

Supplemental Table S1. Coded values of parameters for Box–Behnken design.

Levels	Parameters		
	A-NaCl concentration (mmol/L)	B-CaCl <sub>2</sub> concentration (mmol/L)	C-KCl concentration (mmol/L)
-1	20	2	2
0	40	4	4
1	60	6	6

Based on single-factor experiments, response surface optimization design was conducted using Design-Expert 13.0 software, with GABA content as the response value and NaCl concentration, CaCl<sub>2</sub> concentration, and KCl concentration as the independent variables. A three-factor, three-level response surface analysis experiment was designed, and the experimental factor levels and results are shown in Table S3.