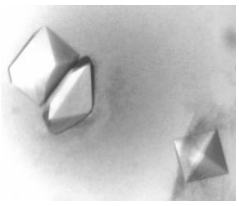
The JCSG+ Suite



For screening of protein crystallization conditions

The JCSG+ Suite provides:

- A ready-to-use kit format to which only protein needs to be added, for easy and fast screening
- Premixed suite based on the results of the Joint Center for Structural Genomics (1) and members of the European Genomics Consortium (2)
- A controlled environment and fresh solutions every time

The JCSG+ 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. Page, R. et al. (2003) Acta. Cryst. **D59**, 1028.
2. Newman, J. et al. (2005) Acta. Cryst. **D61**, 1426.

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	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	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	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

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The JCSG+ Suite Composition Table

Number	Salt	Buffer	Precipitant	Final pH	Cat. no. (Refill-Hit Solution, 4 x 12.5 ml tubes)
1	0.2 M Lithium sulfate	0.1 M Sodium acetate pH 4.5	50% (v/v) PEG 400		135901
2		0.1 M tri-Sodium citrate pH 5.5	20% (w/v) PEG 3000		135902
3	0.18 M tri-Ammonium citrate		20% (w/v) PEG 3350		135903
4	0.02 M Calcium chloride	0.1 M Sodium acetate pH 4.6	30% (v/v) MPD		135904
5	0.2 M Magnesium formate		20% (w/v) PEG 3350		135905
6	0.2 M Lithium sulfate	0.1 M Phosphate-citrate pH 4.2	20% (w/v) PEG 1000		135906
7		0.1 M CHES pH 9.5	20% (w/v) PEG 8000		135907
8	0.2 M Ammonium formate		20% (w/v) PEG 3350		135908
9	0.2 M Ammonium chloride		20% (w/v) PEG 3350		135909
10	0.2 M Potassium formate		20% (w/v) PEG 3350		135910
11	0.2 M Ammonium phosphate	0.1 M Tris pH 8.5	50% (v/v) MPD		135911
12	0.2 M Potassium nitrate		20% (w/v) PEG 3350		135912
13	0.8 M Ammonium sulfate	0.1 M Citric acid pH 3.5		4.0	135913
14	0.2 M Sodium thiocyanate		20% (w/v) PEG 3350		135914
15		0.1 M Bicine pH 8.5	20% (w/v) PEG 6000	9.0	135915
16		0.1 M HEPES pH 7.5	10% (w/v) PEG 8000; 8% (v/v) Ethylene glycol		135916
17		0.1 M Sodium cacodylate pH 6.5	40% (v/v) MPD; 5% (w/v) PEG 8000		135917
