

Experiment Number: K08624

Route: Dermal, IV

Species/Strain: Mice/B6C3F1

Toxicokinetics Data Summary

Compound: Bis 2-Chloroethoxy Methane/ Analyte: Bis 2-Chloroethoxy Methane

CAS Number: 111-91-1

Request Date: 7/11/2023

Request Time: 10:03:16

Lab: Battelle Columbus

Male

Treatment Group (mg/kg)

50 IV Plasma^a

100 IV Plasma^a

300 Dermal Plasma^b

	50 IV Plasma ^a	100 IV Plasma ^a	300 Dermal Plasma ^b
Cmax_pred (ug/mL)	38.2 ± 4.7	63.1 ± 10.5	2.42 ± 0.50
Tmax_pred (minute)			11.9 ± 3.7
Cmax_obs (ug/mL)			3.17 ± 0.43
Tmax_obs (minute)			15
Alpha (minute ⁻¹)			0.0607 ± 0.0373
Alpha Half-life (minute)	4.94 ± 0.34	6.85 ± 0.58	11.4 ± 7.0
Beta (minute ⁻¹)			0.00309 ± 0.00889
Beta Half-life (minute)	17.8 ± 5.0	28.0 ± 13.2	224 ± 645
k01 (minute ⁻¹)			0.114 ± 0.114
k01 Half-life (minute)			6.07 ± 6.05
k10 (minute ⁻¹)	0.136 ± 0.008	0.0989 ± 0.0074	0.0507 ± 0.0398
k10 Half-life (minute)	5.11 ± 0.30	7.01 ± 0.52	13.7 ± 10.7
k12 (minute ⁻¹)	0.00327 ± 0.00130	0.00174 ± 0.00102	0.00941 ± 0.01064
k21 (minute ⁻¹)	0.0402 ± 0.0118	0.0253 ± 0.0123	0.00370 ± 0.00978
Cl (mL/min/kg)	178 ± 14	157 ± 18	
Cl2 (mL/min/kg)	4.28 ± 1.55	2.76 ± 1.50	
Cl1_F (mL/min/kg)			3080 ± 970
Cl2_F (mL/min/kg)			571 ± 791
V1 (mL/kg)	1310 ± 160	1590 ± 260	
V2 (mL/kg)	106 ± 23	109 ± 28	
V1_F (mL/kg)			60700 ± 40400
V2_F (mL/kg)			154000 ± 612000
MRT (minute)	7.97 ± 0.41	10.8 ± 0.7	
AUCinf_pred (ug/mL*min)	282 ± 23	638 ± 72	97.5 ± 30.6

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Male

Treatment Group (mg/kg)

450 Dermal Plasma^b

600 Dermal Plasma^b

	450 Dermal Plasma ^b	600 Dermal Plasma ^b
Cmax_pred (ug/mL)	4.11 ± 0.50	12.3 ± 2.1
Tmax_pred (minute)	13.7 ± 2.3	14.6 ± 3.1
Cmax_obs (ug/mL)	4.40 ± 1.22	7.98 ± 3.57
Tmax_obs (minute)	10	30
Alpha (minute ⁻¹)	0.0526 ± 0.0157	0.0498 ± 0.0152
Alpha Half-life (minute)	13.2 ± 3.9	13.9 ± 4.2
Beta (minute ⁻¹)	0.00244 ± 0.00867	0.00350 ± 0.01301
Beta Half-life (minute)	284 ± 1010	198 ± 734
k01 (minute ⁻¹)	0.0991 ± 0.0505	0.0918 ± 0.0555
k01 Half-life (minute)	7.00 ± 3.56	7.55 ± 4.56
k10 (minute ⁻¹)	0.0484 ± 0.0204	0.0488 ± 0.0157
k10 Half-life (minute)	14.3 ± 6.0	14.2 ± 4.6
k12 (minute ⁻¹)	0.00399 ± 0.00679	0.000979 ± 0.001271
k21 (minute ⁻¹)	0.00265 ± 0.00903	0.00358 ± 0.01320
Cl1_F (mL/min/kg)	2590 ± 480	1150 ± 180
Cl2_F (mL/min/kg)	214 ± 408	23.2 ± 34.7
V1_F (mL/kg)	53500 ± 18300	23700 ± 9400
V2_F (mL/kg)	80600 ± 427000	6470 ± 33200
AUCinf_pred (ug/mL*min)	174 ± 32	520 ± 80

