

Biohydrogen production from biomass and industrial wastes by dark fermentation

ABSTRACT

Hydrogen is a clean energy carrier which has a great potential to be an alternative fuel. Abundant biomass from various industries could be a source for biohydrogen production where combination of waste treatment and energy production would be an advantage. This article summarizes the dark fermentative biohydrogen production from biomass. Types of potential biomass that could be the source for biohydrogen generation such as food and starch-based wastes, cellulosic materials, dairy wastes, palm oil mill effluent and glycerol are discussed in this article. Moreover, the microorganisms, factors affecting biohydrogen production such as undissociated acid, hydrogen partial pressure and metal ions are also discussed.

Keyword: Biohydrogen; Biomass; Palm oil mill effluent