

Supplementary Materials

Table S1. Percentage mortality of a susceptible *C. lectularius* strain and three *C. hemipterus* strains exposed to Tandem, Temprid SC, Pesguard FG161, Sumithrin, and Sumithion at label rate.

Product	Strain	Exposure time	Percentage mortality observed at different time interval post treatment (mean \pm SE)			
			1-day	2-day	3-day	4-day
Tandem	Monheim	5 min	100a	100a	100a	100a
		10 min	100a	100a	100a	100a
		30 min	100a	100a	100a	100a
		1 h	100a	100a	100a	100a
		4 h	100a	100a	100a	100a
		Continuous	100a	100a	100a	100a
	Madam Mo	5 min	93.3 \pm 6.7a	100a	100a	100a
		10 min	100a	100a	100a	100a
		30 min	100a	100a	100a	100a
		1 h	100a	100a	100a	100a
		4 h	100a	100a	100a	100a
		Continuous	100a	100a	100a	100a
	Tanjong Tokong	5 min	83.3 \pm 3.3a	100a	100a	100a
		10 min	93.3 \pm 6.7a	100a	100a	100a
		30 min	100a	100a	100a	100a
		1 h	100a	100a	100a	100a
		4 h	100a	100a	100a	100a
		Continuous	100a	100a	100a	100a
Green Lane	5 min	86.7 \pm 3.3a	96.7 \pm 3.3a	100a	100a	
	10 min	93.3 \pm 6.7a	100a	100a	100a	
	30 min	100a	100a	100a	100a	
	1 h	100a	100a	100a	100a	
	4 h	100a	100a	100a	100a	
	Continuous	100a	100a	100a	100a	
	Monheim	5 min	100a	100a	100a	100a

Temprid SC		10 min	100a	100a	100a	100a
		30 min	100a	100a	100a	100a
		1 h	100a	100a	100a	100a
		4 h	100a	100a	100a	100a
		Continuous	100a	100a	100a	100a
Madam Mo		5 min	100a	100a	100a	100a
		10 min	100a	100a	100a	100a
		30 min	100a	100a	100a	100a
		1 h	100a	100a	100a	100a
		4 h	100a	100a	100a	100a
	Continuous	100a	100a	100a	100a	
Tanjong Tokong		5 min*	33.3 ± 3.3b	36.7 ± 3.3ab	46.7 ± 3.3ab	50.0a
		10 min*	53.3 ± 8.8b	56.7 ± 6.7ab	83.3 ± 8.8a	83.3 ± 8.8a
		30 min*	46.7 ± 3.3b	56.7 ± 8.8ab	76.7 ± 3.3a	76.7 ± 3.3a
		1 h	100a	100a	100a	100a
		4 h	100a	100a	100a	100a
	Continuous	100a	100a	100a	100a	
Green Lane		5 min	40a	40a	43.3 ± 3.3a	50 ± 5.8a
		10 min	40 ± 5.8a	40 ± 5.8a	53.3 ± 3.3a	60 ± 5.8a
		30 min	63.3 ± 8.8a	63.3 ± 8.8a	63.3 ± 8.8a	76.7 ± 6.7a
		1 h	53.3 ± 6.7a	56.7 ± 8.8a	70a	73.3 ± 3.3a
		4 h	70a	76.7 ± 3.3a	76.7 ± 3.3a	76.7 ± 3.3a
	Continuous	100a	100a	100a	100a	
Pesguard FG161	Monheim	5 min	100a	100a	100a	100a
		10 min	100a	100a	100a	100a
		30 min	100a	100a	100a	100a
		1 h	100a	100a	100a	100a
		4 h	100a	100a	100a	100a
	Continuous	100a	100a	100a	100a	
Madam Mo		5 min	86.7 ± 3.3a	100a	100a	100a
		10 min	100a	100a	100a	100a
		30 min	100a	100a	100a	100a

		1 h	100a	100a	100a	100a
		4 h	100a	100a	100a	100a
		Continuous	100a	100a	100a	100a
Tanjong Tokong		5 min	0a	0a	0a	0a
		10 min	0a	0a	0a	0a
		30 min	6.7 ± 3.3a	6.7 ± 3.3a	6.7 ± 3.3a	6.7 ± 3.3a
		1 h	23.3 ± 3.3a	23.3 ± 3.3a	23.3 ± 3.3a	23.3 ± 3.3a
		4 h	30 ± 11.5a	30 ± 11.5a	30 ± 11.5a	30 ± 11.5a
		Continuous*	33.3 ± 6.7b	33.3 ± 6.7b	63.3 ± 6.7ab	66.7 ± 8.8a
Green Lane		5 min	0a	0a	0a	0a
		10 min	0a	0a	0a	0a
		30 min	0a	0a	0a	0a
		1 h	0a	0a	0a	0a
		4 h	0a	0a	0a	6.7 ± 3.3a
		Continuous*	0b	3.3 ± 3.3b	13.3 ± 3.3ab	30 ± 5.8a
Sumithrin Monheim		5 min	100a	100a	100a	100a
		10 min	100a	100a	100a	100a
		30 min	100a	100a	100a	100a
		1 h	100a	100a	100a	100a
		4 h	100a	100a	100a	100a
		Continuous	100a	100a	100a	100a
Madam Mo		5 min*	60 ± 5.8b	83.3 ± 6.7ab	100a	100a
		10 min*	56.7 ± 8.8b	90ab	100a	100a
		30 min	80a	100a	100a	100a
		1 h	83.3 ± 3.3a	100a	100a	100a
		4 h	86.7 ± 3.3a	100a	100a	100a
		Continuous	86.7 ± 3.3a	100a	100a	100a
Tanjong Tokong		5 min	0a	0a	0a	0a
		10 min	0a	0a	0a	0a
		30 min	0a	0a	0a	0a
		1 h	3.3 ± 3.3a	3.3 ± 3.3a	3.3 ± 3.3a	3.3 ± 3.3a
		4 h	6.7 ± 3.3a	6.7 ± 3.3a	6.7 ± 3.3a	10 ± 5.8a
		Continuous				

