

**Select a base buffer and pH for initial screening based on previous studies
(test other buffers as stabilizers in initial screen)**

Controls

A	Blank
B	Protein/Virus alone

Excipients	Molarity or Conc
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Salts/Buffers

1	Histidine	50mM
2	Sodium acetate	50mM
3	Sodium chloride (salt)	150mM
4	Sodium citrate	50mM
5	Sodium phosphate	50mM
6	Sodium sulfate (salt)	150mM
7	Sodium succinate	50mM
8	Tris (TromeThamine)	50mM

Proteins

9	Human Albumin	1.0%
10	Hydrolysed Gelatin	1.0%
11	Protamine sulfate	0.2%

Amino acids and Miscellaneous

12	Arginine	0.1M
13	Aspartic acid	0.1M
14	Glutamic acid	0.1M
15	Glycine	0.1M
16	Histidine	0.1M
17	Isoleucine	0.1M
18	Lactic acid	0.1M
19	Lysine	0.1M
20	Maleic acid	0.1M
21	Malic acid	0.1M
22	Methionine	0.1M
23	Proline	0.1M
24	Urea	0.1M
25	Arginine+Glutamic acid	0.05M+0.05M
26	Arginine+Glutamic acid+Isoleucine	0.045M+0.045M+0.01M

Metal ions/Chelators/Reducing agents

27	Calcium chloride	10mM
28	DTT	1mM
29	EDTA	1mM
30	Magnesium chloride	10mM

Detergents

31	Benzalkonium chloride	0.05%
32	Brij 35	0.05%
33	Poloxamer 188 (Pluronic F-68)	0.05%
34	Polysorbate 20	0.05%
35	Polysorbate 80	0.05%
36	Sodium docusate	0.05%
37	Triton X-100	0.05%

Carbohydrates

38	Lactose	10.0%
39	Sucrose	10.0%
40	Trehalose	10.0%

Polyols

41	Glycerol	10.0%
42	Mannitol	10.0%
43	Sorbitol	10.0%

Cyclodextrins

44	Gamma-Cyclodextrin	5.0%
45	2-OH propyl β -CD	5.0%
46	Sulfobutyl ether beta-cyclodextrin	5.0%

Polymers/Osmolyte/Polyions

47	Carboxymethyl cellulose	1.0%
48	Chitosan	1.0%
49	Dextran sulfate	1.0%
50	Dextran 40	1.0%
51	Hydroxyethyl starch	1.0%
52	PEG-3350	1.0%
53	Sodium Hyaluronate	1.0%

M.W.

250,000

400,000

50,000

40,000

200,000

3350

800