

Table S1. Influence of developmental stage and ultraviolet radiation treatment (UVB control: 0.059 kJ m⁻² h⁻¹ UVB; reduced UVB: 0.017 kJ m⁻² h⁻¹ UVB; low UV: 0.002 kJ m⁻² h⁻¹ UVB) on anthocyanins (µg g⁻¹ fresh weight) in pak choi. Different letters represent significant differences (p ≤ 0.05 by Tukey's HSD test) for each anthocyanin in pak choi (n=4, mean ± standard error). c: cyanidin; glc: glucose; fer: feruloyl; sin: sinapoyl

Developmental stage	UV treatment	Anthocyanins		C-3-disin-diglc-5-glc		C-3-sin,fer-diglc-5-glc		C-3-difer-diglc-5-glc	
Sprouts	Control	37.2±1.8		10.7±0.5		15.3±0.74		11.2±0.5	
	Reduced UVB	41.1±2.5		11.0±0.3		19.1±1.82		11.1±0.4	
	Low UVB	42.4±3.7		12.1±1.1		17.5±1.79		12.8±1.1	
5-leaf plants	Control	41.5±7.3		12.1±2.1		16.8±3.30		12.6±2.1	
	Reduced UVB	48.0±12.5		13.7±3.9		19.5±4.77		14.8±3.9	
	Low UVB	71.6±11.3		17.3±2.2		33.6±6.02		20.7±3.1	
15-leaf plants	Control	73.1±8.0		14.5±0.8		35.0±4.98		23.7±2.5	
	Reduced UVB	69.7±6.2		14.8±0.7		30.0±3.58		24.8±3.2	
	Low UVB	76.1±12.6		14.6±0.8		37.3±8.99		24.1±3.1	
30-leaf plants	Control	91.2±5.2		24.9±0.9		37.7±3.63		28.6±1.2	
	Reduced UVB	120.1±6.6		32.2±1.5		51.2±4.00		36.7±1.6	
	Low UVB	110.5±7.1		30.6±2.1		45.0±3.04		34.9±2.3	
Main effect									
Developmental stage	sprouts	40.3±1.6	A	11.3±0.4	A	17.3±0.93	A	11.7±0.4	A
	5-leaves	53.7±6.8	A	14.4±1.6	A	23.3±3.35	A	16.0±1.9	A
	15-leaves	72.9±4.9	B	14.7±0.4	A	34.1±3.41	B	24.2±1.6	B
	30-leaves	107.3±4.9	C	29.2±1.3	B	44.6±2.50	C	23.4±1.4	C
UV treatment	Control	60.8±6.4	A	15.6±1.5	A	26.2±3.06	A	19.0±2.1	
	Reduced UVB	69.7±8.7	A	17.9±2.4	A	30.0±3.75	A	21.9±2.8	
	Low UVB	75.2±7.5	A	18.7±2.0	A	33.3±3.63	A	23.2±2.3	
Developmental stage									
		***		***		*		***	
UV treatment		*		*		ns		ns	
Developmental stage x UV treatment		ns		ns		ns		ns	

* significant at p ≤ 0.05; ** significant at p ≤ 0.01; *** significant at p ≤ 0.005; ns, not significant

Table S2. Influence of developmental stage and ultraviolet radiation treatment (UVB control: 0.059 kJ m⁻² h⁻¹ UVB; reduced UVB: 0.017 kJ m⁻² h⁻¹ UVB; low UV: 0.002 kJ m⁻² h⁻¹ UVB) on chlorophylls (µg g⁻¹ fresh weight) in pak choi. Different letters represent significant differences (p ≤ 0.05 by Tukey's HSD test) for each chlorophyll (n=4, mean±standard error).

Developmental stage	UV treatment	Chlorophylls	Chlorophyll a	Chlorophyll b	chl a/chl b ratio
Sprouts	Control	583±40	473±34	110±7	4.3
	Reduced UVB	717±30	584±21	133±10	4.4
	Low UVB	642±40	532±38	110±4	4.8
5-leaf plants	Control	1091±41	902±32	189±9	4.8
	Reduced UVB	961±109	808±88	154±21	5.2
	Low UVB	1117±39	931±30	186±9	5.0
15-leaf plants	Control	1277±133	1010±103	267±30	3.8
	Reduced UVB	1536±45	1221±34	315±11	3.9
	Low UVB	1462±111	1164±85	298±26	3.9
30-leaf plants	Control	1374±149	1041±118	334±31	3.1
	Reduced UVB	1153±166	873±128	280±40	3.1
	Low UVB	1535±153	1161±115	375±38	3.1
Main effect					
Developmental stage	sprouts	647±25 A	530±22 A	118±5 A	4.5
	5-leaves	1056±42 B	880±34 B	176±9 B	5.0
	15-leaves	1425±63 C	1132±49 C	293±14 C	3.9
	30-leaves	1354±94 BC	1025±72 BC	329±22 C	3.1
UV treatment	Control	1081±91	856±69	225±23	4.0
	Reduced UVB	1092±96	872±74	220±23	4.2
	Low UVB	1189±117	947±86	242±33	4.2
Developmental stage		***	***	***	
UV treatment		ns	ns	ns	
Developmental stage x UV treatment		ns	ns	ns	

