Experiment Number: K55301B
Route: IV, Gavage
Species/Strain: Rats/F344/N

Toxicokinetics Data Summary
Compound: Pyridine / **Analyte:** Pyridine
CAS Number: 110-86-1

Request Date: 7/11/2023
Request Time: 10:03:16
Lab: T.S.I Mason

Male

	Treatment Group (mg/kg)			
	5 IV Plasma [a,b]	**5 Gavage Plasma[a,c]**	**25 Gavage Plasma[a,b]**	**100 Gavage Plasma[a,b]**
Cmax_obs (ug/mL)	4.9	2.9	20.4	65.7
Tmax_obs (minute)	3	30	60	120
Half-life (hour)	80	73	710	1200
k01 Half-life (minute)		30	16	21
AUC_0-T (min*ug/mL)	1200 ± 94	1255 ± 46	12322 ± 171	50595 ± 118
F		1.05 ± 0.09		

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Female

	Treatment Group (mg/kg)			
	5 IV Plasma[a,b]	**5 Gavage Plasma[a,c]**	**25 Gavage Plasma[a,b]**	**100 Gavage Plasma[a,b]**
Cmax_obs (ug/mL)	4.4	3.4	18.2	62.9
Tmax_obs (minute)	3	60	60	120
Half-life (hour)	130	120	650	1200
k01 Half-life (minute)		35	32	20
AUC_0-T (min*ug/mL)	1185 ± 49	1347 ± 58	12562 ± 356	51352 ± 1077
F		1.14 ± 0.06		

LEGEND

MODELING METHOD & BEST FIT MODEL

[a]Calculated

EXCEPTIONS

[b]Half-life value is approximate

[c]Bioavailability based on truncated curves, Bioavailability equals AUC gavage divided by AUC iv. Half-life value is approximate.

ANALYTE

Pyridine

TK PARAMETERS

Cmax_obs = Observed or Predicted Maximum plasma (or tissue) concentration
Tmax_obs = Time at which Cmax predicted or observed occurs
Half-life = Lambda z Half life, t 1/2, the terminal elimination half-life based on non-compartmental analysis
K01 Half-life = Half-life of the absorption process to the central compartment
AUC_0-T = Area under the plasma concentration versus time curve, AUC, from time ti (initial) to tf (final), AUClast
F = Bioavailability, absolute bioavailability

TK PARAMETERS PROTOCOL

ANALYSIS METHOD

Pyridine was analyzed using gas chromatography with nitrogen-phosphorus detection after extraction from plasma. Pyridine quantitation range in plasma samples was from 0.062 to 100 ug/ml.

TK_IV PLASMA

5 mg/kg Male and Female

Rats were given a single intravenous dose. Each animal was bled twice under deep anesthesia to produce 8 time points from 3 rat/sex/group/time point.

TK_GAVAGE PLASMA

5 mg/kg, 25 mg/kg, 100 mg/kg Male and Female

Rats were given a single gavage dose. Each animal was bled twice under deep anesthesia to produce 8 time points from 3 rat/sex/group/time point.