

Abstract

A Study on Subchronic Inhalation Toxicity of 3-Methylpentane

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Objectives: The purpose of this study was to obtain information regarding classification and health hazards that may result from a 4 weeks inhalation exposure of 3-Methylpentane in Sprague-Dawley rats.

Methods: The testing method was conducted in accordance with OECD guidelines for the testing of chemicals No. 412(Subacute Inhalation Toxicity). The Rats were divided into 4 groups(10 male and 10 female rats in each group) and exposed to 0 ppm, 284 ppm, 1,135 ppm, 4,540 ppm 3-Methylpentane in each exposure chamber for 6 h/day, 5 days/week, for 4 weeks. We used PRISTIMA (Toxicology data management system) to confirm the system and to have confidence of the raw data.

Results: No death and particular clinical presentation including weight change and change of feed rate was observed. Relationship between dose, gender and response was also not significantly changed in hematologic examination, biochemical examination of blood and blood coagulation time. Relative weight measurement of organs, in male group weight change of liver were increased in proportion to dose. In

histopathological examination, all organs are not affected by the test substance.

Conclusions: NOAEL(No Observable Adverse Effect Level) of 3-Methylpentane is more than 4,540 ppm in male group and female group.

Keywords : 3-Methylpentane, NOAEL, subacute inhalation toxicity