Electronic Supplementary Material (ESI) for Analyst.


# Supplementary information for A Rapid Paper-Based Blood Typing Method from Droplet Wicking

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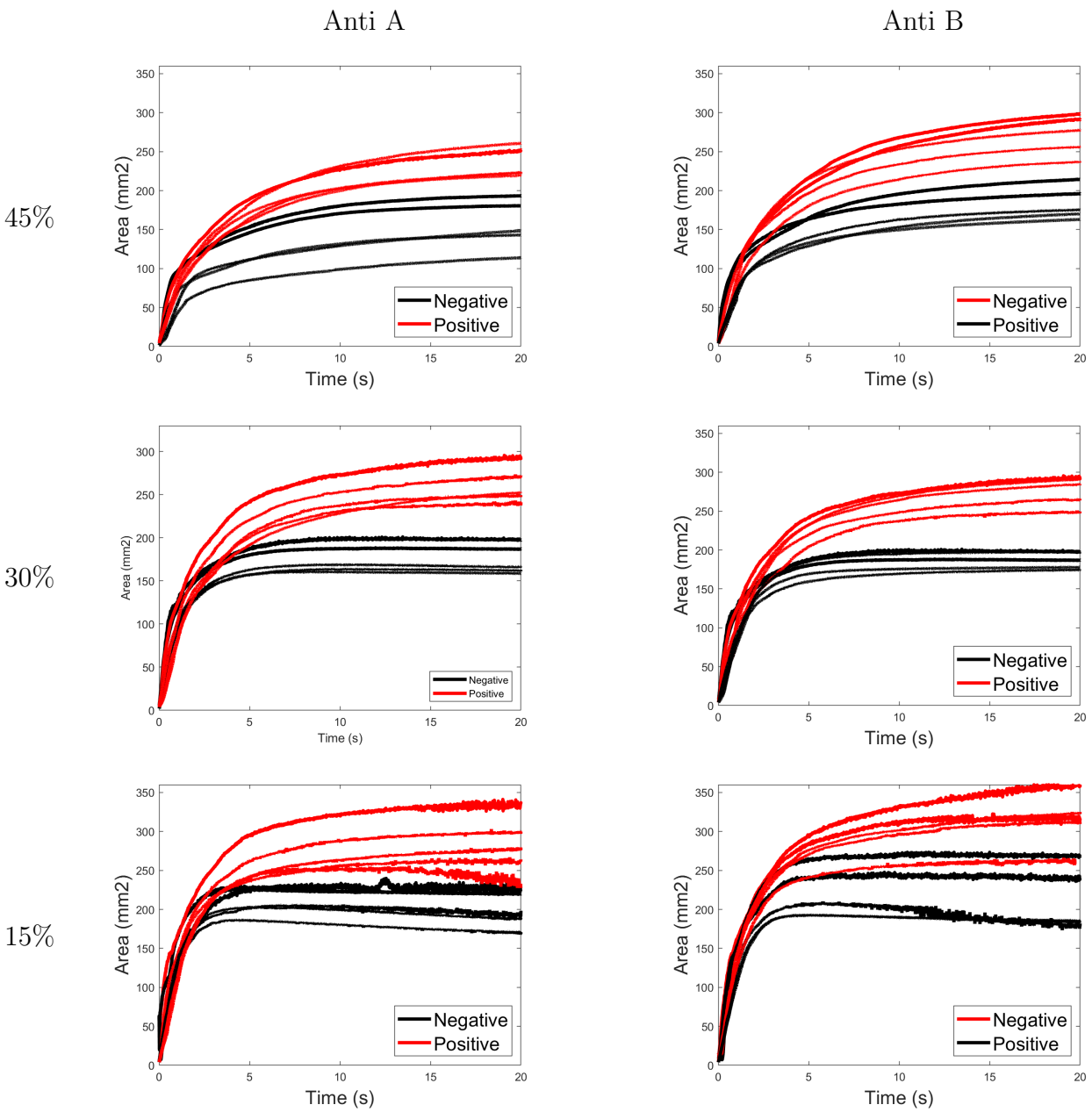



Figure S1: Effect of red blood cell concentration and the type/specificity of antibody on the evolution of the stain size with time for blood droplets spreading on a paper towel previously wet with a droplet of anti A or anti B antibody. Positive and negative test were performed 5 times. In some cases variability was less than the thickness of a line and is therefore hidden.

