Supporting Information

Figure S1. UPLC-DAD phenolic profile of olive de-stoned fruit extract monitored at 280, 320 and 365 nm. Peak assignment refers to **Table 1** and **Table S1.**

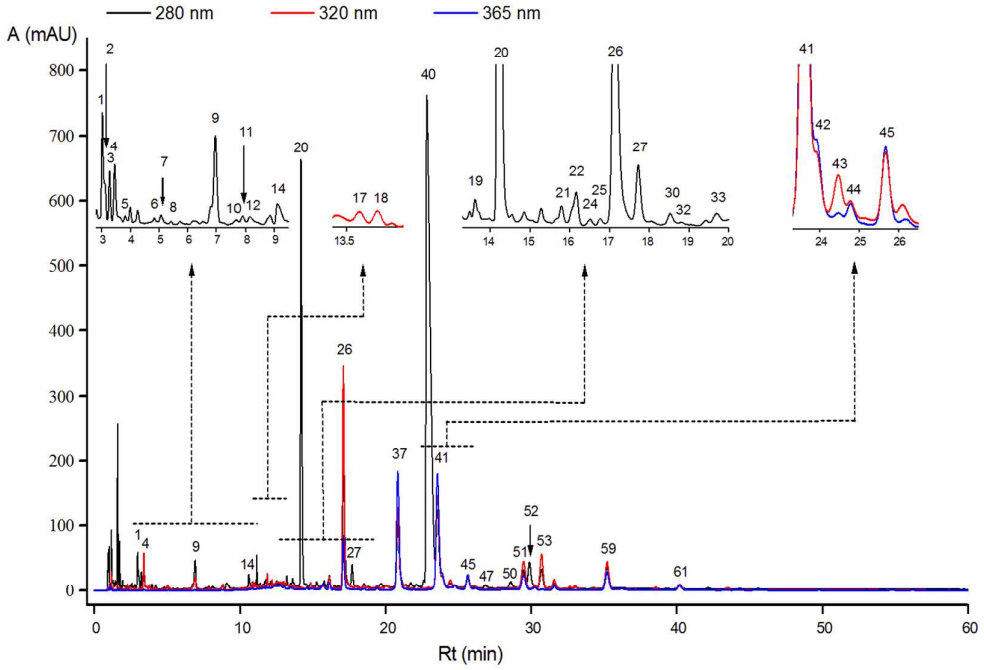

Figure S2. UPLC-DAD phenolic profile of olive stone extract monitored at 280, 320 and 365 nm. Peak assignment refers to **Table 1** and **Table S1.**

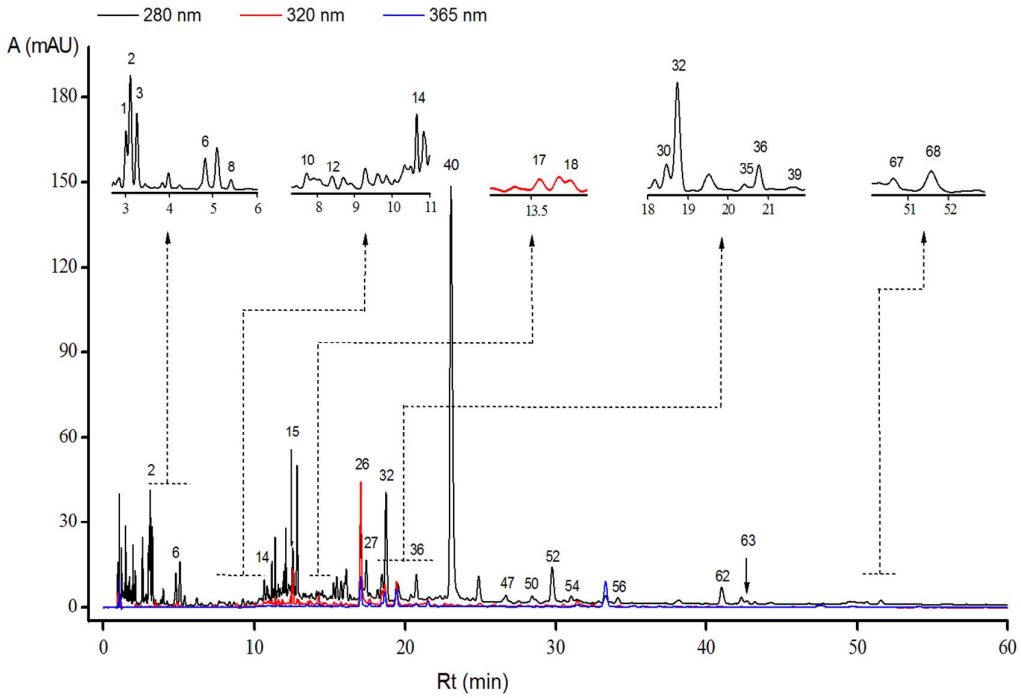

Figure S3. UPLC-DAD phenolic profile of olive paste extract monitored at 280, 320 and 365 nm. Peak assignment refers to **Table 1** and **Table S1.**

