

Fig. S1(a) Photograph of micro-fluidic chip with encased monolithic EOPs, (b) Schematic diagram of the full apparatus for characterising the μ -FIA chip. EOP_a: preconcentration and injection pump; EOP_b: carrier pump; Flow sensor: NFS; Detector: C⁴D.

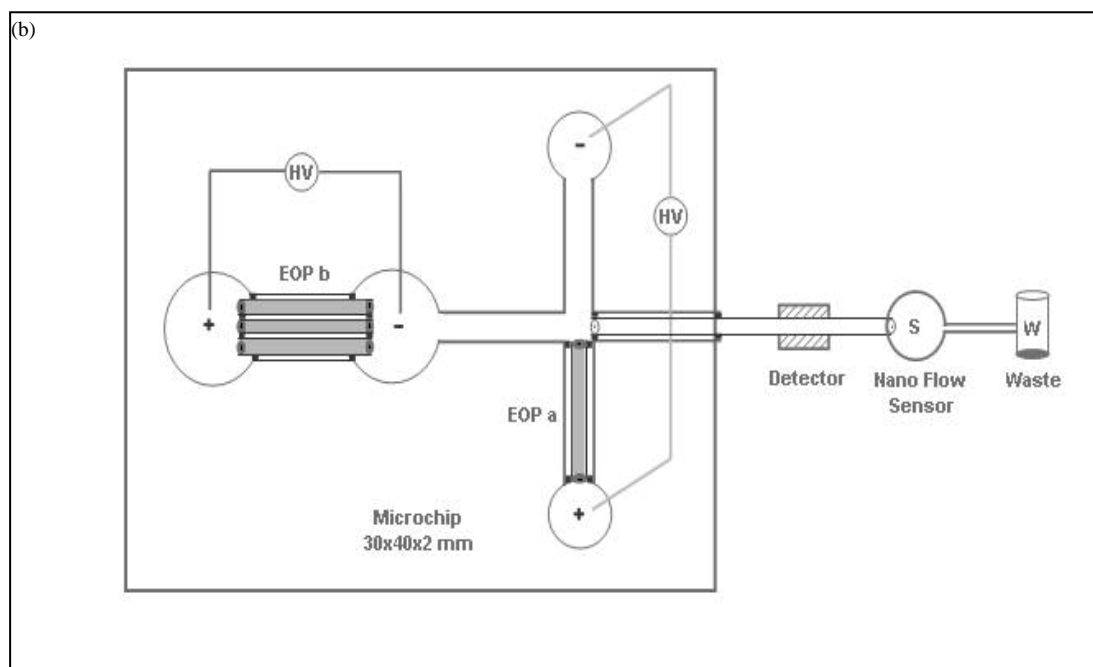
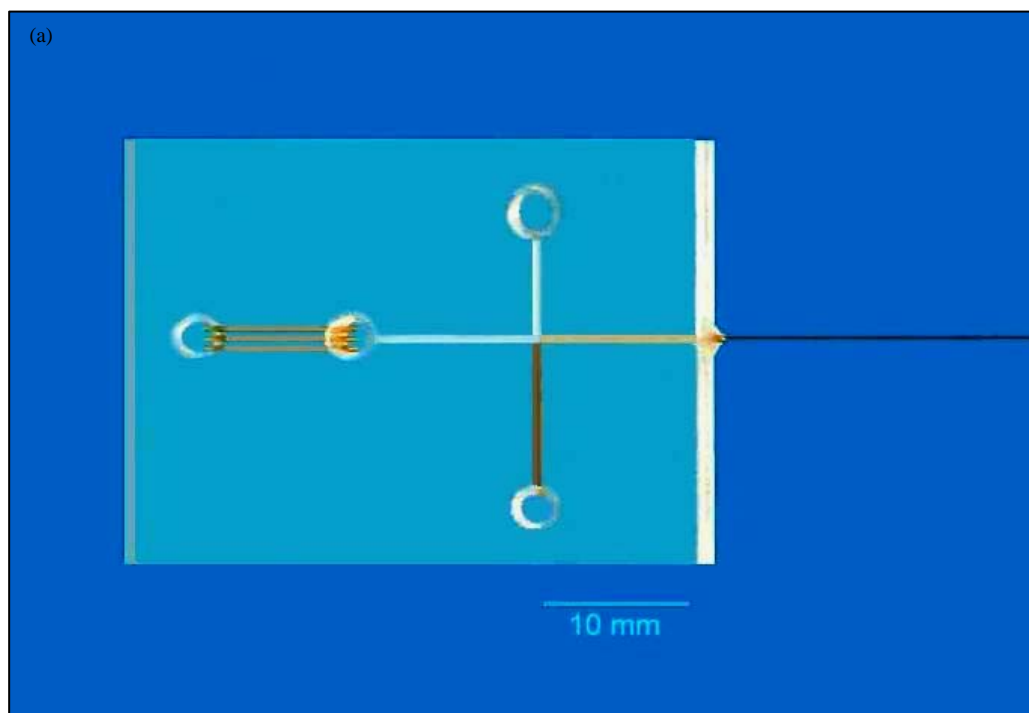
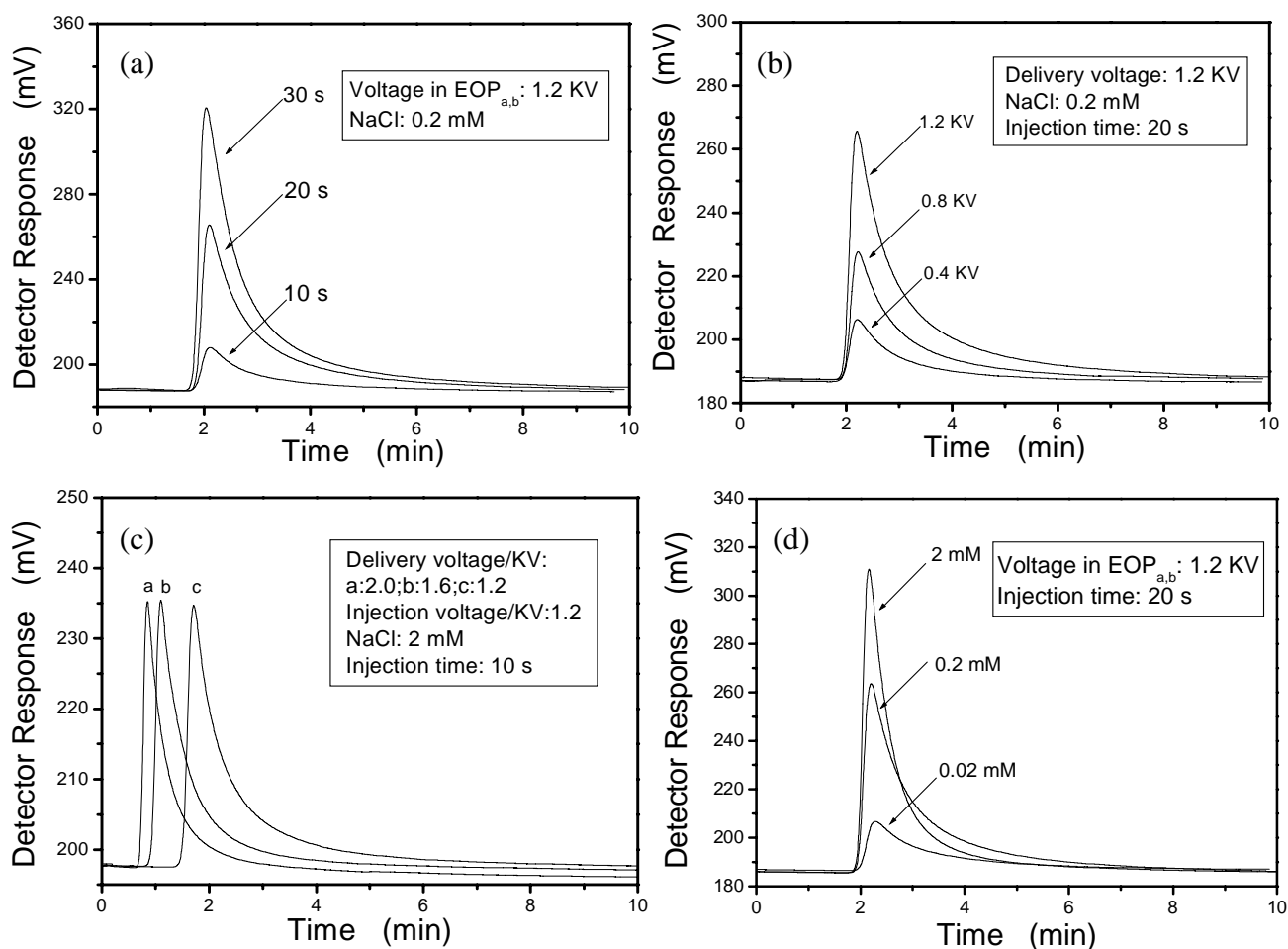


