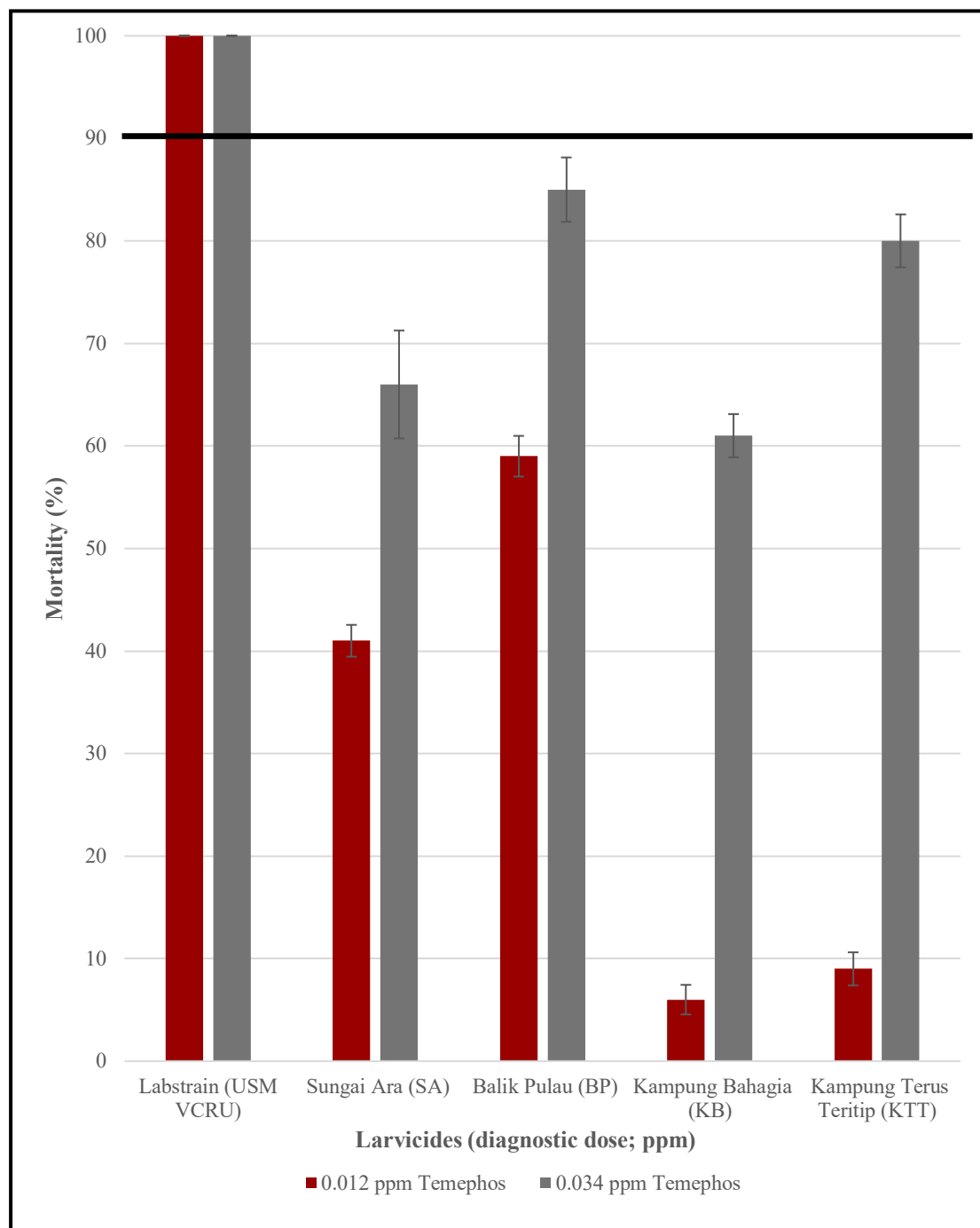


Additional file 3: Table S2: Percentage mortality of *Ae. albopictus* larvae at 24h post-treatment against diagnostic dose of 0.012 ppm and 0.034 ppm temephos larvicides, respectively.

State	Sample	Percentage of mortality (% $\pm$ SD)		Interpretation of susceptibility status (based on 0.034 ppm)
		0.012 ppm	0.034 ppm	
Penang	USM VCRU	100.00 $\pm$ 0.00 [S] (200)	100.00 $\pm$ 0.00 [S] (200)	Susceptible
	SA	40.50 $\pm$ 1.55 [R] (200)	65.67 $\pm$ 2.06 [R] (300)	Confirmed resistance
	BP	59.00 $\pm$ 1.98 [R] (200)	85.00 $\pm$ 3.14 [R] (300)	Confirmed resistance
Perlis	KB	5.67 $\pm$ 1.44 [R] (300)	61.33 $\pm$ 2.10 [R] (300)	Confirmed resistance
	KTT	9.33 $\pm$ 1.61 [R] (300)	80.00 $\pm$ 2.59 [R] (300)	Confirmed resistance

n = 200-300. The sample size was not standardized due to insufficient number of F1 mosquito samples. Percentage mortality after 24 hours = % $\pm$ SD; [S] = susceptible (98-100% mortality), [P] = possible resistance/incipient resistance, [R] = confirmed resistance (< 90% mortality), as determined by WHO (2016)



Additional file 3: Fig. S2: Percentage mortality of *Ae. albopictus* larvae from the different localities in Penang and Perlis, Malaysia towards 0.012 ppm and 0.034 ppm of temephos. Error bars represent 95% confidence interval (CI). Black horizontal line indicates resistant threshold level (mortality <90% is considered phenotypically resistant; WHO, 2016).

Additional file 3: Table S3: Summary of LC₅₀, LC₉₅, diagnostic dose (DD), and resistance ratios (RR) from larval bioassays of temephos in field strains of *Ae. albopictus* compared with the USM VCRU laboratory strain.

State	Sample	Sample size (n)	LC ₅₀ , ppm (95% CL)	LC ₉₅ , ppm (95% CL)	DD, ppm	RR ₅₀ , folds	RR ₉₅ , folds
Penang	USM VCRU	650	0.007 (0.006-0.008) ^a	0.013 (0.011-0.024) ^a	0.034	1	1
	SA	850	0.017 (0.014-0.02) ^b	0.049 (0.035-0.095) ^b	0.152	2.43	3.77
	BP	550	0.011 (0.010-0.11) ^c	0.025 (0.021-0.033) ^a	0.072	1.57	1.92
Perlis	KB	750	0.028 (0.024-0.032) ^d	0.056 (0.045-0.086) ^b	0.148	4	4.31
	KTT	750	0.024 (0.023-0.025) ^d	0.054 (0.048-0.063) ^b	0.152	3.43	4.15

All LC₅₀ and LC₉₉ are statistically significant using overlapping of confidence limits test. CL = Confidence limits; ^{a,b,c,d} Statistically significant using overlapping of confidence interval test. Susceptible: RR is <5; Moderate resistance: RR is 5-10; Highly resistance: RR is >10 as determined by WHO (2016).