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Supporting information for article:

A high-throughput colourimetric method for the determination of pH in crystallisation screens

Jobie Kirkwood, Julie Wilson, Simon O'Keefe and David Hargreaves

Table S1 Table showing the components and quoted pH of three commercial screens along with the spectrophotometrically measured pH

MatrixName	WellID	Well Contents	Buffer pH	Measured pH
HamptonIndex	1	0.1 M Citric acid pH 3.5, 2.0 M Ammonium sulfate	3.5	5.59
HamptonIndex	2	0.1 M Sodium acetate trihydrate pH 4.5, 2.0 M Ammonium sulfate	4.5	5.84
HamptonIndex	3	0.1 M BIS-TRIS pH 5.5, 2.0 M Ammonium sulfate	5.5	6.14
HamptonIndex	4	0.1 M BIS-TRIS pH 6.5, 2.0 M Ammonium sulfate	6.5	6.99
HamptonIndex	5	0.1 M HEPES pH 7.5, 2.0 M Ammonium sulfate	7.5	7.52
HamptonIndex	6	0.1 M Tris pH 8.5, 2.0 M Ammonium sulfate	8.5	7.99
HamptonIndex	7	0.1 M Citric acid pH 3.5, 3.0 M Sodium chloride	3.5	5.34
HamptonIndex	8	0.1 M Sodium acetate trihydrate pH 4.5, 3.0 M Sodium chloride	4.5	5.59
HamptonIndex	9	0.1 M BIS-TRIS pH 5.5, 3.0 M Sodium chloride	5.5	5.89
HamptonIndex	10	0.1 M BIS-TRIS pH 6.5, 3.0 M Sodium chloride	6.5	6.84
HamptonIndex	11	0.1 M HEPES pH 7.5, 3.0 M Sodium chloride	7.5	7.91
HamptonIndex	12	0.1 M Tris pH 8.5, 3.0 M Sodium chloride	8.5	8.82
HamptonIndex	13	0.1 M BIS-TRIS pH 5.5, 0.3 M Magnesium formate dihydrate	5.5	5.74
HamptonIndex	14	0.1 M BIS-TRIS pH 6.5, 0.5 M Magnesium	6.5	6.84

		formate dihydrate		
HamptonIndex	15	0.1 M HEPES pH 7.5, 0.5 M Magnesium formate dihydrate	7.5	7.58
HamptonIndex	16	0.1 M Tris pH 8.5, 0.3 M Magnesium formate dihydrate	8.5	9.26
HamptonIndex	17	1.4 M Sodium phosphate monobasic monohydrate/Potassium phosphate dibasic pH 5.6	5.6	5.25
HamptonIndex	18	1.4 M Sodium phosphate monobasic monohydrate/Potassium phosphate dibasic pH 6.9	6.9	6.91
HamptonIndex	19	1.4 M Sodium phosphate monobasic monohydrate/Potassium phosphate dibasic pH 8.2	8.2	9.26
HamptonIndex	20	0.1 M HEPES pH 7.5, 1.4 M Sodium citrate tribasic dihydrate	7.5	7.91
HamptonIndex	21	1.8 M Ammonium citrate tribasic pH 7.0	7.0	6.58
HamptonIndex	22	0.8 M Succinic acid pH 7.0	7.0	7.07
HamptonIndex	23	2.1 M DL-Malic acid pH 7.0	7.0	6.76
HamptonIndex	24	2.8 M Sodium acetate trihydrate pH 7.0	7.0	6.81
HamptonIndex	25	3.5 M Sodium formate pH 7.0	7.0	6.78
HamptonIndex	26	1.1 M Ammonium tartrate dibasic pH 7.0	7.0	6.84
HamptonIndex	27	2.4 M Sodium malonate pH 7.0	7.0	6.58
HamptonIndex	28	35% v/v Tacsimate pH 7.0	7.0	6.94
HamptonIndex	29	60% v/v Tacsimate pH 7.0	7.0	6.76
HamptonIndex	30	0.1 M Sodium chloride, 0.1 M BIS-TRIS pH 6.5, 1.5 M Ammonium sulfate	6.5	6.91
HamptonIndex	31	0.8 M Potassium sodium tartrate tetrahydrate, 0.1 M Tris pH 8.5, 0.5% w/v Polyethylene glycol monomethyl ether	8.5	9.45

		5,000		
HamptonIndex	32	1.0 M Ammonium sulfate, 0.1 M BIS-TRIS pH 5.5, 1% w/v Polyethylene glycol 3,350	5.5	5.89
HamptonIndex	33	1.1 M Sodium malonate pH 7.0, 0.1 M HEPES pH 7.0, 0.5% v/v Jeffamine ED- 2001 pH 7.0	7.0	6.99
HamptonIndex	34	1.0 M Succinic acid pH 7.0, 0.1 M HEPES pH 7.0, 1% w/v Polyethylene glycol monomethyl ether 2,000	7.0	7.27
HamptonIndex	35	1.0 M Ammonium sulfate , 0.1 M HEPES pH 7.0, 0.5% w/v Polyethylene glycol 8,000	7.0	7.25
HamptonIndex	36	15% v/v Tacsimate pH 7.0, 0.1 M HEPES pH 7.0, 2% w/v Polyethylene glycol 3,350	7.0	7.19
HamptonIndex	37	25% w/v Polyethylene glycol 1,500		
HamptonIndex	38	0.1 M HEPES pH 7.0, 30% v/v Jeffamine M-600 pH 7.0	7.0	6.23
HamptonIndex	39	0.1 M HEPES pH 7.0, 30% v/v Jeffamine ED-2001 pH 7.0	7.0	6.64
HamptonIndex	40	0.1 M Citric acid pH 3.5, 25% w/v Polyethylene glycol 3,350	3.5	4.45
HamptonIndex	41	0.1 M Sodium acetate trihydrate pH 4.5, 25% w/v Polyethylene glycol 3,350	4.5	4.45
HamptonIndex	42	0.1 M BIS-TRIS pH 5.5, 25% w/v Polyethylene glycol 3,350	5.5	4.72
HamptonIndex	43	0.1 M BIS-TRIS pH 6.5, 25% w/v Polyethylene glycol 3,350	6.5	5.84
HamptonIndex	44	0.1 M HEPES pH 7.5, 25% w/v Polyethylene glycol 3,350	7.5	6.88

HamptonIndex	45	0.1 M Tris pH 8.5, 25% w/v Polyethylene glycol 3,350	8.5	8.6
HamptonIndex	46	0.1 M BIS-TRIS pH 6.5, 20% w/v Polyethylene glycol monomethyl ether 5,000	6.5	5.89
HamptonIndex	47	0.1 M BIS-TRIS pH 6.5, 28% w/v Polyethylene glycol monomethyl ether 2,000	6.5	5.68
HamptonIndex	48	0.2 M Calcium chloride dihydrate, 0.1 M BIS-TRIS pH 5.5, 45% v/v (+/-)-2-Methyl-2,4-pentanediol	5.5	4.45
HamptonIndex	49	0.2 M Calcium chloride dihydrate, 0.1 M BIS-TRIS pH 6.5, 45% v/v (+/-)-2-Methyl-2,4-pentanediol	6.5	4.45
HamptonIndex	50	0.2 M Ammonium acetate, 0.1 M BIS-TRIS pH 5.5, 45% v/v (+/-)-2-Methyl-2,4-pentanediol	5.5	4.72
HamptonIndex	51	0.2 M Ammonium acetate, 0.1 M BIS-TRIS pH 6.5, 45% v/v (+/-)-2-Methyl-2,4-pentanediol	6.5	5.2
HamptonIndex	52	0.2 M Ammonium acetate, 0.1 M HEPES pH 7.5, 45% v/v (+/-)-2-Methyl-2,4-pentanediol	7.5	5.89
HamptonIndex	53	0.2 M Ammonium acetate, 0.1 M Tris pH 8.5, 45% v/v (+/-)-2-Methyl-2,4-pentanediol	8.5	7.09
HamptonIndex	54	0.05 M Calcium chloride dihydrate, 0.1 M BIS-TRIS pH 6.5, 30% v/v Polyethylene glycol monomethyl ether 550	6.5	4.93
HamptonIndex	55	0.05 M Magnesium chloride hexahydrate, 0.1 M HEPES pH 7.5, 30% v/v Polyethylene glycol monomethyl ether 550	7.5	6.76

HamptonIndex	56	0.2 M Potassium chloride, 0.05 M HEPES pH 7.5, 35% v/v Pentaerythritol propoxylate (5/4 PO/OH)	7.5	6.64
HamptonIndex	57	0.05 M Ammonium sulfate , 0.05 M BIS- TRIS pH 6.5, 30% v/v Pentaerythritol ethoxylate (15/4 EO/OH)	6.5	5.89
HamptonIndex	58	0.1 M BIS-TRIS pH 6.5, 45% v/v Polypropylene glycol P 400	6.5	4.72
HamptonIndex	59	0.02 M Magnesium chloride hexahydrate, 0.1 M HEPES pH 7.5, 22% w/v Polyacrylic acid sodium salt 5,100	7.5	7.73
HamptonIndex	60	0.01 M Cobalt(II) chloride hexahydrate, 0.1 M Tris pH 8.5, 20% w/v Polyvinylpyrrolidone K 15	8.5	7.27
HamptonIndex	61	0.2 M L-Proline, 0.1 M HEPES pH 7.5, 10% w/v Polyethylene glycol 3,350	7.5	7.27
HamptonIndex	62	0.2 M Trimethylamine N-oxide dihydrate, 0.1 M Tris pH 8.5, 20% w/v Polyethylene glycol monomethyl ether 2,000	8.5	8.6
HamptonIndex	63	5% v/v Tacsimate pH 7.0, 0.1 M HEPES pH 7.0, 10% w/v Polyethylene glycol monomethyl ether 5,000	7.0	6.88
HamptonIndex	64	0.005 M Cobalt(II) chloride hexahydrate, 0.005 M Nickel(II) chloride hexahydrate, 0.005 M Cadmium chloride hydrate, 0.005 M Magnesium chloride hexahydrate, 0.1 M HEPES pH 7.5, 12% w/v Polyethylene glycol 3,350	7.5	7.19
HamptonIndex	65	0.1 M Ammonium acetate, 0.1 M BIS- TRIS pH 5.5, 17% w/v Polyethylene glycol 10,000	5.5	5.49

