

Original OliveNet™ Library: Quick Reference

Phenols	MW	Olive matrix				
		Olive fruit	Leaf	Pomace	Wastewater	Extra-virgin oil
Simple phenols						
Hydroxytyrosol	154	De Marco, 2007	Savarese, 2007	Lozano-Sanchez, 2011		Dierkes, 2012
Homovanillyl alcohol	168		Eyles, 2007			Boskou, 2006
Tyrosol	138	Romero, 2002		Lozano-Sanchez, 2011	Artajo, 2006	Suarez, 2008
Syringaldehyde	182				Boskou, 2006	
3,4-Dihydroxyphenylglycol	171	Marsilio, 2005				
Catechol	110	Romero, 2002			Lozano-Sanchez, 2011	Brenes, 2004
Phenol	94					Vichi, 2008
p-cresol	108				Artajo, 2006	Vichi, 2008
m-cresol	108					Vichi, 2008
o-cresol	108					Vichi, 2008
4-Ethylguaiacol	152				Lozano-Sanchez, 2011	Vichi, 2008
4-Ethylphenol	122					Vichi, 2008
4-Vinylguaiacol	150				Limiroli, 1996	Vichi, 2008
4-Vinylphenol	120			Obeid, 2007		Vichi, 2008
4-Methylcatechol	124			Obeid, 2007		
3,4,5-Trimethoxybenzoic acid	212			Obeid, 2007		
3,4-Dimethoxybenzoic acid	182			Obeid, 2007		
2,6-Dimethoxybenzoic acid	182			Obeid, 2007		
4-Hydroxybenzaldehyde	122					
Hydroxybenzoic acids						
Syringic acid	198	Ryan, 1999		Alu'datt, 2010		Cioffi, 2010
Quinic acid	192		Quirantes-Pine, 2013	Lozano-Sanchez, 2011	Lozano-Sanchez, 2011	
2,3-dihydrocaffeic acid	182	Owen, 2003				Bendini, 2007
Shikimic acid	174			Peralbo-Molina, 2012		

Gallic acid	170	McDonald, 2001		Peralbo-Molina, 2012		Cioffi, 2010
Vanillic acid	168	Romero, 2002		Peralbo-Molina, 2012	De Marco, 2007	De la Torre-Carbot, 2005
Phloretic acid	166	Owen, 2003				
Protocatechuic acid	154	Boskou, 2006		Alu'datt, 2010		
Gentisic acid	154					Bendini, 2007
4-hydroxybenzoic acid	138	Boskou, 2006	Quirantes-Piné, 2013	Alu'datt, 2010		Caponio, 2005
2,4 dihydroxybenzoic acid	154	McDonald, 2001				Carrascosa-Pancorbo, 2005
2,6-Dihydroxybenzoic acid	154	Bianco, 2003				Bianco, 2003
4-O-methyl-D-glucuronic acid	208	Guinda, 2010				
Hydroxyphenylacetic acids						
p-Hydroxyphenylacetic acid	152	Boskou, 2006		Cardoso, 2005		Caponio, 2005
3,4-Dihydroxyphenylacetic acid	168	Boskou, 2006				Bendini, 2007
4-Hydroxy-3-methoxyphenylacetic acid	182					Bendini, 2007
Homoveratric acid	196	Bianco, 2003				Bianco, 2003
Homovanillic acid	182	Ryan, 2002			Artajo, 2006	
2,5-Dihydroxyphenylacetic acid	168			Obeid, 2007		
Hydroxycinnamic acids						
Rosmarinic acid	361			Peralbo-Molina, 2012		
Chlorogenic acid	354	Ryan, 2003		Cardoso, 2005		
Sinapic acid	224	Ryan, 1999		Alu'datt, 2010		
Ferulic acid	194	Boskou, 2006	Li, 2003	Peralbo-Molina, 2012		Cioffi, 2010
Caffeic acid	180	De Marco, 2007		Obeid, 2007	Mulinacci, 2001	Mateos, 2001
p-Coumaric acid	164	Ryan, 2002	Quirantes-Pine, 2013	Peralbo-Molina, 2012	Suarez, 2010	De la Torre-Carbot, 2005

<i>o</i> -Coumaric acid	164	McDonald, 2001		Peralbo-Molina, 2012		Mateos, 2001
<i>m</i> -Coumaric acid	164	Bianco, 2000				Caponio, 1999
Dihydro- <i>p</i> -coumaric acid	166			Obeid, 2007		
Hydroxycaffeic acid	196					Caponio, 1999
Cinnamic acid	148	Boskou, 2006		Peralbo-Molina, 2012		Mateos, 2001
Caffeoylglucose	342			Obeid, 2007		
Caftaric acid	312			Obeid, 2007		
β -Hydroxy verbascoside	641					
Flavonoids						
Hesperidin	610	Kalua, 2006		Alu'datt, 2010		
Rutin	610	De Marco, 2007	Savarese, 2007	Cardoso, 2005	Mulinacci, 2001	
Luteolin-7,4-O-diglucoside	609		Quirantes-Pine, 2013			
Vicenin-2	595	Bouaziz, 2005				
Cyanidin-3-O-rutinoside	595	Romero, 2002				
Scolymoside	594	Bouaziz, 2010	Quirantes-Pine, 2013	Cardoso, 2005		
Luteolin-4'-O-rutinoside	594			Obeid, 2007		
Lucidumoside C	584		Quirantes-Pine, 2013			
Isorhoifolin	578	Romero, 2002	Quirantes-Pine, 2013	Obeid, 2007		
Quercetin-3-O-glucoside	464	Bouaziz, 2005				
Chrysoeriol-7-O-glucoside	462	Bouaziz, 2005	Altok, 2008			
Cyanidin-3-O-glucoside	449	Romero, 2002				
Luteolin-7-O-glucoside	448	De Marco, 2007	Laguerre, 2009	Cardoso, 2005	Mulinacci, 2001	Yorulamaz, 2011
Luteolin-4'-O-glucoside	448	De Marco, 2007	Quirantes-Pine, 2013	Cardoso, 2005		
Luteolin-6-C-glucoside	448	Bouaziz, 2005				
Luteolin-7-O-rutinoside	595	Bouaziz, 2005				
Luteolin-3',7-O-diglucoside	611			Obeid, 2007		
Luteolin-8-C-glucoside	448			Obeid, 2007		

Quercitrin	448	De Marco, 2007		Obeid, 2007		
Apigenin-7-O-glucoside	432	Obeid, 2007	Obeid, 2007	Peralbo-Molina, 2012	Suarez, 2010	
Taxifolin	304		Japón-Luján, 2007	Peralbo-Molina, 2012		Bendini, 2007
Quercetin	302	Rigane, 2011	Obeid, 2007	Alu'datt, 2010		
Chrysoeriol	300	Bouaziz, 2005				Dierkes, 2012
Diosmetin	300		Meirinhos, 2005			
Methoxyluteolin	316					De la Torre-Carbot, 2005
Cyanidin (cation)	287	Ryan, 1999				
Eriodictyol	287		Hvattum, 2002			
Luteolin	286	Ryan, 2002	Obeid, 2007	Lozano-Sanchez, 2011	Lozano-Sanchez, 2011	Fu, 2009
Quercetin 3-O-rutinoside	611	Vlahov, 1992				
Apigenin	270	Bouaziz, 2005	Obeid, 2007	Lozano-Sanchez, 2011	Lozano-Sanchez, 2011	Fu, 2009
Delphinidin	303			Obeid, 2007		
Delphinidin-3-O-glucoside	465			Obeid, 2007		
Hesperitin	302			Obeid, 2007		
Apigenin-7-O-rutinoside	579			Obeid, 2007		
Lignans						
Syringaresinol	418		Christophoridou, 2005			Garcia-Villalba, 2010
1-Acetoxypinoresinol	416	Lopez, 2008		Lozano-Sanchez, 2011	Suarez, 2010	Fu, 2009
Pinoresinol	358	Bonoli, 2004		Suarez, 2010	Suarez, 2010	Fu, 2009
Hydroxypinoresinol	374					Obeid, 2007
Berchemol	376	Christophoridou, 2005				
3-Acetyloxy berchemol	418			Obeid, 2007		
(-)-Olivil	376		Tsukamoto, 1984			
(+)-Fraxiresinol-1-β-D-glucopyranoside	537		Bianco, 1993			

D-(+)-Erythro-1-(4-hydroxy-3-methoxy)- 214 - phenyl-1,2,3-propantriol	214	Obeid, 2007		Obeid, 2007		Obeid, 2007
(+)-1-Acetoxypinoresinol-4"-O-methyl ether	431		Tsukamoto, 1984			
(+)-1-Hydroxypinoresinol-4"-O-methyl ether	404		Tsukamoto, 1984			
(+)-1-Acetoxypinoresinol-4'-β-D-glucopyranoside-4"-O-methyl ether	594		Tsukamoto, 1984			
(+)-1-Hydroxypinoresinol-4'-β-D-glucopyranoside	537		Tsukamoto, 1984			
(+)-1-Acetoxypinoresinol-4'-β-D-glucopyranoside	578		Tsukamoto, 1984			
Hydroxy-isochromans						
1-(3'-Methoxy-4'-hydroxy)-phenyl-6,7-dihydroxyisochroman	288		Bianco, 2002			Bianco, 2001
1-Phenyl-6,7-dihydroxyisochroman	242		Bianco, 2002			Bianco, 2001
Secoiridoids						
Nüzhenide oleoside	1059	Cardoso, 2006		Cardoso, 2006		
Oleuropein pentamer	2692	Cardoso, 2006		Cardoso, 2006		
Oleuropein tetramer	2154	Cardoso, 2006		Cardoso, 2006		
Oleuropein trimer	1616	Cardoso, 2006		Cardoso, 2006		
Oleuropein dimer	1076	Cardoso, 2006		Cardoso, 2006		
Nüzhenide 11-Methyl oleoside	1072	Silva, 2006				
Oleuropein diglucoside	702	Bouaziz, 2010	Molina-Alcaidea, 1996	Cardoso, 2005		
Neo-nüzhenide	702	Di Donna, 2007				
Nüzhenide	686	Bouaziz, 2010	Ryan, 2002	Obeid, 2007		
10-Hydroxyoleuropein	556	Cardoso, 2005	Caruso, 2000	Peralbo-Molina, 2012		
Dihydro-oleuropein	544	Obeid, 2007		Peralbo-Molina, 2012		
Oleuropein	540	De Marco, 2007	Di Nino, 1997	Cardoso, 2005	Suarez, 2010	Bianco, 1998
Oleuroside	540	De Marco, 2007	Di Nino, 1997	Obeid, 2007		

Oleuroside-10-carboxylic acid	585			Obeid, 2007		Obeid, 2007
Oleuropein-3'-O- β -D-glucopyranoside	540			Obeid, 2007		
Ligstroside-3'-O- β -D-glucopyranoside	524			Obeid, 2007		
Demethyloleuropein	526	De Marco, 2007	Savarase, 2007			Bianco, 1998
Oleoside dimethylester	418			Peralbo-Molina, 2012		
Elenolic acid glucoside	404	De Marco, 2007	Ryan, 2002	Cardoso, 2005		
Elenolic acid diglucoside	553			Obeid, 2007		
Secologanic acid	375			Peralbo-Molina, 2012		
Secologanol	390					Fu, 2009
Secologanin	388			Peralbo-Molina, 2012		
Oleuropein aglycone (3,4-DHPEA-EA)	378	De Marco, 2007		Cardoso, 2005	Suarez, 2010	Fu, 2009
7-Deoxyloganic acid	360			Peralbo-Molina, 2012		
Oleacein (Dialdehydic form of decarboxymethyl Oleuropein aglycon)	321					Karkoul a, 2012
3,4-DHPEA-EDA (Oleuropein-aglycone di-aldehyde)	320	De Marco, 2007		Peralbo-Molina, 2012	Suarez, 2010	
Cornoside	316	Bianchi, 2003				
Oleocanthal (Dialdehydic form of decarboxymethyl Ligstroside aglycon)	305					Smith, 2005
p-HPEA-EDA	304	Obeid, 2007		Peralbo-Molina, 2012	Suarez, 2010	Perez-Trujillo, 2010
Elenolic acid	242	De Marco, 2007		Peralbo-Molina, 2012	Mulinacci, 2001	Dierkes, 2012
Elenolic acid methylester	256		Gariboldi, 1986			Dierkes, 2012
Dialdehydic elenolic acid decarboxymethyl	184			Lozano-Sanchez, 2011	Lozano-Sanchez, 2011	
Dialdehydic elenolic ester decarboxymethyl	198			Lozano-Sanchez, 2011		