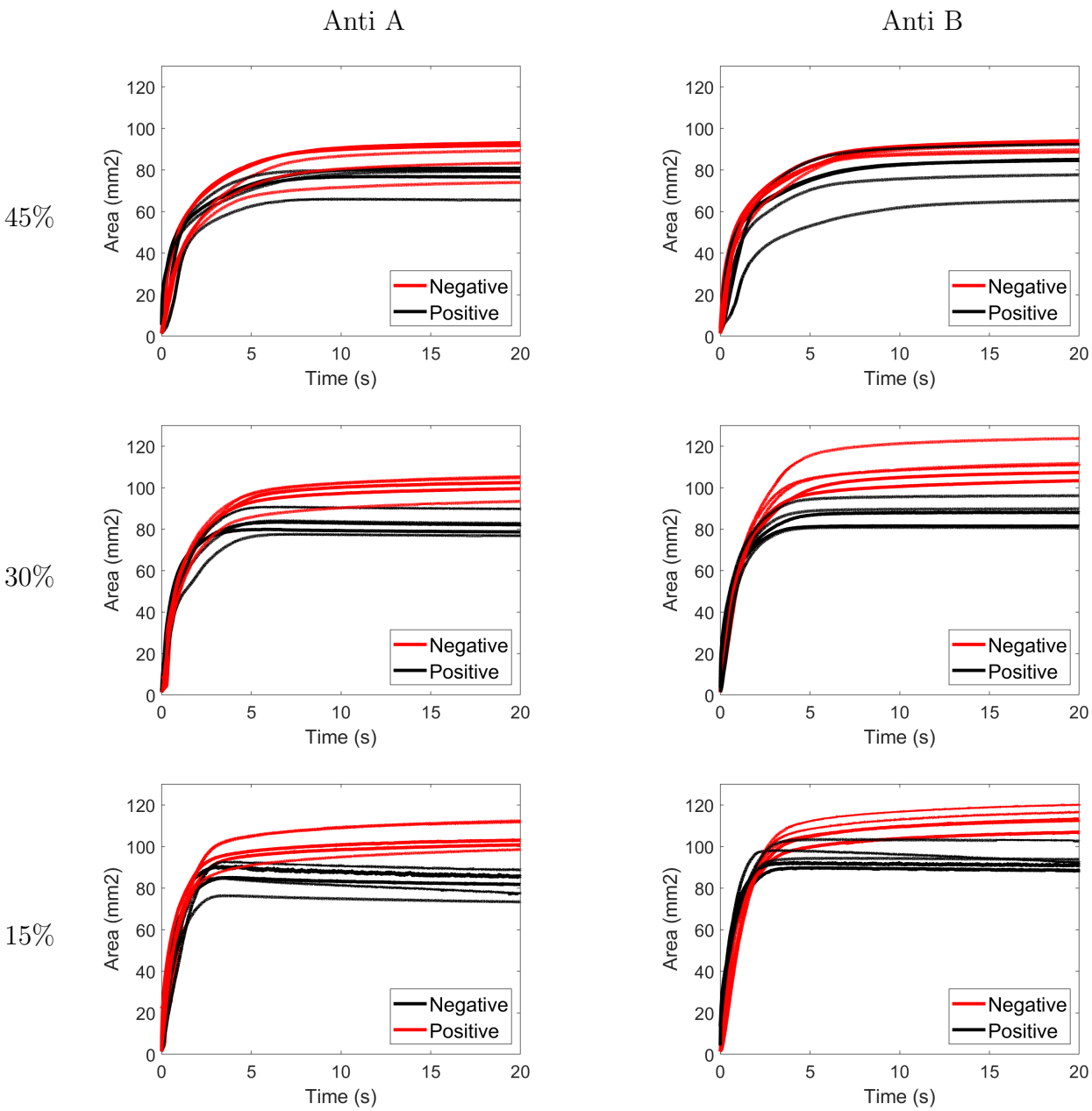
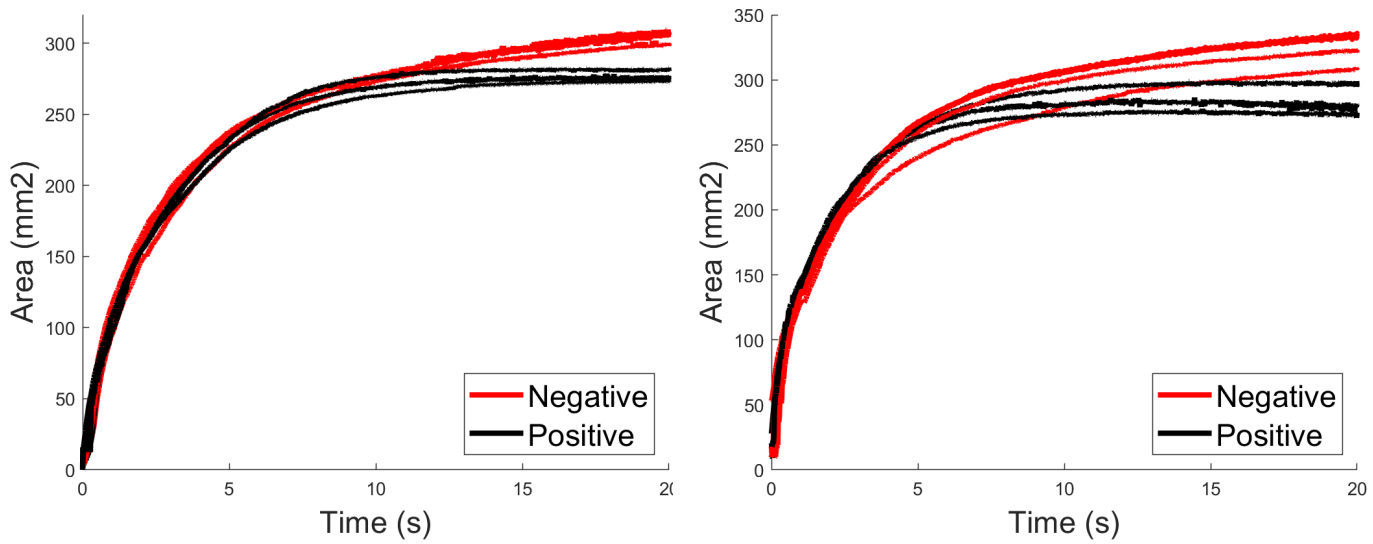


