Experiment Number: S0560
Route: Gavage
Species/Strain: Rat/Fischer 344

Toxicokinetics Data Summary
Test Compound: Primidone
CAS Number: 125-33-7

Date Report Requested: 12/29/2016
Time Report Requested: 14:55:31
Lab: Battelle Columbus Laboratories

Male

Treatment Groups (mg/kg)

	30 [a, #]			30 [b, *]	80 [a, #]			80 [b, *]
				Plasma				
C_{max} (ug/mL)	14.4	±	0.9	3.31	39.3	±	1.2	7.12
T_{max} (minute)	60.9	±	4.6	360	114	±	5	540
$t_{1/2}$ (minute)	42.2	±	3.2		78.8	±	3.1	
k_{10} (minute^-1)	0.0164	±	0.0012		0.00880	±	0.00035	
V_1 (mL/kg)	0.767	±	0.051		0.750	±	0.023	
AUC_{inf} (ug/mL/min)	2381	±	207	2944	12127	±	561	6276

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	Treatment Groups (mg/kg)		
	130 [a, #]		130 [b, *]
	Plasma		
C_{max} (ug/mL)	53.4	± 1.9	9.68
T_{max} (minute)	131	± 6	540
$t_{1/2}$ (minute)	91.1	± 4.1	
k_{10} (minute^-1)	0.00761	± 0.00034	
V_1 (mL/kg)	0.896	± 0.032	
AUC_{inf} (ug/mL/min)	19067	± 1034	10599

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	Female						
	Treatment Groups (mg/kg)						
	30 [a, #]		**30** [b, *]	**80** [a, #]		**80** [b, *]	
	Plasma						
C_{max} (ug/mL)	27.4	± 2.6	1.02	70.7	± 3.3	2.28	
T_{max} (minute)	110	± 13	360	152	± 9	540	
$t_{1/2}$ (minute)	76.3	± 9.3		105	± 6		
k_{10} (minute^-1)	0.00908	± 0.00111		0.00659	± 0.00037		
V_1 (mL/kg)	0.402	± 0.038		0.416	± 0.019		
AUC_{inf} (ug/mL/min)	8213	± 1098	1115	29157	± 1921	2272	

Toxicokinetics Data Summary
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Female

	Treatment Groups (mg/kg)		
	130 [a, #]		**130** [b, *]
	Plasma		
C_{max} (ug/mL)	102	± 5	2.74
T_{max} (minute)	179	± 10	540
$t_{1/2}$ (minute)	124	± 7	
k_{10} (minute^-1)	0.00558	± 0.00030	
V_1 (mL/kg)	0.467	± 0.021	
AUC_{inf} (ug/mL/min)	49924	± 3159	3735

LEGEND

Data are displayed as mean ± SEM

MODELING METHOD & BEST FIT MODEL

[a] PCNONLIN (Statistical Consultants, Inc., Lexington, KY); one one-compartment with equal first-order absorption and first-order elimination with no lag time (Model 5).

[b] Phenobarbital plasma concentration versus time data were not entered into the PCNONLIN program. Reported phenobarbital toxicokinetic parameters are observed values.

ANALYTE

[#] Primidone

[*] Phenobarbital

TK PARAMETERS

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

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

$t_{\frac{1}{2}}$ = Lambda$_z$ half-life, $t_{1/2}$, the terminal elimination half-life based on non-compartmental analysis

k_{10} = Elimination rate constant from the central compartment also k_e or k_{elim}

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

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

** END OF REPORT **