



Effect of Potassium Bromate on the Liver of Swiss Albino Mice

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Abstract : Potassium bromate is a white crystalline solid and a food additive often used in bread as flour improver. It is also used in fish paste, cheese, beer, cold hair wave solution and in other laboratory processes. Exposure of mice to potassium bromate at two dose levels (75 mg/kg bw and 200 mg/kg bw) was investigated for its effects on the liver. Mortality was found to be nil in all the experimental groups. A significant decrease in body weight and increase in liver weight was observed with dose concentration. A significant increase was observed in SGPT (Serum Glutamic Pyruvic Transaminase) and ALP

(Alkaline phosphatase) level which was directly proportionate to the concentration of dose. Histological examinations revealed dilation of sinusoids, necrosis of hepatocytes, vacuolation of cytoplasm due to hydropic degeneration and fatty changes.

Key words : Potassium bromate, SGPT, ALP.

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Introduction :

Potassium bromate is found as white crystalline, granules or powder which is colourless, odourless and tasteless. It has no medicinal value but is added to flour as a maturing agent to dough, to fish paste as a conditioner and also added in beer or cheese (Chipman, 1988). It assists in dough raising process and produces a texture in the finished product that is appealing to the public (Sivasakar, 2000). It is also used as laboratory reagent and oxidising agent in permanent wave compounds, as a food additive. (National Toxicology Program, 1991; Budavari, 1996).

Potassium bromate is also called Bromic acid or potassium salt. Its structural formula is $KBrO_3$ and relative molecular mass is 167.01g/mol. Its