

Experiment Number: C93026

Route: Whole Body Respiratory Exposure

Species/Strain: Rat/F344/N

Toxicokinetics Data Summary

Test Compound: Decalin

CAS Number: 91-17-8

Date Report Requested: 11/09/2016

Time Report Requested: 14:01:49

Lab: Battelle Northwest

Male

Treatment Groups (ppm)

25

100

400

Blood

$C_{0min(pred)}$ (ug/g)	0.501	3.75	20.2
Alpha (min ⁻¹)	0.0276	0.0301	0.0260
$t_{1/2(Alpha)}$ (minute)	25.1	23.0	26.6
Beta (min ⁻¹)	0.00150	0.00166	0.00136
$t_{1/2(Beta)}$ (minute)	463.0	418.0	511.0
AUC _{inf} (ug*min/g)	54.5	370.0	2110.0

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	Female		
	Treatment Groups (ppm)		
	25	100	400
		Blood	
$C_{0min(pred)}$ (ug/g)	0.639	3.89	19.5
Alpha (min ⁻¹)	0.0277	0.0199	0.0180
$t_{1/2(Alpha)}$ (minute)	25.1	34.9	38.4
Beta (min ⁻¹)	0.00163	0.00135	0.00127
$t_{1/2(Beta)}$ (minute)	426.0	512.0	546.0
AUC _{inf} (ug*min/g)	80.3	507.0	2680.0

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LEGEND

Data are displayed as mean \pm SEM

MODELING METHOD & BEST FIT MODEL

Nonlinear least-squares fitting program (SAS PROC NLIN, SAS Institute, Inc., Cary, NC); Toxicokinetic parameters were determined by fitting the equation $C(t) = A_0 e^{-\alpha t} + B_0 e^{-\beta t}$ to the data, where $C(t)$ is the blood concentration of Decalin at any postexposure time (t), α and β are the hybrid rate constants (minute^{-1}) obtained from the fit, and A_0 and B_0 are the intercepts on the ordinate (concentration) axis of the extrapolated initial and terminal phases, respectively. $C_0 = A_0 + B_0$ weighting factor of $[\text{mean Decalin blood concentration}]^{-2}$ for rats.

ANALYTE

Decalin

TK PARAMETERS

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

Alpha = Hybrid rate constant of the alpha phase

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

Beta = Hybrid rate constant of the beta phase

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

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

**** END OF REPORT ****