Experiment Number: S0811
Route: Gavage, IV
Species/Strain: Rat/Sprague-Dawley

Toxicokinetics Data Summary
Test Compound: Hexachlorobenzene
CAS Number: 118-74-1

Date Report Requested: 11/09/2016
Time Report Requested: 14:03:22
Lab: Midwest Research Institute

Female

	Treatment Groups (ug/kg)								
	300 [a]	**100 IV [b]**	**1000 IV [b]**	**300 [a]**	**100 IV [a]**	**1000 IV [a]**	**300 [a]**	**100 IV [a]**	**1000 IV [a]**
	Blood			**Fat (Mesenteric)**			**Liver**		
C_{max}	0.087 ug/mL	0.172 ug/mL	2.31 ug/mL	1.32 ug/g	0.334 ug/g	3.18 ug/g	0.202 ug/g	0.082 ug/g	0.630 ug/g
T_{max} (hour)	3	0	0	72	336	72	3	2	2
$Lambda_z$ (hour^-1)	4.0E-4								
$t_{1/2}$ (day)	38.0			48	68	71	75	90	85
Alpha (hour^-1)		1.49	1.83						
$t_{1/2(Alpha)}$ (hour)		0.47	0.38						
Beta (hour^-1)		0.0009	0.0008						
$t_{1/2(Beta)}$ (day)		34	38						
Cl (mL/hr/kg)		12.0	10.1						
$Cl_{1(F)}$ (mL/hr/kg)	8.8								
V_1 (L/kg)		0.580	0.433						
V_{ss} (L/kg)		11.2	10.1						
$V_{1(F)}$ (L/kg)	11.6								
MRT (day)				71	94	103	106	125	121
AUC_{0-t} (ug*hr/mL)	34.2	8.35	99.5						
AUC_{inf}	58.4 ug*hr/mL	12.1 ug*hr/mL	142.0 ug*hr/mL	2485 ug*hr/g	687 ug*hr/g	8179 ug*hr/g	158.6 ug*hr/g	57.9 ug*hr/g	413 ug*hr/g
F (fraction)	1.2								

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	Treatment Groups (ug/kg)		
	300 [a]	**100 IV [a]**	**1000 IV [a]**
	Lung		
C_{max}	0.127 ug/g	0.101 ug/g	2.176 ug/g
T_{max} (hour)	3	2	2
Lambda$_z$ (hour^-1)			
$t_{1/2}$ (day)	77	55	54
Alpha (hour^-1)			
$t_{1/2(Alpha)}$ (hour)			
Beta (hour^-1)			
$t_{1/2(Beta)}$ (day)			
Cl (mL/hr/kg)			
$Cl_{1(F)}$ (mL/hr/kg)			
V_1 (L/kg)			
V_{ss} (L/kg)			
$V_{1(F)}$ (L/kg)			
MRT (day)	108	77	78
AUC_{0-t} (ug*hr/mL)			
AUC_{inf}	117.1 ug*hr/g	24.4 ug*hr/g	254.4 ug*hr/g
F (fraction)			

LEGEND

Data are displayed as mean ± SEM

MODELING METHOD & BEST FIT MODEL

[a] WinNonlin (Version 1, Pharsight Corporation, Cary, NC); Non-compartmental model

[b] WinNonlin (Version 1, Pharsight Corporation, Cary, NC); Two-compartment model with first order elimination from the central compartment best fit the data.

ANALYTE

Hexachlorobenzene

TK PARAMETERS

C_{max} = Observed or Predicted Maximum plasma (or tissue) concentration

T_{max} = Time at which C_{max} predicted or observed occurs

$Lambda_z$ = Non-compartmental analysis (NCA) terminal elimination rate constant, NCA k_e or k_{elim}

$t_{½}$ = $Lambda_z$ half-life, $t_{1/2}$, the terminal elimination half-life based on non-compartmental analysis

Alpha = Hybrid rate constant of the alpha phase

$t_{½(alpha)}$ = Half-life for the alpha phase

Beta = Hybrid rate constant of the beta phase

$t_{½(beta)}$ = Half-life for the beta phase

Cl = Clearance, includes total clearance

$Cl_{1(F)}$ = Apparent clearance of the central compartment, also $Cl_{(F)}$ for gavage groups in non-compartmental model

V_1 = Volume of distribution of the central compartment, includes V_d and V_{volume} of distribution, V_z apparent volume of distribution NCA, V_{app} apparent volume of distribution for intravenous studies

V_{ss} = Volume of distribution at steady state

$V_{1(F)}$ = Apparent volume of distribution for the central compartment includes $V_{d(F)}$, $V_{(F)}$ for oral groups, and $V_{c(F)}$

MRT = Mean residence time

AUC_{0-t} = Area under the plasma concentration versus time curve, AUC, from time t_i (initial) to t_f (final), AUC_{last}

AUC_{inf} = Area under the plasma concentration versus time curve, AUC, extrapolated to time equals infinity

F = Bioavailability, absolute bioavailability

** END OF REPORT **