Methyl malate-hydroxytyrosol ester	284	Bianco, 2006				
Oleuristic A	716		Wang, 2009			
Oleuristic B	716		Wang, 2009			
Hydroxytyrosil-elenolate	392		Gariboldi, 1986			
10-Hydroxy oleuropein aglycone	394					Garcia-Villalba, 2010
10-Hydroxy oleuropein aglycone decarboxymethyl	336			Obeid, 2007		
10-Hydroxy-10-methyl oleuropein aglycone	408			Obeid, 2007		
Monoaldehydic form of Ligstroside aglycon	365	Kanakis, 2013				Kanakis, 2013
Monoaldehydic form of Oleuropein aglycon	380	Kanakis, 2013				Kanakis, 2013
Oleuropeindial (enol form)	378	Obeid, 2007				
demethyloleuropein aglycone (enol form)	364	Obeid, 2007				
Demethyloleuropein aglycone	364	Obeid, 2007				
Demethyloleuropein	526	Obeid, 2007				
Demethyloleuropein aglycone dialdehyde	364	Obeid, 2007				
3,4-DHPEA-DEDA (Oleuropein aglycone decarboxymethyl dialdehyde form)	320	Obeid, 2007			Scalzo, 1993	
3,4-DHPEA-DEDA (acetal)	366	Obeid, 2007				
Oleuropeindial (keto form)	378	Obeid, 2007				
Oleuropeindial (Cannizzaro-like product of oleuropeindial)	396	Obeid, 2007				
Oleuropeindial - Lactone (Cannizzaro-like product of oleuropeindial)	378	Obeid, 2007				
Elenolic acid dialdehyde	242	Obeid, 2007				
DEDA (Decarboxymethyl elenolic acid dialdehyde)	184	Obeid, 2007				
Hydroxytyrosol acetate	196	Morello, 2004	Quirantes-Pine, 2013			Brenes, 1999
DEDA acetal	230	Obeid, 2007				
Demethyl elenolic acid	228	Obeid, 2007				
Tyrosol acetate	222					Mateos, 2001

Ligstroside	524	De Marco, 2007	Savarase, 2007		De Marco, 2007	
Ligstroside aglycone methyl acetal	376			Obeid, 2007		
Ligstroside aglycone	380		Savarase, 2007			
Demethyligstroside	510	Sivakumar, 2005				
Ligstroside derivative 1	523			Cardoso, 2011		
Ligstroside derivative 2	453			Cardoso, 2011		
Ligstroside derivative 3	685			Cardoso, 2011		
Ligstroside derivative 4	847			Cardoso, 2011		
Ligstroside derivative 5	909			Cardoso, 2011		
Jaspolyoside	926		Perez-Bonilla, 2011			
Jaspolyanoside	911		Perez-Bonilla, 2011			
Isojaspolyoside A	926		Perez-Bonilla, 2011			
(+)-Cycloolivil	376		Tsukamoto, 1984			
Hemiacetal of dialdehydic oleuropein aglycone decarboxymethyl	334	Christophoridou, 2005				
Hemiacetal of dialdehydic ligstroside aglycone decarboxymethyl	318	Christophoridou, 2005				
7"-S-Hydroxyoleuropein	557	Di Donna, 2007	Quirantes-Pine, 2013			
Oleuropein-3"-Methyl ether	555			Obeid, 2007		
3,4-DHPEA-DETA	350			Obeid, 2007		
Decarboxymethyl ligstroside aglycone	304					Lozano-Sanchez, 2010
Hydroxytyrosol acyclodihydroelenolate	382	Obeid, 2007		Obeid, 2007		
Hydroxytyrosil elenolate	364			Obeid, 2007		
Coumarins						
Esculin	340		Tsukamoto, 1984			
Esculetin	178		Tsukamoto, 1984			

Scopoletin	192		Tsukamoto, 1984			
Scopolin	354		Tsukamoto, 1984			
Iridoids						
Loganic acid	375			Peralbo-Molina, 2012		
Loganin	390			Peralbo-Molina, 2012		
Glucosides						
Hydroxytyrosol rhamnoside	301			Peralbo-Molina, 2012		
β -Hydroxy-acetoside	640	Cecchi, 2013				
Verbascoside	624	Rigane, 2011	Laguerre, 2009	Cardoso, 2005	Mulinacci, 2001	
Oxidized verbascoside	623			Cardoso, 2005		
Isoverbascoside	624	Obeid, 2007	Laguerre, 2009	Innocenti, 2006		
Oxidized isoverbascoside	623			Cardoso, 2005		
Acetoside	623		Ryan, 1999	Rodriguez, 2009		
Isoacteoside	625			Obeid, 2007		
Suspensaside	641			Rodriguez, 2009		
Hellicoside	657			Rodriguez, 2009		
Orbanchoside	623			Rodriguez, 2009		
Wedelosin	758			Rodriguez, 2009		
Oleoside-11-Methylester	403			Peralbo-Molina, 2012		
6'-O-[(2E)-2,6-Dimethyl-8-hydroxy-2-octenoyloxy]-secologanoside	559		Karioti, 2006			
4'-O- β -D-Glucosyl-9-O-(6"-deoxysaccharosyl)olivil	851		Schumacher, 2002			
Verucosin	345				Christophoridou, 2005	
Quercetin-3-rhamnoside	449	Savarese, 2007				

Quercetin-7-O-glucoside	464	Bouaziz, 2005				
Caffeoyl-6'-secologanoside	552	Obeid, 2007		Obeid, 2007	Obeid, 2007	
Comselogoside	536	Obeid, 2007		Obeid, 2007		
Oleoside	390	Bouaziz, 2010	Obeid, 2007	Cardoso, 2005		Fu, 2009
Secologanoside	390		Obeid, 2007			Fu, 2009
Hydroxytyrosol-1'- β -glucoside	316	Cardoso, 2005	Savarese, 2007	Cardoso, 2005		Bianco, 1998
Hydroxytyrosol-3- β -glucoside	316	Rubio-Senet, 2013	Savarese, 2007	Rubio-Senet, 2013		Bianco, 1998
Hydroxytyrosol-4- β -glucoside	316	Rubio-Senet, 2013	Savarese, 2007	Rubio-Senet, 2013		Bianco, 1998
Hydroxytyrosol diglucoside	478			Peralbo-Molina, 2012		
Salidroside	300	Romero, 2002		Peralbo-Molina, 2012		
6'- β -D-Glucopyranosyl oleoside	553	Savarese, 2007		Obeid, 2007		
6'-Rhamnopyranosyl oleoside	537	Savarese, 2007		Obeid, 2007		
Methoxyphenols						
Guaiacol	124					Reiners, 1998
2-Methoxy-4-vinylphenol	150				Poerschmann, 2013	
Isoeugenol	165				Poerschmann, 2013	
Homovanillin	166				Poerschmann, 2013	
Phenolic fatty acid esters						
1-oleyltyrosol	389	Maestroduran, 1994				
Deoxyloganic acid lauryl ester	408			Rigane, 2011		

Aliphatic & Aromatic Alcohols	MW	Olive matrix				
		Olive fruit	Leaf	Pomace	Wastewater	Extra-virgin oil
Fatty Alcohols						
Eicosanol	298		Orozco-Solano, 2010			
Docosanol	327	Lopez-Lopez,	Orozco-Solano,			Boskou, 1983

		2008	2010			
Tricosanol	341		Orozco-Solano, 2010			Boskou, 1983
Tetracosanol	355	Lopez-Lopez, 2008	Orozco-Solano, 2010			Boskou, 1983
Pentacosanol	369		Orozco-Solano, 2010			Boskou, 1983
Hexacosanol	383	Lopez-Lopez, 2008	Orozco-Solano, 2010			Boskou, 1983
Heptacosanol	397		Orozco-Solano, 2010			Boskou, 1983
Octacosanol	411	Lopez-Lopez, 2008	Orozco-Solano, 2010			Boskou, 1983
Diterpene alcohols						
Phytol	297					Vetter, 2012
Geranylgeraniol	291					Di Serio, 2016

Sterols	MW	Olive matrix				
		Olive fruit	Leaf	Pomace	Wastewater	Extra-virgin oil
Common sterols (4α-desmethylsterols)						
β -sitosterol	415	Lopez-Lopez, 2008	Orozco-Solano, 2010			
Campesterol	401	Lopez-Lopez, 2008	Orozco-Solano, 2010			
Stigmasterol	413	Lopez-Lopez, 2008	Orozco-Solano, 2010			
Cholesterol	387	Lopez-Lopez, 2008	Orozco-Solano, 2010			
24-Methylene-cholesterol	399		Orozco-Solano, 2010			Jbara, 2010
Brassicasterol	399		Orozco-Solano, 2010			
Clerosterol	413	Lopez-Lopez, 2008	Orozco-Solano, 2010			Noorali, 2014
Ergosterol	397					Calapaj, 1993
Stigmastanol	417	Lopez-Lopez, 2008				Noorali, 2014
Campestanol	403	Lopez-Lopez, 2008	Orozco-Solano, 2010			
Δ -7-Avenasterol	413	Lopez-Lopez, 2008				
Δ -5-Avenasterol	413		Orozco-Solano, 2010			

Δ -7-Stigmastenol	412		Orozco-Solano, 2010			Noorali, 2014
Δ -5,23-Stigmastadienol	412					Boskou, 2006 (AOCS)
Δ -5,24-Stigmastadienol	412	Lopez-Lopez, 2008	Orozco-Solano, 2010			Boskou, 2006 (AOCS)
Δ 7,22-Ergostadienol	399					Itoh, 1981
Δ 7,24-Ergostadienol	399					Itoh, 1981
22,23- Dihydrobrassicasterol	401					Itoh, 1981
4-Methylsterols						
Obtusifoliol	427	Rahier, 1989				
Gramisterol	413					
Citrostadienol	427					
Cycloeucalenol	427	Stiti, 2007				
24-methyl-31-nor-9(11)-lanostenol	429					Itoh, 1981
24-methylene-31-nor-9(11)-lanostenol	427					Itoh, 1981
24-ethyllophenol	429					Itoh, 1981
24-methyl-(E)-23-dehydrolophenol	413					Itoh, 1981
28-isocitrostadienol	427					Itoh, 1981
24-methyl-24(25)-dehydrolophenol	413					Itoh, 1981
24-Ethyl- <i>E</i> -23-dehydrolophenol	427	Stiti, 2012	Stiti, 2012			Stiti, 2007
24-Ethylidenelophenol	427					Stiti, 2007
24-Methylenelophenol	412	Stiti, 2012	Stiti, 2012			
Triterpene alcohols (4,4-dimethylsterols)						
Linalool	154					Genovese, 2015
β -amyrone	425	Stiti, 2007				Itoh, 1973
Butyrospermol	427	Stiti, 2007				Itoh, 1973
24-methylene-cycloartenol	427	Stiti, 2012	Stiti, 2012			Itoh, 1973
Cycloartenol	427	Stiti, 2007				Itoh, 1973
Cyclobranol	440					Itoh, 1981
Cyclosadol	440					Itoh, 1981
Dammaradienol	426					Itoh, 1981
Germanicol	426					Itoh, 1981
24-methylene-24-dihydroparkenol	455	Stiti, 2012				Itoh, 1981
Parkeol	427	Stiti, 2012				Itoh, 1981
3- <i>epi</i> -betulin	443		Stiti, 2012			
Lupeol	427					

3- <i>epi</i> -lupeol	427			Gil, 1997		
Agrostophyllinol	441	Stiti, 2007				
7, 24-tirucalladienol	427					Boskou, 2006 (AOCS)
Tirucallol	427					
Taraxasterol	427	Rahier, 1989				
Taraxerol	427	Stiti, 2007				
Lupenone	425	Rahier, 1989				
α -amyrin	427	Rahier, 1989				
δ -amyrin	427	Stiti, 2007				
β -amyrin	427	Stiti, 2012	Stiti, 2012			Stiti, 2007
Ψ -taraxasterol	427	Stiti, 2007				
28-hydroxytaraxerol	441	Stiti, 2012	Stiti, 2012			Stiti, 2007
28-nor- α -amyrin	454	Stiti, 2012	Stiti, 2012			
Methyl 2 α ,3 β -diacetoxyolean-12-en-28-oate	501	Stiti, 2007		Gil, 1997		
4 α ,14 α -Dimethylstigmasta-8,24(24)-dien-3 β -ol	441			Gil, 1997		
Methyl 3 β -acetoxyolean-12-en-28-oate	471	Stiti, 2007		Gil, 1997		
Bacchar-12,21-dien-3 β -ol		Stiti, 2007				
28-nor- β -amyrin	427		Stiti, 2012			
24-methylene-24-dihydroparkeol	441	Stiti, 2012				
24-methylene-24-dihydrolanosterol	455	Stiti, 2012				
(24Z)-24-ethylidene-dihydrolanosterol	469	Stiti, 2012				
4,4-dimethyl-5 α -stigmast-7-en-3 β -ol	443	Stiti, 2012				
4,4-dimethyl-5 α -stigmasta-7,24Z(241)-dien-3 β -ol	441	Stiti, 2012				
Triterpenic dialcohols						
Uvaol	443	Stiti, 2012	Guinda, 2010			
Erythrodiol	443	Stiti, 2012	Peragon, 2013			

