

## Plaque Simulator QA Check (isotropic point sources in water)

Plaque #1 EP1824-25, implant 2/17/21 8:00 AM for T = 168.00 hours

Tavg (hours) = 1.443 x 24.0 x half-life(in days)

r = distance from source center to QA point on plaque CAX at (6.00,0.00,0.00)

Dose (Gy) = Strength {x ActivityToSk} x Tavg x DoseRateConstant {x (1/G(1,90))} x (1-exp(-T/Tavg)) x (1/r^2) x g(r)

Slot #	Seed Model	Strength @implant	Units	Activity to Sk	Units	Tavg hours	Dose-Rate Constant	G (1,90)	X mm	Y mm	Z mm	r mm	g(r)	Dose Gy	Check by
1	IAAI	1.215	mCi	1.27	U/mCi	2057.14	0.981	0.99260	-0.700	0.000	0.000	6.700	1.039	5.696	_____
2	IAAI	1.215	mCi	1.27	U/mCi	2057.14	0.981	0.99260	-0.565	1.883	0.000	6.830	1.038	5.474	_____
3	IAAI	1.215	mCi	1.27	U/mCi	2057.14	0.981	0.99260	-0.565	-1.883	-0.000	6.830	1.038	5.474	_____
4	IAAI	1.215	mCi	1.27	U/mCi	2057.14	0.981	0.99260	0.136	-3.643	2.846	7.467	1.031	4.548	_____
5	IAAI	1.215	mCi	1.27	U/mCi	2057.14	0.981	0.99260	0.136	-3.643	-2.846	7.467	1.031	4.548	_____
6	IAAI	1.215	mCi	1.27	U/mCi	2057.14	0.981	0.99260	0.136	3.643	-2.846	7.467	1.031	4.548	_____
7	IAAI	1.215	mCi	1.27	U/mCi	2057.14	0.981	0.99260	0.136	3.643	2.846	7.467	1.031	4.548	_____
8	IAAI	1.215	mCi	1.27	U/mCi	2057.14	0.981	0.99260	0.586	5.596	-0.987	7.849	1.026	4.099	_____
9	IAAI	1.215	mCi	1.27	U/mCi	2057.14	0.981	0.99260	0.586	-5.596	-0.987	7.849	1.026	4.099	_____
10	IAAI	1.215	mCi	1.27	U/mCi	2057.14	0.981	0.99260	-0.040	0.000	4.123	7.313	1.033	4.750	_____
11	IAAI	1.215	mCi	1.27	U/mCi	2057.14	0.981	0.99260	-0.040	0.000	-4.123	7.313	1.033	4.750	_____
12	empty								0.739	0.000	5.993	7.975			_____
13	IAAI	2.430	mCi	1.27	U/mCi	2057.14	0.981	0.99260	1.124	0.000	-5.647	7.460	1.031	9.112	_____
14	IAAI	1.215	mCi	1.27	U/mCi	2057.14	0.981	0.99260	2.839	-7.295	-4.738	9.255	1.010	2.902	_____
15	IAAI	1.215	mCi	1.27	U/mCi	2057.14	0.981	0.99260	1.916	-7.531	0.527	8.583	1.018	3.400	_____
16	empty								1.916	-5.244	5.430	8.583			_____
17	empty								1.956	0.000	7.604	8.613			_____
18	empty								1.916	5.244	5.430	8.583			_____
19	IAAI	1.215	mCi	1.27	U/mCi	2057.14	0.981	0.99260	1.916	7.531	0.527	8.583	1.018	3.400	_____
20	IAAI	1.215	mCi	1.27	U/mCi	2057.14	0.981	0.99260	2.839	7.295	-4.738	9.255	1.010	2.902	_____
21	IAAI	1.215	mCi	1.27	U/mCi	2057.14	0.981	0.99260	3.189	-5.185	-7.269	9.361	1.009	2.833	_____
22	IAAI	1.215	mCi	1.27	U/mCi	2057.14	0.981	0.99260	3.189	5.185	-7.269	9.361	1.009	2.833	_____
23	IAAI	1.215	mCi	1.27	U/mCi	2057.14	0.981	0.99260	3.380	-3.735	-8.010	9.218	1.011	2.926	_____
24	IAAI	1.215	mCi	1.27	U/mCi	2057.14	0.981	0.99260	3.380	3.735	-8.010	9.218	1.011	2.926	_____