HamptonIndex	66	0.2 M Ammonium sulfate, 0.1 M BIS-TRIS pH 5.5, 25% w/v Polyethylene glycol 3,350	5.5	5.15
HamptonIndex	67	0.2 M Ammonium sulfate, 0.1 M BIS-TRIS pH 6.5, 25% w/v Polyethylene glycol 3,350	6.5	6.42
HamptonIndex	68	0.2 M Ammonium sulfate, 0.1 M HEPES pH 7.5, 25% w/v Polyethylene glycol 3,350	7.5	7.27
HamptonIndex	69	0.2 M Ammonium sulfate, 0.1 M Tris pH 8.5, 25% w/v Polyethylene glycol 3,350	8.5	8.75
HamptonIndex	70	0.2 M Sodium chloride, 0.1 M BIS-TRIS pH 5.5, 25% w/v Polyethylene glycol 3,350	5.5	4.93
HamptonIndex	71	0.2 M Sodium chloride, 0.1 M BIS-TRIS pH 6.5, 25% w/v Polyethylene glycol 3,350	6.5	6.04
HamptonIndex	72	0.2 M Sodium chloride, 0.1 M HEPES pH 7.5, 25% w/v Polyethylene glycol 3,350	7.5	7.09
HamptonIndex	73	0.2 M Sodium chloride, 0.1 M Tris pH 8.5, 25% w/v Polyethylene glycol 3,350	8.5	9.26
HamptonIndex	74	0.2 M Lithium sulfate monohydrate, 0.1 M BIS-TRIS pH 5.5, 25% w/v Polyethylene glycol 3,350	5.5	5.02
HamptonIndex	75	0.2 M Lithium sulfate monohydrate, 0.1 M BIS-TRIS pH 6.5, 25% w/v Polyethylene glycol 3,350	6.5	6.29
HamptonIndex	76	0.2 M Lithium sulfate monohydrate, 0.1 M HEPES pH 7.5, 25% w/v Polyethylene glycol 3,350	7.5	7.27
HamptonIndex	77	0.2 M Lithium sulfate monohydrate, 0.1 M Tris pH 8.5, 25% w/v Polyethylene glycol 3,350	8.5	9.45
HamptonIndex	78	0.2 M Ammonium acetate, 0.1 M BIS- TRIS pH 5.5, 25% w/v Polyethylene glycol 3,350	5.5	5.49

HamptonIndex	79	0.2 M Ammonium acetate, 0.1 M BIS-TRIS pH 6.5, 25% w/v Polyethylene glycol 3,350	6.5	6.2
HamptonIndex	80	0.2 M Ammonium acetate, 0.1 M HEPES pH 7.5, 25% w/v Polyethylene glycol 3,350	7.5	7.07
HamptonIndex	81	0.2 M Ammonium acetate, 0.1 M Tris pH 8.5, 25% w/v Polyethylene glycol 3,350	8.5	8.46
HamptonIndex	82	0.2 M Magnesium chloride hexahydrate, 0.1 M BIS-TRIS pH 5.5, 25% w/v Polyethylene glycol 3,350	5.5	5.15
HamptonIndex	83	0.2 M Magnesium chloride hexahydrate, 0.1 M BIS-TRIS pH 6.5, 25% w/v Polyethylene glycol 3,350	6.5	6.29
HamptonIndex	84	0.2 M Magnesium chloride hexahydrate, 0.1 M HEPES pH 7.5, 25% w/v Polyethylene glycol 3,350	7.5	7.27
HamptonIndex	85	0.2 M Magnesium chloride hexahydrate, 0.1 M Tris pH 8.5, 25% w/v Polyethylene glycol 3,350	8.5	9.26
HamptonIndex	86	0.2 M Potassium sodium tartrate tetrahydrate, 20% w/v Polyethylene glycol 3,350		
HamptonIndex	87	0.2 M Sodium malonate pH 7.0, 20% w/v Polyethylene glycol 3,350	7	7.52
HamptonIndex	88	0.2 M Ammonium citrate tribasic pH 7.0, 20% w/v Polyethylene glycol 3,350	7	7.07
HamptonIndex	89	0.1 M Succinic acid pH 7.0, 15% w/v Polyethylene glycol 3,350	7	7.27
HamptonIndex	90	0.2 M Sodium formate, 20% w/v Polyethylene glycol 3,350		
HamptonIndex	91	0.15 M DL-Malic acid pH 7.0, 20% w/v Polyethylene glycol 3,350	7	7.07

HamptonIndex	92	0.1 M Magnesium formate dihydrate, 15% w/v Polyethylene glycol 3,350		
HamptonIndex	93	0.05 M Zinc acetate dihydrate, 20% w/v Polyethylene glycol 3,350		
HamptonIndex	94	0.2 M Sodium citrate tribasic dihydrate, 20% w/v Polyethylene glycol 3,350		
HamptonIndex	95	0.1 M Potassium thiocyanate, 30% w/v Polyethylene glycol monomethyl ether 2,000		
HamptonIndex	96	0.15 M Potassium bromide, 30% w/v Polyethylene glycol monomethyl ether 2,000		
Wizard Classic	1	20% w/v PEG 8000, 100 mM CHES/ Sodium hydroxide pH 9.5	9.5	9.26
Wizard Classic	2	10% v/v 2-propanol, 100 mM HEPES/ Sodium hydroxide pH 7.5, 200 mM Sodium chloride	7.5	7.33
Wizard Classic	3	15% v/v Reagent alcohol, 100 mM CHES/ Sodium hydroxide pH 9.5	9.5	8.89
Wizard Classic	4	35% v/v MPD, 100 mM Imidazole/ Hydrochloric acid pH 8.0, 200 mM Magnesium chloride	8	6.91
Wizard Classic	5	30% v/v PEG 400, 100 mM CAPS/ Sodium hydroxide pH 10.5	10.5	9.26
Wizard Classic	6	20% w/v PEG 3000, 100 mM Sodium citrate/ Citric acid pH 5.5	5.5	5.82
Wizard Classic	7	10% w/v PEG 8000, 100 mM MES/ Sodium hydroxide pH 6.0, 200 mM Zinc acetate	6	5.82
Wizard Classic	8	2000 mM Ammonium sulfate, 100 mM Sodium citrate/ Citric acid pH 5.5	5.5	5.59

Wizard Classic	9	1000 mM Ammonium phosphate dibasic, 100 mM Sodium acetate/ Acetic acid pH 4. 5	4.5	7.4
Wizard Classic	10	20% w/v PEG 2000 MME, 100 mM Tris base/ Hydrochloric acid pH 7. 0	7	6.14
Wizard Classic	11	20% v/v 1,4-butanediol, 100 mM MES/ Sodium hydroxide pH 6.0, 200 mM Lithium sulfate	6	5.56
Wizard Classic	12	20% w/v PEG 1000, 100 mM Imidazole/ Hydrochloric acid pH 8.0, 200 mM Calcium acetate	8	6.99
Wizard Classic	13	1260 mM Ammonium sulfate, 100 mM Sodium cacodylate/ Hydrochloric acid pH 6.5	6.5	6.38
Wizard Classic	14	1000 mM Sodium citrate tribasic, 100 mM Sodium cacodylate/ Hydrochloric acid pH 6.5	6.5	6.84
Wizard Classic	15	10% w/v PEG 3000, 100 mM Imidazole/ Hydrochloric acid pH 8.0, 200 mM Lithium sulfate	8	7.91
Wizard Classic	16	2500 mM Sodium chloride, 100 mM Potassium phosphate monobasic/ Sodium phosphate dibasic pH 6.2	6.2	5.82
Wizard Classic	17	30% w/v PEG 8000, 100 mM Sodium acetate/ Acetic acid pH 4. 5, 200 mM Lithium sulfate	4.5	4.74
Wizard Classic	18	1000 mM Potassium sodium tartrate, 100 mM Imidazole/ Hydrochloric acid pH 8.0, 200 mM Sodium chloride	8	7.73
Wizard Classic	19	20% w/v PEG 1000, 100 mM Tris base/ Hydrochloric acid pH 7.	7	4.45

		0		
Wizard Classic	20	400 mM Sodium phosphate monobasic/ 1600 mM Potassium phosphate dibasic, 100 mM Imidazole/ Hydrochloric acid pH 8.0, 200 mM Sodium chloride	8	7.61
Wizard Classic	21	20% w/v PEG 8000, 100 mM HEPES/ Sodium hydroxide pH 7.5	7.5	7.07
Wizard Classic	22	10% v/v 2-propanol, 100 mM Tris base/ Hydrochloric acid pH 8.5	8.5	8.52
Wizard Classic	23	15% v/v Reagent alcohol, 100 mM Imidazole/ Hydrochloric acid pH 8.0, 200 mM Magnesium chloride	8	7.91
Wizard Classic	24	35% v/v MPD, 100 mM Tris base/ Hydrochloric acid pH 7.0, 200 mM Sodium chloride	7	6.15
Wizard Classic	25	30% v/v PEG 400, 100 mM Tris base/ Hydrochloric acid pH 8.5, 200 mM Magnesium chloride	8.5	8.46
Wizard Classic	26	10% w/v PEG 3000, 100 mM CHES/ Sodium hydroxide pH 9.5	9.5	9.16
Wizard Classic	27	1200 mM Sodium phosphate monobasic/ 800 mM Potassium phosphate dibasic, 100 mM CAPS/ Sodium hydroxide pH 10.5, 200 mM Lithium sulfate	10.5	6.23
Wizard Classic	28	20% w/v PEG 3000, 100 mM HEPES/ Sodium hydroxide pH 7.5, 200 mM Sodium chloride	7.5	7.07