Sterols	MW	Olive matrix				
		Olive fruit	Leaf	Pomace	Wastewater	Extra-virgin oil
Phospholipids						
Phosphatidylcholine	313	Montealegre, 2013				Hatzakis, 2008

Phosphatidylethanolamine	271	Montealegre, 2013				Hatzakis, 2008
Lysophosphatidylethanolamine	500	Montealegre, 2013				
Phosphatidylinositol	389	Montealegre, 2013				Hatzakis, 2008
Phosphatidic acid	226	Montealegre, 2013				Hatzakis, 2008
Lysophosphatidic acid	436	Montealegre, 2013				Hatzakis, 2008
Phosphatidylglycerol	285	Montealegre, 2013				

Triterpenic acids	MW	Olive matrix				
		Olive fruit	Leaf	Pomace	Wastewater	Extra-virgin oil
Oleanolic acid	457	Stiti, 2007	Guinda, 2010	Garcia, 2008		Allouche, 2009
Maslinic acid	473	Stiti, 2007	Stiti, 2012	Garcia, 2008		Allouche, 2009
Ursolic acid	457	Stiti, 2012	Guinda, 2010			Allouche, 2009b
Pomolic acid	473					
Betulinic acid	456					Bianchi, 1992
Corosolic acid	473		Stiti, 2012			
3- <i>epi</i> -betulinic acid	457	Stiti, 2012	Stiti, 2012			
Urs-2 β ,3 β -dihydroxy-12-en-28-oic acid	471			Obeid, 2007		
Oleanolic acid demethyl	443		Khelif, 2012			

Volatiles	MW	Olive matrix				
		Olive fruit	Leaf	Pomace	Wastewater	Extra-virgin oil
Aldehydes						
Acetaldehyde	44					Reiners, 1998
Propanal	59					Reiners, 1998
3-Methylbutanal	86					Reiners, 1998
2-Methylbutanal	86					Reiners, 1998
2-Methyl-2-butenal	85					Reiners, 1998
Pentanal	86					Morales, 2005
<i>trans</i> -2-Pentenal	86					Morales, 2005
<i>cis</i> -2-Pentenal	86					Harwood, 2000
2,4 Hexadienal	97					Harwood, 2000

Hexanal	100					Reiners, 1998
3-Hexanal	100					Harwood, 2000
<i>cis</i> -3-Hexenal	98					Aparicio & Luna, 2002
<i>trans</i> -2-Hexenal	98					Reiners, 1998
<i>cis</i> -2-Hexenal	98					Harwood, 2000
Benzaldehyde	107					Harwood, 2000
Heptanal	114					Morales, 2005
<i>trans</i> -2-Heptenal	112					Morales, 2005
<i>cis</i> -2-Heptenal	112					Harwood, 2000
2,4-Heptadienal	110					Reiners, 1998
Phenylacetaldehyde	121					Malheiro, 2011
Octanal	128					Morales, 2005
<i>trans</i> -2-Octenal	126					Morales, 2005
Nonanal	142					Morales, 2005
<i>trans,trans</i> -2,4-Nonadienal	138					Reiners, 1998
<i>cis</i> -2-Nonenal	140					Reiners, 1998
<i>trans</i> -2-Nonenal	140					Reiners, 1998
Decanal	156					Morales, 2005
<i>trans</i> -2-Decenal	154					Morales, 2005
2,4-Decadienal	152					Morales, 2005
<i>trans,trans</i> -2,4-Decadienal	152					Morales, 2005
<i>trans,cis</i> -2,4-Decadienal	152					Reiners, 1998
Vanillin	152	Morello, 2004	Quirantes-Piné, 2013	Lozano-Sanchez, 2011	Lozano-Sanchez, 2011	De la Torre-Carbot, 2005
<i>trans</i> -4,5-Epoxy- <i>trans</i> -2-decenal	168					Reiners, 1998
Alcohols						
Methanol	33					Harwood, 2000
Ethanol	46				Galanakis, 2010	Morales, 2005
1-Propanol	61	Sabatini, 2008				
Butan-1-ol	74					
Butan-2-ol	74					Morales, 2005
2-Heptanol	116					
2-Methyl-3-butenol	87					Harwood, 2000
2-Methyl-1-butanol	88					Morales, 2005
3-Methyl-1-butanol	88					Morales, 2005
Pentanol	89	Morales, 1997				Aparicio & Luna, 2002

3-Pentanol	89					Harwood, 2000
3-Penten-2-ol	86					Morales, 2005
1-Penten-3-ol	87					Harwood, 2000
2-Penten-1-ol	87					Harwood, 2000
Hexanol	102					Reiners, 1998
<i>trans</i> -2-Hexenol	100					Aparicio & Luna, 1998
<i>trans</i> -3-Hexenol	100					Aparicio, 1998
<i>cis</i> -3-Hexenol	100					Harwood, 2000
<i>cis</i> -2-Hexenol	101					Harwood, 2000
4-Hexenol	101					Harwood, 2000
Heptan-2-ol	112					Morales, 2005
Heptanol	117	Iraqi, 2005				Harwood, 2000
2-Phenylethanol	123					Dierkes, 2012(b)
6-Methyl-5-hepten-3-ol	128					Morales, 2005
Octanol	131					Harwood, 2000
2-Octanol	130					Morales, 2005
3-Octenol	128					Morales, 2005
Nonanol	144					Aparicio & Luna, 2002
Lavendulol	155					Harwood, 2000
Terpineol	155					Harwood, 2000
Decanol	159					Harwood, 2000
Benzyl alcohol	109					Harwood, 2000
Esters						
Methyl acetate	75					Harwood, 2000
Ethyl acetate	88					Morales, 2005
Butyl acetate	116					Morales, 2005
2-Methylbutyl acetate	131					Harwood, 2000
Isopentyl acetate	131					Harwood, 2000
2-Hexenyl acetate	143					Harwood, 2000
Hexyl acetate	144					Baeten, 1998
3-Hexenyl acetate	142					Harwood, 2000
<i>cis</i> -3-Hexenyl acetate	142					Reiners, 1998
Octyl acetate	173					Harwood, 2000
2-Ethylphenyl acetate	165					Harwood, 2000
Benzyl acetate	150					
Phenethyl acetate	164					
Ethyl propanoate	102					Morales, 2005
Ethyl butanoate	116					Reiners, 1998
Ethyl isobutyrate	116					Reiners, 1998
Propyl propanoate	117	Sabatini, 2008				
Propyl butanoate	130					Morales, 2005

2-Methylpropyl butanoate	144					Morales, 2005
Ethyl 2-methylbutanoate	130					Reiners, 1998
Ethyl 3-methylbutanoate	130					Reiners, 1998
Ethyl-2-methypropanoate	117					Harwood, 2000
Propyl 2-methylpropanoate	131					Harwood, 2000
Methyl butanoate	103					Harwood, 2000
Methyl 2-methylbutanoate	117					Harwood, 2000
Methyl 3-methylbutanoate	117					Harwood, 2000
Methyl pentanoate	117					Harwood, 2000
Methyl hexanoate	131					Harwood, 2000
Ethyl hexanoate	145					Harwood, 2000
Methyl heptanoate	145					Harwood, 2000
Methyl octanoate	159					Harwood, 2000
Ethyl cyclohexylcarboxylate	156					Reiners, 1998
Ethyl octanoate	173					Harwood, 2000
Ethyl cinnamate	177					
Ketones						
Butan-2-one	72					Morales, 2005
1-Penten-3-one	84					Reiners, 1998
Heptan-2-one	114					Morales, 2005
2-Butanone	73					Harwood, 2000
3-Methyl-2-butanone	87					Harwood, 2000
3-Pentanone	87					Harwood, 2000
4-Methyl-2-pentanone	101					Harwood, 2000
1-Penten-3-one	85					Harwood, 2000
2-Hexanone	101					Harwood, 2000
2-Heptanone	115					Harwood, 2000
6-Methyl-5-hepten-2-one	126					Morales, 2005
2-Octanone	129					Harwood, 2000
3-Octanone	129					Harwood, 2000
Octan-2-one	129					Morales, 2005
1-Octen-3-one	126					Reiners, 1998
cis-1,5-Octadien-3-one	124					Reiners, 1998
2-Nonanone	143					Harwood, 2000
Acetophenone	121					Harwood, 2000
trans- β -Damascenone	190					Reiners, 1998
Carboxylic acids						

Acetic acid	60	Williams, 1998				Reiners, 1998
Propanoic acid	74					Morales, 2005
Isobutyric acid	89					
Butanoic acid	89	Sabatini, 2008				Morales, 2005
3-Methylbutyric acid	102					Reiners, 1998
Pentanoic acid	102					Morales, 2005
3-Methyl-butanoic acid	103					Angerosa, 1996
Hexanoic acid	116					Morales, 2005
Heptanoic acid	130					Morales, 2005
Octanoic acid	144					Morales, 2005
Sulfur compounds						
3-Isopropenylthiophene	125					Harwood, 2000
2,5-Diethylthiophene	141					Harwood, 2000
4-Methoxy-2-methyl-2-butanethiol	134					Reiners, 1998
3-Methyl-2-butenethiol	105					Vichi, 2014
2-Ethyl-5-hexylthiophene	197					Harwood, 2000
Furans						
2-Ethylfuran	97					Harwood, 2000
2-Propylfuran	111					Harwood, 2000
3-Propylfuran	111					Harwood, 2000
3-Methyl-2-pentylfuran	153					Harwood, 2000
3,4-methyl-3-pentenyl furan	151					Harwood, 2000
Ethers						
Diethyl ether	75					Harwood, 2000
1,8-Cineole	155					Harwood, 2000
Organic acids						
Oxalic acid	90	Nergiz, 2009				
Citric acid	193	Nergiz, 2009				
Malic acid	134	Nergiz, 2009				
Succinic acid	118	Nergiz, 2009				
Gluconic acid	195		Quirantes-Pine, 2013			

Hydrocarbons	MW	Olive matrix				
		Olive fruit	Leaf	Pomace	Wastewater	Extra-virgin oil
Terpenic hydrocarbons						
6,10-Dimethyl-l-undecane	185					Lanzon, 1994
Eremophilone	219					Lanzon, 1994
Squalene	411		Tabera, 2004	Fernandez- Bolanos, 2006		Paquot, 1973
Wax esters						
Methyl palmitate	271					Reiter, 2001
Methyl oleate	297					Reiter, 2001
Methyl stearate	298					Reiter, 2001
Ethyl oleate	311					Reiter, 2001
Phytyl oleate C18:1	561					Reiter, 2001
Phytyl oleate C18:0	563					Reiter, 2001
Geranylgeranyl oleate C18:1	555					Reiter, 2001
Geranylgeranyl oleate C18:0	556					Reiter, 2001
Phytyl C20:1	589					Reiter, 2001
Phytyl C20:0	591					Reiter, 2001
Geranylgeranyl C20:1	582					Reiter, 2001
Geranylgeranyl C20:0	583					Reiter, 2001
Phytyl C22:0	619					Reiter, 2001
Geranylgeranyl C22:0	613					Reiter, 2001
Phytyl C24:0	647					Reiter, 2001
Geranylgeranyl C24:0	641					Reiter, 2001
Wax ester 38:0 (12:0-26:0)	565					Reiter, 2001
Wax ester 38:0 (14:0-24:0)	565					Reiter, 2001
Wax ester 38:0 (16:0-22:0)	565					Reiter, 2001
Wax ester 38:0 (18:0-20:0)	565					Reiter, 2001
Wax ester 38:0 (20:0-18:0)	565					Reiter, 2001
Wax ester 40:0 (14:0-26:0)	593					Reiter, 2001
Wax ester 40:0 (16:0-24:0)	593					Reiter, 2001
Wax ester 40:0 (18:0-22:0)	593					Reiter, 2001
Wax ester 40:0 (20:0-20:0)	593					Reiter, 2001
Wax ester 40:1 (16:1-24:0)	591					Reiter, 2001
Wax ester 40:1 (18:1-22:0)	591					Reiter, 2001
Wax ester 42:0 (14:0-28:0)	621					Reiter, 2001
Wax ester 42:0 (16:0-	621					Reiter, 2001

