Experiment Number: S0665
Route: Gavage
Species/Strain: Rats/Sprague-Dawley

Toxicokinetics Data Summary
Compound: 3,3',4,4'-Tetrachloroazobenzene
Analyte: 3,3',4,4'-Tetrachloroazobenzene
CAS Number: 14047-09-7

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

Female

	Treatment Group (mg/kg)	
	3.0 Gavage Whole Blood[a]	**100 Gavage Whole Blood[a]**
Cmax (ng/mL)	192.3	619.8
Tmax (hour)	1.0	3.0
Lambda_z ($hour^{-1}$)	0.5741	0.1451
Beta_Half-life (hour)	1.2	4.8
Cl (mL/hour/kg)	3004.9	34890
Vss (mL/kg)	5680.5	240507
MRT (hour)	17.75	5.423
AUCinf_pred (ng*hour/mL)	998.4	2868

LEGEND

MODELING SOFTWARE

WinNonlin

MODELING METHOD & BEST FIT MODEL

[a] WinNonlin, Non-compartmental analysis

ANALYTE

3,3',4,4'-Tetrachloroazobenzene

TK PARAMETERS

Cmax = Observed or Predicted Maximum plasma (or tissue) concentration
Tmax = Time at which Cmax predicted or observed occurs
Lambda_z = Non-compartmental analysis (NCA) terminal elimination rate constant, NCA ke or kelim
Beta_Half-Life = Half-life for the beta phase
Cl = Clearance, includes total clearance
Vss = Volume of distribution at steady state
MRT = Mean residence time
AUCinf = Area under the plasma concentration versus time curve, AUC, extrapolated to time equals infinity

TK PARAMETERS PROTOCOL

ANALYSIS METHOD

500 uL aliquots of whole blood samples were analyzed by gas chromatography with electron capture detection (GC/ECD) using PCB-118 as the internal standard (a validated method). The limit of detection (LOD) was 0.9 ng/mL and the experimental limit of quantitation (ELOQ) was 5 ng/mL in whole blood.

TK_GAVAGE PLASMA

3 mg/kg, 100 mg/kg

Special study animals of 13-Week study C88148B. Special study female rats in each of three dose groups (0.1, 3, and 100 mg/kg) were dosed through day 92 of the 3-month study and were dosed for two consecutive days (Sunday and Monday) prior to sample collection. Females were dosed from 12/18/00 to 3/19/01, plus Sunday 3/18/01 prior to sample collection and terminal sacrifice gives a 91 day dosing period (13 weeks) 5 days a week (not on holidays or weekends except last Sunday before sacrifice). Whole blood samples were collected from the retroorbital sinus 0, 0.25, 0.5, 1, 3, 6, 9, 12, 20, and 30 hours post-dosing on day 92. Due to consistent low levels of the test chemical in the 0.1 mg/kg dose group, sample analysis was stopped, with approval from the Project Officer. 40 samples were reported as not analyzed. Blood was collected once from the control rats and twice from each dosed rat. The animal study was conducted at one company and tissue and blood samples shipped to a different laboratory for analysis.