

Experiment Number: C96018

Route: Gavage, IV

Species/Strain: Mouse/B6C3F1

Toxicokinetics Data Summary
Test Compound: Bromodichloromethane
CAS Number: 75-27-4

Date Report Requested: 12/02/2016

Time Report Requested: 10:40:05

Lab: Battelle Columbus

Male

Treatment Groups (mg/kg)

25 a, #

25 a, *

50 a, #

50 a, *

Plasma

C _{0min(pred)} (ng/mL)				
C _{max} (ng/mL)	101.4	586.7	310.6	1813.0
T _{max} (minute)	5	2	5	2
Lambda _z (min ⁻¹)	0.00066 ± 0.0061	0.00643 ± 0.0032	0.00052 ± 0.0030	0.0714 ± 0.0207
t _{1/2} (minute)	1050 ± 9770	108 ± 54	1320 ± 7420	9.71 ± 2.81
Alpha (min ⁻¹)				
t _{1/2(Alpha)} (minute)				
Beta (min ⁻¹)				
t _{1/2(Beta)} (minute)				
k ₁₀ (min ⁻¹)				
t _{1/2(k10)} (minute)				
k ₁₂ (min ⁻¹)				
k ₂₁ (min ⁻¹)				
Cl (L/min/kg)	3.76 ± 29.4	3.20 ± 0.51	2.41 ± 7.63	2.35 ± 0.24
V _{ss} (L/kg)	5430 ± 87400	480 ± 183	2960 ± 24500	93.8 ± 18.0
MRT (minute)	1440 ± 20310	150 ± 52	1230 ± 9400	40.0 ± 6.5
AUC _{inf} (ng*min/mL)	6650 ± 51990	7820 ± 1240	20700 ± 65600	21300 ± 2200

Experiment Number: C96018
Route: Gavage, IV
Species/Strain: Mouse/B6C3F1

Toxicokinetics Data Summary
Test Compound: Bromodichloromethane
CAS Number: 75-27-4

Date Report Requested: 12/02/2016
Time Report Requested: 10:40:05
Lab: Battelle Columbus

Male				
Treatment Groups (mg/kg)				
	100 a, #	100 a, *	10 IV a, *	10 IV b, *
Plasma				
C _{0min(pred)} (ng/mL)				4110 ± 3260
C _{max} (ng/mL)	1965	5162	1570	
T _{max} (minute)	7	2	2	
Lambda _z (min ⁻¹)	0.00452 ± 0.0020	0.0195 ± 0.0053	0.0700 ± 0.0099	
t _{1/2} (minute)	153 ± 67	35.5 ± 9.7	9.91 ± 1.41	
Alpha (min ⁻¹)				0.570 ± 0.362
t _{1/2(Alpha)} (minute)				1.22 ± 0.77
Beta (min ⁻¹)				0.0831 ± 0.0072
t _{1/2(Beta)} (minute)				8.34 ± 0.73
k ₁₀ (min ⁻¹)				0.326 ± 0.198
t _{1/2(k10)} (minute)				2.13 ± 1.29
k ₁₂ (min ⁻¹)				0.182 ± 0.165
k ₂₁ (min ⁻¹)				0.146 ± 0.035
Cl (L/min/kg)	1.56 ± 0.22	0.676 ± 0.060	0.794 ± 0.087	0.79 ± 0.19
V _{ss} (L/kg)	110 ± 27	29.3 ± 5.5	7.38 ± 1.49	5.47 ± 2.30
MRT (minute)	70.5 ± 14.4	43.3 ± 7.2	9.30 ± 1.57	
AUC _{inf} (ng*min/mL)	64200 ± 8900	148000 ± 13000	12600 ± 1400	14700 ± 3400

Experiment Number: C96018
Route: Gavage, IV
Species/Strain: Mouse/B6C3F1

Toxicokinetics Data Summary
Test Compound: Bromodichloromethane
CAS Number: 75-27-4

Date Report Requested: 12/02/2016
Time Report Requested: 10:40:05
Lab: Battelle Columbus

