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Assessment of trace elements in bissap (Hibiscus sabdariffa) sold in the city of Abidjan in Côte d'Ivoire

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Pollutants such as lead, cadmium and mercury are harmful to living things at low concentrations. In Côte d'Ivoire, the drink of *Hibiscus sabdariffa L.* generally called bissap juice is widely consumed by the population. However, recent studies have revealed a significant presence of heavy metals in the cultivated soils as well as in the plants taken from these soils in the city of Abidjan. Our study aimed to assess the health risks associated with the consumption of bissap marketed in three communes of Abidjan. Thus, evaluation of trace metallic elements (Pb, Cd, Cu, Zn) in *Hibiscus sabdariffa L.* calyces given as average value: Cd (23.142±13.332 mg/kg), Pb (77.949±15.620 mg/kg) Zn (78.96±15.584 mg/kg) and Cu (42.894±28.394 mg/kg). Bissap juice showed average concentrations Zn (0.139±0.076 mg/L), Pb (0.544±0.143 mg/L) and Cd (0.221±0.064 mg/L). These data compared to Codex Alimentarius and European Commission standards revealed a significant risk of lead and cadmium poisoning in calyces and bissap juice and a lower value for metal copper compared to zinc. Our study requires further investigation in order to evaluate all the factors involved in the chain of contamination and to assess possibly the toxicological and pathophysiological risks incurred by the population due to abuse.

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