-01	1.49238E-01
	300	6.00423E-04	1.43790E-01	1.15448E-03	1.44391E-01	1.45545E-01
	364	3.52979E-04	1.32182E-01	7.78440E-04	1.32535E-01	1.33314E-01
	400	2.61676E-04	1.28978E-01	6.49742E-04	1.29240E-01	1.29890E-01
	500	1.39455E-04	1.17827E-01	4.13650E-04	1.17967E-01	1.18380E-01
	511	1.36264E-04	1.15231E-01	3.90629E-04	1.15367E-01	1.15758E-01
	600	8.43308E-05	1.09054E-01	2.84562E-04	1.09138E-01	1.09423E-01
	662	6.59133E-05	1.03776E-01	2.30788E-02	1.03842E-01	1.04073E-01
	800	3.89811E-05	9.58158E-02	1.57679E-04	9.58548E-02	9.60125E-02
	1000	2.18760E-05	8.61663E-02	9.76695E-05	8.61882E-02	8.62858E-02

MAC = Mass Attenuation Coefficient (cm^2/g), LAC = Linear Attenuation Coefficient (cm^-1)

HUMAN TISSUE: Rib bone

	Energy (keV)	Photo	Compton	Coherent	Photo + Compton	Total
MAC	8.0	2.94619E+01	1.30101E-01	4.25732E-01	2.95920E+01	3.00177E+01
	10.0	1.53762E+01	1.40322E-01	3.26400E-01	1.55165E+01	1.58429E+01
	13.6	6.12473E+00	1.52036E-01	2.13103E-01	6.27677E+00	6.48987E+00
	15.0	4.59734E+00	1.57661E-01	1.94823E-01	4.75500E+00	4.94982E+00
	16.6	3.36938E+00	1.59741E-01	1.62193E-01	3.52912E+00	3.69131E+00
	17.2	3.02940E+00	1.61210E-01	1.54467E-01	3.19061E+00	3.34507E+00
	20.0	1.92066E+00	1.66216E-01	1.29860E-01	2.08688E+00	2.21674E+00
	20.2	1.87204E+00	1.67797E-01	1.23947E-01	2.03983E+00	2.16378E+00
	30.0	5.51646E-01	1.72626E-01	6.89859E-02	7.24272E-01	7.93258E-01
	40.0	2.25867E-01	1.73272E-01	4.24306E-02	3.99139E-01	4.41569E-01
	50.0	1.12729E-01	1.71526E-01	2.85918E-02	2.84255E-01	3.12847E-01
	60.0	6.38622E-02	1.68688E-01	2.05648E-02	2.32550E-01	2.53115E-01
	80.0	2.60878E-02	1.62147E-01	1.20281E-02	1.88234E-01	2.00263E-01
	100.0	7.68952E-02	1.55626E-01	7.87583E-03	2.32521E-01	2.40397E-01
LAC	8.0	3.74166E+01	1.65229E-01	5.40679E-01	3.75818E+01	3.81225E+01
	10.0	1.95278E+01	1.78209E-01	4.14528E-01	1.97060E+01	2.01205E+01
	13.6	7.77841E+00	1.93085E-01	2.70641E-01	7.97149E+00	8.24214E+00
	15.0	5.83862E+00	2.00229E-01	2.47425E-01	6.03885E+00	6.28627E+00
	16.6	4.27911E+00	2.02871E-01	2.05985E-01	4.48198E+00	4.68796E+00
	17.2	3.84733E+00	2.04737E-01	1.96173E-01	4.05207E+00	4.24825E+00
	20.0	2.43924E+00	2.11094E-01	1.64923E-01	2.65034E+00	2.81526E+00
	20.2	2.37749E+00	2.13102E-01	1.57412E-01	2.59059E+00	2.74800E+00
	30.0	7.00590E-01	2.19235E-01	8.76121E-02	9.19825E-01	1.00744E+00
	40.0	2.86851E-01	2.20055E-01	5.38815E+00	5.06906E-01	5.60793E-01
	50.0	1.43166E-01	2.17838E-01	3.63116E-02	3.61004E-01	3.97315E-01
	60.0	8.11050E-02	2.14233E-01	2.61173E-02	2.95338E-01	3.21456E-01
	80.0	3.31315E-02	2.05926E-01	1.52757E-02	2.39058E-01	2.54333E-01
	100.0	9.76569E-02	1.97645E-01	1.00023E-02	2.95301E-01	3.05304E-01

MAC = Mass Attenuation Coefficient (cm^2/g), LAC = Linear Attenuation Coefficient (cm^-1)

HUMAN TISSUE: Bone (Skeleton)

	Energy (keV)	Photo	Compton	Coherent	Photo + Compton	Total
MAC	8.0	2.95971E+01	1.31417E-01	4.18091E-01	2.97285E+01	3.01466E+01
	10.0	1.54707E+01	1.41206E-01	3.21903E-01	1.56119E+01	1.59338E+01
	13.6	6.16725E+00	1.52808E-01	2.10147E-01	6.32006E+00	6.53020E+00
	15.0	4.63073E+00	1.58381E-01	1.92632E-01	4.78911E+00	4.98174E+00
	16.6	3.39950E+00	1.60433E-01	1.60048E-01	3.55994E+00	3.71998E+00
	17.2	3.05606E+00	1.61881E-01	1.52449E-01	3.21795E+00	3.37039E+00
	20.0	1.93805E+00	1.66836E-01	1.28273E-01	2.10488E+00	2.23316E+00
	20.2	1.88913E+00	1.68399E-01	1.22391E-01	2.05753E+00	2.17992E+00
	30.0	5.56746E-01	1.73061E-01	6.81023E-02	7.29807E-01	7.97909E-01
	40.0	2.27954E-01	1.73591E-01	4.18957E-02	4.01545E-01	4.43441E-01
	50.0	1.13745E-01	1.71777E-01	2.82448E-02	2.85522E-01	3.13767E-01
	60.0	6.44243E-02	1.68903E-01	2.03141E-02	2.33328E-01	2.53642E-01
	80.0	2.63078E-02	1.62316E-01	1.18760E-02	1.88624E-01	2.00500E-01
	100.0	1.32150E-02	1.55760E-01	7.77540E-03	1.68975E-01	1.76750E-01
	150.0	3.80445E-03	1.41379E-01	3.54418E-03	1.45183E-01	1.48727E-01
LAC	8.0	4.26199E+01	1.89240E-01	6.02051E-01	4.28091E+01	4.34111E+01
	10.0	2.22778E+01	2.03337E-01	4.63540E-01	2.24811E+01	2.29446E+01
	13.6	8.88084E+00	2.20044E-01	3.02612E-01	9.10088E+00	9.40349E+00
	15.0	6.66825E+00	2.28069E-01	2.77390E-01	6.89632E+00	7.17371E+00
	16.6	4.89529E+00	2.31023E-01	2.30469E-01	5.12631E+00	5.35678E+00
	17.2	4.40073E+00	2.33109E-01	2.19526E-01	4.63384E+00	4.85337E+00
	20.0	2.79079E+00	2.79079E+00	1.84713E-01	3.03103E+00	3.21575E+00
	20.2	2.72035E+00	2.42495E-01	1.76244E-01	2.96284E+00	3.13908E+00
	30.0	8.01714E-01	2.49208E-01	9.80673E-02	1.05092E+00	1.14899E+00
	40.0	3.28254E-01	2.49971E-01	6.03298E-02	5.78225E-01	6.38555E-01
	50.0	1.63792E-01	2.47359E-01	4.06725E-02	4.11152E-01	4.51824E-01
	60.0	9.27710E-02	2.43221E-01	2.92523E-02	3.35992E-01	3.65244E-01
	80.0	3.78833E-02	2.33735E-01	1.71014E-02	2.71618E-01	2.88720E-01
	100.0	1.90296E-02	2.24294E-01	1.11966E-02	2.43324E-01	2.54520E-01
	150.0	5.47841E-03	2.03586E-01	5.10363E-03	2.09064E-01	2.14168E-01

