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Enhancement of GABA content in Hongqu wine by optimisation of fermentation conditions using response surface methodology

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Electronic supplementary material

Supplementary Tables S1–4

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Table S1. Design of response surface experimental

Factors	Variable	Level		
		–1	0	1
A	Amount of water added (%, v/w)	90	120	150
B	pH	3.6	3.8	4
C	Hongqu seed inoculum (%, v/w)	20	30	40

Table S2. Experimental results of response surface experimental

Run	Variable			GABA (mg L^{-1})
	A	*B*	*C*	
1	–1	0	1	641.32
2	–1	–1	0	618.05
3	1	0	–1	556.20
4	0	0	0	681.36
5	–1	0	–1	613.77
6	0	1	1	643.90
7	1	0	1	595.96
8	1	–1	0	607.71
9	0	0	0	682.44
10	0	0	0	688.55
11	0	0	0	700.86
12	0	–1	1	649.54
13	0	1	–1	609.12
14	–1	1	0	622.28
15	0	0	0	693.72
16	1	1	0	593.14
17	0	–1	–1	638.26

GABA – γ-aminobutyric acid

Table S3. Analysis of variance of the calculated model of process parameters

Sources	Sum of squares	*df*	Mean squares	*F*	*P*
Model	26 196.43	9	2 910.71	22.69	0.0002***
Residual	898.15	7	128.31	–	–
Lack of fit	634.35	3	211.45	3.21	0.1449
Pure error	263.80	4	65.95	–	–

If a factor has a *P*-value of less than 0.05, it is a significant factor; *$P < 0.05$, **$P < 0.01$, *** $P < 0.001$

Table S4. Analysis of variance for regression

SD	Mean	CV %	PRESS	R^2	Adjusted R^2	Pred. R^2	Adeq. precision
11.33	637.42	1.78	10 561.74	0.9669	0.9242	0.6102	14.112

SD – standard deviation; CV – coefficient of variation; PRESS – predicted sum of the mean squares