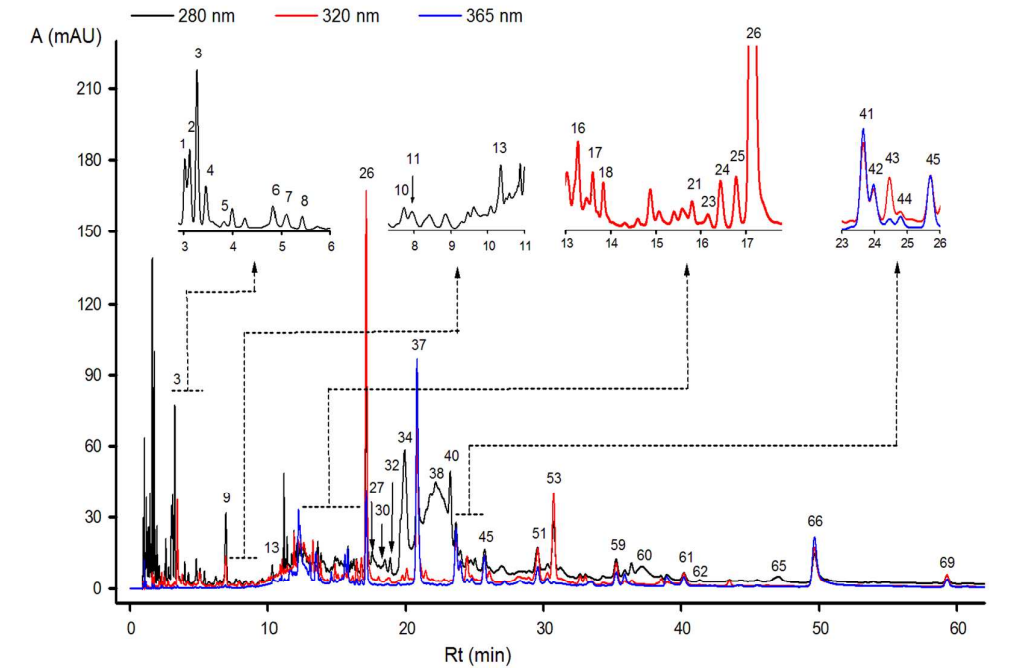

Figure S4. UPLC-DAD phenolic profile of olive pomace extract monitored at 280, 320 and 365 nm. Peak assignment refers to **Table 1** and **Table S1.**

