

Helsinki Factorial

The Factorial citrate buffer pH gradient is dispensed with Factorial citrate pH 4 (stock solutions: 0.9 M Citric acid , 0.9 M BisTrisPropane pH 4) and Factorial citrate pH 10 (stock solutions: 0.9 M Sodium citrate, 0.9 M Bis TrisPropane)

The crystallisation conditions of this screen are divided into classes according to the main precipitant of the well. This helps in interpreting the results; by checking whether all the hits are in the same class of precipitant or whether hits are scored with different precipitants makes it easier to design new crystallisation trials. The classes are

- 1) Viscous organic precipitants; in grey and marked with the letter **V**
- 2) Non-viscous organic precipitants; in pink and marked with the letter **N**
- 3) Salt precipitants; in turquoise and marked with the letter **S**

Note: the concentration in parentheses is the stock solution concentration used to make the well solution

	Class	Well	Buffer	Precipitant	Salt/Additives
1	S	A1		1.75 M Ammonium Phosphate(2 M pH 8.2)	
2	S	A2	0.1 M ADA (1 M pH 6.5)	2.0 M Ammonium Sulfate (3.5 M)	0.1 M Magnesium Sulfate (2.5 M)
3	S	A3	0.1 M Citric Acid (1 M pH 5.5)	2.0 M Ammonium Sulfate (3.5 M)	0.2 M Sodium Chloride (5 M)
4	S	A4	0.1 M CHES (1 M pH 9.5)	2.0 M Ammonium Sulfate (3.5 M)	5% MPD (100%)
5	S	A5	0.1% TEA (100% pH 7.5)	2.0 M Ammonium Sulfate (3.5 M)	2% PEG 400 (100%)
6	S	A6	0.1 M ADA (1 M pH 6.5)	2.0 M Ammonium Sulfate (3.5 M)	10% Ethanol (100%)
7	S	A7	0.1M Factorial citrate (1 M pH 5.5)	2 M Ammonium Sulfate (3.5 M)	10% Dioxane (100%)
8	V	A8	0.1M Factorial citrate (0.9 M pH 7.5)	20% PEG 6000 (50%)	1% Dioxane (100%)
9	N	A9	0.1M Factorial citrate (0.9 M pH 9)	20% iso-Propanol (100%)	10% Dioxane (100%)
10	N	A10	0.1M Factorial citrate (0.9 M pH 6.5)		20% Dioxane (100%)
11	S	A11	0.1M Factorial citrate (0.9 M pH 8)	2.45 M Ammonium Sulfate (3.5 M)	10% DMSO (50%)
12	V	A12	0.1M Factorial citrate (0.9 M pH 9)	10% PEG MME 5000 (50%, 10% MPD (100%))	10% DMSO (50%)
13	S	B1	0.1 M Acetic Acid (1 M pH 4.5)	2.5 M Ammonium Sulfate (3.5 M)	0.2 M Lithium Sulfate (1.8 M)
14	S	B2	0.1 M Tris (1 M pH 8.5)	3.0 M Ammonium Sulfate (3.5 M)	
15	N	B3	0.1% Tea (100% pH 7.5)	30% tert-butanol (50%)	
16	N	B4	0.1 M ADA (1 M pH 6.5)	20% Ethanol (100%)	0.2 M Potassium Chloride (4 M)
17	N	B5	0.1 M Citric Acid (1 M pH 5.5)	30% Ethanol (100%)	
18	N	B6	0.1 M Acetic Acid (1 M pH 4.5)	30% Ethanol (100%)	10% PEG 6000 (50%)
19	V	B7	0.1M Factorial citrate (0.9 M pH 7)	20% MPD (100%)	10% DMSO (50%)
20	V	B8	0.1M Factorial citrate (0.9 M pH 6)	10% Jeffamine (50% pH 7)	30% DMSO (50%)
21	S	B9	0.1M Factorial citrate (0.9 M pH 8.5)	1 M Ammonium Sulfate (3.5 M)	3 M Cesium Chloride (6 M)
22	V	B10	0.1M Factorial citrate (0.9 M pH 4.5)	15% PEG MME 5000 (50%)	0.2 M Cesium Chloride (6 M)
23	N	B11	0.1M Factorial citrate (0.9 M pH 7)	2 M Hexane-1,5-diol (4 M)	0.2 M Cesium Chloride (6 M)
24	S	B12	0.1M Factorial citrate (0.9 M pH 8.5)	2.45 M Ammonium Sulfate (3.5 M)	10% Glycerol (50%)
25	N	C1	0.1 M Tris (1 M pH 8.5)	40% Ethanol (100%)	0.2 M Magnesium Chloride (2 M)
26	N	C2	0.1% TEA (100% pH 7.5)	10% Isopropanol (100%)	20% PEG 400 (100%)
27	N	C3	0.1 M Acetic Acid (1 M pH 4.5)	20% Isopropanol (100%)	0.2 M Potassium Chloride (4 M)
28	N	C4	0.1 M Citric Acid (1 M pH 5.5)	20% Isopropanol (100%)	2% PEG 1500 (50%)
29	N	C5	0.1 M CHES (1 M pH 9.5)	30% Isopropanol (100%)	0.2 M Magnesium Sulfate (2.5 M)
30	S	C6		1.6 M Potassium Sodium Phosphate (2 M pH 5.5)	
31	S	C7	0.1M Factorial citrate (0.9 M pH 6.5)	3 M Cesium Chloride (6 M)	
32	S	C8	0.1M Factorial citrate (0.9 M pH 5.5)	1.5 M Ammonium Sulfate (3.5 M)	2.5% 1-Octanol (100%)
33	V	C9	0.1M Factorial citrate (0.9 M pH 7.5)	15% PPG P-425 (50%)	2.5% 1-Octanol (100%)
34	N	C10	0.1M Factorial citrate (0.9 M pH 6)	20% Isopropanol (100%)	2.5% 1-Octanol (100%)
35	S	C11	0.1M Factorial citrate (0.9 M pH 8)	1 M Potassium Chloride (4 M)	2.5% 1-Octanol (100%)
36	V	C12	0.1M Factorial citrate (0.9 M pH 6)	10% PEG 6000 (50%)	20% Glycerol (50%)
37	S	D1	0.1% TEA (100% pH 7.5)	1.5 M Potassium Sodium Tartrate (2 M)	
38	S	D2	0.1 M Acetic Acid (1 M pH 4.5)	1 M Lithium Sulfate (1.8 M)	
39	S	D3	0.1 M Tris (1 M pH 8.5)	1 M Lithium Sulfate (1.8 M)	1 M Ammonium Sulfate (3.5 M)
40	S	D4	0.1% TEA (100 % pH 7.5)	1.5 M Lithium Sulfate (1.8 M)	
41	S	D5	0.1 M Citric Acid (1 M pH 5.5)	1.5 M Magnesium Sulfate (2.5 M)	
42	S	D6	0.1 M Tris (1 M pH 8.5)	2 M Magnesium Sulfate (2.5 M)	
43	V	D7	0.1M Factorial citrate (0.9 M pH 7)	20% MPD (100%)	10% Glycerol (50%)