MAC = Mass Attenuation Coefficient (cm^2/g), LAC = Linear Attenuation Coefficient (cm^-1)

HUMAN TISSUE: Bone (Skeleton)

	Energy (keV)	Photo	Compton	Coherent	Photo + Compton	Total
MAC	200	1.59337E-03	1.29985E-01	2.01176E-03	1.31578E-01	1.33590E-01
	279	5.94301E-04	1.15954E-01	1.03926E-03	1.16548E-01	1.17588E-01
	300	4.79514E-04	1.13302E-01	8.97480E-04	1.13782E-01	1.14679E-01
	364	2.82332E-04	1.04150E-01	6.05321E-04	1.04432E-01	1.05037E-01
	400	2.09273E-04	1.01634E-01	5.05380E-04	1.01844E-01	1.02349E-01
	500	1.11696E-04	9.28354E-02	3.21246E-04	9.29471E-02	9.32683E-02
	511	1.09260E-04	9.07959E-02	3.03741E-04	9.09052E-02	9.12089E-02
	600	6.76479E-05	8.59259E-02	2.21614E-04	8.59935E-02	8.62151E-02
	662	5.29555E-05	8.17637E-02	1.79460E-04	8.18167E-02	8.19962E-02
	800	3.13696E-05	7.54925E-02	1.22707E-04	7.55238E-02	7.56465E-02
	1000	1.76623E-05	6.78867E-02	7.58384E-05	6.79044E-02	6.79802E-02
LAC	200	2.29446E-03	1.87178E-01	2.89693E-03	1.89472E-01	1.92369E-01
	279	8.55793E-04	1.66974E-01	1.49654E-03	1.67830E-01	1.69326E-01
	300	6.90500E-04	1.63156E-01	1.29237E-03	1.63846E-01	1.65138E-01
	364	4.06558E-04	1.49976E-01	8.71662E-04	1.50382E-01	1.51254E-01
	400	3.01353E-04	1.46354E-01	7.27747E-04	1.46655E-01	1.47383E-01
	500	1.60842E-04	1.33683E-01	4.62595E-04	1.33844E-01	1.34306E-01
	511	1.57335E-04	1.30746E-01	4.37387E-04	1.30903E-01	1.31341E-01
	600	9.74129E-05	1.23733E-01	3.19124E-04	1.23831E-01	1.24150E-01
	662	7.62559E-05	1.17740E-01	2.58422E-04	1.17816E-01	1.18074E-01
	800	4.51722E-05	1.08709E-01	1.76699E-04	1.08754E-01	1.08931E-01
	1000	2.54337E-05	9.77569E-02	1.09207E-04	9.77823E-02	9.78915E-02

MAC = Mass Attenuation Coefficient (cm^2/g), LAC = Linear Attenuation Coefficient (cm^-1)

HUMAN TISSUE: Muscle + 5 % Adipose
(Density = 1.034 g/cm^3)

	Energy (keV)	Photo	Compton	Coherent	Photo + Compton	Total
	8.0	9.45109E+00	1.40770E-01	3.12695E-01	9.59186E+00	9.90456E+00
	10.0	4.67992E+00	1.50955E-01	2.33710E-01	4.83078E+00	5.06458E+00
	13.6	1.74410E+00	1.62315E-01	1.50995E-01	1.90643E+00	2.05741E+00
	15.0	1.27838E+00	1.67900E-01	1.35575E-01	1.44627E+00	1.58185E+00
	16.6	9.20295E-01	1.69685E-01	1.13878E-01	1.08998E+00	1.20386E+00
MAC	17.2	8.20380E-01	1.71080E-01	1.08252E-01	9.91465E-01	1.09972E+00
	20.0	5.04270E-01	1.75760E-01	8.99620E-02	6.80030E-01	7.70040E-01
	20.2	4.89710E-01	1.77355E-01	8.62075E-02	6.67065E-01	7.53300E-01
	30.0	1.34769E-01	1.81095E-01	4.75665E-02	3.15865E-01	3.63375E-01
	40.0	5.27325E-02	1.80950E-01	2.91510E-02	2.33730E-01	2.62865E-01
	50.0	2.54885E-02	1.78625E-01	1.96000E-02	2.04180E-01	2.23730E-01
	60.0	1.41030E-02	1.75300E-01	1.40980E-02	1.89445E-01	2.03465E-01
	80.0	5.56900E-03	1.68075E-01	8.24885E-03	1.73635E-01	1.81925E-01
	100.0	2.72620E-03	1.61060E-01	5.40020E-03	1.63790E-01	1.69215E-01
	150.0	7.57480E-04	1.45930E-01	2.49575E-03	1.46710E-01	1.49180E-01
	8.0	9.77243E+00	1.45556E-01	3.23327E-01	9.91799E+00	1.02413E+01
	10.0	4.83904E+00	1.56087E-01	2.41656E-01	4.99503E+00	5.23678E+00
	13.6	1.80340E+00	1.67834E-01	1.56129E-01	1.97124E+00	2.12737E+00
	15.0	1.32184E+00	1.73609E-01	1.40185E-01	1.49544E+00	1.63563E+00
	16.6	9.51585E-01	1.75454E-01	1.17750E-01	1.12704E+00	1.24479E+00
LAC	17.2	8.48273E-01	1.76897E-01	1.11933E-01	1.02517E+00	1.13711E+00
	20.0	5.21415E-01	1.81736E-01	9.30207E-02	7.03151E-01	7.96221E-01
	20.2	5.06360E-01	1.83385E-01	8.91386E-02	6.89745E-01	7.78912E-01
	30.0	1.39351E-01	1.87252E-01	4.91838E-02	3.26604E-01	3.75730E-01
	40.0	5.45254E-02	1.87102E-01	3.01421E-02	2.41677E-01	2.71802E-01
	50.0	2.63551E-02	1.84698E-01	2.02664E-02	2.11122E-01	2.31337E-01
	60.0	1.45825E-02	1.81260E-01	1.45773E-02	1.95886E-01	2.10383E-01
	80.0	5.75835E-03	1.73790E-01	8.52931E-03	1.79539E-01	1.88110E-01
	100.0	2.81889E-03	1.66536E-01	5.58381E-03	1.69359E-01	1.74968E-01
	150.0	7.83234E-04	1.50892E-01	2.58061E-03	1.51698E-01	1.54252E-01

MAC = Mass Attenuation Coefficient (cm^2/g), LAC = Linear Attenuation Coefficient (cm^-1)

HUMAN TISSUE: Muscle + 5 % Adipose
(density = 1.034 g/cm^3)

