

Inhalation Toxicity of 1-Bromopropane (1-BP)

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The purpose of this study was to investigate the acute(4 hrs) and repeated-dose(6 hrs a day, 5 days a week, 8 weeks) toxic effects of 1-bromopropane(1-BP) on Sprague-Dawley (SD) rats which were treated by inhalation. The results were as follows ;

1. The median lethal concentration(LC₅₀) was estimated 14,374 ppm(confidence limit 95% ; 13,624~15,596 ppm) in acute inhalation. Abnormal clinical signs related to the 1-BP were not observed with the acute inhalation dose. Gross findings of necropsy revealed no evidence of specific toxicity related to the 1-BP.

2. By sub-acute inhalation the body weights of male and female were significantly reduced($p < 0.001$) by the dose of 1,800 ppm compared with control group, while the relative weights of liver were significantly increased($p < 0.001$) in both sexes. However there were no significant variation in food consumption, urine biochemistry, hematology and blood biochemistry for the exposed rats compared with the control rats. Abnormal clinical signs and gross findings of necropsy related to the 1-BP were not shown. No toxicologic lesions were observed by the histopathological test.

Key words : 1-Bromopropane, Acute Inhalation, LC₅₀, Sub-Acute Inhalation