

MATREYA



Lipids, Biochemicals,
and Standards for
Life Science Research

2011 - 2012

About Matreya LLC

- Matreya strives to develop, manufacture and deliver products of the highest value to our customers.
- Quality will always be the best achievable by state-of-the-art techniques, typically greater than 98%
- We strive for rapid delivery. 95+% of our products are shipped within 24 hours of receipt of an order.
- Within the area of sphingolipids and glycolipids, we have earned a reputation as the preferred problem solver and technology leader.
- When you demand quality and consistency, you may rely on Matreya lipids.

Matreya Products for Biochemistry Research.

We offer one of the widest selection of ceramides for intracellular signaling research available. We stock antibodies to glycosphingolipids as well as inhibitors of enzymes involved in glycosphingolipid metabolism.

Our products provide the valuable tools for the study of cell membrane and its structure, growth regulators in the cellular metabolism, and intracellular mediators.

We are able to make our products better and better with the latest technology in Chromatography, Mass Spectrometry, and NMR techniques.

We are proud to offer our products as a valuable tool for your life science research needs.

Matreya Products for Microbiology Research.

Matreya stocks many unusual fatty acid standards produced by bacteria that are useful for culture characterization.

Matreya Products for the Food and Agriculture Industries.

Many of Matreya's fatty acid products have been industry standards for many years. The acids and their methyl esters are used as standards in analysis and quality control.

Custom Preparations.

Our experience in chemical synthesis and the extraction and purification of natural products allows us to produce custom preparations with the same high quality and purity as the products listed in the catalog. Depending on the complexity of the molecule, delivery will be 4 to 12 weeks after receipt of an order, usually less than 6 weeks.

If you can't find a product in the catalog, please check the INDEX, where we also try to list common synonyms for our products.

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All chemicals listed in this catalog are for investigational use only. They are not intended for human consumption or to be used in food or food additives. None are for general drug or medicinal use on humans. We believe the information in this catalog, offered in good faith, is accurate.

Limited Warranty: All Matreya Products, except those specifically exempted, are warranted (for 30 days) to be free of defects in materials and workmanship, if properly stored. Any replacements required as a result of such defects will be made without charge provided that such defective products are returned with a written explanation. Please request a Returned Goods Authorization before returning products under this warranty.

Technical Service

Our technical service department may be contacted by telephone at 800.342.3595, or by e-mail to techservice@matreya.com.

Natural Products

Some of our glycolipids are extracted from natural sources. These products have a normal heterogeneity in their lipid components, particularly in the fatty acids. Variations include carbon chain length as well as the presence or absence of 2-hydroxy fatty acids. Products based on sphingosine may contain longer chain sphingoid bases as well as chains with multiple double bonds. This heterogeneity may result in additional spots showing on TLC plates or multiple peaks in LC analyses. We have listed the typical fatty acid compositions of our natural products in the appendix.

Storage

Catalog items in unopened containers are stable for at least one year when stored under the conditions indicated in the catalog listing. Items containing unsaturated fatty acids are subject to oxidation and should be stored in solution in organic solvents or under argon. Glycolipids and phospholipids should not be stored in aqueous solutions due to potential hydrolysis.

Sphingolipid Structures and Pathways

In a clear and straightforward manner, this wall chart indicates the structures and relationships between most commonly discussed sphingolipids. A one-page thumbnail version of the chart is shown on page 98. Full size copies (approximately 35 x 26 inches) are available on request to customer service.

Package Weight

Unless otherwise specified, the package will contain at least the indicated amount and usually slightly more. The user is cautioned to always measure the required amount from the container.

Matreya's Mission

Matreya is committed to manufacturing high purity lipids to be used as research standards in the biotechnology and pharmaceutical areas. These lipids will be offered world-wide at a fair market price, and at a profit sufficient to assure company growth, for the benefit of its customers, employees, share holders, and community. Matreya will also be committed to fast delivery, excellent technical backup, new product development, safety, and environmentally friendly.

NOTES

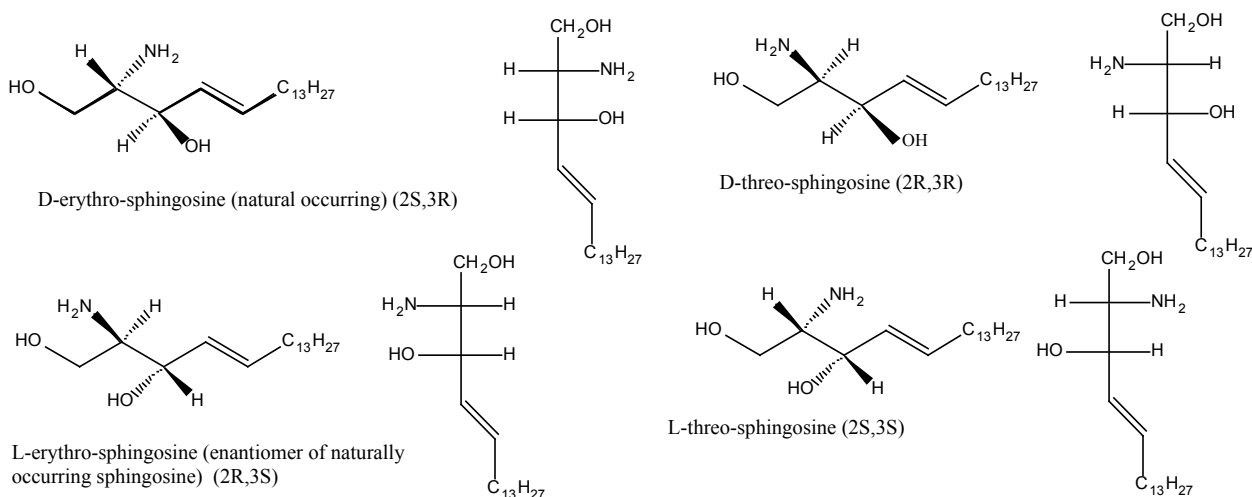
Spingoid Bases, Spingolipids and Glycospingolipids

Spingoid bases such as spingosine are the characteristic structural unit of the spingolipids. The bases are long chain aliphatic amines, containing two or three hydroxyl groups, and typically a *trans*-double bond at C4. In animal tissues most abundant base is spingosine with a C18 aliphatic chain containing a double bond in position 4. The saturated analogue is dihydrospingosine or spinganine. In plants the common long chain base is the 4 hydroxy saturated base phytospingosine.

Spingolipids are widely distributed in animal tissues, particularly cell membranes. Spingoid bases linked to fatty acids via an amide bond at C2 are ceramides and are present in trace amounts in most tissues. Glycospingolipids (ceramides having various mono- and oligosaccharides on the OH group at C1) are neutral glycospingolipids (i.e., cerebrosides and globosides). Those with sialic acid derivatized sugars are acidic glycolipids (i.e., gangliosides). They are amphiphilic and can be solubilized in buffers via sonication and micelle formation.

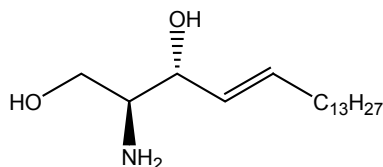
Gangliosides are present in substantial amounts in nerve cell membranes, and together with globosides are found in the membranes of white and red blood cells. These plus the glycospingolipids of the lacto- and neolacto-series are involved in cell recognition (e.g. blood group determinants). Glycolipid expression on the surface of cells determines their antigenicity as well as their status, i.e. differentiated vs. undifferentiated (embryonic), normal vs. malignant, etc. (51). The ganglioside GM1 stimulates nerve growth (189,190) and has been reported to have a curative effect on experimental Parkinsonism (191). For an overview see (192). Gangliosides are also being investigated as potential anti-tumor vaccines (194). Glycospingolipids are also essential for the correct functioning of cell surface receptors (193). Matreya is your best source for many spingolipids. Most of Matreya's spingosines and ceramides are fully synthetic and as such 98%+ pure. Others, particularly the glycospingolipids are highly purified natural products (98%+), and can be used either as standards or biochemical reagents without further purification.

Through total synthesis, all four isomers of spingosine are available as well as a number of spingosines with other than 18 carbons and a number of ceramides (for details in using ceramides in cell culture see Hauser et al. [9]). Fluorescent labeled ceramides, glycospingolipids and spingomyelins are also available for study. D. N. Brindley and his group have been exploring the interaction of ceramides, spingosine and spingosine 1-phosphate in regulating DNA synthesis and phospholipase D activity (195). **See Literature References on page 99.**



Sphingosines

Synthetic Sphingosines with C18 Sphingoid Base



Catalog number 1802

1802	D-erythro-Sphingosine Sphingosine, C18 chain C ₁₈ H ₃₇ NO ₂ CAS#: 123-78-4	25 mg	66.00
<p>Source: synthetic Mol. Wt.: 299 Purity: 98+% by TLC, GC Appearance: solid Solubility: alcohols, chloroform, DMSO Storage: -20°C References: 1,2,92,93,94,95</p> <p>Selective inhibitor of phosphokinase C</p>			
1806	L-threo-Sphingosine L-threo-Sphingosine, C18 chain C ₁₈ H ₃₇ NO ₂	10 mg	200.00
<p>Source: synthetic Mol. Wt.: 299 Purity: 98+% by TLC, GC Appearance: solid Solubility: chloroform, ethanol, methanol, DMSO Storage: -20°C</p>			
1826	L-erythro-Sphingosine L-erythro-Sphingosine, C18 chain C ₁₈ H ₃₇ NO ₂ CAS#: 6036-75-5	5 mg	226.00
<p>Source: synthetic Mol. Wt.: 299 Purity: 98+% by TLC, GC Appearance: solid Solubility: chloroform, ethanol, methanol, DMSO Storage: -20°C</p>			
1827	D-threo-Sphingosine D-threo-Sphingosine, C18 chain C ₁₈ H ₃₇ NO ₂ CAS#: 6036-85-7	5 mg	226.00
<p>Source: synthetic Mol. Wt.: 299 Purity: 98+% by TLC, GC Appearance: solid Solubility: chloroform, ethanol, methanol, DMSO Storage: -20°C</p>			
1304	Sphingosine D-erythro-Sphingosine C ₁₈ H ₃₇ NO ₂ CAS#: 123-78-4	10 mg	116.00
<p>Source: semisynthetic, bovine Mol. Wt.: 299 Purity: 98+% by TLC, GC Appearance: solid Solubility: alcohol, chloroform Storage: -20°C</p>			

Synthetic Sphingosines with Sphingoid Bases other than C18

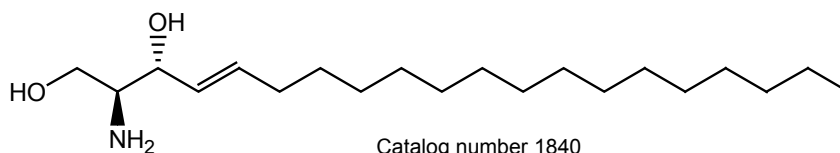
Varying chain lengths allow the study of translocation effects of sphingosines and ceramides into cells.

1833	D-erythro-C14-Sphingosine Sphingosine with C14 chain C ₁₄ H ₂₉ NO ₂	5 mg	200.00
<p>Source: synthetic Mol. Wt.: 243 Purity: 98+% by TLC, GC Appearance: solid Solubility: chloroform, ethanol, methanol, DMSO Storage: -20°C</p>			

1835 D-erythro-C16-Sphingosine 5 mg 200.00
 Sphingosine with C16 chain $C_{16}H_{33}NO_2$
Source: synthetic **Mol. Wt.:** 271 **Purity:** 98+% by TLC, GC **Appearance:** solid
Solubility: chloroform, ethanol, methanol **Storage:** $-20^{\circ}C$

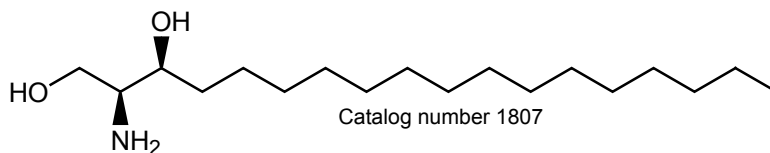
1838 D-erythro-C12-Sphingosine 5 mg 200.00
 Sphingosine with C12 chain $C_{12}H_{25}NO_2$ CAS#: 6918-49-6
Source: synthetic **Mol. Wt.:** 215 **Purity:** 98+% by TLC, GC **Appearance:** solid
Solubility: chloroform, ethanol, methanol **Storage:** $-20^{\circ}C$

1840 D-erythro-C20-Sphingosine 5 mg 195.00
 Sphingosine with C20 chain $C_{20}H_{41}NO_2$
Source: synthetic **Mol. Wt.:** 328 **Purity:** 98+% by TLC, GC **Appearance:** solid
Solubility: chloroform, ethanol, methanol, DMSO **Storage:** $-20^{\circ}C$



Synthetic Dihydrospingosines

D,L-*threo*- Dihydrospingosine has also been found to be a significant inhibitor of sphingosine kinase (6). The D,L-*erythro*-isomer has been used as an inactive control. We offer all four isomers in pure form making detailed studies possible. Safingol, the L-*threo*-isomer is a potent inhibitor of PKC and as such is capable of reversing multi-drug resistance in cancer cells (3). **See Literature References on page 99.**



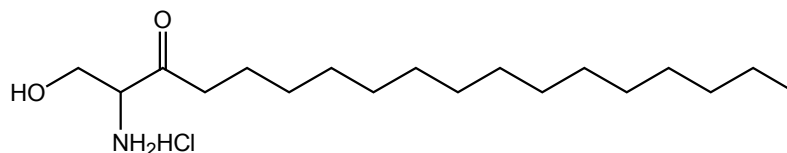
1807 L-threo-Dihydrospingosine (Safingol) 5 mg 150.00
1807-025 L-threo-Sphinganine, C18 chain $C_{18}H_{39}NO_2$ CAS#: 15639-50-6 25 mg 480.00
Source: synthetic **Mol. Wt.:** 301 **Melting Point ($^{\circ}C$):** 103-114 **Purity:** 98+% by TLC, GC **Appearance:** solid **Solubility:** chloroform, ethanol, methanol, DMSO
Storage: $-20^{\circ}C$ **References:** 3,4

1831 D-erythro-Dihydrospingosine 25 mg 123.00
1831-1 D-erythro-Sphinganine, C18 chain $C_{18}H_{39}NO_2$ CAS#: 764-22-7 1 g 2,153.00
Source: synthetic **Mol. Wt.:** 301 **Purity:** 98+% by TLC, GC **Appearance:** solid
Solubility: chloroform, ethanol, methanol, DMSO **Storage:** $-20^{\circ}C$
 Inhibitor of PLA_2 and PLD **References:** 5,6,3

1846 L-erythro-Dihydrospingosine 1 mg 95.00
 L-erythro-Sphinganine, C18 chain $C_{18}H_{39}NO_2$
Source: synthetic **Mol. Wt.:** 301 **Purity:** 98+% by TLC, GC **Appearance:** solid
Solubility: chloroform, ethanol, methanol, DMSO **Storage:** $-20^{\circ}C$ **References:** 5,6,3

1851	D-threo-Dihydrosphingosine D-threo-Sphinganine, C18 chain $C_{18}H_{39}NO_2$ CAS#: 6036-86-8	1 mg	145.00
	Source: synthetic Mol. Wt.: 301 Purity: 98+% by TLC, GC Appearance: solid Solubility: chloroform, ethanol, methanol, DMSO Storage: $-20^{\circ}C$ References: 5,6,3		
1324	D,L-erythro-Dihydrosphingosine D,L-erythro-Sphinganine, C18 chain $C_{18}H_{39}NO_2$ CAS#: 3102-56-5	25 mg	88.00
	Source: synthetic Mol. Wt.: 301 Purity: erythro 77%; threo 23% by TLC, GC Appearance: solid Solubility: chloroform, ethanol, methanol, DMSO Storage: $-20^{\circ}C$ References: 5,6,3 Inhibitor of sphingosine kinase		
1326	D,L-C16-Dihydrosphingosine (mixed isomers) D,L-Sphinganine with C16 chain $C_{16}H_{35}NO_2$	10 mg	95.00
	Source: synthetic Mol. Wt.: 273 Purity: erythro 90%, threo 10% by TLC, GC Appearance: solid Solubility: chloroform, ethanol, methanol, DMSO Storage: $-20^{\circ}C$ References: 5,6,3		
1845	D-erythro-C20-Dihydrosphingosine D-erythro-Sphinganine, C20 chain $C_{20}H_{43}NO_2$ CAS#: 24006-62-0	5 mg	123.00
	Source: synthetic Mol. Wt.: 330 Purity: 98+% by TLC, GC Appearance: solid Solubility: chloroform/methanol 5:1, warm ethanol Storage: $-20^{\circ}C$		
1839	D,L-erythro-C20-Dihydrosphingosine D,L-erythro-Sphinganine, C20 chain $C_{20}H_{43}NO_2$	10 mg	88.00
	Source: synthetic Mol. Wt.: 330 Purity: 98+% by TLC, GC Appearance: solid Solubility: chloroform/methanol 5:1, warm ethanol Storage: $-20^{\circ}C$		

