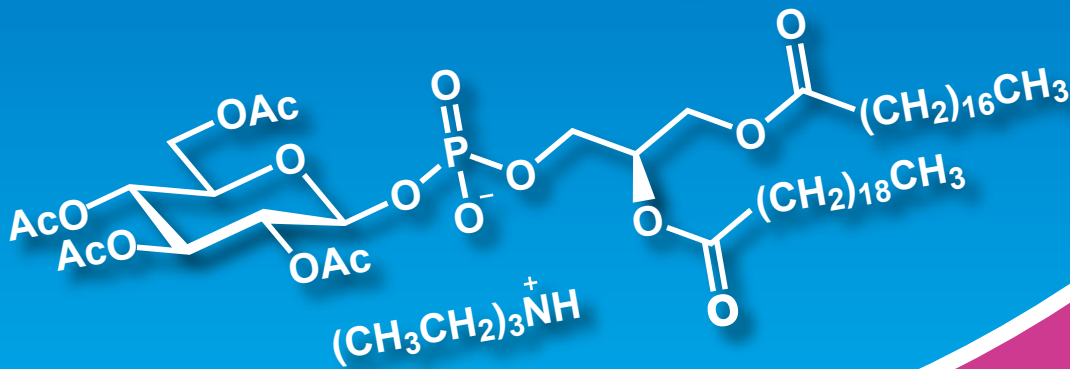
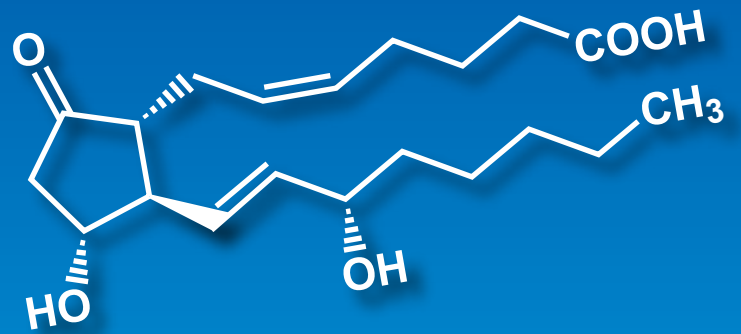
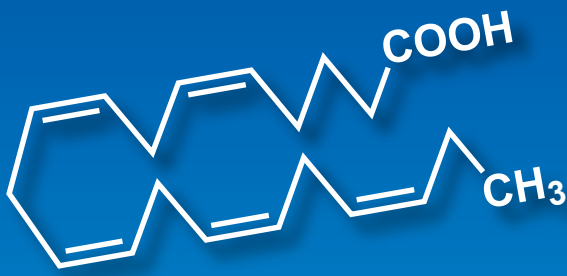


# Lipids



Fatty Acyls

Glycerolipids

Phospholipids

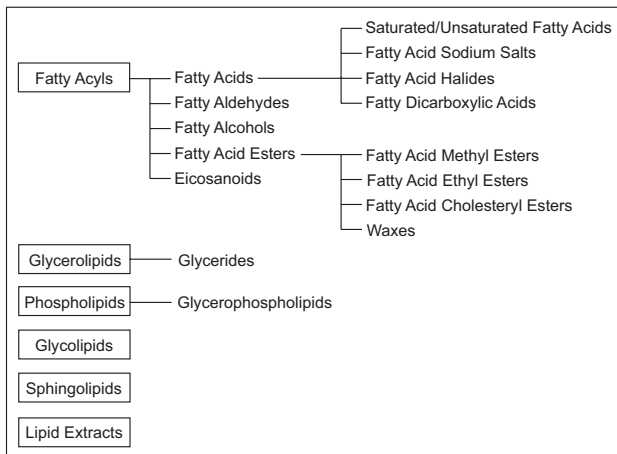
Glycolipids

Sphingolipids

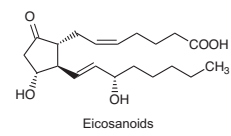
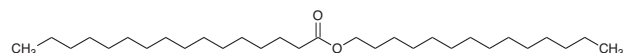
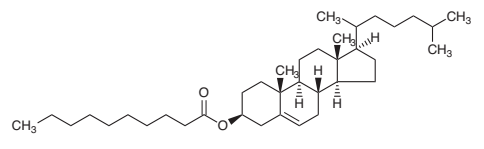
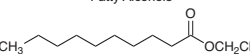
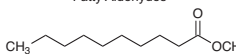
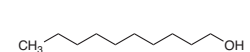
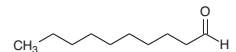
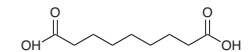
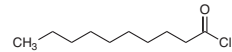
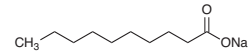
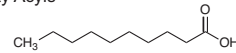
Lipid Extracts, Oils

# Lipids

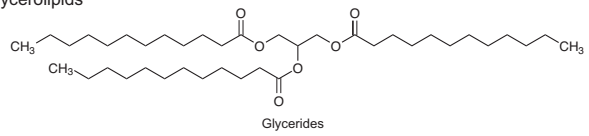
Lipids form a broad category of biomolecules which constitute an essential part of living organisms in addition to carbohydrates and proteins. This brochure introduces lipids and related substances such as fatty acids and their derivatives. The biosynthesis of fatty acids involves the condensation of malonyl-CoA (or methylmalonyl CoA) with acyl CoA as a primer.<sup>1)</sup> Carboxylic acids with chains of 4 or more carbons are referred to as fatty acids while those with 10 or more carbons are called higher fatty acids.<sup>2)</sup> Lipids are classified as the below.<sup>3)</sup>



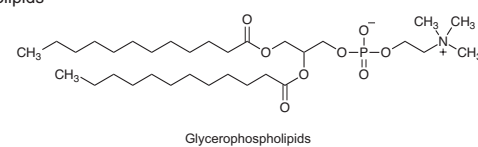
## Fatty Acyls



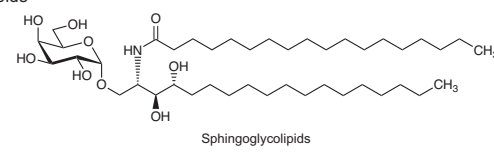
## Glycerolipids



## Phospholipids



## Glycolipids



## Sphingolipids

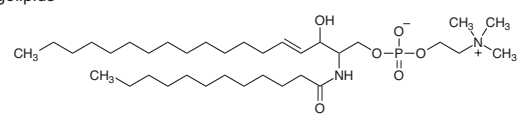


Figure 1. Classification of Lipids

### ● Functional Roles

Fatty acids exist in living organisms mainly as esters of glycerol and triacylglycerols which occur as a major form of energy storage in adipose tissue. Triacylglycerols are found in living organisms as mixtures of acyl groups with different number of carbons and are difficult in most cases to isolate as a single substance. Moreover, fatty acids also exist in living organisms in the form of cholesteryl esters which constitute an essential component of cell membranes where it is required to establish proper membrane permeability and fluidity.

Free fatty acids are known to suppress cell-growth at an order of 0.1mM and above, therefore considerable attention should be paid during their administration to cells.<sup>4)</sup>

### ● Storage Precautions

Unsaturated fatty acids like oleic acid are known to undergo aerial oxidation to produce peroxides. Opened bottles of unsaturated fatty acids and their derivatives should be stored in the refrigerator or frozen with inert gas such as nitrogen or argon. Moreover the tendency to oxidation increases as the degree of unsaturation in the fatty acids increases.

### ● Derivatives

Fatty acid methyl esters are the most widely used fatty acid derivatives in analytical chemistry due to their ease of handling in organic solvents as compared to the highly polar free fatty acids. Moreover their analysis by TLC, gas chromatography (GC) and liquid chromatography (LC) can be improvised by suppressing tailing.

Although fatty acid ethyl esters are rarely used for analysis as compared to the methyl esters, they offer an advantage since their method of preparation from fatty acids involves the use of the less toxic ethanol instead of methanol. For instance, eicosapentaenoic acid which is used as a hyperlipemia medicine is being supplied as ethyl ester. Ethyl esters of lower to middle-chain fatty acids can be also employed in the fragrance industry. Sodium salts of fatty acids can be obtained as saponification products of lipids and are widely used in daily life as an ingredient of soap owing to their amphiphilicity and surfactant properties.

### ● Analysis

GC is the most frequently used technique for the analysis of fatty acids. However, their direct analysis appears to be difficult owing to their low volatility in electron impact (EI) ionization mass spectrometry under normal condition. They can however be easily detected by GC-MS method upon derivatization to their methyl esters.

The several methylation methods include the treatment of the free fatty acids with boron trifluoride-ether complex in methanol or with trimethylsilyldiazomethane, etc.

The GC on-column method is a simple method that uses a methanolic solution of trimethylsulfonium hydroxide or 3-(trifluoromethyl)phenyltrimethylammonium hydroxide to analyze the fatty acid component of lipids such as glycerolipids.

### ● Solubility

In general, the solubility of fatty acids in water decreases as the carbon number increases.

Fatty acid esters and glycerolipids are insoluble in water but soluble in ethanol, chloroform and diethyl ether. They can be added to the buffer solution as a dimethyl sulfoxide solution to examine their activity in living organisms. Please take caution that the solution becomes suspended as the concentration level of the dissolved substance increases. It is recommended to define the optimal concentration level and volume of addition in advance. Sodium salts of fatty acid are more water-soluble than the free fatty acids. Long-chain fatty acid salts tend to form micelles.

### References

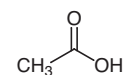
- 1) P. M. Dewick, in *Medicinal Natural Products*, 3rd ed., John Wiley & Sons, Chichester, **2009**, p. 39.
- 2) *Biochemical Nomenclature and Related Documents*, 2nd ed., Portland Press, London, **1992**, p. 180.
- 3) E. Fahy, S. Subramaniam, H. A. Brown, C. K. Glass, A. H. Merrill, Jr., R. C. Murphy, C. R. H. Raetz, D. W. Russell, Y. Seyama, W. Shaw, T. Shimizu, F. Spener, G. van Meer, M. S. VanNieuwenhze, S. H. White, J. L. Witztum, E. A. Dennis, *J. Lipid Res.* **2005**, *46*, 839.
- 4) C. W. Sheu, D. Salomon, J. L. Simmons, T. Sreevalsan, E. Freese, *Antimicrob. Agents Chemother.* **1975**, *7*, 349.