	Energy (keV)	Photo	Compton	Coherent	Photo + Compton	Total
	200	3.11055E-04	1.34115E-01	1.39645E-03	1.34410E-01	1.35790E-01
	279	1.14041E-04	1.19505E-01	7.21980E-04	1.19605E-01	1.20390E-01
	300	9.16025E-05	1.15800E-01	6.23000E-04	1.16800E-01	1.17490E-01
	364	0.00000E+00	1.07295E-01	4.19265E-04	1.07390E-01	1.07785E-01
	400	3.95425E-05	1.04690E-01	3.50845E-04	1.04785E-01	1.05085E-01
MAC	500	2.09750E-05	9.56305E-02	2.22890E-04	9.56500E-02	9.58765E-02
	511	2.06050E-05	9.35490E-02	2.09650E-04	9.35685E-02	9.37760E-02
	600	1.26609E-05	8.85140E-02	1.52800E-04	8.85235E-02	8.86720E-02
	662	9.91605E-06	8.42210E-02	1.23508E-04	8.42305E-02	8.43490E-02
	800	5.84801E-06	7.77550E-02	8.43890E-05	7.77555E-02	7.78440E-02
	1000	3.28875E-06	6.99180E-02	5.16825E-05	6.99185E-02	6.99770E-02
	200	3.21631E-04	1.38675E-01	1.44393E-03	1.38980E-01	1.40407E-01
	279	1.17919E-04	1.23568E-01	7.46527E-04	1.23672E-01	1.24483E-01
	300	9.47170E-05	1.20771E-01	6.44182E-04	1.20771E-01	1.21485E-01
	364	5.55930E-05	1.10943E-01	4.33520E-04	1.11041E-01	1.11450E-01
	400	4.08869E-05	1.08249E-01	3.62774E-04	1.08348E-01	1.08658E-01
LAC	500	2.16881E-05	9.88819E-02	0.00000E+00	9.89021E-02	9.91363E-02
	511	2.13056E-05	9.67297E-02	2.16778E-04	9.67498E-02	9.69644E-02
	600	1.30914E-05	9.15235E-02	1.57995E-04	9.15333E-02	9.16868E-02
	662	1.02532E-05	8.70845E-02	1.27707E-04	8.70943E-02	8.72169E-02
	800	6.04684E-06	8.03987E-02	8.72582E-05	8.03992E-02	8.04907E-02
	1000	3.40057E-06	7.22952E-02	5.34397E-05	7.22957E-02	7.23562E-02

MAC = Mass Attenuation Coefficient (cm^2/g), LAC = Linear Attenuation Coefficient (cm^-1)

HUMAN TISSUE: Muscle + 10 % Adipose
(Density = 1.028 g/cm^3)

	Energy (keV)	Photo	Compton	Coherent	Photo + Compton	Total
	8.0	9.23509E+00	1.41340E-01	3.08490E-01	9.37643E+00	9.68491E+00
	10.0	4.57084E+00	1.51410E-01	2.30720E-01	4.72216E+00	4.95297E+00
	13.6	1.70261E+00	1.62730E-01	1.49090E-01	1.86535E+00	2.01443E+00
	15.0	1.24775E+00	1.68300E-01	1.33950E-01	1.41604E+00	1.55000E+00
	16.6	8.98090E-01	1.70070E-01	1.12457E-01	1.06816E+00	1.18062E+00
MAC	17.2	8.00560E-01	1.71460E-01	1.06905E-01	9.72030E-01	1.07893E+00
	20.0	4.92040E-01	1.76120E-01	8.88740E-02	6.68160E-01	7.57080E-01
	20.2	4.77820E-01	1.77710E-01	8.51450E-02	6.55530E-01	7.40700E-01
	30.0	1.31438E-01	1.81390E-01	4.69730E-02	3.12830E-01	3.59750E-01
	40.0	5.14150E-02	1.81200E-01	2.87820E-02	2.32660E-01	2.61430E-01
	50.0	2.48470E-02	1.78850E-01	1.93500E-02	2.03760E-01	2.23060E-01
	60.0	1.37460E-02	1.75500E-01	1.39160E-02	1.89290E-01	2.03130E-01
	80.0	5.42700E-03	1.68250E-01	8.14170E-03	1.73670E-01	1.81850E-01
	100.0	2.65640E-03	1.61220E-01	5.32940E-03	1.63880E-01	1.69230E-01
	150.0	7.37960E-04	1.46060E-01	2.46250E-03	1.46820E-01	1.49260E-01
	8.0	9.49367E+00	1.45298E-01	3.17128E-01	9.63897E+00	9.95609E+00
	10.0	4.69882E+00	1.55649E-01	2.37180E-01	4.85438E+00	5.09165E+00
	13.6	1.75028E+00	1.67286E-01	1.53265E-01	1.91758E+00	2.07083E+00
	15.0	1.28269E+00	1.73012E-01	1.37701E-01	1.45569E+00	1.59340E+00
	16.6	9.23237E-01	1.74832E-01	1.15606E-01	1.09807E+00	1.21368E+00
LAC	17.2	8.22976E-01	1.76261E-01	1.09898E-01	9.99247E-01	1.10914E+00
	20.0	5.05817E-01	1.81051E-01	9.13625E-02	6.86868E-01	7.78278E-01
	20.2	4.91199E-01	1.82686E-01	8.75291E-02	6.73885E-01	7.61440E-01
	30.0	1.35118E-01	1.86469E-01	4.82882E-02	3.21589E-01	3.69823E-01
	40.0	5.28546E-02	1.86274E-01	2.95879E-02	2.39174E-01	2.68750E-01
	50.0	2.55427E-02	1.83858E-01	1.98918E-02	2.09465E-01	2.29306E-01
	60.0	1.41309E-02	1.80414E-01	1.43056E-02	1.94590E-01	2.08818E-01
	80.0	5.57896E-03	1.72961E-01	8.36967E-03	1.78533E-01	1.86942E-01
	100.0	2.73078E-03	1.65734E-01	5.47862E-03	1.68469E-01	1.73968E-01
	150.0	7.58623E-04	1.50150E-01	2.53145E-03	1.50931E-01	1.53439E-01

MAC = Mass Attenuation Coefficient (cm^2/g), LAC = Linear Attenuation Coefficient (cm^-1)

HUMAN TISSUE: Muscle + 10 % Adipose
(density = 1.028 g/cm^3)

	Energy (keV)	Photo	Compton	Coherent	Photo + Compton	Total
	200	3.03010E-04	1.34230E-01	1.37790E-03	1.34520E-01	1.35880E-01
	279	1.11083E-04	1.19610E-01	7.12360E-04	1.19710E-01	1.20480E-01
	300	8.92250E-05	1.16900E-01	6.14600E-04	1.16900E-01	1.17580E-01
	364	0.00000E+00	1.07390E-01	4.13630E-04	1.07480E-01	1.07870E-01
	400	3.85150E-05	1.04780E-01	3.46190E-04	1.04870E-01	1.05170E-01
MAC	500	2.04300E-05	9.57110E-02	2.19791E-04	9.57300E-02	9.59530E-02
	511	2.00700E-05	9.36280E-02	2.06800E-04	9.36470E-02	9.38520E-02
	600	1.23319E-05	8.85880E-02	1.50800E-04	8.85970E-02	8.87440E-02
	662	9.66210E-06	8.42920E-02	1.21816E-04	8.43010E-02	8.44180E-02
	800	5.69622E-06	7.78200E-02	8.32580E-05	7.78210E-02	7.79080E-02
	1000	3.20350E-06	6.99760E-02	5.09350E-05	6.99770E-02	7.00340E-02
	200	3.11494E-04	1.37988E-01	1.41648E-03	1.38287E-01	1.39685E-01
	279	1.14193E-04	1.22959E-01	7.32306E-04	1.23062E-01	1.23853E-01
	300	9.17233E-05	1.20173E-01	6.31809E-04	1.20173E-01	1.20872E-01
	364	5.38364E-05	1.10397E-01	4.25212E-04	1.10489E-01	1.10890E-01
	400	3.95934E-05	1.07714E-01	3.55883E-04	1.07806E-01	1.08115E-01
LAC	500	2.10020E-05	9.83909E-02	0.00000E+00	9.84104E-02	9.86397E-02
	511	2.06320E-05	9.62496E-02	2.12590E-04	9.62691E-02	9.64799E-02
	600	1.26772E-05	9.10685E-02	1.55022E-04	9.10777E-02	9.12288E-02
	662	9.93264E-06	8.66522E-02	1.25227E-04	8.66614E-02	8.67817E-02
	800	5.85571E-06	7.99990E-02	8.55892E-05	8.00000E-02	8.00894E-02
	1000	3.29320E-06	7.19353E-02	5.23612E-05	7.19364E-02	7.19950E-02

