

Optimizing enzymatic processing of apple pomace: a strategy for modifying techno-functional properties and dietary fiber

Alba Díaz-Núñez^{a,b}, Gloria López-Gámez^{a, b}, Olga Martín-Belloso^{a,b}, Robert Soliva-Fortuny^{a,b}, P. Elez-Martínez^{a,b,*}

^a Department of Food Technology, Engineering and Science. University of Lleida, Lleida, Spain

^b Agrotecnio-CERCA Research Center, Lleida, Spain

Av. Alcalde Rovira Roure, 191, 25198, Lleida, Spain

*Corresponding author.

e-mail address: pedro.elez@udl.cat (P. Elez-Martínez).

European Food Research and Technology

Table S 2. Particle size results of the modified apple pomace under varying conditions for the enzymatic treatment.

Block	Hydrolysis time (h)	Enzymatic concentration (mL/kg DW)	Temperature (°C)	D [4,3]	D [3,2]
1	2.5	0.5	50	260.2 ± 4.6	121.0 ± 2.6
1	1	5.0	40	187.7 ± 6.5	80.3 ± 2.5
1	2.5	2.8	60	174.7 ± 6.6	80.0 ± 2.8
1	2.5	2.8	40	303.3 ± 7.1	118.7 ± 4.3
1	1	5.0	60	200.8 ± 8.5	92.1 ± 1.7
1	4	5.0	60	177.8 ± 2.0	88.1 ± 1.2
1	1	2.8	50	185.8 ± 5.5	76.1 ± 1.9
1	1	0.5	40	258.0 ± 4.9	89.1 ± 0.9
1	4	2.8	50	284.3 ± 5.5	120.0 ± 3.4
1	2.5	2.8	50	325.5 ± 8.2	123.2 ± 5.5
1	2.5	2.8	50	285.2 ± 8.6	106.8 ± 2.8
1	2.5	2.8	50	278.0 ± 3.3	116.0 ± 2.2
1	2.5	2.8	50	234.2 ± 5.9	107.3 ± 2.5
1	2.5	5.0	50	219.5 ± 4.6	102.8 ± 1.3
1	2.5	2.8	50	236.8 ± 8.7	93.10 ± 2.9
1	2.5	2.8	50	237.8 ± 5.3	110.7 ± 1.5
1	1	0.5	60	306.0 ± 4.2	111.3 ± 1.5
1	4	0.5	60	358.5 ± 8.3	149.8 ± 3.8
1	4	5.0	40	165.0 ± 3.0	78.6 ± 0.7
1	4	0.5	40	310.2 ± 5.8	124.5 ± 1.8
2	2.5	2.8	60	206.3 ± 5.1	95.6 ± 1.5
2	1	5.0	40	205.5 ± 5.9	92.95 ± 2.3
2	2.5	2.8	40	300.7 ± 5.1	122.0 ± 2.9
2	2.5	2.8	50	275.3 ± 4.2	119.3 ± 2.3
2	1	5.0	60	313.0 ± 18.9	132.2 ± 7.3
2	2.5	2.8	50	305.0 ± 9.9	118.5 ± 3.3
2	2.5	0.5	50	312.5 ± 6.8	114.2 ± 2.6
2	1	0.5	40	392.8 ± 4.0	202.7 ± 7.3
2	2.5	2.8	50	280.8 ± 8.2	108.8 ± 3.5
2	4	5.0	60	181.7 ± 4.1	81.9 ± 1.6
2	1	2.8	50	185.8 ± 5.5	76.1 ± 1.9
2	2.5	2.8	50	208.5 ± 3.2	111.3 ± 1.4
2	2.5	2.8	50	196.2 ± 14.0	75.4 ± 3.9
2	4	0.5	40	309.3 ± 7.9	126.5 ± 3.8
2	4	5.0	40	311.2 ± 8.9	116.0 ± 3.8
2	4	2.8	50	304.7 ± 2.4	116.2 ± 1.9
2	2.5	5.0	50	213.0 ± 5.2	95.6 ± 2.3
2	1	0.5	60	290.5 ± 7.9	103.3 ± 1.9
2	2.5	2.8	50	195.5 ± 3.1	103.5 ± 1.8
2	4	0.5	60	274.3 ± 6.1	109.5 ± 2.7
Untreated				340.8 ± 20.3	145.3 ± 5.5

Values are mean ± standard deviation (n = 6). D [4,3]: volume diameter, D [3,2]: surface diameter.