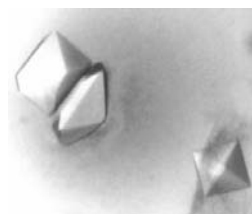


The MPD Suite

For screening of protein crystallization conditions



The MPD Suite provides:

- A ready-to-use kit format to which only protein needs to be added, for easy and fast screening
- 96 precisely defined chemical solutions containing 2-methyl-2,4-pentandiol as precipitant
- A precipitant that lowers the chemical activity of water and thereby reduces the number of electrostatic interactions between the protein and its solvent
- A precipitant that functions as cryoprotectant and thereby protects crystals from breakage due to formation of crystalline ice when performing flash-freezing experiments
- A first set of solutions (conditions 1–48) containing a combination of MPD with 48 different salts known to be effective as co-crystallizers
- A second set of solutions (conditions 49–72) containing different concentrations of MPD in combination with various pH conditions in a 4x6 grid format to precisely define the effect of these factors
- A third set (conditions 73–96) with the most popular solutions from the BMCD enabling screening for different combinations of co-precipitant, salts, and buffers that proved to be successful for other proteins
- The chance to function as intermediate step between results received from an MPD containing suite (e.g., The Classics Suite), and before a narrower refinement

The MPD 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.

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



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

Number	Salt	Buffer	Precipitant	Cat. no.
1	0.2 M Cadmium chloride		40 %(v/v) MPD	134501
2	0.2 M Potassium fluoride		40 %(v/v) MPD	134502
3	0.2 M Ammonium fluoride		40 %(v/v) MPD	134503
4	0.2 M Lithium chloride		40 %(v/v) MPD	134504
5	0.2 M Magnesium chloride		40 %(v/v) MPD	134505
6	0.2 M Sodium chloride		40 %(v/v) MPD	134506
7	0.2 M Calcium chloride		40 %(v/v) MPD	134507
8	0.2 M Potassium chloride		40 %(v/v) MPD	134508
9	0.2 M Ammonium chloride		40 %(v/v) MPD	134509
10	0.2 M Sodium iodide		40 %(v/v) MPD	134510
11	0.2 M Potassium iodide		40 %(v/v) MPD	134511
12	0.2 M Ammonium iodide		40 %(v/v) MPD	134512
13	0.2 M Sodium thiocyanate		40 %(v/v) MPD	134513
14	0.2 M Potassium thiocyanate		40 %(v/v) MPD	134514
15	0.2 M Lithium nitrate		40 %(v/v) MPD	134515
16	0.2 M Magnesium nitrate		40 %(v/v) MPD	134516
17	0.2 M Sodium nitrate		40 %(v/v) MPD	134517
18	0.2 M Potassium nitrate		40 %(v/v) MPD	134518
19	0.2 M Ammonium nitrate		40 %(v/v) MPD	134519
20	0.2 M Zinc sulfate		40 %(v/v) MPD	134520
21	0.2 M Sodium formate		40 %(v/v) MPD	134521
22	0.2 M Potassium formate		40 %(v/v) MPD	134522
23	0.2 M Ammonium formate		40 %(v/v) MPD	134523
24	0.2 M Lithium acetate		40 %(v/v) MPD	134524
25	0.2 M Magnesium acetate		40 %(v/v) MPD	134525
26	0.2 M Sodium malonate		40 %(v/v) MPD	134526
27	0.2 M Sodium acetate		40 %(v/v) MPD	134527
28	0.2 M Calcium acetate		40 %(v/v) MPD	134528
29	0.2 M Potassium acetate		40 %(v/v) MPD	134529
30	0.2 M Ammonium acetate		40 %(v/v) MPD	134530
31	0.2 M Lithium sulfate		40 %(v/v) MPD	134531
32	0.2 M Magnesium sulfate		40 %(v/v) MPD	134532
33	0.2 M Cesium chloride		40 %(v/v) MPD	134533
34	0.2 M Nickel chloride		40 %(v/v) MPD	134534
35	0.2 M Ammonium sulfate		40 %(v/v) MPD	134535
36	0.2 M di-Sodium tartrate		40 %(v/v) MPD	134536
37	0.2 M K/Na tartrate		40 %(v/v) MPD	134537
38	0.2 M di-Ammonium tartrate		40 %(v/v) MPD	134538
39	0.2 M Sodium phosphate		40 %(v/v) MPD	134539
40	0.2 M Potassium bromide		40 %(v/v) MPD	134540
41	0.2 M Sodium bromide		40 %(v/v) MPD	134541
42	0.2 M di-Potassium phosphate		40 %(v/v) MPD	134542
43	0.2 M Ammonium phosphate		40 %(v/v) MPD	134543
44	0.2 M di-Ammonium phosphate		40 %(v/v) MPD	134544
45	0.2 M tri-Lithium citrate		40 %(v/v) MPD	134545
46	0.2 M tri-Sodium citrate		40 %(v/v) MPD	134546
47	0.2 M tri-Potassium citrate		40 %(v/v) MPD	134547
48	0.2 M di-Ammonium citrate		40 %(v/v) MPD	134548

