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Building Blocks of Life



Crystal Screens

- > JBScreen Family
- > JBScreen Formulations



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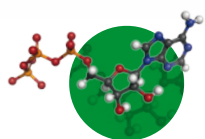
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About us

Established in 1998 by a team of scientists from the Max-Planck-Institute of Molecular Physiology (Dortmund), Jena Bioscience utilizes more than 25 years of academic know-how to develop innovative reagents for clients from both research and industry in 100+ countries. To date, Jena Bioscience still remains an owner-operated business.



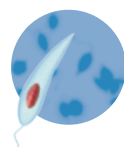
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In our chemistry division, we have hundreds of natural and modified nucleotides in stock. In addition, with our pre-made building blocks and in-house expertise we manufacture even the most exotic nucleotide analog from mg to kg scale.



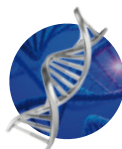
Click Chemistry, Probes & Epigenetics

Our Probes & Epigenetics as well as Click Chemistry sections offer innovative reagents for the functionalization, conjugation and labeling (fluorophores, haptens) of (bio) molecules complemented by epigenetic modification analysis tools.



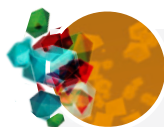
LEXY Expression

In the field of recombinant protein production, Jena Bioscience has developed its proprietary LEXSY (Leishmania Expression System) technology. It is based on an S1-classified unicellular organism that combines easy handling with a eukaryotic protein folding and modification machinery. Besides everything you need to establish LEXSY in your lab we also offer custom expression of recombinant proteins.



Molecular Biology & Proteins

For applications in the field of Molecular Biology we offer a large selection of single reagents, complete kits and optimized master mixes. This section includes products for DNA or RNA purification, amplification and modification with focus on PCR-related techniques.



Crystallography & Cryo-EM

For the crystallization of biological macromolecules – which is often the bottleneck in determining the 3D-structure of proteins – we offer specialized reagents for **protein stabilization, crystal screening, crystal optimization**, and **phasing** that can reduce the time necessary to obtain a high resolution protein structure from several years to a few days.

For questions regarding **Crystallography** contact me directly

Xtals@jenabioscience.com

Christin Reuter



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JBScreen Family

The Crystal Screens of the **JBScreen Family** are designed for efficient and flexible screening of crystallization conditions for soluble proteins, membrane proteins, peptides, nucleic acids, protein-ligand and macromolecular complexes.

The crystallization screens evolved from either published screening strategies/screens (e.g. JBScreen Basic) or compiling successful crystallization conditions of specific protein classes, such as kinases (JBScreen Kinase), membrane proteins (JBScreen Membrane), nucleic acids/protein-nucleic acid complexes (JBScreen Nuc-Pro) or specific crystallization methods (JBScreen LCP).

All JBScreens are free of cacodylate, their formulations are systematically arranged in a gradient format and prepared with great care ensuring elaborate and reproducible crystallization experiments:

- Chemicals used are of MicroSelect grade for Molecular Biology
- Buffers are prepared as 1 M stock solutions, adjusted to the specific pH value
- Final volume is adjusted with >18 MΩcm water
- Solutions are sterile-filtered (0.2 µm filter)
- Formulations are provided online in commonly used file formats: pdf, xls, xml
- Detailed production report includes Lot.# of each compound used in the particular screen for successful refinement



Figure 2

JBScreen Bulk: 24 solutions; 10 ml each



Figure 3

JBScreen HTS: 96 solutions; 1,7 ml each

Highest quality standards (according to DIN EN ISO 9001 and DIN EN ISO 14001) are combined with individualized customer support. If you wish to receive further information, please contact xtals@jenabioscience.com.



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Individual JBScreen Conditions

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Individual conditions for reproducing initial hits, crystallization optimization and soaking experiments are available for all screens of the JBScreen Family. The solutions are made from exactly the same chemicals as the conditions in the original screens, are sterile filtered and available in different volumes.

Product	Cat.-No.	Amount
Individual JBScreen Condition, 10 ml Indicate screen name, Cat.# and condition # when placing the order	CS-IND-10ML	10 ml
Individual JBScreen Condition, 100 ml Indicate screen name, Cat.# and condition # when placing the order	CS-IND-100ML	100 ml

JBScreen Classic

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JBScreen Classic has become one of the most successful crystal screens on the market. It facilitated determination of hundreds of protein structures, and its citations in the literature increase annually by 30% (please see below for selected recent citations).

JBScreen Classic covers the most prominent precipitants and buffers for protein crystallization within 240 conditions, available as JBScreen Classic 1–10 (10 x 24 conditions; 10 ml each). It is arranged by type and concentration of precipitant allowing extraction of first refinement information: For every hit, the effects of the adjacent conditions are immediately visible.

In the early 2000s the sub-screen JBScreen Classic HTS I & II was introduced in which 48 conditions have been eliminated to provide compatibility with high throughput setups in 96 well plates, available in deep well blocks (2 x 96 conditions; 1,7 ml each).

Product	Cat.-No.	Amount
JBScreen Classic 1 (PEG 400 to 3000 based)	CS-101L	24 solutions (10 ml each)
JBScreen Classic 2 (PEG 4000 based)	CS-102L	24 solutions (10 ml each)
JBScreen Classic 3 (PEG 4000+ based)	CS-103L	24 solutions (10 ml each)
JBScreen Classic 4 (PEG 5000 MME to 8000 based)	CS-104L	24 solutions (10 ml each)
JBScreen Classic 5 (PEG 8000 to 20000 based)	CS-105L	24 solutions (10 ml each)
JBScreen Classic 6 (Ammonium Sulfate based)	CS-106L	24 solutions (10 ml each)
JBScreen Classic 7 (MPD based)	CS-107L	24 solutions (10 ml each)
JBScreen Classic 8 (MPD/Alcohol based)	CS-108L	24 solutions (10 ml each)
JBScreen Classic 9 (Alcohol/Salt based)	CS-109L	24 solutions (10 ml each)
JBScreen Classic 10 (Salt based)	CS-110L	24 solutions (10 ml each)
JBScreen Classic 1–5	CS-112L	5 Kits
JBScreen Classic 6–10	CS-113L	5 Kits
JBScreen Classic 1–10	CS-114L	10 Kits
JBScreen Classic HTS I (PEG based)	CS-201L	96 solutions (1.7 ml each)
JBScreen Classic HTS II (Ammonium Sulfate, MPD, Alcohol and Salt based)	CS-202L	96 solutions (1.7 ml each)

Selected Recent Literature Citations of JBScreen Classic

Songsiririthigul *et al.* (2017) Crystal structure of the N-terminal anticodon-binding domain of the nondiscriminating aspartyl-tRNA synthetase from *Helicobacter pylori*. *Acta Cryst F* **73**:62.
 McPhail *et al.* (2017) The Molecular Basis of Aichi Virus 3A Protein Activation of Phosphatidylinositol 4 Kinase IIIβ, PI4KB, through ACBD3. *Structure* **25**:121.
 García Caballero *et al.* (2016) Galectin-related protein: An integral member of the network of chicken galectins 1. From strong sequence conservation of the gene confined to vertebrates to biochemical characteristics of the chicken protein and its crystal structure. *Biochim Biophys Acta*. **1860**:2285.
 Demmer *et al.* (2015) Insights into Flavin-based Electron Bifurcation via the NADH-dependent Reduced Ferredoxin:NADP Oxidoreductase Structure. *JBC* **290**:21985.
 Bosshart *et al.* (2015) Directed Divergent Evolution of a Thermostable d-Tagatose Epimerase towards Improved Activity for Two Hexose Substrates. *ChemBioChem* **16**:592.

JBScreen Basic

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Despite intensive research, the crystallization of biological macromolecules remains a process of trial and error. Nucleation and crystal growth are influenced by the interaction of many variables, such as temperature, pH, precipitant and salt concentration. Testing all possible combinations would be too time consuming and would require enormous amounts of sample. One approach to find suitable crystallization conditions is the sparse-matrix method. This method involves screening with an intentional bias towards conditions which have been proven successful in the crystallization of biological macromolecules.

In 1991, Jancarik and Kim published 50 conditions, which were derived from previously crystallized proteins^[1]. These and other conditions form the basis of the **JBScreen Basic** system^[1,2]. However, like in all other JBScreen crystallization kits, we abstained from the use of cacodylate buffers and replaced them with MES. JBScreen Basic contains 96 unique reagent mixtures for screening a wide range of pH and various salts and precipitants.

Product	Cat.-No.	Amount
JBScreen Basic 1	CS-121	24 solutions (10 ml each)
JBScreen Basic 2	CS-122	24 solutions (10 ml each)
JBScreen Basic 3	CS-123	24 solutions (10 ml each)
JBScreen Basic 4	CS-124	24 solutions (10 ml each)
JBScreen Basic 1–4	CS-125	4 Kits
JBScreen Basic HTS	CS-203L	96 solutions (1.7 ml each)

Selected Literature Citations of JBScreen Basic

Moonens *et al.* (2015) Structural insight in the inhibition of adherence of F4 fimbriae producing enterotoxigenic *Escherichia coli* by llama single domain antibodies. *Veterinary Research* **46**:14.

Zano *et al.* (2014) Structure of an unusual S-adenosylmethionine synthetase from *Campylobacter jejuni*. *Acta Cryst. D* **70**:442.

Goyal *et al.* (2013) Crystallization and preliminary X-ray crystallographic analysis of the curli transporter CsgG. *Acta Cryst. F* **69**:1349.

JBScreen Membrane

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JBScreen Membrane covers 96 of the most successful conditions for crystallization of membrane proteins. Each individual composition results from an extensive analysis of the crystallization conditions that have yielded membrane protein structures so far.

The JBScreen Membrane crystallization conditions are primarily ordered by type and concentration of the precipitant. This allows easy extraction of all relevant information for a straightforward refinement: Once you get a hit, you immediately see the effects of the neighbouring conditions. The subsequent fine tuning of preliminary hits will be much more efficient.

JBScreen Detergents perfectly complement JBScreen Membrane: This combination enables you to screen a broad range of detergents, while concentrating on the most successful crystallization conditions, making crystallization screening of membrane proteins much more efficient and less time consuming.

Product	Cat.-No.	Amount
JBScreen Membrane 1 (PEG 400 to PEG 2000 MME based)	CS-301L	24 solutions (10 ml each)
JBScreen Membrane 2 (PEG 2000 MME to PEG 10000 based)	CS-302L	24 solutions (10 ml each)
JBScreen Membrane 3 (Ammonium Sulfate, Alcohol and Salt based)	CS-303L	24 solutions (10 ml each)
JBScreen Membrane 4 (MPD, Salt based)	CS-304L	24 solutions (10 ml each)
JBScreen Membrane 1 – 4	CS-309	4 Kits
JBScreen Membrane HTS	CS-310	96 solutions (1.7 ml each)
JBScreen Membrane 1 – 4 & JBScreen Detergents HTS	CS-308	4 + 1 Kits

Selected Literature Citations of JBScreen Membrane

Kolek *et al.* (2016) A novel microseeding method for the crystallization of membrane proteins in lipidic cubic phase. *Acta Cryst. F* **72**:307.

Tan *et al.* (2014) A conformational landscape for alginate secretion across the outer membrane of *Pseudomonas aeruginosa*. *Acta Cryst. D* **70**:2054.

Li *et al.* (2014) Crystallizing Membrane Proteins in the Lipidic Mesophase. Experience with Human Prostaglandin E2 Synthase 1 and an Evolving Strategy. *Crystal Growth & Design* **14**:2034.

Jacobs *et al.* (2012) Expression, purification and crystallization of the outer membrane lipoprotein GumB from *Xanthomonas campestris*. *Acta Cryst. F* **68**:1255.

Li *et al.* (2011) Crystallizing Membrane Proteins in Lipidic Mesophases. A Host Lipid Screen. *Crystal Growth & Design* **11**(2):530.

JBScreen LCP

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JBScreen LCP is a crystallization screen designed for efficient screening of crystallization conditions in the Lipidic Cubic Phase (LCP), which has become the method of choice for membrane protein crystallization in different types of LCP lipids.

The 96 conditions of JBScreen LCP result from data mining of 192 integral membrane proteins, that were successfully crystallized by the in meso method and have yielded structures^[3]. The screen is ordered by type and concentration of the precipitant and is free of cacodylate.

Product	Cat.-No.	Amount
JBScreen LCP	CS-340	4 x 24 solutions (10 ml each)
JBScreen LCP HTS	CS-213L	96 solutions (1.7 ml each)

JBScreen Kinase

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JBScreen Kinase is a highly specialized screen formulated for the determination of initial crystallization conditions of protein kinases. Through the use of advanced data mining, crystallization conditions of kinases have been identified from published structures. Data evaluation and verification resulted in the formulation of 96 unique reagents, highly effective for the crystallization of kinases. JBScreen Kinase utilizes a variety of different precipitating agents, i.e. various molecular weight PEGs, MPD and Ammonium Sulfate, in combination with buffers covering a pH range from 3,1–10,0 and numerous additives.

Product	Cat.-No.	Amount
JBScreen Kinase 1	CS-131	24 solutions (10 ml each)
JBScreen Kinase 2	CS-132	24 solutions (10 ml each)
JBScreen Kinase 3	CS-133	24 solutions (10 ml each)
JBScreen Kinase 4	CS-134	24 solutions (10 ml each)
JBScreen Kinase 1–4	CS-135	4 Kits
JBScreen Kinase HTS	CS-204L	96 solutions (1.7 ml each)

Selected Literature Citation of JBScreen Kinase

Yunta *et al.* (2011) SnRK2.6/OST1 from *Arabidopsis thaliana*: cloning, expression, purification, crystallization and preliminary X-ray analysis of K50N and D160A mutants. *Acta Cryst. F* **67(3)**:364.

JBScreen Nuc-Pro

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JBScreen Nuc-Pro is designed to screen for preliminary crystallization conditions of nucleic acids and protein-nucleic acid complexes. The highly effective sparse matrix screen is based upon extensive screening of the PDB, with focus on entries by structural genomic initiatives, the BMCD and other protocols^[4–6]. Reported crystallization conditions for various RNAs, DNAs as well as protein-nucleic acid complexes were compiled and analyzed for rate of recurrence.

The 96 conditions selected cover a variety of polymers, mono- and divalent metal ions, organics, alcohols and buffers of a pH range from 4,0 to 8,5. The organization of the reagents into individual kits is based upon the main precipitant, i.e. various molecular weight PEGs, Salts, alcohols (MPD and 2-Propanol).

Product	Cat.-No.	Amount
JBScreen Nuc-Pro 1	CS-181	24 solutions (10 ml each)
JBScreen Nuc-Pro 2	CS-182	24 solutions (10 ml each)
JBScreen Nuc-Pro 3	CS-183	24 solutions (10 ml each)
JBScreen Nuc-Pro 4	CS-184	24 solutions (10 ml each)
JBScreen Nuc-Pro 1 – 4	CS-185	4 Kits
JBScreen Nuc-Pro HTS	CS-209L	96 solutions (1.7 ml each)

Selected Literature Citations of JBScreen Nuc-Pro

Yin *et al.* (2017) Impact of cytosine methylation on DNA binding specificities of human transcription factors. *Science* **356** eaaj2239.

Nemchinova *et al.* (2017) An Experimental Tool to Estimate the Probability of a Nucleotide Presence in the Crystal Structures of the Nucleotide–Protein Complexes. *Protein J* DOI:10.1007/s10930-017-9709-y.

Wang *et al.* (2016) Base pairing and structural insights into the 5-formylcytosine in RNA duplex. *Nucleic Acids Research* **44**:4968.

Nikulin *et al.* (2016) Characterization of RNA-binding properties of the archaeal Hfq-like protein from *Methanococcus jannaschii*. *J Biomol Struct Dyn* DOI:10.1080/07391102.2016.1189849.

Morgunova *et al.* (2015) Structural insights into the DNA-binding specificity of E2F family transcription factors. *Nat. Commun.* DOI:10.1038/ncomms10050.

JBScreen PEG/Salt

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JBScreen PEG/Salt is an effective reagent kit designed for initial screening of crystallization conditions of biological macromolecules. It comprises high-purity PEG 3350 and PEG 5000 MME, each combined with 48 different salts, thus covering a range of anions and cations most frequently used in bio-crystallography.

Product	Cat.-No.	Amount
JBScreen PEG/Salt 1	CS-141	24 solutions (10 ml each)
JBScreen PEG/Salt 2	CS-142	24 solutions (10 ml each)
JBScreen PEG/Salt 3	CS-143	24 solutions (10 ml each)
JBScreen PEG/Salt 4	CS-144	24 solutions (10 ml each)
JBScreen PEG/Salt 1–4	CS-145	4 Kits
JBScreen PEG/Salt HTS	CS-205L	96 solutions (1.7 ml each)

Selected Literature Citations of JBScreen PEG/Salt

Kumar *et al.* (2017) Non-classical transpeptidases yield insight into new antibacterials. *Nat. Chem. Biol.* **13**:54.
 Chayen *et al.* (2008) Protein crystallization: from purified protein to diffraction-quality crystal. *Nature Methods* **5**:147.

JBScreen Pentaerythritol

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JBScreen Pentaerythritol has been designed for efficient crystallization screening of biological macromolecules based on pentaerythritol polymers as precipitants. The screen was developed by Ulrike Demmer from the Max-Planck-Institute for Biophysics in Frankfurt. The choice of a suitable precipitant is of crucial importance for the crystallization of proteins. JBScreen Pentaerythritol utilizes two novel precipitating agents, i.e. pentaerythritol propoxylate and pentaerythritol ethoxylate. Both are branched polymers containing a pentaerythritol backbone. Thus they differ from more traditional precipitants like MPD and PEG's in size and nature. In addition, pentaerythritol polymers function as cryoprotectants. Protein crystals grown in concentrations greater than 30% of these precipitants can be frozen directly from the crystallization drop. The successful application of pentaerythritol polymers to yield protein crystals was first described by Gulick *et al.*^[7].

Furthermore, this class of precipitants has been used for membrane protein crystallization. The X-ray structure of cbb3 Cytochrome Oxidase was published in Science in 2010. Crystals of this proton pumping membrane protein were successfully grown using pentaerythritol ethoxylate as precipitation agent^[8].

JBScreen Pentaerythritol comprises of 96 unique conditions, based on 4 different pentaerythritol polymers as precipitating agent:

- Pentaerythritol propoxylate 426 (5/4 PO/OH)
- Pentaerythritol propoxylate 629 (17/8 PO/OH)
- Pentaerythritol ethoxylate 270 (3/4 EO/OH)
- Pentaerythritol ethoxylate 797 (15/4 EO/OH)

The 4 polymers are arranged to a grid screen, thus allowing screening i) of three different precipitant concentrations, ii) four different pH values and iii) with and without the addition of salts, i.e. magnesium chloride, ammonium sulfate, potassium chloride.

The advantage of JBScreen Pentaerythritol not only lies in the novel 96 conditions but also in the systematic arrangement of the unique reagents, which enables the user to compare individual conditions directly. Even if initial screening may not always yield crystals, valuable information about the protein under investigation can be obtained from the scoring sheet.

Product	Cat.-No.	Amount
JBScreen Pentaerythritol 1 (PEP 426 based)	CS-191	24 solutions (10 ml each)
JBScreen Pentaerythritol 2 (PEP 629 based)	CS-192	24 solutions (10 ml each)
JBScreen Pentaerythritol 3 (PEE 270 based)	CS-193	24 solutions (10 ml each)
JBScreen Pentaerythritol 4 (PEE 797 based)	CS-194	24 solutions (10 ml each)
JBScreen Pentaerythritol 1–4	CS-195	4 Kits
JBScreen Pentaerythritol HTS	CS-210L	96 solutions (1.7 ml each)

Selected Literature Citations of JBScreen Pentaerythritol

Weidenweber *et al.* (2017) Structure of the acetophenone carboxylase core complex: prototype of a new class of ATP-dependent carboxylases/hydrolases. *Sci. Rep.* **7**:39674.
 Fujita *et al.* (2017) Identification of the key interactions in structural transition pathway of FtsZ from *Staphylococcus aureus*. *J. Struct. Biol.* DOI 10.1016/j.jsb.2017.04.008.
 Wagner *et al.* (2016) The methanogenic CO₂ reducing-and-fixing enzyme is bifunctional and contains 46 [4Fe-4S] clusters. *Science* **354**:114.
 Demmer *et al.* (2015) Insights into Flavin-based Electron Bifurcation via the NADH-dependent Reduced Ferredoxin:NADP Oxidoreductase Structure. *JBC* **290**:21985.
 Reikittke *et al.* (2015) Structure of the GcpE-HMBPP complex from *Thermus thermophilus*. *Biochem. Biophys. Res. Commun.* **458**:246.

JBScreen PACT++

BUY ONLINE →

JBScreen PACT++ is a crystallization screen facilitating systematic pH, anion- and cation testing in the presence of polyethylene glycol (PEG) based on the work of Newman *et al.*^[9].

The 96 unique crystallization conditions combine three mini-screens in one:

1. 24-condition PEG/pH screen
2. 24-condition PEG/cation screen
3. 48-condition PEG/anion screen

This systematic approach aims to alter individual components of the crystallization conditions, i.e. pH, anions and cations, independently from the others in order to obtain more information of the precipitation behaviour of the protein.

When JBScreen PACT++ is used along with JBScreen JCSG++, systematic investigation of the precipitation behaviour of the protein can be combined with a sparse matrix screen in order to enhance the success rate of protein crystallization.

Product	Cat.-No.	Amount
JBScreen PACT++ 1	CS-161	24 solutions (10 ml each)
JBScreen PACT++ 2	CS-162	24 solutions (10 ml each)
JBScreen PACT++ 3	CS-163	24 solutions (10 ml each)
JBScreen PACT++ 4	CS-164	24 solutions (10 ml each)
JBScreen PACT++ 1–4	CS-165	4 Kits
JBScreen PACT++ HTS	CS-207L	96 solutions (1.7 ml each)

JBScreen JCSG ++

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JBScreen JCSG++ is an optimized sparse matrix screen developed by researchers from the Joint Center for Structural Genomics (JCSG)^[10] and from the European Genomics Consortium^[9].

96 reagents have been selected with the aim to maximize the coverage of the crystallization parameter space and to reduce the redundancy of crystallization conditions within commercially available crystallization screens. Thus, a core set of 66 conditions used by the JCSG for high-throughput structural determination^[10] was extended to 96 screening conditions in order to round off the pH profile and to incorporate different precipitants such as succinate, malonate and formate.

When JBScreen JCSG++ is used along with JBScreen PACT++, the benefits of a sparse matrix screen can be combined with the systematic investigation the precipitation behaviour of the protein.

Product	Cat.-No.	Amount
JBScreen JCSG++ 1	CS-151	24 solutions (10 ml each)
JBScreen JCSG++ 2	CS-152	24 solutions (10 ml each)
JBScreen JCSG++ 3	CS-153	24 solutions (10 ml each)
JBScreen JCSG++ 4	CS-154	24 solutions (10 ml each)
JBScreen JCSG++ 1–4	CS-155	4 Kits
JBScreen JCSG++ HTS	CS-206L	96 solutions (1.7 ml each)

Selected Literature Citations of JBScreen JCSG++

Kumar *et al.* (2017) Non-classical transpeptidases yield insight into new antibacterials. *Nat. Chem. Biol.* **13**:54.

Cattani *et al.* (2015) Structure of a PEGylated protein reveals a highly porous double-helical assembly. *Nat. Chem.* **7**:823.

Boltsis *et al.* (2014) Non-contact Current Transfer Induces the Formation and Improves the X-ray Diffraction Quality of Protein Crystals. *Crystal Growth & Design* **14**:4347.

Pi-Screens

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The **Pi-Screens** were developed at the MRC Laboratory of Molecular Biology (Cambridge, UK) for efficient crystallization screening of soluble proteins (Pi-minimal Screen) and integral membrane proteins (Pi-PEG Screen). The approach is based on incomplete factorial design. The unique formulation was generated following a strategy named Pi sampling^[11] in order to create novel combinations of precipitants, buffers and additives across a standard 96-condition plate layout. Thus, the diversity amongst the crystallization conditions is ideal for initial screening.

The Pi-minimal Screen includes 36 components, i.e. 12 precipitants, 12 buffers systems and 12 salts. Buffers employed in the Pi-minimal screen are buffer systems (acid-base pairs, e.g. HEPES and HEPES sodium salt). Consequently, pH can be adjusted by mixing the high and low pH stock solutions at different ratios during later optimizations. The efficiency of the Pi-minimal Screen was demonstrated by the crystallization of 10 proteins before its commercialization^[11].

The Pi-PEG Screen includes various polyethylene glycol mixtures, additives and buffers covering a pH range from 4,0 – 9,5 and hence is suitable for integral membrane proteins as well as for soluble proteins.

The efficiency of the Pi-PEG screen was demonstrated by the crystallization of a G-protein coupled receptor (GPCR) when quality crystals could not be produced with other commercially available screens^[11].