18		0.1 M Phosphate-citrate pH 4.2	40% (v/v) Ethanol; 5% (w/v) PEG 1000		135918
19		0.1 M Sodium acetate pH 4.6	8% (w/v) PEG 4000		135919
20	0.2 M Magnesium chloride	0.1 M Tris pH 7.0	10% (w/v) PEG 8000		135920
21		0.1 M Citric acid pH 4.0	20% (w/v) PEG 6000	5.0	135921
22	0.2 M Magnesium chloride	0.1 M Sodium cacodylate pH 6.5	50% (v/v) PEG 200		135922
23		1.6 M tri-Sodium citrate pH 6.5		6.5	135923
24	0.2 M tri-Potassium citrate		20% (w/v) PEG 3350		135924
25	0.2 M Sodium chloride	0.1 M Phosphate-citrate pH 4.2	20% (w/v) PEG 8000		135925
26	1 M Lithium chloride	0.1 M Citric acid pH 4.0	20% (w/v) PEG 6000	4.0	135926
27	0.2 M Ammonium nitrate		20% (w/v) PEG 3350		135927
28		0.1 M HEPES pH 6.5	10% (w/v) PEG 6000	7.0	135928
29	0.8 M Sodium phosphate; 0.8 M Potassium phosphate	0.1 M HEPES pH 7.5			135929
30		0.1 M Phosphate-citrate pH 4.2	40% (v/v) PEG 300		135930
31	0.2 M Zinc acetate	0.1 M Sodium acetate pH 4.5	10% (w/v) PEG 3000		135931
32		0.1 M Tris pH 8.5	20% (v/v) Ethanol		135932
33		0.1 M Na/K phosphate pH 6.2	25% (v/v) 1,2 propanediol; 10% (v/v) Glycerol		135933
34		0.1 M Bicine pH 9.0	10% (w/v) PEG 20000; 2% (v/v) 1,4-Dioxane		135934
35	2 M Ammonium sulfate	0.1 M Sodium acetate pH 4.6			135935
36			10% (w/v) PEG 1000; 10% (w/v) PEG 8000		135936
37			24% (w/v) PEG 1500; 20% (w/v) Glycerol		135937
38	0.2 M Magnesium chloride	0.1 M HEPES pH 7.5	30% (v/v) PEG 400		135938
39	0.2 M Sodium chloride	0.1 M Na/K phosphate pH 6.2	50% (v/v) PEG 200		135939
40	0.2 M Lithium sulfate	0.1 M Sodium acetate pH 4.5	30% (w/v) PEG 8000		135940
41		0.1 M HEPES pH 7.5	70% (v/v) MPD		135941
42	0.2 M Magnesium chloride	0.1 M Tris pH 8.5	20% (w/v) PEG 8000		135942
43	0.2 M Lithium sulfate	0.1 M Tris pH 8.5	40% (v/v) PEG 400		135943
44		0.1 M Tris pH 8.0	40% (v/v) MPD	8.0	135944
45	0.17 M Ammonium sulfate		25.5% (w/v) PEG 4000; 15% (v/v) Glycerol		135945
46	0.2 M Calcium acetate	0.1 M Sodium cacodylate pH 6.5	40% (v/v) PEG 300		135946
47	0.14 M Calcium chloride	0.07 M Sodium acetate pH 4.6	14% (v/v) Isopropanol; 30% (v/v) Glycerol		135947
48	0.04 M Potassium phosphate		16% (w/v) PEG 8000; 20% (v/v) Glycerol		135948

