

عنوان مقاله:

Diversities of phthalate esters in farmland soils and wasteland soils appeared Irrigation with wastewater in Isfahan

محل انتشار:

سومین کنفرانس برنامه ریزی و مدیریت محیط زیست (سال: 1392)

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خلاصه مقاله:

The distribution of six priority phthalic acid esters (PAEs) in farmland soils and wasteland soils of Isfahan were obtained with gas chromatography-mass spectrometer analysis in 2012. Results showed that total PAEs varied from 0.04 to 0.57 $\mu\text{g g}^{-1}$ with the median value as 0.12 $\mu\text{g g}^{-1}$. DEHP and DBP are the most abundant PAEs, with the concentrations as $0.26 \pm 31 \mu\text{g g}^{-1}$ and $0.24 \pm 29 \mu\text{g g}^{-1}$ and accounted for 10.34 - 81.43% and 9.71 - 91.38% of the Σ 6PAEs, respectively. The agricultural plastic film could elevate the PAEs contents in soils. Principal component analysis indicated the emission from cosmetics and personal care products and plasticizers were important sources for PAEs in suburban soils in Isfahan. The occurrence of PAEs in wasteland soils from suburban farmland area of Isfahan should be paid more attention owing to the ongoing suburban farmland and large amounts of untreated garbage and wastes in urban areas. Data on PAEs in various types of soils and various regions are needed for future research on human exposure to emerging toxic contaminants. Establishing the PAEs profiles for different types of sources is urgent to give more accurate source identification results in the future.

کلمات کلیدی:

Phthalate esters, farmland soils, Wasteland soil, Isfahan

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