|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Sample sites | | Turbidity (NTU) | Total Chlorine (mg/l ) | pH (units) | COD (mg/l) | BOD (mg/l) | TOTAL Fe (mg/l) |
| Tap water samples | La Penitence | 18 | 0.08 | 7.363 | 4.49 | 10.7 | 0.246 |
| Albouystown | 18.1 | 0.04 | 7.469 | 11.21 | 26.7 | 0.614 |
| Kitty | 16.4 | 0.04 | 7.361 | 1.73 | 4.1 | 0.094 |
| Sophia | 15.7 | 0.03 | 7.000 | 4.28 | 10.2 | 0.235 |
| Wortmanville | 14.6 | 0.06 | 7.534 | 1.9 | 4.5 | 0.104 |
|  |  |  |  |  |  |  |  |
| Guyana water Inc. samples | Raw water | 36.5 | 0.02 | 5.874 | 1.64 | 3.9 | 0.09 |
| Treated water | 41.2 | 0.26 | 5.241 | 5.08 | 12.1 | 0.278 |
| Clarified water | 8.55 | 0.04 | 7.584 | 1.4 | 3.3 | 0.076 |
| Flume water | 12.4 | 0.04 | 6.776 | 3.61 | 8.6 | 0.198 |
| Distribution water | 25.6 | 0.01 | 7.552 | 2.1 | 5.2 | 0.12 |
| Central Ruimveldt Well | 24.1 | 0.03 | 7.227 | 1.43 | 3.4 | 0.078 |
| Sophia Well | 17.6 | 0.02 | 6.921 | 7.52 | 17.9 | 0.412 |

Table 1: Physiochemical analysis of residential tap water and Guyana water Inc. samples collected from different sites.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Parameters | Microbes | Tubidity | Total Cl | pH | COD | BOD | Total Fe |
| Microbes | 1 |  |  |  |  |  |  |
| Tubidity | 0.151 | 1 |  |  |  |  |  |
| Total Chlorine | -0.258 | 0.547 | 1 |  |  |  |  |
| pH | 0.204 | -0.803 | -0.659 | 1 |  |  |  |
| COD | -0.103 | -0.026 | 0.135 | -0.041 | 1 |  |  |
| BOD | -0.097 | -0.024 | 0.134 | -0.039 | 1.000 | 1 |  |
| Total Fe | -0.097 | -0.024 | 0.133 | -0.039 | 1.000 | 1.000 | 1 |

Table 2: Correlation between microbial and different physiochemical parameters.

|  |  |  |  |
| --- | --- | --- | --- |
| Organism | Biofilm sample | Water sample | Total |
| *Lactobacillus sp.* | 370 | 440 | 25.2 |
| *Acintobacter sp.* | 765 | 25 | 24.6 |
| *Staphylococcus sp.*(CNS) | 300 | 25 | 10.1 |
| *Bacillus sp.* | 240 | 70 | 9.6 |
| *Chromobacterium sp.* | 220 | 20 | 7.5 |
| *Providencia sp.* | 185 | 50 | 7.3 |
| *Streptococcus sp.* | 200 | 25 | 7.0 |
| *Micrococcus sp.* | 105 | 10 | 3.6 |
| *Micrococcus sp.* | 45 | 35 | 2.5 |
| *Flavobacterium sp.* | 50 | 5 | 1.7 |
| *Flavobacterium sp.* | 15 | 0 | 0.5 |
| *Pseudomonas sp.* | 0 | 10 | 0.3 |
| *Salmonella sp.* | 0 | 5 | 0.2 |
| *Pasteurella sp.* | 5 | 0 | 0.2 |
| *Aeromonas sp.* | 0 | 0 | 0.0 |

Table 3: Analysis of total microbe isolated from biofilm sample and water samples

Fig 1: Total number of microbes isolated from biofilm and water samples of residential sites and GWI sites.