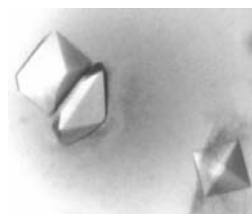


The Cryos Suite

For screening of protein crystallization conditions



The Cryos 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 Suite)
- Solutions containing glycerol as cryoprotectant

The Cryos 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



Cryos Suite Refill-Hit Solutions (4 x 12.5 ml tubes)

Number	Salt	Buffer	Precipitant	Cryoprotectant	Cat. no.
1	0.0085 M Cobalt chloride	0.085 M Sodium acetate pH 4.6	0.85 M 1,6-Hexanediol	15 %(v/v) Glycerol	134201
2		0.085 M tri-Sodium citrate pH 5.6	2.125 M 1,6-Hexanediol	15 %(v/v) Glycerol	134202
3	0.17 M Magnesium chloride	0.085 M Tris pH 8.5	2.89 M 1,6-Hexanediol	15 %(v/v) Glycerol	134203
4			4.25 %(v/v) Isopropanol, 1.7 M Ammonium sulfate	15 %(v/v) Glycerol	134204
5		0.085 M HEPES sodium salt pH 7.5	8.5 %(v/v) Isopropanol, 17 %(w/v) PEG 4000	15 %(v/v) Glycerol	134205
6	0.14 M Calcium chloride	0.07 M Sodium acetate pH 4.6	14 %(v/v) Isopropanol	30 %(v/v) Glycerol	134206
7		0.095 M tri-Sodium citrate pH 5.6	19 %(v/v) Isopropanol, 19 %(w/v) PEG 4000	5 %(v/v) Glycerol	134207
8	0.14 M tri-Sodium citrate	0.07 M HEPES sodium salt pH 7.5	14 %(v/v) Isopropanol	30 %(v/v) Glycerol	134208
9	0.14 M tri-Sodium citrate	0.07 M Sodium cacodylate pH 6.5	21 %(v/v) Isopropanol	30 %(v/v) Glycerol	134209
10	0.18 M Magnesium chloride	0.09 M HEPES sodium salt pH 7.5	27 %(v/v) Isopropanol	10 %(v/v) Glycerol	134210
11	0.16 M Ammonium acetate	0.08 M Tris.HCl pH 8.5	24 %(v/v) Isopropanol	20 %(v/v) Glycerol	134211
12			8.5 %(v/v) Ethanol, 1.275 M Sodium chloride	15 %(v/v) Glycerol	134212
13		0.085 M Tris pH 8.5	17 %(v/v) Ethanol	15 %(v/v) Glycerol	134213
14			21.25 %(v/v) Ethylene glycol	15 %(v/v) Glycerol	134214
15	0.018 M Calcium chloride	0.09 M Sodium acetate pH 4.6	27 %(v/v) MPD	10 %(v/v) Glycerol	134215
16	0.17 M Sodium chloride	0.085 M Sodium acetate pH 4.6	25.5 %(v/v) MPD	15 %(v/v) Glycerol	134216
17	0.18 M Ammonium acetate	0.09 M tri-Sodium citrate pH 5.6	27 %(v/v) MPD	10 %(v/v) Glycerol	134217
18	0.18 M Magnesium acetate	0.09 M Sodium cacodylate pH 6.5	27 %(v/v) MPD	10 %(v/v) Glycerol	134218
19	0.18 M tri-Sodium citrate	0.09 M HEPES sodium salt pH 7.5	27 %(v/v) MPD	10 %(v/v) Glycerol	134219
20	0.425 M Ammonium sulfate	0.085 M HEPES pH 7.5	25.5 %(v/v) MPD	15 %(v/v) Glycerol	134220
