

Retraction

Retracted: Physiochemical and Phytochemical Properties of Wax Apple (*Syzygium samarangense* [Blume] Merrill & L. M. Perry var. Jambu Madu) as Affected by Growth Regulator Application

The Scientific World Journal

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The Scientific World Journal has retracted the article titled “Physiochemical and Phytochemical Properties of Wax Apple (*Syzygium samarangense* [Blume] Merrill & L. M. Perry var. Jambu Madu) as Affected by Growth Regulator Application” [1] due to unreliable data and redundant publication.

The results show inconsistent overlaps with the authors’ other articles published from 2011–15:

- (i) Mohammad Moneruzzaman Khandaker, Abm Sharif Hossain, Normaniza Osman, and Amru Nasrulhaq Boyce, “Growth, yield and quality responses to gibberellic acid (GA₃) of wax apple *Syzygium samarangense* var. Jambu air madu fruits grown under field conditions,” *African Journal of Biotechnology*, vol. 10, no. 56, pp. 11911–11918, September 26, 2011, <https://doi.org/10.5897/AJB.9000278> [2].
- (ii) Mohammad Moneruzzaman Khandaker, Amru Nasrulhaq Boyce, Normaniza Osman, Faruq Golam, M. Motior Rahman and Sofian-Azirun, M., “Fruit development, pigmentation and biochemical properties of wax apple as affected by localized application of GA₃ under field conditions,” *Brazilian Archives of Biology and Technology*, vol. 56, no. 1 Curitiba Jan./Feb. 2013, <https://doi.org/10.1590/S1516-89132013000100002> [3].
- (iii) Mohammad Moneruzzaman Khandaker, Abm Sharif Hossain, Normaniza Osman, Nashriyah Mat, and Amru Nasrulhaq Boyce, “Growth, yield and postharvest quality of wax apple as affected by naphthalene acetic acid Application,” *Revista*

Brasileira de Fruticultura, vol. 37, no. 2, pp. 410–422, 2018, <https://doi.org/10.1590/0100-2945-062/14> [4].

- (iv) Mohammad Moneruzzaman Khandaker, Ali Maj-rashi, and Amru Nasrulhaq Boyce, “The influence of gibberellic acid on the chlorophyll fluorescence, protein content and PAL activity of wax apple (*Syzygium samarangense* var. jambu madu) fruits,” *Australian Journal of Crop Science*, vol. 9, no. 12, pp. 1221–1227, 2015, http://www.cropj.com/khandaker_9_12_2015_1221_1227.pdf [5].
- (v) Mohammad Moneruzzaman Khandaker, Normaniza Osman, Abm Sharif Hossain, Golam Faruq, and Amru Nasrulhaq Boyce, “Effect of 2,4-D on Growth, Yield and Quality of Wax Apple (*Syzygium samarangense*, (Blume) Merrill & L. M. Perry cv. Jambu Madu), Fruits,” *Sains Malaysiana*, vol. 44, no. 10, pp. 1431–1439, 2015, http://www.ukm.my/jsm/pdf_files/SM-PDF-44-10-2015/08%20Mohammad%20Moneruzzaman.pdf [6].

Table 1 in [1] shows the same results as follows:

- (i) Table 2 in [2] for fruit juice (mL/100 g) values and variance, except for the value for GA₃ 100 (78 and 80, respectively)
- (ii) Table 1 in [3] for TSS (°Brix) values and variance, except for the value for GA₃ 50 (11.5 vs. 10.5, respectively)
- (iii) Table 1 in [3] for titratable acidity (%) variances
- (iv) Table 3 in [4] for pH, expect for the value for control (4.90 and 4.92, respectively)

(v) Table 3 in [4] for TSS (°Brix) values for control and NAA 10

(vi) Table 3 in [4] for TA values

Table 2 in [1] shows the same results as follows:

(i) Table 2 in [3] for total sugar (mg/100 g)

Table 3 in [1] shows the same results as follows:

(i) Table 2 in [2] for phenol mg GAE/100 g values and variances, except the value for GA₃ 100 (552 vs. 752, respectively)

(ii) Table 3 in [2] for chlorophyll (mg/L) values and variances

(iii) Table 3 in [2] for carotenoid (µg/g) values and variances, with the same variances but not the same values also appearing in Table 3 in [3]

(iv) Table 2 in [3] for flavonoids (mg CE/100 g) values and variances, with the variances for the control and GA₃ 20 also appearing in Table 2 in [2]

(v) Table 2 in [3] for anthocyanin values and variances (mg/100 g and mg/L, respectively), with the decimal places of the control and GA₃ 20 values and variances and of the GA₃ 50 and GA₃ 100 values also being the same in Table 3 in [2]

Table 1 in [2] also shows the same results as follows:

(i) Table 1 in [3] for yield (kg) values and variances

(ii) Table 1 in [3] for fruit drop (%) variances and GA₃ 50 value

(iii) Table 1 in [3] for average fruit weight (g) for variances

(iv) Table 1 in [3] for fruit set (%) for control variance and GA₃ 20 value and variance

Table 2 in [2] also shows the same results as follows:

(i) Table 1 in [3] for K⁺ content (mg/kg) variances

The studies [1, 5] report one season of overlapping data on GA₃ treatment affecting chlorophyll and anthocyanin, i.e., December 2010–May 2011 in Banting.

The studies [1, 6] report experiments using 2,4-D during the same period (2008–11) in the same places (Klang and Banting). The only common outcome is total sugar, reported in [1] as mg/100 g and in [6] as g/100 g pulp, but the values are not the same. The corresponding author said that total fruit was used in [1] and edible fruit pulp in [6].

The corresponding author said that some data were reused due to premature fruit drop in some experiments, but the underlying data are no longer available.

References

- [1] Mohammad Moneruzzaman Khandaker, Amru Nasrulhaq Boyce, Normaniza Osman, and Abm Sharif Hossain, "Physiochemical and Phytochemical Properties of Wax Apple (*Syzygium samarangense* [Blume] Merrill & L. M. Perry var. Jambu Madu) as Affected by Growth Regulator Application," *The Scientific World Journal*, vol. 2012, Article ID 728613, 13 pages, 2012.
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- [5] Mohammad Moneruzzaman Khandaker, Ali Majrashi, and Amru Nasrulhaq Boyce, "The influence of gibberellic acid on the chlorophyll fluorescence, protein content and PAL activity of wax apple (*Syzygium samarangense* var. Jambu madu) fruits," *Australian Journal of Crop Science*, vol. 9, no. 12, pp. 1221–1227, 2015, http://www.cropj.com/khandaker_9_12_2015_1221_1227.pdf.
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