44	S	D8	0.1M Factorial citrate (0.9 M pH 5.5)	2 M Sodium Chloride (5 M)	10% Glycerol (50%)
45	S	D9	0.1M Factorial citrate (0.9 M pH 8)	2 M Ammonium Sulfate (3.5 M)	0.8% β -octyl glucoside 10%
46	V	D10	0.1M Factorial citrate (0.9 M pH 7.5)	15% PEG 6000 (50%)	0.1% β -octyl glucoside (10%)
47	V	D11	0.1M Factorial citrate (0.9 M pH 6.5)	20% MPD (100%)	0.1% β -octyl glucoside (10%)
48	S	D12	0.1M Factorial citrate (0.9 M pH 4.5)	3 M Sodium Chloride (5 M)	0.5% β -octyl glucoside (10%)
	Class	Well	Buffer	Precipitant	Salt/additives
49	V	E1	0.1 M CHES (1 M pH 9.5)	20% MPD (100%)	0.2 M Magnesium Chloride (2 M)
50	V	E2	0.1 M Citric Acid (1 M pH 5.5)	30% MPD (100%)	
51	V	E3	0.1 M Tris (1 M pH 8.5)	30% MPD (100%)	2.5% tert-butanol (50%)
52	V	E4	0.1 M Acetic Acid (1 M pH 4.5)	40% MPD (100%)	
53	V	E5	0.1% TEA (100% pH 7.5)	40% MPD (100%)	0.2 M Sodium Chloride (5 M)
54	S	E6	0.1 M CHES (1 M pH 9.5)	1 M Sodium Citrate (1.8 M)	
55	S	E7	0.1M Factorial citrate (0.9 M pH 5.5)	1.5 M Ammonium Sulfate (3.5 M)	0.01% NP-40 (0.1%)
56	V	E8	0.1M Factorial citrate (0.9 M pH 7.0)	20% PEG MME 5000 (50%)	0.01% NP-40 (0.1%)
57	V	E9	0.1M Factorial citrate (0.9 M pH 4.5)	20% MPD (100%)	0.01% NP-40 (0.1%)
58	S	E10	0.1M Factorial citrate (0.9 M pH 8.5)	2 M Lithium Chloride (4 M)	0.01% NP-40 (0.1%)
59	S	E11	0.1M Factorial citrate (0.9 M pH 6.0)	1 M Ammonium Sulfate (3.5 M)	0.2 M Cobalt Chloride (2 M)
60	V	E12	0.1M Factorial citrate (0.9 M pH 4.5)	15% Jeffamine M-600 (50% pH 7.0)	0.05 M Cobalt Chloride (2 M)
61	S	F1	0.1% TEA (100% pH 7.5)	1.5 M Sodium Citrate (1.8 M)	
62	S	F2	0.1 M Tris (1 M pH 8.5)	2 M Sodium Chloride (5 M)	
63	S	F3	0.1% TEA (100% pH 7.5)	2 M Sodium Chloride (5 M)	
64	S	F4	0.1 M Acetic Acid (1 M pH 4.5)	3 M Sodium Chloride (5 M)	
65	S	F5	0.1 M Acetic Acid (1 M pH 4.5)	2 M Sodium Formate (4 M)	
66	V	F6	0.1 M Citric Acid (1 M pH 5.5)	20% PEG 400 (100%)	0.2 M Potassium Chloride (4 M)
67	N	F7	0.1M Factorial citrate (0.9 M pH 7.5)	1.5 M Hexane-1,6-diol (4 M)	0.2 M Cobalt Chloride (2 M)
68	S	F8	0.1M Factorial citrate (0.9 M pH 7)		1.5 M Cobalt Chloride (2 M)
69	S	F9	0.1M Factorial citrate (0.9 M pH 8)	2 M Ammonium Sulfate (3.5 M)	1 M Sodium Chloride (5 M)
70	V	F10	0.1M Factorial citrate (0.9 M pH 6.5)	10% PEG 6000 (50%), 10% PEG MME 5000 (50%)	2 M Sodium Chloride (5 M)
71	N	F11	0.1M Factorial citrate (0.9 M pH 7.5)	1.5 M Hexane-1,6-diol (4 M)	0.2 M Sodium Chloride (5 M)