* significant at p ≤ 0.05; ** significant at p ≤ 0.01; *** significant at p ≤ 0.005; ns, not significant

Table S3. Influence of developmental stage and ultraviolet radiation treatment (UVB control: 0.059 kJ m⁻² h⁻¹ UVB; reduced UVB: 0.017 kJ m⁻² h⁻¹ UVB; low UV: 0.002 kJ m⁻² h⁻¹ UVB) on total and aliphatic glucosinolates (μmol g⁻¹ fresh matter) in pak choi. Different letters represent significant differences (p ≤ 0.05 by Tukey's HSD test) for each glucosinolate (n=4, mean ± standard error). GS, glucosinolates; 4MTB, 4-(methylthio)butyl GS; 4MSOB, 4-(methylsulfinyl)butyl GS, 5MSOP, 5-(methylsulfinyl)pentyl GS; 3But, 3-butenyl GS; 4Pent, 4-pentenyl GS; 2OH3But, 2-hydroxy-3-butenyl GS; 2OH4Pent, 2-hydroxy-4-pentenyl GS

DS	UVB	Total GS		4MTB		4MSOB		5MSOP		3But		4Pent		2OH3But		2OH4Pent	
sprouts	Control	1.18±0.04		0.093±0.007		0.193±0.015	C	0.047±0.003		0.642±0.034		0.054±0.005		0.072±0.003		0.000±0.000	
	Reduced UVB	1.43±0.07		0.125±0.013		0.203±0.006	C	0.055±0.001		0.799±0.043		0.069±0.006		0.084±0.011		0.000±0.000	
	Low UV	1.45±0.14		0.120±0.016		0.268±0.034	D	0.055±0.006		0.753±0.094		0.061±0.004		0.106±0.003		0.000±0.000	
5-leaf plants	Control	0.36±0.09		0.000±0.000		0.040±0.005	AB	0.008±0.002		0.176±0.050		0.079±0.028		0.023±0.004		0.002±0.001	
	Reduced UVB	0.22±0.07		0.000±0.000		0.053±0.013	AB	0.004±0.001		0.089±0.028		0.035±0.012		0.015±0.005		0.001±0.000	
	Low UV	0.52±0.09		0.000±0.000		0.084±0.005	B	0.012±0.001		0.173±0.026		0.129±0.037		0.060±0.024		0.016±0.005	
15-leaf plants	Control	0.86±0.15		0.000±0.000		0.006±0.001	A	0.024±0.006		0.395±0.074		0.272±0.061		0.081±0.011		0.016±0.002	
	Reduced UVB	0.68±0.23		0.001±0.001		0.004±0.001	A	0.017±0.006		0.304±0.115		0.229±0.098		0.025±0.004		0.015±0.002	
	Low UV	0.66±0.21		0.004±0.002		0.006±0.001	A	0.014±0.004		0.283±0.097		0.227±0.085		0.057±0.017		0.019±0.001	
30-leaf plants	Control	1.79±0.32		0.000±0.000		0.000±0.000	A	0.047±0.006		0.935±0.107		0.496±0.134		0.209±0.083		0.015±0.007	
	Reduced UVB	1.97±0.37		0.000±0.000		0.000±0.000	A	0.031±0.012		0.869±0.104		0.739±0.197		0.216±0.076		0.023±0.008	
	Low UV	1.86±0.47		0.000±0.000		0.000±0.000	A	0.035±0.011		0.860±0.232		0.632±0.167		0.235±0.102		0.023±0.006	
main effect																	
DS	Sprouts	1.36±0.06	A	0.112±0.008	B	0.221±0.015		0.053±0.002	C	0.731±0.038	B	0.061±0.003	A	0.088±0.006	A	0.000±0.000	A
	5-leafs	0.37±0.06	A	0.000±0.000	A	0.059±0.007		0.008±0.001	A	0.146±0.022	A	0.081±0.019	A	0.032±0.009	A	0.006±0.003	A
	15-leafs	0.73±0.11	A	0.002±0.001	A	0.005±0.001		0.018±0.003	A	0.327±0.053	A	0.243±0.044	A	0.054±0.009	A	0.017±0.001	B
	30-leafs	1.87±0.21	B	0.000±0.000	A	0.000±0.000		0.038±0.006	B	0.888±0.084	B	0.622±0.093	B	0.220±0.046	B	0.020±0.004	B
UV	Control	1.05±0.18		0.023±0.012		0.060±0.024		0.032±0.006		0.537±0.092		0.225±0.066		0.096±0.030		0.008±0.003	
	Reduced UVB	1.08±0.21		0.031±0.000		0.065±0.000		0.027±0.007		0.515±0.060		0.268±0.114		0.085±0.044		0.010±0.005	
	Low UV	1.12±0.22		0.031±0.016		0.089±0.033		0.029±0.006		0.517±0.112		0.262±0.082		0.114±0.035		0.015±0.003	
DS		***		***		***		***		***		***		***		***	
UV		ns		ns		***		ns		ns		ns		ns		ns	
DS x UV		ns		ns		*		ns		ns		ns		ns		ns	

