Supplementary Figures

**Fig S1.** An image of a fully assembled 2DPN showing the sample wells, PMMA jig, source pads and absorbent pad.

**Fig S2.** Disassembled flat paper Y-mixer. Note that there was ~1 min between disassembly and image acquisition. Dashed line demarcates placement of the clear Mylar spacer.

**Fig S3.** Serial dilution in a paper device. Left inlet contains erioglaucine and top inlets contain tartrazine.