



**DRAFT**  
Please verify values

# Radionuclide Data for UGA

## Isotope Am-241

**Element**  **Atomic No**  **Mass No**

**HalfLife**  Years

**Annual Limit on Intake  
ALI (micro-Ci)**

**Ingestion**

**Inhalation**

**Target Organ**

Varskin Beta Dose Rate Conversion Factors  
for various surfaces (rad cm<sup>2</sup> / h micro-Ci)

BareSkin	Gloves	Labcoat	Glass
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

**GammaConst (R cm<sup>2</sup> / h mCi)**

Decay Mode	Max Energy (keV)	Frequency
Gamma	59.5	35.9%
Alpha	5443	12.8%
Alpha	5485	85.2%

Isotope **Ba-133**

**Element**  **Atomic No**  **Mass No**

**HalfLife**  **Years**

**Annual Limit on Intake  
ALI (micro-Ci)**

**Ingestion**

**Inhalation**

**Target Organ**

**Varskin Beta Dose Rate Conversion Factors  
for various surfaces (rad cm<sup>2</sup> / h micro-Ci)**

BareSkin	Gloves	Labcoat	Glass
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

**GammaConst (R cm<sup>2</sup> / h mCi)**

Decay Mode	Max Energy (keV)	Frequency
Gamma	80	36.0%
Gamma	276	7.0%
Gamma	302	14.0%
Gamma	356	69.0%
Gamma	382	8.0%

Isotope **Bi-210**

**Element**  **Atomic No**  **Mass No**

**HalfLife**  **Days**

<b>Annual Limit on Intake ALI (micro-Ci)</b>	
<b>Ingestion</b>	<input type="text" value="800"/>
<b>Inhalation</b>	<input type="text" value="30"/>
<b>Target Organ</b>	<input type="text" value=""/>

<b>Varskin Beta Dose Rate Conversion Factors for various surfaces (rad cm<sup>2</sup> / h micro-Ci)</b>			
<b>BareSkin</b>	<b>Gloves</b>	<b>Labcoat</b>	<b>Glass</b>
<input type="text" value="5.79"/>	<input type="text" value="4.21"/>	<input type="text" value="2.46"/>	<input type="text" value="0.06"/>

<b>GammaConst (R cm<sup>2</sup> / h mCi)</b>	<input type="text" value=""/>
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Decay Mode	Max Energy (keV)	Frequency
Beta	1160	100.0%

Isotope **C-14**

**Element**  **Atomic No**  **Mass No**

**HalfLife**  **Years**

<b>Annual Limit on Intake ALI (micro-Ci)</b>	
<b>Ingestion</b>	<input type="text" value="2000"/>
<b>Inhalation</b>	<input type="text" value="2000"/>
<b>Target Organ</b>	<input type="text" value=""/>

<b>Varskin Beta Dose Rate Conversion Factors for various surfaces (rad cm<sup>2</sup> / h micro-Ci)</b>			
<b>BareSkin</b>	<b>Gloves</b>	<b>Labcoat</b>	<b>Glass</b>
<input type="text" value="1.11"/>	<input type="text" value="0.02"/>	<input type="text" value="0.00"/>	<input type="text" value="0.00"/>

<b>GammaConst (R cm<sup>2</sup> / h mCi)</b>	<input type="text" value=""/>
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<b>Decay Mode</b>	<b>Max Energy (keV)</b>	<b>Frequency</b>
Beta	156	100.0%

Isotope **Ca-45**

**Element**  **Atomic No**  **Mass No**

**HalfLife**  Days

Annual Limit on Intake ALI (micro-Ci)	
<b>Ingestion</b>	<input type="text" value="2000"/>
<b>Inhalation</b>	<input type="text" value="800"/>
<b>Target Organ</b>	<input type="text" value=""/>

Varskin Beta Dose Rate Conversion Factors for various surfaces (rad cm <sup>2</sup> / h micro-Ci)			
BareSkin	Gloves	Labcoat	Glass
<input type="text" value="3.06"/>	<input type="text" value="0.77"/>	<input type="text" value="0.02"/>	<input type="text" value="0.00"/>

<b>GammaConst (R cm<sup>2</sup> / h mCi)</b>	<input type="text" value=""/>
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Decay Mode	Max Energy (keV)	Frequency
Beta	252	100.0%

Isotope **Cd-109**

**Element**  **Atomic No**  **Mass No**

**HalfLife**  **Days**

<b>Annual Limit on Intake ALI (micro-Ci)</b>	
<b>Ingestion</b>	<input type="text" value="300"/>
<b>Inhalation</b>	<input type="text" value="40"/>
<b>Target Organ</b>	<input type="text" value="Kidneys"/>

<b>Varskin Beta Dose Rate Conversion Factors for various surfaces (rad cm<sup>2</sup> / h micro-Ci)</b>			
<b>BareSkin</b>	<b>Gloves</b>	<b>Labcoat</b>	<b>Glass</b>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

