



Corrigendum

Corrigendum to “Experimental characterization of a foldable solar cooker with a trapezoidal cooking chamber and adjustable reflectors” [Energy Sustain. Dev. 79 (2024) 101409]

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The authors regret that inappropriate references were cited in some sentences of the subsection “Performance parameters for solar cooker testing with load” of the original manuscript. In this Corrigendum, the sentences with the correct references are reported to avoid giving inaccurate information.

The authors would like to apologize for any inconvenience caused.

Text in the original paper	New text
Page 8, subsection “Performance parameters for solar cooker testing with load”, first paragraph, lines 7–11	
The average overall efficiency for Δt where the temperature of the fluid changes from T_{f1} to T_{f2} is (Mullick et al., 1987):	The average overall efficiency for the time interval Δt where the temperature variation of the fluid changes from T_{f1} to T_{f2} is:
$\eta_{avg} = \Omega \frac{\Delta T_f}{G_n A_n \Delta t} \quad (8)$	$\eta_{avg} = \Omega \frac{\Delta T_f}{G_n A_n \Delta t} \quad (8)$
where $\Delta T_f = T_{f2} - T_{f1}$. In particular, T_{f1} and T_{f2} are equal to 40 °C and 90 °C, respectively, for the water load tests and 40 °C and 105 °C, respectively, for the glycerin load tests.	where $\Delta T_f = T_{f2} - T_{f1}$. In particular, T_{f1} and T_{f2} are equal to 40 °C and 90 °C, respectively, for the water load tests and 40 °C and 105 °C, respectively, for the glycerin load tests. The definition of the efficiency expressed by Eq. (8) would be similar to the definition proposed by Khalifa et al. (1985) if the direct normal solar irradiance (G_{bn}) were adopted instead of the global solar irradiance (G_n).

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Text in the original paper	New text
Page 9, subsection “Performance parameters for solar cooker testing with load”, second paragraph, lines 1–12	
According to the HWB formulation usually applied when reporting the performance of solar collectors used to heat up a water flow, the instantaneous efficiency of a solar cooker in the process of heating up a certain mass of water or another fluid can be mathematically expressed as (Khalifa et al., 1985; Ruivo et al., 2022):	According to the HWB formulation usually applied when reporting the performance of solar collectors used to heat up a water flow, the instantaneous efficiency of a solar cooker in the process of heating up a certain mass of water or another fluid can be related by:
$\eta = F' \eta_o - \left(\frac{F' U_L}{C} \right) \frac{T_f - T_{amb}}{G_n} = \alpha_0 - \alpha_1 \chi \quad (12)$	$\eta = \alpha_0 - \alpha_1 \chi \quad (12)$
where F' corresponds to the heat exchange efficiency factor, C is the concentration ratio, and $\chi = (T_f - T_{amb})/G_n$. The coefficients α_0 and α_1 can be determined from the plot of points (η, χ) calculated in 5 min intervals. In fact, α_0 and α_1 are the intercept value and the opposite value of the thermal efficiency linear fitting's slope, respectively. The opto-thermal ratio of the cooker (COR) can be calculated using the regression coefficients and is given numerically as (Khalifa et al., 1985; Ruivo et al., 2022):	where $\chi = (T_f - T_{amb})/G_n$ and the coefficients α_0 and α_1 can be determined from the plot of points (η, χ) calculated in 5 min intervals. In fact, α_0 and α_1 are the intercept value and the opposite value of the thermal efficiency linear fitting's slope, respectively. Considering that $\alpha_0 = F' \eta_o$ and $\alpha_1 = (F' U_L)/C$, where F' corresponds to the heat exchange efficiency factor and C is the concentration ratio, the opto-thermal ratio of the cooker (COR), established by Lahkar et al. (2012) for the first time, can be calculated as:
$COR = \frac{\alpha_0}{\alpha_1} = \frac{\eta_o C}{U_L} \quad (13)$	

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Text in the original paper	New text
	$COR = \frac{\alpha_0}{\alpha_1} = \frac{\eta_o C}{U_L} \quad (13)$ <p>As shown in various works (Lahkar et al., 2012; Sagade et al., 2018a, 2018b, 2022), the COR was calculated for tests with different fluids, such as water and glycerin. However, it is important to mention that most of the studies concerning COR have been done using glycerin, which was used for the first time as a test fluid for solar cookers by Sagade et al. (2018a).</p>

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