



Molecular
Dimensions

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Data Sheet

Crystallisation Screen

The CSIRO Organics Screen 10 mL and HT-96 MD1-150 and MD1-151

Key Info

A set of 96 conditions formulated by the CSIRO incorporating various organic compounds with different buffers at varying pHs.

MD1-150 is presented as 96 x 10mL conditions. MD1-151 is presented as 96 x 1mL conditions.

Key features of the CSIRO Organics screen:

- A variety of organic compounds throughout the screen
- Numerous PEG alternatives
- Key salts and additives
- pH range 4.2 - 9.5 across 14 different buffers
- Useful for crystallisation of protein-nucleic acid complexes and quaternary proteins



Figure 2:

Lysozyme crystals formed using the CSIRO Organics screen





Data Sheet

Crystallisation Screen

The CSIRO Organics Screen 10 mL and HT-96 MD1-150 and MD1-151

Formulation Notes

The CSIRO Organics Screen reagents are formulated using ultrapure water (>18.0 MΩ) and are sterile filtered using 0.22 µm filters. No preservatives are added. Final pH may vary from datasheet specification. Molecular Dimensions is happy to discuss the precise formulation of individual reagents. Individual reagents and stock solutions for optimisation are available from Molecular Dimensions.

Abbreviations:

- **ADA**; Azodicarbonamide
- **BICINE**; N,N-Bis(2-hydroxyethyl)glycine
- **Bis-Tris**; 2,2-Bis(hydroxymethyl)-2,2',2''-nitritotriethanol, 2-Bis(2-hydroxyethyl)amino-2-(hydroxymethyl)-1,3-propanediol, Bis(2-hydroxyethyl)amino-tris(hydroxymethyl)methane
- **CHES**; 2-(N-Cyclohexylamino)ethanesulfonic Acid
- **HEPES**; 4-(2-Hydroxyethyl)piperazine-1-ethanesulfonic acid
- **Jeffamine ED-2001**; O,O'-Bis(2-aminopropyl) polypropylene glycol-block-polyethylene glycol-block-polypropylene glycol
- **Jeffamine ED-900**; O,O'-Bis(2-aminopropyl) polypropylene glycol-block-polyethylene glycol-block-polypropylene glycol
- **Jeffamine M-600**; O-(2-Aminopropyl)-O'-(2-methoxyethyl)polypropylene glycol
- **MES monohydrate**; 2-(N-Morpholino) ethanesulfonic acid
- **MPD**; 2, 4-methyl pentanediol
- **OG**; n-Octyl-β-D-Glucopyranoside
- **PEG**; Polyethylene glycol
- **TMAO**; Trimethylamine N-oxide
- **TRIS**; 2-Amino-2-(hydroxymethyl)-1,3-propanediol

Notes

Developed by the CSIRO (Australia) and manufactured by Molecular Dimensions Ltd. Molecular dimensions operates an ethical approach to all its products by making sure the inventors of its products receive the appropriate acknowledgements for their hard work. We hope you appreciate their hard work too!

Ordering Information

PN:	Description:	Pack Size:
MD1-150	The CSIRO Organics Screen 10mL	96 x 10 mL
MD1-151	The CSIRO Organics Screen HT-96	96 x 1 mL

Single Reagents

MDSR-150-tube number	The CSIRO Organics Screen single reagent	100 mL
MDSR-151-well number	The CSIRO Organics Screen HT-96 single reagent	100 mL



