

## Effects of Macrophyte *Vallisneria asiatica* Biomasses on the Algae Community

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**Abstract :** To improve the water quality of lakes and control algae blooms, The effects of *Vallisneria asiatica* which is one of aquatic plants spread over Lake Taihu. With different biomasses on the water quality and algae communities were researched. The results indicated that *V. asiatica* could control an excess of *Microcystis* spp. When the *V. asiatica* biomass was larger than 50g in the tank with 30L solution in the laboratory, Planktonic and epiphytic algae responded differently to *V. asiatica*. The presence of macrophyte *V. asiatica* in eutrophic waters has a positive effect on algae compositions because of different sensitivities of algae species to allelopathic substances released by macrophyte *V. asiatica*. That is, *V. asiatica* could inhibit the growth of *Microcystis* spp. effectively and was benefited to the diatom on the condition in the laboratory.

**Keywords :** algae bloom, algae community, *Microcystis* spp., *Vallisneria asiatica*

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