3-Keto-Dihydrosphingosines

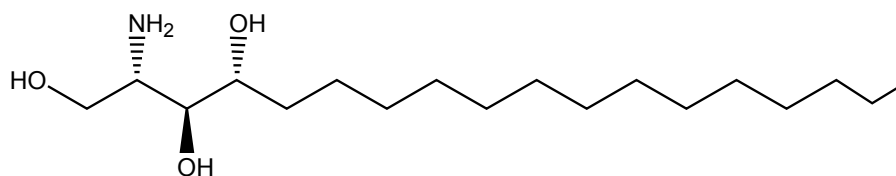


1876	3-keto-Dihydrosphingosine•HCl 3-keto-Sphinganine hydrochloride $C_{18}H_{37}NO_2 \cdot HCl$ CAS#: 18944-28-0	10 mg	350.00
	Source: synthetic Mol. Wt.: 336 Purity: 98+% by TLC, GC Appearance: solid Solubility: chloroform, ethanol, methanol Storage: $-20^{\circ}C$		
1891	3-keto-C6-Dihydrosphingosine•HCl 1-Hydroxy-2-amino-3-keto-hexane • HCl $C_6H_{13}NO_2 \cdot HCl$	10 mg	350.00
	Source: synthetic Mol. Wt.: 168 Purity: 98+% by TLC Appearance: solid Solubility: ethanol, methanol, DI water Storage: $-20^{\circ}C$		

1892 **3-keto-C8-Dihydrospingosine•HCl** **10 mg** **350.00**
 1-Hydroxy-2-amino-3-keto-octane • HCl $C_8H_{17}NO_2 \cdot HCl$
Source: synthetic **Mol. Wt.:** 196 **Purity:** 98+% by TLC **Appearance:** solid
Solubility: chloroform, ethanol, methanol, DI water **Storage:** -20°C

1893 **3-keto-C12-Dihydrospingosine•HCl** **10 mg** **350.00**
 1-Hydroxy-2-amino-3-keto-dodecane • HCl $C_{12}H_{25}NO_2 \cdot HCl$
Source: synthetic **Mol. Wt.:** 252 **Purity:** 98+% by TLC **Appearance:** solid
Solubility: chloroform, ethanol, methanol **Storage:** -20°C

Phytosphingosines

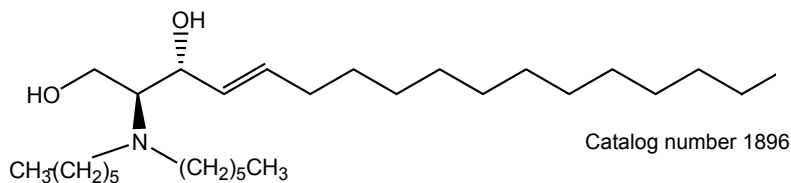


Catalog number 1330

1330 **Phytosphingosine** **50 mg** **95.00**
1330-1 4-Hydroxysphinganine $C_{18}H_{39}NO_3$ **CAS# 554-62-1** **1 g** **649.00**
Source: natural, yeast (*Pichia ciferri*) **Mol. Wt.:** 318 **Purity:** 98+% by TLC, GC
Appearance: solid **Solubility:** ethanol, methanol, chloroform/methanol 2:1 (warm)
Storage: -20°C **Reference:** 7

Other Sphingosine Derivatives and Precursors

1320 **N,N-Dimethyl-D-erythro-sphingosine** **5 mg/ml, 1 ml** **88.00**
 $C_{20}H_{41}NO_2$ **CAS#:** 119567-63-4
Source: synthetic **Mol. Wt.:** 328 **Purity:** 98+% by TLC **Appearance:** liquid
Solvent: isopropanol **Solubility:** chloroform, ethanol, isopropanol, methanol
Storage: -20°C **Reference:** 8
 Inhibitor of phosphokinase C



Catalog number 1896

1896 **N,N-Dihexyl-D-erythro-sphingosine** **5 mg/ml, 1 ml** **138.00**
 Sphingosine with tertiary amine group $C_{30}H_{61}NO_2$
Source: synthetic **Mol. Wt.:** 468 **Purity:** 95% by TLC **Appearance:** liquid
Solvent: ethanol **Solubility:** chloroform, ethanol, methanol **Storage:** -20°C

1805

N-Palmitoyl serinol

C₁₉H₃₉NO₃ CAS#: 126127-31-9

10 mg

108.00

Source: synthetic **Mol. Wt.:** 329 **Purity:** 98+% by TLC, GC **Appearance:** solid
Solubility: chloroform, methanol, ethanol **Storage:** -20°C

Sphingosine precursor

Ceramides

Ceramide is a fatty acid amide of sphingosine. It may be formed by dehydrogenation of dihydroceramide; by hydrolysis of sphingomyelin or glycosphingolipids; or by acylation of free sphingosine. Ceramide functions as a precursor in the synthesis of sphingomyelin (by an exchange reaction with phosphatidylcholine and phosphatidylethanolamine); of glycosphingolipids (by glycosylation with UDP-hexose); and of free sphingosine and fatty acid by hydrolysis. The sphingosine can be phosphorylated by a kinase to form sphingosine-1-phosphate, which may undergo further hydrolysis or cleavage.

Control of sphingolipid metabolism maintains vital balance points in cell physiology. Two of ceramide's metabolites, sphingosine-1-phosphate and glucosylceramide, produce cell proliferation. Sphingosine-1-phosphate is also a highly active regulator of angiogenesis, vascular maturation, cardiac development, immunity, and directed cell movement. Sphingosine, the free base, is a potent inhibitor of protein kinase C and is involved in intracellular calcium regulation.

Sphingolipid enzymes seem to be particularly active in cancers, so modifying their activities by exogenous action may provide alternatives to chemical therapies. These enzymes are controlled by many known agents, such as 1,25-dihydroxy-vitamin D₃, tumor necrosis factor- α , nerve growth factor, interleukin 1, endothelial growth factor, glutathione, arachidonic acid, dexamethasone, many anticancer drugs, therapeutic radiation, and activators of the FAS receptor.

Ceramide exerts numerous biological effects, including induction of cell maturation, cell cycle arrest, terminal cell differentiation, cell senescence, and cell death. Other effects include producing reactive oxygen in mitochondria (followed by apoptosis) and stimulating phosphorylation of certain proteins (especially mitogen activated protein). It also stimulates some protein phosphatases (especially protein phosphatase 2A). Thus ceramide is an important controller of protein activity

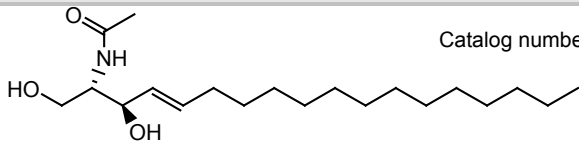
It is apparent from these relationships that ceramide exists at the crux of several enzyme reaction cycles and that experiments involving sphingolipid function call for control of all of the cycles and their branch-off points. Matreya is the major supplier of these lipids, which can be used as standards for analysis of tissues (a much needed part of modern research) and identification of major sphingolipids.

Ceramides with short side chains have been shown to enter easily into cells where they are biologically active. Ceramides with longer side chains, however, also enter cells if dissolved in dodecane-isopropanol first. Fluorescent labeled ceramides and sphingomyelin made from fluorescent labeled acids instead of plain fatty acids are also available for the study of the localization and metabolism of sphingolipids in the cell. Matreya now offers all four isomers of C2, C4, C6 and C18 ceramides. The corresponding dihydroceramides are being used as inactive controls

In three major reviews, Radin (196-198) has discussed the biochemistry and chemistry of ceramide and outlined many potential approaches to cancer therapy using ceramides and related compounds as generators of apoptosis.

See Literature References on page 99.

Synthetic Ceramides Derived from C18-Sphingosine



Catalog number 1901

1901	N-Acetyl-D-erythro-sphingosine N-C2:0-D-erythro-Ceramide $C_{20}H_{39}NO_3$ CAS#: 3102-57-6	10 mg	70.00
	Source: synthetic Mol. Wt.: 342 Purity: 98+ by TLC, GC Appearance: solid Solubility: chloroform, ethanol, methanol, DMSO, (up to 5 mg/ml) Storage: $-20^{\circ}C$ Reference: 9		
1829	N-Acetyl-L-threo-sphingosine N-C2:0-L-threo-Ceramide $C_{20}H_{39}NO_3$	1 mg	101.00
	Source: synthetic Mol. Wt.: 342 Purity: 98+% by TLC, GC Appearance: solid Solubility: chloroform, ethanol, methanol, DMSO, DMF (up to 5 mg/ml) Storage: $-20^{\circ}C$ Reference: 9		
1847	N-Acetyl-L-erythro-sphingosine N-C2:0-L-erythro-Ceramide $C_{20}H_{39}NO_3$	1 mg	88.00
	Source: synthetic Mol. Wt.: 342 Purity: 98+% by TLC, GC Appearance: solid Solubility: chloroform, ethanol, methanol, DMSO, DMF (up to 5 mg/ml) Storage: $-20^{\circ}C$ Reference: 9		
1900	N-Hexanoyl-D-erythro-sphingosine N-C6:0-D-erythro-Ceramide $C_{24}H_{47}NO_3$ CAS#: 124753-97-5	10 mg	88.00
	Source: synthetic Mol. Wt.: 398 Purity: 98+% by TLC, GC Appearance: solid Solubility: chloroform, ethanol, DMSO (up to 5 mg/ml) Storage: $-20^{\circ}C$ Reference: 9		
1828	N-Hexanoyl-L-threo-sphingosine N-C6:0-L-threo-Ceramide $C_{24}H_{47}NO_3$	1 mg	116.00
	Source: synthetic Mol. Wt.: 398 Purity: 98+% by TLC, GC Appearance: solid Solubility: chloroform, ethanol, DMSO, DMF (up to 5mg/ml) Storage: $-20^{\circ}C$ Reference: 9		
1848	N-Hexanoyl-L-erythro-sphingosine N-C6:0-L-erythro-Ceramide $C_{24}H_{47}NO_3$	1 mg	101.00
	Source: synthetic Mol. Wt.: 398 Purity: 98+% by TLC; GC Appearance: solid Solubility: chloroform, ethanol, DMSO, DMF (up to 5mg/ml) Storage: $-20^{\circ}C$ Reference: 9		
1809	N-Hexanoyl-D-threo-sphingosine N-C6:0-D-threo-Ceramide $C_{24}H_{47}NO_3$	1 mg	116.00
	Source: synthetic Mol. Wt.: 398 Purity: 98+% by TLC, GC Appearance: solid Solubility: chloroform, methanol, DMSO (up to 5 mg/ml) Storage: $-20^{\circ}C$ References: 9,102,103,104		

1903	N-Octanoyl-D-erythro-sphingosine N-C8:0-D-erythro-Ceramide C ₂₆ H ₅₁ NO ₃ CAS#: 74713-59-0	10 mg	88.00
	Source: synthetic Mol. Wt.: 426 Purity: 98+ by TLC, GC Appearance: solid Solubility: chloroform, ethanol, methanol, DMSO (up to 5 mg/ml) Storage: -20°C Reference: 9		
1830	N-Octanoyl-L-threo-sphingosine N-C8:0-L-threo-Ceramide C ₂₆ H ₅₁ NO ₃	1 mg	116.00
	Source: synthetic Mol. Wt.: 426 Purity: 98+% by TLC, GC Appearance: solid Solubility: chloroform, ethanol, DMSO, DMF (up to 5 mg/ml) Storage: -20°C Reference: 9		
1810	N-Octanoyl-D-threo-sphingosine N-C8:0-D-threo-Ceramide C ₂₆ H ₅₁ NO ₃	1 mg	116.00
	Source: synthetic Mol. Wt.: 426 Purity: 98+% by TLC, GC Appearance: solid Solubility: chloroform, ethanol, DMSO, DMF (up to 5mg/ml) Storage: -20°C Reference: 9		
1333	N-Decanoyl-D-erythro-sphingosine N-C10:0-D-erythro-Ceramide C ₂₈ H ₅₅ NO ₃	10 mg	76.00
	Source: synthetic Mol. Wt.: 454 Purity: 98+% by TLC, GC Appearance: solid Solubility: chloroform, ethanol, methanol, DMSO, (up to 5mg/ml) Storage: -20°C		
2037	N-Pentadecanoyl-D-erythro-sphingosine N-C15:0-D-erythro-Ceramide C ₃₃ H ₆₅ NO ₃	10 mg	88.00
	Source: synthetic Mol. Wt.: 524 Purity: 98+% by TLC, GC Appearance: solid Solubility: chloroform, warm ethanol, warm methanol Storage: -20°C		
1915	N-Hexadecanoyl-D-erythro-sphingosine N-C16:0-D-erythro-Ceramide C ₃₄ H ₆₇ NO ₃ CAS#: 24696-26-2	10 mg	88.00
	Source: synthetic Mol. Wt.: 538 Purity: 98+% by TLC, GC Appearance: solid Solubility: chloroform, warm ethanol, warm methanol Storage: -20°C Reference: 10		
2038	N-Heptadecanoyl-D-erythro-sphingosine N-C17:0-D-erythro-Ceramide C ₃₅ H ₆₉ NO ₃ CAS#: 67492-16-4	10 mg	88.00
	Source: synthetic Mol. Wt.: 552 Purity: 98+% by TLC, GC Appearance: solid Solubility: chloroform, warm ethanol, warm methanol Storage: -20°C		
1832	N-Octadecanoyl-D-erythro-sphingosine N-C18:0-D-erythro-Ceramide C ₃₆ H ₇₁ NO ₃ CAS#: 2304-81-6	10 mg	80.00
	Source: synthetic Mol. Wt.: 566 Purity: 98+% by TLC, GC Appearance: solid Solubility: chloroform, hot ethanol, chloroform/methanol 2:1 (up to 5mg/ml) Storage: -20°C Reference: 9		

2039	N-Nonadecanoyl-D-erythro-sphingosine N-C19:0-D-erythro-Ceramide C ₃₇ H ₇₃ NO ₃	10 mg	95.00
Source: synthetic Mol. Wt.: 580 Purity: 98+% by TLC, GC Appearance: solid Solubility: chloroform, warm ethanol, warm methanol Storage: -20°C			
1843	N-Octadecanoyl-L-threo-sphingosine N-C18:0-L-threo-Ceramide C ₃₆ H ₇₁ NO ₃	1 mg	101.00
Source: synthetic Mol. Wt.: 566 Purity: 98+% by TLC, GC Appearance: solid Solubility: chloroform, ethanol, DMSO, DMF (up to 5mg/ml) Storage: -20°C Reference: 9			
1850	N-Octadecanoyl-L-erythro-sphingosine N-C18:0-L-erythro-Ceramide C ₃₆ H ₇₁ NO ₃	1 mg	101.00
Source: synthetic Mol. Wt.: 566 Purity: 98+% by TLC, GC Appearance: solid Solubility: chloroform, ethanol, DMSO, DMF (up to 5mg/ml) Storage: -20°C Reference: 9			
1855	N-Octadecanoyl-D-threo-sphingosine N-C18:0-D-threo-Ceramide C ₃₆ H ₇₁ NO ₃	1 mg	116.00
Source: synthetic Mol. Wt.: 566 Purity: 98+% by TLC, GC Appearance: solid Solubility: chloroform, ethanol, DMSO, DMF (up to 5mg/ml) Storage: -20°C			
1916	N-Tetracosanoyl-D-erythro-sphingosine N-C24:0-D-erythro-Ceramide C ₄₂ H ₈₃ NO ₃ CAS#: 34435-05-7	5 mg	95.00
Source: synthetic Mol. Wt.: 650 Purity: 98+% by TLC, GC Appearance: solid Solubility: chloroform Storage: -20°C			
1930	N-Tetracosenoyl-D-erythro-sphingosine N-cis 15-C24:1-D-erythro-ceramide; N-Nervonoyl-D-erythro-sphingosine C ₄₂ H ₈₁ NO ₃ CAS#: 54164-50-0	5 mg	95.00
Source: synthetic Mol. Wt.: 648 Purity: 98+% by TLC, GC Appearance: solid Solubility: chloroform, ethanol, DMSO, warm methanol Storage: -20°C			

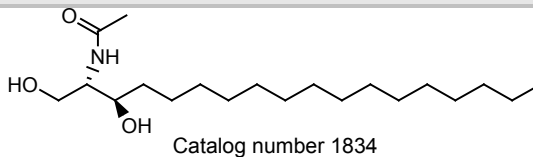
2-Hydroxy Ceramides

2042	N-(R,S)-alpha-Hydroxydodecanoyl-D-erythro-sphingosine N-(R,S)-alpha-Hydroxy-C12:0-D-erythro-ceramide C ₃₀ H ₅₉ NO ₄	5 mg	150.00
Source: synthetic Mol. Wt.: 498 Purity: 98+% by TLC, GC Appearance: solid Solubility: chloroform, methanol, ethanol, DMSO Storage: -20°C			
2044	N-(R,S)-alpha-Hydroxyoctadecanoyl-D-erythro-sphingosine N-(R,S)-alpha-Hydroxy-C18:0-D-erythro-ceramide C ₃₆ H ₇₁ NO ₄	5 mg	150.00
Source: synthetic Mol. Wt.: 582 Purity: 98+% by TLC, GC Appearance: solid Solubility: chloroform/methanol/water, 2:1:0.5 Storage: -20°C			

Ceramide Made from Sphingosines with Sphingoid Bases Other Than C18

1842	N-Acetyl-D-erythro-sphingosine (C14 sphingoid base) N-C2:0 Ceramide of D-erythro-C14-sphingosine C ₁₆ H ₃₁ NO ₃	5 mg	175.00
	Source: synthetic Mol. Wt.: 285 Purity: 98+% by TLC, GC Appearance: solid Solubility: chloroform, ethanol, DMSO, DMF (up to 5 mg/ml) Storage: -20°C Reference: 9		

Dihydroceramides



1834	N-Acetyl-D-erythro-dihydro-sphingosine N-C2:0-D-erythro-Dihydroceramide; N-Acetyl-D-erythro-sphinganine C ₂₀ H ₄₁ NO ₃	5 mg	65.00
	Source: synthetic Mol. Wt.: 344 Purity: 98+% by TLC, GC Appearance: solid Solubility: chloroform, ethanol, methanol Storage: -20°C Reference: 9		