26:0)						
Wax ester 42:0 (18:0-24:0)	621					Reiter, 2001
Wax ester 42:0 (20:0-22:0)	621					Reiter, 2001
Wax ester 42:0 (24:0-18:0)	621					Reiter, 2001
Wax ester 42:1 (16:1-26:0)	621					Reiter, 2001
Wax ester 42:1 (18:1-24:0)	621					Reiter, 2001
Wax ester 44:0 (16:0-28:0)	649					Reiter, 2001
Wax ester 44:0 (18:0-26:0)	649					Reiter, 2001
Wax ester 44:0 (22:0-22:0)	649					Reiter, 2001
Wax ester 44:1 (16:0-28:0)	647					Reiter, 2001
Wax ester 44:1 (18:1-26:0)	647					Reiter, 2001
Wax ester 44:1 (20:1-24:0)	647					Reiter, 2001
Wax ester 46:0 (14:0-32:0)	677					Reiter, 2001
Wax ester 46:0 (16:0-30:0)	677					Reiter, 2001
Wax ester 46:0 (18:0-28:0)	677					Reiter, 2001
Wax ester 46:0 (20:0-26:0)	677					Reiter, 2001
Wax ester 46:0 (22:0-24:0)	677					Reiter, 2001
Wax ester 46:0 (24:0-22:0)	677					Reiter, 2001
Wax ester 46:1 (18:1-28:0)	675					Reiter, 2001
Alkanes						
2-Methylbutane	73					Harwood, 2000
2-Methylpentane	87					Harwood, 2000
3-Methylpentane	87					Harwood, 2000
Hexane	87					Harwood, 2000
Hexene	85					Harwood, 2000
Heptane	101					Harwood, 2000
Octane	115					Harwood, 2000
Nonane	129					Harwood, 2000
Tridecane	185					Harwood, 2000
Methyl benzene	93					Harwood, 2000
Styrene	105					Harwood, 2000
Dodecane	171					Bueno, 2005
Tridecane	185					Bueno, 2005
Tetradecane	199					Bueno, 2005
Pentadecane	213					Bueno, 2005

Hexadecane	227					Bueno, 2005
Heptadecane	241					Bortolomeazzi, 2001
Octadecane	255					Bortolomeazzi, 2001
Nonadecane	269					Bortolomeazzi, 2001
Icosane	283					Bortolomeazzi, 2001
Heneicosane	297					Bortolomeazzi, 2001
Docosane	311					Bortolomeazzi, 2001
Tricosane	325					Bortolomeazzi, 2001
Tetracosane	339					Bortolomeazzi, 2001
Pentacosane	353					Webster, 2000
Hexacosane	367					Webster, 2000
Heptacosane	381					Webster, 2000
Octacosane	395					Webster, 2000
Nonacosane	409					Webster, 2000
Triacotane	423					Webster, 2000
Hentriacotane	437					Webster, 2000
Dotriacotane	451					Webster, 2000
Tritriacotane	465					Webster, 2000
Tetratriacotane	479					Webster, 2000
Alkenes						
6,10-dimethyl-1-undecene	183					Bortolomeazzi, 2001
8-Heptadecene	239					Bortolomeazzi, 2001
9-Docosene	309					Bortolomeazzi, 2001
9-Tricosene	323					Bortolomeazzi, 2001
9-Tetracosene	337					Bortolomeazzi, 2001
9-Pentacosene	351					Bortolomeazzi, 2001
9-Hexacosene	365					Bortolomeazzi, 2001
9-Heptacosene	379					Bortolomeazzi, 2001
Sesquiterpenes						
Cyclosativene	205					Bortolomeazzi, 2001
Longicyclene	205					Bortolomeazzi, 2001
α -copaene	205					Lanzon, 1994
β -cubebene	205					Bortolomeazzi, 2001
β -elemene	205					Bortolomeazzi, 2001

(E)-caryophyllene	205					Bortolomeazzi, 2001
α -trans-bergamotene	205					Bortolomeazzi, 2001
Alloaromadendrene	205					Bortolomeazzi, 2001
β -acoradiene	205					Bortolomeazzi, 2001
Drima-7,9(11)-diene	205					Bortolomeazzi, 2001
γ -Muurolene	205					Bortolomeazzi, 2001
γ -curcumene	205					Bortolomeazzi, 2001
Eremophyllene	205					Bortolomeazzi, 2001
α -Zingiberene	205					Bortolomeazzi, 2001
α -Selinene	205					Bortolomeazzi, 2001
β -Curcumene	205					Bortolomeazzi, 2001
δ -cadinene	205					Bortolomeazzi, 2001
β - Sesquiphellandrene	205					Bortolomeazzi, 2001
(Z)- β -farnesene	205					Bortolomeazzi, 2001
(E)- β -farnesene	205					Bortolomeazzi, 2001
Calarene	205					Lanzon, 1994
(Z)2,(E)4,(E)6-Allofarnesene	205					Bortolomeazzi, 2001
(E)2,(Z)4,(E)6-Allofarnesene	205					Lanzon, 1994

Sugars	MW	Olive matrix				
		Olive fruit	Leaf	Pomace	Wastewater	Extra-virgin oil
Monosaccharides						
D(-)-arabinose	151	Gomez-Gonzalez, 2010	Gomez-Gonzalez, 2010	Lama-Munoz, 2012	Galanakis, 2010	
D(+)-xylose	151	Gomez-Gonzalez, 2010	Gomez-Gonzalez, 2010	Lama-Munoz, 2012	Galanakis, 2010	
D(+)-glucose	181	Gomez-Gonzalez, 2010	Gomez-Gonzalez, 2010	Lama-Munoz, 2012	Galanakis, 2010	
D(+)-mannose	181	Gomez-Gonzalez, 2010	Gomez-Gonzalez, 2010		Galanakis, 2010	
D(-)-galactose	181	Gomez-Gonzalez, 2010	Gomez-Gonzalez, 2010	Lama-Munoz, 2012	Galanakis, 2010	
D(-)-fructose	181	Gomez-Gonzalez, 2010	Gomez-Gonzalez, 2010			

1,6-anhydro- β -D-glucose	163		Gomez-Gonzalez, 2010			
Sedoheptulose	211	Gomez-Gonzalez, 2010	Gomez-Gonzalez, 2010			
Diasaccharides						
D-(+)-sucrose	343	Gomez-Gonzalez, 2010	Gomez-Gonzalez, 2010			
D-(+)-lactose	343		Gomez-Gonzalez, 2010			
Triasaccharides						
D-(+)-raffinose	505		Gomez-Gonzalez, 2010			
Maltotriose	505					
L-rhamnose	165	Gomez-Gonzalez, 2010	Gomez-Gonzalez, 2010	Lama-Munoz, 2012	Galanakis, 2010	
Sugar carboxylic acids						
D-(+)-galacturonic acid	195	Gomez-Gonzalez, 2010	Gomez-Gonzalez, 2010	Lama-Munoz, 2012	Galanakis, 2010	
D-glucuronic acid	195	Gomez-Gonzalez, 2010	Gomez-Gonzalez, 2010	Lama-Munoz, 2012		
Sugar alcohols						
Xylitol	153		Gomez-Gonzalez, 2010			
Adonitol	153		Gomez-Gonzalez, 2010			
L-(-)-arabitol	153		Gomez-Gonzalez, 2010			
D-Mannitol	183	Gomez-Gonzalez, 2010	Gomez-Gonzalez, 2010			
D-(+)- <i>chiro</i> -inositol	181		Gomez-Gonzalez, 2010			
L-Fucose	165					
D-Fucose	165			Lama-Munoz, 2012		
<i>myo</i> -inositol	181		Gomez-Gonzalez, 2010			
Galactinol	343	Gomez-Gonzalez, 2010	Gomez-Gonzalez, 2010			
Oligosaccharides						
α -Cellulose	342			Vlyssides, 1999		

Klason lignin	1513			Rodriguez-Gutierrez, 2014		
Pectin	250	Mafra, 2001				
Galacturonan	194	Mafra, 2001				
Mannan	666	Mafra, 2001				

Pigments	MW	Olive matrix				
		Olive fruit	Leaf	Pomace	Wastewater	Extra-virgin oil
Chlorophylls						
Pheophytin α	872					Garrido Fernandez, 1990
Pyropheophytin α	799					Hornero-Mendez, 2005
Chlorophyll a	894	Criado, 2007				Cichelli, 2004
Chlorophyll b	908	Criado, 2007				Cichelli, 2004
Pheophytin b	886					Cichelli, 2004
Chlorophyllide a	615	Criado, 2007				Ranalli, 2011
Chlorophyllide b	908	Criado, 2007				Ranalli, 2011
Pheophorbide a	593					Ranalli, 2011
Pheophorbide b	607					Ranalli, 2011
Caratenoids						
β -Carotene	534					Ranalli, 2011
Lutein	569	Criado, 2007				Cichelli, 2004
Xanthophylls						
Neoxanthin	601	Criado, 2007				Cichelli, 2004
Violaxanthin	601	Criado, 2007				Cichelli, 2004
Luteoxanthin	601					
Antheraxanthin	585	Criado, 2007				
Mutatoxanthin	585					
β -cryptoxanthin	553					

Tocopherols	MW	Olive matrix				
		Olive fruit	Leaf	Pomace	Wastewater	Extra-virgin oil
α -tocopherol	431	Hassapidou, 1993	de Lucas, 2002	Uribe, 2015		Psomiadou, 2000
β -tocopherol	417	Hassapidou, 1993		Uribe, 2015		Huilun, 2011
γ -tocopherol	417	Hassapidou, 1993	de Lucas, 2002	Uribe, 2015		Huilun, 2011
δ -tocopherol	403	Yorulmaz, 2013				Huilun, 2011

Amino acids	MW	Olive matrix				
		Olive fruit	Leaf	Pomace	Wastewater	Extra-virgin oil
Aspartic acid	134	Casado, 2008				
Glutamic acid	148	Casado, 2008				
Asparagine	133	Casado, 2008				
Serine	105	Casado, 2008				
Glutamine	146	Casado, 2008				
Phenylalanine	165			Peralbo-Molina, 2012		
Arginine	174	Casado, 2008				
Alanine	89	Casado, 2008				
Tyrosine	182	Casado, 2008				
Valine	118	Casado, 2008				
Leucine	132					
Isoleucine	132					

Other	MW	Olive matrix				
		Olive fruit	Leaf	Pomace	Wastewater	Extra-virgin oil
Unclassified						
Halleridone	154	Bianchi, 2003				
1,5-anhydroxylitol			Campeol, 2004			
Poly-unsaturated di-galactoside glycerol diester	951					Bianco, 1998

3-(1-Hydroxymethyl-1-propenyl)pentanedioic acid	200			Obeid, 2007		
3-[1-(hydroxymethyl)-(E)-1-propenyl] glutaric acid	200	Gil, 1998				
3-[1-(formyl)-(E)-1-propenyl] glutaric acid	202	Gil, 1998				

Medium-chain fatty acids	MW	n	Fatty acid esters	MW	Monocylglycerols
Lauric	201	C _{12:0}	Methyl esters		1-monoacylglycerol
Long-chain fatty acids	MW	n	Methyl palmitate	271	2-monoacylglycerol
Myristic	229	C _{14:0}	Methyl heptadecanoate	285	3-monoacylglycerol
Palmitic	257	C _{16:0}	Methyl linoleate	295	Diacylglycerols
Palmitoleic	255	C _{16:1}	Methyl oleate	297	1,2-diacylglycerol
<i>Trans</i> -palmitoleic			Methyl stearate	299	2,3-diacylglycerol
Margaric acid	271	C _{17:0}	Ethyl esters		1,3-diacylglycerol
<i>Cis</i> -Heptadecenoic	267	C _{17:1}	Ethyl palmitate	285	
Stearic	285	C _{18:0}	Ethyl linoleate	309	
Oleic	283	C _{18:1}	Ethyl oleate	311	
11- <i>cis</i> -vaccenic	283	11 <i>c</i> -C _{18:1}	Ethyl stearate	313	
Petroselinic	283				
Elaidic	283				
Linoelaidic	281				
Linoleic	281	C _{18:2}			
Linolenic	279	C _{18:3}			
Arachidic	313	C _{20:0}			
Gadoleic	311				
Eicosenoic	311	C _{20:1}			
Behenic	341	C _{22:0}			
Erucic	339	C _{22:1}			
Lignoceric	369	C _{24:0}			

