Marinovich et al, 1996

Guidelines/Criteria	
Reference:	Marinovich M, Ghilardi F, Galli CL. 1996. Effect of pesticide mixtures on in vitro nervous cells: Comparison with single pesticides. Toxicology 108:201-206.
***In vitro* Study Type** Route of Administration Species & age of animals	Human neuroblastoma cell line SH-SY5Y
Study Duration	4 hours
Type of Mixture Binary >2 components Similar acting or dissimilar What Mode of Action was investigated?	 No One three-way mixture Similar Acetylcholinesterase inhibition
Parameters/End points Measured Target organs/Critical effects Pharmacological changes or adverse effects *In vitro*	 AchE inhibition and protein synthesis determined by tritiated leucine incorporation
Individual Components Characterisation of individual compounds Name, exact chemical name, CAS no. Were dose responses established for individual components? Were no effect levels established? Were doses below the NO(A)ELs investigated?	 Dimethoate, azinphos-methyl, diazinon Yes Yes No
Mixtures Investigated Number of dose levels How does the mixture make-up compare to individual components? (e.g. low dose) equivalents used?) No. of technical replicates per exposure condition (*in vitro*) No. of animals per dose group (*in vivo*)	 Same concentrations as tested for individual components Not stated, but standard errors shown and they look reasonable
Observations/Findings	Mixture tested at 0.01xNOEL of dimethoate and NOEL of diazinon and azinphos-methyl showed no effect on AchE activity (which was a more sensitive endpoint than protein synthesis).
Overall opinion (e.g. sufficient numbers of groups investigated, group sizes adequate, observations reproducible, low dose levels used investigated)	 Other experiments were also reported but they did not involve testing all components at their individual NOELs.