

白洋淀水体铁含量与其他水质因子的关系

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Iron Content in Lake Baiyangdian and Its Relations With Other Water Quality Factors

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摘要

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摘要 于2009年5月—2010年3月,选择代表性月份对白洋淀水体水质进行监测,探讨水体中铁含量、形态及其与其他水质因子的相互关系。结果表明,白洋淀水体总铁含量范围为 $0.03\sim 2.90\text{ mg}\cdot\text{L}^{-1}$,各监测点位平均超标率为61.11%。从时间上来看,水体铁含量表现为夏季>秋季>春季>冬季;从空间上来看,清洁对照点总铁含量最低,污水排放口,养鱼区次之,洋鸭区和垃圾堆放点含量均较高。相关分析表明,水体总铁含量与总磷含量、叶绿素a含量、水体富营养化指数之间均呈显著相关性,与总氮含量未表现出显著相关性。

关键词: 水体 铁含量 水质因子 富营养化 白洋淀

Abstract: Water quality of Lake Baiyangdian was monitored from May 2009 to March 2010 to explore content and forms of iron in the waterbody, and their relations with other water quality factors. Results show that total Fe in the water ranged between 0.03 and $2.90\text{ mg}\cdot\text{L}^{-1}$, and on average 61.11% of the samples from various monitoring sites exceeded the standard limit. Temporally iron content in the water varied in the order of summer>autumn>spring>winter, and spatially, in the order of CK<wastewater outlet and fish-rearing zone<duck rearing zone and garbage dumping site. Correlation analysis shows that total iron in the waterbody is significantly and positively related to total phosphorus, chlorophyll a and other water eutrophication indices, but not to total nitrogen.

Keywords: waterbody iron concentration water quality factor eutrophication Baiyangdian

Received 2011-05-25;

Fund:

国家水体污染控制与治理科技重大专项(2008ZX07209-008);河北省科技支撑计划(10276710D)

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引用本文:

梁淑轩,王云晓,吕佳佩.白洋淀水体铁含量与其他水质因子的关系[J]生态与农村环境学报,2011,27(5):13-17

LIANG Shu-Xuan, WANG Yun-Xiao, Lü Jia-Pei. Iron Content in Lake Baiyangdian and Its Relations With Other Water Quality Factors[J] Journal of Ecology and Rural Environment, 2011, 27(5): 13-17

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