<b>GammaConst (R cm<sup>2</sup> / h mCi)</b>	<input type="text" value="0.461"/>
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Decay Mode	Max Energy (keV)	Frequency
<input type="text" value="EC/Gamma"/>	88	100.0%

Isotope **Cl-36**

**Element**  **Atomic No**  **Mass No**

**HalfLife**  **Years**

**Annual Limit on Intake  
ALI (micro-Ci)**

**Ingestion**

**Inhalation**

**Target Organ**

**Varskin Beta Dose Rate Conversion Factors  
for various surfaces (rad cm<sup>2</sup> / h micro-Ci)**

<b>BareSkin</b>	<b>Gloves</b>	<b>Labcoat</b>	<b>Glass</b>
<input type="text" value="5.58"/>	<input type="text" value="3.88"/>	<input type="text" value="2.18"/>	<input type="text" value="0.00"/>

**GammaConst (R cm<sup>2</sup> / h mCi)**

<b>Decay Mode</b>	<b>Max Energy (keV)</b>	<b>Frequency</b>
<input type="text" value="Beta"/>	714	100.0%

Isotope **Co-57**

**Element**  **Atomic No**  **Mass No**

**HalfLife**  Days

<b>Annual Limit on Intake ALI (micro-Ci)</b>	
<b>Ingestion</b>	<input type="text" value="4000"/>
<b>Inhalation</b>	<input type="text" value="700"/>
<b>Target Organ</b>	<input type="text" value=""/>

<b>Varskin Beta Dose Rate Conversion Factors for various surfaces (rad cm<sup>2</sup> / h micro-Ci)</b>			
<b>BareSkin</b>	<b>Gloves</b>	<b>Labcoat</b>	<b>Glass</b>
<input type="text" value=""/>	<input type="text" value=""/>	<input type="text" value=""/>	<input type="text" value=""/>

<b>GammaConst (R cm<sup>2</sup> / h mCi)</b>	<input type="text" value="0.9"/>
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Decay Mode	Max Energy (keV)	Frequency
Gamma	14	9.0%
Gamma	122	87.0%
Gamma	136	11.0%

Isotope **Co-60**

**Element**  **Atomic No**  **Mass No**

**HalfLife**  **Years**

**Annual Limit on Intake  
ALI (micro-Ci)**

**Ingestion**

**Inhalation**

**Target Organ**

**Varskin Beta Dose Rate Conversion Factors  
for various surfaces (rad cm<sup>2</sup> / h micro-Ci)**

BareSkin	Gloves	Labcoat	Glass
<input type="text" value="4.02"/>	<input type="text" value="1.49"/>	<input type="text" value="0.16"/>	<input type="text" value="0.00"/>

**GammaConst (R cm<sup>2</sup> / h mCi)**

Decay Mode	Max Energy (keV)	Frequency
Beta	314	99.0%
Gamma	1173	100.0%
Gamma	1332	100.0%

Isotope **Cr-51**

**Element**  **Atomic No**  **Mass No**

**HalfLife**  **Days**

<b>Annual Limit on Intake ALI (micro-Ci)</b>	
<b>Ingestion</b>	<input type="text" value="40000"/>
<b>Inhalation</b>	<input type="text" value="20000"/>
<b>Target Organ</b>	<input type="text" value=""/>

<b>Varskin Beta Dose Rate Conversion Factors for various surfaces (rad cm<sup>2</sup> / h micro-Ci)</b>			
<b>BareSkin</b>	<b>Gloves</b>	<b>Labcoat</b>	<b>Glass</b>
<input type="text" value=""/>	<input type="text" value=""/>	<input type="text" value=""/>	<input type="text" value=""/>

<b>GammaConst (R cm<sup>2</sup> / h mCi)</b>	<input type="text" value="0.16"/>
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Decay Mode	Max Energy (keV)	Frequency
Electron	315	
Gamma	320	9.0%

Isotope **Cs-137**

**Element**  **Atomic No**  **Mass No**

**HalfLife**  Years

<b>Annual Limit on Intake ALI (micro-Ci)</b>	
<b>Ingestion</b>	<input type="text" value="100"/>
<b>Inhalation</b>	<input type="text" value="200"/>
<b>Target Organ</b>	<input type="text" value=""/>

**Varskin Beta Dose Rate Conversion Factors  
for various surfaces (rad cm<sup>2</sup> / h micro-Ci)**

<b>BareSkin</b>	<b>Gloves</b>	<b>Labcoat</b>	<b>Glass</b>
<input type="text" value="5.90"/>	<input type="text" value="3.71"/>	<input type="text" value="1.75"/>	<input type="text" value="0.00"/>

**GammaConst (R cm<sup>2</sup> / h mCi)**

Decay Mode	Max Energy (keV)	Frequency
Beta	514	94.4%
Gamma	661.7	85.1%
Beta	1175.6	5.6%

