

PA48: Summary of Tissue Concentration

DTTID: 108-008-003-000-9

Test Compound: Alpha Pinene

Date: 08 Apr 2024

Study Type: TOX

CAS Number: 80-56-8

Time: 10:41:28 AM

Study Number: C20302B-03

DTXSID: DTXSID4026501

Species/Strain: Rat/Sprague Dawley

Tissue Concentration After Whole-body Inhalation Exposure To Alpha Pinene In Male Sprague Dawley Rats

	Dose Group (ppm)			
	0	50	100	200
Blood Concentration				
Alpha Pinene (ng/mL)	BD	10.9 ± 2.06[10]	14.8 ± 1.51[9]	24.2 ± 4.68[10]
Alpha Pinene Oxide (ng/mL)	BD	22.7 ± 2.69[10]	26.8 ± 4.15[10]	43.4 ± 8.80[10]

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Tissue Concentration After Whole-body Inhalation Exposure To Alpha Pinene In Female Sprague Dawley Rats

	Dose Group (ppm)			
	0	50	100	200
Blood Concentration				
Alpha Pinene (ng/mL)	BD	11.5 ± 2.46[10]	16.5 ± 2.14[10]	11.2 ± 2.26[4]
Alpha Pinene Oxide (ng/mL)	BD	24.4 ± 5.58[10]	30.9 ± 5.60[10]	12.1 ± 5.02[4]
Mammary Concentration				
Alpha Pinene (ng/g)	48.3 ± 6.37[16]**	37600 ± 8140[10]**	209000 ± 45400[6]**	40800 [1]
Alpha Pinene Lipid (g/g)	0.287 ± 0.0339[16]	0.290 ± 0.0528[10]	0.135 ± 0.0177[6]	0.125 [1]
Alpha Pinene Oxide (ng/g)	BD	1600 ± 388[10]	10600 ± 5760[6]	279 [1]
Alpha Pinene Oxide Lipid (g/g)	0.303 ± 0.0392[7]	0.300 ± 0.0364[10]	0.248 ± 0.0538[3]	0.169 [1]
Lipid Adjusted Alpha Pinene (ng/g)	179 ± 26.8[16]**	148000 ± 37800[10]**	1580000 ± 346000[6]**	326000 [1]
Lipid Adjusted Alpha Pinene Oxide (ng/g)	BD	6190 ± 1800[10]	7330 ± 1220[3]	1650 [1]

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LEGEND

Data are displayed as mean $\pm$ SEM (N) unless otherwise noted.

If over 20% of the animals in a group were above the limit of detection, then 1/2 the limit of detection value was substituted for values that were below the limit of detection.

When the control group did not have over 20% of its values above the limit of detection, no mean or standard error were calculated, and no statistical analysis was done for the endpoint.

No pairwise comparisons were performed when there was only one animal in the dose group.

Mammary Lipid Adjusted Alpha Pinene Concentration is calculated as Mammary Alpha Pinene Concentration / Mammary Alpha Pinene Lipid Concentration.

Mammary Lipid Adjusted Alpha Pinene Oxide Concentration is calculated as Mammary Alpha Pinene Oxide Concentration / Mammary Alpha Pinene Oxide Lipid Concentration.

If over 20% of the Mammary Alpha Pinene Concentration or Mammary Alpha Pinene oxide Concentration values were above the limit of detection, the corresponding "Adjusted" calculations were performed using 1/2 the limit of detection value for Mammary Alpha Pinene Concentration and 1/2 the limit of quantitation value for Mammary Alpha Pinene Oxide concentration.

When the control group did not have 20% of its Mammary Alpha Pinene Concentration or Mammary Alpha Pinene Oxide Concentration values above the limit of detection, the corresponding "Adjusted" calculations were not performed, so no mean or standard error were reported and no statistical analysis was performed.

Statistical analysis was performed by Jonckheere (trend) and Shirley or Dunn (pairwise) tests.

Statistical significance for the control group indicates a significant trend test.

Statistical significance for a treatment group indicates a significant pairwise test compared to the vehicle control group.

* Statistically significant at $P \leq 0.05$

** Statistically significant at $P \leq 0.01$

The data was collected on study day 731.

BD - Group did not have over 20% of its values above the limit of detection.

One male Blood Alpha Pinene Concentration value from the 100 ppm dose group was excluded from analysis as an outlier.

**** END OF REPORT ****