

Supplementary Materials

Phenolic Release during In Vitro Digestion of Cold and Hot Extruded Noodles Supplemented with Starch and Phenolic Extracts

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Supplementary information

Table S1. Phenolic content and main profiles of native starch and phenolic extracts.

Materials	Phenolic content (mg GAE·g DW ⁻¹)			Main phenolic profiles in unbound phenolic extract (mg/100g)		
	UPC	BPC	TPC	Rutin	Vitexin	Hyperin
Starch	0.463 ± 0.039	0.160 ± 0.013	0.623 ± 0.045	0.139 ± 0.001	n.d.	n.d.
Phenolics	284 ± 13	n.d.	284 ± 13	1674 ± 24	528 ± 74	1114 ± 28

UPC, BPC and TPC, unbound, bound and total phenolic content, respectively; n.d., not detected.

Table S2. Predominant phenolic profiles in buckwheat hull extract determined by a liquid chromatography electrospray ionization mass spectrometry (LC-ESI-MS).

Profile	Molecular formula	Selected ion	m/z	MS2
Vitexin/isovitexin	C ₂₁ H ₁₉ O ₁₀	[M-H] ⁻	431.09848	311.05634; 283.06128;
Hyperin	C ₂₁ H ₁₉ O ₁₂	[M-H] ⁻	463.08884	300.02768; 271.02496; 151.00244; 178.99753
Rutin	C ₂₇ H ₂₉ O ₁₆	[M-H] ⁻	609.12692	300.03;151.00;179.00;

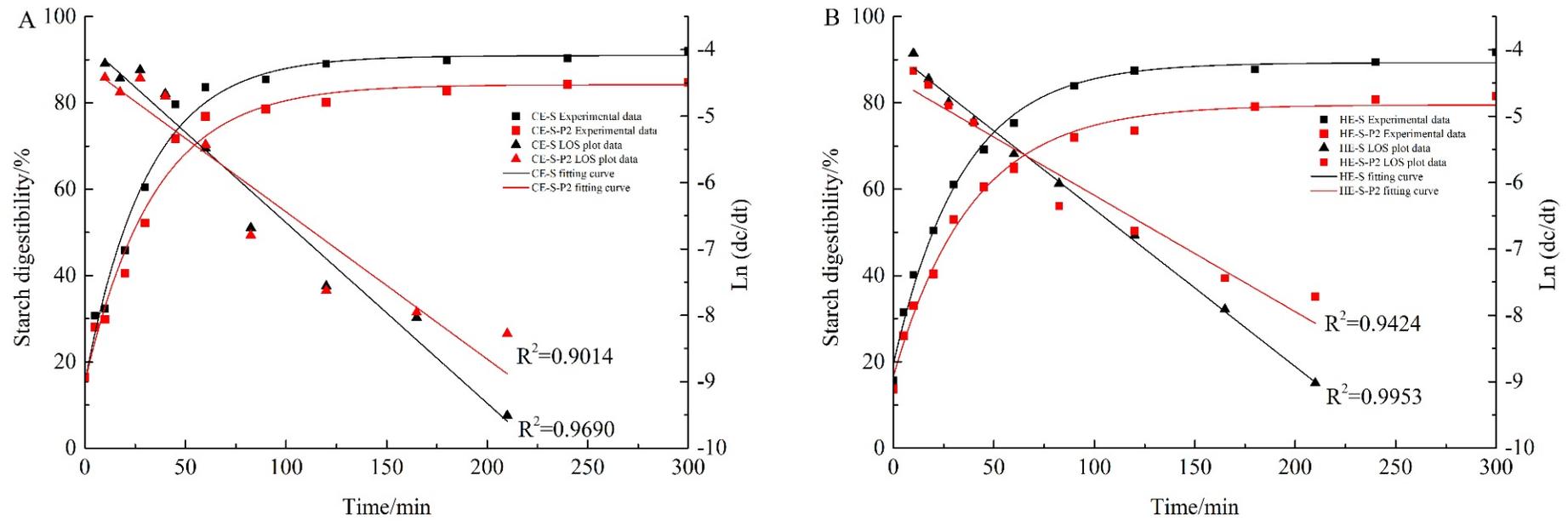


Figure S1. *In vitro* digestion curve of CE (A) and HE (B) starch noodles in the absence or presence of phenolics. CE-S, cold extruded noodles with starch only; CE-S-P2, cold extruded noodles with starch and phenolics (2.0%); HE-S, hold extruded noodles with starch only; HE-S-P2, hold extruded noodles with starch and phenolics (2.0%).

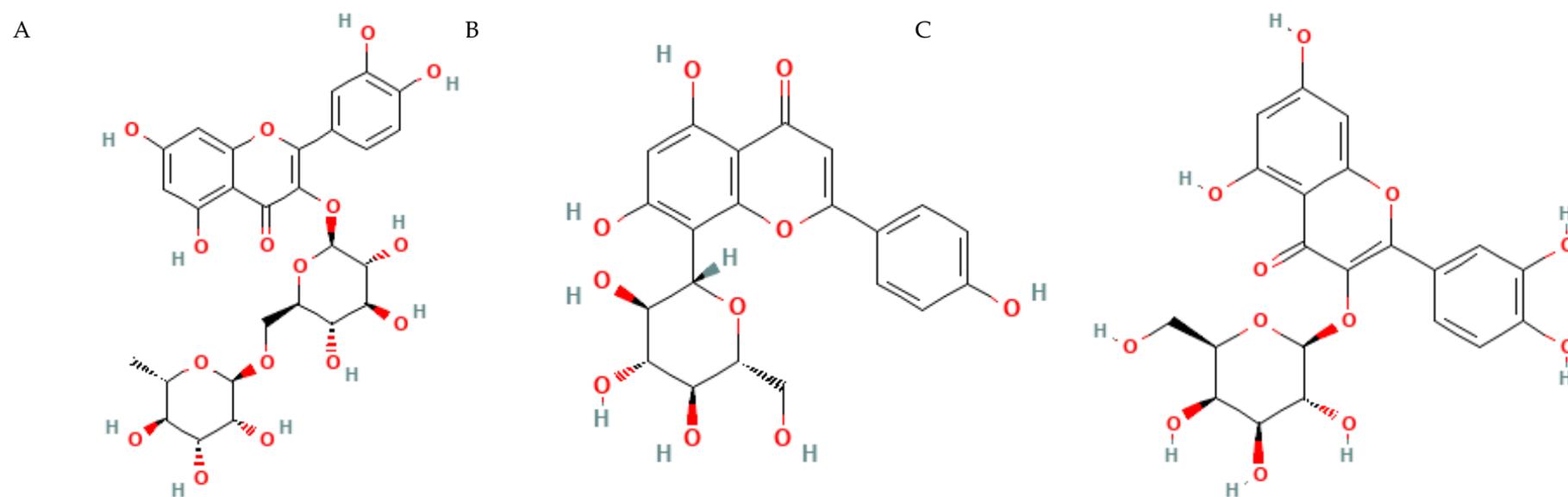


Figure S2. Structure of rutin (A), vitexin (B), and hyperin (C) downloaded from PubChem (<https://pubchem.ncbi.nlm.nih.gov/>).