

MILDOS-AREA Standard Results Report

Case Title: Jane Dough Confirmatory
 Version: MILDOS-AREA 4.0
 File: C:\MILDOS4\UserFiles\JD MILDOS Aug 22 4 year met.mla
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Parameters

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Name	Value	Description
ambientT	283	Ambient temperature (K)
amMix	400	Annual average morning mixing height (m)
anemHeight	10	Anemometer height (m)
caseFile	place holder	not used
caseInfo	Confirmatory analysis using 4 year of meteorological data	Additional user-specified information for the case under study
caseTitle	Jane Dough Confirmatory	User-defined title for case under study
cowIngestRate	50	Ingestion rate (feed wet weight) of animals (beef cattle and milk cows) (kg/d)
cutoffHeight	50	Height above which to use Briggs urban dispersion coefficients (m)
decayPlants	14	Weathering decay half-life for loss of contamination from vegetation due to weathering processes (days)
fracEdibleLeaAnimal	1	Fraction of radionuclides reaching the edible portion of animal-consumed vegetation (unitless)
fracEdibleLeaHuman	1	Fraction of radionuclides reaching the edible portion of human-consumed leafy vegetables (unitless)
fracEdibleRoot	0.1	Fraction of radionuclides reaching the edible portion of human-consumed root vegetables (unitless)
fracHayInd	0.5	Fraction of livestock feed from stored hay for individual consumption (unitless)
fracHayPop	0.5	Fraction of livestock feed from stored hay for consumption by the general population (unitless)
fracMealPrep	1	Fraction of radioactivity in meat remaining after food preparation (unitless)
fracMilkPrep	1	Fraction of radioactivity in milk remaining after food preparation (unitless)
fracPastureInd	0.5	Fraction of livestock feed from pasture grass for individual consumption (unitless)
fracPasturePop	0.5	Fraction of livestock feed from pasture grass for consumption by the general population (unitless)
fracRetain	0.2	Fraction of air-deposited radionuclides retained on vegetation (unitless)
fracVegPrep	0.6	Fraction of radioactivity in vegetables remaining after food preparation (unitless)
gridSize	5	Size of grid blocks to use when calculating air concentrations (m)
isPopExposure	False	Option to perform population ingestion calculations; true (1) or false (0)
isPopIngest	False	Option to perform population ingestion calculations; true (1) or false (0)
jidNotes	Sample jid notes text.	Stores user notes as needed
mapProj	Local Coordinates	Contains the current map projection being used for the map display; consists of a list of the UTM zone, the datum (WGS84 or NAD83), and the EPSG code for the projection (EPSG stands for what used to be the European Petroleum Survey Group)
mapState		String with serialized map state
maxDistCalcArea	1000	Maximum distance between an area source and receptor where the area source model will be used; the source will be treated as a point source beyond the specified distance (m)
meatProd	0	Farmland meat productivity (kg/yr)
metFreq	0	Frequency of time wind is blowing in a specific direction, under a specific stability category, at a given wind speed (unitless)
milkProd	0	Farmland milk productivity (kg/yr)
nPeople	0	Number of people in sector segment (persons)
partFrac	0	Fraction of particle size distribution for a given average particle size (unitless)
pmMix	100	Annual afternoon mixing height (m)
rain	0	Rainfall rate (m/yr)
relRate	0	Nuclide release rate (Ci/yr)
resuspDepVel	0.01	Deposition velocity for particulates associated with the initial and final resuspension factors specified (m/s)

resuspFacFinal	1.00E-09	Final resuspension factor for determining resuspended air concentrations (1/m)
resuspFacInitial	1.00E-05	Initial resuspension factor for determining resuspended air concentrations (1/m)
resuspHalfLife	0.137	Resuspension factor decay half-life (yr)
soilAreaDen	240	Areal surface density / effective surface soil density (kg/m ²)
soilConc	0	Nuclide soil concentration for area sources (pCi/g)
soilHalfLife	50	Environmental soil loss half-life (yr)
vegProd	0	Farmland vegetable productivity (kg/yr)
vGrow	60	Exposure time to radionuclides during the human-consumed vegetable growing season(d)
vGrowPasture	30	Exposure time to radionuclides during the animal-consumed vegetation growing season (d)
yieldMeat	5070	Farmland production rate of meat for population ingestion calculations (kg/km ² -yr)
yieldMilk	5710	Farmland production rate of milk for population ingestion calculations (kg/km ² -yr)
yieldVeg	55800	Farmland production rate of vegetation for population ingestion calculations (kg/km ² -yr)
yVeg	2	Yield density of human-consumed vegetation on farmland (kg/m ²)
yVegPasture	0.75	Yield density of animal-consumed vegetation on farmland (kg/m ²)

Receptors

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Name	x (m)	y (m)	z (m)	Age Group	Indoor Occupancy Factor	Outdoor Occupancy Factor	Indoor Shielding Fraction	Consider Vegetation Pathway?	Vegetation Ingestion Rate (kg/yr)	Consider Meat Pathway?	Meat Ingestion Rate (kg/yr)	Consider Milk Pathway?	Milk Ingestion Rate (kg/yr)	No.	Rn-222 Indoor Eq. Fraction	Calc. Rn-222 Outdoor Equil. Fraction?	Rn-222 Outdoor Eq. Fraction
T-Chair	3700	2200	-7	Adult	5.83E-01	4.17E-01	8.25E-01	False	1.05E+02	False	7.83E+01	False	1.30E+02	1	5.00E-01	False	7.00E-01
Dry Fork	-2700	-1100	-58	Adult	5.83E-01	4.16E-01	8.25E-01	False	1.05E+02	False	7.83E+01	False	1.30E+02	2	5.00E-01	False	7.00E-01
Pumpkin Butte	11100	3600	99	Adult	5.83E-01	4.16E-01	8.25E-01	False	1.05E+02	False	7.83E+01	False	1.30E+02	3	5.00E-01	False	7.00E-01
Man camp	0	75	6	Adult	2.70E-01	0.00E+00	8.25E-01	False	1.05E+02	False	7.83E+01	False	1.30E+02	4	5.00E-01	False	7.00E-01
CBM Worker	-800	0	10	Adult	0.00E+00	7.50E-02	8.25E-01	False	1.05E+02	False	7.83E+01	False	1.30E+02	5	5.00E-01	False	7.00E-01

Sources

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Name	Source Type	Particle Distribution Set	x (m)	y (m)	z (m)	Dispersion Coefficients	No.
Nichols Ranch PA1 Product Bleed	Point Source	1	0.00E+00	0.00E+00	1.00E+01	Pasquill-Gifford	1
Nichols Ranch PA1 Restore Bleed	Point Source	1	0.00E+00	0.00E+00	1.00E+01	Pasquill-Gifford	2
Nichols Ranch PA2 Product Bleed	Point Source	1	0.00E+00	0.00E+00	1.00E+01	Pasquill-Gifford	3
Nichols Ranch PA2 Restore Bleed	Point Source	1	0.00E+00	0.00E+00	1.00E+01	Pasquill-Gifford	4
Hank PA1 Product Bleed	Point Source	1	8.20E+03	3.50E+03	1.00E+01	Pasquill-Gifford	5
Hank PA1 Restore Bleed	Point Source	1	8.20E+03	3.50E+03	1.00E+01	Pasquill-Gifford	6
Hank PA2 Product Bleed	Point Source	1	8.20E+03	3.50E+03	1.00E+01	Pasquill-Gifford	7
Hank PA2 Restore Bleed	Point Source	1	8.20E+03	3.50E+03	1.00E+01	Pasquill-Gifford	8
Jane Dough PA1 Product Bleed	Point Source	1	0.00E+00	0.00E+00	1.00E+01	Pasquill-Gifford	9
Jane Dough PA1 Restore Bleed	Point Source	1	0.00E+00	0.00E+00	1.00E+01	Pasquill-Gifford	10
Jane Dough PA2 Product Bleed	Point Source	1	0.00E+00	0.00E+00	1.00E+01	Pasquill-Gifford	11
Jane Dough PA2 Restore Bleed	Point Source	1	0.00E+00	0.00E+00	1.00E+01	Pasquill-Gifford	12
Nichols Ranch PA1 wellfield leak	Area Source	1	0.00E+00	9.00E+02	6.00E+00	Pasquill-Gifford	13
Nichols Ranch PA2 wellfield leak	Area Source	1	-9.00E+02	4.00E+02	6.00E+00	Pasquill-Gifford	14
Hank PA1 wellfield leak	Area Source	1	8.20E+03	3.50E+03	9.90E+00	Pasquill-Gifford	15
Hank PA2 wellfield leak	Area Source	1	8.20E+03	1.90E+03	9.90E+00	Pasquill-Gifford	16
Jane Dough PA1 wellfield leak	Area Source	1	1.00E+02	-3.00E+03	3.60E+01	Pasquill-Gifford	17
Jane Dough PA2 wellfield leak	Area Source	1	1.00E+03	-3.00E+03	3.60E+01	Pasquill-Gifford	18

Source Release Terms Before Time Step Adjustment [Ci/y]

Source	Rn-222	U-238	Th-230	Ra-226	Pb-210	Rn-220	Th-232	Ra-228	Th-228
Nichols Ranch PA1 Product Bleed	2.00E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Nichols Ranch PA1 Restore Bleed	3.20E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Nichols Ranch PA2 Product Bleed	2.00E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Nichols Ranch PA2 Restore Bleed	3.20E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Hank PA1 Product Bleed	3.70E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Hank PA1 Restore Bleed	1.10E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Hank PA2 Product Bleed	3.70E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Hank PA2 Restore Bleed	1.10E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Jane Dough PA1 Product Bleed	2.00E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Jane Dough PA1 Restore Bleed	3.20E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Jane Dough PA2 Product Bleed	2.00E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Jane Dough PA2 Restore Bleed	3.20E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Nichols Ranch PA1 wellfield leak	1.53E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Nichols Ranch PA2 wellfield leak	1.53E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Hank PA1 wellfield leak	2.21E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Hank PA2 wellfield leak	2.21E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Jane Dough PA1 wellfield leak	1.53E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Jane Dough PA2 wellfield leak	1.53E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Source Type Specific Parameters

Point Sources

Name	Inside Stack Diameter (m)	Effluent Exit Velocity (m/s)	Rn-220 Release Rate	Rn-222 Release Rate	Momentum based rise?	Heat Release
Nichols Ranch PA1 Restore Bleed	0.15	7.75	0	32	True	0
Nichols Ranch PA1 Product Bleed	0.15	7.75	0	20	True	0
Nichols Ranch PA2 Product Bleed	0.15	7.76	0	20	True	0
Nichols Ranch PA2 Restore Bleed	0.15	7.76	0	32	True	0
Hank PA1 Product Bleed	0.15	7.76	0	37	True	0
Hank PA1 Restore Bleed	0.15	7.76	0	11	True	0
Hank PA2 Product Bleed	0.15	7.76	0	37	True	0
Hank PA2 Restore Bleed	0.15	7.76	0	11	True	0
Jane Dough PA1 Product Bleed	0.15	7.76	0	20	True	0
Jane Dough PA1 Restore Bleed	0.15	7.76	0	32	True	0
Jane Dough PA2 Product Bleed	0.15	7.76	0	20	True	0
Jane Dough PA2 Restore Bleed	0.15	7.76	0	32	True	0

Area Sources

Name	Area Option	Radius	Rectangle Length	Rectangle Width	Rect Rotate	Rn-220 Release Rate	Rn-222 Release Rate	Particulate Release Rate	Erosion Option	Area	Tailing Mass < 20 um (%)	Surface Roughness Height (m)	Particle Density (g/m3)	Water Content (wt.%)	Saltating Particle Diameter (m)
Nichols Ranch PA1 wellfield leak	RECT	100	1353	169	45	0	21.2	0	True	228657	3	0.01	2400000	0.1	0.0003
Nichols Ranch PA2 wellfield leak	RECT	100	1353	169	45	0	21.2	0	True	228657	3	0.01	2400000	0.1	0.0003
Hank PA1 wellfield leak	RECT	100	198	1584	0	0	22.3	0	True	313632	3	0.01	2400000	0.1	0.0003
Hank PA2 wellfield leak	RECT	100	198	1584	0	0	22.3	0	True	313632	3	0.01	2400000	0.1	0.0003
Jane Dough PA1 wellfield leak	RECT	100	169	1353	0	0	21.2	0	True	228657	3	0.01	2400000	0.1	0.0003
Jane Dough PA2 wellfield leak	RECT	100	169	1353	0	0	21.2	0	True	228657	3	0.01	2400000	0.1	0.0003

Release Adjustments Over Time

Release Adjustments Over Time																				Radon Adjustment															
Source	Time step	Time 1	Time 2	Time 3	Time 4	Time 5	Time 6	Time 7	Time 8	Time 9	Time 10	Time 11	Time 12	Time 13	Time 14	Time 15	Time 16	Time 17	Time 18	Time 19	Time 1	Time 2	Time 3	Time 4	Time 5	Time 6	Time 7	Time 8	Time 9	Time 10	Time 11	Time 12	Time 13	Time 14	
Duration (years)		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Nichols Ranch PA1 Product Bleed		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.75	1	1	1	1	0.5	0	0	0	0	0	0	0	0	
Nichols Ranch PA1 Restore Bleed		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	1	1	1	1	0.25	0	0	0	
Nichols Ranch PA2 Product Bleed		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.25	1	1	1	1	1	0.5	0	0	0	0	0	
Nichols Ranch PA2 Restore Bleed		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	1	0.5	0	0	0	
Hank PA1 Product Bleed		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0
Hank PA1 Restore Bleed		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hank PA2 Product Bleed		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Hank PA2 Restore Bleed	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Jane Dough PA1 Product Bleed	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	1	1	1	1	1	0.25	0	0
Jane Dough PA1 Restore Bleed	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.75	1	1
Jane Dough PA2 Product Bleed	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.75	1	1	1	1	0
Jane Dough PA2 Restore Bleed	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Nichols Ranch PA1 wellfield leak	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.75	1	1	1	1	1	1	1	1	0.25	1	0	0
Nichols Ranch PA2 wellfield leak	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.25	1	1	1	1	1	1	1	0.5	0	0
Hank PA1 wellfield leak	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
Hank PA2 wellfield leak	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Jane Dough PA1 wellfield leak	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	1	1	1	1	1	1	1	1
Jane Dough PA2 wellfield leak	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.75	1	1	1	1	1

Vegetable Ingestion Parameters

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Vegetation Type	Infant Vegetable Ingestion Fraction	Child Vegetable Ingestion Fraction	Teenager Vegetable Ingestion Fraction	Adult Vegetable Ingestion Fraction
Above Ground	0.00E+00	3.60E-01	3.80E-01	3.60E-01
Potatoes	0.00E+00	5.70E-01	5.50E-01	5.70E-01
Below Ground	0.00E+00	7.00E-02	7.00E-02	5.00E-02

