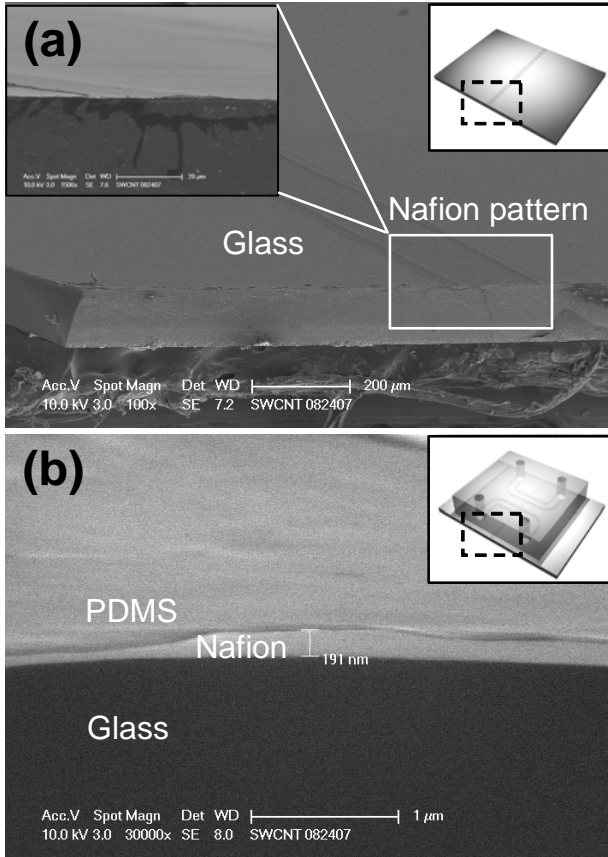


S1.

Scanning electron microscope images of Nafion patterned glasses (b) before and (c) after PDMS bonding step. The thickness of the Nafion membrane on glass was 191 nm.

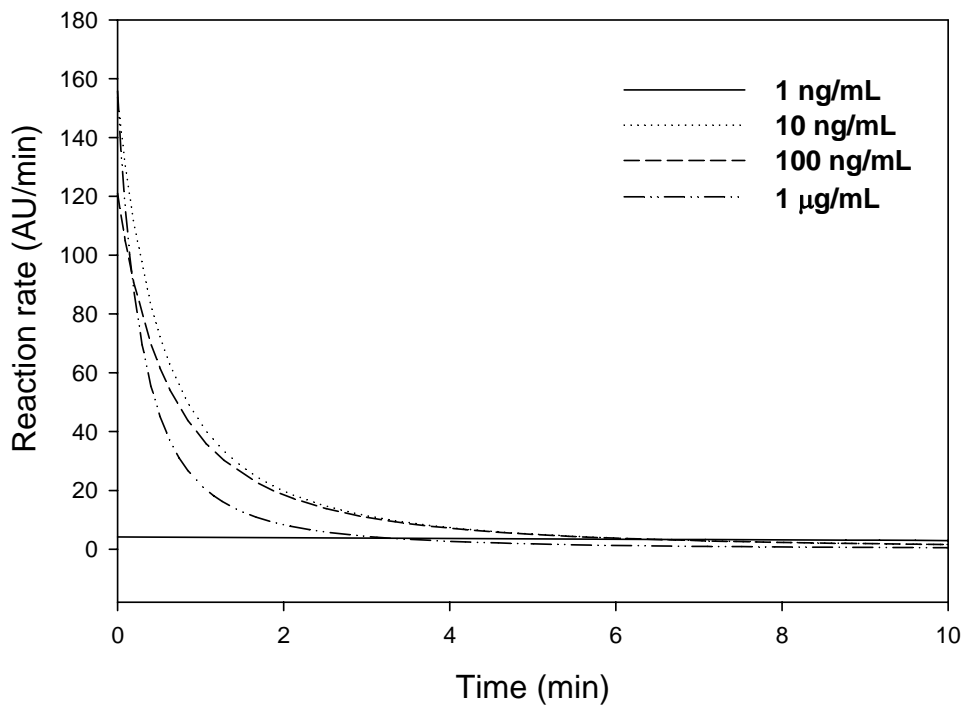


S2.

The fitting curves in Figures 3 have the following equation: $f = \frac{ax}{b+x}$ (hyperbola, 2 parameters). Its first derivate form is: $f' = \frac{ab}{(b+x)^2}$

Table 1. Coefficients for the fitting and slope curves without preconcentration

C_{trypsin}	a	b
1 ng/mL	94.4034±20.1388	0.6925±2.8606
10 ng/mL	155.7665±23.9335	1.4028±2.3908
100 ng/mL	168.6246±20.2717	0.9230±1.6964
1 µg/mL	221.6825±22.6362	1.5820±1.6436



S3.

The fitting curves in Figures 4 have the following equation: $f = \frac{ax}{b+x}$ (hyperbola, 2 parameters). Its first derivate form is: $f' = \frac{ab}{(b+x)^2}$

Table 2. Coefficients for the fitting and slope curves with preconcentration

C_{trypsin}	a	b
10 pg/mL	5720.3163±1130.3878	50.1613±13.9960
100 pg/mL	3346.4409±230.0915	9.3673±1.5716
1 ng/mL	3833.5571±79.3815	1.1567±0.1333