

Supplementary Materials

Table S1. Effect of UV-C (260 nm, 5 min) irradiation on isoflavone concentrations in different cultivars of *Glycine max* Data represent the means of triplicate measurements $\pm$ standard deviation. Unit: nmol g⁻¹ of fresh weight.

Cultivars	Treatment	Daidzein	M-daidzin	Daidzin	Genistein	M-genistin	Genistin	Glycitein	M-glycitin	Glycitin	Total Isoflavone
Soyoung	Control	7.40 $\pm$ 1.3	0	0	31.29 $\pm$ 1.9	0	34.97 $\pm$ 2.4	0	15.14 $\pm$ 0.2	0	88.80 $\pm$ 5.7
	UV-C	27.54 $\pm$ 5.78	89.0 $\pm$ 38.4	88.52 $\pm$ 18.7	74.82 $\pm$ 17.4	23.08 $\pm$ 0	72.43 $\pm$ 5.0	2.21 $\pm$ 0.21	38.71 $\pm$ 6.4	11.78 $\pm$ 2.3	428.09 $\pm$ 94.2
Daepung	Control	0	30.65 $\pm$ 3.0	18.7 $\pm$ 1.6	25.0 $\pm$ 3.6	31.16 $\pm$ 6.9	4.02 $\pm$ 0.2	0.43 $\pm$ 0.5	26.61 $\pm$ 1.6	5.22 $\pm$ 0.3	141.80 $\pm$ 17.1
	UV-C	52.19 $\pm$ 10.7	527.67 $\pm$ 7.9	235.62 $\pm$ 8.5	68.13 $\pm$ 5.8	87.50 $\pm$ 5.3	15.61 $\pm$ 1.3	7.02 $\pm$ 0.7	83.18 $\pm$ 5.9	17.83 $\pm$ 0.8	1094 $\pm$ 46.7
Young-yang	Control	1.25 $\pm$ 0.2	19.51 $\pm$ 3.9	12.05 $\pm$ 0.5	15.23 $\pm$ 1.6	119.57 $\pm$ 10.6	6.20 $\pm$ 0.6	0.60 $\pm$ 0.2	29.89 $\pm$ 1.5	5.42 $\pm$ 0.1	209.73 $\pm$ 19.0
	UV-C	49.95 $\pm$ 4.7	651.91 $\pm$ 53.0	250.81 $\pm$ 29.7	81.88 $\pm$ 14.4	165.05 $\pm$ 27.6	19.09 $\pm$ 0.6	5.54 $\pm$ 0.75	61.58 $\pm$ 4.6	10.77 $\pm$ 0.7	1296.57 $\pm$ 135.9
Daewon	Control	1.74 $\pm$ 0	245.22 $\pm$ 178.5	20.55 $\pm$ 9.1	9.69 $\pm$ 5.2	199.03 $\pm$ 115.5	6.66 $\pm$ 2.1	1.16 $\pm$ 0.2	48.22 $\pm$ 22.5	6.30 $\pm$ 2.0	538.57 $\pm$ 335.1
	UV-C	130.21 $\pm$ 15.0	554.4 $\pm$ 56.6	216.99 $\pm$ 18.7	62.85 $\pm$ 4.4	116.27 $\pm$ 20.9	30.22 $\pm$ 6.3	11.73 $\pm$ 0.1	72.54 $\pm$ 5.1	12.33 $\pm$ 1.0	1207.54 $\pm$ 128.1
Pungsan	Control	5.71 $\pm$ 0.6	45.83 $\pm$ 7.51	21.56 $\pm$ 1.5	37.96 $\pm$ 3.0	100.93 $\pm$ 26.2	53.83 $\pm$ 6.44	0.42 $\pm$ 0.0	23.36 $\pm$ 1.1	5.27 $\pm$ 0.1	294.87 $\pm$ 46.3
	UV-C	42.1 $\pm$ 6.2	211.2 $\pm$ 47.5	82.07 $\pm$ 18.74	88.50 $\pm$ 27.0	59.26 $\pm$ 31.4	64.34 $\pm$ 10.6	1.07 $\pm$ 0.1	27.17 $\pm$ 3.8	6.51 $\pm$ 0.7	582.20 $\pm$ 146.0

Table S2. Isoflavone concentrations in *Glycine max* (cv. Daepung) after UV-C (260 nm) irradiation.

Table .	Daidzin	M-daidzin	Daidzein	Genistin	M-genistin	Genistein	Glycitin	M-glycitin	Glycitein	Total isoflavone
Control	32.7 $\pm$ 4.3	237.4 $\pm$ 23.1	7.5 $\pm$ 0.9	54.5 $\pm$ 6.7	275.7 $\pm$ 21.7	29.8 $\pm$ 4.4	4.7 $\pm$ 0.6	57.6 $\pm$ 10.6	0.5 $\pm$ 0.2	700 $\pm$ 52.8
5 min	418.9 $\pm$ 36.7	1277.2 $\pm$ 118.1	175.5 $\pm$ 34.0	124.2 $\pm$ 10.6	420.4 $\pm$ 51.0	80.9 $\pm$ 17.4	34.4 $\pm$ 2.5	286.4 $\pm$ 12.4	20.4 $\pm$ 3.2	2838 $\pm$ 282.2
10 min	427.6 $\pm$ 29.8	1188.5 $\pm$ 106.7	299.2 $\pm$ 63.2	149.1 $\pm$ 18.8	448.5 $\pm$ 31.3	126.4 $\pm$ 30.9	37.8 $\pm$ 2.6	298.9 $\pm$ 12.6	29.4 $\pm$ 2.2	3005 $\pm$ 192.5
20 min	263.9 $\pm$ 19.4	840.7 $\pm$ 31.6	557.9 $\pm$ 89.4	129.8 $\pm$ 15.7	477.9 $\pm$ 43.0	233.2 $\pm$ 47.6	22.8 $\pm$ 4.9	224.2 $\pm$ 13.1	37.9 $\pm$ 3.5	2788 $\pm$ 157.6
5 min Upper	984.3 $\pm$ 90.3	2572.5 $\pm$ 268.7	80.3 $\pm$ 18.4	397.3 $\pm$ 157.5	981.7 $\pm$ 251.4	63.8 $\pm$ 8.4	39.1 $\pm$ 4.5	307.3 $\pm$ 14.8	4.1 $\pm$ 1.0	5430 $\pm$ 775.5
No incubation	65 $\pm$ 19.2	553.8 $\pm$ 176.6	4.5 $\pm$ 0.7	58.5 $\pm$ 14.5	573.2 $\pm$ 143.2	16.7 $\pm$ 2.8	16.8 $\pm$ 3.4	191.4 $\pm$ 73.8	1.2 $\pm$ 0.3	1481 $\pm$ 429.7