



Cite this: *Analyst*, 2017, **142**, 2846

Correction: A smart multi-pipette for hand-held operation of microfluidic devices

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DOI: 10.1039/c7an90050c
 rsc.li/analyst

Correction for 'A smart multi-pipette for hand-held operation of microfluidic devices' by Byeongyeon Kim *et al.*, *Analyst*, 2016, **141**, 5753–5758.

In the original manuscript, the expression for the generated pressure drop by the smart pipette, eqn (3) was given incorrectly, as

$$P_{n+1} = \frac{V_1}{V_2 + (\Delta V_3)_t} P_{\text{atm}}$$

The correct formula should be as follows:

$$P_{n+1} = \frac{V_1 - (\Delta V_3)_t}{V_2 + (\Delta V_3)_t} P_{\text{atm}} \quad (3)$$

To reflect this change, amendments are required to Fig. 1 and the text.

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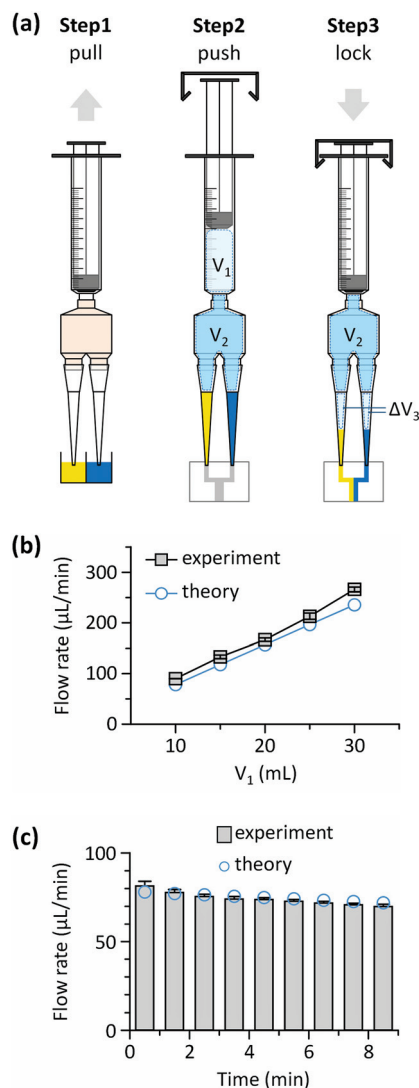


Fig. 1 Operation of the smart multi-pipette. (a) Three-step smart multi-pipetting procedure. Two different fluids are first drawn into the pipette tips by pulling the plunger of the smart multi-pipette. After loading a microfluidic device onto the tips, a certain pressure drop is generated through the device by fully depressing the plunger. Engaging the plunger holder locks the plunger in position and maintains the pressure drop. (b) Comparison of the experimental and theoretical results for the volumetric flow rates generated by the smart multi-pipette ($n = 3$). (c) Experimental and theoretical flow-rate profiles during device operation for pumping 667 μL of water ($n = 3$). Error bars represent standard deviation.

• Fig. 1b and c are affected by the correction needed to the theoretical estimation for the generated pressure by the smart pipette, and the overall corrected version of Fig. 1 is as follows:

• The first sentence on p. 5755 should be amended as follows:

‘If $V_2 \gg (\Delta V_3)_t$ and $V_1 \gg (\Delta V_3)_t$, the pressure change becomes negligible and thus the smart multi-pipette maintains a constant pressure during device operation.’

• The fourth sentence of the third paragraph on p. 5755 should be amended as follows:

‘We note that the experimental value is higher than the theoretical expectation of 7.8%.’

The changes do not affect any of the conclusions of the article.

The Royal Society of Chemistry apologises for these errors and any consequent inconvenience to authors and readers.