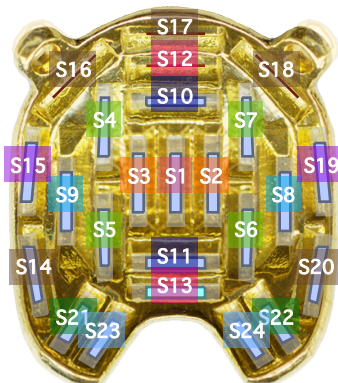
Dose delivered from this plaque (P#1) to:

QA\_Point Dose = 81.107

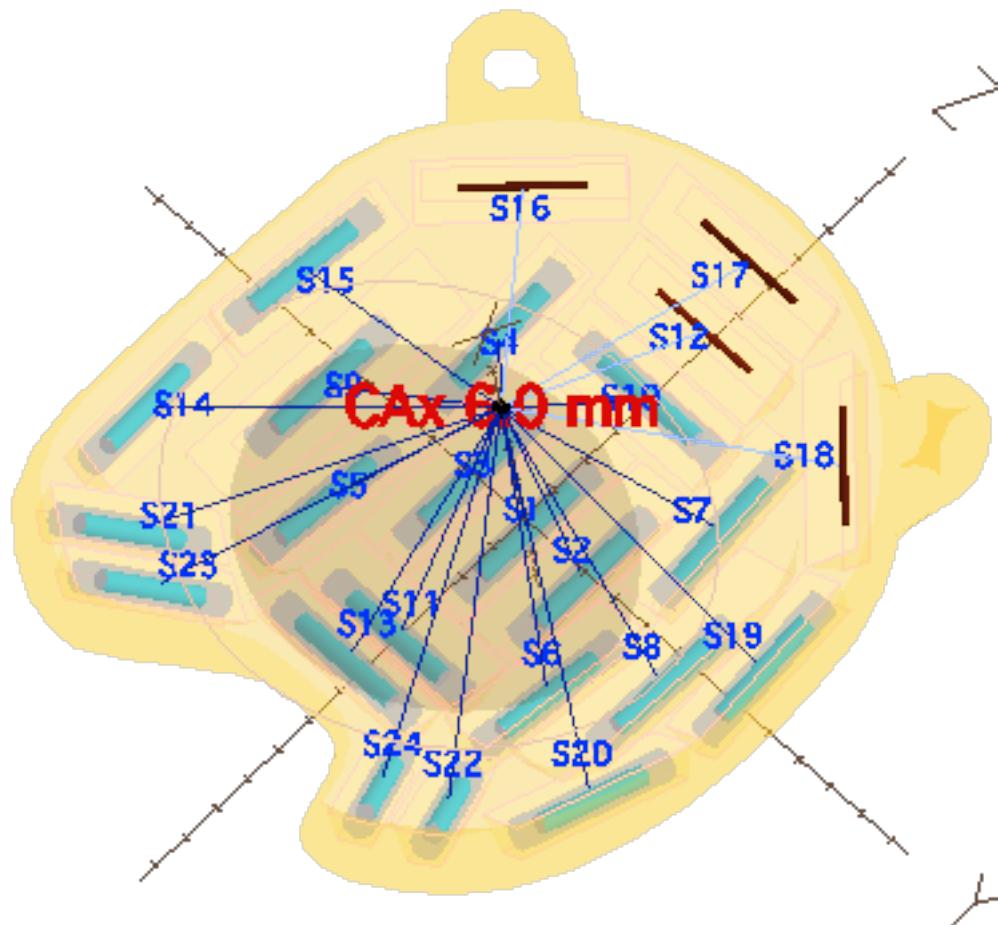
QA\_Check Dose = 85.769

Point / Check = 0.946

EP1824-25



## Plaque Simulator QA Check Geometry



EP1824-25