Isotope **Eu-152**

**Element**  **Atomic No**  **Mass No**

**HalfLife**  **Years**

**Annual Limit on Intake  
ALI (micro-Ci)**

**Ingestion**

**Inhalation**

**Target Organ**

**Varskin Beta Dose Rate Conversion Factors  
for various surfaces (rad cm<sup>2</sup> / h micro-Ci)**

<b>BareSkin</b>	<b>Gloves</b>	<b>Labcoat</b>	<b>Glass</b>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

**GammaConst (R cm<sup>2</sup> / h mCi)**

<b>Decay Mode</b>	<b>Max Energy (keV)</b>	<b>Frequency</b>
Gamma	122	37.0%
Gamma	245	8.0%
Gamma	344	27.0%
Gamma	779	14.0%
Gamma	965	15.0%
Gamma	1087	12.0%
Gamma	1113	14.0%
Gamma	1408	22.0%
Positron	1753	14.0%
Beta	1818	100.0%

Isotope **Fe-55**

**Element**  **Atomic No**  **Mass No**

**HalfLife**  Years

**Annual Limit on Intake  
ALI (micro-Ci)**

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**Ingestion**

**Inhalation**

**Target Organ**

**Varskin Beta Dose Rate Conversion Factors  
for various surfaces (rad cm<sup>2</sup> / h micro-Ci)**

BareSkin	Gloves	Labcoat	Glass
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

**GammaConst (R cm<sup>2</sup> / h mCi)**

Decay Mode	Max Energy (keV)	Frequency
EC	232	100.0%

**Isotope Fe-59**

**Element**  **Atomic No**  **Mass No**

**HalfLife**  **Days**

**Annual Limit on Intake  
ALI (micro-Ci)**

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**Ingestion**

**Inhalation**

**Target Organ**

**Varskin Beta Dose Rate Conversion Factors  
for various surfaces (rad cm<sup>2</sup> / h micro-Ci)**

<b>BareSkin</b>	<b>Gloves</b>	<b>Labcoat</b>	<b>Glass</b>
<input type="text" value="4.11"/>	<input type="text" value="1.93"/>	<input type="text" value="0.49"/>	<input type="text" value="0.00"/>

**GammaConst (R cm<sup>2</sup> / h mCi)**

<b>Decay Mode</b>	<b>Max Energy (keV)</b>	<b>Frequency</b>
<input type="text" value="Gamma"/>	192	3.1%
<input type="text" value="Gamma"/>	1099	56.5%
<input type="text" value="Gamma"/>	1292	43.2%

Isotope **H-3**

**Element**  **Atomic No**  **Mass No**

**HalfLife**  **Years**

<b>Annual Limit on Intake ALI (micro-Ci)</b>	
<b>Ingestion</b>	<input type="text" value="80000"/>
<b>Inhalation</b>	<input type="text" value="80000"/>
<b>Target Organ</b>	<input type="text" value=""/>

<b>Varskin Beta Dose Rate Conversion Factors for various surfaces (rad cm<sup>2</sup> / h micro-Ci)</b>			
<b>BareSkin</b>	<b>Gloves</b>	<b>Labcoat</b>	<b>Glass</b>
<input type="text" value="0.00"/>	<input type="text" value="0.00"/>	<input type="text" value="0.00"/>	<input type="text" value="0.00"/>

<b>GammaConst (R cm<sup>2</sup> / h mCi)</b>	<input type="text" value=""/>
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Decay Mode	Max Energy (keV)	Frequency
Beta	18.6	100.0%

Isotope **Hg-203**

**Element**  **Atomic No**  **Mass No**

**HalfLife**  Days

**Annual Limit on Intake  
ALI (micro-Ci)**

**Ingestion**

**Inhalation**

**Target Organ**

**Varskin Beta Dose Rate Conversion Factors  
for various surfaces (rad cm<sup>2</sup> / h micro-Ci)**

<b>BareSkin</b>	<b>Gloves</b>	<b>Labcoat</b>	<b>Glass</b>
<input type="text" value="4.88"/>	<input type="text" value="2.18"/>	<input type="text" value="0.24"/>	<input type="text" value="0.00"/>

**GammaConst (R cm<sup>2</sup> / h mCi)**

<b>Decay Mode</b>	<b>Max Energy (keV)</b>	<b>Frequency</b>
Beta	214	100.0%
Electron	275	
Gamma	279	77.0%

Isotope **I-125**

**Element**  **Atomic No**  **Mass No**

**HalfLife**  **Days**

<b>Annual Limit on Intake ALI (micro-Ci)</b>	
<b>Ingestion</b>	<input type="text" value="40"/>
<b>Inhalation</b>	<input type="text" value="60"/>
<b>Target Organ</b>	<input type="text" value="Thyroid"/>

<b>Varskin Beta Dose Rate Conversion Factors for various surfaces (rad cm<sup>2</sup> / h micro-Ci)</b>			
<b>BareSkin</b>	<b>Gloves</b>	<b>Labcoat</b>	<b>Glass</b>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

