

**Supplementary Table S1.** The levels of the 33 compounds identified from alfalfa and Buckwheat seed and sprouts extracts by *UHPLC-Q-TOF-MS<sup>2</sup>* confirmed by comparison with reference standards.

No.	Metabolites	AL sprout	AL seed	BW sprout	BW seed
1.	Lysine	150000.00	0.00	28000.00	0.00
2.	L-Arginine	91000.00	77000.00	220000.00	0.00
3.	L-Phenylalanine	850000.00	0.00	0.00	0.00
4.	Leucine	220000.00	0.00	0.00	0.00
5.	L-Valine	310000.00	0.00	54000.00	0.00
6.	L-Tryptophan	200000.00	0.00	170000.00	68000.00
7.	L-Histidine	560000.00	0.00	130000.00	0.00
8.	D-ornithine	380000.00	0.00	120000.00	0.00
9.	L-Asparagine	0.00	54000.00	54000.00	0.00
10.	$\gamma$ -Aminobutyric acid	0.00	0.00	110000.00	0.00
11.	Pyroglutamic acid	150000.00	48000.00	160000.00	69000.00
12.	DL-Homoserine	240000.00	190000.00	95000.00	0.00
13.	L-Glutamate	500000.00	0.00	200000.00	220000.00
14.	Glutathione	0.00	0.00	100000.00	0.00
15.	Uridine	0.00	100000.00	55000.00	0.00
16.	Actinonin	310000.00	0.00	0.00	420000.00
17.	DL-o-Tyrosine	250000.00	0.00	120000.00	0.00
18.	Citric acid	100000.00	770000.00	600000.00	790000.00
19.	Malic acid	64000.00	300000.00	0.00	380000.00
20.	Lactic acid	130000.00	45000.00	0.00	0.00
21.	Fumaric acid	0.00	96000.00	0.00	120000.00
22.	3-Furoic acid	0.00	250000.00	190000.00	260000.00
23.	Trans-Cinnamic acid	140000.00	0.00	0.00	0.00
24.	m-Coumaric acid	0.00	0.00	95000.00	0.00
25.	Ascorbic acid	66000.00	0.00	0.00	0.00
26.	(-)-Catechin gallate	0.00	0.00	60000.00	310000.00
27.	+) -Epicatechin	0.00	0.00	200000.00	350000.00
28.	Gluconic acid	1600000	0.00	1700000	0.00
29.	Galactaric acid	280000	0.00	0.00	0.00
30.	Hypoxanthine	260000	0.00	0.00	0.00
31.	N-Methylglutamic acid	0.00	45000	0.00	0.00
32.	1-Hexadecylamine	230000	490000	500000	540000
33.	Adenosine	0.00	560000	0.00	370000

The values are presented as peak area representing the levels of metabolites in the extracts. Zero (0.00) peak areas indicate that the corresponding metabolite was not detected in the respective extract