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**Situation of heavy metals (Pb, Cd) in the plant-based beverages sold in the city of Abidjan, Cote d'Ivoire:
Case of the bissap extracted from *Hibiscus sabdariffa*****Mboh Gervais Melaine¹, Nguessan Ismael Gbabilia Zie², Ackah Jacques Auguste Alfred Bognan², Konan Kouassi Martin³ and Djaman Allico Joseph^{1,3}**¹Pasteur Institute of Ivory Coast, Ivory Coast²University of Jean Lorougnon Guede University, Ivory Coast³University of Félix Houphouët Boigny, Ivory Coast

The heavy metals present in our environment expose our organism to risks of poisoning at the origin of serious pathologies such as: cancer, respiratory diseases, and disorders of the infertility. Our study aims to search for certain metals such as lead and cadmium in a beverage consumed by Abidjan populations "Bissap juice" extracted from a locally grown plant, its scientific name *Hibiscus sabdariffa*. The calices of this plant were collected in three main communes of the city of Abidjan (Adjamé, Yopougon, Abobo). Heavy metals such as lead and cadmium have been evaluated in both the *Hibiscus sabdariffa* and beverage calyxes by the

Atomic Absorption Spectrometry method. The results revealed a presence of these metals in both calices: Cd (23.14 ± 13.33 mg / kg), Pb (77.94 ± 15.62 mg / kg), and the extracted beverage (Bissap): Pb (0.54 ± 0.14 mg / L) and Cd (0.22 ± 0.06 mg / L). These data compared to Codex Alimentarius and European Commission standards revealed a significant risk of lead and cadmium intoxication in the calyx and Bissap juice. Our study requires more investigation in order to evaluate the factors involved in the chain of contamination, and to measure the toxicological and physiopathological risks incurred by an excessive consumption of this drink.

Biography

Mboh Gervais Melaine has obtained PhD in biochemistry from the University of Abidjan; Cocody in Côte d'Ivoire in 2011. Since 2011, he works as a researcher at the Pasteur Institute of Côte d'Ivoire in the department of Biochemistry. He was appointed in 2016 as the head of the Training Department and I worked in 2017 as a consultant in the framework of the West African laboratory network, for the training of laboratory technicians in Guinea Bissau and Cape Verde. His interest research Micronutrients biomolecules and infectious diseases, Heavy metals-food safety and health, Natural substances and development of new therapeutics.

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