

Supplementary information 1

Table 1. The macronutrient composition of protein ingredients provided by suppliers.

g/100 g	Pea protein	Faba bean protein	Hemp protein	Quinoa flour	Oat flour
Carbohydrate	NI	NI	7.8	52.0	59.9
Dietary fiber	2.0 – 4.0	12.0 – 15.0	20.0	13.0	8.7
Fat	3.0 – 5.0	3.5 – 4.5	16.0	6.0	6.4
Protein	54.0 – 56.0	63.0 – 67.0	50.0	14.0	11.8
Ash	5.5 – 6.5	12.0 – 15.0	NI	3.0	1.6
Moisture	10.0 – 12.0	8.0 – 10.0	NI	12.0	11.6

NI: not informed

Supplementary information 2



Figure 1. Pictures of TVPs 1-3 (on the left) and Snacks 1-3 (on the right).

Supplementary information 3

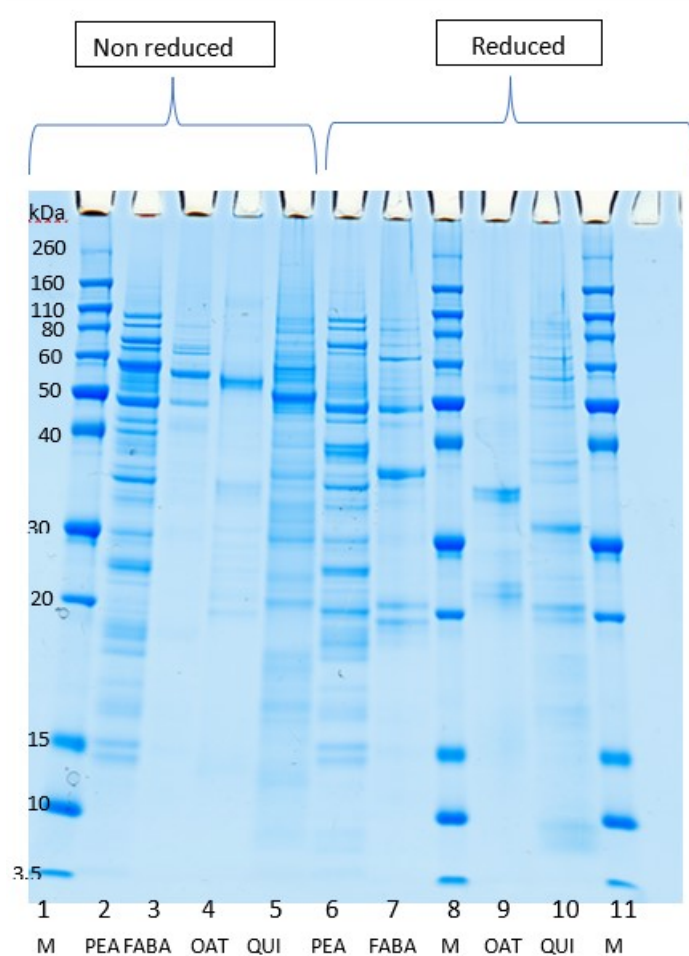


Figure 2. Molecular weight distribution of protein ingredients obtained by Sodium Dodecylsulfate Polyacrylamide Gel Electrophoresis (SDS-PAGE) under non-reducing and reducing conditions. M: Molecular marker. QUI: quinoa.

Supplementary information 4

Table 2. Amino acid composition and scores of protein ingredients. The limiting amino acid is in bold.

	Pea protein		Faba bean protein		Quinoa flour		Hemp protein		Oat flour	
Indispensable amino acid	Amino acid content	Amino acid score	Amino acid content	Amino acid score	Amino acid content	Amino acid score	Amino acid content	Amino acid score	Amino acid content	Amino acid score
	(mg/g protein)	(mg/g protein)	(mg/g protein)	(mg/g protein)	(mg/g protein)	(mg/g protein)	(mg/g protein)	(mg/g protein)	(mg/g protein)	(mg/g protein)
Histidine	25.63	169	27.60	182	31.01	205	27.43	181	22.56	149
Isoleucine	43.12	142	43.32	143	41.07	136	40.04	132	39.47	130
Leucine	76.08	129	82.62	140	72.09	122	66.58	113	77.07	130
Lysine	80.96	178	68.30	150	65.38	144	39.15	86	42.29	93
Methionine	9.76		7.51		25.15		25.44		17.86	
Cysteine	12.82		11.70		20.12		17.47		31.95	
Methionine + cysteine	22.58	99	19.21	85	45.26	199	42.91	189	49.81	219
Phenylalanine	52.48		45.24		45.26		35.83		51.69	
Tyrosine	37.02		36.86		33.53		35.39		35.71	
Phenylalanine + Tyrosine	89.50	236	82.10	217	78.79	208	71.22	188	87.41	231
Threonine	39.67	175	37.21	164	40.23	177	46.89	206	34.77	153
Tryptophan	8.95	148	8.91	147	14.25	235	35.83	591	15.04	248
Valine	46.38	118	46.46	118	48.62	123	35.39	90	51.69	131