<b>GammaConst (R cm<sup>2</sup> / h mCi)</b>	<input type="text" value="0.7"/>
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Decay Mode	Max Energy (keV)	Frequency
Alpha		
Electron	30	
Gamma	35	7.0%

**Isotope I-129**

**Element**  **Atomic No**  **Mass No**

**HalfLife**  **Years**

<b>Annual Limit on Intake ALI (micro-Ci)</b>	
<b>Ingestion</b>	<input type="text" value="5"/>
<b>Inhalation</b>	<input type="text" value="9"/>
<b>Target Organ</b>	<input type="text" value="Thyroid"/>

<b>Varskin Beta Dose Rate Conversion Factors for various surfaces (rad cm<sup>2</sup> / h micro-Ci)</b>			
<b>BareSkin</b>	<b>Gloves</b>	<b>Labcoat</b>	<b>Glass</b>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

<b>GammaConst (R cm<sup>2</sup> / h mCi)</b>	<input type="text" value="0.02"/>
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<b>Decay Mode</b>	<b>Max Energy (keV)</b>	<b>Frequency</b>
Gamma	39.6	7.5%
Beta	154	100.0%

Isotope **I-131**

**Element**  **Atomic No**  **Mass No**

**HalfLife**  **Days**

**Annual Limit on Intake  
ALI (micro-Ci)**

**Ingestion**

**Inhalation**

**Target Organ**

**Varskin Beta Dose Rate Conversion Factors  
for various surfaces (rad cm<sup>2</sup> / h micro-Ci)**

<b>BareSkin</b>	<b>Gloves</b>	<b>Labcoat</b>	<b>Glass</b>
<input type="text" value="5.18"/>	<input type="text" value="3.09"/>	<input type="text" value="1.38"/>	<input type="text" value="0.00"/>

**GammaConst (R cm<sup>2</sup> / h mCi)**

<b>Decay Mode</b>	<b>Max Energy (keV)</b>	<b>Frequency</b>
Gamma	80	2.6%
Gamma	284	5.4%
Gamma	364	82.0%
Gamma	637	6.8%
Gamma	723	1.6%
Beta	807	100.0%

Isotope **Ir-192**

**Element**  **Atomic No**  **Mass No**

**HalfLife**  **Days**

<b>Annual Limit on Intake ALI (micro-Ci)</b>	
<b>Ingestion</b>	<input type="text" value="900"/>
<b>Inhalation</b>	<input type="text" value="200"/>
<b>Target Organ</b>	<input type="text" value=""/>

<b>Varskin Beta Dose Rate Conversion Factors for various surfaces (rad cm<sup>2</sup> / h micro-Ci)</b>			
<b>BareSkin</b>	<b>Gloves</b>	<b>Labcoat</b>	<b>Glass</b>
<input type="text" value=""/>	<input type="text" value=""/>	<input type="text" value=""/>	<input type="text" value=""/>

<b>GammaConst (R cm<sup>2</sup> / h mCi)</b>	<input type="text" value="4.8"/>
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Decay Mode	Max Energy (keV)	Frequency
Gamma	296	29.0%
Gamma	308	30.0%
Gamma	317	81.0%
Electron	390	
Gamma	468	49.0%
Gamma	589	4.0%
Gamma	604	9.0%
Gamma	612	6.0%
Beta	670	100.0%

Isotope **K-40**

**Element**  **Atomic No**  **Mass No**

**HalfLife**  **Years**

<b>Annual Limit on Intake ALI (micro-Ci)</b>	
<b>Ingestion</b>	<input type="text" value="300"/>
<b>Inhalation</b>	<input type="text" value="400"/>
<b>Target Organ</b>	<input type="text" value=""/>

<b>Varskin Beta Dose Rate Conversion Factors for various surfaces (rad cm<sup>2</sup> / h micro-Ci)</b>			
<b>BareSkin</b>	<b>Gloves</b>	<b>Labcoat</b>	<b>Glass</b>
<input type="text" value="4.75"/>	<input type="text" value="3.71"/>	<input type="text" value="2.32"/>	<input type="text" value="0.26"/>

<b>GammaConst (R cm<sup>2</sup> / h mCi)</b>	<input type="text" value=""/>
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Decay Mode	Max Energy (keV)	Frequency
Positron	43.1	10.7%
Beta	1311.09	89.3%
Gamma	1460.8	10.7%

Isotope **Mn-54**

**Element**  **Atomic No**  **Mass No**

**HalfLife**  Days

Annual Limit on Intake ALI (micro-Ci)	
<b>Ingestion</b>	<input type="text" value="2000"/>
<b>Inhalation</b>	<input type="text" value="800"/>
<b>Target Organ</b>	<input type="text" value=""/>

