

Supplementary materials.

**Table S1.**

Free Soluble phenolic, Soluble Conjugated, Insoluble Bound acids in wholemeal.

a) Free Soluble phenolic acids ( $\mu\text{g g}^{-1}$ ) in wholemeal

Genotype	Gallic acid	<i>p</i> -Hydroxybenzoic Acid	Vanillic acid	Caffeic acid	Syringic acid	Vanillin	Ferulic acid	Sinapic acid	<i>p</i> -coumaric acid	Trans-cinnamic acid	TPAs	Vitexin
Cappelli	4.55 <sup>a</sup>	n.d.	n.d.	n.d.	n.d.	3.12 <sup>d</sup>	n.d.	n.d.	n.d.	n.d.	7.67 <sup>b</sup>	17.52 <sup>e</sup>
Sfinge	4.32 <sup>c</sup>	n.d.	n.d.	n.d.	n.d.	1.44 <sup>e</sup>	n.d.	n.d.	n.d.	n.d.	5.76 <sup>e</sup>	73.36 <sup>b</sup>
Marco Aurelio	4.08 <sup>b</sup>	n.d.	n.d.	n.d.	n.d.	3.36 <sup>c</sup>	n.d.	n.d.	n.d.	n.d.	7.44 <sup>c</sup>	75.04 <sup>a</sup>
Nadif	4.4 <sup>b</sup>	n.d.	n.d.	n.d.	n.d.	4.0 <sup>b</sup>	n.d.	n.d.	n.d.	n.d.	8.40 <sup>a</sup>	65.2 <sup>c</sup>
Kronos	2.72 <sup>d</sup>	n.d.	n.d.	n.d.	n.d.	4.32 <sup>a</sup>	n.d.	n.d.	n.d.	n.d.	7.04 <sup>d</sup>	54.88 <sup>d</sup>

b) Soluble Conjugated phenolic acids ( $\mu\text{g g}^{-1}$ ) in wholemeal

Genotype	Gallic acid	<i>p</i> -Hydroxybenzoic Acid	Vanillic acid	Caffeic acid	Syringic acid	Vanillin	Ferulic acid	Sinapic acid	<i>p</i> -coumaric acid	Trans-cinnamic acid	TPAs	Vitexin
Cappelli	n.d.	1.455 <sup>d</sup>	6.95 <sup>d</sup>	n.d.	1.45 <sup>d</sup>	0.70 <sup>d</sup>	6.345 <sup>e</sup>	2.55 <sup>e</sup>	n.d.	4.25 <sup>c</sup>	23.71 <sup>e</sup>	n.d.
Sfinge	n.d.	2.345 <sup>a</sup>	8.75 <sup>a</sup>	n.d.	2.30 <sup>b</sup>	1.10 <sup>a</sup>	12.40 <sup>a</sup>	6.15 <sup>c</sup>	n.d.	3.60 <sup>d</sup>	36.65 <sup>a</sup>	n.d.
Marco Aurelio	n.d.	2.25 <sup>b</sup>	8.05 <sup>b</sup>	n.d.	2.40 <sup>a</sup>	0.90 <sup>b</sup>	10.10 <sup>b</sup>	10.245 <sup>a</sup>	n.d.	2.02 <sup>e</sup>	35.97 <sup>b</sup>	n.d.
Nadif	n.d.	2.045 <sup>c</sup>	7.50 <sup>c</sup>	n.d.	1.65 <sup>c</sup>	0.75 <sup>d</sup>	6.80 <sup>d</sup>	2.90 <sup>d</sup>	n.d.	5.165 <sup>b</sup>	26.81 <sup>d</sup>	n.d.
Kronos	n.d.	2.25 <sup>b</sup>	7.00 <sup>d</sup>	n.d.	2.45 <sup>a</sup>	0.80 <sup>c</sup>	7.145 <sup>c</sup>	7.10 <sup>b</sup>	n.d.	5.85 <sup>a</sup>	32.60 <sup>c</sup>	n.d.

