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Determination of heavy metal (PB) content in mineral water produced in Iran by flameless atomic absorption spectroscopy

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There are some limitations about quantity of heavy metals in food and drugs specially in mineral water. High concentrations of heavy metals in food, drugs and mineral water can cause peripheral neuropathy ,decrease in learning ability and memory ,nephritis, anemia and growth deficiency during a long time. So everybody who drinks mineral water with lead content more than maximum contaminant level is high risk of lead cumulation and chronic toxicity by it. As there is not process control during mineral water production, we decided to assay lead quantity in products of 14 mineral water companies of Iran, by atomic absorption spectroscopy. The maximum average of lead content (0.0935±0.0018 ppm) was found in crystal mineral water and the minimum average of lead content(0.0222±0.00099 ppm) in Sepidan mineral water. Results showed that the mean lead content, in 14 types of mineral water were higher than approvable concentrations(0.0015 ppm) so none of these samples have a satisfactory lead concentration.

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