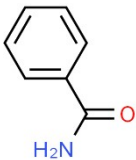
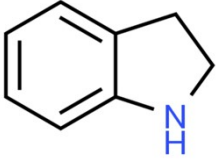
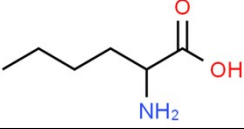
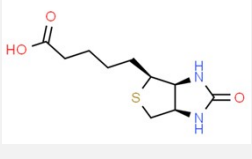
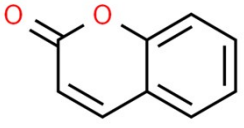


TABLE S1. Detailed information of nutritional composition of feed supplied to the experimental animals during the experiment.

Composition: Wheat bran, wheat, corn, corn gluten, calcium carbonate, soybean oil, mineral dicalcium phosphate, corn gluten feed, sodium chloride, magnesium oxide.	
Nutritional aditives (per mg)	
Vitamin A	6000 I.U.
Vitamin D3	600 I.U.
Fe	50 mg
Mn	44 mg
Zn	31 mg
Cu	7 mg
I	6 mg
Technological additives	
Sepiolite	632 mg
Analytical components (%)	
Moisture	12.00
Crude protein	14.50
Crude fat	4.00
Crude fiber	4.50
Crude ash	4.70

TABLE S2. Characterization of the metabolites described.

Name	Formula	Structure	Cal. MW	m/z	MS2	Reference ion	SMILES	InChi
Benzamide	C7 H7 N O		121.052	122.059	DDA for preferred ion	[M+H] ⁺ 1	<chem>c1ccc(cc1)C(=O)N</chem>	InChI=1S/C7H7NO/c8-7(9)6-4-2-1-3-5-6/h1-5H,(H2,8,9)
Indoline	C8 H9 N		119.073	120.081	No MS2	[M+H] ⁺ 1	<chem>c1ccc2c(c1)CCN2</chem>	InChI=1S/C8H9N/c1-2-4-8-7(3-1)5-6-9-8/h1-4,9H,5-6H2
Norleucine	C6 H13 N O2		131.094	132.102	DDA for preferred ion	[M+H] ⁺ 1	<chem>CCCCC(C(=O)O)N</chem>	InChI=1S/C6H13NO2/c1-2-3-4-5(7)6(8)9/h5H,2-4,7H2,1H3,(H,8,9)
Biotin	C10 H16 N2 O3 S		244.087	245.095	DDA for preferred ion	[M+H] ⁺ 1	<chem>C1[C@H]2[C@@H]([C@@H](S1)CCCCC(=O)O)NC(=O)N2</chem>	InChI=1S/C10H16N2O3S/c13-8(14)4-2-1-3-7-9-6(5-16-7)11-10(15)12-9/h6-7,9H,1-5H2,(H,13,14)(H2,11,12,15)/t6-,7-,9-/m0/s1
Coumarin	C9 H6 O2		146.036	147.043	No MS2	[M+H] ⁺ 1	<chem>c1ccc2c(c1)ccc(=O)o2</chem>	InChI=1S/C9H6O2/c10-9-6-5-7-3-1-2-4-8(7)11-9/h1-6H

