## Ground Water Complete Potability Test (GCT)

This test checks for more water quality parameters compared to the ground water potability test and in addition, provides clues for possible sources of contamination, if any. Thus the test not only helps you know if the water consumed by your family and friends is potable but will also help investigate the possible source of contamination if any. If you are testing ground water for the first time then this test is recommended.

### A. Sample Required:

At least one litre of water is collected in Water Collection Bottle - 1000 ml (B01L) or equivalent, delivered at laboratory preferably within 6 hrs, but not later than 24 hrs from time of collection. Keep away from sunlight. Avoid exposure to excessive heat. Keep in refrigerator, if delayed delivery is anticipated.

### B. Test Duration:

If sample is found satisfactory, then report will be available after 48 hours. If sample is found to have bacteria then further test will be made to look for indication of fecal contamination, isolate specific organisms. This test will take another 48 hours. So report will be available after 96 hours.

### C. Report Details:

1. Most probable number of organisms (MPN) present per 100 ml of water. This is an indicator of bacterial contamination.
2. Tests to investigate possible source of bacterial contamination. These tests will be done only if the MPN value is found unsatisfactory.
   i. Confirmatory test for E.Coli which indicates fecal contamination.
   ii. Isolation of specific bacteria such as Salmonella, Fecal Streptococci.
3. Physical indicators of contamination: pH, Color, Turbidity, and Conductivity.
4. Chemical Indicators of Contamination: (a) Ammonia, (b) Nitrites, and (c) Nitrates
5. Mineral Content Estimation. These test will assess whether the level of naturally dissolved minerals are within permissible limits.
   i. Fluoride content. This indicates risk of fluorosis.
   ii. Calcium, Magnesium, Sulfates, and Chlorides.
6. Indicators of Industrial Pollution: Alkalinity Test.
7. Quality of Treatment Assessment.
8. Interpretation, based on test results and sample collection record.