Varskin Beta Dose Rate Conversion Factors for various surfaces (rad cm <sup>2</sup> / h micro-Ci)			
<b>BareSkin</b>	<b>Gloves</b>	<b>Labcoat</b>	<b>Glass</b>
<input type="text" value=""/>	<input type="text" value=""/>	<input type="text" value=""/>	<input type="text" value=""/>

<b>GammaConst (R cm<sup>2</sup> / h mCi)</b>	<input type="text" value="4.37"/>
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Decay Mode	Max Energy (keV)	Frequency
EC/Gamma	835	100.0%

Isotope **Na-22**

**Element**  **Atomic No**  **Mass No**

**HalfLife**  **Years**

**Annual Limit on Intake  
ALI (micro-Ci)**

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**Ingestion**

**Inhalation**

**Target Organ**

**Varskin Beta Dose Rate Conversion Factors  
for various surfaces (rad cm<sup>2</sup> / h micro-Ci)**

<b>BareSkin</b>	<b>Gloves</b>	<b>Labcoat</b>	<b>Glass</b>
<input type="text" value="5.00"/>	<input type="text" value="3.05"/>	<input type="text" value="1.26"/>	<input type="text" value="0.00"/>

**GammaConst (R cm<sup>2</sup> / h mCi)**

<b>Decay Mode</b>	<b>Max Energy (keV)</b>	<b>Frequency</b>
<input type="text" value="Gamma"/>	511	180.0%
<input type="text" value="Gamma"/>	1274.5	100.0%
<input type="text" value="Positron"/>	1567	100.0%

Isotope **Na-24**

**Element**  **Atomic No**  **Mass No**

**HalfLife**  Hours

**Annual Limit on Intake  
ALI (micro-Ci)**

**Ingestion**

**Inhalation**

**Target Organ**

**Varskin Beta Dose Rate Conversion Factors  
for various surfaces (rad cm<sup>2</sup> / h micro-Ci)**

BareSkin	Gloves	Labcoat	Glass
<input type="text" value="6.03"/>	<input type="text" value="4.64"/>	<input type="text" value="2.89"/>	<input type="text" value="0.26"/>

**GammaConst (R cm<sup>2</sup> / h mCi)**

Decay Mode	Max Energy (keV)	Frequency
Beta	1389	100.0%

Isotope **Ni-63**

**Element**  **Atomic No**  **Mass No**

**HalfLife**  Years

**Annual Limit on Intake  
ALI (micro-Ci)**

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**Ingestion**

**Inhalation**

**Target Organ**

**Varskin Beta Dose Rate Conversion Factors  
for various surfaces (rad cm<sup>2</sup> / h micro-Ci)**

BareSkin	Gloves	Labcoat	Glass
<input type="text" value="0.00"/>	<input type="text" value="0.00"/>	<input type="text" value="0.00"/>	<input type="text" value="0.00"/>

**GammaConst (R cm<sup>2</sup> / h mCi)**

Decay Mode	Max Energy (keV)	Frequency
Beta	67	100.0%

Isotope **P-32**

**Element**  **Atomic No**  **Mass No**

**HalfLife**  **Days**

<b>Annual Limit on Intake ALI (micro-Ci)</b>	
<b>Ingestion</b>	<input type="text" value="600"/>
<b>Inhalation</b>	<input type="text" value="400"/>
<b>Target Organ</b>	<input type="text" value=""/>

<b>Varskin Beta Dose Rate Conversion Factors for various surfaces (rad cm<sup>2</sup> / h micro-Ci)</b>			
<b>BareSkin</b>	<b>Gloves</b>	<b>Labcoat</b>	<b>Glass</b>
<input type="text" value="6.03"/>	<input type="text" value="4.70"/>	<input type="text" value="2.93"/>	<input type="text" value="0.55"/>

<b>GammaConst (R cm<sup>2</sup> / h mCi)</b>	<input type="text" value=""/>
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<b>Decay Mode</b>	<b>Max Energy (keV)</b>	<b>Frequency</b>
Beta	1710	100.0%

Isotope **P-33**

**Element**  **Atomic No**  **Mass No**

**HalfLife**  **Days**

<b>Annual Limit on Intake ALI (micro-Ci)</b>	
<b>Ingestion</b>	<input type="text" value="6000"/>
<b>Inhalation</b>	<input type="text" value="3000"/>
<b>Target Organ</b>	<input type="text" value=""/>

<b>Varskin Beta Dose Rate Conversion Factors for various surfaces (rad cm<sup>2</sup> / h micro-Ci)</b>			
<b>BareSkin</b>	<b>Gloves</b>	<b>Labcoat</b>	<b>Glass</b>
<input type="text" value=""/>	<input type="text" value=""/>	<input type="text" value=""/>	<input type="text" value=""/>

<b>GammaConst (R cm<sup>2</sup> / h mCi)</b>	<input type="text" value=""/>
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Decay Mode	Max Energy (keV)	Frequency
Beta	248	100.0%

