



University of Guam Coconut Rhinoceros Beetle Biological Control Project

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<https://github.com/aubreymoore/rearing3>

## Bioassay Report: V23B\_perOSIN

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[https://github.com/aubreymoore/rearing3/raw/master/bioassay-V23B%5C\\_perOSIN.pdf](https://github.com/aubreymoore/rearing3/raw/master/bioassay-V23B%5C_perOSIN.pdf)

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# 1 Summary

Table 1: Bioassay summary.

	bioassay_name	date_start_bioassay	date_end_bioassay	bioassay_treatment	N
0	V23B_perOSIN-1	2019-05-03	2019-05-31	control	6
1	V23B_perOSIN-1	2019-05-03	2019-05-31	heat inactivated	5
2	V23B_perOSIN-1	2019-05-03	2019-05-31	virus	5

Fifteen adult beetles maintained for more than 2 weeks to observe possible contamination from green muscardine fungus infection were employed in a preliminary test to determine the susceptibility of adult beetle to infection by virus V23B isolate (Solomon Islands). Each of 15 beetles (5/virus isolate) were injected with 1 - 2 ul of virus preparation with a sterile 1 ml pipette w/ 30cc needle tip. Adults were then placed individually in clean glass mason jars (bleached-treated) , sphagnum moss and with a piece of banana added for food. Beetles were incubated at 300C and 80

## 2 Mortality

Table 2: Mortality summary.

	bioassay_treatment	ntotal	ndead	mortality	adjusted_mortality	significance
0	control	6	0.0	0.0	0.0	1.000000
1	heat inactivated	5	0.0	0.0	0.0	1.000000
2	virus	5	3.0	0.6	0.6	0.060606

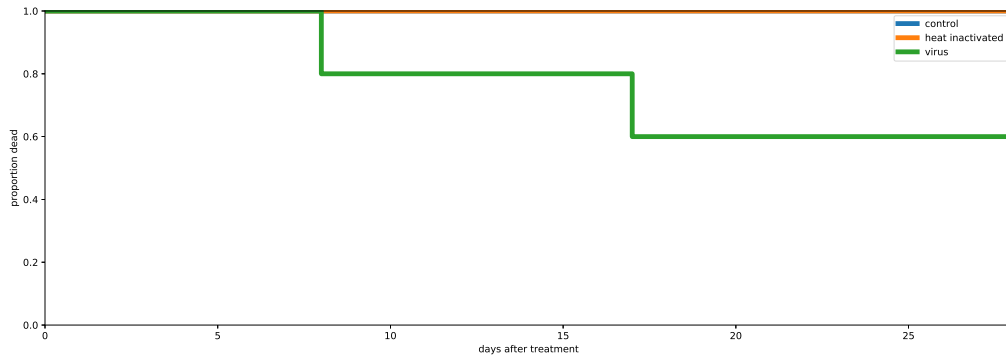


Table 3: Pairwise differences among mortality curves.

		test_statistic	p
control	heat inactivated	0.000000	1.000000
	virus	4.624030	0.031527
heat inactivated	virus	3.862042	0.049390

### 3 Change in Mass

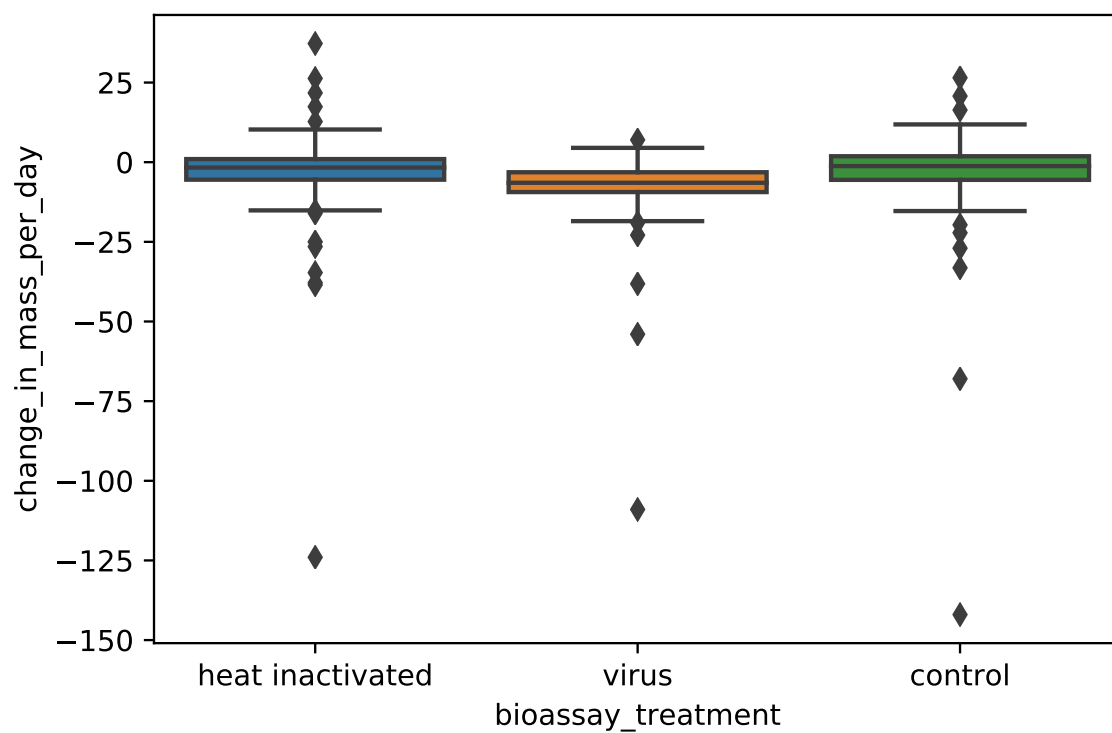


Table 4: Results of pairwise significance tests for differences in change in mass.

	control	heat inactivated	virus
control	-1.000000	0.648200	0.000523
heat inactivated	0.648200	-1.000000	0.001745
virus	0.000523	0.001745	-1.000000