

**EVALUATION OF CONCENTRATION OF TOXIC METALS IN  
DIFFERENT LOCAL BRANDS OF CLEANSER PRODUCT**

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## **ABSTRACT**

### **EVALUATION OF CONCENTRATION OF TOXIC METALS IN DIFFERENT LOCAL BRANDS OF CLEANSER PRODUCT**

The concentration of toxic metals were determined in different local brands of facial cleanser product. The objective of this study was to determine the toxicity assessment of the product and the risk associated with human exposure to metals in these facial cleanser product. After wet digestion with mixture of nitric acid, hydrochloric acid and hydrogen peroxide with ratio 3:1:1 and the concentration of heavy metals in the all samples were analyzed by inductively coupled plasma-optical emission spectroscopy (ICP-OES) and cold vapor atomic absorption spectroscopy (CV-AAS) for Hg. The results of mean concentration of selected heavy metals in these cleanser product ranged from 0.020 to 0.120 mg/kg Pb, 0.050 to 0.190 mg/kg Cu, 0.026 to 12.350 mg/kg Zn and 0.225 mg/kg Hg respectively. The concentration of all the samples were below the permissible limits by FDA. The systematic exposure dosage (SED) values of these metals measured from the application of these brands of cleanser were below their respective provisional tolerable daily intake/or recommended daily intake values. The margin of safety (MoS) values were higher than 100 which indicated that the product do not cause considerable health risk to the users. As a conclusion, the margin of safety (MoS) for copper and zinc were greater than 100 which are considered safe to use.