1910	N-Hexanoyl-D-erythro-dihydro-sphingosine N-C6:0-D-erythro-Dihydroceramide; N-Hexanoyl-D-erythro-sphinganine C ₂₄ H ₄₉ NO ₃	5 mg	65.00
	Source: synthetic Mol. Wt.: 400 Purity: 98+% by TLC, GC Appearance: solid Solubility: chloroform, ethanol, methanol, DMSO Storage: -20°C Reference: 9		

1854	N-Octanoyl-D-erythro-dihydro-sphingosine N-C8:0-D-erythro-Dihydroceramide; N-Octanoyl-D-erythro-sphinganine C ₂₆ H ₅₃ NO ₃	5 mg	65.00
	Source: synthetic Mol. Wt.: 428 Purity: 98+% by TLC, GC Appearance: solid Solubility: chloroform, ethanol, DMSO Storage: -20°C Reference: 9		

2041	N-Octadecanoyl-D-erythro-dihydro-sphingosine N-C18:0-D-erythro-Dihydroceramide; N-Octadecanoyl-D-erythro-sphinganine C ₃₆ H ₇₃ NO ₃	10 mg	101.00
	Source: synthetic Mol. Wt.: 568 Purity: 98% by TLC Appearance: solid Solubility: warm chloroform/methanol, 5:1; hot ethanol, DMSO Storage: -20°C		

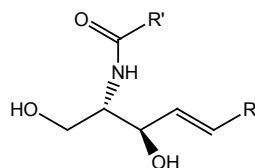
2-Hydroxy Dihydroceramides

2043	N-(R,S)-alpha-Hydroxydodecanoyl-D-erythro-dihydro-sphingosine N-(R,S)-alpha-Hydroxy-C12:0-D-erythro-dihydroceramide C ₃₀ H ₆₁ NO ₄	5 mg	160.00
	Source: synthetic Mol. Wt.: 500 Purity: 98+% by TLC, GC Appearance: solid Solubility: chloroform/methanol/water, 2:1:0.5 Storage: -20°C		

2045	N-(R,S)-alpha-Hydroxyoctadecanoyl-D-erythro-dihydrosphingosine N-(R,S)-alpha-Hydroxy-C18:0-D-erythro-dihydroceramide C ₃₆ H ₇₃ NO ₄	5 mg	160.00
Source: synthetic Mol. Wt.: 584 Purity: 98+% by TLC, GC Appearance: solid Solubility: chloroform/methanol/water, 2:1:0.5 Storage: -20°C			

2047	N-(R,S)-alpha-Hydroxyhexadecanoyl-D-erythro-dihydrosphingosine N-(R,S)-alpha-Hydroxy-C16:0-D-erythro-dihydroceramide C ₃₄ H ₆₉ NO ₄	5 mg	99.00
Source: synthetic Mol. Wt.: 556 Purity: 98+% by TLC Appearance: solid Solubility: chloroform/methanol/water, 2:1:0.5 Storage: -20°C			

Ceramides From Natural Sources



General ceramide structure

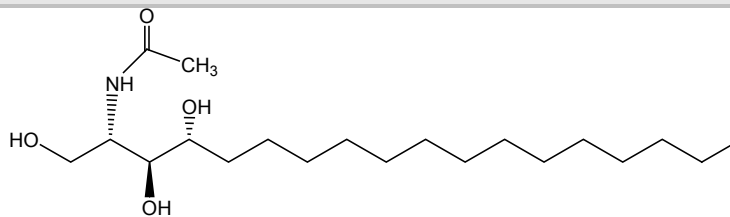
1056	Ceramides Ceramides with hydroxy and non-hydroxy acyl groups C ₄₂ H ₈₃ NO ₄ CAS#: 104404-17-13	25 mg	88.00
Source: natural, bovine Mol. Wt.: 666(2-hydroxy-lignoceroyl) Purity: 98+% by TLC Appearance: solid Solubility: chloroform/methanol 2:1 Storage: -20°C Reference: 9			

1322 1322-05	Ceramides Ceramides with mostly non-hydroxy acyl groups C ₃₆ H ₇₁ NO ₃	10 mg 50 mg	66.00 223.00
Source: natural, bovine Mol. Wt.: 566 (stearoyl) Purity: 98+% by TLC Appearance: solid Solubility: chloroform/methanol 2:1, ethanol Storage: -20°C Reference: 9			

1323 1323-05	Ceramides Ceramides with mostly hydroxy acyl groups C ₃₆ H ₇₁ NO ₄	10 mg 50 mg	66.00 223.00
Source: natural, bovine Mol. Wt.: 582 (2-hydroxy-stearoyl) Purity: 98+% by TLC Appearance: solid Solubility: chloroform/methanol 2:1, methanol Storage: -20°C References: 9,102,103,104			

See Table III in Appendix for typical fatty acid content of products prepared from natural sources.

Phytoceramides



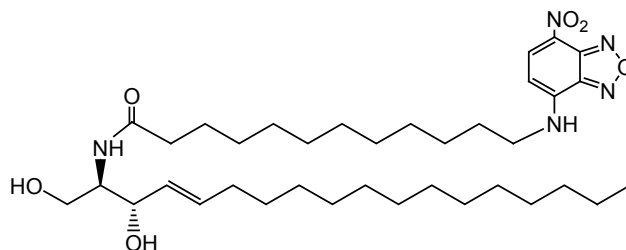
Catalog number 1897

1897	N-Acetyl-phytosphingosine N-C2:0-Phytoceramide C ₂₀ H ₄₁ NO ₄	5 mg	88.00
<p>Source: semisynthetic, yeast (<i>Pichia ciferri</i>) Mol. Wt.: 360 Purity: 98+% by TLC, GC Appearance: solid Solubility: ethanol, methanol, chloroform/methanol 1:1 (warm), warm DMSO Storage: -20°C</p>			
1895	N-Hexanoyl-phytosphingosine N-C6:0-Phytoceramide C ₂₄ H ₄₉ NO ₄	5 mg	88.00
<p>Source: semisynthetic, yeast (<i>Pichia ciferri</i>) Mol. Wt.: 416 Purity: 98+% by TLC, GC Appearance: solid Solubility: ethanol, methanol, chloroform/methanol 1:1 (warm) Storage: -20°C</p>			
1894	N-Octanoyl-phytosphingosine N-C8:0-Phytoceramide C ₂₆ H ₅₃ NO ₄	5 mg	88.00
<p>Source: semisynthetic, yeast (<i>Pichia ciferri</i>) Mol. Wt.: 444 Purity: 98+% by TLC, GC Appearance: solid Solubility: ethanol, methanol, chloroform/methanol 1:1 (warm) Storage: -20°C</p>			
2035	N-Hexadecanoyl-phytosphingosine N-C16:0-Phytoceramide C ₃₄ H ₆₉ NO ₄	5 mg	88.00
<p>Source: semisynthetic, yeast (<i>Pichia ciferri</i>) Mol. Wt.: 556 Purity: 98+% by TLC, GC Appearance: solid Solubility: chloroform/methanol 5:1 Storage: -20°C</p>			
2034	N-Stearoyl-phytosphingosine N-C18:0-Phytoceramide C ₃₆ H ₇₃ NO ₄	5 mg	88.00
<p>Source: semisynthetic, yeast (<i>Pichia ciferri</i>) Mol. Wt.: 584 Purity: 98+% by TLC-MS Appearance: solid Solubility: chloroform/methanol 1:1 (warm) Storage: -20°C</p>			
2036	N-Tetracosanoyl-phytosphingosine N-C24:0-Phytoceramide C ₄₂ H ₈₅ NO ₄	5 mg	108.00
<p>Source: semisynthetic, yeast (<i>Pichia ciferri</i>) Mol. Wt.: 668 Purity: 98+% by TLC-MS Appearance: solid Solubility: chloroform/methanol 5:1 Storage: -20°C</p>			

Fluorescent Ceramides

1841 **N-Hexanoyl-NBD-D-erythro-sphingosine** **100 µg** **175.00**
1841-001 N-C6:0-NBD-ceramide; N-C6:0-NBD-D-erythro-sphingosine, fluorescent; N-(NBD-aminocaproyl)-D-erythro-sphingosine **1 mg** **453.00**
 $C_{30}H_{49}N_5O_6$ **CAS#:** 86701-10-2

Source: synthetic **Mol. Wt.:** 575 **Melting Point (°C):** 85.7-87.9 **Purity:** 98+% by TLC **Appearance:** solid **Solubility:** chloroform, ethanol, methanol
Storage: -20°C **Reference:** 9



Catalog number 1618

Excitation: 460 nm
Emission: 535 nm

1618 **N-Dodecanoyl-NBD-D-erythro-sphingosine** **100 µg** **126.00**
1618-001 N-C12:0-NBD ceramide; N-C12:0-NBD-D-erythro-sphingosine, fluorescent; N-(NBD-aminolauroyl)-D-erythro-sphingosine **1 mg** **453.00**
 $C_{36}H_{61}N_5O_6$

Source: synthetic **Mol. Wt.:** 660 **Purity:** 98+% by TLC **Appearance:** solid
Solubility: chloroform/methanol 2:1, methanol **Storage:** -20°C

1857 **N-Hexanoyl-NBD-L-threo-sphingosine** **100 µg** **139.00**
1857-001 N-C6:0-NBD-ceramide; N-C6:0-NBD-L-threo-sphingosine, fluorescent; N-(NBD-aminocaproyl)-L-threo-sphingosine **1 mg** **453.00**
 $C_{30}H_{49}N_5O_6$

Source: synthetic **Mol. Wt.:** 575 **Purity:** 98+% by TLC **Appearance:** solid
Solubility: chloroform, ethanol, methanol **Storage:** -20°C **Reference:** 9

1620 **N-Dodecanoyl-NBD-L-threo-sphingosine** **100 µg** **139.00**
1620-001 N-C12:0-NBD-ceramide; N-C12:0-NBD-L-threo-sphingosine, fluorescent; N-(NBD-aminolauroyl)-L-threo-sphingosine **1 mg** **453.00**
 $C_{36}H_{61}N_5O_6$

Source: synthetic **Mol. Wt.:** 660 **Purity:** 98+% by TLC **Appearance:** solid
Solubility: chloroform/methanol 2:1, methanol **Storage:** -20°C

1624 **N-Hexanoyl-NBD-L-threo-dihydrosphingosine** **100 µg** **126.00**
1624-001 N-C6:0-NBD-dihydroceramide; N-C6:0-NBD-L-threo-dihydrosphingosine, fluorescent; N-(NBD-aminocaproyl)-L-threo-dihydrosphingosine **1 mg** **453.00**
 $C_{30}H_{51}N_5O_6$

Source: synthetic **Mol. Wt.:** 578 **Purity:** 98+% by TLC **Appearance:** solid
Solubility: chloroform/methanol 2:1, methanol **Storage:** -20°C

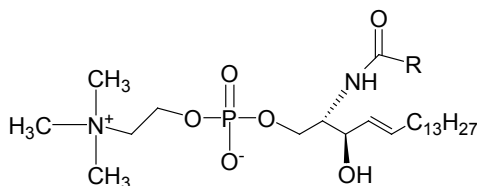
1623 **N-Dodecanoyl-NBD-L-threo-dihydrosphingosine** **100 µg** **126.00**
1623-001 N-C12:0-NBD-dihydroceramide; N-C12:0-NBD-L-threo-dihydrosphingosine, fluorescent; N-(NBD-aminolauroyl)-L-threo-dihydrosphingosine **1 mg** **453.00**
 $C_{36}H_{63}N_5O_6$

Source: synthetic **Mol. Wt.:** 662 **Purity:** 98+% by TLC **Appearance:** solid
Solubility: chloroform/methanol 2:1, methanol **Storage:** -20°C

1626 1626-001	N-Hexanoyl-NBD-D-erythro-dihydrosphingosine N-C6:0-NBD-dihydroceramide; N-C6:0-NBD-D-erythro-dihydrosphingosine, fluorescent; N-(NBD-aminocaproyl)-D-erythro-dihydrosphingosine C ₃₀ H ₅₁ N ₅ O ₆	100 µg 1 mg	108.00 453.00
Source: synthetic Mol. Wt.: 578 Purity: 98+% by TLC Appearance: solid Solubility: chloroform/methanol 2:1, methanol Storage: -20°C			
1625 1625-001	N-Dodecanoyl-NBD-D-erythro-dihydrosphingosine N-C12:0-NBD-dihydroceramide; N-C12:0-NBD-D-erythro-dihydrosphingosine, fluorescent; N-(NBD-aminolauroyl)-D-erythro-dihydrosphingosine C ₃₆ H ₆₃ N ₅ O ₆	100 µg 1 mg	114.00 453.00
Source: synthetic Mol. Wt.: 662 Purity: 98+% by TLC Appearance: solid Solubility: chloroform/methanol 2:1, methanol Storage: -20°C			
1628 1628-001	N-Hexanoyl-NBD-phytosphingosine N-C6:0-NBD-phytoceramide; N-C6:0-NBD-phytosphingosine, fluorescent; N-(NBD-aminocaproyl)-phytosphingosine C ₃₀ H ₅₁ N ₅ O ₇	100 µg 1 mg	108.00 453.00
Source: semisynthetic, bacteria Mol. Wt.: 594 Purity: 98+% by TLC Appearance: solid Solubility: chloroform/methanol 2:1, methanol Storage: -20°C			
1627 1627-001	N-Dodecanoyl-NBD-phytosphingosine N-C12:0-NBD-phytoceramide; N-C12:0-NBD-phytosphingosine, fluorescent; N-(NBD-aminolauroyl)-phytosphingosine C ₃₆ H ₆₃ N ₅ O ₇	100 µg 1 mg	114.00 453.00
Source: semisynthetic, bacteria Mol. Wt.: 678 Purity: 98+% by TLC Appearance: solid Solubility: chloroform/methanol 2:1, methanol Storage: -20°C			
See Biochemicals and Reagents section (page 87) for additional fluorescent labeled products.			
Compounds with fluorescent labels other than NBD are available on custom basis. Contact Technical Service for more information.			

Phosphosphingolipids

Sphingomyelins

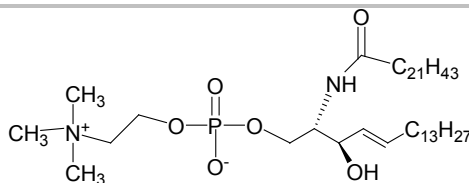


Catalog number 1051

1051 1051-1	Sphingomyelin SPM; ceramide-1-phosphorylcholine C ₄₁ H ₈₃ N ₂ O ₆ P CAS#: 85187-10-6	25 mg 1 g	40.00 450.00
Source: natural, bovine spinal cord Mol. Wt.: 731 (stearoyl) Purity: 98+% by TLC Appearance: solid Solubility: chloroform, ethanol, methanol Storage: -20°C References: 119,120,145,146,147			
Predominately C18:0 and C24:1 fatty acids			

1328	Sphingomyelin SPM; Ceramide-1-phosphorylcholine C ₄₇ H ₉₅ N ₂ O ₆ P CAS#: 85187-10-6	25 mg	40.00
	Source: natural, porcine RBC Mol. Wt.: 815 (lignoceroyl) Purity: 98+% by TLC Appearance: solid Solubility: chloroform, ethanol Storage: -20°C Predominately C16:0 and C24:0 fatty acids		
1329	Sphingomyelin SPM; Ceramide-1-phosphorylcholine C ₄₆ H ₉₃ N ₂ O ₆ P CAS#: 85187-10-6	25 mg	40.00
	Source: natural, bovine buttermilk Mol. Wt.: 801 (tricosanoyl) Purity: 98+% by TLC Appearance: solid Solubility: chloroform, ethanol Storage: -20°C Approximately equal amounts of C16:0, C22:0, C23:0, and C24:0 fatty acids		
1332 1332-1	Sphingomyelin SPM; Ceramide-1-phosphorylcholine C ₃₉ H ₇₉ N ₂ O ₆ P	25 mg 1 gram	40.00 450.00
	Source: natural, chicken, egg Mol. Wt.: 703 (palmitate) Purity: 98+% by TLC Appearance: solid Solubility: chloroform, methanol, warm ethanol Storage: -20°C References: 119,120,145,177,178		
1907	N-Acetyl-sphingosylphosphorylcholine Sphingomyelin with C2:0 fatty acid C ₂₅ H ₅₁ N ₂ O ₆ P	5 mg	158.00
	Source: semisynthetic, bovine buttermilk Mol. Wt.: 506 Purity: 98+% by TLC Appearance: solid Solubility: ethanol, chloroform/methanol 2:1 Storage: -20°C Mixture of D-erythro and L-threo isomers		
1909	N-Hexanoyl-sphingosylphosphorylcholine Sphingomyelin with C6:0 fatty acid C ₂₉ H ₅₉ N ₂ O ₆ P	5 mg	158.00
	Source: semisynthetic, bovine buttermilk Mol. Wt.: 563 Purity: 98+% by TLC Appearance: solid Solubility: ethanol, chloroform/methanol 2:1 Storage: -20°C Mixture of D-erythro and L-threo isomers		
1911	N-Octadecanoyl-sphingosylphosphorylcholine Sphingomyelin with C18:0 fatty acid C ₄₁ H ₈₃ N ₂ O ₆ P	5 mg	158.00
	Source: semisynthetic, bovine buttermilk Mol. Wt.: 731 Purity: 98+% by TLC Appearance: solid Solubility: chloroform, ethanol, methanol Storage: -20°C Mixture of D-erythro and L-threo isomers		
1890	N-Heptadecanoyl-sphingosylphosphorylcholine Sphingomyelin with C17:0 fatty acid C ₄₀ H ₈₁ N ₂ O ₆ P	5 mg	158.00
	Source: semisynthetic, bovine buttermilk Mol. Wt.: 717 Purity: 98+% by TLC Appearance: solid Solubility: chloroform, ethanol, methanol Storage: -20°C Mixture of D-erythro and L-threo isomers		