Met JFD

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Direction	Stability Class	0.67 m/s	2.46 m/s	4.47 m/s	6.93 m/s	9.61 m/s	12.5 m/s
N	A	0.00045	0.00247	0.00000	0.00000	0.00000	0.00000
NNE	A	0.00091	0.00292	0.00000	0.00000	0.00000	0.00000
NE	A	0.00046	0.00157	0.00000	0.00000	0.00000	0.00000
ENE	A	0.00057	0.00124	0.00000	0.00000	0.00000	0.00000
E	A	0.00205	0.00135	0.00000	0.00000	0.00000	0.00000
ESE	A	0.00251	0.00270	0.00000	0.00000	0.00000	0.00000
SE	A	0.00148	0.00292	0.00000	0.00000	0.00000	0.00000
SSE	A	0.00262	0.00315	0.00000	0.00000	0.00000	0.00000
S	A	0.00228	0.00360	0.00000	0.00000	0.00000	0.00000
SSW	A	0.00228	0.00382	0.00000	0.00000	0.00000	0.00000
SW	A	0.00274	0.00348	0.00000	0.00000	0.00000	0.00000
WSW	A	0.00240	0.00282	0.00000	0.00000	0.00000	0.00000
W	A	0.00262	0.00640	0.00000	0.00000	0.00000	0.00000
WNW	A	0.00137	0.00550	0.00000	0.00000	0.00000	0.00000
NW	A	0.00091	0.00281	0.00000	0.00000	0.00000	0.00000
NNW	A	0.00068	0.00236	0.00000	0.00000	0.00000	0.00000
N	B	0.00011	0.00202	0.00034	0.00000	0.00000	0.00000
NNE	B	0.00000	0.00124	0.00000	0.00000	0.00000	0.00000

NE	B		0.00000	0.00034	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
ENE	B		0.00023	0.00124	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
E	B		0.00103	0.00079	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
ESE	B		0.00068	0.00258	0.00023	0.00000	0.00000	0.00000	0.00000	0.00000
SE	B		0.00011	0.00281	0.00023	0.00000	0.00000	0.00000	0.00000	0.00000
SSE	B		0.00000	0.00258	0.00023	0.00000	0.00000	0.00000	0.00000	0.00000
S	B		0.00011	0.00393	0.00011	0.00000	0.00000	0.00000	0.00000	0.00000
SSW	B		0.00011	0.00337	0.00023	0.00000	0.00000	0.00000	0.00000	0.00000
SW	B		0.00034	0.00258	0.00011	0.00000	0.00000	0.00000	0.00000	0.00000
WSW	B		0.00011	0.00225	0.00034	0.00000	0.00000	0.00000	0.00000	0.00000
W	B		0.00046	0.00382	0.00023	0.00000	0.00000	0.00000	0.00000	0.00000
WNW	B		0.00011	0.00371	0.00045	0.00000	0.00000	0.00000	0.00000	0.00000
NW	B		0.00000	0.00303	0.00087	0.00000	0.00000	0.00000	0.00000	0.00000
NNW	B		0.00000	0.00281	0.00055	0.00000	0.00000	0.00000	0.00000	0.00000
N	C		0.00000	0.00087	0.00056	0.00000	0.00000	0.00000	0.00000	0.00000
NNE	C		0.00000	0.00023	0.00112	0.00000	0.00000	0.00000	0.00000	0.00000
NE	C		0.00000	0.00023	0.00080	0.00000	0.00000	0.00000	0.00000	0.00000
ENE	C		0.00011	0.00045	0.00087	0.00000	0.00000	0.00000	0.00000	0.00000
E	C		0.00080	0.00146	0.00034	0.00000	0.00000	0.00000	0.00000	0.00000
ESE	C		0.00034	0.00124	0.00303	0.00000	0.00000	0.00000	0.00000	0.00000
SE	C		0.00000	0.00079	0.00202	0.00000	0.00000	0.00000	0.00000	0.00000
SSE	C		0.00011	0.00079	0.00213	0.00000	0.00000	0.00000	0.00000	0.00000
S	C		0.00000	0.00112	0.00292	0.00000	0.00000	0.00000	0.00000	0.00000
SSW	C		0.00000	0.00163	0.00472	0.00000	0.00000	0.00000	0.00000	0.00000
SW	C		0.00000	0.00101	0.00550	0.00000	0.00000	0.00000	0.00000	0.00000
WSW	C		0.00034	0.00101	0.00481	0.00000	0.00000	0.00000	0.00000	0.00000
W	C		0.00000	0.00157	0.00595	0.00000	0.00000	0.00000	0.00000	0.00000
WNW	C		0.00011	0.00258	0.00404	0.00000	0.00000	0.00000	0.00000	0.00000
NW	C		0.00011	0.00101	0.00393	0.00000	0.00000	0.00000	0.00000	0.00000
NNW	C		0.00000	0.00134	0.00607	0.00000	0.00000	0.00000	0.00000	0.00000
N	D		0.00046	0.00416	0.01840	0.01800	0.00449	0.00148	0.00148	0.00148
NNE	D		0.00011	0.00303	0.00741	0.00505	0.00057	0.00011	0.00011	0.00011
NE	D		0.00023	0.00225	0.00449	0.00045	0.00045	0.00000	0.00000	0.00000
ENE	D		0.00091	0.01022	0.00472	0.00191	0.00011	0.00000	0.00000	0.00000
E	D		0.00570	0.04267	0.01393	0.00472	0.00056	0.00023	0.00023	0.00023
ESE	D		0.00114	0.00966	0.01674	0.01550	0.00461	0.00181	0.00181	0.00181
SE	D		0.00023	0.00360	0.00404	0.00786	0.00225	0.00067	0.00067	0.00067
SSE	D		0.00011	0.00258	0.00449	0.00213	0.00079	0.00000	0.00000	0.00000
S	D		0.00000	0.00427	0.00887	0.00449	0.00079	0.00011	0.00011	0.00011
SSW	D		0.00023	0.00663	0.02045	0.03100	0.01393	0.00506	0.00506	0.00506
SW	D		0.00057	0.00225	0.01292	0.02954	0.02280	0.01202	0.01202	0.01202
WSW	D		0.00034	0.00225	0.00652	0.01247	0.00539	0.00247	0.00247	0.00247
W	D		0.00080	0.00348	0.00652	0.01034	0.00404	0.00146	0.00146	0.00146
WNW	D		0.00080	0.00786	0.00472	0.00404	0.00180	0.00011	0.00011	0.00011
NW	D		0.00023	0.00595	0.00932	0.00629	0.00169	0.00034	0.00034	0.00034
NNW	D		0.00023	0.00582	0.01651	0.02123	0.00977	0.00449	0.00449	0.00449
N	E		0.00000	0.00157	0.00135	0.00000	0.00000	0.00000	0.00000	0.00000
NNE	E		0.00023	0.00079	0.00169	0.00000	0.00000	0.00000	0.00000	0.00000
NE	E		0.00000	0.00090	0.00135	0.00000	0.00000	0.00000	0.00000	0.00000
ENE	E		0.00148	0.00899	0.00135	0.00000	0.00000	0.00000	0.00000	0.00000
E	E		0.00342	0.04519	0.01348	0.00000	0.00000	0.00000	0.00000	0.00000
ESE	E		0.00137	0.00629	0.00584	0.00000	0.00000	0.00000	0.00000	0.00000
SE	E		0.00034	0.00382	0.00034	0.00000	0.00000	0.00000	0.00000	0.00000
SSE	E		0.00046	0.00348	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
S	E		0.00023	0.00360	0.00056	0.00000	0.00000	0.00000	0.00000	0.00000
SSW	E		0.00046	0.00169	0.00056	0.00000	0.00000	0.00000	0.00000	0.00000
SW	E		0.00034	0.00090	0.00034	0.00000	0.00000	0.00000	0.00000	0.00000
WSW	E		0.00103	0.00112	0.00090	0.00000	0.00000	0.00000	0.00000	0.00000
W	E		0.00046	0.00213	0.00056	0.00000	0.00000	0.00000	0.00000	0.00000
WNW	E		0.00137	0.00404	0.00112	0.00000	0.00000	0.00000	0.00000	0.00000
NW	E		0.00125	0.00326	0.00079	0.00000	0.00000	0.00000	0.00000	0.00000
NNW	E		0.00057	0.00148	0.00112	0.00000	0.00000	0.00000	0.00000	0.00000
N	F		0.00171	0.00101	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
NNE	F		0.00091	0.00124	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
N.E										

	F	0.00160	0.00056	0.00000	0.00000	0.00000	0.00000
ENE	F	0.00388	0.00258	0.00000	0.00000	0.00000	0.00000
E	F	0.00810	0.00427	0.00000	0.00000	0.00000	0.00000
ESE	F	0.00753	0.00483	0.00000	0.00000	0.00000	0.00000
SE	F	0.00525	0.00595	0.00000	0.00000	0.00000	0.00000
SSE	F	0.00399	0.00685	0.00000	0.00000	0.00000	0.00000
S	F	0.00319	0.00371	0.00000	0.00000	0.00000	0.00000
SSW	F	0.00274	0.00326	0.00000	0.00000	0.00000	0.00000
SW	F	0.00251	0.00169	0.00000	0.00000	0.00000	0.00000
WSW	F	0.00274	0.00101	0.00000	0.00000	0.00000	0.00000
W	F	0.00308	0.00258	0.00000	0.00000	0.00000	0.00000
WNW	F	0.00354	0.00202	0.00000	0.00000	0.00000	0.00000
NW	F	0.00319	0.00247	0.00000	0.00000	0.00000	0.00000
NNW	F	0.00183	0.00123	0.00000	0.00000	0.00000	0.00000

Dose Coefficients

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Radon Dose Coefficients

[mrem/(pCi/m3)]

Nuclide	Effective	Bone	Kidney	Liver	Lung
Th-232	0	0	0	0	0
Ra-228	0	0	0	0	0
Th-228	0	0	0	0	0
Rn-220	12400	0	0	0	12400
Po-216	0	0	0	0	0
Pb-212	0	0	0	0	0
Bi-212	0	0	0	0	0
U-238	0	0	0	0	0
Th-230	0	0	0	0	0
Ra-226	0	0	0	0	0
Rn-222	0.5	0	0	0	0.5
Po-218	0	0	0	0	0
Pb-214	0	0	0	0	0
Bi-214	0	0	0	0	0
Pb-210	0	0	0	0	0
Po-210	0	0	0	0	0
Bi-210	0	0	0	0	0

1% of Rn-222 DCF is from Rn-222 without daughters [(mrem/yr) / (pCi/m3)]

External Dose Coefficients

Air Submersion: [(mrem/yr) / (pCi/m3)]

Ground Surface: [(mrem/yr) / (pCi/m2)]

Nuclide	Air Submersion	Ground Surface	NucIndx
Rn-220	2.16E-06	4.45E-08	0
Po-216	9.68E-08	1.93E-09	1
Pb-212	8.02E-04	1.67E-05	2
Bi-212	8.52E-03	1.46E-04	3
Th-232	1.02E-06	6.43E-08	4
Ra-228	5.58E-03	1.08E-04	5
Th-228	6.57E-05	1.39E-06	6
Rn-222	2.23E-06	4.61E-08	7
Po-218	5.23E-08	1.04E-09	8
Pb-214	1.38E-03	2.85E-05	9
Bi-214	8.93E-03	1.65E-04	10
Pb-210	6.59E-06	4.13E-07	11
Bi-210	3.84E-06	0.00E+00	12
Po-210	4.86E-08	0.00E+00	13
U-238	1.61E-04	3.61E-06	14
Th-230	2.03E-06	8.76E-08	15
Ra-226	3.68E-05	7.52E-07	16

Ingestion Dose Coefficients

[mrem/pCi]

Nuclide	Age	Effective	Bone	Liver	Kidney	Lung
Bi-210	Infant	0	0	0	0	0
Bi-210	Child	0	0	0	0	0

Bi-210	Teenager	0	0	0	0	0
Bi-210	Adult	0	0	0	0	0
Bi-212	Infant	0.000244	0.00000777	0.00000654	0.00041	7.9866E-10
Bi-212	Child	0.00000678	0.00000025	0.000000267	0.000018	4.2398E-11
Bi-212	Teenager	0.00000278	0.000000122	0.000000126	0.00000984	1.8734E-11
Bi-212	Adult	0.00000106	3.38E-08	5.03E-08	0.0000041	9.86E-12
Bi-214	Infant	0	0	0	0	0
Bi-214	Child	0	0	0	0	0
Bi-214	Teenager	0	0	0	0	0
Bi-214	Adult	0	0	0	0	0
Pb-210	Infant	1.11E-01	2.19E-01	4.07E-01	3.58E-01	1.46E-02
Pb-210	Child	1.78E-02	8.07E-02	9.50E-02	6.99E-02	3.16E-03
Pb-210	Teenager	1.61E-02	2.37E-01	5.12E-02	4.22E-02	1.55E-03
Pb-210	Adult	7.05E-03	8.14E-02	2.42E-02	1.97E-02	7.67E-04
Pb-212	Infant	0.0105	0.141	0.0106	0.03403	1.3203E-07
Pb-212	Child	0.000291	0.00454	0.000433	0.000177	7.009E-09
Pb-212	Teenager	0.000118	0.00221	0.000204	0.0000967	3.097E-09
Pb-212	Adult	0.0000455	0.000614	0.0000817	0.0000403	1.63E-09
Pb-214	Infant	0	0	0	0	0
Pb-214	Child	0	0	0	0	0
Pb-214	Teenager	0	0	0	0	0
Pb-214	Adult	0	0	0	0	0
Po-210	Infant	0	0	0	0	0
Po-210	Child	0	0	0	0	0
Po-210	Teenager	0	0	0	0	0
Po-210	Adult	0	0	0	0	0
Po-216	Infant	0	0	0	0	0
Po-216	Child	0	0	0	0	0
Po-216	Teenager	0	0	0	0	0
Po-216	Adult	0	0	0	0	0
Po-218	Infant	0	0	0	0	0
Po-218	Child	0	0	0	0	0
Po-218	Teenager	0	0	0	0	0
Po-218	Adult	0	0	0	0	0
Ra-226	Infant	0.0211	0.109	0.00848	0.00332	0.00372812
Ra-226	Child	0.00238	0.025	0.00132	0.000644	0.000915084
Ra-226	Teenager	0.00422	0.109	0.000814	0.00102	0.00101676
Ra-226	Adult	0.00132	0.0253	0.000339	0.000339	0.00033892
Ra-228	Infant	0.027441	0.1200622	0.0110578	0.00872216	1.68409E-08
Ra-228	Child	0.00590886	0.0409211	0.0028648	0.002500615	6.12329E-07
Ra-228	Teenager	0.00346518	0.0860444	0.00128667	0.0012203	2.98314E-07
Ra-228	Adult	0.00144216	0.0215111	0.00058403	0.000581143	1.57007E-07
Rn-220	Infant	0	0	0	0	0
Rn-220	Child	0	0	0	0	0
Rn-220	Teenager	0	0	0	0	0
Rn-220	Adult	0	0	0	0	0
Rn-222	Infant	0	0	0	0	0
Rn-222	Child	0	0	0	0	0
Rn-222	Teenager	0	0	0	0	0
Rn-222	Adult	0	0	0	0	0
Th-228	Infant	0.1753	3.37	0.01957	0.008482	1.84761E-08
Th-228	Child	0.00487	0.1084	0.000798	0.0003729	9.8083E-08
Th-228	Teenager	0.001892	0.0528	0.000377	0.0002037	4.3339E-08
Th-228	Adult	0.000762	0.01465	0.0001505	0.00008482	2.281E-08
Th-230	Infant	0.0251	0.0439	0.00374	0.000353	0.00030192
Th-230	Child	0.00153	0.00332	0.000145	0.0000154	1.18252E-05
Th-230	Teenager	0.0012	0.00332	0.0000594	0.0000068	5.7868E-06
Th-230	Adult	0.000546	0.00133	0.000022	0.00000252	0.000002518
Th-232	Infant	0.137	1.64	0.0049	0.000508	1.0375E-07
Th-232	Child	0.00846	0.15	0.000222	0.0000254	5.625E-09
Th-232	Teenager	0.00655	0.212	0.000106	0.0000129	3.25E-09
Th-232	Adult	0.00273	0.0884	0.0000377	0.00000462	1.25E-09
U-238	Infant	0.034857	0.099200924	0.000587493	0.106400438	0.000823539
U-238	Child	0.002168	0.0102901	7.95E-05	0.012760053	8.66813E-05

