

7. Studies on Improvement of Methane Fermentation Efficiency

- The Methane Fermentation Characteristic for Kitchen Garbage by Sub-critical Water Hydrolysis -

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Recently, various environmental problems of a large amount of generation of waste etc. have become aggravated. In such a situation, various measures are promoted aiming at the recycling society formation that effectively uses limited natural resources. The recycling of the kitchen garbage is the one. Because the energy conversion is possible, and the environmental load is also small, the methane fermentation is expected as measures. However, it is a problem in the methane fermentation to require a long term.

It studies so that it may improve the efficiency of the methane fermentation by applying the sub-critical water processing with excellent hydrolysis power to this as a preprocessing of the methane fermentation.

In this paper, we describe basic properties when the sub-critical water processing is applied as a preprocessing of the mesophilic methane fermentation for the food waste by the batch experiment that uses the model kitchen garbage. Moreover, it reports on the methane fermentation experiment result of using the garbage of the supermarket by using small-scale facilities.

Key words : methane fermentation, sub-critical water, kitchen garbage