

ABSTRACT

Background: The presence of hazardous metals in cosmetics, food and medicines was identified as a significant concern since it had the potential to cause severe health complications among individuals who used these products. The use of such products is prevalent among those who may lack awareness regarding the presence of hazardous metals in these products. **Objective:** The main purpose of this study was to evaluate the presence and concentration of potentially dangerous metals in cosmetic products, food goods and herbal medicines that had been transported to Pakistan. At present, Pakistan lacks regulatory measures pertaining to the establishment of maximum allowable levels of pollutants, including metal ions, in these products. **Research Methodology:** The research approach encompasses the gathering of samples, the implementation of wet digestion for sample preparation, and the utilization of atomic absorption spectroscopy for analysis. **Results** White Glow cream had the highest percentage of nickel with an amount of 6.95 ± 0.01 . On average, "Face Fresh Cream" had the greatest content of Lead of 3.71 ± 0.20 , and "Skin Whitening Cream" had the lowest concentration with a value of 2.38. Herbal syrup had the highest lead levels with a concentration of 7.24 ± 2.78 , chocolates had Nickel at maximum with a mean value of 25.91 ± 0.29 and beverages had the highest Lead levels at 3.71 ± 0.20 , 3.61 ± 0.04 . **Conclusion:** The comprehensive evaluation of both concentration levels and associated health risks revealed that the targeted sample items pose a significant threat to consumer well-being. Consequently, it was imperative to implement stringent quality control protocols to guarantee that the levels of metal concentrations present in these products remain within the boundaries set by regulatory standards.