

Testing the normality of residuals on regression model for the growth of *Moraxella* sp. B on monobromoacetic acid

ABSTRACT

Bioremediation of monobromoacetic acid, a haloacetic acid, continues to be recommended as a cheaper and achievable method in comparison to physical and chemical techniques. In a prior work, we model the growth of the bacterium *Moraxella* sp. B on monobromoacetic acid from published literature to acquire crucial growth constants. We learned that the Buchanan-three-phase model via nonlinear regression using the least square method was the most effective model to describe the growth curve. Nevertheless, the use of statistical tests to choose the best model relies heavily on the residuals of the curve to be statistically robust. More often than not, the residuals must be tested for conformation to normal distribution. In order for these assumptions to be met, we perform statistical diagnosis tests such as the Kolmogorov-Smirnov, Wilks-Shapiro and D'agostino-Pearson tests.