

## SUPPLEMENTARY MATERIAL

**Table 1.** Electron beam doses delivered and mean survival of *Halobacterium* strains and *Deinococcus radiodurans*

Strain tested <sup>a</sup>	Mean Dose (kGy)	Max/Min Dose (kGy)	# Data points per bin	Mean Fraction surviving	Std. Error <sup>b</sup>
<b><i>Halobacterium</i> NRC-1 (S)</b>	0 <sup>c</sup>	n/a	5	1 <sup>e</sup>	n/a
	2.8	2.8 <sup>d</sup>	1	3.9E-1	n/a
	5.1	4.9, 5.6	3	1.7E-1	5.8E-2
	8.7	8.4, 9.1	2	9.1E-3	7.7E-3
	11	10.6, 11.3	3	6.2E-7	6.2E-7
	12	11.9, 11.9	2	2.0E-5	3.2E-6
	15	15.1, 15.3	4	2.0E-6	1.2E-6
	19	17.1, 19.7	6	2.6E-6	2.6E-6
	23	22.0, 23.3	4	0	n/a <sup>f</sup>
<b><i>Halobacterium</i> NRC-1 (E)</b>	0	n/a	10	1	n/a
	2.8	2.7, 2.9	4	9.2E-1	3.5E-2
	5.4	5.3, 5.6	4	4.4E-1	8.1E-2

<sup>a</sup> Each strain was tested in both the exponential phase (E) and stationary phase (S) of growth.

<sup>b</sup> Standard error was the error on the mean. By definition, there is no error on the mock-irradiated value of 1. For the single bin with one data point, there is no error.

<sup>c</sup> Target dose of 0 represents mock-irradiated cells. Max/min is not applicable.

<sup>d</sup> There was only one data point at this dose.

<sup>e</sup> Survival fraction of mock-irradiated cells is the mean of all mock-irradiated data points divided by this mean, which is, by definition, unity.

<sup>f</sup> The standard error formula is not applicable to multiple measurements of 0.

	8.7	8.0, 9.1	10	1.2E-1	3.1E-2
	10	10.1, 10.5	2	5.5E-5	4.4E-5
	12	11.3, 12.1	8	2.4E-4	1.2E-4
	15	14.8, 15.5	4	6.6E-7	6.6E-7
	17	16.4, 17.6	5	9.2E-8	9.2E-8
	20	19.0, 20.3	6	0	n/a
	23	22.0, 23.0	3	0	n/a
<b><i>Halobacterium</i> LH5 (S)</b>	0	n/a	5	1	n/a
	1.5	1.0, 1.9	2	9.7E-1	2.0E-2
	3.4	2.8, 4.0	2	8.0E-1	4.4E-2
	5.3	4.9, 5.9	4	5.9E-1	8.0E-2
	9.1	8.4, 9.9	3	3.2E-1	6.6E-2
	12	10.6, 13.1	5	1.5E-1	3.2E-2
	15	15.1, 16.0	4	2.3E-2	1.0E-2
	19	17.1, 19.7	5	1.2E-3	1.0E-3
	23	22.0, 23.3	4	5.0E-6	3.4E-6
<b><i>Halobacterium</i> LH5 (E)</b>	0	n/a	5	1	n/a
	2.9	2.8, 3.0	2	9.7E-1	1.1E-1
	5.7	5.6, 5.7	2	1.0	2.0E-2
	8.8	8.4, 9.1	5	9.3E-1	1.5E-1
	12	11.3, 12.1	4	5.0E-1	1.0E-1
	15	14.4, 15.1	3	1.9E-1	6.9E-2
	17	16.7, 17.6	3	9.0E-3	5.4E-3
	20	18.8, 20.5	3	1.2E-4	6.5E-5
	22	21.5, 23.3	3	2.1E-4	1.8E-4
<b><i>Halobacterium</i> LH7a (S)</b>	0	n/a	6	1	n/a
	1.7	1.0, 1.9	5	9.2E-1	3.6E-2
	3.9	3.9, 4.0	4	8.5E-1	6.5E-2

	5.5	4.9, 5.9	6	7.6E-1	4.8E-2
	8.3	8.3, 8.3	3	6.6E-1	9.3E-2
	10	10.5, 10.6	6	3.4E-1	4.1E-2
	12	11.5, 11.5	3	2.0E-1	3.1E-2
	14	13.1, 13.8	4	8.8E-2	3.4E-2
	16	15.3, 16.0	6	2.1E-2	8.3E-3
	18	17.7, 17.8	6	9.6E-3	1.5E-3
	20	19.3, 20.1	6	5.5E-4	3.6E-4
	23	22.0, 23.3	6	6.9E-6	3.5E-6
	30	30.2, 30.2	3	1.5E-8	8.5E-9
	36	35.9, 35.9	3	0	n/a
<b><i>Halobacterium</i> LH7a (E)</b>	0	n/a	4	1	n/a
	1.9	1.9, 1.9	3	1.3	1.6E-2
	3.9	3.9, 3.9	3	1.1	6.0E-2
	5.7	5.7, 5.7	3	9.3E-1	1.1E-1
	8.5	8.3, 9.0	4	8.2E-1	1.0E-1
	11	10.5, 10.5	3	7.5E-1	5.9E-2
	12	11.5, 11.5	3	6.2E-1	1.9E-2
	14	13.8, 13.8	3	2.3E-1	3.7E-2
	16	14.8, 15.8	4	1.4E-1	5.2E-2
	18	17.6, 17.8	7	3.9E-3	2.0E-3
	20	20.1, 20.5	4	3.6E-5	3.6E-5
	23	22.8, 23.3	4	1.0E-7	1.0E-7
	30	30.2, 30.2	3	0	n/a
	36	35.9, 35.9	3	0	n/a
<b><i>D. radiodurans</i> R1 (E)</b>	0	n/a	10	1	n/a
	3.2	2.8, 3.6	6	9.1E-1	7.3E-2
	5.8	5.7, 6.0	8	7.6E-1	6.1E-2

	7.8	7.8, 7.8	2	8.2E-1	2.0E-3
	9.2	9.1, 9.5	6	2.5E-1	7.0E-2
	12	11.9, 12.2	8	2.0E-2	1.1E-2
	14	14.1, 14.4	4	8.3E-5	4.8E-5
	15	14.8, 15.3	6	4.4E-4	2.6E-4
	29	29.0, 29.0	2	3.2E-6	3.2E-6
<b><i>D. radiodurans</i> R1 (S)</b>	0	n/a	10	1	n/a
	3.0	2.8, 3.1	3	9.2E-1	7.0E-2
	3.6	3.6, 3.6	2	9.7E-1	8.5E-3
	5.9	5.7, 6.0	6	6.3E-1	9.5E-2
	7.8	7.8, 7.8	2	7.0E-1	3.8E-2
	9.5	9.4, 9.5	2	4.8E-1	5.5E-2
	12	12.0, 12.2	4	5.8E-2	3.7E-2
	15	14.1, 15.8	11	1.0E-2	3.1E-3
	20	18.8, 20.8	9	1.5E-4	9.6E-5
	24	24.2, 24.2	2	0	n/a
	30	29.0, 30.8	3	0	n/a