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INFLUENCE OF FREEZING/THAWING AND DRYING/MILLING ON BIOCHEMICAL METHANE POTENTIAL

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Abstract

In studies of biochemical methane production (BMP) researchers often collate a large number of samples at the same time for a sample archive. The samples are often frozen to avoid microbial transformation, further homogenized by grinding. We studied the influence of subfreezing/thawing and drying/milling of energy crop on BMP and anaerobic biodegradability (BD). Relative standard deviation (RSD, %) between the BMP of controls and of the subfrozen was in the range 2.1–9.0%, and of the dried/milled 3.1–17.5%. Whereas biodegradability of the controls was 72.3(±16.3)%, that of the pretreated was slightly lower at 70.5(±14.7)% for the subfrozen and 69.7(±18.4)% for the dried/milled.

Key words: anaerobic digestion, biodegradability, biogas, pretreatment

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