References

- Allouche, Y., Uceda, M., Jimenez, A., Paz-Aguilera, M., Gaforio, J. J., & Beltran, G. (2009). Fruit quality and olive leaf and stone addition affect Picual virgin olive oil triterpenic content. *Journal Of Agricultural And Food Chemistry*, 57(19), 8998-9001.
- Ben Akacha, N., & Gargouria, M. (2009). Enzymatic synthesis of green notes with hydroperoxide-lyase from olive leaves and alcohol-dehydrogenase from yeast in liquid/gas reactor. *Process Biochemistry*, 44(10), 1122-1127. doi:10.1016/j.procbio.2009.06.006
- Allouche, Y., Jimenez, A., Uceda, M., Aguilera, M. P., Gaforio, J. J., & Beltran, G. (2009). Triterpenic content and chemometric analysis of virgin olive oils from forty olive cultivars. *Journal Of Agricultural And Food Chemistry*, 57(9), 3604-3610.
- Altıok, E., Bayçın, D., Bayraktar, O., & Ülkü, S. (2008). Isolation of polyphenols from the extracts of olive leaves (*Olea europaea* L.) by adsorption on silk fibroin. *Separation And Purification Technology*, 62342-348. doi:10.1016/j.seppur.2008.01.022
- Alu'datt, M. H., Alli, I., Ereifej, K., Alhamad, M., Al-Tawaha, A. R., & Rababah, T. (2010). Optimisation, characterisation and quantification of phenolic compounds in olive cake. *Food Chemistry*, 123117-122.
- Angerosa, F., B. Lanza, and V. Marsilio. 1996. "Biogenesis of fusty defect in virgin olive oils." *Grasas Y Aceites* 47, no. 3: 142-150. *FSTA - Food Science and Technology Abstracts*, EBSCOhost (accessed July 30, 2015).
- Aparicio, R., & Morales, M. T. (1998). Characterization of olive ripeness by green aroma compounds of virgin olive oil. *Journal of Agricultural and Food Chemistry*, 46(3), 1116-1122.
- Aparicio, R., & Luna, G. (2002). Characterisation of monovarietal virgin olive oils. *European Journal of Lipid Science and Technology*, 104(9-10), 614-627.
- Artajo, L. S., Romero, M. P., Tovar, M. J., & Motilva, M. J. (2006). Effect of irrigation applied to olive trees (*Olea europaea* L.) on phenolic compound transfer during olive oil extraction. *European Journal Of Lipid Science And Technology*, 108(1), 19-27. doi:10.1002/ejlt.200500227
- Artajo, L. S., Romero, M. P., Saurez, M., & Motilva, M. J. (2007). Partition of phenolic compounds during the virgin olive oil industrial extraction process. *European Food Research And Technology*, 225(5--6), 617-625. doi:10.1007/s00217-006-0456-0
- Baeten, V., Hourant, P., Morales, M. T., & Aparicio, R. (1998). Oil and fat classification by FT-Raman spectroscopy. *Journal of Agricultural and Food Chemistry*, 46(7), 2638-2646.
- Ballesteros, E., Garcia-Sanchez, A., & Ramos-Martos, N. (2006). Simultaneous multidetermination of residues of pesticides and polycyclic aromatic hydrocarbons in olive and olive-pomace oils by gas chromatography/tandem mass spectrometry. *Journal Of Chromatography A*, 1111(1), 89-96. doi:10.1016/j.chroma.2006.01.101
- L. Bastoni, A. Bianco, F. Piccioni, and N. Uccella, "Biophenolic profile in olives by nuclear magnetic resonance," *Food Chemistry*, vol. 73, no. 2, pp. 145–151, 2001.
- Bendini, A., Cerretani, L., Carrasco-Pancorbo, A., Gómez-Caravaca, A. M., Segura-Carretero, A., Fernández-Gutiérrez, A., & Lercker, G. (2007). Phenolic molecules in virgin olive oils: a survey of their sensory properties, health effects, antioxidant activity and analytical methods. An overview of the last decade. *Molecules (Basel, Switzerland)*, 12(8), 1679-1719.
- Bianchi G., C. Murelli, G. Vlahov, Surface Waxes From Olive Fruits. *Phytochemistry* 31: 3503- 3506, (1992).

- Bianchi, G. (2003). Lipids and phenols in table olives. *European Journal Of Lipid Science & Technology*, 105(5), 229.
- Bianco, A., Mazzei, R. A., Melchioni, C., Romeo, G., Scarpati, M. L., Soriero, A., & Uccella, N. (1998). Microcomponents of olive oil. III. Glucosides of 2(3,4-dihydroxy-phenyl)ethanol. *Food Chemistry*, 63(4), 461-464. doi:10.1016/S0308-8146(98)00064-8
- Bianco A., Coccioli F., Guiso M., Marra C. The occurrence in olive oil of a new class of phenolic compounds: hydroxyl-isochromans. *Food Chemistry* 77, (2001) 405-411
- A. Bianco, F. Coccioli, M. Guiso, and C. Marra, "The occurrence in olive oil of a new class of phenolic compounds: hydroxyisochromans," *Food Chemistry*, vol. 77, no. 4, pp. 405–411, 2002.
- A. Bianco, C. Melchioni, A. Ramunno, G. Romeo, and N. Uccella, "Phenolic components of *Olea europaea*—isolation of tyrosol derivatives," *Natural Product Research*, vol. 18, no. 1, pp. 29–32, 2004.
- A. Bianco, M. A. Chiacchio, G. Grassi, D. Iannazzo, A. Piperno, and R. Romeo, "Phenolic components of *Olea europea*. Isolation of new tyrosol and hydroxytyrosol derivatives," *Food Chemistry*, vol. 95, no. 4, pp. 562–565, 2006.
- Boggia, R., Borgogni, C., Hysenaj, V., Leardi, R., & Zunin, P. (2014). Direct GC-(EI)MS determination of fatty acid alkyl esters in olive oils. *Talanta*, 11960-67.
- Bonoli M., Bendini A., Cerretani L., Lercker G., Tochi T.G. Qualitative and semiquantitative analysis of phenolic compounds in extra virgin olive oils as a function of the ripening degree of olive fruits by different analytical techniques. *Journal of Agricultural and Food Chemistry* 52, (2004) 7026-7032
- Bortolomeazzi, R., Berno, P., Pizzale, L., & Conte, L. S. (2001). Sesquiterpene, alkene, and alkane hydrocarbons in virgin olive oils of different varieties and geographical origins. *Journal Of Agricultural And Food Chemistry*, 49(7), 3278-3283. doi:10.1021/jf001271w
- Boskou D., G. Stefanou, M. Konstandinidis, Tetracosanol and Hexacosanol Content of Greek Olive Oils. *Grasas Aceites* 34: 402-404, (1983).
- Boskou, D., *Olive Oil: Chemistry and Technology*, AOCS, (2006).
- Boskou, G., Salta, F. N., Chrysostomou, S., Mylona, A., Chiou, A., & Andrikopoulos, N. K. (2006). Antioxidant capacity and phenolic profile of table olives from the Greek market. *Food Chemistry*, 94(4), 558-564.
- Bouaziz M., Grayer R.J., Simmonds M.S.J., Damak M., Sayadi S. Identification and antioxidant potential of flavonoids and low molecular weight phenols in olive cultivar Chemlali growing in Tunisia. *Journal of Agricultural and Food Chemistry* 53, (2005) 236-241
- Bouaziz, M., Jemai, H., Khabou, W., & Sayadi, S. (2010). Oil content, phenolic profiling and antioxidant potential of Tunisian olive drupes. *Journal Of The Science Of Food And Agriculture*, 90(10), 1750-1758.
- Brenes, M., Garcia, A., Garcia, P., Rios, J. J., & Garrido, A. (1999). Phenolic compounds in Spanish olive oils. *Journal Of Agricultural And Food Chemistry*, 47(9), 3535-3540. doi:10.1021/jf990009o
- Brenes, M., Romero, C., Garcia, A., Hidalgo, F. J., & Ruiz-Mendez, M. V. (2004). Phenolic compounds in olive oils intended for refining: formation of 4-ethylphenol during olive paste storage. *Journal Of Agricultural And Food Chemistry*, 52(26), 8177-8181. doi:10.1021/jf0402532

Bueno, E. O., Sanchez-Casas, J., Montano-Garcia, A., & Gallardo-Gonzalez, L. (2005). Discriminating power of the hydrocarbon content from virgin olive oil of Extremadura cultivars. *Journal Of The American Oil Chemists' Society*, 82(1), 1-6. doi:10.1007/s11746-005-1034-0

Calapaj R., S. Chiricosta, G. Saija, et al., Evaluation of Gas Chromatographic and Spectrophotometric Analytical Results to Check the Presence of Seed Oils in Olive Oil Samples. *Riv. Ital. Sost. Grasse* 70: 585-594, (1993).

E. Campeol, G. Flamini, P. L. Cioni, I. Morelli, F. D'Andrea, and R. Cremonini, "1,5-Anhydroxylitol from leaves of *Olea europaea*," *Carbohydrate Research*, vol. 339, no. 16, pp. 2731– 2732, 2004

Caponio, F., Alloggio, V., & Gomes, T. (1999). Phenolic compounds of virgin olive oil: influence of paste preparation techniques. *Food Chemistry*, 64(2), 203-209. doi:10.1016/S0308-8146(98)00146-0

Cardoso, S. M., Guyot, S., Marnet, N., Lopes-da-Silva, J. A., Renard, C. C., & Coimbra, M. A. (2005). Characterisation of phenolic extracts from olive pulp and olive pomace by electrospray mass spectrometry. *Journal Of The Science Of Food And Agriculture*, 85(1), 21-32. doi:10.1002/jsfa.1925

Cardoso S.M., Guyot S., Marnet N., Lopes-da-Silva J., Silva A.MS., Renard C.MGC., Coimbra M. Identification of oleuropein oligomers in olive pulp and pomace. *Journal of the Science of Food and Agriculture* 86, (2006) 1495-1502

Cardoso, S.M., et al., Oleuropein/ligstroside isomers and their derivatives in Portuguese olive mill wastewaters. *Food Chemistry*, 2011. 129(2): p. 291-296.

Carrasco-Pancorbo, A., Cerretani, L., Bendini, A., Segura-Carretero, A., Gallina-Toschi, A., & Fernandez-Gutierrez, A. (2005). Analytical determination of polyphenols in olive oils. *Journal Of Separation Science*, 28(9--10), 837-858. doi:10.1002/jssc.200500032

Caruso, D., Colombo, R., Patelli, R., Giavarini, F., & Galli, G. (2000). Rapid evaluation of phenolic component profile and analysis of oleuropein aglycon in olive oil by atmospheric pressure chemical ionization-mass spectrometry (APCI-MS). *Journal Of Agricultural And Food Chemistry*, 48(4), 1182-1185. doi:10.1021/jf9905370

Casado, F., & Montano, A. (2008). Influence of Processing Conditions on Acrylamide Content in Black Ripe Olives. *Journal Of Agricultural And Food Chemistry*,

Cavalheiro, C. V., Picoloto, R. S., Cichoski, A. J., Wagner, R., de Menezes, C. R., Zepka, L. Q., & ... Barin, J. S. (2015). Olive leaves offer more than phenolic compounds – Fatty acids and mineral composition of varieties from Southern Brazil. *Industrial Crops & Products*, 71122-127. doi:10.1016/j.indcrop.2015.03.054

Cecchi, L., Migliorini, M., Cherubini, C., Giusti, M., Zanoni, B., Innocenti, M., & Mulinacci, N. (2013). Phenolic profiles, oil amount and sugar content during olive ripening of three typical Tuscan cultivars to detect the best harvesting time for oil production. *Food Research International*, 54(2), 1876-1884.

Christophoridou, S., Dais, P., Tseng, L., & Spraul, M. (2005). Separation and identification of phenolic compounds in olive oil by coupling high-performance liquid chromatography with postcolumn solid-phase extraction to nuclear magnetic resonance spectroscopy (LC-SPE-NMR). *Journal Of Agricultural And Food Chemistry*,

Cichelli, A., & Pertesana, G. P. (2004). High-performance liquid chromatographic analysis of chlorophylls, pheophytins and carotenoids in virgin olive oils: chemometric approach to variety classification. *Journal Of Chromatography A*, 1046141-146. doi:10.1016/j.chroma.2004.06.093

Cioffi, G., Pesca, M. S., Caprariis, P. d., Braca, A., Severino, L., & De Tommasi, N. (2010). Phenolic compounds in olive oil and olive pomace from Cilento (Campania, Italy) and their antioxidant activity. *Food Chemistry*, 121(1), 105-111.

