Drink. Water Eng. Sci. Discuss.,
https://doi.org/10.5194/dwes-2020-13-RC1, 2020

Open Access
Drinking Water
Engineering and Science
Discussions

Interactive comment on "Comparison between constant and variable chlorine decay models applied to urban water supply network" *by* Ababu T. Tiruneh et al.

Anonymous Referee #1

Received and published: 10 August 2020

This paper compares chlorine residual modelling in a water distribution system using a first and second order reaction rate models. It is well written and I enjoyed reading it.

For publication in this (or any other) scientific journal, a manuscript needs to "represent a substantial contribution to scientific progress within the scope of this journal (substantial new concepts, ideas, methods, or data)". Unfortunately I can't see any such contribution in the paper. The two chlorine decay models are well known, the laboratory tests used to calibrate these models are routine and the application of the model to the Matsapa distribution network is done without reference to measured chlorine residuals in the field.

I would like to encourage the authors to do further work and resubmit the paper when they have added a novel contribution. Given that this supply network is in a rural area serving a particular demographic, and that it seems the local supply authority doesn't have the resources for detailed monitoring and operations, expanding the paper to describe the challenges faced with this research and how they were be overcome will add novelty to the paper and make it useful to people working in similar areas. It is essential to take residual chlorine measurements in the field and compare the simulations models to actual data, rather than simply comparing the results of two simulations models.

Interactive comment on Drink. Water Eng. Sci. Discuss., https://doi.org/10.5194/dwes-2020-13, 2020.