

COST COMPARISONS: ANIMAL TESTS VS. *IN VITRO** ALTERNATIVES

* *"In Vitro"* refers to a test that uses cells or tissue contained in test-tubes or other laboratory equipment

TYPE OF TEST		COST
Genetic toxicity		
Chromosome aberration	animal test	\$30,000
	<i>in vitro</i> test	\$20,000
Sister chromatid exchange	animal test	\$22,000
	<i>in vitro</i> test	\$8,000
Unscheduled DNA synthesis	animal test	\$32,000
	<i>in vitro</i> test	\$11,000
Eye irritation/corrosion		
Draize rabbit eye test	animal test	\$1,800
Bovine corneal opacity and permeability (BCOP) test	<i>in vitro</i> test	\$1,400
Skin corrosion		
Draize rabbit skin test	animal test	\$1,800
EpiDerm™ human skin model	<i>in vitro</i> test	\$850
CORROSITEX® membrane barrier	<i>in vitro</i> test	\$500
Skin sensitization		
Guinea pig maximisation test	animal test	\$6,000
Local lymph node assay (LLNA)	reduction alternative	\$3,000
Phototoxicity		
Rat phototoxicity test	animal test	\$11,500
3T3 neutral red uptake test	<i>in vitro</i> test	\$1,300

Embryotoxicity		
Rat developmental toxicity test	animal test	\$50,000
Rat limb bud test	<i>in vitro</i> test	\$15,000
Non-genotoxic cancer risk		
Rat 24-month cancer bioassay	animal test	\$700,000
Syrian hamster embryo (SHE) cell transformation test	<i>in vitro</i> test	\$22,000
Pyrogenicity		
Rabbit pyrogen test	animal test	\$475-\$990
Limulus amoebocyte lysate	1 st gen <i>in vitro</i> test	\$85-\$160
Human blood method (Endosafe-IPT)	2 nd gen <i>in vitro</i> test	\$83-\$100
Estrogen hormone interactions		
Rat uterotrophic assay (ovariectomized)	animal test	\$29,600
Subcellular receptor-binding assay	<i>in vitro</i> test	\$7,200
Androgen hormone interactions		
Rat Hershberger assay	animal test	\$37,000
Subcellular receptor-binding assay	<i>in vitro</i> test	\$7,300

References

Charles River Laboratories. (2006). CRL Price List. Wilmington, MA: CRL.

Corvi, R. (ECVAM), personal communication.

Derelanko, M.J. & Hollinger, M.A. (Eds.). (2002). Handbook of Toxicology, Second Ed. Washington, DC: CRC Press.

Endocrine Disruptor Screening and Testing Advisory Committee. EDSTAC Final Report. (1998). Washington, DC: US EPA.

Institute for In Vitro Sciences. (2007). IIVS Price List. Gaithersburg, MD: IIVS.

Stott, W. (Dow Chemical), personal communication.

Webb, S. (Proctor & Gamble), personal communication.