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

Number	Salt	Buffer	Precipitant	Cat. no.
49		0.1 M Citric acid pH 4.0	10 %(v/v) MPD	134549
50		0.1 M Sodium acetate pH 5.0	10 %(v/v) MPD	134550
51		0.1 M MES pH 6.0	10 %(v/v) MPD	134551
52		0.1 M HEPES pH 7.0	10 %(v/v) MPD	134552
53		0.1 M Tris pH 8.0	10 %(v/v) MPD	134553
54		0.1 M BICINE pH 9.0	10 %(v/v) MPD	134554
55		0.1 M Citric acid pH 4.0	20 %(v/v) MPD	134555
56		0.1 M Sodium acetate pH 5.0	20 %(v/v) MPD	134556
57		0.1 M MES pH 6.0	20 %(v/v) MPD	134557
58		0.1 M HEPES pH 7.0	20 %(v/v) MPD	134558
59		0.1 M Tris pH 8.0	20 %(v/v) MPD	134559
60		0.1 M BICINE pH 9.0	20 %(v/v) MPD	134560
61		0.1 M Citric acid pH 4.0	40 %(v/v) MPD	134561
62		0.1 M Sodium acetate pH 5.0	40 %(v/v) MPD	134562
63		0.1 M MES pH 6.0	40 %(v/v) MPD	134563
64		0.1 M HEPES pH 7.0	40 %(v/v) MPD	134564
65		0.1 M Tris pH 8.0	40 %(v/v) MPD	134565
66		0.1 M BICINE pH 9.0	40 %(v/v) MPD	134566
67		0.1 M Sodium acetate pH 4.0	65 %(v/v) MPD	134567
68		0.1 M Sodium acetate pH 5.0	65 %(v/v) MPD	134568
69		0.1 M MES pH 6.0	65 %(v/v) MPD	134569
70		0.1 M HEPES pH 7.0	65 %(v/v) MPD	134570
71		0.1 M Tris pH 8.0	65 %(v/v) MPD	134571
72		0.1 M BICINE pH 9.0	65 %(v/v) MPD	134572
73	0.1 M tri-Sodium citrate	0.1 M HEPES sodium salt pH 7.5	10 %(w/v) MPD	134573
74	0.05 M Magnesium chloride	0.1 M Tris.HCl pH 8.5	12 %(w/v) MPD	134574
75	0.02 M Calcium chloride	0.1 M Sodium acetate pH 4.6	15 %(w/v) MPD	134575
76		0.1 M Imidazole.HCl pH 8.0	15 %(w/v) MPD, 5 %(w/v) PEG 4000	134576
77	0.2 M Ammonium acetate	0.1 M tri-Sodium citrate pH 5.6	15 %(w/v) MPD	134577
78	0.2 M Magnesium acetate	0.1 M MES sodium salt pH 6.5	15 %(w/v) MPD	134578
79	0.2 M tri-Sodium citrate	0.1 M HEPES sodium salt pH 7.5	15 %(w/v) MPD	134579
80	0.1 M tri-Sodium citrate	0.1 M HEPES sodium salt pH 7.5	20 %(w/v) MPD	134580
81		0.1 M Imidazole.HCl pH 8.0	20 %(w/v) MPD	134581
82	0.2 M Sodium chloride		20 %(w/v) MPD, 4 %(w/v) Glycerol	134582
83	0.02 M Calcium chloride	0.1 M Sodium acetate pH 4.6	30 %(w/v) MPD	134583
84	0.2 M Ammonium acetate	0.1 M tri-Sodium citrate pH 5.6	30 %(w/v) MPD	134584
85	0.2 M Magnesium acetate	0.1 M MES sodium salt pH 6.5	30 %(w/v) MPD	134585
86	0.5 M Ammonium sulfate	0.1 M HEPES sodium salt pH 7.5	30 %(w/v) MPD	134586
87	0.2 M tri-Sodium citrate	0.1 M HEPES sodium salt pH 7.5	30 %(w/v) MPD	134587
88		0.1 M HEPES sodium salt pH 7.5	30 %(w/v) MPD, 5 %(w/v) PEG 4000	134588
89		0.1 M Imidazole.HCl pH 8.0	30 %(w/v) MPD, 10 %(w/v) PEG 4000	134589
90			30 %(w/v) MPD, 20 %(w/v) Ethanol	134590
91			35 %(w/v) MPD	134591
92		0.1 M Imidazole.HCl pH 8.0	35 %(w/v) MPD	134592
93		0.1 M Tris.HCl pH 8.5	40 %(w/v) MPD	134593
94		0.1 M HEPES sodium salt pH 7.5	47 %(w/v) MPD	134594
95			47 %(w/v) MPD, 2 %(w/v) tert-Butanol	134595
96			50 %(w/v) MPD	134596

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 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 Opti-Salts Suite	■		■	■	
Pre-Screen Assay				■	

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