

IN VITRO MODELS OF ETHYLENE GLYCOL METABOLISM

2010 Society of Toxicology
Abstract No. 2394

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1 - Tetra Tech Sciences 2 - BioReliance

Human Hepatocyte Model

In Vitro Method:

Human Liver S9 Model

In Vitro Method: Human liver S9, pooled from 10 male donors (Celsis/In Vitro Technologies, Baltimore, MD), with a cofactor pool was incubated in culture medium containing 10, 100, or 300 mM EG. Medium samples were collected at 1, 4, 8, and 24 hours of incubation and analysed by GC-FID to measure EG and by HPLC-UV to measure GA and OA. The ELISA was employed to measure ADH in duplicate samples of control medium (no S9) and in undiluted human S9.

Results: Analysis of samples showed no change in the EG concentrations, and GA and OA were not detected. The ELISA showed small but measurable levels of ADH in the undiluted S9.