72	N	F12	0.1M Factorial citrate (0.9 M pH 6)	30% Ethyleneglycol (100%)	2 M Sodium Chloride (5 M)
73	V	G1	0.1% TEA (100% pH 7.5)	30% PEG 400 (100%)	0.2 M Magnesium Chloride (2 M)
74	V	G2	0.1 M Tris (1 M pH 8.5)	40% PEG 400 (100%)	
75	V	G3	0.1 M Tris (1 M pH 8.5)	15% PEG 1500 (50%)	5% MPD (100%)
76	V	G4	0.1 M Citric Acid (1 M pH 5.5)	20% PEG 1500 (50%)	
77	V	G5	0.1 M ADA (1 M pH 6.5)	20% PEG 1500 (50%)	0.2 M Potassium Chloride (4 M)
78	V	G6	0.1 M CHES (1 M pH 9.5)	25% PEG 1500 (50%)	0.2 M Magnesium Sulfate (2.5 M)
79	S	G7	0.1M Factorial citrate (0.9 M pH 8)	1.5 M Ammonium Sulfate (3.5 M), 10% Glycerol (50%)	0.05 M Magnesium Chloride (2 M), 0.05 M Potassium Chloride (4 M)
80	V	G8	0.1M Factorial citrate (0.9 M pH 4.5)	20% Jeffamine M-600 (50% pH 7.0)	0.05 M Magnesium Chloride (2 M), 0.05 M Potassium Chloride (4 M)
81	V	G9	0.1M Factorial citrate (0.9 M pH 6.5)	30% MPD (100%)	0.05 M Magnesium Chloride (2 M), 0.05 M Potassium Chloride (4 M)
82	S	G10	0.1M Factorial citrate (0.9 M pH 7)	1 M Potassium Chloride (4 M)	1 M Magnesium Chloride (2 M)
83	S	G11	0.1M Factorial citrate (0.9 M pH 7)	0.2 M Ammonium Sulfate (3.5 M)	2.5 M Lithium Chloride (4 M)
84	N	G12	0.1M Factorial citrate (0.9 M pH 5.5)	20% Ethyleneglycol (100%)	1 M Lithium Chloride (4 M)
85	V	H1	0.1% TEA (100 % pH 7.5)	30% PEG 1500 (50%)	0.2 M Ammonium Sulfate (3.5 M)
86	V	H2	0.1 M Acetic Acid (1 M pH 4.5)	20% PEG 6000 (50%)	1 M Sodium Chloride (5 M)
87	V	H3	0.1 M Citric Acid (1 M pH 5.5)	20% PEG 6000 (50%)	2.5% tert-Butanol (50%)
88	V	H4	0.1% TEA (100% pH 7.5)	25% PEG 6000 (50%)	
89	V	H5	0.1 M ADA (1 M pH 6.5)	25% PEG 6000 (50%)	0.2 M Lithium Sulfate (1.8 M)
90	V	H6	0.1 M Acetic Acid (1 M pH 4.5)	30% PEG 6000 (50%)	
91	V	H7	0.1M Factorial citrate (0.9 M pH 9)	20% PPG P-400 (50%)	1 M Lithium Chloride (4 M)
92	S	H8	0.1M Factorial citrate (0.9 M pH 8.5)	1.0 M Sodium Chloride (5 M)	1 M Lithium Chloride (4 M)
93	S	H9	0.1M Factorial citrate (0.9 M pH 5.5)	1.0 M Ammonium Sulfate (3.5 M)	1 M Potassium Chloride (4 M)
94	V	H10	0.1M Factorial citrate (0.9 M pH 8)	20% PEG 6000 (50%), 20% Ethyleneglycol (100%)	0.2 M Potassium Chloride (4 M)
95	V	H11	0.1M Factorial citrate (0.9 M pH 7)	20% Jeffamine M-600 (50% pH 7)	0.2 M Potassium Chloride (4 M)
96	S	H12	0.1M Factorial citrate (0.9 M pH 6)		2.0 M Potassium Chloride (4 M)