c) Insoluble Bound phenolic acids ( $\mu\text{g g}^{-1}$ ) in wholemeal

Genotype	Gallic acid	<i>p</i> -Hydroxybenzoic Acid	Vanillic acid	Caffeic acid	Syringic acid	Vanillin	Ferulic acid	Sinapic acid	<i>p</i> -coumaric acid	Trans-cinnamic acid	TPAs	Vitexin
Cappelli	n.d.	1.95 <sup>d</sup>	7.92 <sup>a</sup>	0.80 <sup>d</sup>	2.48 <sup>b</sup>	3.01 <sup>b</sup>	480.365 <sup>a</sup>	12.045 <sup>b</sup>	15.085 <sup>c</sup>	n.d.	523.65 <sup>a</sup>	n.d.
Sfinge	n.d.	2.10 <sup>c</sup>	6.10 <sup>c</sup>	1.18 <sup>b</sup>	2.63 <sup>a</sup>	2.93 <sup>b</sup>	450.58 <sup>c</sup>	12.93 <sup>b</sup>	17.20 <sup>a</sup>	n.d.	495.65 <sup>c</sup>	n.d.
Marco Aurelio	n.d.	2.68 <sup>b</sup>	7.18 <sup>b</sup>	1.04 <sup>c</sup>	2.13 <sup>d</sup>	3.22 <sup>a</sup>	469.46 <sup>b</sup>	10.12 <sup>c</sup>	15.29 <sup>b</sup>	n.d.	511.12 <sup>b</sup>	n.d.
Nadif	n.d.	2.90 <sup>a</sup>	5.53 <sup>e</sup>	0.57 <sup>e</sup>	2.24 <sup>c</sup>	2.51 <sup>d</sup>	421.23 <sup>d</sup>	7.11 <sup>d</sup>	11.31 <sup>d</sup>	n.d.	453.40 <sup>d</sup>	n.d.
Kronos	n.d.	1.55 <sup>e</sup>	5.78 <sup>d</sup>	1.37 <sup>a</sup>	2.22 <sup>cd</sup>	2.64 <sup>c</sup>	369.87 <sup>e</sup>	7.18 <sup>d</sup>	9.23 <sup>e</sup>	n.d.	399.84 <sup>e</sup>	n.d.

Results are expressed as  $\mu\text{g g}^{-1}$  of flour on a dry sample weight basis. Data are represented as mean  $\pm$  standard deviation of three replicate extractions. The same letter indicates no statistical difference, whereas different letters stand for significant statistical difference ( $P < 0.05$ ; Tukey's test).

**Table S2.**

Free Soluble phenolic, Soluble Conjugated, Insoluble Bound acids in semolina

a) Free Soluble phenolic acids ( $\mu\text{g g}^{-1}$ ) in semolina

Genotype	Gallic acid	<i>p</i> -Hydroxybenzoic Acid	Vanillic acid	Caffeic acid	Syringic acid	Vanillin	Ferulic acid	Sinapic acid	<i>p</i> -coumaric acid	Trans-cinnamic acid	TPAs	Vitexin
Cappelli	1.36 <sup>b</sup>	n.d.	1.52 <sup>a</sup>	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	2.88 <sup>b</sup>	12.08 <sup>a</sup>
Sfinge	0.8 <sup>d</sup>	n.d.	1.12 <sup>c</sup>	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	1.92 <sup>b</sup>	n.d.
Marco Aurelio	3.2 <sup>a</sup>	n.d.	1.36 <sup>b</sup>	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	4.56 <sup>a</sup>	8 <sup>c</sup>
Nadif	0.88 <sup>e</sup>	n.d.	1.36 <sup>b</sup>	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	2.24 <sup>c</sup>	n.d.
Kronos	1.205 <sup>c</sup>	n.d.	1.04 <sup>c</sup>	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	2.25 <sup>c</sup>	10.4 <sup>b</sup>