## Fatty Acyls

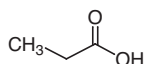
## Fatty Acids

Saturated  
Fatty Acids

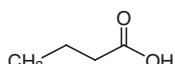
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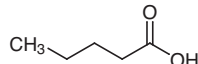
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Propionic Acid  
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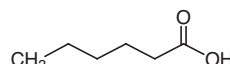
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Butyric Acid  
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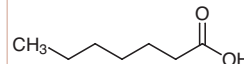
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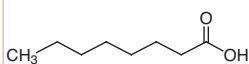
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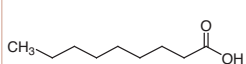
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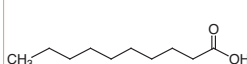
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*n*-Octanoic Acid  
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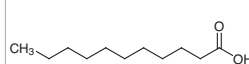
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Nonanoic Acid  
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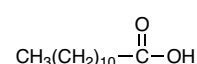
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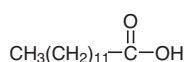
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Undecanoic Acid  
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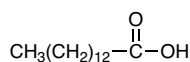
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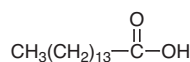
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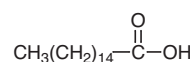
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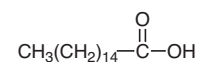
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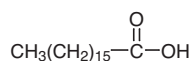
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Palmitic Acid (>97.0%)  
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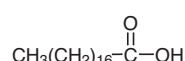
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Palmitic Acid (>99.5%)  
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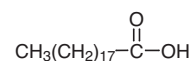
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Heptadecanoic Acid  
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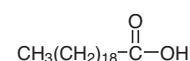
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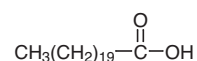
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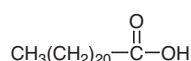
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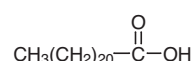
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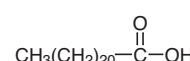
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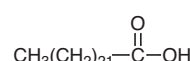
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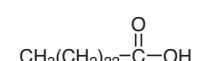
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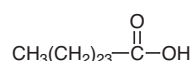
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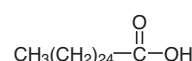
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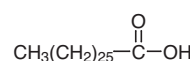
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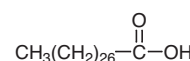
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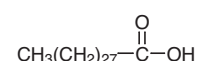
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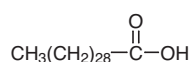
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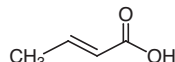
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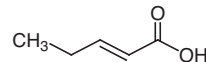
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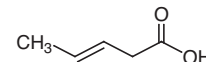
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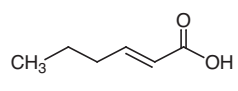
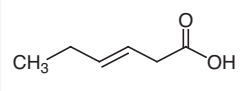
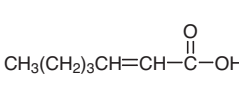
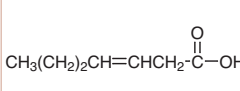
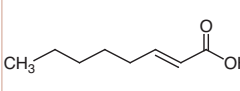
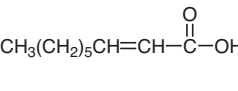
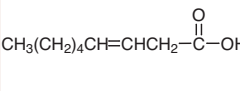
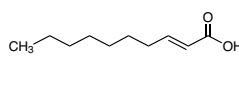
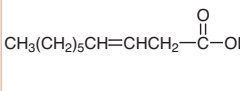
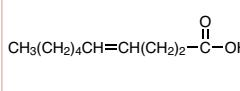
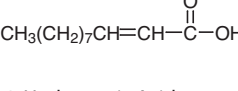
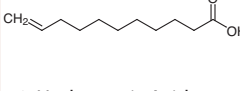
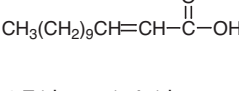
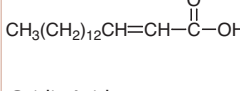
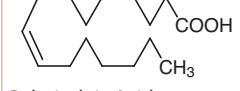
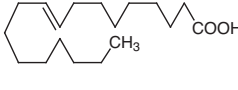
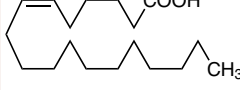
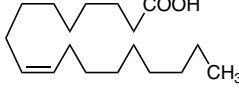
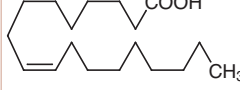
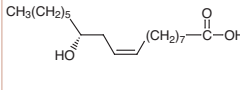
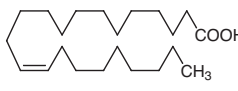
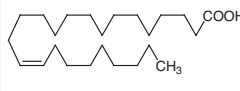
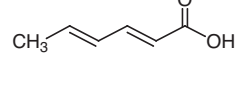
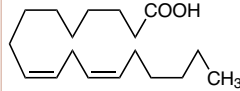
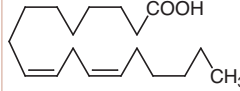
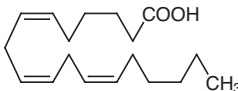
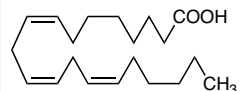
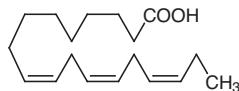



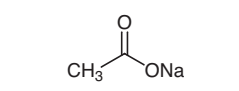
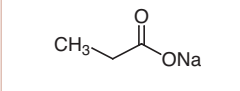
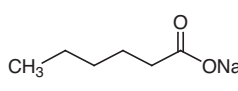
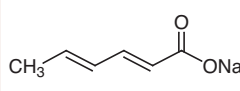
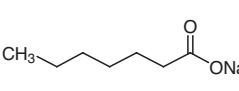
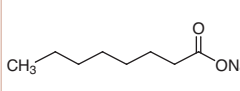
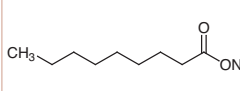
Crotonic Acid  
CAS RN: 107-93-7

P0345 5mL 25mL

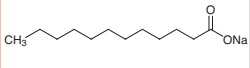
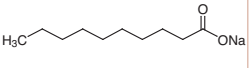
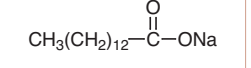
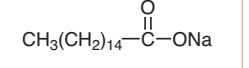
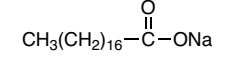
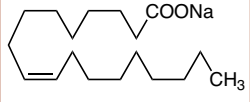
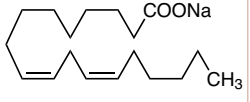
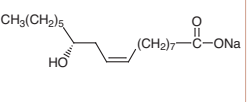
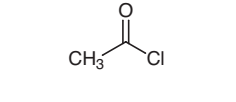
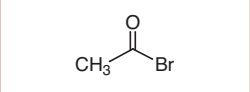
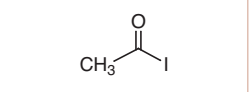
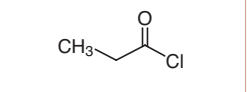
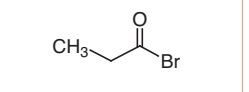
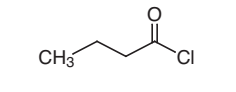
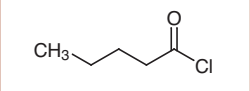
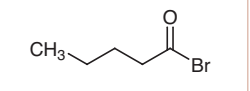
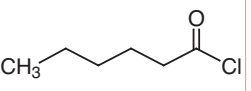
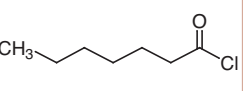
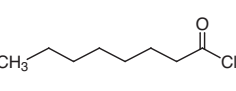
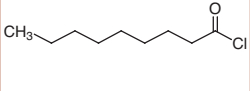
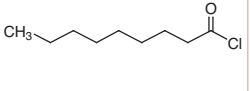
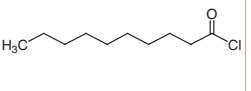
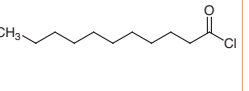
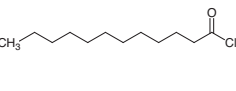
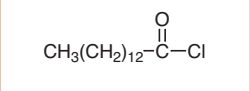
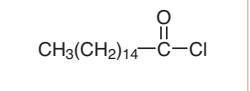
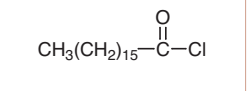
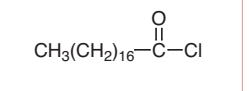
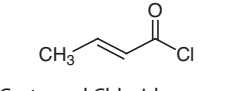
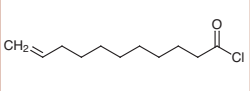
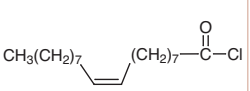
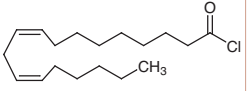
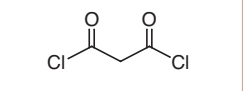
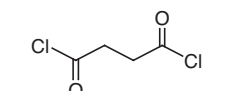
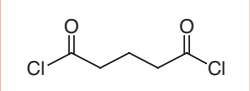
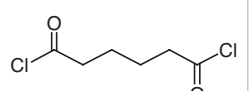
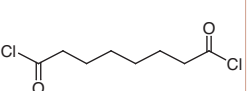
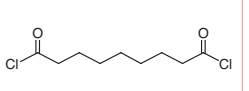
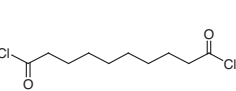
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CAS RN: 13991-37-2

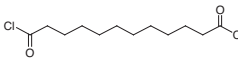
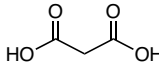
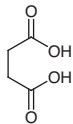
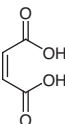
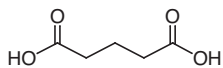
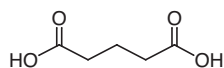
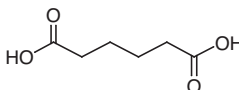
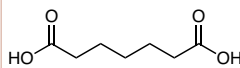
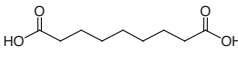
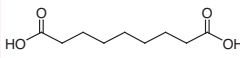
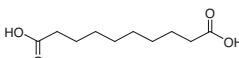
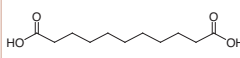
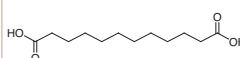
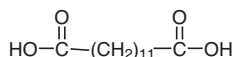
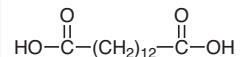
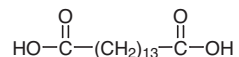
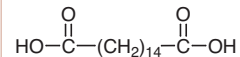
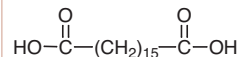
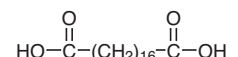
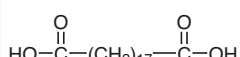
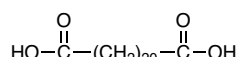
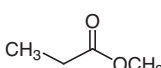
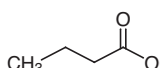
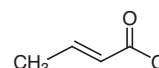
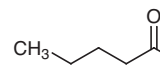
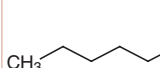
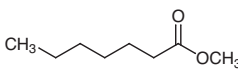
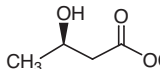
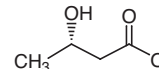
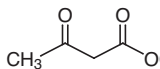
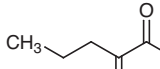
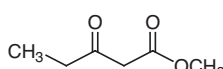
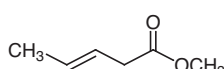
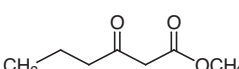
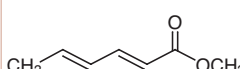
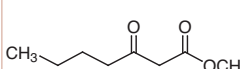
P1072 5mL 25mL

*trans*-3-Pentenoic Acid  
CAS RN: 1617-32-9

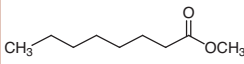
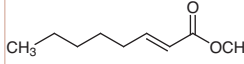
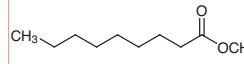
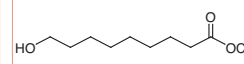
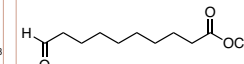
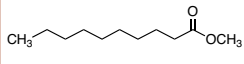
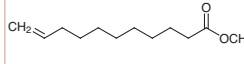
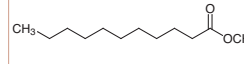
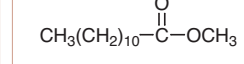
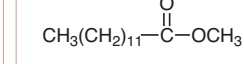
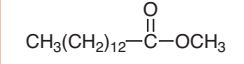
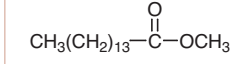
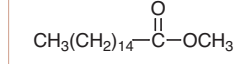