Fig. S2 Peak profiles for NaCl solution resulting from (a) increasing injection time with EOP_a and EOP_b voltages constant; (b) increasing EOP_a voltage with EOP_b constant; (c) increasing EOP_b voltage with EOP_a constant; (d) increasing sample concentration with EOP_a and EOP_b voltages constant. Working fluid in $EOP_{a,b}$: sodium chloride solution and DI-water respectively.



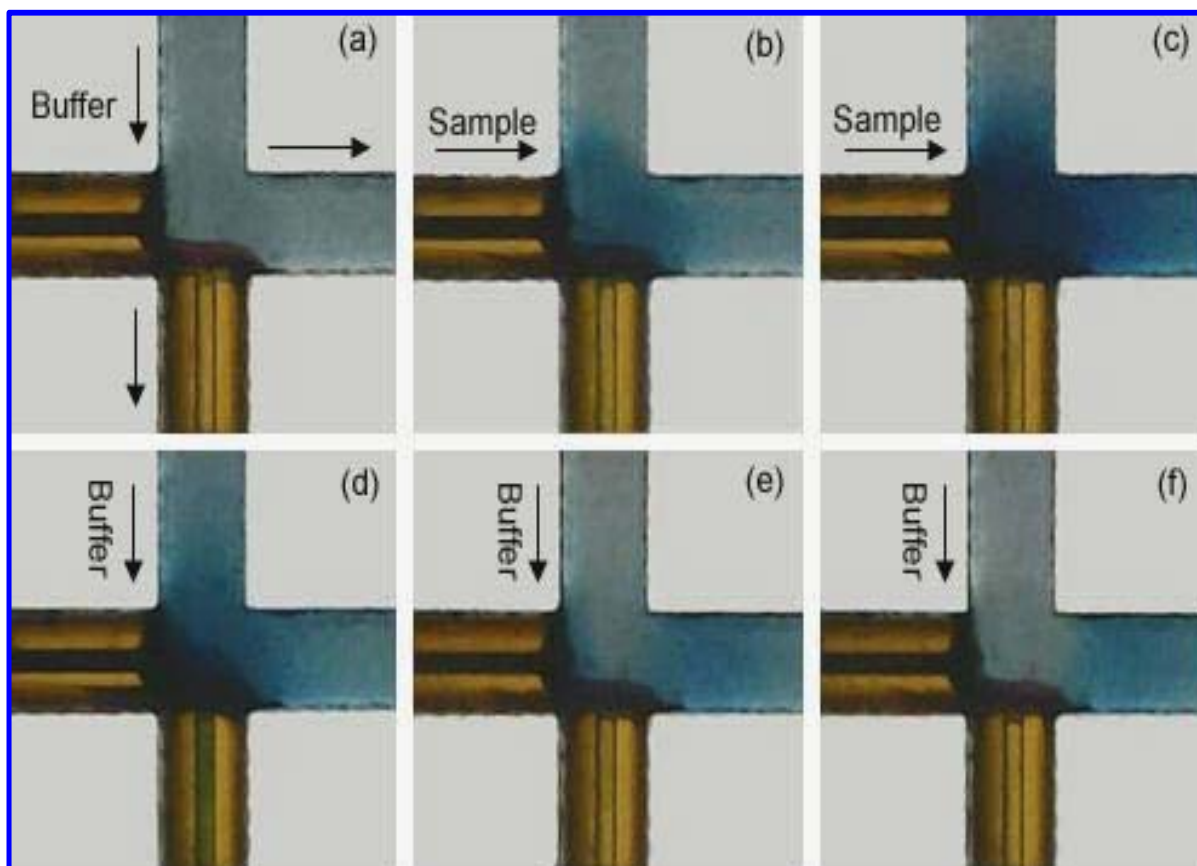


Fig. S3. Photographs showing the injection of a blue dye solution using EOP_a (b-c) followed by delivery into the detector capillary using EOP_b (d-f). Injection = 10 s at 1.2 kV.