

Supporting Information

A facile colorimetric and spectrophotometric method for sensitive determination of Metformin in human serum based on citrate capped gold nanoparticles: Central composite design optimization

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Supplementary Captions:

Figure S1. Normal plot of residuals

Figure S2. Response using the CCD obtained by plotting (a) R_1 vs. pH. (b). R_1 vs. Ratio

Table S1. The designed matrix by software (Design Expert7) and the response R of each experiment

Table S2. ANOVA for Quadratic model

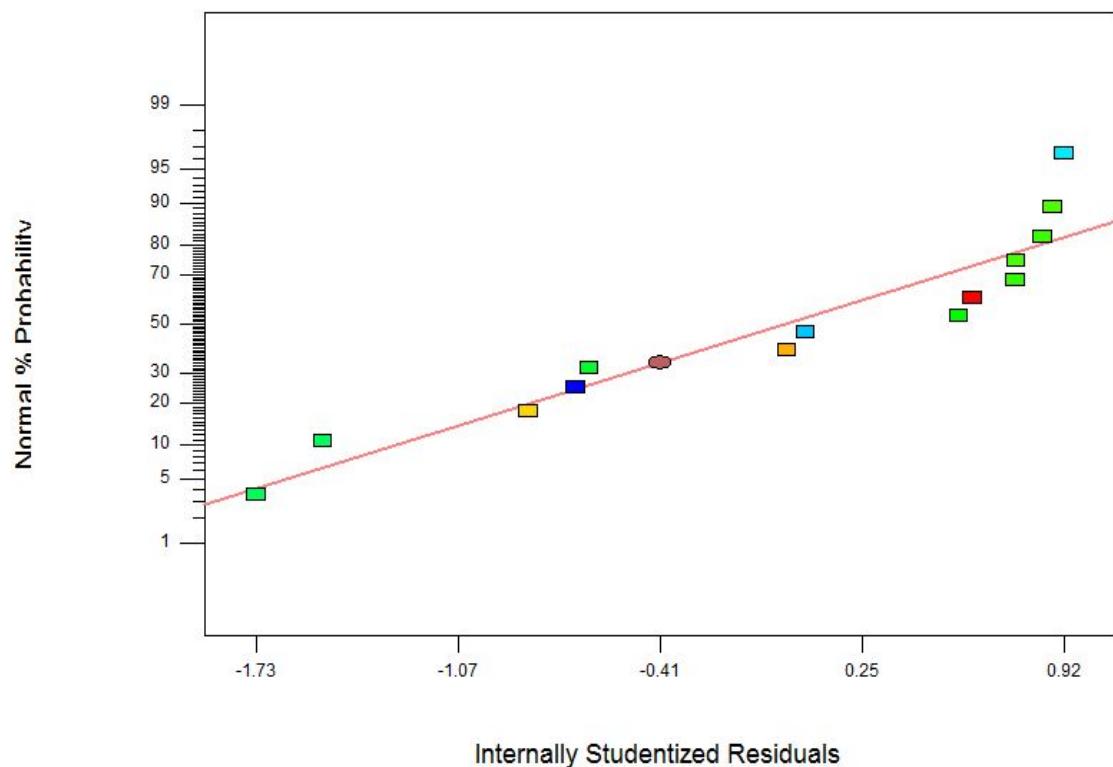


Figure S1. Normal plot of residuals

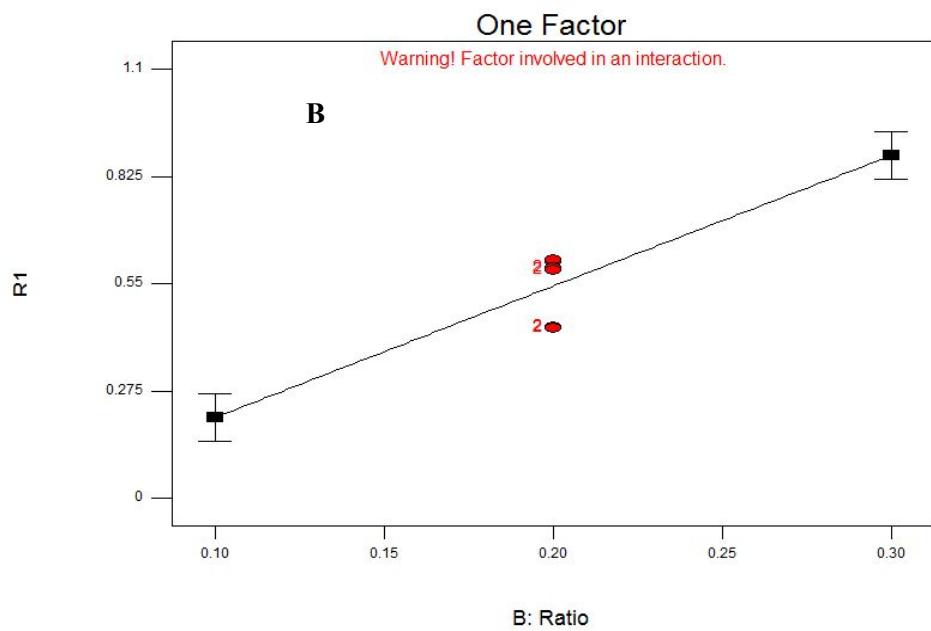
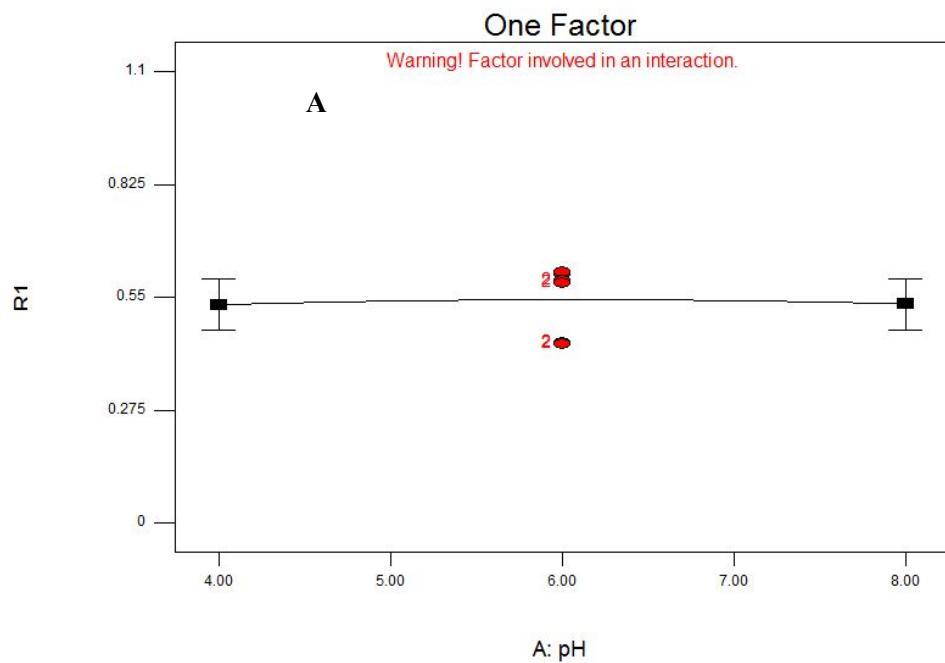


Figure S2. Response using the CCD obtained by plotting (a) R₁ vs. pH. (b). R₁ vs. Ratio