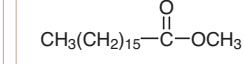
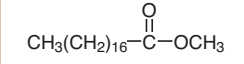
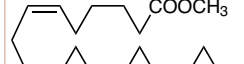
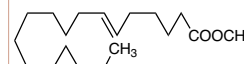
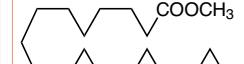
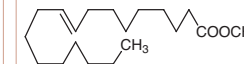
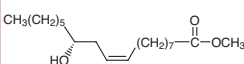
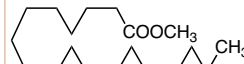


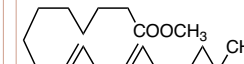

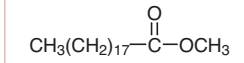
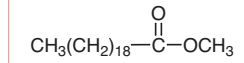

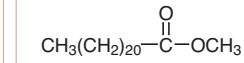
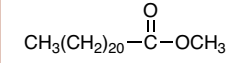
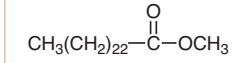
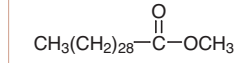
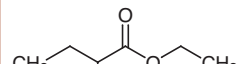
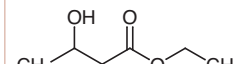
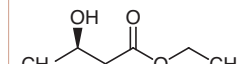
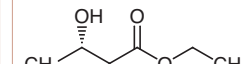
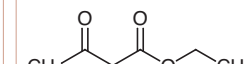
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<b>N0426</b> 25mL  2-Nonenoic Acid CAS RN: 3760-11-0	<b>N0312</b> 1mL 5mL  3-Nonenoic Acid CAS RN: 4124-88-3	<b>D0098</b> 5mL 25mL  <i>trans</i> -2-Decenoic Acid CAS RN: 334-49-6	<b>D1186</b> 5mL  3-Decenoic Acid CAS RN: 15469-77-9	<b>D4449</b> 5mL 25mL  4-Decenoic Acid CAS RN: 26303-90-2
<b>U0032</b> 5g  2-Undecenoic Acid CAS RN: 4189-02-0	<b>U0007</b> 25g 400g  10-Undecenoic Acid CAS RN: 112-38-9	<b>T0759</b> 5g 25g  2-Tridecenoic Acid CAS RN: 6969-16-0	<b>H0428</b> 1g 5g  Gaidic Acid CAS RN: 629-56-1	<b>H0072</b> 100mg 1g  Palmitoleic Acid CAS RN: 373-49-9
<b>O0010</b> 5g 25g  Elaidic Acid CAS RN: 112-79-8	<b>O0009</b> 1g  Petroselinic Acid CAS RN: 593-39-5	<b>O0011</b> 25mL 500mL  Oleic Acid (>85.0%) CAS RN: 112-80-1	<b>O0180</b> 5mL 25mL  Oleic Acid (>99.0%) CAS RN: 112-80-1	<b>R0027</b> 25mL 500mL  Ricinoleic Acid CAS RN: 141-22-0
<b>D0965</b> 25g 100g  Erucic Acid CAS RN: 112-86-7	<b>T1642</b> 1g  <i>cis</i> -15-Tetracosenoic Acid CAS RN: 506-37-6	<b>S0053</b> 25g 500g  Sorbic Acid CAS RN: 110-44-1	<b>L0053</b> 25mL 100mL 500mL  Linoleic Acid (>85.0%) CAS RN: 60-33-3	<b>L0124</b> 5g 25g  Linoleic Acid (>97.0%) CAS RN: 60-33-3
<b>L0152</b> 100mg 1g  $\gamma$ -Linolenic Acid CAS RN: 506-26-3	<b>E0640</b> 50mg  Dihomo- $\gamma$ -linolenic Acid CAS RN: 1783-84-2	<b>L0050</b> 25mL  Linolenic Acid CAS RN: 463-40-1	<b>A0781</b> 100mg 500mg  Arachidonic Acid CAS RN: 506-32-1	<b>E0441</b> 100mg 500mg  EPA CAS RN: 10417-94-4
<b>D2226</b> 100mg  DHA CAS RN: 6217-54-5	<b>Fatty Acid Sodium Salts</b>		<b>S0559</b> 300g  Sodium Acetate CAS RN: 127-09-3	<b>P0512</b> 25g 500g  Sodium Propionate CAS RN: 137-40-6
<b>H0112</b> 25g 500g  Sodium Hexanoate CAS RN: 10051-44-2	<b>S0058</b> 25g 500g  Sodium Sorbate CAS RN: 7757-81-5	<b>E0009</b> 25g  Sodium Heptanoate CAS RN: 10051-45-3	<b>O0034</b> 25g 250g  Sodium <i>n</i> -Octanoate CAS RN: 1984-06-1	<b>N0291</b> 25g  Sodium Nonanoate CAS RN: 14047-60-0

## Lipids

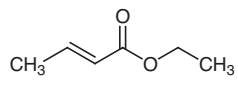
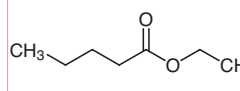
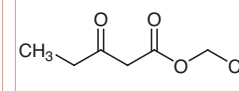
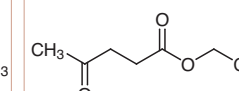
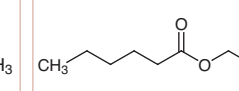
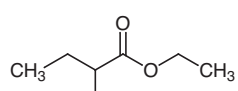
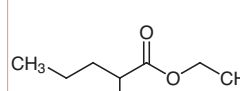
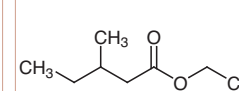
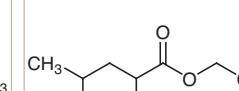
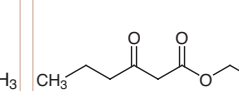
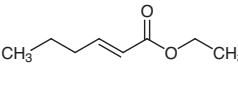
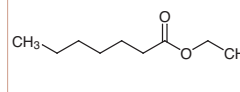
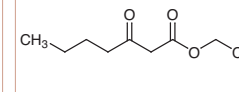
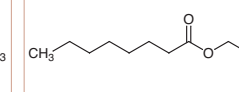
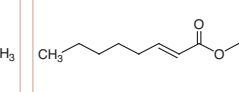
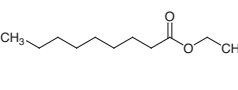
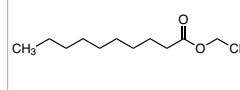
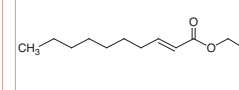
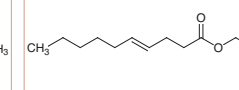
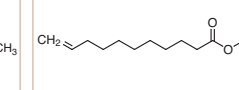
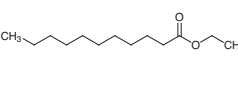
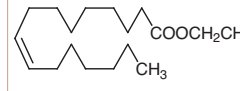
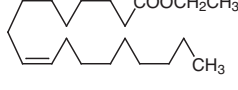
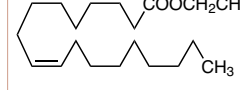
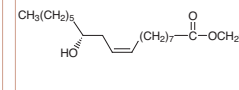
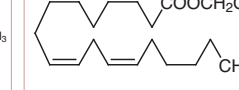
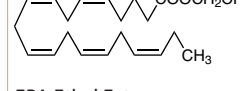

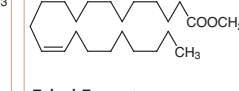
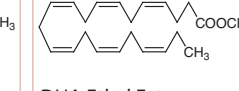
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<b>O0057</b> 25g 100g 500g  Sodium Oleate CAS RN: 143-19-1	<b>L0056</b> 5g 25g  Sodium Linoleate CAS RN: 822-17-3	<b>R0030</b> 25g 500g  Sodium Ricinolate CAS RN: 5323-95-5	<b>Fatty Acid Halides</b>		
<b>A0082</b> 100g 500g  Acetyl Chloride CAS RN: 75-36-5	<b>A0080</b> 25g 500g  Acetyl Bromide CAS RN: 506-96-7	<b>A0095</b> 10g 25g  Acetyl Iodide CAS RN: 507-02-8	<b>P0516</b> 25g 500g  Propionyl Chloride CAS RN: 79-03-8	<b>P0515</b> 25g  Propionyl Bromide CAS RN: 598-22-1	<b>B0770</b> 25g 500g  Butyryl Chloride CAS RN: 141-75-3
<b>V0010</b> 25mL 100mL 500mL  Valeryl Chloride CAS RN: 638-29-9	<b>V0038</b> 10g  Valeryl Bromide CAS RN: 1889-26-5	<b>H0117</b> 25g 100g 500g  Hexanoyl Chloride CAS RN: 142-61-0	<b>H0040</b> 25g 100g 500g  Heptanoyl Chloride CAS RN: 2528-61-2	<b>O0039</b> 25mL 100mL 500mL  n-Octanoyl Chloride CAS RN: 111-64-8	
<b>N0372</b> 25g 100g  Nonanoyl Chloride (>95.0%) CAS RN: 764-85-2	<b>N0813</b> 25g  Nonanoyl Chloride (>97.0%) CAS RN: 764-85-2	<b>D0027</b> 25mL 100mL 500mL  Decanoyl Chloride CAS RN: 112-13-0	<b>U0026</b> 10mL 25mL  Undecanoyl Chloride CAS RN: 17746-05-3	<b>D0972</b> 25mL 500mL  Lauroyl Chloride CAS RN: 112-16-3	
<b>T0086</b> 25g 400g  Myristoyl Chloride CAS RN: 112-64-1	<b>P0009</b> 25mL 500mL  Palmitoyl Chloride CAS RN: 112-67-4	<b>H0782</b> 25mL  Heptadecanoyl Chloride CAS RN: 40480-10-2	<b>S0404</b> 25g 250g  Stearoyl Chloride CAS RN: 112-76-5	<b>C0424</b> 25g 100g 500g  Crotonoyl Chloride (cis- and trans- mixture) CAS RN: 10487-71-5	
<b>U0008</b> 25mL 250mL  10-Undecenoyl Chloride CAS RN: 38460-95-6	<b>O0053</b> 25g 250g  Oleoyl Chloride CAS RN: 112-77-6	<b>L0113</b> 1g  Linoleoyl Chloride CAS RN: 7459-33-8	<b>M0882</b> 10g 25g  Malonyl Chloride CAS RN: 1663-67-8	<b>S0110</b> 25g 250g  Succinyl Chloride CAS RN: 543-20-4	
<b>G0202</b> 25mL  Glutaryl Chloride CAS RN: 2873-74-7	<b>A0169</b> 25g 100g 500g  Adipoyl Chloride CAS RN: 111-50-2	<b>S0420</b> 25g  Suberoyl Chloride CAS RN: 10027-07-3	<b>A0562</b> 25mL  Azelaoyl Chloride CAS RN: 123-98-8	<b>S0030</b> 25mL 100mL 500mL  Sebacoyl Chloride CAS RN: 111-19-3	