Female				
Treatment Groups (mg/kg)				
	25 a, #	25 a, *	50 a, #	50 a, *
Plasma				
C _{0min(pred)} (ng/mL)				
C _{max} (ng/mL)	65.58	708.3	435.2	901.5
T _{max} (minute)	5.0	2	7.0	2
Lambda _z (min ⁻¹)	0.0330 ± 0.0129	0.0276 ± 0.0044	0.00145 ± 0.00071	0.0107 ± 0.0039
t _{1/2} (minute)	21.0 ± 8.2	25.1 ± 4.0	477 ± 230	64.7 ± 23.5
Alpha (min ⁻¹)				
t _{1/2(Alpha)} (minute)				
Beta (min ⁻¹)				
t _{1/2(Beta)} (minute)				
k ₁₀ (min ⁻¹)				
t _{1/2(k10)} (minute)				
k ₁₂ (min ⁻¹)				
k ₂₁ (min ⁻¹)				
Cl (L/min/kg)	27.0 ± 3.4	4.72 ± 0.62	3.72 ± 0.56	3.50 ± 0.51
V _{ss} (L/kg)	756 ± 209	161 ± 32	1590 ± 580	279 ± 69
MRT (minute)	28.0 ± 6.9	34.0 ± 5.0	427 ± 141	79.6 ± 15.9
AUC _{inf} (ng*min/mL)	926 ± 120	5300 ± 700	13400 ± 2000	14300 ± 2100

Experiment Number: C96018
Route: Gavage, IV
Species/Strain: Mouse/B6C3F1

Toxicokinetics Data Summary
Test Compound: Bromodichloromethane
CAS Number: 75-27-4

Date Report Requested: 12/02/2016
Time Report Requested: 10:40:05
Lab: Battelle Columbus

Female				
Treatment Groups (mg/kg)				
	100 a, #	100 a, *	10 IV a, *	10 IV c, *
Plasma				
C _{0min(pred)} (ng/mL)				3040 ± 1490
C _{max} (ng/mL)	1546	4839	1475	
T _{max} (minute)	7.0	2	2	
Lambda _z (min ⁻¹)	0.00518 ± 0.00163	0.0472 ± 0.0129	0.0728 ± 0.018	
t _{1/2} (minute)	134 ± 42	14.7 ± 4.0	9.53 ± 2.40	
Alpha (min ⁻¹)				0.360 ± 0.088
t _{1/2(Alpha)} (minute)				1.93 ± 0.47
Beta (min ⁻¹)				0.00576 ± 0.0363
t _{1/2(Beta)} (minute)				120 ± 756
k ₁₀ (min ⁻¹)				0.227 ± 0.460
t _{1/2(k10)} (minute)				3.05 ± 6.18
k ₁₂ (min ⁻¹)				0.129 ± 0.419
k ₂₁ (min ⁻¹)				0.00913 ± 0.0402
Cl (L/min/kg)	1.55 ± 0.32	0.927 ± 0.100	0.896 ± 0.119	0.75 ± 1.42
V _{ss} (L/kg)	191 ± 65	46.8 ± 8.3	7.01 ± 1.56	49.8 ± 360.7
MRT (minute)	123 ± 33	50.5 ± 7.1	7.82 ± 1.39	
AUC _{inf} (ng*min/mL)	64700 ± 13400	108000 ± 1200	11200 ± 1500	16200 ± 29500

Experiment Number: C96018

Route: Gavage, IV

Species/Strain: Mouse/B6C3F1

Toxicokinetics Data Summary

Test Compound: Bromodichloromethane

CAS Number: 75-27-4

Date Report Requested: 12/02/2016

Time Report Requested: 10:40:05

Lab: Battelle Columbus

LEGEND

Data are displayed as mean \pm SEM

MODELING METHOD & BEST FIT MODEL

^a PROC NLIN in SAS 8.2 (SAS Institute Inc., Cary, NC); Non-compartmental analysis

^b PROC NLIN in SAS 8.2 (SAS Institute Inc., Cary, NC); Two-compartment model with bolus input, first-order elimination. Plasma BDCM concentrations declined in a biexponential fashion with rapid early alpha phase and a terminal beta phase that was approximately 6.9-fold lower.

^c PROC NLIN in SAS 8.2 (SAS Institute Inc., Cary, NC); Two-compartment model with bolus input, first-order elimination. Plasma BDCM concentrations declined in a biexponential fashion with rapid early alpha phase and a terminal beta phase that was approximately 63-fold lower.

ANALYTE

Bromodichloromethane

VEHICLE

Corn Oil

* Deionized water-Cremophor 9 to 1

TK PARAMETERS

$C_{0min(pred)}$ = Fitted plasma concentration at time zero (IV only)

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

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

λ_{bz} = Non-compartmental analysis (NCA) terminal elimination rate constant, NCA k_e or k_{elim}

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

Alpha = Hybrid rate constant of the alpha phase

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

Beta = Hybrid rate constant of the beta phase

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

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

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_{ss} = Volume of distribution at steady state

MRT = Mean residence time

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

**** END OF REPORT ****