

Table 9. List of esters in human body.

CAS-number	Compound name	Formula	Faeces	Urine	Breath	Skin	Milk	Blood	Saliva	Semen
<i>Methanoates</i>										
107-31-3	methanoic acid, methyl ester / methyl formate	C2H4O2			[6, 275, 336]					
109-94-4	methanoic acid, ethyl ester / ethyl formate	C3H6O2			[336, 408]	[191]		[141]		
110-74-7	methanoic acid, 1-propyl ester / n-propyl formate	C4H8O2			[408]					
592-84-7	methanoic acid, butyl ester	C5H10O2	[222]							
638-49-3	methanoic acid, pentyl ester	C6H12O2	[9]							
110-45-2	methanoic acid, isopentyl ester / isoamyl formate	C6H12O2					[155]			[241]
66794-46-5	Formic acid, 3-methylbut-2-yl ester	C6H12O2			[369]					
13493-97-5	Furfuryl formate	C6H6O3					[167]			
629-33-4	Formic acid, hexyl ester / Hexyl formate	C7H14O2								[241]
112-23-2	methanoic acid, heptyl ester	C8H16O2	[9]							
<i>Ethanoates</i>										
79-20-9	acetic acid, methyl ester / methyl ethanoate / Ethanoic acid, methyl ester / methyl acetate	C3H6O2	[9, 216, 247, 248]		[6, 57, 106, 275, 298, 336, 369]			[106]	[115]	[241]
108-05-4	acetic acid, ethenyl ester / vinyl acetate	C4H6O2	[223]		[57]					[241]
141-78-6	acetic acid, ethyl ester / ethyl acetate / ethyl ethanoate / ethanoic acid ethyl ester	C4H8O2	[9, 216, 222, 247, 248]	[193, 250]	[6, 57, 106, 259, 277, 296, 318, 336, 406, 407]	[189, 410]	[155]	[106, 123, 131, 141]	[110, 113]	[241]
109-60-4	acetic acid, propyl ester / n-propyl acetate / propyl	C5H10O2	[9, 216, 248]		[408]				[110]	

	ethanoate / Ethanoic acid propyl ester						
108-21-4	acetic acid, isopropyl ester / iso-propylacetate / acetic acid, 1-methylethyl ester	C5H10O2		[336, 408]	[410]		[110]
106-61-6	1,2,3-Propanetriol, 1-acetate	C5H10O4				[167]	
820-71-3	acetic acid, 2-methylprop-2- en-1-yl ester / 1-acetoxy-2- methyl-2-propene	C6H10O2		[408]			
123-86-4	acetic acid, butyl ester / butyl acetate / butyl ethanoate / Ethanoic acid, butyl ester	C6H12O	[9, 216, 248]	[6, 296, 336, 344]	[410]		[125]
110-19-0	acetic acid, isobutyl ester / isobutyl acetate / 2- Methylpropyl acetate	C6H12O	[202]	[6, 336]	[410]		
105-46-4	Sec-butylacetate	C6H12O2		[344]	[187]		
108-65-6	acetic acid, 1-methoxy-2- propyl ester / 1-methoxy-2- propyl acetate	C6H12O3		[377, 408]			
41448-83-3	acetic acid, 3-methoxypropyl ester / 3-methoxypropyl acetate / 3-methoxy-acetate- 1-propanol	C6H12O3		[408]			
111-15-9	1-acetoxy-2-ethoxyethane	C6H12O3		[336, 408]			
624-41-9	acetic acid, 2-methylbutyl ester / 2-methyl butyl acetate	C7H14O2		[408]			
626-38-0	acetic acid, 1-methylbutyl ester / 1-methylbutyl acetate	C7H14O2		[408]			
628-63-7	acetic acid, pentyl ester / Ethanoic acid pentyl ester	C7H14O2	[9, 216, 247]				
123-92-2	acetic acid, isopentyl ester / isopentyl acetate / acetic acid, 3-methyl-1-butyl ester / Ethanoic acid 3- methylbutanyl ester / isoamylacetate	C7H14O2	[216, 247]	[331, 408]			[111] [241]