Wizard Classic	29	10% w/v PEG 8000, 100 mM CHES/ Sodium hydroxide pH 9.5, 200 mM Sodium chloride	9.5	8.52
Wizard Classic	30	1260 mM Ammonium sulfate, 100 mM Sodium acetate/ Acetic acid pH 4. 5, 200 mM Sodium chloride	4.5	5.2
Wizard Classic	31	20% w/v PEG 8000, 100 mM Sodium phosphate dibasic/ Citric acid pH 4.2, 200 mM Sodium chloride	4.2	4.59
Wizard Classic	32	10% w/v PEG 3000, 100 mM Potassium phosphate monobasic/ Sodium phosphate dibasic pH 6.2	6.2	6.04
Wizard Classic	33	2000 mM Ammonium sulfate, 100 mM CAPS/ Sodium hydroxide pH 10.5 , 200 mM Lithium sulfate	10.5	7.47
Wizard Classic	34	1000 mM Ammonium phosphate dibasic, 100 mM Imidazole/ Hydrochloric acid pH 8.0	8	7.73
Wizard Classic	35	20% v/v 1,4-butanediol, 100 mM Sodium acetate/ Acetic acid pH 4. 5	4.5	4.74
Wizard Classic	36	1000 mM Sodium citrate tribasic, 100 mM Imidazole/ Hydrochloric acid pH 8.0	8	8.46
Wizard Classic	37	2500 mM Sodium chloride, 100 mM Imidazole/ Hydrochloric acid pH 8.0	8	7.61
Wizard Classic	38	1000 mM Potassium sodium tartrate, 100 mM CHES/ Sodium hydroxide pH 9.5, 200 mM Lithium sulfate	9.5	9.26

Wizard Classic	39	20% w/v PEG 1000, 100 mM Sodium phosphate dibasic/ Citric acid pH 4.2, 200 mM Lithium sulfate	4.2	4.51
Wizard Classic	40	10% v/v 2-propanol, 100 mM MES/ Sodium hydroxide pH 6.0, 200 mM Calcium acetate	6	5.82
Wizard Classic	41	30% w/v PEG 3000, 100 mM CHES/ Sodium hydroxide pH 9.5	9.5	9.07
Wizard Classic	42	15% v/v Reagent alcohol, 100 mM Tris base/ Hydrochloric acid pH 7.0	7	6.94
Wizard Classic	43	35% v/v MPD, 100 mM Potassium phosphate monobasic/ Sodium phosphate dibasic pH 6.2	6.2	5.02
Wizard Classic	44	30% v/v PEG 400, 100 mM Sodium acetate/ Acetic acid pH 4.5, 200 mM Calcium acetate	4.5	4.99
Wizard Classic	45	20% w/v PEG 3000, 100 mM Sodium acetate/ Acetic acid pH 4.5	4.5	4.59
Wizard Classic	46	10% w/v PEG 8000, 100 mM Imidazole/ Hydrochloric acid pH 8.0, 200 mM Calcium acetate	8	7.65
Wizard Classic	47	1260 mM Ammonium sulfate, 100 mM Tris base/ Hydrochloric acid pH 8.5, 200 mM Lithium sulfate	8.5	7.73
Wizard Classic	48	20% w/v PEG 1000, 100 mM Sodium acetate/ Acetic acid pH 4.5, 200 mM Zinc acetate	4.5	4.9
Wizard Classic	49	10% w/v PEG 3000, 100 mM Sodium acetate/ Acetic acid pH 4.5, 200 mM Zinc acetate	4.5	4.72

Wizard Classic	50	35% v/v MPD, 100 mM MES/ Sodium hydroxide pH 6.0, 200 mM Lithium sulfate	6	4.82
Wizard Classic	51	20% w/v PEG 8000, 100 mM Tris base/ Hydrochloric acid pH 8. 5, 200 mM Magnesium chloride	8.5	8.31
Wizard Classic	52	2000 mM Ammonium sulfate, 100 mM Sodium cacodylate/ Hydrochloric acid pH 6.5, 200 mM Sodium chloride	6.5	5.95
Wizard Classic	53	20% v/v 1,4-butanediol, 100 mM HEPES/ Sodium hydroxide pH 7. 5, 200 mM Sodium chloride	7.5	7.07
Wizard Classic	54	10% v/v 2-propanol, 100 mM Sodium phosphate dibasic/ Citric acid pH 4.2, 200 mM Lithium sulfate	4.2	4.45
Wizard Classic	55	30% w/v PEG 3000, 100 mM Tris base/ Hydrochloric acid pH 7. 0, 200 mM Sodium chloride	7	4.51
Wizard Classic	56	10% w/v PEG 8000, 100 mM Potassium phosphate monobasic/ Sodium phosphate dibasic pH 6.2, 200 mM Sodium chloride	6.2	6.38
Wizard Classic	57	2000 mM Ammonium sulfate, 100 mM Sodium phosphate dibasic/ Citric acid pH 4.2	4.2	5.34
Wizard Classic	58	1000 mM Ammonium phosphate dibasic, 100 mM Tris base/ Hydrochloric acid pH 8. 5	8.5	8.13
Wizard Classic	59	10% v/v 2-propanol, 100 mM Sodium cacodylate/ Hydrochloric acid pH 6.5, 200 mM Zinc acetate	6.5	5.66

Wizard Classic	60	30% v/v PEG 400, 100 mM Sodium cacodylate/ Hydrochloric acid pH 6.5, 200 mM Lithium sulfate	6.5	6.2
Wizard Classic	61	15% v/v Reagent alcohol, 100 mM Sodium citrate/ Citric acid pH 5.5, 200 mM Lithium sulfate	5.5	5.84
Wizard Classic	62	20% w/v PEG 1000, 100 mM Potassium phosphate monobasic/ Sodium phosphate dibasic pH 6.2, 200 mM Sodium chloride	6.2	6.64
Wizard Classic	63	1260 mM Ammonium sulfate, 100 mM HEPES/ Sodium hydroxide pH 7. 5	7.5	7.27
Wizard Classic	64	1000 mM Sodium citrate tribasic, 100 mM CHES/ Sodium hydroxide pH 9.5	9.5	9.45
Wizard Classic	65	2500 mM Sodium chloride, 100 mM Tris base/ Hydrochloric acid pH 7. 0, 200 mM Magnesium chloride	7	7.19
Wizard Classic	66	20% w/v PEG 3000, 100 mM Tris base/ Hydrochloric acid pH 7. 0, 200 mM Calcium acetate	7	6.94
Wizard Classic	67	1600 mM Sodium phosphate monobasic/ 4 00 mM Potassium phosphate dibasic, 100 mM Sodium phosphate dibasic/ Citric acid pH 4.2	4.2	5.56
Wizard Classic	68	15% v/v Reagent alcohol, 100 mM MES/ Sodium hydroxide pH 6.0, 200 mM Zinc acetate	6	5.82
Wizard Classic	69	35% v/v MPD, 100 mM Sodium acetate/ Acetic acid pH 4. 5	4.5	4.47

Wizard Classic	70	10% v/v 2-propanol, 100 mM Imidazole/ Hydrochloric acid pH 8.0	8	7.61
Wizard Classic	71	15% v/v Reagent alcohol, 100 mM HEPES/ Sodium hydroxide pH 7. 5, 200 mM Magnesium chloride	7.5	7.37
Wizard Classic	72	30% w/v PEG 8000, 100 mM Imidazole/ Hydrochloric acid pH 8.0, 200 mM Sodium chloride	8	6.64
Wizard Classic	73	35% v/v MPD, 100 mM HEPES/ Sodium hydroxide pH 7. 5, 200 mM Sodium chloride	7.5	6.34
Wizard Classic	74	30% v/v PEG 400, 100 mM CHES/ Sodium hydroxide pH 9.5	9.5	9.07
Wizard Classic	75	10% w/v PEG 3000, 100 mM Sodium cacodylate/ Hydrochloric acid pH 6.5, 200 mM Magnesium chloride	6.5	5.82
Wizard Classic	76	20% w/v PEG 8000, 100 mM MES/ Sodium hydroxide pH 6.0, 200 mM Calcium acetate	6	5.82
Wizard Classic	77	1260 mM Ammonium sulfate, 100 mM CHES/ Sodium hydroxide pH 9.5, 200 mM Sodium chloride	9.5	7.52
Wizard Classic	78	20% v/v 1,4-butanediol, 100 mM Imidazole/ Hydrochloric acid pH 8.0, 200 mM Zinc acetate	8	5.82
Wizard Classic	79	1000 mM Sodium citrate tribasic, 100 mM Tris base/ Hydrochloric acid pH 7. 0, 200 mM Sodium chloride	7	7.65
Wizard Classic	80	20% w/v PEG 1000, 100 mM Tris base/ Hydrochloric acid pH 8. 5	8.5	8.04

