## WHHS-Pro-China raw data

Pi removal efficiency of INP-PBP engineering bacteria

	Group A	Group B	Group C	
	BL21	BL21-PstS	BL21-INP-PstS	
3				
	1.36000000	1.44000000	2.13	
	1.49000000	1.01000000	2.01	
	1.76000000	1.87000000	2.55	

Effect of Pi starvation on Pi adsorption efficiency of INP-PBP engineering bacteria

Т	able format:		Group A			Group B		
	Grouped	BL21			BL21-INP-F	PstS		
	8	A:Y1	A:Y2	A:Y3	B:Y1	B:Y2	B:Y3	(
1	Control	1.3100	1.6300	1.7800	2.44	2.25	2.24	
2	Pi starvation	2.0200	2.2100	1.8900	4.11	3.06	3.83	

Effect of pH on Pi adsorption efficiency of INP-PBP engineering bacteria

Group B	Group C	Group D	Group E
5	7	8	10
1.34	2.07	1.42	0.42
2.04	2.27	1.15	0.58
1.57	2.70	1.24	0.31
	5 1.34 2.04	5 7   1.34 2.07   2.04 2.27	5     7     8       1.34     2.07     1.42       2.04     2.27     1.15

Effect of temperature on Pi adsorption efficiency of INP-PBP engineering bacteria

	Group A	Group B	Group C	(
	25	35	45	
3				
	1.450	2.190	0.560	
	1.830	2.580	0.310	
	1.190	2.290	0.450	

Effect of pH on Pi desorption of INP-PBP engineering bacteria

		TF.TT V				
	Group A	Group B	Group C	Group D	Group E	(
	3	5	7	8	10	
Θ						
Titl	0.5420	0.1450	0.147	0.297	0.755	
Titl	0.6860	0.1590	0.151	0.332	0.717	
Titl	0.5760	0.1590	0.207	0.296	0.784	
T141						

Effect of temperature on Pi desorption of INP-PBP engineering bacteria

Group A	Group B	Group C	(
25	35	45	
0.1650	0.4240	0.9330	
0.1900	0.4030	0.6160	
0.1250	0.5360	0.8860	

The active component of INP-PBP engineering bacteria

Cytoplasmic content	Membrane content
1.66	2.48
1.31	8.62
1.29	3.31

Pi removal efficiency of PelB–PBP engineering bacteria

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Group A	Group B	Group C	G
BL21	BL21-PstS	BL21-PelB-PstS	
1.0500	1.2300	2.8300	
1.2900	1.9800	2.6800	
1.7400	1.8300	2.0500	

The active component of PelB–INP engineering bacteria

L L		
Group C	Group B	Group A
Periplasmic fraction	Soluble fraction	Total cell lysate
1.47	1.62	2.01
1.08	1.41	2.31
1.31	1.94	2.33

## Removal efficiency of Pi by immobilized PBP

Group A	Group B	Group C	G
Bead	PelB-PstS	PelB-PstS(	
1.04	5.18	13.56	
1.35	4.48	17.90	
1.13	6.37	16.92	
	Bead 1.04 1.35	Bead     PelB-PstS       1.04     5.18       1.35     4.48	Bead     PelB-PstS     PelB-PstS(       1.04     5.18     13.56       1.35     4.48     17.90

## Effect of pH on desorption Pi of immobilized PBP

2	Group A	Group B	Group C	Group D	Group E
	3	5	7	8	10
	0.73000	0.2680	0.140	0.156	0.798
	1.29200	0.3000	0.112	0.172	0.827
	0.86400	0.2320	0.204	0.188	1.320

Effect of temperature on desorption Pi of immobilized PBP

Group A	Group B	Group C	
25	35	45	
0.5720	0.2540	1.298	
0.8320	0.3880	1.327	
0.7130	0.5430	0.989	