Product	Cat.-No.	Amount
Pi-minimal Screen	CS-127	4 x 24 solutions (10 ml each)
Pi-PEG Screen	CS-128	4 x 24 solutions (10 ml each)
Pi-minimal Screen HTS	CS-211L	96 solutions (1.7 ml each)
Pi-PEG Screen HTS	CS-212L	96 solutions (1.7 ml each)

Selected Literature Citation of Pi-Screens

Gorrec (2016) Protein crystallization screens developed at the MRC Laboratory of Molecular Biology. *Drug Discov. Today* **21**:819.

Ohashi *et al.* (2016) Characterization of Atg38 and NRBF2, a fifth subunit of the autophagic Vps34/PIK3C3 complex. *Autophagy* **12**:2129.

Omari *et al.* (2014) Pushing the limits of sulfur SAD phasing: de novo structure solution of the N-terminal domain of the ectodomain of HCV E1. *Acta Cryst. D* **70**:2197.

JBScreen Wizard

[BUY ONLINE →](#)

JBScreen Wizard is a highly effective random sparse matrix screen for crystallizing proteins, peptides, nucleic acids and macromolecular complexes. A large range of precipitants, buffers and salts allow a broad sampling of crystallization space at pH levels from pH 4,5 to 10,5.

Product	Cat.-No.	Amount
JBScreen Wizard 1	CS-311	48 solutions (10 ml each)
JBScreen Wizard 2	CS-312	48 solutions (10 ml each)
JBScreen Wizard 3	CS-313	48 solutions (10 ml each)
JBScreen Wizard 4	CS-314	48 solutions (10 ml each)
JBScreen Wizard 1 & 2	CS-315	2 Kits
JBScreen Wizard 3 & 4	CS-316	2 Kits
JBScreen Wizard 1–4	CS-317	4 Kits
JBScreen Wizard 1 & 2 HTS	CS-318	96 solutions (1.7 ml each)
JBScreen Wizard 3 & 4 HTS	CS-319	96 solutions (1.7 ml each)
JBScreen Wizard 1–4 HTS	CS-320	2 x 96 solutions (1.7 ml each)

Selected Literature Citation of JBScreen Wizard

Dos Santos *et al.* (2017) Renaissance of protein crystallization and precipitation in biopharmaceuticals purification. *Biotechnol. Adv.* **35**:41.

References

- [1] Jancarik & Kim (1991) Sparse matrix sampling: a screening method for crystallization of proteins. *J. Appl. Cryst.* **4**:409.
- [2] Cudney *et al.* (1994) Screening and optimization strategies for macromolecular crystal growth. *Acta Cryst. D* **50**:414.
- [3] Caffrey (2015) A comprehensive review of the lipid cubic phase or in meso method for crystallizing membrane and soluble proteins and complexes. *Acta Cryst. F* **71**:3.
- [4] Doudna *et al.* (1993) Crystallization of ribozymes and small RNA motifs by a sparse matrix approach. *Proc. Natl. Sci. USA* **90**:7829.
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- [6] Ke *et al.* (2004) Crystallization of RNA and RNA-protein complexes. *Methods* **34**:408.
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Crystallization Stock Solutions

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Sterile stock solutions for reproducing and optimizing initial hits.

Crystallization stock solutions, i.e. polymers, buffers and salts are ideal for the optimization of your crystallization conditions. Using the same chemicals as utilized in the JBScreens ensures higher reproducibility of your experiments. Crystallization Stock Solutions are ready for use: the concentration is adjusted and they are sterile filtered.

Polymers	Cat.-No.	Amount
Pentaerythritol ethoxylate (3/4 EO/OH), 60 % w/v PEE 270	CSS-372	100 ml
Pentaerythritol ethoxylate (3/4 EO/OH), 100 % v/v PEE 270	CSS-373	100 ml
Pentaerythritol ethoxylate (15/4 EO/OH), 60 % w/v PEE 797	CSS-374	100 ml
Pentaerythritol ethoxylate (15/4 EO/OH), 100 % v/v PEE 797	CSS-375	100 ml
Pentaerythritol propoxylate (17/8 PO/OH), 60 % w/v PEP 629	CSS-376	100 ml
Pentaerythritol propoxylate (17/8 PO/OH), 100 % v/v PEP 629	CSS-377	100 ml
Pentaerythritol propoxylate (5/4 PO/OH), 60 % w/v PEP 426	CSS-378	100 ml

Polymers	Cat.-No.	Amount
Pentaerythritol propoxylate (5/4 PO/OH), 100 % v/v PEP 426	CSS-379	100 ml
Polyethyleneglycol 200, 100 % v/v PEG 200	CSS-396	100 ml
Polyethyleneglycol 300, 100 % v/v PEG 300	CSS-397	100 ml
Polyethyleneglycol 350 Monomethylether, 50 % v/v PEG 350 MME	CSS-381	100 ml
Polyethyleneglycol 400, 100 % v/v PEG 400	CSS-252	100 ml
Polyethyleneglycol 550 Monomethylether, 50 % v/v PEG 550 MME	CSS-236	100 ml
Polyethyleneglycol 550 Monomethylether, 50 % w/v PEG 550 MME	CSS-237	100 ml
Polyethyleneglycol 600, 50 % v/v PEG 600	CSS-241	100 ml
Polyethyleneglycol 600, 50 % w/v PEG 600	CSS-240	100 ml
Polyethyleneglycol 1000, 50 % w/v PEG 1000	CSS-242	100 ml
Polyethyleneglycol 1500, 50 % w/v PEG 1500	CSS-244	100 ml
Polyethyleneglycol 2000, 50 % w/v PEG 2000	CSS-245	100 ml
Polyethyleneglycol 2000 Monomethylether, 50 % w/v PEG 2000 MME	CSS-234	100 ml
Polyethyleneglycol 3000, 50 % w/v PEG 3000	CSS-248	100 ml
Polyethyleneglycol 3350, 50 % w/v PEG 3350	CSS-249	100 ml
Polyethyleneglycol 4000, 50 % w/v PEG 4000	CSS-253	100 ml
Polyethyleneglycol 5000 Monomethylether, 50 % w/v PEG 5000 MME	CSS-235	100 ml
Polyethyleneglycol 6000, 50 % w/v PEG 6000	CSS-255	100 ml
Polyethyleneglycol 8000, 50 % w/v PEG 8000	CSS-256	100 ml
Polyethyleneglycol 10000, 50 % w/v PEG 10000	CSS-243	100 ml
Polyethyleneglycol 20000, 50 % w/v PEG 20000	CSS-246	100 ml
Polyethylenimine, 50 % w/v	CSS-257	4 x 25 ml
Jeffamine M-600, 50 % v/v, pH 7.0	CSS-196	100 ml
Jeffamine ED-2001 - 50 % w/v, pH 7.0	CSS-406	4 x 25 ml

Organics	Cat.-No.	Amount
1,3-Propanediol, 50 % v/v	CSS-104	100 ml
1,4-Dioxane, 50 % v/v	CSS-107	4 x 25 ml
1,4-Dioxane, 50 % w/v	CSS-106	4 x 25 ml
1,6-Hexanediol, 5 M	CSS-109	100 ml
2,5-Hexanediol, 8 % v/v	CSS-419	100 ml
1,4-Butanediol, 50 % v/v	CSS-386	100 ml
MPD, 100 % v/v 2-Methyl-2,4-Pentanediol	CSS-117	100 ml
2-Propanol, 100 % v/v Iso-Propanol	CSS-119	4 x 25 ml
Ethanol, 50 % v/v	CSS-330	4 x 25 ml
Ethylene glycol, 100 % v/v	CSS-183	100 ml
Glycerol, 100 % v/v Glycerin	CSS-188	100 ml
L-Glutathion reduced, 0.16 M	CSS-199	100 ml
Methanol, 50 % w/v	CSS-224	4 x 25 ml
Propylene Glycol, 50 % v/v 1,2-Propanediol	CSS-280	100 ml
tert-Butanol, 50 % v/v	CSS-311	4 x 25 ml
tert-Butanol, 50 % w/v	CSS-310	4 x 25 ml
Triethyleneglycol, 50 % w/v	CSS-314	100 ml
Buffers	Cat.-No.	Amount
ADA pH 6.0, 1 M	CSS-125	100 ml
ADA pH 6.5, 1 M	CSS-338	100 ml
Bicine pH 8.3, 1 M	CSS-383	100 ml
Bicine pH 9.0, 1 M	CSS-147	100 ml
Bicine pH 9.5, 1 M	CSS-339	100 ml
BIS-TRIS pH 6.5, 1 M	CSS-148	100 ml
BIS-TRIS pH 7.0, 1 M	CSS-340	100 ml

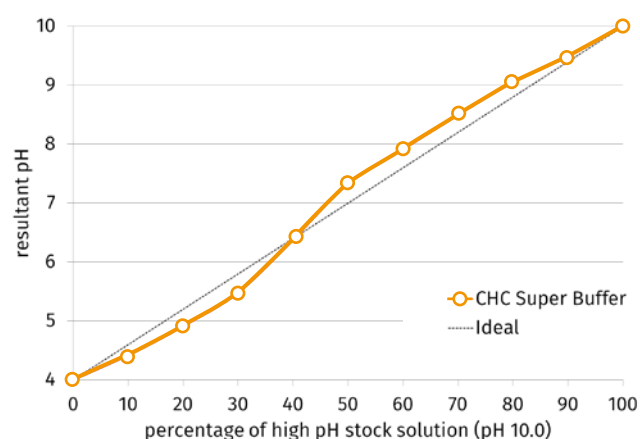
Buffers	Cat.-No.	Amount
BIS-TRIS Propane pH 7.0, 1 M	CSS-149	100 ml
CAPS pH 10.0, 1 M	CSS-156	100 ml
CAPS pH 10.5, 1 M	CSS-382	100 ml
CHES pH 9.5, 1 M	CSS-160	100 ml
Citrate/ Phosphate pH 4.4, 1 M	CSS-161	100 ml
Citrate/Phosphate pH 5.0, 1 M	CSS-341	100 ml
Citric Acid pH 3.1, 1 M	CSS-162	100 ml
Citric Acid pH 4.2, 1 M	CSS-342	100 ml
Citric Acid pH 5.0, 1 M	CSS-343	100 ml
Glycine pH 9.5, 1 M	CSS-089	100 ml
Glycine, 1 M	CSS-189	100 ml
HEPES pH 6.8, 1 M	CSS-409	100 ml
HEPES pH 7.5, 1 M	CSS-192	100 ml
HEPES pH 8.2, 1 M	CSS-410	100 ml
HEPES, 1 M	CSS-360	100 ml
Imidazole pH 6.5, 1 M	CSS-095	4 x 25 ml
Imidazole pH 7.0, 1 M	CSS-355	4 x 25 ml
Imidazole pH 7.5, 1 M	CSS-344	4 x 25 ml
Imidazole pH 8.0, 1 M	CSS-345	4 x 25 ml
Imidazole, 1 M	CSS-195	4 x 25 ml
Lithium Acetate Dihydrate pH 7.5, 1 M	CSS-000	100 ml
DL-Malic Acid pH 5.5, 1 M	CSS-197	100 ml
MES pH 5.6, 1 M	CSS-407	100 ml
MES pH 6.5, 1 M	CSS-222	100 ml
MES pH 6.7, 1 M	CSS-408	100 ml
MOPS pH 7.0, 1 M	CSS-226	100 ml
PIPES pH 6.0, 1 M	CSS-232	100 ml
PIPES pH 7.0, 1 M	CSS-347	100 ml
Potassium Phosphate pH 8.0, 1 M	CSS-273	100 ml
Sodium Acetate pH 3.6, 1 M	CSS-411	100 ml
Sodium Acetate pH 4.6, 1 M	CSS-283	100 ml
Sodium Acetate pH 5.6, 1 M	CSS-412	100 ml
Sodium Acetate (HCl) pH 3.6, 1 M	CSS-413	100 ml

Buffers	Cat.-No.	Amount
Sodium Acetate (HCl) pH 5.6, 1 M	CSS-414	100 ml
tri-Sodium Citrate Dihydrate pH 3.7, 1 M	CSS-415	100 ml
tri-Sodium Citrate Dihydrate pH 4.8, 1 M	CSS-318	100 ml
tri-Sodium Citrate Dihydrate pH 5.6, 1 M	CSS-352	100 ml
Sodium Phosphate pH 6.2, 1 M	CSS-297	100 ml
Sodium Phosphate pH 6.7, 1 M	CSS-348	100 ml
Sodium Phosphate pH 6.8, 1 M	CSS-349	100 ml
Sodium Phosphate pH 7.0, 1 M	CSS-350	100 ml
Sodium Potassium Phosphate pH 6.5, 1 M	CSS-299	100 ml
Sodium Potassium Phosphate pH 7.5, 1 M	CSS-351	100 ml
Succinic Acid, 0.5 M	CSS-307	100 ml
Tricine pH 8.0, 1 M	CSS-313	100 ml
TRIS (TRIS-Acetate) pH 8.0, 1 M	CSS-337	100 ml
TRIS pH 7.1, 1 M	CSS-417	100 ml
TRIS pH 7.5, 1 M	CSS-320	100 ml
TRIS pH 8.0, 1 M	CSS-353	100 ml
TRIS pH 8.5, 1 M	CSS-354	100 ml
TRIS pH 9.0, 1 M	CSS-418	100 ml

Super Buffers

Super Buffers screen the pH independently from any other parameter. They are composed of a mixture of three individual buffers with distinct pK_a values and cover a broad pH range without changing the chemical environment of the buffer solution.

Our Super Buffers are supplied as low and high pH stock solutions, which can be mixed at different ratios to obtain different pH values within the range. Plotting the pH vs. the percentage of high pH stock solution in the mixture results in an almost linear pH function for any JBScreen Super Buffer system.



Super Buffers	Cat.-No.	Amount
AAB pH 4.0 - 1 M	CSS-404	100 ml
AAB pH 9.0 - 1 M	CSS-405	100 ml
CHC pH 4.0 - 1 M	CSS-402	100 ml
CHC pH 10.0 - 1 M	CSS-403	100 ml

Super Buffers	Cat.-No.	Amount
MIB pH 4.0 - 1 M	CSS-400	4 x 25 ml
MIB pH 10.0 - 1 M	CSS-401	4 x 25 ml
MMT pH 4.0 - 1 M	CSS-398	100 ml
MMT pH 9.0 - 1 M	CSS-399	100 ml
PCB pH 4.0 - 1 M	CSS-387	4 x 25 ml
PCB pH 9.0 - 1 M	CSS-388	4 x 25 ml
SPG pH 4.0 - 1 M	CSS-389	100 ml
SPG pH 10.0 - 1 M	CSS-390	100 ml
TBG pH 4.0 - 1 M	CSS-384	100 ml
TBG pH 9.0 - 1 M	CSS-385	100 ml

Salts	Cat.-No.	Amount
Ammonium Acetate, 5 M	CSS-129	100 ml
Ammonium Chloride, 5 M	CSS-131	100 ml
Ammonium dihydrogen Phosphate, 3 M	CSS-133	100 ml
Ammonium Fluoride, 10 M	CSS-134	4 x 25 ml
Ammonium Formate, 5 M	CSS-136	100 ml
Ammonium Iodide, 1 M	CSS-137	100 ml
Ammonium Nitrate, 10 M	CSS-138	100 ml
Ammonium Sulfate, 4 M	CSS-143	100 ml
Cadmium Chloride, 1 M	CSS-151	4 x 25 ml
Cadmium Sulfate, 1 M	CSS-152	4 x 25 ml
Calcium Acetate Hydrate, 1 M	CSS-153	100 ml
Calcium Chloride Dihydrate, 5 M	CSS-155	100 ml
Cesium Chloride, 1 M	CSS-157	100 ml
Cobalt(II) Chloride Hexahydrate, 1 M	CSS-163	4 x 25 ml
di-Ammonium hydrogen Phosphate, 3.5 M	CSS-171	100 ml
di-Ammonium Tartrate, 2 M	CSS-172	100 ml
di-Potassium hydrogen Phosphate, 1 M	CSS-391	100 ml
di-Sodium hydrogen Phosphate, 1 M	CSS-392	100 ml
Iron (III) Chloride Hexahydrate, 1 M	CSS-184	4 x 25 ml

Salts	Cat.-No.	Amount
Lithium Acetate Dihydrate, 1 M	CSS-200	100 ml
Lithium Chloride, 10 M	CSS-356	100 ml
Lithium Citrate Hydrate, 1.5 M	CSS-203	100 ml
Lithium Nitrate, 8 M	CSS-204	4 x 25 ml
Lithium Sulfate, 2.5 M	CSS-207	100 ml
Magnesium Acetate Tetrahydrate, 1 M	CSS-210	100 ml
Magnesium Chloride Hexahydrate, 1 M	CSS-211	100 ml
Magnesium Formate Dihydrate, 1 M	CSS-393	100 ml
Magnesium Nitrate Hexahydrate, 1 M	CSS-214	100 ml
Magnesium Sulfate Heptahydrate, 2.5 M	CSS-216	100 ml
Nickel Sulfate Hexahydrate, 1 M	CSS-227	4 x 25 ml
Nickel(II) Chloride Hexahydrate, 1 M	CSS-228	4 x 25 ml
Potassium Acetate, 5 M	CSS-262	100 ml
Potassium Bromide, 4 M	CSS-264	100 ml
Potassium Chloride, 4 M	CSS-371	100 ml
Potassium dihydrogen Phosphate, 1 M	CSS-268	100 ml
Potassium Formate, 10 M	CSS-269	100 ml
Potassium Iodide, 1 M	CSS-270	100 ml
Potassium L-Tartrate Monobasic, 0.025 M	CSS-271	100 ml
Potassium Nitrate, 1 M	CSS-272	4 x 25 ml
Potassium Sulfate 0.5 M	CSS-275	100 ml
Potassium Thiocyanate, 2 M	CSS-276	100 ml
Potassium/Sodium Tartrate-4-hydrate, 2 M	CSS-278	100 ml
Sodium Acetate, 2.5 M	CSS-284	100 ml
Sodium Bromide, 3 M	CSS-285	100 ml
Sodium Chloride, 5 M	CSS-286	100 ml
Sodium dihydrogen Phosphate, 1 M	CSS-394	100 ml
Sodium Fluoride, 1 M	CSS-290	100 ml
Sodium Formate, 5 M	CSS-291	100 ml
Sodium Iodide, 1 M	CSS-293	100 ml

Salts	Cat.-No.	Amount
Sodium Malonate, 2 M	CSS-217	100 ml
Sodium Nitrate, 7 M	CSS-294	4 x 25 ml
Sodium Sulfate, 1 M	CSS-300	100 ml
Sodium Tartrate dibasic Dihydrate, 1 M	CSS-301	100 ml
Sodium Thiocyanate, 8 M	CSS-303	100 ml
tri-Potassium Citrate Monohydrate, 2.5 M	CSS-266	100 ml
tri-Sodium Citrate Dihydrate, 1.6 M	CSS-319	100 ml
Zinc Acetate Dihydrate, 1 M	CSS-324	4 x 25 ml
Zinc Chloride, 1 M	CSS-325	4 x 25 ml
Zinc Sulfate Heptahydrate, 1 M	CSS-326	4 x 25 ml

Screen Formulations

JBScreen Classic

Classic 1		Precipitant	Buffer*	Additive
bulk	HTS I			
1/A1	A1	15 % w/v PEG 400	100 mM Sodium acetate; pH 4.6	100 mM Calcium chloride
1/A2	—	15 % w/v PEG 400	100 mM MES; pH 6.5	none
1/A3	A2	15 % w/v PEG 400	100 mM HEPES; pH 7.5	200 mM Magnesium chloride
1/A4	—	15 % w/v PEG 400	100 mM TRIS; pH 8.5	200 mM tri-Sodium citrate
1/A5	A3	25 % w/v PEG 400	100 mM Sodium acetate; pH 4.6	100 mM Magnesium chloride
1/A6	A4	25 % w/v PEG 400	100 mM TRIS; pH 8.5	200 mM Lithium sulfate
1/B1	—	28 % w/v PEG 400	100 mM HEPES; pH 7.5	200 mM Calcium chloride
1/B2	A5	30 % w/v PEG 400	100 mM Sodium acetate; pH 4.6	100 mM Calcium chloride
1/B3	A6	30 % w/v PEG 400	100 mM MES; pH 6.5	100 mM Sodium acetate
1/B4	—	30 % w/v PEG 400	100 mM MES; pH 6.5	100 mM Magnesium chloride
1/B5	A7	30 % w/v PEG 400	100 mM HEPES; pH 7.5	200 mM Magnesium chloride
1/B6	A8	30 % w/v PEG 400	100 mM TRIS; pH 8.5	200 mM tri-Sodium citrate
1/C1	A9	30 % w/v PEG 550 MME	100 mM BICINE; pH 9.0	100 mM Sodium chloride
1/C2	A10	25 % w/v PEG 550 MME	100 mM MES; pH 6.5	10 mM Zinc sulfate
1/C3	A11	25 % w/v PEG 1,000	100 mM HEPES; pH 7.5	none
1/C4	A12	30 % w/v PEG 1,000	100 mM TRIS; pH 8.5	none
1/C5	B1	15 % w/v PEG 1,500	none	none
1/C6	B2	20 % w/v PEG 1,500	100 mM HEPES; pH 7.5	none
1/D1	B3	30 % w/v PEG 1,500	none	none
1/D2	B4	20 % w/v PEG 2,000 MME	100 mM TRIS; pH 8.5	10 mM Nickel (II) chloride
1/D3	B5	25 % w/v PEG 2,000 MME	none	none
1/D4	—	30 % w/v PEG 2,000 MME	100 mM MES; pH 6.5	100 mM Sodium acetate
1/D5	B6	20 % w/v PEG 3,000	100 mM HEPES; pH 7.5	200 mM Sodium acetate
1/D6	B7	30 % w/v PEG 3,000	100 mM TRIS; pH 8.5	200 mM Lithium sulfate

Classic 2		Precipitant	Buffer*	Additive
bulk	HTS I			
2/A1	B8	4 % w/v PEG 4,000	100 mM Sodium acetate; pH 4.6	none
2/A2	B9	8 % w/v PEG 4,000	none	none
2/A3	B10	8 % w/v PEG 4,000	100 mM Sodium acetate; pH 4.6	none
2/A4	B11	10 % w/v PEG 4,000	100 mM MES; pH 6.5	200 mM Magnesium chloride
2/A5	B12	12 % w/v PEG 4,000	100 mM HEPES; pH 7.5	100 mM Sodium acetate
2/A6	—	12 % w/v PEG 4,000	100 mM TRIS; pH 8.5	none
2/B1	C1	16 % w/v PEG 4,000	100 mM TRIS; pH 8.5	200 mM Lithium sulfate
2/B2	C2	16 % w/v PEG 4,000	100 mM TRIS; pH 8.5	200 mM Sodium acetate
2/B3	—	16 % w/v PEG 4,000	100 mM TRIS; pH 8.5	200 mM Magnesium chloride
2/B4	C3	18 % w/v PEG 4,000	100 mM Sodium acetate; pH 4.6	none
2/B5	C4	20 % w/v PEG 4,000	100 mM TRIS; pH 8.5	200 mM Lithium sulfate
2/B6	C5	20 % w/v PEG 4,000	100 mM TRIS; pH 8.5	200 mM Calcium chloride
2/C1	—	22 % w/v PEG 4,000	100 mM HEPES; pH 7.5	100 mM Sodium acetate
2/C2	C6	25 % w/v PEG 4,000	100 mM Sodium acetate; pH 4.6	none
2/C3	C7	25 % w/v PEG 4,000	100 mM MES; pH 6.5	200 mM Magnesium chloride
2/C4	C8	25 % w/v PEG 4,000	100 mM TRIS; pH 8.5	200 mM Calcium chloride
2/C5	C9	30 % w/v PEG 4,000	none	none
2/C6	C10	30 % w/v PEG 4,000	100 mM Sodium acetate; pH 4.6	100 mM Magnesium chloride
2/D1	—	30 % w/v PEG 4,000	100 mM MES; pH 6.5	none
2/D2	C11	30 % w/v PEG 4,000	100 mM HEPES; pH 7.5	200 mM Calcium chloride
2/D3	—	30 % w/v PEG 4,000	100 mM TRIS; pH 8.5	200 mM Lithium sulfate
2/D4	C12	30 % w/v PEG 4,000	100 mM TRIS; pH 8.5	200 mM Sodium acetate
2/D5	D1	30 % w/v PEG 4,000	100 mM TRIS; pH 8.5	200 mM Magnesium chloride
2/D6	D2	35 % w/v PEG 4,000	none	none

*pH values indicated are those of the 1.0 M buffer stock solution prior to dilution with other components

