

Study Number: C98004-01

Test Type: TOX

Route: Oral Gavage

Species/Strain: Rat/Harlan Sprague Dawley

Study Number:

Study Gender:

PWG Approval Date

PA49: Summary of Cytochrome Activity

Test Compound: Hexachlorobenzene (HCB)

CAS Number: 607-91-0

C98004-01

Female

See web page for date of PWG Approval

Date Report Requested: 07/06/2020

Time Report Requested: 08:54:42

Lab: NTP

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Treatment Groups (mg/kg)

	0	0.03	0.1	0.3	1
Hepatic Cytochrome P450 1A2 (nmol/min/mg protein)	0.465 ± 0.028 (10) **	0.560 ± 0.030 (9) *	0.524 ± 0.020 (10) *	0.626 ± 0.019 (10) **	0.978 ± 0.042 (10) **
Hepatic Cytochrome P450 1A1 (pmol/min/mg protein)	35.9 ± 4.1 (10) **	43.0 ± 2.8 (9)	42.4 ± 1.9 (10)	48.1 ± 3.8 (10) **	107.7 ± 5.9 (10) **
Hepatic Cytochrome P450 2B (pmol/min/mg protein)	1.77 ± 0.14 (10) **	2.94 ± 0.11 (9) **	4.39 ± 0.22 (10) **	9.07 ± 0.65 (10) **	21.71 ± 0.98 (10) **
Hepatic Microsomal Protein Concentration (mg/ml)	43.5 ± 2.1 (10)	39.8 ± 1.1 (9)	45.9 ± 1.0 (10)	43.2 ± 1.1 (10)	41.1 ± 0.9 (10)
Pulmonary Cytochrome P450 1A1 (pmol/min/mg protein)	0.628 ± 0.110 (10) **	0.958 ± 0.229 (9)	0.538 ± 0.067 (10)	0.621 ± 0.082 (10)	0.885 ± 0.136 (10)
Pulmonary Microsomal Protein Concentration (mg/ml)	3.56 ± 0.24 (10)	3.04 ± 0.18 (9)	3.10 ± 0.20 (10)	2.57 ± 0.21 (10) *	2.34 ± 0.21 (10) **

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	Treatment Groups (mg/kg)		
	3	10	25
Hepatic Cytochrome P450 1A2 (nmol/min/mg protein)	1.669 ± 0.090 (10) **	0.965 ± 0.182 (10) **	0.691 ± 0.169 (10) **
Hepatic Cytochrome P450 1A1 (pmol/min/mg protein)	284.2 ± 23.0 (10) **	314.1 ± 52.3 (10) **	339.7 ± 67.7 (10) **
Hepatic Cytochrome P450 2B (pmol/min/mg protein)	66.30 ± 4.57 (9) **	38.94 ± 5.41 (10) **	28.19 ± 2.63 (10) **
Hepatic Microsomal Protein Concentration (mg/ml)	37.9 ± 1.8 (10)	53.2 ± 2.0 (10)	42.1 ± 1.7 (10)
Pulmonary Cytochrome P450 1A1 (pmol/min/mg protein)	0.338 ± 0.063 (10)	0.843 ± 0.100 (10)	4.872 ± 0.903 (10) **
Pulmonary Microsomal Protein Concentration (mg/ml)	2.68 ± 0.19 (10)	3.32 ± 0.38 (10)	2.98 ± 0.12 (10)

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Female: Special Day 146

Treatment Groups (mg/kg)

	0	0.03	25
Hepatic Cytochrome P450 1A2 (nmol/min/mg protein)	0.354 ± 0.018 (5) **	0.286 ± 0.025 (5)	0.173 ± 0.018 (5) **
Hepatic Cytochrome P450 1A1 (pmol/min/mg protein)	26.9 ± 1.9 (5)	20.3 ± 2.0 (5)	71.7 ± 11.7 (5)
Hepatic Microsomal Protein Concentration (mg/ml)	41.3 ± 3.1 (5)	38.1 ± 1.1 (5)	43.2 ± 1.3 (5)

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Female: Special Day 201

Treatment Groups (mg/kg)

0

0.03

25

Hepatic Cytochrome P450 1A2
(nmol/min/mg protein)

0.285 ± 0.041 (5)

0.256 ± 0.041 (5)

0.313 ± 0.039 (5)

Hepatic Cytochrome P450 1A1
(pmol/min/mg protein)

24.1 ± 3.7 (5) **

27.0 ± 3.0 (5)

67.8 ± 7.6 (5) **

Hepatic Microsomal Protein
Concentration (mg/ml)

47.6 ± 5.4 (5)

60.8 ± 9.9 (5)

53.0 ± 1.9 (5)

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LEGEND

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

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

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

Statistical significance for the control group indicates a significant trend test

* Statistically significant at $P \leq 0.05$

** Statistically significant at $P \leq 0.01$

Pulmonary Cytochrome P450 1A1 measurements for Special Study Animals on Day 146 and Day 201 are not presented due to uninterpretable values.

**** END OF REPORT ****