Criado, M. N., Motilva, M. J., Goni, M., & Romero, M. P. (2007). Comparative study of the effect of the maturation process of the olive fruit on the chlorophyll and carotenoid fractions of drupes and virgin oils from Arbequina and Farga cultivars. *Food Chemistry*, 100(2), 748-755. doi:10.1016/j.foodchem.2005.10.035

Torre-Carbot, K. I., Jauregui, O., Gimeno, E., Castellote, A., Lamuela-Raventos, R., & Lopez-Sabater, M. (2005). Characterization and quantification of phenolic compounds in olive oils by solid-phase extraction, HPLC-DAD, and HPLC-MS/MS. *Journal Of Agricultural And Food Chemistry*,

de Lucas, A., Martinez de la Ossa, E., Rincón, J., Blanco, M., & Gracia, I. (2002). Supercritical fluid extraction of tocopherol concentrates from olive tree leaves. *The Journal Of Supercritical Fluids*, 22221-228. doi:10.1016/S0896-8446(01)00132-2

De Marco, E., Savarese, M., Paduano, A., & Sacchi, R. (2007). Characterization and fractionation of phenolic compounds extracted from olive oil mill wastewaters. *Food Chemistry*,

De Nino, A., Lombardo, N., Perri, E., Procopio, A., Raffaelli, A., & Sindona, G. (1997). Direct Identification of Phenolic Glucosides from Olive Leaf Extracts by Atmospheric Pressure Ionization Tandem Mass Spectrometry. *Journal Of Mass Spectrometry*, 32(5), 533. doi:10.1002/(SICI)1096-9888(199705)32:5<533::AID-JMS506>3.0.CO;2-9

Di Donna L., Mazzotti F., Salerno R., Tagarelli A., Taverna D., Sindona G. Characterization of new phenolic compounds from leaves of *Olea europaea* L. by high-resolution tandem mass spectrometry. *Rapid Communications in Mass Spectrometry* 21, (2007a) 3653-3657

Di Serio, M. G., Di Giacinto, L., Di Loreto, G., Giansante, L., Pellegrino, M., Vito, R. and Perri, E. (2016), Chemical and sensory characteristics of Italian virgin olive oils from Grossa di Gerace cv. *Eur. J. Lipid Sci. Technol.*, 118: 288–298.

Dierkes, G., Krieger, S., Dueck, R., Bongartz, A., Schmitz, O. J., & Hayen, H. (2012). High-performance liquid chromatography-mass spectrometry profiling of phenolic compounds for evaluation of olive oil bitterness and pungency. *Journal Of Agricultural And Food Chemistry*, 60(31), 7597-7606.

Dierkes, G., Bongartz, A., Guth, H., & Hayen, H. (2012). Quality evaluation of olive oil by statistical analysis of multicomponent stable isotope dilution assay data of aroma active compounds. *Journal Of Agricultural And Food Chemistry*, 60(1), 394-401

M. Esti, L. Cinquanta, and E. La Notte, "Phenolic compounds in different olive varieties," *Journal of Agricultural and Food Chemistry*, vol. 46, no. 1, pp. 32–35, 1998.

Eyles, A., Jones, W., Riedl, K., Cipollini, D., Schwartz, S., Chan, K., Herms, D.A., Bonello, P., 2007. Comparative phloem chemistry of Manchurian (*Fraxinus mandshurica*) and two North American ash species (*Fraxinus americana* and *Fraxinus pennsylvanica*). *J. Chem. Ecol.* 33, 1430–1448.

Fernandez-Bolanos, J., Felizon, B., Brenes, M., Guillen, R., & Heredia, A. (1998). Hydroxytyrosol and tyrosol as the main compounds found in the phenolic fraction of steam-exploded olive stones. *Journal Of The American Oil Chemists' Society*, 75(11), 1643-1649. doi:10.1007/s11746-998-0106-8

Fernandez-Bolanos, J., Rodriguez, G., Rodriguez, R., Guillen, R., & Jimenez, A. (2006). Extraction of interesting organic compounds from olive oil waste. *Grasas Y Aceites*, 57(1), 95-106.

Fu, S., Arráez-Roman, D., Segura-Carretero, A., Menéndez, J. A., Menéndez-Gutiérrez, M. P., Micol, V., & Fernández-Gutiérrez, A. (2010). Qualitative screening of phenolic compounds in olive leaf extracts by hyphenated liquid chromatography and preliminary evaluation of cytotoxic activity against human breast cancer cells. *Analytical And Bioanalytical Chemistry*,

Galanakis, C. M., Tornberg, E., & Gekas, V. (2010). A study of the recovery of the dietary fibres from olive mill wastewater and the gelling ability of the soluble fibre fraction. *LWT - Food Science And Technology*, (7), 1009. doi:10.1016/j.lwt.2010.01.005

Garcia, A., Brenes, M., Dobarganes, M. C., Romero, C., & Ruiz-Mendez, M. V. (2008). Enrichment of pomace olive oil in triterpenic acids during storage of Alpeorujo olive paste. *European Journal Of Lipid Science And Technology*, 110(12), 1136-1141. doi:10.1002/ejlt.200800070

García-Villalba R., Carrasco-Pancorbo A., Oliveras-Ferraro C., Vázquez-Martín A., Menéndez J.A., Segura-Carretero A., Fernández-Gutiérrez A. Characterisation and quantification of phenolic compounds of extra virgin olive oils with anticancer properties by a rapid and resolute LC-ESI-TOF-MS. *Journal of Pharmaceutical and Biomedical Analysis* 51, (2010) 416-429

P. Gariboldi, G. Jommi, and L. Verotta, "Secoiridoids from *Olea europaea*," *Phytochemistry*, vol. 25, no. 4, pp. 865–869, 1986

Garrido Fernandez, J., Gandul Rojas, B., Gallardo Guerrero, L., Minguez Mosquera, M., & Pereda Marin, J. (1990). Chlorophyll and carotenoid composition of the pigments in the virgin olive oil. Provitamin A value. *Grasas Y Aceites (Spain)*,

Genovese, A., Caporaso, N., Villani, V., Paduano, A., & Sacchi, R. (2015). Olive oil phenolic compounds affect the release of aroma compounds. *Food Chemistry*, 181284-294.

M. Gil, A. Haidour, and J. L. Ramos, "Two glutaric acid derivatives from olives," *Phytochemistry*, vol. 49, no. 5, pp. 1311–1315, 1998.

Gil, M., Haidour, A., & Ramos, J. L. (1997). Identification of two triterpenoids in solid wastes from olive cake. *Journal Of Agricultural And Food Chemistry*, 45(11), 4490-4494. doi:10.1021/jf970428q

Gomez-Gonzalez, S., Ruiz-Jimenez, J., Priego-Capote, F., & Luque de Castro, M. D. (2010). Qualitative and quantitative sugar profiling in olive fruits, leaves, and stems by gas chromatography-tandem mass spectrometry (GC-MS/MS) after ultrasound-assisted leaching. *Journal Of Agricultural And Food Chemistry*, 58(23), 12292-12299.

Gomez-Rico, A., Inarejos-Garcia, A. M., Desamparados-Salvador, M., & Fregapane, G. (2009). Effect of malaxation conditions on phenol and volatile profiles in olive paste and the corresponding virgin olive oils (*Olea europaea* L. cv. Cornicabra). *Journal Of Agricultural And Food Chemistry*, 57(9), 3587-3595. doi:10.1021/jf803505w

Guillen, M. D., Sopelana, P., & Palencia, G. (2004). Polycyclic aromatic hydrocarbons and olive pomace oil. *Journal Of Agricultural And Food Chemistry*, 52(7), 2123-2132. doi:10.1021/jf035259q

Guinda, A., Rada, M., Delgado, T., Gutierrez-Adanez, P., & Castellano, J. M. (2010). Pentacyclic triterpenoids from olive fruit and leaf. *Journal Of Agricultural And Food Chemistry*, 58(17), 9685-9691.

Harwood, J. & Aparicio, R (2000). *Handbook of Olive Oil: Analysis and properties*. Aspen publishing.

Hassapidou, M. N., & Manoukas, A. G. (1993). Tocopherol and tocotrienol compositions of raw table olive fruit. *Journal Of The Science Of Food And Agriculture*, 61(2), 277-280. doi:10.1002/jsfa.2740610223

Hatzakis, E., Koidis, A., Boskou, D., & Dais, P. (2008). Determination of phospholipids in olive oil by ³¹P NMR spectroscopy. *Journal Of Agricultural And Food Chemistry*, 56(15), 6232-6240. doi:10.1021/jf800690t

Hbaieb, R. H., Kotti, F., Garcia-Rodriguez, R., Gargouri, M., Sanz, C., & Perez, A. G. (2015). Monitoring endogenous enzymes during olive fruit ripening and storage: correlation with virgin olive oil phenolic profiles. *Food Chemistry*, 174, 240-247.

Hornero-Mendez, D., Gandul-Rojas, B., & Minguéz-Mosquera, M. I. (2005). Routine and sensitive SPE-HPLC method for quantitative determination of pheophytin a and pyropheophytin a in olive oils. *Food Research International*, 38(8-9), 1067-1072. doi:10.1016/j.foodres.2005.02.022

Huilun, C., Angiuli, M., Ferrari, C., Tombari, E., Salvetti, G., & Bramanti, E. (2011). Tocopherol speciation as first screening for the assessment of extra virgin olive oil quality by reversed-phase high-performance liquid chromatography/fluorescence detector. *Food Chemistry*, 125(4), 1423-1429.

Hvattum, E., 2002. Determination of phenolic compounds in rose hip (*Rosa canina*) using liquid chromatography coupled to electrospray ionisation tandem mass spectrometry and diode-array detection. *Rapid Commun Mass Spectrom.* 16, 655-662.

Innocenti, M., la Marca, G., Malvagia, S., Giaccherini, C., Vincieri, F. F., & Mulinacci, N. (2006). Electrospray ionisation tandem mass spectrometric investigation of phenylpropanoids and secoiridoids from solid olive residue. *Rapid Communications In Mass Spectrometry: RCM*, 20(13), 2013-2022.

Iraqi R, Vermeulen C, Benzekril A, Bouseta A and Collin S, Screening of key odorants in Moroccan green olives by gas chromatography-olfactometry/aroma extract dilution analysis. *J Agric Food Chem* 53:1179-1184 (2005).

Itoh T., T. Tamura, T. Matsumoto, Methylsterol Composition of 19 Vegetable Oils. *JAOCS* 50: 300-303, (1973)b.

Itoh T., K. Yoshida, T. Yatsu, et al., Triterpene Alcohols and Sterols of Spanish Olive Oil. *JAOCS* 58: 545-550, (1981).

Japon-Lujan, R., & Luque de Castro, M. D. (2007). Static-dynamic superheated liquid extraction of hydroxytyrosol and other biophenols from alperujo (a semisolid residue of the olive oil industry). *Journal Of Agricultural And Food Chemistry*, 55(9), 3629-3634. doi:10.1021/jf0636770

Jbara, G., Jawhar, A., Bido, Z., Cardone, G., Dragotta, A., & Famiani, F. (2010). Fruit and oil characteristics of the main Syrian olive cultivars. *Italian Journal Of Food Science*, 22(4), 395-400.

Kalua, C. M., Bedgood, D. J., Bishop, A. G., & Prenzler, P. D. (2006). Changes in volatile and phenolic compounds with malaxation time and temperature during virgin olive oil production. *Journal Of Agricultural And Food Chemistry*, 54(20), 7641-7651. doi:10.1021/jf061122z

Kanakis, P., Termentzi, A., Michel, T., Gikas, E., Halabalaki, M., & Skaltsounis, A. L. (2013). From olive drupes to olive oil. An HPLC-Orbitrap-based qualitative and quantitative exploration of olive key metabolites. *Planta Medica*, 79(16), 1576-1587.

A. Karioti, A. Chatzopoulou, A. R. Bilia, G. Liakopoulos, S. Stavrianakou, and H. Skaltsa, "Novel secoiridoid glucosides in *Olea europaea* leaves suffering from boron deficiency," *Bioscience, Biotechnology and Biochemistry*, vol. 70, no. 8, pp. 1898- 1903, 2006.

Karkoula, E., Skantzari, A., Melliou, E., & Magiatis, P. (2012). Direct measurement of oleocanthal and oleacein levels in olive oil by quantitative ¹H NMR. Establishment of a new index for the characterization of extra virgin olive oils. *Journal Of Agricultural And Food Chemistry*, 60(47), 11696-11703.

