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# Protectıve Effect of Thyme Leaf on Monosodıum Glutamat-Induced Metabolıc Changes

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Monosodium glutamate is widely used as a food additive and there is increasing concern that excitoxins such as MSG play an important role in the development of metabolic disorders. Therefore, MSG studies are increasing day by day. In this study, the protective effect of thyme plant on the metabolic syndrome caused by MSG was investigated.

32 wistar albibo rats were divided into four groups (in each group 8 wistar albibo) as control group, thyme group (250 mg / kg), MSG group (2gr / kg) and MSG + oregano group. At the end of the 28-day trial, the rats were sacrificed and their blood samples were taken. Serum was separated by centrifugation. Serum levels of AST, ALT, LDH, AKP, Glucose, Insulin, Urea, cretainine, Total protein, albumin were measured by using commercial kits in YYU Medical Faculty Biochemistry Laboratory.

Serum glucose levels were significantly increased in the MSG group compared to the control group. Serum glucose levels in MSG + thyme group decreased significantly than MSG group. There was a slight increase in serum AST and ALT levels in MSG group.

As a result, it was concluded that MSG application may have impaired carbohydrate metabolism by increasing serum glucose levels significantly. It was observed in this study that thyme plant may cause this effect to decrease.

**Keywords:** MSG, AST, ALT, LDH, AKP, Glucose, İnsulin, Urea, Cretainine, Total Protein and Albumin Levels.

## Biography:

Nurhayat Atasoy In 20 June 1968 Van was born in Turkey. She completed her undergraduate education in the Department of Chemistry at Van Yüzüncü Yıl University. She completed her master's and doctoral studies in the field of biochemistry at the same university. She trained many undergraduate, graduate and doctoral students in this field. She is still working as an associate professor at the same university. She has studies on vitamins, hormones, antioxidants, heavy metals and food chemistry, and these studies continue.