

环境科学

地表水环境中PAHs源解析的方法比较及应用

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摘要:

通过对比分析水环境领域多环芳烃(PAHs)的源解析方法综述了各种源解析方法的原理、优缺点及具体适用范围, 并在此基础上, 分别从内陆河流湖泊及沿海区域两方面对国内外地表水环境中(包括上覆水及水底表层沉积物)PAHs的源解析方法的应用及解析结果进行分析比较. 结果表明, 内陆区域河流和湖泊上覆水及沉积物中的PAHs主要来源为矿物燃料及木材等高温燃烧源, 河口及近海海水和沉积物中的PAHs主要来源为燃烧源及石油源, 石油源对PAHs的贡献较内陆区域更明显.

关键词: 多环芳烃(PAHs) 源识别 源解析 上覆水 表层沉积物

Comparison among Methods of Source Apportionment of PAHs and Their Application |in Surface Water Analysis

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Abstract:

Source apportionment of PAHs applied in the analysis of surface water was studied to control and eliminate water pollution. Comparing variable methods of source apportionment of PAHs, we analyzed and discussed the principle, characteristics and scope of the application of the methods that are usually divided into qualitative analysis and quantitative analysis. The applications and results of source apportionment of PAHs in surface water and sediments were contrasted and analyzed. Then, the source of contaminations was also analyzed briefly. The results of the source apportionment indicate that PAHs in aquatic environment and sediments in inland region mainly come from the combustion of coal, wood, and other minerals. PAHs in coastal areas which are in aquatic and sedimentary environments are derived from petroleum and other combustion processes. Subsequently, PAHs in coastal areas are more obviously from petroleum compared with that in inland region.

Keywords: polycyclic aromatic hydrocarbons(PAHs) source identification source apportionment overlying water sediment

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2. 王婷, 王晓丽, 杜显元, 刘建林, 陈界江, 李鱼. 样品陈化对自然水体采集生物膜中重金属形态分布的影响[J]. 吉林大学学报(理学版), 2008,46(05): 1001-1005
3. 李鱼, 郭霖, 黎娜, 陈界江. 表层沉积物中重金属形态与酶活性的相关性[J]. 吉林大学学报(理学版), 2009,47(03): 628-634

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