Experiment Number: K13111
Route: Intravenous, Oral Gavage
Species/Strain: Rat/Harlan Sprague-Dawley

Toxicokinetics Data Summary
Compound & Analyte: 2-(2H-Benzotriazol-2-yl) phenol
CAS Number: 10096-91-0

Request Date: 7/26/2023
Request Time: 2:30:16
Lab: BAT

Male

	Treatment Group (mg/kg)		
	2.25 IV[a] Blood	**30 Gav[b] Blood**	**300 Gav[b] Blood**
C_0min_pred (ng/mL)	866 ± 46		
Cmax_pred (ng/mL)		69.7 ± 12.7	237 ± 56
Tmax_pred (hour)		0.862 ± 0.300	1.49 ± 0.36
Cmax_obs (ng/mL)	790	77.1	273
Tmax_obs (hour)		0.750	0.750
Alpha_Half-life (hour)	0.117 ± 0.006	0.407 ± 25.7	1.15 ± 2.40
Beta_Half-life (hour)	0.964 ± 0.074	1.57 ± 0.78	192 ± 562
Gamma_Half-life (hour)	22.4 ± 4.4		
k01 ($hour^{-1}$)		2.02 ± 64.9	0.794 ± 1.77
k01_Half-life (hour)		0.344 ± 11.1	0.872 ± 1.94
k10 ($hour^{-1}$)	3.12 ± 0.17	0.527 ± 16.9	0.0820 ± 0.288
k10_Half-life (hour)	0.222 ± 0.012	1.32 ± 42.1	8.46 ± 29.6
k12 ($hour^{-1}$)	1.38 ± 0.12	0.188 ± 45.7	0.496 ± 1.03
k21 ($hour^{-1}$)	0.995 ± 0.085	1.43 ± 45.7	0.0264 ± 0.0227
k13 ($hour^{-1}$)	1.12 ± 0.09		
k31 ($hour^{-1}$)	0.0423 ± 0.0073		
Cl1 (mL/hr/kg)	7920 ± 290		
Cl2 (mL/hr/kg)	3510 ± 270		
Cl3 (mL/hr/kg)	2850 ± 240		
Cl1_F (mL/hr/kg)		133000 ± 20000	44600 ± 99200
Cl2_F (mL/hr/kg)		47400 ± 9990000	270000 ± 112000
V1 (mL/kg)	2540 ± 130		
V2 (mL/kg)	3530 ± 310		
V3 (mL/kg)	67400 ± 16300		
V1_F (mL/kg)		252000 ± 8040000	544000 ± 1150000
V2_F (mL/kg)		33100 ± 5940000	10200000 ± 10900000

Experiment Number: K13111 | **Toxicokinetics Data Summary** | **Request Date:** 3/12/2021

Route: Intravenous, Oral Gavage | **Compound & Analyte:** 2-(2H-Benzotriazol-2-yl)phenol | **Request Time:** 2:30:16

Species/Strain: Rat/Harlan Sprague-Dawley | **CAS Number:** 10096-91-0 | **Lab:** BAT

Male

	Treatment Group (mg/kg)		
	2.25 IV[a] Blood	**30 Gav[b] Blood**	**300 Gav[b] Blood**
MRT (hour)	9.27 ± 2.35		
AUC_0-T (ng/mL·hr)	258	216	2160
AUC_inf (ng/mL·hr)	284 ± 10	226 ± 34	6720 ± 14900

LEGEND

MODELING METHOD & BEST FIT MODEL

[a] WinNonlin three-compartment model with bolus input, first order output, and 1/Yhat^2 weighting (model #18); Cmax_pred based on the model prediction at 0 minutes.

[b] WinNonlin two-compartment model with first order input, first order output, and 1/Yhat^2 weighting (model #13).

ANALYTE

2-(2H-Benzotriazol-2-yl)phenol

TK PARAMETERS

C_0min_pred = Fitted plasma concentration at time zero (IV only)
Cmax_obs = Observed maximum plasma concentration
Cmax_pred = Predicted maximum plasma concentration
Tmax_obs = Time at which observed Cmax occurs
Tmax_pred = Time at which predicted Cmax occurs
Alpha_Half-life = Half-life for the alpha phase
Beta_Half- life = Half-life for the beta phase
Gamma Half-life = Half-life for the gamma phase
k01 = Absorption rate constant, ka
k01_Half-life = Half-life of the absorption process to the central compartment
k10 = Elimination rate constant from the central compartment also ke or kelim
k10_Half_life = Half-life for the elimination process from the central compartment
k12 = Distribution rate constant from first to second compartment
k21 = Distribution rate constant from second to first compartment
k13 = Distribution rate constant from first to third compartment
k31 = Distribution rate constant from third to first compartment

TK PARAMETERS (cont'd)

Cl1 = Clearance of central compartment
Cl2 = Clearance of the secondary compartment
Cl3 = Clearance of the tertiary compartment
Cl1_F = Apparent clearance of the central compartment, also Cl_F for gavage groups in non-compartmental model
Cl2_F = Apparent clearance of the secondary compartment
V1 = Volume of distribution of the central compartment, includes Vd and V volume of distribution
V2 = Volume of distribution for the peripheral compartment
V3 = Volume of distribution for the peripheral compartment
V1_F = Apparent volume of distribution for the central compartment includes Vd_F, V_F for oral groups, and Vc_F
V2_F = Apparent volume of distribution for the peripheral compartment
MRT = Mean residence time
AUC_0-T = Area under the plasma concentration versus time curve, AUC, from time ti (initial) to tf (final), AUClast
AUC_inf = Area under the plasma concentration versus time curve, AUC, extrapolated to time equals infinity

TK PARAMETERS PROTOCOL

BLOOD

IV 2.25 Rat Male

Harlan Sprague Dawley male rats were intravenously administered a single 2.25 mg/kg dose of 2-(2H-benzotriazol-2-yl)phenol (PBZT). An automated blood sampling system (Culex) was used for this study. Whole blood samples were taken from n=3 animals/timepoint/per group at pre-dose and 16 timepoints at 0.0333, 0.0833, 0.167, 0.25, 0.333, 0.5, 0.75, 1, 2, 4, 8, 12, 18, 24, 48, and 72 hrs. Parent (free) was analyzed by LC-MS/MS with a lower limit of quantitation (LLOQ) of 2.0 ng/mL. Parameter estimates are reported to three significant figures with standard error (SE). Observed values do not have a reported SE.

BLOOD

Gavage 30 Rat Male, 300 Rat Male

Harlan Sprague Dawley male rats were administered a single gavage dose of 30 or 300 mg/kg 2-(2H-benzotriazol-2-yl)phenol (PBZT). An automated blood sampling system (Culex) was used for this study. Whole blood samples were taken from n=3 animals/timepoint/per group at pre-dose and 16 timepoints at 0.0333, 0.0833, 0.167, 0.25, 0.333, 0.5, 0.75, 1, 2, 4, 8, 12, 18, 24, 48, and 72 hrs. Parent (free) was analyzed by LC-MS/MS with a lower limit of quantitation (LLOQ) of 2.0 ng/mL. Parameter estimates are reported to three significant figures with standard error (SE). Observed values do not have a reported SE.