

**LEMBAR**  
**HASIL PENILAIAN SEJAWAT SEBIDANG ATAU PEER REVIEW**  
**KARYA ILMIAH : JURNAL INTERNASIONAL**

Judul Karya Ilmiah/Artikel : Physicochemical Changes And Sensory Quality Of Liquid Smoked Milkfish Nuggets  
 Jumlah Penulis : 7 (tujuh)  
 Status Pengusul : Penulis pertama/ ~~penulis ke-4~~/ penulis korespodensi\*  
 Penulis Karya Ilmiah : **Swastawati F**, Ambariyanto, Cahyono, Wijayanti I, Chilmawati D, Hadiyanto and AN Al-Baarri  
 Identitas Karya Ilmiah  
 a. Nama prosiding : African Journal Of Food, Agriculture, Nutrition and Development  
 b. No.ISSN : 1684 5374  
 c. Vol, No, Bln, Thn : Vol 21:7 (2020)  
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 e. DOI Artikel (Jika ada) : <https://doi.org/10.18697/ajfand.102.19440>  
 URL : <https://ajfand.net/Volume21/No7/Swastawati19440.pdf>  
 f. Alamat Web Jurnal : <https://ajfand.net/#gsc.tab=0>  
 g. Terindeks di : Scopus, Q3, SJR : 0.22 ; H Index : 11  
 Kategori Publikasi Jurnal Ilmiah (beri ✓ pada kategori yang tepat) :  Jurnal Ilmiah Internasional bereputasi  
 Jurnal Ilmiah Nasional Terakreditasi  
 Jurnal Ilmiah Nasional Tidak Terakreditasi

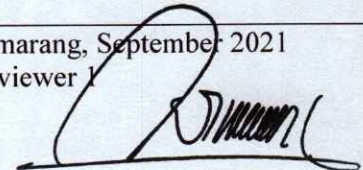
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Semarang, September 2021  
 Reviewer 1



Prof. Ir. Tri Winarni Agustini, M.Sc., Ph.D.  
 NIP. 196508211990012001

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URL : <https://ajfand.net/Volume21/No7/Swastawati19440.pdf>

f. Alamat Web Jurnal : <https://ajfand.net/#gsc.tab=0>

g. Terindeks di : Scopus, Q3, SJR : 0.22 ; H Index : 11

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(beri ✓ pada kategori yang tepat)  Jurnal Ilmiah Nasional Terakreditasi  
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Semarang, ..... September 2021  
Reviewer B

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## Volume 21 No. 7 (2021)

**Commentary:** Very simply, what do we mean by Food Systems? - *Ruth Oniang'o*

**Editor's Note:** Indigenous People's Contribution to Food Systems Transformation - *Mary Njeri Karanu*

### Peer Reviewed Articles

- [1] Contamination and health risk assessment of instant noodles by heavy metals from commercial outlets in Windhoek, Namibia.  
[Kakoma FIS and Omotayo Awofolu](https://doi.org/10.18697/ajfand.102.19700) <https://doi.org/10.18697/ajfand.102.19700>  
[Namibia]
- [2] Physicochemical changes and sensory quality of liquid smoked milkfish nuggets.  
[Fronthea Swastawati et al.](https://doi.org/10.18697/ajfand.102.19440) <https://doi.org/10.18697/ajfand.102.19440>  
[Indonesia]
- [3] Women development in agriculture as agency for fostering innovative agricultural financing in Nigeria .  
[Monica Ewomazino Akokuwebe et al.](https://doi.org/10.18697/ajfand.102.19345) <https://doi.org/10.18697/ajfand.102.19345>  
[South Africa]
- [4] Assessment of the production and importance of cowpea [*Vigna unguiculata* (L.) walp]: Cases from selected districts of southern Ethiopia.  
[Ayalew Tewodros et al.](https://doi.org/10.18697/ajfand.102.19630) <https://doi.org/10.18697/ajfand.102.19630>  
[Ethiopia]
- [5] Determinants of smallholder farmers' participation in microfinance markets in Huye district, southern province, Rwanda.  
[Mutamuliza Eularie et al.](https://doi.org/10.18697/ajfand.102.19445) <https://doi.org/10.18697/ajfand.102.19445>  
[Rwanda]
- [6] Patterns of rice production and yields in south eastern Nigeria.  
[Chinedu Lilian Mba et al.](https://doi.org/10.18697/ajfand.102.20105) <https://doi.org/10.18697/ajfand.102.20105>  
[Nigeria]
- [7] Effect of coconut (*Cocos nucifera*) flakes substitution on some quality parameters of wheat bread.  
[Aminat Olabisi Adelekan and TA Alamu](https://doi.org/10.18697/ajfand.102.20170) <https://doi.org/10.18697/ajfand.102.20170>  
[Nigeria]
- [8] Evaluation of a seed storage facility in relation to preserving seed moisture, vigour and germination.  
[Siphso Sibanda et al.](https://doi.org/10.18697/ajfand.102.20140) <https://doi.org/10.18697/ajfand.102.20140>  
[South Africa]
- [9] Nutritional status of children under age five in Benue State, Nigeria.  
[Eunice Nguungwan Seer-Uke et al.](https://doi.org/10.18697/ajfand.102.20380) <https://doi.org/10.18697/ajfand.102.20380>  
[Nigeria]
- [10] Effects of fresh shoot biomass of siam weed *Chromolaena odorata* (L.) King and H. Robinson on the germination and growth of okra *Abelmoschus esculentus* (L.) moench.  
[Tolulope Ajewole et al.](https://doi.org/10.18697/ajfand.102.19695) <https://doi.org/10.18697/ajfand.102.19695>  
[Nigeria]