142-92-7	acetic acid, hexyl ester / Ethanoic acid hexyl ester	C8H16O2	[9, 216]			
112-07-2	1-acetoxy-2-butoxyethane	C8H16O3		[408]		
72237-36-6	acetic acid, 4-hexen-1-ol ester / acetate-4-hexen-1-ol	C8H16O3		[408]		
122-79-2	Acetic acid, phenyl ester / phenylacetate	C8H8O2		[320, 341, 358, 388]		
101-41-7	methyl phenylacetate	C9H10O2		[266]		
140-11-4	acetic acid, benzyl ester / benzyl acetate / acetic acid, phenylmethyl ester	C9H10O2		[57]	[182, 185]	[420]
5921-82-4	acetic acid, 1-methylhexyl ester / 1-methylhexyl acetate	C9H18O2			[176]	
103-45-7	acetic acid, 2-phenylethyl ester / phenylethylester acetic acid	C10H12O2		[369]	[176, 182]	
103-09-3	acetic acid, 2-ethyl-1-hexanol ester / 2-ethyl-1-hexanol acetate / acetic acid, 2- ethylhexyl ester	C10H20O2		[364, 408]		[110] [241]
90-17-5	acetic acid, alpha- trichloromethylbenzyl ester / alpha-trichloromethylbenzyl acetate	C10H9Cl3O2			[182]	[182, 420]
21040-45-9	acetic acid, cinnamyl ester / E-cinnamyl acetate	C11H12O2			[182]	
93-29-8	acetic acid, isoeugenyl ester / isoeugenol acetate	C12H14O3			[182]	
141-12-8	acetic acid, (Z)-3,7-dimethyl- 2,6-octadien-1-ol ester / neryl acetate / Nerol acetate	C12H20O2		[57]	[182]	
105-87-3	acetic acid, (E)-3,7-dimethyl- 2,6-octadien-1-ol ester / geranyl acetate	C12H20O2			[182]	[420]
80-26-2	acetic acid, alpha-terpinyl ester / alpha-terpinyl acetate	C12H20O2			[182]	[182, 420]

115-95-7	Linalyl acetate	C12H20O2		[57]			
20298-69-5	acetic acid, cis-2-tert-butylcyclohexyl ester / cis-2-tert-butylcyclohexyl acetate	C12H22O2			[182]		
32210-23-4	acetic acid, 4-tert-butylcyclohexyl ester / vertenex / 4-tert-butylcyclohexyl acetate	C12H22O2			[176, 409]		
53767-93-4	acetic acid, dihydromyrcenyl ester / dihydromyrcenol acetate	C12H22O2			[182]		
150-84-5	acetic acid, 3,7-dimethyl-6-octen-1-ol ester / citronellol acetate	C12H22O2		[57]	[182]		
89-48-5	acetic acid, menthyl ester / menthyl acetate	C12H22O2		[57]			[110]
20777-45-1	acetic acid, isomenthyl ester / isomenthyl acetate	C12H22O2					[110]
822-23-1	Octadecyl acetate	C20H40O2			[189]		
<i>propanoate</i>							
554-12-1	propanoic acid, methyl ester / methyl propionate	C4H8O2	[9, 247]		[336, 408]		[106] [110]
105-37-3	propanoic acid, ethyl ester / ethyl propanoate / ethyl propionate	C5H10O2	[9, 216, 248]		[408]	[191]	
105-38-4	propanoic acid, vinyl ester / vinyl propionate	C5H8O2				[155]	
5390-28-3	Ethanol, 2-nitro-, propionate (ester)	C5H9NO4			[369]		
106-36-5	propanoic acid, propyl ester / propyl propanoate	C6H12O2	[9, 216, 247, 248]		[408]		
590-01-2	propanoic acid, butyl ester / butyl propanoate	C7H14O2	[9, 216, 248]				111,
540-42-1	2-methylpropyl propanoate	C7H14O2	[248]				

624-54-4	propanoic acid, pentyl ester / pentyl propanoate	C8H16O2	[9, 216]				
97-87-0	Propanoic acid 2-methylbutyl ester	C8H16O2	[216]				
637-27-4	Phenyl propionate / Propanoic acid, phenyl ester	C9H10O2		[388]			
68555-63-5	Maltol propionate	C9H10O4				[167]	
2445-76-3	propanoic acid, hexyl ester / hexyl propanoate	C9H18O2	[9]				
na	2-Methyl-2-ethyl-3- hydroxyhexyl propanoate	C12H24O3		[202]			
74367-33-2	1-(2-Hydroxy-1- methylethyl)-2,2- dimethylpropyl 2- methylpropanoate	C12H24O3		[253]			
103-58-2	propanoic acid, 2-methyl-3- phenyl propyl ester	C13H18O2	[222]				
	<i>butanoate</i>						
623-42-7	butanoic acid, methyl ester / methyl butanoate	C5H10O2	[9, 216, 247, 248]		[178]	[124]	[241]
123-20-6	Vinyl butyrate	C6H10O2			[191]		
105-54-4	butanoic acid, ethyl ester / ethyl butanoate	C6H12O	[9, 216, 222, 248]		[331, 336, 408]		[241]
2051-78-7	butanoic acid,2-propenyl ester / allyl butyrate	C7H12O2					[421]
105-66-8	butanoic acid, propyl ester / n-propyl butyrate / propyl butanoate	C7H14O2	[9, 216, 222, 248]		[408]		[110, 111]
638-11-9	1-Methylethyl butanoate	C7H14O2					[111]
109-21-7	butanoic acid, butyl ester / butyl butanoate	C8H16O	[9, 216, 222, 248]	[193]	[324]		
539-90-2	2-methylpropyl butanoate / Butanoic acid 2-methylpropyl ester	C8H16O2	[216, 248]				
106-27-4	butanoic acid, isopentyl ester / isoamyl butanoate	C9H18O	[216]		[408]		