10 mL MD1-150 | HT-96 MD1-151

Conditions 1-1 to 1-48 (Part A) | Conditions A1 to D12

Tube #	Well #	Conc.	Units.	Buffer	pH	Conc.	Units	Chemical 1	Conc.	Units	Chemical 2	Conc.	Units	Chemical 3
1-1	A1	0.1	M	Triethanolamine hydrochloride	7.50	30.00	%	Jeffamine ED-2001 pH 7.0						
1-2	A2	0.1	M	Tris	8.50	30.00	%	Jeffamine ED-2001 pH 7.0						
1-3	A3	0.1	M	Tris	8.50	30.00	%	Jeffamine® ED-900 pH 7.0						
1-4	A4	0.1	M	ADA	6.50	0.20	M	Sodium chloride	37.5	%	Jeffamine® ED-900 pH 7.0			
1-5	A5	0.1	M	HEPES	7.00	0.20	M	Sodium chloride	38	%	Jeffamine® ED-900 pH 7.0			
1-6	A6	0.1	M	Sodium citrate tribasic dihydrate	5.50	0.01	M	Iron(III) chloride hexahydrate	10	%	Jeffamine® M-600 pH 7.0			
1-7	A7					20.00	%	Jeffamine® M-600 pH 7.0	0.05	M	Magnesium chloride hexahydrate	0.05	M	Potassium chloride
1-8	A8	0.05	M	Sodium cacodylate trihydrate	6.00	30.00	%	Jeffamine® M-600 pH 7.0						
1-9	A9	0.10	M	MES monohydrate	6.50	30.00	%	Jeffamine® M-600 pH 7.0	0.05	M	Cesium chloride			
1-10	A10					20.00	%	Pentaerythritol ethoxylate (15/4 EO/OH)	0.20	M	Sodium malonate dibasic monohydrate			
1-11	A11					0.20	M	Sodium formate	20.00	%	Pentaerythritol ethoxylate (15/4 EO/OH)			
1-12	A12	0.10	M	Tris	8.50	20.00	%	Pentaerythritol ethoxylate (15/4 EO/OH)						
1-13	B1	0.10	M	Bis-Tris	6.50	0.05	M	Ammonium sulfate	30.00	%	Pentaerythritol ethoxylate (15/4 EO/OH)			
1-14	B2					0.10	M	Magnesium formate dihydrate	15.00	%	Pentaerythritol ethoxylate (15/4 EO/OH)			
1-15	B3	0.10	M	Sodium citrate tribasic dihydrate	5.50	2.50	%	tert-Butanol	20.00	%	Pentaerythritol ethoxylate (15/4 EO/OH)			
1-16	B4	0.10	M	MES monohydrate	6.50	20.00	%	Pentaerythritol ethoxylate (15/4 EO/OH)						
1-17	B5	0.10	M	CHES	9.00	10.00	%	Pentaerythritol propoxylate (5/4 PO/OH)	0.20	M	TMAO			
1-18	B6					20.00	%	Pentaerythritol propoxylate (5/4 PO/OH)	0.20	M	Sodium citrate tribasic dihydrate			
1-19	B7	0.10	M	HEPES	7.50	10.00	%	2-Propanol	20.00	%	Pentaerythritol propoxylate (5/4 PO/OH)			
1-20	B8	0.10	M	Tris	8.50	25.00	%	Pentaerythritol propoxylate (5/4 PO/OH)						
1-21	B9					0.10	M	Potassium thiocyanate	30.00	%	Pentaerythritol propoxylate (5/4 PO/OH)			
1-22	B10	0.10	M	HEPES	7.50	0.20	M	Magnesium chloride hexahydrate	30.00	%	Pentaerythritol Ethoxylate (15/4 EO/OH)			
1-23	B11					25.00	%	Pentaerythritol propoxylate (5/4 PO/OH)						