* significant at p ≤ 0.05; ** significant at p ≤ 0.01; *** significant at p ≤ 0.005; ns, not significant

Table S4. Influence of developmental stage and ultraviolet radiation treatment (UVB control: 0.059 kJ m⁻² h⁻¹ UVB; reduced UVB: 0.017 kJ m⁻² h⁻¹ UVB; low UV: 0.002 kJ m⁻² h⁻¹ UVB) on indolic and aromatic glucosinolates (µg g⁻¹ fresh weight) in pak choi. Different letters represent significant differences (p ≤ 0.05 by Tukey's HSD test) for each glucosinolate (n=4, mean ± standard error). GS, glucosinolate; I3M, indole-3-methyl GS; 4OH13M, 4-hydroxyindole-3-ylmethyl GS; 4MOI3M, 4-methoxyindole-3-ylmethyl GS; 1MOI3M, 1-methoxyindole-3-ylmethyl GS; 2PE, 2-phenylethyl GS

Developmental stage	UV treatment	I3M		4OH13M		4MOI3M		1MOI3M		2PE	
Sprouts	Control	8.0±0.431		3.5±0.392		2.4±0.144		4.6±0.327		17.6±0.432	
	Reduced UVB	8.7±0.394		1.7±0.078		3.5±0.245		7.2±0.553		22.5±0.912	
	Low UVB	5.9±0.403		2.8±0.585		2.0±0.155		4.3±0.358		22.5±2.776	
5-leaf plants	Control	6.6±1.722		1.7±0.752		0.7±0.119		1.2±0.590		3.0±1.043	
	Reduced UVB	6.5±2.555		1.0±0.374		0.6±0.171		1.2±0.583		2.7±0.769	
	Low UVB	15.4±5.952		2.3±0.908		1.7±0.514		3.3±2.636		6.7±1.342	
15-leaf plants	Control	4.8±0.683		4.5±0.691		2.9±0.415		4.4±0.949		13.0±2.259	
	Reduced UVB	3.7±1.263		2.6±0.926		3.6±0.942		2.9±1.406		22.1±8.240	
	Low UVB	4.3±1.946		1.1±0.401		3.4±0.664		3.1±1.212		11.8±3.772	
30-leaf plants	Control	4.5±0.401		3.7±0.628		2.7±0.454		5.6±0.810		20.8±3.468	
	Reduced UVB	4.4±1.388		3.9±1.427		3.1±0.416		5.6±2.048		24.0±2.006	
	Low UVB	4.3±0.992		4.3±1.398		3.2±0.291		4.7±0.634		18.7±2.228	
Main effect											
Developmental stage	sprouts	7.4±0.417	B	2.6±0.305	AB	2.6±0.211	B	5.3±0.451	B	20.8±1.130	B
	5-leaves	9.5±2.382	B	1.6±0.405	A	0.9±0.222	A	1.9±0.885	A	4.1±0.784	A
	15-leaves	4.2±0.742	A	2.7±0.556	AB	3.3±0.379	B	3.4±0.659	B	15.6±3.139	B
	30-leaves	4.3±0.528	A	3.9±0.635	B	2.9±0.218	B	5.2±0.702	B	21.1±1.531	B
UV treatment	Control	5.9±0.566		3.3±0.385		2.1±0.267		3.9±0.528		13.6±1.978	
	Reduced UVB	5.8±0.873		2.3±0.476		2.7±0.397		4.2±0.835		17.8±2.965	
	Low UVB	7.4±1.859		2.6±0.498		2.5±0.277		3.8±0.690		14.9±1.980	
Developmental stage		***		*		***		***		***	
UV treatment		ns		ns		ns		ns		ns	
Developmental stage x UV treatment		ns		ns		ns		ns		ns	

* significant at p ≤ 0.05; ** significant at p ≤ 0.01; *** significant at p ≤ 0.005; ns, not significant