Table S1. The designed matrix by software (Design Expert7) and the response R₁ of each experiment

Std	Run	Block	Factor1:pH	Factor2:Ratio	R ₁
6	1	1	6	0.2	0.612
2	2	1	8	0.1	0.245
7	3	1	6	0.2	0.438
4	4	1	8	0.3	0.878
3	5	1	4	0.3	0.839
5	6	1	6	0.2	0.604
1	7	1	4	0.1	0.207
13	8	2	6	0.2	0.584
14	9	2	6	0.2	0.435
11	10	2	6	0.35	1.06
8	11	2	3	0.2	0.53
12	12	2	6	0.2	0.59
9	13	2	9	0.2	0.484
10	14	2	6	0.05	0

Table S2. ANOVA for Quadratic model

Source	Sum of Squares	df	Mean Square	F-value	p-value	
Block	0.0014	1	0.0014			
Model	0.9601	5	0.1920	33.43	< 0.0001	Significant
A-pH	7.529E-06	1	7.529E-06	0.0013	0.9721	
B-Ratio	0.9589	1	0.9589	166.95	< 0.0001	
AB	2.500E-07	1	2.500E-07	0.0000	0.9949	
A ²	0.0012	1	0.0012	0.2039	0.6652	
B ²	0.0000	1	0.0000	0.0027	0.9602	
Residual	0.0402	7	0.0057			
Lack of Fit	0.0055	3	0.0018	0.2108	0.8842	Not significant
Pure Error	0.0347	4	0.0087			
Cor Total	1.00	13				