

Experiment Number: S0558
Route: Gavage, IV
Species/Strain: Mouse/B6C3F1

Toxicokinetics Data Summary
Test Compound: Anthraquinone
CAS Number: 84-65-1

Date Report Requested: 01/10/2017
Time Report Requested: 08:56:39
Lab: Battelle Columbus

Male				
Treatment Groups (mg/kg)				
	80^a	200^a	800^a	4 IV^b
	Plasma			
C_{max} (ug/mL)	0.68 ± 0.17	2.11 ± 0.58	3.47 ± 1.07	2.73 ± 1.16
T_{max}	4 h	4 h	4 h	2 m
$t_{1/2}$ (hour)	4 to 6	4 to 6	4 to 6	4
AUC_{0-t} (ug/mL*min)	3.67	9.98	21.9	3.45

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Female

Treatment Groups (mg/kg)

80^a

200^a

800^a

4 IV^c

Plasma

C_{max} (ug/mL)	0.71 ± 0.06	1.59 ± 0.15	2.63 ± 1.23	3.44 ± 0.54
T_{max}	4 h	4 h	4 h	2 m
$t_{1/2}$ (hour)		4 to 6	4 to 6	4
AUC_{0-t} (ug/mL*min)	3.37	7.91	15.7	2.16

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LEGEND

Data are displayed as mean \pm SD

m = minutes; h = hours

MODELING METHOD & BEST FIT MODEL

^a Sigma Plot, Version 5.0, was used to calculate the AUC 0-T values by the trapezoidal method. Other reported toxicokinetic parameters are observed values only. Half-life of elimination was "eye-balled" (Half-life). As requested by the NTP, no attempt was made to model the plasma concentration versus time profiles; The plasma concentration time profile was characteristic of a two compartment open model with first order absorption and elimination with initial upward phase (absorption) and later slow decreasing phase (elimination).

^b Sigma Plot, Version 5.0, was used to calculate the AUC 0-T values by the trapezoidal method. Other reported toxicokinetic parameters are observed values only. Half-life of elimination was "eye-balled" (Half-life). As requested by the NTP, no attempt was made to model the plasma concentration versus time profiles; The plasma concentration time profile was a biphasic curve suggesting that anthraquinone is best described by a two compartment open model with an initial tissue distribution phase (the initial portion of the biphasic curve), and an elimination phase (the terminal linear portion of the biphasic curve).

^c Sigma Plot, Version 5.0, was used to calculate the AUC 0-T values by the trapezoidal method. Other reported toxicokinetic parameters are observed values only. Half-life of elimination was "eye-balled" (Half-life). As requested by the NTP, no attempt was made to model the plasma concentration versus time profiles; The plasma concentration time profile was a biphasic curve suggesting that anthraquinone is best described by a two compartment open model. (initial tissue distribution phase (the initial portion of the biphasic curve), and an elimination phase (the terminal linear portion of the biphasic curve).

ANALYTE

Anthraquinone

TK PARAMETERS

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

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

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

AUC_{0-t} = Area under the plasma concentration versus time curve, AUC, from time t_i (initial) to t_f (final), AUC_{last}

**** END OF REPORT ****