<p><b>D2544</b> 5g 25g</p>  <p>Dodecanedioyl Dichloride CAS RN: 4834-98-4</p>	<p>Fatty Dicarboxylic Acids</p>	<p><b>M0028</b> 25g 500g</p>  <p>Malonic Acid CAS RN: 141-82-2</p>	<p><b>S0100</b> 25g 500g</p>  <p>Succinic Acid CAS RN: 110-15-6</p>	<p><b>M0006</b> 25g 500g</p>  <p>Maleic Acid CAS RN: 110-16-7</p>
<p><b>G0069</b> 25g 500g</p>  <p>Glutaric Acid CAS RN: 110-94-1</p>		<p><b>G0245</b> 500g</p>  <p>Glutaric Acid (ca. 50% in Water, ca. 4.3mol/L) CAS RN: 110-94-1</p>	<p><b>A0161</b> 25g 500g</p>  <p>Adipic Acid CAS RN: 124-04-9</p>	<p><b>P0435</b> 25g 100g 500g</p>  <p>Pimelic Acid CAS RN: 111-16-0</p>
<p><b>A0561</b> 25g 500g</p>  <p>Azelaic Acid (&gt;80.0%) CAS RN: 123-99-9</p>	<p><b>A1318</b> 25g 250g</p>  <p>Azelaic Acid (&gt;98.0%) CAS RN: 123-99-9</p>	<p><b>S0022</b> 25g 500g</p>  <p>Sebacic Acid CAS RN: 111-20-6</p>	<p><b>N0333</b> 5g 25g</p>  <p>Undecanedioic Acid CAS RN: 1852-04-6</p>	<p><b>D0013</b> 25g 500g</p>  <p>Dodecanedioic Acid CAS RN: 693-23-2</p>
<p><b>T0021</b> 5g 25g</p>  <p>Tridecanedioic Acid CAS RN: 505-52-2</p>	<p><b>T0704</b> 5g 25g</p>  <p>Tetradecanedioic Acid CAS RN: 821-38-5</p>	<p><b>P0909</b> 1g 10g</p>  <p>Pentadecanedioic Acid CAS RN: 1460-18-0</p>	<p><b>H0293</b> 1g 5g 25g</p>  <p>Hexadecanedioic Acid CAS RN: 505-54-4</p>	<p><b>H0972</b> 1g</p>  <p>Heptadecanedioic Acid CAS RN: 2424-90-0</p>
<p><b>O0222</b> 1g 5g 25g</p>  <p>Octadecanedioic Acid CAS RN: 871-70-5</p>	<p><b>N0663</b> 1g 5g</p>  <p>Nonadecanedioic Acid CAS RN: 6250-70-0</p>	<p><b>D3137</b> 1g</p>  <p>Docosanedioic Acid CAS RN: 505-56-6</p>	<p>Fatty Acid Esters</p>	
<p>Fatty Acid Methyl Esters</p>				
<p><b>P0508</b> 25mL 500mL</p>  <p>Methyl Propionate CAS RN: 554-12-1</p>	<p><b>B0763</b> 25mL 500mL</p>  <p>Methyl Butyrate CAS RN: 623-42-7</p>	<p><b>C0419</b> 25mL 100mL 500mL</p>  <p>Methyl Crotonate CAS RN: 623-43-8</p>	<p><b>V0005</b> 25mL</p>  <p>Methyl Valerate CAS RN: 624-24-8</p>	<p><b>H0111</b> 25mL 500mL</p>  <p>Methyl Hexanoate CAS RN: 106-70-7</p>
<p><b>H0032</b> 25mL</p>  <p>Methyl Heptanoate CAS RN: 106-73-0</p>	<p><b>H0705</b> 10mL 25mL</p>  <p>Methyl (R)-(+)-3-Hydroxybutyrate CAS RN: 3976-69-0</p>	<p><b>H0704</b> 5mL 25mL</p>  <p>Methyl (S)-(-)-3-Hydroxybutyrate CAS RN: 53562-86-0</p>	<p><b>A0650</b> 25g 500g</p>  <p>Methyl Acetoacetate CAS RN: 105-45-3</p>	<p><b>M1863</b> 5g 25g</p>  <p>Methyl 2-Oxovalerate CAS RN: 6376-59-6</p>
<p><b>K0035</b> 25g 100g 500g</p>  <p>Methyl 3-Oxovalerate CAS RN: 30414-53-0</p>	<p><b>P1210</b> 5mL 25mL</p>  <p>Methyl <i>trans</i>-3-Pentenoate CAS RN: 20515-19-9</p>	<p><b>K0037</b> 25mL 500mL</p>  <p>Methyl 3-Oxohexanoate CAS RN: 30414-54-1</p>	<p><b>S0056</b> 25mL</p>  <p>Methyl Sorbate CAS RN: 1515-80-6</p>	<p><b>O0246</b> 25mL</p>  <p>Methyl 3-Oxoheptanoate CAS RN: 39815-78-6</p>

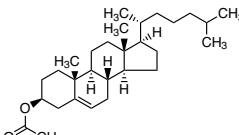
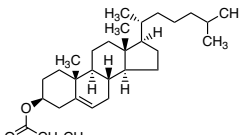
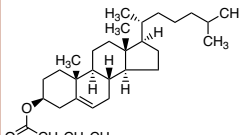
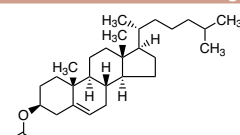
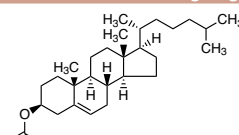
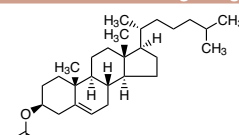
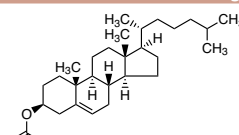
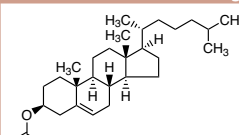
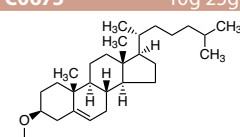
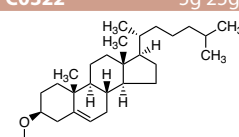
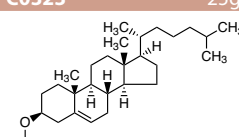
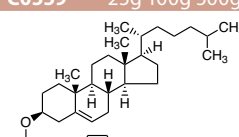
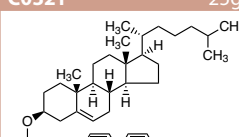
## Lipids

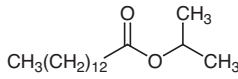
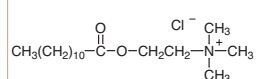
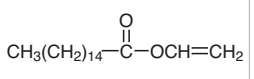
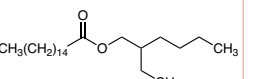
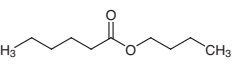
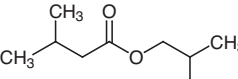
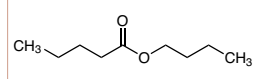
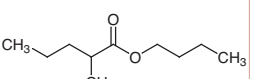
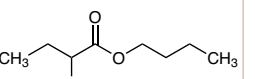
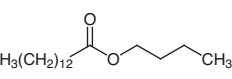
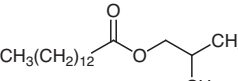
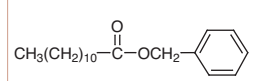
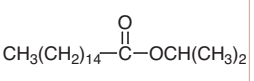
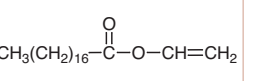
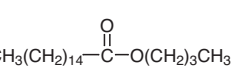
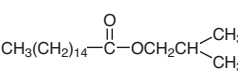
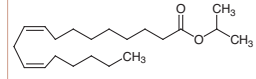
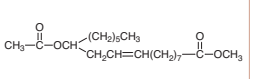
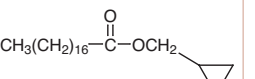
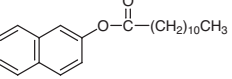
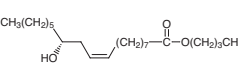
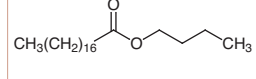
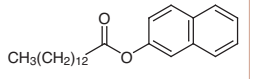
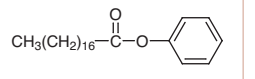
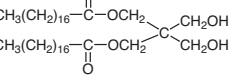
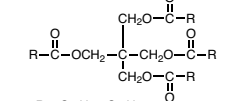
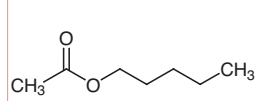
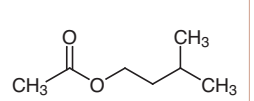
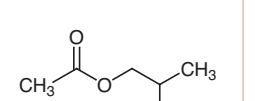
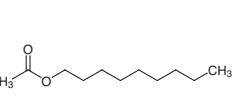
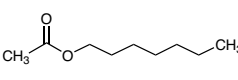
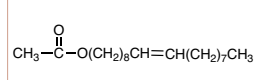
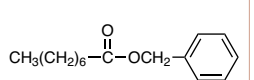
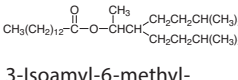
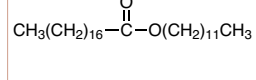
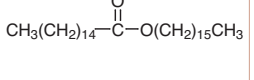
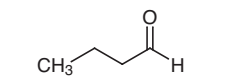
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<b>D0023</b> 25mL 500mL  Methyl Decanoate CAS RN: 110-42-9	<b>U0036</b> 25mL 100mL 500mL  Methyl 10-Undecenoate CAS RN: 111-81-9	<b>U0050</b> 25mL  Methyl Undecanoate CAS RN: 1731-86-8	<b>L0015</b> 25mL 500mL  Methyl Laurate CAS RN: 111-82-0	<b>T0960</b> 5mL 25mL 100mL  Methyl Tridecanoate CAS RN: 1731-88-0
<b>M0482</b> 25mL 500mL  Methyl Myristate CAS RN: 124-10-7	<b>P0869</b> 5mL 25mL  Methyl Pentadecanoate CAS RN: 7132-64-1	<b>P0006</b> 25g 250g  Methyl Palmitate CAS RN: 112-39-0	<b>P1958</b> 100mg 1g  Methyl <i>cis</i> -9-Hexadecanoate CAS RN: 1120-25-8	<b>H0566</b> 5g 25g  Methyl Heptadecanoate CAS RN: 1731-92-6
<b>S0080</b> 25g 500g  Methyl Stearate CAS RN: 112-61-8	<b>M2306</b> 500mg  Methyl <i>cis</i> -6-Octadecenoate CAS RN: 2777-58-4	<b>M2310</b> 100mg 500mg  Methyl <i>trans</i> -6-Octadecenoate CAS RN: 14620-36-1	<b>O0055</b> 25mL 500mL  Methyl Oleate CAS RN: 112-62-9	<b>O0226</b> 1mL 5mL  Methyl <i>trans</i> -9-Octadecenoate CAS RN: 1937-62-8
<b>R0029</b> 25mL 500mL  Methyl Ricinoleate CAS RN: 141-24-2	<b>M2308</b> 100mg  Methyl <i>cis</i> -11-Octadecenoate CAS RN: 1937-63-9	<b>M2309</b> 100mg  Methyl <i>trans</i> -11-Octadecenoate CAS RN: 6198-58-9	<b>L0078</b> 25mL 500mL  Methyl Linoleate CAS RN: 112-63-0	<b>M2307</b> 100mg 500mg  Methyl Linoleaidate CAS RN: 2566-97-4
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<b>B1241</b> 25g  Methyl Behenate (>90.0%) CAS RN: 929-77-1	<b>L0112</b> 1g 5g  Methyl Lignocerate CAS RN: 2442-49-1	<b>T0812</b> 100mg 1g  Methyl Triacontate CAS RN: 629-83-4	<b>Fatty Acid Ethyl Esters</b>	
<b>H0229</b> 5g 25g  Ethyl 2-Hydroxybutyrate CAS RN: 52089-54-0	<b>H0230</b> 25g 500g  Ethyl DL-3-Hydroxybutyrate CAS RN: 5405-41-4	<b>H1029</b> 1g 5g  Ethyl ( <i>R</i> )-(-)-3-Hydroxybutyrate CAS RN: 24915-95-5	<b>H0975</b> 5g 25g  Ethyl ( <i>S</i> )-(+)-3-Hydroxybutyrate CAS RN: 56816-01-4	<b>A0649</b> 25g 500g  Ethyl Acetoacetate CAS RN: 141-97-9