5870-93-9	Butanoic acid heptyl ester	C11H22O2	[216]	
29811-50-5	butanoic acid, 2-methyloctyl ester	c13H26O2		[113]
78-36-4	Linalyl butanoate / linalyl butyrate	C14H24O2	[57]	[111]
<i>Isobutanoate / 2-methylpropanoate</i>				
547-63-7	2-methylpropanoic acid, methyl ester / methyl isobutyrate	C5H10O2	[9, 248]	
97-62-1	2-methylpropanoic acid, ethyl ester / ethyl 2-methylpropanoate	C6H12O2	[9, 216, 248]	
644-49-5	2-methylpropanoic acid, propyl ester / n-propyl isobutyrate / propyl 2-methylpropanoate	C7H14O2	[9, 247, 248]	[110]
2445-69-4	2-methylpropanoic acid, 2-methylbutyl ester / 2-methylbutyl 2-methylpropanoate	C9H18O2	[408]	
10522-34-6	Propanoic acid, 2-methyl-, nonyl ester	C13H26O2		[409]
<i>Pentanoate</i>				
624-24-8	pentanoic acid, methyl ester / methyl pentanoate	C6H12O2	[9, 216, 222, 247, 248]	
539-82-2	pentanoic acid, ethyl ester	C7H14O2	[9, 216]	
141-06-0	Pentanoic acid propyl ester	C8H16O2	[216]	
591-68-4	pentanoic acid, butyl ester	C9H18O2	[9, 216, 222]	
2137-56-0	pentyl pentanoate	C10H20O2	[248]	
<i>2-methylbutanoate</i>				
868-57-5	2-methylbutanoic acid, methyl ester / methyl-2-methylbutanoate	C6H12O2	[9, 216, 247, 248]	[241]

7452-79-1	2-methylbutanoic acid, ethyl ester / 2-methylbutyric acid, ethyl ester ui	C7H14O2	[216]	[408]	
37064-20-3	2-methylbutanoic acid, propyl ester	C8H16O2	[9, 247]		
<i>3-methylbutanoate</i>					
556-24-1	Methyl 3-methylbutanoate / methyl isovalerate / 3-methylbutanoic acid, methyl ester	C6H12O2	[216]		[111]
108-64-5	3-methylbutanoic acid, ethyl ester / ethylisovalerate / ethyl 3-methylbutanoate	C7H14O2	[9, 216, 247, 248]	[408]	
557-00-6	propyl 3-methylbutanoate	C8H16O2	[248]		
109-19-3	3-methylbutanoic acid, butyl ester	C9H18O2	[9, 216]		
<i>2,2-dimethylpropanoate</i>					
215667-91-7	2,2-Dimethylpropionic acid, decyl ester	C15H30O2		[409]	
<i>Hexanoate</i>					
106-70-7	hexanoic acid, methyl ester / methyl hexanoate	C7H14O2	[9, 216, 247, 248]	[185, 190]	[112, 422]
3050-69-9	hexanoic acid, ethenyl ester	C8H14O2	[9]		
626-77-7	hexanoic acid, propyl ester	C9H18O2	[9, 216]		
123-66-0	hexanoic acid, ethyl ester / ethyl hexanoate	C8H16O2	[9, 216]		[127] [118]
626-82-4	hexanoic acid, butyl ester	C10H20O2	[9, 216]		
2492-18-4	Hexanoic acid, 1,1-dimethylethyl ester	C10H20O2		[344]	
540-07-8	hexanoic acid, pentyl ester	C11H22O2			[118]
6938-60-9	hexanoic acid, dodecyl ester	C18H36O2		[182]	
2412-80-8	Methyl 4-methylpentanoate	C7H14O2			[111]
25415-67-2	Ethyl 4-methylpentanoate	C8H16O2			[111]
<i>Heptanoate</i>					

