Supplemental Table S4.   Analysis of variance (ANOVA) for the response surface regression model to GABA content

| Source | Sum of Squares | df | Mean Square | $F$ value | $p$ value | |
|---|---|---|---|---|---|---|
| Model | 63.28 | 9 | 7.03 | 9.08 | 0.0071 | significant |
| A | 5.17 | 1 | 5.17 | 6.67 | 0.0416 | |
| B | 4.09 | 1 | 4.09 | 5.28 | 0.0613 | |
| C | 9.27 | 1 | 9.27 | 11.96 | 0.0135 | |
| AB | 5.50 | 1 | 5.50 | 7.10 | 0.0373 | |
| AC | 0.9409 | 1 | 0.9409 | 1.21 | 0.3126 | |
| BC | 1.07 | 1 | 1.07 | 1.38 | 0.2841 | |
| A² | 35.64 | 1 | 35.64 | 46.02 | 0.0005 | |
| B² | 1.60 | 1 | 1.60 | 2.07 | 0.2006 | |
| C² | 0.0000 | 1 | 0.0000 | 0.0000 | 1.0000 | |
| Residual | 4.65 | 6 | 0.7745 | | | |
| Lack of fit | 3.89 | 3 | 1.30 | 5.10 | 0.1070 | not significant |
| Pure Error | 0.7622 | 3 | 0.2541 | | | |
| Cor Total | 67.92 | 15 | | | | |

It can be seen in Table S4 that F value of the model is 9.08 and the $p$ value was 0.0071 ($< 0.01$), indicating high significance of the model. The $F$ value and $p$ value of the missing fitting term were 5.10 and 0.1070 respectively ($> 0.1$), indicating that the model had good fitting results.