Wizard Classic	81	1000 mM Ammonium phosphate dibasic, 100 mM Sodium citrate tribasic/ Citric acid pH 5.5, 200 mM Sodium chloride	5.5	7.65
Wizard Classic	82	10% w/v PEG 8000, 100 mM Imidazole/ Hydrochloric acid pH 8.0	8	7.4
Wizard Classic	83	800 mM Sodium phosphate monobasic/ 12 00 mM Potassium phosphate dibasic, 100 mM Sodium acetate/ Acetic acid pH 4. 5	4.5	6.84
Wizard Classic	84	10% w/v PEG 3000, 100 mM Sodium phosphate dibasic/ Citric acid pH 4.2, 200 mM Sodium chloride	4.2	4.51
Wizard Classic	85	1000 mM Potassium sodium tartrate, 100 mM Tris base/ Hydrochloric acid pH 7. 0, 200 mM Lithium sulfate	7	7.61
Wizard Classic	86	2500 mM Sodium chloride, 100 mM Sodium acetate/ Acetic acid pH 4. 5, 200 mM Lithium sulfate	4.5	4.59
Wizard Classic	87	20% w/v PEG 8000, 100 mM CAPS/ Sodium hydroxide pH 10.5 , 200 mM Sodium chloride	10.5	9.26
Wizard Classic	88	20% w/v PEG 3000, 100 mM Imidazole/ Hydrochloric acid pH 8.0, 200 mM Zinc acetate	8	5.34
Wizard Classic	89	2000 mM Ammonium sulfate, 100 mM Tris base/ Hydrochloric acid pH 7. 0, 200 mM Lithium sulfate	7	6.29
Wizard Classic	90	30% v/v PEG 400, 100 mM HEPES/ Sodium hydroxide pH 7. 5, 200 mM Sodium chloride	7.5	6.88

Wizard Classic	91	10% w/v PEG 8000, 100 mM Tris base/ Hydrochloric acid pH 7.0, 200 mM Magnesium chloride	7	7.06
Wizard Classic	92	20% w/v PEG 1000, 100 mM Sodium cacodylate/ Hydrochloric acid pH 6.5, 200 mM Magnesium chloride	6.5	4.99
Wizard Classic	93	1260 mM Ammonium sulfate, 100 mM MES/ Sodium hydroxide pH 6.0	6	6.23
Wizard Classic	94	1000 mM Ammonium phosphate dibasic, 100 mM Imidazole/ Hydrochloric acid pH 8.0, 200 mM Sodium chloride	8	6.88
Wizard Classic	95	2500 mM Sodium chloride, 100 mM Imidazole/ Hydrochloric acid pH 8.0, 200 mM Zinc acetate	8	5.95
Wizard Classic	96	1000 mM Potassium sodium tartrate, 100 mM MES/ Sodium hydroxide pH 6.0	6	7.06
JCSG- <i>plus</i> TM	1	Lithium Sulfate 0.2 M, Peg 400 50 % v/v	4.5	4.82
JCSG- <i>plus</i> TM	2	Peg 3000 20 % v/v	5.5	5.66
JCSG- <i>plus</i> TM	3	Di-Ammonium Hydrogen Citrate 0.2 M, Peg 3350 20 % w/v		
JCSG- <i>plus</i> TM	4	Calcium Chloride 0.02 M, Mpd 30 % v/v	4.6	4.45
JCSG- <i>plus</i> TM	5	Magnesium Formate 0.2 M, Peg 3350 20 % w/v		
JCSG- <i>plus</i> TM	6	Lithium Sulfate 0.2 M, Peg 1000 20 % w/v	4.2	4.45
JCSG- <i>plus</i> TM	7	Peg 8000 20 % w/v	9.5	9.26
JCSG- <i>plus</i> TM	8	Ammonium Formate 0.2 M, Peg 3350 20 % w/v		
JCSG- <i>plus</i> TM	9	Ammonium Chloride 0.2 M, Peg 3350 20 % w/v		

JCSG- <i>plus</i> TM	10	Potassium Formate 0.2 M, Peg 3350 20 % w/v		
JCSG- <i>plus</i> TM	11	Ammonium Dihydrogen Phosphate 0.2 M, Mpd 50 % v/v	8.5	5.41
JCSG- <i>plus</i> TM	12	Potassium Nitrate 0.2 M, Peg 3350 20 % w/v		
JCSG- <i>plus</i> TM	13	Ammonium Sulfate 0.8 M	4	4.45
JCSG- <i>plus</i> TM	14	Sodium Thiocyanate 0.2 M, Peg 3350 20 % w/v		
JCSG- <i>plus</i> TM	15	Peg 6000 20 % w/v	9	9.16
JCSG- <i>plus</i> TM	16	Peg 8000 10 % w/v	7.5	6.84
JCSG- <i>plus</i> TM	17	Mpd 40 % v/v, Peg 8000 5 % w/v	6.5	5.84
JCSG- <i>plus</i> TM	18	Ethanol 40 % v/v, Peg 1000 5 % w/v	4.2	4.45
JCSG- <i>plus</i> TM	19	Peg 4000 8 % w/v	4.6	4.51
JCSG- <i>plus</i> TM	20	Magnesium Chloride 0.2 M, Peg 8000 10 % w/v	7	7.19
JCSG- <i>plus</i> TM	21	Peg 6000 20 % w/v	5	5.82
JCSG- <i>plus</i> TM	22	Magnesium Chloride 0.2 M, Peg 200 50 % v/v	6.5	6.15
JCSG- <i>plus</i> TM	23	Tri-Sodium Citrate 1.6 M	6.5	6.14
JCSG- <i>plus</i> TM	24	Tri-Potassium Citrate 0.2 M, Peg 3350 20 % w/v		
JCSG- <i>plus</i> TM	25	Sodium Chloride 0.2 M, Peg 8000 20 % w/v	4.2	4.45
JCSG- <i>plus</i> TM	26	Lithium Chloride 1 M, Peg 6000 20 % w/v	4	4.45
JCSG- <i>plus</i> TM	27	Ammonium Nitrate 0.2 M, Peg 3350 20 % w/v		
JCSG- <i>plus</i> TM	28	Peg 6000 10 % w/v	7	6.38
JCSG- <i>plus</i> TM	29	Sodium Dihydrogen Phosphate 0.8 M, Potassium Dihydrogen Phosphate 0.8 M	7.5	4.51

JCSG- <i>plus</i> TM	30	Peg 300 40 % v/v		4.2	4.45
JCSG- <i>plus</i> TM	31	Zinc Acetate 0.2 M, Peg 3000 10 % w/v		4.5	5.25
JCSG- <i>plus</i> TM	32	Ethanol 20 % v/v		8.5	8.13
JCSG- <i>plus</i> TM	33	1,2-Propanediol 25 % v/v, Glycerol 10 % v/v		6.2	6.58
JCSG- <i>plus</i> TM	34	Dioxane 0.02 V/V, Peg 20000 10 % w/v		9	8.97
JCSG- <i>plus</i> TM	35	Ammonium Sulfate 2 M		4.6	5.56
JCSG- <i>plus</i> TM	36	Peg 1000 10 % w/v			
JCSG- <i>plus</i> TM	37	Glycerol 20 % v/v, Peg 1500 24 % w/v			
JCSG- <i>plus</i> TM	38	Magnesium Chloride 0.2 M, Peg 400 30 % v/v		7.5	6.94
JCSG- <i>plus</i> TM	39	Sodium Chloride 0.2 M, Peg 200 50 % v/v		6.2	6.15
JCSG- <i>plus</i> TM	40	Lithium Sulfate 0.2 M, Peg 8000 30 % w/v		4.5	4.64
JCSG- <i>plus</i> TM	41	Mpd 70 % v/v		7.5	5.41
JCSG- <i>plus</i> TM	42	Magnesium Chloride 0.2 M, Peg 8000 20 % w/v		8.5	8.7
JCSG- <i>plus</i> TM	43	Lithium Sulfate 0.2 M, Peg 400 40 % v/v		8.5	9.26
JCSG- <i>plus</i> TM	44	Mpd 40 % v/v		8	7.47
JCSG- <i>plus</i> TM	45	Ammonium Sulfate 0.17 M, Glycerol 15 % v/v, Peg 4000 25.5 % w/v			
JCSG- <i>plus</i> TM	46	Calcium Acetate 0.2 M, Peg 300 40 % v/v		6.5	6.64
JCSG- <i>plus</i> TM	47	Calcium Chloride 0.14 M, 2-Propanol 14 % v/v, Glycerol 30 % v/v		4.6	4.45
JCSG- <i>plus</i> TM	48	Potassium Dihydrogen Phosphate 0.04 M, Glycerol 20 % v/v, Peg 8000 16 % w/v			
JCSG- <i>plus</i> TM	49	Tri-Sodium Citrate 1 M		6.5	7.07
JCSG- <i>plus</i> TM	50	Sodium Chloride 0.2 M, Ammonium Sulfate 2 M		6.5	6.42

JCSG- <i>plus</i> TM	51	Sodium Chloride 0.2 M, 2-Propanol 10 % v/v	7.5	7.15
JCSG- <i>plus</i> TM	52	Lithium Sulfate 0.2 M, Ammonium Sulfate 1.26 M	8.5	7.73
JCSG- <i>plus</i> TM	53	Mpd 40 % v/v	10.5	9.45
JCSG- <i>plus</i> TM	54	Zinc Acetate 0.2 M, Peg 3000 20 % w/v	8	5.68
JCSG- <i>plus</i> TM	55	Zinc Acetate 0.2 M, 2-Propanol 10 % v/v	6.5	5.68
JCSG- <i>plus</i> TM	56	Di-Ammonium Hydrogen Phosphate 1 M	4.5	7.73
JCSG- <i>plus</i> TM	57	Magnesium Sulfate 1.6 M	6.5	6.69
JCSG- <i>plus</i> TM	58	Peg 6000 10 % w/v	9	9.16
JCSG- <i>plus</i> TM	59	Calcium Acetate 0.16 M, Glycerol 20 % v/v, Peg 8000 14.4 % w/v	6.5	6.42
JCSG- <i>plus</i> TM	60	Peg 8000 10 % w/v	8	7.47
JCSG- <i>plus</i> TM	61	Caesium Chloride 0.05 M, Jeffamine M- 600 30 % v/v	6.5	5.68
JCSG- <i>plus</i> TM	62	Ammonium Sulfate 3.2 M	5	5.59
JCSG- <i>plus</i> TM	63	Mpd 20 % v/v	8	7.61
JCSG- <i>plus</i> TM	64	Jeffamine M-600 20 % v/v	7.5	6.99
JCSG- <i>plus</i> TM	65	Magnesium Chloride 0.2 M, Ethylene Glycol 50 % v/v	8.5	8.97
JCSG- <i>plus</i> TM	66	Mpd 10 % v/v	9	8.75
JCSG- <i>plus</i> TM	67	Succinic Acid 0.8 M	7	7.58
JCSG- <i>plus</i> TM	68	DI-Malic Acid 2.1 M	7	6.91
JCSG- <i>plus</i> TM	69	Sodium Malonate 2.4 M	7	6.38
JCSG- <i>plus</i> TM	70	Sodium Malonate 1.1 M, Jeffamine Ed- 2001 0.5 % v/v	7	7.19
JCSG- <i>plus</i> TM	71	Succinic Acid 1 M, Peg 2000 Mme 1 % w/v	7	7.09
JCSG- <i>plus</i> TM	72	Jeffamine M-600 30 % v/v	7	6.64
JCSG- <i>plus</i> TM	73	Jeffamine Ed-2001 30 % v/v	7	6.2

