

**A REVIEW ON THE EFFECTS OF POLLUTION ON THE PHYSIOCHEMICAL  
PROPERTIES OF DOMESTIC WATER**

**BY**

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## **Declaration**

I Ekwaro Jeremiah Ikemer declare that this research review paper is my original work and has not been submitted elsewhere for examination, award of a degree or publication. Where other peoples' work or my own has been used, this has been properly acknowledged and referenced in accordance with the Busitema University requirements.

Signature.....

Date.....

### **Approval**

This undergraduate research report has been submitted for examination with my supervisor's approval.

Signature.....

Date.....

MR. MUSAGALA PETER

## **Dedication**

I Ekwaro Jeremiah Ikemer dedicate this piece of work to my beloved father, Mr. Ikemer Samson, my mother Khianja Jesica and my siblings Emoot Erasmus, Epalat Stephen and Atyang Getrude who have done great work to ensure that I reach this far. Their love, care and support cannot be measured may the almighty God bless them abundantly.

I also want to dedicate it to Okiror Moris, Opige Hudson, Joole Andrew, Namaasa Bright who have always been together with me in the struggle; I wish you the best in your struggles always.

Finally, I would like to dedicate this piece of work to all my friends, relatives who have supported me spiritually, morally, financially and encourage me through this program.

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## Abstract

People on globe are under tremendous threat due to undesired changes in the physical, chemical and biological characteristics of water. Due to increased human population, industrialization, use of fertilizers and man-made activity water is highly polluted with different harmful contaminants. Natural water contaminates due to weathering of rocks and leaching of soils, mining processing and agro-chemical run off. It is necessary that the quality of drinking water should be checked at regular time interval, because due to use of contaminated drinking water, human population suffers from various water borne diseases. The availability of good quality water is an indispensable feature for preventing diseases and improving quality of life. It is necessary to know details about different physiochemical parameters such as color, temperature, acidity, hardness, pH, sulphate, chloride, DO, BOD, COD, alkalinity used for testing of water quality. Heavy metals such as Pb, Cr, Fe, Hg etc. are of special concern because they produce water or chronic poisoning in aquatic animals. Some water analysis reports with physic-chemical parameters have been given for the exploring parameter study. Guidelines of different physic-chemical parameters also have been given for comparing the value of real water sample.

## 1.0 Introduction

Water occupies about 71% of the earth's surface though it is one of the scarcest commodities especially in the developing countries of the world (Adakole, J.A., and Oladimeji, A.O., 2006). The most demanded of all urban and rural amenities and indispensable for man's activities is safe water free from contamination (Ali, 2012). Water is abundant on the planet Earth as a whole, but fresh potable water is not always available at the right time or in the right place for human or ecosystem use and water is undoubtedly the most precious natural resource vital to life (Adakole, J.A., and Oladimeji, A.O, 2006). Water is distributed in nature as surface and ground water in different forms and sources which are oceans, seas, rivers, streams, lakes, ponds, wells, boreholes and springs. (J Bhatnagar, A., and Singh, S. , 2010). Most urban-rural communities in the developing countries use water from rivers, streams, and lakes as sources of water used for domestic purposes (Kanchan Varsha and Kanchan M.C., Microbial , 2000). The water from these sources is contaminated with domestic, agricultural, and industrial wastes and is likely to cause water related diseases (Aghoghovwia, O. A., and Ohimain, E. I. , 2014). Water is a resource that has many uses, including recreation, transportation, hydroelectric power and domestic, industrial and commercial uses, water also supports all forms of life and affects our health, lifestyle, and economic well- being. (Tajuddin, 2012). Water is not only an essential element for survival of life but also an important vehicle for economic development of the nation (Iyama, W.A., and Echri, O.S, 2014). Though water is a renewable resource the volume of usable water is limited in the nature, it is therefore essential to maintain the sustainability of water by adopting proper management technique in its utilization (Panjiar, 2010). The change in the impurities and microorganisms' levels leads to water pollution, besides the national regulations World Health Organization (WHO) guidelines are used for assessing water quality. (A. Akpan-Idio, A. Ibrahim and I. Udo., 2012). Water being one of the basic needs of humans, its safety must be critically monitored through effectively and properly



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