	Teenager	0.0017122	0.035800377	4.52E-05	0.008180034	4.33407E-05
U-238	Adult	0.0005526	0.007920077	1.81E-05	0.003270014	1.80586E-05

Inhalation Dose Coefficients (Adult)
(mrem/yr) / (pCi/m³)

Nuclide	PartSize	Class	Organ	DCF
U-238	0.1	Day	Effective	8.75E-03
U-238	0.15	Day	Effective	7.36E-03
U-238	0.2	Day	Effective	6.43E-03
U-238	0.3	Day	Effective	5.90E-03
U-238	0.5	Day	Effective	5.43E-03
U-238	1	Day	Effective	5.18E-03
U-238	2	Day	Effective	5.31E-03
U-238	3	Day	Effective	5.51E-03
U-238	5	Day	Effective	5.79E-03
U-238	10	Day	Effective	6.07E-03
U-238	20	Day	Effective	5.66E-03
U-238	50	Day	Effective	5.44E-03
U-238	0.1	Day	Bone	1.09E-01
U-238	0.15	Day	Bone	9.96E-02
U-238	0.2	Day	Bone	9.37E-02
U-238	0.3	Day	Bone	8.67E-02
U-238	0.5	Day	Bone	8.05E-02
U-238	1	Day	Bone	7.65E-02
U-238	2	Day	Bone	8.03E-02
U-238	3	Day	Bone	8.35E-02
U-238	5	Day	Bone	8.77E-02
U-238	10	Day	Bone	9.23E-02
U-238	20	Day	Bone	9.55E-02
U-238	50	Day	Bone	8.41E-02
U-238	0.1	Day	Kidney	4.48E-02
U-238	0.15	Day	Kidney	4.10E-02
U-238	0.2	Day	Kidney	3.86E-02
U-238	0.3	Day	Kidney	3.57E-02
U-238	0.5	Day	Kidney	3.32E-02
U-238	1	Day	Kidney	3.15E-02
U-238	2	Day	Kidney	3.30E-02
U-238	3	Day	Kidney	3.44E-02
U-238	5	Day	Kidney	3.61E-02
U-238	10	Day	Kidney	3.81E-02
U-238	20	Day	Kidney	3.94E-02
U-238	50	Day	Kidney	3.47E-02
U-238	0.1	Day	Liver	2.49E-04
U-238	0.15	Day	Liver	2.27E-04
U-238	0.2	Day	Liver	2.14E-04
U-238	0.3	Day	Liver	1.98E-04
U-238	0.5	Day	Liver	1.84E-04
U-238	1	Day	Liver	1.75E-04
U-238	2	Day	Liver	1.83E-04
U-238	3	Day	Liver	1.91E-04
U-238	5	Day	Liver	2.00E-04
U-238	10	Day	Liver	2.11E-04
U-238	20	Day	Liver	2.19E-04
U-238	50	Day	Liver	1.92E-04
U-238	0.1	Day	Lung	5.23E-03
U-238	0.15	Day	Lung	4.67E-03
U-238	0.2	Day	Lung	4.27E-03
U-238	0.3	Day	Lung	3.71E-03
U-238	0.5	Day	Lung	3.03E-03
U-238	1	Day	Lung	2.22E-03
U-238	2	Day	Lung	1.56E-03
U-238	3	Day	Lung	1.24E-03
U-238	5	Day	Lung	9.09E-04
U-238	10	Day	Lung	5.82E-04
U-238	20	Day	Lung	3.97E-04

U-238	50	Day	Lung	2.22E-04
U-238	0.1	Week	Effective	3.47E-02
U-238	0.15	Week	Effective	3.06E-02
U-238	0.2	Week	Effective	2.78E-02
U-238	0.3	Week	Effective	2.42E-02
U-238	0.5	Week	Effective	1.98E-02
U-238	1	Week	Effective	1.49E-02
U-238	2	Week	Effective	1.03E-02
U-238	3	Week	Effective	8.39E-03
U-238	5	Week	Effective	6.43E-03
U-238	10	Week	Effective	4.52E-03
U-238	20	Week	Effective	2.60E-03
U-238	50	Week	Effective	1.50E-03
U-238	0.1	Week	Bone	3.01E-02
U-238	0.15	Week	Bone	2.80E-02
U-238	0.2	Week	Bone	2.65E-02
U-238	0.3	Week	Bone	2.50E-02
U-238	0.5	Week	Bone	2.37E-02
U-238	1	Week	Bone	2.31E-02
U-238	2	Week	Bone	2.46E-02
U-238	3	Week	Bone	2.56E-02
U-238	5	Week	Bone	2.70E-02
U-238	10	Week	Bone	2.84E-02
U-238	20	Week	Bone	2.95E-02
U-238	50	Week	Bone	2.31E-02
U-238	0.1	Week	Kidney	1.24E-02
U-238	0.15	Week	Kidney	1.15E-02
U-238	0.2	Week	Kidney	1.09E-02
U-238	0.3	Week	Kidney	1.03E-02
U-238	0.5	Week	Kidney	9.75E-03
U-238	1	Week	Kidney	9.51E-03
U-238	2	Week	Kidney	1.01E-02
U-238	3	Week	Kidney	1.06E-02
U-238	5	Week	Kidney	1.11E-02
U-238	10	Week	Kidney	1.17E-02
U-238	20	Week	Kidney	1.21E-02
U-238	50	Week	Kidney	9.51E-03
U-238	0.1	Week	Liver	6.88E-05
U-238	0.15	Week	Liver	6.38E-05
U-238	0.2	Week	Liver	6.07E-05
U-238	0.3	Week	Liver	5.70E-05
U-238	0.5	Week	Liver	5.40E-05
U-238	1	Week	Liver	5.27E-05
U-238	2	Week	Liver	5.61E-05
U-238	3	Week	Liver	5.66E-05
U-238	5	Week	Liver	6.16E-05
U-238	10	Week	Liver	6.50E-05
U-238	20	Week	Liver	6.73E-05
U-238	50	Week	Liver	5.27E-05
U-238	0.1	Week	Lung	2.75E-01
U-238	0.15	Week	Lung	2.45E-01
U-238	0.2	Week	Lung	2.23E-01
U-238	0.3	Week	Lung	1.93E-01
U-238	0.5	Week	Lung	1.56E-01
U-238	1	Week	Lung	1.12E-01
U-238	2	Week	Lung	7.46E-02
U-238	3	Week	Lung	5.63E-02
U-238	5	Week	Lung	3.70E-02
U-238	10	Week	Lung	1.82E-02
U-238	20	Week	Lung	7.36E-03
U-238	50	Week	Lung	0.00E+00
U-238	0.1	Year	Effective	6.02E-01
U-238	0.15	Year	Effective	5.36E-01
U-238	0.2	Year	Effective	4.89E-01

	0.3	Year	Effective	4.22E-01
U-238	0.5	Year	Effective	3.42E-01
U-238	1	Year	Effective	2.51E-01
U-238	2	Year	Effective	1.64E-01
U-238	3	Year	Effective	1.26E-01
U-238	5	Year	Effective	8.75E-02
U-238	10	Year	Effective	5.01E-02
U-238	20	Year	Effective	1.82E-02
U-238	50	Year	Effective	1.49E-04
U-238	0.1	Year	Bone	1.79E-02
U-238	0.15	Year	Bone	1.60E-02
U-238	0.2	Year	Bone	1.47E-02
U-238	0.3	Year	Bone	1.28E-02
U-238	0.5	Year	Bone	1.05E-02
U-238	1	Year	Bone	7.92E-03
U-238	2	Year	Bone	5.89E-03
U-238	3	Year	Bone	4.93E-03
U-238	5	Year	Bone	3.92E-03
U-238	10	Year	Bone	2.95E-03
U-238	20	Year	Bone	2.41E-03
U-238	50	Year	Bone	1.85E-03
U-238	0.1	Year	Kidney	7.57E-03
U-238	0.15	Year	Kidney	6.76E-03
U-238	0.2	Year	Kidney	6.19E-03
U-238	0.3	Year	Kidney	5.41E-03
U-238	0.5	Year	Kidney	4.46E-03
U-238	1	Year	Kidney	3.35E-03
U-238	2	Year	Kidney	2.50E-03
U-238	3	Year	Kidney	2.08E-03
U-238	5	Year	Kidney	1.66E-03
U-238	10	Year	Kidney	1.25E-03
U-238	20	Year	Kidney	1.02E-03
U-238	50	Year	Kidney	7.82E-04
U-238	0.1	Year	Liver	4.92E-05
U-238	0.15	Year	Liver	4.41E-05
U-238	0.2	Year	Liver	4.03E-05
U-238	0.3	Year	Liver	3.50E-05
U-238	0.5	Year	Liver	2.89E-05
U-238	1	Year	Liver	2.15E-05
U-238	2	Year	Liver	1.57E-05
U-238	3	Year	Liver	1.29E-05
U-238	5	Year	Liver	1.01E-05
U-238	10	Year	Liver	7.26E-06
U-238	20	Year	Liver	5.69E-06
U-238	50	Year	Liver	4.24E-06
U-238	0.1	Year	Lung	5.12E+00
U-238	0.15	Year	Lung	4.57E+00
U-238	0.2	Year	Lung	4.17E+00
U-238	0.3	Year	Lung	3.60E+00
U-238	0.5	Year	Lung	2.92E+00
U-238	1	Year	Lung	2.08E+00
U-238	2	Year	Lung	1.39E+00
U-238	3	Year	Lung	1.05E+00
U-238	5	Year	Lung	6.91E-01
U-238	10	Year	Lung	3.39E-01
U-238	20	Year	Lung	1.37E-01
U-238	50	Year	Lung	0.00E+00
Th-230	0.1	Day	Effective	5.88E-01
Th-230	0.15	Day	Effective	4.65E-01
Th-230	0.2	Day	Effective	3.93E-01
Th-230	0.3	Day	Effective	3.65E-01
Th-230	0.5	Day	Effective	3.40E-01
Th-230	1	Day	Effective	3.26E-01
Th-230	2	Day	Effective	3.30E-01
Th-230				

	3	Day	Effective	3.39E-01
Th-230	5	Day	Effective	3.56E-01
Th-230	10	Day	Effective	3.64E-01
Th-230	20	Day	Effective	3.02E-01
Th-230	50	Day	Effective	2.66E-01
Th-230	0.1	Day	Bone	8.73E+00
Th-230	0.15	Day	Bone	8.53E+00
Th-230	0.2	Day	Bone	8.42E+00
Th-230	0.3	Day	Bone	8.28E+00
Th-230	0.5	Day	Bone	8.16E+00
Th-230	1	Day	Bone	7.99E+00
Th-230	2	Day	Bone	8.08E+00
Th-230	3	Day	Bone	8.12E+00
Th-230	5	Day	Bone	8.21E+00
Th-230	10	Day	Bone	8.36E+00
Th-230	20	Day	Bone	8.53E+00
Th-230	50	Day	Bone	6.66E+00
Th-230	0.1	Day	Kidney	1.65E-03
Th-230	0.15	Day	Kidney	1.61E-03
Th-230	0.2	Day	Kidney	1.58E-03
Th-230	0.3	Day	Kidney	1.56E-03
Th-230	0.5	Day	Kidney	1.54E-03
Th-230	1	Day	Kidney	1.51E-03
Th-230	2	Day	Kidney	1.53E-03
Th-230	3	Day	Kidney	1.54E-03
Th-230	5	Day	Kidney	1.55E-03
Th-230	10	Day	Kidney	1.58E-03
Th-230	20	Day	Kidney	1.61E-03
Th-230	50	Day	Kidney	1.26E-03
Th-230	0.1	Day	Liver	1.44E-02
Th-230	0.15	Day	Liver	1.41E-02
Th-230	0.2	Day	Liver	1.39E-02
Th-230	0.3	Day	Liver	1.37E-02
Th-230	0.5	Day	Liver	1.35E-02
Th-230	1	Day	Liver	1.32E-02
Th-230	2	Day	Liver	1.33E-02
Th-230	3	Day	Liver	1.34E-02
Th-230	5	Day	Liver	1.36E-02
Th-230	10	Day	Liver	1.38E-02
Th-230	20	Day	Liver	1.41E-02
Th-230	50	Day	Liver	1.10E-02
Th-230	0.1	Day	Lung	9.40E-02
Th-230	0.15	Day	Lung	8.75E-02
Th-230	0.2	Day	Lung	8.29E-02
Th-230	0.3	Day	Lung	7.67E-02
Th-230	0.5	Day	Lung	6.92E-02
Th-230	1	Day	Lung	5.96E-02
Th-230	2	Day	Lung	5.09E-02
Th-230	3	Day	Lung	4.61E-02
Th-230	5	Day	Lung	4.04E-02
Th-230	10	Day	Lung	3.34E-02
Th-230	20	Day	Lung	2.71E-02
Th-230	50	Day	Lung	1.99E-03
Th-230	0.1	Week	Effective	5.88E-01
Th-230	0.15	Week	Effective	4.65E-01
Th-230	0.2	Week	Effective	3.93E-01
Th-230	0.3	Week	Effective	3.65E-01
Th-230	0.5	Week	Effective	3.40E-01
Th-230	1	Week	Effective	3.26E-01
Th-230	2	Week	Effective	3.30E-01
Th-230	3	Week	Effective	3.39E-01
Th-230	5	Week	Effective	3.56E-01
Th-230	10	Week	Effective	3.64E-01
Th-230	20	Week	Effective	3.02E-01
Th-230				