Table S5. Influence of developmental stage and ultraviolet radiation treatment (UVB control: 0.059 kJ m⁻² h⁻¹ UVB; reduced UVB: 0.017 kJ m⁻² h⁻¹ UVB; low UV: 0.002 kJ m⁻² h⁻¹ UVB) on indolic and aromatic glucosinolates (μmol g⁻¹ fresh matter) in pak choi. Different letters represent significant differences (p ≤ 0.05 by Tukey's HSD test) for each glucosinolate (n=4, mean ± standard error). GS, glucosinolate; I3M, indole-3-methyl GS; 4OH13M, 4-hydroxyindole-3-ylmethyl GS; 4MOI3M, 4-methoxyindole-3-ylmethyl GS; 1MOI3M, 1-methoxyindole-3-ylmethyl GS; 2PE, 2-phenylethyl GS

DS	UV	13M		4OH13M		4MO13M		1MO13M		2PE	
sprouts	Control	0.018±0.001		0.008±0.001		0.005±0.000		0.010±0.001		0.042±0.001	
	Reduced UVB	0.019±0.001		0.004±0.000		0.007±0.001		0.015±0.001		0.053±0.002	
	Low UVB	0.013±0.001		0.006±0.001		0.004±0.000		0.009±0.001		0.053±0.007	
5-leaf plants	Control	0.015±0.004		0.004±0.002		0.001±0.000		0.003±0.001		0.007±0.002	
	Reduced UVB	0.015±0.006		0.002±0.001		0.001±0.000		0.003±0.001		0.006±0.002	
	Low UVB	0.022±0.005		0.006±0.002		0.002±0.000		0.001±0.000		0.015±0.003	
15-leaf plants	Control	0.011±0.002		0.010±0.001		0.006±0.001		0.009±0.002		0.031±0.005	
	Reduced UVB	0.008±0.003		0.006±0.002		0.008±0.002		0.006±0.003		0.052±0.020	
	Low UVB	0.010±0.004		0.002±0.001		0.007±0.001		0.006±0.003		0.028±0.009	
30-leaf plants	Control	0.010±0.001		0.008±0.001		0.006±0.001		0.012±0.002		0.049±0.008	
	Reduced UVB	0.010±0.003		0.008±0.003		0.006±0.001		0.012±0.004		0.057±0.005	
	Low UVB	0.010±0.002		0.009±0.003		0.007±0.001		0.010±0.001		0.044±0.005	
main effect											
DS	sprouts	0.017±0.001	B	0.006±0.001	AB	0.006±0.000	B	0.011±0.001	B	0.049±0.003	B
	5-leafs	0.017±0.003	B	0.004±0.001	A	0.002±0.000	A	0.002±0.001	A	0.009±0.002	A
	15-leafs	0.010±0.002	A	0.006±0.001	AB	0.007±0.001	B	0.007±0.001	B	0.037±0.007	B
	30-leafs	0.010±0.001	A	0.008±0.001	B	0.006±0.000	B	0.011±0.001	B	0.050±0.004	B
UV	Control	0.013±0.001		0.007±0.001		0.005±0.001		0.008±0.001		0.013±0.001	
	Reduced UVB	0.013±0.002		0.005±0.002		0.006±0.001		0.009±0.002		0.013±0.002	
	Low UVB	0.014±0.002		0.006±0.001		0.005±0.001		0.007±0.001		0.014±0.002	
DS		***		*		***		***		***	
UV		ns		ns		ns		ns		ns	
DS x UV		ns		ns		ns		ns		ns	

* significant at p ≤ 0.05; ** significant at p ≤ 0.01; *** significant at p ≤ 0.005; ns, not significant

Table S6. Influence of developmental stage and ultraviolet radiation treatment (UVB control: 0.059 kJ m⁻² h⁻¹ UVB; reduced UVB: 0.017 kJ m⁻² h⁻¹ UVB; low UV: 0.002 kJ m⁻² h⁻¹ UVB) on epithionitriles (µg g⁻¹ fresh weight) in pak choi. Different letters represent significant differences (p ≤ 0.05 by Tukey's HSD test) for each epithionitrile (n=4, mean±standard error). CETB, 1-cyano-3,4-epithiobutane; CETPent, 1-cyano-4,5-epithiopentane; CHETB, 1-cyano-2-hydroxy-3,4-epithiobutane (sum of 2 isomers); CHETPent, 1-cyano-2-hydroxy-4,5-epithiopentane (sum of 2 isomers).

