Supplementary Materials

Comparative Evaluation of the Antioxidative and Antimicrobial Nutritive Properties and Potential Bioaccessibility of Plant Seeds and Algae Rich in Protein and Polyphenolic Compounds

Table S1. Content of essential and relatively essential amino acids (g/100 g protein) in analysed raw materials.

Raw material	Essential amino acid							Relatively essential			Σ_{eaa}
	Thr	Val	Met	Ile	Leu	Phe	Lys	Ser	His	Arg	
Black cumin	3.77±0.14[e]	4.26±0.34[e]	0.76±0.12[h]	3.18±0.22[h]	5.27±0.32[g]	3.65±0.32[h]	3.90±0.57[e]	4.20±0.32[e]	2.54±0.16[d]	7.64±0.87[d]	39.16±2.82[f]
Milk thistle	4.01[c]±0.10[c]	5.13±0.23[c]	1.27±0.18[f]	4.03±0.07[e]	6.10±0.70[e]	4.59±0.12[e]	4.71±0.17[c]	5.22±0.34[a]	2.64±0.40[d]	10.59±0.41[c]	48.28±2.50[b]
Fenugreek	3.74±0.29[e]	3.96±0.40[f]	1.03±0.27[g]	4.77±0.32[a]	6.70±0.56[c]	4.57±0.15[e]	6.76±0.81[a]	4.91±0.54[b]	2.80±0.34[c]	10.40±1.32[c]	49.65±4.45[a]
Almonds	2.62±0.76[f]	3.72±0.60[g]	0.39±0.32[i]	3.08±0.59[i]	5.69±0.88[f]	5.10±0.75[c]	2.64±0.48[f]	3.50±0.74[h]	2.33±0.50[e]	11.16±0.35[b]	40.23±5.43[f]
White sesame	3.82±0.73[d]	4.69±0.69[d]	1.50±0.32[c]	3.65±0.60[f]	6.47±1.16[d]	4.85±0.88[d]	2.72±0.41[f]	4.56±0.73[d]	2.75±0.40[c]	12.87±1.48[a]	47.88±7.34[bc]
White mustard	4.25±0.53[b]	4.63±0.45[d]	1.50±0.38[c]	3.45±0.34[g]	6.32±0.63[d]	3.96±0.50[g]	5.75±0.65[b]	3.86±0.40[g]	2.83±0.38[c]	5.57±1.18[f]	42.11±4.26[e]
Star anise	3.72±0.04[e]	4.74±0.11[d]	1.37±0.02[e]	4.13±0.09[d]	6.50±0.02[c]	5.62±0.06[b]	4.38±0.02[d]	4.71±0.06[c]	3.77±0.03[b]	6.89±0.02[ef]	45.83±0.04[c]
Eggfruit	4.42±0.17[a]	5.39±0.14[b]	2.64±0.11[a]	4.56±0.23[b]	6.33±0.19[de]	6.62±0.20[a]	3.98±0.12[e]	5.22±0.19[a]	4.82±0.22[a]	4.14±0.11[g]	48.12±0.91[b]

	Thr	Val	Met	Ile	Leu	Phe	Lys	Ser	His	Arg	Σ_{eaa}
Spirulina	4.30±1.33[b]	5.62±1.43[a]	1.70±0.76[b]	4.45±1.80[c]	7.26±1.70[b]	3.95±1.66[g]	4.19±1.36[d]	4.13±1.13[e]	1.51±1.02[f]	7.13±1.41[d]	44.24±12.25[d]
Chlorella	4.53±0.53[a]	5.71±0.56[a]	1.45±0.66[d]	4.43±0.64[c]	8.03±0.95[a]	4.39±0.44[f]	4.90±0.69[c]	4.07±0.50[f]	1.81±0.47[f]	6.42±1.20[f]	45.75±5.58[c]

values are means ±SD of two determinations; a-j – the same letter in column mean homogenous groups

Amino acids abbreviations: Thr – threonine; Val – valine; Met – methionine; Ile – isoleucine; Leu – leucine; Phe – phenylalanine; Lys –lysine; Ser-serine; His – histidine; Arg – arginine; Σ_{eaa}- sum of essential and relatively essential amino acids

Table S2. Content of non-essential and relatively non-essential amino acids (g/100 g protein) in analysed raw materials and accepted patterns.

Raw material	Non-essential amino acid					Relatively non-essential		Σ_{neaa}
	Asp	Glu	Pro	Gly	Ala	Cys	Tyr	
Black cumin	7.46±0.70[e]	21.01±0.42[b]	3.30±0.33[e]	5.66±0.23[ab]	3.79±0.35[g]	1.24±0.35[a]	2.95±0.32[c]	45.41±1.02[c]
Milk thistle	9.70±0.30[c]	21.26±0.24[b]	4.07±0.91[c]	5.59±1.04[b]	4.35±0.19[d]	0.91±0.38[b]	3.25±0.52[b]	49.13±2.36[b]
Fenugreek	10.74±1.14[b]	17.65±0.52[d]	4.34±1.49[bc]	4.90±0.50[e]	3.93±0.48[f]	0.74±0.04[c]	2.56±0.69[d]	44.87±4.57[cd]
Almonds	10.00±0.99[b]	25.63±2.19[a]	3.79±0.96[d]	5.84±0.77[a]	3.92±0.44[f]	0.76±0.19[c]	2.25±0.44[d]	52.18±5.75[a]
White sesame	8.28±0.13[d]	19.76±2.88[c]	2.66±0.51[f]	5.05±0.82[d]	4.62±0.73[c]	1.25±0.12[a]	3.05±0.67[c]	44.67±5.73[cd]
White mustard	6.26±0.65[f]	16.91±0.49[e]	5.63±1.63[a]	4.67±0.58[ef]	4.04±0.56[e]	0.99±0.37[b]	2.33±0.44[d]	40.83±2.47[e]
Star anise	8.00±0.02[d]	12.44±0.07[f]	4.84±0.14[b]	5.28±0.01[c]	4.81±0.02[c]	1.04±0.06[b]	3.02±0.02[c]	39.44±0.05[e]
Eggfruit	14.18±0.28[a]	9.75±0.19[g]	5.65±0.25[a]	5.24±0.16[c]	7.18±0.22[a]	0.47±0.07[d]	4.09±0.12[a]	46.56±1.19[c]
Spirulina	8.51±2.36[d]	12.13±0.80[f]	2.89±1.05[f]	4.35±1.92[f]	7.02±1.18[a]	0.32±0.12[e]	2.98±1.55[c]	38.21±6.60[f]
Chlorella	8.65±0.61[d]	12.34[f]±0.58[f]	2.92±1.17[f]	4.81±0.50[e]	6.82±0.70[b]	0.34±0.18[e]	2.94±0.68[e]	38.82±2.78[f]

[a,b,c,d,e,f] – significant differences between the mean contents of individual amino acids, means denoted by different letters differ at p≤0.05.
Amino acids abbreviations: Asp – aspartic acid; Glu – glutamic acid; Pro – proline; Gly – glycine; Ala – alanine; Cys- cysteine; Tyr –tyrosine