	50	Week	Effective	2.66E-01
Th-230	0.1	Week	Bone	1.09E+01
Th-230	0.15	Week	Bone	1.01E+01
Th-230	0.2	Week	Bone	9.62E+00
Th-230	0.3	Week	Bone	8.99E+00
Th-230	0.5	Week	Bone	8.41E+00
Th-230	1	Week	Bone	7.99E+00
Th-230	2	Week	Bone	8.21E+00
Th-230	3	Week	Bone	8.41E+00
Th-230	5	Week	Bone	8.69E+00
Th-230	10	Week	Bone	9.02E+00
Th-230	20	Week	Bone	9.25E+00
Th-230	50	Week	Bone	6.66E+00
Th-230	0.1	Week	Kidney	2.07E-03
Th-230	0.15	Week	Kidney	1.92E-03
Th-230	0.2	Week	Kidney	1.82E-03
Th-230	0.3	Week	Kidney	1.70E-03
Th-230	0.5	Week	Kidney	1.59E-03
Th-230	1	Week	Kidney	1.51E-03
Th-230	2	Week	Kidney	1.55E-03
Th-230	3	Week	Kidney	1.59E-03
Th-230	5	Week	Kidney	1.64E-03
Th-230	10	Week	Kidney	1.70E-03
Th-230	20	Week	Kidney	1.76E-03
Th-230	50	Week	Kidney	1.26E-03
Th-230	0.1	Week	Liver	1.81E-02
Th-230	0.15	Week	Liver	1.67E-02
Th-230	0.2	Week	Liver	1.59E-02
Th-230	0.3	Week	Liver	1.49E-02
Th-230	0.5	Week	Liver	1.39E-02
Th-230	1	Week	Liver	1.32E-02
Th-230	2	Week	Liver	1.36E-02
Th-230	3	Week	Liver	1.39E-02
Th-230	5	Week	Liver	1.44E-02
Th-230	10	Week	Liver	1.49E-02
Th-230	20	Week	Liver	1.53E-02
Th-230	50	Week	Liver	1.10E-02
Th-230	0.1	Week	Lung	1.44E-01
Th-230	0.15	Week	Lung	1.29E-01
Th-230	0.2	Week	Lung	1.17E-01
Th-230	0.3	Week	Lung	1.02E-01
Th-230	0.5	Week	Lung	8.27E-02
Th-230	1	Week	Lung	5.96E-02
Th-230	2	Week	Lung	4.06E-02
Th-230	3	Week	Lung	3.12E-02
Th-230	5	Week	Lung	2.14E-02
Th-230	10	Week	Lung	1.18E-02
Th-230	20	Week	Lung	6.35E-03
Th-230	50	Week	Lung	1.99E-03
Th-230	0.1	Year	Effective	6.11E-01
Th-230	0.15	Year	Effective	5.43E-01
Th-230	0.2	Year	Effective	4.94E-01
Th-230	0.3	Year	Effective	4.28E-01
Th-230	0.5	Year	Effective	3.50E-01
Th-230	1	Year	Effective	2.62E-01
Th-230	2	Year	Effective	1.80E-01
Th-230	3	Year	Effective	1.44E-01
Th-230	5	Year	Effective	1.09E-01
Th-230	10	Year	Effective	7.50E-02
Th-230	20	Year	Effective	4.35E-02
Th-230	50	Year	Effective	2.57E-02
Th-230	0.1	Year	Bone	7.35E+00
Th-230	0.15	Year	Bone	6.57E+00
Th-230	0.2	Year	Bone	6.02E+00
Th-230				

	0.3	Year	Bone	5.24E+00
Th-230	0.5	Year	Bone	4.32E+00
Th-230	1	Year	Bone	3.22E+00
Th-230	2	Year	Bone	2.36E+00
Th-230	3	Year	Bone	1.95E+00
Th-230	5	Year	Bone	1.52E+00
Th-230	10	Year	Bone	1.11E+00
Th-230	20	Year	Bone	8.77E-01
Th-230	50	Year	Bone	6.44E-01
Th-230	0.1	Year	Kidney	1.45E-03
Th-230	0.15	Year	Kidney	1.30E-03
Th-230	0.2	Year	Kidney	1.19E-03
Th-230	0.3	Year	Kidney	1.04E-03
Th-230	0.5	Year	Kidney	8.53E-04
Th-230	1	Year	Kidney	6.36E-04
Th-230	2	Year	Kidney	4.67E-04
Th-230	3	Year	Kidney	3.66E-04
Th-230	5	Year	Kidney	3.01E-04
Th-230	10	Year	Kidney	2.19E-04
Th-230	20	Year	Kidney	1.73E-04
Th-230	50	Year	Kidney	1.27E-04
Th-230	0.1	Year	Liver	1.28E-02
Th-230	0.15	Year	Liver	1.14E-02
Th-230	0.2	Year	Liver	1.04E-02
Th-230	0.3	Year	Liver	9.10E-03
Th-230	0.5	Year	Liver	7.50E-03
Th-230	1	Year	Liver	5.59E-03
Th-230	2	Year	Liver	4.10E-03
Th-230	3	Year	Liver	3.39E-03
Th-230	5	Year	Liver	2.65E-03
Th-230	10	Year	Liver	1.93E-03
Th-230	20	Year	Liver	1.52E-03
Th-230	50	Year	Liver	1.12E-03
Th-230	0.1	Year	Lung	2.73E+00
Th-230	0.15	Year	Lung	2.43E+00
Th-230	0.2	Year	Lung	2.22E+00
Th-230	0.3	Year	Lung	1.92E+00
Th-230	0.5	Year	Lung	1.55E+00
Th-230	1	Year	Lung	1.11E+00
Th-230	2	Year	Lung	7.41E-01
Th-230	3	Year	Lung	5.59E-01
Th-230	5	Year	Lung	3.68E-01
Th-230	10	Year	Lung	1.81E-01
Th-230	20	Year	Lung	7.31E-02
Th-230	50	Year	Lung	0.00E+00
Po-210	0.1	Day	Effective	1.58E-02
Po-210	0.15	Day	Effective	1.31E-02
Po-210	0.2	Day	Effective	1.14E-02
Po-210	0.3	Day	Effective	1.05E-02
Po-210	0.5	Day	Effective	9.76E-03
Po-210	1	Day	Effective	9.50E-03
Po-210	2	Day	Effective	9.97E-03
Po-210	3	Day	Effective	1.05E-02
Po-210	5	Day	Effective	1.11E-02
Po-210	10	Day	Effective	1.18E-02
Po-210	20	Day	Effective	1.11E-02
Po-210	50	Day	Effective	1.07E-02
Po-210	0.1	Day	Bone	2.92E-03
Po-210	0.15	Day	Bone	2.68E-03
Po-210	0.2	Day	Bone	2.52E-03
Po-210	0.3	Day	Bone	2.34E-03
Po-210	0.5	Day	Bone	2.18E-03
Po-210	1	Day	Bone	2.09E-03
Po-210	2	Day	Bone	2.22E-03

	3	Day	Bone	2.31E-03
Po-210	5	Day	Bone	2.44E-03
Po-210	10	Day	Bone	2.58E-03
Po-210	20	Day	Bone	2.68E-03
Po-210	50	Day	Bone	2.37E-03
Po-210	0.1	Day	Kidney	6.15E-02
Po-210	0.15	Day	Kidney	5.63E-02
Po-210	0.2	Day	Kidney	5.31E-02
Po-210	0.3	Day	Kidney	4.92E-02
Po-210	0.5	Day	Kidney	4.59E-02
Po-210	1	Day	Kidney	4.40E-02
Po-210	2	Day	Kidney	4.67E-02
Po-210	3	Day	Kidney	4.87E-02
Po-210	5	Day	Kidney	5.14E-02
Po-210	10	Day	Kidney	5.43E-02
Po-210	20	Day	Kidney	5.63E-02
Po-210	50	Day	Kidney	4.99E-02
Po-210	0.1	Day	Liver	1.13E-02
Po-210	0.15	Day	Liver	1.04E-02
Po-210	0.2	Day	Liver	9.77E-03
Po-210	0.3	Day	Liver	9.06E-03
Po-210	0.5	Day	Liver	8.45E-03
Po-210	1	Day	Liver	8.10E-03
Po-210	2	Day	Liver	8.59E-03
Po-210	3	Day	Liver	8.97E-03
Po-210	5	Day	Liver	9.46E-03
Po-210	10	Day	Liver	1.00E-02
Po-210	20	Day	Liver	1.04E-02
Po-210	50	Day	Liver	9.18E-03
Po-210	0.1	Day	Lung	1.86E-03
Po-210	0.15	Day	Lung	1.65E-03
Po-210	0.2	Day	Lung	1.52E-03
Po-210	0.3	Day	Lung	1.33E-03
Po-210	0.5	Day	Lung	1.10E-03
Po-210	1	Day	Lung	8.21E-04
Po-210	2	Day	Lung	6.03E-04
Po-210	3	Day	Lung	4.97E-04
Po-210	5	Day	Lung	3.88E-04
Po-210	10	Day	Lung	2.81E-04
Po-210	20	Day	Lung	2.21E-04
Po-210	50	Day	Lung	1.37E-04
Po-210	0.1	Week	Effective	1.85E-02
Po-210	0.15	Week	Effective	1.61E-02
Po-210	0.2	Week	Effective	1.44E-02
Po-210	0.3	Week	Effective	1.27E-02
Po-210	0.5	Week	Effective	1.08E-02
Po-210	1	Week	Effective	8.84E-03
Po-210	2	Week	Effective	7.23E-03
Po-210	3	Week	Effective	6.63E-03
Po-210	5	Week	Effective	6.08E-03
Po-210	10	Week	Effective	5.54E-03
Po-210	20	Week	Effective	4.42E-03
Po-210	50	Week	Effective	3.79E-03
Po-210	0.1	Week	Bone	8.40E-04
Po-210	0.15	Week	Bone	7.66E-04
Po-210	0.2	Week	Bone	7.55E-04
Po-210	0.3	Week	Bone	7.25E-04
Po-210	0.5	Week	Bone	7.14E-04
Po-210	1	Week	Bone	7.40E-04
Po-210	2	Week	Bone	6.39E-04
Po-210	3	Week	Bone	6.02E-04
Po-210	5	Week	Bone	5.76E-04
Po-210	10	Week	Bone	1.08E-03
Po-210	20	Week	Bone	1.11E-03
Po-210				

	50	Week	Bone	9.13E-04
Po-210	0.1	Week	Kidney	1.59E-02
Po-210	0.15	Week	Kidney	1.49E-02
Po-210	0.2	Week	Kidney	1.43E-02
Po-210	0.3	Week	Kidney	1.37E-02
Po-210	0.5	Week	Kidney	1.35E-02
Po-210	1	Week	Kidney	1.40E-02
Po-210	2	Week	Kidney	1.59E-02
Po-210	3	Week	Kidney	1.71E-02
Po-210	5	Week	Kidney	1.85E-02
Po-210	10	Week	Kidney	2.00E-02
Po-210	20	Week	Kidney	2.09E-02
Po-210	50	Week	Kidney	1.73E-02
Po-210	0.1	Week	Liver	2.62E-03
Po-210	0.15	Week	Liver	2.45E-03
Po-210	0.2	Week	Liver	2.36E-03
Po-210	0.3	Week	Liver	2.26E-03
Po-210	0.5	Week	Liver	2.23E-03
Po-210	1	Week	Liver	2.31E-03
Po-210	2	Week	Liver	2.62E-03
Po-210	3	Week	Liver	2.81E-03
Po-210	5	Week	Liver	3.05E-03
Po-210	10	Week	Liver	3.29E-03
Po-210	20	Week	Liver	3.45E-03
Po-210	50	Week	Liver	2.85E-03
Po-210	0.1	Week	Lung	1.18E-01
Po-210	0.15	Week	Lung	1.05E-01
Po-210	0.2	Week	Lung	9.62E-02
Po-210	0.3	Week	Lung	8.32E-02
Po-210	0.5	Week	Lung	6.74E-02
Po-210	1	Week	Lung	4.81E-02
Po-210	2	Week	Lung	3.21E-02
Po-210	3	Week	Lung	2.42E-02
Po-210	5	Week	Lung	1.59E-02
Po-210	10	Week	Lung	7.82E-03
Po-210	20	Week	Lung	3.17E-03
Po-210	50	Week	Lung	0.00E+00
Po-210	0.1	Year	Effective	1.86E-02
Po-210	0.15	Year	Effective	1.61E-02
Po-210	0.2	Year	Effective	1.44E-02
Po-210	0.3	Year	Effective	1.27E-02
Po-210	0.5	Year	Effective	1.08E-02
Po-210	1	Year	Effective	8.84E-03
Po-210	2	Year	Effective	7.23E-03
Po-210	3	Year	Effective	6.63E-03
Po-210	5	Year	Effective	6.08E-03
Po-210	10	Year	Effective	5.54E-03
Po-210	20	Year	Effective	4.42E-03
Po-210	50	Year	Effective	3.79E-03
Po-210	0.1	Year	Bone	8.40E-04
Po-210	0.15	Year	Bone	7.88E-04
Po-210	0.2	Year	Bone	7.55E-04
Po-210	0.3	Year	Bone	7.25E-04
Po-210	0.5	Year	Bone	7.14E-04
Po-210	1	Year	Bone	7.40E-04
Po-210	2	Year	Bone	8.39E-04
Po-210	3	Year	Bone	9.02E-04
Po-210	5	Year	Bone	9.76E-04
Po-210	10	Year	Bone	1.06E-03
Po-210	20	Year	Bone	1.11E-03
Po-210	50	Year	Bone	9.13E-04
Po-210	0.1	Year	Kidney	1.59E-02
Po-210	0.15	Year	Kidney	1.49E-02
Po-210	0.2	Year	Kidney	1.43E-02
Po-210				

