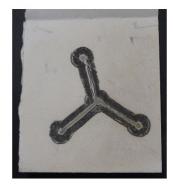
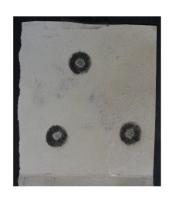
"Scratch it out": Carbon-copy based Paper devices for microbial assays and liver disease diagnosis.

Amrutha Hasandka^{a±}, Anusha Prabhu^{a±}, Akshata Prabhu^{a±}, Hardik Ramesh Singhal^{b±}, Giri Nandagopal M S^c, Revathi Shenoy^d, Naresh Kumar Mani^{a,e*}

Paper-based origami device fabricated using Carbon copy







Layer 1

Layer 2

Layer 3

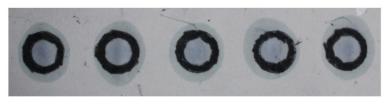
Supplementary figure 1: Paper-based origami device fabricated using carbon-copy approach with water sample confined inside the circular device & channel.

Barrier thickness – 1 mm



Leaked

Barrier thickness – 2 mm

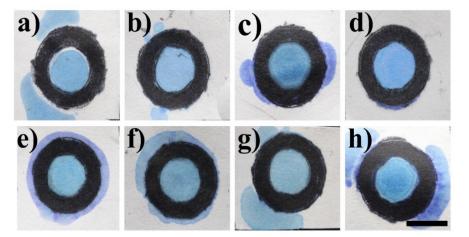


Leaked

Barrier thickness – 3 mm

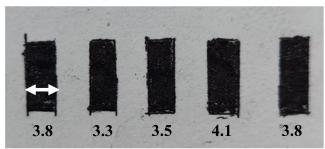


Confined

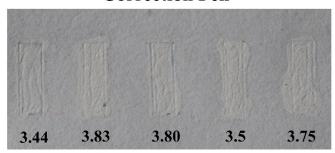


Supplementary figure 3: Barrier disruption using non-polar solvents and surfactants (a) 50% Ethanol (b) 70% Ethanol (c) DMSO (d) Acetone (e) IPA (f) 1% SDS (g) 1% Triton-X-100 (h)Dimethyl formamide. Scale bar 8 mm.

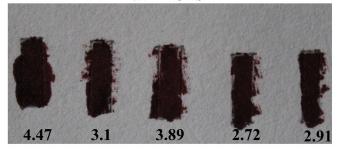
Carbon Copy (All units are in mm)



Correction Pen



Nail Polish



Supplementary figure 4: Barriers fabricated using Carbon copy, Correction Pen and Nail polish with their respective barrier width.