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Research Paper :

Physico-chemical analysis of selected municipal water samples of Ahmedpur and Latur town in Maharashtra

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ABSTRACT

The study was carried out by collecting two municipal water samples during July -10. The results were compared with standards prescribed by WHO and ISI 10500. Total 10 parameters were analyzed. In the present investigation, observed physico-chemical parameters are within the water quality standards and it is fit for drinking purpose.

KEY WORDS : Physico-chemical parameters, Water analysis

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The history of ancient civilization from it's growth and decline is inherently linked with the quantum of water supply. According to Bumgartnes and Reiches (1979) out of the total quantity of water in hydrosphere 97 per cent is in ocean and therefore non potable and only 3 per cent is fresh water out of which 77.23 per cent fresh water is in glaciers or ice caps, 9.86 per cent ground water at depth less than 800 m and 35 per cent ground water at depth between 800 m to 4 km only 0.03 per cent in rivers and lakes.

Water is an extra ordinary chemical compound of fundamental importance. The great scientist Cavendish in 1781 proved it for the first time that water is a compound of hydrogen and oxygen *i.e.* H_2O Chemically water consists of two parts of hydrogen and one part of oxygen by volume or 1 part of hydrogen and 8 parts of oxygen by weight. Water being a good solvent dissolves almost all substance which it comes in contact. So generally natural water is not pure. It contains impurities of various kinds of both dissolved and suspended there comprise dissolved gases Ex H_2S, CO_2, NH_3, N_2 dissolved minerals ex. salts of calcium, magnesium, and sodium suspended impurities Ex- Clay, sand, microscopic, organism. These are natural impurities derived from the atmosphere. catchments area and the soil normally such impurities, which are in low concentration that they do not pollute the water, rather their presence is sometimes essential for maintaining the potable and other useful properties of water. Water is said to be polluted when it is changed in its quality or composition directly or indirectly as a result of waste disposal of human activities so that is becomes turbid having bad test, offensive odor less suitable for drinking and other purposes.

Among the most and basic natural resources fresh water is essential for survival of man. In India nowadays is rarely used directly fresh water is rarely used directly for drinking purposes as the water is contaminated with several impurities the domestic use of water may involve preliminary or advanced treatment of water and than takes to storage tanks for regular distribution to cities and industries.

In the present investigation the treated water of Municipal Corporation of Ahmedpur and Latur was analyzed to observe weather the water is acceptable for drinking purpose or not water samples are collected from the pipes of Municipal Corporation the month of July 2010 and 10 parameters are observed and compared with ISI 10500 and WHO specification.

EXPERIMENTAL METHODOLOGY

Ahmedpur and Latur cities are situated region of Maharashtra. The peoples are using tube well water as