Experiment Number: K08624

Route: Dermal, IV

Species/Strain: Mice/B6C3F1

Toxicokinetics Data Summary

Compound: Bis 2-Chloroethoxy Methane/ Analyte: Bis 2-Chloroethoxy Methane

CAS Number: 111-91-1

Request Date: 7/11/2023

Request Time: 10:03:16

Lab: Battelle Columbus

Female

Treatment Group (mg/kg)

50 IV Plasma^a

300 Dermal Plasma^b

600 Dermal Plasma^b

	50 IV Plasma ^a	300 Dermal Plasma ^b	600 Dermal Plasma ^b
Cmax_pred (ug/mL)	30.4 ± 5.8	5.58 ± 0.92	15.5 ± 1.8
Tmax_pred (minute)		9.36 ± 2.01	14.1 ± 1.8
Cmax_obs (ug/mL)		6.69 ± 1.76	15.7 ± 5.0
Tmax_obs (minute)		10	15
Alpha (minute ⁻¹)		0.0824 ± 0.0312	0.0547 ± 0.0106
Alpha Half-life (minute)	4.63 ± 0.72	8.41 ± 3.18	12.7 ± 2.4
Beta (minute ⁻¹)		0.00841 ± 0.00406	0.00453 ± 0.00235
Beta Half-life (minute)	23.7 ± 47.7	82.4 ± 39.7	153 ± 79
k01 (minute ⁻¹)		0.137 ± 0.094	0.0900 ± 0.0342
k01 Half-life (minute)		5.06 ± 3.46	7.71 ± 2.93
k10 (minute ⁻¹)	0.142 ± 0.018	0.0782 ± 0.0291	0.0536 ± 0.0103
k10 Half-life (minute)	4.86 ± 0.62	8.87 ± 3.30	12.9 ± 2.5
k12 (minute ⁻¹)	0.00561 ± 0.00248	0.00377 ± 0.00213	0.000965 ± 0.000264
k21 (minute ⁻¹)	0.0307 ± 0.0628	0.00886 ± 0.00435	0.00462 ± 0.00240
Cl (mL/min/kg)	234 ± 25		
Cl2 (mL/min/kg)	9.21 ± 3.54		
Cl1_F (mL/min/kg)		1960 ± 260	959 ± 98
Cl2_F (mL/min/kg)		94.2 ± 33.3	17.2 ± 4.2
V1 (mL/kg)	1640 ± 320		
V2 (mL/kg)	300 ± 585		
V1_F (mL/kg)		25000 ± 10800	17900 ± 4600
V2_F (mL/kg)		10600 ± 5100	3730 ± 2210
MRT (minute)	8.30 ± 3.21		
AUCinf_pred (ug/mL*min)	214 ± 23	153 ± 20	626 ± 64

Experiment Number: K08624
Route: Dermal, IV
Species/Strain: Mice/B6C3F1

Toxicokinetics Data Summary

Compound: Bis 2-Chloroethoxy Methane/ **Analyte:** Bis 2-Chloroethoxy Methane
CAS Number: 111-91-1

Request Date: 7/11/2023
Request Time: 10:03:16
Lab: Battelle Columbus

Male

Treatment Group (mg/kg)

50 IV Heart^c

300 Dermal Heart^d

600 Dermal Heart^d

Cmax_obs (ug/g)	39.3	2.51	9.95
Tmax_obs (minute)	3.90	18.0	14.0
Half-life (minute)	8.88	23.5	25.5

Experiment Number: K08624

Toxicokinetics Data Summary

Request Date: 7/11/2023

Route: Dermal, IV

Compound: Bis 2-Chloroethoxy Methane/ Analyte: Bis 2-Chloroethoxy Methane

Request Time: 10:03:16

Species/Strain: Mice/B6C3F1

CAS Number: 111-91-1

Lab: Battelle Columbus

Female

Treatment Group (mg/kg)

20 IV Heart^c

300 Dermal Heart^d

600 Dermal Heart^d

	20 IV Heart ^c	300 Dermal Heart ^d	600 Dermal Heart ^d
Cmax_obs (ug/g)	34.6	6.63	17.5
Tmax_obs (minute)	4.19	14.5	33.0
Half-life (minute)	6.98	10.8	61.9

