

# Analysis of Water Sample of Different Areas of Mahagaon

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## Abstract

Water is a limited natural resource. Therefore, preserving water is very important for protection of our environment.<sup>[1]</sup> Various water quality monitoring system have been developed to measure concentration of the constituents in quantity for characterization of water for different uses.<sup>[2]</sup> Water quality can be estimated through quality index which in turn is analysed through various parameter such as pH level, dissolved oxygen, electrical conductivity etc. This paper addresses the impact of parameter on water quality<sup>[3]</sup>. Moreover the paper also depicts how water can be utilized based on various of parameter.

## Keyword:

Parameters, pH-level, TDS, Electrical conductivity (EC), Hardness of water, Alkalinity, Dissolve Oxygen (DO), Carbon dioxide(CO<sub>2</sub>).

## Introduction:

Increase in urbanization industrialization ,agriculture activity and various human activities has increase the pollution of surface water and ground water .As the safe and potable drinking water is needed. Various treatment method are adopted to rise the quality of drinking water . Water should be free from the various contaminated viz. Oraganic and inorganic pollutants ,heavy metals, pesticides, etc. as well as all it's parameter pH level, electrical conductivity ,calcium ,magnesium, TDS ,total hardness, carbonate, bicarbonate, chloride, alkalinity, sodium potassium ,nitrate, DO, should be within a permissible limit.

The five samples collected for the water analysis. Tubewell water is collected from the five different areas of Mahagaon.

Sr.no.	Sample	Place
1	S <sub>1</sub>	Uti , Mahagaon
2	S <sub>2</sub>	Kalgao, Mahagaon
3	S <sub>3</sub>	Mudana , Mahagaon
4	S <sub>4</sub>	Amni , Mahagaon
5	S <sub>5</sub>	Fulsavangi , Mahagaon

## Method and Material :

The water sample were collected from Mahagaon Dist.Yavatmal area from different five tubewell in morning 9 am ,in polythene bottles. The water sample were immediately brought in to laboratory in the estimation of various physio chemical parameter like temperature, pH were recorded by using thermometer and digital pH-meter. Specific conductivities were measured by using digital conductivity meter. The TDS value and DO value were measured by using water analysis kit (water analyser 371).

While other parameter such as hardness ,CO<sub>2</sub> , alkalinity, and calcium were estimator in the laboratory by using standard laboratory method.

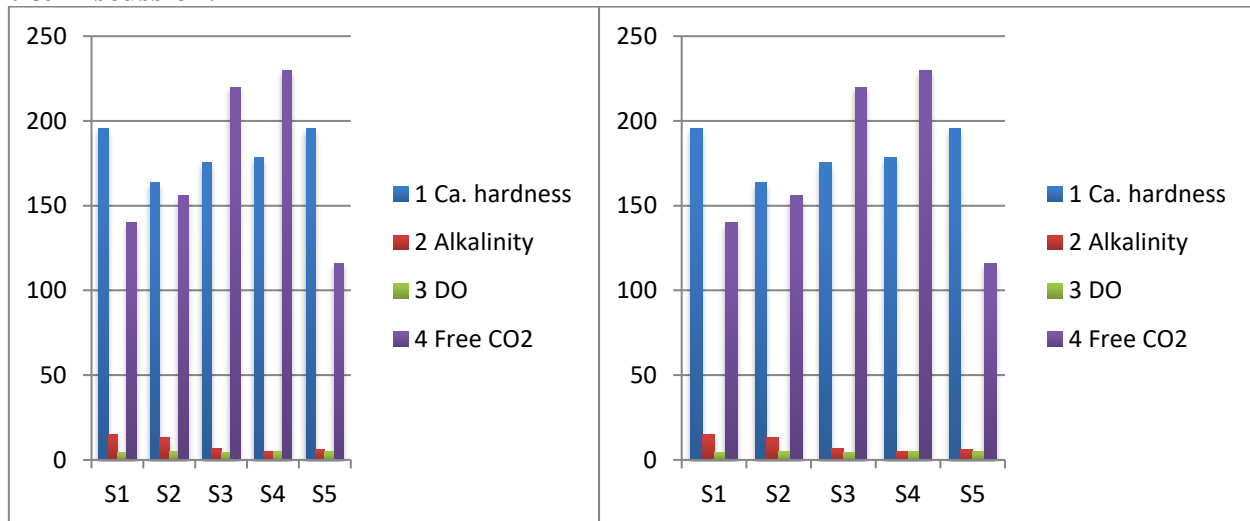
Table 1

Sr. No.	Sample	S1	S2	S3	S4	S5
1	Temp.	29 <sup>0</sup> c	30 <sup>0</sup> c	30 <sup>0</sup> c	29 <sup>0</sup> c	28 <sup>0</sup> c
2	TDS	132	123	112	155	103
3	PH	7.5	7.8	7.6	8.3	8.2
4	Conductivity	1.54	1.10	0.99	1.03	1.11
5	Tot. Hardness	320 mg/l	303 mg/l	266 mg/l	272 mg/l	284 mg/l
6	Ca. Hardness	189.3 mg/l	161.83 mg/l	155.53 mg/l	173.53 mg/l	192.43 mg/l
7	Akalinity	14 mg/l	12 mg/l	6 mg/l	5 mg/l	4 mg/l
8	DO	4.7	4.8	4.5	5	5
9	Free CO <sub>2</sub>	146 mg/l	158 mg/l	223 mg/l	235 mg/l	119 mg/l

Table 2

Property	TDS	pH	Conductivity	DO	Ca. Hardness	Alkalinity	Free CO <sub>2</sub>	Total Hardness
Desirable value	2 mg/L	6.5 – 8.5	0.05 – 0.5	More than 7	75 mg/L	200 mg/L	45 mg/L	40 – 80 mg/L

### Result & Discussion:



Graph 1

Graph 2

It can be seen that the amount of TDS has been decreased in a S1,S2,S3 and S5 and increased in a S4. This above table seen pH value found in higher S4 and S5. Conductivity increased in S1. If we compare five tube wells then the water of the total hardness increased in S1.

### Conclusion:

We concluded that from above table 1 and 2, the calculated value of sample of drinking water are different from the standard Indian value or standard Indian desirable value of drinking water. Hence, In the area of Mahagaon we have need to do proper analysis of water and prior treatment for healthy human being.

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