1-24	B12	0.05	M	HEPES	7.50	0.20	M	Potassium chloride	30.00	%	Pentaerythritol propoxylate (5/4 PO/OH)			
1-25	C1	0.10	M	HEPES	7.50	0.20	M	Magnesium chloride hexahydrate	30.00	%	Pentaerythritol propoxylate (5/4 PO/OH)			
1-26	C2	0.10	M	HEPES	7.50	0.02	M	Magnesium chloride hexahydrate	22.00	%	Poly(acrylic acid sodium salt) 5100			
1-27	C3					15.00	%	Polypropylene glycol 400	2.50	%	1-Butanol			
1-28	C4					1.00	M	Lithium chloride	20.00	%	Polypropylene glycol 400			
1-29	C5	0.10	M	Bis-Tris	6.50	45.00	%	Polypropylene glycol 400						
1-30	C6	0.10	M	HEPES	8.00	0.50	M	Ammonium citrate tribasic	15.00	%	Polyvinylpyrrolidone			
1-31	C7	0.10	M	Tris	7.00	20.00	%	Polyvinylpyrrolidone	0.05	M	Manganese(II) chloride tetrahydrate			
1-32	C8	0.10	M	HEPES	8.00	20.00	%	Polyvinylpyrrolidone	0.02	M	Manganese(II) chloride tetrahydrate			
1-33	C9	0.10	M	Sodium cacodylate trihydrate	6.50	0.30	M	Magnesium acetate tetrahydrate	23.00	%	Polyvinylpyrrolidone			
1-34	C10	0.10	M	MES monohydrate	6.00	30.00	%	Polyvinylpyrrolidone	0.20	M	Lithium bromide			
1-35	C11	0.10	M	Tris	7.00	0.10	M	Calcium acetate hydrate	30.00	%	Polyvinylpyrrolidone			
1-36	C12	0.10	M	Sodium cacodylate trihydrate	6.50	15.00	%	Polyvinylpyrrolidone K25						
1-37	D1	0.10	M	Tris	8.50	0.08	M	Cobalt(II) chloride hexahydrate	16.00	%	Polyvinylpyrrolidone K25			
1-38	D2	0.10	M	Phosphate/Citrate	4.20	25.00	%	1,2-Propanediol	10.00	%	Glycerol	5.00	%	PEG 3000
1-39	D3	0.10	M	Sodium dihydrogen phosphate	6.20	25.00	%	1,2-Propanediol	10.00	%	Glycerol			
1-40	D4	0.10	M	Tris	7.00	25.00	%	1,2-Propanediol	0.20	M	Ammonium sulfate	10.00	%	Glycerol
1-41	D5	0.1	M	Imidazole	8	25.00	%	1,2-Propanediol	10.00	%	Glycerol	0.02	M	Zinc acetate dihydrate
1-42	D6	0.1	M	Tris	8.5	25.00	%	1,2-Propanediol	10.00	%	Glycerol	0.20	M	Magnesium chloride hexahydrate
1-43	D7	0.10	M	HEPES	7.50	30.00	%	1,2-Propanediol	20.00	%	PEG 400			
1-44	D8	0.10	M	Sodium acetate	5.00	40.00	%	1,2-Propanediol	0.05	M	Calcium acetate hydrate	0.12	M	D-Trehalose
1-45	D9	0.10	M	Sodium acetate	5.00	40.00	%	1,2-Propanediol						
1-46	D10	0.1	M	Sodium citrate tribasic dihydrate	5.5	40.00	%	1,2-Propanediol	0.20	M	Sodium chloride			
1-47	D11	0.10	M	HEPES	5.50	40.00	%	1,2-Propanediol						
1-48	D12	0.10	M	CHES	9.50	40.00	%	1,2-Propanediol	0.20	M	Sodium citrate tribasic dihydrate			