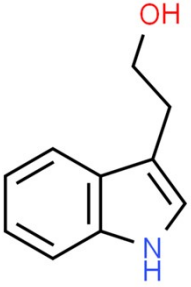
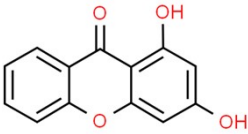
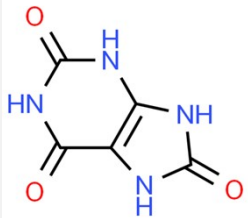
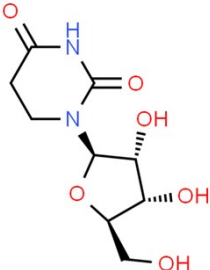
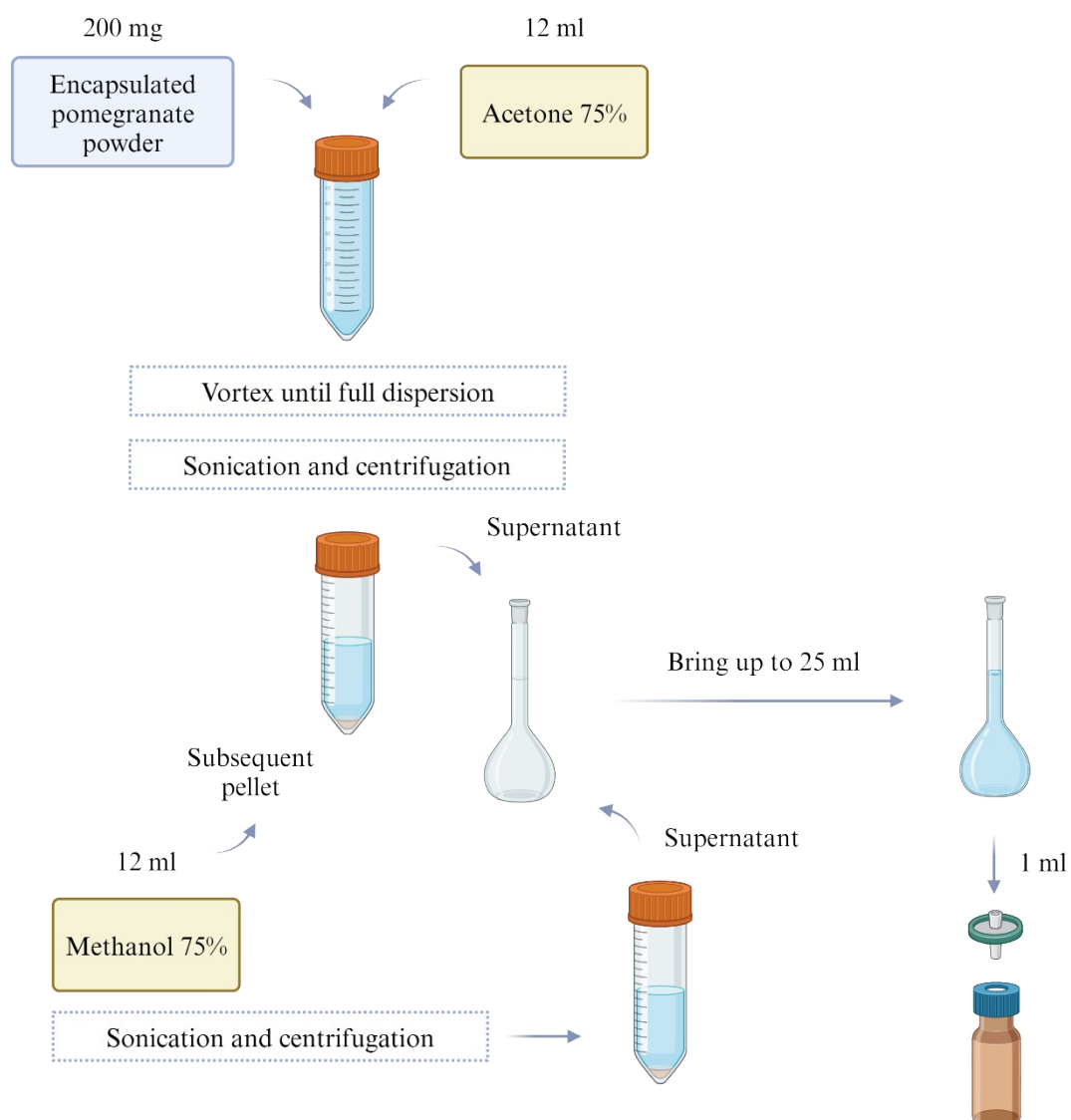
Tryptophol	C ₁₀ H ₁₁ N O		161.083	162.091	DDA for preferred ion	[M+H] ⁺ 1	<chem>c1ccc2c(c1)c(c[nH]2)CCO</chem>	InChI=1S/C ₁₀ H ₁₁ NO/c12-6-5-8-7-11-10-4-2-1-3-9(8)10/h1-4,7,11-12H,5-6H2
1,3-dihydroxy-9H-xanthen-9-one	C ₁₃ H ₈ O ₄		228.041	229.049	DDA for preferred ion	[M+H] ⁺ 1	<chem>c1ccc2c(c1)c(=O)c3c(cc(cc3o2)O)O</chem>	InChI=1S/C ₁₃ H ₈ O ₄ /c14-7-5-9(15)12-11(6-7)17-10-4-2-1-3-8(10)13(12)16/h1-6,14-15H
Uric acid	C ₅ H ₄ N ₄ O ₃		168.028	169.035	No MS2	[M+H] ⁺ 1	<chem>c12c([nH]c(=O)[nH]1)[nH]c(=O)[nH]c2=O</chem>	InChI=1S/C ₅ H ₄ N ₄ O ₃ /c10-3-1-2(7-4(11)6-1)8-5(12)9-3/h(H4,6,7,8,9,10,11,12)
Dihydrouridine	C ₉ H ₁₄ N ₂ O ₆		246.084	247.092	DDA for preferred ion	[M+H] ⁺ 1	<chem>C1CN(C(=O)NC1=O)[C@H]2[C@@H]([C@@H]([C@H](O2)CO)O)O</chem>	InChI=1S/C ₉ H ₁₄ N ₂ O ₆ /c12-3-4-6(14)7(15)8(17-4)11-2-1-5(13)10-9(11)16/h4,6-8,12,14-15H,1-3H2,(H,10,13,16)/t4-,6-,7-,8-/m1/s1

FIGURE S1. Schematic view of the pre-treatment of encapsulated powder samples for subsequent characterization analysis using HPLC.



