

## 菜心对邻苯二甲酸酯 (PAEs) 吸收途径的初步研究

### Uptake pathway of phthalic acid esters (PAEs) by Brassica Parachinensis

投稿时间: 2004-12-20 最后修改时间: 2005-5-30

稿件编号: 20050830

中文关键词: 菜心(Brassica Parachinensis); 邻苯二甲酸酯(PAEs); 吸收途径; 茎叶; 根系

英文关键词: Brassica Parachinensis; phthalic acid esters(PAEs); uptake pathway; shoot; root

基金项目: 国家自然科学基金项目(30471007); 教育部科技研究重点项目(地方02112); 广东省自然科学基金(021011, 036716); 广东省科技计划项目(01C21202, 03A20504, 03C34505); 广东省环保科技开发研究项目(粤环2001-20); 广东省教育厅自然科学研究项目(Z02004)

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摘要点击次数: 130

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中文摘要:

采用玻璃室处理和污染土壤覆盖原土壤来控制PAEs来源进行盆栽试验,应用GC/MS联机检测技术初步研究了菜心对PAEs的吸收途径。结果表明:污染土壤处理与污染土壤上覆盖原土壤处理相比,前者菜心茎叶中DBP和DEHP的含量均高于后者,但相差不大,表明菜心茎叶可以吸收污染土壤中挥发出来的DBP和DEHP,而根系吸收运移是菜心茎叶中DBP和DEHP的主要来源途径。玻璃室处理增加了菜心茎叶和根系中DBP的含量,而对DEHP的影响趋势不明显。DBP与DEHP相比,前者更易被菜心根系吸收并向地上部(茎叶)运移,后者主要滞留在根部。

英文摘要:

Using glasshouse and clean soil covering on polluted soil to control PAEs sources, Brassica Parachinensis was pot-cultured, and the concentrations of PAEs in Brassica Parachinensis were detected by gas chromatography-mass spectrum (GC/MS). The results showed that concentrations of both DBP and DEHP in the shoots growing in polluted soil were only a few higher than those of them in the shoots growing in polluted soil covered with original soil. DBP and DEHP in the shoots of Brassica Parachinensis derived dominantly from roots uptake, leaf uptake of DBP and DEHP volatilizing from polluted soil was minor. Concentrations of DBP in Brassica Parachinensis (both shoots and roots) growing in glasshouse were higher than those of that in Brassica Parachinensis growing in non-glasshouse. But similar situations were not observed for DEHP. In the shoots concentrations of DBP were always higher than those of DEHP, but in the roots concentrations of DEHP were always higher than those of DBP on the contrary, which indicated that roots uptake and translocation was more important for DBP.

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