APPLICABILITY OF THE STANDARD ADDITIONS METHOD

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The standard additions method is widely used especially for the samples with complex matrices such as blood and urine; but it is important to check whether the method can be applied directly to obtain accurate results or some prerequisites should be satisfied before the analysis. It is necessary that the different forms of the analyte are isoformed and do behave exactly the same way. The technique is effective because in flame atomic absorption spectrometry the flame atomizes the forms of different thermal stabilities so isoformation is not required. However, this is not the case for ETAAS or HG-AAS since the atomization step in both of them selective to some forms of the analyte but not all of them. In this study Hydride Generation AAS is used for Arsenic determination. The urine samples were digested and diluted to different factors then analysed to see the effect of the matrix mass on the signal and if these different dilutions result the same amount of the analyte at the end or not. On the other hand the effect of the digestion period was examined, hence different digestion procedures were investigated using different oxidizing agents. Digestion in PTFE bombs with both conventional and microwave ovens was employed as well as open digestion in borosilicate vessels.