

Abstract

This study was designed during the period from October 2014 to April 2015 to measure the concentration of some heavy metals (Cadmium, Cobalt, Copper, Lead & Nickel) in the blood serum and its effect upon some blood parameters of workers at four fuel stations have chosen (Alballam station, Nasiriyah station, Alrayat station and Almohandis station) in Al-Nasiriyah city (Center of Thi-Qar province southern of Iraq).

100 blood samples have collected randomly, 80 of it were taken from a group of workers at four stations. They aged from 20 to 55 years (them duration work was 1-12 years) and 20 samples of non-working as a control group.

Each sample of blood divided into two parts, the first, to measure blood parameters directly, second part the separate the serum for the purpose of measuring the concentration of heavy metals.

The results and statistical analysis showed that the concentration of these heavy metals in the samples were higher than the concentration in the control group, the concentration of metals were, Cd (0.024 ppm), Co (0.027 ppm), Cu (0.02 ppm), Ni (0.078 ppm) and Pb (0.15 ppm), while the control group recorded low values, Cd, Co, Cu were less than (0.004 ppm), while Ni (0.03 ppm) and Pb (0.03 ppm).

Blood parameters of this study were (RBCs.= $5.1 \times 10^6/\mu\text{L}$, Hb.= 14 g/dL, PCV.= 43.2%, WBCs.= $7.4 \times 10^3/\mu\text{L}$ & PLTs.= $204.9 \times 10^3/\mu\text{L}$). Some of these parameters (RBCs., WBCs. & PLTs.)