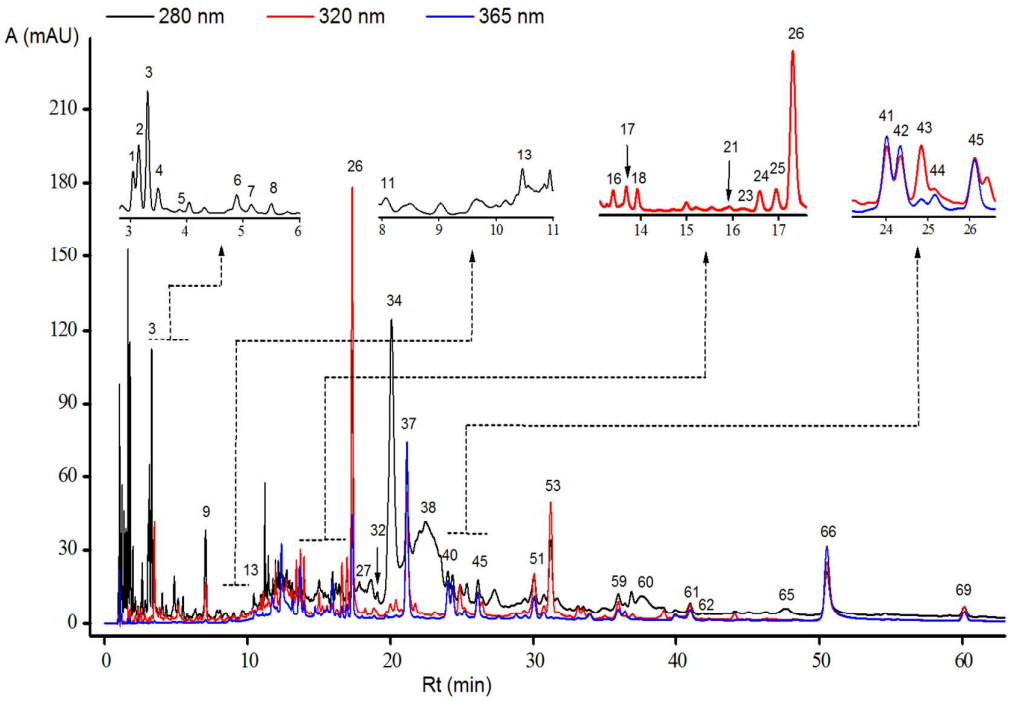

Figure S5. UPLC-DAD phenolic profile of olive mill wastewater extract monitored at 280, 320 and 365 nm. Peak assignment refers to **Table 1** and **Table S1.**

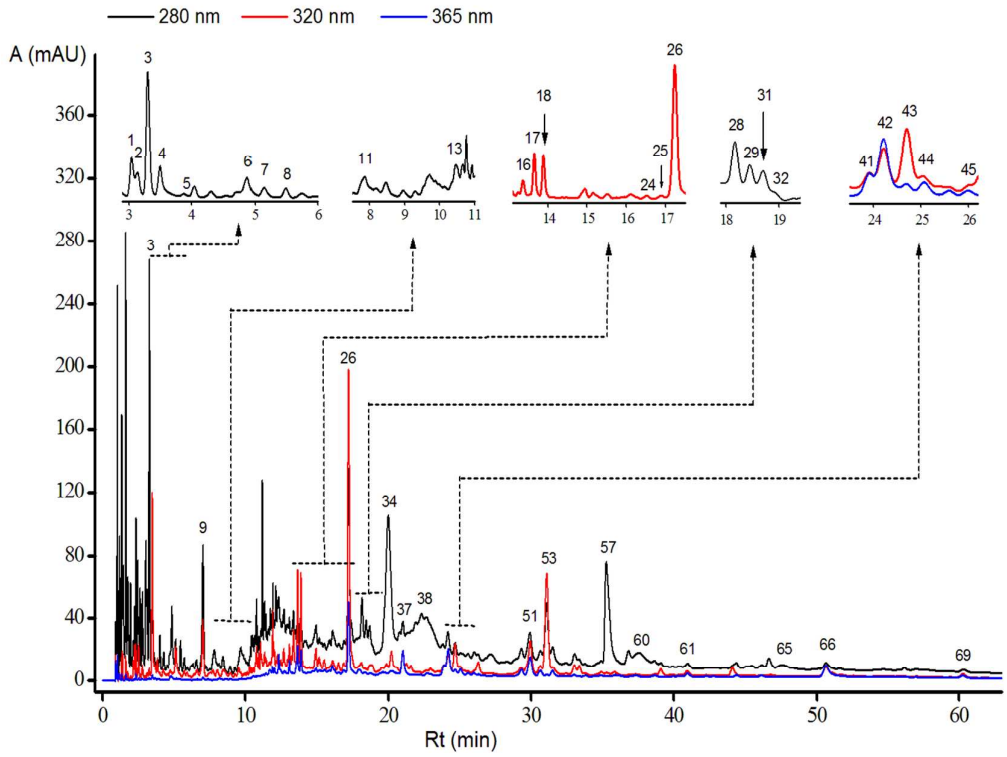

Figure S6. UPLC-DAD phenolic profile of olive oil extract monitored at 280, 320 and 365 nm. Peak assignment refers to **Table 1** and **Table S1.**

