

Bioaccessibility and antioxidant activity of polyphenols from pigmented barley and wheat

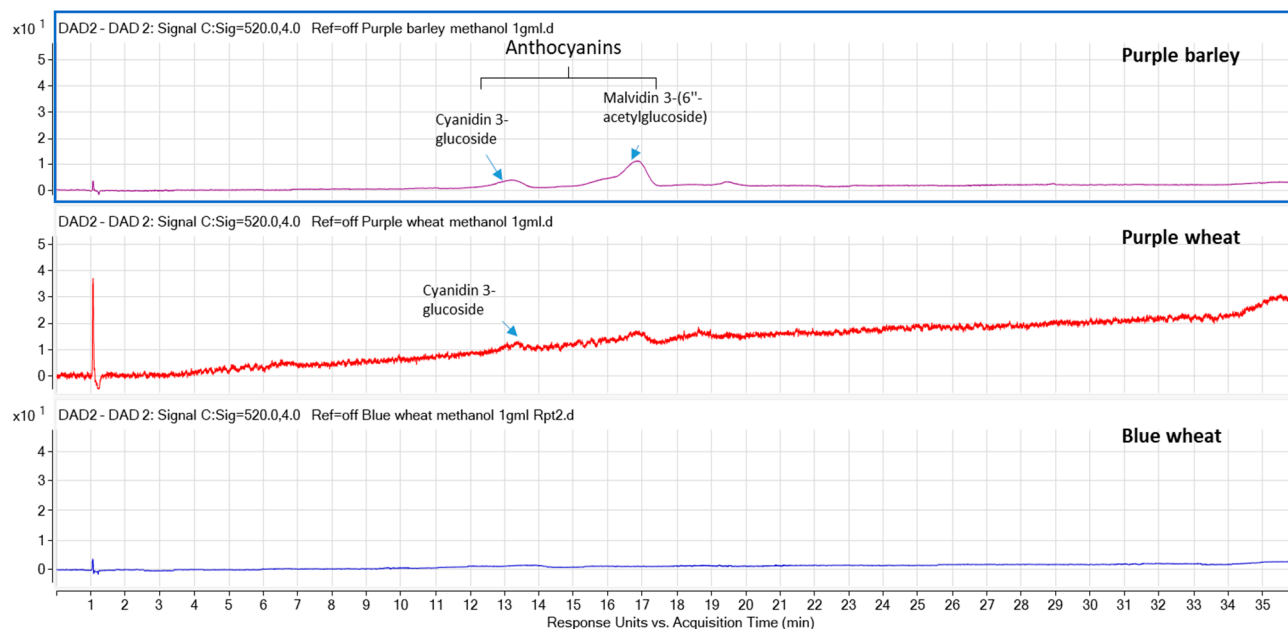
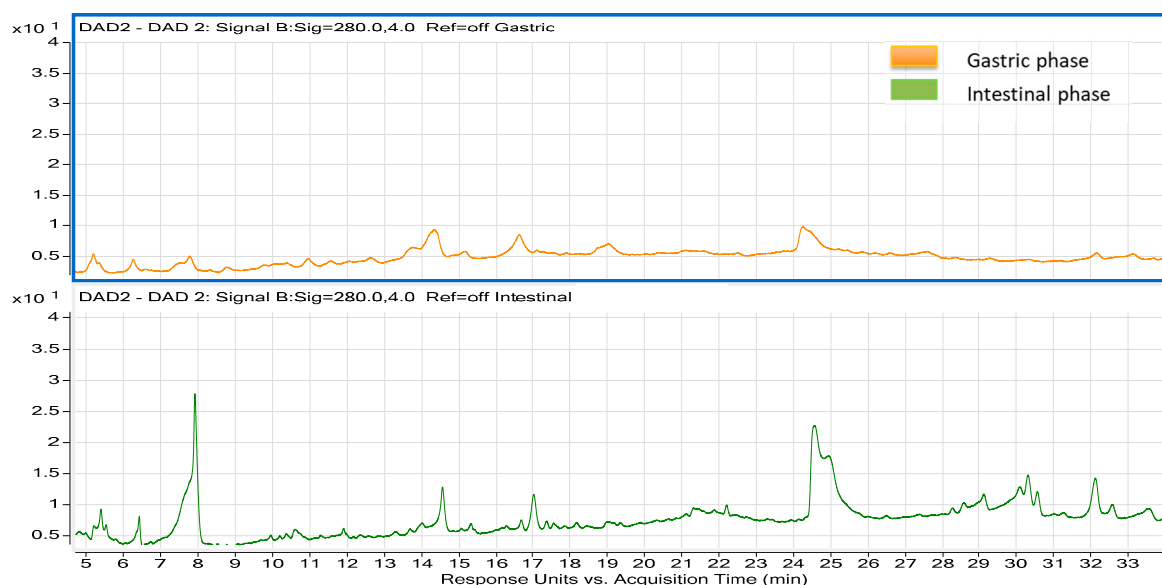
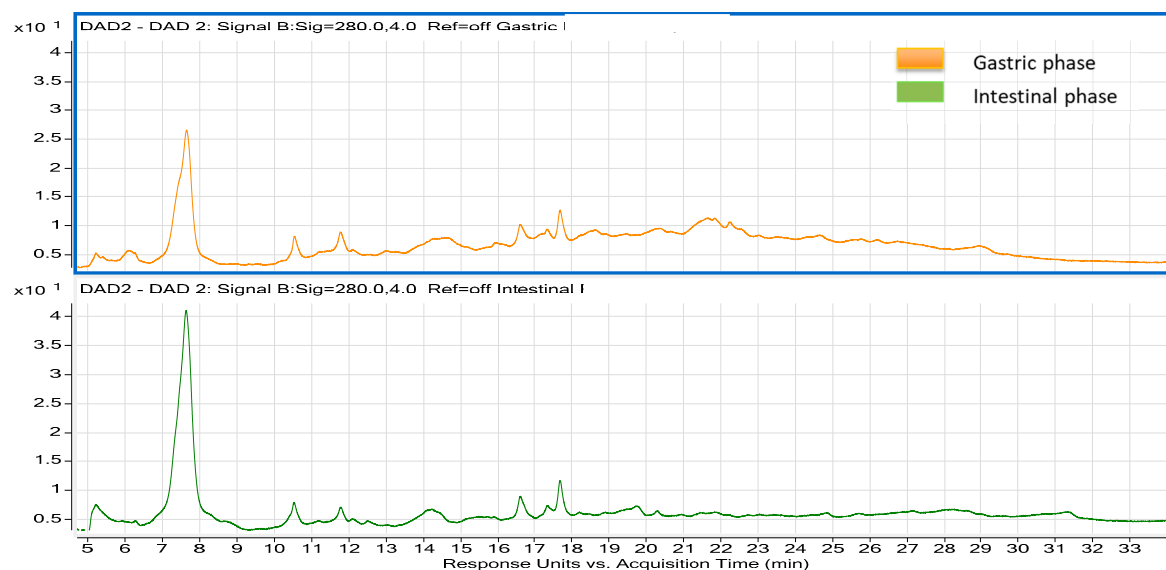


