

羟基丁酸酯和羟基己酸酯共聚物的神经亲和性研究

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PHA具有良好的力学性能并能完全被生物降解, PHBHH_x是短链和长链单体共聚的PHA, 具有硬度和韧性都好的特点。研究PHBHH的亲水性、保持蛋白质在材料上有序结构变化的情况及HeLa细胞和鼠大脑皮层神经细胞在材料上的生长情况, 说明PHBHH_x是很有希望的神经修复材料, 并且通过热分析法(DSC)得到其熔点, 使之便于以后的处理加工。

STUDIES ON THE NERVE CELL AFFINITY OF POLY (3-HYDROXYBUTYRATE-CO-3-HYDROXY HEXANOATE) (PHBHH_x)

PHA is a kind of materials with excellent mechanical properties and complete biodegradability. PHBHHX, long chain and short chain monomer polymerized PHA, has a better tenacity and rigidity. In our experiment, Hela cells and fetal rat cerebral cortex nerve cells were cultured on PHBHHX respectively, and the nerve cell affinity of the materials were evaluated by measuring the water contact angle of the

materials and the circular dichroism (CD) of proteins adsorbed on the materials. Results indicate that PHBHHX is one of the promising nerve restoring materials. DSC method was used to determine the melting point of the materials so that it will be convenient to process the materials later.

关键词

PHBHHX; Hela 细胞(Hela cells); 神经细胞(Nerve cells); 蛋白吸附(Protein adsorption); 熔点(Melting point)