JCSG- <i>plus</i> TM	74	Magnesium Chloride 0.02 M, Polyacrylic Acid 5100 Sodium Salt 22 % w/v	7.5	7.58
JCSG- <i>plus</i> TM	75	Cobalt Chloride 0.01 M, Polyvinylpyrrolidone K15 20 % w/v	8.5	7.58
JCSG- <i>plus</i> TM	76	Tri-Methylamine N-Oxide 0.2 M, Peg 2000 Mme 20 % w/v	8.5	8.46
JCSG- <i>plus</i> TM	77	Cobalt Chloride 0.005 M, Cadmium Chloride 0.005 M, Magnesium Chloride 0.005 M, Nickel Chloride 0.005 M, Peg 3350 12 % w/v	7.5	6.99
JCSG- <i>plus</i> TM	78	Sodium Malonate 0.2 M, Peg 3350 20 % w/v	7	6.99
JCSG- <i>plus</i> TM	79	Succinic Acid 0.1 M, Peg 3350 15 % w/v	7	7.4
JCSG- <i>plus</i> TM	80	DL- Malic Acid 0.15 M, Peg 3350 20 % w/v	7	6.91
JCSG- <i>plus</i> TM	81	Potassium Thiocyanate 0.1 M, Peg 2000 Mme 30 % w/v		
JCSG- <i>plus</i> TM	82	Potassium Bromide 0.15 M, Peg 2000 Mme 30 % w/v		
JCSG- <i>plus</i> TM	83	Ammonium Sulfate 2 M	5.5	5.88
JCSG- <i>plus</i> TM	84	Sodium Chloride 3 M	5.5	5.84
JCSG- <i>plus</i> TM	85	Magnesium Formate 0.3 M	5.5	5.82
JCSG- <i>plus</i> TM	86	Ammonium Sulfate 1 M, Peg 3350 1 % w/v	5.5	6.04
JCSG- <i>plus</i> TM	87	Peg 3350 25 % w/v	5.5	5.2
JCSG- <i>plus</i> TM	88	Calcium Chloride 0.2 M, Mpd 45 % v/v	5.5	5.34
JCSG- <i>plus</i> TM	89	Ammonium Acetate 0.2 M, Mpd 45 % v/v	5.5	4.99
JCSG- <i>plus</i> TM	90	Peg 10000 17 % w/v	5.5	5.56
JCSG- <i>plus</i> TM	91	Ammonium Sulfate 0.2 M, Peg 3350 25 % w/v	5.5	5.56

JCSG- <i>plus</i> TM	92	Sodium Chloride 0.2 M, Peg 3350 25 % w/v	5.5	5.25
JCSG- <i>plus</i> TM	93	Lithium Sulfate 0.2 M, Peg 3350 25 % w/v	5.5	5.46
JCSG- <i>plus</i> TM	94	Ammonium Acetate 0.2 M, Peg 3350 25 % w/v	5.5	5.68
JCSG- <i>plus</i> TM	95	Magnesium Chloride 0.2 M, Peg 3350 25 % w/v	5.5	5.41
JCSG- <i>plus</i> TM	96	Ammonium Acetate 0.2 M, Mpd 45 % v/v	7.5	5.02

Table S2 Table showing pH measurement made with a pH meter and measurement made using the spectrophotometric method.

Buffer	Jenway 4330 pH meter Measurements	Spectrophotometer pH
PCTP4* 1 mM, PCTP9.5 99 mM	9.42	9.45
PCTP4 9.90909 mM, PCTP9.5 90.0909 mM	8.95	9.07
PCTP4 18.8182 mM, PCTP9.5 81.1818 mM	8.37	8.46
PCTP4 27.7273 mM, PCTP9.5 72.2727 mM	7.61	7.61
PCTP4 36.6364 mM, PCTP9.5 63.3636 mM	7.23	7.19
PCTP4 45.5455 mM, PCTP9.5 54.4545 mM	6.84	6.84
PCTP4 54.4545 mM, PCTP9.5 45.5455 mM	6.49	6.5
PCTP4 63.3636 mM, PCTP9.5 36.6364 mM	6.11	6.14
PCTP4 72.2727 mM, PCTP9.5 27.7273 mM	5.66	5.66
PCTP4 81.1818 mM, PCTP9.5 18.8182 mM	5.18	5.25
PCTP4 90.0909 mM, PCTP9.5 9.90909 mM	4.72	4.9
Sodium acetate 100 mM	4.46	4.47
Sodium acetate 100 mM	4.63	4.55
Sodium acetate 100 mM	4.84	4.74
Sodium acetate 100 mM	5.03	4.9
Sodium acetate 100 mM	5.22	5.09
Sodium acetate 100 mM	5.37	5.2
Sodium acetate 100 mM	5.57	5.41
Sodium acetate 100 mM	5.74	5.56
Sodium citrate 100 mM	5.09	5.09
Sodium citrate 100 mM	5.14	5.09
Sodium citrate 100 mM	5.21	5.25
Sodium citrate 100 mM	5.33	5.25
Sodium citrate 100 mM	5.44	5.41
Sodium citrate 100 mM	5.65	5.56
Sodium citrate 100 mM	5.84	5.74
Sodium citrate 100 mM	6.03	5.89

Sodium citrate 100 mM	6.23	6.15
Sodium citrate 100 mM	6.47	6.42
Sodium citrate 100 mM	6.74	6.64
Sodium citrate 100 mM	6.96	6.88
MES (2-(N-morpholino)ethanesulfonic acid) 100 mM	4.78	4.82
MES (2-(N-morpholino)ethanesulfonic acid) 100 mM	5.11	5.02
MES (2-(N-morpholino)ethanesulfonic acid) 100 mM	5.32	5.2
MES (2-(N-morpholino)ethanesulfonic acid) 100 mM	5.53	5.34
MES (2-(N-morpholino)ethanesulfonic acid) 100 mM	5.71	5.56
MES (2-(N-morpholino)ethanesulfonic acid) 100 mM	5.91	5.74
MES (2-(N-morpholino)ethanesulfonic acid) 100 mM	6.12	5.88
MES (2-(N-morpholino)ethanesulfonic acid) 100 mM	6.3	6.14
MES (2-(N-morpholino)ethanesulfonic acid) 100 mM	6.5	6.29
MES (2-(N-morpholino)ethanesulfonic acid) 100 mM	6.66	6.42
MES (2-(N-morpholino)ethanesulfonic acid) 100 mM	6.82	6.53
MES (2-(N-morpholino)ethanesulfonic acid) 100 mM	6.94	6.69
Sodium Cacodylate 100 mM	5.2	5.25
Sodium Cacodylate 100 mM	5.38	5.41
Sodium Cacodylate 100 mM	5.54	5.56
Sodium Cacodylate 100 mM	5.69	5.68

Sodium Cacodylate 100 mM	5.87	5.84
Sodium Cacodylate 100 mM	6.05	5.95
Sodium Cacodylate 100 mM	6.23	6.15
Sodium Cacodylate 100 mM	6.43	6.38
Sodium Cacodylate 100 mM	6.59	6.5
Sodium Cacodylate 100 mM	6.77	6.69
Sodium Cacodylate 100 mM	6.92	6.84
Sodium Cacodylate 100 mM	7.13	6.99
Sodium HEPES 100 mM	6.36	5.95
Sodium HEPES 100 mM	6.65	6.29
Sodium HEPES 100 mM	6.9	6.58
Sodium HEPES 100 mM	7.13	6.76
Sodium HEPES 100 mM	7.36	6.91
Sodium HEPES 100 mM	7.57	7.15
Sodium HEPES 100 mM	7.84	7.37
Sodium HEPES 100 mM	8.04	7.58
Sodium HEPES 100 mM	8.31	7.75
Sodium HEPES 100 mM	8.48	7.99
Sodium HEPES 100 mM	8.64	8.22
Sodium HEPES 100 mM	8.83	8.46
Tris-HCL 100 mM	6.78	7.09
Tris-HCL 100 mM	7.14	7.33
Tris-HCL 100 mM	7.27	7.52
Tris-HCL 100 mM	7.57	7.65
Tris-HCL 100 mM	7.78	7.99
Tris-HCL 100 mM	8.02	8.13
Tris-HCL 100 mM	8.23	8.46
Tris-HCL 100 mM	8.45	8.7
Tris-HCL 100 mM	8.7	8.89
Tris-HCL 100 mM	8.81	8.89
Tris-HCL 100 mM	9.06	9.07
Tris-HCL 100 mM	9.22	9.45

Water	7	6.29
Water	7	6.29
Water	7	6.34
Water	7	6.42
Water	7	6.38
Water	7	6.38
Water	7	6.46
Water	7	6.38
Water	7	6.46
Water	7	6.53
Water	7	6.5
Water	7	6.38

Table S3 Table showing the changes in pH on addition of buffer, buffer with lysozyme and water for a set of standard crystallisation conditions.

Green fill indicates condition which grew crystals.

