

was rinsed with distilled water and dipped into the sample solution mark, and allowed to settle. Concentrations of lead (Pb), chromium and a stable reading was recorded.

Soil metal analysis The soil samples were sieved through a 2 mm sieve to remove the stones and other remaining coarse particles. 5 g of air-dried, soil sample was weighed into a 100 ml beaker and 2 ml of aqueous HNO₃ and 6 ml of aqueous HCl in the ratio 1:3 was added to the already weighed soil sample. The mixture was digested by heating on a heating mantle to ensure the mixture attains near-dryness so as to enable proper leaching of the soil sample. The digested sample was filtered using distilled water to dilute or alternatively, the mixture could be rinsed through a filter paper into a 50 ml volumetric flask. Distilled water was used to make up the digested filtrate to 50 ml mark in the volumetric flask. The digested soil was then presented to the flame type atomic absorption spectrophotometer (AAS) (Model HANNA HI 8314), so that the respective metals of interest can be read out. The mean values of three determinations per sample were recorded.

Procedure for *Talinum triangulare* pH and metal analysis

***Talinum triangulare* pH analysis** Portions of 100 g of *Talinum triangulare* was weighed and soaked in 5 L of distilled water in a plastic container. The pH of this water (where the leaves was soaked) was determined using a pH meter:

***Talinum triangulare* metal analysis** In the laboratory, samples of *Talinum triangulare* were washed with distilled water and allowed to dry in moisture extraction oven at 105°C. The oven dried sample was ground into fine powder using pestle and mortar, and sieved through a 20 mm mesh sieve to obtain a dried powdered sample that was used for all the analyses. Approximately 50g of the powder was transferred to a 100 ml beaker; and then digested with 10 ml of HNO₃-HClO₄-HF. The contents of the beaker were heated at 200°C for 1 h in a fume cupboard, and then cooled to room temperature. Then, 20 ml of distilled water was added and the mixture was filtered using Whatman No. 42 filter paper to complete the digestion of organic matter. Finally, the mixture was transferred to a 50 ml volumetric flask, filled to the

Parameters/Leaf Samples	pH	Lead mg/kg	(Pb) Arsenic mg/kg	(As) Chromium mg/mk	(Cr) Zinc (Zn) mg/mk	Cobalt Mg/mk	(Co) Copper (Cu)mg/mk
Abuloma							
Onne							

Parameters/leaf collection point	Abuloma	Onne	Igbo- Etche	Control	Maximum Allowable Concentration
Naphthalene(mg/kg)	bdl			bdl	1.8
Acenaphthlene(mg/kg)	bdl	bdl	bdl	bdl	570
Acenaphthylene(mg/kg)	bdl			bdl	852
Fluorene(mg/kg)			bdl	bdl	560
Anthracene(mg/kg)			bdl	bdl	12,000
Phenanthrene(mg/kg)				bdl	0.14
Fluoranthene(mg/kg)				bdl	3,100
Pyrene(mg/kg)		bdl		bdl	2,300
1,2-Dibenzathracene(mg/kg)	bdl			bdl	0
Chrysene(mg/kg)		bdl		bdl	88
Benzo [k] fluoranthene(mg/kg)			bdl	bdl	9
Benzo [b] fluoranthene(mg/kg)	bdl			bdl	1
Benzo [a] pyrene(mg/kg)		bdl		bdl	0.9
Indenol [1,2,3-cd]pyrene(mg/kg)		bdl		bdl	0.09
1,2,5,6-Dibenzanthracene(mg/kg)			bdl	bdl	0.9
1,12-Benzoperylene(mg/kg)			bdl	bdl	0.9

Values with different superscript letters (a,b,c) in the same row are significantly different at the 0.05 level (P 0.05). bdl=below detectable limit i.e., < 0.0001mg/kg. Source: Maximum allowable concentration from the International standard for Tiered Approach to Corrective Action Objectives (TACO).Table 4:

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