

Supplementary Materials

Table S1. Swelling power (g/g) of amaranth ($n = 8$), quinoa ($n = 7$) and buckwheat ($n = 10$) wholemeal flour measured at different temperatures (55, 65, 75, 85 and 95 °C).

Swelling Power (g/g) ¹	Amaranth	Quinoa	Buckwheat	<i>p</i> -Value ²
55 °C	2.66 - 2.97 2.77 ± 0.10^a	2.87 - 4.07 3.33 ± 0.47^b	2.65 - 3.01 2.84 ± 0.12^{ab}	0.028
65 °C	2.56 - 4.33 3.19 ± 0.56^a	3.89 - 5.19 4.54 ± 0.53^b	3.35 - 5.08 4.39 ± 0.51^b	< 0.001
75 °C	10.21 - 12.00 10.87 ± 0.59^b	5.11 - 6.62 5.86 ± 0.46^a	5.37 - 5.81 5.68 ± 0.14^a	< 0.001
85 °C	11.64 - 14.73 12.97 ± 1.19^c	6.11 - 8.47 7.14 ± 0.81^b	5.45 - 6.64 6.10 ± 0.38^a	< 0.001
95 °C	10.77 - 12.11 11.50 ± 0.42^c	8.11 - 9.75 8.71 ± 0.50^b	6.82 - 8.06 7.30 ± 0.35^a	< 0.001

¹ Results presented as minimum – maximum, and mean $\pm$ standard deviation. ² Average values marked by the same letter (a-c) are not statistically different ($p > 0.05$).

Table S2. Pasting parameters of amaranth ($n = 8$), quinoa ($n = 7$) and buckwheat ($n = 10$) wholemeal flour.

Pasting Parameter ¹	Amaranth	Quinoa	Buckwheat	<i>p</i> -Value ³
pasting temperature (°C)	65.09 – 68.89 67.53 ± 1.27^c	57.64 – 65.46 62.22 ± 2.95^a	64.60 – 66.23 65.08 ± 0.63^b	< 0.001
peak viscosity (mPa.s)	1459 – 2045 1657 ± 180^a	1418 - 2606 2064 ± 524^a	2539 - 3304 2771 ± 242^b	< 0.001
peak time (min)	7.491 - 8.127 7.902 ± 0.182^a	10.022 - 11.778 10.909 ± 0.692^b	10.734 - 12.700 11.473 ± 0.598^b	< 0.001
peak temperature (°C)	82.19 - 85.36 84.25 ± 0.91^a	94.86 - 95.17 95.07 ± 0.11^b	95.02 - 95.13 95.08 ± 0.03^b	< 0.001
holding strength (mPa.s)	987 – 1271 1107 ± 87^a	1156 - 2513 1910 ± 552^b	2494 - 3113 ² 2719 ± 201^c	< 0.001
final viscosity (mPa.s)	1345 – 1714 1502 ± 124^a	1756 - 3274 2677 ± 647^b	5415 - 7661 6421 ± 673^c	< 0.001
total setback (mPa.s)	340 – 449 395 ± 42^a	425 - 1224 767 ± 261^b	2806 - 4548 3702 ± 493^c	< 0.001

¹ Results presented as minimum – maximum, and mean $\pm$ standard deviation. ² The holding strength of buckwheat samples was calculated as the average viscosity at the end of the holding phase. ³ Average values marked by the same letter (a-c) are not statistically different ($p > 0.05$).