

Study the changes in concentration of nitrate and phosphate in water river Oshmak Kochesfahan-Zibakenar

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Received date: 2016.08.23
Reception date: 2018.01.10

Abstract

Nitrate and phosphate are of the most important pollutants of surface waters. In this study which is cross-sectional, water sampling is conducted during the winter months of 2012, and spring, summer and the fall of 2013 from five stations along the river Oshmak, and parameters of nitrate and phosphate are being measured and tested through the river water sampling according to the standard method of America. Nitrate and phosphate were measured using light absorption method at a wavelength of 880 nm and by spectrophotometer device, and were expressed in units of milligrams per liter and were compared by standard values of drinking and agricultural water using t- test One-Sample. The minimum and maximum amounts of phosphate and nitrate were 0.13 to 1.15 milligrams per liter and 0.20 to 1.35 milligrams per liter, respectively. Nitrate and phosphate levels have increased from upstream to downstream, due to high area under cultivation of rice around the river and the entry of agricultural wastewater and are in less level than the standard. The results make possible decision making regarding the monitoring and control of river water pollution sources and effective use of it for different consumptions to provide the relevant authorities.

Keywords: Oshmak River, Nitrate, Phosphate, Pollution.