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安徽龙河口水库流域沉积物中粘土矿物分析及其环境意义

Clay minerals from sediments of Longhekou Reservoir basin and their environment significance

中文关键词: 粘土矿物 物源 龙河口水库 安徽

英文关键词: clay mineral source sediments Longhekou Reservoir Anhui

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中文摘要:

龙河口水库是巢湖上游的重要水源地，对水库钻孔ALE的粘土矿物进行定性和半定量分析，发现水库沉积的粘土矿物主要是绿泥石（含绿泥石/蛭石混层矿物），多年平均含量达40%，其次是高岭石和伊利石及少量的蒙皂石，伊利石的多年平均含量只有21%，远低于该流域中晓天河（54%）和滑石河（63.5%）的表层样。水库和龙潭河粘土矿物的含量组成较相似，与晓天河和滑石河差别较大。表层样中粘土矿物的差异主要受流域的地质地貌的影响，水库沉积物中粘土矿物的特征主要与环境动力和粘土矿物的结晶习性有密切的关系。

英文摘要:

The Longhekou Reservoir is a very important water source for the Chaohu Lake. Clay minerals from core ALE in the Longhekou Reservoir were analyzed qualitatively and semi-quantitatively. The result shows that the clay minerals are mainly chlorite (Ch/V), with many years' average quantity being 40%, subordinately kaolinite and illite, and minor smectite. 40 years' average quantity of illite in the reservoir is only 21%, lower than that of the surface sediments in the Xiaotian River (54%) and in the Huashi River (63.5%). The percentages of clay minerals in the Longtan River are similar to those in the Longhekou Reservoir,but obviously differ from those in the Xiaotian River ane Huashi River. The physiognomic and geological features have a strong impact on the surface sediments in the Longhekou Reservoir basin, and the sediments of the Longhekou Reservoir have an intimate relationship with the environmental dynamic forces and the features of clay mineral crystallization. The results also show that the clay minerals from the Laolong River have exerted an obvious effect on the reservoir sediments, and this is very important in the control of soil erosion.

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