Abstract

Our Experimental study has been conducted on the assessement of the toxicity of oxide of iron (Fe_3O_4) nanoparticles.

To define (Fe_3o_4) toxicity on the rabbit (oryctolagus cuniculus), we have exposed the animal to four different doses of oxide iron (Fe_3o_4) 50, 75, 100, 125 mg / kg / day, through oral route (digestive system) during a period of two month.

The Obtained results show that iron oxide has caused a hypertrophy of liver of the animal, and many changes in the morphology such as hair loss, urine color and skin inflammations and as it appear stress and anxiety.

Our Results, also, have been indicated including negative effects on metabolite elements such as:

Carbohydrates, proteins, which suffered an increase in the proportion, a decrease in lipids amount has been shown led to a significant increase in MDA production.

Toxic effects of FeO-NPs caused a decrease in GSH level as well as enzymatic activity of: GPx, GST, CAT.

Blood analysis, also, indicates an increase in the amount of transaminases: TGP and TGP.

It is to note that all our results are in dose-dependent relationship.

Key words:

Nanoparticles (NPs), iron oxide, oxidative stress, antyoxidants, liver toxity, GSH, CAT, GPx.