MAC = Mass Attenuation Coefficient (cm^2/g), LAC = Linear Attenuation Coefficient (cm^-1)

HUMAN TISSUE: Muscle + 20 % Adipose
(Density = 1.016 g/cm^3)

	Energy (keV)	Photo	Compton	Coherent	Photo + Compton	Total
MAC	8.0	8.80308E+00	1.42480E-01	3.00080E-01	8.94556E+00	9.24562E+00
	10.0	4.35268E+00	1.52320E-01	2.24740E-01	4.50492E+00	4.72974E+00
	13.6	1.61962E+00	1.63560E-01	1.45280E-01	1.78320E+00	1.92846E+00
	15.0	1.18650E+00	1.69100E-01	1.30700E-01	1.35558E+00	1.48630E+00
	16.6	8.53680E-01	1.70840E-01	1.09614E-01	1.02452E+00	1.13414E+00
	17.2	7.60920E-01	1.72220E-01	1.04210E-01	9.33160E-01	1.03736E+00
	20.0	4.67580E-01	1.76840E-01	8.66980E-02	6.44420E-01	7.31160E-01
	20.2	4.54040E-01	1.78420E-01	8.30200E-02	6.32460E-01	7.15500E-01
	30.0	1.24776E-01	1.81980E-01	4.57860E-02	3.06760E-01	3.52500E-01
	40.0	4.87800E-02	1.81700E-01	2.80440E-02	2.30520E-01	2.58560E-01
	50.0	2.35640E-02	1.79300E-01	1.88500E-02	2.02920E-01	2.21720E-01
	60.0	1.30320E-02	1.75900E-01	1.35520E-02	1.88980E-01	2.02460E-01
	80.0	5.14300E-03	1.68600E-01	7.92740E-03	1.73740E-01	1.81700E-01
	100.0	2.51680E-03	1.61540E-01	5.18780E-03	1.64060E-01	1.69260E-01
	150.0	6.98920E-04	1.46320E-01	2.39600E-03	1.47040E-01	1.49420E-01
LAC	8.0	8.94393E+00	1.44760E-01	3.04881E-01	9.08869E+00	9.39355E+00
	10.0	4.42232E+00	1.54757E-01	2.28336E-01	4.57700E+00	4.80542E+00
	13.6	1.64553E+00	1.66177E-01	1.47604E-01	1.81173E+00	1.95932E+00
	15.0	1.20548E+00	1.71806E-01	1.32791E-01	1.37727E+00	1.51008E+00
	16.6	8.67339E-01	1.73573E-01	1.11368E-01	1.04091E+00	1.15229E+00
	17.2	7.73095E-01	1.74976E-01	1.05877E-01	9.48091E-01	1.05396E+00
	20.0	4.75061E-01	1.79669E-01	8.80852E-02	6.54731E-01	7.42859E-01
	20.2	4.61305E-01	1.81275E-01	8.43483E-02	6.42579E-01	7.26948E-01
	30.0	1.26772E-01	1.84892E-01	4.65186E-02	3.11668E-01	3.58140E-01
	40.0	4.95605E-02	1.84607E-01	2.84927E-02	2.34208E-01	2.62697E-01
	50.0	2.39410E-02	1.82169E-01	1.91516E-02	2.06167E-01	2.25268E-01
	60.0	1.32405E-02	1.78714E-01	1.37688E-02	1.92004E-01	2.05699E-01
	80.0	5.22529E-03	1.71298E-01	8.05424E-03	1.76520E-01	1.84607E-01
	100.0	2.55707E-03	1.64125E-01	5.27080E-03	1.66685E-01	1.71968E-01
	150.0	7.10103E-04	1.48661E-01	2.43434E-03	1.49393E-01	1.51811E-01

MAC = Mass Attenuation Coefficient (cm^2/g), LAC = Linear Attenuation Coefficient (cm^-1)

HUMAN TISSUE: Muscle + 20 % Adipose
(density = 1.016 g/cm^3)

	Energy (keV)	Photo	Compton	Coherent	Photo + Compton	Total
MAC	200	2.86920E-04	1.34460E-01	1.34080E-03	1.34740E-01	1.36060E-01
	279	1.05166E-04	1.19820E-01	6.93120E-04	1.19920E-01	1.20660E-01
	300	8.44700E-05	1.17100E-01	5.97800E-04	1.17100E-01	1.17760E-01
	364	0.00000E+00	1.07580E-01	4.02360E-04	1.07660E-01	1.08040E-01
	400	3.64600E-05	1.04960E-01	3.36880E-04	1.05040E-01	1.05340E-01
	500	1.93400E-05	9.58720E-02	2.13592E-04	9.58900E-02	9.61060E-02
	511	1.90000E-05	9.37860E-02	2.01100E-04	9.38040E-02	9.40040E-02
	600	1.16738E-05	8.87360E-02	1.46800E-04	8.87440E-02	8.88880E-02
	662	9.15420E-06	8.44340E-02	1.18432E-04	8.44420E-02	8.45560E-02
	800	5.39264E-06	7.79500E-02	8.09960E-05	7.79520E-02	7.80360E-02
	1000	3.03300E-06	7.00920E-02	4.94400E-05	7.00940E-02	7.01480E-02
LAC	200	2.91511E-04	1.36611E-01	1.36225E-03	1.36896E-01	1.38237E-01
	279	1.06849E-04	1.21737E-01	7.04210E-04	1.21839E-01	1.22591E-01
	300	8.58215E-05	1.18974E-01	6.07365E-04	1.18974E-01	1.19644E-01
	364	5.03733E-05	1.09301E-01	4.08798E-04	1.09383E-01	1.09769E-01
	400	3.70434E-05	1.06639E-01	3.42270E-04	1.06721E-01	1.07025E-01
	500	1.96494E-05	9.74060E-02	0.00000E+00	9.74242E-02	9.76437E-02
	511	1.93040E-05	9.52866E-02	2.04318E-04	9.53049E-02	9.55081E-02
	600	1.18506E-05	9.01558E-02	1.49149E-04	9.01639E-02	9.03102E-02
	662	9.30057E-06	8.57849E-02	1.20327E-04	8.57931E-02	8.59089E-02
	800	5.47892E-06	7.91972E-02	8.22919E-05	7.91992E-02	7.92846E-02
	1000	3.08153E-06	7.12135E-02	5.02310E-05	7.12155E-02	7.12704E-02

MAC = Mass Attenuation Coefficient (cm^2/g), LAC = Linear Attenuation Coefficient (cm^-1)

HUMAN TISSUE: Muscle + 30 % Adipose
(Density = 1.004 g/cm^3)

