Microbial Environmental Control and Countermeasures for Large Aquaculture Water in Aquarium of Inland Areas

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The aquarium of inland areas is a relatively closed aquaculture ecosystem. The recycling of organic matter is an important biochemical process. There is a very close relationship between the production, presence and migration of organic matter, the composition of aquatic organisms (microorganisms, plankton, and fish) and life activities. The status and changes of the microbial environment will greatly affect the water quality and fish health. In the water environment with natural conditions, the composition and concentration of bacteria are different due to different sources, locations, forms, and seasons of the water body. Under the interference of breeding behavior, bacteria in the water environment will undergo major changes. This change presents a more complex and complicated relationship.

Based on years of operation of large-scale pools in Beijing Aquarium, this paper combines the regular monitoring and data collection of large-scale pools in recent years, summarizing the management of biological aquaculture in marine aquariums at various levels, including microbiology, breeding individuals, and breeding environments. Existing water environment control technologies have advantages and disadvantages in the scope of application and practical application. The new methods for the treatment of microbial problems in aquatic organisms are summarized, and the deficiencies and solutions of current technologies are analyzed, and the development trend of microbial detection in aquatic environments is also forecasted.