Classic 3		Precipitant 1	Precipitant 2	Buffer*	Additive
bulk	HTS I				
3/A1	D3	8 % w/v PEG 4,000	800 mM Lithium chloride	100 mM TRIS; pH 8.5	none
3/A2	D4	10 % w/v PEG 4,000	20 % w/v 2-Propanol	none	none
3/A3	D5	10 % w/v PEG 4,000	10 % w/v 2-Propanol	100 mM tri-Sodium citrate; pH 5.6	none
3/A4	—	10 % w/v PEG 4,000	5 % w/v 2-Propanol	100 mM HEPES; pH 7.5	none
3/A5	D6	10 % w/v PEG 4,000	20 % w/v 2-Propanol	100 mM HEPES; pH 7.5	none
3/A6	D7	12 % w/v PEG 4,000	none	100 mM Sodium acetate; pH 4.6	200 mM Ammonium sulfate
3/B1	—	15 % w/v PEG 4,000	none	none	200 mM Ammonium sulfate
3/B2	D8	15 % w/v PEG 4,000	none	100 mM tri-Sodium citrate; pH 5.6	200 mM Ammonium sulfate
3/B3	D9	16 % w/v PEG 4,000	10 % w/v 2-Propanol	100 mM HEPES; pH 7.5	200 mM Ammonium sulfate
3/B4	D10	20 % w/v PEG 4,000	none	none	200 mM Ammonium sulfate
3/B5	D11	20 % w/v PEG 4,000	10 % w/v Glycerol	none	200 mM Magnesium sulfate
3/B6	—	20 % w/v PEG 4,000	5 % w/v 2-Propanol	none	100 mM tri-Sodium citrate
3/C1	D12	20 % w/v PEG 4,000	20 % w/v 2-Propanol	none	100 mM tri-Sodium citrate
3/C2	E1	20 % w/v PEG 4,000	none	100 mM MES; pH 6.5	600 mM Sodium chloride
3/C3	E2	20 % w/v PEG 4,000	10 % w/v 2-Propanol	100 mM HEPES; pH 7.5	none
3/C4	E3	22 % w/v PEG 4,000	none	none	100 mM Sodium acetate, 200 mM
3/C5	—	25 % w/v PEG 4,000	none	100 mM Sodium acetate; pH 4.6	200 mM Ammonium sulfate
3/C6	E4	25 % w/v PEG 4,000	none	100 mM tri-Sodium citrate; pH 5.6	200 mM Ammonium sulfate
3/D1	E5	25 % w/v PEG 4,000	200 mM Lithium sulfate	100 mM HEPES; pH 7.5	100 mM Sodium acetate
3/D2	E6	25 % w/v PEG 4,000	8 % w/v 2-Propanol	none	100 mM Sodium acetate
3/D3	E7	30 % w/v PEG 4,000	none	none	200 mM Ammonium sulfate
3/D4	—	30 % w/v PEG 4,000	none	100 mM Sodium acetate; pH 4.6	200 mM Ammonium sulfate
3/D5	E8	30 % w/v PEG 4,000	none	100 mM tri-Sodium citrate; pH 5.6	100 mM Ammonium sulfate
3/D6	E9	32 % w/v PEG 4,000	none	100 mM TRIS; pH 8.5	800 mM Lithium chloride

Classic 4		Precipitant 1	Precipitant 2	Buffer*	Additive
bulk	HTS I				
4/A1	E10	25 % w/v PEG 5,000 MME	none	100 mM TRIS; pH 8.5	200 mM Lithium sulfate
4/A2	E11	30 % w/v PEG 5,000 MME	none	100 mM MES; pH 6.5	200 mM Ammonium sulfate
4/A3	E12	3 % w/v PEG 6,000	none	100 mM TRIS; pH 8.5	100 mM Potassium chloride
4/A4	F1	10 % w/v PEG 6,000	none	none	10 mM Magnesium chloride
4/A5	F2	12 % w/v PEG 6,000	2 M Sodium chloride	none	none
4/A6	F3	15 % w/v PEG 6,000	5 % w/v Glycerol	none	none
4/B1	F4	15 % w/v PEG 6,000	50 mM Potassium chloride	none	10 mM Magnesium chloride
4/B2	—	16 % w/v PEG 6,000	none	none	10 mM tri-Sodium citrate
4/B3	F5	20 % w/v PEG 6,000	none	50 mM Imidazole; pH 8.0	none
4/B4	F6	25 % w/v PEG 6,000	none	100 mM HEPES; pH 7.5	100 mM Lithium chloride
4/B5	F7	28 % w/v PEG 6,000	500 mM Lithium chloride	100 mM TRIS; pH 8.5	none
4/B6	F8	30 % w/v PEG 6,000	1 M Lithium chloride	none	100 mM Sodium acetate
4/C1	—	33 % w/v PEG 6,000	none	none	10 mM tri-Sodium citrate
4/C2	F9	2 % w/v PEG 8,000	500 mM Lithium sulfate	none	none
4/C3	F10	2 % w/v PEG 8,000	1 M Lithium sulfate	none	none
4/C4	F11	4 % w/v PEG 8,000	none	none	none
4/C5	F12	8 % w/v PEG 8,000	200 mM Lithium chloride	none	50 mM Magnesium sulfate
4/C6	—	8 % w/v PEG 8,000	none	100 mM TRIS; pH 8.5	none
4/D1	G1	10 % w/v PEG 8,000	none	100 mM MES; pH 6.5	200 mM Zinc acetate
4/D2	G2	10 % w/v PEG 8,000	none	100 mM HEPES; pH 7.5	200 mM Calcium acetate
4/D3	G3	10 % w/v PEG 8,000	none	none	100 mM Sodium acetate, 50 mM
4/D4	G4	10 % w/v PEG 8,000	none	none	200 mM Magnesium acetate
4/D5	G5	10 % w/v PEG 8,000	10 % w/v Ethylene glycol	100 mM HEPES; pH 7.5	none
4/D6	—	10 % w/v PEG 8,000	10 % w/v PEG 1,000	none	none

Classic 5		Precipitant 1	Precipitant 2	Buffer*	Additive
bulk	HTS I				
5/A1	—	12 % w/v PEG 8,000	5 % w/v Glycerol	none	100 mM Potassium chloride
5/A2	G6	12 % w/v PEG 8,000	10 % w/v Glycerol	none	500 mM Potassium chloride
5/A3	G7	15 % w/v PEG 8,000	none	none	200 mM Ammonium sulfate
5/A4	G8	15 % w/v PEG 8,000	500 mM Lithium sulfate	none	none
5/A5	G9	15 % w/v PEG 8,000	none	100 mM MES; pH 6.5	200 mM Sodium acetate
5/A6	—	15 % w/v PEG 8,000	none	none	100 mM tri-Sodium citrate, 50 mM Ammonium sulfate
5/B1	G10	18 % w/v PEG 8,000	none	100 mM HEPES; pH 7.5	200 mM Calcium acetate
5/B2	G11	18 % w/v PEG 8,000	2 % w/v 2-Propanol	100 mM HEPES; pH 7.5	100 mM Sodium acetate
5/B3	G12	18 % w/v PEG 8,000	none	100 mM TRIS; pH 8.5	200 mM Lithium sulfate
5/B4	—	20 % w/v PEG 8,000	none	100 mM HEPES; pH 7.5	none
5/B5	H1	20 % w/v PEG 8,000	none	100 mM MES; pH 6.5	200 mM Magnesium acetate
5/B6	H2	20 % w/v PEG 8,000	none	100 mM CHES; pH 9.5	none
5/C1	—	22 % w/v PEG 8,000	none	100 mM MES; pH 6.5	200 mM Ammonium sulfate
5/C2	H3	25 % w/v PEG 8,000	none	none	200 mM Lithium chloride
5/C3	H4	30 % w/v PEG 8,000	none	none	200 mM Ammonium sulfate
5/C4	H5	8 % w/v PEG 10,000	none	100 mM Sodium acetate; pH 4.6	none
5/C5	H6	14 % w/v PEG 10,000	none	100 mM Imidazole; pH 8.0	none
5/C6	—	16 % w/v PEG 10,000	none	100 mM TRIS; pH 8.5	none
5/D1	H7	18 % w/v PEG 10,000	20 % w/v Glycerol	100 mM TRIS; pH 8.5	100 mM Sodium chloride
5/D2	H8	20 % w/v PEG 10,000	none	100 mM HEPES; pH 7.5	none
5/D3	H8	30 % w/v PEG 10,000	none	100 mM TRIS; pH 8.5	none
5/D4	H10	10 % w/v PEG 20,000	none	100 mM MES; pH 6.5	none
5/D5	H11	17 % w/v PEG 20,000	none	100 mM TRIS; pH 8.5	100 mM Magnesium chloride
5/D6	H12	20 % w/v PEG 20,000	none	none	none

Classic 6		Precipitant 1	Precipitant 2	Buffer*	Additive
bulk	HTS II				
6/A1	A1	500 mM Ammonium sulfate	1 M Lithium sulfate	none	100 mM tri-Sodium citrate
6/A2	—	1 M Ammonium sulfate	none	none	none
6/A3	A2	1 M Ammonium sulfate	none	100 mM Sodium acetate; pH 4.6	none
6/A4	A3	1 M Ammonium sulfate	2 % w/v PEG 400	100 mM HEPES; pH 7.5	none
6/A5	A4	1 M Ammonium sulfate	none	100 mM TRIS; pH 8.5	none
6/A6	A5	1.2 M Ammonium sulfate	3 % w/v 2-Propanol	none	50 mM tri-Sodium citrate
6/B1	A6	1.5 M Ammonium sulfate	15 % w/v Glycerol	100 mM TRIS; pH 8.5	none
6/B2	—	1.6 M Ammonium sulfate	500 mM Lithium chloride	none	none
6/B3	A7	1.6 M Ammonium sulfate	1 M Lithium sulfate	none	none
6/B4	A8	1.6 M Ammonium sulfate	none	100 mM HEPES; pH 7.5	200 mM Sodium chloride
6/B5	A9	1.6 M Ammonium sulfate	2 % w/v PEG 1,000	100 mM HEPES; pH 7.5	none
6/B6	A10	1.8 M Ammonium sulfate	none	100 mM MES; pH 6.5	none
6/C1	A11	2 M Ammonium sulfate	2 M Sodium chloride	none	none
6/C2	A12	2 M Ammonium sulfate	none	100 mM Sodium acetate; pH 4.6	none
6/C3	B1	2 M Ammonium sulfate	5 % w/v PEG 400	100 mM MES; pH 6.5	none
6/C4	B2	2 M Ammonium sulfate	none	100 mM TRIS; pH 8.5	none
6/C5	—	2.2 M Ammonium sulfate	none	none	none
6/C6	B3	2.2 M Ammonium sulfate	20 % w/v Glycerol	none	none
6/D1	B4	2.4 M Ammonium sulfate	none	none	100 mM tri-Sodium citrate
6/D2	B5	3 M Ammonium sulfate	1 % w/v MPD	none	none
6/D3	B6	3 M Ammonium sulfate	10 % w/v Glycerol	none	none
6/D4	B7	3.5 M Ammonium sulfate	none	100 mM HEPES; pH 7.5	none
6/D5	B8	3.5 M Ammonium sulfate	1 % w/v MPD	100 mM MES; pH 6.5	none
6/D6	—	3.5 M Ammonium sulfate	none	none	none

*pH values indicated are those of the 1.0 M buffer stock solution prior to dilution with other components

Classic 7		Precipitant 1	Precipitant 2	Buffer*	Additive
bulk	HTS II				
7/A1	B9	10 % w/v MPD	none	100 mM HEPES; pH 7.5	100 mM tri-Sodium citrate
7/A2	B10	12 % w/v MPD	none	100 mM TRIS; pH 8.5	50 mM Magnesium chloride
7/A3	—	15 % w/v MPD	none	100 mM Sodium acetate; pH 4.6	20 mM Calcium chloride
7/A4	B11	15 % w/v MPD	5 % w/v PEG 4,000	100 mM Imidazole; pH 8.0	none
7/A5	B12	15 % w/v MPD	none	100 mM tri-Sodium citrate; pH 5.6	200 mM Ammonium acetate
7/A6	—	15 % w/v MPD	none	100 mM MES; pH 6.5	200 mM Magnesium acetate
7/B1	C1	15 % w/v MPD	none	100 mM HEPES; pH 7.5	200 mM tri-Sodium citrate
7/B2	C2	20 % w/v MPD	none	100 mM HEPES; pH 7.5	100 mM tri-Sodium citrate
7/B3	C3	20 % w/v MPD	none	100 mM Imidazole; pH 8.0	none
7/B4	C4	20 % w/v MPD	4 % w/v Glycerol	none	200 mM Sodium chloride
7/B5	C5	30 % w/v MPD	none	100 mM Sodium acetate; pH 4.6	20 mM Calcium chloride
7/B6	C6	30 % w/v MPD	none	100 mM tri-Sodium citrate; pH 5.6	200 mM Ammonium acetate
7/C1	—	30 % w/v MPD	none	100 mM MES; pH 6.5	200 mM Magnesium acetate
7/C2	C7	30 % w/v MPD	none	100 mM HEPES; pH 7.5	500 mM Ammonium sulfate
7/C3	C8	30 % w/v MPD	none	100 mM HEPES; pH 7.5	200 mM tri-Sodium citrate
7/C4	—	30 % w/v MPD	5 % w/v PEG 4,000	100 mM HEPES; pH 7.5	none
7/C5	C9	30 % w/v MPD	10 % w/v PEG 4,000	100 mM Imidazole; pH 8.0	none
7/C6	C10	30 % w/v MPD	20 % w/v Ethanol	none	none
7/D1	—	35 % w/v MPD	none	none	none
7/D2	C11	35 % w/v MPD	none	100 mM Imidazole; pH 8.0	none
7/D3	C12	40 % w/v MPD	none	100 mM TRIS; pH 8.5	none
7/D4	D1	47 % w/v MPD	none	100 mM HEPES; pH 7.5	none
7/D5	D2	47 % w/v MPD	2 % w/v 2-Methyl-2-propanol	none	none
7/D6	D3	50 % w/v MPD	none	none	none

Classic 8		Precipitant 1	Precipitant 2	Buffer*	Additive
bulk	HTS II				
8/A1	—	50 % w/v MPD	15 % w/v Ethanol	none	10 mM Sodium acetate
8/A2	D4	50 % w/v MPD	20 % w/v 2-Propanol	none	50 mM Sodium acetate, 50 mM Sodium chloride
8/A3	D5	50 % w/v MPD	none	100 mM TRIS; pH 8.5	100 mM Ammonium di-hydrogen phosphate
8/A4	D6	55 % w/v MPD	none	none	none
8/A5	D7	60 % w/v MPD	none	100 mM Sodium acetate; pH 4.6	10 mM Cadmium chloride
8/A6	—	60 % w/v MPD	none	none	20 mM Sodium acetate
8/B1	D8	70 % w/v MPD	none	100 mM MES; pH 6.5	none
8/B2	D9	70 % w/v MPD	none	100 mM TRIS; pH 8.5	none
8/B3	D10	20 % w/v Methanol	none	100 mM TRIS; pH 8.5	10 mM Calcium chloride
8/B4	D11	2 % w/v Ethanol	none	100 mM TRIS; pH 8.5	none
8/B5	—	5 % w/v Ethanol	5 % w/v MPD	100 mM HEPES; pH 7.5	none
8/B6	D12	5 % w/v Ethanol	5 % w/v MPD	100 mM TRIS; pH 8.5	200 mM Sodium chloride
8/C1	E1	10 % w/v Ethanol	none	100 mM TRIS; pH 8.5	none
8/C2	E2	12 % w/v Ethanol	4 % w/v PEG 400	100 mM Sodium acetate; pH 4.6	none
8/C3	E3	14 % w/v Ethanol	5 % w/v Glycerol	100 mM TRIS; pH 8.5	none
8/C4	E4	18 % w/v Ethanol	none	100 mM TRIS; pH 8.5	none
8/C5	—	20 % w/v Ethanol	none	none	none
8/C6	E5	20 % w/v Ethanol	10 % w/v Glycerol	none	none
8/D1	E6	30 % w/v Ethanol	10 % w/v PEG 6,000	none	10 mM Sodium acetate
8/D2	E7	45 % w/v Ethanol	none	none	none
8/D3	E8	50 % w/v Ethanol	none	none	10 mM Sodium acetate
8/D4	E9	60 % w/v Ethanol	1.5 % w/v PEG 6,000	none	50 mM Sodium acetate
8/D5	E10	60 % w/v Ethanol	none	none	100 mM Sodium chloride
8/D6	—	2 % w/v 2-Propanol	none	100 mM TRIS; pH 8.5	10 mM Magnesium sulfate

Classic 9		Precipitant	Buffer*	Additive
bulk	HTS II			
9/A1	E11	5 % w/v 2-Propanol	100 mM HEPES; pH 7.5	none
9/A2	E12	10 % w/v 2-Propanol	100 mM Sodium acetate; pH 4.6	200 mM Calcium chloride
9/A3	F1	10 % w/v 2-Propanol	100 mM HEPES; pH 7.5	200 mM tri-Sodium citrate
9/A4	F2	10 % w/v 2-Propanol	100 mM TRIS; pH 8.5	10 mM Magnesium chloride
9/A5	—	12 % w/v 2-Propanol	100 mM TRIS; pH 8.5	50 mM Sodium chloride
9/A6	F3	15 % w/v 2-Propanol	100 mM MES; pH 6.5	200 mM tri-Sodium citrate
9/B1	—	15 % w/v 2-Propanol	100 mM HEPES; pH 7.5	200 mM tri-Sodium citrate
9/B2	F4	15 % w/v 2-Propanol	100 mM HEPES; pH 7.5	200 mM Magnesium chloride
9/B3	F5	15 % w/v 2-Propanol	100 mM TRIS; pH 8.5	200 mM Ammonium acetate
9/B4	F6	20 % w/v 2-Propanol	100 mM Sodium acetate; pH 4.6	200 mM Calcium chloride
9/B5	—	20 % w/v 2-Propanol	100 mM HEPES; pH 7.5	200 mM tri-Sodium citrate
9/B6	F7	25 % w/v 2-Propanol	100 mM HEPES; pH 7.5	100 mM Magnesium chloride
9/C1	F8	30 % w/v 2-Propanol	100 mM MES; pH 6.5	200 mM tri-Sodium citrate
9/C2	—	30 % w/v 2-Propanol	100 mM HEPES; pH 7.5	200 mM Magnesium chloride
9/C3	F9	30 % w/v 2-Propanol	100 mM TRIS; pH 8.5	200 mM Ammonium acetate
9/C4	F10	25 % w/v 2-Methyl-2-propanol	100 mM TRIS; pH 8.5	100 mM Calcium chloride
9/C5	F11	35 % w/v 2-Methyl-2-propanol	100 mM tri-Sodium citrate; pH 5.6	none
9/C6	F12	200 mM Ammonium di-hydrogen phosphate	none	none
9/D1	G1	200 mM Potassium Sodium tartrate	none	none
9/D2	G2	200 mM Magnesium acetate	none	none
9/D3	G3	400 mM Ammonium di-hydrogen phosphate	none	none
9/D4	—	400 mM Potassium Sodium tartrate	none	none
9/D5	G4	400 mM Potassium Sodium tartrate	100 mM TRIS; pH 8.5	none
9/D6	G5	500 mM Ammonium di-hydrogen phosphate	none	200 mM tri-Sodium citrate

Classic 10		Precipitant 1	Precipitant 2	Buffer*	Additive
bulk	HTS II				
10/A1	G6	500 mM Sodium acetate	None	100 mM Imidazole; pH 8.0	none
10/A2	G7	700 mM tri-Sodium citrate	None	100 mM HEPES; pH 7.5	none
10/A3	—	700 mM Lithium sulfate	None	100 mM TRIS; pH 8.5	none
10/A4	G8	800 mM Potassium Sodium tartrate	None	100 mM HEPES; pH 7.5	none
10/A5	G9	1 M Ammonium di-hydrogen phosphate	None	100 mM tri-Sodium citrate; pH 5.6	none
10/A6	G10	1 M Ammonium di-hydrogen phosphate	None	100 mM TRIS; pH 8.5	none
10/B1	G11	1 M Lithium sulfate	None	100 mM TRIS; pH 8.5	10 mM Nickel (II) chloride
10/B2	G12	1 M Sodium acetate	None	100 mM Imidazole; pH 8.0	none
10/B3	—	1 M Sodium formate	None	100 mM Sodium acetate; pH 4.6	none
10/B4	H1	1.4 M Sodium acetate	None	100 mM MES; pH 6.5	none
10/B5	—	1.4 M tri-Sodium citrate	None	100 mM HEPES; pH 7.5	none
10/B6	H2	1.5 M Lithium sulfate	None	100 mM TRIS; pH 8.5	none
10/C1	H3	1.5 M tri-Sodium citrate; pH 6.5	None	none	none
10/C2	H4	1.6 M Magnesium sulfate	None	100 mM MES; pH 6.5	none
10/C3	H5	1.6 M Potassium Sodium tartrate	None	100 mM MES; pH 6.5	none
10/C4	H6	2 M Ammonium formate	None	100 mM MES; pH 6.5	none
10/C5	H7	2 M Ammonium di-hydrogen phosphate	None	100 mM TRIS; pH 8.5	none
10/C6	—	2 M Sodium formate	None	none	none
10/D1	—	2 M Magnesium chloride	None	100 mM TRIS; pH 8.5	none
10/D2	H8	2 M Sodium chloride	None	100 mM MES; pH 6.5	200 mM Sodium acetate
10/D3	H9	2 M Sodium formate	None	100 mM Sodium acetate; pH 4.6	none
10/D4	H10	1 M Ammonium di-hydrogen phosphate	30 % w/v Glycerol	100 mM TRIS; pH 8.5	none
10/D5	H11	4 M Sodium chloride	None	100 mM HEPES; pH 7.5	none
10/D6	H12	3 M Sodium formate	None	none	none

*pH values indicated are those of the 1.0 M buffer stock solution prior to dilution with other components

JBScreen Basic

Basic 1				
No.	Precipitant 1	Precipitant 2	Buffer*	Additive
A1	25 % v/v Ethylene glycol	none	none	none
A2	12 % v/v Glycerol	1.5 M Ammonium sulfate	100 mM TRIS; pH 8.5	none
A3	1 M 1,6-Hexanediol	none	100 mM Sodium acetate; pH 4.6	10 mM Cobalt (II) chloride
A4	2.5 M 1,6-Hexanediol	none	100 mM tri-Sodium citrate; pH 5.6	none
A5	3.4 M 1,6-Hexanediol	none	100 mM TRIS; pH 8.5	200 mM Magnesium chloride
A6	30 % v/v MPD	none	100 mM Sodium acetate; pH 4.6	200 mM Sodium chloride
A7	30 % v/v MPD	none	100 mM tri-Sodium citrate; pH 5.6	200 mM Ammonium acetate
A8	30 % v/v MPD	none	100 mM Sodium acetate; pH 4.6	20 mM Calcium chloride
A9	30 % v/v MPD	500 mM Ammonium sulfate	100 mM HEPES; pH 7.5	none
A10	30 % v/v MPD	none	100 mM HEPES; pH 7.5	200 mM tri-Sodium citrate
A11	50 % v/v MPD	none	100 mM TRIS; pH 8.5	200 mM Ammonium di-hydrogen phosphate
A12	70 % v/v MPD	none	100 mM HEPES; pH 7.5	none
B1	2 % w/v Ethylene imine polymer	none	100 mM tri-Sodium citrate; pH 5.6	500 mM Sodium chloride
B2	2 % v/v PEG 400	2 M Ammonium sulfate	100 mM HEPES; pH 7.5	none
B3	28 % v/v PEG 400	none	100 mM HEPES; pH 7.5	200 mM Calcium chloride
B4	30 % v/v PEG 400	none	100 mM TRIS; pH 8.5	200 mM tri-Sodium citrate
B5	30 % v/v PEG 400	none	100 mM HEPES; pH 7.5	200 mM Magnesium chloride
B6	30 % v/v PEG 400	none	100 mM Sodium acetate; pH 4.6	100 mM Calcium chloride
B7	20 % v/v PEG 550 MME	none	100 mM BICINE; pH 9.5	100 mM Sodium chloride
B8	25 % v/v PEG 550 MME	none	100 mM MES; pH 6.5	10 mM Zinc sulfate
B9	10 % w/v PEG 1,000	10 % w/v PEG 8,000	none	none
B10	30 % w/v PEG 1,500	none	none	none
B11	20 % w/v PEG 2,000 MME	none	100 mM TRIS; pH 8.5	10 mM Nickel (II) chloride
B12	30 % w/v PEG 2,000 MME	none	100 mM Sodium acetate; pH 4.6	200 mM Ammonium sulfate
Basic 2				
No.	Precipitant 1	Precipitant 2	Buffer*	Additive
C1	8 % w/v PEG 4,000	none	100 mM Sodium acetate; pH 4.6	none
C2	20 % w/v PEG 4,000	20 % v/v 2-Propanol	100 mM tri-Sodium citrate; pH 5.6	none
C3	20 % w/v PEG 4,000	10 % v/v 2-Propanol	100 mM HEPES; pH 7.5	none
C4	25 % w/v PEG 4,000	none	100 mM Sodium acetate; pH 4.6	200 mM Ammonium sulfate
C5	30 % w/v PEG 4,000	none	none	200 mM Ammonium sulfate
C6	30 % w/v PEG 4,000	none	100 mM Sodium acetate; pH 4.6	200 mM Ammonium acetate
C7	30 % w/v PEG 4,000	none	100 mM tri-Sodium citrate; pH 5.6	200 mM Ammonium acetate
C8	30 % w/v PEG 4,000	none	100 mM TRIS; pH 8.5	200 mM Sodium acetate
C9	30 % w/v PEG 4,000	none	100 mM TRIS; pH 8.5	200 mM Lithium sulfate
C10	30 % w/v PEG 4,000	none	100 mM TRIS; pH 8.5	200 mM Magnesium chloride
C11	30 % w/v PEG 5,000 MME	none	100 mM MES; pH 6.5	200 mM Ammonium sulfate
C12	10 % w/v PEG 6,000	2 M Sodium chloride	none	none
D1	10 % w/v PEG 6,000	5 % v/v MPD	100 mM HEPES; pH 7.5	none
D2	2 % w/v PEG 8,000	1 M Lithium sulfate	none	none
D3	8 % w/v PEG 8,000	none	100 mM TRIS; pH 8.5	none
D4	10 % w/v PEG 8,000	8 % v/v Ethylene glycol	100 mM HEPES; pH 7.5	none
D5	15 % w/v PEG 8,000	500 mM Lithium sulfate	none	none
D6	18 % w/v PEG 8,000	none	100 mM MES; pH 6.5	200 mM Calcium acetate
D7	18 % w/v PEG 8,000	none	100 mM MES; pH 6.5	200 mM Zinc acetate
D8	20 % w/v PEG 8,000	none	none	50 mM Potassium di-hydrogen phosphate
D9	20 % w/v PEG 8,000	none	100 mM MES; pH 6.5	200 mM Magnesium acetate
D10	30 % w/v PEG 8,000	none	100 mM MES; pH 6.5	200 mM Sodium acetate
D11	30 % w/v PEG 8,000	none	none	200 mM Ammonium sulfate
D6	30 % w/v PEG 8,000	none	100 mM MES; pH 6.5	200 mM Ammonium sulfate

