



## A Case Study of Bore Well Water and Tap Water Samples in Mangrulpir Town

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### Abstract

*Physico– chemical analysis of Bore well and tap water samples for drinking purpose is studied by collecting samples from different places located in Mangrulpir Town. For this Physico– chemical analysis various parameters studied such as PH, TDS, DO, Total hardness, Turbidity, Salinity, Conductance, Temperature.etc. It is found that hardness of bore well samples collected from Kalpananagar is high compare to standard values and Water samples collected from Mangaldham region is suTable for drinking purpose compare to standerd values.*

**Keywords:**MangrulpirTown Bore well, water Tap water, parameters.

### Introduction:

Mangrulpir is a town (Taluka place) in the state of Maharastra, India District Washim. and Mangrulpir is located at  $20^{\circ}18'47''\text{N}$   $77^{\circ}20'26''\text{E}$ . Mangrulpir has population near about 54,719 male constitute 52% of the population and 48% female. During last decade, this is observed that ground water get polluted drastically because of increased human activities consequently number of cases of water born diseases has been seen which is a cause of health hazards.

### Materials and Methods (Experimental) :

The samples were collected in clean polythene bottles without any air bubbles. The bottles were rinsed before sampling and Tightly sealed after collection and labeled and preserved according to standard method<sup>8-12</sup>. The temperature of water samples was measured in the field itself at the time of sample collection. For analysis Qualigen (AR Grade) reagents, double distilled water and borosil glassware's were used throughout the work. The major water quality parameters considered examination in this study are PH, TDS, DO, Total hardness, Turbidity, Salinity, Conductance, Temperature.etc. The PH was measured by didital PH meter. Total hardness of water was estimated by complexometric titration method using EDTA as a complexing agent in presence of buffer solution and Erichrome black T as indicator<sup>14</sup>. The total hardness of the sample is expressed in  $\text{caco}_3\text{mg L}^{-1}$ .

## Result and Discussion:

**Table 1: Data of Bore well water sample**

Sample No.	Area in Mangrulpir town	PH	TDS	DO	Total hardness	Turbidity	Salinity	Conductance	Temperature
1	Mangaldham	8.00	220	0.34	185	0.50	0.02	0.37	27 C <sup>0</sup>
2	Math Mohalla	7.06	360	0.36	315	0.40	0.10	0.94	25 C <sup>0</sup>
3	BirbalnathChouk	8.30	220	0.30	150	0.01	0.02	0.35	25 C <sup>0</sup>
4	Bilal Nagar	8.40	400	0.34	200	0.30	0.01	0.36	27 C <sup>0</sup>
5	PathanPura	7.72	127	1.80	315	1.50	0.02	1.93	25 C <sup>0</sup>
6	QuaziPura	7.66	300	3.9	315	0.40	0.06	0.94	23 C <sup>0</sup>
7	Kalpana Nagar	7.30	550	10.1	220	0.20	1.20	1.41	26 C <sup>0</sup>

**Table 2: Data of Tap water sample**

Sample No.	Area in Mangrulpir town	PH	TDS	DO	Total hardness	Turbidity	Salinity	Conductance	Temperature
1	Mangaldham	8.20	232	6.00	210	0.50	0.10	0.95	25 C <sup>0</sup>
2	Math Mohalla	8.80	340	3.80	212	0.50	0.03	0.72	25 C <sup>0</sup>
3	BirbalnathChouk	8.40	320	2.80	225	0.60	0.02	0.34	26 C <sup>0</sup>
4	Bilal Nagar	6.90	240	3.80	240	0.40	0.01	0.26	27 C <sup>0</sup>
5	PathanPura	8.16	330	6.20	200	0.10	0.10	0.36	25 C <sup>0</sup>
6	QuaziPura	8.42	200	6.00	210	0.10	0.20	0.36	25 C <sup>0</sup>
7	Kalpana Nagar	7.50	200	5.00	212	0.30	0.30	0.46	25 C <sup>0</sup>

## Conclusions:

From above Table the bore well water sample of Kalpananagar is having high TDS means hazardous for drinking may causes kidney stone.

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