

**Table S1. Supplementary data on solubility of salts and buffers**

<b>Substance</b> (molecular mass)	<b>Solubility</b>	<b>Temp</b> (°C)	<b>Molarity</b>	<b>Reference</b>
<b>NaCl</b> (58.44)	358 g/L.	20	6.13	EC Joint Research Centre Institute for Health and Consumer Protection. <a href="http://esis.jrc.ec.europa.eu/">http://esis.jrc.ec.europa.eu/</a>
<b>KCl</b> (74.55)	344 g/L	20	4.61	CRC Handbook of Chemistry and Physics 1991-92, 72 <sup>nd</sup> ed. DR Lide (ed).
<b>CaCl<sub>2</sub></b> (110.98)	745 g/L	20	6.71	CRC Handbook of Chemistry and Physics 1991-92, 72 <sup>nd</sup> ed DR Lide (ed).
<b>Na<sub>2</sub>SO<sub>4</sub></b> (142.04)	190g/ 1000g	20	1.29	Wells, RC. 1923. Sodium sulphate: its sources and uses. Bulletin 717, United States Geological Survey Department of the Interior. Government Printing Office, Washington.
<b>Na<sub>2</sub>HPO<sub>4</sub></b> (141.96)		20	0.36	By interpolation of solubility data at other temperatures (Table S2)
<b>Tris</b> (121.14)	~500 g/L	25	4.13	<a href="http://en.wikipedia.org/wiki/Tris">http://en.wikipedia.org/wiki/Tris</a>
<b>HEPES</b> (238.3)		0	2.25	E. Good E, Winget GD, Winter W, Connolly TN, Izawa S, Singh RMM. 1966. Hydrogen Ion Buffers for Biological Research. <i>Biochemistry</i> <b>5</b> : 467–477. doi:10.1021/bi00866a011. PMID 5942950.
<b>MOPS</b> (209.3)	980 g/L	20	4.7	<a href="http://www.biospectra.us/p-14-mops-free-acid.aspx">http://www.biospectra.us/p-14-mops-free-acid.aspx</a>
<b>Dimethyl glutarate</b> (160.2)	43g/L	20	0.27	U.S. Environmental Protection Agency. Supporting Documents for Risk-Based Prioritization. 3/18/2008. <a href="http://www.epa.gov/hpvis/rbp/Dibasic%20esters.Web.SupportDocs.031808.pdf">http://www.epa.gov/hpvis/rbp/Dibasic%20esters.Web.SupportDocs.031808.pdf</a> .

**Table S2 Solubility of disodium phosphate at different temperatures\***

<b>Temp (C)</b>	<b>Solubility (M)</b>
0	0.12
17	0.31
20	0.54
25	0.85
25	0.44
34	2.44
40	3.88
50	5.62
80	6.57

\* CRC Handbook of Chemistry and Physics 1991-92. 72<sup>nd</sup> ed. DR Lide (ed).