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# Corrigendum: Applied insight: studying reducing the carbon footprint of the drying process and its environmental impact and financial return

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### KEYWORDS

drying, solar energy, hybrid solar dryer, energy consumption, greenhouse gas emissions, carbon footprint

## A Corrigendum on

Applied insight: studying reducing the carbon footprint of the drying process and its environmental impact and financial return

by Ibrahim A, Amer A, Elsebaee I, Sabahe A and Amer MA (2024). Front. Bioeng. Biotechnol. 12: 1355133. doi: 10.3389/fbioe.2024.1355133

In the published article, there was an error in Figures 2, 3D as published. There was an error in the arrangement of ratio values on the columns. The corrected Figures 2, 3D appear below.

In the published article, there was an error. As a result of modifying Figures 2, 3D, it was necessary to amend paragraphs in the Abstract, Results and discussions, and Conclusion sections.

A correction has been made to Abstract. This sentence previously stated:

"The highest CO<sub>2</sub> mitigated ratio using the HS<sub>TEE</sub> dryer was recorded in thyme, marjoram, and lemongrass samples, with values ranging from 45% to 54% at 30, 40, and 50°C."

The corrected sentence appears below:

"The highest  $CO_2$  mitigated ratio using the  $HS_{TEE}$  dryer was recorded in lavender, thyme, basil, lemongrass, and sage samples with values ranging from 45% to 54% at 30, and 50°C."

A correction has been made to **3 Results and discussions**, Paragraph 3. This sentence previously stated:

"The highest ratio of energy reduction for the  $HS_{TEE}$  dryer compared to the TE dryer was recorded for thyme samples at 30, 40, and 50°C with values of 49%, 50%, and 54%, respectively. The lowest ratio of energy reduction for the  $HS_{TEE}$  dryer ranged between 37% and 40% for basil, lavender, and sage at 30°C and 40°C."

The corrected sentence appears below:

"The highest ratio of  $CO_2$  mitigated was noted for lavender, thyme, basil, lemongrass, and sage samples with values ranging from 45% to 54% at 30, and



50°C. The lowest ratio of energy reduction for the  $HS_{TEE}$  dryer ranged between 37% and 40% for lavender, marjoram, lemongrass, and thyme at 40 °C and 50°C."

A correction has been made to Results and discussions, Paragraph 6. This sentence previously stated:

"The highest ratio of CO2 mitigated was noted for thyme, marjoram, and lemongrass samples with values ranging from 45% to 54% at 30, 40, and 50°C."

The corrected sentence appears below:

"The highest ratio of CO2 mitigated was noted for lavender, thyme, basil, lemongrass, and sage samples with values ranging from 45% to 54% at 30, and 50°C."

A correction has been made to 4 Conclusion, Paragraph 1. This sentence previously stated:

"However, for sage, lavender, and basil at 30°C and 40°C, the lowest energy reduction ratio obtained using the HS<sub>TEE</sub> dryer varied from 37% to 40%."

The corrected sentence appears below:

"However, for lavender, marjoram, lemongrass, and thyme at 40°C and 50°C, the lowest energy reduction ratio obtained using the HS<sub>TEE</sub> dryer varied from 37% to 40%."

The authors apologize for these errors and state that they do not change the scientific conclusions of the article in any way. The original article has been updated.



Schematic representation of the CO<sub>2</sub> mitigated/year using the HSTEE dryer and hybrid solar dryer based on proposed photovoltaic solar energy (HSPVSE dryer) vs. TE dryer at different CO<sub>2</sub> emission factors. (A) Coal emission factor (kgCO<sub>2</sub>/kWh), (B) oil emission factor (kgCO<sub>2</sub>/kWh), (C) natural gas emission factor (kgCO<sub>2</sub>/kWh), and (D) annual CO<sub>2</sub> mitigated ratio

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