1917	N-Eicosanoyl-D-erythro-sphingosylphosphorylcholine Sphingomyelin with C20:0 fatty acid C ₄₃ H ₈₇ N ₂ O ₆ P	0.5 mg	158.00
<p>Source: semisynthetic, bovine buttermilk Mol. Wt.: 759 Purity: 98+% by TLC Appearance: solid Solubility: chloroform/methanol 14:1, ethanol, methanol Storage: -20°C</p>			



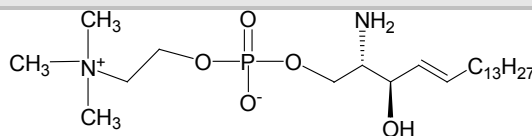
Catalog number 1918

1918	N-Docosanoyl-D-erythro-sphingosylphosphorylcholine Sphingomyelin with C22:0 fatty acid C ₄₅ H ₉₁ N ₂ O ₆ P	0.5 mg	158.00
<p>Source: semisynthetic, bovine buttermilk Mol. Wt.: 787 Purity: 98+% by TLC Appearance: solid Solubility: chloroform/methanol 14:1, ethanol, methanol Storage: -20°C</p>			

2200	N-1-¹³C-Palmitoyl-sphingosylphosphorylcholine D-erythro-Sphingomyelin with 1- ¹³ C-palmitic acid; SPM with ¹³ C labeled fatty acid ¹² C ₃₈ ¹³ CH ₇₉ N ₂ O ₆ P	1 mg	158.00
<p>Source: semisynthetic, bovine buttermilk Mol. Wt.: 703 Purity: 98+% by TLC Appearance: solid Solubility: chloroform, ethanol, methanol Storage: -20°C</p>			

1327	N-Acyl-sphingosylphosphorylethanolamine Ceramide phosphorylethanolamine C ₄₄ H ₈₉ N ₂ O ₆ P	5 mg	132.00
<p>Source: semisynthetic, bovine buttermilk Mol. Wt.: 773 (based on tricosanoyl) Purity: 98+% by TLC Appearance: solid Solubility: chloroform/methanol 2:1 Storage: -20°C</p>			

Sphingosylphosphorylcholines (SPC)



Catalog number 1318

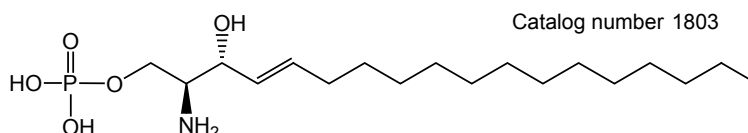
1318	D-erythro-Sphingosylphosphorylcholine D-erythro-SPC C ₂₃ H ₄₉ N ₂ O ₅ P	5 mg	219.00
<p>Source: semisynthetic, bovine buttermilk Mol. Wt.: 464 Purity: 98+% by TLC Appearance: solid Solubility: chloroform/methanol 2:1 Storage: -20°C</p>			

1319	L-threo-Sphingosylphosphorylcholine L-threo-SPC C ₂₃ H ₄₉ N ₂ O ₅ P	5 mg	219.00
<p>Source: semisynthetic, bovine buttermilk Mol. Wt.: 464 Purity: 98+% by TLC Appearance: solid Solubility: chloroform/methanol 2:1 Storage: -20°C</p>			

1321	Sphingosylphosphorylcholine	10 mg	201.00
1321-05	lyso-Sphingomyelin; SPC (mixture of D-erythro and L-threo isomers) C ₂₃ H ₄₉ N ₂ O ₅ P CAS#: 82970-80-7	50 mg	799.00
Source: semisynthetic, bovine buttermilk Mol. Wt.: 466 Purity: 98+% by TLC Appearance: solid Solubility: chloroform/methanol 2:1 Storage: -20°C			

1913	lyso-Dihydro sphingomyelin	1 mg	114.00
	Dihydro sphingosylphosphorylcholine (mixture of D-erythro and L-threo isomers) C ₂₃ H ₅₁ N ₂ O ₅ P		
Source: semisynthetic, bovine buttermilk Mol. Wt.: 467 Purity: 98+% by TLC Appearance: solid Solubility: chloroform/methanol 2:1 Storage: -20°C			

Sphingosine Phosphates

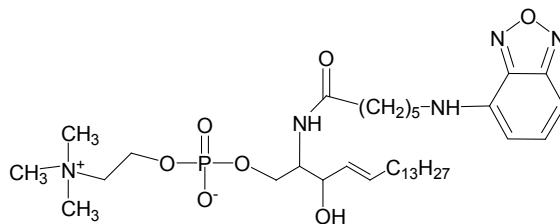


1803	D-erythro-Sphingosine-1-phosphate	5 mg	240.00
	S-1-P, S-P-A C ₁₈ H ₃₈ NO ₅ P CAS#: 26993-30-6		
Source: synthetic Mol. Wt.: 380 Purity: 98+% by TLC Appearance: solid Solubility: chloroform/methanol/40% dimethylamine, 5:15:3, 1mg/ml; chloroform plus a few drops of TFA Storage: -20°C References: 10,11,12,13,14			

1852	D-erythro-Dihydro sphingosine-1-phosphate	5 mg	240.00
	C ₁₈ H ₄₀ NO ₅ P CAS#: 19794-97-9		
Source: synthetic Mol. Wt.: 382 Purity: 98+% by TLC Appearance: solid Solubility: chloroform/methanol/40% dimethylamine, 5:15:3, 1mg/ml; chloroform plus a few drops of TFA Storage: -20°C			

2046	N-Hexadecanoyl-D-erythro-sphingosine-1-phosphate, NH₄⁺ salt	5 mg	325.00
	N-C16:0-Ceramide-1-phosphate C ₃₄ H ₆₈ NO ₆ P		
Source: synthetic Mol. Wt.: 618 Purity: 98+% by TLC Appearance: solid Solubility: chloroform/methanol/acetic acid, 60:15:25 Storage: -20°C			

Fluorescent Sphingomyelins



Catalog number 1912

Excitation: 460 nm
Emission: 535 nm

1912 1912-001	N-Hexanoyl-NBD-sphingosylphosphorylcholine N-C6:0-NBD-sphingomyelin, fluorescent; N-C6:0-NBD-sphingosylphosphorylcholine; fluorescent sphingomyelin; N-(NBD-aminocaproyl)-sphingomyelin C ₃₅ H ₆₁ N ₆ O ₉ P CAS#: 94885-04-8	100 µg 1 mg	95.00 250.00
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Source: semisynthetic, bovine buttermilk **Mol. Wt.:** 740 **Purity:** 98+% by TLC
Appearance: solid **Solubility:** chloroform, ethanol, methanol
Storage: -20°C

Mixture of D-erythro and L-threo isomers

1619 1619-001	N-Dodecanoyl-NBD-sphingosylphosphorylcholine N-C12:0-NBD-sphingomyelin, fluorescent; N-C12:0-NBD-sphingosylphosphorylcholine; fluorescent sphingomyelin; N-(NBD-aminolauroyl)-sphingomyelin C ₄₁ H ₇₃ N ₆ O ₉ P	100 µg 1 mg	126.00 275.00
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Source: semisynthetic, bovine buttermilk **Mol. Wt.:** 825 **Purity:** 98+% by TLC
Appearance: solid **Solubility:** chloroform/methanol 2:1, methanol
Storage: -20°C

Mixture of D-erythro and L-threo isomers

See Biochemicals and Reagents section (page 87) for additional fluorescent labeled products.

Compounds with fluorescent labels other than NBD are available on custom basis. Contact Technical Service for more information.

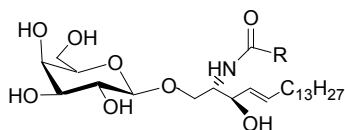
Glycosphingolipids

Glycosphingolipids are widely distributed in animal and plant tissues. They consist of a ceramide (Cer) bound in glycosidic linkage through the primary hydroxyl to a mono- or oligosaccharide which may contain substituents such as a sulfate, acetate, or phosphate group. They are amphiphilic and the less glycosylated compounds can be dispersed in buffers by dissolving them in a detergent or organic solvent (EtOH, DMSO, isoPrOH) and mixing by sonication.

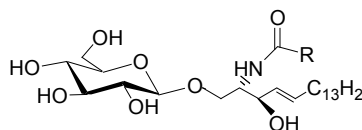
Galactosphingolipids, mainly GalCer (cerebrosides) and its sulfate ester, occur in large amounts in the nervous system. Glucosphingolipids, the simplest of which is GlcCer (glucocerebrosides), are very widely distributed, particularly in nerve cell membranes. GlcCer is isolated from a variety of natural sources including human, bovine, and plant. Each of these sources has a heterogeneity in the fatty acid content of the ceramide as well as an occasional variation in the sphingoid chain. Globosides (containing both glucose and galactose) are a prominent group of glycosphingolipids, they contain an α -linked galactose moiety and are typically located in blood cell membranes. Gangliosides are another prominent group of glycosphingolipids; they are acidic because of substitution with sialic (neuraminic) acid. The glycosphingolipids function in a wide range of enzyme and structural interactions, such as immunological or membrane recognition phenomena, binding of microbial pathogens, hormone and growth factor actions, cancer cell growth and malignancy, atherosclerosis, genetic disease errors, blood group determinants, etc. Tissues change in glycosphingolipid composition during embryogenesis, maturation, aging, and other vital physiological processes. Some glycosphingolipids stimulate cell proliferation, others induce apoptosis, effects of great significance to cancer therapy and maturational development. Marked differences in glycosphingolipid composition are seen in normal and cancerous cells. See references 41, 199-210.

See Literature References on page 99.

Galactosylceramides and Glucosylceramides



Galactosylceramide



Glucosylceramide

1050	Cerebrosides Galactosylceramide, ceramide beta-D-galactoside C ₄₈ H ₉₃ NO ₈ CAS#: 85305-88-0 Source: natural, bovine Mol. Wt.: 812 (lignoceryl form) Purity: 98+% by TLC Appearance: solid Solubility: chloroform/methanol 2:1 Storage: -20°C Contains both hydroxy and non-hydroxy fatty acid side chains	50 mg	76.00
1066	Cerebroside, Kerasin (top spot) Galactosylceramide with mostly non-hydroxy fatty acid side chain C ₄₂ H ₈₁ NO ₈ CAS#: 536-13-0 Source: natural, bovine Mol. Wt.: 810 (nervonyl, [24:1]) Purity: 98+% by TLC Appearance: solid Solubility: chloroform/methanol/water 2:1:0.5 Storage: -20°C	10 mg	95.00

1138 Cerebroside, Phrenosin (bottom spot) **10 mg** **95.00**
Galactosylceramide with mostly 2-hydroxy fatty acid side chains
 $C_{42}H_{81}NO_9$ **CAS#:** 37211-11-3

Source: natural, bovine **Mol. Wt.:** 743 (2-hydroxystearoyl) **Purity:** 98+% by TLC
Appearance: solid **Solubility:** chloroform/methanol/water 2:1:0.5 **Storage:** $-20^{\circ}C$

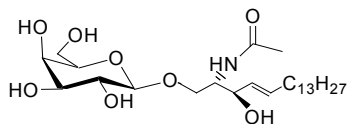
1305 Psychosine, (in free amine form) **10 mg** **158.00**
lyso-Cerebroside; 1-beta-D-galactosylsphingosine
 $C_{24}H_{47}NO_7$ **CAS#:** 2238-90-6

Source: semisynthetic, bovine **Mol. Wt.:** 461 **Purity:** 98+% by TLC
Appearance: solid **Solubility:** ethanol, chloroform/methanol/water 5:1:0.1
Storage: $-20^{\circ}C$ **References:** 248,249,250

1914 N-Stearoyl-D₃₅-psychosine, perdeuterated **5 mg** **263.00**
Cerebrosides with N-C18:0-D₃₅ fatty acid side chain $C_{42}H_{46}D_{35}NO_8$

Source: semisynthetic, bovine **Mol. Wt.:** 762 **Purity:** 98+% by TLC
Appearance: solid **Solubility:** chloroform, hot ethanol, chloroform/methanol 2:1
Storage: $-20^{\circ}C$

Deuterium labeled stearoyl-sidechain



Catalog number 1325

1325 N-Acetyl-psychosine **10 mg** **132.00**
N-C₂:0-Cerebroside; cerebroside with C₂:0 fatty acid $C_{26}H_{49}NO_8$

Source: semisynthetic, bovine **Mol. Wt.:** 503 **Purity:** 98+% by TLC
Appearance: solid **Solubility:** chloroform, ethanol, methanol **Storage:** $-20^{\circ}C$

1335 N-Pentadecanoyl-psychosine **5 mg** **95.00**
N-C₁₅:0-Cerebroside $C_{39}H_{75}NO_8$

Source: semisynthetic, bovine **Mol. Wt.:** 685 **Purity:** 98+% by TLC
Appearance: solid **Solubility:** chloroform/ methanol, 2:1 **Storage:** $-20^{\circ}C$

1334 N-Octanoyl-β-D-galactosylceramide **10 mg** **233.00**
1334-50 N-C₈:0-Galactosylceramide $C_{32}H_{61}NO_8$ **50 mg** **812.00**

Source: semisynthetic, bovine **Mol. Wt.:** 588 **Purity:** 98+% by TLC
Appearance: solid **Solubility:** chloroform/ methanol, 9:1, ethanol, methanol
Storage: $-20^{\circ}C$

1621	N-Hexanoyl-NBD-galactosylceramide	100 µg	126.00
1621-001	N-C6:0-NBD-beta-D-galactosylsphingosine; N-C6:0-NBD-cerebroside; N-C6:0-NBD-galactosylceramide, fluorescent; N-(NBD-aminocaproyl)-galactosylsphingosine C ₃₆ H ₅₉ N ₅ O ₁₁	1 mg	453.00

Source: semisynthetic, bovine **Mol. Wt.:** 738 **Purity:** 98+% by TLC
Appearance: solid **Solubility:** chloroform/ methanol, 5:1, methanol
Storage: -20°C

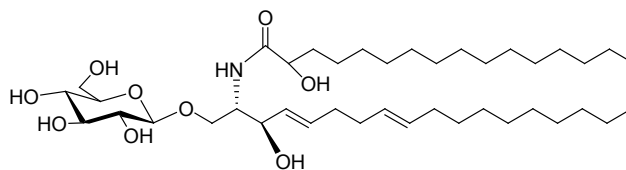
1633	N-Dodecanoyl-NBD-galactosylceramide	100 µg	101.00
1633-001	N-C12:0-NBD-beta-D-galactosylsphingosine; N-(NBD-aminododecanoyl)-beta-D-galactosylsphingosine; N-C12:0-NBD-cerebroside; N-C12:0-NBD-galactosylceramide, fluorescent C ₄₂ H ₇₁ N ₅ O ₁₁	1 mg	453.00

Source: semisynthetic, bovine spinal cord **Mol. Wt.:** 822 **Purity:** 98+% by TLC
Appearance: solid **Solubility:** chloroform/ methanol, 2:1; chloroform; DMSO
Storage: -20°C

1521	Glucocerebrosides	5 mg	114.00
1521-50	Glucosylceramide; ceramide beta-D-glucoside C ₄₆ H ₈₉ NO ₈	50 mg	874.00

Source: natural, bovine buttermilk **Mol. Wt.:** 784 (docosanoyl) **Purity:** 98+% by TLC **Appearance:** solid **Solubility:** chloroform/methanol 2:1 **Storage:** -20°C

See Table III (p 90-94) for side chain variants



Catalog number 1522

1522	Glucocerebrosides, plant	5 mg	51.00
1522-100	Glucosylceramide; ceramide beta-D-glucoside C ₄₀ H ₇₅ NO ₉	100 mg	712.00

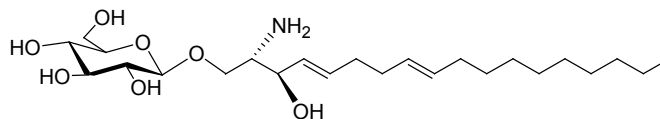
Source: natural, plant **Mol. Wt.:** 714 (2-hydroxyhexadecanoyl) **Purity:** 98+% by TLC **Appearance:** solid **Solubility:** chloroform/methanol 2:1 **Storage:** -20°C

Sphingoid backbone is >95% 4,8-sphingadiene (C18:2 t,t-4,8) and most of the fatty acids are of the 2-hydroxy type. See Table III page 90-94.

