



Erratum to “Applications and immobilization strategies of the copper-centred laccase enzyme; a review” [Heliyon Volume 9, Issue 2, February 2023, Article e13156]

Hilda Dinah Kyomuhimbo, Hendrik G. Brink *

Water Utilisation and Environmental Engineering Division, Department of Chemical Engineering, University of Pretoria, South Africa

In the original published version of this article, the legends for **Figs. 4, 5, 7 and 8** were missing. These have now been provided by the authors again, to include in the published article. The correct figure legends can be found below. The publisher apologizes for the errors. Both the HTML and PDF versions of the article have been updated to correct the errors.

Erratum: Figure legends.

Fig. 4

Key.

A-polymers, B-Nanoparticles (NPs) and (nanoparticle-polymer composites) NCs, C-metal organic frameworks (MOF), D-silica, E-biomass, F-clay, G-crosslinked enzyme aggregates (CLEAs) and free enzyme, H-zeolite.

Caption.

Fig. 4: A graph showing the percentage degradation of various drugs, pesticides, herbicides and other organic pollutants that have been degraded using laccase enzyme immobilized on various supports with different times of exposure, that is, 0–6 h, 6–24 h and over 24 h.

Fig. 5

Key.

A-unspecified fungi, B-*Aspergillus sp.*, C-*Cerrena sp.*, D-*M. thermophila*, E-*Pleurotus sp.*, F-*Trametes sp.*, G-other fungi, H-*Bacillus sp.*, I-*E. coli.*, J-*Brevibacterium sp.*, K-*Shewanella sp.*, L-*Alcaligenes sp.*

Caption.

Fig. 5: A graph showing laccase immobilized on various supports and its efficiency in degrading synthetic dyes, textile effluents, olive mill waste water and paper industry effluents at different hours of exposure, that is, 0–6 h, 6–24 h and over 24 h.

Fig. 7

Key.

A-unspecified fungi, B-*Aspergillus sp.*, C-*Cerrena sp.*, D-other fungi, E-*M. thermophila*, F-*Pleurotus sp.*, G-*Rhus sp.*, H-*Trametes sp.*, I-*Bacillus sp.*, J-*E. coli.*, K-*Sphingobacterium ksn-11*, L- γ -*Proteobacterium JB*.

*0–1 month storage, **1–4 months storage, ***over 4 months storage.

Caption.

Fig. 7: A graph showing the storage stability (percentage retained activity after storage) of free and immobilized laccase on various

DOI of original article: <https://doi.org/10.1016/j.heliyon.2023.e13156>.

* Corresponding author.

E-mail address: deon.brink@up.ac.za (H.G. Brink).

<https://doi.org/10.1016/j.heliyon.2023.e17324>

Received 13 June 2023; Accepted 13 June 2023

Available online 3 July 2023

2405-8440/© 2023 The Author(s). Published by Elsevier Ltd. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

supports after 1 month, 1–4 months and over 4 months.

Fig. 8

Key.

A-Unspecified, B-other fungi, C-*Aspergillus sp.*, D-*M. thermophila*, E-*Pleurotus sp.*, F-*Trametes sp.*, G-*Cerrena sp.*, H-*Rhus sp.*, I-*Bacillus sp.*, J-*E. coli*, K-*Shewanella sp.*, L- *Sphingobacterium ksn-11*, M – *S. psammoticus*, N- *G. lucidium*.

Caption.

Fig. 8: A graph showing reusability (retained percentage activity) of laccase immobilized on various supports after 1–5 cycles, 5–10 cycles, 10–50 cycles and over 50 cycles.