106-73-0	heptanoic acid, methyl ester	C8H16O2	[9, 216]			
106-30-9	heptanoic acid, ethyl ester	C9H18O2	[9, 216]			
<i>Octanoate</i>						
111-11-5	Methyl octanoate / octanoic acid, methyl ester	C9H18O2	[216]		[192]	[111]
106-32-1	octanoic acid, ethyl ester / ethyloctanoate	C10H20O2		[331, 388]	[185]	[118]
7425-14-1	2-ethylhexanoic acid, 2-ethylhexyl ester / 2-ethylhexyl 2ethylhexanoate	C16H32O2			[176]	
2306-89-0	octanoic acid, decyl ester	C18H36O2			[182]	
20292-09-5	octanoic acid, dodecyl ester	C20H40O2			[182]	
16456-36-3	octanoic acid, tetradecyl ester	C22H44O2			[182]	
<i>Nonanoate</i>						
1731-84-6	nonanoic acid, methyl ester	C10H20O2			[178, 185, 192]	
123-29-5	nonanoic acid, ethyl ester	C11H22O2				[118]
<i>decanoate</i>						
110-42-9	decanoic acid, methyl ester / methyl decanoate	C11H22O2		[57]	[185]	[155]
10448-26-7	hexyl decanoate	C16H32O2		[383]		
2306-88-9	octyl decanoate	C16H32O2		[383]		
110-38-3	decanoic acid, ethyl ester / ethyl decanoate	C12H24O2				[155, 156]
73947-30-5	2-Ethylhexyl decanoate	C18H36O2				[111]
<i>Undecanoate</i>						
1731-86-8	undecanoic acid, methyl ester	C12H24O2			[185]	
<i>Dodecanoate</i>						
111-82-0	dodecanoic acid, methyl ester / Methyl dodecanoate	C13H26O2			[185, 190]	[156]
106-33-2	dodecanoic acid, ethyl ester	C14H28O2				[156]
10233-13-3	dodecanoic acid, isopropyl ester / isopropyl dodecanoate	C15H30O2			[182]	[111, 418, 420]

34316-64-8	dodecanoic acid, hexyl ester / hexyl dodecanoate	C18H36O2		[182]		[420]
<i>Tridecanoate</i>						
1731-88-0	tridecanoic acid, methyl ester	C13H28O2		[178, 185]		
5129-65-7	10-methyldodecanoic acid, methyl ester	C14H28O2		[185]		
<i>Tetradecanoate</i>						
124-10-7	tetradecanoic acid, methyl ester / methyl tetradecanoate	C15H30O2		[185, 190]	[156]	[111]
124-06-1	tetradecanoic acid, ethyl ester	C16H32O2		[182]		[118]
110-27-0	tetradecanoic acid, 1-methylethyl ester / isopropyl myristate	C17H34O2		[176, 186, 409]		[110, 111, 418]
127512-73-6	tetradecanoic acid, undecyl ester	C25H50O2		[178]		
<i>Pentadecanoate</i>						
213617-69-7	9-methyltetradecanoic acid, methyl ester	C16H32O2		[185]		
7132-64-1	pentadecanoic acid, methyl ester	C16H32O2		[185]		
41114-00-5	pentadecanoic acid, ethyl ester	C17H34O2		[182]		
<i>Hexadecanoate, heptadecanoate, octadecanoate & docosanoate, tetracosanoate</i>						
112-39-0	hexadecanoic acid, methyl ester / methyl palmitate / methyl hexadecanoate	C17H34O2	[344]	[178, 182, 185, 189, 190, 409]	[156]	[111, 420]
5487-50-3	13-methylpentadecanoic acid, methyl ester	C17H34O2		[178]		
5129-60-2	14-methylpentadecanoic acid, methyl ester	C17H34O2		[178]		
628-97-7	hexadecanoic acid, ethyl ester / ethyl hexadecanoate	C18H36O2		[182]		[118, 420]
4219-49-2	hexadecanoic acid, 2-hydroxyethyl ester	C18H36O3		[176]		