Well Number	Well Contents	pH of component Buffer	measured pH	measured pH 50% water	measured pH 50% buffer pH 5	measured pH 50% buffer pH 7	measured pH 50% buffer pH 9	measured pH Lysozyme & buffer pH5	measured pH Lysozyme & buffer pH7	measured pH Lysozyme & buffer pH9	plate well ID
1	[1]100 mM Tris base/HCl pH: 8.5 3400 mM hexanediol 200 mM Magnesium Chloride	8.5	7.99	8.04	8.31	8.46	8.46	8.13	8.31	8.52	a1
2	[2]5 %v/v isopropanol 2000 mM Ammonium Sulphate	na	5.56	5.59	5.41	6.34	6.94	5.41	6.38	6.94	a2
3	[3]100 mM Sodium Acetate/HCl pH: 4.6 10 %v/v isopropanol 200 mM Calcium Chloride	4.6	4.45	4.45	4.45	4.45	4.45	4.55	4.55	4.9	a3
4	[4]100 mM MES/NaOH pH: 6.5 20 %v/v isopropanol 200 mM Sodium Citrate	6.5	6.23	6.78	6.69	6.58	6.84	6.58	6.81	6.94	a4
5	[5]100 mM HEPES sodium salt/HCl pH: 7.5 30 %v/v isopropanol 200 mM Magnesium Chloride	7.5	6.69	7.25	7.25	7.37	7.4	7.15	7.37	7.52	a5
6	[6]100 mM HEPES sodium salt/HCl pH: 7.5 20 %v/v isopropanol 200 mM Sodium Citrate	7.5	7.15	7.58	7.52	7.58	7.61	7.4	7.61	7.65	a6
7	[7]100 mM Tris base/HCl pH: 8.5 30 %v/v isopropanol 200 mM Ammonium Acetate	8.5	7.58	8.22	8.13	8.13	8.22	7.99	8.22	8.31	a7

8	[8]100 mM Sodium Citrate/HCl pH: 5.6 10 %v/v isopropanol 20 %w/v Polyethylene Glycol-3350	5.6	5.46	5.84	5.66	5.74	5.84	5.89	5.89	6.04	a8
9	[9]100 mM MES/NaOH pH: 6.5 10 %v/v isopropanol 20 %w/v Polyethylene Glycol-3350	6.5	5.49	5.89	5.89	6.04	6.15	5.84	6.34	6.46	a9
10	[10]100 mM HEPES sodium salt/HCl pH: 7.5 10 %v/v isopropanol 20 %w/v Polyethylene Glycol-3350	7.5	6.69	7.09	7.07	7.15	7.27	7.09	7.4	7.52	a10
11	[11]100 mM Tris base/HCl pH: 8.5 10 %v/v isopropanol 20 %w/v Polyethylene Glycol-3350	8.5	8.04	8.46	8.46	8.7	8.6	8.46	8.6	8.97	a11
12	[12]10 %v/v Ethanol 2000 mM Sodium Chloride	na	6.64	6.46	5.2	7.33	8.75	5.15	7.37	8.6	a12
13	[13]100 mM Tris base/HCl pH: 8.5 25 %v/v Ethanol	8.5	8.04	8.46	8.46	8.52	8.6	8.22	8.52	9.07	b1
14	[14]30 %v/v Ethylene Glycol		5.49	4.45	4.93	6.84	9.07	4.93	7.07	9.07	b2
15	[15]100 mM Sodium Citrate/HCl pH: 5.6 5 %v/v Ethanol 20 %w/v Polyethylene Glycol-3350	5.6	5.49	5.84	5.68	5.84	5.84	5.89	5.68	6.2	b3
16	[16]100 mM MES/NaOH pH: 6.5 5 %v/v Ethanol 20 %w/v Polyethylene Glycol-3350	6.5	5.89	6.15	6.15	6.29	6.42	6.15	6.46	6.64	b4
17	[17]100 mM HEPES sodium salt/HCl pH: 7.5 5 %v/v Ethanol 20 %w/v Polyethylene Glycol-3350	7.5	6.99	7.27	7.19	7.27	7.37	7.15	7.52	7.58	b5
18	[18]100 mM Tris base/HCl pH: 8.5 5 %v/v Ethanol 20 %w/v Polyethylene Glycol-3350	8.5	8.31	8.46	8.46	8.52	8.6	8.31	8.7	8.75	b6
19	[19]100 mM Sodium Acetate/HCl pH: 4.6 20 %v/v MethylPentaneDiol 200 mM Sodium Chloride	4.6	4.45	4.45	4.45	4.45	4.45	4.45	4.72	4.72	b7
20	[20]100 mM Sodium Citrate/HCl pH: 5.6 20 %v/v MethylPentaneDiol 200 mM Ammonium	5.6	5.49	5.89	5.84	5.88	5.89	5.84	5.95	6.15	b8

	Acetate										
21	[21]100 mM MES/NaOH pH: 6.5 20 %v/v MethylPentaneDiol 200 mM Magnesium Acetate	6.5	5.89	6.38	6.29	6.42	6.46	6.23	6.5	6.64	b9
22	[22]100 mM HEPES sodium salt/HCl pH: 7.5 30 %v/v MethylPentaneDiol 500 mM Ammonium Sulphate	7.5	6.64	7.15	7.06	7.09	7.15	6.91	7.09	7.19	b10
23	[23]100 mM HEPES sodium salt/HCl pH: 7.5 30 %v/v MethylPentaneDiol 200 mM Sodium Citrate	7.5	6.64	7.27	7.19	7.25	7.37	7.09	7.33	7.4	b11
24	[24]100 mM Tris base/HCl pH: 8.5 30 %v/v MethylPentaneDiol 200 mM Sodium diHydrogen Phosphate	8.5	5.49	6.04	6.04	6.04	6.04	6.15	6.29	6.38	b12
25	[25]35 %v/v 1,4 Dioxane	na	4.45	4.72	4.72	5.15	5.46	4.93	5.59	5.89	c1
26	[26]2000 mM Ammonium Sulphate	na	5.59	5.66	5.09	6.91	7.27	5.09	6.78	7.19	c2
27	[27]100 mM MES/NaOH pH: 6.5 2000 mM Ammonium Sulphate	6.5	6.23	6.91	6.84	6.94	6.99	6.5	6.69	6.91	c3
28	[28]100 mM HEPES sodium salt/HCl pH: 7.5 2000 mM Ammonium Sulphate 100 mM Sodium Chloride	7.5	6.84	7.61	7.58	7.58	7.61	7.25	7.73	7.52	c4
29	[29]100 mM Tris base/HCl pH: 8.5 2000 mM Ammonium Sulphate	8.5	7.65	8.31	8.22	7.99	8.31	7.73	7.91	7.99	c5
30	[30]100 mM Sodium Acetate/HCl pH: 4.6 1600 mM Ammonium Sulphate	4.6	5.56	4.55	4.59	4.55	4.82	5.09	4.9	5.09	c6
31	[31]100 mM Sodium Citrate/HCl pH: 5.6 1800 mM Ammonium Sulphate 200 mM Sodium Potassium Tartrate	5.6	5.59	5.68	5.82	5.59	5.84	5.56	5.56	5.82	c7
32	[32]100 mM MES/NaOH pH: 6.5 1600 mM Ammonium Sulphate 10	6.5	6.81	6.76	6.58	6.91	6.94	6.64	6.88	6.99	c8

	%v/v 1,4 Dioxane										
33	[33]100 mM Tris base/HCl pH: 8.5 1800 mM Ammonium Sulphate 12 %v/v Ethylene Glycol	8.5	8.97	8.31	8.04	8.13	8.31	7.91	7.99	7.99	c9
34	[34]100 mM Sodium Citrate/HCl pH: 5.6 1000 mM Sodium diHydrogen Phosphate	5.6	4.82	5.02	5.02	5.09	5.09	4.96	4.9	4.72	c10
35	[35]100 mM HEPES sodium salt/HCl pH: 7.5 400 mM Potassium diHydrogen Phosphate 600 mM Sodium diHydrogen Phosphate	7.5	4.82	5.15	5.15	5.15	5.2	5.09	5.15	5.2	c11
36	[36]100 mM Tris base/HCl pH: 8.5 1350 mM Sodium diHydrogen Phosphate 1000 mM Sodium Chloride	8.5	5.15	4.93	4.47	4.59	4.9	4.64	4.64	4.9	c12
37	[37]800 mM Sodium diHydrogen Phosphate	na	4.45	4.72	4.45	4.9	4.82	4.74	4.9	5.09	d1
38	[38]100 mM Sodium Acetate/HCl pH: 4.6 1000 mM Sodium Chloride	4.6	4.45	4.45	4.45	4.45	4.45	4.47	4.51	4.51	d2
39	[39]100 mM Sodium Citrate/HCl pH: 5.6 2000 mM Sodium Chloride	5.6	5.25	5.46	5.15	5.56	5.49	5.25	5.56	5.66	d3
40	[40]100 mM MES/NaOH pH: 6.5 2000 mM Sodium Chloride 500 mM Potassium diHydrogen Phosphate	6.5	5.34	5.41	5.25	5.25	5.41	5.2	5.25	5.25	d4
41	[41]100 mM HEPES sodium salt/HCl pH: 7.5 4500 mM Sodium Chloride	7.5	7.33	7.73	7.91	8.22	8.31	7.65	7.73	8.13	d5
42	[42]1000 mM Sodium Chloride 10 mM Magnesium Chloride	na	6.88	6.81	5.15	7.47	9.26	5.25	7.33	9.33	d6
43	[43]100 mM Sodium Citrate/HCl pH: 5.6 1750 mM Sodium Acetate	5.6	6.58	6.53	6.5	6.58	6.64	6.38	6.5	6.58	d7
44	[44]100 mM MES/NaOH pH: 6.5 1800 mM Sodium Acetate	6.5	7.09	6.94	6.94	7.06	7.07	6.81	6.94	7.06	d8