Figure S1. Chromatograms at 520 nm highlighting anthocyanin compounds in the methanol extracts of pigmented cereals. Purple line: purple barley anthocyanin profile; Red line: purple wheat anthocyanin profile; Blue line: blue wheat anthocyanin profile.

A. Purple barley



B. Purple Wheat



C. Blue Wheat

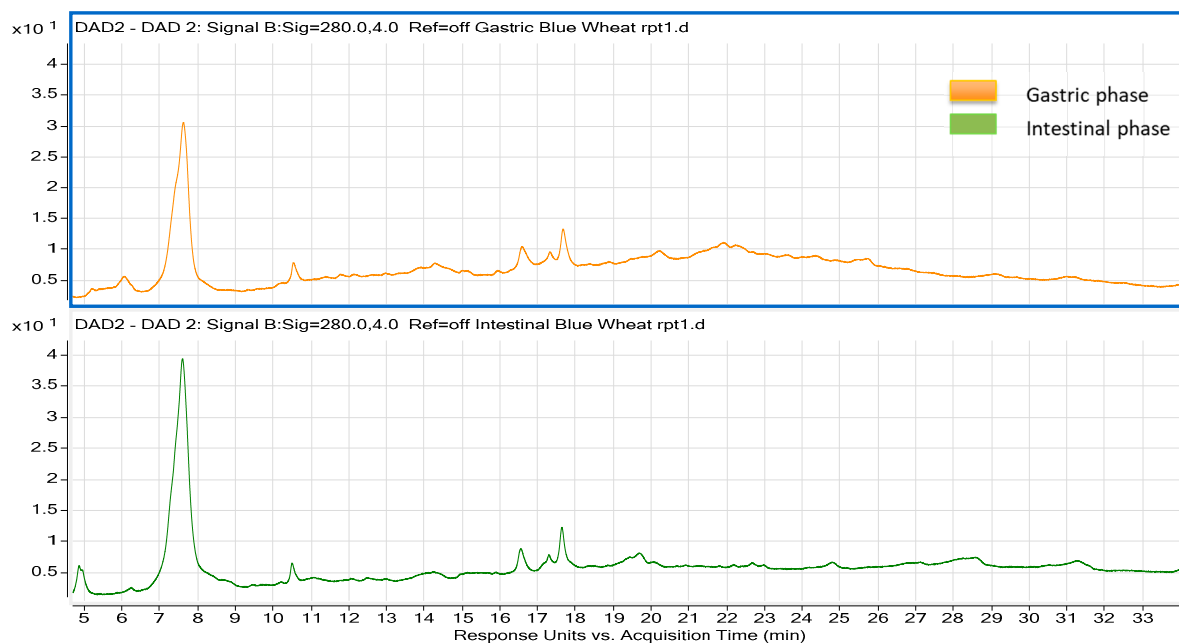


Figure S2. Annotated chromatograms of pigmented wheat flour from **gastric** and **intestinal** phases of digestion

Table S1. Table of unidentified compounds from methanol extraction

Peak	RT (mins)	Λ_{\max} (nm)	m/z	Phenolic quantification (mg GAE/100 g dw)		
				Purple Barley	Purple Wheat	Blue Wheat
P2	6.6	280	671.2026	0.97 ± 0^a	0.54 ± 0^c	0.67 ± 0.04^b
P3	7.1	280	655.2132	–	0.06 ± 0^a	0.06 ± 0^a
P5 *	8.4	280	203.0839	0.33 ± 0.06^c	5.81 ± 0.04^a	5.39 ± 0.07^b
P6	8.9	280	451.1238	0.04 ± 0	–	–
P8	10.5	300	323.1354	0.1 ± 0.04	–	–
P9	11.1	280	472.1578	–	0.15 ± 0.01	–
P10	11.7	255, 285	504.1444	–	0.89 ± 0.01	–
P14	14.5	280, 320	307.1393	–	0.07 ± 0.01	–
P15	14.8	320	787.3615	1.62 ± 0.27	–	–
P16	15.5	310	413.1087	–	–	0.13 ± 0
P17	15.7	320	817.3733	0.22 ± 0.02	–	–
P18	16.5	350	366.1199	–	–	0.1 ± 0.02
P21*	17.5	320	537.3072	–	–	0.13 ± 0.05
P24	20.0	320	452.2184	–	–	0.17 ± 0.01

Data are the means \pm SD (n = 3). Different alphabets in each row indicates a significant difference in phenolic content. Gallic acid equivalent: GAE; Mass to charge ration: m/z ; – not detected; RT: retention time

* P5 tentatively identified as the amino phenolic compound tryptophan based on study by (Podio et al., 2019)

* Ferulic acid was identified by mass spectra (193.0578) at 17.5 mins but not quantifiable as its UHPLC peak was masked by the other compound eluting at the same time.