21	0.17 M Ammonium phosphate	0.085 M Tris pH 8.5	42.5 %(v/v) MPD	15 %(v/v) Glycerol	134221
22		0.085 M HEPES pH 7.5	59.5 %(v/v) MPD	15 %(v/v) Glycerol	134222
23		0.085 M Tris pH 8.5	21.25 %(v/v) tert-Butanol	15 %(v/v) Glycerol	134223
24		0.085 M tri-Sodium citrate pH 5.6	29.75 %(v/v) tert-Butanol	15 %(v/v) Glycerol	134224
25			0.26 M Ammonium phosphate	35 %(v/v) Glycerol	134225
26		0.07 M tri-Sodium citrate pH 5.6	0.7 M Ammonium phosphate	30 %(v/v) Glycerol	134226
27		0.08 M Tris.HCl pH 8.5	1.6 M Ammonium phosphate	20 %(v/v) Glycerol	134227
28		0.085 M HEPES pH 7.5	1.7 M Ammonium formate	15 %(v/v) Glycerol	134228
29		0.08 M Sodium acetate pH 4.6	1.6 M Ammonium sulfate	20 %(v/v) Glycerol	134229
30		0.075 M Tris.HCl pH 8.5	1.5 M Ammonium sulfate	25 %(v/v) Glycerol	134230
31			1.5 M Ammonium sulfate	25 %(v/v) Glycerol	134231
32	0.085 M Sodium chloride	0.085 M HEPES pH 7.5	1.36 M Ammonium sulfate	15 %(v/v) Glycerol	134232
33	0.0085 M Cobalt chloride	0.085 M MES pH 6.5	1.53 M Ammonium sulfate	15 %(v/v) Glycerol	134233
34	0.17 M K/Na tartrate	0.085 M tri-Sodium citrate pH 5.6	1.7 M Ammonium sulfate	15 %(v/v) Glycerol	134234
35			0.85 M Imidazole pH 7.0	15 %(v/v) Glycerol	134235
36			0.26 M K/Na tartrate	35 %(v/v) Glycerol	134236
37		0.065 M HEPES sodium salt pH 7.5	0.52 M K/Na tartrate	35 %(v/v) Glycerol	134237
38		0.07 M Imidazole pH 6.5	0.7 M Sodium acetate	30 %(v/v) Glycerol	134238
39	0.0425 M Cadmium sulfate	0.085 M HEPES pH 7.5	0.85 M Sodium acetate	15 %(v/v) Glycerol	134239
40		0.07 M Sodium cacodylate pH 6.5	0.98 M Sodium acetate	30 %(v/v) Glycerol	134240
41		0.085 M Sodium acetate pH 4.6	1.7 M Sodium chloride	15 %(v/v) Glycerol	134241
42	0.085 M Sodium phosphate, 0.085 M Potassium phosphate	0.085 M MES pH 6.5	1.7 M Sodium chloride	15 %(v/v) Glycerol	134242
43		0.085 M HEPES pH 7.5	3.655 M Sodium chloride	15 %(v/v) Glycerol	134243
44		0.09 M HEPES sodium salt pH 7.5	1.26 M tri-Sodium citrate	10 %(v/v) Glycerol	134244
45			1.36 M tri-Sodium citrate pH 6.5	15 %(v/v) Glycerol	134245
46		0.075 M HEPES sodium salt pH 7.5	0.6 M Sodium phosphate, 0.6 M Potassium phosphate	25 %(v/v) Glycerol	134246
47		0.07 M Sodium acetate pH 4.6	1.4 M Sodium formate	30 %(v/v) Glycerol	134247
48			3.6 M Sodium formate	10 %(v/v) Glycerol	134248

