# Validation criteria for measurement of biochemical methane potential (BMP)*

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August 5, 2020

*Document number 101. File version 1.0. This document is from the Standard BMP Methods collection.* †

## 1 Validation criteria

BMP results that meet *all* the following criteria can be described as "validated". Otherwise tests should be repeated.

1. All required components of the BMP measurement protocol described in Holliger et al. [2020] (document 100) are met. This includes a duration criterion: Terminate BMP tests only after daily $CH_4$ production from individual batches (bottles) during 3 consecutive days is $< 1.0\%$ of the net accumulated volume of methane from the substrate (substrate batch minus average of blanks).
2. Mean cellulose BMP is between 340 and 395 $NmL_{CH_4}\ g_{VS}{}^{-1}$.
3. Relative standard deviation for cellulose BMP (standard deviation, including variability in blanks, substrate bottles, and added substrate VS, divided by mean BMP) is no more than 6%.

## 2 More details

This document presents validation criteria for measurement of biochemical methane potential (also called biomethane potential) (BMP) in batch tests. The develop-

*Recommended citation: xxx. Validation criteria for measurement of biochemical methane potential (BMP). Standard BMP Methods document 101, version 1.0. Available online: https://www.dbfz.de/en/BMP (accessed on August 1, 2020).
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†For more information and other documents, visit https://www.dbfz.de/en/BMP. For document version history or to propose changes, visit https://github.com/sashahafner/BMP-methods.

ment of these criteria is described in Hafner et al. [2020] and they are intended to be applied after measurement of BMP in order to determine if results are valid, or if the test must be repeated. Only results from BMP tests that have followed the requirements given in Holliger et al. [2020] (document 100) can be considered "validated". The criteria listed above are duplicated in this document, and the present document was created to simply make it easier to find these required criteria. For details and many additional recommendations, see Holliger et al. [2016], Hafner et al. [2020], and Holliger et al. [2020].

# References


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