List of Compatible Buffers and Buffer Compounds

The following table lists protein sample buffers and buffer components that are known to be compatible with the Protein 200 Plus LabChip® kit and the Agilent 2100 bioanalyzer. The numbers to the right indicate effects that may occur if that particular buffer is used.

Salts and Buffers:	**Detergents:**	
50 mM HEPES pH 7.5	1% CHAPS in PBS pH 7.4	(1,2)
25 mM HEPES, 150 mM NaCl pH 7.5	0.1% desoxycholate in PBS pH 7.4	(3)
20 mM HEPES, 20% glycerol, 0.1 M KCl, 0.2mM EDTA, 0.5 mM PMSF, 0.5 mM DTT pH 7.9	2% dodecyl beta maltoside in PBS 7.4	(1)
20 mM Histidine, 30 mM NaCl, 30 mM sucrose, 290 mM glycine, 2 mM CaCl2 pH 6.6	1% sarcosyl in PBS pH 7.4	(2, 4)
250 mM imidazole in PBS pH 7.5	1% SDS	
300 mM KCl	1% Triton X-100	(1)
50 mM MES pH 6.0	0.1% Tween 20	(1)
5 mM $MgCl_2$	0.5% zwittergent E3-14 in PBS pH 7.4	(1, 2)
100 mM MOPS pH 7.2		
20 mM Na acetate		
500 mM NaCl	**Other Additives:**	
25 mM NaF		
300 mM NH_4HCO_3	20 % acetonitrile	(5)
200 mM NH_4SO_4	10 % DMSO	
50 mM Na or K phosphate pH 7.4	100 mM DTT	
20 mM Na phosphate, 15 mM NaCl pH 7.4	10 mM EDTA	
50 mM NaH_2PO_4, 300 mM NaCl, 250 mM imidazole pH 7.4	20 % ethanol	
2 mM Na pyrophosphate, 1 mM Na orthovanadate, 5 mM BME, 0-500 mM imidazole pH 7.4	600 mM guanidine	(6)
26 mM NaH_2PO_4, 41 mM Na_2HPO_4, 79 mM NaCl pH 8.0	30% glycerol	
PBS pH 7.4	1 mM HCl	
25 mM PIPES pH 7.0	5% mannitol	
100 mM Tris-HCl pH 8.0	0.04% NaN_3	
100 mM Tris-bis-propane	0.1 M NaOH	(7)
100 mM Tris, 3 mM desthiobiotin pH 8.0	1% PEG 3350 and 2000 (polyethylene glycol)	
250 mM Tris, 20 mM glycine pH 7.5	protease inhibitor cocktail (100x diluted, Sigma)	
100 mM Tris, 150 mM Na citrate pH 7.5	200 mM sucrose	
50 mM Tris, 500 mM NaCl, 0 - 500 mM imidazole pH 7.5	0.1 % TFA	(8)
18 mM Tris, 22.5 mM NaCl, 10% glycerol pH 7.5	7 M urea	
20 mM Tris, 500 mM NaCl, 25 mM ß-glycerophosphate pH 7.5 50 mM Tris, 10 mM gluthathione pH 8.0	0.01% Pluronic® F68 (contained in lipid concentrates used in cell culture)	(9)

Key:

(1) Gives large system peak which overlaps with lower marker, slightly affects sizing.
(2) Upper marker low, quantitation affected.
(3) At higher concentrations: lower marker disappears, negative dip between 9-20 kDa, no sizing possible
(4) Negative dip between 14-19 kDa.
(5) Can precipitate SDS, must be evaporated, quantitation might be affected.
(6) Precipitates SDS, quantitation might be affected.
(7) Causes additional peaks in the area of the lower marker and therefore affects lower marker assignment, sizing might be affected.
(8) Acidic buffers might affect sizing, must be evaporated or neutralized.
(9) Causes a peak at 22-24 kDa at higher concentrations inferring with other proteins in this size range. Above 5% the lower and upper marker are affected.

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