Cryos Suite Refill-Hit Solutions (4 x 12.5 ml tubes)

Number	Salt	Buffer	Precipitant	Cryoprotectant	Cat. no.
49		0.085 M BICINE pH 9	1.7 %(v/v) Dioxane, 8.5 %(w/v) PEG 20000	15 %(v/v) Glycerol	13424
50		0.085 M MES pH 6.5	8.5 %(v/v) Dioxane, 1.36 M Ammonium sulfate	15 %(v/v) Glycerol	134250
51			29.75 %(v/v) Dioxane	15 %(v/v) Glycerol	134251
52	0.425 M Sodium chloride	0.085 M tri-Sodium citrate pH 5.6	1.7 %(v/v) Ethylene imine polymer	15 %(v/v) Glycerol	134252
53		0.085 M Tris pH 8.5	10.2 %(v/v) Glycerol, 1.275 M Ammonium sulfate	15 %(v/v) Glycerol	134253
54	0.425 M Sodium chloride, 0.085 M Magnesium chloride	0.0085 M CTAB	15 %(v/v) Glycerol		134254
55	0.0085 M Ferric chloride	0.085 M tri-Sodium citrate pH 5.6	8.5 %(v/v) Jeffamine M-600	15 %(v/v) Glycerol	134255
56		0.085 M HEPES pH 7.5	17 %(v/v) Jeffamine M-600	15 %(v/v) Glycerol	134256
57	0.425 M Ammonium sulfate	0.085 M tri-Sodium citrate pH 5.6	0.85 M Lithium sulfate	15 %(v/v) Glycerol	134257
58	0.0085 M Nickel chloride	0.085 M Tris pH 8.5	0.85 M Lithium sulfate	15 %(v/v) Glycerol	134258
59		0.075 M HEPES sodium salt pH 7.5	1.125 M Lithium sulfate	25 %(v/v) Glycerol	134259
60		0.085 M BICINE pH 9.0	1.7 M Magnesium chloride	15 %(v/v) Glycerol	134260
61			0.17 M Magnesium formate	15 %(v/v) Glycerol	134261
62		0.085 M MES pH 6.5	1.36 M Magnesium sulfate	15 %(v/v) Glycerol	134262
63		0.065 M Tris.HCl pH 8.5	5.2 %(w/v) PEG 8000	35 %(v/v) Glycerol	134263
64		0.085 M HEPES pH 7.5	8.5 %(w/v) PEG 8000	15 %(v/v) Glycerol	134264
65	0.4 M Lithium sulfate		12 %(w/v) PEG 8000	20 %(v/v) Glycerol	134265
66	0.16 M Zinc acetate	0.08 M Sodium cacodylate pH 6.5	14.4 %(w/v) PEG 8000	20 %(v/v) Glycerol	134266
67	0.16 M Calcium acetate	0.08 M Sodium cacodylate pH 6.5	14.4 %(w/v) PEG 8000	20 %(v/v) Glycerol	134267
68	0.16 M Magnesium acetate	0.08 M Sodium cacodylate pH 6.5	16 %(w/v) PEG 8000	20 %(v/v) Glycerol	134268
69	0.04 M Potassium phosphate		16 %(w/v) PEG 8000	20 %(v/v) Glycerol	134269
70	0.17 M Ammonium sulfate	0.085 M Sodium cacodylate pH 6.5	25.5 %(w/v) PEG 8000	15 %(v/v) Glycerol	134270
71	0.17 M Sodium acetate	0.085 M Sodium cacodylate pH 6.5	25.5 %(w/v) PEG 8000	15 %(v/v) Glycerol	134271
72	0.17 M Ammonium sulfate		25.5 %(w/v) PEG 8000	15 %(v/v) Glycerol	134272
73		0.085 M HEPES sodium salt pH 7.5	1.7 %(v/v) PEG 400, 1.7 M Ammonium sulfate	15 %(v/v) Glycerol	134273
74	0.19 M Calcium chloride	0.095 M HEPES sodium salt pH 7.5	26.6 %(v/v) PEG 400	5 %(v/v) Glycerol	134274
75	0.085 M Cadmium chloride	0.085 M Sodium acetate pH 4.6	25.5 %(v/v) PEG 400	15 %(v/v) Glycerol	134275