	Energy (keV)	Photo	Compton	Coherent	Photo + Compton	Total
	8.0	8.37107E+00	1.43620E-01	2.91670E-01	8.51469E+00	8.80633E+00
	10.0	4.13452E+00	1.53230E-01	2.18760E-01	4.28768E+00	4.50651E+00
	13.6	1.53663E+00	1.64390E-01	1.41470E-01	1.70105E+00	1.84249E+00
	15.0	1.12525E+00	1.69900E-01	1.27450E-01	1.29512E+00	1.42260E+00
	16.6	8.09270E-01	1.71610E-01	1.06771E-01	9.80880E-01	1.08766E+00
MAC	17.2	7.21280E-01	1.72980E-01	1.01515E-01	8.94290E-01	9.95790E-01
	20.0	4.43120E-01	1.77560E-01	8.45220E-02	6.20680E-01	7.05240E-01
	20.2	4.30260E-01	1.79130E-01	8.08950E-02	6.09390E-01	6.90300E-01
	30.0	1.18114E-01	1.82570E-01	4.45990E-02	3.00690E-01	3.45250E-01
	40.0	4.61450E-02	1.82200E-01	2.73060E-02	2.28380E-01	2.55690E-01
	50.0	2.22810E-02	1.79750E-01	1.83500E-02	2.02080E-01	2.20380E-01
	60.0	1.23180E-02	1.76300E-01	1.31880E-02	1.88670E-01	2.01790E-01
	80.0	4.85900E-03	1.68950E-01	7.71310E-03	1.73810E-01	1.81550E-01
	100.0	2.37720E-03	1.61860E-01	5.04620E-03	1.64240E-01	1.69290E-01
	150.0	6.59880E-04	1.46580E-01	2.32950E-03	1.47260E-01	1.49580E-01
	8.0	8.40455E+00	1.44194E-01	2.92837E-01	8.54875E+00	8.84155E+00
	10.0	4.15106E+00	1.53843E-01	2.19635E-01	4.30483E+00	4.52454E+00
	13.6	1.54278E+00	1.65048E-01	1.42036E-01	1.70785E+00	1.84986E+00
	15.0	1.12975E+00	1.70580E-01	1.27060E-01	1.30030E+00	1.42829E+00
	16.6	8.12507E-01	1.72296E-01	1.07198E-01	9.84803E-01	1.09201E+00
LAC	17.2	7.24165E-01	1.73672E-01	1.01921E-01	8.97867E-01	9.99773E-01
	20.0	4.44892E-01	1.78270E-01	8.48601E-02	6.23163E-01	7.08061E-01
	20.2	4.31981E-01	1.79847E-01	8.12186E-02	6.11828E-01	6.93061E-01
	30.0	1.18586E-01	1.83300E-01	4.47774E-02	3.01893E-01	3.46631E-01
	40.0	4.63296E-02	1.82929E-01	2.74152E-02	2.29293E-01	2.56713E-01
	50.0	2.23701E-02	1.80469E-01	1.84234E-02	2.02888E-01	2.21262E-01
	60.0	1.23673E-02	1.77005E-01	1.32408E-02	1.89425E-01	2.02597E-01
	80.0	4.87844E-03	1.69626E-01	7.74395E-03	1.74505E-01	1.82276E-01
	100.0	2.38671E-03	1.62507E-01	5.06638E-03	1.64897E-01	1.69967E-01
	150.0	6.62519E-04	1.47166E-01	2.33882E-03	1.47849E-01	1.50178E-01

MAC = Mass Attenuation Coefficient (cm^2/g), LAC = Linear Attenuation Coefficient (cm^-1)

HUMAN TISSUE: Muscle + 30 % Adipose
(density = 1.004 g/cm^3)

	Energy (keV)	Photo	Compton	Coherent	Photo + Compton	Total
	200	2.70830E-04	1.34690E-01	1.30370E-03	1.34960E-01	1.36240E-01
	279	9.92490E-05	1.20030E-01	6.73880E-04	1.20130E-01	1.20840E-01
	300	7.97150E-05	1.17300E-01	5.81000E-04	1.17300E-01	1.17940E-01
	364	0.00000E+00	1.07770E-01	3.91090E-04	1.07840E-01	1.08210E-01
	400	3.44050E-05	1.05140E-01	3.27570E-04	1.05210E-01	1.05510E-01
MAC	500	1.82500E-05	9.60330E-02	2.07393E-04	9.60500E-02	9.62590E-02
	511	1.79300E-05	9.39440E-02	1.95400E-04	9.39610E-02	9.41560E-02
	600	1.10157E-05	8.88840E-02	1.42800E-04	8.88910E-02	8.90320E-02
	662	8.64630E-06	8.45760E-02	1.15048E-04	8.45830E-02	8.46940E-02
	800	5.08906E-06	7.80800E-02	7.87340E-05	7.80830E-02	7.81640E-02
	1000	2.86250E-06	7.02080E-02	4.79450E-05	7.02110E-02	7.02620E-02
	200	2.71913E-04	1.35229E-01	1.30891E-03	1.35500E-01	1.36785E-01
	279	9.96460E-05	1.20510E-01	6.76575E-04	1.20611E-01	1.21323E-01
	300	8.00339E-05	1.17769E-01	5.83324E-04	1.17769E-01	1.18412E-01
	364	4.69772E-05	1.08201E-01	3.92654E-04	1.08271E-01	1.08643E-01
	400	3.45426E-05	1.05561E-01	3.28880E-04	1.05631E-01	1.05932E-01
LAC	500	1.83230E-05	9.64171E-02	0.00000E+00	9.64342E-02	9.66440E-02
	511	1.80017E-05	9.43198E-02	1.96182E-04	9.43368E-02	9.45326E-02
	600	1.10598E-05	8.92395E-02	1.43371E-04	8.92466E-02	8.93881E-02
	662	8.68088E-06	8.49143E-02	1.15508E-04	8.49213E-02	8.50328E-02
	800	5.10942E-06	7.83923E-02	7.90489E-05	7.83953E-02	7.84767E-02
	1000	2.87395E-06	7.04888E-02	4.81368E-05	7.04918E-02	7.05430E-02

MAC = Mass Attenuation Coefficient (cm^2/g), LAC = Linear Attenuation Coefficient (cm^-1)

HUMAN TISSUE: Muscle + 40 % Adipose
(Density = .992 g/cm^3)

	Energy (keV)	Photo	Compton	Coherent	Photo + Compton	Total
MAC	8.0	7.93906E+00	1.44760E-01	2.83260E-01	8.08382E+00	8.36704E+00
	10.0	3.91636E+00	1.54140E-01	2.12780E-01	4.07044E+00	4.28328E+00
	13.6	1.45364E+00	1.65220E-01	1.37660E-01	1.61890E+00	1.75652E+00
	15.0	1.06400E+00	1.70700E-01	1.24200E-01	1.23466E+00	1.35890E+00
	16.6	7.64860E-01	1.72380E-01	1.03928E-01	9.37240E-01	1.04118E+00
	17.2	6.81640E-01	1.73740E-01	9.88200E-02	8.55420E-01	9.54220E-01
	20.0	4.18660E-01	1.78280E-01	8.23460E-02	5.96940E-01	6.79320E-01
	20.2	4.06480E-01	1.79840E-01	7.87700E-02	5.86320E-01	6.65100E-01
	30.0	1.11452E-01	1.83160E-01	4.34120E-02	2.94620E-01	3.38000E-01
	40.0	4.35100E-02	1.82700E-01	2.65680E-02	2.26240E-01	2.52820E-01
	50.0	2.09980E-02	1.80200E-01	1.78500E-02	2.01240E-01	2.19040E-01
	60.0	1.16040E-02	1.76700E-01	1.28240E-02	1.88360E-01	2.01120E-01
	80.0	4.57500E-03	1.69300E-01	7.49880E-03	1.73880E-01	1.81400E-01
	100.0	2.23760E-03	1.62180E-01	4.90460E-03	1.64420E-01	1.69320E-01
	150.0	6.20840E-04	1.46840E-01	2.26300E-03	1.47480E-01	1.49740E-01
LAC	8.0	7.87555E+00	1.43602E-01	2.80994E-01	8.01915E+00	8.30010E+00
	10.0	3.88503E+00	1.52907E-01	2.11078E-01	4.03788E+00	4.24901E+00
	13.6	1.44201E+00	1.63898E-01	1.36559E-01	1.60595E+00	1.74247E+00
	15.0	1.05549E+00	1.69334E-01	1.23206E-01	1.22478E+00	1.34803E+00
	16.6	7.58741E-01	1.71001E-01	1.03097E-01	9.29742E-01	1.03285E+00
	17.2	6.76187E-01	1.72350E-01	9.80294E-02	8.48577E-01	9.46586E-01
	20.0	4.15311E-01	1.76854E-01	8.16872E-02	5.92164E-01	6.73885E-01
	20.2	4.03228E-01	1.78401E-01	7.81398E-02	5.81629E-01	6.59779E-01
	30.0	1.10560E-01	1.81695E-01	4.30647E-02	2.92263E-01	3.35296E-01
	40.0	4.31619E-02	1.81238E-01	2.63555E-02	2.24430E-01	2.50797E-01
	50.0	2.08300E-02	1.78758E-01	1.77072E-02	1.99630E-01	2.17288E-01
	60.0	1.15112E-02	1.75286E-01	1.27214E-02	1.86853E-01	1.99511E-01
	80.0	4.53840E-03	1.67946E-01	7.43881E-03	1.72489E-01	1.79949E-01
	100.0	2.21970E-03	1.60883E-01	4.86536E-03	1.63105E-01	1.67965E-01
	150.0	6.15873E-04	1.45665E-01	2.24490E-03	1.46300E-01	1.48542E-01

