



**INVESTIGATIONS OF DIFFERENT PARAMETERS
OF WATER IN VARIOUS VILLAGES IN MIRAJ
TAHSIL, MAHARASHTRA-INDIA**

D. V. Rupnawar

Shikshan Maharshi Dr.Bapuji Salunkhe Mahavidyalaya, Miraj .

Abstract

In present investigation, the physical and chemical parameters of various water samples from Miraj, Tahsil of Maharashtra have been studied. All parameters were within the permissible limits. The results indicate that the water is Non-polluted and can be used for drinking, agriculture domestic purpose.

Keywords: Physical parameters, Chemical parameters, Water.

1. INTRODUCTION

Water is one of the most important compounds in the ecosystem. Better quality of water is described by its physical, and chemical characteristics. Correlation is possible among these parameters and the significant one would be useful to indicate quality of water [1-2]. The natural aquatic resources are causing heavy and varied pollution in aquatic environment leading to water quality and depletion of aquatic biota. The physico-chemical parameters of water and the dependence of all life process of these factors make it desirable to take as a good environment. In present study involves the analysis of water quality in terms of physico-chemical parameters of fresh Well water samples in various villages in MirajTashil.

In the present investigation, physical and chemical parameters are studied for water in different villages of Mirajtahasil. And the investigated the Temperature, Turbidity, Total Dissolved Solids, pH, Dissolved Oxygen, Free Carbon dioxide, alkalinity and Total Hardness, were analyzed in 2011. Also, compared results with WHO standards and with respect to each village.

2. MATERIALS AND METHODS:

The water samples of various villages in MirajTashil were collected from well in the morning hours, in polythene bottle regularly for every month. The water samples were immediately brought into laboratory for the analysis of various physico-chemical parameters like water, temperature and pH were recorded at the time of sample collection, by using thermometer and pocket Digital pH Meter. While other parameters like electrical conductivity, DO, TDS, Free CO₂ and Hardness, were estimated in the Laboratory By using standard Methods as prescribed By APHA, AWWA, Trivedy and Goel.

3. RESULTS AND DISCUSSION

3.1 Physical Parameters

In the physical parameters are important to study for water samples to understand the temperature, Turbidity, TDS and pH of water samples. The water samples are collected in each month as representative at morning 9 a.m. The temperature found to 24 to 25°C in each month. The turbidity count

is also near about same and found to be in the range of 8.5 to 8.7. The total dissolved solid (TDS) is cunt is also found in the range of 0.207 to 0.211. The pH is found to near about neutral and in the range of 7.3 to 7.6. The all data of mentioned in Table. 1. Fig.1 shows the temperature, turbidity and pH variation with respect to months and comparison with each other. Fig. 2 shows the bar diagram of TDS with respect to months.

Table.1 Physical parameters of water samples, Temperature, turbidity, TDS and pH

Months	Temperature 0C	Turbidity (NTU)	TDS ppt	pH
Jun	25	8.7	0.211	7.4
July	25.5	8.6	0.208	7.6
Aug	24	8.5	0.207	7.3

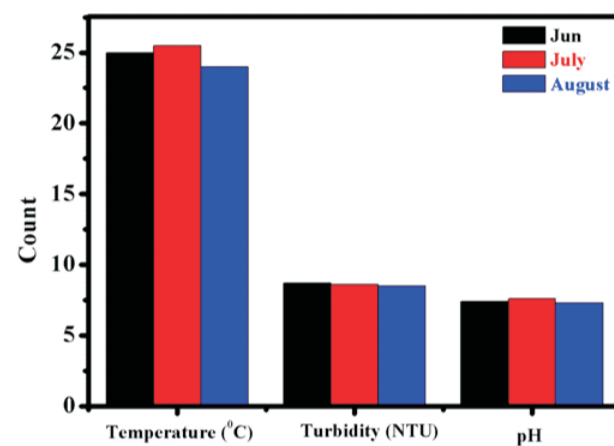


Fig. 1 Ratio of chemical parameters of water samples, Temperature, turbidity, and pH

