Abstract
Bacgroun Early childhood lead exposure is associated with numerous adverse health effects. Biomonitoring among susceptible populations, such as children, has not been previously conducted. The aim of the study is to evaluate the blood lead (Pb) and total blood calcium (Ca) levels; blood zinc (Zn) levels. Metos A cross-sectional study was designed to collect healthy children age 1-36 months (Mean ± SD: 1.5 ± 0.6 age, 60% boys) in the study from January 2010 to September 2011. Results The overall mean blood Pb levels were 42.18 ± 12.13 g/L, the overall mean blood Zn and total blood Ca concentrations were 62.18 ± 12.33 mol/L and 1.78 ± 0.13 mmol/L, respectively. The prevalence of elevated blood Pb levels in all children was 1.3%. A significant difference was found between female and male subjects for the blood Pb and Zn. After controlling for gender and age, there was a weak positive correlation between total blood Ca and Zn level. Conclusions The blood Pb levels had a significant negative correlation with total blood Ca level after adjusting for age and gender, and these findings suggest that Pb had effect on positive blood Zn and total blood Ca levels; parents should pay more attention to the nutrition of girls.

Keywords
Key words, Biomonitoring, Zinc, Total blood calcium, Lead.