Developmental stage	UV treatment	TotalEpithionitriles	CETB	CETPent	CHETB sum	CHETPent sum
Sprouts	Control	127.2±23.425	115.3±20.735	8.7±2.985	3.2±0.260	0.0±0.000
	Reduced UVB	131.7±36.652	117.4±32.788	10.0±3.068	4.4±1.088	0.0±0.000
	Low UVB	135.2±19.770	121.4±14.493	9.4±4.248	4.4±1.128	0.0±0.000
5-leaf plants	Control	37.2±12.385	20.3±6.452	13.0±4.281	3.9±1.960	0.0±0.000
	Reduced UVB	29.2±7.720	14.1±1.729	8.5±2.680	6.5±4.978	0.0±0.000
	Low UVB	30.5±5.863	18.7±3.887	10.4±2.246	1.4±0.866	0.0±0.000
15-leaf plants	Control	166.0±27.920	82.0±15.153	59.9±11.401	23.4±1.998	0.6±0.644
	Reduced UVB	96.8±24.883	51.3±13.106	36.5±10.726	9.0±2.456	0.0±0.000
	Low UVB	150.0±53.096	69.0±22.236	63.0±22.950	16.5±7.463	1.4±0.857
30-leaf plants	Control	304.2±58.760	179.3±45.455	94.8±15.735	28.6±7.966	1.5±0.217
	Reduced UVB	315.4±60.476	156.2±41.848	126.8±23.360	30.4±9.381	2.1±0.688
	Low UVB	225.8±83.553	111.3±39.559	74.9±30.012	37.0±17.446	2.6±0.841
Main effect						
Developmental stage	sprouts	131.4±14.440	B 118.0±12.510	BC 9.4±1.826	A 4.0±0.507	A 0.0±0.000
	5-leaves	32.3±4.858	A 17.7±2.460	A 10.7±1.755	A 3.9±1.752	A 0.0±0.000
	15-leaves	137.6±21.520	B 67.4±9.793	AB 53.2±9.105	B 16.3±3.020	A 0.4±0.226
	30-leaves	281.8±37.754	C 148.9±23.703	C 98.9±13.980	C 32.0±6.529	B 1.1±0.220
UV treatment	Control	158.6±29.379	99.2±18.931	44.1±10.214	14.8±3.490	0.3±0.129
	Reduced UVB	143.3±32.137	84.7±18.830	45.4±13.750	12.6±3.641	0.3±0.155
	Low UVB	135.4±28.890	80.1±14.959	39.4±11.482	14.8±5.580	0.6±0.230
Developmental stage		***	***	***	***	***
UV treatment		ns	ns	ns	ns	ns
Developmental stage x UV treatment		ns	ns	ns	ns	ns

* significant at p ≤ 0.05; ** significant at p ≤ 0.01; *** significant at p ≤ 0.005; ns, not significant

Table S7. Influence of developmental stage and ultraviolet radiation treatment (UVB control: 0.059 kJ m⁻² h⁻¹ UVB; reduced UVB: 0.017 kJ m⁻² h⁻¹ UVB; low UV: 0.002 kJ m⁻² h⁻¹ UVB) on epithionitriles (μmol g⁻¹ fresh matter) in pak choi. Different letters represent significant differences (p ≤ 0.05 by Tukey's HSD test (n=4)) for each epithionitrile mean±standard error. DS, developmental stage; CETB, 1-cyano-3,4-epithiobutane; CETPent, 1-cyano-4,5-epithiopentane; CHETB, 1-cyano-2-hydroxy-3,4-epithiobutane (sum of 2 isomers); CHETPent, 1-cyano-2-hydroxy-4,5-epithiopentane (sum of 2 isomers).

DS	UV	Total Epithionitriles		CETB		CETPent		CHETB sum		CHETPent sum	
sprouts	Control	1.112±0.209		1.019±0.183		0.068±0.023		0.025±0.002		0.000±0.000	
	Reduced UVB	1.149±0.322		1.037±0.290		0.078±0.024		0.034±0.008		0.000±0.000	
	Low UVB	1.181±0.170		1.072±0.128		0.074±0.033		0.034±0.009		0.000±0.000	
5-leaf plants	Control	0.312±0.106		0.179±0.057		0.102±0.034		0.030±0.015		0.000±0.000	
	Reduced UVB	0.241±0.075		0.125±0.015		0.067±0.021		0.049±0.039		0.000±0.000	
	Low UVB	0.258±0.059		0.165±0.034		0.082±0.018		0.011±0.007		0.000±0.000	
15-leaf plants	Control	1.382±0.243		0.725±0.134		0.471±0.090		0.181±0.015		0.004±0.004	
	Reduced UVB	0.810±0.219		0.453±0.116		0.287±0.084		0.070±0.019		0.000±0.000	
	Low UVB	1.243±0.441		0.610±0.196		0.496±0.180		0.128±0.058		0.010±0.006	
30-leaf plants	Control	2.561±0.588		1.585±0.402		0.745±0.124		0.221±0.062		0.010±0.002	
	Reduced UVB	2.626±0.631		1.380±0.370		0.996±0.184		0.236±0.073		0.014±0.005	
	Low UVB	1.877±0.726		0.983±0.350		0.589±0.236		0.286±0.135		0.018±0.006	
main effect											
DS	sprouts	1.147±0.129	B	1.043±0.111	BC	0.074±0.014	A	0.031±0.004	A	0.000±0.000	A
	5-leafs	0.270±0.049	A	0.156±0.022	A	0.084±0.014	A	0.030±0.014	A	0.000±0.000	A
	15-leafs	1.145±0.184	B	0.596±0.087	AB	0.418±0.072	B	0.126±0.023	A	0.005±0.003	A
	30-leafs	2.355±0.372	C	1.316±0.209	C	0.777±0.110	C	0.248±0.051	B	0.014±0.003	B
UV	Control	1.342±0.319		0.877±0.193		0.347±0.093		0.114±0.031		0.004±0.002	
	Reduced UVB	1.206±0.352		0.749±0.192		0.357±0.125		0.097±0.033		0.004±0.002	
	Low UVB	1.140±0.310		0.708±0.153		0.310±0.104		0.115±0.050		0.007±0.003	
DS		***		***		***		***		***	
UV		ns		ns		ns		ns		ns	
DS x UV		ns		ns		ns		ns		ns	

