

11 Years of Environmental and Analytical Toxicology: Past Discoveries, Current Challenges

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Editorial Note

Environmental and Analytical Toxicology Journal provides a unique forum for scientists to publish research papers, reviews, case reports, and brief communications on a wide range of environmental and analytical toxicology concerns.

The harmful effects of various chemical, biological, and physical agents on individual living organisms are discussed in this journal. The Journal of Environmental and Analytical Toxicology has the highest quality. It is a scholarly Open Access journal to publish the most comprehensive and reliable source of information on advanced and recent research topics.

I feel privileged to discuss few Research articles published in the Journal of Environmental and Analytical Toxicology which added much more impact and thus increased readership, citations, and altmetric score.

In one of the articles entitled "Atomic Absorption Spectrometric Determination of the Concentration of Fe, Mn, Pb and Cd in Fruits of Mango, Avocado and Papaya from Gondar "Gebeya" Market Gondar, Ethiopia"; the author very well elucidated about Metal particles (ions or molecules) which are detected in the human body on a routine basis. Heavy metals enter the human body through food (spinach, which includes iron), air (inhalation of ultrafine particles), and water (groundwater contains dissolved metal salts and minerals from earth strata). Inside the body, they compete with potential minerals like magnesium and calcium, interfering with organ function. In industrial employment, pharmaceutical manufacture, and agriculture, people may come into contact with these trace metals.

According to research, global industrialization, and agricultural activities, has an impact on pollution and the global ecology. The development of different analytical approaches for selective and sensitive identification of heavy metals in environmental samples has come from increased industrialization and human activities, which have increased the emission of various contaminants. Although there is no precise definition of what heavy metal is density is frequently used as criteria.

Firstly, fruits and vegetables are exposed to varying levels of trace metals, depending on where they are grown. The study finds that

fresh fruits are grown near Gondar town. Fruit farms are contaminated with heavy metals.

As a result, consumption of these fruits and vegetables may pose a health risk to humans and animals at the time of the study. Fruit growers in the area should be informed on the importance of growing crops with low levels of these metals. Furthermore, the digesting procedure is a simple approach for the digestion of fruit samples, with a percent recovery rate of over 95%, and the study demonstrates that the method validation analysis values are extremely good.

Another article namely "Nutritive Benefits of Plantain (*Musa paradisaica*) Grown with Sludge Obtained from Wastewater Treatment Plant within Port-Harcourt Environment" was written by Emmanuel I Amadi. His co-authors have described the nutritional benefits of Plantain (a group of banana varieties that staple foods in many tropical areas). Plantain belongs to the Musaceae family and is considered one of the most significant staple food crops farmed in Central and West Africa. In both rural and urban regions, plantain helps in food security and employment. It is an important and reliable food source in equatorial Africa is based on the fact that it yields fruits all year.

Plantain yield in Nigeria is declining due to soil nutrient depletion, which prevents plants from absorbing nutrients. According to statistics, Nigeria is the fifth-largest producer of plantain. Water accounts for 60% of the plantain, followed by carbohydrate (27%-31%), protein (2%-3%), fat (1%), and other crucial elements. Plantain is one of the most important sources of energy, and it needs to be consumed for a sodium-reduced diet.

The findings of this study revealed that crops are grown with sludge obtained from Port-Harcourt wastewater treatment. They are used as a natural fertilizer that has better nutritional benefits, such as an increase in protein and iron content, than their controls, and can thus be recommended as a diet to combat protein deficiency. The purpose of this study was to look at the potential nutritional advantages of plantain grown with natural organic fertilizer (sludge), which can be used to replace the expensive artificial inorganic fertilizer with little expense and side effects.

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