

**RESULTS OF THE WATER QUALITY PARAMETERS OF THE INSTITUTE
(SAMPLING DATE - 20/09/2023)**

TABLE 1- PUMPS

| Parameters | Permissible Limit | Maximum Limit | P3 | P7 | P8 | P11 | P12 | P13 | P14 | P15 | P16 |
|--|--------------------------|----------------------|-----------|-----------|-----------|------------|------------|------------|------------|------------|------------|
| pH | 6.5 to 8.5 | No relaxation | 8.32 | 8.19 | 8.07 | 8.21 | 7.85 | 7.98 | 8.22 | 7.95 | 8.35 |
| TDS (mg/l) | 500 | 2000 | 461 | 607 | 771 | 662 | 414 | 552 | 674 | 715 | 419 |
| Hardness (as CaCO ₃) (mg/l) | 200 | 600 | 100 | 120 | 170 | 130 | 100 | 110 | 140 | 150 | 90 |
| Alkalinity(as CaCO ₃) (mg/l) | 200 | 600 | 300 | 270 | 320 | 250 | 290 | 260 | 270 | 300 | 240 |
| Nitrate (mg/l) | 45 | No relaxation | 0.06 | 0.11 | 0.08 | 0.06 | 0.07 | 0.09 | 0.06 | 0.08 | 0.07 |
| Sulfate (mg/l) | 200 | 400 | 33.57 | 39.64 | 49.94 | 34.15 | 37.05 | 48.73 | 45.63 | 33.61 | 44.21 |
| Fluoride (mg/l) | 1 | 1.5 | 0.753 | 0.536 | 0.576 | 0.592 | 0.814 | 0.805 | 0.588 | 0.690 | 0.823 |
| Chloride (mg/l) | 250 | 1000 | 130 | 250 | 305 | 285 | 105 | 185 | 275 | 315 | 100 |
| Turbidity (NTU) | 5 | 10 | 0.001 | 0.001 | 0.002 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 |
| Arsenic (mg/l) | 0.01 | 0.05 | 0.0023 | 0.0022 | 0.0021 | 0.0019 | 0.0031 | 0.0020 | 0.0022 | 0.0024 | 0.0029 |
| Copper (mg/l) | 0.05 | 1.5 | 0.0014 | 0.0011 | 0.0018 | 0.0013 | 0.0017 | 0.0013 | 0.0019 | 0.0012 | 0.0018 |
| Cadmium (mg/l) | 0.003 | No relaxation | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| Chromium (mg/l) | 0.05 | No relaxation | 0.0005 | 0.0007 | 0.0013 | 0.0014 | 0.0006 | 0.0005 | 0.0014 | 0.0010 | 0.0008 |
| Lead (mg/l) | 0.01 | No relaxation | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| Iron (mg/l) | 0.3 | No relaxation | 0.11 | 0.20 | 0.12 | 0.18 | 0.13 | 0.16 | 0.10 | 0.12 | 0.17 |
| Zinc (mg/l) | 5 | 15 | 0.0016 | 0.0027 | 0.0052 | 0.0024 | 0.0016 | 0.0017 | 0.0016 | 0.0013 | 0.0018 |
| Fecal Coliform (cfu) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| E. Coli (cfu) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Sampling Locations:

**P3 - Behind Helicopter building,
P7 - Near water tank and main entrance of VH-Extension, type-1,
P8 - Near Health Centre,
P11 - Hall 10 back side,
P12 - Near about 150 M of P-2 (end of lane-36),
P13 - Near Visiting Faculty Apartment,
P14 - Near Hall 12,
P15 - Behind New Sac,
P16 - Near duplex type-3**

BDL Below Detection Limit; NTU – Nephelometric Turbidity Unit; cfu- Colony forming Units in 100 ml of the sample.

Detection Limits Pb 0.0001 mg/l, Cu 0.0001 mg/l, Cr 0.0005 mg/l, Fe 0.0001 mg/l, Cd 0.0004 mg/l, As 0.0001 mg/l, Zn 0.0005 mg/l.

TABLE 3 - VARIOUS RESIDENTIAL LOCATIONS

| Parameters | T1 (169) | T2 (223) | T3D (317) | T3F (365) | T4 (435) | T5 (503) | T6 (616) | Multistory Building-A (203) | Multistory Building-B (403) | Multistory Building-C (503) | Multistory Building-D (101) |
|--|---------------------|---------------------|----------------------|----------------------|---------------------|---------------------|---------------------|--|--|--|--|
| pH | 8.35 | 8.41 | 8.29 | 8.32 | 8.28 | 8.38 | 8.42 | 8.24 | 8.28 | 8.35 | 8.42 |
| TDS (mg/l) | 609 | 425 | 424 | 433 | 566 | 769 | 472 | 761 | 765 | 761 | 779 |
| Hardness (as CaCO ₃) (mg/l) | 120 | 90 | 100 | 90 | 110 | 180 | 120 | 140 | 140 | 150 | 160 |
| Alkalinity(as CaCO ₃) (mg/l) | 260 | 270 | 290 | 300 | 280 | 290 | 310 | 240 | 250 | 260 | 280 |
| Nitrate (mg/l) | 0.12 | 0.09 | 0.20 | 0.12 | 0.21 | 0.14 | 0.25 | 0.08 | 0.09 | 0.08 | 0.09 |
| Sulfate (mg/l) | 33.05 | 28.73 | 25.47 | 33.15 | 34.63 | 43.26 | 23.57 | 49.95 | 43.78 | 45.68 | 40.01 |
| Fluoride (mg/l) | 0.601 | 0.792 | 0.821 | 0.894 | 0.564 | 0.653 | 0.747 | 0.518 | 0.520 | 0.535 | 0.541 |
| Chloride (mg/l) | 255 | 105 | 100 | 115 | 185 | 300 | 130 | 295 | 300 | 305 | 305 |
| Turbidity (NTU) | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.002 | 0.001 | 0.001 |
| Arsenic (mg/l) | 0.0017 | 0.0021 | 0.0019 | 0.0018 | 0.0012 | 0.0010 | 0.0021 | 0.0023 | 0.0022 | 0.0017 | 0.0019 |
| Copper (mg/l) | 0.0005 | 0.0002 | 0.0006 | 0.0005 | 0.0004 | 0.0005 | 0.0003 | 0.0006 | 0.0005 | 0.0006 | 0.0007 |
| Cadmium (mg/l) | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| Chromium (mg/l) | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| Lead (mg/l) | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| Iron (mg/l) | 0.1299 | 0.1036 | 0.1156 | 0.0977 | 0.1082 | 0.1267 | 0.1169 | 0.1349 | 0.1417 | 0.1429 | 0.1339 |
| Zinc (mg/l) | 0.0052 | 0.0375 | 0.0945 | 0.0561 | 0.0042 | 0.0987 | 0.0927 | 0.0271 | 0.0235 | 0.0296 | 0.0794 |
| Fecal Coliform (cfu) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| E. Coli (cfu) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

*Sampling locations: H1 to RA2 various hostels;
 VH- Visitors Hostel;
 HC- Health Centre;
 T1 to T6 Residences with corresponding House Numbers.
 Multistory Building A to D- New faculty buildings with corresponding House Numbers.*

*BDL Below Detection Limit; NTU - Nephelometric Turbidity Unit; cfu- Colony forming Units in 100 ml of the sample.
 Detection Limits: Pb 0.0001 mg/l, Cu 0.0001 mg/l, Cr 0.0005 mg/l, Fe 0.0001 mg/l, Cd 0.0004 mg/l, As 0.0001 mg/l, Zn 0.0005 mg/l.*