

Supplementary Material

# Supercritical Fluid Extraction of Phenolic Compounds from Mango (*Mangifera indica* L.) Seed Kernels and their Application as an Antioxidant in an Edible Oil

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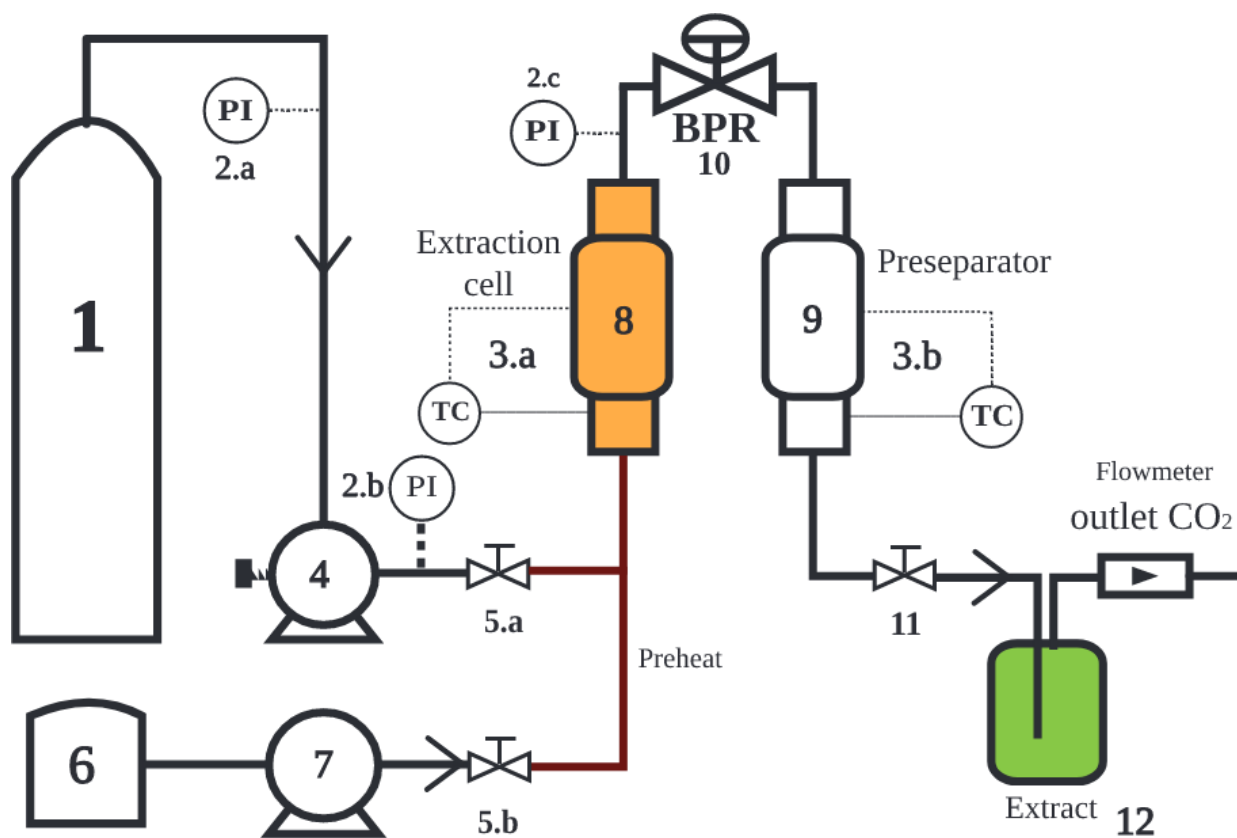
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## Convention

1. CO<sub>2</sub> reservoir
2. Pressure indicators
  - 2.a CO<sub>2</sub> in to pump
  - 2.b CO<sub>2</sub> out of pump
  - 2.c CO<sub>2</sub> in extraction cell
3. Temperature controller
  - 3.a Cell jacket
  - 3.b Preseparator
4. Pump CO<sub>2</sub>
5. Valve solvent access:
  - 5.a CO<sub>2</sub>
  - 5.b Ethanol
6. EtOH reservoir
7. Piston pump
8. Cell and heating jacket
9. Preseparator heating jacket
10. Control valve pressure drop
11. Exhaust outlet valve
12. Vessel Collector

**Figure S1.** Schematic diagram of the equipment employed for SFE (home-build experimental unit).

**Table S1.** Retention time, UV-Vis spectra, and quantification of compounds by supercritical fluid extraction as well as by Soxhlet extraction.

Feature	Peak 1 <sup>a</sup>	Peak 2 <sup>b</sup>	Peak 3	Peak 4	Peak 5	Peak 6	Peak 7	Peak 8
Retention time (min)	2.95	13.53	13.86	14.48	14.68	14.92	15.22	16.34
UV-Vis max (nm)	272	274	357; 368	281	281	280	280	276
<b>Quantification in supercritical fluid extraction</b>								
1	37.8	41.3	35.7	70.1	177.8	7.7	55.0	43.3
2	37.7	67.3	10.0	8.8	21.7	6.5	9.7	14.4
3	21.7	19.0	30.6	79.8	126.2	96.4	81.3	20.0
4	44.0	63.8	19.1	5.1	85.1	3.7	23.7	25.6
5	43.8	61.3	8.4	7.5	19.0	6.3	9.4	18.6
6	40.0	20.9	6.9	2.7	22.2	1.9	6.5	9.1
7	28.2	10.5	3.7	2.3	10.4	2.0	6.8	9.3
8	51.1	58.3	10.9	8.6	21.6	6.6	9.8	16.9
9	20.0	18.3	15.7	9.1	134.4	4.2	35.1	36.5
10	59.9	163.8	8.8	3.9	9.2	3.9	5.8	28.2
11	48.4	19.5	19.9	24.6	58.8	3.3	17.1	12.3
12	25.9	66.3	18.2	5.9	81.3	3.6	21.2	18.0
13	48.1	51.3	8.9	7.5	18.6	6.4	9.3	17.3
14	48.3	178.0	7.1	5.6	14.5	5.3	7.6	16.5
15	41.4	92.3	10.5	14.0	35.0	10.8	16.1	21.8
16	25.0	51.4	39.0	44.3	116.6	4.0	36.1	26.5
17	46.6	12.4	28.5	31.2	69.3	4.1	26.5	9.4
18	8.4	10.3	33.2	37.1	86.3	4.7	32.5	7.7
19	40.8	67.0	7.2	7.4	17.8	5.9	8.8	17.6
<b>Quantification in Soxhlet extraction</b>								
	11.0	7.1	45.7	79.4	105.8	47.8	68.5	12.9

<sup>a</sup> Retention time and UV-Vis spectra coincident with authentic standard gallic acid. <sup>b</sup> Retention time and UV-Vis spectra coincident with authentic standard ellagic acid. Numbers 1–19 in the first column correspond to the experiments performed by supercritical fluid extraction, following the same numbering as in Table 1. In those measurements no technical replications were performed. In contrast, in Soxhlet extraction three replications were performed. Concentration of peak 1 was expressed as mg gallic acid g<sup>-1</sup> extract. Concentration of peak 2 was expressed as mg ellagic acid g<sup>-1</sup> extract. Concentration of peaks 3–8 were expressed as mg ellagic acid equivalents g<sup>-1</sup> extract.