

Additional file 3: Statistical analysis of the dataset of *de novo* production of geranic acid by *P. putida* DSM 12264 harboring *ges* (Figure 3). In table **a)** and **b)**, ANOVA and Tukey's HSD values are shown for t = 0 - t = 26.25 in regard to geraniol production by *P. putida* DSM 12264 w/o *ges* and *P. putida* DSM 12264 harboring *ges*. In table **c)** and **d)**, ANOVA and Tukey's HSD values are shown for t = 0 to t = 26.25 in regard to geranic acid production by *P. putida* DSM 12264 w/o *ges* and *P. putida* DSM 12264 harboring *ges*. *: mean difference is significant at level $p < 0.05$ (Tukey's HSD).

a) ANOVA (geraniol)		Sum of squares	df	Mean square	F	Sig.
t = 0	Between Groups	.00	1	.00	2.79	.237
	Within Groups	.00	2	.00		
	Total	.00	3			
t = 4	Between Groups	.30	1	.30	151.25	.007
	Within Groups	.00	2	.00		
	Total	.31	3			
t = 5	Between Groups	.36	1	.36	450.00	.002
	Within Groups	.00	2	.00		
	Total	.36	3			
t = 10	Between Groups	.12	1	.12	1156.00	.001
	Within Groups	.00	2	.00		
	Total	.12	3			
t = 21.25	Between Groups	.00	1	.00	NaN	NaN
	Within Groups	.00	2	.00		
	Total	.00	3			
t = 22.25	Between Groups	.00	1	.00	NaN	NaN
	Within Groups	.00	2	.00		
	Total	.00	3			
t = 24.25	Between Groups	.00	1	.00	NaN	NaN
	Within Groups	.00	2	.00		
	Total	.00	3			
t = 26.25	Between Groups	.00	1	.00	NaN	NaN
	Within Groups	.00	2	.00		
	Total	.00	3			

b) TUKEY HSD (geraniol)

95% Confidence interval

	Strain (I)	Strain (J)	Mean difference (I-J)	Std. error	Sig.	Lower bound	Upper bound
t = 0	control (w/o ges)	+ ges	-.05	.03	.237	-.16	.07
	+ ges	control (w/o ges)	.05	.03	.237	-.07	.16
t = 4	control (w/o ges)	+ ges	-.55*	.04	.006	-.74	-.36
	+ ges	control (w/o ges)	.55*	.04	.006	.36	.74
t = 5	control (w/o ges)	+ ges	-.60*	.03	.002	-.72	-.48
	+ ges	control (w/o ges)	.60*	.03	.002	.48	.72
t = 10	control (w/o ges)	+ ges	-.34*	.01	.000	-.38	-.30
	+ ges	control (w/o ges)	.34*	.01	.000	.30	.38
t = 21.25	control (w/o ges)	+ ges	.00	.00		.00	.00
	+ ges	control (w/o ges)	.00	.00		.00	.00
t = 22.25	control (w/o ges)	+ ges	.00	.00		.00	.00
	+ ges	control (w/o ges)	.00	.00		.00	.00
t = 24.25	control (w/o ges)	+ ges	.00	.00		.00	.00
	+ ges	control (w/o ges)	.00	.00		.00	.00
t = 26.25	control (w/o ges)	+ ges	.00	.00		.00	.00
	+ ges	control (w/o ges)	.00	.00		.00	.00

c) ANOVA (geranic acid)

		Sum of squares	df	Mean square	F	Sig.
t = 0	Between Groups	.00	1	.00	NaN	NaN
	Within Groups	.00	2	.00		
	Total	.00	3			
t = 4	Between Groups	.00	1	.00	.16	.728

		SS	df	MS	F	p
	Within Groups	.00	2	.00		
	Total	.01	3			
t = 5	Between Groups	.01	1	.01	.78	.471
	Within Groups	.03	2	.01		
	Total	.04	3			
t = 10	Between Groups	3.01	1	3.01	91.71	.011
	Within Groups	.07	2	.03		
	Total	3.08	3			
t = 21.25	Between Groups	62.25	1	62.25	421.76	.002
	Within Groups	.30	2	.15		
	Total	62.55	3			
t = 22.25	Between Groups	59.83	1	59.83	2587.25	.000
	Within Groups	.05	2	.02		
	Total	59.88	3			
t = 24.25	Between Groups	58.52	1	58.52	514.94	.002
	Within Groups	.23	2	.11		
	Total	58.75	3			
t = 26.25	Between Groups	61.07	1	61.07	564.33	.002
	Within Groups	.22	2	.11		
	Total	61.29	3			

95% Confidence interval

	Strain (I)	Strain (J)	Mean	Std. error	Sig.	Lower bound	Upper bound
	difference (I-J)						
t = 0	control (w/o ges)	+ ges	.00	.00		.00	.00

	+ ges	control (w/o ges)	.00	.00		.00	.00
t = 4	control (w/o ges)	+ ges	-.02	.05	.728	-.23	.19
	+ ges	control (w/o ges)	.02	.05	.728	-.19	.23
t = 5	control (w/o ges)	+ ges	-.10	.11	.471	-.59	.39
	+ ges	control (w/o ges)	.10	.11	.471	-.39	.59
t = 10	control (w/o ges)	+ ges	-1.73*	.18	.011	-2.51	-.96
	+ ges	control (w/o ges)	1.73*	.18	.011	.96	2.51
t = 21.25	control (w/o ges)	+ ges	-7.89*	.38	.002	-9.54	-6.24
	+ ges	control (w/o ges)	7.89*	.38	.002	6.24	9.54
t = 22.25	control (w/o ges)	+ ges	-7.73*	.15	.000	-8.39	-7.08
	+ ges	control (w/o ges)	7.73*	.15	.000	7.08	8.39
t = 24.25	control (w/o ges)	+ ges	-7.65*	.34	.001	-9.10	-6.20
	+ ges	control (w/o ges)	7.65*	.34	.001	6.20	9.10
t = 26.25	control (w/o ges)	+ ges	-7.81*	.33	.001	-9.23	-6.40
	+ ges	control (w/o ges)	7.81*	.33	.001	6.40	9.23