Basic 3				
No.	Precipitant 1	Precipitant 2	Buffer*	Additive
E1	10 % w/v PEG 10,000	2 % v/v 1,4-Dioxane	100 mM BICINE; pH 9.5	none
E2	20 % w/v PEG 10,000	none	100 mM HEPES; pH 7.5	none
E3	12 % w/v PEG 20,000	none	100 mM MES; pH 6.5	none
E4	5 % v/v 2-Propanol	2 M Ammonium sulfate	none	none
E5	20 % v/v 2-Propanol	none	100 mM HEPES; pH 7.5	200 mM tri-Sodium citrate
E6	20 % v/v 2-Propanol	none	100 mM Sodium acetate; pH 4.6	200 mM Calcium chloride
E7	30 % v/v 2-Propanol	none	100 mM HEPES; pH 7.5	200 mM Magnesium chloride
E8	30 % v/v 2-Propanol	none	100 mM TRIS; pH 8.5	200 mM Ammonium acetate
E9	10 % v/v 1,4-Dioxane	1.6 M Ammonium sulfate	100 mM MES; pH 6.5	none
E10	35 % v/v 1,4-Dioxane	none	none	none
E11	10 % v/v Ethanol	1.5 M Sodium chloride	none	none
E12	20 % v/v Ethanol	none	100 mM TRIS; pH 8.5	none
F1	25 % v/v 2-Methyl-2-propanol	none	100 mM TRIS; pH 8.5	none
F2	35 % v/v 2-Methyl-2-propanol	none	100 mM tri-Sodium citrate; pH 5.6	none
F3	1 M Imidazole; pH 7.0	none	none	none
F4	1 M Lithium sulfate	none	100 mM TRIS; pH 8.5	10 mM Nickel (II) chloride
F5	1.5 M Lithium sulfate	none	100 mM HEPES; pH 7.5	none
F6	400 mM Potassium Sodium tartrate	none	none	none
F7	800 mM Potassium Sodium tartrate	none	100 mM HEPES; pH 7.5	none
F8	1.4 M tri-Sodium citrate	none	100 mM HEPES; pH 7.5	none
F9	1.6 M tri-Sodium citrate; pH 6.5	none	none	none
F10	10 % v/v Jeffamine® M-600	none	100 mM tri-Sodium citrate; pH 5.6	10 mM Iron (III) chloride
F11	20 % v/v Jeffamine® M-600	none	100 mM HEPES; pH 7.5	none
F12	30 % v/v Jeffamine® M-600	none	100 mM MES; pH 6.5	50 mM Cesium chloride

Basic 4				
No.	Precipitant 1	Precipitant 2	Buffer*	Additive
G1	800 mM Potassium di-hydrogen phosphate	800 mM Sodium di-hydrogen phosphate	100 mM HEPES; pH 7.5	none
G2	400 mM Ammonium di-hydrogen phosphate	none	none	none
G3	1 M Ammonium di-hydrogen phosphate	none	100 mM tri-Sodium citrate; pH 5.6	none
G4	2 M Ammonium di-hydrogen phosphate	none	100 mM TRIS; pH 8.5	none
G5	2 M Ammonium formate	none	100 mM Sodium acetate; pH 4.6	none
G6	4 M Ammonium formate	none	100 mM HEPES; pH 7.5	none
G7	2 M Ammonium formate	none	none	none
G8	500 mM Ammonium sulfate	1 M Lithium sulfate	100 mM tri-Sodium citrate; pH 5.6	none
G9	1.6 M Ammonium sulfate	none	100 mM HEPES; pH 7.5	100 mM Sodium chloride
G10	1.8 M Ammonium sulfate	none	100 mM MES; pH 6.5	10 mM Cobalt (II) chloride
G11	2 M Ammonium sulfate	none	100 mM TRIS; pH 8.5	none
G12	2 M Ammonium sulfate	none	none	none
H1	2 M Ammonium sulfate	none	100 mM Sodium acetate; pH 4.6	none
H2	2 M Ammonium sulfate	none	100 mM tri-Sodium citrate; pH 5.6	200 mM Potassium Sodium tartrate
H3	200 mM Magnesium formate	none	none	none
H4	1.6 M Magnesium sulfate	none	100 mM MES; pH 6.5	none
H5	2 M Magnesium chloride	none	100 mM BICINE; pH 9.5	none
H6	1 M Sodium acetate	none	100 mM Imidazole; pH 6.5	none
H7	1 M Sodium acetate	none	100 mM HEPES; pH 7.5	50 mM Cadmium sulfate
H8	1.4 M Sodium acetate	none	100 mM MES; pH 6.5	none
H9	500 mM Sodium chloride	10 mM Magnesium chloride	none	10 mM Cetyltrimethylammonium bromide
H10	2 M Sodium chloride	none	100 mM Sodium acetate; pH 4.6	none
H11	2 M Sodium chloride	none	100 mM MES; pH 6.5	100 mM Sodium di-hydrogen phosphate, 100 mM Potassium di-hydrogen phosphate
H12	4.3 M Sodium chloride	none	100 mM HEPES; pH 7.5	none

*pH values indicated are those of the 1.0 M buffer stock solution prior to dilution with other components

JBScreen Membrane

Membrane 1	Precipitant 1	Precipitant 2	Buffer*	Additive
No.				
A1	15 % w/v PEG 400	15 % w/v Glycerol	100 mM HEPES; pH 7.5	200 mM Calcium chloride
A2	20 % w/v PEG 400	100 mM Sodium chloride	100 mM tri-Sodium citrate; pH 5.6	20 mM Magnesium chloride
A3	25 % w/v PEG 400	none	50 mM Sodium acetate; pH 4.6	50 mM Magnesium acetate
A4	30 % w/v PEG 400	50 mM Sodium sulfate	50 mM TRIS; pH 8.5	50 mM Lithium sulfate
A5	48 % w/v PEG 400	none	100 mM HEPES; pH 7.5	200 mM Calcium chloride
A6	20 % w/v PEG 550 MME	none	10 mM TRIS; pH 7.5	none
A7	30 % w/v PEG 550 MME	none	50 mM TRIS; pH 8.5	100 mM Magnesium chloride
A8	35 % w/v PEG 600	none	none	none
A9	28 % w/v PEG 1,000	10 % w/v Glycerol	100 mM TRICINE; pH 8.0	350 mM Sodium chloride
A10	10 % w/v PEG 1,500	5 % w/v Ethanol	none	100 mM Magnesium chloride, 100 mM Sodium chloride
A11	30 % w/v PEG 1,500	none	none	none
A12	5 % w/v PEG 2,000	none	none	none
B1	10 % w/v PEG 2,000	none	100 mM TRIS; pH 8.5	500 mM Magnesium chloride
B2	15 % w/v PEG 2,000	none	none	none
B3	15 % w/v PEG 2,000	none	none	100 mM Lithium chloride
B4	15 % w/v PEG 2,000	none	100 mM di-Sodium hydrogen phosphate; pH 6.2	20 mM tri-Sodium citrate
B5	15 % w/v PEG 2,000	none	100 mM di-Sodium hydrogen phosphate; pH 6.8	500 mM Sodium chloride
B6	15 % w/v PEG 2,000	none	20 mM BIS-TRIS; pH 7.0	none
B7	15 % w/v PEG 2,000	none	50 mM HEPES; pH 7.5	100 mM Magnesium chloride
B8	20 % w/v PEG 2,000	2 % w/v MPD	100 mM TRIS; pH 8.0	300 mM Magnesium nitrate
B9	25 % w/v PEG 2,000	15 % w/v Glycerol	100 mM BICINE; pH 9.0	300 mM Magnesium chloride
B10	30 % w/v PEG 2,000	none	200 mM di-Sodium hydrogen phosphate; pH 6.2	500 mM Sodium chloride
B11	8 % w/v PEG 2,000 MME	none	100 mM Sodium acetate; pH 4.6	none
B12	10 % w/v PEG 2,000 MME	20 % w/v Glycerol	100 mM tri-Sodium citrate; pH 5.6	3 % w/v PEG 200

Membrane 2	Precipitant 1	Precipitant 2	Buffer*	Additive
No.				
C1	12 % w/v PEG 2,000 MME	none	50 mM TRIS; pH 8.5	500 mM Sodium chloride
C2	10 % w/v PEG 3,350	none	50 mM tri-Sodium citrate; pH 5.6	150 mM Sodium chloride
C3	2 % w/v PEG 4,000	none	50 mM TRIS; pH 7.5	none
C4	5 % w/v PEG 4,000	none	none	none
C5	5 % w/v PEG 4,000	none	none	100 mM Potassium chloride
C6	5 % w/v PEG 4,000	10 % w/v Glycerol	50 mM MES; pH 6.5	100 mM Sodium chloride
C7	5 % w/v PEG 4,000	none	50 mM di-Sodium hydrogen phosphate; pH 6.7	none
C8	10 % w/v PEG 4,000	none	50 mM TRIS; pH 8.5	500 mM Sodium chloride
C9	12 % w/v PEG 4,000	none	100 mM ADA; pH 6.5	100 mM Lithium sulfate
C10	12 % w/v PEG 4,000	none	50 mM di-Sodium hydrogen phosphate; pH 6.8	none
C11	12 % w/v PEG 4,000	20 % w/v Glycerol	50 mM MOPS; pH 7.0	500 mM Potassium chloride
C12	15 % w/v PEG 4,000	none	10 mM TRIS; pH 7.5	100 mM Lithium chloride
D1	20 % w/v PEG 4,000	none	100 mM BIS-TRIS; pH 7.0	500 mM Sodium chloride
D2	20 % w/v PEG 4,000	none	100 mM di-Sodium hydrogen phosphate; pH 7.0	500 mM Sodium chloride
D3	20 % w/v PEG 4,000	150 mM Zinc acetate	50 mM TRIS; pH 7.5	50 mM Zinc chloride
D4	22 % w/v PEG 4,000	none	50 mM TRICINE; pH 8.0	none
D5	22 % w/v PEG 4,000	none	50 mM TRIS; pH 8.5	500 mM Sodium chloride
D6	30 % w/v PEG 4,000	none	none	none
D7	10 % w/v PEG 5,000 MME	none	100 mM tri-Sodium citrate; pH 5.6	100 mM Magnesium acetate
D8	5 % w/v PEG 6,000	none	none	100 mM Magnesium sulfate
D9	10 % w/v PEG 6,000	150 mM Zinc acetate	50 mM TRIS; pH 7.5	50 mM Zinc chloride
D10	15 % w/v PEG 6,000	none	50 mM di-Sodium succinate; pH 6.5	none
D11	12 % w/v PEG 8,000	10 % w/v MPD	none	25 mM Potassium di-hydrogen phosphate
D12	8 % w/v PEG 10,000	none	100 mM tri-Sodium citrate; pH 5.6	100 mM Magnesium acetate

Membrane 3				
No.	Precipitant 1	Precipitant 2	Buffer*	Additive
E1	700 mM Ammonium sulfate	none	1 M Sodium Potassium phosphate; pH 7.5	none
E2	1 M Ammonium sulfate	none	50 mM MES; pH 6.5	100 mM Zinc acetate
E3	1.2 M Ammonium sulfate	none	50 mM TRIS; pH 7.5	none
E4	1.2 M Ammonium sulfate	none	100 mM TRIS; pH 8.5	none
E5	1.4 M Ammonium sulfate	4 % w/v 2-Propanol	none	100 mM Ammonium acetate
E6	2 M Ammonium sulfate	none	none	none
E7	2 M Ammonium sulfate	none	100 mM tri-Sodium citrate; pH 5.6	none
E8	2.5 M Ammonium sulfate	2 % w/v PEG 5,000 MME	100 mM HEPES; pH 7.5	none
E9	3 M Ammonium sulfate	none	none	none
E10	3.5 M Ammonium sulfate	none	none	none
E11	3.5 M Ammonium sulfate	none	50 mM Sodium Potassium phosphate; pH 7.5	250 mM Sodium chloride
E12	25 % w/v MPD	none	100 mM BIS-TRIS; pH 7.0	none
F1	25 % w/v MPD	none	300 mM tri-Sodium citrate; pH 5.6	none
F2	25 % w/v Triethylene glycol	none	none	100 mM Glycine, 100 mM Ammonium sulfate
F3	30 % w/v 2-Propanol	20 % w/v Glycerol	100 mM Sodium acetate; pH 4.6	200 mM Calcium chloride
F4	none	none	50 mM di-Potassium hydrogen phosphate; pH 8.0	none
F5	none	none	100 mM tri-Sodium citrate; pH 4.8	none
F6	none	none	1 M di-Potassium hydrogen phosphate; pH 6.5	1 % w/v 1,4-Dioxane
F7	1 M tri-Sodium citrate	none	none	none
F8	1 M tri-Sodium citrate	none	none	500 mM Lithium chloride
F9	1.5 M Sodium chloride	none	100 mM Sodium acetate; pH 4.6	none
F10	none	none	1.5 M di-Potassium hydrogen phosphate; pH 7.0	none
F11	1.5 M Lithium sulfate	none	100 mM HEPES; pH 7.5	none
F12	2 M Sodium chloride	none	none	100 mM Sodium formate
Membrane 4				
No.	Precipitant		Buffer*	Additive
G1	12 % w/v MPD		100 mM Sodium acetate; pH 4.6	100 mM Sodium chloride
G2	4 % w/v MPD		100 mM tri-Sodium citrate; pH 5.6	100 mM Magnesium chloride
G3	12 % w/v MPD		100 mM ADA; pH 6.5	none
G4	12 % w/v MPD		100 mM HEPES; pH 7.5	100 mM tri-Sodium citrate
G5	12 % w/v MPD		100 mM TRIS; pH 8.5	100 mM Lithium sulfate
G6	1 M tri-Sodium citrate		100 mM HEPES; pH 7.5	none
G7	200 mM Lithium sulfate		100 mM TRIS; pH 8.5	none
G8	100 mM Sodium chloride		100 mM tri-Sodium citrate; pH 5.6	none
G9	100 mM Sodium chloride		100 mM TRIS; pH 8.5	none
G10	1 M Ammonium di-hydrogen phosphate		100 mM Sodium acetate; pH 4.6	100 mM Lithium sulfate
G11	1 M Ammonium di-hydrogen phosphate		100 mM tri-Sodium citrate; pH 5.6	none
G12	1 M Ammonium di-hydrogen phosphate		100 mM ADA; pH 6.5	none
H1	2 M Ammonium di-hydrogen phosphate		100 mM TRIS; pH 7.5	none
H2	1 M Magnesium sulfate		100 mM Sodium acetate; pH 4.6	none
H3	1 M Magnesium sulfate		100 mM tri-Sodium citrate; pH 5.6	none
H4	1 M Magnesium sulfate		100 mM ADA; pH 6.5	100 mM Lithium sulfate
H5	400 mM Magnesium sulfate		50 mM TRIS; pH 7.5	none
H6	400 mM Magnesium sulfate		100 mM TRIS; pH 8.5	100 mM Potassium Sodium tartrate
H7	1 M Potassium Sodium tartrate		100 mM HEPES; pH 7.5	none
H8	100 mM Potassium Sodium tartrate		100 mM HEPES; pH 7.5	100 mM Lithium sulfate
H9	4 M Sodium formate		none	none
H10	2 M Sodium formate; pH 4.6		none	none
H11	1.4 M Sodium acetate		100 mM MES; pH 6.5	none
H12	100 mM Sodium acetate		100 mM TRIS; pH 8.5	none

*pH values indicated are those of the 1.0 M buffer stock solution prior to dilution with other components

JBScreen LCP

LCP No.	Precipitant 1	Buffer*	Additive
A1	15 % v/v PEG 300	100 mM HEPES; pH 7.6	50 mM Ethylenediaminetetraacetic acid disodium salt; pH 8.0, 1.2 % v/v 1,7 Heptanediol
A2	30 % v/v PEG 300	100 mM HEPES; pH 7.5	100 mM Ammonium di-hydrogen phosphate, 2 % v/v MPD
A3	30 % v/v PEG 300	100 mM Sodium Phosphate; pH 6.3	150 mM Sodium chloride
A4	32 % v/v PEG 300	100 mM HEPES; pH 7.5	100 mM Ammonium di-hydrogen phosphate, 1 % v/v 1,7 Heptanediol
A5	37 % v/v PEG 300	100 mM BIS-TRIS propane; pH 6.5	100 mM di-Ammonium hydrogen phosphate
A6	10 % v/v PEG 400	100 mM HEPES; pH 7.5	150 mM Ammonium sulfate
A7	13 % v/v PEG 400	100 mM MES; pH 6.0	170 mM Potassium Sodium tartrate, 0.45 % v/v Jeffamine® M-600; pH 7.0
A8	14 % v/v PEG 400	100 mM TRIS; pH 7.5	6 % v/v MPD
A9	18 % v/v PEG 400	100 mM TRIS; pH 7.5	100 mM tri-Sodium citrate
A10	18 % v/v PEG 400	50 mM HEPES; pH 7.0	100 mM Potassium sulfate
A11	18.5 % v/v PEG 400	100 mM tri-Sodium citrate; pH 5.0	50 mM Lithium sulfate, 100 mM Sodium chloride
A12	19.5 % v/v PEG 400	100 mM HEPES; pH 7.0	350 mM Ammonium di-hydrogen phosphate
B1	20 % v/v PEG 400	100 mM tri-Sodium citrate; pH 5.5	300 mM di-Sodium malonate, 5 mM 2-Aminoethanesulfonic acid
B2	20 % v/v PEG 400	100 mM HEPES; pH 7.0	400 mM Sodium chloride
B3	20 % v/v PEG 400	100 mM MES; pH 6.5	400 mM Potassium nitrate; pH 6.9, 1 mM Tris(2-carboxyethyl) phosphine hydrochloride
B4	21 % v/v PEG 400	100 mM MES; pH 6.5	70 mM di-Ammonium hydrogen phosphate
B5	23 % v/v PEG 400	100 mM tri-Sodium citrate; pH 5.25	300 mM di-Sodium malonate, 5 mM Nickel (II) chloride
B6	25 % v/v PEG 400	100 mM HEPES; pH 7.5	200 mM Potassium Sodium tartrate
B7	26 % v/v PEG 400	100 mM MES; pH 6.7	200 mM Lithium sulfate, 3.5 % v/v 1,4-Butanediol, 4 % v/v Dimethyl sulfoxide
B8	26 % v/v PEG 400	100 mM MES; pH 6.0	300 mM di-Sodium malonate, 5 mM Strontium chloride
B9	26 % v/v PEG 400	100 mM TRIS; pH 8.0	300 mM Ammonium sulfate
B10	26.5 % v/v PEG 400	100 mM tri-Sodium citrate; pH 5.0	50 mM Sodium thiocyanate, 2 % v/v 2,5-Hexanediol
B11	27 % v/v PEG 400	100 mM TRIS; pH 7.75	220 mM Sodium formate, 5 % v/v 1,4-Butanediol
B12	27 % v/v PEG 400	100 mM HEPES; pH 6.9	150 mM Ammonium fluoride, 2.5 % v/v Jeffamine® M-600
C1	27.5 % v/v PEG 400	100 mM BIS-TRIS propane; pH 6.7	120 mM di-Sodium tartrate, 3 % v/v 1,3-Butanediol
C2	27.5 % v/v PEG 400	100 mM BIS-TRIS propane; pH 6.4	150 mM Potassium Sodium tartrate
C3	28 % v/v PEG 400	100 mM BIS-TRIS propane; pH 7.0	300 mM Potassium formate
C4	28 % v/v PEG 400	100 mM tri-Sodium citrate; pH 4.5	300 mM Ammonium di-hydrogen phosphate, 10 mM Magnesium chloride
C5	28.5 % v/v PEG 400	100 mM HEPES; pH 7.0	100 mM di-Ammonium hydrogen phosphate, 6 mM Tris(2-carboxyethyl)phosphine hydrochloride
C6	29 % v/v PEG 400	100 mM MES; pH 6.8	200 mM di-Ammonium hydrogen phosphate
C7	29 % v/v PEG 400	50 mM tri-Sodium citrate; pH 4.0	200 mM Lithium sulfate
C8	29.5 % v/v PEG 400	100 mM TRIS; pH 7.75	350 mM Sodium formate, 5 % v/v 1,4-Butanediol
C9	30 % v/v PEG 400	100 mM TRIS; pH 8.0	200 mM di-Sodium malonate
C10	30 % v/v PEG 400	100 mM tri-Sodium citrate; pH 6.5	185 mM Lithium sulfate
C11	30 % v/v PEG 400	100 mM tri-Sodium citrate; pH 5.0	200 mM Magnesium chloride
C12	30 % v/v PEG 400	100 mM tri-Sodium citrate; pH 5.5	200 mM Lithium sulfate
D1	30 % v/v PEG 400	100 mM BIS-TRIS propane; pH 7.5	300 mM Ammonium acetate, 2 % w/v D-(+)-Glucose
D2	30 % v/v PEG 400	100 mM HEPES; pH 7.0	100 mM Sodium chloride
D3	30 % v/v PEG 400	100 mM MES; pH 6.0	100 mM Magnesium sulfate, 2.5 % v/v Polypropylene glycol 400
D4	30 % v/v PEG 400	100 mM tri-Sodium citrate; pH 6.0	400 mM Potassium nitrate
D5	30 % v/v PEG 400	100 mM TRIS; pH 7.5	400 mM Lithium chloride
D6	30 % v/v PEG 400	100 mM TRIS; pH 8.0	100 mM Magnesium sulfate
D7	30 % v/v PEG 400	100 mM MES; pH 6.3	100 mM Ammonium formate
D8	30 % v/v PEG 400	100 mM HEPES; pH 7.0	100 mM Sodium thiocyanate
D9	30 % v/v PEG 400	100 mM MES; pH 6.5	100 mM Sodium thiocyanate, 20 mM Calcium chloride
D10	30 % v/v PEG 400	100 mM TRIS; pH 8.0	100 mM Sodium thiocyanate, 20 mM Calcium chloride
D11	30 % v/v PEG 400	100 mM tri-Sodium citrate; pH 5.5	100 mM Sodium chloride, 3 % w/v D-(+)-Trehalose
D12	30 % v/v PEG 400	50 mM MES; pH 6.5	100 mM Magnesium chloride