* significant at p ≤ 0.05; ** significant at p ≤ 0.01; *** significant at p ≤ 0.005; ns, not significant

Table S8. Influence of developmental stage and ultraviolet radiation treatment (UVB control: 0.059 kJ m⁻² h⁻¹ UVB; reduced UVB: 0.017 kJ m⁻² h⁻¹ UVB; low UV: 0.002 kJ m⁻² h⁻¹ UVB) on nitriles (μmol g⁻¹ fresh matter) in pak choi. Different letters represent significant differences (p ≤ 0.05 by Tukey's HSD test (n=4)) for each nitrile mean±standard error. DS, developmental stage; 4MTB-CN, 5-(methylthio)pentynitrile, 5MTP-CN, 6-(methylthio)hexynitrile; 4MSOB-CN, 5-(methylsulfinyl)pentynitrile; 5 MSOP-CN, 6-(methylsulfinyl)hexynitrile; 3But-CN, 4pentenenitrile; IAN, indole-3-acetonitrile; 2PE-CN, 3-phenylpropanenitrile. In order to illustrate from which glucosinolate the nitrile derived, abbreviation of nitriles are usually based on the cyanide (CN) name.

DS	UV	Total nitriles		4MTB-CN		5MTP-CN		4MSOB-CN		5MSOP-CN		3But-CN		IAN		2PE-CN
sprouts	Control	0.231±0.037	BC	0.080±0.010	B	0.008±0.001		0.007±0.002	A	0.000±0.000	A	0.104±0.017		0.015±0.003	B	0.017±0.003
	Reduced UVB	0.423±0.082	D	0.147±0.013	C	0.014±0.001		0.062±0.019	B	0.024±0.007	B	0.110±0.030		0.033±0.005	C	0.032±0.007
	Low UV	0.291±0.039	CD	0.121±0.014	C	0.011±0.003		0.018±0.003	A	0.004±0.001	A	0.111±0.013		0.011±0.004	AB	0.015±0.002
5-leaf plants	Control	0.026±0.010	A	0.000±0.000	A	0.000±0.000		0.000±0.000	A	0.000±0.000	A	0.005±0.002		0.003±0.001	A	0.017±0.007
	Reduced UVB	0.029±0.018	A	0.000±0.000	A	0.000±0.000		0.000±0.000	A	0.000±0.000	A	0.001±0.001		0.006±0.003	AB	0.022±0.014
	Low UV	0.019±0.006	A	0.000±0.000	A	0.000±0.000		0.000±0.000	A	0.000±0.000	A	0.004±0.003		0.002±0.000	A	0.012±0.003
15-leaf plants	Control	0.091±0.015	AB	0.000±0.000	A	0.000±0.000		0.000±0.000	A	0.000±0.000	A	0.035±0.006		0.005±0.000	AB	0.051±0.009
	Reduced UVB	0.091±0.018	AB	0.000±0.000	A	0.000±0.000		0.000±0.000	A	0.000±0.000	A	0.023±0.007		0.003±0.001	A	0.065±0.009
	Low UV	0.076±0.018	AB	0.000±0.000	A	0.000±0.000		0.000±0.000	A	0.000±0.000	A	0.033±0.010		0.002±0.001	A	0.040±0.007
30-leaf plants	Control	0.151±0.044	ABC	0.000±0.000	A	0.010±0.005		0.000±0.000	A	0.000±0.000	A	0.112±0.029		0.002±0.000	A	0.027±0.010
	Reduced UVB	0.128±0.046	AB	0.002±0.002	A	0.018±0.018		0.000±0.000	A	0.000±0.000	A	0.097±0.024		0.001±0.000	A	0.010±0.003
	Low UV	0.103±0.031	AB	0.000±0.000	A	0.001±0.001		0.000±0.000	A	0.000±0.000	A	0.081±0.026		0.002±0.000	A	0.019±0.004
main effect																
DS	Sprouts	0.315±0.043		0.116±0.011		0.011±0.001	A	0.029±0.009		0.009±0.004		0.109±0.011	B	0.019±0.004		0.021±0.003
	5-leaves	0.024±0.007		0.000±0.000		0.000±0.000	A	0.000±0.000		0.000±0.000		0.004±0.001	A	0.003±0.001		0.017±0.005
	15-leaves	0.086±0.010		0.000±0.000		0.000±0.000	A	0.000±0.000		0.000±0.000		0.030±0.004	A	0.004±0.001		0.052±0.005
	30-leaves	0.127±0.025		0.001±0.001		0.010±0.006	A	0.000±0.000		0.000±0.000		0.097±0.014	B	0.002±0.000		0.019±0.004
UV	Control	0.125±0.037		0.020±0.011		0.004±0.002		0.002±0.001		0.000±0.000		0.064±0.016		0.006±0.002		0.028±0.006
	Reduced UVB	0.168±0.066		0.037±0.019		0.008±0.005		0.016±0.009		0.006±0.004		0.058±0.017		0.011±0.004		0.032±0.008
	Low UV	0.122±0.041		0.030±0.016		0.003±0.002		0.004±0.002		0.001±0.001		0.057±0.015		0.004±0.002		0.022±0.004
DS		***		***		*		***		***		***		***		***
UV		ns		*		ns		*		***		ns		***		ns
DS x UV		*		***		ns		***		***		ns		***		ns

