

## Pb(铅)富集植物品种的筛选

### Screening out of Pb hypertolerant plant species

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中文摘要:

为选择和筛选富集重金属或对重金属具有耐性的植物, 为利用植物修复重金属污染土壤提供参考, 该研究通过温室砂培和土培的方法, 对生长于铅锌尾矿区的36种植物进行了筛选, 以叶片叶绿素含量、株高、植株含Pb量为Pb富集植物的筛选指标。同时满足下列条件, 即: 植物叶片中叶绿素含量: 处理/对照 $>0.90$ ; 株高: 处理/对照 $\geq 1.00$ 和含Pb量 $>500$  mg/kg的植物可以用做进一步的耐性试验。按以上标准筛选出6个富集Pb的植物品种, 分别是香根草、绿叶苋菜、裂叶荆芥、羽叶鬼针草、紫穗槐和苍耳。

英文摘要:

In order to choose the hypertolerant plants to heavy metals and for the case of phytoremediation in soils polluted by heavy metals, the researches were carried out by using the methods of soil-planting and sand-planting in the greenhouse. Thirty-six species growing on lead zinc tail mining areas have been chosen for the study. The treatment concentration of lead was  $400 \text{ mg} \cdot \text{L}^{-1}$ . Three indexes, which are chlorophyll content of plant leaves, the plant length and the content of lead in plants, were used as standard to choose Pb tolerant plant species. There are six plant species, i. e. are *Vetiveria zizanioides*, *Schizonepeta tenuifolia*, *Amaranthus tricolor*, *Xanthium sibiricum*, *Sophora japonica*, *Bidens maximowicziana*, meet jointly the criterion of chlorophyll:  $\text{Tr}/\text{CK} > 0.90$ , plant length:  $\text{Tr}/\text{CK} \geq 1.00$  and lead content:  $\text{Tr} > 500 \text{ mg}/\text{kg}$ , and they could be used for further test of hypertolerant plant polluted by heavy metals.

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