Experiment Number: K08624

Toxicokinetics Data Summary

Request Date: 7/11/2023

Route: Dermal, IV

Compound: Bis 2-Chloroethoxy Methane/ **Analyte:** Bis 2-Chloroethoxy Methane

Request Time: 10:03:16

Species/Strain: Mice/B6C3F1

CAS Number: 111-91-1

Lab: Battelle Columbus

Male

Treatment Group (mg/kg)

50 IV Liver^c

300 Dermal Liver^d

600 Dermal Liver^d

Cmax_obs (ug/g)	1.65	3.15	13.2
Tmax_obs (minute)	6.96	17.6	32.3
Half-life (minute)	7.66	26.4	44.3

Experiment Number: K08624
Route: Dermal, IV
Species/Strain: Mice/B6C3F1

Toxicokinetics Data Summary
Compound: Bis 2-Chloroethoxy Methane/ **Analyte:** Bis 2-Chloroethoxy Methane
CAS Number: 111-91-1

Request Date: 7/11/2023
Request Time: 10:03:16
Lab: Battelle Columbus

Female

Treatment Group (mg/kg)

50 IV Liver^c

300 Dermal Liver^d

600 Dermal Liver^d

Cmax_obs (ug/g)	0.164	3.49	15.6
Tmax_obs (minute)	3.52	14.1	32.3
Half-life (minute)	15.2	24.0	30.7

Experiment Number: K08624
Route: Dermal, IV
Species/Strain: Mice/B6C3F1

Toxicokinetics Data Summary

Compound: Bis 2-Chloroethoxy Methane/ **Analyte:** Bis 2-Chloroethoxy Methane
CAS Number: 111-91-1

Request Date: 7/11/2023
Request Time: 10:03:16
Lab: Battelle Columbus

Male

Treatment Group (mg/kg)

50 IV Thymus^c

300 Dermal Thymus^d

600 Dermal Thymus^d

Cmax_obs (ug/g)	32.8	3.00	14.0
Tmax_obs (minute)	3.90	13.2	13.9
Half-life (minute)	7.91	14.7	14.5

Experiment Number: K08624
Route: Dermal, IV
Species/Strain: Mice/B6C3F1

Toxicokinetics Data Summary

Compound: Bis 2-Chloroethoxy Methane/ **Analyte:** Bis 2-Chloroethoxy Methane
CAS Number: 111-91-1

Request Date: 7/11/2023
Request Time: 10:03:16
Lab: Battelle Columbus

Female

Treatment Group (mg/kg)

50 IV Thymus^c

300 Dermal Thymus^d

600 Dermal Thymus^d

Cmax_obs (ug/g)	30.3	5.88	13.7
Tmax_obs (minute)	4.19	14.4	18.6
Half-life (minute)	5.74	14.3	16.7

Experiment Number: K08624

Route: Dermal

Species/Strain: Mice/B6C3F1

Toxicokinetics Data Summary

Compound: Bis 2-Chloroethoxy Methane/ Analyte: Thiodiglycolic Acid

CAS Number: 111-91-1

Request Date: 7/11/2023

Request Time: 10:03:16

Lab: Battelle Columbus

Male

Treatment Group (mg/kg)

300 Dermal Plasma^d

450 Dermal Plasma^d

600 Dermal Plasma^d

Cmax_pred (ug/mL)	2.32	5.82	7.78
Tmax_obs (minute)	240	90	240
Half-life (minute)	188	195	205

Experiment Number: K08624

Route: Dermal

Species/Strain: Mice/B6C3F1

Toxicokinetics Data Summary

Compound: Bis 2-Chloroethoxy Methane/ **Analyte:** Thiodiglycolic Acid

CAS Number: 111-91-1

Request Date: 7/11/2023

Request Time: 10:03:16

Lab: Battelle Columbus

Male

Treatment Group (mg/kg)

300 Dermal Heart^d

600 Dermal Heart^d

Cmax_obs (ug/g)	0.731	3.12
Tmax_obs (minute)	180	240
Half-life (minute)	448	169

Experiment Number: K08624

Route: Dermal

Species/Strain: Mice/B6C3F1

Toxicokinetics Data Summary

Compound: Bis 2-Chloroethoxy Methane/ Analyte: Thiodiglycolic Acid

CAS Number: 111-91-1

Request Date: 7/11/2023

Request Time: 10:03:16

Lab: Battelle Columbus

Male

Treatment Group (mg/kg)

