

# MINISTRY OF PUBLIC HEALTH AND SANITATION

Telephone: +254-20-2725806/7  
and +254-20-2725873/4 (four lines)  
Fax: +254-20-2717567  
E-mail: gchemist@wananchi.com  
govchem@health.go.ke  
When replying please quote



GOVERNMENT CHEMIST'S DIVISION  
P.O. Box 20753-00202, KNH  
NAIROBI

Ref. No. .... P/WAT/VOL. 11/11/12/(16)  
and date

...14<sup>th</sup> December 2011.....XX.....

## REPORT ON CHEMICAL ANALYSIS OF WATER

Laboratory sample No. W 196/11/12

Date Received: 28/11/2011

Sender: Okumu Oscar  
P. O. Box 1285-00100 Nairobi.

Date sample taken:

Source: Treated River Sio Water

### PHYSICAL TESTS

Colour: - (Hazen Units)

Turbid: Clear

(J.T.U.'s)

Deposit: None

Odour: None

(T.O.N)

Taste

pH: 7.3

Electrical Conductivity at 25 °C (microsiemens/cm)

161.3 us

### CHEMICAL TESTS

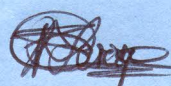
|                                       | Results mg/l(ppm) | Max guideline value mg/l(ppm) |
|---------------------------------------|-------------------|-------------------------------|
| Total Alkalinity as CaCO <sub>3</sub> | 100.0             | 500.0                         |
| Phenolphthalein (CO <sub>3</sub> ) =  | Nil               | -                             |
| Methyl Orange (HCO <sub>3</sub> )-    | 100.0             | -                             |
| Chloride (Cl)-                        | 5.0               | 250.0                         |
| Sulphate(SO <sub>4</sub> )=           | 2.0               | 250.0                         |
| Nitrate (NO <sub>3</sub> )-           | -                 | -                             |
| Nitrite (NO <sub>2</sub> )-           | Not detected      | 3.0                           |
| Fluoride (F)-                         | 0.2               | 1.5                           |
| Total Anions                          |                   |                               |
| Sodium (Na)+                          | 11.9              | 200.0                         |
| Potassium (K)+                        | 1.7               | -                             |
| Calcium (Ca)++                        | 20.0              | -                             |
| Magnesium (Mg)++                      | 16.8              | -                             |
| Iron (Total) (Fe)+++                  | Not detected      | 0.3                           |
| Manganese (Mn)++                      | 0.04              | 0.5                           |
| Ammonia-Free & Saline (N)             |                   |                               |
| Ammonia-Albuminoid (N)                |                   |                               |
| Total Cations                         |                   |                               |



|                                                | Results mg/l(ppm) | Max guideline<br>value mg/l(ppm) |
|------------------------------------------------|-------------------|----------------------------------|
| Carbonate Hardness as (CaCO <sub>3</sub> )     | 100.0             | -                                |
| Non-Carbonate hardness as (CaCO <sub>3</sub> ) | 20.0              | -                                |
| Total Hardness as (CaCO <sub>3</sub> )         | 120.0             | 500.0                            |
| Free Carbon Dioxide                            |                   |                                  |
| Silica (SiO <sub>2</sub> )                     | 20.0              | -                                |
| Oxygen absorbed. 4 hr. at 27°C(P.V.)           | Not detected      | 1.0                              |
| Total Dissolved Solids, residue dried at 180°C | 112.5             | 1000.0                           |
| <b>Optional Parameters (done on request)</b>   |                   |                                  |
| Lead (Pb <sup>2+</sup> )                       |                   |                                  |
| Copper (Cu <sup>2+</sup> )                     |                   |                                  |
| Zinc (Zn <sup>2+</sup> )                       |                   |                                  |
| Dissolved oxygen                               |                   |                                  |

# REMARKS:

Slightly alkaline and moderately hard water that is moderately mineralized. On the basis of chemical test done the water is fit for human consumption.



S. G. NJOROGÉ

Date .. 14<sup>th</sup> December 2011

SGN/lar

For: Government Chemist