* significant at p ≤ 0.05; ** significant at p ≤ 0.01; *** significant at p ≤ 0.005; ns, not significant

Table S9. Influence of developmental stage and ultraviolet radiation treatment (UVB control: 0.059 kJ m⁻² h⁻¹ UVB; reduced UVB: 0.017 kJ m⁻² h⁻¹ UVB; low UV: 0.002 kJ m⁻² h⁻¹ UVB) on isothiocyanates (µg g⁻¹ fresh weight) in pak choi. Different letters represent significant differences (p ≤ 0.05 by Tukey's HSD test) for each isothiocyanate (n= 4, mean±standard error). ITC, isothiocyanate; 5MTP-ITC, 5-(methylthio)pentyl ITC, 3But-ITC, 3-butenyl ITC; 4Pent-ITC, 4-pentenyl ITC; OZT, 5-vinyl-1,3-oxazolidine-2-thione; 2PE-ITC, 2-phenylethyl ITC.

Developmental stage	UV treatment	Total isothiocyanates	5MTP-ITC		3But-ITC		4Pent-ITC		OZT		2PE-ITC		
Sprouts	Control	1.6±0.194		0.0±0.000		1.6±0.194		0.0±0.000		0.0±0.000		0.0±0.000	
	Reduced UVB	1.7±0.224		0.0±0.000		1.7±0.224		0.0±0.000		0.0±0.000		0.0±0.000	
	Low UVB	1.0±0.100		0.0±0.000		1.0±0.100		0.0±0.000		0.0±0.000		0.0±0.000	
5-leaves	Control	0.0±0.000		0.0±0.000		0.0±0.000		0.0±0.000		0.0±0.000		0.0±0.000	
	Reduced UVB	0.0±0.000		0.0±0.000		0.0±0.000		0.0±0.000		0.0±0.000		0.0±0.000	
	Low UVB	0.0±0.000		0.0±0.000		0.0±0.000		0.0±0.000		0.0±0.000		0.0±0.000	
15-leaves	Control	2.4±0.715		0.0±0.000		1.0±0.217		1.1±0.265		0.3±0.252		0.1±0.063	
	Reduced UVB	2.8±1.135		0.0±0.000		1.0±0.377		1.3±0.536		0.0±0.000		0.4±0.250	
	Low UVB	6.1±3.119		0.0±0.000		2.0±1.083		2.8±1.276		0.8±0.519		0.5±0.265	
30-leaves	Control	4.1±1.500		0.3±0.057		1.2±0.581		1.5±0.558		0.7±0.301		0.3±0.202	
	Reduced UVB	6.0±1.829		0.4±0.224		1.5±0.605		3.1±0.849		0.6±0.391		0.5±0.150	
	Low UVB	2.4±0.915		0.1±0.057		0.7±0.308		1.2±0.466		0.3±0.204		0.1±0.102	
Main effect													
Developmental stage	sprouts	1.5±0.135	AB	0.0±0.000	A	1.5±0.135	B	0.0±0.000	A	0.0±0.000	A	0.0±0.000	A
	5-leaves	0.0±0.000	A	0.0±0.000	A	0.0±0.000	A	0.0±0.000	A	0.0±0.000	A	0.0±0.000	A
	15-leaves	3.8±1.140	B	0.0±0.000	A	1.4±0.380	B	1.7±0.484	B	0.3±0.198	AB	0.3±0.125	B
	30-leaves	4.2±0.890	B	0.2±0.082	B	1.1±0.289	B	1.9±0.421	B	0.6±0.169	B	0.3±0.093	B
UV treatment	Control	2.0±0.531		0.1±0.037		1.0±0.213		0.9±0.231		0.2±0.117		0.1±0.059	
	Reduced UVB	2.6±0.747		0.1±0.064		1.1±0.240		1.5±0.422		0.1±0.110		0.2±0.088	
	Low UVB	2.4±0.941		0.0±0.014		0.9±0.316		1.3±0.465		0.3±0.148		0.2±0.083	
Developmental stage				***		***		***		*		***	
UV treatment				ns		ns		ns		ns		ns	
Developmental stage x UV treatment				ns		ns		ns		ns		ns	

