Experiment Number: S0613
Route: Gavage, IV
Species/Strain: Rat/Fischer 344

Toxicokinetics Data Summary
Test Compound: Formamide
CAS Number: 75-12-7

Date Report Requested: 12/27/2016
Time Report Requested: 11:23:42
Lab: Midwest Research Institute

Male

	Treatment Groups (mg/kg)					
	36 [a]	**300 [a]**	**600 [a]**	**10 IV [b]**	**30 IV [b]**	**90 IV [b]**
	Plasma					
C_{max} (ug/mL)	49.6	301.3	823.2	13.3	39.4	139
T_{max} (hour)	1.9	2.4	1.7			
k_{01} (hour^-1)	1.97	1.7	2.5			
$t_{1/2(k01)}$ (hour)	0.35	0.42	0.28			
k_{10} (hour^-1)	0.47	0.037	0.037	0.052	0.056	0.049
$t_{1/2(k10)}$ (hour)	14.8	18.8	18.5	13.4	12.3	14.2
Cl (mL/hr*kg)	39	38	39	39	43	32
V_1 (mL/kg)	662	913	684	754	761	649
MRT (hour)	23	25	24	19	15	20
AUC_{inf} (ug*hr/mL)	1201	11099	24717	256	655	2847
F (fraction)	1.3	1.4	1.6			

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	Female					
	Treatment Groups (mg/kg)					
	36 [a]	300 [a]	600 [a]	10 IV [b]	30 IV [b]	90 IV [b]
	Plasma					
C_{max} (ug/mL)	50.5	269.4	752.6	12.2	41.3	141
T_{max} (hour)	1.5	1.5	1.3			
k_{01} (hour^-1)	2.5	2.6	3.6			
$t_{1/2(k01)}$ (hour)	0.28	0.26	0.19			
k_{10} (hour^-1)	0.63	0.055	0.044	0.055	0.070	0.066
$t_{1/2(k10)}$ (hour)	11.0	12.6	15.8	12.7	10.0	10.4
Cl (mL/hr*kg)	46	45	44	45	51	43
V_1 (mL/kg)	648	1025	755	821	727	640
MRT (hour)	19	17.9	20.4	19	13	18
AUC_{inf} (ug*hr/mL)	934	7961	18977	227	573	2284
F (fraction)	1.2	1.2	1.4			

LEGEND

Data are displayed as mean values

MODELING METHOD & BEST FIT MODEL

[a] WinNonlin (Version 1, SCI, Cary, North Carolina) estimated Cmax, Tmax, and elimination and absorbtion half-lives. Model independent methods (CHANKIN) were used to estimate mean residence time (MRToral), mean absorbance time (MAT) and area under the plasma concentration-time curve (AUCo-inf); One compartment model with first order absorption and elimination.

[b] WinNonlin (Version 1, SCI, Cary, North Carolina) estimated elimination half lives (K10_Half-life), volumes of distribution (V shown as V1), and clearance (Cl). Model independent methods (Statistical Moment, CHANKIN software, Chan, K.K.J., Wnuck, K., Bell, C.L ., Comp. Prog. Biomed., 1986 .) were used to estimate mean residence time (MRT) and area under the plasma concentration-time curve (AUCo-inf); One compartment model with first order elimintation.

ANALYTE

Formamide

TK PARAMETERS

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

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

k_{01} = Absorption rate constant, k_a

$t_{1/2(k01)}$ = Half-life of the absorption process to the central compartment

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

$t_{1/2(k10)}$ = Half-life for the elimination process from the central compartment

Cl = Clearance, includes total clearance

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

MRT = Mean residence time

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

F = Bioavailability, absolute bioavailability

** END OF REPORT **