1622	N-Hexanoyl-NBD-glucosylceramide	100 µg	126.00
1622-001	N-C6:0-NBD-beta-D-glucosylsphingosine; N-C6:0-NBD-glucosylceramide, fluorescent C ₃₆ H ₅₉ N ₅ O ₁₁	1 mg	453.00

Source: semisynthetic, bovine **Mol. Wt.:** 738 **Purity:** 98+% by TLC
Appearance: solid **Solubility:** chloroform/methanol 5:1, methanol
Storage: -20°C

1306 **Glucopsychosine** **5 mg** **219.00**
 Glucosylsphingosine; lyso-glucocerebroside; 1-beta-D-glucosylsphingosine
 $C_{24}H_{47}NO_7$ **CAS#:** 52050-17-6
Source: semisynthetic, bovine buttermilk **Mol. Wt.:** 461 **Purity:** 98+% by TLC
Appearance: solid **Solubility:** ethanol, methanol, chloroform/methanol 2:1
Storage: -20°C



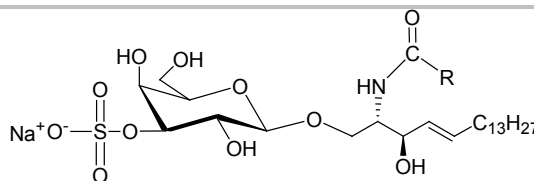
Catalog number 1310

1310 **Glucopsychosine** **5 mg** **158.00**
 Glucosylsphingosine; lyso-glucocerebroside; 1-beta-D-glucosylsphingadienine
 $C_{24}H_{45}NO_7$ **CAS#:** 52050-17-6
Source: natural, plant **Mol. Wt.:** 460 (based on 1-beta-D-glucosylsphinga-4,8-dienine)
Purity: 98+% by TLC **Appearance:** solid **Solubility:** chloroform/methanol 4:1
Storage: -20°C

Sphingoid backbone is >95% 4,8-sphingadiene (C18:2 t,t-4, 8)

1531 **N-Docosanoyl-glucopsychosine** **1 mg** **263.00**
 Glucocerebroside with C22:0 fatty acid side chain; N-Docosanoyl-β-glucosylsphingosine
 $C_{46}H_{89}NO_8$
Source: semisynthetic, bovine **Mol. Wt.:** 784 **Purity:** 98+% by TLC
Appearance: solid **Solubility:** chloroform **Storage:** -20°C

1533 **N-Palmitoyl-D₃-glucopsychosine, deuterated** **1 mg** **250.00**
 N-C16:0-D₃-Glucopsychosine; Glucocerebroside with C16:0-D₃ fatty acid side chain
 $C_{40}H_{74}D_3NO_8$
Source: semisynthetic, bovine buttermilk **Mol. Wt.:** 703 **Purity:** 98+% by TLC
Appearance: solid **Solubility:** chloroform/methanol 2:1 **Storage:** -20°C

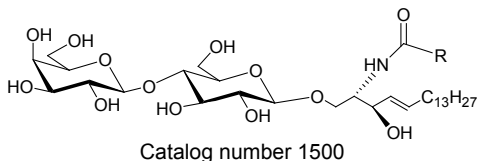


Catalog number 1049

1049 **Sulfatides** **50 mg** **325.00**
 Ceramide-galactoside-3-sulfate; cerebroside sulfate $C_{42}H_{80}NNaO_{11}S$
CAS#: 85496-63-5
Source: natural, bovine **Mol. Wt.:** 830 (stearoyl) Na⁺ Salt **Purity:** 98+% by TLC
Appearance: solid **Solubility:** chloroform/methanol/water 2:1:0.1 (if needed, a few drops of acetic acid) DMSO **Storage:** -20°C **References:** 64,65,66

1904	lyso-Sulfatide (NH₄⁺ salt) Sphingosine-1-galactoside-3-sulfate C ₂₄ H ₄₇ NO ₁₀ S CAS#: 38621-58-8	1 mg	370.00
	Source: semisynthetic, bovine Mol. Wt.: 542 Purity: 98+% by TLC Appearance: solid Solubility: chloroform/methanol 2:1 Storage: -20°C References: 64,71,72		
2076	N-Acetyl-sulfatide N-C2:0-sulfatide; N-acetyl-sphingosyl-beta-D-galactoside-3-sulfatide C ₂₆ H ₄₉ NO ₁₁ S	1 mg	250.00
	Source: semisynthetic, bovine Mol. Wt.: 584 Purity: 98+% by TLC Appearance: solid Solubility: chloroform/methanol 1:1, ethanol, methanol Storage: -20°C		
1875	N-Palmitoyl-sulfatide Sulfatide with C16:0 fatty acid side chain; N-palmitoyl-sphingosyl-beta-D-galactoside-3-sulfate C ₄₀ H ₇₇ NO ₁₁ S	1 mg	250.00
	Source: semisynthetic, bovine Mol. Wt.: 780 Purity: 98+% by TLC Appearance: solid Solubility: chloroform/methanol 2:1 Storage: -20°C References: 64,71,72		
1888	N-Tetracosanoyl-sulfatide N-C24:0-Sulfatide; N-tetracosanoyl-sphingosyl-beta-D-galactoside-3-sulfate C ₄₈ H ₉₃ NO ₁₁ S	1 mg	275.00
	Source: semisynthetic, bovine Mol. Wt.: 892 Purity: 98+% by TLC Appearance: solid Solubility: chloroform/methanol 5:1 Storage: -20°C		
1536	N-Octadecanoyl-D₃-sulfatide N-C18:0-D ₃ -Sulfatide C ₄₂ H ₇₈ D ₃ NO ₁₁ S	1 mg	357.00
	Source: semisynthetic, bovine Mol. Wt.: 811 Purity: 98+% by TLC Appearance: solid Solubility: chloroform/methanol/DI water 2:1:0.1 Storage: -20°C		
1632 1632-001	N-Dodecanoyl-NBD-sulfatide N-C12:0-NBD-sulfatide; N-Dodecanoyl-NBD-lyso-sulfatide; N-Dodecanoyl-NBD-sphingosyl-beta-D-galactoside-3-sulfate C ₄₂ H ₇₁ N ₅ O ₁₄ S	100 µg 1 mg	102.00 453.00
	Source: semisynthetic, bovine Mol. Wt.: 901 Purity: 98+% by TLC Appearance: solid Solubility: chloroform/methanol 2:1 Storage: -20°C		

Lactosylceramides

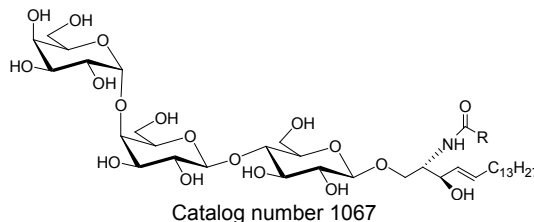


1500	Lactosylceramide LC, lactocerebrosides; CDH, ceramide beta-lactoside C ₄₈ H ₉₁ NO ₁₃ CAS#: 4682-48-8	1 mg	126.00
<p>Source: natural, porcine RBC Mol. Wt.: 890 (stearoyl) Purity: 98+% by TLC Appearance: solid Solubility: chloroform/methanol/water 5:1:0.1, DMSO Storage: -20°C References: 127,128,129</p> <p>Contains 2-hydroxy fatty acids (See Table III)</p>			
1507 1507-50	Lactosylceramide LC; lactocerebrosides; CDH, ceramide beta-lactoside C ₅₃ H ₁₀₁ NO ₁₃ CAS#: 4682-48-8	5 mg 50 mg	175.00 1,200.00
<p>Source: natural, bovine buttermilk Mol. Wt.: 960 (tricosanoyl) Purity: 98+% by TLC Appearance: solid Solubility: chloroform/methanol/water 5:1:0.1 Storage: -20°C References: 127,128,129</p>			
1517	lyso-Lactosylceramide Lactosylsphingosine; lyso-LC C ₃₀ H ₅₇ NO ₁₂	1 mg	160.00
<p>Source: semisynthetic, bovine buttermilk Mol. Wt.: 623 Purity: 98+% by TLC Appearance: solid Solubility: chloroform/methanol/water 2:1:0.1 Storage: -20°C</p>			
1532	N-Palmitoyl-lactosylceramide Lactosylceramide with C16:0 fatty acid side chain C ₄₆ H ₈₇ NO ₁₃	1 mg	115.00
<p>Source: semisynthetic, bovine buttermilk Mol. Wt.: 862 Purity: 98+% by TLC Appearance: solid Solubility: chloroform/methanol/water 2:1:0.1 Storage: -20°C</p>			
1534	N-Palmitoyl-D₃-lactosylceramide, deuterated N-C16:0-D ₃ -Lactosylceramide; lactosylceramide with C16:0-D ₃ fatty acid side chain C ₄₆ H ₈₄ D ₃ NO ₁₃	1 mg	324.00
<p>Source: semisynthetic, bovine buttermilk Mol. Wt.: 864 Purity: 98+% by TLC Appearance: solid Solubility: chloroform/methanol/water 5:1:0.1 Storage: -20°C</p>			
1629 1629-001	N-Hexanoyl-NBD-lactosylceramide N-Hexanoyl-NBD-beta-D-lactosylsphingosine; N-C6:0-NBD-beta-D-lactosylsphingosine; N-C6:0-NBD-lactosylceramide, fluorescent; fluorescent LC; N-(NBD-aminocaproyl)-lactosylsphingosine C ₄₂ H ₆₉ N ₅ O ₁₆	50 ug 1 mg	158.00 684.00
<p>Source: semisynthetic, bovine buttermilk Mol. Wt.: 900 Purity: 98+% by TLC Appearance: solid Solubility: chloroform/methanol 2:1 Storage: -20°C</p>			

1630	N-Dodecanoyl-NBD-lactosylceramide	50 µg	175.00
1630-001	N-Dodecanoyl-NBD-beta-D-lactosylsphingosine; N-C12:0-NBD-beta-D-lactosylsphingosine; N-C12:0-NBD-lactosylceramide, fluorescent; fluorescent LC; N-(NBD-aminolauroyl)-lactosylsphingosine $C_{48}H_{81}N_5O_{16}$	1 mg	684.00

Source: semisynthetic, bovine buttermilk **Mol. Wt.:** 984 **Purity:** 98+% by TLC
Appearance: solid **Solubility:** chloroform/methanol 2:1 **Storage:** -20°C

Ceramide Trihexosides



1067	Ceramide trihexosides	1 mg	245.00
1067-10	CTH; Gb3; globotriaosylceramide $C_{60}H_{113}NO_{18}$ CAS#: 71965-57-6	10 mg	1,935.00

Source: natural, porcine RBC **Mol. Wt.:** 1137 (tetracosanoyl) **Purity:** 98+% by TLC
Appearance: solid **Solubility:** chloroform/methanol 2:1, DMSO, hot methanol
Storage: -20°C **References:** 135,136,137,138,139

Contains hydroxy and non-hydroxy fatty acid side chains

1513	Ceramide trihexosides (top spot)	0.5 mg	175.00
	CTH with non-hydroxy fatty acid side chain $C_{54}H_{101}NO_{18}$		

Source: natural, porcine RBC **Mol. Wt.:** 1052 (stearoyl) **Purity:** 98+% by TLC
Appearance: solid **Solubility:** chloroform/methanol 2:1 **Storage:** -20°C
References: 130,131,132,133,134

1514	Ceramide trihexosides (bottom spot)	0.5 mg	200.00
	CTH with hydroxy fatty acid side chain $C_{54}H_{101}NO_{19}$		

Source: natural, porcine RBC **Mol. Wt.:** 1068 (hydroxystearoyl) **Purity:** 98+% by TLC
Appearance: solid **Solubility:** chloroform/methanol 1:1, DMSO, hot methanol
Storage: -20°C **References:** 15,16

1520	lyso-Ceramide trihexoside	1 mg	370.00
	lyso-CTH; lyso-globotriaosylsphingosine $C_{36}H_{67}NO_{17}$ CAS# 126550-86-5		

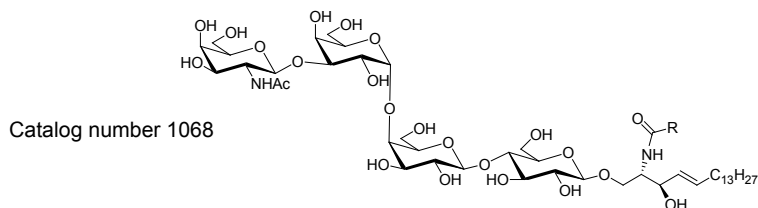
Source: semisynthetic, porcine RBC **Mol. Wt.:** 786 **Purity:** 98+% by TLC
Appearance: solid **Solubility:** chloroform/methanol/water 2:1:0.1 **Storage:** -20°C
References: 109,110,111,112,113

1523	N-Heptadecanoyl ceramide trihexoside	0.5 mg	275.00
	N-C17:0-Ceramide trihexoside; N-heptadecanoyl globotriaosylceramide $C_{53}H_{99}NO_{18}$		

Source: semisynthetic, porcine RBC **Mol. Wt.:** 1038 **Purity:** 98+% by TLC
Appearance: solid **Solubility:** chloroform/methanol 2:1, DMSO, hot methanol
Storage: -20°C

1524	N-Tricosanoyl ceramide trihexoside N-C23:0-Ceramide trihexoside; N-tricosanoyl globotriaosylceramide $C_{59}H_{111}NO_{18}$	0.5 mg	275.00
	Source: semisynthetic, porcine RBC Mol. Wt.: 1122 Purity: 98+% by TLC Appearance: solid Solubility: chloroform/methanol 2:1, DMSO, hot methanol Storage: -20°C		
1631 1631-001	N-Dodecanoyl-NBD-ceramide trihexoside N-C12:0-NBD-CTH; N-C12:0-NBD-globotriaosylceramide; N-(NBD-aminolauroyl) ceramide trihexoside $C_{54}H_{91}N_5O_{21}$	100 µg 1 mg	158.00 684.00
	Source: semisynthetic, porcine RBC Mol. Wt.: 1145 Purity: 98+% by TLC Appearance: solid Solubility: chloroform/methanol 2:1: DMSO; hot methanol Storage: -20°C		
1537	N-Octadecanoyl-D₃-ceramide trihexoside C18:0-D ₃ -CTH; C18:0-D ₃ -Gb3; N-Octadecanoyl-D ₃ -globotriaosylceramide $C_{54}H_{98}D_3NO_{18}$	0.5 mg	300.00
	Source: semisynthetic, porcine RBC Mol. Wt.: 1055 Purity: 98+% by TLC Appearance: solid Solubility: chloroform/methanol 2:1, DMSO Storage: -20°C		

Globosides



1068	Globosides Gb4; globotetrahexosylceramide $C_{68}H_{126}N_2O_{23}$ CAS#: 11034-93-8	5 mg	314.00
	Source: natural, porcine RBC Mol. Wt.: 1340 (tetracosanoyl) Purity: 98+% by TLC Appearance: solid Solubility: chloroform/methanol 2:1, DMSO, hot methanol Storage: -20°C References: 163,164,165		

Labeled Glycolipids

Stable Isotopes

1914	N-Stearoyl-D₃₅-psychosine, perdeuterated Cerebrosides with N-C18:0-D ₃₅ fatty acid side chain $C_{42}H_{46}D_{35}NO_8$	5 mg	263.00
	Source: semisynthetic, bovine Mol. Wt.: 762 Purity: 98+% by TLC Appearance: solid Solubility: chloroform, hot ethanol, chloroform/methanol 2:1 Storage: -20°C		
	Deuterium labeled stearoyl-sidechain		

1533	N-Palmitoyl-D₃-glucopsychosine, deuterated N-C16:0-D ₃ -Glucopsychosine; glucocerebroside with C16:0-D ₃ fatty acid side chain C ₄₀ H ₇₄ D ₃ NO ₈	1 mg	250.00
	Source: semisynthetic, bovine buttermilk Mol. Wt.: 703 Purity: 98+% by TLC Appearance: solid Solubility: chloroform/methanol 2:1 Storage: -20°C		
1534	N-Palmitoyl-D₃-lactosylceramide, deuterated N-C16:0-D ₃ -Lactosylceramide; lactosylceramide with C16:0-D ₃ fatty acid side chain C ₄₆ H ₈₄ D ₃ NO ₁₃	1 mg	324.00
	Source: semisynthetic, bovine buttermilk Mol. Wt.: 864 Purity: 98+% by TLC Appearance: solid Solubility: chloroform/methanol/water 5:1:0.1 Storage: -20°C		
1536	N-Octadecanoyl-D₃-sulfatide N-C18:0-D ₃ -Sulfatide C ₄₂ H ₇₈ D ₃ NO ₁₁ S	1 mg	357.00
	Source: semisynthetic, bovine Mol. Wt.: 811 Purity: 98+% by TLC Appearance: solid Solubility: chloroform/methanol/DI water 2:1:0.1 Storage: -20°C		
1537	N-Octadecanoyl-D₃-ceramide trihexoside C18:0-D ₃ -CTH; C18:0-D ₃ -Gb3; N-Octadecanoyl-D ₃ -globotriaosylceramide C ₅₄ H ₉₈ D ₃ NO ₁₈	0.5 mg	300.00
	Source: semisynthetic, porcine Mol. Wt.: 1055 Purity: 98+% by TLC Appearance: solid Solubility: chloroform/methanol 2:1, DMSO Storage: -20°C		

Fluorescent Compounds

1621	N-Hexanoyl-NBD-galactosylceramide	100 µg	101.00
1621-001	N-C6:0-NBD-beta-D-galactosylsphingosine; N-C6:0-NBD-cerebroside; N-C6:0-NBD-galactosylceramide, fluorescent; N-(NBD-aminocaproyl)-beta-D-galactosylsphingosine C ₃₆ H ₅₉ N ₅ O ₁₁	1 mg	453.00
	Source: semisynthetic, bovine Mol. Wt.: 738 Purity: 98+% by TLC Appearance: solid Solubility: chloroform/methanol 5:1, methanol Storage: -20°C		
1622	N-Hexanoyl-NBD-glucosylceramide	100 µg	126.00
1622-001	N-C6:0-NBD-beta-D-glucosylsphingosine; N-C6:0-NBD-glucosylceramide, fluorescent; N-(NBD-aminocaproyl)-beta-D-glucosylsphingosine C ₃₆ H ₅₉ N ₅ O ₁₁	1 mg	453.00
	Source: semisynthetic, bovine Mol. Wt.: 738 Purity: 98+% by TLC Appearance: solid Solubility: chloroform/methanol 5:1, methanol Storage: -20°C		
1629	N-Hexanoyl-NBD-lactosylceramide	50 µg	158.00
1629-001	N-Hexanoyl-NBD-beta-D-lactosylsphingosine; N-C6:0-NBD-beta-D-lactosylsphingosine; N-C6:0-NBD-lactosylceramide, fluorescent: fluorescent LC; N-(NBD-aminocaproyl)-beta-D-lactosylsphingosine C ₄₂ H ₆₉ N ₅ O ₁₆	1 mg	684.00
	Source: semisynthetic, bovine buttermilk Mol. Wt.: 900 Purity: 98+% by TLC Appearance: solid Solubility: chloroform/methanol 2:1 Storage: -20°C		