**CONTAMINATION AND HEALTH RISK ASSESSMENT OF INSTANT NOODLES  
BY HEAVY METALS FROM COMMERCIAL OUTLETS IN WINDHOEK, NAMIBIA**

**Kakoma FIS<sup>1</sup> and OR Awofolu<sup>1\*</sup>**



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## ABSTRACT

With growing international trade, food safety has emerged as an important global human health issue. One of the pathways by which extraneous contaminants such as toxic heavy metals access the human system is through food ingestion. At above permissible levels, these metals pose serious danger to human health. Cultivated farm produce on contaminated soil has the propensity to uptake and accumulate such contaminants. In this study, the prevalence and possible human health risks of toxic heavy metals such as Zinc, Cadmium, Copper, Lead, and Arsenic (Zn, Cd, Cu, Pb and As) in selected Instant Noodle Brands (INBs) from commercial outlets in Windhoek, Namibia was carried out. Different brands of instant noodle samples were purchased from four different commercial outlets for four periods with one-month interval. A total of 48 samples were collected and analysed for the level of heavy metals using mineral acid digestion method. Quantification of analysed metals in digested samples was done using Inductive Coupled Plasma -Optical Emission Spectrometer (ICP-OES). The mean concentration of heavy metals in the digested instant noodle samples across the sampling periods ranged from 13.1 – 17.9 mg/kg with overall mean concentration of 14.6mg/kg; 0.05 – 0.5mg/kg with overall mean level of 0.15 mg/kg; 1.5 – 2.4 mg/kg with overall mean concentration of 1.9 mg/kg; ND – 1.3 mg/kg with overall mean level of 0.4 mg/kg and 2.3 – 3.8 mg/kg with overall mean concentration of 1.4 mg/kg for Zn, Cd, Cu, Pb and As, respectively. A strong correlation ( $r = 0.99$ ) was obtained between Zn and Cd levels but average correlation ( $r = 0.56$ ) between Cd and Cu as well as between Cu and As ( $r = 0.55$ ). Target Hazard Quotient (THQ) values greater than 1 (one) was obtained for Pb (1.7) and As (7.3). In addition, Carcinogenic Risk Index (CRI) values of 0.71 and 0.02 were also obtained for Pb and As, respectively. Of great concerns are the potential development of non-carcinogenic health effects and carcinogenic health risks with respect to these two toxic metals. Both metals are of no physiological benefits to the human system and very toxic at low levels. Hence, proper quality assurance protocol and monitoring of the level of toxic heavy metals in instant noodles products is recommended.

**Key words:** Noodles, Heavy metals, Health Risk, Toxicity, Food Safety, Contaminants, Food, Namibia



**WOMEN DEVELOPMENT IN AGRICULTURE AS AGENCY FOR  
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## ABSTRACT

The significant contribution of women in agricultural development cannot be over-emphasised. Women farmers are commonly side-lined and their efforts under-valued in conventional agricultural and economic evaluations despite the substantial impact they have made in the sector. Globally, women's contributions to the agricultural sector have been appraised as the world's major producers and organisers of food crops where half of the world's foods have been grown by them. In Africa, Nigeria included, women dominate and play major roles in producing subsistence crops and livestock. Their contribution to agriculture is estimated to be 65% in Nigeria. However, their contributions are undermined largely because women are often economically marginalised. Though women are food producers for most of the households in rural areas, their marginalisation has been historical. Factors hindering women from accessing agricultural financing include patriarchy, an unfavourable land tenure system that deprives women of access to collateral security in accessing bank loans and the vagueness of women's limited self-agency. Anchored in patriarchal and liberal feminism theories, this study examines how Nigerian women are marginalised in selected spheres of agrarian livelihoods in the south-eastern parts of Nigeria. South-East Nigerian women farmers participate fully in all key stages of farming activities such as production, processing and marketing of food crops. The Igbo men cultivate mainly cash crops. Similarly, in the Northern parts of Nigeria, women are only allowed to participate in certain stages of cash crop growing but they are fully allowed to engage in subsistence farming as they are relegated to home front activities. Patriarchy limits women's access and control over land resources in all forms. Patriarchal and liberal feminism denoted that the actions and ideas of male farmers dominant over those of women has prevented female farmers the autonomy and freedom to become rational beings. This paper recommends mainstreaming of gender in the design, implementation and monitoring of agricultural policies and programmes for inclusive financing for food security and sustainable development.

**Key words:** Agriculture, development, innovative financing, gender, livelihood, marginalised, Nigeria, patriarchy, women, tradition