MAC = Mass Attenuation Coefficient (cm^2/g), LAC = Linear Attenuation Coefficient (cm^-1)

HUMAN TISSUE: Muscle + 40 % Adipose
(density = .992 g/cm^3)

	Energy (keV)	Photo	Compton	Coherent	Photo + Compton	Total
MAC	200	2.54740E-04	1.34920E-01	1.26660E-03	1.35180E-01	1.36420E-01
	279	9.33320E-05	1.20240E-01	6.54640E-04	1.20340E-01	1.21020E-01
	300	7.49600E-05	1.17500E-01	5.64200E-04	1.17500E-01	1.18120E-01
	364	0.00000E+00	1.07960E-01	3.79820E-04	1.08020E-01	1.08380E-01
	400	3.23500E-05	1.05320E-01	3.18260E-04	1.05380E-01	1.05680E-01
	500	1.71600E-05	9.61940E-02	2.01194E-04	9.62100E-02	9.64120E-02
	511	1.68600E-05	9.41020E-02	1.89700E-04	9.41180E-02	9.43080E-02
	600	1.03576E-05	8.90320E-02	1.38800E-04	8.90380E-02	8.91760E-02
	662	8.13840E-06	8.47180E-02	1.11664E-04	8.47240E-02	8.48320E-02
	800	4.78548E-06	7.82100E-02	7.64720E 05	7.82140E-02	7.82920E-02
	1000	2.69200E-06	7.03240E-02	4.64500E-05	7.03280E-02	7.03760E-02
LAC	200	2.52702E-04	1.33841E-01	1.25647E-03	1.34099E-01	1.35329E-01
	279	9.25853E-05	1.19278E-01	6.49403E-04	1.19377E-01	1.20052E-01
	300	7.43603E-05	1.16560E-01	5.59686E-04	1.16560E-01	1.17175E-01
	364	4.36480E-05	1.07096E-01	3.76781E-04	1.07156E-01	1.07513E-01
	400	3.20912E-05	1.04477E-01	3.15714E-04	1.04537E-01	1.04835E-01
	500	1.70227E-05	9.54244E-02	0.00000E+00	9.54403E-02	9.56407E-02
	511	1.67251E-05	9.33492E-02	1.88182E-04	9.33650E-02	9.35535E-02
	600	1.02747E-05	8.83197E-02	1.37690E-04	8.83257E-02	8.84626E-02
	662	8.07329E-06	8.40403E-02	1.10771E-04	8.40462E-02	8.41533E-02
	800	4.74720E-06	7.75843E-02	7.58602E-05	7.75883E-02	7.76657E-02
	1000	2.67046E-06	6.97614E-02	4.60784E-05	6.97654E-02	6.98130E-02

MAC = Mass Attenuation Coefficient (cm^2/g), LAC = Linear Attenuation Coefficient (cm^-1)

HUMAN TISSUE: Muscle + 50 % Adipose
(Density = .98 g/cm^3)

	Energy (keV)	Photo	Compton	Coherent	Photo + Compton	Total
	8.0	7.50705E+00	1.45900E-01	2.74850E-01	7.65295E+00	7.92775E+00
	10.0	3.69820E+00	1.55050E-01	2.06800E-01	3.85320E+00	4.06005E+00
	13.6	1.37065E+00	1.66050E-01	1.33850E-01	1.53675E+00	1.67055E+00
	15.0	1.00275E+00	1.71500E-01	1.20950E-01	1.17420E+00	1.29520E+00
	16.6	7.20450E-01	1.73150E-01	1.01085E-01	8.93600E-01	9.94700E-01
MAC	17.2	6.42000E-01	1.74500E-01	9.61250E-02	8.16550E-01	9.12650E-01
	20.0	3.94200E-01	1.79000E-01	8.01700E-02	5.73200E-01	6.53400E-01
	20.2	3.82700E-01	1.80550E-01	7.66450E-02	5.63250E-01	6.39900E-01
	30.0	1.04790E-01	1.83750E-01	4.22250E-02	2.88550E-01	3.30750E-01
	40.0	4.08750E-02	1.83200E-01	2.58300E-02	2.24100E-01	2.49950E-01
	50.0	1.97150E-02	1.80050E-01	1.73500E-02	2.00400E-01	2.17700E-01
	60.0	1.08900E-02	1.77100E-01	1.24600E-02	1.88050E-01	2.00450E-01
	80.0	4.29100E-03	1.69650E-01	7.28450E-03	1.73950E-01	1.81250E-01
	100.0	2.09800E-03	1.62500E-01	4.76300E-03	1.64600E-01	1.69350E-01
	150.0	5.81800E-04	1.47100E-01	2.19650E-03	1.47700E-01	1.49900E-01
	8.0	7.35691E+00	1.42982E-01	2.69353E-01	7.49989E+00	7.76919E+00
	10.0	3.62424E+00	1.51949E-01	2.02664E-01	3.77614E+00	3.97885E+00
	13.6	1.34324E+00	1.62729E-01	1.31173E-01	1.50602E+00	1.63714E+00
	15.0	9.82695E-01	1.68070E-01	1.18531E-01	1.15072E+00	1.26930E+00
	16.6	7.06041E-01	1.69687E-01	9.90633E-02	8.75728E-01	9.74806E-01
LAC	17.2	6.29160E-01	1.71010E-01	9.42025E-02	8.00219E-01	8.94397E-01
	20.0	3.86316E-01	1.75420E-01	7.85666E-02	5.61736E-01	6.40332E-01
	20.2	3.75046E-01	1.76939E-01	7.51121E-02	5.51985E-01	6.27102E-01
	30.0	1.02694E-01	1.80075E-01	4.13805E-02	2.82779E-01	3.24135E-01
	40.0	4.00575E-02	1.79536E-01	2.53134E-02	2.19618E-01	2.44951E-01
	50.0	1.93207E-02	1.77037E-01	1.70030E-02	1.96392E-01	2.13346E-01
	60.0	1.06722E-02	1.73558E-01	1.22108E-02	1.84289E-01	1.96441E-01
	80.0	4.20518E-03	1.66257E-01	7.13881E-03	1.70471E-01	1.77625E-01
	100.0	2.05604E-03	1.59250E-01	4.66774E-03	1.61308E-01	1.65963E-01
	150.0	5.70164E-04	1.44158E-01	2.15257E-03	1.44746E-01	1.46902E-01

MAC = Mass Attenuation Coefficient (cm^2/g), LAC = Linear Attenuation Coefficient (cm^-1)