LCP No.	Precipitant 1	Buffer*	Additive
E1	30 % v/v PEG 400	100 mM HEPES; pH 7.5	2 mM -Mercaptoethanol
E2	31 % v/v PEG 400	100 mM MES; pH 6.0	300 mM di-Sodium malonate, 5 mM Cobalt (III) Hexamine chloride
E3	31 % v/v PEG 400	100 mM HEPES; pH 7.5	150 mM tri-Sodium citrate, 350 mM Magnesium chloride
E4	32 % v/v PEG 400	100 mM HEPES; pH 7.8	70 mM Ammonium fluoride, 6 % v/v Polypropylene glycol 400
E5	32 % v/v PEG 400	100 mM HEPES; pH 7.0	100 mM Sodium chloride
E6	32 % v/v PEG 400	50 mM MES; pH 6.5	100 mM Sodium thiocyanate, 20 mM Calcium chloride
E7	32 % v/v PEG 400	100 mM tri-Sodium citrate; pH 4.5	75 mM Sodium chloride, 130 mM Magnesium chloride
E8	32.5 % v/v PEG 400	100 mM BIS-TRIS propane; pH 6.75	150 mM Sodium sulfate, 6 % v/v 1,4-Butanediol
E9	32.5 % v/v PEG 400	100 mM MES; pH 6.2	100 mM Potassium Sodium tartrate, 5 % v/v Ethylene glycol
E10	34 % v/v PEG 400	100 mM TRIS; pH 8.7	90 mM tri-Sodium citrate, 120 mM Ammonium sulfate
E11	34 % v/v PEG 400	100 mM HEPES; pH 7.0	300 mM Lithium sulfate, 7.5 % v/v Dimethyl sulfoxide
E12	35 % v/v PEG 400	none	4 % v/v Glycerol, 80 mM tri-Sodium citrate, 100 mM TRICINE
F1	35 % v/v PEG 400	100 mM tri-Sodium citrate; pH 5.0	370 mM Ammonium acetate, 3 % v/v 1-Propanol
F2	36 % v/v PEG 400	100 mM HEPES; pH 7.2	100 mM Ammonium chloride
F3	37.5 % v/v PEG 400	100 mM tri-Sodium citrate; pH 6.0	180 mM di-Ammonium tartrate, 4 % v/v MPD
F4	38 % v/v PEG 400	100 mM HEPES; pH 7.0	300 mM Lithium chloride, 30 mM Strontium chloride
F5	39 % v/v PEG 400	100 mM TRIS; pH 8.5	100 mM Potassium chloride
F6	39.8 % v/v PEG 400	100 mM BIS-TRIS propane; pH 7.2	100 mM Ammonium di-hydrogen phosphate
F7	40 % v/v PEG 400	100 mM TRIS; pH 8.0	4 % v/v Dimethyl sulfoxide, 1 % v/v 1,7 Heptanediol
F8	40 % v/v PEG 400	50 mM MES; pH 6.5	1.6 M Sodium chloride
F9	40 % v/v PEG 400	100 mM ADA; pH 6.5	160 mM Lithium chloride, 4 mM Strontium chloride
F10	40 % v/v PEG 400	100 mM ADA; pH 6.5	200 mM Lithium sulfate
F11	42 % v/v PEG 400	100 mM MES; pH 6.5	150 mM Sodium acetate
F12	25 % v/v PEG DME 500	100 mM MES; pH 6.0	10 mM Copper (II) chloride, 200 mM Ammonium formate
G1	30 % v/v PEG DME 500	100 mM MES; pH 6.0	2 mM Cadmium chloride
G2	30 % v/v PEG DME 500	100 mM tri-Sodium citrate; pH 6.0	100 mM Magnesium chloride, 100 mM Sodium chloride, 100 mM Ammonium sulfate
G3	14 % v/v PEG MME 550	100 mM HEPES; pH 7.5	200 mM Lithium sulfate
G4	15 % v/v PEG MME 550	100 mM HEPES; pH 7.0	200 mM Potassium Sodium tartrate, 1 mM Tris(2-carboxyethyl) phosphine hydrochloride
G5	25 % v/v PEG MME 550	50 mM ADA; pH 6.25	350 mM Sodium nitrate, 50 mM di-Sodium malonate; pH 7.0
G6	28 % v/v PEG MME 550	100 mM TRIS; pH 8.0	100 mM Lithium sulfate
G7	28 % v/v PEG MME 550	50 mM ADA; pH 7.0	550 mM Ammonium sulfate
G8	25 % v/v PEG 600	100 mM ADA; pH 7.0	none
G9	22.5 % w/v PEG 1,500	100 mM MES; pH 5.5	300 mM Sodium acetate
G10	12 % w/v PEG 3,350	100 mM Sodium acetate; pH 4.6	200 mM di-Sodium malonate
G11	25 % w/v PEG 3,350	100 mM BIS-TRIS; pH 5.5	200 mM Lithium sulfate
G12	25 % w/v PEG 3,350	100 mM BIS-TRIS; pH 5.5	none
H1	10 % w/v PEG 4,000	100 mM Sodium acetate; pH 4.6	200 mM Potassium chloride
H2	20 % w/v PEG 6,000	100 mM BICINE; pH 9.0	none
H3	30 % w/v PEG 8,000	none	200 mM Ammonium sulfate
H4	10 % w/v PEP 426	100 mM MES; pH 6.5	100 mM Ammonium chloride, 10 mM Calcium chloride
H5	20 % w/v PEP 426	100 mM TRIS; pH 8.0	100 mM Potassium formate
H6	4 % v/v MPD	100 mM tri-Sodium citrate; pH 5.6	100 mM Sodium chloride, 100 mM Lithium nitrate
H7	5 % v/v MPD	100 mM tri-Sodium citrate; pH 5.6	100 mM Sodium chloride, 60 mM Magnesium acetate
H8	8 % v/v MPD	100 mM ADA; pH 6.7	400 mM Potassium nitrate, 100 mM tri-Potassium citrate
H9	none	1 M Sodium Potassium phosphate; pH 5.1	300 mM D-(+)-Trehalose
H10	1.5 M Sodium chloride	75 mM Sodium acetate; pH 4.6	none
H11	1 M Sodium acetate	100 mM MES; pH 6.5	none
H12	1 M Lithium sulfate	100 mM TRIS; pH 8.5	10 mM Nickel (II) chloride

*pH values indicated are those of the 1.0 M buffer stock solution prior to dilution with other components

JBScreen Kinase

Kinase 1		Precipitant	Buffer*	Additive
No.				
A1	1 M Ammonium sulfate	100 mM tri-Sodium citrate; pH 5.6	200 mM Magnesium acetate, 10 mM Dithiothreitol	
A2	1.3 M Ammonium sulfate	100 mM tri-Sodium citrate; pH 5.6	none	
A3	1.3 M Ammonium sulfate	100 mM TRIS; pH 8.5	none	
A4	1.8 M Ammonium sulfate	100 mM MES; pH 6.5	25 mM Cobalt (II) chloride	
A5	2 M Ammonium sulfate	100 mM tri-Sodium citrate; pH 3.1	200 mM Sodium chloride	
A6	2 M Ammonium sulfate	100 mM Sodium acetate; pH 4.6	50 mM Magnesium chloride	
A7	2 M Ammonium sulfate	100 mM Sodium acetate; pH 4.6	none	
A8	2 M Ammonium sulfate	100 mM HEPES; pH 7.5	2 % v/v PEG 550 MME	
A9	2 M Ammonium sulfate	100 mM HEPES; pH 7.5	none	
A10	2 M Ammonium sulfate	100 mM TRIS; pH 8.5	6 mM Magnesium chloride	
A11	1.5 M Lithium sulfate	100 mM TRIS; pH 8.5	10 mM Nickel sulfate	
A12	1 M Lithium chloride	100 mM tri-Sodium citrate; pH 4.2	none	
B1	2 M Sodium chloride	100 mM Sodium acetate; pH 4.6	none	
B2	2 M Sodium chloride	100 mM MES; pH 6.5	100 mM di-Sodium hydrogen phosphate, 100 mM Potassium di-hydrogen phosphate	
B3	3.3 M Sodium chloride	100 mM HEPES; pH 7.5	1 % v/v Glycerol	
B4	1.2 M Sodium acetate	100 mM MES; pH 6.5	6.25 mM Calcium chloride	
B5	3.7 M Sodium formate	100 mM BICINE; pH 9.5	2 % w/v PEG 3,000	
B6	500 mM di-Sodium malonate; pH 6.0	50 mM PIPES; pH 6.0	1.6 % v/v Glycerol, 10 mM Dithiothreitol	
B7	500 mM di-Sodium hydrogen phosphate	100 mM CAPS; pH 10.0	500 mM Potassium di-hydrogen phosphate, 200 mM Lithium sulfate	
B8	1.2 M di-Sodium tartrate	100 mM TRIS; pH 8.5	5 mM Dithiothreitol	
B9	1 M Potassium Sodium tartrate	100 mM MES; pH 6.5	none	
B10	30 % v/v Jeffamine® M-600	100 mM MES; pH 6.5	50 mM Cesium chloride	
B11	40 % v/v MPD	100 mM MES; pH 6.5	none	
B12	50 % v/v MPD	100 mM HEPES; pH 7.5	none	

Kinase 2		Precipitant	Buffer*	Additive
No.				
C1	10 % v/v PEG 400	50 mM TRIS; pH 8.5	1 mM Dithiothreitol, 1 mM Ethylenediaminetetraacetic acid disodium salt, 300 mM Sodium chloride	
C2	15 % v/v PEG 400	100 mM HEPES; pH 7.5	200 mM Calcium chloride	
C3	25 % v/v PEG 400	100 mM MES; pH 6.5	10 % v/v 2-Propanol	
C4	25 % v/v PEG 400	100 mM TRIS; pH 8.5	150 mM tri-Sodium citrate	
C5	15 % v/v PEG 550 MME	100 mM Sodium acetate; pH 4.6	5 % v/v Ethylene glycol	
C6	20 % v/v PEG 550 MME	100 mM BICINE; pH 9.0	100 mM Sodium chloride	
C7	20 % w/v PEG 1,000	100 mM TRIS; pH 8.5	1 mM Dithiothreitol	
C8	35 % w/v PEG 1,000	100 mM HEPES; pH 7.5	50 mM Lithium sulfate	
C9	12 % w/v PEG 2,000	100 mM MES; pH 6.5	200 mM Magnesium acetate	
C10	25 % w/v PEG 2,000	100 mM Sodium acetate; pH 4.6	100 mM Magnesium chloride	
C11	30 % w/v PEG 2,000	100 mM Sodium acetate; pH 4.6	50 mM Magnesium chloride	
C12	24 % w/v PEG 2,000 MME	100 mM Sodium phosphate citrate; pH 5.0	none	
D1	12 % w/v PEG 3,350	100 mM MES; pH 6.5	500 mM Sodium chloride	
D2	12 % w/v PEG 3,350	50 mM tri-Sodium citrate; pH 5.6	200 mM Ammonium sulfate, 50 mM Magnesium sulfate	
D3	15 % w/v PEG 3,350	100 mM Imidazole; pH 7.5	250 mM Ammonium sulfate, 10 mM Cadmium chloride	
D4	20 % w/v PEG 3,350	150 mM di-Sodium DL-malate; pH 7.0	none	
D5	20 % w/v PEG 3,350	100 mM HEPES; pH 7.5	200 mM Sodium chloride, 20 mM L-Glutathione reduced	
D6	20 % w/v PEG 3,350	100 mM TRIS; pH 8.5	120 mM Sodium chloride, 5 mM Dithiothreitol	
D7	20 % w/v PEG 3,350	none	200 mM Potassium nitrate	
D8	22 % w/v PEG 3,350	none	100 mM Ammonium formate	
D9	24 % w/v PEG 3,350	100 mM tri-Sodium citrate; pH 5.0	none	
D10	30 % w/v PEG 3,350	100 mM Sodium acetate; pH 4.6	200 mM Ammonium acetate	
D11	30 % w/v PEG 3,350	200 mM Ammonium acetate; pH 5.6	20 % v/v 2-Propanol, 200 mM Calcium chloride	
D12	32.5 % w/v PEG 3,350	100 mM TRIS; pH 8.5	500 mM Sodium chloride, 200 mM Magnesium chloride	

Kinase 3			
No.	Precipitant	Buffer*	Additive
E1	8 % w/v PEG 4,000	50 mM MES; pH 6.5	10 mM Magnesium chloride, 10 mM Dithiothreitol
E2	10 % w/v PEG 4,000	50 mM PIPES; pH 7.0	10 mM Dithiothreitol
E3	10 % w/v PEG 4,000	100 mM HEPES; pH 7.5	15 % v/v Ethylene glycol, 10 % v/v 2-Propanol, 200 mM Magnesium chloride
E4	10 % w/v PEG 4,000	100 mM HEPES; pH 7.5	none
E5	15 % w/v PEG 4,000	100 mM HEPES; pH 7.5	10 % v/v 2-Propanol
E6	15 % w/v PEG 4,000	75 mM TRIS; pH 8.5	200 mM Sodium chloride, 1 % w/v PEG 6,000, 75 mM Sodium acetate
E7	15 % w/v PEG 4,000	100 mM di-Sodium DL-malate; pH 5.5	200 mM Ammonium sulfate
E8	20 % w/v PEG 4,000	100 mM BIS-TRIS; pH 6.5	100 mM Sodium chloride
E9	20 % w/v PEG 4,000	100 mM HEPES; pH 7.5	200 mM Magnesium chloride
E10	20 % w/v PEG 4,000	100 mM TRIS; pH 8.5	200 mM Magnesium chloride
E11	25 % w/v PEG 4,000	100 mM MES; pH 6.5	200 mM Magnesium chloride
E12	25 % w/v PEG 4,000	100 mM TRIS; pH 8.5	100 mM Lithium sulfate
F1	28 % w/v PEG 4,000	200 mM Lithium acetate; pH 7.5	none
F2	30 % w/v PEG 4,000	100 mM MES; pH 6.5	200 mM Sodium acetate
F3	30 % w/v PEG 4,000	150 mM TRIS; pH 8.5	200 mM Ammonium sulfate
F4	8 % w/v PEG 5,000 MME	100 mM HEPES; pH 7.5	10 % v/v 2-Propanol
F5	25 % w/v PEG 5,000 MME	100 mM MES; pH 6.5	200 mM Ammonium sulfate
F6	30 % w/v PEG 5,000 MME	100 mM HEPES; pH 7.5	200 mM Ammonium sulfate
F7	30 % w/v PEG 5,000 MME	100 mM ADA; pH 6.5	100 mM Ammonium sulfate
F8	20 % w/v PEG 6,000	100 mM MES; pH 6.5	none
F9	28 % w/v PEG 6,000	100 mM MES; pH 6.5	10 mM Dithiothreitol
F10	30 % w/v PEG 6,000	100 mM HEPES; pH 7.5	175 mM Lithium sulfate
F11	30 % w/v PEG 6,000	100 mM PIPES; pH 7.0	10 mM Dithiothreitol
F12	32 % w/v PEG 6,000	100 mM MES; pH 6.5	none
Kinase 4			
No.	Precipitant	Buffer*	Additive
G1	7 % w/v PEG 8,000	100 mM MES; pH 6.5	20 % v/v Ethylene glycol
G2	7 % w/v PEG 8,000	100 mM MES; pH 6.5	150 mM Calcium acetate, 16 % v/v Ethylene glycol
G3	10 % w/v PEG 8,000	100 mM TRIS; pH 8.5	10 % v/v PEG 200
G4	12 % w/v PEG 8,000	100 mM HEPES; pH 7.5	none
G5	12 % w/v PEG 8,000	100 mM TRIS; pH 8.5	250 mM di-Sodium tartrate
G6	16 % w/v PEG 8,000	100 mM HEPES; pH 7.5	100 mM Potassium di-hydrogen phosphate
G7	16 % w/v PEG 8,000	100 mM HEPES; pH 7.5	150 mM Sodium chloride, 2 % v/v Ethylene glycol
G8	18 % w/v PEG 8,000	100 mM MES; pH 6.5	200 mM Magnesium acetate
G9	18 % w/v PEG 8,000	100 mM MES; pH 6.5	none
G10	18 % w/v PEG 8,000	100 mM TRIS; pH 8.5	none
G11	20 % w/v PEG 8,000	100 mM tri-Sodium citrate; pH 5.0	100 mM Magnesium acetate
G12	20 % w/v PEG 8,000	100 mM TRIS; pH 8.5	200 mM Magnesium chloride, 2 % v/v Ethylene glycol
H1	22 % w/v PEG 8,000	100 mM TRIS; pH 8.5	2 % v/v Ethylene glycol
H2	25 % w/v PEG 8,000	100 mM Sodium acetate; pH 4.6	50 mM Magnesium chloride
H3	30 % w/v PEG 8,000	100 mM MES; pH 6.5	200 mM Ammonium sulfate, 4 % v/v 1,3-Propanediol
H4	30 % w/v PEG 8,000	100 mM HEPES; pH 7.5	10 mM Dithiothreitol, 20 % v/v Glycerol
H5	9 % w/v PEG 8,000	100 mM MES; pH 6.5	200 mM Zinc acetate
H6	16 % w/v PEG 10,000	100 mM BIS-TRIS; pH 6.5	300 mM Ammonium sulfate, 5 % v/v Ethylene glycol
H7	10 % w/v PEG 10,000	100 mM HEPES; pH 7.5	8 % v/v Ethylene glycol
H8	15 % w/v PEG 10,000	100 mM HEPES; pH 7.5	5 mM Dithiothreitol
H9	15 % w/v PEG 10,000	100 mM TRIS; pH 8.5	none
H10	12 % w/v PEG 20,000	100 mM MES; pH 6.5	none
H11	10 % w/v PEG 20,000	100 mM HEPES; pH 7.5	100 mM Ammonium formate
H12	15 % w/v PEG 20,000	none	10 mM Potassium hydrogen tartrate

*pH values indicated are those of the 1.0 M buffer stock solution prior to dilution with other components

JBScreen Nuc-Pro

Nuc-Pro 1 No.	Precipitant	Buffer*	Additive
A1	20 % v/v PEG 200	50 mM HEPES; pH 7.5	200 mM Potassium chloride, 25 mM Magnesium sulfate
A2	50 % v/v PEG 200	100 mM TRIS; pH 8.0	none
A3	5 % v/v PEG 400	50 mM PIPES; pH 7.0	30 mM Magnesium chloride
A4	5 % v/v PEG 400	20 mM MES; pH 5.8	15 mM Magnesium formate, 2 mM Cobalt (II) chloride
A5	10 % v/v PEG 400	50 mM HEPES; pH 7.0	100 mM Potassium chloride
A6	15 % v/v PEG 400	50 mM MES; pH 6.5	80 mM Magnesium acetate, 15 mM Magnesium chloride
A7	15 % v/v PEG 400	100 mM TRIS; pH 8.0	80 mM Calcium chloride, 20 mM Sodium chloride
A8	20 % v/v PEG 400	50 mM BIS-TRIS propane; pH 6.8	60 mM Magnesium chloride
A9	25 % v/v PEG 400	100 mM tri-Sodium citrate; pH 5.6	130 mM Sodium chloride, 60 mM Magnesium chloride
A10	30 % v/v PEG 400	100 mM HEPES; pH 7.5	200 mM Calcium chloride
A11	30 % v/v PEG 400	50 mM TRIS; pH 8.5	100 mM Potassium chloride, 10 mM Magnesium chloride
A12	25 % v/v PEG 550 MME	50 mM HEPES; pH 7.0	10 mM Magnesium chloride
B1	20 % w/v PEG 1,000	50 mM MES; pH 6.5	200 mM Magnesium chloride, 100 mM Sodium chloride
B2	30 % w/v PEG 2,000 MME	100 mM Sodium acetate; pH 4.6	200 mM Ammonium sulfate
B3	10 % w/v PEG 3,350	100 mM MES; pH 6.5	100 mM Calcium chloride, 13 % v/v Glycerol
B4	25 % w/v PEG 3,350	50 mM MES; pH 6.0	200 mM Sodium formate, 10 % v/v Glycerol
B5	30 % w/v PEG 3,350	50 mM di-Sodium succinate; pH 5.5	100 mM Sodium chloride
B6	35 % w/v PEG 3,350	50 mM TRIS; pH 7.5	50 mM Potassium chloride
B7	5 % w/v PEG 4,000	50 mM HEPES; pH 7.0	200 mM Ammonium sulfate, 20 mM Magnesium acetate
B8	5 % w/v PEG 4,000	50 mM MES; pH 6.0	5 mM Magnesium sulfate
B9	10 % w/v PEG 4,000	50 mM MES; pH 6.5	200 mM Ammonium acetate, 10 mM Calcium chloride
B10	10 % w/v PEG 4,000	50 mM Imidazole; pH 7.2	20 mM Zinc sulfate
B11	15 % w/v PEG 4,000	50 mM TRIS; pH 7.5	150 mM Potassium chloride, 20 mM Magnesium chloride
B12	15 % w/v PEG 4,000	50 mM tri-Sodium citrate; pH 5.0	100 mM Sodium chloride, 20 mM Ammonium sulfate

Nuc-Pro 2 No.	Precipitant	Buffer*	Additive
C1	20 % w/v PEG 4,000	100 mM tri-Sodium citrate; pH 5.6	100 mM Potassium chloride, 10 % v/v 2-Propanol
C2	20 % w/v PEG 4,000	50 mM MOPS; pH 7.0	100 mM Sodium chloride
C3	20 % w/v PEG 4,000	100 mM HEPES; pH 7.5	none
C4	24 % w/v PEG 4,000	50 mM di-Sodium succinate; pH 5.5	60 mM Magnesium chloride, 300 mM Sodium chloride
C5	25 % w/v PEG 4,000	50 mM tri-Sodium citrate; pH 5.0	50 mM Ammonium sulfate
C6	30 % w/v PEG 4,000	50 mM MES; pH 6.5	80 mM Magnesium acetate
C7	30 % w/v PEG 4,000	50 mM TRIS; pH 8.5	150 mM Ammonium chloride, 10 mM Calcium chloride
C8	32 % w/v PEG 4,000	100 mM TRIS; pH 8.5	5 % v/v Glycerol
C9	36 % w/v PEG 4,000	50 mM Sodium acetate; pH 5.0	none
C10	5 % w/v PEG 6,000	20 mM BIS-TRIS; pH 6.0	60 mM di-Ammonium hydrogen citrate, 20 mM Magnesium chloride
C11	10 % w/v PEG 6,000	50 mM tri-Sodium citrate; pH 4.0	100 mM Sodium chloride
C12	10 % w/v PEG 6,000	50 mM HEPES; pH 7.0	200 mM Ammonium acetate, 150 mM Magnesium acetate
D1	15 % w/v PEG 6,000	10 mM TRIS; pH 7.5	none
D2	18 % w/v PEG 6,000	50 mM Sodium acetate; pH 5.0	none
D3	20 % w/v PEG 6,000	50 mM BIS-TRIS propane; pH 7.0	7 % v/v MPD, 5 % v/v 2-Methyl-2-propanol
D4	20 % w/v PEG 6,000	50 mM di-Potassium L-Malate; pH 5.0	30 mM Calcium chloride
D5	5 % w/v PEG 8,000	50 mM HEPES; pH 7.5	20 mM Magnesium chloride
D6	10 % w/v PEG 8,000	100 mM TRIS; pH 8.0	10 % v/v Glycerol, 1 mM Tris(2-carboxyethyl)phosphine hydrochloride
D7	10 % w/v PEG 8,000	50 mM MES; pH 6.5	200 mM Potassium chloride, 100 mM Magnesium acetate
D8	15 % w/v PEG 8,000	50 mM BIS-TRIS propane; pH 6.8	100 mM Ammonium sulfate, 10 % v/v Glycerol
D9	15 % w/v PEG 8,000	100 mM MES; pH 6.5	200 mM Calcium acetate
D10	18 % w/v PEG 8,000	100 mM TRIS; pH 8.0	200 mM Magnesium formate
D11	20 % w/v PEG 8,000	10 mM TRIS; pH 7.5	10 mM Calcium chloride
D12	15 % w/v PEG 20,000	100 mM MES; pH 6.5	80 mM Manganese (II) chloride

