HEAVY METAL ANALYSIS OF HERBAL PLANTS USED IN TRADITIONAL TREATMENT OF HYPERTENSION (HIGH BLOOD PRESSURE)

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ABSTRACT

DETERMINATION OF HEAVY METAL IN HERBAL PLANTS USED FOR TREATMENT OF HYPERTENSION

The objective of this study is to determine concentration of heavy metal in the leaf of herbal plant that used to treat hypertension. The selected herbal plants are Andrographis Paniculata (Hempedu Bumi), Orthosiphon Aristatus (Misai Kucing) and Vernonia Amygdalina (Pokok Bismillah). The chosen heavy metals studied were chromium (Cr), iron (Fe), lead (Pb) and zinc (Zn). All the samples were analysed by Inductively Coupled Plasma Optical Emission Spectrometry (ICP-OES). The concentration of heavy metals in the leaf of herbal plants range 1.75 mg/kg to 3.75 mg/kg for Cr, 313.67 mg/kg to 586 mg/kg for Fe, 13.58 mg/kg to 19.83 mg/kg for Pb and 43.83 mg/kg to 87.33 mg/kg for Zn. The trends of concentration of heavy metals in each medicinal plants in decreasing order was Fe > Zn > Pb > Cr. The pollution index (PI) of each heavy metal was estimated and all the pollution index was less than 1 which no pollution occurred in each selected herbal plant. It is recommended that more types of herbal plants should be studied and the number sampling sites also should be increased.

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