



Physico-chemical & Biological Analysis of unprotected water

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Water is the basic & primary need of all vital life processes. Major part of earth surface (about $\frac{3}{4}$ th) is covered by water mainly by ocean and to some extent by lakes, rivers, streams, ponds. Unfortunately, clean, pure and safe water only exists briefly in nature and is immediately polluted by prevailing environmental factors and human activities. The quality of water depends on various chemical constituents and their concentration, most of which are derived from the geological layout of the particular region.

The analysis of water would show its effect on human health, aquatic plants, animals and marine life as well. thus there is a need to look some useful indicator both chemical and physical which can be used to monitor the quality of water.

The present investigation on physicochemical and biological analysis of unprotected water was done by collecting water samples from different water bodies around Patna. Chemical analysis such as Dissolved Oxygen, Biological Oxygen Demand, Chemical Oxygen Demand, Chlorides, Nitrate, Phosphate contents of the samples were determined by the standard methods. Biological analysis included the isolation of bacteria from water samples. The water samples were also analyzed physically by measuring pH and temperature at the time of collection. A good knowledge of the chemical and biological qualities of raw water is necessary so as to guide its suitability for use. Thus, regular physicochemical analysis of water at source must be carried out to determine or check the effectiveness of treatment process.

Keywords: *Water quality, Chemical analysis, Biological analysis, Physical analysis.*
