

综合评述

## 寡营养细菌及其在环境科学中的应用

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摘要

寡营养细菌是生存在寡营养环境中的一类细菌,其多样性与生物量在整个生物圈组成中都具有较大的优势,因而在生物地球化学循环中发挥着重要作用.从20世纪80年代开始,寡营养细菌在自然或人为环境中的寡营养机制、对饥饿的生理反应以及在生态系统中的作用一直是微生物生态学研究的的前沿领域之一,其理论价值与应用前景已受到各国微生物生态学家与环境科学家们的广泛重视.本文综述了寡营养细菌的基本概念、营养类型、生理生态特性、可能的寡营养机制、主要研究方法以及在医学细菌检测和环境重金属监测中的应用等,并指出了寡营养细菌在环境科学中的应用前景.

关键词 [寡营养细菌](#); [生态特征](#); [环境科学](#)

分类号

## Oligotrophic bacteria and their applications in environmental science

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### Abstract

Oligotrophic bacteria are a group of microbes living in oligotrophic environments. Their diversity and biomass are dominant in biosphere,and thus,play an important role in biogeochemical cycles.Since 1980s,their oligotrophic mechanisms,responses to starvation,and roles in ecosystems have been one of the most advanced subjects in microbial ecological research.Much attention has been paid to the theoretical values and applied perspectives of oligotrophic bacteria.This paper reviewed the concepts, nutritional types,physiological and ecological characteristics,possible oligotrophic mechanisms,and main research methods of oligotrophic bacteria,and their applications in bacteria examination of iatrology and in environmental monitoring for heavy metals.The applied perspectives of oligotrophic bacteria in environmental science were also discussed.

### Key words

[Oligotrophic bacteria](#) [Ecological characteristics](#) [Environmental science](#)

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