

Supplementary Material

Ultrasound-Assisted Extraction and Characterization of Apple Pomace, Functional Ingredient for Beef Burger Fortification

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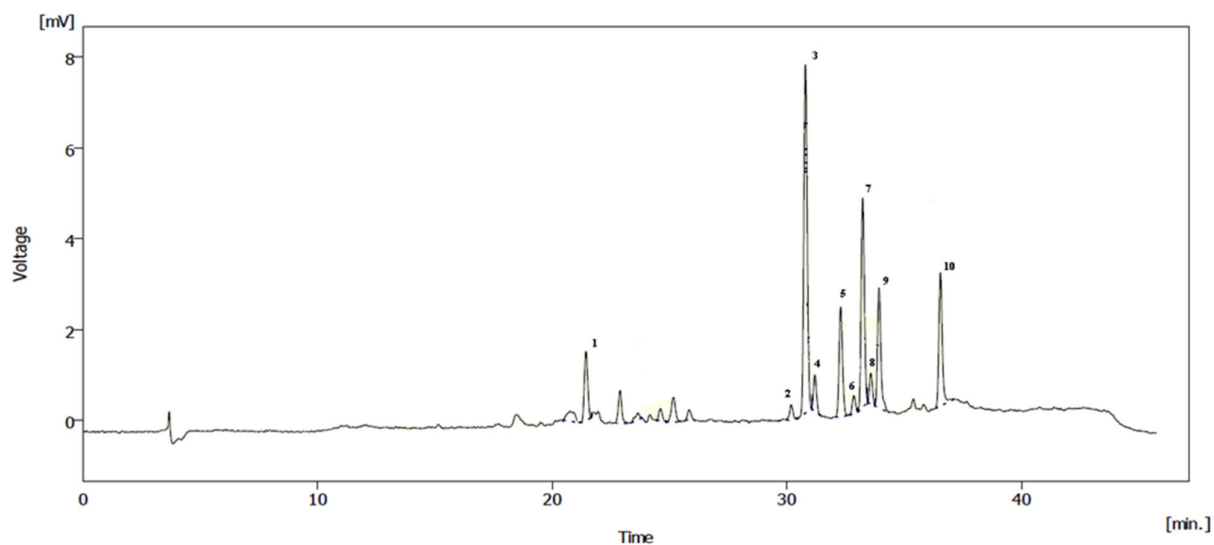
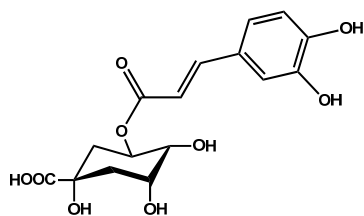
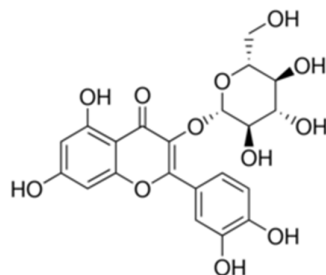


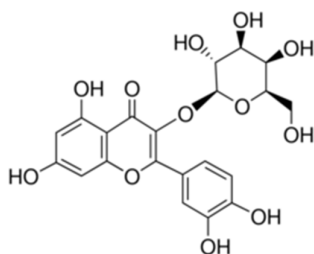
Figure S1. HPLC-UV chromatographic profile of UAE extract, from double extraction of freeze-dried apple pomace (FD2). ¹ chlorogenic acid; ² rutin; ³ quercetin-3-O-galattoside; ⁴ quercetin-3-O-glucoside; ⁵ quercetin-3-O-xyloside; ⁶ quercetin-3-O-arabinopiranoside; ⁷ quercetin-3-O-arabinofuranoside; ⁸ quercetin-O-pentoside; ⁹ quercetin-3-O-rhamnoside; ¹⁰ phloridzin.



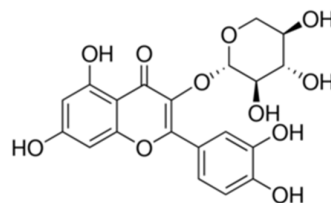
Chlorogenic acid



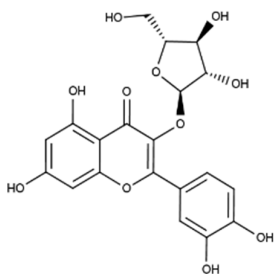
Quercetin-3-*O*-galactoside



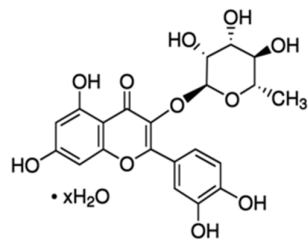
Quercetin-3-*O*-glucoside



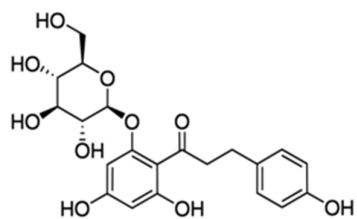
Quercetin-3-*O*-xyloside



Quercetin-3-*O*-arabinofuranoside



Quercetin-3-*O*-rhamnoside



Phloridzin

Figure S2. Chemical structures of the main quantified compounds.



(a)



(b)



(c)



(d)

Figure S3. Cooking equipment (a) and cooked beef burgers with different apple pomace addition: 0 % (b), 4 % (c), and 8 % (d).

Table S1. Calibration curve, R², and range of linearity of spectrophotometric *in vitro* assays.

	Linearity range	Calibration curve	R²
TPC	6.25–100 µg/mL	$y = 0.0121x - 0.0262$	0.9994
ABTS	0.01–0.3 µg/mL	$y = -1.5097x + 0.6673$	0.9992
DPPH	0.5–250.0 µg/mL	$y = 1.4259x + 0.6499$	0.9997
FRAP	0.5–10 µg/mL	$y = 96.305x + 0.0368$	0.9995