The comparison of oxygen flask combustion with wet-ashing procedures for the determination of zinc in spinach samples by atomic absorption spectrometry

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ABSTRACT

Oxygen flask combustion was used for determination of zinc content of spinach samples prior to atomic absorption spectrometry. The results were compared with wet-ashing digestion procedures in closed and open vessels utilizing an acid mixture of \( \text{HNO}_3 + \text{HClO}_4 \). Even with high zinc content of package and fuse materials, oxygen flask combustion gave highest precision among the methods used for decomposition. By judicious choice of sample wrapper and fuse material oxygen flask combustion is strongly recommended on the basis of speed, efficacy, simplicity and cost for decomposition of plant samples.