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COMPARISON OF HYDROGEN AND METHANE PRODUCTION IN DARK FERMENTATION IN PRESENCE OF OXYGEN IN LOW pH

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In the chapter, results of dark fermentation of sour cabbage of concentration 2 and 10 g/L in presence of oxygen with concentrations 0-10% are presented. In initial value of pH 6.05, concentration of oxygen between 2% to 9% inhibits methanogesis (and methane production more than 2 times) and increases hydrogen production 6 times. It also shortens the fermentation process above 40% in comparison with anaerobic processes. Other interesting case is that low pH and low oxygen concentration were found low, 0.05%, but stable occurrence of ethylene in produced biogas.

Biography

Gaweł Sołowski has completed his Master's degree at Silesian University of Technology at Gliwice in 2014. He is pursuing his PhD at Institute of Fluid Machinary of Polish Academy Science from 2014. He has been serving Assistant Editor in *Open Chemistry in de Gruyter Open* and published 3 papers in reputed journal.

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