ABSTRACT

Sample preparation is the largest source of errors and one of the most important step of each analysis. Decomposition of organic compounds in the sample required dextructor precise, dextructor HNO_3, HF, $KMnO_4$ can be used for the decomposition of various organic compounds. Chelating agents APDC and NaDDTC can overcome the interferences matrix Na, Ca, K, Mg in the sample because it will chelat with heavy metals and do not react with alkali and alkaline earth elements. Selected dextructor for Pb and Cd determintion using destructor HNO_3:HF:$KMnO_4$. Selected chelating agents for Pb determination using NaDDTC Pb 0.1% (w/v), pH 5, time shaking 45 minutes and for Cd determination using APDC 2% (w/v), pH 4, time shaking 60 minutes. Selectivity AAS using Hollow Chatoda Lamp (HCL) Pb (λ 283.3 nm) and Cd (λ 228.8 nm); Pb linearity was y = 0.0115x + 0.0010 (*r*=0.9997); Cd linearity was y = 0.2466x + 0.0212 (*r*=0.9995); LOD and LOQ Pb 0.06 μg/mL and 0.12 μg/mL respectively; LOD and LOQ Cd 0.001 μg/mL and 0.003 μg/mL respectively; RSD Pb 1.6%; Cd 1.4; %recovery Pb 94.06%±4.4; Cd 91.4%±3.5.

Keyword : Dextructor, Chelating agent, Lead, Cadmium, AAS method.