300 Dermal Liver^d

600 Dermal Liver^d

Cmax_obs (ug/g)	48.2	88.2
Tmax_obs (minute)	90	120
Half-life (minute)	140	145

Experiment Number: K08624

Route: Dermal

Species/Strain: Mice/B6C3F1

Toxicokinetics Data Summary

Compound: Bis 2-Chloroethoxy Methane/ **Analyte:** Thiodiglycolic Acid

CAS Number: 111-91-1

Request Date: 7/11/2023

Request Time: 10:03:16

Lab: Battelle Columbus

Male

Treatment Group (mg/kg)

300 Dermal Thymus^d 600 Dermal Thymus^d

Cmax_obs (ug/g)	2.35	10.0
Tmax_obs (minute)	180	480
Half-life (minute)	746	542

Experiment Number: K08624

Route: Dermal

Species/Strain: Mice/B6C3F1

Toxicokinetics Data Summary

Compound: Bis 2-Chloroethoxy Methane/ Analyte: Thiodiglycolic Acid

CAS Number: 111-91-1

Request Date: 7/11/2023

Request Time: 10:03:16

Lab: Battelle Columbus

Female

Treatment Group (mg/kg)

300 Dermal Plasma^d 600 Dermal Plasma^d

Cmax_obs (ug/mL)	1.95	4.33
Tmax_obs (minute)	90	90
Half-life (minute)	185	214

Experiment Number: K08624

Route: Dermal

Species/Strain: Mice/B6C3F1

Toxicokinetics Data Summary

Compound: Bis 2-Chloroethoxy Methane/ Analyte: Thiodiglycolic Acid

CAS Number: 111-91-1

Request Date: 7/11/2023

Request Time: 10:03:16

Lab: Battelle Columbus

Female

Treatment Group (mg/kg)

300 Dermal Heart^d

600 Dermal Heart^d

Cmax_obs (ug/g)	0.833	2.64
Tmax_obs (minute)	240	240
Half-life (minute)	340	218

Experiment Number: K08624

Route: Dermal

Species/Strain: Mice/B6C3F1

Toxicokinetics Data Summary

Compound: Bis 2-Chloroethoxy Methane/ **Analyte:** Thiodiglycolic Acid

CAS Number: 111-91-1

Request Date: 7/11/2023

Request Time: 10:03:16

Lab: Battelle Columbus

Female

Treatment Group (mg/kg)

300 Dermal Liver^d

600 Dermal Liver^d

Cmax_obs (ug/g)	56.9	93.4
Tmax_obs (minute)	90	120
Half-life (minute)	133	140

Experiment Number: K08624

Route: Dermal

Species/Strain: Mice/B6C3F1

Toxicokinetics Data Summary

Compound: Bis 2-Chloroethoxy Methane/ Analyte: Thiodiglycolic Acid

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Request Date: 7/11/2023

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Lab: Battelle Columbus

Female

Treatment Group (mg/kg)

300 Dermal Thymus^d 600 Dermal Thymus^d

Cmax_obs (ug/g)	2.94	6.76
Tmax_obs (minute)	240	480
Half-life (minute)	447	300

Experiment Number: K08624

Toxicokinetics Data Summary

Request Date: 7/11/2023

Route: Dermal

Compound: Bis 2-Chloroethoxy Methane/ **Analyte:** Bis 2-Chloroethoxy Methane

Request Time: 10:03:16

Species/Strain: Mice/B6C3F1

CAS Number: 111-91-1

Lab: Battelle Columbus

LEGEND

MODELING SOFTWARE

WinNonlin Version 5.0.1

MODELING METHOD & BEST FIT MODEL

^aWinNonlin, Version 5.0.1, Pharsight Corporation, Mountain View, CA, Two-compartment model with bolus input, first order output, and $1/Y^2$ weighting.

^bWinNonlin, Version 5.0.1, Pharsight Corporation, Mountain View, CA, Two-compartment model with first order input, first order output, and $1/Y^2$ weighting.

^cWinNonlin, Version 5.0.1, Pharsight Corporation, Mountain View, CA, Non-compartment model with bolus input, first order output, and uniform weighting.

^dWinNonlin, Version 5.0.1, Pharsight Corporation, Mountain View, CA, Non-compartment model with first order input, first order output, and uniform weighting.