45	[45]100 mM MES/NaOH pH: 6.5 1000 mM Sodium Acetate	6.5	6.91	6.84	6.78	6.88	6.94	6.64	6.91	6.99	d9
46	[46]100 mM HEPES sodium salt/HCl pH: 7.5 1800 mM Ammonium Acetate	7.5	7.52	7.47	7.4	7.47	7.47	7.15	7.37	7.4	d10
47	[47]1200 mM Sodium Citrate	na	6.91	8.13	7.65	8.13	8.46	7.19	7.65	8.22	d11
48	[48]100 mM HEPES sodium salt/HCl pH: 7.5 1000 mM Sodium Citrate	7.5	7.73	8.04	7.61	8.04	7.91	7.73	7.65	7.61	d12
49	[49]100 mM Sodium Acetate/HCl pH: 4.6 2000 mM Sodium Formate	4.6	5.34	5.25	5.2	5.41	5.46	5.2	5.25	5.41	e1
50	[50]4000 mM Sodium Formate	na	7.58	7.65	6.91	7.65	8.6	6.58	7.33	7.52	e2
51	[51]750 mM Sodium Potassium Tartrate	na	7.65	7.47	6.5	7.61	8.82	6.15	7.58	9.45	e3
52	[52]100 mM HEPES sodium salt/HCl pH: 7.5 1000 mM Sodium Potassium Tartrate	7.5	8.22	7.99	7.75	7.65	8.04	7.65	7.65	7.61	e4
53	[53]100 mM Tris base/HCl pH: 8.5 1800 mM Lithium Sulphate	8.5	9.33	8.82	8.82	8.82	8.82	8.89	9.45	8.82	e5
54	[54]100 mM HEPES sodium salt/HCl pH: 7.5 1800 mM Lithium Sulphate	7.5	7.27	7.73	8.13	7.73	7.99	7.61	7.73	7.91	e6
55	[55]100 mM Sodium Citrate/HCl pH: 5.6 500 mM Ammonium Sulphate 1000 mM Lithium Sulphate	5.6	5.56	5.56	5.56	5.66	5.66	5.59	5.56	5.59	e7
56	[56]100 mM Sodium Citrate/HCl pH: 5.6 1500 mM Magnesium Chloride	5.6	4.64	4.45	4.45	4.45	4.45	4.45	4.47	4.45	e8
57	[57]100 mM MES/NaOH pH: 6.5 1800 mM Magnesium Chloride	6.5	6.94	6.91	6.84	6.91	6.94	6.78	6.84	6.94	e9
58	[58]100 mM Tris base/HCl pH: 8.5 2000 mM Magnesium Chloride	8.5	8.82	9.26	9.22	9.22	9.22	9.07	9.07	9.07	e10
59	[59]2000 mM Sodium Malonate	na	5.88	7.25	6.99	7.09	7.37	6.69	6.84	6.91	e11

60	[60]25 %w/v Polyethylene Glycol-1500	na	5.41	5.34	4.9	6.15	6.69	5.09	6.53	7.15	e12
61	[61]10 %w/v Polyethylene Glycol-1500 10 %w/v Polyethylene Glycol-8000	na	4.45	4.45	4.45	5.89	6.64	4.72	6.38	7.15	f1
62	[62]100 mM Sodium Citrate/HCl pH: 5.6 10 %w/v Polyethylene Glycol-8000	5.6	5.66	5.88	5.74	5.84	5.89	5.74	5.89	6.14	f2
63	[63]100 mM Tris base/HCl pH: 8.5 2 %v/v 1,4 Dioxane 15 %w/v Polyethylene Glycol-10000	8.5	8.46	8.52	8.52	8.6	8.97	8.46	8.6	8.97	f3
64	[64]100 mM Sodium Acetate/HCl pH: 4.6 8 %w/v Polyethylene Glycol-3350	4.6	4.45	4.45	4.45	4.45	4.45	4.45	4.9	4.93	f4
65	[65]100 mM Sodium Citrate/HCl pH: 5.6 30 %v/v Polyethylene Glycol-400	5.6	5.66	5.82	5.66	5.68	5.84	5.68	5.84	5.89	f5
66	[66]100 mM MES/NaOH pH: 6.5 12 %w/v Polyethylene Glycol-10000	6.5	6.04	6.14	6.04	6.2	6.29	6.15	6.42	6.5	f6
67	[67]100 mM MES/NaOH pH: 6.5 25 %w/v Polyethylene Glycol-550 MME	6.5	5.49	5.84	5.84	5.88	5.89	5.84	6.15	6.2	f7
68	[68]100 mM Tris base/HCl pH: 8.5 8 %w/v Polyethylene Glycol-8000	8.5	8.97	8.6	8.6	8.97	9.07	8.52	8.6	9.07	f8
69	[69]100 mM Tris base/HCl pH: 8.5 30 %v/v Polyethylene Glycol-400	8.5	7.99	8.22	8.13	8.31	8.46	8.13	8.46	8.52	f9
70	[70]18 %w/v Polyethylene Glycol-8000 50 mM Sodium diHydrogen Phosphate	na	4.45	4.72	4.72	5.46	5.68	4.93	5.84	6.04	f10
71	[71]12 %w/v Polyethylene Glycol-8000 500 mM Lithium Sulphate	na	6.2	5.46	4.99	7.37	9.26	5.15	7.52	9.26	f11
72	[72]200 mM Ammonium Sulphate 25 %w/v Polyethylene Glycol-8000	na	5.68	5.46	4.93	6.81	7.47	5.34	6.81	7.37	f12
73	[73]200 mM Ammonium Sulphate 30 %w/v	na	5.46	5.46	4.93	5.46	7.27	5.56	6.69	7.19	g1

	Polyethylene Glycol-3350										
74	[74]30 %v/v Polyethylene Glycol-400 200 mM Magnesium Chloride	na	4.45	4.45	4.45	4.45	5.46	4.45	5.46	6.76	g2
75	[75]10 %w/v Polyethylene Glycol-6000 2000 mM Sodium Chloride	na	4.45	4.45	4.45	6.91	9.07	4.93	7.19	9.26	g3
76	[76]100 mM Sodium Acetate/HCl pH: 4.6 30 %v/v Polyethylene Glycol-400 100 mM Calcium Chloride	4.6	4.45	4.45	4.45	4.45	4.45	4.45	4.45	4.45	g4
77	[77]100 mM Sodium Acetate/HCl pH: 4.6 18 %w/v Polyethylene Glycol-8000 200 mM Calcium Acetate	4.6	5.15	5.25	5.2	5.25	5.34	5.34	5.49	5.49	g5
78	[78]100 mM Sodium Citrate/HCl pH: 5.6 400 mM Ammonium Sulphate 25 %w/v Polyethylene Glycol-3350	5.6	5.49	5.66	5.49	5.66	5.68	5.74	5.88	5.95	g6
79	[79]100 mM Sodium Citrate/HCl pH: 5.6 200 mM Ammonium Sulphate 30 %w/v Polyethylene Glycol-8000	5.6	5.68	5.49	5.49	5.66	5.68	5.74	5.84	5.95	g7
80	[80]100 mM Sodium Citrate/HCl pH: 5.6 200 mM Ammonium Sulphate 30 %w/v Polyethylene Glycol-2000 MonoMethylEther	5.6	5.49	5.68	5.49	5.68	5.74	5.66	5.84	6.14	g8
81	[81]100 mM Sodium Citrate/HCl pH: 5.6 28 %w/v Polyethylene Glycol-3350 200 mM Ammonium Acetate	5.6	5.84	5.89	5.84	5.89	5.89	5.89	5.95	6.23	g9
82	[82]100 mM MES/NaOH pH: 6.5 25 %w/v Polyethylene Glycol-3350 200 mM Sodium Acetate	6.5	6.15	6.2	6.15	6.29	6.42	6.15	6.42	6.64	g10
83	[83]100 mM MES/NaOH pH: 6.5 30 %w/v Polyethylene Glycol-6000	6.5	6.04	6.15	6.14	6.2	6.29	6.14	6.34	5.89	g11

	200 mM Ammonium Sulphate										
84	[84]100 mM HEPES sodium salt/HCl pH: 7.5 10 %v/v Polyethylene Glycol-400 2000 mM Ammonium Sulphate	7.5	7.65	7.61	7.58	7.61	7.4	7.07	7.52	7.61	g12
85	[85]100 mM HEPES sodium salt/HCl pH: 7.5 5 %v/v MethylPentaneDiol 20 %w/v Polyethylene Glycol-6000	7.5	6.88	7.07	7.07	7.19	7.27	7.07	7.37	7.4	h1
86	[86]100 mM HEPES sodium salt/HCl pH: 7.5 8 %v/v Ethylene Glycol 20 %w/v Polyethylene Glycol-10000	7.5	6.84	7.09	7.07	7.15	7.25	6.94	7.37	7.37	h2
87	[87]100 mM HEPES sodium salt/HCl pH: 7.5 22 %w/v Polyethylene Glycol-8000 200 mM Magnesium Acetate	7.5	7.37	7.47	7.37	7.52	7.58	7.27	7.52	7.58	h3
88	[88]100 mM HEPES sodium salt/HCl pH: 7.5 28 %v/v Polyethylene Glycol-400 200 mM Calcium Chloride	7.5	6.99	7.15	7.06	7.15	7.25	6.88	7.15	7.25	h4
89	[89]100 mM HEPES sodium salt/HCl pH: 7.5 30 %w/v Polyethylene Glycol-3350 200 mM Lithium Sulphate	7.5	7.27	7.47	7.37	7.47	7.52	7.06	7.06	7.27	h5
90	[90]100 mM HEPES sodium salt/HCl pH: 7.5 30 %w/v Polyethylene Glycol-3350 200 mM Magnesium Chloride	7.5	7.15	7.4	7.27	7.37	7.47	7.07	7.37	7.47	h6
91	[91]100 mM Tris base/HCl pH: 8.5 18 %w/v Polyethylene Glycol-8000 200 mM Calcium Acetate	8.5	9.16	9.16	8.97	9.07	9.16	8.6	9.07	9.16	h7
92	[92]100 mM Tris base/HCl pH: 8.5 20 %w/v Polyethylene Glycol-2000 MonoMethylEther 100	8.5	9.07	8.97	8.6	9.07	9.16	8.7	8.97	9.07	h8

