

Since the dawn of civilization, cosmetics have constituted a part of routine body care by all set of people¹. As a group, heavy metals like arsenic, cadmium, chromium, mercury, nickel, lead, cobalt, copper and zinc can build up in the body over time and are known to cause varied health problems,¹⁰ which include: cancer, reproductive and developmental disorders, neurological problems; memory loss; mood swings; nerve, joint and muscle disorders; cardiovascular, skeletal, blood, immune system, kidney and renal problems; headaches; vomiting, nausea, and diarrhea; lung damage; contact dermatitis; and brittle hair and hair loss. The digest was evaporated to almost dryness and then made up with distilled water to 100 mL. The sample solutions were subsequently analyzed for arsenic, cadmium, chromium, copper, lead, cobalt, mercury and zinc, using an ICP-OES at the SAIF IITM, Chennai. This paper focuses on the analysis of heavy metals using Inductively Coupled Plasma-Optical Emission Spectroscopy (ICP-OES) used in cosmetics and its adverse effects. The main sources of heavy metal pollution in the environment are man-made effects, including combustion of fossil fuels, mining activities, wastewater discharges of manufacturing industries, and waste disposal⁶. Significant levels of heavy metals in sediments and soils may pass to the aquatic environment, groundwater, and plants through the transfer processes and uptake by animals and humans leads to accumulation. Women usually attribute their problem to face creams, deodorants, shampoos and eye cleansers whereas men blame aftershaves, deodorants and shower foam and most commonly encounter with headache, nausea and dizziness⁷. Various organizations viz., Cosmetic Technical Working Group (CTWG), ASEAN Cosmetic Directive, etc., have formulated the heavy metal level in cosmetics and which are unavoidable. Heavy metals like Lead, Arsenic, Chromium, Nickel, Mercury and Cadmium are common contaminants in various cosmetic products⁴. Heavy metal contamination is one of the most important reasons addressing problem.