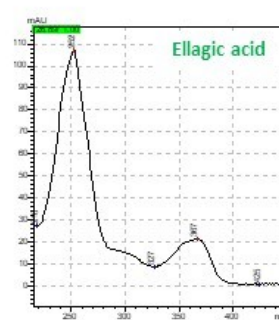
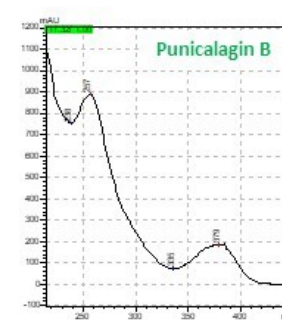
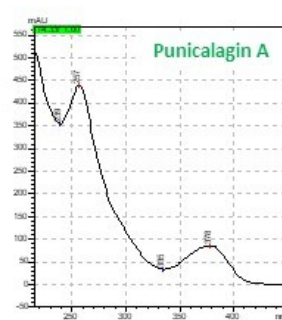
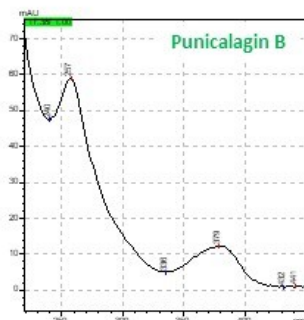
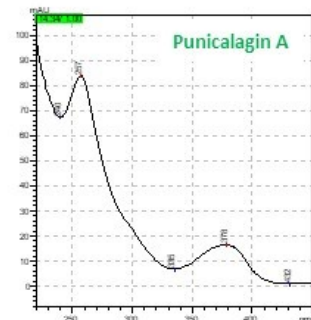
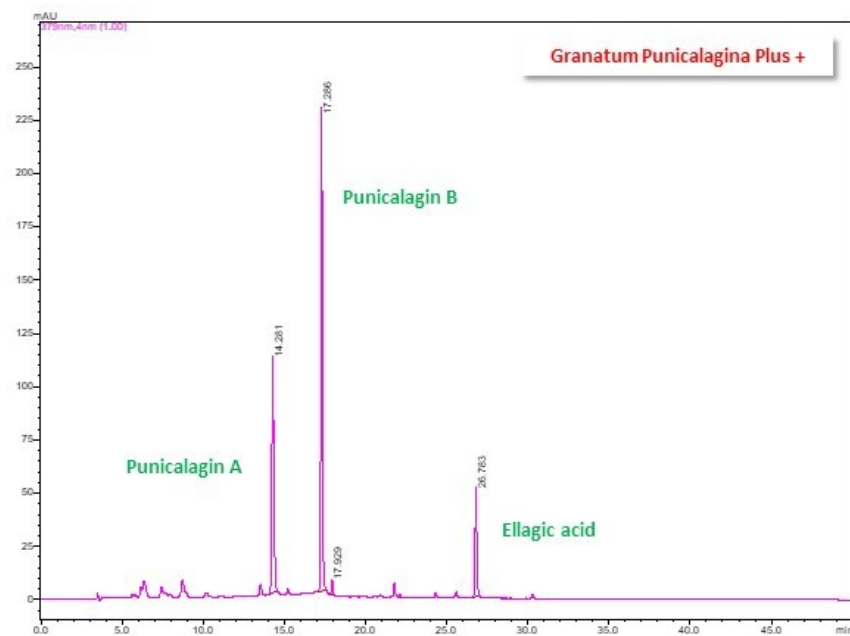
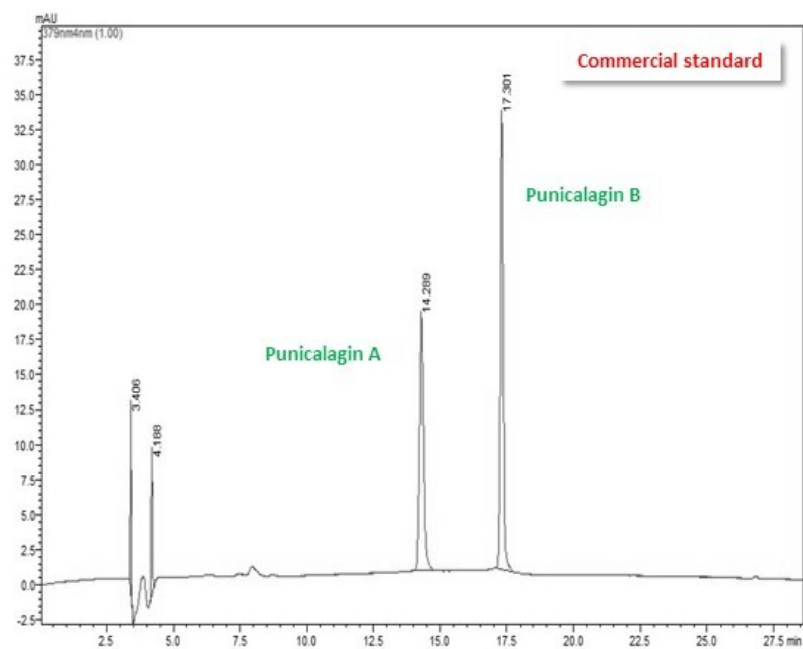
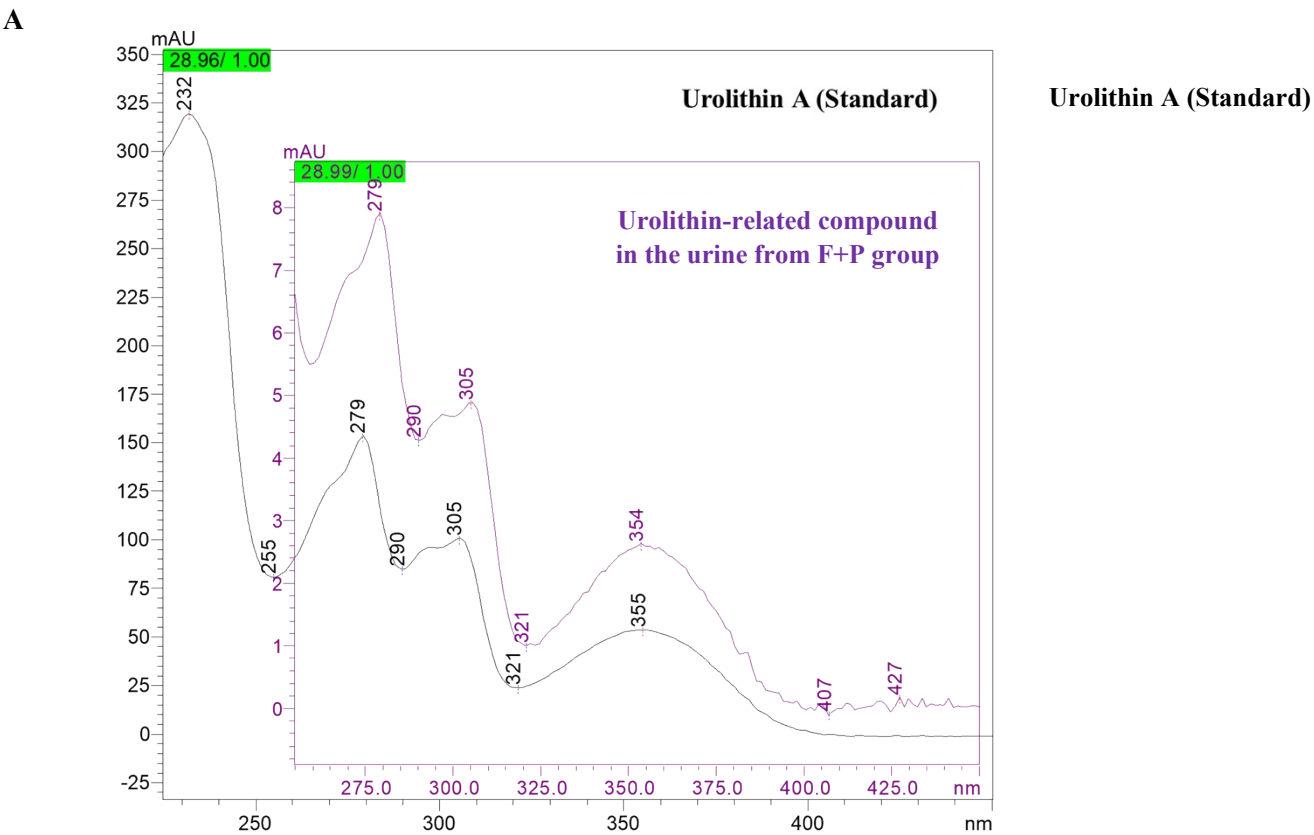


FIGURE S2. Chromatograms of both isomers of punicalagin standard and analyzed sample from the pomegranate powder encapsulated.

FIGURE S3. Urolithin-related compound identified by the HPLC-DAD assay carried out on the urine samples from the experimental rats (A) and quantification (B).



B

	C ^a	F ^a	F+P ^a
μg compound/μL urine	Not detected	Not detected	2.25x10 ⁻³ ±1.89x10 ⁻³

^a Different experimental groups fed with basal diet and either drinking water (C), 30% (w/v) fructose solution (F), or 30% (w/v) fructose solution with 0.2% P (F+P) expressed as mean±standard deviation.