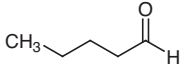
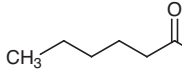
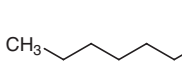
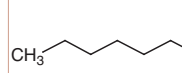
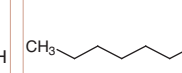
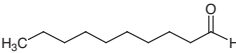
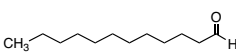
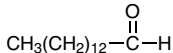
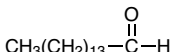
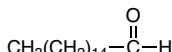
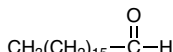
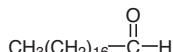
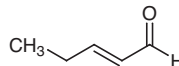
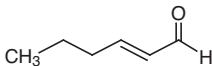
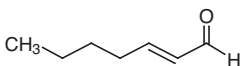
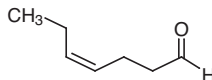
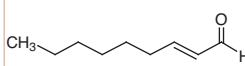
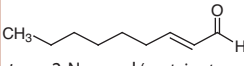
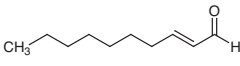
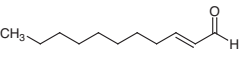
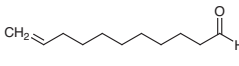
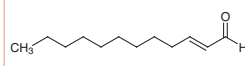
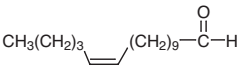
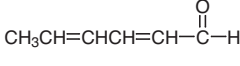
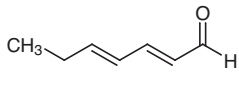
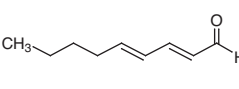
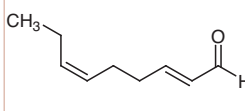
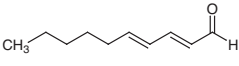
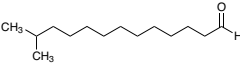
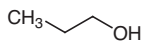
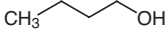
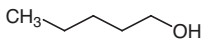
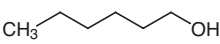
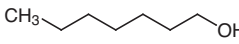
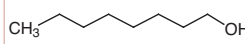
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<b>E0345</b> 25mL 500mL  Ethyl 2-Ethylbutyrate CAS RN: 2983-38-2	<b>E0801</b> 25mL 500mL  Ethyl 2-Methylvalerate CAS RN: 39255-32-8	<b>E0803</b> 5g 25g  Ethyl 3-Methylvalerate CAS RN: 5870-68-8	<b>E0802</b> 5g 25g  Ethyl DL-Leucate CAS RN: 10348-47-7	<b>K0030</b> 25mL 500mL  Ethyl 3-Oxohexanoate CAS RN: 3249-68-1
<b>E0787</b> 25g  Ethyl <i>trans</i> -2-Hexenoate CAS RN: 27829-72-7	<b>H0031</b> 25mL 500mL  Ethyl Heptanoate CAS RN: 106-30-9	<b>O0216</b> 10g 25g  Ethyl 3-Oxoheptanoate CAS RN: 7737-62-4	<b>O0030</b> 25mL 500mL  Ethyl <i>n</i> -Octanoate CAS RN: 106-32-1	<b>O0286</b> 25mL  Ethyl <i>trans</i> -2-Octenoate CAS RN: 7367-82-0
<b>N0289</b> 25mL  Ethyl Nonanoate CAS RN: 123-29-5	<b>D0022</b> 25mL 500mL  Ethyl Decanoate CAS RN: 110-38-3	<b>D2767</b> 25mL  Ethyl <i>trans</i> -2-Decenoate CAS RN: 7367-88-6	<b>D1931</b> 10mL  Ethyl <i>trans</i> -4-Decenoate CAS RN: 76649-16-6	<b>E0771</b> 25g 250g  Ethyl 10-Undecenoate CAS RN: 692-86-4
<b>U0049</b> 25mL 250mL  Ethyl Undecanoate CAS RN: 627-90-7	<b>L0013</b> 25mL 500mL $CH_3(CH_2)_{10}-C(=O)-OCH_2CH_3$ Ethyl Laurate CAS RN: 106-33-2	<b>T0959</b> 5mL 25mL $CH_3(CH_2)_{11}-C(=O)-OCH_2CH_3$ Ethyl Tridecanoate CAS RN: 28267-29-0	<b>M0479</b> 25mL 100mL 500mL $CH_3(CH_2)_{12}-C(=O)-OCH_2CH_3$ Ethyl Myristate CAS RN: 124-06-1	<b>P0868</b> 5mL 25mL $CH_3(CH_2)_{13}-C(=O)-OCH_2CH_3$ Ethyl Pentadecanoate CAS RN: 41114-00-5
<b>P0003</b> 25mL 500mL $CH_3(CH_2)_{14}-C(=O)-OCH_2CH_3$ Ethyl Palmitate CAS RN: 628-97-7	<b>H0501</b> 100mg  Ethyl <i>cis</i> -9-Hexadecenoate CAS RN: 56219-10-4	<b>H0526</b> 5g 25g $CH_3(CH_2)_{15}-C(=O)-OCH_2CH_3$ Ethyl Heptadecanoate CAS RN: 14010-23-2	<b>S0079</b> 25g 250g $CH_3(CH_2)_{16}-C(=O)-OCH_2CH_3$ Ethyl Stearate (>96.0%) CAS RN: 111-61-5	<b>S0365</b> 25g $CH_3(CH_2)_{16}-C(=O)-OCH_2CH_3$ Ethyl Stearate (>99.0%) CAS RN: 111-61-5
<b>O0143</b> 5mL 25mL  Ethyl Oleate (>95.0%) CAS RN: 111-62-6	<b>O0054</b> 25mL 500mL  Ethyl Oleate (>70.0%) CAS RN: 111-62-6	<b>R0049</b> 25mL  Ethyl Ricinoleate CAS RN: 55066-53-0	<b>L0135</b> 5mL 25mL  Ethyl Linoleate (>97.0%) CAS RN: 544-35-4	<b>N0459</b> 5g 25g $CH_3(CH_2)_{17}-C(=O)-OCH_2CH_3$ Ethyl Nonadecanoate CAS RN: 18281-04-4
<b>A0899</b> 5g 25g $CH_3(CH_2)_{18}-C(=O)-OCH_2CH_3$ Ethyl Arachidate CAS RN: 18281-05-5	<b>E0442</b> 200mg  EPA Ethyl Ester CAS RN: 86227-47-6	<b>E0853</b> 25g  EPA Ethyl Ester (stabilized with Tocopherols) CAS RN: 86227-47-6	<b>D1014</b> 5mL 25mL  Ethyl Erucate CAS RN: 37910-77-3	<b>D2195</b> 100mg  DHA Ethyl Ester CAS RN: 84494-72-4

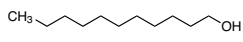
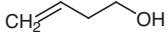
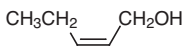
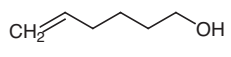
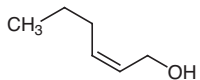
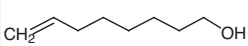
## Lipids

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<p><b>C0673</b> 25g</p>  <p>Cholesterol Hexanoate CAS RN: 1062-96-0</p>	<p><b>C0334</b> 5g 25g</p>  <p>Cholesterol <i>n</i>-Octanoate CAS RN: 1182-42-9</p>	<p><b>N0347</b> 25g 500g</p>  <p>Cholesterol Pelargonate CAS RN: 1182-66-7</p>	<p><b>C0618</b> 25g</p>  <p>Cholesterol Decanoate CAS RN: 1183-04-6</p>	<p><b>C0620</b> 25g</p>  <p>Cholesterol Laurate CAS RN: 1908-11-8</p>	
<p><b>C0675</b> 10g 25g</p>  <p>Cholesterol Myristate CAS RN: 1989-52-2</p>	<p><b>C0322</b> 5g 25g</p>  <p>Cholesterol Palmitate CAS RN: 601-34-3</p>	<p><b>C0323</b> 25g</p>  <p>Cholesterol Stearate CAS RN: 35602-69-8</p>	<p><b>C0559</b> 25g 100g 500g</p>  <p>Cholesterol Oleate CAS RN: 303-43-5</p>	<p><b>C0321</b> 25g</p>  <p>Cholesterol Linoleate CAS RN: 604-33-1</p>	
<p><b>Other Fatty Acid Esters</b></p>		<p><b>A2179</b> 25mL 500mL</p> <chem>CCCCCCCC(=O)O/C=C</chem> <p>Allyl Hexanoate CAS RN: 123-68-2</p>	<p><b>A2119</b> 25g 250g</p> <chem>CCCCCCCCC(=O)O/C=C</chem> <p>Allyl Heptanoate CAS RN: 142-19-8</p>	<p><b>C0896</b> 25mL 500mL</p> <chem>CCCCCCCCC(=O)O/C=C</chem> <p>Vinyl <i>n</i>-Octanoate (stabilized with MEHQ) CAS RN: 818-44-0</p>	<p><b>O0157</b> 25mL</p> <chem>CCCCCCCCC(=O)OC(C)C</chem> <p>Isopropyl <i>n</i>-Octanoate CAS RN: 5458-59-3</p>
<p><b>P2113</b> 25mL</p> <chem>CCCCCCCCC(=O)OCC</chem> <p>Propyl <i>n</i>-Octanoate CAS RN: 624-13-5</p>	<p><b>A2679</b> 25mL</p> <chem>CCCCCCCCC(=O)O/C=C</chem> <p>Allyl Nonanoate CAS RN: 7493-72-3</p>	<p><b>C0895</b> 25mL 500mL</p> <chem>CCCCCCCCC(=O)O/C=C</chem> <p>Vinyl Decanoate (stabilized with MEHQ) CAS RN: 4704-31-8</p>	<p><b>O0029</b> 25mL</p> <chem>CCCCCCCCC(=O)OCC</chem> <p>Butyl <i>n</i>-Octanoate CAS RN: 589-75-3</p>	<p><b>O0032</b> 25mL 500mL</p> <chem>CCCCCCCCC(=O)OC(C)C</chem> <p>Isobutyl <i>n</i>-Octanoate CAS RN: 5461-06-3</p>	
<p><b>U0057</b> 25mL</p> <chem>C=CCCCCCCCC(=O)O/C=C</chem> <p>Vinyl 10-Undecenoate (stabilized with MEHQ) CAS RN: 5299-57-0</p>	<p><b>O0028</b> 25mL 500mL</p> <chem>CCCCCCCCC(=O)OCC</chem> <p>Amyl <i>n</i>-Octanoate CAS RN: 638-25-5</p>	<p><b>O0031</b> 25mL</p> <chem>CCCCCCCCC(=O)OC(C)C</chem> <p>Isomyl <i>n</i>-Octanoate (contains 2-Methylbutyl <i>n</i>-Octanoate) CAS RN: 2035-99-6</p>	<p><b>L0090</b> 25mL 500mL</p> <chem>CCCCCCCCC(=O)O/C=C</chem> <p>Vinyl Laurate (stabilized with MEHQ) CAS RN: 2146-71-6</p>	<p><b>D0020</b> 25mL</p> <chem>CCCCCCCCC(=O)OCC(C)C</chem> <p>Butyl Decanoate CAS RN: 30673-36-0</p>	
<p><b>B0760</b> 25mL 500mL</p> <chem>CCCC(=O)OCC(C)C</chem> <p>Isoamyl Butyrate CAS RN: 106-27-4</p>	<p><b>I0196</b> 25mL 500mL</p> <chem>CC(C)CC(=O)OCC(C)C</chem> <p>Isoamyl Isovalerate CAS RN: 659-70-1</p>	<p><b>B1891</b> 25mL 500mL</p> <chem>CCCC(=O)OCCCC</chem> <p>Hexyl Butyrate CAS RN: 2639-63-6</p>	<p><b>C1514</b> 25mL 500mL</p> <chem>CCCCC(=O)OCCCC</chem> <p>Hexyl Hexanoate CAS RN: 6378-65-0</p>	<p><b>D0018</b> 25mL</p> <chem>CCCCCCCC(=O)OCCCC</chem> <p>Amyl Decanoate CAS RN: 5933-87-9</p>	
<p><b>D0019</b> 25mL</p> <chem>CCCCCCCCC(=O)OCC(C)C</chem> <p>Isoamyl Decanoate CAS RN: 2306-91-4</p>	<p><b>L0083</b> 25mL 500mL</p> <chem>CCCCCCCCC(=O)OCC(C)C</chem> <p>Butyl Laurate CAS RN: 106-18-3</p>	<p><b>L0084</b> 25mL 500mL</p> <chem>CCCCCCCCC(=O)OCC(C)C</chem> <p>Isobutyl Laurate CAS RN: 37811-72-6</p>	<p><b>L0012</b> 25mL 500mL</p> <chem>CCCCCCCCC(=O)OCCCC</chem> <p>Amyl Laurate CAS RN: 5350-03-8</p>	<p><b>L0014</b> 25mL</p> <chem>CCCCCCCCC(=O)OCC(C)C</chem> <p>Isoamyl Laurate CAS RN: 6309-51-9</p>	