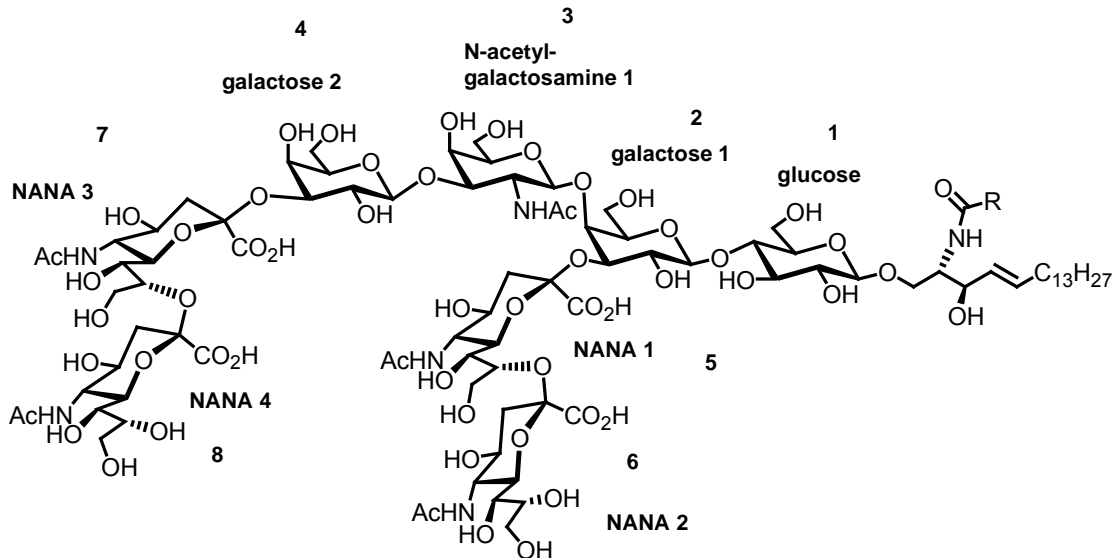
1630	N-Dodecanoyl-NBD-lactosylceramide	50 µg	175.00
1630-001	N-Dodecanoyl-NBD-beta-D-lactosylsphingosine; N-C12:0-NBD-beta-D-lactosylsphingosine; N-C12:0-NBD-lactosylceramide, fluorescent; fluorescent LC; N-(NBD-aminolauroyl)-beta-D-lactosylsphingosine C ₄₈ H ₈₁ N ₅ O ₁₆	1 mg	684.00
Source: semisynthetic, bovine buttermilk Mol. Wt.: 984 Purity: 98+% by TLC Appearance: solid Solubility: chloroform/methanol 2:1 Storage: -20°C			
1631	N-Dodecanoyl-NBD-ceramide trihexoside	100 µg	158.00
1631-001	N-C12:0-NBD-CTH; N-C12:0-NBD-globotriaosylceramide; N-(NBD-aminolauroyl) ceramide trihexoside C ₅₄ H ₉₁ N ₅ O ₂₁	1 mg	684.00
Source: semisynthetic, porcine RBC Mol. Wt.: 1145 Purity: 98+% by TLC Appearance: solid Solubility: chloroform/methanol 2:1: DMSO; hot methanol Storage: -20°C			
1632	N-Dodecanoyl-NBD-sulfatide	100 µg	102.00
1632-001	N-C12:0-NBD-sulfatide; N-Dodecanoyl-NBD-lyso-sulfatide; N-Dodecanoyl-NBD-sphingosyl-beta-D-galactoside-3-sulfate; N-(NBD-amniolauroyl) sulfatide C ₄₂ H ₇₁ N ₅ O ₁₄ S	1 mg	453.00
Source: semisynthetic, bovine Mol. Wt.: 901 Purity: 98+% by TLC Appearance: solid Solubility: chloroform/methanol 2:1 Storage: -20°C			

See Biochemicals and Reagents section (page 87) for additional fluorescent labeled products.

Compounds with fluorescent labels other than NBD are available on custom basis. Contact Technical service for more information.

Gangliosides

The diagram below can be used with the general formulas given in the ganglioside descriptions to construct the individual structures.



1064	Gangliotetraosylceramide Asialo GM ₁ ; Gg4 C ₆₂ H ₁₁₄ N ₂ O ₂₃ CAS#: 71012-19-6	1 mg	289.00
	Source: semisynthetic, bovine Mol. Wt.: 1256 (stearoyl) Purity: 98+% by TLC Appearance: solid Solubility: chloroform/methanol/water 2:1:0.1, forms micellar solution in water Storage: -20°C References: 73,114,140,141		
	General formula: 1,2,3,4		
1512	Gangliotriosylceramide Asialo GM ₂ ; Gg3 C ₅₆ H ₁₀₄ N ₂ O ₁₈	100 µg	385.00
	Source: semisynthetic, human Mol. Wt.: 1093 (stearoyl) Purity: 98+% by TLC Appearance: solid Solubility: chloroform/methanol/water 2:1:0.1, forms micellar solution in water Storage: -20°C References: 246,247		
	General formula: 1,2,3		
1061 1061-50	Monosialoganglioside GM₁ (NH₄⁺ salt) GM ₁ C ₇₃ H ₁₃₁ N ₃ O ₃₁ •NH ₃ CAS#: 37758-47-7	5 mg 50 mg	214.00 1,722.00
	Source: natural, bovine brain Mol. Wt.: 1547 + NH ₃ (stearoyl) Purity: 98+% by TLC Appearance: solid Solubility: chloroform/methanol/water 2:1:0.1, forms micellar solution in water Storage: -20°C References: 17,18,19,73,76,144		
	General formula: 1,2,3,4,5		

1518	lyso-Monosialoganglioside GM₁ (NH₄⁺ salt) lyso-GM ₁ C ₅₅ H ₉₇ N ₃ O ₃₀ •NH ₃ CAS#: 171483-40-2	500 µg	233.00
	Source: semisynthetic, bovine Mol. Wt.: 1280 +NH ₃ Purity: 98+% by TLC Appearance: solid Solubility: chloroform/methanol/water 2:1:0.2 Storage: -20°C References: 73,76,245		
1526	Fucosylated monosialoganglioside GM₁ (NH₄⁺ salt) Fucosyl-GM ₁ C ₇₉ H ₁₄₁ N ₃ O ₃₅ •NH ₃ CAS#: 71812-11-8	500 µg	426.00
	Source: natural, porcine Mol. Wt.: 1693 + NH ₃ (stearoyl) Purity: 98+% by TLC Appearance: solid Solubility: chloroform/methanol/water 2:1:0.1, forms micellar solution in water Storage: -20°C References: 251,252,253,254		
2050	N-Octadecanoyl-D₃-monosialoganglioside GM₁ (NH₄⁺ salt) N-D ₃ -Stearoyl GM ₁ C ₇₃ H ₁₂₈ N ₃ O ₃₁ D ₃ •NH ₃	0.5 mg	375.00
	Source: semisynthetic, bovine brain Mol. Wt.: 1550 + NH ₃ Purity: 98+% by TLC Appearance: solid Solubility: chloroform/methanol/water 2:1:0.1, forms micellar solution in water Storage: -20°C		
1502	Monosialoganglioside GM₂ (NH₄⁺ salt) GM ₂ C ₆₇ H ₁₂₁ N ₃ O ₂₆ •NH ₃ CAS#: 19600-01-2	500 µg	200.00
	Source: natural, human Tay-Sachs Mol. Wt.: 1385+ NH ₃ (stearoyl) Purity: 98+% by TLC Appearance: solid Solubility: chloroform/methanol/water 2:1:0.1, forms micellar solution in water Storage: -20°C References: 73,76,18,77		
	General formula: 1,2,3,5		
1503	Monosialoganglioside GM₃ (NH₄⁺ salt) GM ₃ C ₆₄ H ₁₁₈ N ₂ O ₂₁ •NH ₃ CAS#: 54827-14-4	1 mg	115.00
	Source: natural, bovine buttermilk Mol. Wt.: 1252+ NH ₃ (tricosanoyl) Purity: 98+% by TLC Appearance: solid Solubility: chloroform/methanol 2:1, forms micellar solution in water Storage: -20°C References: 18,19,20,21,73,76,78,79		
	General formula: 1,2,5		
1535	Monosialoganglioside GM₄, egg (NH₄⁺ salt) GM ₄ C ₅₇ H ₁₀₆ N ₂ O ₁₇ •NH ₃	0.5 mg	275.00
	Source: natural, egg, chicken Mol. Wt.: 1091+NH ₃ (2-hydroxydocosanoyl) Purity: 98+% by TLC Appearance: solid Solubility: chloroform/methanol 2:1, forms micellar solution in water Storage: -20°C References: 18,22,23,73,76		
	General formula: 2,5		
1062	Disialoganglioside GD_{1a} (NH₄⁺ salt) GD _{1a} C ₈₄ H ₁₄₈ N ₄ O ₃₉ •2NH ₃ CAS#: 12707-58-3	5 mg	225.00
	Source: natural, bovine brain Mol. Wt.: 1838 + 2NH ₃ (stearoyl) Purity: 98+% by TLC Appearance: solid Solubility: chloroform/methanol/water 2:1:0.1, forms micellar solution in water Storage: -20°C References: 18,73,142,143		
	General formula: 1,2,3,4,5,7		

1501	Disialoganglioside GD_{1b} (NH₄⁺ salt) GD _{1b} C ₈₄ H ₁₄₈ N ₄ O ₃₉ •2NH ₃ CAS#: 19553-76-5	1 mg	171.00
	Source: natural, bovine brain Mol. Wt.: 1838+ 2NH ₃ (stearoyl) Purity: 98+% by TLC Appearance: solid Solubility: chloroform/methanol/water 2:1:0.1 Storage: -20°C References: 73,18,74,75		
	General formula: 1,2,3,4,5,6		
1527	Disialoganglioside GD₂ (NH₄⁺ salt) GD ₂ C ₇₈ H ₁₄₁ N ₅ O ₃₄ •2NH ₃	0.5 mg	500.00
	Source: semisynthetic, rabbit Mol. Wt.: 1693 + 2NH ₃ Purity: 98+% by TLC, MS Appearance: solid Solubility: chloroform/methanol/water 2:1:0.1, forms micellar solution in water Storage: -20°C		
1504	Disialoganglioside GD₃ (NH₄⁺ salt) GD ₃ C ₇₅ H ₁₃₅ N ₅ O ₂₉ •2NH ₃ CAS#: 62010-37-1	5 mg	225.00
	Source: natural, bovine buttermilk Mol. Wt.: 1543+2NH ₃ (tricosanoyl) Purity: 98+% by TLC Appearance: solid Solubility: chloroform/methanol 2:1, forms micellar solution in water Storage: -20°C References: 20,21,24,73,76,125,126		
	General formula: 1,2,5,6		
1063	Trisialoganglioside GT_{1b} (NH₄⁺ salt) GT _{1b} C ₉₅ H ₁₆₅ N ₅ O ₄₇ •3NH ₃ CAS#: 59247-13-1	5 mg	275.00
	Source: natural, bovine brain Mol. Wt.: 2129 + 3NH ₃ (stearoyl) Purity: 98+% by TLC Appearance: solid Solubility: chloroform/methanol/water 2:1:0.1, forms micellar solution in water Storage: -20°C References: 73,154,155,156		
	General Formula: 1,2,3,4,5,6,7		
1516	Tetrasialoganglioside GQ_{1b} (NH₄⁺ salt) GQ _{1b} C ₁₀₆ H ₁₈₂ N ₆ O ₅₅ •4NH ₃ CAS#: 68652-37-9	100 µg	145.00
	Source: natural, bovine Mol. Wt.: 2421+4NH ₃ (stearoyl) Purity: 98+% by TLC Appearance: solid Solubility: chloroform/methanol/water 2:1:0.1, forms micellar solution in water Storage: -20°C References: 18,25		
	General formula: 1,2,3,4,5,6,7,8		
1065	Purified mixed gangliosides, bovine (NH₄⁺ salt) Mixed gangliosides	25 mg	167.00
	Source: natural, bovine brain Purity: 98+% by TLC Appearance: solid Solubility: chloroform/methanol/water 2:1:0.1, forms micellar solution in water Storage: -20°C References: 18,73,76		
	Approximately 98% GM ₁ , GD _{1a} , GD _{1b} and GT _{1b} , remaining 2% other gangliosides		

1525	Purified mixed gangliosides, porcine, (NH₄⁺ salt)	25 mg	194.00
	<p>Source: natural, porcine Purity: 98+% by TLC Appearance: solid Solubility: chloroform/methanol/water 2:1:0.1, forms micellar solution in water Storage: -20°C</p> <p>Approximately 98% GM₁, GD_{1a}, GD_{1b} and GT_{1b}, remaining 2% other gangliosides</p>		

Glycosphingolipid Reference Mixes for TLC

These mixtures are qualitative standards prepared from our purified glycosphingolipids.

1505	Neutral glycosphingolipid qualmix Glycosylceramides, qualitative mix	1 mg/ml, 1 ml	117.00
	<p>Source: natural, bovine and porcine Appearance: liquid Solvent: chloroform/methanol 2:1 Solubility: chloroform/methanol 2:1 Storage: -20°C</p> <p>Contains: cerebrosides, lactosylceramide, ceramide trihexoside, globoside</p>		
1508	Monosialoganglioside mix GM ₃ , GM ₂ , GM ₁ qualitative mix	0.5 mg/ml, 1 ml	117.00
	<p>Source: natural, bovine, human Appearance: liquid Solvent: chloroform/methanol/water 2:1:0.1 Solubility: chloroform/methanol/water 2:1:0.1 Storage: -20°C</p> <p>Contains: GM₃, GM₂, GM₁</p>		
1509	Disialoganglioside mix GD ₃ , GD _{1a} , GD _{1b} , qualitative mix	0.5 mg/ml, 1 ml	126.00
	<p>Source: natural, bovine Appearance: liquid Solvent: chloroform/methanol/water 2:1:0.1 Solubility: chloroform/methanol/water 2:1:0.1 Storage: -20°C</p> <p>Contains: GD₃, GD_{1a}, GD_{1b}</p>		
1510	Lactosylceramide and sialosyl derivatives mix LC, GM ₃ , GD ₃ qualitative mix	0.5 mg/ml, 1 ml	145.00
	<p>Source: natural, bovine buttermilk Appearance: liquid Solvent: chloroform/methanol/water 2:1:0.1 Solubility: chloroform/methanol/water 2:1:0.1 Storage: -20°C</p> <p>Contains: LC, GM₃, GD₃</p>		
1511	Gangliotetraosylceramide and sialosyl derivatives mix asialo GM ₁ , GM ₁ , GD _{1a} , GD _{1b} , GT _{1b} qualitative mix	0.5 mg/ml, 1 ml	108.00
	<p>Source: natural, bovine Appearance: liquid Solvent: chloroform/methanol/water 2:1:0.1 Solubility: chloroform/methanol/water 2:1:0.1 Storage: -20°C</p> <p>Contains: asialo GM₁, GM₁, GD_{1a}, GD_{1b}, GT_{1b}</p>		

Antibodies Directed Against Glycolipids

These monoclonal and polyclonal antibodies are directed against the carbohydrate chains of Matreya's glycolipids. The same carbohydrate moieties are found on many glycoproteins. The antibodies are for use in ELISA or TLC immunoblotting applications (3). All antibodies are quality tested by actual performance in ELISA and TLC immunoblotting. The antibodies contain no preservatives and are shipped on dry ice.
See Literature References on page 99.

1977	Anti-ganglioside GD₃ Monoclonal antibody to GD ₃ , isotype IgG/IgM	50 µl	233.00
	Source: natural, mouse hybridoma R-24 cell line Appearance: liquid Solubility: water Storage: -20°C References: 26,27,28 Dry Ice Charge Applies Suitable for TLC immunoblotting, ELISA		
1950	Anti-ganglioside asialo GM₁ Polyclonal antibody to asialo GM ₁ , isotype IgG/IgM	100 µl	294.00
	Source: natural, rabbit Appearance: liquid Solubility: water Storage: -20°C References: 26,29,114,115 Dry Ice Charge Applies Suitable for ELISA, TLC-immunoblotting. Slight cross reaction to GM ₁		
1951	Anti-ganglioside asialo GM₂ Polyclonal antibody to asialo GM ₂ , isotype IgG/IgM	50 µl	233.00
	Source: natural, rabbit Appearance: liquid Solubility: water Storage: -20°C References: 26,29 Dry Ice Charge Applies Suitable for ELISA, TLC-immunoblotting		
1954	Anti-ganglioside GM₁ Polyclonal antibody to GM ₁ , isotype IgG/IgM	100 µl	233.00
	Source: natural, rabbit Appearance: liquid Solubility: water Storage: -20°C References: 26,29,96,97,98,99 Dry Ice Charge Applies Suitable for ELISA, TLC-immunoblotting. Slight cross reaction to asialo-GM ₁		
1961	Anti-ganglioside GM₂ (NANA) Polyclonal antibody to GM ₂ (NANA), isotype IgG/IgM	50 µl	233.00
	Source: natural, rabbit Appearance: liquid Solubility: water Storage: -20°C References: 26,27,28,29,30,31,96,97,184,185 Dry Ice Charge Applies Suitable for ELISA, TLC-immunoblotting		
1957	Anti-ganglioside GM₄ Polyclonal antibody to GM ₄ , isotype IgG/IgM	50 µl	233.00
	Source: natural, rabbit Appearance: liquid Solubility: water Storage: -20°C References: 26,29 Dry Ice Charge Applies Suitable for ELISA, TLC-immunoblotting		

1960 **Anti-globoside GL-4** **50 µl** **233.00**
 Polyclonal antibody to GL-4, isotype IgG/IgM

Source: natural, rabbit **Appearance:** liquid **Solubility:** water **Storage:** -20°C
References:26,27,28,29,30,31,32 **Dry Ice Charge Applies**

Suitable for ELISA, TLC-immunoblotting

Enzyme Inhibitors

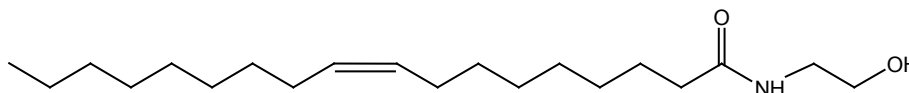
Ceramide: UDPglucose Transferase. PDMP (D,L-threo-1-phenyl-2-decanoylamino-3-morpholino-1-propanol-HCl) closely resembles the natural sphingolipid substrate of brain glucosyl transferase and is a very potent and competitive inhibitor of the enzyme (211). It has been shown to block outgrowth of neurites in cultured retina and to block glucolipid synthesis in cultured 3T3 cells (212). N.S. Radin and co-workers have shown (213) that PPMP has activity equivalent to that of PDMP when cell homogenates and brain and liver microsomes are used, but it is about 20 times more potent when used with intact cells. In another paper (214), Radin's group has shown that PDMP has substantial activity against Ehrlich ascites tumors in mice. Recent publications from the laboratory of Myles Cabot (215, 216) show that PPMP can reverse multi-drug resistance in cancer cells by causing a build-up of ceramide and preventing the synthesis of glycosylated ceramides. **See Literature References on page 99.**

Matreya also offers the resolved D- and L-threo-isomers of PDMP and PPMP.

