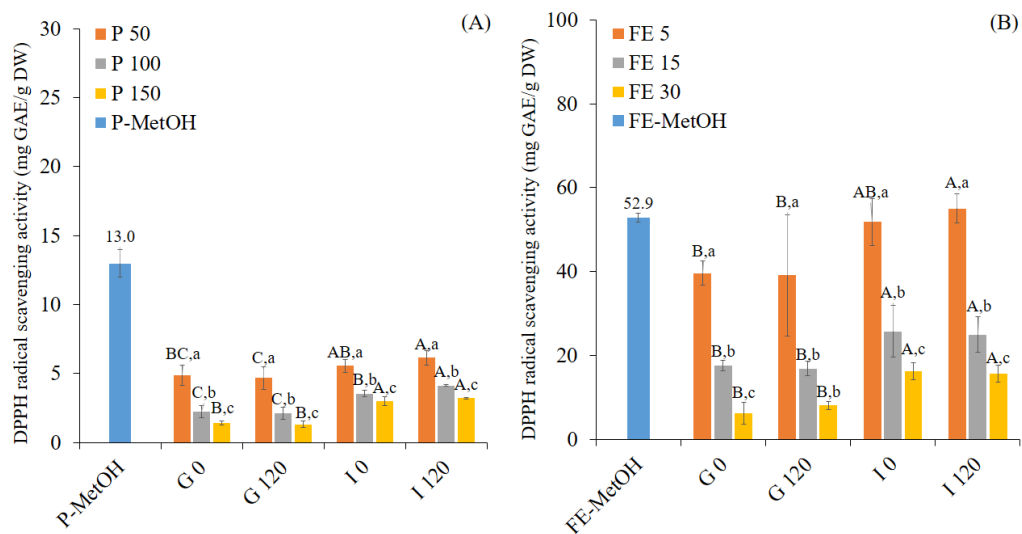
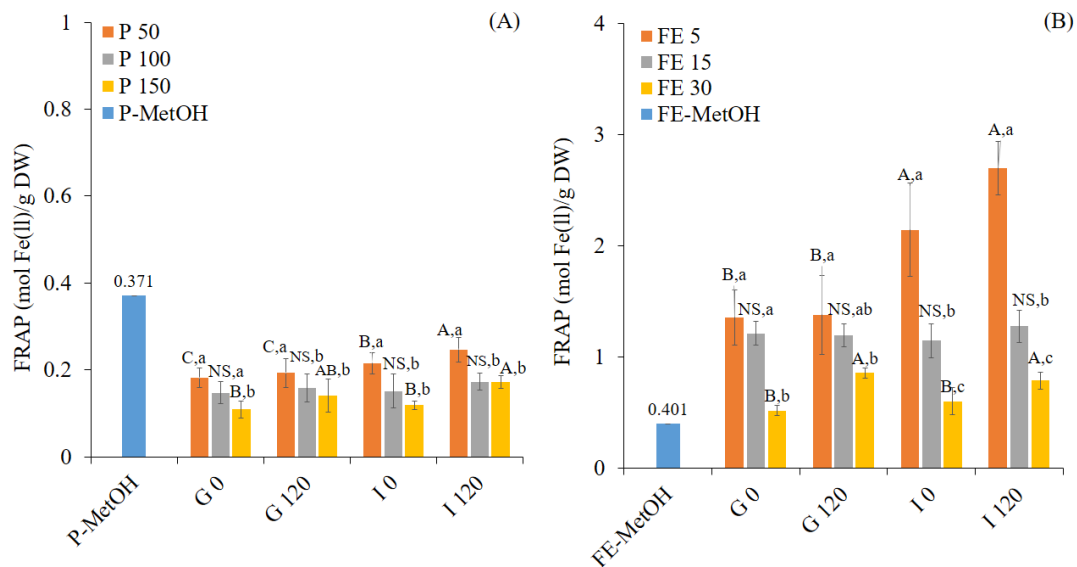


**Figure S1.** Changes in proportionate total phenolic content release (mg GAE/g DW) from white mugwort powder at different concentrations (P 50, 100, 150 mg/mL) (A) and white mugwort extract at different concentrations (FE 5, 15, 30 mg/mL) (B) during in vitro gastrointestinal digestion. Values with different letters (A-D) within the same treatment are significantly different ( $p \leq 0.05$ ). Values with different letters (a-c) within the same digestion phase are significantly different ( $p \leq 0.05$ ). P-value higher than 0.05 is represented by NS (non-significant difference).



**Figure S2.** Changes in DPPH scavenging activity (mg GAE/g DW) of white mugwort powder at different concentrations (P 50, 100, 150 mg/mL) (A) and white mugwort extract at different concentrations (FE 5, 15, 30 mg/mL) (B) during in vitro gastrointestinal digestion. Values with different letters (A-C) within the same treatment are significantly different ( $p \leq 0.05$ ). Values with different letters (a-c) within the same digestion phase are significantly different ( $p \leq 0.05$ ).



**Figure S3** Changes in FRAP value (mol Fe(II)/g DW) of white mugwort powder at different concentrations (P 50, 100, 150 mg/mL) (A) and white mugwort extract at different concentrations (FE 5, 15, 30 mg/mL) (B) during in vitro gastrointestinal digestion. Values with different letters (A-C) within the same treatment are significantly different ( $p \leq 0.05$ ). Values with different letters (a-c) within the same digestion phase are significantly different ( $p \leq 0.05$ ).

**Table S1** The content of polyphenol compounds (mg /g DW) of dried powder and fresh aerial part extract from white mugwort.

No	Compounds (mg/g dry DW)	Retention time (min)	Dried powder (P)	Fresh aerial part extract (FE)
1	5-CQA	12.4	0.04 ± 0.00	0.26 ± 0.01
2	3-CQA	26.7	1.40 ± 0.09	22.26 ± 2.28
3	Sinapoylmalate*	38.2	1265.32 ± 813.53*	8665.15 ± 50.33*
4	Rutin	42.5	0.65 ± 0.02	1.75 ± 0.02
5	Isovitexin	42.9	0.36 ± 0.01	0.92 ± 0.01
6	Kaempferol	47.7	1.21 ± 0.09	5.34 ± 1.03
7	3,5-diCQA	48.8	4.58 ± 0.15	19.85 ± 6.10
8	Morin	61.3	0.60 ± 0.05	2.17 ± 0.12
9	Quercetin	66.8	0.12 ± 0.01	0.66 ± 0.01

\*Compounds were identified by mass spectrum compared with literature and the data were expressed as relative peak area.