Kiritsakis A, Markakis P. 1978. Olive oil: a review. *Adv Fd Res* 31:470–82.

Koutsaftakis, A., Kotsifaki, F., & Stefanoudaki, E. (1999). Effect of extraction system, stage of ripeness, and kneading temperature on the sterol composition of virgin olive oils. *Journal Of The American Oil Chemists' Society*, 76(12), 1477-1481. doi:10.1007/s11746-999-0188-y

Lama-Munoz, A., Rodriguez-Gutierrez, G., Rubio-Senent, F., & Fernandez-Bolanos, J. (2012). Production, characterization and isolation of neutral and pectic oligosaccharides with low molecular weights from olive by-products thermally treated. *Food Hydrocolloids*, 28(1), 92-104.

Lanzon, A., Albi, T., Cert, A., & Gracian, J. (1994). The hydrocarbon fraction of virgin olive oil and changes resulting from refining. *Journal Of The American Oil Chemists' Society*, 71(3), 285-291. doi:10.1007/BF02638054

Li, W., Sun, Y., Liang, W., Fitzloff, J.F., van Breemen, R.B., 2003. Identification of caffeic acid derivatives in *Actea racemosa* (*Cimicifuga racemosa*: black cohosh) by liquid chromatography/tandem mass spectrometry. *Rapid Commun. Mass Spectrom.* 17, 978–982.

Limiroli, R.; Consonni, R.; Ranalli, A.; Bianchi, G.; Zetta, L. ¹ H NMR study of phenolics in the vegetation water of three cultivars of *Olea europaea*: similarities and differences. *J. Agric. Food Chem.* 1996, 44, 2040–2048.

López O.J.M., Innocenti M., Ieri F., Giaccherini C., Romani A., Mulinacci N. HPLC/DAD/ESI/MS detection of lignans from Spanish and Italian *Olea europaea* L. fruits. *Journal of Food Composition and Analysis* 21, (2008) 62-70

Lopez-Lopez, A., Montano, A., Ruiz-Mendez, M. V., & Garrido-Fernandez, A. (2008). Sterols, Fatty Alcohols, and Triterpenic Alcohols in Commercial Table Olives. *Journal Of The American Oil Chemists' Society*, (3), 253.

Lorenzi V, Maury J, Casanova J, Berti L. 2006. Purification, product characterization and kinetic properties of lipoxygenase from olive fruit (*Olea europaea* L.). *Plant Physiol Bioch* 44(7):450–4.

Lozano-Sanchez, J., et al., *Prediction of extra virgin olive oil varieties through their phenolic profile. Potential cytotoxic activity against human breast cancer cells.* *J Agric Food Chem*, 2010. **58**(18): p. 9942-55.

Lozano-Sanchez, J., Giambanelli, E., Quirantes-Pine, R., Cerretani, L., Bendini, A., Segura-Carretero, A., & Fernandez-Gutierrez, A. (2011). Wastes generated during the storage of extra virgin olive oil as a natural source of phenolic compounds. *Journal Of Agricultural And Food Chemistry*, 59(21), 11491-11500.

R. Maestroduran, R. Leoncabello, V. Ruizgutierrez, P. Fiestas, and A. Vazquezroncero, "Bitter phenolic glucosides from seeds of olive (*Olea europaea*)," *Grasas y Aceites*, vol. 45, no. 5, pp. 332– 335, 1994.

Maestro-Durán, R., León Cabello, R., Ruíz-Gutiérrez, V., Fiestas, P., & Vázquez-Roncero, A. (1994). Glucósidos fenólicos amargos de las semillas del olivo (*Olea europea*). *Grasas Y Aceites*,

Mafra, I., Lanza, B., Reis, A., Marsilio, V., Campestre, C., Angelis, M. d., & Coimbra, M. A. (2001). Effect of ripening on texture, microstructure and cell wall polysaccharide composition of olive fruit (*Olea europaea*). *Physiologia Plantarum*, 111(4), 439-447. doi:10.1034/j.1399-3054.2001.1110403.x

Malheiro, R., Guedes de Pinho, P., Casal, S., Bento, A., & Pereira, J. A. (2011). Determination of the volatile profile of stoned table olives from different varieties by using HS-SPME and GC/IT-MS. *Journal Of The Science Of Food And Agriculture*, 91(9), 1693-1701.

Mangels, A.R., Holden, J.M., Beecher, G.R., Forman, M.R.E., Lanza, E., 1993. Carotenoid content of fruits and vegetables: an evaluation of analytic data. *Journal of the American Dietetic Association* 93, 284–296.

Marsilio, V.; Seghetti, L.; Iannucci, E.; Russi, F.; Lanza, B.; Felicioni, M. Use of a lactic acid bacteria starter culture during green olive (*Olea europaea* L. cv Ascolana tenera) processing. *J. Sci. Food Agric.* 2005, 85, 1084–1090.

Mateos, R., Espartero, J. L., Trujillo, M., Rios, J. J., Leon-Camacho, M., Alcudia, F., & Cert, A. (2001). Determination of phenols, flavones, and lignans in virgin olive oils by solid-phase extraction and high-performance liquid chromatography with diode array ultraviolet detection. *Journal Of Agricultural And Food Chemistry*, 49(5), 2185-2192. doi:10.1021/jf0013205

McDonald, S., Prenzler, P. D., Antolovich, M., & Robards, K. (2001). Phenolic content and antioxidant activity of olive extracts. *Food Chemistry*, 73(1), 73-84. doi:10.1016/S0308-8146(00)00288-0

J. Meirinhos, B. M. Silva, P. Valentao et al., “Analysis and ~ quantification of flavonoidic compounds from Portuguese olive (*Olea europaea* L.) leaf cultivars,” *Natural Product Research*, vol. 19, no. 2, pp. 189–195, 2005

Alcaide, E. M., & Nefzaoui, A. (1996). Recycling of olive oil by-products: possibilities of utilization in animal nutrition. *International Biodeterioration & Biodegradation*, 38(3-4), 227-235.

Montealegre, C., Sanchez-Hernandez, L., Crego, A. L., & Marina, M. L. (2013). Determination and characterization of glycerophospholipids in olive fruit and oil by nonaqueous capillary electrophoresis with electrospray-mass spectrometric detection. *Journal Of Agricultural And Food Chemistry*, 61(8), 1823-1832.

Montedoro, G., Baldioli, M., Selvaggini, R., Begliomini, A., Taticchi, A., & Servili, M. (2002). Relationships between phenolic composition of olive fruit and olive oil: the importance of the endogenous enzymes. *Acta Horticulturae*,

Morales MT, Rios JJ and Aparicio R, Changes in the volatile composition of virgin olive oil during oxidation: Flavors and off-flavors. *J Agric Food Chem* 45:2666–2673 (1997).

Morales, M. T., Luna, G., & Aparicio, R. (2005). Comparative study of virgin olive oil sensory defects. *Food Chemistry*, 91(2), 293-301.

Moreda, W., Rodriguez-Acuna, R., Perez-Camino, M. C., & Cert, A. (2004). Determination of high molecular mass polycyclic aromatic hydrocarbons in refined olive pomace and other vegetable oils. *Journal Of The Science Of Food And Agriculture*, 84(13), 1759-1764. doi:10.1002/jsfa.1877

Morello, J. R., Romero, M. P., & Motilva, M. J. (2004). Effect of the maturation process of the olive fruit on the phenolic fraction of drupes and oils from Arbequina, Farga, and Morrut cultivars. *Journal Of Agricultural And Food Chemistry*, 52(19), 6002-6009. doi:10.1021/jf035300p

Moret, S., Piani, B., Bortolomeazzi, R., & Conte, L. S. (1997). HPLC determination of polycyclic aromatic hydrocarbons in olive oils. *Zeitschrift Fuer Lebensmittel-Untersuchung Und-Forschung A/Food Research And Technology*, 205(2), 116-120. doi:10.1007/s002170050136

- Mulinacci, N., Romani, A., Galardi, C., Pinelli, P., Giaccherini, C., & Vincieri, F. F. (2001). Polyphenolic content in olive oil waste waters and related olive samples. *Journal Of Agricultural And Food Chemistry*, 49(8), 3509-3514.
- Nergiz, C., & Ergönül, P. G. (2009). Organic acid content and composition of the olive fruits during ripening and its relationship with oil and sugar. *Scientia Horticulturae*,
- Noorali, M., Barzegar, M., & Sahari, M. A. (2014). Sterol and fatty acid compositions of olive oil as an indicator of cultivar and growing area. *Journal Of The American Oil Chemists' Society*, 91(9), 1571-1581.
- Obied, H. K., Bedgood, D. J., Prenzler, P. D., & Robards, K. (2007). Chemical screening of olive biophenol extracts by hyphenated liquid chromatography. *Analytica Chimica Acta*, 603(2), 176-189.
doi:10.1016/j.aca.2007.09.044
- Obied HK, Prenzler PD, Ryan D, Servili M, Taticchi A, Esposto S, Robards K. 2008. Biosynthesis and biotransformations of phenol-conjugated oleosidic secoiridoids from *Olea europaea* L. *Nat Prod Rep* 25(6): 1167–79
- Olías, J. M., Pérez, A. G., Ríos, J. J., & Sanz, L. C. (1993). Aroma of virgin olive oil: Biogenesis of the "green" odor notes. *Journal of Agricultural and Food Chemistry*, 41(12), 2368-2373
- Orozco-Solano, M., Ruiz-Jiménez, J., & Luque de Castro, M. (2010). Ultrasound-assisted extraction and derivatization of sterols and fatty alcohols from olive leaves and drupes prior to determination by gas chromatography-tandem mass spectrometry. *Journal Of Chromatography. A*,
- R. W. Owen, R. Haubner, W. Mier et al., "Isolation, structure elucidation and antioxidant potential of the major phenolic and flavonoid compounds in brined olive drupes," *Food and Chemical Toxicology*, vol. 41, no. 5, pp. 703–717, 2003.
- Padilla, M. N., Hernandez, M. L., Sanz, C., & Martinez-Rivas, J. M. (2012). Molecular cloning, functional characterization and transcriptional regulation of a 9-lipoxygenase gene from olive. *Phytochemistry*, 7458-68.
- Padilla, M. N., Hernández, M. L., Sanz, C., & Martínez-Rivas, J. M. (2014). Stress-dependent regulation of 13-lipoxygenases and 13-hydroperoxide lyase in olive fruit mesocarp. *Phytochemistry*, 10280-88.
doi:10.1016/j.phytochem.2014.01.024
- Paquot, C., & Kallel, H. (1973). The unsaponifiable matter in olive oil. Evidence for presence of new components. *Revue Francaise Des Corps Gras*, 20(6), 329-333.
- Peragon, J. (2013). Time course of pentacyclic triterpenoids from fruits and leaves of olive tree (*Olea europaea* L.) cv. Picual and cv. Cornezuelo during ripening. *Journal Of Agricultural And Food Chemistry*, 61(27), 6671-6678.
- Peralbo-Molina, A., Priego-Capote, F., & Luque de Castro, M. D. (2012). Tentative identification of phenolic compounds in olive pomace extracts using liquid chromatography tandem mass spectrometry with a quadrupole-quadrupole-time-of-flight mass detector. *Journal Of Agricultural And Food Chemistry*, 60(46), 11542-11550.
- M. Perez-Trujillo, A. M. Gomez-Caravaca, A. Segura-Carretero, A. Fernandez-Gutierrez, and T. Parella, "Separation and identification of phenolic compounds of extra virgin olive oil from *Olea Europaea* L. by HPLC-DAD-SPE-NMR/MS. Identification of a new diastereoisomer of the aldehydic form of oleuropein aglycone," *Journal of Agricultural and Food Chemistry*, vol. 58, no. 16, pp. 9129–9136, 2010.
- Poerschmann, J., B. Weiner, and I. Baskyr, *Organic compounds in olive mill wastewater and in solutions resulting from hydrothermal carbonization of the wastewater*. Chemosphere, 2013. 92(11): p. 1472-1482.

