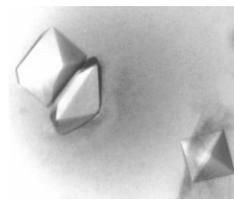


# The Classics Suite

## For screening of protein crystallization conditions



### The Classics Suite provides:

- A ready-to-use kit format to which only protein needs to be added, for easy and fast screening
- Ideal conditions for an initial screening to define crystallization conditions of a new protein
- 96 precisely defined chemical solutions at high concentrations to evaluate components' effects on protein solubility
- A spectrum of the most popular chemicals in protein crystallography with conditions based on the work by Jancarik and Kim (1)
- Information about protein solubility (if compared side by side with results of the Classics Lite Suite)

The Classics Suite is available in a wide range of formats to suit all scales and throughputs.

EasyXtal Refill-Hit Solutions can be used to develop grids around the original hit conditions. An overview of the composition of the 96 solutions together with an order number for the corresponding Refill-Hit Solution can be found on pages 2 and 3. The location of each Refill-Hit Solution number is given in the diagram below.

1. Jancarik, J., and Kim, S-H. (1991) Sparse matrix sampling: a screening method for crystallization of proteins. *J. Appl. Cryst.* **24**, 411.

### Location of Refill-Hit Solutions in 24-Well and 96-Well Plate Formats

	1	2	3	4	5	6
A	1	2	3	4	5	6
B	7	8	9	10	11	12
C	13	14	15	16	17	18
D	19	20	21	22	23	24

24-well plate 1 of 4

	1	2	3	4	5	6
A	25	26	27	28	29	30
B	31	32	33	34	35	36
C	37	38	39	40	41	42
D	43	44	45	46	47	48

24-well plate 2 of 4

	1	2	3	4	5	6
A	49	50	51	52	53	54
B	55	56	57	58	59	60
C	61	62	63	64	65	66
D	67	68	69	70	71	72

24-well plate 3 of 4

	1	2	3	4	5	6
A	73	74	75	76	77	78
B	79	80	81	82	83	84
C	85	86	87	88	89	90
D	91	92	93	94	95	96

24-well plate 4 of 4

	1	2	3	4	5	6	7	8	9	10	11	12
A	1	2	3	4	5	6	7	8	9	10	11	12
B	13	14	15	16	17	18	19	20	21	22	23	24
C	25	26	27	28	29	30	31	32	33	34	35	36
D	37	38	39	40	41	42	43	44	45	46	47	48
E	49	50	51	52	53	54	55	56	57	58	59	60
F	61	62	63	64	65	66	67	68	69	70	71	72
G	73	74	75	76	77	78	79	80	81	82	83	84
H	85	86	87	88	89	90	91	92	93	94	95	96

