

## ABSTRACT

Effect of tea infusion conditions, *i.e.* water temperature (80, 90, 100 °C) and infusion time (1, 3, 5, 10 min), on Al and Mn concentrations in infusions prepared from three types of tea (black, green and oolong tea) was studied. Concentrations of Al and Mn were determined using ICP-OES and Flame AAS, respectively. The results indicate that the infusion temperature and time has significantly effect on the element concentrations. The higher the water temperature and the longer infusion time, the higher the Al and Mn concentrations. However, after a certain infusion time, the diffusion rate of the metals became lower due to less difference of metals concentration at the surface of tea leaves and in the bulk solution. The results also demonstrated that the metals contents changed significantly between types of tea. The metals contents were found higher in black and green tea, depending on the investigate metal and infusion conditions, than oolong tea. The amounts of Al and Mn in the later were exceptionally low at all investigated infusion conditions. This may be partially due to the form of tea leaves: its rolled leaves caused the slow water uptake and hence the slower dissolution of the metals.