10 mL MD1-150 | HT-96 MD1-151

Conditions 2-1 to 2-48 (Part B) | Conditions E1 to H12

Tube #	Well #	Conc.	Units.	Buffer	pH	Conc.	Units	Chemical 1	Conc.	Units	Chemical 2	Conc.	Units	Chemical 3
2-1	E1	0.10	M	Tris	8.50	10.00	%	1,3-Propanediol	5.00	%	Polyvinylpyrrolidone K25			
2-2	E2	0.20	M	ADA	6.50	20.00	%	MPD	20.00	%	1,3-Propanediol			
2-3	E3	0.10	M	Sodium cacodylate trihydrate	6.50	30.00	%	1,3-Propanediol	0.20	M	Sodium citrate tribasic dihydrate			
2-4	E4	0.10	M	Tris	8.50	30.00	%	1,3-Propanediol						
2-5	E5	0.10	M	Sodium acetate	5.00	20.00	%	1,4-Butanediol						
2-6	E6	0.10	M	MES monohydrate	6.00	20.00	%	1,4-Butanediol	0.20	M	Lithium sulfate			
2-7	E7	0.10	M	HEPES	7.50	20.00	%	1,4-Butanediol	0.20	M	Sodium chloride			
2-8	E8	0.10	M	Tris	8.00	18.00	%	1,4-Butanediol	0.01	M	Zinc acetate dihydrate			
2-9	E9	0.05	M	ADA	6.50	40.00	%	1,4-Butanediol						
2-10	E10					1.50	M	1,6-Hexanediol	0.20	M	Cobalt (II) sulfate heptahydrate			
2-11	E11	0.10	M	Sodium citrate tribasic dihydrate	5.50	2.50	M	1,6-Hexanediol	0.01	M	Manganese(II) chloride tetrahydrate			
2-12	E12	0.10	M	Tris	8.50	3.40	M	1,6-Hexanediol	0.20	M	Magnesium chloride hexahydrate			
2-13	F1	0.10	M	Sodium dihydrogen phosphate	6.20	0.20	M	Sodium chloride	7.50	%	1-Butanol			
2-14	F2	0.10	M	HEPES	7.50	0.50	M	Ammonium sulfate	5.00	%	1-Butanol			
2-15	F3	0.10	M	Sodium cacodylate trihydrate	6.50	35.00	%	2-Ethoxyethanol						
2-16	F4	0.10	M	Imidazole	8.00	35.00	%	2-Ethoxyethanol	0.05	M	Calcium acetate hydrate			
2-17	F5	0.10	M	Tris	8.50	35.00	%	2-Ethoxyethanol	0.20	M	Lithium sulfate			
2-18	F6					20.00	%	MPD	1.00	M	Ammonium sulfate	1.00	%	OG
2-19	F7	0.10	M	BICINE	9.35	20.00	%	MPD	0.20	M	Magnesium chloride hexahydrate			
2-20	F8	0.10	M	CHES	9.50	20.00	%	MPD	0.20	M	Sodium chloride			
2-21	F9					30.00	%	MPD	0.05	M	Magnesium chloride hexahydrate	0.05	M	Potassium chloride
2-22	F10	0.10	M	Sodium acetate	5.00	30.00	%	MPD	0.02	M	Calcium chloride dihydrate			
2-23	F11	0.10	M	Sodium acetate	5.00	30.00	%	MPD	0.20	M	Sodium chloride			
2-24	F12	0.10	M	Sodium cacodylate trihydrate	6.50	30.00	%	MPD	0.20	M	Magnesium acetate tetrahydrate			
2-25	G1	0.10	M	HEPES	7.50	30.00	%	MPD	0.20	M	Sodium citrate tribasic dihydrate			
2-26	G2	0.10	M	Tris	8.50	30.00	%	MPD	2.50	%	tert-Butanol			
2-27	G3	0.10	M	Sodium acetate	5.00	35.00	%	MPD	10.00	%	Glycerol			
2-28	G4	0.10	M	Sodium acetate	5.00	35.00	%	MPD						
2-29	G5	0.10	M	MES monohydrate	6.00	35.00	%	MPD	10.00	%	Glycerol	0.05	M	Sodium iodide
2-30	G6	0.10	M	ADA	6.20	35.00	%	MPD						
2-31	G7	0.10	M	MES monohydrate	6.50	35.00	%	MPD	0.20	M	Lithium sulfate			
2-32	G8	0.10	M	Sodium cacodylate trihydrate	6.50	35.00	%	MPD	0.05	M	Zinc acetate dihydrate			
2-33	G9	0.10	M	Tris	7.00	35.00	%	MPD	0.20	M	Sodium chloride			
2-34	G10	0.10	M	HEPES	7.50	35.00	%	MPD	0.20	M	Sodium chloride			
2-35	G11	0.10	M	Imidazole	8.00	35.00	%	MPD	0.20	M	Magnesium chloride hexahydrate			
2-36	G12					40.00	%	MPD	0.10	%	OG			
2-37	H1	0.10	M	Phosphate/Citrate	4.20	40.00	%	MPD						
2-38	H2	0.10	M	Sodium citrate tribasic dihydrate	5.50	40.00	%	MPD						
2-39	H3	0.05	M	MES monohydrate	6.00	40.00	%	MPD						
2-40	H4	0.10	M	Sodium cacodylate trihydrate	6.50	40.00	%	MPD	5.00	%	PEG 8000			
2-41	H5	0.10	M	HEPES	7.50	40.00	%	MPD	5.00	%	PEG 400			
2-42	H6	0.10	M	Triethanolamine hydrochloride	7.50	40.00	%	MPD	0.20	M	Sodium chloride			
2-43	H7	0.10	M	Imidazole	8.00	40.00	%	MPD	0.20	M	Magnesium chloride hexahydrate			
2-44	H8	0.10	M	Bis-Tris	5.50	45.00	%	MPD	0.20	M	Calcium chloride dihydrate			
2-45	H9	0.10	M	Bis-Tris	6.50	45.00	%	MPD	0.20	M	Calcium chloride dihydrate			
2-46	H10	0.10	M	HEPES	7.50	45.00	%	MPD	0.20	M	Ammonium acetate			
2-47	H11	0.10	M	Tris	8.50	50.00	%	MPD						
2-48	H12	0.10	M	HEPES	7.50	70.00	%	MPD						