ANALYTE

Bis 2-Chloroethoxy Methane

Thiodiglycolic Acid

Experiment Number: K08624

Route: Dermal, IV

Species/Strain: Mice/B6C3F1

Toxicokinetics Data Summary

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TK PARAMETERS

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

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

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

Alpha = Hybrid rate constant of the alpha phase

Alpha Half-life = Half-life for the alpha phase

Beta = Hybrid rate constant of the beta phase

Beta Half-life = Half-life for the beta phase

k₀₁ = Absorption rate constant, k_a

k₀₁ Half-life = Half-life of the absorption process to the central compartment

k₁₀ = Elimination rate constant from the central compartment also k_e or k_{elim}

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

Cl = Clearance, includes total clearance

Cl₂ = Clearance of the secondary compartment

Cl_{1_F} = Apparent clearance of the central compartment, also Cl_F for gavage groups in non-compartmental model

Cl_{2_F} = Apparent clearance of the secondary compartment

V₁ = 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

V₂ = Volume of distribution for the peripheral compartment

V_{1_F} = Apparent volume of distribution for the central compartment includes V_{d_F}, V_F for oral groups, and V_{c_F}

V_{2_F} = Apparent volume of distribution for the peripheral compartment

MRT = Mean Residence Time

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

Experiment Number: K08624
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Toxicokinetics Data Summary
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TK PARAMETERS PROTOCOL

TK_INTRA VENOUS PLASMA

ANALYSIS METHOD

Following blood collection, each animal was terminated with CO₂ and the heart, thymus, and liver were collected. Blood collection time points for this group are 2, 5, 10, 15, 20, 30, 40, 50, 60, and 90 minutes. SE is the standard error of the mean. Parameter estimates are reported to three significant figures. C_{max} (predicted) based on the model prediction at time 0 minutes.

50 mg/kg Male and Female

Animals were given a single bolus injection of Bis 2-Chloroethoxy Methane (CEM) through a jugular catheter. Concentrations time data sets were evaluated using non-compartmental analysis and, when possible, compartmental models. WinNonlin, Version 5.0.1, Pharsight Corporation, Mountain View, CA

ANALYSIS METHOD

Following blood collection, each animal was terminated with CO₂ and the heart, thymus, and liver were collected. Blood collection time points for this group are 5, 10, 15, 30, 45, 60, 90, 120, 180, 240, and 360 minutes. SE is the standard error of the mean. Parameter estimates are reported to three significant figures. C_{max} (predicted) based on the model prediction at time 0 minutes.

100 mg/kg Male

Animals were given a single bolus injection of Bis 2-Chloroethoxy Methane (CEM) through a jugular catheter. Concentrations time data sets were evaluated using non-compartmental analysis and, when possible, compartmental models. WinNonlin, Version 5.0.1, Pharsight Corporation, Mountain View, CA

Experiment Number: K08624
Route: Dermal, IV
Species/Strain: Mice/B6C3F1

Toxicokinetics Data Summary

Compound: Bis 2-Chloroethoxy Methane/ **Analyte:** Bis 2-Chloroethoxy Methane
CAS Number: 111-91-1

Request Date: 7/11/2023
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Lab: Battelle Columbus

TK_DERMAL PLASMA

ANALYSIS METHOD

Following blood collection, each animal was terminated with CO₂ and the heart, thymus, and liver were collected. Blood collection time points for this group are 5, 10, 15, 30, 60, 90, 120, 180, and 240 minutes. SE is the standard error of the mean. Parameter estimates are reported to three significant figures except for observed T_{max}.

300 mg/kg Male and Female, 450 mg/kg Male

Animals were given a single dermal administration of Bis 2-Chloroethoxy Methane (CEM) in 95 percent ethanol. Concentrations time data sets were evaluated using non-compartmental analysis and, when possible, compartmental models. WinNonlin, Version 5.0.1, Pharsight Corporation, Mountain View, CA

ANALYSIS METHOD

Following blood collection, each animal was terminated with CO₂ and the heart, thymus, and liver were collected. Blood collection time points for this group are 5, 10, 15, 30, 60, 90, 120, 180, 240, and 360 minutes. SE is the standard error of the mean. Parameter estimates are reported to three significant figures except for observed T_{max}.

