

## **Supplementary Information**

### **Microfluidics-based rapid measurement of nitrite in human blood plasma**

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**Table of contents-**

- Flow rates of the buffer,  $NO_2^-$  stock, plasma, NaOH solution and probe for on-chip mixing and incubation and detection of exogenous  $NO_2^-$  in the centrifuged blood plasma at different concentrations and for 1:2, 1:3, and 1:6 dilutions.

**Table S1** Flow rates of the buffer,  $NO_2^-$  stock (12  $\mu$ M), plasma, NaOH solution and probe for on-chip mixing and reaction and detection of exogenous  $NO_2^-$  in the centrifuged blood plasma at different concentrations and at different dilutions.

$NO_2^-$ concentration ( $\mu$ M)	$NO_2^-$ stock ( $\mu$ L /min)	<i>1:2 dilution</i>		<i>1:3 dilution</i>		<i>1:6 dilution</i>		Probe ( $\mu$ L/min)	NaOH ( $\mu$ L/min)
		Buffer ( $\mu$ L/min)	Plasma ( $\mu$ L/min)	Buffer ( $\mu$ L/min)	Plasma ( $\mu$ L/min)	Buffer ( $\mu$ L/min)	Plasma ( $\mu$ L/min)		
0	0	2.6	2	3.1	1.5	3.75	0.85	0.47	0.93
0.06	0.03	2.57	2	3.07	1.5	3.72	0.85	0.47	0.93
0.12	0.06	2.54	2	3.04	1.5	3.69	0.85	0.47	0.93
0.24	0.12	2.48	2	2.98	1.5	3.63	0.85	0.47	0.93
0.48	0.24	2.36	2	2.86	1.5	3.51	0.85	0.47	0.93
0.96	0.48	2.12	2	2.62	1.5	3.27	0.85	0.47	0.93
1.92	0.96	1.64	2	2.14	1.5	2.79	0.85	0.47	0.93
3.85	1.92	0.68	2	1.18	1.5	1.83	0.85	0.47	0.93

To obtain Different dilutions (1:2, 1:3, and 1:6) and different exogenous  $NO_2^-$  concentrations for centrifuged plasma, we used  $NO_2^-$  working solution of 12  $\mu$ M. The flow rates used for undiluted centrifuged plasma, buffer, probe and  $NO_2^-$  stock is as shown in Table S1.