

28-day (subacute) Inhalation Toxicity of 1,2-Dichlorobenzene in F344 Rats

Methods

Five male and five female F344 rats were exposed to 1,2-Dichlorobenzene vapors for 4-weeks (6 h/day, 5 days/week) at concentration of 0, 50, 150, and 450 ppm. The exposure of test substance and housing animals were carried out in whole-body inhalation chambers, and the range of environmental conditions was maintained in accordance with the test guidelines. Clinical signs, body weight changes, hematology, blood biochemistry, organ weights, and histopathological findings were observed.

Results

The test substance concentrations in the chambers were 49.29 ± 2.63 , 149.95 ± 10.22 , and 425.17 ± 67.74 ppm. No death or substance-related clinical signs were observed during the test period. Decreased body weight changes were observed in high dose group (450 ppm) in male and female rats. Also, the change of absolute and relative organ weights of the liver, and histopathological findings of the liver including hepatocellular karyocytomegaly were observed.

1,2-Dichlorobenzene
 49.29 ± 2.63 ,
 149.95 ± 10.22 &
 425.17 ± 67.74
ppm

Conclusion

Based on the findings, the no-observed-adverse-effect level (NOAEL) was determined to be 150 ppm in F344 rats.

Laboratory



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