

Ground Water Bacteriological Contamination Test (GBT)

If borewell is near to sewerage, septic tank, place of open defecation then there is a possibility of fecal contamination. Usually the chemical characteristics of a source does not change so much. Hence, there is no need to repeat the chemical characteristics at short intervals. The test helps to monitor bacterial contamination due to seasonal changes, and also to assess the quality of treatment.

A. Sample Required: At least 100 ml of sample water is collected in 125 ml (B125) water sample collection bottle 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. Interpretation, based on test results and sample collection record.

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