b) Soluble Conjugated phenolic acids ( $\mu\text{g g}^{-1}$ ) in semolina

Genotype	Gallic acid	<i>p</i> -Hydroxybenzoic Acid	Vanillic acid	Caffeic acid	Syringic acid	Vanillin	Ferulic acid	Sinapic acid	<i>p</i> -coumaric acid	Trans-cinnamic acid	TPAs	Vitexin
Cappelli	n.d.	0.555 <sup>c</sup>	1.325 <sup>c</sup>	n.d.	n.d.	0.405 <sup>c</sup>	1.365 <sup>e</sup>	2.38 <sup>c</sup>	n.d.	n.d.	6.03 <sup>c</sup>	n.d.
Sfinge	n.d.	1.01 <sup>b</sup>	2.03 <sup>b</sup>	n.d.	n.d.	0.09 <sup>e</sup>	2.285 <sup>c</sup>	2.99 <sup>b</sup>	n.d.	n.d.	8.41 <sup>b</sup>	n.d.
Marco Aurelio	n.d.	0.99 <sup>b</sup>	2.045 <sup>b</sup>	n.d.	n.d.	0.77 <sup>a</sup>	2.42 <sup>b</sup>	2.225 <sup>d</sup>	n.d.	n.d.	8.45 <sup>b</sup>	n.d.
Nadif	n.d.	0.445 <sup>d</sup>	1.25 <sup>c</sup>	n.d.	n.d.	0.32 <sup>d</sup>	2.045 <sup>d</sup>	2.4 <sup>c</sup>	n.d.	n.d.	6.46 <sup>c</sup>	n.d.
Kronos	n.d.	1.36 <sup>a</sup>	2.92 <sup>a</sup>	n.d.	n.d.	0.61 <sup>b</sup>	3.045 <sup>a</sup>	4.41 <sup>a</sup>	n.d.	n.d.	12.35 <sup>a</sup>	n.d.

c) Insoluble Bound phenolic acids ( $\mu\text{g g}^{-1}$ ) in semolina

Genotype	Gallic acid	<i>p</i> -Hydroxybenzoic Acid	Vanillic acid	Caffeic acid	Syringic acid	Vanillin	Ferulic acid	Sinapic acid	<i>p</i> -coumaric acid	Trans-cinnamic acid	TPAs	Vitexin
Cappelli	n.d.	0.62 <sup>a</sup>	0.66 <sup>c</sup>	n.d.	0.32 <sup>b</sup>	1.87 <sup>b</sup>	63.7 <sup>a</sup>	1.14 <sup>c</sup>	1.675 <sup>c</sup>	n.d.	69.99 <sup>a</sup>	n.d.
Sfinge	n.d.	0.35 <sup>c</sup>	0.395 <sup>e</sup>	n.d.	0.24 <sup>d</sup>	1.91 <sup>ab</sup>	55.44 <sup>d</sup>	1.335 <sup>b</sup>	1.41 <sup>d</sup>	n.d.	61.08 <sup>c</sup>	n.d.
Marco Aurelio	n.d.	0.48 <sup>b</sup>	1.08 <sup>a</sup>	n.d.	0.725 <sup>a</sup>	0.43 <sup>d</sup>	59.845 <sup>b</sup>	1.45 <sup>a</sup>	2.045 <sup>a</sup>	n.d.	66.06 <sup>b</sup>	n.d.
Nadif	n.d.	0.23 <sup>d</sup>	0.59 <sup>d</sup>	n.d.	0.25 <sup>c</sup>	1.94 <sup>a</sup>	56.11 <sup>c</sup>	1.12 <sup>c</sup>	1.23 <sup>e</sup>	n.d.	61.47 <sup>c</sup>	n.d.
Kronos	n.d.	0.46 <sup>b</sup>	0.935 <sup>b</sup>	n.d.	0.3 <sup>bc</sup>	1.105 <sup>c</sup>	52.8 <sup>e</sup>	1.37 <sup>b</sup>	1.735 <sup>b</sup>	n.d.	58.71 <sup>d</sup>	n.d.

Results are expressed as  $\mu\text{g g}^{-1}$  of flour on a dry sample weight basis. Data are represented as mean  $\pm$  standard deviation of three replicate extractions. The same letter indicates no statistical difference, whereas different letters stand for significant statistical difference ( $P < 0.05$ ; Tukey's test).