Isotope **Pb-210**

**Element**  **Atomic No**  **Mass No**

**HalfLife**  **Years**

<b>Annual Limit on Intake ALI (micro-Ci)</b>	
<b>Ingestion</b>	<input type="text" value="0.6"/>
<b>Inhalation</b>	<input type="text" value="0.2"/>
<b>Target Organ</b>	<input type="text" value="Bone Surface"/>

<b>Varskin Beta Dose Rate Conversion Factors for various surfaces (rad cm<sup>2</sup> / h micro-Ci)</b>			
<b>BareSkin</b>	<b>Gloves</b>	<b>Labcoat</b>	<b>Glass</b>
<input type="text" value="0.00"/>	<input type="text" value="0.00"/>	<input type="text" value="0.00"/>	<input type="text" value="0.00"/>

<b>GammaConst (R cm<sup>2</sup> / h mCi)</b>	<input type="text" value="0.01"/>
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<b>Decay Mode</b>	<b>Max Energy (keV)</b>	<b>Frequency</b>
Beta	17	84.0%
Gamma	46.5	4.3%
Beta	63.5	16.0%

Isotope **Pu-239**

**Element**  **Atomic No**  **Mass No**

**HalfLife**  **Years**

<b>Annual Limit on Intake ALI (micro-Ci)</b>	
<b>Ingestion</b>	<input type="text" value="0.8"/>
<b>Inhalation</b>	<input type="text" value="0.006"/>
<b>Target Organ</b>	<input type="text" value="Bone Surface"/>

<b>Varskin Beta Dose Rate Conversion Factors for various surfaces (rad cm<sup>2</sup> / h micro-Ci)</b>			
<b>BareSkin</b>	<b>Gloves</b>	<b>Labcoat</b>	<b>Glass</b>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

<b>GammaConst (R cm<sup>2</sup> / h mCi)</b>	<input type="text"/>
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<b>Decay Mode</b>	<b>Max Energy (keV)</b>	<b>Frequency</b>
Alpha	5110	11.0%
Alpha	5160	88.0%

Isotope **Ra-226**

**Element**  **Atomic No**  **Mass No**

**HalfLife**  **Years**

**Annual Limit on Intake  
ALI (micro-Ci)**

**Ingestion**

**Inhalation**

**Target Organ**

**Varskin Beta Dose Rate Conversion Factors  
for various surfaces (rad cm<sup>2</sup> / h micro-Ci)**

<b>BareSkin</b>	<b>Gloves</b>	<b>Labcoat</b>	<b>Glass</b>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

**GammaConst (R cm<sup>2</sup> / h mCi)**

<b>Decay Mode</b>	<b>Max Energy (keV)</b>	<b>Frequency</b>
<input type="text" value="Alpha"/>	4600	6.0%
<input type="text" value="Alpha"/>	4770	95.0%

Isotope **Rb-86**

**Element**  **Atomic No**  **Mass No**

**HalfLife**  **Days**

**Annual Limit on Intake  
ALI (micro-Ci)**

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**Ingestion**

**Inhalation**

**Target Organ**

**Varskin Beta Dose Rate Conversion Factors  
for various surfaces (rad cm<sup>2</sup> / h micro-Ci)**

<b>BareSkin</b>	<b>Gloves</b>	<b>Labcoat</b>	<b>Glass</b>
<input type="text" value="5.89"/>	<input type="text" value="4.53"/>	<input type="text" value="2.76"/>	<input type="text" value="0.53"/>

**GammaConst (R cm<sup>2</sup> / h mCi)**

<b>Decay Mode</b>	<b>Max Energy (keV)</b>	<b>Frequency</b>
Beta	698	8.6%
Gamma	1076.6	8.6%
Beta	1774.7	91.4%

Isotope **S-35**

**Element**  **Atomic No**  **Mass No**

**HalfLife**  **Days**

<b>Annual Limit on Intake ALI (micro-Ci)</b>	
<b>Ingestion</b>	<input type="text" value="6000"/>
<b>Inhalation</b>	<input type="text" value="2000"/>
<b>Target Organ</b>	<input type="text" value="GI Wall"/>

<b>Varskin Beta Dose Rate Conversion Factors for various surfaces (rad cm<sup>2</sup> / h micro-Ci)</b>			
<b>BareSkin</b>	<b>Gloves</b>	<b>Labcoat</b>	<b>Glass</b>
<input type="text" value="1.21"/>	<input type="text" value="0.04"/>	<input type="text" value="0.00"/>	<input type="text" value="0.00"/>

<b>GammaConst (R cm<sup>2</sup> / h mCi)</b>	<input type="text"/>
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<b>Decay Mode</b>	<b>Max Energy (keV)</b>	<b>Frequency</b>
<input type="text" value="Beta"/>	167	100.0%

Isotope **Sc-46**

**Element**  **Atomic No**  **Mass No**

**HalfLife**  **Days**

<b>Annual Limit on Intake ALI (micro-Ci)</b>	
<b>Ingestion</b>	<input type="text" value="900"/>
<b>Inhalation</b>	<input type="text" value="200"/>
<b>Target Organ</b>	<input type="text" value=""/>

