

**Supplementary data 3: The composition of different pH buffer solutions**

<b>pH Value</b>	<b><i>Disodium hydrogen phosphate</i></b> <b><i>(0.2 mol/L)</i></b>	<b><i>Citric acid</i></b> <b><i>(0.1 mol/L)</i></b>
2.2	0.4 mL	10.6 mL
3.0	2.05 mL	7.95 mL
4.0	3.85 mL	6.15 mL
5.0	5.15 mL	4.85 mL
6.0	6.32 mL	3.68 mL
7.0	8.24 mL	1.76 mL
8.0	9.72 mL	0.28 mL

  

	<b><i>Sodium carbonate</i></b> <b><i>(0.1 mol/L)</i></b>	<b><i>Sodium hydrogen carbonate</i></b> <b><i>(0.1 mol/L)</i></b>
9.1	1.0 mL	9.0 mL
9.9	5.0 mL	5.0 mL
10.8	9.0 mL	1.0 mL