

**Figure 3.** Selenium volatilization rates among bacterial strains isolated from the soil-rabbitfoot grass system. Microbial volatilization measurements conducted over 24 hours demonstrated *B. cereus* as the best Se volatilizing species at  $p < 0.05$ . The data in the figure are means and standard deviation ( $n=3$ ).

Unit:  $\mu\text{g}/\text{d}$

Strain	AVG	STD
<i>Pseudomonas putida</i>	1.7927	0.675
<i>Bacillus megaterium</i>	0.6291	0.2359
<i>Pseudomonas tessidea</i>	0.5681	6.66E-03
<i>Paenibacillus barcinonensis</i>	1.2311	0.8007
<i>Bacillus subtilis</i>	0.3135	0.0337
Uncultured bacterium clone	1.8521	1.277
<i>Bacillus cereus</i>	964.8245	116.0684
<i>Methylobacterium sp.</i>	1.3898	0.5466
<i>Streptomyces graminearus</i>	1.3898	0.5466

**Figure 4.** Cumulative selenium mass volatilized from the soil-Indian mustard (*B. juncea*). The data are means and standard deviations ( $n=4$ ).

Unit:  $\text{ng}/\text{pot}$

Days after Se application	Soil without plant		Soil with plant		Bacterial inoculated soil and plant	
	AVG	STD	AVG	STD	AVG	STD
1	113.4842	74.6276	765.0559	181.8255	871.7523	314.8322
2	264.8937	151.1986	2323.2628	491.479	2688.5771	651.5065
3	421.4391	236.4615	4089.5335	614.2753	5080.2214	1077.6051
4	537.2794	290.1994	5247.4535	654.8666	7298.6695	968.4868
5	639.653	327.9118	6570.9262	774.2007	9558.492	1228.097
6	714.0384	335.5433	8055.4802	862.0112	11669.1938	1405.9393
7	766.575	348.6922	9725.7535	592.7644	13572.927	1776.7386

**SI Figure 1.** Sorensen's coefficient (CS) of rhizosphere soil from each treatment. Percentage of similarities for the unvegetated soil without Se treatment (or Soil), the unvegetated soil treated with  $5 \text{ mg kg}^{-1} \text{ Se}$  (or Soil + Se), and the rabbitfoot grass soil with  $5 \text{ mg kg}^{-1} \text{ Se}$  treatment (or Soil+Se+RFG) groups after 4 weeks.

Unit: %

Without Se rabbitfoot grass	64.4813
With Se rabbitfoot grass	75.55
Soil + selenium	65.7778