Nuc-Pro 3	Precipitant 1	Precipitant 2	Buffer*	Additive
No.				
E1	1.2 M Ammonium sulfate	none	100 mM HEPES; pH 7.5	2 % w/v PEG 400
E2	20 mM Calcium chloride	none	100 mM Glycine; pH 8.0	none
E3	2 M Lithium chloride	none	50 mM MES; pH 6.0	200 mM Calcium acetate, 1 mM Cobalt (II) chloride
E4	600 mM Lithium sulfate	none	50 mM MES; pH 6.0	10 mM Magnesium chloride
E5	1 M Lithium sulfate	8 % w/v PEG 400	50 mM HEPES; pH 7.5	none
E6	1 M Lithium sulfate	none	none	50 mM tri-Sodium citrate, 3 % w/v 2-Propanol
E7	1.2 M Lithium sulfate	none	50 mM MES; pH 6.5	30 mM Magnesium chloride
E8	1.2 M Lithium sulfate	none	50 mM MES; pH 6.5	50 mM Magnesium chloride, 2 mM Cobalt (II) chloride
E9	1.5 M Lithium sulfate	none	50 mM TRIS; pH 8.5	5 % w/v Glycerol
E10	1.6 M Lithium sulfate	2 % w/v PEG 1,000	50 mM HEPES; pH 7.5	none
E11	1.7 M Lithium sulfate	none	50 mM HEPES; pH 7.0	50 mM Magnesium sulfate
E12	1.7 M Lithium sulfate	none	none	10 % w/v Glycerol
F1	2 M Lithium sulfate	none	none	3 % w/v MPD
F2	5 mM Magnesium chloride	none	50 mM MES; pH 6.5	2.5 mM Cobalt (II) chloride
F3	40 mM Magnesium chloride	none	50 mM MES; pH 6.0	none
F4	80 mM Magnesium chloride	none	50 mM HEPES; pH 7.5	none
F5	200 mM Sodium chloride	none	50 mM BIS-TRIS propane; pH 7.0	none
F6	400 mM Sodium chloride	none	50 mM BIS-TRIS propane; pH 6.8	none
F7	600 mM Sodium chloride	none	50 mM MES; pH 6.0	100 mM Ammonium acetate, 5 mM Magnesium sulfate
F8	2.5 M Sodium chloride	none	50 mM TRIS; pH 7.5	200 mM Magnesium chloride
F9	1.8 M Sodium formate	none	100 mM TRIS; pH 8.0	none
F10	2 M Sodium formate	none	100 mM Sodium acetate; pH 4.6	none
F11	100 mM di-Sodium hydrogen phosphate	none	none	80 mM Sodium chloride
F12	1 M di-Sodium tartrate	none	50 mM TRIS; pH 7.5	30 mM Magnesium chloride

Nuc-Pro 4	Precipitant 1	Precipitant 2	Buffer*	Additive
No.				
G1	10 % w/v 1,6-Hexanediol	none	50 mM MES; pH 6.5	20 mM Magnesium chloride
G2	20 % w/v 1,6-Hexanediol	none	50 mM HEPES; pH 7.0	50 mM Ammonium chloride, 10 mM Magnesium chloride
G3	35 % w/v 1,6-Hexanediol	none	50 mM TRIS; pH 8.5	75 mM Magnesium sulfate
G4	10 % v/v MPD	none	50 mM TRIS; pH 7.5	50 mM Ammonium acetate
G5	10 % v/v MPD	none	50 mM HEPES; pH 7.0	80 mM Potassium chloride, 10 mM Magnesium sulfate
G6	15 % v/v MPD	none	50 mM ADA; pH 6.5	100 mM Sodium acetate
G7	15 % v/v MPD	none	50 mM di-Sodium succinate; pH 5.5	10 mM Magnesium acetate
G8	18 % v/v MPD	none	20 mM MES; pH 5.8	10 mM Magnesium chloride
G9	23 % v/v MPD	none	50 mM MES; pH 6.0	100 mM Sodium chloride
G10	26 % v/v MPD	none	50 mM PIPES; pH 7.0	65 mM Magnesium chloride, 1 mM Cobalt (III) Hexamine chloride
G11	27 % v/v MPD	none	20 mM MES; pH 5.8	400 mM Sodium chloride, 120 mM Calcium chloride
G12	35 % v/v MPD	none	20 mM BIS-TRIS; pH 6.0	50 mM Sodium chloride, 10 mM Calcium chloride
H1	50 % v/v MPD	none	100 mM tri-Sodium citrate; pH 5.6	10 mM Magnesium chloride
H2	5 % v/v 2-Propanol	none	50 mM TRIS; pH 7.5	10 mM Magnesium chloride
H3	5 % v/v 2-Propanol	none	50 mM MES; pH 6.5	100 mM Calcium acetate
H4	9 % v/v 2-Propanol	none	50 mM Imidazole; pH 7.2	15 mM Magnesium acetate, 15 mM Magnesium chloride
H5	10 % v/v 2-Propanol	none	50 mM MES; pH 6.5	80 mM Ammonium acetate
H6	10 % v/v 2-Propanol	none	50 mM di-Sodium succinate; pH 5.5	2 mM Cobalt (II) chloride
H7	13 % v/v 2-Propanol	none	50 mM MOPS; pH 7.0	200 mM Potassium chloride, 6 mM Cobalt (III) Hexamine chloride
H8	15 % v/v 2-Propanol	none	50 mM MES; pH 6.0	20 mM Magnesium chloride
H9	10 % v/v 1,4-Dioxane	none	50 mM HEPES; pH 7.5	none
H10	10 % v/v Ethanol	none	50 mM MES; pH 6.5	20 mM Magnesium chloride, 1 mM Cobalt (II) chloride
H11	20 % v/v Ethylene glycol	5 % w/v PEG 3,350	none	20 mM Magnesium chloride
H12	15 % v/v Glycerol	none	100 mM Sodium acetate; pH 4.6	200 mM Sodium chloride

*pH values indicated are those of the 1.0 M buffer stock solution prior to dilution with other components

JBScreen PEG/Salt

PEG/Salt 1	Precipitant	Additive
No.		
A1	20 % w/v PEG 3,350	200 mM Ammonium acetate
A2	20 % w/v PEG 3,350	200 mM Ammonium chloride
A3	20 % w/v PEG 3,350	200 mM Ammonium fluoride
A4	20 % w/v PEG 3,350	200 mM Ammonium formate
A5	20 % w/v PEG 3,350	200 mM Ammonium iodide
A6	20 % w/v PEG 3,350	200 mM Ammonium nitrate
A7	20 % w/v PEG 3,350	200 mM Ammonium di-hydrogen phosphate
A8	20 % w/v PEG 3,350	200 mM di-Ammonium hydrogen phosphate
A9	20 % w/v PEG 3,350	200 mM Ammonium sulfate
A10	20 % w/v PEG 3,350	200 mM Ammonium sulfite
A11	20 % w/v PEG 3,350	200 mM Calcium acetate
A12	20 % w/v PEG 3,350	200 mM Calcium chloride
B1	20 % w/v PEG 3,350	200 mM di-Ammonium tartrate
B2	20 % w/v PEG 3,350	200 mM Potassium formate
B3	20 % w/v PEG 3,350	200 mM Lithium acetate
B4	20 % w/v PEG 3,350	200 mM Lithium chloride
B5	20 % w/v PEG 3,350	200 mM tri-Lithium citrate
B6	20 % w/v PEG 3,350	200 mM Lithium nitrate
B7	20 % w/v PEG 3,350	200 mM Lithium sulfate
B8	20 % w/v PEG 3,350	200 mM Magnesium acetate
B9	20 % w/v PEG 3,350	200 mM Magnesium chloride
B10	20 % w/v PEG 3,350	200 mM Magnesium formate
B11	20 % w/v PEG 3,350	200 mM Magnesium nitrate
B12	20 % w/v PEG 3,350	200 mM Magnesium sulfate
PEG/Salt 2	Precipitant	Additive
No.		
C1	20 % w/v PEG 3,350	200 mM Potassium acetate
C2	20 % w/v PEG 3,350	200 mM Potassium chloride
C3	20 % w/v PEG 3,350	200 mM Potassium fluoride
C4	20 % w/v PEG 3,350	200 mM Potassium iodide
C5	20 % w/v PEG 3,350	200 mM Potassium iodide
C6	20 % w/v PEG 3,350	200 mM Potassium di-hydrogen phosphate
C7	20 % w/v PEG 3,350	200 mM di-Potassium hydrogen phosphate
C8	20 % w/v PEG 3,350	200 mM Potassium sulfate
C9	20 % w/v PEG 3,350	200 mM Potassium thiocyanate
C10	20 % w/v PEG 3,350	200 mM Potassium Sodium tartrate
C11	20 % w/v PEG 3,350	200 mM Sodium acetate
C12	20 % w/v PEG 3,350	200 mM Sodium chloride
D1	20 % w/v PEG 3,350	200 mM tri-Sodium citrate
D2	20 % w/v PEG 3,350	200 mM Sodium fluoride
D3	20 % w/v PEG 3,350	200 mM Sodium formate
D4	20 % w/v PEG 3,350	200 mM Sodium iodide
D5	20 % w/v PEG 3,350	200 mM Sodium thiocyanate
D6	20 % w/v PEG 3,350	200 mM Sodium nitrate
D7	20 % w/v PEG 3,350	200 mM Sodium di-hydrogen phosphate
D8	20 % w/v PEG 3,350	200 mM di-Sodium hydrogen phosphate
D9	20 % w/v PEG 3,350	200 mM Sodium sulfate
D10	20 % w/v PEG 3,350	200 mM di-Sodium tartrate
D11	20 % w/v PEG 3,350	200 mM tri-Potassium citrate
D12	20 % w/v PEG 3,350	200 mM Zinc acetate

PEG/Salt 3		Precipitant	Additive
No.			
E1	20 % w/v PEG 5,000 MME		200 mM Ammonium acetate
E2	20 % w/v PEG 5,000 MME		200 mM Ammonium chloride
E3	20 % w/v PEG 5,000 MME		200 mM Ammonium fluoride
E4	20 % w/v PEG 5,000 MME		200 mM Ammonium formate
E5	20 % w/v PEG 5,000 MME		200 mM Ammonium iodide
E6	20 % w/v PEG 5,000 MME		200 mM Ammonium nitrate
E7	20 % w/v PEG 5,000 MME		200 mM Ammonium di-hydrogen phosphate
E8	20 % w/v PEG 5,000 MME		200 mM di-Ammonium hydrogen phosphate
E9	20 % w/v PEG 5,000 MME		200 mM Ammonium sulfate
E10	20 % w/v PEG 5,000 MME		200 mM Ammonium sulfite
E11	20 % w/v PEG 5,000 MME		200 mM Calcium acetate
E12	20 % w/v PEG 5,000 MME		200 mM Calcium chloride
F1	20 % w/v PEG 5,000 MME		200 mM di-Ammonium tartrate
F2	20 % w/v PEG 5,000 MME		200 mM Potassium formate
F3	20 % w/v PEG 5,000 MME		200 mM Lithium acetate
F4	20 % w/v PEG 5,000 MME		200 mM Lithium chloride
F5	20 % w/v PEG 5,000 MME		200 mM tri-Lithium citrate
F6	20 % w/v PEG 5,000 MME		200 mM Lithium nitrate
F7	20 % w/v PEG 5,000 MME		200 mM Lithium sulfate
F8	20 % w/v PEG 5,000 MME		200 mM Magnesium acetate
F9	20 % w/v PEG 5,000 MME		200 mM Magnesium chloride
F10	20 % w/v PEG 5,000 MME		200 mM Magnesium formate
F11	20 % w/v PEG 5,000 MME		200 mM Magnesium nitrate
F12	20 % w/v PEG 5,000 MME		200 mM Magnesium sulfate
PEG/Salt 4		Precipitant	Additive
No.			
G1	20 % w/v PEG 5,000 MME		200 mM Potassium acetate
G2	20 % w/v PEG 5,000 MME		200 mM Potassium chloride
G3	20 % w/v PEG 5,000 MME		200 mM Potassium fluoride
G4	20 % w/v PEG 5,000 MME		200 mM Potassium iodide
G5	20 % w/v PEG 5,000 MME		200 mM Potassium nitrate
G6	20 % w/v PEG 5,000 MME		200 mM Potassium di-hydrogen phosphate
G7	20 % w/v PEG 5,000 MME		200 mM di-Potassium hydrogen phosphate
G8	20 % w/v PEG 5,000 MME		200 mM Potassium sulfate
G9	20 % w/v PEG 5,000 MME		200 mM Potassium thiocyanate
G10	20 % w/v PEG 5,000 MME		200 mM Potassium Sodium tartrate
G11	20 % w/v PEG 5,000 MME		200 mM Sodium acetate
G12	20 % w/v PEG 5,000 MME		200 mM Sodium chloride
H1	20 % w/v PEG 5,000 MME		200 mM tri-Sodium citrate
H2	20 % w/v PEG 5,000 MME		200 mM Sodium fluoride
H3	20 % w/v PEG 5,000 MME		200 mM Sodium formate
H4	20 % w/v PEG 5,000 MME		200 mM Sodium iodide
H5	20 % w/v PEG 5,000 MME		200 mM Sodium thiocyanate
H6	20 % w/v PEG 5,000 MME		200 mM Sodium nitrate
H7	20 % w/v PEG 5,000 MME		200 mM Sodium di-hydrogen phosphate
H8	20 % w/v PEG 5,000 MME		200 mM di-Sodium hydrogen phosphate
H9	20 % w/v PEG 5,000 MME		200 mM Sodium sulfate
H10	20 % w/v PEG 5,000 MME		200 mM di-Sodium tartrate
H11	20 % w/v PEG 5,000 MME		200 mM tri-Potassium citrate
H12	20 % w/v PEG 5,000 MME		200 mM Zinc acetate

JBScreen Pentaerythritol

Pentaerythritol 1			
No.	Precipitant	Buffer*	Additive
A1	25 % w/v PEP 426	100 mM Sodium acetate; pH 4.6	none
A2	35 % w/v PEP 426	100 mM Sodium acetate; pH 4.6	none
A3	45 % w/v PEP 426	100 mM Sodium acetate; pH 4.6	none
A4	25 % w/v PEP 426	100 mM MES; pH 6.5	none
A5	35 % w/v PEP 426	100 mM MES; pH 6.5	none
A6	45 % w/v PEP 426	100 mM MES; pH 6.5	none
A7	25 % w/v PEP 426	100 mM HEPES; pH 7.5	none
A8	35 % w/v PEP 426	100 mM HEPES; pH 7.5	none
A9	45 % w/v PEP 426	100 mM HEPES; pH 7.5	none
A10	25 % w/v PEP 426	100 mM TRIS; pH 8.5	none
A11	35 % w/v PEP 426	100 mM TRIS; pH 8.5	none
A12	45 % w/v PEP 426	100 mM TRIS; pH 8.5	none
B1	25 % w/v PEP 426	100 mM Sodium acetate; pH 4.6	50 mM Magnesium chloride
B2	35 % w/v PEP 426	100 mM Sodium acetate; pH 4.6	200 mM Ammonium sulfate
B3	45 % w/v PEP 426	100 mM Sodium acetate; pH 4.6	400 mM Potassium chloride
B4	25 % w/v PEP 426	100 mM MES; pH 6.5	50 mM Magnesium chloride
B5	35 % w/v PEP 426	100 mM MES; pH 6.5	200 mM Ammonium sulfate
B6	45 % w/v PEP 426	100 mM MES; pH 6.5	400 mM Potassium chloride
B7	25 % w/v PEP 426	100 mM HEPES; pH 7.5	50 mM Magnesium chloride
B8	35 % w/v PEP 426	100 mM HEPES; pH 7.5	200 mM Ammonium sulfate
B9	45 % w/v PEP 426	100 mM HEPES; pH 7.5	400 mM Potassium chloride
B10	25 % w/v PEP 426	100 mM TRIS; pH 8.5	50 mM Magnesium chloride
B11	35 % w/v PEP 426	100 mM TRIS; pH 8.5	200 mM Ammonium sulfate
B12	45 % w/v PEP 426	100 mM TRIS; pH 8.5	400 mM Potassium chloride

Pentaerythritol 2			
No.	Precipitant	Buffer*	Additive
C1	25 % w/v PEP 629	100 mM Sodium acetate; pH 4.6	none
C2	35 % w/v PEP 629	100 mM Sodium acetate; pH 4.6	none
C3	45 % w/v PEP 629	100 mM Sodium acetate; pH 4.6	none
C4	25 % w/v PEP 629	100 mM MES; pH 6.5	none
C5	35 % w/v PEP 629	100 mM MES; pH 6.5	none
C6	45 % w/v PEP 629	100 mM MES; pH 6.5	none
C7	25 % w/v PEP 629	100 mM HEPES; pH 7.5	none
C8	35 % w/v PEP 629	100 mM HEPES; pH 7.5	none
C9	45 % w/v PEP 629	100 mM HEPES; pH 7.5	none
C10	25 % w/v PEP 629	100 mM TRIS; pH 8.5	none
C11	35 % w/v PEP 629	100 mM TRIS; pH 8.5	none
C12	45 % w/v PEP 629	100 mM TRIS; pH 8.5	none
D1	25 % w/v PEP 629	100 mM Sodium acetate; pH 4.6	50 mM Magnesium chloride
D2	35 % w/v PEP 629	100 mM Sodium acetate; pH 4.6	200 mM Ammonium sulfate
D3	45 % w/v PEP 629	100 mM Sodium acetate; pH 4.6	300 mM Potassium chloride
D4	25 % w/v PEP 629	100 mM MES; pH 6.5	50 mM Magnesium chloride
D5	35 % w/v PEP 629	100 mM MES; pH 6.5	200 mM Ammonium sulfate
D6	45 % w/v PEP 629	100 mM MES; pH 6.5	300 mM Potassium chloride
D7	25 % w/v PEP 629	100 mM HEPES; pH 7.5	50 mM Magnesium chloride
D8	35 % w/v PEP 629	100 mM HEPES; pH 7.5	200 mM Ammonium sulfate
D9	45 % w/v PEP 629	100 mM HEPES; pH 7.5	300 mM Potassium chloride
D10	25 % w/v PEP 629	100 mM TRIS; pH 8.5	50 mM Magnesium chloride
D11	35 % w/v PEP 629	100 mM TRIS; pH 8.5	200 mM Ammonium sulfate
D12	45 % w/v PEP 629	100 mM TRIS; pH 8.5	300 mM Potassium chloride

JBScreen PACT++

PACT++ 1			
No.	Precipitant	Buffer*	Additive
A1	25 % w/v PEG 1,500	100 mM SPG buffer; pH 4.0	none
A2	25 % w/v PEG 1,500	100 mM SPG buffer; pH 5.0	none
A3	25 % w/v PEG 1,500	100 mM SPG buffer; pH 6.0	none
A4	25 % w/v PEG 1,500	100 mM SPG buffer; pH 7.0	none
A5	25 % w/v PEG 1,500	100 mM SPG buffer; pH 8.0	none
A6	25 % w/v PEG 1,500	100 mM SPG buffer; pH 9.0	none
A7	20 % w/v PEG 6,000	100 mM Sodium acetate; pH 5.0	200 mM Sodium chloride
A8	20 % w/v PEG 6,000	100 mM Sodium acetate; pH 5.0	200 mM Ammonium chloride
A9	20 % w/v PEG 6,000	100 mM Sodium acetate; pH 5.0	200 mM Lithium chloride
A10	20 % w/v PEG 6,000	100 mM Sodium acetate; pH 5.0	200 mM Magnesium chloride
A11	20 % w/v PEG 6,000	100 mM Sodium acetate; pH 5.0	200 mM Calcium chloride
A12	20 % w/v PEG 6,000	100 mM Sodium acetate; pH 5.0	10 mM Zinc chloride
B1	25 % w/v PEG 1,500	100 mM MIB buffer; pH 4.0	none
B2	25 % w/v PEG 1,500	100 mM MIB buffer; pH 5.0	none
B3	25 % w/v PEG 1,500	100 mM MIB buffer; pH 6.0	none
B4	25 % w/v PEG 1,500	100 mM MIB buffer; pH 7.0	none
B5	25 % w/v PEG 1,500	100 mM MIB buffer; pH 8.0	none
B6	25 % w/v PEG 1,500	100 mM MIB buffer; pH 9.0	none
B7	20 % w/v PEG 6,000	100 mM MES; pH 6.0	200 mM Sodium chloride
B8	20 % w/v PEG 6,000	100 mM MES; pH 6.0	200 mM Ammonium chloride
B9	20 % w/v PEG 6,000	100 mM MES; pH 6.0	200 mM Lithium chloride
B10	20 % w/v PEG 6,000	100 mM MES; pH 6.0	200 mM Magnesium chloride
B11	20 % w/v PEG 6,000	100 mM MES; pH 6.0	200 mM Calcium chloride
B12	20 % w/v PEG 6,000	100 mM MES; pH 6.0	10 mM Zinc chloride
PACT++ 2			
No.	Precipitant	Buffer*	Additive
C1	25 % w/v PEG 1,500	100 mM TBG Buffer; pH 4.0	none
C2	25 % w/v PEG 1,500	100 mM TBG Buffer; pH 5.0	none
C3	25 % w/v PEG 1,500	100 mM TBG Buffer; pH 6.0	none
C4	25 % w/v PEG 1,500	100 mM TBG Buffer; pH 7.0	none
C5	25 % w/v PEG 1,500	100 mM TBG Buffer; pH 8.0	none
C6	25 % w/v PEG 1,500	100 mM TBG Buffer; pH 9.0	none
C7	20 % w/v PEG 6,000	100 mM HEPES; pH 7.0	200 mM Sodium chloride
C8	20 % w/v PEG 6,000	100 mM HEPES; pH 7.0	200 mM Ammonium chloride
C9	20 % w/v PEG 6,000	100 mM HEPES; pH 7.0	200 mM Lithium chloride
C10	20 % w/v PEG 6,000	100 mM HEPES; pH 7.0	200 mM Magnesium chloride
C11	20 % w/v PEG 6,000	100 mM HEPES; pH 7.0	200 mM Calcium chloride
C12	20 % w/v PEG 6,000	100 mM HEPES; pH 7.0	10 mM Zinc chloride
D1	25 % w/v PEG 1,500	100 mM MMT buffer; pH 4.0	none
D2	25 % w/v PEG 1,500	100 mM MMT buffer; pH 5.0	none
D3	25 % w/v PEG 1,500	100 mM MMT buffer; pH 6.0	none
D4	25 % w/v PEG 1,500	100 mM MMT buffer; pH 7.0	none
D5	25 % w/v PEG 1,500	100 mM MMT buffer; pH 8.0	none
D6	25 % w/v PEG 1,500	100 mM MMT buffer; pH 9.0	none
D7	20 % w/v PEG 6,000	100 mM TRIS; pH 8.0	200 mM Sodium chloride
D8	20 % w/v PEG 6,000	100 mM TRIS; pH 8.0	200 mM Ammonium chloride
D9	20 % w/v PEG 6,000	100 mM TRIS; pH 8.0	200 mM Lithium chloride
D10	20 % w/v PEG 6,000	100 mM TRIS; pH 8.0	200 mM Magnesium chloride
D11	20 % w/v PEG 6,000	100 mM TRIS; pH 8.0	200 mM Calcium chloride
D12	20 % w/v PEG 6,000	100 mM TRIS; pH 8.0	10 mM Zinc chloride

