

A COMPARISON OF TRACE METAL LEVELS IN DOXORUBICIN INDUCED RAT LIVER USING ETAAS

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Doxorubicin (DXR) is a cancer drug that is widely used for cancer chemotherapy. Because of prominent cytotoxicity to normal cells or tissues, clinically limits applications. When used long term, DXR causes several side effects, resistance and toxicity to normal tissues. To decrease the DXR toxicity and improve bioavailability, various carrier systems have been development to maintain the tumor inhibition effect. Recently, many researchers have been investigated DXR effect on normal cells or tissues. They used an agent whose name is CMN it possess antioxidant activity besides effect of anti-inflammatory, antioxidant, antiproliferative, antiangiogenic, hepatoprotective, antimetastatic, antidiabetic, antiarthritic antithrombotic, and antiatherosclerotic in cell culture and animal studies. Various preclinical studies revealed that CMN is well known for its potential to inhibit carcinogenesis induced by chemical carcinogens both initiation and progression stages. The present study was designed as thirty five wistar albino male rats were randomly divided into five groups of seven rats in each group. Group I was identified as the control group and only CMN was injected to group II. While DXR was injected group III, group IV was treated with DXR+CMN and DXR+CMN was injected to group V in higher dose CMN. The objective of this study was to assessment and compares levels of some elements including copper, iron, zinc and selenium, and in the liver of control group and doxorubicin induced rats tissue. All trace metals were analyzed

using electrothermal atomic absorption spectrophotometry (ETAAS). Results revealed that Cu, Fe, Zn, Se amount and Cu/Fe, Cu/Zn, and Cu/Se ratio were present in different levels in the each of five groups. In liver, there was not statistically any differences among Cu, Fe, Zn and Fe concentrations of group I and II ($p>0.05$). Group IV Se concentration was found statistically the lowest and Fe concentration of group IV was found the highest.

Recent Publications

1. Ince M, Kaplan Ince O, Asam E and Onal A (2017) Using food wastes biomass as effective adsorbents in water and wastewater treatment for Cu (II) removal. Atomic Spectroscopy 38(5):142-148.

Biography

Onal A received his technician degree from Munzur University, Department of Food Technology at 2011 and he is a student Department of Food Engineering at the Munzur University. He is the author of more than 3 papers that published in journals with good impact factor in their area and her research areas including Atomic Absorption Spectroscopy; Trace and Toxic Element Analysis; Instrumental Analysis; Problem Solving in Chemistry and Food Science.

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