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| Free white paper | |
| How to maximize the methane yield of biogas plants using the FOS/TAC ratio as a control parameter | |
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Herisau, 24 April 2020.  
Monitoring the ratio of free organic acids (FOS) to total inorganic carbonate (TAC) is the best practice how to monitor the fermentation process in biogas reactors. Keeping this ratio stable within a defined window is key to maximizing the methane output and hence the profitability of a biogas plant. A free white paper from Metrohm takes a closer look at the chemistry behind the biogas production process and how to determine the FOS/TAC ratio applying a simple titration method.

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| Methane is produced in biogas reactors under anaerobic (oxygen free) conditions. The aim of production is to produce meth­ane with a volume concentration of at least 50%. The present white paper puts a focus on the following topics:   * The four steps of the biogas production and the chemistry of the fermentation process * Destabilization/disruption of the fermentation process: possible root causes * The FOS/TAC value: what it is, why it is used as an early indicator (process monitoring), and how to interpret results * How to determine the FOS/TAC ratio applying a simple titration * Further reading | Eco Titrator from Metrohm: available complete with all required accessories for the straightforward analysis of the FOS/TAC ratio |

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| ****Weblink:**** | news.metrohm.com |
| ****Keywords:**** | FOS/TAC, methane, biogas |
| ****Branches:**** | Biogas production |
| ****Image:**** |  |

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