96-well plate



## The Classics Suite Composition Table

Number	Salt	Buffer	Precipitant	Cat. no. (Refill-Hit Solution, 4 x 12.5 ml tubes)
1	0.01 M Cobalt chloride	0.1 M Sodium acetate pH 4.6	1.0 M 1,6-Hexanediol	134001
2		0.1 M tri-Sodium citrate pH 5.6	2.5 M 1,6-Hexanediol	134002
3	0.2 M Magnesium chloride	0.1 M Tris pH 8.5	3.4 M 1,6-Hexanediol	134003
4			5% (v/v) Isopropanol; 2.0 M Ammonium sulfate	134004
5		0.1 M HEPES sodium salt pH 7.5	10% (v/v) Isopropanol; 20% (w/v) PEG 4000	134005
6	0.2 M Calcium chloride	0.1 M Sodium acetate pH 4.6	20% (v/v) Isopropanol	134006
7		0.1 M tri-Sodium citrate pH 5.6	20% (v/v) Isopropanol; 20% (w/v) PEG 4000	134007
8	0.2 M tri-Sodium citrate	0.1 M HEPES sodium salt pH 7.5	20% (v/v) Isopropanol	134008
9	0.2 M tri-Sodium citrate	0.1 M Sodium cacodylate pH 6.5	30% (v/v) Isopropanol	134009
10	0.2 M Magnesium chloride	0.1 M HEPES sodium salt pH 7.5	30% (v/v) Isopropanol	134010
11	0.2 M Ammonium acetate	0.1 M Tris-HCl pH 8.5	30% (v/v) Isopropanol	134011
12			10% (v/v) Ethanol; 1.5 M Sodium chloride	134012
13		0.1 M Tris pH 8.5	20% (v/v) Ethanol	134013
14			25% (v/v) Ethylene glycol	134014
15	0.02 M Calcium chloride	0.1 M Sodium acetate pH 4.6	30% (v/v) MPD	134015
16	0.2 M Sodium chloride	0.1 M Sodium acetate pH 4.6	30% (v/v) MPD	134016
17	0.2 M Ammonium acetate	0.1 M tri-Sodium citrate pH 5.6	30% (v/v) MPD	134017
18	0.2 M Magnesium acetate	0.1 M Sodium cacodylate pH 6.5	30% (v/v) MPD	134018
19	0.2 M tri-Sodium citrate	0.1 M HEPES sodium salt pH 7.5	30% (v/v) MPD	134019
20	0.5 M Ammonium sulfate	0.1 M HEPES pH 7.5	30% (v/v) MPD	134020
21	0.2 M Ammonium phosphate	0.1 M Tris pH 8.5	50% (v/v) MPD	134021
22		0.1 M HEPES pH 7.5	70% (v/v) MPD	134022
23		0.1 M Tris pH 8.5	25% (v/v) tert-Butanol	134023
24		0.1 M tri-Sodium citrate pH 5.6	35% (v/v) tert-Butanol	134024
25			0.4 M Ammonium phosphate	134025
26		0.1 M tri-Sodium citrate pH 5.6	1.0 M Ammonium phosphate	134026
27		0.1 M Tris-HCl pH 8.5	2.0 M Ammonium phosphate	134027
28		0.1 M HEPES pH 7.5	2.0 M Ammonium formate	134028
29		0.1 M Sodium acetate pH 4.6	2.0 M Ammonium sulfate	134029
30		0.1 M Tris-HCl pH 8.5	2.0 M Ammonium sulfate	134030
31			2.0 M Ammonium sulfate	134031
32	0.1 M Sodium chloride	0.1 M HEPES pH 7.5	1.6 M Ammonium sulfate	134032
33	0.01 M Cobalt chloride	0.1 M MES pH 6.5	1.8 M Ammonium sulfate	134033
34	0.2 M K/Na tartrate	0.1 M tri-Sodium citrate pH 5.6	2.0 M Ammonium sulfate	134034
35			1.0 M Imidazole pH 7.0	134035
36			0.4 M K/Na tartrate	134036
37		0.1 M HEPES sodium salt pH 7.5	0.8 M K/Na tartrate	134037
38		0.1 M Imidazole pH 6.5	1.0 M Sodium acetate	134038
39	0.05 M Cadmium sulfate	0.1 M HEPES pH 7.5	1.0 M Sodium acetate	134039
40		0.1 M Sodium cacodylate pH 6.5	1.4 M Sodium acetate	134040
41		0.1 M Sodium acetate pH 4.6	2.0 M Sodium chloride	134041
42	0.1 M Sodium phosphate; 0.1 M Potassium phosphate	0.1 M MES pH 6.5	2.0 M Sodium chloride	134042
43		0.1 M HEPES pH 7.5	4.3 M Sodium chloride	134043
44		0.1 M HEPES sodium salt pH 7.5	1.4 M tri-Sodium citrate	134044
45			1.6 M tri-Sodium citrate pH 6.5	134045
46		0.1 M HEPES sodium salt pH 7.5	0.8 M Sodium phosphate; 0.8 M Potassium phosphate	134046
47		0.1 M Sodium acetate pH 4.6	2.0 M Sodium formate	134047
48			4.0 M Sodium formate	134048

