

Evaluation of water quality: Physico – chemical characteristics of Ganga and Yamuna river at Allahabad

■ SYED SUAIB NAUSHAD, ALOK MILTON LALL, AMIT ALEXANDER CHARAN AND ARADHANA IRENE CHARAN

Article Chronicle :

Received :

30.04.2014;

Revised :

08.05.2014;

Accepted :

18.05.2014

Key Words :

Physico-chemical parameters, Rivers, Anthropogenic, Water quality

SUMMARY : Rivers are especially at high risk of contamination by different contaminants from anthropogenic sources including heavy metals since change of the sediment regime often occurs. The present study was carried out to study the changes in physiochemical parameters of the water samples of Ganga and Yamuna River in Allahabad region. Water samples under investigations were collected from the different sites of Allahabad and following parameters were investigated such as water temperature, pH, DO (mg/l), BOD (mg/l), COD (mg/l) and TDS (mg/l), chloride (mg/l), total alkalinity (mg/l), total hardness (mg/l), calcium (mg/l), magnesium (mg/l), turbidity (mg/l) and conductivity (μScm^{-1}). Analysis of observation reveal variation in the value of temperature from 21°C to 24°C, pH of river ranged from a minimum 7.8 and 8.3, D.O ranged from 4.5 to 5.8 (mg/l), BOD ranged from 11.0 to 16 (mg/l), COD ranged from 8 to 21.6 (mg/l), TDS ranged from 359 to 455 (mg/l), chloride ranged from 5.7 to 6.8 (mg/l), total alkalinity ranged from 25 to 26.6 (mg/l), conductivity ranged from 480 to 573 μScm^{-1} , total hardness ranged from 212 to 246 (mg/l), calcium ranged from 110 to 150 (mg/l), magnesium varied from 72 to 136 (mg/l), turbidity ranged from 11 to 18.5 (mg/l). All the physicochemical parameters for pre monsoon, monsoon and post monsoon seasons are within the highest desirable or maximum permissible limit set by WHO except turbidity which was high while NO_3^- , Cl^- and F^- are less than the values prescribed by WHO.

HOW TO CITE THIS ARTICLE : Naushad, Syed Suaib, Lall, Alok Milton, Charan, Amit Alexander and Charan, Aradhana Irene (2014). Evaluation of water quality: Physico – chemical characteristics of Ganga and Yamuna River at Allahabad. *Asian J. Environ. Sci.*, 9(1): 11-14.

Author for correspondence :

SYED SUAIB NAUSHAD

Department of
Biochemistry and
Biochemical Engineering,
Jacob School of
Biotechnology and
Bioengineering, Sam
Higginbottom Institute of
Agriculture, Technology
and Sciences,
ALLAHABAD (U.P.)
INDIA
Email: [suaibnaushad@
gmail.com](mailto:suaibnaushad@gmail.com)

See end of the article for
Coopted authors'