142-91-6	hexadecanoic acid, 1-methylethyl ester / isopropyl palmitate / isopropyl hexadecanoate	C19H38O2		[176, 182, 409]	[111, 114, 182, 418, 420]
111-06-8	hexadecanoic acid, butyl ester	C20H40O2		[178]	
1731-92-6	heptadecanoic acid, methyl ester	C18H36O2		[178]	
158274-92-1	methylhexadecanoic acid, methyl ester	C18H36O2		[178]	
14010-23-2	heptadecanoic acid, ethyl ester	C19H38O2		[182]	
112-61-8	octadecanoic acid, methyl ester / Methyl octadecanoate	C19H38O2		[178, 189]	[111]
5129-61-3	16-methylheptadecanoic acid, methyl ester	C19H38O2		[178]	
637-55-8	octadecanoic acid, phenyl ester	C24H40O2		[178]	
17671-27-1	Behenyl behenate	C44H88O2	[344]		
2442-49-1	tetracosanoic acid, methyl ester	C25H50O2		[178]	
<i>ENE oates</i>					
<i>2-propenoate</i>					
140-88-5	2-propenoic acid, ethyl ester	C5H8O2		[336, 408]	
925-60-0	2-propenoic acid, propyl ester / 1-propyl acrylate	C6H10O2		[408]	
4245-37-8	2-propenoic acid, 2-methylethenyl ester	C6H8O2			[110]
141-32-2	2-Propenoic acid, butyl ester	C7H12O2		[296]	
<i>Others</i>					
4358-59-2	2-butenic acid, methyl ester, (Z)-	C5H8O2		[408]	[131]
623-70-1	2-Butenoic acid ethyl ester	C6H10O2	[196]		
7299-91-4	2-butenic acid, butyl ester	C8H14O2		[178]	
80-62-6	2-methylpropenonic acid, methyl ester / methyl methacrylate	C5H8O2		[57, 336, 408]	[409]

97-88-1	2-methyl-2-propenoic acid, butyl ester	C8H14O2				[131]
97-86-9	2-methylpropenoic acid, 2-methylpropyl ester / 2-methylpropyl methacrylate	C8H14O2		[408]		
16930-94-2	2-pentenoic acid, hexyl ester	C11H20O2			[182]	
n.a.	3-methylbut-2-enoic acid, 4-cyanophenyl ester	C12H11NO2				[125]
na	3-Methyl-2-butenic acid, heptadecyl ester	C22H42O2		[253]		
22104-69-4	methyl 2-heptenoate	C8H14O2	[248]			
2462-84-2	Methyl 9-octadecenoate	C19H36O2				[111]
27234-05-5	octadecenoic acid, methyl ester	C19H38O2			[178]	
<i>Cyclic HC oates</i>						
na	Cyclobutanecarboxylic acid, 2-propenyl ester	C8H12O2			[277]	
4630-82-4	cyclohexanecarboxylic acid, methyl ester	C8H14O2	[9, 216, 247]			
3289-28-9	cyclohexanecarboxylic acid, ethyl ester / ethyl cyclohexanecarboxylate	C9H16O2	[9, 248]			
24828-61-3	cyclopentanetridecanoic acid, methyl ester	C19H36O2			[185]	
<i>Benzoate, salicylate (inc. Substituted benzoic acid esters)</i>						
119-36-8	salicylic acid, methyl ester / methyl salicylate / 2-Hydroxymethyl benzoate	C8H8O3	[9]	[194, 202, 254]	[266]	[111]
118-61-6	2-Hydroxy benzoic acid ethyl ester	C9H10O3			[57]	
121-98-2	Methyl p-anisate	C9H10O3			[266]	
85-91-6	N-methylantranilic acid, methyl ester / methyl-N-methylantranilate	C9H11NO2			[182]	
94-09-7	benzocaine	C9H11NO2				[114]
4191-73-5	4-hydroxybenzoic acid, propyl ester	C10H12O3			[178]	

19438-10-9	3-hydroxybenzoic acid, methyl ester	C8H8O3	[178]		
4707-47-5	2,4-dihydroxy-3,6-dimethylbenzoic acid, methyl ester	C10H12O4	[178]		
2050-08-0	salicylic acid, pentyl ester / pentyl salicylate	C12H16O3	[182]		[420]
ui	salicylic acid, hexenyl ester / hexenyl salicylate	C13H16O3	[182]		
65405-77-8	salicylic acid, 1-hexenyl ester / 3Z-1-hexenyl salicylate	C13H16O3	[182]		182,420,
6259-76-3	salicylic acid, hexyl ester / hexyl salicylate	C13H18O3	[176, 182, 409]	[125]	[420, 422]
120-51-4	benzoic acid benzyl alcohol ester / benzyl benzoate	C14H12O2	[182]		
118-58-1	salicylic acid, phenylmethyl ester / 2-hydroxybenzoic acid, phenylmethyl ester / phenylmethyl salicylate	C14H12O3	[178]		
5444-75-7	Benzoic acid, 2-ethylhexyl ester	C15H22O2	[409]		
118-60-5	salicylic acid, 2-ethylhexyl ester / 2-ethylhexyl salicylate	C15H22O3	[176, 182]		[182, 420]
118-56-9	salicylic acid, homomenthyl ester / homomenthyl salicylate	C16H22O3	[176, 409]		
2915-72-2	benzoic acid, dodecyl ester	C19H30O2	[182]		
ui	benzoic acid, dodecyl ester, branched	C19H30O2	[182]		
29376-83-8	benzoic acid, tridecyl ester	C20H36O2	[182]		
70682-72-3	benzoic acid, tetradecyl ester	C21H34O2	[182]		
<i>Hydroxy acid esters (except hydroxybenzoic)</i>					
547-64-8	lactic acid, methyl ester / methyl lactate	C4H8O3	[176]		
81584-87-4	Monoacyl glycerol	C4H8O4	[249]		

