Supplementary Information

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Effects of Blue and Red Light On Growth And Nitrate Metabolism In Pakchoi

Table S1: Standard operating table of determination of glutamine.

Reagents (ml)	Blank tube	Standard tube	Test tube
Double steaming water	0.01		
Two mmol/L fluid of glutamine standard application		0.01	0.01
Sample			0.03
Acetate buffer	0.03	0.03	0.03
Glutaminase	0.01	0.01	0.01
Mix solution and then use water bath at 37 ℃ for 15min.			
Glutamine Standard solution	1.0	1.0	1.0
Indenone solution	1.0	1.0	1.0
After completing the above steps, mix solution and then use water bath at 37 ℃ for 15min. Zero with double steaming water, and the absorbance was read at 630 nm.			

Glutamine concentration was calculated using the following formula:

$$\frac{\text{measured value of OD - blank value of OD}}{\text{standard value of OD - blank value of OD}} \times \text{standard concentration} \div \text{sample quality}$$

Table S2: Standard operating table of determination of glutamic acid

Reagents (ml)	Blank tube	Standard tube	Test tube
Double steaming water	0.5		
200 μmol L^{-1} fluid of glutamic acid standard application		0.5	
The supernatant			0.5
Tris-EDTA-Hydrazine buffer	1.0	1.0	1.0
Adenine Dinucleotide solution	0.1	0.1	0.1
5'-Diphosphate solution	0.01	0.01	0.01
Double steaming water	0.39	0.39	0.39
Mix solution, zero with double steaming water , then the absorbance was read at 340 nm. Absorbance of each tube mark as A_1.			
Glutamic Dehydrogenase	0.02	0.02	0.02
After completing the above steps, mix solution and then use water bath at 37 ℃ for 40 min. Zero with double steaming water, and the absorbance was read at 340 nm. Absorbance of each tube mark as A2.			

Glutamic acid concentration was calculated using the following formula:

$$\frac{(\text{measured value of A2 - measured value of A1}) - (\text{blank value of A2 - blank value of A1})}{(\text{standard value of A2 - standard value of A1}) - (\text{blank value of A2 - blank value of A1})} \times \text{standard concentration} \div \text{sample quality}$$