ABSTRACT: This study aims to investigate the concentration of heavy metals in Tap water, such as Arsenic, Cadmium, Copper, Chromium, Lead, Iron, Nickel, Manganese and Zinc and their potential health impact to health and environment. The Calcium and Magnesium were also quantified to find the hardness of tap water consumed in our daily household. The Lahore local areas were selected to study the heavy metals concentration. The analysis was performed using Atomic Absorption Spectroscopy Agilent Technologies Model 240AA and Vapor Generation Assembly of Agilent Technologies Model 77AA for Arsenic quantification. The study areas results were then compared according to Pakistan Environmental Quality Standard and World Health Organization. The Chronic daily intake (CDI) was also calculated for children and adults both. The chronic daily intake study results shows the higher to lower trend of metals as Ca> Mg> Mn > Zn> Cu> Fe> Pb> Ni> Cr> As> Cd. The study results shows the Calcium, Magnesium, Copper, Iron and Zinc results are in permissible results. The analysis showed the higher results are possible due to anthropogenic activities.

KEYWORDS: Heavy metals; Tap Water; Average daily intake; Health impact; Atomic Absorption Spectroscopy