76	0.18 M Magnesium chloride	0.09 M HEPES sodium salt pH 7.5	27 %(v/v) PEG 400	10 %(v/v) Glycerol	134276
77	0.18 M tri-Sodium citrate	0.09 M Tris.HCl pH 8.5	27 %(v/v) PEG 400	10 %(v/v) Glycerol	134277
78	0.085 M Sodium chloride	0.085 M BICINE pH 9.0	17 %(w/v) PEG 550 MME	15 %(v/v) Glycerol	134278
79	0.0085 M Zinc sulfate	0.085 M MES pH 6.5	21.25 %(w/v) PEG 550 MME	15 %(v/v) Glycerol	134279
80			8.5 %(w/v) PEG 1000, 8.5 %(w/v) PEG 8000	15 %(v/v) Glycerol	134280
81			24 %(w/v) PEG 1500	20 %(v/v) Glycerol	134281
82	0.0085 M Nickel chloride	0.085 M Tris pH 8.5	17 %(w/v) PEG 2000 MME	15 %(v/v) Glycerol	134282
83	0.17 M Ammonium sulfate	0.085 M Sodium acetate pH 4.6	25.5 %(w/v) PEG 2000 MME	15 %(v/v) Glycerol	134283
84		0.07 M Sodium acetate pH 4.6	5.6 %(w/v) PEG 4000	30 %(v/v) Glycerol	134284
85	0.16 M Ammonium sulfate	0.08 M Sodium acetate pH 4.6	20 %(w/v) PEG 4000	20 %(v/v) Glycerol	134285
86	0.17 M Ammonium acetate	0.085 M Sodium acetate pH 4.6	25.5 %(w/v) PEG 4000	15 %(v/v) Glycerol	134286
87	0.17 M Ammonium acetate	0.085 M tri-Sodium citrate pH 5.6	25.5 %(w/v) PEG 4000	15 %(v/v) Glycerol	134287
88	0.16 M Magnesium chloride	0.08 M Tris.HCl pH 8.5	24 %(w/v) PEG 4000	20 %(v/v) Glycerol	134288
89	0.17 M Lithium sulfate	0.085 M Tris.HCl pH 8.5	25.5 %(w/v) PEG 4000	15 %(v/v) Glycerol	134289
90	0.17 M Sodium acetate	0.085 M Tris.HCl pH 8.5	25.5 %(w/v) PEG 4000	15 %(v/v) Glycerol	134290
91	0.17 M Ammonium sulfate		25.5 %(w/v) PEG 4000	15 %(v/v) Glycerol	134291
92	0.17 M Ammonium sulfate	0.085 M MES pH 6.5	25.5 %(w/v) PEG 5000 MME	15 %(v/v) Glycerol	134292
93		0.085 M HEPES pH 7.5	8.5 %(w/v) PEG 6000, 4.25 %(v/v) MPD	15 %(v/v) Glycerol	134293
94			8 %(w/v) PEG 6000, 1.6 M Sodium chloride	20 %(v/v) Glycerol	134294
95		0.085 M HEPES pH 7.5	17 %(w/v) PEG 10000, 6.8 % Ethylene glycol	15 %(v/v) Glycerol	134295
96		0.085 M MES pH 6.5	10.2 %(w/v) PEG 20000	15 %(v/v) Glycerol	

Protein Crystallization Suites and Formats

	EasyXtal Microplate	NeXtal Deep-Well Block	EasyXtal Tool X-Seal	EasyXtal DG Tool X-Seal	NeXtal Tubes
The Classics Suite	■	■	■	■	■
The Classics Lite Suite	■	■	■	■	■
The Cryos Suite	■	■	■	■	■
The PEGs Suite	■	■	■	■	■
The AmSO ₄ Suite	■	■	■	■	■
The MPD Suite	■	■		■	■
The Anions Suite	■	■	■	■	■
The Cryos Suite	■	■	■	■	■
The pHClear Suite	■	■	■	■	■
The pHClear II Suite	■	■	■	■	■
The MbClass Suite	■	■		■	■
The MbClass II Suite	■	■		■	■
The Protein Complex Suite	■	■	■	■	■
The PEGs II Suite	■	■	■	■	■
The CompPAS Suite	■	■	■	■	■
The PACT Suite	■	■	■	■	■
The Nucleix Suite	■	■	■	■	■
The JCSG+ Suite	■	■	■	■	■
The Opti-Salts Suite	■		■	■	
Pre-Screen Assay				■	

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