

The paper describes a modified and optimised conventional wet ashing method for the determination of antimony (Sb) in polyethylene terephthalate (PET) bottles used for bottling sparkling and still water. The modified optimum conventional wet ashing method was applied as the digestion method to extract Sb from PET bottles, and the extracted Sb analysed using flame atomic absorption spectrometry (F-AAS), and in bottled water, Sb was analysed with hydride vapour generator atomic absorption spectrometry (HVG-AAS). Microwave digestion method was also used as described above for comparison. The concentrations of Sb obtained using modified optimum conventional wet ashing and microwave digestion protocols were from 169 ± 13 to 285 ± 17 ng g⁻¹ and from 123 ± 0.5 to 249 ± 18 ng g⁻¹, respectively. The average concentration of Sb in bottled water samples using the HVG-AAS was 0.183 ± 0.013 µg L⁻¹, with a range of 0.012 ± 0.001 to 0.358 ± 0.006 µg L⁻¹. Sb concentration increased marginally with longevity of storage, but still remained well below the various guidelines for Sb levels in drinking water.