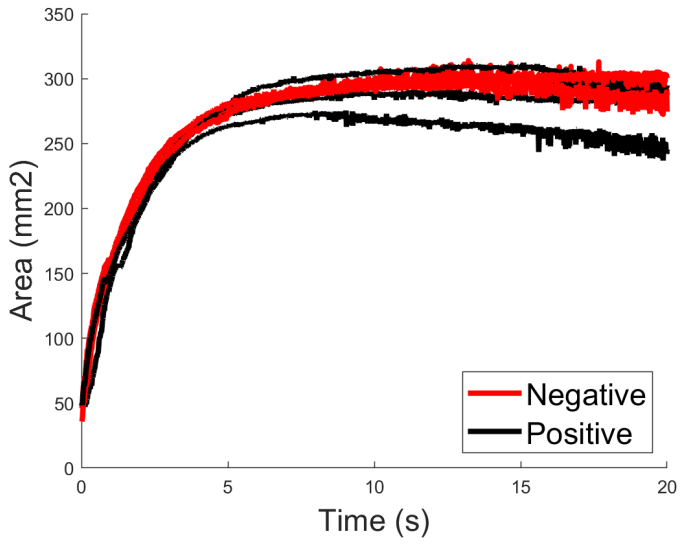

Figure S2: Effect of red blood cell concentration and the type/specificity of antibody on the evolution of the stain size with time for blood droplets spreading on a filter paper previously wet with a droplet of anti A or anti B antibody. Positive and negative test were performed 5 times. In some cases variability was less than the thickness of a line and is therefore hidden.




