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厌氧颗粒污泥微生物菌群及研究方法进展

张强¹, 陈程程², 刘同军², 陈贯虹^{1*}, 裴振洪³

1. 山东省科学院生物研究所, 山东 济南 250014; 2. 山东轻工业学院食品与生物工程学院, 山东 济南 250353; 3. 日照鲁信金禾生化有限公司, 山东 日照 276800

摘要:

厌氧颗粒污泥是废水厌氧处理过程的决定性因素。本文对厌氧颗粒污泥中主要微生物菌群特别是产甲烷菌的结构进行了详细描述, 并对FISH、实时荧光定量PCR、变性梯度凝胶电泳、16S rRNA、T-RFLP等现代分子生物学技术在厌氧颗粒污泥微生物菌群结构研究中的应用进行了综述, 并对颗粒污泥的形成与生长过程以及调控颗粒污泥内部菌群结构等方面的研究趋势进行了展望。

关键词: 厌氧颗粒污泥 微生物菌群 分子生物学技术

The microbial communities in anaerobic granular sludge and their research advances

ZHANG Qiang¹, CHEN Cheng-Cheng², LIU Tong-Jun², CHEN Guan-Hong^{1*}, PEI Zhen-Hong³

1. Biology Institute, Shandong Academy of Sciences, Jinan 250014, China; 2. School of Food and Bioengineering, Shandong Polytechnic University, Jinan 250353, China; 3. Rizhao Luxin Jinhe Biochemical Limited Corporation, Rizhao 276800, China

Abstract:

Anaerobic granular sludge is a definitive factor in anaerobic effluent treatment. This paper addresses the main microbial communities in anaerobic granular sludge, especially the methanogen community. This paper also surveys the application of such modern molecular biotechnology as FISH, RT-PCR, DGGE, 16S rRNA and T-RFLP in the research of microbial communities of anaerobic granular sludge. We eventually present the development prospect for the formation of the granular sludge, its growth process and the regulation of microbial communities in granular sludge.

Keywords: anaerobic granular sludge microbial community molecular biotechnology

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通讯作者: 陈贯虹(1970-), 女, 硕士, 研究方向为生物化工。

作者简介: 张强(1980-), 男, 博士, 研究方向为微生物工程。Email: zhbuaiji@sina.com

作者Email: swhg@keylab.net

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