Letter to the Editor

Differential equations on the kinetics of biodiesel production

CrossMark

Dear Editor, Our group has reviewed the set of differential equations published in this journal by Berchmans et al. [1], describing the kinetics of biodiesel production. These equations give correct results with a small change in Eq. (5), in which a sign is incorrect in the expression for water production (W) and free fatty acids consumption (FFA). A corrected version of this equation should read:

$$\frac{d[W]}{dt} = -\frac{d[\text{FFA}]}{dt} = k_{12}[\text{FFA}][\text{OH}] \qquad (1)$$

All other equations are correctly written.

We would like to highlight the valuable information reported by the authors of the above article, especially the quantification of parameters and the assays with different mixing regimes.

References

[1] Berchmans HJ, Morishita K, Takarada T. Kinetic study of hydroxide-catalyzed methanolysis of jatropha curcas-waste food oil mixture for biodiesel production. Fuel 2013;104(0):46–52. <http://www.sciencedirect.com/science/article/pii/S0016236110000256>.

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