600 mg/kg Male and Female

Animals were given a single dermal administration of Bis 2-Chloroethoxy Methane (CEM) in 95 percent ethanol. Concentrations time data sets were evaluated using non-compartmental analysis and, when possible, compartmental models. WinNonlin, Version 5.0.1, Pharsight Corporation, Mountain View, CA

Experiment Number: K08624
Route: Dermal, IV
Species/Strain: Mice/B6C3F1

Toxicokinetics Data Summary

Compound: Bis 2-Chloroethoxy Methane/ **Analyte:** Bis 2-Chloroethoxy Methane
CAS Number: 111-91-1

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Lab: Battelle Columbus

TK PARAMETERS PROTOCOL (cont'd)

TK_INTRAVENTOUS HEART

ANALYSIS METHOD

Following blood collection, each animal was terminated with CO2 and the heart, thymus, and liver were collected. Blood collection time points for this group are 2, 5, 10, 15, 20, 30, 40, 50, 60, and 90 minutes. Parameter estimates are reported to three significant figures. Non-compartmental analysis does not calculate a standard error.

50 mg/kg Male and Female

Animals were given a single bolus injection of Bis 2-Chloroethoxy Methane (CEM) through a jugular catheter. Concentrations time data sets were evaluated using non-compartmental analysis and, when possible, compartmental models using WinNonlin, Version 5.0.1, Pharsight Corporation, Mountain View, CA

TK_DERMAL HEART

ANALYSIS METHOD

Following blood collection, each animal was terminated with CO2 and the heart, thymus, and liver were collected. Blood collection time points for this group are 5, 10, 15, 30, 60, 90, 120, 180, and 240 minutes. Parameter estimates are reported to three significant figures. Non-compartmental analysis does not calculate a standard error.

300 mg Male and Female

Animals were given a single dermal administration of Bis 2-Chloroethoxy Methane (CEM) in 95 percent ethanol. Concentrations time data sets were evaluated using non-compartmental analysis and, when possible, compartmental models. WinNonlin, Version 5.0.1, Pharsight Corporation, Mountain View, CA

Experiment Number: K08624

Route: Dermal, IV

Species/Strain: Mice/B6C3F1

Toxicokinetics Data Summary

Compound: Bis 2-Chloroethoxy Methane/ **Analyte:** Bis 2-Chloroethoxy Methane

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Request Date: 7/11/2023

Request Time: 10:03:16

Lab: Battelle Columbus

TK PARAMETERS PROTOCOL (cont'd)

ANALYSISMETHOD

Following blood collection, each animal was terminated with CO2 and the heart, thymus, and liver were collected. Blood collection time points for this group are 5, 10, 15, 30, 60, 90, 120, 180, 240, and 360 minutes. Parameter estimates are reported to three significant figures. Non-compartmental analysis does not calculate a standard error.

600 mg/kg Male and Female

Animals were given a single bolus injection of Bis 2-Chloroethoxy Methane (CEM) through a jugular catheter. Concentrations time data sets were evaluated using non-compartmental analysis and, when possible, compartmental models using WinNonlin, Version 5.0.1, Pharsight Corporation, Mountain View, CA

TK_DERMAL LIVER

ANALYSISMETHOD

Following blood collection, each animal was terminated with CO2 and the heart, thymus, and liver were collected. Blood collection time points for this group are 2, 5, 10, 15, 20, 30, 40, 50, 60, and 90 minutes. Parameter estimates are reported to three significant figures. Non-compartmental analysis does not calculate a standard error.

50 mg/kg Male and Female

Animals were given a single bolus injection of Bis 2-Chloroethoxy Methane (CEM) through a jugular catheter. Concentrations time data sets were evaluated using non-compartmental analysis and, when possible, compartmental models using WinNonlin, Version 5.0.1, Pharsight Corporation, Mountain View, CA

Experiment Number: K08624

Route: Dermal, IV

Species/Strain: Mice/B6C3F1

Toxicokinetics Data Summary

Compound: Bis 2-Chloroethoxy Methane/ **Analyte:** Bis 2-Chloroethoxy Methane

CAS Number: 111-91-1

Request Date: 7/11/2023

Request Time: 10:03:16

Lab: Battelle Columbus

TK PARAMETERS PROTOCOL (cont'd)

ANALYSIS METHOD

Following blood collection, each animal was terminated with CO₂ and the heart, thymus, and liver were collected. Blood collection time points for this group are 5, 10, 15, 30, 60, 90, 120, 180, and 240 minutes. Parameter estimates are reported to three significant figures. Non-compartmental analysis does not calculate a standard error.

