

G001
Acetonitrile [75-05-8]

Results of Testing

| Chemical Name | CAS No. | Study Code/Type | Protocol/Guideline | Species | Exposure | Dose/Concentration | No. per Group | Results | Reference |
|---------------|---------|---|---|---|--|----------------------|-----------------------|--|------------------------------------|
| Acetonitrile | 75-05-8 | HECTOXCARC Carcinogenicity | National Toxicology Program (NTP) | F344/N rats | inhalation, 6 hr/d, 5 d/wk, 2 years | 0, 100, 200, 400 ppm | 56 male, 56 female | There was equivocal evidence of carcinogenic activity in male rats based on marginally increased incidences of hepatocellular adenoma and carcinoma. There was no evidence of carcinogenic activity in female rats exposed to 100, 200 or 400 ppm. There was an increased incidence of hepatic basophilic foci in male rats but not exposure-related liver lesions in female rats. | NTP TR-447, April 1996 |
| Acetonitrile | 75-05-8 | HEDIRR Permeability coefficient (Kp) | 69 FR 22402 OPPT-2003-0006 | | in vitro | | | TEST DATA IN REVIEW PROCESS | REC'D 6/2005 |
| Acetonitrile | 75-05-8 | HEDIRR Dermal absorption | 69 FR 22402 OPPT-2003-0006 | | in vitro | 10 minutes | | TEST DATA IN REVIEW PROCESS | REC'D 6/2005 |
| Acetonitrile | 75-05-8 | HEDIRR Dermal absorption | 69 FR 22402 OPPT-2003-0006 | | in vitro | 60 minutes | | TEST DATA IN REVIEW PROCESS | REC'D 6/2005 |
| Acetonitrile | 75-05-8 | HECTOXCARC Carcinogenicity | National Toxicology Program (NTP) | B6C3F ₁ mice | inhalation, 6 hr/d, 5 d/wk, 2 years | 0, 50, 100, 200 ppm | 60 male, 60 female | There was no evidence of carcinogenic activity in male and female mice exposed to 50, 100 or 200 ppm. There was an exposure-related increase of squamous hyperplasia of the forestomach in male and female mice. | NTP TR-447, April 1996 |
| Acetonitrile | 75-05-8 | HEGTOXCHRM Gene mutation | National Toxicology Program (NTP) | Chinese hamster ovary (CHO) | in vitro | Not specified | Not applicable | A small increase in chromosomal aberrations occurred in the presence, but not in the absence, of S9. | NTP TR-447, April 1996 |
| Acetonitrile | 75-05-8 | HEGTOXCHRM Micronucleus test | National Toxicology Program (NTP) | mice | in vitro | Not specified | Not applicable | A significant increase in micronucleated normochromatic erythrocytes was observed in mice treated with acetonitrile for 13 weeks. Female mice were not affected by exposure. | NTP TR-447, April 1996 |
| Acetonitrile | 75-05-8 | HEGTOXCHRM Gene mutation | Non-TSCA Protocol/ Guideline (docket 42019) | Chinese hamster ovary (CHO) | in vitro | 4-20 mg/mL | Not applicable | Mutation frequencies at two of the sample concentrations in both the activated and the nonactivated Aroclor-induced S9 were higher than in the negative controls; however, analysis of variance on the combined data from replicated experiments indicated no significant differences. | OTS0507279 49 FR 44142; 11/2/84 |
| Acetonitrile | 75-05-8 | HEGTOXMUTA Mutagenicity study (Ames test) | National Toxicology Program (NTP) | <i>Salmonella</i> <i>typhimurium</i> | in vitro | Not specified | Not applicable | No mutagenic response observed either with or without S9 activation in <i>Salmonella typhimurium</i> strains TA97, TA98, TA100, TA1535, or TA1537. | NTP TR-447, April 1996 |

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| Acetonitrile | 75-05-8 | HERTOXTERA Developmental toxicity | Non-TSCA Protocol/ Guideline (docket 42019) | New Zealand white rabbits | days 6-18 of gestation | 0, 2.0, 15.0, 30.0 mg/kg/day | 25 (pregnant) | Observations in dams of the high dose group included mortality (in 5 animals), thinning of the stomach wall in the cardiac region, ataxia, colored exudate, decreased motor activity, bradypnea, dyspnea, and impaired or loss of righting reflex. An increase in the incidence of an extra ossification site in the parietal bones was observed in four fetuses in two high dose groups, however this frequency was considered to be a spontaneous effect in this strain of rabbit. | OTS0507279 49 FR 44142; 11/2/84 |