	0.3	Year	Kidney	1.37E-02
Po-210	0.5	Year	Kidney	1.35E-02
Po-210	1	Year	Kidney	1.40E-02
Po-210	2	Year	Kidney	1.59E-02
Po-210	3	Year	Kidney	1.71E-02
Po-210	5	Year	Kidney	1.85E-02
Po-210	10	Year	Kidney	2.00E-02
Po-210	20	Year	Kidney	2.09E-02
Po-210	50	Year	Kidney	1.73E-02
Po-210	0.1	Year	Liver	2.62E-03
Po-210	0.15	Year	Liver	2.45E-03
Po-210	0.2	Year	Liver	2.36E-03
Po-210	0.3	Year	Liver	2.26E-03
Po-210	0.5	Year	Liver	2.23E-03
Po-210	1	Year	Liver	2.31E-03
Po-210	2	Year	Liver	2.62E-03
Po-210	3	Year	Liver	2.81E-03
Po-210	5	Year	Liver	3.05E-03
Po-210	10	Year	Liver	3.29E-03
Po-210	20	Year	Liver	3.45E-03
Po-210	50	Year	Liver	2.86E-03
Po-210	0.1	Year	Lung	1.18E-01
Po-210	0.15	Year	Lung	1.05E-01
Po-210	0.2	Year	Lung	9.62E-02
Po-210	0.3	Year	Lung	8.32E-02
Po-210	0.5	Year	Lung	6.74E-02
Po-210	1	Year	Lung	4.81E-02
Po-210	2	Year	Lung	3.21E-02
Po-210	3	Year	Lung	2.42E-02
Po-210	5	Year	Lung	1.59E-02
Po-210	10	Year	Lung	7.82E-03
Po-210	20	Year	Lung	3.17E-03
Po-210	50	Year	Lung	0.00E+00
Bi-210	0.1	Day	Effective	4.21E-05
Bi-210	0.15	Day	Effective	3.60E-05
Bi-210	0.2	Day	Effective	3.20E-05
Bi-210	0.3	Day	Effective	2.87E-05
Bi-210	0.5	Day	Effective	2.51E-05
Bi-210	1	Day	Effective	2.20E-05
Bi-210	2	Day	Effective	2.01E-05
Bi-210	3	Day	Effective	1.98E-05
Bi-210	5	Day	Effective	1.96E-05
Bi-210	10	Day	Effective	1.95E-05
Bi-210	20	Day	Effective	1.74E-05
Bi-210	50	Day	Effective	1.63E-05
Bi-210	0.1	Day	Bone	8.41E-07
Bi-210	0.15	Day	Bone	7.68E-07
Bi-210	0.2	Day	Bone	7.20E-07
Bi-210	0.3	Day	Bone	6.62E-07
Bi-210	0.5	Day	Bone	6.07E-07
Bi-210	1	Day	Bone	5.66E-07
Bi-210	2	Day	Bone	5.81E-07
Bi-210	3	Day	Bone	5.98E-07
Bi-210	5	Day	Bone	6.21E-07
Bi-210	10	Day	Bone	6.47E-07
Bi-210	20	Day	Bone	6.66E-07
Bi-210	50	Day	Bone	5.85E-07
Bi-210	0.1	Day	Kidney	3.12E-04
Bi-210	0.15	Day	Kidney	2.85E-04
Bi-210	0.2	Day	Kidney	2.67E-04
Bi-210	0.3	Day	Kidney	2.46E-04
Bi-210	0.5	Day	Kidney	2.25E-04
Bi-210	1	Day	Kidney	2.10E-04
Bi-210	2	Day	Kidney	2.16E-04
Bi-210				

	3	Day	Kidney	2.22E-04
Bi-210	5	Day	Kidney	2.30E-04
Bi-210	10	Day	Kidney	2.40E-04
Bi-210	20	Day	Kidney	2.47E-04
Bi-210	50	Day	Kidney	2.17E-04
Bi-210	0.1	Day	Liver	2.30E-06
Bi-210	0.15	Day	Liver	2.10E-06
Bi-210	0.2	Day	Liver	1.97E-06
Bi-210	0.3	Day	Liver	1.81E-06
Bi-210	0.5	Day	Liver	1.66E-06
Bi-210	1	Day	Liver	1.55E-06
Bi-210	2	Day	Liver	1.59E-06
Bi-210	3	Day	Liver	1.64E-06
Bi-210	5	Day	Liver	1.70E-06
Bi-210	10	Day	Liver	1.77E-06
Bi-210	20	Day	Liver	1.82E-06
Bi-210	50	Day	Liver	1.60E-06
Bi-210	0.1	Day	Lung	1.48E-04
Bi-210	0.15	Day	Lung	1.32E-04
Bi-210	0.2	Day	Lung	1.21E-04
Bi-210	0.3	Day	Lung	1.06E-04
Bi-210	0.5	Day	Lung	8.70E-05
Bi-210	1	Day	Lung	6.51E-05
Bi-210	2	Day	Lung	4.90E-05
Bi-210	3	Day	Lung	3.98E-05
Bi-210	5	Day	Lung	3.13E-05
Bi-210	10	Day	Lung	2.30E-05
Bi-210	20	Day	Lung	1.83E-05
Bi-210	50	Day	Lung	1.30E-05
Bi-210	0.1	Week	Effective	5.41E-04
Bi-210	0.15	Week	Effective	4.70E-04
Bi-210	0.2	Week	Effective	4.23E-04
Bi-210	0.3	Week	Effective	3.72E-04
Bi-210	0.5	Week	Effective	3.13E-04
Bi-210	1	Week	Effective	2.51E-04
Bi-210	2	Week	Effective	1.98E-04
Bi-210	3	Week	Effective	1.02E-04
Bi-210	5	Week	Effective	1.58E-04
Bi-210	10	Week	Effective	1.39E-04
Bi-210	20	Week	Effective	1.09E-04
Bi-210	50	Week	Effective	8.24E-05
Bi-210	0.1	Week	Bone	6.35E-06
Bi-210	0.15	Week	Bone	6.02E-06
Bi-210	0.2	Week	Bone	5.93E-06
Bi-210	0.3	Week	Bone	6.08E-06
Bi-210	0.5	Week	Bone	6.74E-06
Bi-210	1	Week	Bone	8.29E-06
Bi-210	2	Week	Bone	1.11E-05
Bi-210	3	Week	Bone	1.27E-05
Bi-210	5	Week	Bone	1.46E-05
Bi-210	10	Week	Bone	1.65E-05
Bi-210	20	Week	Bone	1.78E-05
Bi-210	50	Week	Bone	1.74E-05
Bi-210	0.1	Week	Kidney	7.18E-04
Bi-210	0.15	Week	Kidney	6.88E-04
Bi-210	0.2	Week	Kidney	6.75E-04
Bi-210	0.3	Week	Kidney	6.75E-04
Bi-210	0.5	Week	Kidney	7.04E-04
Bi-210	1	Week	Kidney	7.88E-04
Bi-210	2	Week	Kidney	9.51E-04
Bi-210	3	Week	Kidney	1.05E-03
Bi-210	5	Week	Kidney	1.16E-03
Bi-210	10	Week	Kidney	1.28E-03
Bi-210	20	Week	Kidney	1.35E-03
Bi-210				

	50	Week	Kidney	1.10E-03
Bi-210	0.1	Week	Liver	1.73E-05
Bi-210	0.15	Week	Liver	1.64E-05
Bi-210	0.2	Week	Liver	1.62E-05
Bi-210	0.3	Week	Liver	1.66E-05
Bi-210	0.5	Week	Liver	1.84E-05
Bi-210	1	Week	Liver	2.26E-05
Bi-210	2	Week	Liver	3.01E-05
Bi-210	3	Week	Liver	3.46E-05
Bi-210	5	Week	Liver	3.97E-05
Bi-210	10	Week	Liver	4.50E-05
Bi-210	20	Week	Liver	4.84E-05
Bi-210	50	Week	Liver	4.75E-05
Bi-210	0.1	Week	Lung	3.93E-03
Bi-210	0.15	Week	Lung	3.51E-03
Bi-210	0.2	Week	Lung	3.20E-03
Bi-210	0.3	Week	Lung	2.77E-03
Bi-210	0.5	Week	Lung	2.24E-03
Bi-210	1	Week	Lung	1.60E-03
Bi-210	2	Week	Lung	1.07E-03
Bi-210	3	Week	Lung	8.06E-04
Bi-210	5	Week	Lung	5.30E-04
Bi-210	10	Week	Lung	2.60E-04
Bi-210	20	Week	Lung	1.05E-04
Bi-210	50	Week	Lung	0.00E+00
Bi-210	0.1	Year	Effective	5.41E-04
Bi-210	0.15	Year	Effective	4.70E-04
Bi-210	0.2	Year	Effective	4.23E-04
Bi-210	0.3	Year	Effective	3.72E-04
Bi-210	0.5	Year	Effective	3.13E-04
Bi-210	1	Year	Effective	2.51E-04
Bi-210	2	Year	Effective	1.98E-04
Bi-210	3	Year	Effective	1.02E-04
Bi-210	5	Year	Effective	1.58E-04
Bi-210	10	Year	Effective	1.39E-04
Bi-210	20	Year	Effective	1.09E-04
Bi-210	50	Year	Effective	9.24E-05
Bi-210	0.1	Year	Bone	6.35E-06
Bi-210	0.15	Year	Bone	6.02E-06
Bi-210	0.2	Year	Bone	5.93E-06
Bi-210	0.3	Year	Bone	6.08E-06
Bi-210	0.5	Year	Bone	6.74E-06
Bi-210	1	Year	Bone	8.29E-06
Bi-210	2	Year	Bone	1.11E-05
Bi-210	3	Year	Bone	1.27E-05
Bi-210	5	Year	Bone	1.46E-05
Bi-210	10	Year	Bone	1.65E-05
Bi-210	20	Year	Bone	1.78E-05
Bi-210	50	Year	Bone	1.74E-05
Bi-210	0.1	Year	Kidney	7.18E-04
Bi-210	0.15	Year	Kidney	6.88E-04
Bi-210	0.2	Year	Kidney	6.75E-04
Bi-210	0.3	Year	Kidney	6.75E-04
Bi-210	0.5	Year	Kidney	7.04E-04
Bi-210	1	Year	Kidney	7.88E-04
Bi-210	2	Year	Kidney	9.51E-04
Bi-210	3	Year	Kidney	1.05E-03
Bi-210	5	Year	Kidney	1.16E-03
Bi-210	10	Year	Kidney	1.28E-03
Bi-210	20	Year	Kidney	1.35E-03
Bi-210	50	Year	Kidney	1.10E-03
Bi-210	0.1	Year	Liver	1.73E-05
Bi-210	0.15	Year	Liver	1.64E-05
Bi-210	0.2	Year	Liver	1.62E-05

	0.3	Year	Liver	1.66E-05
Bi-210	0.5	Year	Liver	1.84E-05
Bi-210	1	Year	Liver	2.26E-05
Bi-210	2	Year	Liver	3.01E-05
Bi-210	3	Year	Liver	3.48E-05
Bi-210	5	Year	Liver	3.97E-05
Bi-210	10	Year	Liver	4.60E-05
Bi-210	20	Year	Liver	4.84E-05
Bi-210	50	Year	Liver	4.75E-05
Bi-210	0.1	Year	Lung	3.93E-03
Bi-210	0.15	Year	Lung	3.51E-03
Bi-210	0.2	Year	Lung	3.20E-03
Bi-210	0.3	Year	Lung	2.77E-03
Bi-210	0.5	Year	Lung	2.24E-03
Bi-210	1	Year	Lung	1.60E-03
Bi-210	2	Year	Lung	1.07E-03
Bi-210	3	Year	Lung	8.06E-04
Bi-210	5	Year	Lung	5.30E-04
Bi-210	10	Year	Lung	2.60E-04
Bi-210	20	Year	Lung	1.05E-04
Bi-210	50	Year	Lung	0.00E+00
Pb-210	0.1	Day	Effective	1.49E-02
Pb-210	0.15	Day	Effective	1.24E-02
Pb-210	0.2	Day	Effective	1.08E-02
Pb-210	0.3	Day	Effective	1.00E-02
Pb-210	0.5	Day	Effective	9.35E-03
Pb-210	1	Day	Effective	9.24E-03
Pb-210	2	Day	Effective	9.86E-03
Pb-210	3	Day	Effective	1.04E-02
Pb-210	5	Day	Effective	1.12E-02
Pb-210	10	Day	Effective	1.19E-02
Pb-210	20	Day	Effective	1.13E-02
Pb-210	50	Day	Effective	1.10E-02
Pb-210	0.1	Day	Bone	1.01E-01
Pb-210	0.15	Day	Bone	9.25E-02
Pb-210	0.2	Day	Bone	8.72E-02
Pb-210	0.3	Day	Bone	8.12E-02
Pb-210	0.5	Day	Bone	7.62E-02
Pb-210	1	Day	Bone	7.40E-02
Pb-210	2	Day	Bone	7.97E-02
Pb-210	3	Day	Bone	8.39E-02
Pb-210	5	Day	Bone	8.91E-02
Pb-210	10	Day	Bone	9.48E-02
Pb-210	20	Day	Bone	9.87E-02
Pb-210	50	Day	Bone	8.88E-02
Pb-210	0.1	Day	Kidney	3.65E-02
Pb-210	0.15	Day	Kidney	3.34E-02
Pb-210	0.2	Day	Kidney	3.15E-02
Pb-210	0.3	Day	Kidney	2.92E-02
Pb-210	0.5	Day	Kidney	2.73E-02
Pb-210	1	Day	Kidney	2.63E-02
Pb-210	2	Day	Kidney	2.81E-02
Pb-210	3	Day	Kidney	2.94E-02
Pb-210	5	Day	Kidney	3.11E-02
Pb-210	10	Day	Kidney	3.30E-02
Pb-210	20	Day	Kidney	3.42E-02
Pb-210	50	Day	Kidney	3.07E-02
Pb-210	0.1	Day	Liver	7.57E-02
Pb-210	0.15	Day	Liver	6.94E-02
Pb-210	0.2	Day	Liver	6.54E-02
Pb-210	0.3	Day	Liver	6.09E-02
Pb-210	0.5	Day	Liver	5.72E-02
Pb-210	1	Day	Liver	5.55E-02
Pb-210	2	Day	Liver	5.98E-02
Pb-210				