	mM Sodium Chloride										
93	[93]100 mM Tris base/HCl pH: 8.5 25 %w/v Polyethylene Glycol-550 MME 100 mM Sodium Chloride	8.5	8.31	8.46	8.31	8.46	8.52	8.22	8.46	8.7	h9
94	[94]100 mM Tris base/HCl pH: 8.5 25 %w/v Polyethylene Glycol-3350 200 mM Ammonium Acetate	8.5	8.31	8.31	8.31	8.46	8.46	8.13	8.31	8.46	h10
95	[95]100 mM Tris base/HCl pH: 8.5 30 %v/v Polyethylene Glycol-400 200 mM Sodium Citrate	8.5	9.26	9.16	8.6	9.16	9.26	8.46	9.07	9.26	h11
96	[96]100 mM Tris base/HCl pH: 8.5 30 %v/v Polyethylene Glycol-8000 200 mM Sodium Acetate	8.5	9.16	9.07	8.6	9.16	9.26	8.52	8.97	9.07	h12

Table S4 Variation between pH meters was tested using a Corning 240 pH meter and two different Jenway 4330 pH meters.

All three meters were calibrated using standard solutions for pH 4, 7 and 10. The readings for the three meters are shown together with the average (absolute) errors for each standard solution.

Standard	pH meter			
	Jenway 4330 (1)	Jenway 4330 (2)	Corning 240	Average error
pH 4	4.10	4.02	3.96	0.05
pH 6	6.07	6.02	6.03	0.04
pH 7	7.07	7.05	7.00	0.04
pH 9	9.29	9.13	9.20	0.21
Overall average error				0.09

Table S5 Table showing 384-well miniaturized assay results.

Buffer	Jenway 4330 pH meter Measurements	Spectrophotometer pH (1)	Spectrophotometer pH (2)	Spectrophotometer pH (3)	Spectrophotometer pH (4)
PCTP4* 1 mM, PCTP9.5 99 mM	9.42	9.07	9.07	9.07	7.61
PCTP4 9.90909 mM, PCTP9.5 90.0909 mM	8.95	8.6	8.04	9.07	7.15
PCTP4 18.8182 mM, PCTP9.5 81.1818 mM	8.37	7.65	7.65	8.13	7.15
PCTP4 27.7273 mM, PCTP9.5 72.2727 mM	7.61	7.47	7.52	7.52	7.25
PCTP4 36.6364 mM, PCTP9.5 63.3636 mM	7.23	7.19	7.09	7.09	7.09
PCTP4 45.5455 mM, PCTP9.5 54.4545 mM	6.84	6.84	6.76	6.78	6.58
PCTP4 54.4545 mM, PCTP9.5 45.5455 mM	6.49	6.53	6.42	6.42	6.38
PCTP4 63.3636 mM, PCTP9.5 36.6364 mM	6.11	5.95	5.95	5.95	5.89
PCTP4 72.2727 mM, PCTP9.5 27.7273 mM	5.66	5.68	5.66	5.66	5.84
PCTP4 81.1818 mM, PCTP9.5 18.8182 mM	5.18	5.49	5.49	5.46	5.49
PCTP4 90.0909 mM, PCTP9.5 9.90909 mM	4.72	4.82	5.46	4.82	5.49
Sodium acetate 100 mM	4.46	5.2	5.15	5.15	5.49
Sodium acetate 100 mM	4.63	4.82	5.15	4.72	5.49
Sodium acetate 100 mM	4.84	4.82	4.82	4.82	4.93
Sodium acetate 100 mM	5.03	5.46	5.46	5.41	5.49
Sodium acetate 100 mM	5.22	4.82	5.46	5.46	5.49
Sodium acetate 100 mM	5.37	5.25	5.46	5.46	5.49
Sodium acetate 100 mM	5.57	5.46	5.46	5.46	5.49
Sodium acetate 100 mM	5.74	5.49	5.66	5.66	5.66
Sodium citrate 100 mM	5.09	5.15	4.93	5.15	5.49
Sodium citrate 100 mM	5.14	5.09	4.82	5.15	5.49
Sodium citrate 100 mM	5.21	5.46	5.46	5.46	8.89

Sodium citrate 100 mM	5.33	5.25	5.15	4.93	5.49
Sodium citrate 100 mM	5.44	5.46	5.46	5.25	8.89
Sodium citrate 100 mM	5.65	5.49	5.46	5.46	5.49
Sodium citrate 100 mM	5.84	5.49	5.49	5.49	5.66
Sodium citrate 100 mM	6.03	5.74	5.84	5.82	5.84
Sodium citrate 100 mM	6.23	5.95	5.89	5.89	5.89
Sodium citrate 100 mM	6.47	6.23	6.15	6.15	8.89
Sodium citrate 100 mM	6.74	6.53	6.42	6.42	8.89
Sodium citrate 100 mM	6.96	6.69	6.58	6.58	6.42
MES (2-(N-morpholino)ethanesulfonic acid) 100 mM	4.78	5.2	5.25	4.93	5.49
MES (2-(N-morpholino)ethanesulfonic acid) 100 mM	5.11	5.49	5.49	5.49	5.46
MES (2-(N-morpholino)ethanesulfonic acid) 100 mM	5.32	5.25	5.46	5.46	5.49
MES (2-(N-morpholino)ethanesulfonic acid) 100 mM	5.53	5.46	5.46	5.46	8.89
MES (2-(N-morpholino)ethanesulfonic acid) 100 mM	5.71	5.49	5.49	5.49	5.66
MES (2-(N-morpholino)ethanesulfonic acid) 100 mM	5.91	5.66	5.66	5.66	5.66
MES (2-(N-morpholino)ethanesulfonic acid) 100 mM	6.12	5.84	5.84	5.84	5.89
MES (2-(N-morpholino)ethanesulfonic acid) 100 mM	6.3	5.95	5.89	5.95	5.95
MES (2-(N-morpholino)ethanesulfonic acid) 100 mM	6.5	6.15	6.14	6.04	6.15
MES (2-(N-morpholino)ethanesulfonic acid) 100 mM	6.66	8.89	6.15	6.23	8.89
MES (2-(N-morpholino)ethanesulfonic acid) 100 mM	6.82	6.5	6.38	6.38	6.38
MES (2-(N-morpholino)ethanesulfonic acid) 100 mM	6.94	6.58	6.42	6.53	6.42
Sodium Cacodylate 100 mM	5.2	5.46	5.46	5.49	5.49
Sodium Cacodylate 100 mM	5.38	5.46	5.46	5.49	5.49

Sodium Cacodylate 100 mM	5.54	5.49	5.49	5.49	5.66
Sodium Cacodylate 100 mM	5.69	5.49	5.66	5.66	5.49
Sodium Cacodylate 100 mM	5.87	5.74	5.74	5.82	5.84
Sodium Cacodylate 100 mM	6.05	5.89	5.84	5.89	5.89
Sodium Cacodylate 100 mM	6.23	6.04	6.04	6.15	5.89
Sodium Cacodylate 100 mM	6.43	6.34	6.23	6.23	8.89
Sodium Cacodylate 100 mM	6.59	6.42	6.5	6.38	6.38
Sodium Cacodylate 100 mM	6.77	6.58	6.53	6.53	6.38
Sodium Cacodylate 100 mM	6.92	6.69	6.64	6.58	6.38
Sodium Cacodylate 100 mM	7.13	6.88	6.84	6.84	6.53
Sodium HEPES 100 mM	6.36	5.95	5.89	5.84	5.89
Sodium HEPES 100 mM	6.65	6.23	6.15	6.14	6.15
Sodium HEPES 100 mM	6.9	6.5	6.38	6.34	6.38
Sodium HEPES 100 mM	7.13	6.69	6.58	6.58	6.53
Sodium HEPES 100 mM	7.36	6.94	6.78	6.69	6.58
Sodium HEPES 100 mM	7.57	7.07	7.06	7.06	6.91
Sodium HEPES 100 mM	7.84	7.33	7.15	7.19	7.09
Sodium HEPES 100 mM	8.04	7.4	7.25	7.25	7.15
Sodium HEPES 100 mM	8.31	7.37	7.4	7.52	6.88
Sodium HEPES 100 mM	8.48	7.52	7.33	7.33	6.88
Sodium HEPES 100 mM	8.64	7.65	7.58	7.61	7.25
Sodium HEPES 100 mM	8.83	7.65	7.4	7.52	6.91
Tris-HCL 100 mM	6.78	7.09	6.84	6.84	6.64
Tris-HCL 100 mM	7.14	7.25	7.09	7.15	6.84
Tris-HCL 100 mM	7.27	7.52	7.33	7.33	7.15
Tris-HCL 100 mM	7.57	7.52	7.4	7.4	7.15
Tris-HCL 100 mM	7.78	7.52	7.33	7.33	6.84
Tris-HCL 100 mM	8.02	7.65	7.61	7.61	7.33
Tris-HCL 100 mM	8.23	7.99	7.65	7.61	7.33
Tris-HCL 100 mM	8.45	7.73	7.65	7.65	7.33
Tris-HCL 100 mM	8.7	7.99	7.73	7.65	7.4
Tris-HCL 100 mM	8.81	7.99	7.65	7.73	7.52
Tris-HCL 100 mM	9.06	8.6	8.6	7.99	7.52

Tris-HCL 100 mM	9.22	7.73	7.61	7.61	7.15
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