300 mg Male and Female

Animals were given a single dermal administration of Bis 2-Chloroethoxy Methane (CEM) in 95 percent ethanol. Concentrations time data sets were evaluated using non-compartmental analysis and, when possible, compartmental models. WinNonlin, Version 5.0.1, Pharsight Corporation, Mountain View, CA

ANALYSIS METHOD

Following blood collection, each animal was terminated with CO₂ and the heart, thymus, and liver were collected. Blood collection time points for this group are 5, 10, 15, 30, 60, 90, 120, 180, 240, and 360 minutes. Parameter estimates are reported to three significant figures. Non-compartmental analysis does not calculate a standard error.

600 mg/kg Male and Female

Following blood collection, each animal was terminated with CO₂ and the heart, thymus, and liver were collected. Blood collection time points for this group are 5, 10, 15, 30, 60, 90, 120, 180, 240, and 360 minutes. Parameter estimates are reported to three significant figures. Non-compartmental analysis does not calculate a standard error.

Experiment Number: K08624
Route: Dermal, IV
Species/Strain: Mice/B6C3F1

Toxicokinetics Data Summary

Compound: Bis 2-Chloroethoxy Methane/ **Analyte:** Bis 2-Chloroethoxy Methane
CAS Number: 111-91-1

Request Date: 7/11/2023
Request Time: 10:03:16
Lab: Battelle Columbus

TK PARAMETERS PROTOCOL (cont'd)

TK_INTRAVENOUS THYMUS

ANALYSIS METHOD

Following blood collection, each animal was terminated with CO₂ and the heart, thymus, and liver were collected. Blood collection time points for this group are 2, 5, 10, 15, 20, 30, 40, 50, 60, and 90 minutes. Parameter estimates are reported to three significant figures. Non-compartmental analysis does not calculate a standard error.

50 mg/kg Male and Female

Animals were given a single bolus injection of Bis 2-Chloroethoxy Methane (CEM) through a jugular catheter. Concentrations time data sets were evaluated using non-compartmental analysis and, when possible, compartmental models using WinNonlin, Version 5.0.1, Pharsight Corporation, Mountain View, CA

TK_DERMAL THYMUS

ANALYSIS METHOD

Following blood collection, each animal was terminated with CO₂ and the heart, thymus, and liver were collected. Blood collection time points for this group are 5, 10, 15, 30, 60, 90, 120, 180, and 240 minutes. Parameter estimates are reported to three significant figures. Non-compartmental analysis does not calculate a standard error.

300 mg Male and Female

Animals were given a single dermal administration of Bis 2-Chloroethoxy Methane (CEM) in 95 percent ethanol. Concentrations time data sets were evaluated using non-compartmental analysis and, when possible, compartmental models. WinNonlin, Version 5.0.1, Pharsight Corporation, Mountain View, CA

Experiment Number: K08624
Route: Dermal, IV
Species/Strain: Mice/B6C3F1

Toxicokinetics Data Summary
Compound: Bis 2-Chloroethoxy Methane/ **Analyte:** Bis 2-Chloroethoxy Methane
CAS Number: 111-91-1

Request Date: 7/11/2023
Request Time: 10:03:16
Lab: Battelle Columbus

TK PARAMETERS PROTOCOL

ANALYSIS METHOD

Following blood collection, each animals was terminated with CO2 and the heart, thymus, and liver were collected. Blood collection time points for this group are 5, 10, 15, 30, 60, 90, 120, 180, 240, and 360 minutes. Parameter estimates are reported to three significant figures. Non-compartmental analysis does not calculate a standard error.

600 mg Male and Female

Animals were given a single dermal administration of Bis 2-Chloroethoxy Methane (CEM) in 95 percent ethanol. Concentrations time data sets were evaluated using non-compartmental analysis and, when possible, compartmental models. WinNonlin, Version 5.0.1, Pharsight Corporation, Mountain View, CA

Experiment Number: K08624
Route: Dermal, IV
Species/Strain: Mice/B6C3F1

Toxicokinetics Data Summary
Compound: Bis 2-Chloroethoxy Methane/ **Analyte:** Thiodiglycolic Acid
CAS Number: 111-91-1

Request Date: 7/11/2023
Request Time: 10:03:16
Lab: Battelle Columbus

TK PARAMETERS PROTOCOL (cont'd)

TK_DERMAL PLASMA

ANALYSIS METHOD

Following blood collection, each animal was terminated with CO2 and the heart, thymus, and liver were collected. Blood collection time points for this group are 5, 10, 15, 30, 60, 90, 120, 180, 240, 480, 600, and 720 minutes. Parameter estimates are reported to three significant figures, except for observed Tmax Non-compartmental analysis does not calculate a standard error.

