

Supplementary Material

Effect of Germination and Illumination on Melatonin and Its Metabolites, Phenolic Content, and Antioxidant Activity in Mung Bean Sprouts

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1. Validation parameters of serotonin, tryptophan, and melatonin

Table S1. Validation parameters of serotonin, tryptophan, and melatonin

Parameters	Serotonin	Tryptophan	Melatonin
Linear equation	$y = 5.5665x + 0.0313$	$y = 0.9564x + 0.0138$	$y = 3.5414x - 0.0406$
Range ($\mu\text{g/mL}$)	0.05 - 4.00	0.05 - 4.00	0.05 - 4.00
Coefficient of correlation	0.9997	0.9995	0.9998
LOD ($\mu\text{g/mL}$)	0.0025	0.01	0.0025
LOQ ($\mu\text{g/mL}$)	0.05	0.05	0.05

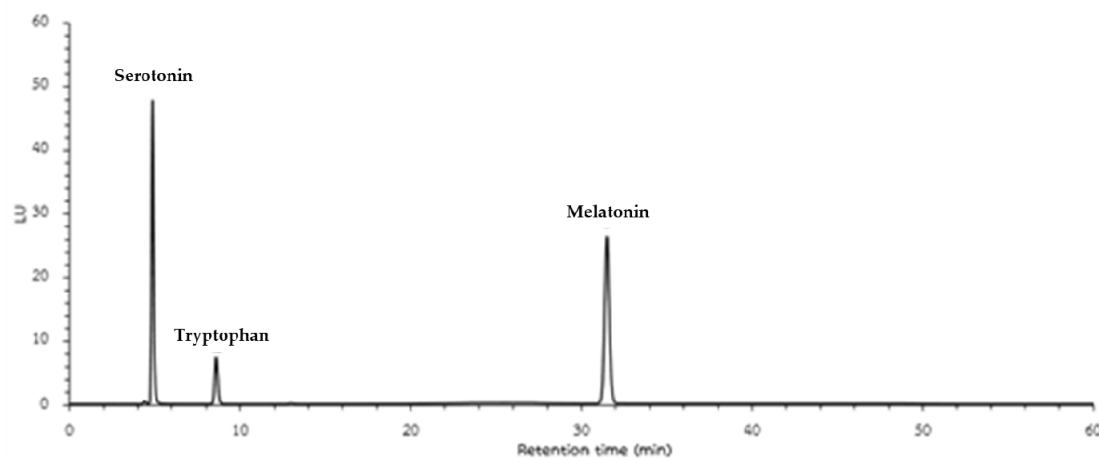


Figure S1. Chromatogram of standard tryptophan, serotonin, and melatonin at concentration of 4 $\mu\text{g/mL}$.

2. Validation parameters of phenolic acids

Table S2. Validation parameters of standard phenolic acids

Parameters	GA	PCCA	<i>p</i> -HO	ChA	VA	SyA	<i>p</i> -CA	RU	FA	SA	QU
Linear equation	y = 3647.4x + 1196.3	y = 2398.4x + 1001.9	y = 1657.9x + 775.62	y = 3027.2x + 285.11	y = 2837.3x + 1239.6	y = 5111.5x + 2274.9	y = 11200x + 3400.3	y = 2886x + 1497.7	y = 8965.9x + 2280.2	y = 8027.5x + 1552.3	y = 29567x - 28517
Range (µg/mL)	0.25 – 5.00	0.25 – 5.00	0.25 – 5.00	0.25 – 5.00	0.25 – 5.00	0.25 – 5.00	0.25 – 5.00	0.25 – 5.00	0.25 – 5.00	0.25 – 5.00	0.25 – 5.00
Coefficient of correlation	0.9998	0.9997	0.9996	1.000	0.9997	0.9997	0.9998	0.9995	0.9998	0.9999	0.9982
LOD (µg/mL)	0.005	0.025	0.025	0.025	0.010	0.010	0.005	0.025	0.010	0.005	0.001
LOQ (µg/mL)	0.025	0.100	0.100	0.100	0.100	0.025	0.010	0.100	0.025	0.025	0.025

GA: gallic acid, PCCA: protocatechuic acid; *p*-HO: *p*-hydroxybenzoic acid; ChA: chlorogenic acid, VA: vanillic acid; SyA: syringic acid; *p*-CA: *p*-coumaric acid; RU: rutin; FA: ferulic acid; SA: sinapic acid; QU: quercetin.

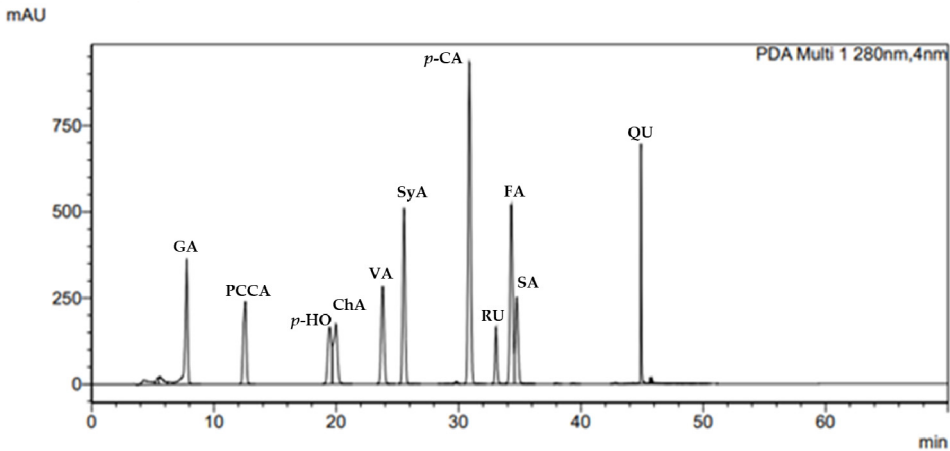


Figure S2. Chromatogram of standard phenolic acids at concentration of 5 µg/mL. GA: gallic acid, PCCA: protocatechuic acid; *p*-HO: *p*-hydroxybenzoic acid; ChA: chlorogenic acid, VA: vanillic acid; SyA: syringic acid; *p*-CA: *p*-coumaric acid; RU: rutin; FA: ferulic acid; SA: sinapic acid; QU: quercetin.