

Supplementary Table 1. Experimental parameters (factors) and levels for formulations containing lactose or trehalose, leucine, pluronic F68 and PEG.

Parameter	Level		
	1	2	3
Lactose or Trehalose (mg/mL)	0	6	12
Leucine (mg/mL)	0	2.8	5.5
Pluronic F68 %(v/v)	0	0.27	0.54
PEG (mg/mL)	0	5	10

Supplementary Table 2. Experimental parameters (factors) and levels for formulations containing mannitol, glycine, leucine, pluronic F68 and PEG.

Parameter	Levels		
	1	2	3
Mannitol (mg/mL)	0	6	12
Glycine (mg/mL)	0	10	20
Leucine (mg/mL)	0	2.8	5.5
Pluronic F68 %(v/v)	0	0.27	0.54
PEG (mg/mL)	0	5	10

Supplementary Table 3. Master table enlisting formulation information of all the phage formulations produced in this study.

Phage	Formulation composition (mg/mL)				
	Trehalose	lactose	Leucine	Pluronic F68	PEG3000
PEV1			2.8	0.0027	5
			5.5	0.0054	10
	6			0.0027	10
	6		2.8	0.0054	
	6		5.5		5
	10		15		
	12			0.0054	5
	12		2.8		10
	12		5.5	0.0027	
	14		11		
	17		8		
	20		5		
	23		2		
			2.8	0.0027	5
			5.5	0.0054	10
		6		0.0027	10
		6	2.8	0.0054	
		6	5.5		5
		10	15		
		12		0.0054	5
		12	2.8		10
		12	5.5	0.0027	
		14	11		
	17	8			
	20	5			
	23	2			
PEV20			2.8	0.0027	5
			5.5	0.0054	10
	6			0.0027	10
	6		2.8	0.0054	
	6		5.5		5
	10		15		
	12			0.0054	5
	12		2.8		10
	12		5.5	0.0027	
	14		11		
	17		8		
	20		5		
	23		2		

		2.8	0.0027	5
		5.5	0.0054	10
	6		0.0027	10
	6	2.8	0.0054	
	6	5.5		5
	10	15		
	12		0.0054	5
	12	2.8		10
	12	5.5	0.0027	
	14	11		
	17	8		
	20	5		
	23	2		
PEV61		2.8	0.0027	5
		5.5	0.0054	10
	6		0.0027	10
	6	2.8	0.0054	
	6	5.5		5
	10	15		
	12		0.0054	5
	12	2.8		10
	12	5.5	0.0027	
	14	11		
	17	8		
	20	5		
	23	2		
		2.8	0.0027	5
		5.5	0.0054	10
	6		0.0027	10
	6	2.8	0.0054	
	6	5.5		5
	10	15		
	12		0.0054	5
	12	2.8		10
	12	5.5	0.0027	
	14	11		
	17	8		
	20	5		
	23	2		