Protein Kinase C Inhibitor. Sphingosine is a potent and reversible inhibitor of protein kinase C (217); it also has been shown at low concentrations to stimulate DNA synthesis and act synergistically with known growth factors (218). Note that Safingol (our L-threo-dihydrosphingosine) has also been shown to partially reverse multi-drug resistance in cancer cells (216) *via* inhibition of protein kinase C.

Dihydroceramide desaturase Inhibitor. Cyclopropenylceramide is the first known inhibitor of this enzyme and may allow significant studies on the role of ceramide in apoptosis. Matreya is the only source for this inhibitor. (222)

Ceramidase Inhibitors. N-Oleoylethanolamine has been shown to be an efficacious inhibitor of the ceramidase found in human kidney and cerebellum (219). It is specifically an inhibitor of acid ceramidase (220) with an IC₅₀ of ca. 500 µM. N-Hexadecanoylethanolamine can be used as an inactive control. D-MAPP is a potent (IC₅₀ approximately 5 µM) inhibitor of alkaline ceramidase. Its enantiomer L-MAPP is inactive as an inhibitor and acts as a substrate for this enzyme (220,221). **See Literature References on page 99.**



Catalog number 1751

1751 **N-Oleoylethanolamine** **100 mg** **140.00**
 NOE C₂₀H₃₉NO₂ **CAS#:** 111-58-0

Source: synthetic **Mol. Wt.:** 326 **Melting Point (°C):** 63-66 **Purity:** 98+% by TLC, GC **Appearance:** solid **Solubility:** chloroform, ethanol, methanol, ethyl ether, DMSO
Storage: -20°C **References:** 33,34,35

Activity: acid ceramidase inhibitor

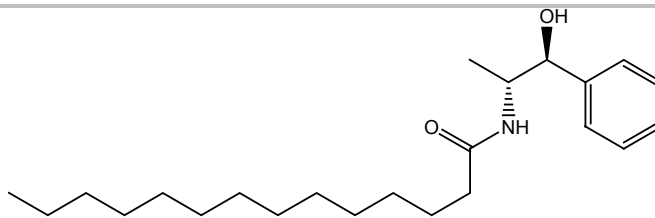
1786 **N-Hexadecanoylethanolamine** **100 mg** **98.00**
 C₁₈H₃₇NO₂ **CAS#** 544-31-0

Source: synthetic **Mol. Wt.:** 299 **Melting Point (°C):** 99-102 **Purity:** 98+% by TLC **Appearance:** solid **Solubility:** chloroform, ethanol, methanol, DMSO
Storage: -20°C **References:** 33,34,35

Activity: inactive as acid ceramidase inhibitor

1807 1807-025	L-threo-Dihydrosphingosine (Safingol) L-threo-Sphinganine, C18 chain C ₁₈ H ₃₉ NO ₂ CAS#: 15639-50-6	5 mg 25 mg	150.00 480.00
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Source: synthetic **Mol. Wt.:** 301 **Melting Point (°C):** 103-114 **Purity:** 98+% by TLC, GC **Appearance:** solid **Solubility:** chloroform, ethanol, methanol
Storage: -20°C **References:** 3,4



Catalog number 1859

1859	D-MAPP D-erythro-2-Tetradecanoylamino-1-phenyl-1-propanol C ₂₃ H ₃₉ NO ₂ CAS#: 143492-39-1	100 mg	132.00
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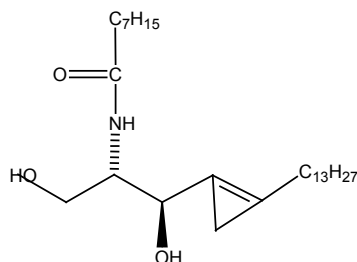
Source: synthetic **Mol. Wt.:** 361 **Purity:** 98+% by TLC **Appearance:** solid
Solubility: ethanol **Storage:** -20°C

Activity: alkaline ceramidase inhibitor

1860	L-MAPP L-erythro-2-Tetradecanoylamino-1-phenyl-1-propanol C ₂₃ H ₃₉ NO ₂ CAS#: 143492-38-0	100 mg	132.00
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Source: synthetic **Mol. Wt.:** 361 **Purity:** 98+% by TLC **Appearance:** solid
Solubility: ethanol **Storage:** -20°C

Activity: inactive as alkaline ceramidase inhibitor



Catalog number: 1886

1886 1886-005	N-C8:0-Cyclopropenylceramide N-C8:0-CPPC; N-[(1R, 2S)-2-hydroxy-1-hydroxymethyl-2-(2-tridecyl-1-cyclopropenyl) ethyl] octanamide; GT ₁₁ C ₂₇ H ₅₁ NO ₃	1 mg 5 mg	170.00 624.00
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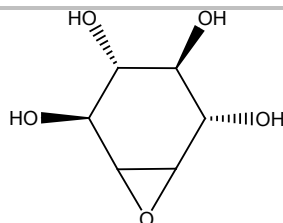
Source: synthetic **Mol. Wt.:** 437 **Melting Point (°C):** 69-70 **Purity:** 98+% by ¹H NMR; HPLC **Appearance:** solid **Solubility:** chloroform, ethanol, methanol
Storage: -20°C **References:** 36,37,38,39

Activity: Dihydroceramide desaturase inhibitor

1887 **N-C16:0-Cyclopropenylceramide** **1 mg** **170.00**
1887-005 N-C16:0-CPPC; N-[(1R, 2S)-2-hydroxy-1-hydroxymethyl-2-(2-tridecyl-1-cyclopropenyl) ethyl] hexadecamide **5 mg** **624.00**
C₃₅H₆₇NO₃

Source: synthetic **Mol. Wt.:** 550 **Melting Point (°C):** 156-157 **Purity:** 98+% by ¹H NMR; HPLC **Appearance:** solid **Solubility:** chloroform, ethanol, methanol
Storage: -20°C **References:** 37,38,39

Activity: Dihydroceramide desaturase inhibitor



Catalog number 1889

1889 **Conduritol B epoxide** **25 mg** **150.00**
C₆H₁₀O₅ **CAS#:** 6090-95-5

Source: synthetic **Mol. Wt.:** 162 **Melting Point (°C):** 164-166 **Purity:** 98+% by TLC, NMR **Appearance:** solid **Solubility:** water, DMSO, methanol (slightly)
Storage: -20°C

Inhibits α-glucosidase activity; specific inhibitor of glucocerebrosidase in cultured cells.

1719 **D,L-threo-PDMP** **100 mg** **158.00**
D,L-threo-1-Phenyl-2-decanoylamino-3-morpholino-1-propanol•HCl
C₂₃H₃₈N₂O₃•HCl **CAS#:** 80938-69-8

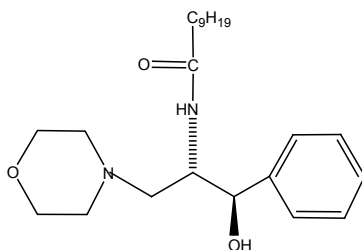
Source: synthetic **Mol. Wt.:** 427 **Purity:** 98+% by TLC **Appearance:** solid
Solubility: ethanol, methanol, chloroform, DMSO **Storage:** -20°C
References: 80,81,82,83

Activity: glucosyl ceramide synthase inhibitor

1720 **D,L-threo-PPMP** **100 mg** **158.00**
D,L-threo-1-Phenyl-2-hexadecanoylamino-3-morpholino-1-propanol•HCl
C₂₉H₅₀N₂O₃•HCl **CAS#:** 149022-18-4

Source: synthetic **Mol. Wt.:** 511 **Purity:** 98+% by TLC **Appearance:** solid
Solubility: alcohols, chloroform **Storage:** -20°C

Activity: glucosyl ceramide synthase inhibitor



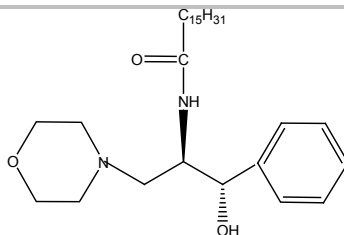
Catalog number 1749

1749 L-threo-PDMP **10 mg** **215.00**
 L-threo-1-Phenyl-2-decanoylamino-3-morpholino-1-propanol•HCl
 $C_{23}H_{38}N_2O_3 \cdot HCl$ CAS#: 109836-81-9
Source: synthetic **Mol. Wt.:** 427 **Purity:** 98+% by TLC **Appearance:** solid
Solubility: ethanol, methanol **Storage:** $-20^{\circ}C$

1753 D,L-erythro-PPMP **100 mg** **145.00**
 D,L-erythro-1-Phenyl-2-hexadecanoylamino-3-morpholino-1-propanol•HCl
 $C_{29}H_{50}N_2O_3 \cdot HCl$
Source: synthetic **Mol. Wt.:** 511 **Purity:** 98+% by TLC **Appearance:** solid
Solubility: chloroform, ethanol, methanol, DMSO **Storage:** $-20^{\circ}C$

1755 D,L-erythro-PDMP **100 mg** **145.00**
 D,L-erythro-1-Phenyl-2-decanoylamino-3-morpholino-1-propanol•HCl
 $C_{23}H_{38}N_2O_3 \cdot HCl$ CAS#: 109760-77-2
Source: synthetic **Mol. Wt.:** 427 **Purity:** 98+% by TLC **Appearance:** solid
Solubility: chloroform, ethanol, methanol, DMSO **Storage:** $-20^{\circ}C$

1756 D-threo-PDMP **10 mg** **215.00**
 D-threo-1-Phenyl-2-decanoylamino-3-morpholino-1-propanol•HCl
 $C_{23}H_{38}N_2O_3 \cdot HCl$ CAS#: 109836-82-0
Source: synthetic **Mol. Wt.:** 427 **Purity:** 98+% by TLC **Appearance:** solid
Solubility: ethanol, methanol **Storage:** $-20^{\circ}C$ **References:** 40,41,42,43,80,81,83
 Activity: glucosyl ceramide synthase inhibitor



Catalog number 1865

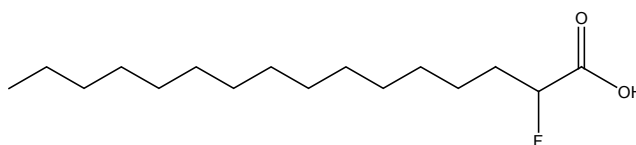
1865 D-threo-PPMP **10 mg** **215.00**
 D-threo-1-Phenyl-2-hexadecanoylamino-3-morpholino-1-propanol•HCl
 $C_{29}H_{50}N_2O_3 \cdot HCl$
Source: synthetic **Mol. Wt.:** 511 **Purity:** 98+% by TLC **Appearance:** solid
Solubility: ethanol, methanol **Storage:** $-20^{\circ}C$ **References:** 44,45,46,47,48
 Activity: glucosyl ceramide synthase inhibitor

1868 **L-threo-PPMP** **10 mg** **215.00**
L-threo-1-Phenyl-2-hexadecanoylamino-3-morpholino-1-propanol•HCl
C₂₉H₅₀N₂O₃•HCl

Source: synthetic **Mol. Wt.:** 511 **Purity:** 98+% by TLC **Appearance:** solid
Solubility: ethanol, methanol **Storage:** -20°C

1800 **Castanospermine** **25 mg** **55.00**
1,6,7,8-tetrahydroxyoctahydroindolizine C₈H₁₅NO₄ **CAS#:** 79831-76-8

Source: natural, plant **Mol. Wt.:** 189 **Melting Point (°C):** 210-215 **Purity:** 98+%
by TLC, NMR **Appearance:** solid **Solubility:** water, methanol/water, 90:10
Storage: -20°C



Catalog number 1717

1717 **2-Fluoropalmitic acid** **25 mg** **139.00**
C₁₆H₃₁FO₂ **CAS#:** 89270-22-4

Source: synthetic **Mol. Wt.:** 274 **Melting Point (°C):** 83-85 **Purity:** 98+% by TLC
Appearance: solid **Solubility:** chloroform, ethanol, methanol **Storage:** -20°C

Activity: Acyl-CoA synthase inhibitor

1718 **Methyl 2-fluoropalmitate** **10 mg** **119.00**
C₁₇H₃₃FO₂

Source: synthetic **Mol. Wt.:** 288 **Melting Point (°C):** 36-38 **Purity:** 98+% by TLC
Appearance: solid **Solubility:** chloroform, ethanol, methanol **Storage:** -20°C

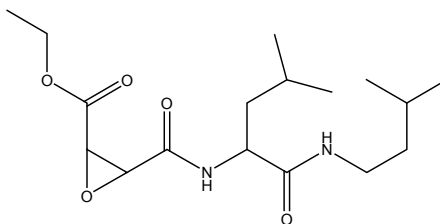
Activity: inactive ester of 2-fluoropalmitic acid

1750 **2,2-Difluoropalmitic acid** **25 mg** **126.00**
C₁₆H₃₀F₂O₂

Source: synthetic **Mol. Wt.:** 292 **Melting Point (°C):** 50.8-53 **Purity:** 98+% by
TLC, GC **Appearance:** solid **Solubility:** chloroform, ethanol, methanol
Storage: -20°C

1858 **2-Acetyl-4-(1R, 2S, 3R, 4-tetrahydroxybutyl)-imidazole** **1 mg** **151.00**
THI C₉H₁₄N₂O₅ **CAS#:** 94944-70-4

Source: synthetic **Mol. Wt.:** 230 **Melting Point (°C):** n/a **Purity:** 99% by HPLC,
MS, NMR **Appearance:** solid **Solubility:** water **Storage:** -20°C
References: 49,100,101



Catalog number 1752

1752 **EST** **5 mg** **275.00**

E-64-d; Loxastatin $C_{17}H_{30}N_2O_5$ **CAS#:** 88321-09-9

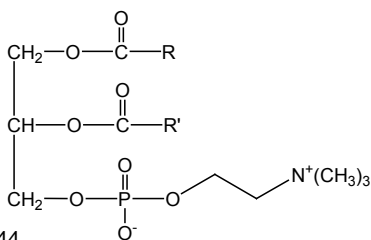
Source: synthetic **Mol. Wt.:** 342 **Melting Point (°C):** 125-127 **Purity:** 98+% by TLC, GC **Appearance:** solid **Solubility:** chloroform, ethanol, methanol
Storage: -20°C **References:** 50, 84,85, 86, 87

Activity: cystein protease inhibitor

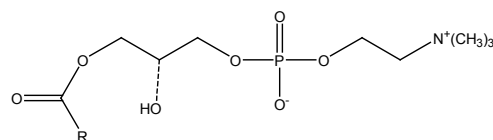
Glycerolipids

Glycerophospholipids

Natural Phospholipids



Catalog number 1044



Catalog number 1046

1044 **Lecithin** **50 mg/ml, 1 ml** **45.00**

Phosphatidylcholine; PC $C_{44}H_{84}NO_8P$ **CAS#:** 8002-43-5

Source: natural, chicken, egg **Mol. Wt.:** 787 (oleoyl) **Purity:** 98+% by TLC
Appearance: liquid **Solvent:** chloroform **Solubility:** chloroform, ethyl ether, ethanol
Storage: -20°C

See Table III page 93-97 for fatty acid content

1070 **Lecithin** **50 mg/ml, 1 ml** **150.00**

Phosphatidylcholine; PC $C_{44}H_{84}NO_8P$ **CAS#:** 8002-43-5

Source: natural, bovine **Mol. Wt.:** 787 (oleoyl) **Purity:** 98+% by TLC
Appearance: liquid **Solvent:** chloroform **Solubility:** chloroform, ethyl ether
Storage: -20°C