687-47-8	lactic acid, ethyl ester / ethyl (-)lactate	C5H10O3				[176]
131831-55-5	hydroxybutanoic acid, ethyl ester u.i	C6H12O3				[178]
6382-06-5	Propanoic acid, 2-hydroxy-, pentyl ester	C8H16O3			[369]	
1487-49-6	Butanoic acid, 3-hydroxy-, methyl ester	C5H10O3				[241]
103499-40-7	Butanoic acid, 2-hydroxy-3,3-dimethyl-, ethyl ester, (2S)-	C8H16O3			[377]	
74367-34-3	2-methyl-3-hydroxy-2,4,4-trimethylpentylpropanoic acid ester / propanoic acid, 2-methyl-3-hydroxy-2,4,4-trimethylpentyl ester / 3-Hydroxy-2,4,4-trimethylpentyl 2-methylpropanoate	C12H24O3	[9]	[253]	[291, 364]	[409]
108766-16-1	(1R,2S,5R)-2-isopropyl-5-methylcyclohexyl 3-hydroxybutanoate / (-)-menthyl 3-hydroxybutyrate	C14H26O3			[383]	
183613-15-2	ethyl-3-hydroxydodecanoate	C14H28O3			[383]	
83966-24-9	3-hydroxy-3-(isopropoxycarbonyl)pentane dioic acid / 2-isopropyl citrate	C9H14O7			[383]	
<i>Other mono esters</i>						
6290-49-9	methoxyacetic acid, methyl ester	C4H8O3			[408]	
141-97-9	acetoacetic acid, ethyl ester / ethyl acetotacetate / ethyl-3-oxobutanoate	C6H10O3				[122]
1334-76-5	methyl furoate	C6H6O3			[185]	
327-70-8	Trifluoroacetic acid, n-pentyl ester	C7H11F3O2				[241]
17046-22-9	butyl isocyanatoacetate	C7H11NO3			[274]	

763-69-9	3-ethoxypropionic acid, ethyl ester	C7H14O3	[408]	
17640-22-1	Butyl methoxyacetate	C7H14O3	[377]	
93-60-7	methyl nicotinate	C7H7NO2	[266]	
na	DL-3-Methyl-2-butanol, pentafluoropropionate	C8H11F5O2	[369]	
na	1-Methoxy-5-trifluoroacetoxylhexane	C9H15F3O3	[369]	
24468-13-1	DL-2-Ethylhexyl chloroformate	C9H17ClO2	[364]	
103-25-3	phenylpropanoic acid, methyl ester / benzenepropanoic acid, methyl ester	C10H12O2	[9]	
16397-79-8	Acetic acid,2,2,2-trichloro-, 2-ethylhexyl ester	C10H17Cl3O2	[344]	
853728-01-5	O-malonyl-L-carnitine / (3R)-3-[(carboxyacetyl)oxy]-4-(trimethylazaniumyl)butanoate	C10H17NO2	[383]	
39647-11-5	methyl-cis-dihydrojasmonate	C13H22O3		[182]
24851-98-7	methyl dihydrojasmonate / methyl 2-pentyl-3-oxo-1-cyclopentyl acetate	C13H22O3		[176]
53172-76-2	pentanedioic acid, mono (2-ethylhexyl) ester	C13H24O4		[178]
17961-12-5	hexanedioic acid, octyl ester	C14H26O4		[178]
959247-28-0	methoxyacetic acid, dodecyl ester	C15H30O3		[176]
102-20-5	phenylacetic acid, 2-phenylethyl ester / 2-phenylethylphenylacetate	C16H16O2		[182]
na	Pentanoic acid, 2,2,4-trimethyl-3-carboxyisopropyl, isobutyl ester	C16H30O4	[253]	
959263-00-4	methoxyacetic acid, tetradecyl ester	C17H34O3		[176]