	3	Day	Liver	6.29E-02
Pb-210	5	Day	Liver	6.68E-02
Pb-210	10	Day	Liver	7.11E-02
Pb-210	20	Day	Liver	7.40E-02
Pb-210	50	Day	Liver	6.66E-02
Pb-210	0.1	Day	Lung	1.42E-03
Pb-210	0.15	Day	Lung	1.30E-03
Pb-210	0.2	Day	Lung	1.23E-03
Pb-210	0.3	Day	Lung	1.14E-03
Pb-210	0.5	Day	Lung	1.07E-03
Pb-210	1	Day	Lung	1.04E-03
Pb-210	2	Day	Lung	1.12E-03
Pb-210	3	Day	Lung	1.18E-03
Pb-210	5	Day	Lung	1.25E-03
Pb-210	10	Day	Lung	1.33E-03
Pb-210	20	Day	Lung	1.39E-03
Pb-210	50	Day	Lung	1.25E-03
Pb-210	0.1	Week	Effective	1.48E-02
Pb-210	0.15	Week	Effective	1.24E-02
Pb-210	0.2	Week	Effective	1.08E-02
Pb-210	0.3	Week	Effective	1.00E-02
Pb-210	0.5	Week	Effective	9.35E-03
Pb-210	1	Week	Effective	9.24E-03
Pb-210	2	Week	Effective	9.85E-03
Pb-210	3	Week	Effective	1.04E-02
Pb-210	5	Week	Effective	1.12E-02
Pb-210	10	Week	Effective	1.19E-02
Pb-210	20	Week	Effective	1.13E-02
Pb-210	50	Week	Effective	1.10E-02
Pb-210	0.1	Week	Bone	1.01E-01
Pb-210	0.15	Week	Bone	9.25E-02
Pb-210	0.2	Week	Bone	8.72E-02
Pb-210	0.3	Week	Bone	8.12E-02
Pb-210	0.5	Week	Bone	7.62E-02
Pb-210	1	Week	Bone	7.40E-02
Pb-210	2	Week	Bone	7.97E-02
Pb-210	3	Week	Bone	8.39E-02
Pb-210	5	Week	Bone	8.91E-02
Pb-210	10	Week	Bone	9.48E-02
Pb-210	20	Week	Bone	9.67E-02
Pb-210	50	Week	Bone	8.85E-02
Pb-210	0.1	Week	Kidney	3.65E-02
Pb-210	0.15	Week	Kidney	3.34E-02
Pb-210	0.2	Week	Kidney	3.15E-02
Pb-210	0.3	Week	Kidney	2.92E-02
Pb-210	0.5	Week	Kidney	2.73E-02
Pb-210	1	Week	Kidney	2.63E-02
Pb-210	2	Week	Kidney	2.81E-02
Pb-210	3	Week	Kidney	2.94E-02
Pb-210	5	Week	Kidney	3.11E-02
Pb-210	10	Week	Kidney	3.30E-02
Pb-210	20	Week	Kidney	3.42E-02
Pb-210	50	Week	Kidney	3.07E-02
Pb-210	0.1	Week	Liver	7.57E-02
Pb-210	0.15	Week	Liver	6.94E-02
Pb-210	0.2	Week	Liver	6.54E-02
Pb-210	0.3	Week	Liver	6.09E-02
Pb-210	0.5	Week	Liver	5.72E-02
Pb-210	1	Week	Liver	5.55E-02
Pb-210	2	Week	Liver	5.98E-02
Pb-210	3	Week	Liver	6.29E-02
Pb-210	5	Week	Liver	6.68E-02
Pb-210	10	Week	Liver	7.11E-02
Pb-210	20	Week	Liver	7.40E-02
Pb-210				

	50	Week	Liver	6.86E-02
Pb-210	0.1	Week	Lung	1.42E-03
Pb-210	0.15	Week	Lung	1.30E-03
Pb-210	0.2	Week	Lung	1.23E-03
Pb-210	0.3	Week	Lung	1.14E-03
Pb-210	0.5	Week	Lung	1.07E-03
Pb-210	1	Week	Lung	1.04E-03
Pb-210	2	Week	Lung	1.12E-03
Pb-210	3	Week	Lung	1.18E-03
Pb-210	5	Week	Lung	1.25E-03
Pb-210	10	Week	Lung	1.33E-03
Pb-210	20	Week	Lung	1.39E-03
Pb-210	50	Week	Lung	1.25E-03
Pb-210	0.1	Year	Effective	1.49E-02
Pb-210	0.15	Year	Effective	1.24E-02
Pb-210	0.2	Year	Effective	1.08E-02
Pb-210	0.3	Year	Effective	1.00E-02
Pb-210	0.5	Year	Effective	9.35E-03
Pb-210	1	Year	Effective	9.24E-03
Pb-210	2	Year	Effective	9.86E-03
Pb-210	3	Year	Effective	1.04E-02
Pb-210	5	Year	Effective	1.12E-02
Pb-210	10	Year	Effective	1.19E-02
Pb-210	20	Year	Effective	1.13E-02
Pb-210	50	Year	Effective	1.10E-02
Pb-210	0.1	Year	Bone	1.01E-01
Pb-210	0.15	Year	Bone	9.25E-02
Pb-210	0.2	Year	Bone	8.72E-02
Pb-210	0.3	Year	Bone	8.12E-02
Pb-210	0.5	Year	Bone	7.62E-02
Pb-210	1	Year	Bone	7.40E-02
Pb-210	2	Year	Bone	7.97E-02
Pb-210	3	Year	Bone	8.39E-02
Pb-210	5	Year	Bone	8.91E-02
Pb-210	10	Year	Bone	9.48E-02
Pb-210	20	Year	Bone	9.87E-02
Pb-210	50	Year	Bone	8.88E-02
Pb-210	0.1	Year	Kidney	3.65E-02
Pb-210	0.15	Year	Kidney	3.34E-02
Pb-210	0.2	Year	Kidney	3.15E-02
Pb-210	0.3	Year	Kidney	2.92E-02
Pb-210	0.5	Year	Kidney	2.73E-02
Pb-210	1	Year	Kidney	2.63E-02
Pb-210	2	Year	Kidney	2.81E-02
Pb-210	3	Year	Kidney	2.94E-02
Pb-210	5	Year	Kidney	3.11E-02
Pb-210	10	Year	Kidney	3.30E-02
Pb-210	20	Year	Kidney	3.42E-02
Pb-210	50	Year	Kidney	3.07E-02
Pb-210	0.1	Year	Liver	7.57E-02
Pb-210	0.15	Year	Liver	6.94E-02
Pb-210	0.2	Year	Liver	6.54E-02
Pb-210	0.3	Year	Liver	6.09E-02
Pb-210	0.5	Year	Liver	5.72E-02
Pb-210	1	Year	Liver	5.56E-02
Pb-210	2	Year	Liver	5.98E-02
Pb-210	3	Year	Liver	6.29E-02
Pb-210	5	Year	Liver	6.68E-02
Pb-210	10	Year	Liver	7.11E-02
Pb-210	20	Year	Liver	7.40E-02
Pb-210	50	Year	Liver	6.66E-02
Pb-210	0.1	Year	Lung	1.42E-03
Pb-210	0.15	Year	Lung	1.30E-03
Pb-210	0.2	Year	Lung	1.23E-03
Pb-210				

	0.3	Year	Lung	1.14E-03
Pb-210	0.5	Year	Lung	1.07E-03
Pb-210	1	Year	Lung	1.04E-03
Pb-210	2	Year	Lung	1.12E-03
Pb-210	3	Year	Lung	1.18E-03
Pb-210	5	Year	Lung	1.25E-03
Pb-210	10	Year	Lung	1.33E-03
Pb-210	20	Year	Lung	1.39E-03
Pb-210	50	Year	Lung	1.25E-03
Ra-226	0.1	Day	Effective	1.94E-02
Ra-226	0.15	Day	Effective	1.71E-02
Ra-226	0.2	Day	Effective	1.54E-02
Ra-226	0.3	Day	Effective	1.35E-02
Ra-226	0.5	Day	Effective	1.11E-02
Ra-226	1	Day	Effective	8.57E-03
Ra-226	2	Day	Effective	6.25E-03
Ra-226	3	Day	Effective	5.29E-03
Ra-226	5	Day	Effective	4.34E-03
Ra-226	10	Day	Effective	3.41E-03
Ra-226	20	Day	Effective	2.38E-03
Ra-226	50	Day	Effective	1.80E-03
Ra-226	0.1	Day	Bone	3.41E-02
Ra-226	0.15	Day	Bone	3.16E-02
Ra-226	0.2	Day	Bone	3.01E-02
Ra-226	0.3	Day	Bone	2.86E-02
Ra-226	0.5	Day	Bone	2.77E-02
Ra-226	1	Day	Bone	2.81E-02
Ra-226	2	Day	Bone	3.15E-02
Ra-226	3	Day	Bone	3.37E-02
Ra-226	5	Day	Bone	3.63E-02
Ra-226	10	Day	Bone	3.92E-02
Ra-226	20	Day	Bone	4.11E-02
Ra-226	50	Day	Bone	3.58E-02
Ra-226	0.1	Day	Kidney	4.57E-04
Ra-226	0.15	Day	Kidney	4.24E-04
Ra-226	0.2	Day	Kidney	4.04E-04
Ra-226	0.3	Day	Kidney	3.83E-04
Ra-226	0.5	Day	Kidney	3.71E-04
Ra-226	1	Day	Kidney	3.77E-04
Ra-226	2	Day	Kidney	4.22E-04
Ra-226	3	Day	Kidney	4.52E-04
Ra-226	5	Day	Kidney	4.88E-04
Ra-226	10	Day	Kidney	5.26E-04
Ra-226	20	Day	Kidney	5.51E-04
Ra-226	50	Day	Kidney	4.78E-04
Ra-226	0.1	Day	Liver	4.57E-04
Ra-226	0.15	Day	Liver	4.24E-04
Ra-226	0.2	Day	Liver	4.04E-04
Ra-226	0.3	Day	Liver	3.83E-04
Ra-226	0.5	Day	Liver	3.71E-04
Ra-226	1	Day	Liver	3.77E-04
Ra-226	2	Day	Liver	4.22E-04
Ra-226	3	Day	Liver	4.52E-04
Ra-226	5	Day	Liver	4.88E-04
Ra-226	10	Day	Liver	5.26E-04
Ra-226	20	Day	Liver	5.51E-04
Ra-226	50	Day	Liver	4.78E-04
Ra-226	0.1	Day	Lung	1.47E-01
Ra-226	0.15	Day	Lung	1.31E-01
Ra-226	0.2	Day	Lung	1.19E-01
Ra-226	0.3	Day	Lung	1.03E-01
Ra-226	0.5	Day	Lung	8.35E-02
Ra-226	1	Day	Lung	5.96E-02
Ra-226	2	Day	Lung	3.98E-02
Ra-226				

	3	Day	Lung	3.00E-02
Ra-226	5	Day	Lung	1.98E-02
Ra-226	10	Day	Lung	9.70E-03
Ra-226	20	Day	Lung	3.92E-03
Ra-226	50	Day	Lung	0.00E+00
Ra-226	0.1	Week	Effective	1.94E-02
Ra-226	0.15	Week	Effective	1.71E-02
Ra-226	0.2	Week	Effective	1.54E-02
Ra-226	0.3	Week	Effective	1.35E-02
Ra-226	0.5	Week	Effective	1.11E-02
Ra-226	1	Week	Effective	8.57E-03
Ra-226	2	Week	Effective	6.25E-03
Ra-226	3	Week	Effective	5.29E-03
Ra-226	5	Week	Effective	4.34E-03
Ra-226	10	Week	Effective	3.41E-03
Ra-226	20	Week	Effective	2.38E-03
Ra-226	50	Week	Effective	1.80E-03
Ra-226	0.1	Week	Bone	3.41E-02
Ra-226	0.15	Week	Bone	3.16E-02
Ra-226	0.2	Week	Bone	3.01E-02
Ra-226	0.3	Week	Bone	2.88E-02
Ra-226	0.5	Week	Bone	2.77E-02
Ra-226	1	Week	Bone	2.81E-02
Ra-226	2	Week	Bone	3.15E-02
Ra-226	3	Week	Bone	3.37E-02
Ra-226	5	Week	Bone	3.63E-02
Ra-226	10	Week	Bone	3.92E-02
Ra-226	20	Week	Bone	4.11E-02
Ra-226	50	Week	Bone	3.56E-02
Ra-226	0.1	Week	Kidney	4.57E-04
Ra-226	0.15	Week	Kidney	4.24E-04
Ra-226	0.2	Week	Kidney	4.04E-04
Ra-226	0.3	Week	Kidney	3.83E-04
Ra-226	0.5	Week	Kidney	3.71E-04
Ra-226	1	Week	Kidney	3.77E-04
Ra-226	2	Week	Kidney	4.22E-04
Ra-226	3	Week	Kidney	4.52E-04
Ra-226	5	Week	Kidney	4.88E-04
Ra-226	10	Week	Kidney	5.26E-04
Ra-226	20	Week	Kidney	5.51E-04
Ra-226	50	Week	Kidney	4.78E-04
Ra-226	0.1	Week	Liver	4.57E-04
Ra-226	0.15	Week	Liver	4.24E-04
Ra-226	0.2	Week	Liver	4.04E-04
Ra-226	0.3	Week	Liver	3.83E-04
Ra-226	0.5	Week	Liver	3.71E-04
Ra-226	1	Week	Liver	3.77E-04
Ra-226	2	Week	Liver	4.22E-04
Ra-226	3	Week	Liver	4.52E-04
Ra-226	5	Week	Liver	4.88E-04
Ra-226	10	Week	Liver	5.26E-04
Ra-226	20	Week	Liver	5.51E-04
Ra-226	50	Week	Liver	4.78E-04
Ra-226	0.1	Week	Lung	1.47E-01
Ra-226	0.15	Week	Lung	1.31E-01
Ra-226	0.2	Week	Lung	1.19E-01
Ra-226	0.3	Week	Lung	1.03E-01
Ra-226	0.5	Week	Lung	8.35E-02
Ra-226	1	Week	Lung	5.96E-02
Ra-226	2	Week	Lung	3.98E-02
Ra-226	3	Week	Lung	3.00E-02
Ra-226	5	Week	Lung	1.98E-02
Ra-226	10	Week	Lung	9.70E-03
Ra-226	20	Week	Lung	3.92E-03
Ra-226				

	50	Week	Lung	0.00E+00
Ra-226	0.1	Year	Effective	1.84E-02
Ra-226	0.15	Year	Effective	1.71E-02
Ra-226	0.2	Year	Effective	1.54E-02
Ra-226	0.3	Year	Effective	1.35E-02
Ra-226	0.5	Year	Effective	1.11E-02
Ra-226	1	Year	Effective	8.57E-03
Ra-226	2	Year	Effective	6.25E-03
Ra-226	3	Year	Effective	5.29E-03
Ra-226	5	Year	Effective	4.34E-03
Ra-226	10	Year	Effective	3.41E-03
Ra-226	20	Year	Effective	2.38E-03
Ra-226	50	Year	Effective	1.80E-03
Ra-226	0.1	Year	Bone	3.41E-02
Ra-226	0.15	Year	Bone	3.16E-02
Ra-226	0.2	Year	Bone	3.01E-02
Ra-226	0.3	Year	Bone	2.86E-02
Ra-226	0.5	Year	Bone	2.77E-02
Ra-226	1	Year	Bone	2.81E-02
Ra-226	2	Year	Bone	3.15E-02
Ra-226	3	Year	Bone	3.37E-02
Ra-226	5	Year	Bone	3.63E-02
Ra-226	10	Year	Bone	3.92E-02
Ra-226	20	Year	Bone	4.11E-02
Ra-226	50	Year	Bone	3.56E-02
Ra-226	0.1	Year	Kidney	4.57E-04
Ra-226	0.15	Year	Kidney	4.24E-04
Ra-226	0.2	Year	Kidney	4.04E-04
Ra-226	0.3	Year	Kidney	3.83E-04
Ra-226	0.5	Year	Kidney	3.71E-04
Ra-226	1	Year	Kidney	3.77E-04
Ra-226	2	Year	Kidney	4.22E-04
Ra-226	3	Year	Kidney	4.52E-04
Ra-226	5	Year	Kidney	4.88E-04
Ra-226	10	Year	Kidney	5.26E-04
Ra-226	20	Year	Kidney	5.51E-04
Ra-226	50	Year	Kidney	4.78E-04
Ra-226	0.1	Year	Liver	4.57E-04
Ra-226	0.15	Year	Liver	4.24E-04
Ra-226	0.2	Year	Liver	4.04E-04
Ra-226	0.3	Year	Liver	3.83E-04
Ra-226	0.5	Year	Liver	3.71E-04
Ra-226	1	Year	Liver	3.77E-04
Ra-226	2	Year	Liver	4.22E-04
Ra-226	3	Year	Liver	4.52E-04
Ra-226	5	Year	Liver	4.88E-04
Ra-226	10	Year	Liver	5.26E-04
Ra-226	20	Year	Liver	5.51E-04
Ra-226	50	Year	Liver	4.78E-04
Ra-226	0.1	Year	Lung	1.47E-01
Ra-226	0.15	Year	Lung	1.31E-01
Ra-226	0.2	Year	Lung	1.19E-01
Ra-226	0.3	Year	Lung	1.03E-01
Ra-226	0.5	Year	Lung	8.35E-02
Ra-226	1	Year	Lung	5.96E-02
Ra-226	2	Year	Lung	3.98E-02
Ra-226	3	Year	Lung	3.00E-02
Ra-226	5	Year	Lung	1.98E-02
Ra-226	10	Year	Lung	9.70E-03
Ra-226	20	Year	Lung	3.92E-03
Ra-226	50	Year	Lung	0.00E+00
Bi-212	0.1	Day	Effective	4.37E-05
Bi-212	0.15	Day	Effective	3.67E-05
Bi-212	0.2	Day	Effective	3.27E-05
Bi-212				