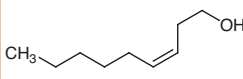
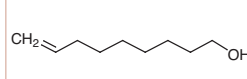
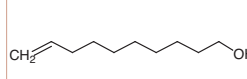
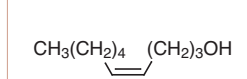
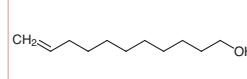
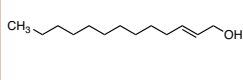
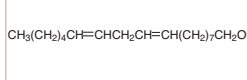
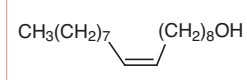
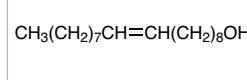
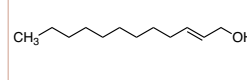
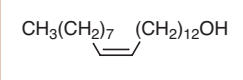
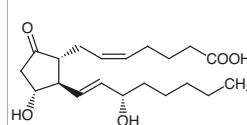
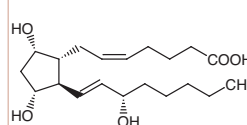
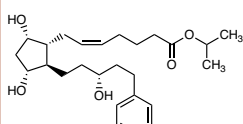
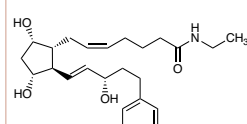
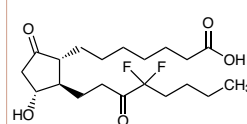
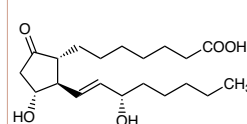
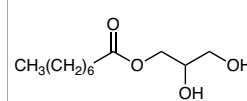
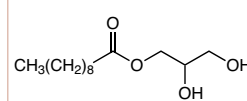
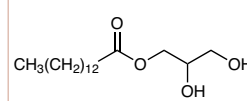
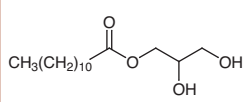
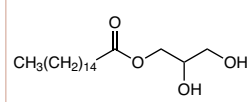
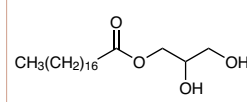
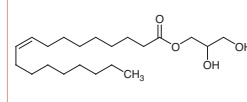
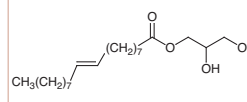
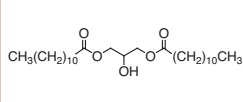
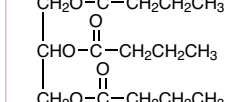
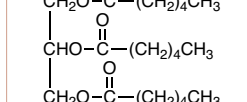
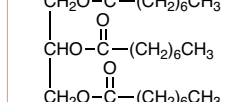
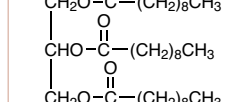
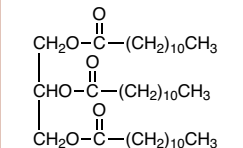
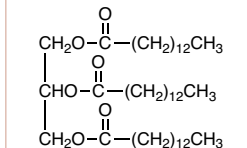
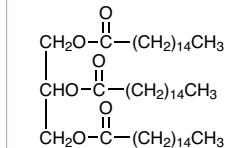
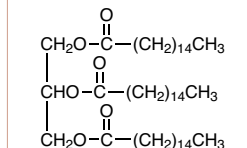
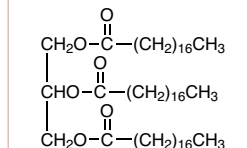
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<p><b>I0197</b> 25mL 500mL</p>  <p>Isobutyl Isovalerate CAS RN: 589-59-3</p>	<p><b>B4322</b> 25mL</p>  <p>Butyl Valerate CAS RN: 591-68-4</p>	<p><b>B3359</b> 25mL 500mL</p>  <p>Butyl 2-Methylvalerate CAS RN: 6297-41-2</p>	<p><b>B6101</b> 25mL 100mL</p>  <p>Butyl 2-Methylbutyrate CAS RN: 15706-73-7</p>	<p><b>M0477</b> 25mL 500mL</p>  <p>Butyl Myristate CAS RN: 110-36-1</p>
<p><b>M0555</b> 25mL</p>  <p>Isobutyl Myristate CAS RN: 25263-97-2</p>	<p><b>L0107</b> 25mL</p>  <p>Benzyl Laurate CAS RN: 140-25-0</p>	<p><b>P0005</b> 25mL 500mL</p>  <p>Isopropyl Palmitate CAS RN: 142-91-6</p>	<p><b>S0241</b> 25g 100g</p>  <p>Vinyl Stearate (stabilized with MEHQ) CAS RN: 111-63-7</p>	<p><b>P0649</b> 25mL</p>  <p>Butyl Palmitate CAS RN: 111-06-8</p>
<p><b>P0651</b> 25mL</p>  <p>Isobutyl Palmitate CAS RN: 110-34-9</p>	<p><b>L0139</b> 25mL 500mL</p>  <p>Isopropyl Linoleate CAS RN: 22882-95-7</p>	<p><b>A0879</b> 25mL 500mL</p>  <p>Methyl O-Acetylricinoleate CAS RN: 140-03-4</p>	<p><b>S0366</b> 5g 25g</p>  <p>Glycidyl Stearate CAS RN: 7460-84-6</p>	<p><b>L0122</b> 5g 25g</p>  <p>2-Naphthyl Laurate CAS RN: 6343-73-3</p>
<p><b>R0045</b> 25mL 500mL</p>  <p>Butyl Ricinoleate CAS RN: 151-13-3</p>	<p><b>S0077</b> 25g</p>  <p>Butyl Stearate CAS RN: 123-95-5</p>	<p><b>M0780</b> 10g</p>  <p>2-Naphthyl Myristate CAS RN: 7262-80-8</p>	<p><b>O0007</b> 5g 25g</p>  <p>Phenyl Stearate CAS RN: 637-55-8</p>	<p><b>P0738</b> 25g</p>  <p>Pentaerythritol Distearate (mixture) CAS RN: 13081-97-5</p>
<p><b>P0739</b> 25g 500g</p>  <p>Pentaerythritol Tetrastearate (contains palmitate) CAS RN: 115-83-3</p>	<p><b>A0021</b> 25mL 500mL</p>  <p>Amyl Acetate CAS RN: 628-63-7</p>	<p><b>A0033</b> 25mL 500mL</p>  <p>Isoamyl Acetate CAS RN: 123-92-2</p>	<p><b>A0034</b> 25mL 500mL</p>  <p>Isobutyl Acetate CAS RN: 110-19-0</p>	<p><b>A0041</b> 25mL 500mL</p>  <p>Nonyl Acetate CAS RN: 143-13-5</p>
<p><b>A0904</b> 25mL 500mL</p>  <p>Heptyl Acetate CAS RN: 112-06-1</p>	<p><b>A0934</b> 25mL 500mL</p>  <p>Oleyl Acetate CAS RN: 693-80-1</p>	<p><b>B6116</b> 25g</p>  <p>Benzyl Octanoate CAS RN: 10276-85-4</p>	<p>Waxes</p>	
<p><b>I0662</b> 25g 500g</p>  <p>3-Isoamyl-6-methyl-2-heptyl Myristate CAS RN: 88332-30-3</p>	<p><b>S0078</b> 25g</p>  <p>Dodecyl Stearate CAS RN: 5303-25-3</p>	<p><b>P1077</b> 25g 500g</p>  <p>Hexadecyl Palmitate CAS RN: 540-10-3</p>	<p>Fatty Aldehydes</p>	
			 <p>Butyraldehyde CAS RN: 123-72-8</p>	

