

US EPA ARCHIVE DOCUMENT

Note to the FIFRA SAP & the Public:

As mentioned in the Chlorpyrifos Issue Paper, the Agency performed benchmark (BMD) analyses for additional studies not included in the August 21, 2008 submission to the FIFRA SAP. The following table provides an updated Table 2 (Issue Paper). Table 2 is contained in Section 2.4 Dose Response Assessment (Subsection, 2.4.1. AChE Inhibition).

Table 1. Summary of Benchmark Dose Analyses for Acute and Repeated AChE Studies in Rat

Reference	Age	Brain (mg/kg/day)		RBC (mg/kg/day)		Heart (mg/kg/day)	
		BMD ₁₀	BMDL ₁₀	BMD ₁₀	BMDL ₁₀	BMD ₁₀	BMDL ₁₀
Acute/Single Dose Studies							
Betancourt and Carr (2004)	PND 1	0.12	NR	NA			
Zheng et al. (2000)	PND 7 (male)	0.41 ^A	0.25 ^A	0.54	0.34	NA	
Timchalk et al. (2006)	PND 12	0.64	0.54	0.25	0.08	NA	
Timchalk et al. (2006)	PND 17	NA		1.12	0.48	NA	
Moser et al. (2006)	PND 17	0.87	0.67	NA		NA	
Zheng et al. (2000)	Adult (male)	5.83 ^A	3.09 ^A	0.61	0.48	NA	
Repeat Dose Studies							
Betancourt and Carr (2004)	PND 1-3	0.44	0.22	NA			
Zheng et al. (2000)	PND 7-20 male	1.4 ^A	0.95 ^A	0.21	0.14	NA	
Zheng et al. (2000)	Adult, 14 days male	0.83 ^A	0.40 ^A	0.20	0.095	NA	
Betancourt and Carr (2004)	PND 1-6	0.41	0.198	NA			

Reference	Age	Brain (mg/kg/day)		RBC (mg/kg/day)		Heart (mg/kg/day)	
		BMD ₁₀	BMDL ₁₀	BMD ₁₀	BMDL ₁₀	BMD ₁₀	BMDL ₁₀
2006 Cumulative RA	Repeated >21 days, Adult Female (non-pregnant)	1.48	1.26	NA			
Dow (Hoberman et al. 1998a,b, MRID44556901); Maurissen, 2000	Dam, GD6-20	0.65	0.54	0.06	0.03	NA	
Dow (Mattsson et al. 1998 44648101); Mattsson, 2000	Dam, GD6-20	Hindbrain 1.10 Forebrain 1.17	Hindbrain 0.81 Forebrain 0.98	0.14	0.08	0.16	0.12
Dow (Mattsson et al. 1998 44648101); Mattsson, 2000	Dam, LD 1	Hindbrain 0.96 Forebrain 1.11	Hindbrain 0.55 Forebrain 0.77	0.079	0.0498	0.109	0.056

NA= Not applicable, NR = Not reported