* significant at p ≤ 0.05; ** significant at p ≤ 0.01; *** significant at p ≤ 0.005; ns, not significant

1 Table S10. Influence of developmental stage and ultraviolet radiation treatment (UVB control: 0.059 kJ m⁻² h⁻¹ UVB; reduced UVB: 0.017 kJ m⁻² h⁻¹ UVB; low UV:
2 0.002 kJ m⁻² h⁻¹ UVB) on isothiocyanates (μmol g⁻¹ fresh matter) in pak choi. Different letters represent significant differences (p ≤ 0.05 by Tukey's HSD test
3 (n=4)) for each isothiocyanate mean±standard error. DS, developmental stage; ITC, isothiocyanate; 5MTP-ITC, 5-(methylthio)pentyl ITC, 3But-ITC, 3-butenyl ITC;
4 4Pent-ITC, 4-pentenyl ITC; OZT, 5-vinyl-1,3-oxazolidine-2-thione; 2PE-ITC, 2-phenylethyl ITC.

DS	UV	Total isothiocyanates		5MTP-ITC		3But-ITC		4Pent-ITC		OZT		2PE-ITC	
sprouts	Control	0.015±0.002		0.000±0.000		0.015±0.002		0.000±0.000		0.000±0.000		0.000±0.000	
	Reduced UVB	0.015±0.002		0.000±0.000		0.015±0.002		0.000±0.000		0.000±0.000		0.000±0.000	
	Low UVB	0.009±0.001		0.000±0.000		0.009±0.001		0.000±0.000		0.000±0.000		0.000±0.000	
5-leaf plants	Control	0.000±0.000		0.000±0.000		0.000±0.000		0.000±0.000		0.000±0.000		0.000±0.000	
	Reduced UVB	0.000±0.000		0.000±0.000		0.000±0.000		0.000±0.000		0.000±0.000		0.000±0.000	
	Low UVB	0.000±0.000		0.000±0.000		0.000±0.000		0.000±0.000		0.000±0.000		0.000±0.000	
15-leaf plants	Control	0.020±0.006		0.000±0.000		0.009±0.002		0.008±0.002		0.002±0.002		0.000±0.000	
	Reduced UVB	0.022±0.009		0.000±0.000		0.009±0.003		0.011±0.004		0.000±0.000		0.003±0.002	
	Low UVB	0.049±0.025		0.000±0.000		0.018±0.010		0.022±0.010		0.006±0.004		0.003±0.002	
30-leaf plants	Control	0.032±0.013		0.002±0.000		0.010±0.005		0.012±0.004		0.006±0.002		0.002±0.001	
	Reduced UVB	0.047±0.017		0.002±0.001		0.013±0.005		0.024±0.007		0.005±0.003		0.003±0.001	
	Low UVB	0.019±0.009		0.000±0.000		0.006±0.003		0.009±0.004		0.003±0.002		0.001±0.001	
main effect													
DS	sprouts	0.013±0.001	AB	0.000±0.000	A	0.013±0.001	B	0.000±0.000	A	0.000±0.000	A	0.000±0.000	A
	5-leafs	0.000±0.000	A	0.000±0.000	A	0.000±0.000	A	0.000±0.000	A	0.000±0.000	A	0.000±0.000	A
	15-leafs	0.030±0.009	B	0.000±0.000	A	0.012±0.003	B	0.014±0.004	B	0.003±0.002	AB	0.002±0.001	B
	30-leafs	0.032±0.008	B	0.001±0.000	B	0.010±0.003	B	0.015±0.003	B	0.004±0.001	B	0.002±0.001	B
UVB	Control	0.017±0.006		0.000±0.000		0.009±0.002		0.005±0.002		0.002±0.001		0.001±0.000	
	Reduced UVB	0.021±0.008		0.000±0.000		0.009±0.002		0.009±0.004		0.001±0.001		0.001±0.001	
	Low UVB	0.019±0.009		0.000±0.000		0.008±0.003		0.008±0.004		0.002±0.001		0.001±0.001	
DS				***		***		***		*		***	
UVB				ns		ns		ns		ns		ns	
DS x UVB				ns		ns		ns		ns		ns	

5 * significant at p ≤ 0.05; ** significant at p ≤ 0.01; *** significant at p ≤ 0.005; ns, not significant