Correction to: Thermal analysis for heat transfer enhancement in electroosmosis-modulated peristaltic transport of Sutterby nanofluids in a microfluidic vessel

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Received: 5 February 2019 / Accepted: 16 February 2019 / Published online: 12 March 2019
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Correction to: Journal of Thermal Analysis and Calorimetry
<https://doi.org/10.1007/s10973-018-7939-7>

The original article was published with typographical errors in the non-dimensionalization and parameters involved in the equations.

In Ramesh and Prakash [1], it was noticed that Eq. (1) was incorrect. The correct equation is now provided as follows:

$$H = \pm \left(d - b \cos^2 \left(\frac{\pi}{\lambda} (X - ct) \right) \right), \quad (1)$$

it was wrongly typed a instead of d in [1], where d is the half-width of the channel. With this change, there is a mismatch in Fig. 1. The correct figure is as follows:

In [1], there was a typographical error in non-dimensional parameter $\bar{S}_{ij}$, the correct expression is $\bar{S}_{ij} = dS_{ij}/c\mu_f$, with this the expression is dimensionless. There were two typographical errors in Eqs. (40) and (41) in [1]. The correct expressions are

$$u + \alpha \left[\left\{ 1 - \beta \left(\frac{\partial u}{\partial y} \right)^2 \right\} \frac{\partial u}{\partial y} \right] = -1, \quad \frac{\partial \theta}{\partial y} + Bh\theta = 0, \\ \frac{\partial \sigma}{\partial y} + Bm\sigma = 0 \quad \text{at } y = h = 1 - a \cos^2 \pi x, \quad (40)$$

$$u - \alpha \left[\left\{ 1 - \beta \left(\frac{\partial u}{\partial y} \right)^2 \right\} \frac{\partial u}{\partial y} \right] = -1, \quad \frac{\partial \theta}{\partial y} - Bh\theta = 0, \\ \frac{\partial \sigma}{\partial y} - Bm\sigma = 0 \quad \text{at } y = -h = -(1 - a \cos^2 \pi x), \quad (41)$$

where $a(=b/d)$ is the wave amplitude ratio, $\bar{\alpha}(=\mu_f\alpha/d)$ is the non-dimensional velocity slip parameter (later dropped the bar for convenience). Due to the typographical errors in Eqs. (40)–(41) in [1], the correct expression for Eq. (48) in [1] is given by

$$\bar{Q} = Q + 1 - h - \frac{a}{2}. \quad (48)$$

The dimensionless quantities $Bh=\eta_h d/\kappa_h$, $Bm=\eta_m d/\kappa_m$, $Gr_t=\rho_f g \beta_t d^2 T_0/c\mu_f$, $Gr_c=\rho_f g \beta_c d^2 C_0/c\mu_f$ are introduced in [1].

Since only dimensionless parameters were used in [1], the later sections and findings of [1] remain unchanged by the corrected scalings.

The authors would like to apologize for any inconvenience caused.

The original article can be found online at <https://doi.org/10.1007/s10973-018-7939-7>.

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Fig. 1 Physical sketch of the problem

Acknowledgements We wish to thank Professor Asterios Pantokratoras (School of Engineering, Democritus University of Thrace, Greece) for bringing these typographical errors to our attention.

References

1. Ramesh K, Prakash J (2018) Thermal analysis for heat transfer enhancement in electroosmosis-modulated peristaltic transport of Sutterby nanofluids in a microfluidic vessel. *J Therm Anal Calorim*. <https://doi.org/10.1007/s10973-018-7939-7>.