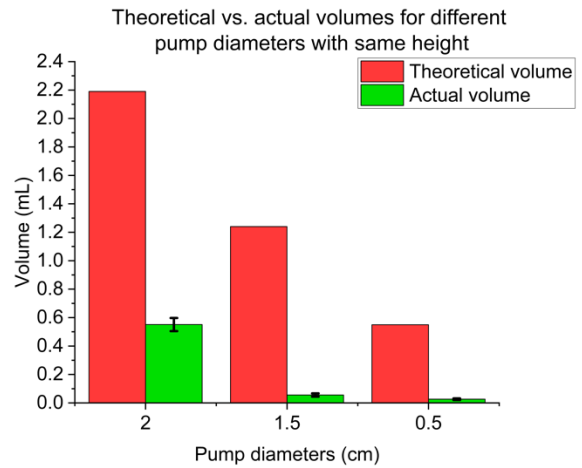
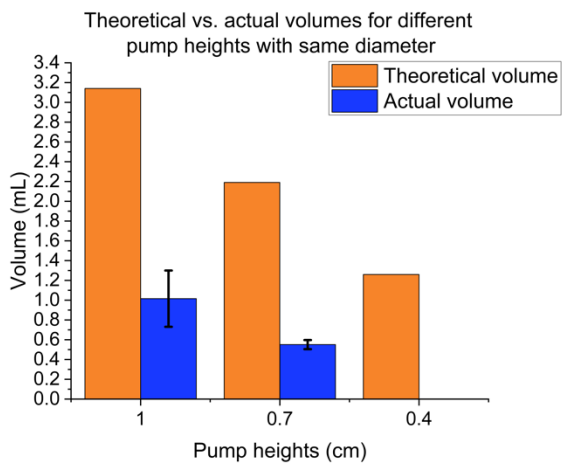


Supplementary 1. A) Glucose sensor; B) Extension part mold, PDMS extension part, and glass capillary; C) Final glucose device after assembling; D) Operating glucose device to pump the solution into the sensor by pressing PDMS micropump.



Supplementary 2. A) Three different PDMS micropumps of 1 cm, 0.7 cm, and 0.4 cm heights with the same 2 cm diameter; B) Three different PDMS micropumps with 2 cm, 1.5 cm, and 0.5 cm diameters with the same 0.7 cm height. C) Theoretical and actual volumes for three PDMS micropumps with different heights; D) Theoretical and actual volumes for three PDMS micropumps with different diameters.