PACT++ 3			
No.	Precipitant	Buffer*	Additive
E1	20 % w/v PEG 3,350	none	200 mM Sodium fluoride
E2	20 % w/v PEG 3,350	none	200 mM Sodium bromide
E3	20 % w/v PEG 3,350	none	200 mM Sodium iodide
E4	20 % w/v PEG 3,350	none	200 mM Potassium thiocyanate
E5	20 % w/v PEG 3,350	none	200 mM Sodium nitrate
E6	20 % w/v PEG 3,350	none	200 mM Sodium formate
E7	20 % w/v PEG 3,350	none	200 mM Sodium acetate
E8	20 % w/v PEG 3,350	none	200 mM Sodium sulfate
E9	20 % w/v PEG 3,350	none	200 mM Potassium Sodium tartrate
E10	20 % w/v PEG 3,350	none	200 mM Sodium Potassium phosphate
E11	20 % w/v PEG 3,350	none	200 mM tri-Sodium citrate
E12	20 % w/v PEG 3,350	none	200 mM di-Sodium malonate
F1	20 % w/v PEG 3,350	100 mM BIS-TRIS propane; pH 6.5	200 mM Sodium fluoride
F2	20 % w/v PEG 3,350	100 mM BIS-TRIS propane; pH 6.5	200 mM Sodium bromide
F3	20 % w/v PEG 3,350	100 mM BIS-TRIS propane; pH 6.5	200 mM Sodium iodide
F4	20 % w/v PEG 3,350	100 mM BIS-TRIS propane; pH 6.5	200 mM Potassium thiocyanate
F5	20 % w/v PEG 3,350	100 mM BIS-TRIS propane; pH 6.5	200 mM Sodium nitrate
F6	20 % w/v PEG 3,350	100 mM BIS-TRIS propane; pH 6.5	200 mM Sodium formate
F7	20 % w/v PEG 3,350	100 mM BIS-TRIS propane; pH 6.5	200 mM Sodium acetate
F8	20 % w/v PEG 3,350	100 mM BIS-TRIS propane; pH 6.5	200 mM Sodium sulfate
F9	20 % w/v PEG 3,350	100 mM BIS-TRIS propane; pH 6.5	200 mM Potassium Sodium tartrate
F10	20 % w/v PEG 3,350	100 mM BIS-TRIS propane; pH 6.5	200 mM Sodium Potassium phosphate
F11	20 % w/v PEG 3,350	100 mM BIS-TRIS propane; pH 6.5	200 mM tri-Sodium citrate
F12	20 % w/v PEG 3,350	100 mM BIS-TRIS propane; pH 6.5	200 mM di-Sodium malonate
PACT++ 4			
No.	Precipitant	Buffer*	Additive
G1	20 % w/v PEG 3,350	100 mM BIS-TRIS propane; pH 7.5	200 mM Sodium fluoride
G2	20 % w/v PEG 3,350	100 mM BIS-TRIS propane; pH 7.5	200 mM Sodium bromide
G3	20 % w/v PEG 3,350	100 mM BIS-TRIS propane; pH 7.5	200 mM Sodium iodide
G4	20 % w/v PEG 3,350	100 mM BIS-TRIS propane; pH 7.5	200 mM Potassium thiocyanate
G5	20 % w/v PEG 3,350	100 mM BIS-TRIS propane; pH 7.5	200 mM Sodium nitrate
G6	20 % w/v PEG 3,350	100 mM BIS-TRIS propane; pH 7.5	200 mM Sodium formate
G7	20 % w/v PEG 3,350	100 mM BIS-TRIS propane; pH 7.5	200 mM Sodium acetate
G8	20 % w/v PEG 3,350	100 mM BIS-TRIS propane; pH 7.5	200 mM Sodium sulfate
G9	20 % w/v PEG 3,350	100 mM BIS-TRIS propane; pH 7.5	200 mM Potassium Sodium tartrate
G10	20 % w/v PEG 3,350	100 mM BIS-TRIS propane; pH 7.5	none
G11	20 % w/v PEG 3,350	100 mM BIS-TRIS propane; pH 7.5	200 mM tri-Sodium citrate
G12	20 % w/v PEG 3,350	100 mM BIS-TRIS propane; pH 7.5	200 mM di-Sodium malonate
H1	20 % w/v PEG 3,350	100 mM BIS-TRIS propane; pH 8.5	200 mM Sodium fluoride
H2	20 % w/v PEG 3,350	100 mM BIS-TRIS propane; pH 8.5	200 mM Sodium bromide
H3	20 % w/v PEG 3,350	100 mM BIS-TRIS propane; pH 8.5	200 mM Sodium iodide
H4	20 % w/v PEG 3,350	100 mM BIS-TRIS propane; pH 8.5	200 mM Potassium thiocyanate
H5	20 % w/v PEG 3,350	100 mM BIS-TRIS propane; pH 8.5	200 mM Sodium nitrate
H6	20 % w/v PEG 3,350	100 mM BIS-TRIS propane; pH 8.5	200 mM Sodium formate
H7	20 % w/v PEG 3,350	100 mM BIS-TRIS propane; pH 8.5	200 mM Sodium acetate
H8	20 % w/v PEG 3,350	100 mM BIS-TRIS propane; pH 8.5	200 mM Sodium sulfate
H9	20 % w/v PEG 3,350	100 mM BIS-TRIS propane; pH 8.5	200 mM Potassium Sodium tartrate
H10	20 % w/v PEG 3,350	100 mM BIS-TRIS propane; pH 8.5	20 mM Sodium Potassium phosphate
H11	20 % w/v PEG 3,350	100 mM BIS-TRIS propane; pH 8.5	200 mM tri-Sodium citrate
H12	20 % w/v PEG 3,350	100 mM BIS-TRIS propane; pH 8.5	200 mM di-Sodium malonate

*pH values indicated are those of the 1.0 M buffer stock solution prior to dilution with other components

JBScreen JCSG++

JCSG++ 1	Precipitant 1	Precipitant 2	Buffer*	Additive
No.				
A1	50 % v/v PEG 400	none	100 mM Sodium acetate; pH 4.5	200 mM Lithium sulfate
A2	20 % w/v PEG 3,000	none	100 mM tri-Sodium citrate; pH 5.5	none
A3	20 % w/v PEG 3,350	none	none	200 mM di-Ammonium hydrogen citrate; pH 5.0
A4	30 % v/v MPD	none	100 mM Sodium acetate; pH 4.6	20 mM Calcium chloride
A5	20 % w/v PEG 3,350	none	none	200 mM Magnesium formate; pH 5.9
A6	20 % w/v PEG 1,000	none	100 mM Potassium phosphate citrate; pH 4.2	200 mM Lithium sulfate
A7	20 % w/v PEG 8,000	none	100 mM CHES; pH 9.5	none
A8	20 % w/v PEG 3,350	none	none	200 mM Ammonium formate; pH 6.6
A9	20 % w/v PEG 3,350	none	none	200 mM Ammonium chloride; pH 6.3
A10	20 % w/v PEG 3,350	none	none	200 mM Potassium formate; pH 7.3
A11	50 % v/v MPD	none	100 mM TRIS; pH 8.5	200 mM Ammonium di-hydrogen phosphate
A12	20 % w/v PEG 3,350	none	none	200 mM Potassium nitrate; pH 6.9
B1	none	none	100 mM tri-Sodium citrate; pH 4.0	800 mM Ammonium sulfate
B2	20 % w/v PEG 3,350	none	none	200 mM Sodium thiocyanate; pH 6.9
B3	20 % w/v PEG 6,000	none	100 mM BICINE; pH 9.0	none
B4	10 % w/v PEG 8,000	8 % v/v Ethylene glycol	100 mM HEPES; pH 7.5	none
B5	40 % v/v MPD	5 % w/v PEG 8,000	100 mM MES; pH 6.5	none
B6	40 % v/v Ethanol	5 % w/v PEG 1,000	100 mM Potassium phosphate citrate; pH 4.2	none
B7	8 % w/v PEG 4,000	none	100 mM Sodium acetate; pH 4.6	none
B8	10 % w/v PEG 8,000	none	100 mM TRIS; pH 7.0	200 mM Magnesium chloride
B9	20 % w/v PEG 6,000	none	100 mM tri-Sodium citrate; pH 5.0	none
B10	50 % v/v PEG 200	none	100 mM MES; pH 6.5	200 mM Magnesium chloride
B11	none	none	none	1.6 M tri-Sodium citrate
B12	20 % w/v PEG 3,350	none	none	200 mM tri-Potassium citrate; pH 8.3

JCSG++ 2	Precipitant 1	Precipitant 2	Buffer*	Additive
No.				
C1	20 % w/v PEG 8,000	none	100 mM Potassium phosphate citrate; pH 4.2	200 mM Sodium chloride
C2	20 % w/v PEG 6,000	none	100 mM tri-Sodium citrate; pH 4.0	1 M Lithium chloride
C3	20 % w/v PEG 3,350	none	none	200 mM Ammonium nitrate; pH 6.3
C4	10 % w/v PEG 6,000	none	100 mM HEPES; pH 7.0	none
C5	800 mM Sodium di-hydrogen phosphate	800 mM Potassium di-hydrogen phosphate	100 mM HEPES; pH 7.5	none
C6	40 % v/v PEG 300	none	100 mM Potassium phosphate citrate; pH 4.2	none
C7	10 % w/v PEG 3,000	none	100 mM Sodium acetate; pH 4.5	200 mM Zinc acetate
C8	20 % v/v Ethanol	none	100 mM TRIS; pH 8.5	none
C9	25 % v/v 1,2-Propanediol	10 % v/v Glycerol	100 mM Sodium Potassium phosphate; pH 6.2	none
C10	10 % w/v PEG 20,000	2 % v/v 1,4-Dioxane	100 mM BICINE; pH 9.0	none
C11	none	none	100 mM Sodium acetate; pH 4.6	2 M Ammonium sulfate
C12	10 % w/v PEG 1,000	10 % w/v PEG 8,000	none	none
D1	24 % w/v PEG 1,500	20 % v/v Glycerol	none	none
D2	30 % v/v PEG 400	none	100 mM HEPES; pH 7.5	200 mM Magnesium chloride
D3	50 % v/v PEG 200	none	100 mM Sodium Potassium phosphate; pH 6.2	200 mM Sodium chloride
D4	30 % w/v PEG 8,000	none	100 mM Sodium acetate; pH 4.5	200 mM Lithium sulfate
D5	70 % v/v MPD	none	100 mM HEPES; pH 7.5	none
D6	20 % w/v PEG 8,000	none	100 mM TRIS; pH 8.5	200 mM Magnesium chloride
D7	40 % v/v PEG 400	none	100 mM TRIS; pH 8.5	200 mM Lithium sulfate
D8	40 % v/v MPD	none	100 mM TRIS; pH 8.0	none
D9	25.5 % w/v PEG 4,000	15 % v/v Glycerol	none	170 mM Ammonium sulfate
D10	40 % v/v PEG 300	none	100 mM MES; pH 6.5	200 mM Calcium acetate
D11	14 % v/v 2-Propanol	30 % v/v Glycerol	70 mM Sodium acetate; pH 4.6	140 mM Calcium chloride
D12	16 % w/v PEG 8,000	20 % v/v Glycerol	none	40 mM Potassium di-hydrogen phosphate

JCSG++ 3				
No.	Precipitant 1	Precipitant 2	Buffer*	Additive
E1	none	None	100 mM MES; pH 6.5	1 M tri-Sodium citrate
E2	2 M Ammonium sulfate	None	100 mM MES; pH 6.5	200 mM Sodium chloride
E3	10 % v/v 2-Propanol	None	100 mM HEPES; pH 7.5	200 mM Sodium chloride
E4	1.26 M Ammonium sulfate	None	100 mM TRIS; pH 8.5	200 mM Lithium sulfate
E5	40 % v/v MPD	None	100 mM CAPS; pH 10.5	none
E6	20 % w/v PEG 3,000	None	100 mM Imidazole; pH 8.0	200 mM Zinc acetate
E7	10 % v/v 2-Propanol	None	100 mM MES; pH 6.5	200 mM Zinc acetate
E8	none	None	100 mM Sodium acetate; pH 4.5	1 M di-Ammonium hydrogen phosphate
E9	none	None	100 mM MES; pH 6.5	1.6 M Magnesium sulfate
E10	10 % w/v PEG 6,000	None	100 mM BICINE; pH 9.0	none
E11	14.4 % w/v PEG 8,000	20% v/v Glycerol	80 mM MES; pH 6.5	160 mM Calcium acetate
E12	10 % w/v PEG 8,000	None	100 mM Imidazole; pH 8.0	none
F1	30 % v/v Jeffamine® M-600	None	100 mM MES; pH 6.5	50 mM Cesium chloride
F2	none	None	100 mM tri-Sodium citrate; pH 5.0	3.15 M Ammonium sulfate
F3	20 % v/v MPD	None	100 mM TRIS; pH 8.0	none
F4	20 % v/v Jeffamine® M-600	None	100 mM HEPES; pH 7.5	none
F5	50 % v/v Ethylene glycol	None	100 mM TRIS; pH 8.5	200 mM Magnesium chloride
F6	10 % v/v MPD	None	100 mM BICINE; pH 9.0	none
F7	none	None	none	800 mM di-Sodium succinate; pH 7.0
F8	none	None	none	2.1 M di-Sodium DL-malate; pH 7.0
F9	none	None	none	2.4 M di-Sodium malonate; pH 7.0
F10	0.5 % w/v Jeffamine® ED-2001; pH 7.0	None	100 mM HEPES; pH 7.0	1.1 M di-Sodium malonate; pH 7.0
F11	1 % w/v PEG 2,000 MME	None	100 mM HEPES; pH 7.0	1 M di-Sodium succinate; pH 7.0
F12	30 % v/v Jeffamine® M-600; pH 7.0	None	100 mM HEPES; pH 7.0	none

JCSG++ 4				
No.	Precipitant		Buffer*	Additive
G1	30 % w/v Jeffamine® ED-2001; pH 7.0		100 mM HEPES; pH 7.0	none
G2	22 % w/v Poly(acrylic acid sodium salt) 5,100		100 mM HEPES; pH 7.5	20 mM Magnesium chloride
G3	20 % w/v Polyvinylpyrrolidone K15		100 mM TRIS; pH 8.5	100 mM Cobalt (II) chloride
G4	20 % w/v PEG 2,000		100 mM TRIS; pH 8.5	200 mM Trimethylamine N-oxide
G5	12 % w/v PEG 3,350		100 mM HEPES; pH 7.5	5 mM Cobalt (II) chloride, 5 mM Cadmium chloride, 5 mM Nickel (II) chloride, 5 mM Magnesium chloride
G6	20 % w/v PEG 3,350		none	200 mM di-Sodium malonate; pH 7.0
G7	15 % w/v PEG 3,350		none	100 mM di-Sodium succinate; pH 7.0
G8	20 % w/v PEG 3,350		none	150 mM di-Sodium DL-malate; pH 7.0
G9	30 % w/v PEG 2,000 MME		none	100 mM Potassium thiocyanate
G10	30 % w/v PEG 2,000 MME		none	150 mM Potassium bromide
G11	none		100 mM BIS-TRIS; pH 5.5	2 M Ammonium sulfate
G12	none		100 mM BIS-TRIS; pH 5.5	3 M Sodium chloride
H1	none		100 mM BIS-TRIS; pH 5.5	300 mM Magnesium formate
H2	1 % w/v PEG 3,350		100 mM BIS-TRIS; pH 5.5	1 M Ammonium sulfate
H3	25 % w/v PEG 3,350		100 mM BIS-TRIS; pH 5.5	none
H4	45 % v/v MPD		100 mM BIS-TRIS; pH 5.5	200 mM Calcium chloride
H5	45 % v/v MPD		100 mM BIS-TRIS; pH 5.5	200 mM Ammonium acetate
H6	17 % w/v PEG 10,000		100 mM BIS-TRIS; pH 5.5	100 mM Ammonium acetate
H7	25 % w/v PEG 3,350		100 mM BIS-TRIS; pH 5.5	200 mM Ammonium sulfate
H8	25 % w/v PEG 3,350		100 mM BIS-TRIS; pH 5.5	200 mM Sodium chloride
H9	25 % w/v PEG 3,350		100 mM BIS-TRIS; pH 5.5	200 mM Lithium sulfate
H10	25 % w/v PEG 3,350		100 mM BIS-TRIS; pH 5.5	200 mM Ammonium acetate
H11	25 % w/v PEG 3,350		100 mM BIS-TRIS; pH 5.5	200 mM Magnesium chloride
H12	45 % v/v MPD		100 mM HEPES; pH 7.5	200 mM Ammonium acetate

*pH values indicated are those of the 1.0 M buffer stock solution prior to dilution with other components

Pi-Screens

Pi-minimal No.	Precipitant	Buffer*	Additive
A1	600 mM Sodium Potassium phosphate; pH 4.0	150 mM Sodium formate; pH 4.0	160 mM Potassium bromide
A2	24 % v/v PEG 550 MME	150 mM Sodium acetate; pH 4.5	8 % v/v PEG 300
A3	2 M Ammonium nitrate	150 mM di-Sodium DL-malate; pH 5.0	160 mM Magnesium sulfate
A4	10 % w/v PEG 20,000	150 mM tri-Sodium citrate; pH 5.5	32 mM Sodium fluoride
A5	30 % w/v PEG 1,000	150 mM MES; pH 6.0	80 mM Potassium thiocyanate
A6	1.6 M Sodium chloride	150 mM MES; pH 6.5	160 mM Sodium iodide
A7	24 % w/v PEG 4,000	150 mM MOPS; pH 7.0	8 % v/v 1,2-Propanediol
A8	800 mM Lithium sulfate	150 mM HEPES; pH 7.5	none
A9	20 % w/v PEG 5,000 MME	150 mM TRIS; pH 8.0	8 % v/v Ethylene glycol
A10	36 % w/v Glycerol	150 mM TAPS; pH 8.5	80 mM Potassium Sodium tartrate
A11	1.4 M Ammonium sulfate	150 mM AMPD - TRIS buffer; pH 9.0	8 % v/v MPD
A12	20 % w/v PEG 8,000	150 mM CAPSO; pH 9.5	8 % v/v 2-Butanol
B1	2.29 M Ammonium nitrate	150 mM Sodium formate; pH 4.0	70 mM Calcium chloride
B2	11.4 % w/v PEG 20,000	150 mM Sodium acetate; pH 4.5	7 % v/v Ethylene glycol
B3	34.3 % w/v PEG 1,000	150 mM di-Sodium DL-malate; pH 5.0	70 mM Potassium Sodium tartrate
B4	1.83 M Sodium chloride	150 mM tri-Sodium citrate; pH 5.5	7 % v/v MPD
B5	27.4 % w/v PEG 4,000	150 mM MES; pH 6.0	7 % v/v 2-Butanol
B6	910 mM Lithium sulfate	150 mM MES; pH 6.5	140 mM Potassium bromide
B7	22.9 % w/v PEG 5,000 MME	150 mM MOPS; pH 7.0	7 % v/v PEG 300
B8	41.1 % w/v Glycerol	150 mM HEPES; pH 7.5	140 mM Magnesium sulfate
B9	1.6 M Ammonium sulfate	150 mM TRIS; pH 8.0	28 mM Sodium fluoride
B10	22.9 % w/v PEG 8,000	150 mM TAPS; pH 8.5	70 mM Potassium thiocyanate
B11	690 mM Sodium Potassium phosphate; pH 9.0	150 mM AMPD - TRIS buffer; pH 9.0	140 mM Sodium iodide
B12	28 % v/v PEG 550 MME	150 mM CAPSO; pH 9.5	7 % v/v 1,2-Propanediol
C1	38.6 % w/v PEG 1,000	150 mM Sodium formate; pH 4.0	120 mM Magnesium sulfate
C2	2.06 M Sodium chloride	150 mM Sodium acetate; pH 4.5	24 mM Sodium fluoride
C3	30.9 % w/v PEG 4,000	150 mM di-Sodium DL-malate; pH 5.0	60 mM Potassium thiocyanate
C4	1.03 M Lithium sulfate	150 mM tri-Sodium citrate; pH 5.5	120 mM Sodium iodide
C5	25.7 % w/v PEG 5,000 MME	150 mM MES; pH 6.0	6 % v/v 1,2-Propanediol
C6	46.3 % w/v Glycerol	150 mM MES; pH 6.5	60 mM Calcium chloride
C7	1.8 M Ammonium sulfate	150 mM MOPS; pH 7.0	6 % v/v Ethylene glycol
C8	25.7 % w/v PEG 8,000	150 mM HEPES; pH 7.5	60 mM Potassium Sodium tartrate
C9	770 mM Sodium Potassium phosphate; pH 8.0	150 mM TRIS; pH 8.0	6 % v/v MPD
C10	31 % v/v PEG 550 MME	150 mM TAPS; pH 8.5	6 % v/v 2-Butanol
C11	2.57 M Ammonium nitrate	150 mM AMPD - TRIS buffer; pH 9.0	120 mM Potassium bromide
C12	12.9 % w/v PEG 20,000	150 mM CAPSO; pH 9.5	6 % v/v PEG 300
D1	34.3 % w/v PEG 4,000	150 mM Sodium formate; pH 4.0	none
D2	1.14 M Lithium sulfate	150 mM Sodium acetate; pH 4.5	5 % v/v MPD
D3	28.6 % w/v PEG 5,000 MME	150 mM di-Sodium DL-malate; pH 5.0	5 % v/v 2-Butanol
D4	51.4 % w/v Glycerol	150 mM tri-Sodium citrate; pH 5.5	100 mM Potassium bromide
D5	2 M Ammonium sulfate	150 mM MES; pH 6.0	5 % v/v PEG 300
D6	28.6 % w/v PEG 8,000	150 mM MES; pH 6.5	100 mM Magnesium sulfate
D7	860 mM Sodium Potassium phosphate; pH 7.0	150 mM MOPS; pH 7.0	20 mM Sodium fluoride
D8	34 % v/v PEG 550 MME	150 mM HEPES; pH 7.5	50 mM Potassium thiocyanate
D9	2.86 M Ammonium nitrate	150 mM TRIS; pH 8.0	100 mM Sodium iodide
D10	14.3 % w/v PEG 20,000	150 mM TAPS; pH 8.5	5 % v/v 1,2-Propanediol
D11	42.9 % w/v PEG 1,000	none	50 mM Calcium chloride
D12	2.29 M Sodium chloride	150 mM CAPSO; pH 9.5	5 % v/v Ethylene glycol

Pi-minimal No.	Precipitant	Buffer*	Additive
E1	31.4 % w/v PEG 5,000 MME	150 mM Sodium formate; pH 4.0	40 mM Potassium thiocyanate
E2	56.6 % w/v Glycerol	150 mM Sodium acetate; pH 4.5	80 mM Sodium iodide
E3	2.2 M Ammonium sulfate	150 mM di-Sodium DL-malate; pH 5.0	4 % v/v 1,2-Propanediol
E4	31.4 % w/v PEG 8,000	150 mM tri-Sodium citrate; pH 5.5	none
E5	940 mM Sodium Potassium phosphate; pH 6.0	150 mM MES; pH 6.0	4 % v/v Ethylene glycol
E6	37.7 % v/v PEG 550 MME	150 mM MES; pH 6.5	40 mM Potassium Sodium tartrate
E7	3.14 M Ammonium nitrate	150 mM MOPS; pH 7.0	4 % v/v MPD
E8	15.7 % w/v PEG 20,000	150 mM HEPES; pH 7.5	4 % v/v 2-Butanol
E9	47.1 % w/v PEG 1,000	150 mM TRIS; pH 8.0	80 mM Potassium bromide
E10	2.51 M Sodium chloride	150 mM TAPS; pH 8.5	4 % v/v PEG 300
E11	37.7 % w/v PEG 4,000	150 mM AMPD - TRIS buffer; pH 9.0	80 mM Magnesium sulfate
E12	1.26 M Lithium sulfate	150 mM CAPSO; pH 9.5	none
F1	2.4 M Ammonium sulfate	150 mM Sodium formate; pH 4.0	3 % v/v 2-Butanol
F2	34.3 % w/v PEG 8,000	150 mM Sodium acetate; pH 4.5	60 mM Potassium bromide
F3	1.03 M Sodium Potassium phosphate; pH 5.0	150 mM di-Sodium DL-malate; pH 5.0	3 % v/v PEG 300
F4	42 % v/v PEG 550 MME	none	60 mM Magnesium sulfate
F5	3.43 M Ammonium nitrate	150 mM MES; pH 6.0	12 mM Sodium fluoride
F6	17.1 % w/v PEG 20,000	150 mM MES; pH 6.5	30 mM Potassium thiocyanate
F7	51.4 % w/v PEG 1,000	150 mM MOPS; pH 7.0	60 mM Sodium iodide
F8	2.74 M Sodium chloride	150 mM HEPES; pH 7.5	3 % v/v 1,2-Propanediol
F9	41.1 % w/v PEG 4,000	150 mM TRIS; pH 8.0	30 mM Calcium chloride
F10	1.37 M Lithium sulfate	150 mM TAPS; pH 8.5	3 % v/v Ethylene glycol
F11	34.3 % w/v PEG 5,000 MME	150 mM AMPD - TRIS buffer; pH 9.0	30 mM Potassium Sodium tartrate
F12	61.7 % w/v Glycerol	150 mM CAPSO; pH 9.5	3 % v/v MPD
G1	1.11 M Sodium Potassium phosphate; pH 4.0	150 mM Sodium formate; pH 4.0	2 % v/v 1,2-Propanediol
G2	44.6 % v/v PEG 550 MME	150 mM Sodium acetate; pH 4.5	none
G3	3.71 M Ammonium nitrate	150 mM di-Sodium DL-malate; pH 5.0	2 % v/v Ethylene glycol
G4	18.6 % w/v PEG 20,000	150 mM tri-Sodium citrate; pH 5.5	20 mM Potassium Sodium tartrate
G5	55.7 % w/v PEG 1,000	150 mM MES; pH 6.0	2 % v/v MPD
G6	2.97 M Sodium chloride	150 mM MES; pH 6.5	2 % v/v 2-Butanol
G7	44.6 % w/v PEG 4,000	150 mM MOPS; pH 7.0	40 mM Potassium bromide
G8	1.49 M Lithium sulfate	150 mM HEPES; pH 7.5	2 % v/v PEG 300
G9	37.1 % w/v PEG 5,000 MME	150 mM TRIS; pH 8.0	40 mM Magnesium sulfate
G10	66.9 % w/v Glycerol	150 mM TAPS; pH 8.5	8 mM Sodium fluoride
G11	2.6 M Ammonium sulfate	150 mM AMPD - TRIS buffer; pH 9.0	20 mM Potassium thiocyanate
G12	37.1 % w/v PEG 8,000	150 mM CAPSO; pH 9.5	40 mM Sodium iodide
H1	4 M Ammonium nitrate	150 mM Sodium formate; pH 4.0	1 % v/v PEG 300
H2	20 % w/v PEG 20,000	150 mM Sodium acetate; pH 4.5	20 mM Magnesium sulfate
H3	60 % w/v PEG 1,000	150 mM di-Sodium DL-malate; pH 5.0	4 mM Sodium fluoride
H4	3.2 M Sodium chloride	150 mM tri-Sodium citrate; pH 5.5	10 mM Potassium thiocyanate
H5	48 % w/v PEG 4,000	150 mM MES; pH 6.0	20 mM Sodium iodide
H6	1.6 M Lithium sulfate	150 mM MES; pH 6.5	1 % v/v 1,2-Propanediol
H7	40 % w/v PEG 5,000 MME	150 mM MOPS; pH 7.0	10 mM Calcium chloride
H8	72 % w/v Glycerol	150 mM HEPES; pH 7.5	1 % v/v Ethylene glycol
H9	2.8 M Ammonium sulfate	150 mM TRIS; pH 8.0	10 mM Potassium Sodium tartrate; pH 7.0
H10	40 % w/v PEG 8,000	150 mM TAPS; pH 8.5	1 % v/v MPD
H11	1.2 M Sodium Potassium phosphate; pH 9.0	150 mM AMPD - TRIS buffer; pH 9.0	1 % v/v 2-Butanol
H12	48 % v/v PEG 550 MME	150 mM CAPSO; pH 9.5	20 mM Potassium bromide

