

Artificial Neural Network Modelling of Biogas Production Processes

Abdul Sahli Fakharudin¹, Md Nasir Sulaiman², Norwati Mustapha²

¹Faculty of Computer Systems & Software Engineering, Universiti Malaysia Pahang,
Lebuhraya TunRazak, 26300, Gambang, Pahang, Malaysian.

²Faculty of Computer Science and Information Technology, Universiti Putra Malaysia,
43400 UPM Serdang, Selangor, Malaysia

Corresponding author Email: sahli@ump.edu.my

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Mathematical modelling using regression for the biogas production process was a proven method used until now. Recently the artificial neural network modelling had been used to model the biogas production process to represent it in neural network model. However, the implementation of the artificial neural network modelling was limited to its problem and some of the proper implementation, for example testing and validation was not fully addressed. This paper used several data sets to compare the artificial neural network modelling results and comparing it with the previous mathematical modelling results. The results show that the artificial neural network modelling produced better results with higher accuracy and lower error when compared to the mathematical modelling. But some issues need to be addressed such as dataset size and over-training in producing good models to represent the biogas production process.

Keywords: Artificial Neural Network, Modelling, Biogas Production