

An Update on the Review of Microbial Synthesis of Glucosamine and N-acetylglucosamine

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July 6, 2022

Abstract

Glucosamine (GlcN) is a natural amino monosaccharide in which a hydroxyl group of glucose is substituted for an amino group. It belongs to functional amino sugar compounds. The traditional GlcN production method is prepared by hydrolyzing the exoskeleton of shrimp and crab. This method has many potential problems such as geographical and seasonal restrictions on raw material supply, serious environmental pollution and potential allergic reactions. The microbial fermentation method has the advantages of short fermentation time, high production intensity, wide source of raw materials, green and sustainable process, and product safety. This paper mainly summarizes the research on strain construction, metabolic pathway design, and fermentation condition optimization in microbial fermentation, which has certain guiding significance for the further production of glucosamine.

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