

VM (160 and 370 NmL CH₄/g DM) for all tested sludge types (primary, biologic, mixed, *etc.*). This work has also confirmed that commonly measured parameters (COD, VM, DM) cannot be used to accurately predict sludge methane potential. BMP measurement thus remains the only mean to obtain an accurate value. A method to decrease the BMP measurement time, coupling reactor experiments (AMPTS II@ system) and a simplified ADM model, was also proposed. This method provides a BMP estimation very close (4% error on average) to results obtained using only the classical reactor method, while also decreasing the measurement time to 4 days (from 20 days using classical methods). This decrease in measurement time will help to increase the usefulness of on-site BMP measurements on a day-to-day basis, as it is currently rarely used for WWTP sludge digesters monitoring.

Keywords: Methane potential – BMP – Urban sludge – Predictive method – Modeling approach.