HUMAN TISSUE: Muscle + 50 % Adipose
(density = .98 g/cm^3)

	Energy (keV)	Photo	Compton	Coherent	Photo + Compton	Total
	200	2.38650E-04	1.35150E-01	1.22950E-03	1.35400E-01	1.36600E-01
	279	8.74150E-05	1.20450E-01	6.35400E-04	1.20550E-01	1.21200E-01
	300	7.02050E-05	1.17700E-01	5.47400E-04	1.17700E-01	1.18300E-01
	364	0.00000E+00	1.08150E-01	3.68550E-04	1.08200E-01	1.08550E-01
	400	3.02950E-05	1.05500E-01	3.08950E-04	1.05550E-01	1.05850E-01
MAC	500	1.60700E-05	9.63550E-02	1.94995E-04	9.63700E-02	9.65650E-02
	511	1.57900E-05	9.42600E-02	1.84000E-04	9.42750E-02	9.44600E-02
	600	9.69950E-06	8.91800E-02	1.34800E-04	8.91850E-02	8.93200E-02
	662	7.63050E-06	8.48600E-02	1.08280E-04	8.48650E-02	8.49700E-02
	800	4.48190E-06	7.83400E-02	7.42100E-05	7.83450E-02	7.84200E-02
	1000	2.52150E-06	7.04400E-02	4.49550E-05	7.04450E-02	7.04900E-02
	200	2.33877E-04	1.32447E-01	1.20491E-03	1.32692E-01	1.33868E-01
	279	8.56667E-05	1.18041E-01	6.22692E-04	1.18139E-01	1.18776E-01
	300	6.88009E-05	1.15346E-01	5.36452E-04	1.15346E-01	1.15934E-01
	364	4.03858E-05	1.05987E-01	3.61179E-04	1.06036E-01	1.06379E-01
	400	2.96891E-05	1.03390E-01	3.02771E-04	1.03439E-01	1.03733E-01
LAC	500	1.57486E-05	9.44279E-02	0.00000E+00	9.44426E-02	9.46337E-02
	511	1.54742E-05	9.23748E-02	1.80320E-04	9.23895E-02	9.25708E-02
	600	9.50551E-06	8.73964E-02	1.32104E-04	8.74013E-02	8.75336E-02
	662	7.47789E-06	8.31628E-02	1.06114E-04	8.31677E-02	8.32706E-02
	800	4.39226E-06	7.67732E-02	7.27258E-05	7.67781E-02	7.68516E-02
	1000	2.47107E-06	6.90312E-02	4.40559E-05	6.90361E-02	6.90802E-02

MAC = Mass Attenuation Coefficient (cm^2/g), LAC = Linear Attenuation Coefficient (cm^-1)

HUMAN TISSUE: Muscle + 60 % Adipose
(Density = .968 g/cm^3)

	Energy (keV)	Photo	Compton	Coherent	Photo + Compton	Total
MAC	8.0	7.07504E+00	1.47040E-01	2.66440E-01	7.22208E+00	7.48846E+00
	10.0	3.48004E+00	1.55960E-01	2.00820E-01	3.63596E+00	3.83682E+00
	13.6	1.28766E+00	1.66880E-01	1.30040E-01	1.45460E+00	1.58458E+00
	15.0	9.41500E-01	1.72300E-01	1.17700E-01	1.11374E+00	1.23150E+00
	16.6	6.76040E-01	1.73920E-01	9.82420E-02	8.49960E-01	9.48220E-01
	17.2	6.02360E-01	1.75260E-01	9.34300E-02	7.77680E-01	8.71080E-01
	20.0	3.69740E-01	1.79720E-01	7.79940E-02	5.49460E-01	6.27480E-01
	20.2	3.58920E-01	1.81260E-01	7.45200E-02	5.40180E-01	6.14700E-01
	30.0	9.81280E-02	1.84340E-01	4.10380E-02	2.82480E-01	3.23500E-01
	40.0	3.82400E-02	1.83700E-01	2.50920E-02	2.21960E-01	2.47080E-01
	50.0	1.84320E-02	1.81100E-01	1.68500E-02	1.99560E-01	2.16360E-01
	60.0	1.01760E-02	1.77500E-01	1.20960E-02	1.87740E-01	1.99780E-01
	80.0	4.00700E-03	1.70000E-01	7.07020E-03	1.74020E-01	1.81100E-01
	100.0	1.95840E-03	1.62820E-01	4.62140E-03	1.64780E-01	1.69380E-01
	150.0	5.42760E-04	1.47360E-01	2.13000E-03	1.47920E-01	1.50060E-01
LAC	8.0	6.84864E+00	1.42335E-01	2.57914E-01	6.99097E+00	7.24883E+00
	10.0	3.36868E+00	1.50969E-01	1.94394E-01	3.51961E+00	3.71404E+00
	13.6	1.24645E+00	1.61540E-01	1.25879E-01	1.40805E+00	1.53387E+00
	15.0	9.11372E-01	1.66786E-01	1.13934E-01	1.07810E+00	1.19209E+00
	16.6	6.54407E-01	1.68355E-01	9.50983E-02	8.22761E-01	9.17877E-01
	17.2	5.83085E-01	1.69652E-01	9.04403E-02	7.52794E-01	8.43206E-01
	20.0	3.57908E-01	1.73969E-01	7.54982E-02	5.31877E-01	6.07401E-01
	20.2	3.47435E-01	1.75460E-01	7.21354E-02	5.22894E-01	5.95030E-01
	30.0	9.49879E-02	1.78441E-01	3.97248E-02	2.73441E-01	3.13148E-01
	40.0	3.70163E-02	1.77822E-01	2.42891E-02	2.14857E-01	2.39173E-01
	50.0	1.78422E-02	1.75305E-01	1.63108E-02	1.93174E-01	2.09436E-01
	60.0	9.85037E-03	1.71820E-01	1.17089E-02	1.81732E-01	1.93387E-01
	80.0	3.87878E-03	1.64560E-01	6.84395E-03	1.68451E-01	1.75305E-01
	100.0	1.89573E-03	1.57610E-01	4.47352E-03	1.59507E-01	1.63960E-01
	150.0	5.25392E-04	1.42644E-01	2.06184E-03	1.43187E-01	1.45258E-01

MAC = Mass Attenuation Coefficient (cm^2/g), LAC = Linear Attenuation Coefficient (cm^-1)

HUMAN TISSUE: Muscle + 60 % Adipose
(density = .968 g/cm^3)