**Varskin Beta Dose Rate Conversion Factors  
for various surfaces (rad cm<sup>2</sup> / h micro-Ci)**

<b>BareSkin</b>	<b>Gloves</b>	<b>Labcoat</b>	<b>Glass</b>
<input type="text" value=""/>	<input type="text" value=""/>	<input type="text" value=""/>	<input type="text" value=""/>

<b>GammaConst (R cm<sup>2</sup> / h mCi)</b>	<input type="text" value="10.9"/>
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Decay Mode	Max Energy (keV)	Frequency
Beta	356.9	100.0%
Gamma	889.3	100.0%
Gamma	1120.5	100.0%

Isotope **Se-75**

**Element**  **Atomic No**  **Mass No**

**HalfLife**  Days

Annual Limit on Intake ALI (micro-Ci)	
<b>Ingestion</b>	<input type="text" value="500"/>
<b>Inhalation</b>	<input type="text" value="600"/>
<b>Target Organ</b>	<input type="text" value=""/>

Varskin Beta Dose Rate Conversion Factors  
for various surfaces (rad cm<sup>2</sup> / h micro-Ci)

<b>BareSkin</b>	<b>Gloves</b>	<b>Labcoat</b>	<b>Glass</b>
<input type="text" value=""/>	<input type="text" value=""/>	<input type="text" value=""/>	<input type="text" value=""/>

**GammaConst (R cm<sup>2</sup> / h mCi)**

Decay Mode	Max Energy (keV)	Frequency
Gamma	96.7	3.4%
Gamma	121.1	1.7%
Gamma	136	58.3%
Gamma	264.7	58.5%
Gamma	279.5	24.8%
Gamma	400.7	11.4%

Isotope **Sr-90**

**Element**  **Atomic No**  **Mass No**

**HalfLife**  **Years**

**Annual Limit on Intake  
ALI (micro-Ci)**

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**Ingestion**

**Inhalation**

**Target Organ**

**Varskin Beta Dose Rate Conversion Factors  
for various surfaces (rad cm<sup>2</sup> / h micro-Ci)**

<b>BareSkin</b>	<b>Gloves</b>	<b>Labcoat</b>	<b>Glass</b>
<input type="text" value="5.49"/>	<input type="text" value="3.45"/>	<input type="text" value="1.59"/>	<input type="text" value="0.00"/>

**GammaConst (R cm<sup>2</sup> / h mCi)**

<b>Decay Mode</b>	<b>Max Energy (keV)</b>	<b>Frequency</b>
<input type="text" value="Beta"/>	<input type="text" value="546"/>	<input type="text" value="100.0%"/>

Isotope **Tc-99**

**Element**  **Atomic No**  **Mass No**

**HalfLife**  **Years**

<b>Annual Limit on Intake ALI (micro-Ci)</b>	
<b>Ingestion</b>	<input type="text" value="4000"/>
<b>Inhalation</b>	<input type="text" value="700"/>
<b>Target Organ</b>	<input type="text" value=""/>

<b>Varskin Beta Dose Rate Conversion Factors for various surfaces (rad cm<sup>2</sup> / h micro-Ci)</b>			
<b>BareSkin</b>	<b>Gloves</b>	<b>Labcoat</b>	<b>Glass</b>
<input type="text" value="3.44"/>	<input type="text" value="1.08"/>	<input type="text" value="0.07"/>	<input type="text" value="0.00"/>

<b>GammaConst (R cm<sup>2</sup> / h mCi)</b>	<input type="text" value=""/>
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<b>Decay Mode</b>	<b>Max Energy (keV)</b>	<b>Frequency</b>
Beta	293.5	100.0%

Isotope **Tc-99m**

**Element**  **Atomic No**  **Mass No**

**HalfLife**  **Hours**

<b>Annual Limit on Intake ALI (micro-Ci)</b>	
<b>Ingestion</b>	<input type="text" value="80000"/>
<b>Inhalation</b>	<input type="text" value="200000"/>
<b>Target Organ</b>	<input type="text" value=""/>

Varskin Beta Dose Rate Conversion Factors  
for various surfaces (rad cm<sup>2</sup> / h micro-Ci)

<b>BareSkin</b>	<b>Gloves</b>	<b>Labcoat</b>	<b>Glass</b>
<input type="text" value=""/>	<input type="text" value=""/>	<input type="text" value=""/>	<input type="text" value=""/>

**GammaConst (R cm<sup>2</sup> / h mCi)**

Decay Mode	Max Energy (keV)	Frequency
Gamma	140.5	89.0%

Isotope **Th-228**

**Element**  **Atomic No**  **Mass No**

**HalfLife**  **Years**

<b>Annual Limit on Intake ALI (micro-Ci)</b>	
<b>Ingestion</b>	<input type="text" value="6"/>
<b>Inhalation</b>	<input type="text" value="0.01"/>
<b>Target Organ</b>	<input type="text" value="Bone Surface"/>