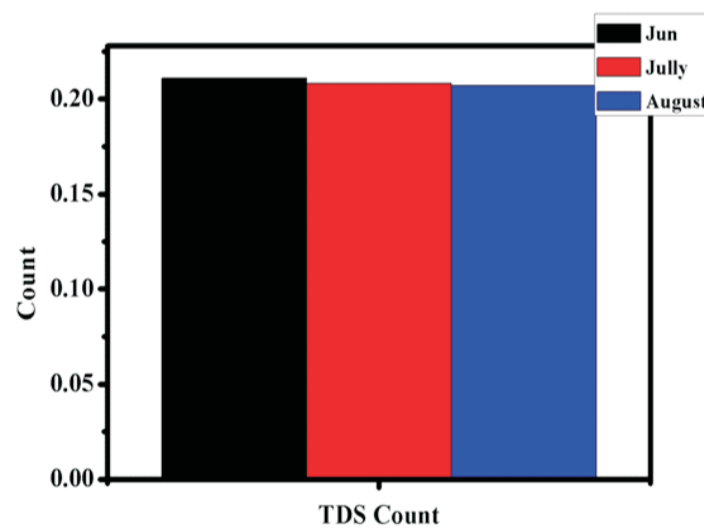


Fig. 2 TDS count in water samples

3.1 Chemical Parameters

The chemical parameters are important to decide the water is drinkable or not. The Table. 2 shows the study of different chemical parameters such as dissolved oxygen, Free CO₂, hardness, chloride and alkalinity. The dissolved percentage of oxygen percentage is 7.1 to 8.6 %. The free CO₂ is in the range of 25 to 35. The hardness of water sample 119 to 130. The chloride is 33 to 45. The alkalinity

is in between 88 to 107.

Table. 2 Different chemical parameters of water samples and value expressed in mg/lit

Months	Dissolved Oxygen	Free CO ₂	Hardness	Chloride	Alkalinity
Jun	7.5	30	130	33	91
July	8.6	35	119	42	88
August	7.1	25	125	45	107

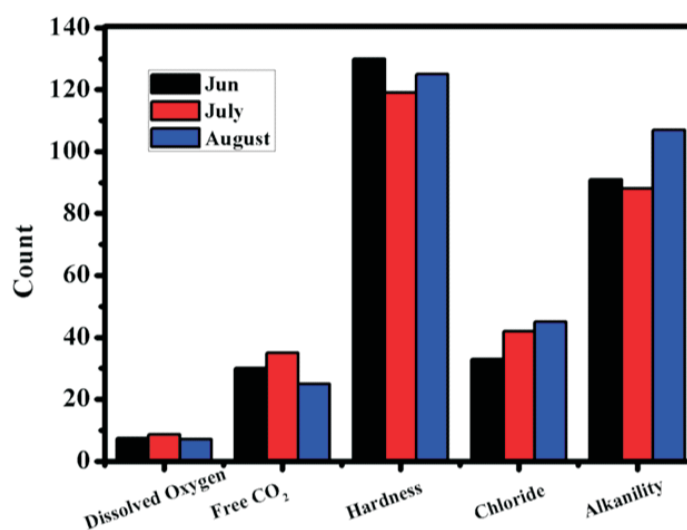


Fig. 3 Chemical parameters of water samples

4. CONCLUSIONS

In conclusion, water analysis is made in Miraj Tehsil. In many villages of MirajTahasilwater sample quality is near about same. The physical and chemical properties investigated in this study are indicate the water quality is good for all samples and water can be drinkable. Also, this water is useful for agriculture, domestic purpose.

5. REFERENCES

- [1]A. Mishra, V. Bhatt “Physico-Chemical And Microbiological Analysis Of Under Ground Water In V.V Nagar And Near By Places Of AnandDistrict,Gujarat, India” Journal Of Chemistry, 5 (3) (2008) 487-492
- [2]P. N. Palanisamy, A. Geetha, M. Sujatha, P. Sivakumar, K. Karunakaran, “Assessment Of Ground Water Quality In And Around Gobichettipalayam Town Erode District, Tamilnadu” E-Journal Of Chemistry, 4 (3) (2007) 434-439
- [3]Sandeep K.Pandey, Shweta Tiwari, “PHYSICO-CHEMICAL ANALYSIS OF GROUND WATER OF SELECTED AREA OF GHAZIPUR CITY-A CASE STUDY” Nature And Science, 7(2009) 1
- [4]Robert “Bob” Masters Drugs On Tap in: Emerging Contaminants. Water & Wastewater International August, 16(4) (2001)11-12
- [5]Postel, S. L. Daily, G.C. And Ehrlich P.R. (1996) Human Appropriation Of Renewable Fresh Water. Science 271:785-788.
- [6]LeenaDeshpande,“Water Quality Analysis Laboratory Methods”, National Environmental Engineering Research Institute (NEERI), Nagpur Council Of Scientific & Industrial Research, New Delhi, Govt. Of India