	0.3	Day	Effective	2.93E-05
Bi-212	0.5	Day	Effective	2.55E-05
Bi-212	1	Day	Effective	2.16E-05
Bi-212	2	Day	Effective	1.94E-05
Bi-212	3	Day	Effective	1.87E-05
Bi-212	5	Day	Effective	1.81E-05
Bi-212	10	Day	Effective	1.76E-05
Bi-212	20	Day	Effective	5.03E-06
Bi-212	50	Day	Effective	1.49E-05
Bi-212	0.1	Day	Bone	6.44E-07
Bi-212	0.15	Day	Bone	4.51E-07
Bi-212	0.2	Day	Bone	3.47E-07
Bi-212	0.3	Day	Bone	3.80E-07
Bi-212	0.5	Day	Bone	4.55E-07
Bi-212	1	Day	Bone	6.06E-07
Bi-212	2	Day	Bone	8.36E-07
Bi-212	3	Day	Bone	9.70E-07
Bi-212	5	Day	Bone	1.12E-06
Bi-212	10	Day	Bone	1.28E-06
Bi-212	20	Day	Bone	2.70E-07
Bi-212	50	Day	Bone	1.26E-06
Bi-212	0.1	Day	Kidney	1.05E-04
Bi-212	0.15	Day	Kidney	7.36E-05
Bi-212	0.2	Day	Kidney	5.66E-05
Bi-212	0.3	Day	Kidney	6.19E-05
Bi-212	0.5	Day	Kidney	7.40E-05
Bi-212	1	Day	Kidney	9.88E-05
Bi-212	2	Day	Kidney	1.36E-04
Bi-212	3	Day	Kidney	1.58E-04
Bi-212	5	Day	Kidney	1.82E-04
Bi-212	10	Day	Kidney	2.08E-04
Bi-212	20	Day	Kidney	2.02E-04
Bi-212	50	Day	Kidney	2.05E-04
Bi-212	0.1	Day	Liver	6.51E-07
Bi-212	0.2	Day	Liver	4.63E-07
Bi-212	0.15	Day	Liver	3.57E-07
Bi-212	0.3	Day	Liver	3.89E-07
Bi-212	0.5	Day	Liver	4.63E-07
Bi-212	1	Day	Liver	6.14E-07
Bi-212	2	Day	Liver	8.47E-07
Bi-212	3	Day	Liver	9.79E-07
Bi-212	5	Day	Liver	1.13E-06
Bi-212	10	Day	Liver	1.29E-06
Bi-212	20	Day	Liver	1.25E-06
Bi-212	50	Day	Liver	1.27E-06
Bi-212	0.1	Day	Lung	3.06E-04
Bi-212	0.15	Day	Lung	2.68E-04
Bi-212	0.2	Day	Lung	2.42E-04
Bi-212	0.3	Day	Lung	2.10E-04
Bi-212	0.5	Day	Lung	1.72E-04
Bi-212	1	Day	Lung	1.25E-04
Bi-212	2	Day	Lung	8.66E-05
Bi-212	3	Day	Lung	8.83E-05
Bi-212	5	Day	Lung	4.98E-05
Bi-212	10	Day	Lung	3.20E-05
Bi-212	20	Day	Lung	1.25E-05
Bi-212	50	Day	Lung	1.06E-05
Bi-212	0.1	Week	Effective	4.40E-05
Bi-212	0.15	Week	Effective	3.77E-05
Bi-212	0.2	Week	Effective	3.33E-05
Bi-212	0.3	Week	Effective	2.94E-05
Bi-212	0.5	Week	Effective	2.47E-05
Bi-212	1	Week	Effective	1.91E-05
Bi-212	2	Week	Effective	1.47E-05

	3	Week	Effective	1.27E-05
Bi-212	5	Week	Effective	1.07E-05
Bi-212	10	Week	Effective	8.81E-06
Bi-212	20	Week	Effective	5.03E-06
Bi-212	50	Week	Effective	2.94E-05
Bi-212	0.1	Week	Bone	2.42E-07
Bi-212	0.15	Week	Bone	1.62E-07
Bi-212	0.2	Week	Bone	1.18E-07
Bi-212	0.3	Week	Bone	1.26E-07
Bi-212	0.5	Week	Bone	1.43E-07
Bi-212	1	Week	Bone	1.75E-07
Bi-212	2	Week	Bone	2.24E-07
Bi-212	3	Week	Bone	2.51E-07
Bi-212	5	Week	Bone	2.82E-07
Bi-212	10	Week	Bone	3.15E-07
Bi-212	20	Week	Bone	2.70E-07
Bi-212	50	Week	Bone	1.26E-07
Bi-212	0.1	Week	Kidney	3.81E-05
Bi-212	0.15	Week	Kidney	2.52E-05
Bi-212	0.2	Week	Kidney	1.81E-05
Bi-212	0.3	Week	Kidney	1.96E-05
Bi-212	0.5	Week	Kidney	2.26E-05
Bi-212	1	Week	Kidney	2.82E-05
Bi-212	2	Week	Kidney	3.63E-05
Bi-212	3	Week	Kidney	4.09E-05
Bi-212	5	Week	Kidney	4.61E-05
Bi-212	10	Week	Kidney	5.14E-05
Bi-212	20	Week	Kidney	4.44E-05
Bi-212	50	Week	Kidney	1.96E-05
Bi-212	0.1	Week	Liver	2.56E-07
Bi-212	0.15	Week	Liver	1.73E-07
Bi-212	0.2	Week	Liver	1.27E-07
Bi-212	0.3	Week	Liver	1.34E-07
Bi-212	0.5	Week	Liver	1.51E-07
Bi-212	1	Week	Liver	1.82E-07
Bi-212	2	Week	Liver	2.29E-07
Bi-212	3	Week	Liver	2.56E-07
Bi-212	5	Week	Liver	2.87E-07
Bi-212	10	Week	Liver	3.19E-07
Bi-212	20	Week	Liver	2.74E-07
Bi-212	50	Week	Liver	1.35E-07
Bi-212	0.1	Week	Lung	3.47E-04
Bi-212	0.15	Week	Lung	2.99E-04
Bi-212	0.2	Week	Lung	2.68E-04
Bi-212	0.3	Week	Lung	2.34E-04
Bi-212	0.5	Week	Lung	1.94E-04
Bi-212	1	Week	Lung	1.43E-04
Bi-212	2	Week	Lung	1.02E-04
Bi-212	3	Week	Lung	8.33E-05
Bi-212	5	Week	Lung	6.37E-05
Bi-212	10	Week	Lung	4.48E-05
Bi-212	20	Week	Lung	1.73E-05
Bi-212	50	Week	Lung	2.34E-04
Bi-212	0.1	Year	Effective	4.40E-05
Bi-212	0.15	Year	Effective	3.77E-05
Bi-212	0.2	Year	Effective	3.33E-05
Bi-212	0.3	Year	Effective	2.94E-05
Bi-212	0.5	Year	Effective	2.47E-05
Bi-212	1	Year	Effective	1.91E-05
Bi-212	2	Year	Effective	1.47E-05
Bi-212	3	Year	Effective	1.27E-05
Bi-212	5	Year	Effective	1.07E-05
Bi-212	10	Year	Effective	8.81E-06
Bi-212	20	Year	Effective	5.03E-06

	50	Year	Effective	2.94E-05
Bi-212	0.1	Year	Bone	2.42E-07
Bi-212	0.15	Year	Bone	1.62E-07
Bi-212	0.2	Year	Bone	1.18E-07
Bi-212	0.3	Year	Bone	1.26E-07
Bi-212	0.5	Year	Bone	1.43E-07
Bi-212	1	Year	Bone	1.75E-07
Bi-212	2	Year	Bone	2.24E-07
Bi-212	3	Year	Bone	2.51E-07
Bi-212	5	Year	Bone	2.82E-07
Bi-212	10	Year	Bone	3.15E-07
Bi-212	20	Year	Bone	2.70E-07
Bi-212	50	Year	Bone	1.25E-07
Bi-212	0.1	Year	Kidney	3.81E-05
Bi-212	0.15	Year	Kidney	2.52E-05
Bi-212	0.2	Year	Kidney	1.81E-05
Bi-212	0.3	Year	Kidney	1.96E-05
Bi-212	0.5	Year	Kidney	2.28E-05
Bi-212	1	Year	Kidney	2.82E-05
Bi-212	2	Year	Kidney	3.63E-05
Bi-212	3	Year	Kidney	4.09E-05
Bi-212	5	Year	Kidney	4.61E-05
Bi-212	10	Year	Kidney	5.14E-05
Bi-212	20	Year	Kidney	4.44E-05
Bi-212	50	Year	Kidney	1.96E-05
Bi-212	0.1	Year	Liver	2.56E-07
Bi-212	0.15	Year	Liver	1.73E-07
Bi-212	0.2	Year	Liver	1.27E-07
Bi-212	0.3	Year	Liver	1.34E-07
Bi-212	0.5	Year	Liver	1.51E-07
Bi-212	1	Year	Liver	1.82E-07
Bi-212	2	Year	Liver	2.29E-07
Bi-212	3	Year	Liver	2.56E-07
Bi-212	5	Year	Liver	2.87E-07
Bi-212	10	Year	Liver	3.19E-07
Bi-212	20	Year	Liver	2.74E-07
Bi-212	50	Year	Liver	1.35E-07
Bi-212	0.1	Year	Lung	3.47E-04
Bi-212	0.15	Year	Lung	2.99E-04
Bi-212	0.2	Year	Lung	2.68E-04
Bi-212	0.3	Year	Lung	2.34E-04
Bi-212	0.5	Year	Lung	1.94E-04
Bi-212	1	Year	Lung	1.43E-04
Bi-212	2	Year	Lung	1.02E-04
Bi-212	3	Year	Lung	8.33E-05
Bi-212	5	Year	Lung	6.37E-05
Bi-212	10	Year	Lung	4.48E-05
Bi-212	20	Year	Lung	1.73E-05
Bi-212	50	Year	Lung	2.34E-04
Pb-212	0.1	Day	Effective	3.22E-04
Pb-212	0.15	Day	Effective	2.75E-04
Pb-212	0.2	Day	Effective	2.45E-04
Pb-212	0.3	Day	Effective	2.20E-04
Pb-212	0.5	Day	Effective	1.94E-04
Pb-212	1	Day	Effective	1.69E-04
Pb-212	2	Day	Effective	1.59E-04
Pb-212	3	Day	Effective	1.58E-04
Pb-212	5	Day	Effective	1.58E-04
Pb-212	10	Day	Effective	1.59E-04
Pb-212	20	Day	Effective	1.45E-04
Pb-212	50	Day	Effective	1.44E-04
Pb-212	0.1	Day	Bone	1.85E-03
Pb-212	0.15	Day	Bone	1.48E-03
Pb-212	0.2	Day	Bone	1.22E-03

	0.3	Day	Bone	1.19E-03
Pb-212	0.5	Day	Bone	1.22E-03
Pb-212	1	Day	Bone	1.37E-03
Pb-212	2	Day	Bone	1.68E-03
Pb-212	3	Day	Bone	1.87E-03
Pb-212	5	Day	Bone	2.10E-03
Pb-212	10	Day	Bone	2.33E-03
Pb-212	20	Day	Bone	2.27E-03
Pb-212	50	Day	Bone	2.28E-03
Pb-212	0.1	Day	Kidney	1.22E-04
Pb-212	0.15	Day	Kidney	9.58E-05
Pb-212	0.2	Day	Kidney	8.07E-05
Pb-212	0.3	Day	Kidney	7.87E-05
Pb-212	0.5	Day	Kidney	7.99E-05
Pb-212	1	Day	Kidney	8.88E-05
Pb-212	2	Day	Kidney	1.08E-04
Pb-212	3	Day	Kidney	1.19E-04
Pb-212	5	Day	Kidney	1.34E-04
Pb-212	10	Day	Kidney	1.48E-04
Pb-212	20	Day	Kidney	1.44E-04
Pb-212	50	Day	Kidney	1.45E-04
Pb-212	0.1	Day	Liver	2.48E-04
Pb-212	0.15	Day	Liver	1.96E-04
Pb-212	0.2	Day	Liver	1.65E-04
Pb-212	0.3	Day	Liver	1.60E-04
Pb-212	0.5	Day	Liver	1.64E-04
Pb-212	1	Day	Liver	1.81E-04
Pb-212	2	Day	Liver	2.21E-04
Pb-212	3	Day	Liver	2.44E-04
Pb-212	5	Day	Liver	2.73E-04
Pb-212	10	Day	Liver	3.30E-04
Pb-212	20	Day	Liver	2.94E-04
Pb-212	50	Day	Liver	2.96E-04
Pb-212	0.1	Day	Lung	1.78E-03
Pb-212	0.15	Day	Lung	1.58E-03
Pb-212	0.2	Day	Lung	1.44E-03
Pb-212	0.3	Day	Lung	1.24E-03
Pb-212	0.5	Day	Lung	1.01E-03
Pb-212	1	Day	Lung	7.28E-04
Pb-212	2	Day	Lung	4.96E-04
Pb-212	3	Day	Lung	3.85E-04
Pb-212	5	Day	Lung	2.76E-04
Pb-212	10	Day	Lung	1.71E-04
Pb-212	20	Day	Lung	8.24E-05
Pb-212	50	Day	Lung	6.92E-05
Pb-212	0.1	Week	Effective	3.22E-04
Pb-212	0.15	Week	Effective	2.75E-04
Pb-212	0.2	Week	Effective	2.45E-04
Pb-212	0.3	Week	Effective	2.20E-04
Pb-212	0.5	Week	Effective	1.94E-04
Pb-212	1	Week	Effective	1.69E-04
Pb-212	2	Week	Effective	1.59E-04
Pb-212	3	Week	Effective	1.58E-04
Pb-212	5	Week	Effective	1.58E-04
Pb-212	10	Week	Effective	1.59E-04
Pb-212	20	Week	Effective	1.45E-04
Pb-212	50	Week	Effective	1.44E-04
Pb-212	0.1	Week	Bone	1.85E-03
Pb-212	0.15	Week	Bone	1.46E-03
Pb-212	0.2	Week	Bone	1.22E-03
Pb-212	0.3	Week	Bone	1.19E-03
Pb-212	0.5	Week	Bone	1.22E-03
Pb-212	1	Week	Bone	1.37E-03
Pb-212	2	Week	Bone	1.68E-03
Pb-212				

