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新型纳米无机抗菌剂TiO₂和ZnO的广谱抗菌性研究

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Study on the antimicrobial activities of nanometer inorganic antibacterial agents TiO₂ and ZnO

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- 摘要
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全文: PDF (1063 KB) HTML (KB) 输出: BibTeX | EndNote (RIS) 背景资料

摘要 选择了革兰氏阴性细菌、革兰氏阳性细菌、芽孢杆菌、酵母菌和霉菌的代表菌株,采用三角瓶振荡法及纸片扩散法,对2种新型纳米无机抗菌剂:纳米TiO₂和纳米ZnO进行了广谱抗菌性研究,并通过与日本的纳米无机抗菌剂及有机抗菌剂进行比较,结果表明2种新型纳米抗菌剂不仅对所有代表菌株表现出很好的广谱抗菌性能,而且其抑菌能力强于日本无机抗菌剂和有机抗菌剂;在此基础上对相关抗菌剂的抗菌机理进行了分析讨论。

关键词: 纳米无机抗菌剂 纳米TiO₂ 纳米ZnO 有机抗菌剂 抗菌性能分析

Abstract: The qualitative antibacterial activities of two new inorganic antibacterial agents TiO₂ and ZnO were studied to the typical Gram-negative bacteria, Gram-positive bacteria, bacillus, microzyme and mould by the experiments of vibrating flask and the disk diffusion. The experimental results show that the two new nanometer inorganic antibacterial agents have broad-spectrum antibacterial activities and the antibacterial effect is much better than that of organic antibacterial agents and the inorganic antibacterial agents mend in Japan. Moreover, the antibacterial mechanism of the correlative antibacterial agents has been discussed.

Key words: nanometer inorganic antibacterial agents nanometer TiO₂ nanometer ZnO organic antibacterial agents antibacterial activity

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