(a)

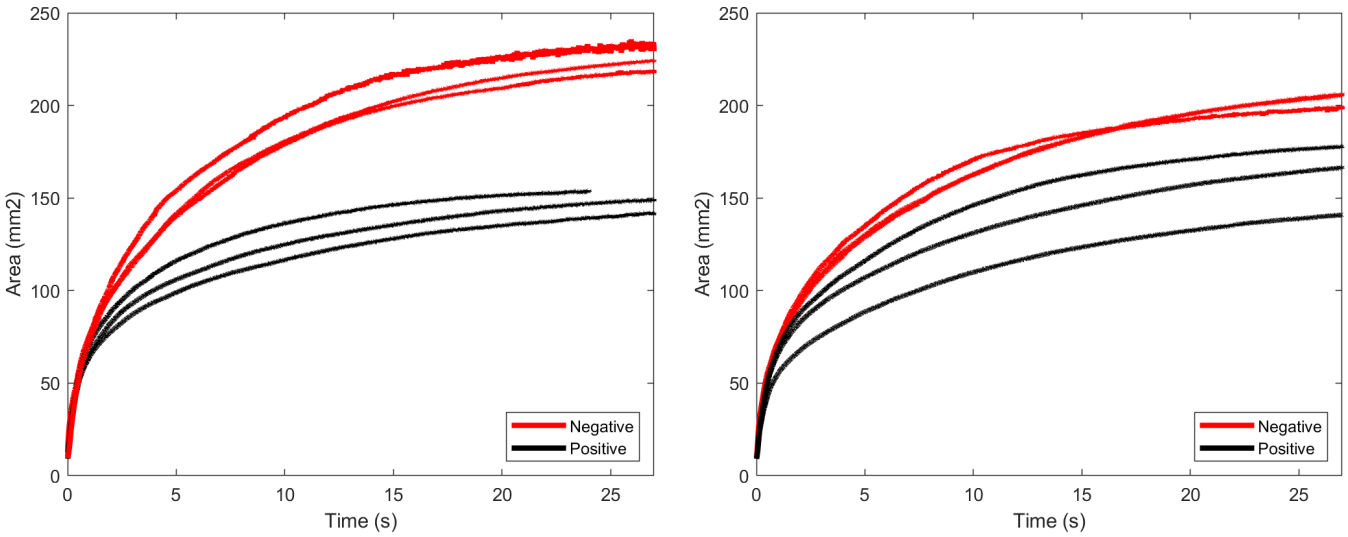



(b)




(c)

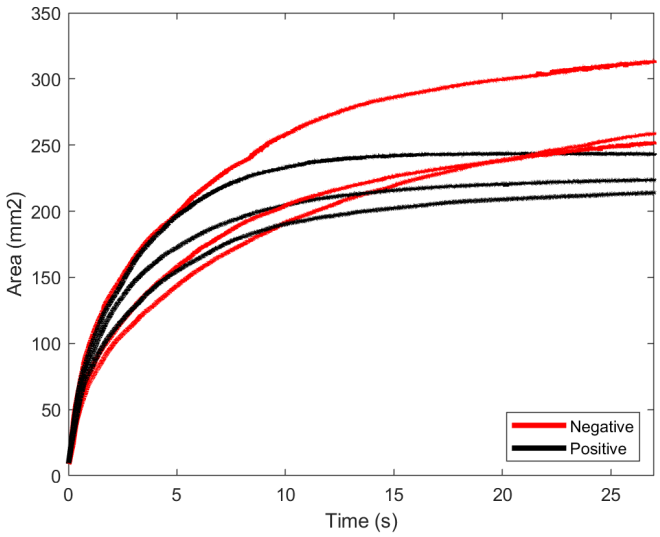
Figure S3: Wicking tests with D antibody solution at different concentrations. a) 45%, b) 30% c) 15%. Positive and negative test were performed 3 times; in some cases variability was less than the thickness of a line and is therefore hidden.




(a)




(b)




(c)

Figure S4: Wicking tests with whole blood on paper towel. a) A and B type blood with Anti-A antibody solution, b) A and B type blood with Anti-B antibody solution and c) D positive and D negative blood with Anti-D antibody solution. Positive and negative test were performed 3 times; in some cases variability was less than the thickness of a line and is therefore hidden.

