

**PATHOLOGICAL EVALUATION OF REPEATED DOSE ORAL TOXICITY STUDY OF *ROUPYA BHASMA* IN WISTAR RATS.**

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**ABSTRACT**

**Ethnopharmacological Relevance:** *Roupya Bhasma* is an Ayurvedic medicine prepared from Silver. It is used in Ayurvedic treatment of memory loss, dizziness, excessive thirst etc. There is an imminent need for assessment of a systematic study on safety profile of *Roupya Bhasma* to generate scientific evidence of their utility and safety.

**Objective:** To determine pathological evaluation of *Roupya Bhasma* in rats.

**Method:** Two treatment group animals were given with Therapeutic Dose (TD) and twice of Therapeutic Dose (2TD) for 90 consecutive days, which were 1 and 2 times the proposed human therapeutic dose (HTD). The 3rd group or control group, receive Carboxy Methyl Cellulose (CMC). The rat were fasted overnight prior to the terminal necropsy and their body weights were recorded. Blood samples were obtained for laboratory investigations from all the animals before necropsy. Weights of certain organ recorded. Histopathological evaluation was performed on brain, heart, kidney, lung, spleen, liver, and adrenal in all rats.

**Results:** Animals were evaluated using functional observation battery (FOB). No treatment related gross pathological changes were observed in animals from different treatment groups. The values of different hematological parameters of rats from group treated with *Roupya Bhasma* (TD) and *Roupya Bhasma* (2TD) were found to be comparable with those of the control group rats. Gross pathological findings noted in rats at necropsy in this study included reddening of lungs and small cysts on liver. However these changes occurred as isolated incidences' and did not appear to be treatment related. The microscopic examinations of tissues revealed some incidental findings, such as acute congestion in liver and lungs, round cell infiltration in liver and acute inflammation in lungs in the treated and control group rats and was considered unrelated to exposure to the *Roupya Bhasma*.

**Conclusion:** Based on these outcomes of the present chronic study, the NOEL (No Observed Effect Level) for *Roupya Bhasma* in Wistar rats could be concluded at that of doubled of human dose.

**Keywords:** *Roupya Bhasma*, metallic, Ayurvedic Formulation, Chronic toxicity study, No observed effect level (NOEL) etc

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