

Kojic acid : applications and development of fermentation process for production

ABSTRACT

Kojic acid, 5-hydroxy-2-hydroxymethyl-g-pyrone, has many potential industrial applications. In this review, the properties and diverse applications of kojic acid in industries are described. The review also discusses the advance in kojic acid fermentation, focusing on the process development in microorganisms and strain selection, medium and culture optimization, as well as fermentation modes for commercially viable industrial scale production. The performances of various fermentation techniques that have been applied for the production of kojic acid are compared, while the advantages and disadvantages of each technique are discussed in this paper.

Keyword: Kojic acid; Mild antibiotic; Anti-browning agent; Tyrosinase inhibitor; Surmerged fermentation; Resuspended cell system; Surface culture