5466-77-3	4-methoxycinnamic acid, 2-ethylhexyl ester / 2-ethylhexyl-4-methoxycinnamate / 2-Propenoic acid, 3-(4-methoxyphenyl)-, 2-ethylhexyl ester	C18H26O3			[182, 409]			[182, 420]
96436-87-2	4-methoxycinnamic acid, octyl ester / 1-octyl-4-methoxycinnamate	C18H26O3						[182, 420]

LACTONES

Gamma, furanones (&benzofuranone&thiolone)

497-23-4	2(5H)-furanone	C4H4O2			[408]		[167]	
96-48-0	dihydro-2(3H)-furanone / butyrolactone / γ -Butyrolactone / 4-Butyrolactone	C4H6O	[9]		[6, 106, 275, 305, 364, 406, 407]	[410]	[125]	[116]
5469-16-9	Dihydro-4-hydroxy-2(3H)-furanone	C4H6O3					[167]	
591-11-7	4-methyl-2(5H)-furanone	C5H6O2			[408]			
22122-36-7	3-methyl-2(5H)-furanone	C5H6O2			[6, 275]	[176]		
108-29-2	dihydro-5-methyl-2(3H)-furanone / gamma valerolactone	C5H8O2	[9]	[196, 256, 258]	[408]			
1679-49-8	Dihydro-4-methyl-2(3H)-furanone / 3-methylbutyrolactone	C5H8O2			[262]			
695-06-7	gamma-hexalactone / 5-ethyl-dihydro-2(3H)-furanone / g-Caprolactone	C6H10O2	[9]	[196, 256, 258]				
28664-35-9	3-hydroxy-4,5-dimethyl-2(5H)furanone / sotolon	C6H8O3			[208]		[162, 164]	
1073-11-6	5-ethenyldihydro-5-methyl-2(3H)-furanone	C7H10O2			[202]	[6]		
698-10-2	5-ethyl-3-hydroxy-4-methyl-2(5H)-furanone / abhexone	C7H10O3			[208]			

105-21-5	gamma-heptalactone / gamma-heptanolactone	C7H12O2			[182]		[110, 420]
104-50-7	gamma-octalactone / gamma-C8-lactone	C8H14O2			[179, 180]		
104-61-0	gamma nonalactone / g- nonanolactone / gamma-c9- lactone	C9H16O2	[208]		[179, 180, 182, 189, 414]	[153, 162 165]	[110, 420]
706-14-9	gamma-decalactone / gamma-c10-lactone	C10H18O2	[208]		[179, 180, 414]	[156, 162, 164]	
774-64-1	3,4-Dimethyl-5-pentylidene- 2(5H)-furanone / Bovolide	C11H16O2		[29]			
57084-17-0	gamma-undecalactone	C11H20O2	[208]		[414]		[110]
2305-05-7	gamma-dodecalactone	C12H22O2				[153, 156, 162]	
82304-66-3	7,9-di-tert-butyl-1- oxaspiro(4.5)deca-6,9-diene- 2,8-dione	C17H24O3	[223]	[253]			
502-26-1	dihydro-5-tetradecyl- 2(3H)furanone	C18H34O2			[178]		
87-41-2	1(3H)-isobenzofuranone	C8H6O2					[113]
87-41-2	phthalide	C8H6O2				[155]	
92572-53-7	4-Allyl-2-t-butyl-4-methyl- 1,3-oxathiolan-5-one	C11H18O2S					[241]
<i>Delta, pyranones (&benzopyranone&dioxanedione)</i>							
504-31-4	2-pyranone / 5-hydroxy-2,4- pentadienoic acid, delta- lactone	C5H4O2			[408]		
542-28-9	tetrahydro-2H-pyran-2-one / delta-valerolactone	C5H8O2			[57]		[125]
823-22-3	delta-hexalactone / δ- Caprolactone	C6H10O2			[196, 202, 256, 258]		
10413-18-0	4-methyl-5-hydroxy-hexanoic acid lactone	C7H12O2			[256]		
520-45-6	3-acetyl-6-methyl-2H-pyran- 2,4(3H)dione	C8H8O4			[178]		
3301-94-8	delta nonalactone	C9H16O2	[208]				