		Continuous*	20 ± 5.8b	36.7 ± 8.8 ab	53.3 ± 8.8a	56.7 ± 8.8a
Green Lane	5 min		0a	0a	0a	0a
	10 min		0a	0a	0a	0a
	30 min		0a	0a	0a	0a
	1 h		0a	0a	0a	0a
	4 h		0a	0a	6.7 ± 3.3a	6.7 ± 3.3a
	Continuous*		6.7 ± 3.3b	16.7 ± 8.8ab	23.3 ± 3.3ab	30a
	Sumithion	Monheim	5 min	100a	100a	100a
		10 min	100a	100a	100a	100a
		30 min	100a	100a	100a	100a
		1 h	100a	100a	100a	100a
		4 h	100a	100a	100a	100a
		Continuous	100a	100a	100a	100a
Madam Mo	5 min		0a	0a	6.7 ± 3.3a	10a
	10 min		0a	6.7 ± 3.3a	10 ± 5.8a	10 ± 5.8a
	30 min*		0b	10ab	16.7 ± 3.3a	20a
	1 h*		10 ± 5.8b	10 ± 5.8b	20 ± 5.8ab	23.3 ± 3.3a
	4 h		20 ± 5.8a	33.3 ± 8.8a	40 ± 5.8a	40 ± 5.8a
	Continuous		100a	100a	100a	100a
	Tanjong Tokong	5 min		0a	0a	0a
10 min			0a	10a	10a	10a
30 min*			0b	10ab	10ab	13.3 ± 3.3a
1 h			10a	10a	10a	13.3 ± 3.3a
4 h			16.7 ± 6.7a	16.7 ± 6.7a	20.0 ± 5.8a	23.3 ± 8.8a
Continuous*			70b	90ab	100a	100a
Green Lane		5 min		0a	0a	0a
	10 min		0a	0a	0a	6.7 ± 6.7a
	30 min		0a	3.3 ± 3.3a	6.7 ± 3.3a	10 ± 5.8a
	1 h		10a	10a	10a	10a
	4 h		6.7 ± 3.3a	10 ± 5.8a	10 ± 5.8a	16.7 ± 3.3a
	Continuous		100a	100a	100a	100a

Green Lane	5 min*	0b	0b	10ab	20ab	20ab	23.3 ± 3.3ab	30a	30a	33.3 ± 3.3a	33.3 ± 3.3a	33.3 ± 3.3a	33.3 ± 3.3a	40a	40a
	10 min*	0c	6.7 ± 3.3bc	13.3 ± 3.3ab	23.3 ± 3.3abc	26.7 ± 3.3ab	26.7 ± 3.3abc	33.3 ± 8.8ab	33.3 ± 8.8ab	33.3 ± 8.8ab	33.3 ± 8.8ab	40 ± 10.0a	40 ± 10.0a	40 ± 10.0a	40 ± 10.0a
	30 min*	0c	6.7 ± 3.3bc	13.3 ± 8.8ab	23.3 ± 12.0abc	30 ± 5.8ab	33.3 ± 6.7abc	36.7 ± 3.3ab	36.7 ± 3.3ab	36.7 ± 3.3ab	36.7 ± 3.3ab	36.7 ± 3.3ab	40 ± 5.8a	46.7 ± 8.8a	46.7 ± 8.8a
	1 h*	0c	20bc	20bc	23.3 ± 3.3abc	30abc	33.3 ± 3.3abc	40 ± 10abc	40 ± 10abc	43.3 ± 8.8ab	46.7 ± 12.0a	46.7 ± 12.0a	53.3 ± 8.8a	53.3 ± 8.8a	53.3 ± 8.8a
	4 h*	26.7 ± 6.7d	56.7 ± 6.7cd	63.3 ± 8.8bc	66.7 ± 6.7abcd	73.3 ± 6.7ab	76.7 ± 3.3abcd	83.3 ± 3.3abcd	86.7 ± 3.3ab	90ab	90ab	93.3 ± 3.3a	93.3 ± 3.3a	100a	100a
	Continuous*	33.3 ± 8.8b	86.7 ± 3.3ab	96.7 ± 3.3ab	100a	100a	100a	100a	100a	100a	100a	100a	100a	100a	100a

* Percentage mortality across day 1 to day 14 is significantly different ($p < 0.05$; Friedman Test). Mean followed by different letters within the same row are significantly different ($p < 0.05$; Dunn's Test).