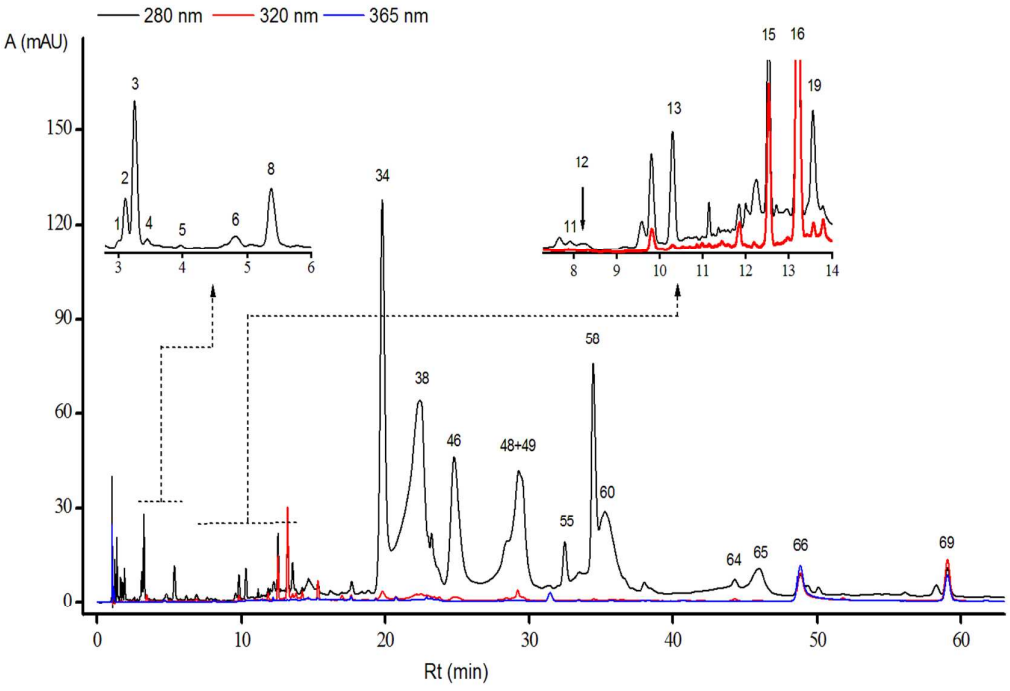

Table S1: Input (Fruit + Stone)-Intermediate (Paste) and Output (OMWW + Pomace + Olive Oil) Phenol Contents (mg/kg of Fruit FW) of Olive Oil Process Compared by ANOVA and When Significant the Means Were Separated With Tukey's HSD Test ($P < 0.05$).

N°[A]	Class / Phenolic compound	input (mg/ kg fruit FW)	intermediate (mg/ kg fruit FW)	output (mg/ kg fruit FW)	ANOVA sign. F
	Simple phenols				
1[A]	Hydroxytyrosol glucoside	56.6 a[B]	40.1 b	42.1 b	***[D]
2	Hydroxytyrosol-1-β -glucoside	28.6 c	48.5 b	60.1 a	***
3	Hydroxytyrosol	32.3 c	87.0 b	108.6 a	***
6	Tyrosol glucoside	16.3 c	37.8 b	49.2 a	***
8	Tyrosol	10.4 c	21.4 b	28.1 a	***
19	Hydroxytyrosol acetate	26.6 a	nq[C]	0.18 b	***
	Total	170.7 c	235 b	288.3 a	***
	Benzoic acids				
13	Vanillic acid	nd[C]	10.0 a	9.4 b	***
15	Vanillin	1.5 a	nd	0.05 b	***
	Total	1.5 c	10.0 a	9.4 b	***
	Cinnamic acids				
16	*p*-Coumaric acid	nq (co)[C]	8.3 a	7.3 b	***
17	β-OH-verbascoside isomer 1	6.6 c	16.9 b	26.3 a	***
18	β-OH-verbascoside isomer 2	3.7 c	15.4 b	25.0 a	***
24	β-OH-methyl-verbascoside isomer 1	8.3 c	24.1 b	28.6 a	***
25	β-OH-methyl-verbascoside isomer2	5.8 c	26.1 b	32.2 a	***
26	Verbascoside	371.7 a	258.0 b	222.7 c	***
	Total	396.0 a	348.7 b	342.0 b	***
	Flavonoids				
22	Luteolin-4'.7-*O*-diglucoside	19.55	nq (ins)[C]	nd	-[D]
37	Rutin	290.1 a	181.9 b	122.6 c	***
41	Luteolin-7-*O*-glucoside	315.5 a	41.8 b	34.2 b	***
42	Luteolin rutinoside isomer 1	42.7 a	29.5 c	34.4 b	***
44	Luteolin rutinoside isomer 2	15.0 a	12.2 b	12.8 b	***

