OSHRI

Occupational Safety and Health Research Institute

90-day (subchronic) Inhalation Toxicity of 1,2-Dichlorobenzene in F344 Rats

Methods

Ten male and ten female F344 rats were exposed to 1,2-Dichlorobenzene vapors for 13-weeks (6 h/day, 5 days/week) at concentration of 0, 30, 100, and 300 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 sings, body weight changes, hematology, blood biochemistry, organ weights, and histopathological findings were observed.

Results

The test substance concentrations in the chambers were 29.94±1.84, 99.76±6.53, and 300.78±15.29 ppm. No death or substance-related clinical signs, body weight changes, and food consumptions were observed during the test period. The relative weights of the spleen in high dose group (300 ppm) and absolute and relative weights of uterus in high and middle dose group (300 and 100 ppm) showed significant differences in female rats. TCHO in middle dose (100 ppm) male and female rats and high dose (300 ppm) female rats showed significant differences. Also, TG in middle dose (100 ppm) male and female rats and high dose (300 ppm) male rats showed significant differences. But these were not considered to be substance-related. Pancreatic acinar cell atrophy in high dose (300 ppm) male and female rats and pituitary cyst in high dose (300 ppm) female rats were observed, but the degree was insignificant. Histopathological changes observed in other tissues were also natural lesions and did not appear to be due to test substance.

1,2-Dichlorobenzene

29.94±1.84, 99.76±6.53 & 300.78±15.29 ppm

Conclusion

The F344 rats exposed to 1,2-Dichlorobenzene showed no obvious exposure-related effects.

Laboratory

Chemicals Research Bureau, Occupational Safety & Health Research Institute
30, Expo-ro 339beon-gil, Yuseong-gu, Daejeon, 34122, Republic of Korea
Tel. +82-42-869-8541 Fax. +82-42-869-8691 Homepage. http://oshri.kosha.or.kr/eoshri