

- 1 **This file contains raw data used by Nararak et al 2022**
- 2 **Behavioral avoidance and biological safety of vetiver oil and its constituents against**
- 3 ***Aedes aegypti* (L.), *Aedes albopictus* (Skuse) and *Culex quinquefasciatus* (Say)**
- 4 **Published in Current Research in Research Science**
- 5 **The sheet assay contains Data used in Table 4-5**
- 6 **These data showed the result of phototoxic and genotoxicity activities of vetiver**
- 7 **components against the standard cell lines.**
- 8 **Table 1** *In vitro* cytotoxic and phototoxic activity of vetiver components against mouse
- 9 normal fibroblast (BALB/c 3T3) cell lines.

Compound	Without irradiation			IC ₅₀ with irradiation			PIF	Phototoxicity
	IC ₅₀ (µg.mL ⁻¹)	IC ₉₀ (µg.mL ⁻¹)	Slope	IC ₅₀ (µg.mL ⁻¹)	IC ₉₀ (µg.mL ⁻¹)	Slope		
Vetiver oil	5.29 ± 0.98	73.19 ± 1.65	12.45	13.74 ± 2.01	36.53 ± 3.37	4.44	0.38	Non-phototoxic
Terpinen-4-ol	>100	>100	ND	>100	>100	ND	N/A	Non-phototoxic
α -Terpineol	>100	>100	ND	>100	>100	ND	N /A	Non-phototoxic
Valencene	>100	>100	ND	>100	>100	ND	N/A	Non-phototoxic
Vetiverol	96.09 ± 6.22	>100	0.62	87.98 ± 8.26	>100	0.89	1.09	Non-phototoxic
Vetivone	>100	>100	ND	>100	>100	ND	N /A	Non-phototoxic
Chlorpromazine	48.9 ± 3.26	>100	0.99	1.05 ± 0.29	12.65	65.23	54.71	Phototoxic

10 Results are expressed as mean ± SD,

- 11 IC_{50} = Concentration inducing a 50% decrease of cell viability, IC_{90} = Concentration inducing a 90%
- 12 decrease of cell viability
- 13 Slope = Cell viability decrease (%) observed at $1\mu\text{g.mL}^{-1}$, as assessed by not linear regression analysis
- 14 with Table Curve 2.0 software
- 15 N/A = showed no sign of phototoxicity as indicated by the low to no PIF values as compared
- 16 ND = non-Determined activity

Table 2 *In vitro* genotoxicity activity of vetiver oil and pure compounds on CHO-K1 cells.

Compound (% or $\mu\text{g.mL}^{-1}$)	Assay performed without S9 mix			Assay performed with S9 mix			
	Proliferative Index (%)	MNC (per 1,000)	<i>P</i>	Proliferative Index (%)	MNC (per 1,000)	<i>P</i>	
Negative control	100	10.5±0.7	-	100	10.5±2.1	-	
Positive control [§]	98.2	31.5±2.1	<0.001	97.6	24.0±1.4	<0.001	
Solvent control	98.6	9.5±0.7	NS ^a	98.4	10.0±1.4	NS	
Vetiver oil	0.1	98.6	10.5±0.7	NS	99.4	10.5±1.4	NS
	0.5	96.8	10.0±1.4	NS	97.5	9.5±0.7	NS
	1	81.2	12.5±0.7	NS	85.6	11.5±1.4	NS
	5	TOX	-	-	TOX	-	NS
Terpinen-4-ol	5	99.8	10.0±1.4	NS	99.9	10.5±2.1	NS
	10	99.1	11.5±0.7	NS	98.9	10.5±0.7	NS
	50	89.5	12.5±0.7	NS	86.4	12.0±2.8	NS
	100	82.4	13.0±2.8	NS	78.6	10.5±0.7	NS
α -Terpineol	5	99.3	12.0±1.4	NS	99.4	8.5 ± 0.7	NS
	10	93.5	11.0±2.8	NS	95.3	9.0±1.4	NS
	50	78.4	8.5±2.1	NS	80.2	13.0±1.4	NS
	100	TOX	-	-	TOX	-	-
Valencene	5	100	12.5±2.1	NS	98.7	12.5±0.7	NS
	10	99.6	10.5±0.7	NS	99.4	12.5±0.7	NS
	50	94.5	9.0±2.8	NS	89.1	12.0±2.8	NS
	100	89.5	10.0±1.4	NS	86.6	12.5±0.7	NS
Vetiverol	5	98.7	11.0±2.8	NS	99.2	9.0±1.4	NS
	10	88.4	10.5±0.7	NS	97.8	12.5±2.1	NS
	50	81.2	13.5±2.1	NS	74.1	11.5±2.1	NS
	100	TOX	-	-	TOX	-	-
Vetivone	5	98.4	8.5±0.7	NS	97.4	10.0±1.4	NS
	10	92.2	10.0±1.4	NS	91.3	12.5±0.7	NS
	50	87.3	11.5±2.1	NS	87.3	12.0±2.8	NS
	100	78.5	9.5±2.1	NS	79.3	12.5±0.7	NS

[§]Positive controls: mitomycin C ($0.05 \mu\text{g.mL}^{-1}$) without S9 mix and benzo-[a]-pyrene ($5 \mu\text{g.mL}^{-1}$) with S9 mix; MNC: Micronucleated cells per 1,000; P: Probability of the comparison between the negative control and the tested dose using the Chi-squared test; TOX: Toxic.

^aNS: non-significant activity; Results are expressed as mean \pm SD