	3	Week	Bone	1.87E-03
Pb-212	5	Week	Bone	2.10E-03
Pb-212	10	Week	Bone	2.33E-03
Pb-212	20	Week	Bone	2.27E-03
Pb-212	50	Week	Bone	2.28E-03
Pb-212	0.1	Week	Kidney	1.22E-04
Pb-212	0.15	Week	Kidney	9.56E-05
Pb-212	0.2	Week	Kidney	8.07E-05
Pb-212	0.3	Week	Kidney	7.87E-05
Pb-212	0.5	Week	Kidney	7.99E-05
Pb-212	1	Week	Kidney	8.88E-05
Pb-212	2	Week	Kidney	1.08E-04
Pb-212	3	Week	Kidney	1.18E-04
Pb-212	5	Week	Kidney	1.34E-04
Pb-212	10	Week	Kidney	1.48E-04
Pb-212	20	Week	Kidney	1.44E-04
Pb-212	50	Week	Kidney	1.45E-04
Pb-212	0.1	Week	Liver	2.48E-04
Pb-212	0.15	Week	Liver	1.96E-04
Pb-212	0.2	Week	Liver	1.65E-04
Pb-212	0.3	Week	Liver	1.60E-04
Pb-212	0.5	Week	Liver	1.64E-04
Pb-212	1	Week	Liver	1.81E-04
Pb-212	2	Week	Liver	2.21E-04
Pb-212	3	Week	Liver	2.44E-04
Pb-212	5	Week	Liver	2.73E-04
Pb-212	10	Week	Liver	3.30E-04
Pb-212	20	Week	Liver	2.94E-04
Pb-212	50	Week	Liver	2.98E-04
Pb-212	0.1	Week	Lung	1.78E-03
Pb-212	0.15	Week	Lung	1.58E-03
Pb-212	0.2	Week	Lung	1.44E-03
Pb-212	0.3	Week	Lung	1.24E-03
Pb-212	0.5	Week	Lung	1.01E-03
Pb-212	1	Week	Lung	7.28E-04
Pb-212	2	Week	Lung	4.96E-04
Pb-212	3	Week	Lung	3.86E-04
Pb-212	5	Week	Lung	2.76E-04
Pb-212	10	Week	Lung	1.71E-04
Pb-212	20	Week	Lung	8.24E-05
Pb-212	50	Week	Lung	6.92E-05
Pb-212	0.1	Year	Effective	3.22E-04
Pb-212	0.15	Year	Effective	2.75E-04
Pb-212	0.2	Year	Effective	2.45E-04
Pb-212	0.3	Year	Effective	2.20E-04
Pb-212	0.5	Year	Effective	1.94E-04
Pb-212	1	Year	Effective	1.69E-04
Pb-212	2	Year	Effective	1.59E-04
Pb-212	3	Year	Effective	1.58E-04
Pb-212	5	Year	Effective	1.58E-04
Pb-212	10	Year	Effective	1.59E-04
Pb-212	20	Year	Effective	1.45E-04
Pb-212	50	Year	Effective	1.44E-04
Pb-212	0.1	Year	Bone	1.85E-03
Pb-212	0.15	Year	Bone	1.46E-03
Pb-212	0.2	Year	Bone	1.22E-03
Pb-212	0.3	Year	Bone	1.19E-03
Pb-212	0.5	Year	Bone	1.22E-03
Pb-212	1	Year	Bone	1.37E-03
Pb-212	2	Year	Bone	1.68E-03
Pb-212	3	Year	Bone	1.87E-03
Pb-212	5	Year	Bone	2.10E-03
Pb-212	10	Year	Bone	2.33E-03
Pb-212	20	Year	Bone	2.27E-03
Pb-212				

	50	Year	Bone	2.28E-03
Pb-212	0.1	Year	Kidney	1.22E-04
Pb-212	0.15	Year	Kidney	9.58E-05
Pb-212	0.2	Year	Kidney	8.07E-05
Pb-212	0.3	Year	Kidney	7.87E-05
Pb-212	0.5	Year	Kidney	7.99E-05
Pb-212	1	Year	Kidney	8.88E-05
Pb-212	2	Year	Kidney	1.08E-04
Pb-212	3	Year	Kidney	1.19E-04
Pb-212	5	Year	Kidney	1.34E-04
Pb-212	10	Year	Kidney	1.48E-04
Pb-212	20	Year	Kidney	1.44E-04
Pb-212	50	Year	Kidney	1.45E-04
Pb-212	0.1	Year	Liver	2.48E-04
Pb-212	0.15	Year	Liver	1.96E-04
Pb-212	0.2	Year	Liver	1.65E-04
Pb-212	0.3	Year	Liver	1.60E-04
Pb-212	0.5	Year	Liver	1.64E-04
Pb-212	1	Year	Liver	1.81E-04
Pb-212	2	Year	Liver	2.21E-04
Pb-212	3	Year	Liver	2.44E-04
Pb-212	5	Year	Liver	2.73E-04
Pb-212	10	Year	Liver	3.30E-04
Pb-212	20	Year	Liver	2.94E-04
Pb-212	50	Year	Liver	2.96E-04
Pb-212	0.1	Year	Lung	1.78E-03
Pb-212	0.15	Year	Lung	1.56E-03
Pb-212	0.2	Year	Lung	1.44E-03
Pb-212	0.3	Year	Lung	1.24E-03
Pb-212	0.5	Year	Lung	1.01E-03
Pb-212	1	Year	Lung	7.28E-04
Pb-212	2	Year	Lung	4.96E-04
Pb-212	3	Year	Lung	3.86E-04
Pb-212	5	Year	Lung	2.76E-04
Pb-212	10	Year	Lung	1.71E-04
Pb-212	20	Year	Lung	8.24E-05
Pb-212	50	Year	Lung	8.92E-05
Th-228	0.1	Day	Effective	8.36E-01
Th-228	0.15	Day	Effective	7.43E-01
Th-228	0.2	Day	Effective	6.76E-01
Th-228	0.3	Day	Effective	5.87E-01
Th-228	0.5	Day	Effective	4.78E-01
Th-228	1	Day	Effective	3.45E-01
Th-228	2	Day	Effective	2.36E-01
Th-228	3	Day	Effective	1.66E-01
Th-228	5	Day	Effective	1.34E-01
Th-228	10	Day	Effective	8.54E-02
Th-228	20	Day	Effective	4.54E-02
Th-228	50	Day	Effective	3.91E-02
Th-228	0.1	Day	Bone	1.79E+00
Th-228	0.15	Day	Bone	1.57E+00
Th-228	0.2	Day	Bone	1.42E+00
Th-228	0.3	Day	Bone	1.24E+00
Th-228	0.5	Day	Bone	1.06E+00
Th-228	1	Day	Bone	8.51E-01
Th-228	2	Day	Bone	7.16E-01
Th-228	3	Day	Bone	6.64E-01
Th-228	5	Day	Bone	6.15E-01
Th-228	10	Day	Bone	5.71E-01
Th-228	20	Day	Bone	5.03E-01
Th-228	50	Day	Bone	4.93E-01
Th-228	0.1	Day	Kidney	1.88E-03
Th-228	0.15	Day	Kidney	1.64E-03
Th-228	0.2	Day	Kidney	1.47E-03
Th-228				

	0.3	Day	Kidney	1.30E-03
Th-228	0.5	Day	Kidney	1.11E-03
Th-228	1	Day	Kidney	9.08E-04
Th-228	2	Day	Kidney	7.81E-04
Th-228	3	Day	Kidney	7.32E-04
Th-228	5	Day	Kidney	6.90E-04
Th-228	10	Day	Kidney	6.53E-04
Th-228	20	Day	Kidney	5.75E-04
Th-228	50	Day	Kidney	5.65E-04
Th-228	0.1	Day	Liver	1.64E-02
Th-228	0.15	Day	Liver	1.35E-02
Th-228	0.2	Day	Liver	1.22E-02
Th-228	0.3	Day	Liver	1.07E-02
Th-228	0.5	Day	Liver	9.11E-03
Th-228	1	Day	Liver	7.34E-03
Th-228	2	Day	Liver	6.18E-03
Th-228	3	Day	Liver	5.74E-03
Th-228	5	Day	Liver	5.33E-03
Th-228	10	Day	Liver	4.96E-03
Th-228	20	Day	Liver	4.36E-03
Th-228	50	Day	Liver	4.29E-03
Th-228	0.1	Day	Lung	6.35E+00
Th-228	0.15	Day	Lung	5.64E+00
Th-228	0.2	Day	Lung	5.15E+00
Th-228	0.3	Day	Lung	4.46E+00
Th-228	0.5	Day	Lung	3.61E+00
Th-228	1	Day	Lung	2.57E+00
Th-228	2	Day	Lung	1.72E+00
Th-228	3	Day	Lung	1.31E+00
Th-228	5	Day	Lung	9.08E-01
Th-228	10	Day	Lung	5.16E-01
Th-228	20	Day	Lung	2.04E-01
Th-228	50	Day	Lung	1.55E-01
Th-228	0.1	Week	Effective	4.85E-01
Th-228	0.15	Week	Effective	3.91E-01
Th-228	0.2	Week	Effective	3.36E-01
Th-228	0.3	Week	Effective	3.08E-01
Th-228	0.5	Week	Effective	2.75E-01
Th-228	1	Week	Effective	2.53E-01
Th-228	2	Week	Effective	2.46E-01
Th-228	3	Week	Effective	2.47E-01
Th-228	5	Week	Effective	2.50E-01
Th-228	10	Week	Effective	2.55E-01
Th-228	20	Week	Effective	2.08E-01
Th-228	50	Week	Effective	2.10E-01
Th-228	0.1	Week	Bone	9.11E+00
Th-228	0.15	Week	Bone	7.14E+00
Th-228	0.2	Week	Bone	6.00E+00
Th-228	0.3	Week	Bone	5.61E+00
Th-228	0.5	Week	Bone	5.26E+00
Th-228	1	Week	Bone	5.07E+00
Th-228	2	Week	Bone	5.26E+00
Th-228	3	Week	Bone	5.46E+00
Th-228	5	Week	Bone	5.71E+00
Th-228	10	Week	Bone	5.97E+00
Th-228	20	Week	Bone	4.98E+00
Th-228	50	Week	Bone	5.04E+00
Th-228	0.1	Week	Kidney	9.02E-03
Th-228	0.15	Week	Kidney	7.08E-03
Th-228	0.2	Week	Kidney	5.96E-03
Th-228	0.3	Week	Kidney	5.57E-03
Th-228	0.5	Week	Kidney	5.23E-03
Th-228	1	Week	Kidney	5.05E-03
Th-228	2	Week	Kidney	5.25E-03

	3	Week	Kidney	5.46E-03
Th-228	5	Week	Kidney	5.72E-03
Th-228	10	Week	Kidney	5.99E-03
Th-228	20	Week	Kidney	5.00E-03
Th-228	50	Week	Kidney	5.06E-03
Th-228	0.1	Week	Liver	7.78E-02
Th-228	0.15	Week	Liver	6.11E-02
Th-228	0.2	Week	Liver	5.11E-02
Th-228	0.3	Week	Liver	4.79E-02
Th-228	0.5	Week	Liver	4.52E-02
Th-228	1	Week	Liver	4.34E-02
Th-228	2	Week	Liver	4.52E-02
Th-228	3	Week	Liver	4.67E-02
Th-228	5	Week	Liver	4.88E-02
Th-228	10	Week	Liver	5.12E-02
Th-228	20	Week	Liver	4.26E-02
Th-228	50	Week	Liver	4.34E-02
Th-228	0.1	Week	Lung	9.22E-01
Th-228	0.15	Week	Lung	8.19E-01
Th-228	0.2	Week	Lung	7.48E-01
Th-228	0.3	Week	Lung	6.46E-01
Th-228	0.5	Week	Lung	5.22E-01
Th-228	1	Week	Lung	3.74E-01
Th-228	2	Week	Lung	2.51E-01
Th-228	3	Week	Lung	1.93E-01
Th-228	5	Week	Lung	1.34E-01
Th-228	10	Week	Lung	7.76E-02
Th-228	20	Week	Lung	3.08E-02
Th-228	50	Week	Lung	2.39E-02
Th-228	0.1	Year	Effective	8.36E-01
Th-228	0.15	Year	Effective	7.43E-01
Th-228	0.2	Year	Effective	6.76E-01
Th-228	0.3	Year	Effective	5.87E-01
Th-228	0.5	Year	Effective	4.78E-01
Th-228	1	Year	Effective	3.45E-01
Th-228	2	Year	Effective	2.38E-01
Th-228	3	Year	Effective	1.88E-01
Th-228	5	Year	Effective	1.34E-01
Th-228	10	Year	Effective	8.54E-02
Th-228	20	Year	Effective	4.54E-02
Th-228	50	Year	Effective	3.91E-02
Th-228	0.1	Year	Bone	1.79E+00
Th-228	0.15	Year	Bone	1.57E+00
Th-228	0.2	Year	Bone	1.42E+00
Th-228	0.3	Year	Bone	1.24E+00
Th-228	0.5	Year	Bone	1.06E+00
Th-228	1	Year	Bone	8.51E-01
Th-228	2	Year	Bone	7.16E-01
Th-228	3	Year	Bone	6.64E-01
Th-228	5	Year	Bone	6.15E-01
Th-228	10	Year	Bone	5.71E-01
Th-228	20	Year	Bone	5.03E-01
Th-228	50	Year	Bone	4.93E-01
Th-228	0.1	Year	Kidney	1.88E-03
Th-228	0.15	Year	Kidney	1.64E-03
Th-228	0.2	Year	Kidney	1.47E-03
Th-228	0.3	Year	Kidney	1.30E-03
Th-228	0.5	Year	Kidney	1.11E-03
Th-228	1	Year	Kidney	9.08E-04
Th-228	2	Year	Kidney	7.81E-04
Th-228	3	Year	Kidney	7.32E-04
Th-228	5	Year	Kidney	6.90E-04
Th-228	10	Year	Kidney	6.53E-04
Th-228	20	Year	Kidney	5.75E-04
Th-228				