

Experiment Number: S0577
Route: Gavage, IV
Species/Strain: Rat/Fischer 344

Toxicokinetics Data Summary
Test Compound: Methyleugenol
CAS Number: 93-15-2

Date Report Requested: 12/27/2016
Time Report Requested: 11:27:23
Lab: Battelle Columbus

Male				
Treatment Groups (mg/kg)				
	37^a	75^a	150^a	37 IV^b
	Plasma			
C _{max} (ug/mL)	0.656	1.52	3.84	45.7
T _{max} (minute)	5	5	5	2
t _{1/2} (minute)	60	75	115	75
AUC _{0-t} (ug/mL*min)	33.5	155.6	459.5	581.4
F (percent)	5.8	13.2	19.5	

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Female

Treatment Groups (mg/kg)

37^a

75^a

150^a

37 IV^b

Plasma

C _{max} (ug/mL)	1.14	3.22	8.25	49.5
T _{max} (minute)	5	5	5	2
t _{1/2} (minute)	95	80	105	75
AUC _{0-t} (ug/mL*min)	27.0	133.1	307.9	495.4
F (percent)	5.5	13.3	15.3	

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LEGEND

Data are displayed as mean values

MODELING METHOD & BEST FIT MODEL

^a AUC was calculated using the trapezoid rule using Sigma Plot Version 5.0. Reported toxicokinetic parameters, ie C_{max}, T_{max}, and half-life, are observed values only, no attempt was made to model the plasma concentration versus time profiles. Half-life is the half-life of elimination; Results were characteristic of a two compartment open model with first-order absorption and elimination with a biphasic curve having no initial upward phase that would indicate absorption but an initial fast decreasing phase followed by a later slow decreasing phase. The fast decreasing phase describes the distribution phase and the later slow decreasing phase, or terminal linear portion, describes the elimination phase.

^b AUC was calculated using the trapezoid rule using Sigma Plot Version 5.0. Reported toxicokinetic parameters, ie C_{max}, T_{max}, and half-life, are observed values only, no attempt was made to model the plasma concentration versus time profiles. Half-life is the half-life of elimination; The best fit for the data points appears to be a biphasic curve suggesting a two compartment open model with well defined distribution (time points 2 through 15 minutes) and elimination phases (time points 30 minutes through 6 hours).

ANALYTE

Methyleugenol

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} = Lambda_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}

F = Bioavailability, absolute bioavailability

**** END OF REPORT ****