- Psomiadou, E., Tsimidou, M., & Boskou, D. (2000). α -Tocopherol content of Greek virgin olive oils. *Journal Of Agricultural And Food Chemistry*, 48(5), 1770-1775. doi:10.1021/jf990993o
- Marcos Pupin, A., & Figueiredo Toledo, M. C. (1996). Benzo(a)pyrene in olive oils on the Brazilian market. *Food Chemistry*, 55(2), 185-188. doi:10.1016/0308-8146(95)00075-5
- Quirantes-Pine, R., Lozano-Sanchez, J., Herrero, M., Ibanez, E., Segura-Carretero, A., & Fernandez-Gutierrez, A. (2013). HPLC-ESI-QTOF-MS as a Powerful Analytical Tool for Characterising Phenolic Compounds in Olive-leaf Extracts. *Phytochemical Analysis*, (3), 213-223.
- Rahier, A., & Benveniste, P. (1989). 11: Mass Spectral Identification of Phytosterols. *Analysis Of Sterols And Other Biologically Significant Steroids*, 223-250. doi:10.1016/B978-0-12-515445-1.50016-1
- Ranalli, A., Contento, S., & Simone, G. d. (2011). Levels of lipochromes and other bioactives in virgin olive oil from new olive germplasm. *Journal Of Food Composition And Analysis*, 24(6), 845-850.
- Reiners, J., & Grosch, W. (1998). Odorants of virgin olive oils with different flavor profiles. *Journal of Agricultural and Food Chemistry*, 46(7), 2754-2763.
- Reiter B., E. Lorbeer, Analysis of the Wax Ester Fraction of Olive Oil and Sunflower Oil by Gas Chromatography and Gas Chromatography-mass Spectrometry. *JAOCs* 78: 881-888, (2001).
- Rigane, G., Salem, R. B., Sayadi, S., & Bouaziz, M. (2011). Phenolic composition, isolation, and structure of a new deoxyloganic acid derivative from Dhokar and Gemri-Dhokar olive cultivars. *Journal Of Food Science*, 76(7), C965-C973.
- G. Rodr'iguez, A. Lama, M. Trujillo, J. L. Espartero, and J. Fernandez-Bola'nos, "Isolation of a powerful antioxidant from Olea europaea fruit-mill waste: 3,4-Dihydroxyphenylglycol," LWT—Food Science and Technology, vol. 42, no. 2, pp. 483–490, 2009.
- Rodriguez-Gutierrez, G., Rubio-Senent, F., Lama-Munoz, A., Garcia, A., & Fernandez-Bolanos, J. (2014). Properties of lignin, cellulose, and hemicelluloses isolated from olive cake and olive stones: binding of water, oil, bile acids, and glucose. *Journal Of Agricultural And Food Chemistry*, 62(36), 8973-8981.
- Romero, C., Garcia, P., Brenes, M., Garcia, A., & Garrido, A. (2002). Phenolic compounds in natural black Spanish olive varieties. *European Food Research And Technology*, 215(6), 489-496. doi:10.1007/s00217-002-0619-6
- Rovellini, P., Cortesi, N., & Fedeli, E. (1997). Analysis of flavonoids from Oleaeuropaea by HPLC-UV and HPLC-electrospray-MS. *Rivista Italiana Delle Sostanze Grasse*, 74(7), 273-279.
- Rubio-Senent, F., et al., *Isolation and identification of phenolic glucosides from thermally treated olive oil byproducts*. J Agric Food Chem, 2013. 61(6): p. 1235-48.
- Ryan, D., Robards, K., & Lavee, S. (1999). Determination of phenolic compounds in olives by reversed-phase chromatography and mass spectrometry. *Journal Of Chromatography. A*,
- Ryan, D., Antolovich, M., Herlt, T., Prenzler, P. D., Lavee, S., & Robards, K. (2002). Identification of phenolic compounds in tissues of the novel olive cultivar Hardy's Mammoth. *Journal Of Agricultural And Food Chemistry*, 50(23), 6716-6724. doi:10.1021/jf025736p
- Ryan, D., Antolovich, M., Herlt, T., Prenzler, P. D., Lavee, S., & Robards, K. (2002). Identification of phenolic compounds in tissues of the novel olive cultivar Hardy's Mammoth. *Journal Of Agricultural And Food Chemistry*, 50(23), 6716-6724. doi:10.1021/jf025736p

- Ryan, D., Prenzler, P. D., Lavee, S., Antolovich, M., & Robards, K. (2003). Quantitative Changes in Phenolic Content during Physiological Development of the Olive (*Olea europaea*) Cultivar Hardy's Mammoth. *Journal Of Agricultural And Food Chemistry*,
- Sabatini N, Mucciarella MR and Marsilio V, Volatile compounds in uninoculated and inoculated table olives with *Lactobacillus plantarum* (*Olea europaea* L., cv. Moresca and Kalamata). *Food Sci Technol* 41:2017–2022 (2008)
- Salas JJ, Sanchez J. 1998. Hydroperoxide lyase from olive (*olea europaea*) ´ fruits in advances in plant lipid research. In: The Proceedings of the 13th International Symposium on Plant Lipids Held at Sevilla Spain July 1998 (Vol 53 P, 300) Univ. de Sevilla.
- Salas JJ, Willams M, Harwood JL, Sanchez J. 1999. Lipoxygenase activity in olive (*Olea europaea*) fruit. *J Am Oil Chem Soc* 76(10):1163–68
- Salas JJ, Sanchez J. 1999b. Hydroperoxide lyase from olive (*Olea europaea*) fruits. *Plant Sci* 143(1):19–26.
- Savarese, M., De Marco, E., & Sacchi, R. (2007). Characterization of phenolic extracts from olives (*Olea europaea* cv. Pisciotana) by electrospray ionization mass spectrometry. *Food Chemistry*,
- R. lo Scalzo and M. L. Scarpati, “A new secoiridoid from olive wastewaters,” *Journal of Natural Products*, vol. 56, no. 4, pp. 621– 623, 1993.
- Scano P., M. Casu, A. Lai, et al., Recognition and Quantitation of Cis-vaccenic and Eicosenoic Fatty Acids in Olive Oils by C-13 Nuclear Magnetic Resonance Spectroscopy. *Lipids*, 34: 757- 759, (1999).
- B. Schumacher, S. Scholle, J. Holzl, N. Khudeir, S. Hess, and C. ´ E. Muller, “Lignans isolated from Valerian: identification and characterization of a new olivil derivative with partial agonistic activity at A1 adenosine receptors,” *Journal of Natural Products*, vol. 65, no. 10, pp. 1479–1485, 2002.
- Servili M., Taticchi A., Esposto S., Urbani S., Selvaggini R., Montedoro G.F. Effect of olive stoning on the volatile and phenolic composition of virgin olive oil. *Journal of Agricultural and Food Chemistry* 55, (2007) 7028-7035
- Servili M., Baldioli M., Selvaggini R., Macchioni A., Montedoro G. Phenolic compounds of olive fruit: One- and two-dimensional nuclear magnetic resonance characterization of nüzhenide and its distribution in the constitutive parts of fruit. *Journal of Agricultural and Food Chemistry* 47, (1999a) 12-18
- Servili M, Selvaggini R, Esposto S, Taticchi A, Montedoro G, Morozzi G. 2004. Health and sensory properties of virgin olive oil hydrophilic phenols: agronomic and technological aspects of production that affect their occurrence in the oil. *J Chromatogr A* 1054(1):113–27.
- Shimizu, M., Kudo, N., Nakajima, Y., Matsuo, N., Katsuragi, Y., Tokimitsu, I., & Barcelo, F. (2008). Effect of lipase activity and specificity on the DAG content of olive oil from the Shodoshima-produced olive fruits. *Journal Of The American Oil Chemists' Society*, 85(7), 629-633. doi:10.1007/s11746-008-1243-9
- Silva, S., Gomes, L., Leitao, F., Coelho, A. V., & Vilas Boas, L. (2006). Phenolic compounds and antioxidant activity of *Olea europaea* L. fruits and leaves. *Food Science And Technology International*, 12(5), 385-396.
- Sivakumar G., Briccoli Bati C., Ucella N. HPLC-MS screening of the antioxidant profile of Italian olive cultivars. *Chemistry of Natural Compounds* 41, (2005) 588-591

- Smith, A. 3., Han, Q., Breslin, P. S., & Beauchamp, G. K. (2005). Synthesis and assignment of absolute configuration of (-)-oleocanthal: a potent, naturally occurring non-steroidal anti-inflammatory and anti-oxidant agent derived from extra virgin olive oils. *Organic Letters*, 7(22), 5075-5078.
- Stiti, N., Triki, S., & Hartmann, M. (2007). Formation of Triterpenoids throughout *Olea europaea* Fruit Ontogeny. *Lipids*,
- Stiti, N., & Hartmann, M. (2012). Nonsterol Triterpenoids as Major Constituents of *Olea europaea*. *Journal Of Lipids*, 1-13. doi:10.1155/2012/476595
- Suarez, M., Macia, A., Romero, M. P., & Motilva, M. J. (2008). Improved liquid chromatography tandem mass spectrometry method for the determination of phenolic compounds in virgin olive oil. *Journal Of Chromatography A*, 1214(1--2), 90-99. doi:10.1016/j.chroma.2008.10.098
- Suarez, M., Romero, M. P., & Motilva, M. J. (2010). Development of a phenol-enriched olive oil with phenolic compounds from olive cake. *Journal Of Agricultural And Food Chemistry*, 58(19), 10396-10403
- Tabera, J., Guinda, A., Ruiz-Rodríguez, A., Señoráns, F. J., Ibáñez, E., Albi, T., & Reglero, G. (2004). Countercurrent supercritical fluid extraction and fractionation of high-added-value compounds from a hexane extract of olive leaves. *Journal Of Agricultural And Food Chemistry*, 52(15), 4774-4779.
- Tsukamoto, H., S. Hisada, and S. Nishibe, Lignans from bark of the *Olea* plants. I. *Chem Pharm Bull* (Tokyo), 1984. 32(7): p. 2730-5.
- Uribe, E., Pasten, A., Lemus-Mondaca, R., Vega-Galvez, A., Quispe-Fuentes, I., Ortiz, J., & Scala, K. d. (2015). Comparison of chemical composition, bioactive compounds and antioxidant activity of three olive-waste cakes. *Journal Of Food Biochemistry*, 39(2), 189-198.
- Walter Vetter, Markus Schröder, and Katja Lehnert (2012), Differentiation of refined and Virgin Edible Oils by Means of the trans- and cis-phytol Isomer Distribution. *Journal Of Agricultural And Food Chemistry*, 60, 6103-6107.
- Vichi, S., Cortes-Francisco, N., Romero, A., & Caixach, J. (2014). Determination of volatile thiols in virgin olive oil by derivatisation and LC-HRMS, and relation with sensory attributes. *Food Chemistry*, 149313-318.
- Vlyssides, A., Loizidou, M., & Zorpas, A. A. (1999). Characteristics of solid residues from olive oil processing as bulking material for co-composting with industrial wastewaters. *Journal Of Environmental Science & Health, Part A: Toxic/Hazardous Substances & Environmental Engineering*, 34(3), 737-748. doi:10.1080/10934529909376862
- X.F. Wang, C. Li, Y.P. Shi, and D.L. Di, "Two new secoiridoid glycosides from the leaves of *Olea europaea* L.," *Journal of Asian Natural Products Research*, vol. 11, no. 11, pp. 940–944, 2009
- Webster, L., Simpson, P., Shanks, A. M., & Moffat, C. F. (2000). The authentication of olive oil on the basis of hydrocarbon concentration and composition. *Analyst*, 125(1), 97-104. doi:10.1039/a907036b
- Weisshaar, R. (2002). Rapid determination of heavy polycyclic aromatic hydrocarbons in edible fats and oils. *European Journal Of Lipid Science And Technology*, 104(5), 282-285. doi:10.1002/1438-9312(200205)104:5<282::AID-EJLT282>3.0.CO;2-3
- Williams M, Morales MT, Aparicio R and Harwood JL, Analysis of volatiles from callus cultures of olive *Olea europaea*. *Phytochemistry* 47:1253–1259 (1998).

Yorulmaz A., Tekin A., Turan S. Improving olive oil quality with double protection: Destoning and malaxation in nitrogen atmosphere. *European Journal of Lipid Science and Technology* 113, (2011) 637-643

Yorulmaz, A., Erinc, H., & Tekin, A. (2013). Changes in Olive and Olive Oil Characteristics During Maturation. *Journal Of The American Oil Chemists' Society (JAOCs)*, 90(5), 647-658. doi:10.1007/s11746-013-2210-7

Zarrouk, W., Carrasco-Pancorbo, A., Segura-Carretero, A., Fernandez-Gutierrez, A., & Zarrouk, M. (2010). Exploratory characterization of the unsaponifiable fraction of Tunisian virgin olive oils by a global approach with HPLC-APCI-IT MS/MS analysis. *Journal Of Agricultural And Food Chemistry*, 58(10), 6418-6426.