*pH values indicated are those of the 1.0 M buffer stock solution prior to dilution with other components

Pi-PEG No.	Precipitant	Buffer*	Additive
A1	22.5 % v/v PEG 200	50 mM Sodium acetate; pH 4.8	none
A2	20 % v/v PEG 300	50 mM Sodium acetate; pH 5.2	none
A3	20 % v/v PEG 350 MME	50 mM MES; pH 5.6	none
A4	20 % v/v PEG 400	50 mM MES; pH 6.0	none
A5	20 % v/v PEG 550 MME	50 mM ADA; pH 6.4	none
A6	20 % v/v PEG 600	50 mM ADA; pH 6.8	none
A7	17.5 % w/v PEG 1,000	50 mM HEPES; pH 7.1	none
A8	17.5 % w/v PEG 1,500	50 mM HEPES; pH 7.3	none
A9	15 % w/v PEG 2,000	50 mM TRIS; pH 7.6	none
A10	15 % w/v PEG 2,000 MME	50 mM TRIS; pH 8.0	none
A11	15 % w/v PEG 3,000	50 mM BICINE; pH 8.4	none
A12	15 % w/v PEG 4,000	50 mM BICINE; pH 8.8	none
B1	15 % w/v PEG 1,500	50 mM Sodium acetate; pH 4.8	3.6 % w/v PEG 4,000
B2	12.9 % w/v PEG 2,000	50 mM Sodium acetate; pH 5.2	6.4 % v/v PEG 200
B3	12.9 % w/v PEG 2,000 MME	50 mM MES; pH 5.6	5.7 % v/v PEG 300
B4	12.9 % w/v PEG 3,000	50 mM MES; pH 6.0	5.7 % v/v PEG 350 MME
B5	12.9 % w/v PEG 4,000	50 mM ADA; pH 6.4	5.7 % v/v PEG 400
B6	19.3 % v/v PEG 200	50 mM ADA; pH 6.8	5.7 % v/v PEG 550 MME
B7	17.1 % v/v PEG 300	50 mM HEPES; pH 7.1	5.7 % v/v PEG 600
B8	17.1 % v/v PEG 350 MME	50 mM HEPES; pH 7.3	5 % w/v PEG 1,000
B9	17.1 % v/v PEG 400	50 mM TRIS; pH 7.6	5 % w/v PEG 1,500
B10	17.1 % v/v PEG 550 MME	50 mM TRIS; pH 8.0	4.3 % w/v PEG 2,000
B11	17.1 % v/v PEG 600	50 mM BICINE; pH 8.4	4.3 % w/v PEG 2,000 MME
B12	15 % w/v PEG 1,000	50 mM BICINE; pH 8.8	4.3 % w/v PEG 3,000
C1	14.3 % v/v PEG 350 MME	50 mM Sodium acetate; pH 4.8	11.4 % v/v PEG 300
C2	14.3 % v/v PEG 400	50 mM Sodium acetate; pH 5.2	11.4 % v/v PEG 350 MME
C3	14.3 % v/v PEG 550 MME	50 mM MES; pH 5.6	11.4 % v/v PEG 400
C4	14.3 % v/v PEG 600	50 mM MES; pH 6.0	11.4 % v/v PEG 550 MME
C5	12.5 % w/v PEG 1,000	50 mM ADA; pH 6.4	11.4 % v/v PEG 600
C6	12.5 % w/v PEG 1,500	50 mM ADA; pH 6.8	10 % w/v PEG 1,000
C7	10.7 % w/v PEG 2,000	50 mM HEPES; pH 7.1	10 % w/v PEG 1,500
C8	10.7 % w/v PEG 2,000 MME	50 mM HEPES; pH 7.3	8.6 % w/v PEG 2,000
C9	10.7 % w/v PEG 3,000	50 mM TRIS; pH 7.6	8.6 % w/v PEG 2,000 MME
C10	10.7 % w/v PEG 4,000	50 mM TRIS; pH 8.0	8.6 % w/v PEG 3,000
C11	16.1 % v/v PEG 200	50 mM BICINE; pH 8.4	7.1 % w/v PEG 4,000
C12	14.3 % v/v PEG 300	50 mM BICINE; pH 8.8	12.9 % v/v PEG 200
D1	8.6 % w/v PEG 2,000 MME	50 mM Sodium acetate; pH 4.8	17.1 % v/v PEG 400
D2	8.6 % w/v PEG 3,000	50 mM Sodium acetate; pH 5.2	17.1 % v/v PEG 550 MME
D3	8.6 % w/v PEG 4,000	50 mM MES; pH 5.6	17.1 % v/v PEG 600
D4	12.9 % v/v PEG 200	50 mM MES; pH 6.0	15 % w/v PEG 1,000
D5	11.4 % v/v PEG 300	50 mM ADA; pH 6.4	15 % w/v PEG 1,500
D6	11.4 % v/v PEG 350 MME	50 mM ADA; pH 6.8	12.9 % w/v PEG 2,000
D7	11.4 % v/v PEG 400	50 mM HEPES; pH 7.1	12.9 % w/v PEG 2,000 MME
D8	11.4 % v/v PEG 550 MME	50 mM HEPES; pH 7.3	12.9 % w/v PEG 3,000
D9	11.4 % v/v PEG 600	50 mM TRIS; pH 7.6	10.7 % w/v PEG 4,000
D10	10 % w/v PEG 1,000	50 mM TRIS; pH 8.0	19.3 % v/v PEG 200
D11	10 % w/v PEG 1,500	50 mM BICINE; pH 8.4	17.1 % v/v PEG 300
D12	8.6 % w/v PEG 2,000	50 mM BICINE; pH 8.8	17.1 % v/v PEG 350 MME

JBScreen Wizard

Wizard 1 No.	Precipitant	Buffer*	Additive
12/A1	20 % w/v PEG 8,000	100 mM CHES; pH 9.5	none
12/A2	10 % v/v 2-Propanol	100 mM HEPES; pH 7.5	200 mM Sodium chloride
12/A3	15 % v/v Ethanol	100 mM CHES; pH 9.5	none
12/A4	35 % v/v MPD	100 mM Imidazole; pH 8.0	200 mM Magnesium chloride
12/A5	30 % v/v PEG 400	100 mM CAPS; pH 10.5	none
12/A6	20 % w/v PEG 3,000	100 mM tri-Sodium citrate; pH 5.5	none
12/A7	10 % w/v PEG 8,000	100 mM MES; pH 6.0	200 mM Zinc acetate
12/A8	2 M Ammonium sulfate	100 mM tri-Sodium citrate; pH 5.5	none
12/A9	1 M di-Ammonium hydrogen phosphate	100 mM Sodium acetate; pH 4.5	none
12/A10	20 % w/v PEG 2,000 MME	100 mM TRIS; pH 7.0	none
12/A11	20 % v/v 1,4-Butanediol	100 mM MES; pH 6.0	200 mM Lithium sulfate
12/A12	20 % w/v PEG 1,000	100 mM Imidazole; pH 8.0	200 mM Calcium acetate
12/B1	1.26 M Ammonium sulfate	100 mM MES; pH 6.5	none
12/B2	1 M tri-Sodium citrate	100 mM MES; pH 6.5	none
12/B3	10 % w/v PEG 3,000	100 mM Imidazole; pH 8.0	200 mM Lithium sulfate
12/B4	2.5 M Sodium chloride	100 mM Sodium Potassium phosphate; pH 6.2	none
12/B5	30 % w/v PEG 8,000	100 mM Sodium acetate; pH 4.5	200 mM Lithium sulfate
12/B6	1 M Potassium Sodium tartrate	100 mM Imidazole; pH 8.0	200 mM Sodium chloride
12/B7	20 % w/v PEG 1,000	100 mM TRIS; pH 7.0	none
12/B8	400 mM Sodium di-hydrogen phosphate, 1.6 M di-Potassium hydrogen phosphate	100 mM Imidazole; pH 8.0	200 mM Sodium chloride
12/B9	20 % w/v PEG 8,000	100 mM HEPES; pH 7.5	none
12/B10	10 % v/v 2-Propanol	100 mM TRIS; pH 8.5	none
12/B11	15 % v/v Ethanol	100 mM Imidazole; pH 8.0	200 mM Magnesium chloride
12/B12	35 % v/v MPD	100 mM TRIS; pH 7.0	200 mM Sodium chloride
12/C1	30 % v/v PEG 400	100 mM TRIS; pH 8.5	200 mM Magnesium chloride
12/C2	10 % w/v PEG 3,000	100 mM CHES; pH 9.5	none
12/C3	1.2 M Sodium di-hydrogen phosphate, 800 mM di-Potassium hydrogen phosphate	100 mM CAPS; pH 10.5	200 mM Lithium sulfate
12/C4	20 % w/v PEG 3,000	100 mM HEPES; pH 7.5	200 mM Sodium chloride
12/C5	10 % w/v PEG 8,000	100 mM CHES; pH 9.5	200 mM Sodium chloride
12/C6	1.26 M Ammonium sulfate	100 mM Sodium acetate; pH 4.5	200 mM Sodium chloride
12/C7	20 % w/v PEG 8,000	100 mM Sodium phosphate citrate; pH 4.2	200 mM Sodium chloride
12/C8	10 % w/v PEG 3,000	100 mM Sodium Potassium phosphate; pH 6.2	none
12/C9	2 M Ammonium sulfate	100 mM CAPS; pH 10.5	200 mM Lithium sulfate
12/C10	1 M di-Ammonium hydrogen phosphate	100 mM Imidazole; pH 8.0	none
12/C11	20 % v/v 1,4-Butanediol	100 mM Sodium acetate; pH 4.5	none
12/C12	1 M tri-Sodium citrate	100 mM Imidazole; pH 8.0	none
12/D1	2.5 M Sodium chloride	100 mM Imidazole; pH 8.0	none
12/D2	1 M Potassium Sodium tartrate	100 mM CHES; pH 9.5	200 mM Lithium sulfate
12/D3	20 % w/v PEG 1,000	100 mM Sodium phosphate citrate; pH 4.2	200 mM Lithium sulfate
12/D4	10 % v/v 2-Propanol	100 mM MES; pH 6.0	200 mM Calcium acetate
12/D5	30 % w/v PEG 3,000	100 mM CHES; pH 9.5	none
12/D6	15 % v/v Ethanol	100 mM TRIS; pH 7.0	none
12/D7	35 % v/v MPD	100 mM Sodium Potassium phosphate; pH 6.2	none
12/D8	30 % v/v PEG 400	100 mM Sodium acetate; pH 4.5	200 mM Calcium acetate
12/D9	20 % w/v PEG 3,000	100 mM Sodium acetate; pH 4.5	none
12/D10	10 % w/v PEG 8,000	100 mM Imidazole; pH 8.0	200 mM Calcium acetate
12/D11	1.26 M Ammonium sulfate	100 mM TRIS; pH 8.5	200 mM Lithium sulfate
12/D12	20 % w/v PEG 1,000	100 mM Sodium acetate; pH 4.5	200 mM Zinc acetate

Wizard 2	Precipitant	Buffer*	Additive
No.			
12/E1	10 % w/v PEG 3,000	100 mM Sodium acetate; pH 4.5	200 mM Zinc acetate
12/E2	35 % v/v MPD	100 mM MES; pH 6.0	200 mM Lithium sulfate
12/E3	20 % w/v PEG 8,000	100 mM TRIS; pH 8.5	200 mM Magnesium chloride
12/E4	2 M Ammonium sulfate	100 mM MES; pH 6.5	200 mM Sodium chloride
12/E5	20 % v/v 1,4-Butanediol	100 mM HEPES; pH 7.5	200 mM Sodium chloride
12/E6	10 % v/v 2-Propanol	100 mM Sodium phosphate citrate; pH 4.2	200 mM Lithium sulfate
12/E7	30 % w/v PEG 3,000	100 mM TRIS; pH 7.0	200 mM Sodium chloride
12/E8	10 % w/v PEG 8,000	100 mM Sodium Potassium phosphate; pH 6.2	200 mM Sodium chloride
12/E9	2 M Ammonium sulfate	100 mM Sodium phosphate citrate; pH 4.2	none
12/E10	1 M di-Ammonium hydrogen phosphate	100 mM TRIS; pH 8.5	none
12/E11	10 % v/v 2-Propanol	100 mM MES; pH 6.5	200 mM Zinc acetate
12/E12	30 % v/v PEG 400	100 mM MES; pH 6.5	200 mM Lithium sulfate
12/F1	15 % v/v Ethanol	100 mM tri-Sodium citrate; pH 5.5	200 mM Lithium sulfate
12/F2	20 % w/v PEG 1,000	100 mM Sodium Potassium phosphate; pH 6.2	200 mM Sodium chloride
12/F3	1.26 M Ammonium sulfate	100 mM HEPES; pH 7.5	none
12/F4	1 M tri-Sodium citrate	100 mM CHES; pH 9.5	none
12/F5	2.5 M Sodium chloride	100 mM TRIS; pH 7.0	200 mM Magnesium chloride
12/F6	20 % w/v PEG 3,000	100 mM TRIS; pH 7.0	200 mM Calcium acetate
12/F7	1.6 M Sodium di-hydrogen phosphate, 400 mM di-Potassium hydrogen phosphate	100 mM Sodium phosphate citrate; pH 4.2	none
12/F8	15 % v/v Ethanol	100 mM MES; pH 6.0	200 mM Zinc acetate
12/F9	35 % v/v MPD	100 mM Sodium acetate; pH 4.5	none
12/F10	10 % v/v 2-Propanol	100 mM Imidazole; pH 8.0	none
12/F11	15 % v/v Ethanol	100 mM HEPES; pH 7.5	200 mM Magnesium chloride
12/F12	30 % w/v PEG 8,000	100 mM Imidazole; pH 8.0	200 mM Sodium chloride
12/G1	35 % v/v MPD	100 mM HEPES; pH 7.5	200 mM Sodium chloride
12/G2	30 % v/v PEG 400	100 mM CHES; pH 9.5	none
12/G3	10 % w/v PEG 3,000	100 mM MES; pH 6.5	200 mM Magnesium chloride
12/G4	20 % w/v PEG 8,000	100 mM MES; pH 6.0	200 mM Calcium acetate
12/G5	1.26 M Ammonium sulfate	100 mM CHES; pH 9.5	200 mM Sodium chloride
12/G6	20 % v/v 1,4-Butanediol	100 mM Imidazole; pH 8.0	200 mM Zinc acetate
12/G7	1 M tri-Sodium citrate	100 mM TRIS; pH 7.0	200 mM Sodium chloride
12/G8	20 % w/v PEG 1,000	100 mM TRIS; pH 8.5	none
12/G9	1 M di-Ammonium hydrogen phosphate	100 mM tri-Sodium citrate; pH 5.5	200 mM Sodium chloride
12/G10	10 % w/v PEG 8,000	100 mM Imidazole; pH 8.0	none
12/G11	800 mM Sodium di-hydrogen phosphate, 1.2 M di-Potassium hydrogen phosphate	100 mM Sodium acetate; pH 4.5	none
12/G12	10 % w/v PEG 3,000	100 mM Sodium phosphate citrate; pH 4.2	200 mM Sodium chloride
12/H1	1 M Potassium Sodium tartrate	100 mM TRIS; pH 7.0	200 mM Lithium sulfate
12/H2	2.5 M Sodium chloride	100 mM Sodium acetate; pH 4.5	200 mM Lithium sulfate
12/H3	20 % w/v PEG 8,000	100 mM CAPS; pH 10.5	200 mM Sodium chloride
12/H4	20 % w/v PEG 3,000	100 mM Imidazole; pH 8.0	200 mM Zinc acetate
12/H5	2 M Ammonium sulfate	100 mM TRIS; pH 7.0	200 mM Lithium sulfate
12/H6	30 % v/v PEG 400	100 mM HEPES; pH 7.5	200 mM Sodium chloride
12/H7	10 % w/v PEG 8,000	100 mM TRIS; pH 7.0	200 mM Magnesium chloride
12/H8	20 % w/v PEG 1,000	100 mM MES; pH 6.5	200 mM Magnesium chloride
12/H9	1.26 M Ammonium sulfate	100 mM MES; pH 6.0	none
12/H10	1 M di-Ammonium hydrogen phosphate	100 mM Imidazole; pH 8.0	200 mM Sodium chloride
12/H11	2.5 M Sodium chloride	100 mM Imidazole; pH 8.0	200 mM Zinc acetate
12/H12	800 mM Potassium Sodium tartrate	100 mM MES; pH 6.0	none

*pH values indicated are those of the 1.0 M buffer stock solution prior to dilution with other components

Wizard 3	Precipitant	Buffer*	Additive
No.			
34/A1	20 % w/v PEG 3,350	none	200 mM di-Ammonium hydrogen citrate
34/A2	30 % v/v MPD	100 mM Sodium acetate; pH 4.6	20 mM Calcium chloride
34/A3	20 % w/v PEG 3,350	none	200 mM Magnesium formate
34/A4	20 % w/v PEG 3,350	none	200 mM Ammonium formate
34/A5	20 % w/v PEG 3,350	none	200 mM Ammonium chloride
34/A6	20 % w/v PEG 3,350	none	200 mM Barium chloride
34/A7	50 % v/v MPD	100 mM TRIS; pH 8.5	200 mM Ammonium di-hydrogen phosphate
34/A8	20 % w/v PEG 3,350	none	200 mM Potassium nitrate
34/A9	800 mM Ammonium sulfate	100 mM tri-Sodium citrate; pH 4.0	none
34/A10	20 % w/v PEG 3,350	none	200 mM Sodium thiocyanate
34/A11	20 % w/v PEG 6,000	100 mM BICINE; pH 9.0	none
34/A12	10 % w/v PEG 8,000	100 mM HEPES; pH 7.5	8 % v/v Ethylene glycol
34/B1	8 % w/v PEG 4,000	100 mM Sodium acetate; pH 4.6	none
34/B2	20 % w/v PEG 6,000	100 mM tri-Sodium citrate; pH 5.0	none
34/B3	1.6 M tri-Sodium citrate	none	none
34/B4	20 % w/v PEG 3,350	none	200 mM tri-Potassium citrate
34/B5	20 % w/v PEG 4,000	100 mM tri-Sodium citrate; pH 5.5	10 % v/v 2-Propanol
34/B6	20 % w/v PEG 6,000	100 mM tri-Sodium citrate; pH 4.0	1 M Lithium chloride
34/B7	20 % w/v PEG 3,350	none	200 mM Ammonium nitrate
34/B8	10 % w/v PEG 6,000	100 mM HEPES; pH 7.0	none
34/B9	800 mM Sodium di-hydrogen phosphate, 800 mM di-Potassium hydrogen phosphate	100 mM HEPES; pH 7.5	none
34/B10	20 % v/v Ethanol	100 mM TRIS; pH 8.5	none
34/B11	10 % w/v PEG 20,000	100 mM BICINE; pH 9.0	2 % v/v 1,4-Dioxane
34/B12	2 M Ammonium sulfate	100 mM Sodium acetate; pH 4.6	none
34/C1	10 % w/v PEG 1,000	none	10 % w/v PEG 8,000
34/C2	24 % w/v PEG 1,500	none	20 % v/v Glycerol
34/C3	30 % v/v PEG 400	100 mM HEPES; pH 7.5	200 mM Magnesium chloride
34/C4	70 % v/v MPD	100 mM HEPES; pH 7.5	none
34/C5	40 % v/v MPD	100 mM TRIS; pH 8.0	none
34/C6	25.5 % w/v PEG 4,000	none	170 mM Ammonium sulfate, 15 % v/v Glycerol
34/C7	14 % v/v 2-Propanol	70 mM Sodium acetate; pH 4.6	140 mM Calcium chloride, 30 % v/v Glycerol
34/C8	16 % w/v PEG 8,000	none	40 mM Potassium di-hydrogen phosphate, 20 % v/v Glycerol
34/C9	1.6 M Magnesium sulfate	100 mM MES; pH 6.5	none
34/C10	10 % w/v PEG 6,000	100 mM BICINE; pH 9.0	none
34/C11	14.4 % w/v PEG 8,000	80 mM MES; pH 6.5	160 mM Calcium acetate, 20 % v/v Glycerol
34/C12	30 % v/v Jeffamine® M-600; pH 7.0	100 mM MES; pH 6.5	50 mM Cesium chloride
34/D1	3.2 M Ammonium sulfate	100 mM tri-Sodium citrate; pH 5.0	none
34/D2	15 % w/v PEG 10,000	100 mM tri-Sodium citrate; pH 5.5	2 % v/v 1,4-Dioxane
34/D3	20 % v/v Jeffamine® M-600; pH 7.0	100 mM HEPES; pH 7.5	none
34/D4	10 % v/v MPD	100 mM BICINE; pH 9.0	none
34/D5	28 % v/v PEG 400	100 mM HEPES; pH 7.5	200 mM Calcium chloride
34/D6	30 % w/v PEG 4,000	100 mM TRIS; pH 8.5	200 mM Lithium sulfate
34/D7	30 % w/v PEG 8,000	none	200 mM Ammonium sulfate
34/D8	30 % w/v PEG 5,000 MME	100 mM TRIS; pH 8.0	200 mM Lithium sulfate
34/D9	1.5 M Ammonium sulfate	100 mM TRIS; pH 8.5	12 % v/v Glycerol
34/D10	50 % v/v MPD	100 mM TRIS; pH 8.5	200 mM Ammonium chloride
34/D11	30 % w/v PEG 5,000 MME	100 mM MES; pH 6.5	200 mM Ammonium sulfate
34/D12	20 % w/v PEG 10,000	100 mM HEPES; pH 7.5	none

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We offer free shipping of all orders worth EUR 250+ (excl. VAT) within Germany.

Payment

Invoices will be issued after your order has been shipped and will be sent to the billing address by separate mail. Invoices will not be included within the shipments. In case of partial deliveries, separate invoices will be issued after each shipment has left Jena Bioscience. You will find payment information (bank addresses and account data) on each invoice. Jena Bioscience accepts payment by:

Check

Please send your payment checks to the following address:

Jena Bioscience GmbH
Loebstedter Strasse 71
07749 Jena, Germany

We kindly ask you to make sure that our invoice number and your customer number appear on the check.

Wire transfer

All information necessary for wire transfers will be shown on each invoice.

Our VAT number (for EU customers): DE 195825742

Credit card

Jena Bioscience accepts the following credit cards:

- VISA
- Mastercard
- American Express

If you wish to pay by credit card, please provide the following credit card information:

- Card holder
- Card number
- Expiry date
- Security code (VISA / Mastercard: 3 digits, to be found on your card's back side in the upper right corner of the signature field; AmEx: usually 4 digits (sometimes only three), to be found on the front side of your card above the card number)

Patent Disclaimer

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Billing address

Shipping address

Customer number	Name
University/Company	University/Company
Institute/Department	Institute/Department
Address	Address
Postcode	Postcode
City/Signature	City/Signature
VAT number (EEC only)	Phone
PO number	Fax
Date / Signature	Email

If you wish to pay by credit card, please provide the following credit card information:

I want to pay by





Card holder	Card number
Expiry date	Security code

(VISA / Mastercard: 3 digits on card's back side, upper right corner of signature field; AmEx: 4 digits, card's front side, above card number)

	Catalog number	Product	Quantity	Net Price per Item EURO	Net Price all Items EURO
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
				Total	



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DIN EN ISO 9001 and DIN EN ISO 14001
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ACCCACGAAAGGGAA ATAAGC AACG TTCAGGGAAGAA CTAUAACTGCCAC ACCCAGAAAGGGAA ATAAGC AACG TTCAGGGAAGAA
TTCAGGGAAGAA CTAUAACTGCCAC ACCCAGAAAGGGAA ATAAGC AACG TTCAGGGAAGAA CTAUAACTGCCAC ACCCAGAAAGGGAA
ACCCACGAAAGGGAA ATAAGC AACG TTCAGGGAAGAA CTAUAACTGCCAC ACCCAGAAAGGGAA ATAAGC AACG TTCAGGGAAGAA

Crystallography

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