45	Quercitrin	50.1 a	35.0 b	28.6 c	***
51	Apigenin-7-*O*-glucoside	79.9 a	39.3 b	38.4 b	***
59	Luteolin-4'-*O*-glucoside	93.8 a	29.7 b	24.7 c	***
61	Luteolin-3'-*O*-glucoside	29.4	30.1	30.0	n.s. [D]
66	Luteolin	nd	123.5 b	139.0 a	***
69	Apigenin	nd	27.97 a	30.1 a	***
	Total	936.1 a	551.1 b	494.9 c	***
	Lignans				
55	Pinoresinol	nd	nd	0.7 a	***
58	Acetoxypinoresinol	nd	nd	2.7 a	***
	Total	nd	nd	3.4 a	***
	Secoiridoids				
4	Unknown A	12.0 a	10.6 b	11.0 b	***
5	Unknown 408 MW compound 1	2.0	2.03	2.03	n.s.
7	Unknown 408 MW compound 2	3.1 b	3.5 a	3.5 a	** [D]
9	Unknown B	309.8 a	284.9 b	316.2 a	**
10	Elenolic acid glucoside isomer 1	40.6 b	50.1 a	nd	***
11	Secologanoside	54.1 b	67.0 a	68.2 a	***
12	Elenolic acid glucoside isomer 2	69.2 a	nq (co)	0.11 b	***
14	Elenolic acid glucoside isomer 3	164.1a	nd	nd	***
20	Demethyloleuropein	3470.05	nq (ins)[C]	nq (tr)[C]	-
21	Dihydro-oleuropein isomer 1	118.5 c	194.2 b	210.9 a	***
23	3.4-DHPEA-EDA isomer 1	nd	168.6 a	118.9 b	***
27	Dihydro-oleuropein isomer 2	382.4 a	275.1 b	105.3 c	***
28	Unknown 484 MW isomer 1	nd	nd	51.3 a	***
29	Unknown 484 MW isomer 2	nd	nd	38.9 a	***
30	Oleuropein diglucoside isomer 1	140.8 b	230.8 a	nq(ins)	***
31	Unknown 484 MW isomer 3	nd	nd	37.1 a	***
32	Nüzhenide isomer 2	149.3 c	180.3 a	166.0 b	***
33	Oleuropein diglucoside isomer 2	143.1 a	nd	nd	***
34	3.4-DHPEA-EDA isomer 2	nd	1828.6 b	3300.2 a	***
35	Nüzhenide isomer 3	17.0 a	nd	nd	***
36	Methoxynüzhenide	34.0 a	nd	nd	***
38	Oleuropein aglycone isomer 1	nd	4729.6 a	3771.3 b	***

39	Nüzhenide isomer 4	12.7 a	nd	nd	***
40	Oleuropein	12649.6 a	698.5 b	377.6 c	***
43	Caffeoyl-6'-secologanoside	14.7	14.7	15.1	n.s.
46	*p-HPEA-EDA*	nd	nd	13.0 a	***
47	Oleuroside	169.3 a	nd	nd	***
48+49	Ligstroside + Oleuropein aglycone sum	nd	nd	18.8 a	***
50	Unknown C	243.9	nq (co)	nd	-
52	Ligstroside	627.2 a	nd	nd	***
53	Comselogoside	33.7	34.7	34.6	n.s.
54	Nüzhenide 11-methyl oleoside isomer 1	18.2 a	nd	nd	***
56	Nüzhenide 11-methyl oleoside isomer 2	18.3 a	nd	nd	***
57	Acetal of 3.4-DHPEA-EDA	nd	nd	142.6 a	***
60	Oleuropein aglycone isomer 2	nd	693.6 b	763.6 a	***
62	Nüzhenide 11-methyl oleoside isomer 4	31.9 c	112.4 a	88.7 b	***
63	Methoxynüzhenide 11-methyl oleoside	10.3 a	nd	nd	***
64	Ligstroside aglycone isomer 2	nd	nd	1.7 a	***
65	Oleuropein aglycone isomer 3	nd	347.0 b	357.6 a	***
67	Nüzhenide di(11-methyl oleoside) isomer 1	8.6 a	nd	nd	***
68	Nüzhenide di(11-methyl oleoside) isomer 2	15.0 a	nd	nd	***
	Total	18964.0 a	9926.1 b	10014.4 b	***
	Σ TP [E]	20468.3 a	11070.9 b	11152.5 b	***

[A] Number of peaks correspond to the peak assignment in figures S1-S6 (Supplementary).

[B] Means in the same row, followed by different letters are statisticaly different (Tukey's HSD test. $P < 0.05$).

[C] Compound is described as not detected (nd), not quantified (nq) due to trace amount nq (tr), inconsistent UV-Vis spectrum nq (ins) or co-elution problems nq (co).

[D] *. $P < 0.05$; **. $P < 0.01$; ***. $P < 0.001$; n.s.. not significant. (-) value could not be calculated

[E] Σ TP = sum of all U(H)PLC-DAD quantified phenols.