	Energy (keV)	Photo	Compton	Coherent	Photo + Compton	Total
MAC	200	2.22560E-04	1.35380E-01	1.19240E-03	1.35620E-01	1.36780E-01
	279	8.14980E-05	1.20660E-01	6.16160E-04	1.20760E-01	1.21380E-01
	300	6.54500E-05	1.17900E-01	5.30600E-04	1.17900E-01	1.18480E-01
	364	0.00000E+00	1.08340E-01	3.57280E-04	1.08380E-01	1.08720E-01
	400	2.82400E-05	1.05680E-01	2.99640E-04	1.05720E-01	1.06020E-01
	500	1.49800E-05	9.65160E-02	1.88796E-04	9.65300E-02	9.67180E-02
	511	1.47200E-05	9.44180E-02	1.78300E-04	9.44320E-02	9.46120E-02
	600	9.04140E-06	8.93280E-02	1.30800E-04	8.93320E-02	8.94640E-02
	662	7.12260E-06	8.50020E-02	1.04896E-04	8.50060E-02	8.51080E-02
	800	4.17832E-06	7.84700E-02	7.19480E-05	7.84760E-02	7.85480E-02
	1000	2.35100E-06	7.05560E-02	4.34600E-05	7.05620E-02	7.06040E-02
LAC	200	2.15438E-04	1.31048E-01	1.15424E-03	1.31280E-01	1.32403E-01
	279	7.88901E-05	1.16799E-01	5.96443E-04	1.16896E-01	1.17496E-01
	300	6.33556E-05	1.14127E-01	5.13621E-04	1.14127E-01	1.14689E-01
	364	3.71906E-05	1.04873E-01	3.45847E-04	1.04912E-01	1.05241E-01
	400	2.73363E-05	1.02298E-01	2.90052E-04	1.02337E-01	1.02627E-01
	500	1.45006E-05	9.34275E-02	0.00000E+00	9.34410E-02	9.36230E-02
	511	1.42490E-05	9.13966E-02	1.72594E-04	9.14102E-02	9.15844E-02
	600	8.75207E-06	8.64695E-02	1.26614E-04	8.64734E-02	8.66012E-02
	662	6.89468E-06	8.22819E-02	1.01539E-04	8.22858E-02	8.23846E-02
	800	4.04461E-06	7.59590E-02	6.96457E-05	7.59648E-02	7.60345E-02
	1000	2.27577E-06	6.82982E-02	4.20693E-05	6.83040E-02	6.83447E-02

MAC = Mass Attenuation Coefficient (cm^2/g), LAC = Linear Attenuation Coefficient (cm^-1)

HUMAN TISSUE: Muscle + 70 % Adipose
(Density = .956 g/cm^3)

	Energy (keV)	Photo	Compton	Coherent	Photo + Compton	Total
	8.0	6.64303E+00	1.48180E-01	2.58030E-01	6.79121E+00	7.04917E+00
	10.0	3.26188E+00	1.56870E-01	1.94840E-01	3.41872E+00	3.61359E+00
	13.6	1.20467E+00	1.67710E-01	1.26230E-01	1.37245E+00	1.49861E+00
	15.0	8.80250E-01	1.73100E-01	1.14450E-01	1.05328E+00	1.16780E+00
	16.6	6.31630E-01	1.74690E-01	9.53990E-02	8.06320E-01	9.01740E-01
MAC	17.2	5.62720E-01	1.76020E-01	9.07350E-02	7.38810E-01	8.29510E-01
	20.0	3.45280E-01	1.80440E-01	7.58180E-02	5.25720E-01	6.01560E-01
	20.2	3.35140E-01	1.81970E-01	7.23950E-02	5.17110E-01	5.89500E-01
	30.0	9.14660E-02	1.84930E-01	3.98510E-02	2.76410E-01	3.16250E-01
	40.0	3.56050E-02	1.84200E-01	2.43540E-02	2.19820E-01	2.44210E-01
	50.0	1.71490E-02	1.81550E-01	1.63500E-02	1.98720E-01	2.15020E-01
	60.0	9.46200E-03	1.77900E-01	1.17320E-02	1.87430E-01	1.99110E-01
	80.0	3.72300E-03	1.70350E-01	6.85590E-03	1.74090E-01	1.80950E-01
	100.0	1.81880E-03	1.63140E-01	4.47980E-03	1.64960E-01	1.69410E-01
	150.0	5.03720E-04	1.47620E-01	2.06350E-03	1.48140E-01	1.50220E-01
	8.0	6.35074E+00	1.41660E-01	2.46677E-01	6.49240E+00	6.73901E+00
	10.0	3.11836E+00	1.49968E-01	1.86267E-01	3.26830E+00	3.45459E+00
	13.6	1.15166E+00	1.60331E-01	1.20676E-01	1.31206E+00	1.43267E+00
	15.0	8.41519E-01	1.65484E-01	1.09414E-01	1.00694E+00	1.11642E+00
	16.6	6.03838E-01	1.67004E-01	9.12014E-02	7.70842E-01	8.62063E-01
LAC	17.2	5.37960E-01	1.68275E-01	8.67427E-02	7.06302E-01	7.93012E-01
	20.0	3.30088E-01	1.72501E-01	7.24820E-02	5.02588E-01	5.75091E-01
	20.2	3.20394E-01	1.73963E-01	6.92096E-02	4.94357E-01	5.63562E-01
	30.0	8.74415E-02	1.76793E-01	3.80976E-02	2.64248E-01	3.02335E-01
	40.0	3.40384E-02	1.76095E-01	2.32824E-02	2.10148E-01	2.33465E-01
	50.0	1.63944E-02	1.73562E-01	1.56306E-02	1.89976E-01	2.05559E-01
	60.0	9.04567E-03	1.70072E-01	1.12158E-02	1.79183E-01	1.90349E-01
	80.0	3.55919E-03	1.62855E-01	6.55424E-03	1.66430E-01	1.72988E-01
	100.0	1.73877E-03	1.55962E-01	4.28269E-03	1.57702E-01	1.61956E-01
	150.0	4.81556E-04	1.41125E-01	1.97271E-03	1.41622E-01	1.43610E-01

MAC = Mass Attenuation Coefficient (cm^2/g), LAC = Linear Attenuation Coefficient (cm^-1)

HUMAN TISSUE: Muscle + 70 % Adipose
(density = .956 g/cm^3)

	Energy (keV)	Photo	Compton	Coherent	Photo + Compton	Total
	200	2.06470E-04	1.35610E-01	1.15530E-03	1.35840E-01	1.36960E-01
	279	7.55810E-05	1.20870E-01	5.96920E-04	1.20970E-01	1.21560E-01
	300	6.06950E-05	1.18100E-01	5.13800E-04	1.18100E-01	1.18660E-01
	364	0.00000E+00	1.08530E-01	3.46010E-04	1.08560E-01	1.08890E-01
	400	2.61850E-05	1.05860E-01	2.90330E-04	1.05890E-01	1.06190E-01
MAC	500	1.38900E-05	9.66770E-02	1.82597E-04	9.66900E-02	9.68710E-02
	511	1.36500E-05	9.45760E-02	1.72600E-04	9.45890E-02	9.47640E-02
	600	8.38330E-06	8.94760E-02	1.26800E-04	8.94790E-02	8.96080E-02
	662	6.61470E-06	8.51440E-02	1.01512E-04	8.51470E-02	8.52460E-02
	800	3.87474E-06	7.86000E-02	6.96860E-05	7.86070E-02	7.86760E-02
	1000	2.18050E-06	7.06720E-02	4.19650E-05	7.06790E-02	7.07180E-02
	200	1.97385E-04	1.29643E-01	1.10447E-03	1.29863E-01	1.30934E-01
	279	7.22554E-05	1.15552E-01	5.70655E-04	1.15647E-01	1.16211E-01
	300	5.80244E-05	1.12904E-01	4.91193E-04	1.12904E-01	1.13439E-01
	364	3.40623E-05	1.03755E-01	3.30786E-04	1.03783E-01	1.04099E-01
	400	2.50329E-05	1.01202E-01	2.77555E-04	1.01231E-01	1.01518E-01
LAC	500	1.32788E-05	9.24232E-02	0.00000E+00	9.24356E-02	9.26087E-02
	511	1.30494E-05	9.04147E-02	1.65006E-04	9.04271E-02	9.05944E-02
	600	8.01443E-06	8.55391E-02	1.21221E-04	8.55419E-02	8.56652E-02
	662	6.32365E-06	8.13977E-02	9.70455E-05	8.14005E-02	8.14952E-02
	800	3.70425E-06	7.51416E-02	6.66198E-05	7.51483E-02	7.52143E-02
	1000	2.08456E-06	6.75624E-02	4.01185E-05	6.75691E-02	6.76064E-02

MAC = Mass Attenuation Coefficient (cm^2/g), LAC = Linear Attenuation Coefficient (cm^-1)