

Experiment Number: C99028

Route: IV

Species/Strain: Rat/F344

Toxicokinetics Data Summary

Test Compound: Thiodiglycolic Acid

CAS Number: 123-93-3

Date Report Requested: 12/22/2016

Time Report Requested: 15:48:56

Lab: Battelle Columbus

Male

Treatment Groups (mg/kg)

	20 IV <sup>a</sup>	20 IV <sup>a</sup>	20 IV <sup>b</sup>	20 IV <sup>a</sup>
	Heart	Liver	Plasma	Thymus
C <sub>max(pred)</sub> (ug/mL)			32.3 ± 6.4	
C <sub>max(obs)</sub> (ug/g)	8.93	83.0		8.70
T <sub>max</sub> (minute)	15.5	25.2		15.7
t <sub>1/2</sub> (minute)	129	64.6		109
t <sub>1/2(Alpha)</sub> (minute)			22.0 ± 3.0	
t <sub>1/2(Beta)</sub> (minute)			649 ± 628	
k <sub>10</sub> (minute <sup>-1</sup> )			0.0227 ± 0.0059	
t <sub>1/2(k10)</sub> (minute)			30.6 ± 8.0	
k <sub>12</sub> (minute <sup>-1</sup> )			0.00849 ± 0.00397	
k <sub>21</sub> (minute <sup>-1</sup> )			0.00149 ± 0.00119	
Cl (mL/min/kg)			14.0 ± 2.9	
V <sub>1</sub> (mL/kg)			619 ± 123	
V <sub>2</sub> (mL/kg)			3530 ± 4490	
MRT (minute)			296 ± 374	
AUC <sub>inf</sub> (ug/mL*min)			1420 ± 296	

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	Heart	Liver	Plasma	Thymus
C <sub>max(pred)</sub> (ug/mL)			71.9 ± 19.0	
C <sub>max(obs)</sub> (ug/g)	7.78	183		8.78
T <sub>max</sub> (minute)	14.7	44.0		15.0
t <sub>1/2</sub> (minute)	147	125		149
t <sub>1/2(Alpha)</sub> (minute)			6.35 ± 0.90	
t <sub>1/2(Beta)</sub> (minute)			129 ± 15	
k <sub>10</sub> (minute <sup>-1</sup> )			0.0746 ± 0.0125	
t <sub>1/2(k10)</sub> (minute)			9.29 ± 1.55	
k <sub>12</sub> (minute <sup>-1</sup> )			0.0320 ± 0.0046	
k <sub>21</sub> (minute <sup>-1</sup> )			0.00786 ± 0.00102	
Cl (mL/min/kg)			20.8 ± 2.3	
V <sub>1</sub> (mL/kg)			278 ± 74	
V <sub>2</sub> (mL/kg)			1130 ± 275	
MRT (minute)			67.9 ± 10.4	
AUC <sub>inf</sub> (ug/mL*min)			963 ± 107	

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#### LEGEND

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Data are displayed as mean  $\pm$  SEM

#### MODELING METHOD & BEST FIT MODEL

<sup>a</sup> WinNonlin, Version 5.0.1, Pharsight Corporation, Mountain View, CA; Non-compartment model with bolus input, first order output, and 1/Y<sup>2</sup> weighting. Non-compartmental analysis does not calculate a standard error for half life.

<sup>b</sup> WinNonlin, Version 5.0.1, Pharsight Corporation, Mountain View, CA; Two-compartment model with bolus input, first order output, and 1/Y<sup>2</sup> weighting.

#### ANALYTE

Thiodiglycolic Acid

#### TK PARAMETERS

$C_{\max(\text{pred})}$  = Observed or Predicted Maximum plasma (or tissue) concentration

$C_{\max(\text{obs})}$  = Observed or Predicted Maximum plasma (or tissue) concentration

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

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

$t_{1/2(\text{alpha})}$  = Half-life for the alpha phase

$t_{1/2(\text{beta})}$  = Half-life for the beta phase

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

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

$k_{12}$  = Distribution rate constant from first to second compartment etc.

$k_{21}$  = Distribution rate constant from second to first compartment etc.

Cl = Clearance, includes total clearance

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

$V_2$  = Volume of distribution for the peripheral compartment

MRT = Mean residence time

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

**\*\* END OF REPORT \*\***