## The Classics Suite Composition Table

Number	Salt	Buffer	Precipitant	Cat. no. (Refill-Hit Solution, 4 x 12.5 ml tubes)
49		0.1 M Bicine pH 9.0	2% (v/v) Dioxane; 10% (w/v) PEG 20000	134049
50		0.1 M MES pH 6.5	10% (v/v) Dioxane; 1.6 M Ammonium sulfate	134050
51			35% (v/v) Dioxane	134051
52	0.5 M Sodium chloride	0.1 M tri-Sodium citrate pH 5.6	2% (v/v) Ethylene imine polymer	134052
53		0.1 M Tris pH 8.5	12% (v/v) Glycerol; 1.5 M Ammonium sulfate	134053
54	0.5 M Sodium chloride; 0.01 M Magnesium chloride	0.01 M CTAB		134054
55	0.01 M Ferric chloride	0.1 M tri-Sodium citrate pH 5.6	10% (v/v) Jeffamine M-600	134055
56		0.1 M HEPES pH 7.5	20% (v/v) Jeffamine M-600	134056
57	0.5 M Ammonium sulfate	0.1 M tri-Sodium citrate pH 5.6	1.0 M Lithium sulfate	134057
58	0.01 M Nickel chloride	0.1 M Tris pH 8.5	1.0 M Lithium sulfate	134058
59		0.1 M HEPES sodium salt pH 7.5	1.5 M Lithium sulfate	134059
60		0.1 M Bicine pH 9.0	2.0 M Magnesium chloride	134060
61			0.2 M Magnesium formate	134061
62		0.1 M MES pH 6.5	1.6 M Magnesium sulfate	134062
63		0.1 M Tris-HCl pH 8.5	8% (w/v) PEG 8000	134063
64		0.1 M HEPES pH 7.5	10% (w/v) PEG 8000	134064
65	0.5 M Lithium sulfate		15% (w/v) PEG 8000	134065
66	0.2 M Zinc acetate	0.1 M Sodium cacodylate pH 6.5	18% (w/v) PEG 8000	134066
67	0.2 M Calcium acetate	0.1 M Sodium cacodylate pH 6.5	18% (w/v) PEG 8000	134067
68	0.2 M Magnesium acetate	0.1 M Sodium cacodylate pH 6.5	20% (w/v) PEG 8000	134068
69	0.05 M Potassium phosphate		20% (w/v) PEG 8000	134069
70	0.2 M Ammonium sulfate	0.1 M Sodium cacodylate pH 6.5	30% (w/v) PEG 8000	134070
71	0.2 M Sodium acetate	0.1 M Sodium cacodylate pH 6.5	30% (w/v) PEG 8000	134071
72	0.2 M Ammonium sulfate		30% (w/v) PEG 8000	134072
73		0.1 M HEPES sodium salt pH 7.5	2% (v/v) PEG 400; 2.0 M Ammonium sulfate	134073
74	0.2 M Calcium chloride	0.1 M HEPES sodium salt pH 7.5	28% (v/v) PEG 400	134074
75	0.1 M Cadmium chloride	0.1 M Sodium acetate pH 4.6	30% (v/v) PEG 400	134075
76	0.2 M Magnesium chloride	0.1 M HEPES sodium salt pH 7.5	30% (v/v) PEG 400	134076
77	0.2 M tri-Sodium citrate	0.1 M Tris-HCl pH 8.5	30% (v/v) PEG 400	134077
78	0.1 M Sodium chloride	0.1 M Bicine pH 9.0	20% (w/v) PEG 550 MME	134078
79	0.01 M Zinc sulfate	0.1 M MES pH 6.5	25% (w/v) PEG 550 MME	134079
80			10% (w/v) PEG 1000; 10% (w/v) PEG 8000	134080
81			30% (w/v) PEG 1500	134081
82	0.01 M Nickel chloride	0.1 M Tris pH 8.5	20% (w/v) PEG 2000 MME	134082
83	0.2 M Ammonium sulfate	0.1 M Sodium acetate pH 4.6	30% (w/v) PEG 2000 MME	134083
84		0.1 M Sodium acetate pH 4.6	8% (w/v) PEG 4000	134084
85	0.2 M Ammonium sulfate	0.1 M Sodium acetate pH 4.6	25% (w/v) PEG 4000	134085
86	0.2 M Ammonium acetate	0.1 M Sodium acetate pH 4.6	30% (w/v) PEG 4000	134086
87	0.2 M Ammonium acetate	0.1 M tri-Sodium citrate pH 5.6	30% (w/v) PEG 4000	134087
88	0.2 M Magnesium chloride	0.1 M Tris-HCl pH 8.5	30% (w/v) PEG 4000	134088
89	0.2 M Lithium sulfate	0.1 M Tris-HCl pH 8.5	30% (w/v) PEG 4000	134089
90	0.2 M Sodium acetate	0.1 M Tris-HCl pH 8.5	30% (w/v) PEG 4000	134090
91	0.2 M Ammonium sulfate		30% (w/v) PEG 4000	134091
92	0.2 M Ammonium sulfate	0.1 M MES pH 6.5	30% (w/v) PEG 5000 MME	134092
93		0.1 M HEPES pH 7.5	10% (w/v) PEG 6000; 5% (v/v) MPD	134093
94			10% (w/v) PEG 6000; 2.0 M Sodium chloride	134094
95		0.1 M HEPES pH 7.5	20% (w/v) PEG 10000; 8% (v/v) Ethylene glycol	134095
96		0.1 M MES pH 6.5	12% (w/v) PEG 20000	134096

## Protein Crystallization Suites and Formats

	EasyXtal Microplate	NeXtal Deep- Well Block	EasyXtal DG Tool X-Seal	NeXtal Tubes
The Classics Suite		■	■	■
The Classics Lite Suite		■	■	■
The Classics II Suite		■	■	■
The Cryos Suite		■	■	■
The PEGs Suite		■	■	■
The AmSO <sub>4</sub> Suite		■	■	■
The MPD Suite		■	■	■
The Anions Suite		■	■	■
The Cations Suite		■	■	■
The pHClear Suite		■	■	■
The pHClear II Suite		■	■	■
The MbClass Suite		■	■	■
The MbClass II Suite		■	■	■
The Protein Complex Suite		■	■	■
The PEGs II Suite		■	■	■
The ComPAS Suite		■	■	■
The PACT Suite		■	■	■
The Nucleix Suite		■	■	■
The JCSG+ Suite		■	■	■
The JCSG Core I-IV Suites		■	■	■
The Opti-Salts Suite	■	■	■	
Pre-Screen Assay			■	

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