## Lipids

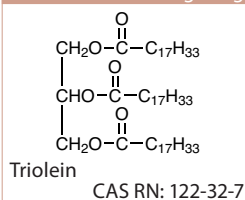
<b>V0001</b> 25mL 500mL  Valeraldehyde CAS RN: 110-62-3	<b>H0133</b> 25mL 100mL 500mL  Hexanal CAS RN: 66-25-1	<b>H0025</b> 25mL 500mL  Heptanal CAS RN: 111-71-7	<b>O0044</b> 25mL 500mL  <i>n</i> -Octanal CAS RN: 124-13-0	<b>N0296</b> 25mL 100mL 500mL  Nonanal CAS RN: 124-19-6
<b>D0032</b> 25mL 500mL  Decanal CAS RN: 112-31-2	<b>U0009</b> 25mL 250mL  Undecanal CAS RN: 112-44-7	<b>D0979</b> 25mL 500mL  Dodecanal (stabilized with DL- $\alpha$ -Tocopherol) CAS RN: 112-54-9	<b>T0410</b> 5mL  Tridecanal CAS RN: 10486-19-8	<b>T2696</b> 1g  Tetradecanal CAS RN: 124-25-4
<b>P1869</b> 1g  Pentadecanal CAS RN: 2765-11-9	<b>H1296</b> 1g  Hexadecanal CAS RN: 629-80-1	<b>H1295</b> 1g  Heptadecanal CAS RN: 629-90-3	<b>O0368</b> 1g  Octadecanal CAS RN: 638-66-4	<b>P1790</b> 5g 25g  <i>trans</i> -2-Pentenal CAS RN: 1576-87-0
<b>H0345</b> 25mL 100mL 500mL  <i>trans</i> -2-Hexenal CAS RN: 6728-26-3	<b>H0579</b> 5mL 25mL  <i>trans</i> -2-Heptenal CAS RN: 18829-55-5	<b>H0520</b> 5mL 25mL  <i>cis</i> -4-Heptenal CAS RN: 6728-31-0	<b>O0176</b> 10mL 25mL  <i>trans</i> -2-Octenal CAS RN: 2548-87-0	<b>N0483</b> 5mL 25mL  <i>trans</i> -2-Nonenal CAS RN: 18829-56-6
<b>N0430</b> 25mL  <i>trans</i> -2-Nonenal (contains <i>trans</i> -2-Nonenal Diethyl Acetal) (ca. 10% in Ethanol, ca. 0.57mol/L) CAS RN: 18829-56-6	<b>D1642</b> 5mL 25mL  <i>trans</i> -2-Decenal CAS RN: 3913-81-3	<b>U0046</b> 5mL 25mL  <i>trans</i> -2-Undecenal CAS RN: 53448-07-0	<b>U0011</b> 25mL  10-Undecenal CAS RN: 112-45-8	<b>D2068</b> 25mL  <i>trans</i> -2-Dodecenal CAS RN: 20407-84-5
<b>H0679</b> 1g 10g  <i>cis</i> -11-Hexadecenal CAS RN: 53939-28-9	<b>H0581</b> 25mL  2,4-Hexadienal CAS RN: 80466-34-8	<b>H0681</b> 5mL  <i>trans,trans</i> -2,4-Heptadienal CAS RN: 4313-03-5	<b>N0521</b> 5mL  <i>trans,trans</i> -2,4-Nonadienal CAS RN: 5910-87-2	<b>N0836</b> 1g 5g  <i>trans,cis</i> -2,6-Nonadienal CAS RN: 557-48-2
<b>D1934</b> 5mL 25mL  <i>trans,trans</i> -2,4-Decadienal CAS RN: 25152-84-5	<b>M3275</b> 1g  12-Methyltridecanal CAS RN: 75853-49-5	<b>Fatty Alcohols</b>		<b>P0491</b> 25mL 500mL  1-Propanol CAS RN: 71-23-8
<b>B0704</b> 25mL 500mL  1-Butanol CAS RN: 71-36-3	<b>P0055</b> 25mL 500mL  1-Pentanol CAS RN: 71-41-0	<b>H0130</b> 25mL 500mL  1-Hexanol CAS RN: 111-27-3	<b>H0033</b> 25mL 500mL  1-Heptanol CAS RN: 111-70-6	<b>O0036</b> 25mL 500mL  1-Octanol CAS RN: 111-87-5

<b>N0292</b> 25mL 500mL  1-Nonanol CAS RN: 143-08-8	<b>D0031</b> 25mL 500mL  1-Decanol CAS RN: 112-30-1	<b>U0005</b> 25mL 100mL 500mL  1-Undecanol CAS RN: 112-42-5	<b>D0978</b> 25g 400g  1-Dodecanol CAS RN: 112-53-8	<b>T0803</b> 25g $\text{CH}_3(\text{CH}_2)_{12}\text{OH}$ 1-Tridecanol CAS RN: 112-70-9
<b>T0414</b> 25mL 500mL Tridecanol (mixture of isomers) CAS RN: 26248-42-0	<b>T0084</b> 25mL 500mL $\text{CH}_3(\text{CH}_2)_{13}\text{OH}$ 1-Tetradecanol CAS RN: 112-72-1	<b>P0036</b> 25g 100g 500g $\text{CH}_3(\text{CH}_2)_{14}\text{OH}$ 1-Pentadecanol CAS RN: 629-76-5	<b>H0071</b> 25g 500g $\text{CH}_3(\text{CH}_2)_{15}\text{OH}$ 1-Hexadecanol CAS RN: 36653-82-4	<b>H0018</b> 5g 25g $\text{CH}_3(\text{CH}_2)_{16}\text{OH}$ 1-Heptadecanol CAS RN: 1454-85-9
<b>O0006</b> 25g 500g $\text{CH}_3(\text{CH}_2)_{17}\text{OH}$ 1-Octadecanol CAS RN: 112-92-5	<b>N0284</b> 5g 25g $\text{CH}_3(\text{CH}_2)_{18}\text{OH}$ 1-Nonadecanol CAS RN: 1454-84-8	<b>E0004</b> 25g 500g $\text{CH}_3(\text{CH}_2)_{19}\text{OH}$ 1-Eicosanol CAS RN: 629-96-9	<b>H0011</b> 10g $\text{CH}_3(\text{CH}_2)_{20}\text{OH}$ 1-Heneicosanol CAS RN: 15594-90-8	<b>D0964</b> 25g 500g $\text{CH}_3(\text{CH}_2)_{21}\text{OH}$ 1-Docosanol CAS RN: 661-19-8
<b>T0403</b> 100mg $\text{CH}_3(\text{CH}_2)_{22}\text{OH}$ 1-Tricosanol CAS RN: 3133-01-5	<b>T0593</b> 1g 5g $\text{CH}_3(\text{CH}_2)_{23}\text{OH}$ 1-Tetracosanol CAS RN: 506-51-4	<b>H0342</b> 100mg 1g $\text{CH}_3(\text{CH}_2)_{25}\text{OH}$ 1-Hexacosanol CAS RN: 506-52-5	<b>O0199</b> 100mg 1g $\text{CH}_3(\text{CH}_2)_{27}\text{OH}$ 1-Octacosanol CAS RN: 557-61-9	<b>T1049</b> 100mg 1g $\text{CH}_3(\text{CH}_2)_{29}\text{OH}$ 1-Triacontanol CAS RN: 593-50-0
<b>Unsaturated Fatty Alcohols</b>	<b>B0236</b> 10mL 25mL 500mL  3-Buten-1-ol CAS RN: 627-27-0	<b>B0696</b> 25mL $\text{CH}_3\text{CH}=\text{CHCH}_2\text{OH}$ Crotyl Alcohol ( <i>cis</i> - and <i>trans</i> - mixture) CAS RN: 6117-91-5	<b>P1199</b> 5mL 25mL  <i>cis</i> -2-Penten-1-ol CAS RN: 1576-95-0	<b>P1243</b> 25mL 250mL  4-Penten-1-ol CAS RN: 821-09-0
	<b>H0124</b> 25mL 100mL  <i>cis</i> -3-Hexen-1-ol CAS RN: 928-96-1	<b>H0346</b> 25g 250g  <i>trans</i> -2-Hexen-1-ol CAS RN: 928-95-0	<b>H0653</b> 10mL 25mL 250mL  5-Hexen-1-ol CAS RN: 821-41-0	<b>H0751</b> 25mL  <i>cis</i> -2-Hexen-1-ol CAS RN: 928-94-9
<b>H0682</b> 5mL  <i>trans</i> -2-Hepten-1-ol CAS RN: 33467-76-4	<b>H0833</b> 5mL 25mL  <i>cis</i> -4-Hepten-1-ol CAS RN: 6191-71-5	<b>H0949</b> 5g 25g  6-Hepten-1-ol CAS RN: 4117-10-6	<b>O0247</b> 10mL 100mL  <i>trans</i> -2-Octen-1-ol CAS RN: 18409-17-1	<b>O0248</b> 25mL  <i>cis</i> -3-Octen-1-ol CAS RN: 20125-84-2
<b>O0250</b> 5mL 25mL  <i>cis</i> -5-Octen-1-ol CAS RN: 64275-73-6	<b>O0280</b> 5mL 25mL  7-Octen-1-ol CAS RN: 13175-44-5	<b>N0469</b> 10mL  <i>cis</i> -6-Nonen-1-ol CAS RN: 35854-86-5	<b>N0586</b> 10mL  <i>cis</i> -2-Nonen-1-ol CAS RN: 41453-56-9	<b>N0587</b> 10mL  <i>trans</i> -2-Nonen-1-ol CAS RN: 31502-14-4

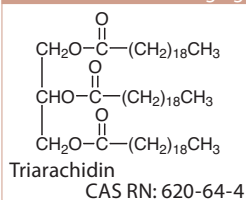
## Lipids

<p><b>N0588</b> 10mL 25mL</p>  <p><i>cis</i>-3-Nonen-1-ol CAS RN: 10340-23-5</p>	<p><b>N0650</b> 5g 25g</p>  <p>8-Nonen-1-ol CAS RN: 13038-21-6</p>	<p><b>D1892</b> 25mL 500mL</p>  <p>9-Decen-1-ol CAS RN: 13019-22-2</p>	<p><b>D2293</b> 5mL</p>  <p><i>cis</i>-4-Decen-1-ol CAS RN: 57074-37-0</p>	<p><b>U0047</b> 25mL 500mL</p>  <p>10-Undecen-1-ol CAS RN: 112-43-6</p>
<p><b>T1502</b> 10mL</p>  <p><i>trans</i>-2-Tridecen-1-ol CAS RN: 68480-25-1</p>	<p><b>O0225</b> 5mL 25mL</p>  <p>Linoleyl Alcohol CAS RN: 506-43-4</p>	<p><b>O0058</b> 25mL 500mL</p>  <p>Oleyl Alcohol CAS RN: 143-28-2</p>	<p><b>O0228</b> 1g 5g</p>  <p><i>trans</i>-9-Octadecenol CAS RN: 506-42-3</p>	<p><b>D1936</b> 5mL</p>  <p><i>trans</i>-2-Dodecenol CAS RN: 69064-37-5</p>
<p><b>D2174</b> 1g 5g</p>  <p><i>cis</i>-13-Docosanol CAS RN: 629-98-1</p>	<p><b>Eicosanoids</b></p>		<p><b>Prostaglandins</b></p>	
			<p><b>P1884</b> 1mg 10mg</p>  <p>Prostaglandin E<sub>2</sub> CAS RN: 363-24-6</p>	<p><b>P1885</b> 1mg 10mg</p>  <p>Prostaglandin F<sub>2α</sub> CAS RN: 551-11-1</p>
<p><b>L0262</b> 10mg 50mg</p>  <p>Latanoprost CAS RN: 130209-82-4</p>	<p><b>B6165</b> 5mg 25mg</p>  <p>Bimatoprost CAS RN: 155206-00-1</p>	<p><b>L0355</b> 50mg</p>  <p>Lubiprostone CAS RN: 136790-76-6</p>	<p><b>P1917</b> 10mg</p>  <p>Prostaglandin E<sub>1</sub> CAS RN: 745-65-3</p>	
<p><b>Glycerolipids</b></p>				
	<p><b>M1071</b> 1g 5g</p>  <p>Monocaprylin CAS RN: 26402-26-6</p>	<p><b>M1072</b> 1g 5g</p>  <p>Monocaprin CAS RN: 26402-22-2</p>	<p><b>M1073</b> 1g 5g</p>  <p>Monomyristin CAS RN: 589-68-4</p>	
<p><b>G0081</b> 5g 25g</p>  <p>Monolaurin CAS RN: 142-18-7</p>	<p><b>G0083</b> 25g</p>  <p>Monopalmitin CAS RN: 542-44-9</p>	<p><b>G0085</b> 25g 500g</p>  <p>Monostearin CAS RN: 123-94-4</p>	<p><b>G0082</b> 25g 500g</p>  <p>Monoolein CAS RN: 111-03-5</p>	<p><b>M1075</b> 1g</p>  <p>Monoelaidin CAS RN: 2716-53-2</p>
<p><b>G0079</b> 10g</p>  <p><math>\alpha,\alpha'</math>-Dilaurin CAS RN: 539-93-5</p>	<p><b>T0364</b> 25mL 500mL</p>  <p>Tributyrin CAS RN: 60-01-5</p>	<p><b>T0441</b> 10mL 25mL</p>  <p>Tricaproin CAS RN: 621-70-5</p>	<p><b>T0365</b> 25mL</p>  <p>Tricaprylin CAS RN: 538-23-8</p>	<p><b>T0413</b> 10g 25g</p>  <p>Tricaprin CAS RN: 621-71-6</p>
<p><b>G0087</b> 25g 100g 500g</p>  <p>Trilaurin CAS RN: 538-24-9</p>	<p><b>G0088</b> 25g</p>  <p>Trimyristin CAS RN: 555-45-3</p>	<p><b>T3096</b> 25g 100g</p>  <p>Tripalmitin (&gt;80.0%) CAS RN: 555-44-2</p>	<p><b>G0213</b> 25g 250g</p>  <p>Tripalmitin (&gt;85.0%) CAS RN: 555-44-2</p>	<p><b>G0212</b> 25g 250g</p>  <p>Tristearin CAS RN: 555-43-1</p>

