Designation: Senior Research Scientist

Email: / markosaakrong@csirwater.com / markosaakrong@gmail.com

Tel: +233 243708812

Googlescholar link: https://scholar.google.com/citations?user=S_ZDelEAAAAJ&hl=en

Degrees

BSc, MPhil (University of Ghana, Kwame Nkrumah University of Science and Technology)

Affiliation: Research Staff Association, Ghana Science Association

Profile

Mark Osa Akrong is a Senior Research Scientist with the Environmental Biology and Health Division (Microbiology Section) of the Council for Scientific and Industrial Research - Water Research Institute (CSIR-WRI). He is a microbiologist with ten years of experience. He obtained his Bachelor's degree in Biological Science at the Kwame Nkrumah University of Science and Technology in 2003, MPhil degree in Environmental Science at University of Ghana in 2009 and currently working on marine algae, hydrocolloid extraction and bacterial diversity on marine algae for his PHD under the Project "Sea Biorefinery Research project (SeaBioGha)" at the Kwame Nkrumah University of Science and Technology. He also worked as a Research Assistant at the International Water Management Institute. His area of research and development include: environmental microbiology, assessment and monitoring of water quality from different water resources: drinking water, boreholes, wastewater, freshwater and marine environment as well as packaged water. He has supervised undergraduate students, trained professionals and supervised many students on internship as well as national service personnel in the microbiology laboratory. He has more than 10 peer- reviewed articles in international journals.

Research Interest

Sanitation, Environmental microbiology, Marine ecology and, Urban agriculture

The research activities comprise of field work and laboratory analysis. Research and development activities carried out involve water quality monitoring of surface and ground waters, wastewater, irrigation water, marine waters, etc; Water quality monitoring of major mining companies in Ghana, rivers, dams, lakes, municipal water supply. Microbiological quality of bottled water stored under different temperature conditions; Isolation and Small-scale production of Bacillus Sphaericus as Biological Control on Mosquito Larvae.

Current Project

1. Sanitation and health status of low-income community in Accra (Funded by GCRF)
2. Bacteria diversity in marine waters and seaweeds of economic importance, Seasonal variation of seaweed biomass and hydrocolloid yield in Ghana (Under Sea Biorefinery Research project).

Publications:

1. Addico, G., Amu-Mensah F.K., Akrong, M.O., Amu-Mensah, M.A and Darko, H. (2018). Phytoplankton species diversity and biomass and its impact on the sustainable management of Lake Bosomtwe in the Ashanti Region of Ghana. African Journal of Environmental Science and Technology. Vol. 12(10), pp. 377-383. DOI: 10.5897/AJEST2017.2458
2. Amu-Mensah, M.A., Amu-Mensah F.K., Akrong, M.O., Darko, H. and Addico, G. (2017). Significance of Lake Bosomtwe as a freshwater resource in Ghana; communities' perception. International Journal of Development and Sustainability. Vol. 6 No.10 Pp 1305-1318. ISSN:2186-8662-www.isdsnet.com/ijds
3. Sedzro, M.D., Banu, R.A and Akrong, M.O (2017). Evidence based review of Legionella elimination in building water systems. International Journal of Water Resources and Environmental Engineering, 9(1), 22-32. Doi:105897/IJWREE2015.0615
4. Tekpor, M., Akrong, M.O., Asmah, M.H, Banu, R.A and Ansa, E.D.O. (2016). Bacteriological quality of drinking water in the Atebubu-Amantin District of the Brong-Ahafo Region of Ghana. Springer link: Appl Water Sci. doi:10.1007/s13201-016-0457-5. Pp 1-6.

5. Ansa, E.D.O., Andoh, A.H., Njenu, P., Banu, R., Akrong, M.O. Achampong, M.A. and Adiyiah, J. (2015). Sunlight Inactivation of Faecal Coliforms in Domestic Wastewater. Desalination and Water Treatment. Doi:10.1080/19443994.2015.1063010.
6. Akrong, M.O., Ampofo, J.A., Banu, R.A. and Danso, S.K.A. (2015). Assessment of Bacteria and Heavy metals contamination in lettuce at Farm Gate and Market in the Accra Metropolis. British Microbiology Research Journal 5 (7)226-234.
7. Silverman, A.I., Akrong, M.O., Drechsel, P. and Nelson, K.L. (2014). On-farm treatment of wastewater used for vegetable irrigation: bacteria and virus removal in small ponds in Accra, Ghana. Journal of Water Reuse and Desalination 4 (4). Pp 276-286.
8. Silverman, A.I., Akrong, M.O., Amoah, P., Drechsel, P. and Nelson, K.L. (2013). Quatification of Human Norovirus GII, Human Adenovirus, and Faecal Indicator Organisms in Wastewater Used for Irrigation in Accra. Journal of Water and Health. 11 (3). Pp 473-488.

9. Duwiejuah, A. B., Cobbina, S.J. and Akrong, M.O. (2013). Effect of Storage on the Quality of Sachet-Vended Water in the Tamale Metropolis, Ghana. Journal of Environmental Protection, (4) DOI:10.4236/jep/2013.46073. Pp 629-637.
10. Cobbina, S.J., Kotochi, M.C., Korese, J.K. and Akrong, M.O. (2013). Microbial Contamination in Vegetables at the Farm Gate Due to Irrigation with Wastewater in the Tamale

Metropolis of Northern Ghana. Journal of Environmental Protection, 4. 676-682.

11. Akrong, M.O., Ampofo, J.A. and Danso, S.K.A. (2012). The Quality and Health Implications of Urban Irrigation Water Used for Vegetable Production in the Accra Metropolis. Journal of Environmental Protection, 2012, 3. 1509-1518.

12. Akrong, M.O., Cobbina, S.J. and Ampofo, J.A. (2012). Assessment of Heavy Metals in Lettuce Grown in Soils Irrigated with Different Water Sources in the Accra Metropolis. Journal of Environmental and Earth Science 4 (5): 576-582