The JCSG+ Suite Composition Table

Number	Salt	Buffer	Precipitant	Final pH	Cat. no. (Refill-Hit Solution, 4 x 12.5 ml tubes)
49	1 M tri-Sodium citrate	0.1 M Sodium cacodylate pH 6.5			135949
50	0.2 M Sodium chloride	0.1 M Sodium cacodylate pH 6.5	2 M Ammonium sulfate		135950
51	0.2 M Sodium chloride	0.1 M HEPES pH 7.5	10% (v/v) Isopropanol		135951
52	0.2 M Lithium sulfate	0.1 M Tris pH 8.5	1.26 M Ammonium sulfate		135952
53		0.1 M CAPS pH 10.5	40% (v/v) MPD		135953
54	0.2 M Zinc acetate	0.1 M Imidazole pH 8.0	20% (w/v) PEG 3000		135954
55	0.2 M Zinc acetate	0.1 M Sodium cacodylate pH 6.5	10% (v/v) Isopropanol		135955
56	1 M di-Ammonium phosphate	0.1 M Sodium acetate pH 4.5			135956
57	1.6 M Magnesium sulfate	0.1 M MES pH 6.5			135957
58		0.1 M Bicine pH 9.0	10% (w/v) PEG 6000	9.0	135958
59	0.16 M Calcium acetate	0.08 M Sodium cacodylate pH 6.5	14.4% (w/v) PEG 8000; 20% (v/v) Glycerol		135959
60		0.1 M Imidazole pH 8.0	10% (w/v) PEG 8000		135960
61	0.05 M Cesium chloride	0.1 M MES pH 6.5	30% (v/v) Jeffamine M-600		135961
62	3.2 M Ammonium sulfate	0.1 M Citric acid pH 4.0	(final 5.0)	5.0	135962
63		0.1 M Tris pH 8.5	20% (v/v) MPD (final 8.0)	8.0	135963
64		0.1 M HEPES pH 7.5	20% (v/v) Jeffamine M-600		135964
65	0.2 M Magnesium chloride	0.1 M Tris pH 8.5	50% (v/v) Ethylene glycol		135965
66		0.1 M Bicine pH 8.5	10% (v/v) MPD (final 9.0)	9.0	135966
67	0.8 M Succinic acid pH 7.0				135967
68	2.1 M DL-Malic acid pH 7.0				135968
69	2.4 M Sodium malonate pH 7.0				135969
70	1.1 M Sodium malonate	0.1 M HEPES pH 7.0	0.5% (v/v) Jeffamine ED-2001	7.0	135970
71	1 M Succinic acid	0.1 M HEPES pH 7.0	1% (w/v) PEG MME 2000	7.0	135971
72		0.1 M HEPES pH 7.0	30% (v/v) Jeffamine M-600	7.0	135972
73		0.1 M HEPES pH 7.0	30% (v/v) Jeffamine ED-2001	7.0	135973
74	0.02 M Magnesium chloride	0.1 M HEPES pH 7.5	22% (w/v) Polyacrylic acid 5100, sodium salt		135974
75	0.01 M Cobalt chloride	0.1 M Tris pH 8.5	20% (w/v) Polyvinylpyrrolidone K15		135975
76	0.2 M Trimethylamine N-oxide	0.1 M Tris pH 8.5	20% (w/v) PEG MME 2000		135976
77	0.005 M Cobalt chloride; 0.005 M Cadmium chloride; 0.005 M Magnesium chloride; 0.005 M Nickel chloride	0.1 M HEPES pH 7.5	12% (w/v) PEG 3350		135977
78	0.24 M Sodium malonate pH 7.0		20% (w/v) PEG 3350		135978
79	0.1 M Succinic acid pH 7.0		15% (w/v) PEG 3350		135979
80	0.15 M DL-Malic acid pH 7.0		20% (w/v) PEG 3350		135980
81	0.1 M Potassium thiocyanate		30% (w/v) PEG MME 2000		135981
82	0.15 M Potassium bromide		30% (w/v) PEG MME 2000		135982
83	2 M Ammonium sulfate	0.1 M Bis-Tris pH 5.5			135983
84	3 M Sodium chloride	0.1 M Bis-Tris pH 5.5			135984
85	0.3 M Magnesium formate	0.1 M Bis-Tris pH 5.5			135985
86	1 M Ammonium sulfate	0.1 M Bis-Tris pH 5.5	1% (w/v) PEG 3350		135986
87	0.1 M tri-Sodium acetate pH 4.5	0.1 M Bis-Tris pH 5.5	25% (w/v) PEG 3350		135987
88	0.2 M Calcium chloride	0.1 M Bis-Tris pH 5.5	45% (v/v) MPD		135988
89	0.2 M Ammonium acetate	0.1 M Bis-Tris pH 5.5	45% (v/v) MPD		135989
90	0.1 M Ammonium acetate	0.1 M Bis-Tris pH 5.5	17% (w/v) PEG 10000		135990
91	0.2 M Ammonium sulfate	0.1 M Bis-Tris pH 5.5	25% (w/v) PEG 3350		135991
92	0.2 M Sodium chloride	0.1 M Bis-Tris pH 5.5	25% (w/v) PEG 3350		135992
93	0.2 M Lithium sulfate	0.1 M Bis-Tris pH 5.5	25% (w/v) PEG 3350		135993
94	0.2 M Ammonium acetate	0.1 M Bis-Tris pH 5.5	25% (w/v) PEG 3350		135994
95	0.2 M Magnesium chloride	0.1 M Bis-Tris pH 5.5	25% (w/v) PEG 3350		135995
96	0.2 M Ammonium acetate	0.1 M HEPES pH 7.5	45% (v/v) MPD		135996

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 $AmSO_4$ 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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