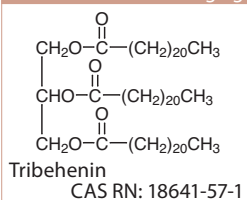
G0089 25g 100g



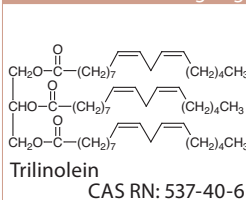
T1389 1g 5g



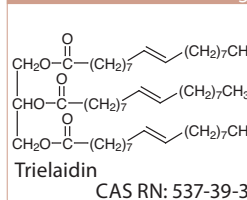
T1391 1g 5g



T1388 5g 25g

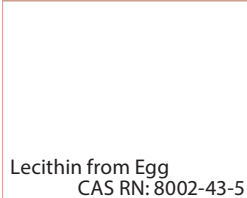


T1392 1g

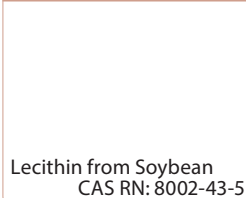


## Phospholipids

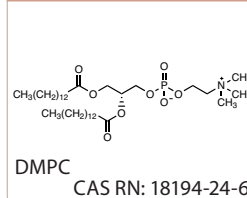
L0022 25g 100g



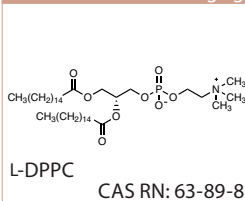
L0023 25g 500g



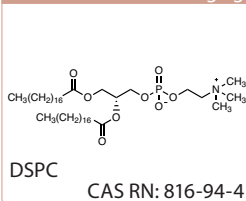
D3924 200mg 1g



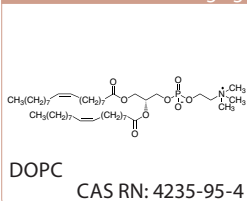
D3925 200mg 1g



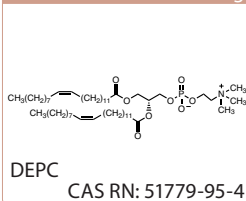
D3926 200mg 1g



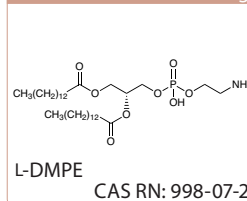
D4250 250mg 1g



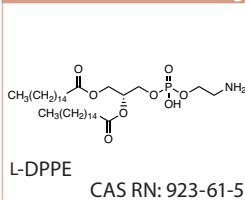
D5319 250mg



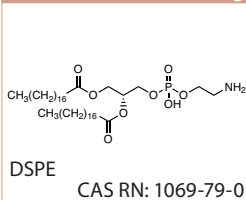
D4249 250mg



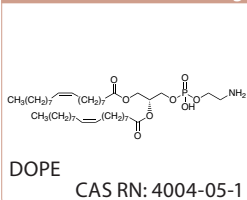
D4213 250mg



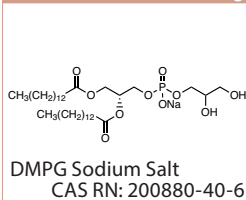
D4214 250mg



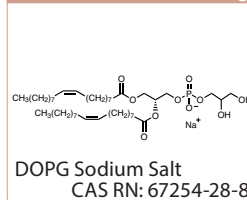
D4251 250mg



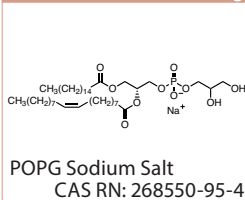
D3946 1g



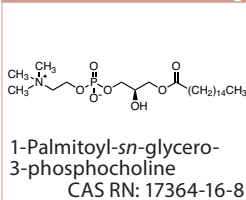
D5318 250mg



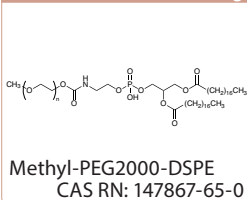
P2522 250mg



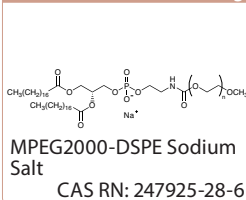
P2694 250mg



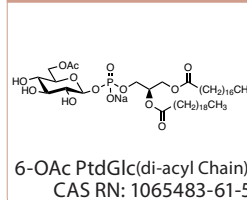
M3264 250mg



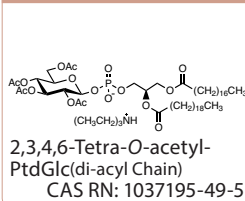
M3330 100mg



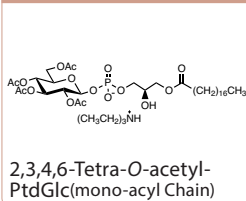
A2638 Please contact us.



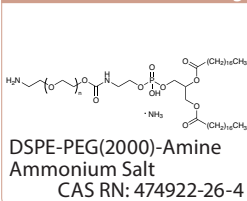
P2079 Please contact us.



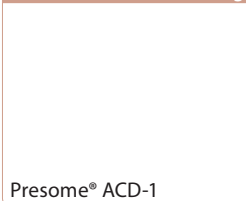
P2080 Please contact us.



D6011 10mg

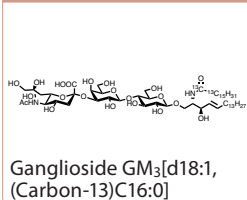


P2807 100mg

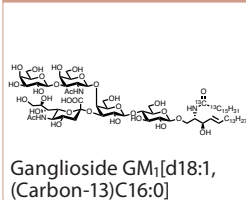


## Glycolipids

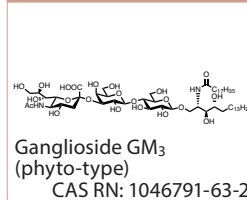
G0419 Please contact us.



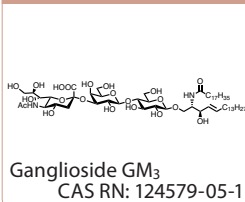
G0421 Please contact us.



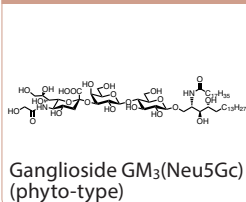
G0422 Please contact us.



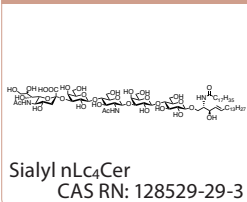
G0489 Please contact us.



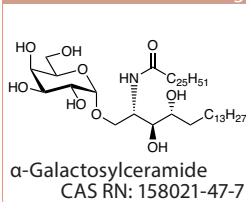
G0510 Please contact us.



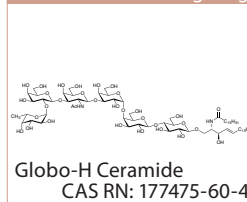
S0910 Please contact us.



G0509 1mg



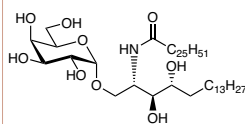
G0589 1mg 5mg





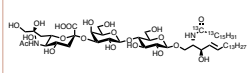
# Sphingolipids

G0509 1mg



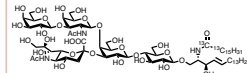
$\alpha$ -Galactosylceramide  
CAS RN: 158021-47-7

G0419 Please contact us.



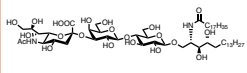
Ganglioside GM<sub>3</sub>[d18:1,  
(Carbon-13)C16:0]

G0421 Please contact us.



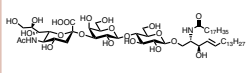
Ganglioside GM<sub>1</sub>[d18:1,  
(Carbon-13)C16:0]

G0422 Please contact us.



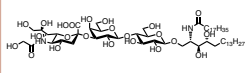
Ganglioside GM<sub>3</sub>  
(phyto-type)  
CAS RN: 1046791-63-2

G0489 Please contact us.



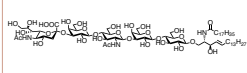
Ganglioside GM<sub>3</sub>  
CAS RN: 124579-05-1

G0510 Please contact us.



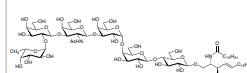
Ganglioside GM<sub>3</sub>(Neu5Gc)  
(phyto-type)

S0910 Please contact us.



Sialyl nLc<sub>4</sub>Cer  
CAS RN: 128529-29-3

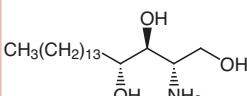
G0589 1mg 5mg



Globo-H Ceramide  
CAS RN: 177475-60-4

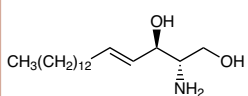
# Sphingoid Base

P1765 1g 5g



Phytosphingosine  
CAS RN: 554-62-1

S0874 25mg



D-Sphingosine  
CAS RN: 123-78-4

# Lipid Extracts, Oils

C0421 5mL 25mL

Croton Oil  
CAS RN: 8001-28-3

C0626 25mL 100mL 500mL

Cedar Oil  
CAS RN: 8000-27-9

O0051 25g

Origanum Oil  
CAS RN: 8007-11-2

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