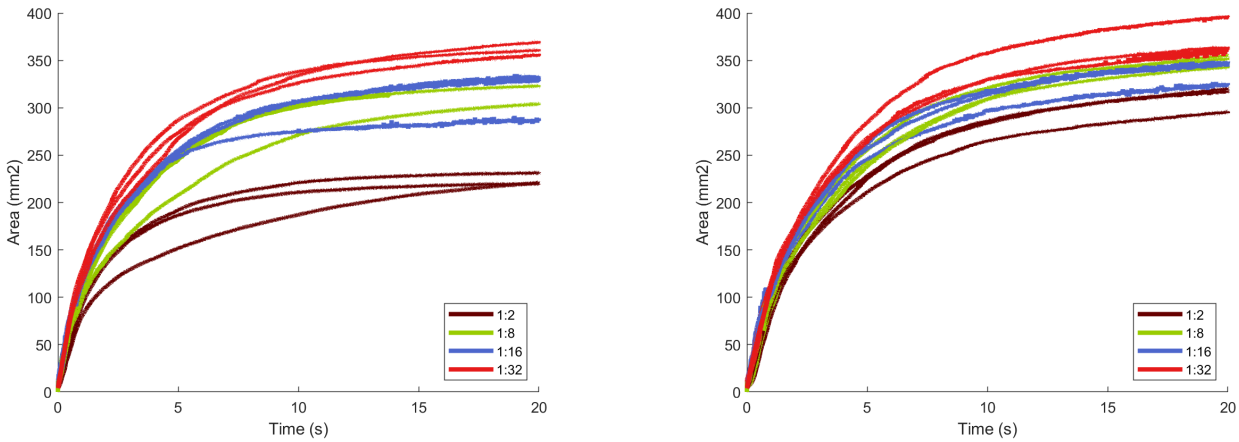



Figure S5: Stain kinetics of (a) A type blood and (b) B type blood on different dilutions of anti-A antibody solutions. Each dilution is tested 3 times, in some cases variability was less than the thickness of a line and is therefore hidden.

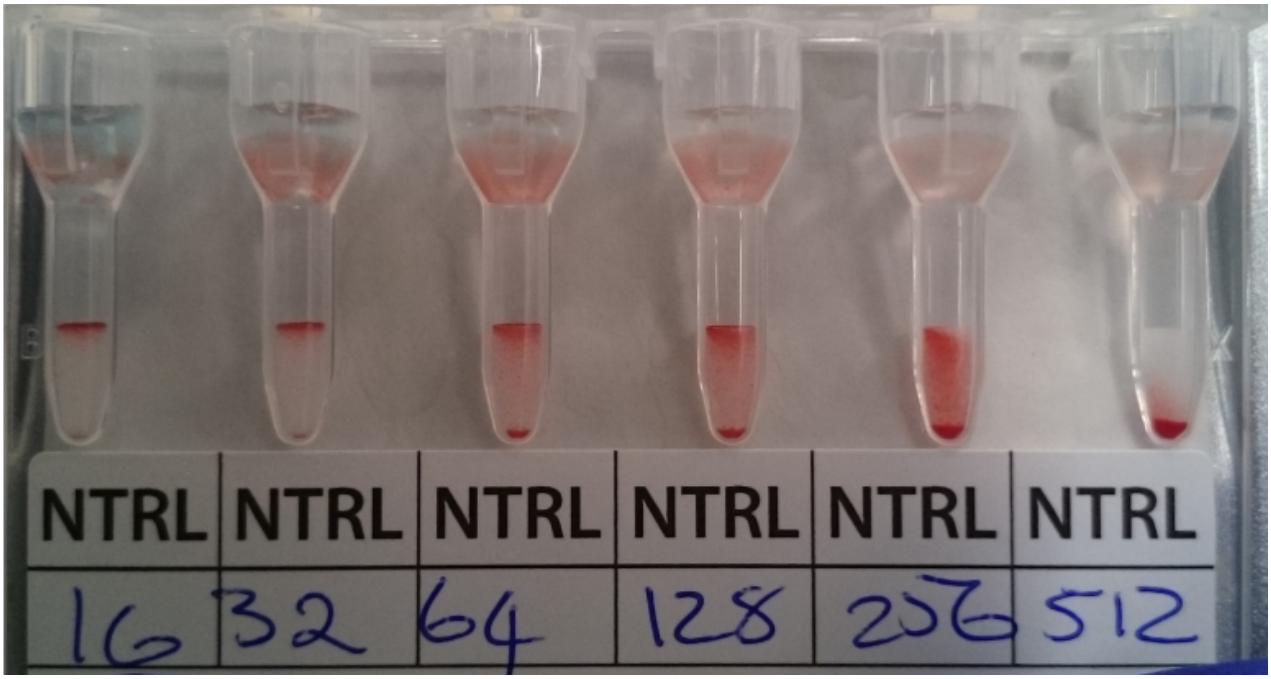



Figure S6: Dilution tests performed using serial dilutions of the same anti-A antibodies using the gel column technique.

