

**Effect of Blend of Metanil Yellow and Tartrazine on
Different Organs of Albino Rats**

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Abstract

Introduction: Tartrazine and metanil yellow are an organic azo dye widely used in food products, drugs and cosmetics. The present study was conducted to evaluate toxic effect of these food colors on liver, kidneys of albino rats. The study also evaluates protective effect of quercetin as an antioxidant against toxic effect of these food colors.

Methods: Eighty adult albino rats were divided into 8 groups. Control group, 3 groups treated with Blend of Tartrazine and metanil yellow in 3 doses 25, 50,75 mg/kg for 30 days by gavage, one positive control group treated with quercetin 50 mg/kg for 30 days and three groups treated with the blend of tartrazine and metanil yellow plus 50 mg/kg of quercetin. At the end of experiment serum samples were collected for evaluation of liver and kidney functions. samples from the liver, kidneys were fixed in formalin 10% and prepared routinely for paraffin sectioning and staining for histopathological examination.

Results: The study showed significant elevation of liver and kidney functions after treatment with the food color blend. Also, there was significant improvement of liver and kidney functions after treatment with quercetin. Histopathological examination revealed mild to moderate changes in liver and kidney which were improved after quercetin treatment.

Conclusion: The current sub chronic study concluded that blend of tartrazine and metanil yellow caused significant biochemical and histological changes in different organs of albino rats. So prolonged consumption of these substances lead to adverse effects on human health. Also, quercetin plays an important role in protection of the body against toxic effect of food color blend.