

**SRI V.S. SIVALINGAM CHETTIAR GOVERNMENT
DEGREE COLLEGE, SULLURUPET-524121
TIRUPATHI, DISTRICT**

DEPARTMENT OF CHEMISTRY

BEST PRACTICE

Title of the Best Practice

Water Analysis

Objective

To Create awareness among the students about the quality of water used in and around Sullurupet . Some characteristics of water are tested for water analysis.

The Context

The analysis program is organised by Department of Chemistry S.V.S.S.C Govt Degree college sullurupet . to create awareness among the students about the nature of water used in and around sullurupet . Department is conducting regularly some properties of water like acidic , basic nature , hardness , content of nitrate ion and content of ammonia of water samples taken from different villages , lakes , rivers and municipal water .

Practice

The analysis is made with different samples of water taken from different areas to conduct the following test . The characteristic of the test reports for the best quality of water are listed as follows .

Ph Test reports

- 1 Ph Range for fresh water is 6.9 to 8.5 for drinking and remaining all purpose like agricultural , animals and aquatic life .
- 2 Water which more alkane i.e. , having Ph 6.9 to 8.5 .reduces acid in the blood stream and improves metabolism , improve digestion and reduces bone loose
- 3 If the blood gets too acidic i.e., less than 5 brings down – less breathing, increases gastric juice and decreases the digestive nature .
- 4 Fishes in the ponds, lake , rivers and in oceans live if the Ph is equal to 7.5 if the Ph is less than 5 acidic nature is increases and marine fish may not survive .

Nitrate Ion

According to Environmental protection agency (EPA) standards for Nitrate Ion in drinking water is 10 mg/l if the nitrate ion is more dissolved oxygen levels (DO) is less the optimum values .

- 1 If the nitrate is more in drinking water it turns skin colour to grey and blue and cause more health effects like weakness excesses heart rate and dizziness .
- 2 If the ponds , lake and river water posses more the optimum level the aquatic animals gets respiratory problems and may lead to death . The other domestic animals also get the same effects .
- 3 If the nitrate ion is reduce the plant growths and the productivities also decreases and the percentage yield of cultivation is decreases .

Ammonia

The Optimum level of ammonia in drinking water must range from .25 to 32.5 mg/l. The drinking water must have standards of .5 ml of ammonia

- 1 .if the ammonia level is more than the optimum value symptoms like irritability ,headache , vomiting occurs in minor cases if the levels are more it may cause coma and even death in some cases.
- 2 If the ponds , lake , river water and ocean posses more than optimum value the aquatic life will be effected more nitrate content .
- 3 The growth of plants also decreases if the ammonia level is more than optimum.

Hardness

The hardness of water is simple test conducted in lab using indicators like methyl orange and phenolphthalein. There are certain common tests used to identify the hardness of water.

1. Some of the effects of hard water cause damage to central nervous system, childhood apoptic disorders produce stones in kidneys.
2. Hardness causes negative effect in the growth of plants in animal life.

The above tests are conducted taking water samples from different places in and around Sullurpet and are analysed using water analysis reagent kit. To conduct this test 5ml of water is taken in test tube and test solution is added to it and the colour obtained is matched with standard values given to identify the purity.



