PA48: Summary of Internal Concentration

Study Number: C20302B-04
Test Type: Toxicology-3-month
Route: Whole-Body Inhalation
Species/Strain: Rat/Harlan Sprague Dawley

Test Compound: alpha-Pinene
CAS Number: 80-56-8
DTXSID: DTXSID4026501

Date: 30 Apr 2026
Time: 2:28:29 PM

Male SD 90

	Treatment Group (ppm)			
	0	50	100	200
Blood				
Blood Lipid Concentration (g/mL)	0.00361 ± 0.000165[5]*	0.00406 ± 0.000175[5]	0.00383 ± 0.000283[4]	0.00442 ± 0.000130[5]*
Blood alpha-Pinene Concentration (ng/mL)	BD	34.9 ± 1.77[5]	43.2 ± 8.34[4]	81.9 ± 2.17[5]
Blood Lipid Adjusted alpha-Pinene Concentration (ng/g lipid)	BD	8710 ± 819[5]	11500 ± 2730[4]	18500 ± 243[5]
Blood alpha-Pinene Oxide Concentration (ng/mL)	BD	86.2 ± 3.98[5]	89.4 ± 3.53[4]	104 ± 5.80[5]
Blood Lipid Adjusted alpha-Pinene Oxide Concentration (ng/g lipid)	BD	21400 ± 1460[5]	23600 ± 1570[4]	23500 ± 930[5]
Mammary Lipid Concentration (in alpha-Pinene analysis) (g/g)	0.0719 ± 0.00458[5]**	0.217 ± 0.0360[5]*	0.174 ± 0.0251[4]*	0.223 ± 0.0263[5]**
Mammary alpha-Pinene Concentration (ng/g)	20.3 ± 6.14[5]**	32900 ± 3210[5]**	93400 ± 13700[4]**	210000 ± 15100[5]**
Mammary Lipid Adjusted alpha-Pinene Concentration (ng/g lipid)	411 ± 139[3]**	163000 ± 21100[5]*	560000 ± 86300[4]**	1010000 ± 180000[5]**
Mammary Lipid Concentration (in alpha-Pinene Oxide analysis) (g/g)	0.161 ± 0.0252[5]	0.189 ± 0.0481[5]	0.156 ± 0.0378[4]	0.191 ± 0.0123[5]
Mammary alpha-Pinene Oxide Concentration (ng/g)	BD	3740 ± 1010[5]	5760 ± 584[4]	5110 ± 699[5]
Mammary Lipid Adjusted alpha-Pinene Oxide Concentration (ng/g lipid)	BD	20900 ± 3990[5]	47300 ± 15700[4]	27000 ± 3240[5]

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Female SD 90

	Treatment Group (ppm)			
	0	50	100	200
Blood				
Blood Lipid Concentration (g/mL)	0.00484 ± 0.000252[5]	0.00502 ± 0.000123[5]	0.00507 ± 0.000331[5]	0.00491 ± 0.000241[5]
Blood alpha-Pinene Concentration (ng/mL)	BD	56.8 ± 0.278[4]	124 ± 10.3[5]	143 ± 12.7[5]
Blood Lipid Adjusted alpha-Pinene Concentration (ng/g lipid)	BD	11500 ± 241[4]	24800 ± 2440[5]	29700 ± 3470[5]
Blood alpha-Pinene Oxide Concentration (ng/mL)	BD	129 ± 8.00[5]	196 ± 22.6[5]	182 ± 13.7[5]
Blood Lipid Adjusted alpha-Pinene Oxide Concentration (ng/g lipid)	BD	25800 ± 1660[5]	38700 ± 4090[5]	37200 ± 2460[5]
Mammary Lipid Concentration (in alpha-Pinene analysis) (g/g)	0.0718 ± 0.00524[5]*	0.205 ± 0.0471[5]**	0.0988 ± 0.0135[5]	0.201 ± 0.0418[5]**
Mammary alpha-Pinene Concentration (ng/g)	18.6 ± 6.09[5]**	82500 ± 8550[5]**	250000 ± 26400[5]**	470000 ± 22400[5]**
Mammary Lipid Adjusted alpha-Pinene Concentration (ng/g lipid)	430 ± 60.0[2]**	533000 ± 151000[5]	2760000 ± 553000[5]*	2940000 ± 798000[5]*
Mammary Lipid Concentration (in alpha-Pinene Oxide analysis) (g/g)	0.182 ± 0.0243[5]	0.174 ± 0.0454[5]	0.239 ± 0.0321[5]	0.193 ± 0.00711[5]
Mammary alpha-Pinene Oxide Concentration (ng/g)	BD	5320 ± 793[5]	13800 ± 2610[5]	13600 ± 1410[5]
Mammary Lipid Adjusted alpha-Pinene Oxide Concentration (ng/g lipid)	BD	34600 ± 5610[5]	61400 ± 13100[5]	71000 ± 7670[5]

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LEGEND

Data are displayed as mean ± SEM (N) unless otherwise noted.

SD – Study Day

If over 20% of the animals in a group are above the limit of detection. then 1/2 the limit of detection value is substituted for values that are 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; no statistical analysis was done for the endpoint.

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 $p \leq 0.01$

** END OF REPORT **