na	decalactone u.i.	C10H18O2		[392]			
705-86-2	delta-decalactone	C10H18O2	[208]		[413]	[153,162,164]	
713-95-1	delta-dodecalactone	C12H22O2				[162, 164]	
91-64-5	2H-1-benzopyran-2-one / coumarin	C9H6O2	[208]		[178, 182]		[420]
95-96-5	3,6-dimethyl-1,4-dioxane-2,5-dione ui / lactide	C6H8O4		[408]			
87-05-8	7-ethoxy-4-methylchromen-2-one / 7-Ethoxy-4-methylcoumarin	C12H12O3		[383]			
531-59-9	7-methoxycoumarin	C10H8O3	[208]				
na	5,13,14,15-tetrahydroxy-8,17-dioxatetracyclo[8.7.0.0(2),.0(1)(1),(1)]heptadeca-1(10),2(7),3,5,11,13,15-heptaen-9-one	C15H8O7		[383]			
<i>others / uncertain cyclic esters</i>							
2549-60-2	4-methyl-2-oxepanone	C7H12O2		[408]			
40923-58-8	γ -Valprolactone	C8H14O2		[349]			
n/a	alkylated lactone ui	ui				[155]	
<i>Diester and , triester (phthalates listed separately)</i>							
n.a.	oxalic acid, allyl nonyl ester	C14H24O4		[369]			[125, 126]
na	Oxalic acid, butyl 2-ethylhexyl ester	C14H26O4			[409]		
n.a.	oxalic acid, allyl tridecyl ester	C18H32O4					[126]
142-16-5	Bis(2-ethylhexyl) maleate	C20H36O4					[241]
102-76-1	triacetin	C9H14O6			[176]		
108-59-8	Propanedioic acid, dimethyl ester	C5H8O4			[192]		
74381-40-1	propanoic acid, 2-methyl-1-(1,1-dimethylethyl)-2-methyl-1,3-propanediyl ester	C16h30O4	[9]	[194]		[409]	

6846-50-0	2,2,4-Trimethyl-1,3-pentanediol diisobutyrate	C16H30O4		[409]				
ui	di butanoic acid, isooctyl diester / isooctanedioldibutyrate / isooctadiol dibutyrate	C18H30O4		[182]				[420]
ui	pentanedioic acid, ester	unknown		[178]				
627-93-0	hexanedioic acid, dimethyl ester	C8H14O4		[185, 192]				
ui	hexanedioic acid, ester	unknown		[178]				
51238-94-9	heptanedioic acid, dibutyl ester	C15H28O4		[178]				
132322-44-2	2,3-bis(acetyloxy)propyl propanoate / Glycerol 1-propanoate diacetate	C10h16O6	[383]					
n/a	laureth sulfosuccinate	C(16+2n)H(28+4n)O(7+n)S 2Metal counterions	[355]					
<i>Phthalates</i>								
131-11-3	dimethyl phthalate	C10H10O4						[419]
84-66-2	phthalic acid, diethyl ester / diethyl phthalate / 1,2-benzenedicarboxylic acid, diethyl ester / Diethyl benzene-1,2-dicarboxylate	C12H14O4	[354, 364, 377,408]	[409]	[159]	[130]		[118]
84-74-2	phthalic acid, dibutyl ester / dibutyl phthalate	C16H22O4	[253]		[159]			[419]
84-69-5	Diisobutyl phthalate / 1,2-Benzenedicarboxylic acid, bis(2-methylpropyl) ester	C16H22O4	[253]	[409]				
na	Phthalic acid, butyl 2-pentyl ester	C17H24O4		[409]				
na	Phthalic acid, hexyl pent-4-enyl ester	C19H26O4	[377]					

117-81-7	phthalic acid, di(2-ethylhexyl) ester / di(2-ethylhexyl) phthalate / bis(2-ethylhexyl) phthalate	C24H38O4		[159]	[419]
<i>Carbonates</i>					
96-49-1	1,3-Dioxolan-2-one / ethylene carbonate	C3H4O3		[360]	
616-38-6	dimethyl carbonate / Carbonic acid, dimethyl ester	C3H6O3		[296, 336, 408]	[130]
623-53-0	ethylmethylcarbonate	C4H8O3		[408]	
<i>Anhydrides</i>					
108-24-7	acetic anhydride	C4H6O3	[222]	[408]	
5926-95-4	2 H-pyran-2,6(3 H)-dione	C5H4O3			[167]
123-62-6	Propanoic acid, anhydride	C6H10O3		[265]	
6318-55-4	Aconitic anhydride	C6H6O5		[374]	
7475-92-5	3,4-dimethyldihydrofuran-2,5-dione	C6H8O3	[222]		
2938-48-9	2,2-Dimethylglutaric anhydride	C7H10O3			[409]
85-44-9	phthalic anhydride / phthalolactone / 2-benzofuran-1(3H)-one	C8H4O3		[260, 383]	[130]