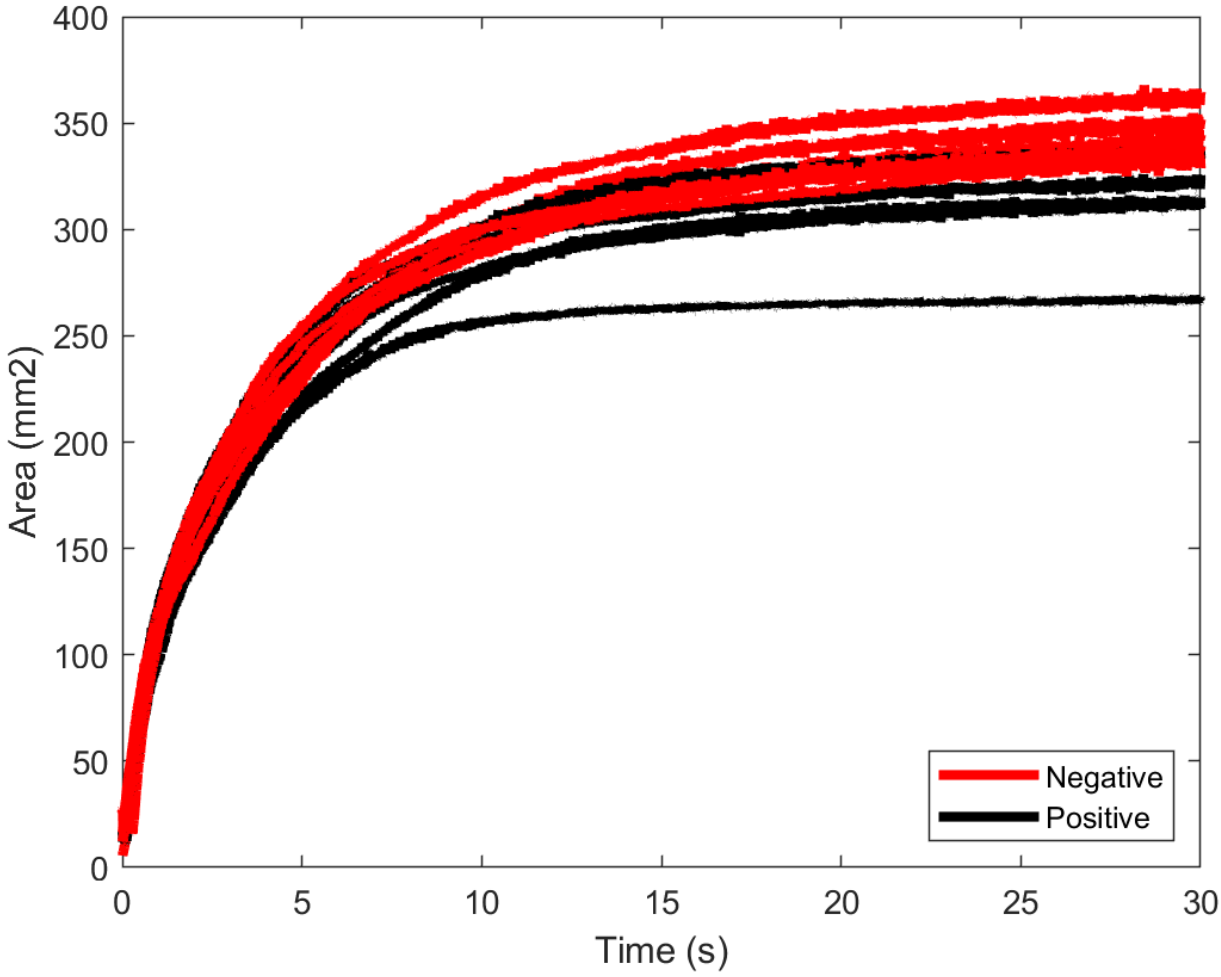



Figure S7: Stain growth evolution for 45% cells solutions wicking over paper wetted with plasma. Positive tests are identified when cells are combined with an incompatible plasma sample (A cells with B plasma or B cells with A plasma). Negative tests are identified when cells are combined with a compatible plasma sample (A cells with A plasma or B cells with B plasma).