

# RAD SOURCE RS 2000 X-RAY IRRADIATOR DOSE CHART

UNMC Animal Facility (SN 3196) Machine Settings: 160 KV 25mA 0.3 mm Cu

<b>LEVEL 1</b>				
Dose Rate: 1.2 Gy/min (Inside the RAD+)				
rad	Gray	Min	Sec	
200	2.0	1	40	
250	2.5	2	5	
300	3.0	2	30	
350	3.5	2	55	
400	4.0	3	20	
450	4.5	3	45	
500	5.0	4	10	
550	5.5	4	35	
600	6.0	5	0	
650	6.5	5	25	
700	7.0	5	50	
750	7.5	6	15	
800	8.0	6	40	
850	8.5	7	5	
900	9.0	7	30	
950	9.5	7	55	
1000	10.0	8	20	
1050	10.5	8	45	
1100	11.0	9	10	
1150	11.5	9	35	
1200	12.0	10	0	
1250	12.5	10	25	
1300	13.0	10	50	
1350	13.5	11	15	
1400	14.0	11	40	
1450	14.5	12	5	
1500	15.0	12	30	

<b>LEVEL 3</b>				
Dose Rate: 2.0 Gy/min				
rad	Gray	Min	Sec	
200	2.0	1	0	
250	2.5	1	15	
300	3.0	1	30	
350	3.5	1	45	
400	4.0	2	0	
450	4.5	2	15	
500	5.0	2	30	
550	5.5	2	45	
600	6.0	3	0	
650	6.5	3	15	
700	7.0	3	30	
750	7.5	3	45	
800	8.0	4	0	
850	8.5	4	15	
900	9.0	4	30	
950	9.5	4	45	
1000	10.0	5	0	
1500	15.0	7	30	
2000	20.0	10	0	
2500	25.0	12	30	
3000	30.0	15	0	
3500	35.0	17	30	
4000	40.0	20	0	
4500	45.0	22	30	
5000	50.0	25	0	
5500	55.0	27	30	
6000	60.0	30	0	
6500	65.0	32	30	
7000	70.0	35	0	
7500	75.0	37	30	
8000	80.0	40	0	
8500	85.0	42	30	
9000	90.0	45	0	
9500	95.0	47	30	
10000	100.0	50	0	

<b>LEVEL 4</b>				
Dose Rate: 2.9 Gy/min				
rad	Gray	Min	Sec	
200	2.0	0	41	
250	2.5	0	52	
300	3.0	1	2	
350	3.5	1	12	
400	4.0	1	23	
450	4.5	1	33	
500	5.0	1	43	
550	5.5	1	54	
600	6.0	2	4	
650	6.5	2	14	
700	7.0	2	25	
750	7.5	2	35	
800	8.0	2	46	
850	8.5	2	56	
900	9.0	3	6	
950	9.5	3	17	
1000	10.0	3	27	

<b>LEVEL 5</b>				
Dose Rate: 4.5 Gy/min				
rad	Gray	Min	Sec	
2000	20.0	4	27	
2500	25.0	5	33	
3000	30.0	6	40	
3500	35.0	7	47	
4000	40.0	8	53	
4500	45.0	10	0	
5000	50.0	11	7	
5500	55.0	12	13	
6000	60.0	13	20	
6500	65.0	14	27	
7000	70.0	15	33	
7500	75.0	16	40	
8000	80.0	17	47	
8500	85.0	18	53	
9000	90.0	20	0	
9500	95.0	21	7	
10000	100.0	22	13	

<b>LEVEL 6</b>				
Dose Rate: 8.5 Gy/min				
NOTE: ESTIMATED DOSE RATE				
rad	Gray	Min	Sec	
2000	20.0	2	21	
2500	25.0	2	56	
3000	30.0	3	32	
3500	35.0	4	7	
4000	40.0	4	42	
4500	45.0	5	18	
5000	50.0	5	53	
5500	55.0	6	28	
6000	60.0	7	4	
6500	65.0	7	39	
7000	70.0	8	14	
7500	75.0	8	49	
8000	80.0	9	25	
8500	85.0	10	0	
9000	90.0	10	35	
9500	95.0	11	11	
10000	100.0	11	46	

## For Doses NOT Listed in the Above Tables

Divide the desired dose (Gy) by Dose Rate for the Level being used to get the minutes of irradiation needed.

Convert irradiation time into minutes and seconds

### EXAMPLE:

Your target dose is 45 Gy using Level 3

Dose rate for Level 3 = 2 Gy/min

Irradiation time =  $45 \text{ Gy} \div 2 \text{ Gy/min} = 22.5 \text{ minutes}$

Convert to minutes & seconds format (multiply the decimal remainder by 60 to get seconds) - for this example  $0.5 \text{ minutes} = 0.5 \times 60 = 30 \text{ sec}$

Irradiation Time (min sec) = 22 minutes 30 seconds