<b>Varskin Beta Dose Rate Conversion Factors for various surfaces (rad cm<sup>2</sup> / h micro-Ci)</b>			
<b>BareSkin</b>	<b>Gloves</b>	<b>Labcoat</b>	<b>Glass</b>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

<b>GammaConst (R cm<sup>2</sup> / h mCi)</b>	<input type="text" value="0.01"/>
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<b>Decay Mode</b>	<b>Max Energy (keV)</b>	<b>Frequency</b>
Gamma	84.4	1.3%
Alpha	5340	28.2%
Alpha	5423	71.1%

Isotope **Th-232**

**Element**  **Atomic No**  **Mass No**

**HalfLife**  **Years**

<b>Annual Limit on Intake ALI (micro-Ci)</b>	
<b>Ingestion</b>	<input type="text" value="0.7"/>
<b>Inhalation</b>	<input type="text" value="0.001"/>
<b>Target Organ</b>	<input type="text" value="Bone Surface"/>

<b>Varskin Beta Dose Rate Conversion Factors for various surfaces (rad cm<sup>2</sup> / h micro-Ci)</b>			
<b>BareSkin</b>	<b>Gloves</b>	<b>Labcoat</b>	<b>Glass</b>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

<b>GammaConst (R cm<sup>2</sup> / h mCi)</b>	<input type="text"/>
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Decay Mode	Max Energy (keV)	Frequency
Alpha	3950	24.0%
Alpha	4010	76.0%

Isotope **U-238**

**Element**  **Atomic No**  **Mass No**

**HalfLife**  **Years**

<b>Annual Limit on Intake ALI (micro-Ci)</b>	
<b>Ingestion</b>	<input type="text" value="10"/>
<b>Inhalation</b>	<input type="text" value="0.04"/>
<b>Target Organ</b>	<input type="text" value="Bone Surface"/>

<b>Varskin Beta Dose Rate Conversion Factors for various surfaces (rad cm<sup>2</sup> / h micro-Ci)</b>			
<b>BareSkin</b>	<b>Gloves</b>	<b>Labcoat</b>	<b>Glass</b>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

<b>GammaConst (R cm<sup>2</sup> / h mCi)</b>	<input type="text"/>
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Decay Mode	Max Energy (keV)	Frequency
Alpha	4150	25.0%
Alpha	4200	75.0%

Isotope **U-Dep**

**Element**  **Atomic No**  **Mass No**

**HalfLife**  **Years**

<b>Annual Limit on Intake ALI (micro-Ci)</b>	
<b>Ingestion</b>	<input type="text" value="10"/>
<b>Inhalation</b>	<input type="text" value="0.04"/>
<b>Target Organ</b>	<input type="text" value="Bone Surface"/>

<b>Varskin Beta Dose Rate Conversion Factors for various surfaces (rad cm<sup>2</sup> / h micro-Ci)</b>			
<b>BareSkin</b>	<b>Gloves</b>	<b>Labcoat</b>	<b>Glass</b>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

<b>GammaConst (R cm<sup>2</sup> / h mCi)</b>	<input type="text"/>
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<b>Decay Mode</b>	<b>Max Energy (keV)</b>	<b>Frequency</b>
Alpha	4150	25.0%
Alpha	4200	75.0%

Isotope **Y-90**

**Element**  **Atomic No**  **Mass No**

**HalfLife**  Hours

**Annual Limit on Intake  
ALI (micro-Ci)**

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**Ingestion**

**Inhalation**

**Target Organ**

**Varskin Beta Dose Rate Conversion Factors  
for various surfaces (rad cm<sup>2</sup> / h micro-Ci)**

BareSkin	Gloves	Labcoat	Glass
<input type="text" value="6.05"/>	<input type="text" value="4.61"/>	<input type="text" value="2.76"/>	<input type="text" value="1.08"/>

**GammaConst (R cm<sup>2</sup> / h mCi)**

Decay Mode	Max Energy (keV)	Frequency
Beta	2268	100.0%

Isotope **Zn-65**

**Element**  **Atomic No**  **Mass No**

**HalfLife**  Days

**Annual Limit on Intake  
ALI (micro-Ci)**

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**Ingestion**

**Inhalation**

**Target Organ**

**Varskin Beta Dose Rate Conversion Factors  
for various surfaces (rad cm<sup>2</sup> / h micro-Ci)**

BareSkin	Gloves	Labcoat	Glass
<input type="text" value="0.00"/>	<input type="text" value="0.00"/>	<input type="text" value="0.00"/>	<input type="text" value="0.00"/>

**GammaConst (R cm<sup>2</sup> / h mCi)**

Decay Mode	Max Energy (keV)	Frequency
Positron	235.8	50.6%
Gamma	511	3.4%
Gamma	1115.5	50.6%
Positron	1351.4	49.4%