

FINAL PAPER ON CHARACTERISTIC STUDY OF WATER SAMPLE FOR PUBLIC SCHOOLS/COLLEGES IN YAVATMAL

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ABSTRACT

The purpose of this Water Sample Testing Civil Project is to find out, how the water sample can test. The report starts with introduction and ends with conclusion with experiment report. The report defines the detailed information about water testing with various examples. The report also explains about the quantity of the samples and types of the samples. The Sampling Methods consists of Manual sampling, Automatic sampling and Sorbent sampling, which explain the details of water testing. The physical and chemical properties of drinking water vary from top to bottom of the depth of the earth, and the time from morning to night. It is therefore difficult to obtain a truly representative sample. We need water for different purposes; we need water for drinking, industry, irrigation, swimming, fishing, etc. Water for various purposes requirements for the composition and purity, and each body of water must be tested regularly to confirm the suitability. The types of analysis could change from simple field testing for a single analytic to laboratory based multi component instrumental analysis. The analytical process demands sampling and sample storage since changes in composition of water do not stop once the sampling has been taken. Screening is done to ensure that water reaches the laboratory, the same composition as it has occurred during sampling. The purpose of this project is to better understand environmental impacts of our actions on the local streams and rivers, the scientific studies of water quality and the understanding is to make the significance of the results. Water analysis and monitoring is a very important aspect of water conservation and protection. Water is a vital resource that runs more quickly over time. To ensure continued supply of safe, clean drinking water, we must work together as a community to protect and to this vital resource. Since the industrial revolution in the late eighteenth century, the world has discovered new sources of pollution nearly every day. So, air and water can potentially become polluted everywhere. Little is known about changes in pollution rates. The increase in water-related diseases provides a real assessment of the degree of pollution in the environment. This chapter summarizes water quality parameters from an ecological perspective not only for humans but also for other living things. According to its quality, water can be classified into four types. Those four water quality types are discussed through an extensive review of their important common attributes including physical, chemical, and biological parameters. These water quality parameters are reviewed in terms of definition, sources, impacts, effects, and measuring methods.

Keywords: water quality, physical parameters, chemical parameters, biological parameters, radioactive substances, toxic substances, indicator organisms.

1. INTRODUCTION

Water is one of the most important of all natural resources known on earth. It is important to all living organisms, most ecological systems, human health, food production and economic development. The safety of drinking water is an ongoing concern within the global village. Traditionally, the safety of potable water supplies has been controlled by disinfection, usually by chlorination and coliform population estimates. However, it has been reported that coliform free potable water may not necessarily be free of pathogens. Many congenital diseases such as goiter and cancer have been associated with presence of high concentration of a chemical or its inadequate supply in water. Low concentration of iodine in Homo sapiens results in goiter. Infants have been considered as a potential high-risk group to the toxic effects of sodium from drinking water. Currently, about 20% of the world's population lacks access to safe drinking water, and more than 5 million people die annually from illness associated with safe drinking water or inadequate sanitation. If everyone had safe drinking water and adequate sanitation services, there would be 200million fewer cases of diarrhea and 2.1 million fewer deaths caused by diarrheal illness each year. Biofilms in drinking water distribution system has generated health concerns. Biofilms are coating of organic and inorganic materials in pipes that can harbor, protect and allow the proliferation of several bacterial pathogens, including Legionella and Mycobacterium avium complex (MAC). Factors that affect bacterial growth on biofilms include water temperature,

type of disinfectant and residual concentration, biodegradable organic carbon level, degree of pipe corrosion and treatment/distribution system characteristics. Chloramines are considerably more effective than chlorine for controlling legionella in biofilms distribution system deficiencies linked to a number of waters born disease outbreaks. A number of water quality parameters are measured to determine water quality. These parameters include physical properties like pH, colour, turbidity, suspended solids, temperature, conductivity, odour etc. Chemical properties like COD, BOD, total nitrogen, total phosphorus, total pesticides etc. Biological properties include total coliform bacteria, fecal coliform counts, faecal streptococci count, salmonella counts etc.

2. LIST OF SAMPLE POINTS

Table: Sample Test

SR No	List Of Places	Sources	Depth (In Feet)
1	Jagdambha Collage Of Engineering And Technology Yavatmal	Bore Well	90
2	Babaji Datey Kala & Vanijya Mahavidyalaya, Yavatmal	Bore Well	60
3	Vivekanand Vidyalaya, Yavatmal	Bore Well	140
4	Lok Nayak Bapuji Aney Vidyalaya Yavatmal	Bore Well	110
5	Abhyankar Kanya Shala Yavatmal	Bore Well	105
6	Government Engineering College, Yavatmal	Bore Well	112
7	Shri Vasantao Naik Government Medical College Yavatmal	Open Well	75

3. CONCLUSION

PRIMARY

Natural Water Is Never Completely Pure. Most Of the Earth's Water Sources Get Their Water Supplies Through Precipitation. During Precipitation Water Passes Over (Runoff) And Through the Ground (Infiltration), Acquiring A Wide Variety of Dissolved or Suspended Impurities That Intensely Alters Its Usefulness. Water Is an Essential Ingredient of Animal and Plant Life Crediting to Its Unique Physical, Chemical and Biological Properties. These Characteristics Also Have a Direct Influence on The Types and Distribution of Aquatic Biota. All The Standards for Prescribed Discharge of Wastes into The Water Body Are Designed on The Basis of Water Quality Characteristics. Also, The Improvement of Water Quality and Formation of Policy Measures Revolves Around These Characteristics.

FINAL

The Water We Tested Form Various Schools and Colleges is Initially Suitable for Drinking After a Single Filtration. There Is No Harmful Contains Which Are Harmful to Human Body. Most Of the Sources Is Fine to Drink Water. Physical Parameters Are Okay. Chemical Parameters Are Moderate at Some Stations, But in Major Aspects the Water Is Good for Drinking After Single Filtration. There Is No Serous Issue Regarding the Sources of Water and No Harmful Parameters Are There.

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