300 mg/kg Male and Female

Animals were given a single dermal administration of Bis 2-Chloroethoxy Methane (CEM) in 95 percent ethanol. Concentrations time data sets were evaluated using non-compartmental analysis and, when possible, compartmental models. WinNonlin, Version 5.0.1, Pharsight Corporation, Mountain View, CA

ANALYSIS METHOD

Following blood collection, each animal was terminated with CO2 and the heart, thymus, and liver were collected. Blood collection time points for this group are 5, 10, 15, 30, 60, 90, 120, 180, 240, 360, 480, 600, and 720 minutes. Parameter estimates are reported to three significant figures, except for observed Tmax Non-compartmental analysis does not calculate a standard error.

600 mg/kg Male and Female, 450 mg/kg Male

Animals were given a single dermal administration of Bis 2-Chloroethoxy Methane (CEM) in 95 percent ethanol. Concentrations time data sets were evaluated using non-compartmental analysis and, when possible, compartmental models. WinNonlin, Version 5.0.1, Pharsight Corporation, Mountain View, CA

Experiment Number: K08624
Route: Dermal, IV
Species/Strain: Mice/B6C3F1

Toxicokinetics Data Summary
Compound: Bis 2-Chloroethoxy Methane/ **Analyte:** Thiodiglycolic Acid
CAS Number: 111-91-1

Request Date: 7/11/2023
Request Time: 10:03:16
Lab: Battelle Columbus

TK PARAMETERS PROTOCOL (cont'd)

TK_DERMAL HEART

ANALYSIS METHOD

Following blood collection, each animal was terminated with CO₂ and the heart, thymus, and liver were collected. Blood collection time points for this group are 5, 10, 15, 30, 60, 90, 120, 180, 240, 480, 600, and 720 minutes. Parameter estimates are reported to three significant figures. Non-compartmental analysis does not calculate a standard error.

300 mg/kg, 600 mg/kg Male and Female

Animals were given a single dermal administration of Bis 2-Chloroethoxy Methane (CEM) in 95 percent ethanol. Concentrations time data sets were evaluated using non-compartmental analysis and, when possible, compartmental models. WinNonlin, Version 5.0.1, Pharsight Corporation, Mountain View, CA

TK_DERMAL LIVER

ANALYSIS METHOD

Following blood collection, each animals was terminated with CO₂ and the heart, thymus, and liver were collected. Blood collection time points for this group are 5, 10, 15, 30, 60, 90, 120, 180, 240, 480, 600, and 720 minutes. Parameter estimates are reported to three significant figures. Non-compartmental analysis does not calculate a standard error.

Experiment Number: K08624
Route: Dermal, IV
Species/Strain: Mice/B6C3F1

Toxicokinetics Data Summary
Compound: Bis 2-Chloroethoxy Methane/ **Analyte:** Thiodiglycolic Acid
CAS Number: 111-91-1

Request Date: 7/11/2023
Request Time: 10:03:16
Lab: Battelle Columbus

TK PARAMETERS PROTOCOL (cont'd)

300 mg/kg, 600 mg/kg Male and Female

Animals were given a single dermal administration of Bis 2-Chloroethoxy Methane (CEM) in 95 percent ethanol. Concentrations time data sets were evaluated using non-compartmental analysis and, when possible, compartmental models. WinNonlin, Version 5.0.1, Pharsight Corporation, Mountain View, CA

TK_DERMAL THYMUS

ANALYSISMETHOD

Following blood collection, each animal was terminated with CO2 and the heart, thymus, and liver were collected. Blood collection time points for this group are 5, 10, 15, 30, 60, 90, 120, 180, 240, 480, 600, and 720 minutes. Parameter estimates are reported to three significant figures, except for observed Tmax Non-compartmental analysis does not calculate a standard error.

300 mg/kg, 600 mg/kg Male and Female

Animals were given a single dermal administration of Bis 2-Chloroethoxy Methane (CEM) in 95 percent ethanol. Concentrations time data sets were evaluated using non-compartmental analysis and, when possible, compartmental models. WinNonlin, Version 5.0.1, Pharsight Corporation, Mountain View, CA