See Table III page 93-97 for fatty acid content

1302	Lecithin Phosphatidylcholine; PC $C_{44}H_{80}NO_8P$ CAS#: 8002-43-5	50 mg/ml, 1 ml	73.00
	Source: natural, plant Mol. Wt.: 782 (linoleoyl) Purity: 98+% by TLC Appearance: liquid Solvent: chloroform Solubility: chloroform, ethyl ether Storage: -20°C		
	See Table III page 93-97 for fatty acid content		
1046	lyso-Lecithin lyso-Phosphatidylcholine $C_{24}H_{50}NO_7P$ CAS#: 9008-30-4	50 mg	72.00
	Source: semisynthetic, chicken, egg Mol. Wt.: 496 (palmitoyl) Purity: 98+% by TLC Appearance: solid Solubility: chloroform/methanol 2:1 Storage: -20°C		
	See Table III page 93-97 for fatty acid content		
1047	Phosphatidylserine PS $C_{42}H_{78}NO_{10}P$	50 mg/ml, 1 ml	170.00
	Source: natural, bovine Mol. Wt.: 788 (oleoyl) Purity: 98+% by TLC Appearance: liquid Solvent: chloroform Solubility: chloroform, toluene Storage: -20°C References: 160,161,162		
	See Table III page 93-97 for fatty acid content		
1048	Phosphatidylinositol (Na⁺ salt) PI $C_{45}H_{78}O_{13}P \cdot Na$ CAS# 383907-36-6	10 mg/ml, 1 ml	108.00
	Source: natural, plant Mol. Wt.: 881 (linoleoyl) Purity: 98+% by TLC Appearance: liquid Solvent: chloroform Solubility: chloroform, ethyl ether Storage: -20°C References: 51,90,106,108		
	See Table III page 93-97 for fatty acid content		
1336	Phosphatidylinositol, plant, soy, (Na⁺ salt) $C_{43}H_{78}O_{13}P \cdot Na$ CAS# 383907-36-6	50 mg/ml, 1 ml	282.00
	Source: natural, plant, soy Mol. Wt.: 834 +Na (linoleoyl and palmitoyl) Purity: 98+% by TLC Appearance: liquid Solvent: chloroform Solubility: chloroform, ethyl ether Storage: -20°C		
1053	Phosphatidic acid (NH₄⁺ salt) PA $C_{39}H_{72}O_8P \cdot NH_4^+$	50 mg	95.00
	Source: semisynthetic, chicken, egg Mol. Wt.: 718 + NH ₄ ⁺ (oleoyl) Purity: 98+% by TLC Appearance: solid Solubility: chloroform, ethyl ether Storage: -20°C		
	See Table III page 93-97 for fatty acid content		
1045	Phosphatidylethanolamine PE $C_{41}H_{78}NO_8P$ CAS#: 39382-08-6	50 mg/ml, 1 ml	130.00
	Source: natural, chicken, egg Mol. Wt.: 744 (oleoyl) Purity: 98+% by TLC Appearance: liquid Solvent: chloroform Solubility: chloroform Storage: -20°C References: 116,117,182		
	See Table III page 93-97 for fatty acid content		

1069 Phosphatidylethanolamine **50 mg/ml, 1 ml** **189.00**
 PE C₄₁H₇₈NO₈P CAS#: 90989-93-8
Source: natural, bovine brain **Mol. Wt.:** 744 (oleoyl) **Purity:** 98+% by TLC
Appearance: liquid **Solvent:** chloroform **Solubility:** chloroform **Storage:** -20°C
References: 116,117,118

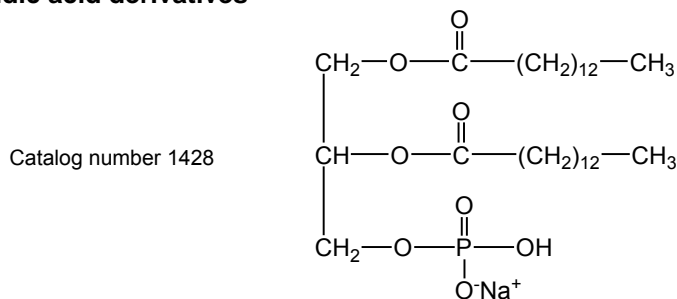
1301 Phosphatidylethanolamine **50 mg/ml, 1 ml** **114.00**
 PE C₄₁H₇₄NO₈P CAS#: 90989-93-8
Source: natural, plant **Mol. Wt.:** 740 (linoleoyl) **Purity:** 98+% by TLC
Appearance: liquid **Solvent:** chloroform **Solubility:** chloroform **Storage:** -20°C
 See Table III page 93-97 for fatty acid content

1052 Phosphoglycerides kit **1 each** **433.00**
Source: natural, egg, bovine, plant **Purity:** 98+% by TLC **Appearance:** liquid/solid
Solvent: various **Storage:** -20°C
 Individually packed in ampules and vials (Purity 98+%): Phosphatidic acid NH₄⁺ salt 10mg; Phosphatidylethanolamine, egg (in 1 ml CHCl₃) 10mg; Sphingomyelin, bovine 10mg; Phosphatidylserine, bovine (in 1 ml CHCl₃) 10 mg; Lecithin, egg (in 1 ml CHCl₃) 10 mg; lyso-Lecithin, egg 10 mg; Cerebrosides, bovine 10mg; Sulfatides, bovine 10mg; Phosphatidylinositol, Na⁺ salt, plant (in 1 ml CHCl₃) 3mg

Synthetic Phospholipids

These phospholipids have 98+% chemical purity except where stated and 99% fatty acid chain purity. Store at -20°C. Solubility: see individual entries

Phosphatidic acid derivatives



1428 1,2-Dimyristoyl-sn-glycero-3-phosphatidic acid (Na⁺ salt) **100 mg** **58.00**
 DMPA C₃₁H₆₀O₈P•Na CAS#: 80724-31-8
Source: synthetic **Mol. Wt.:** 615 **Purity:** 98+% by TLC **Appearance:** solid
Solubility: chloroform/methanol/acetic acid, 4:1:0.1 **Storage:** -20°C

1429 1,2-Dipalmitoyl-sn-glycero-3-phosphatidic acid (Na⁺ salt) **100 mg** **58.00**
 DPPA C₃₅H₆₈O₈P•Na CAS#: 71065-87-7
Source: synthetic **Mol. Wt.:** 671 **Purity:** 98+% by TLC **Appearance:** solid
Solubility: chloroform/methanol/acetic acid, 4:1:0.1 **Storage:** -20°C

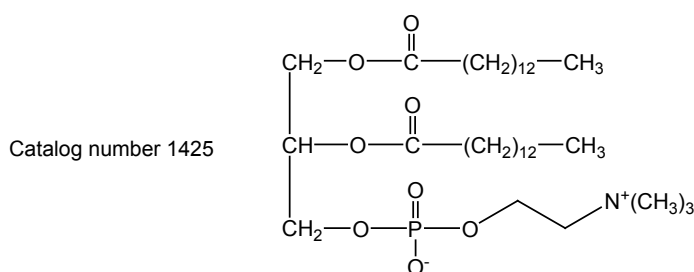
1430 **1,2-Distearoyl-sn-glycero-3-phosphatidic acid (Na⁺ salt)** **100 mg** **58.00**
 DSPA C₃₉H₇₆O₈P•Na CAS#: 108321-18-2

Source: synthetic **Mol. Wt.:** 727 **Purity:** 98+% by TLC **Appearance:** solid
Solubility: chloroform/methanol/acetic acid, 4:1:0.1 **Storage:** -20°C

Phosphatidylcholines

1442 **1,2-Dilauroyl-sn-glycero-3-phosphorylcholine** **100 mg** **58.00**
 DLPC C₃₂H₆₄NO₈P CAS#: 18194-25-7

Source: synthetic **Mol. Wt.:** 622 **Purity:** 98+% by TLC **Appearance:** solid
Solubility: methylene chloride, methanol **Storage:** -20°C



1425 **1,2-Dimyristoyl-sn-glycero-3-phosphorylcholine** **100 mg** **58.00**
 DMPC C₃₆H₇₂NO₈P CAS#: 18194-24-6

Source: synthetic **Mol. Wt.:** 678 **Purity:** 98+% by TLC **Appearance:** solid
Melting Point: 130-139°C **Solubility:** methylene chloride, methanol **Storage:** -20°C

1426 **1,2-Dipalmitoyl-sn-glycero-3-phosphorylcholine** **100 mg** **58.00**
 DPPC C₄₀H₈₀NO₈P CAS#: 63-89-8

Source: synthetic **Mol. Wt.:** 734 **Purity:** 98+% by TLC **Appearance:** solid
Solubility: methylene chloride, methanol **Storage:** -20°C

1400 **1,2-Diheptadecanoyl-sn-glycero-3-phosphorylcholine** **50 mg** **57.00**
 DHDPC C₄₂H₈₄NO₈P CAS#: 70897-27-7

Source: synthetic **Mol. Wt.:** 762 **Purity:** 98+% by TLC **Appearance:** solid
Solubility: methylene chloride, methanol **Storage:** -20°C

1427 **1,2-Distearoyl-sn-glycero-3-phosphorylcholine** **100 mg** **58.00**
 DSPC C₄₄H₈₈NO₈P CAS#: 816-94-4

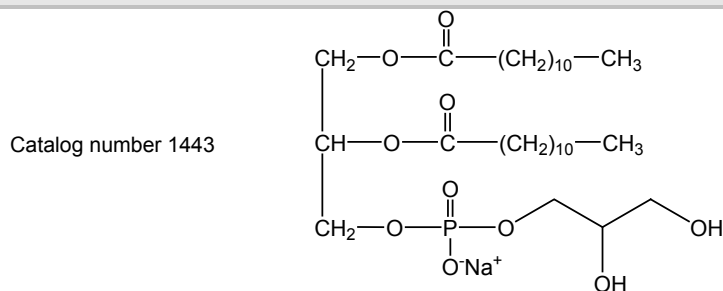
Source: synthetic **Mol. Wt.:** 790 **Purity:** 98+% by TLC **Appearance:** solid
Solubility: methylene chloride, methanol **Storage:** -20°C

1437 **1-Palmitoyl-2-oleoyl-sn-glycero-3-phosphorylcholine** **100 mg** **75.00**
 POPC C₄₂H₈₂NO₈P CAS#: 26853-31-6

Source: synthetic **Mol. Wt.:** 760 **Purity:** 98+% by TLC **Appearance:** solid
Solubility: methylene chloride, methanol **Storage:** -20°C

1445	1-Palmitoyl-sn-glycero-3-phosphorylcholine lyso-PPC C ₂₄ H ₅₀ NO ₇ P CAS#: 17364-16-8	100 mg	75.00
Source: synthetic Mol. Wt.: 496 Purity: 98+% by TLC Appearance: solid Solubility: methylene chloride, methanol Storage: -20°C			
1409	1-Stearoyl-2-linoleoyl-sn-glycero-3-phosphorylcholine C ₄₄ H ₈₄ NO ₈ P	25 mg/ml, 1 ml	175.00
Source: synthetic Mol. Wt.: 786 Purity: 98+% by TLC Appearance: liquid Solvent: chloroform Solubility: chloroform, ethanol Storage: -20°C			
1410	1-Stearoyl-2-[9(Z),11(E)-octadecadienoyl]-sn-glycero-3-phosphorylcholine C ₄₄ H ₈₄ NO ₈ P	25 mg/ml, 1 ml	175.00
Source: synthetic Mol. Wt.: 786 Purity: 98+% by TLC Appearance: liquid Solvent: chloroform Solubility: chloroform, ethanol Storage: -20°C			
1411	1-Stearoyl-2-[10(E),12(Z)-octadecadienoyl]-sn-glycero-3-phosphorylcholine C ₄₄ H ₈₄ NO ₈ P	25 mg/ml, 1 ml	175.00
Source: synthetic Mol. Wt.: 786 Purity: 98+% by TLC Appearance: liquid Solvent: chloroform Solubility: chloroform, ethanol Storage: -20°C			

Phosphatidylglycerols



1443	1,2-Dilauroyl-sn-glycero-3-phosphorylglycerol (Na⁺ salt) DLPG C ₃₀ H ₅₈ O ₁₀ P•Na CAS#: 73548-69-3	100 mg	58.00
Source: synthetic Mol. Wt.: 632 Purity: 98+% by TLC Appearance: solid Solubility: chloroform/methanol, 5:1 Storage: -20°C			
1431	1,2-Dimyristoyl-sn-glycero-3-phosphorylglycerol (Na⁺ salt) DMPG C ₃₄ H ₆₆ O ₁₀ P•Na CAS#: 200880-40-6	100 mg	58.00
Source: synthetic Mol. Wt.: 689 Purity: 98+% by TLC Appearance: solid Melting Point: 120-129°C Solubility: chloroform/methanol, 5:1 Storage: -20°C			

1432 **1,2-Dipalmitoyl-sn-glycero-3-phosphorylglycerol (Na⁺ salt)** **100 mg** **58.00**
 DPPG C₃₈H₇₄O₁₀P•Na CAS#: 200880-41-7

Source: synthetic **Mol. Wt.:** 745 **Purity:** 98+% by TLC **Appearance:** solid
Melting Point: 122-127°C **Solubility:** chloroform/methanol, 5:1 **Storage:** -20°C

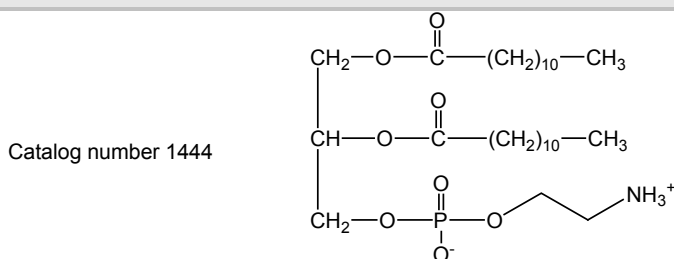
1433 **1,2-Distearoyl-sn-glycero-3-phosphorylglycerol (Na⁺ salt)** **100 mg** **58.00**
 DSPG C₄₂H₈₂O₁₀P•Na CAS#: 4537-78-4

Source: synthetic **Mol. Wt.:** 801 **Purity:** 98+% by TLC **Appearance:** solid
Solubility: chloroform/methanol, 5:1 **Storage:** -20°C

1438 **1-Palmitoyl-2-oleoyl-sn-glycero-3-phosphorylglycerol (Na⁺ salt)** **100 mg** **125.00**
 POPG C₄₀H₇₆O₁₀P•Na CAS#: 202070-86-8

Source: synthetic **Mol. Wt.:** 771 **Purity:** 98+% by TLC **Appearance:** solid
Solubility: chloroform/methanol, 5:1 **Storage:** -20°C

Phosphatidylethanolamines



1444 **1,2-Dilauroyl-sn-glycero-3-phosphorylethanolamine** **100 mg** **63.00**
 DLPE C₂₉H₅₈NO₈P CAS#: 42436-56-6

Source: synthetic **Mol. Wt.:** 579 **Purity:** 98+% by TLC **Appearance:** solid
Solubility: chloroform + methanol mixture **Storage:** -20°C

1434 **1,2-Dimyristoyl-sn-glycero-3-phosphorylethanolamine** **100 mg** **63.00**
 DMPE C₃₃H₆₆NO₈P CAS# 998-07-2

Source: synthetic **Mol. Wt.:** 636 **Purity:** 98+% by TLC **Appearance:** solid
Solubility: chloroform/acetic acid 95:5; chloroform/methanol/water/acetic acid 100:30:10:2.5 **Storage:** -20°C

1435 **1,2-Dipalmitoyl-sn-glycero-3-phosphorylethanolamine** **100 mg** **63.00**
 DPPE C₃₇H₇₄NO₈P CAS#: 923-61-5

Source: synthetic **Mol. Wt.:** 692 **Purity:** 98+% by TLC **Appearance:** solid
Solubility: chloroform/acetic acid 95:5; chloroform/methanol/water/acetic acid 100:30:10:2.5 **Storage:** -20°C

1436 **1,2-Distearoyl-sn-glycero-3-phosphorylethanolamine** **100 mg** **63.00**
 DSPE C₄₁H₈₂NO₈P CAS#: 1069-79-0

Source: synthetic **Mol. Wt.:** 748 **Purity:** 98+% by TLC **Appearance:** solid
Solubility: chloroform/acetic acid 95:5; chloroform/methanol/water/acetic acid 100:30:10:2.5 **Storage:** -20°C

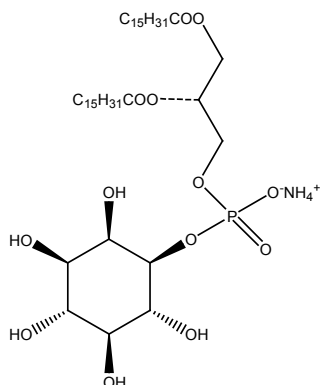
1439	1,2-Distearoyl-phosphatidylethanolamine-methyl-polyethyleneglycol conjugate-2000 (Na⁺ salt) DSPE-MPEG-2000 CAS#: 147867-65-0	100 mg	98.00
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Source: synthetic **Purity:** 98+% by TLC **Appearance:** solid
Solubility: chloroform **Storage:** -20°C

Phosphatidylinositols

The metabolism of inositol lipids is involved in the signal transduction of many hormones, neurotransmitters and growth factors (51,189). In the classical pathway, phosphatidylinositol-specific phospholipase C (PI-PLC) hydrolyzes phosphatidyl 4,5-biphosphate (PIP₂) to yield 1,2-diacylglycerol (DAG) and inositol 1,4,5-triphosphate (IP₃). The role of IP₃ and DAG as second messengers is well recognized.

In a second, more recently discovered pathway, the activation of phosphoinositide (PI) 3-kinase results in the formation of three novel phosphatidyl (PI) lipids phosphorylated at the D3 position of the inositol ring: PI-3-P, PI-3,4-P₂ and PI-3,4,5-P₃ (190). These D3 lipids are not known substrates for any of the phospholipase C enzymes and function as second messengers. PI 3-kinase activity is correlated with many cellular processes, including the regulation of cell growth, oncogenic transformation, chemotaxis and receptor down-regulation among others (191, 192,193). The recent paper on the effect of PI3,4-P₂ on the *Akt* proto-oncogene product (9) also contains protocols for applying PIP's to cell cultures. Matreya's synthetic phosphatidylinositols and inositol phosphates are excellent tools for investigating these second messengers, understanding the enzyme mechanisms involved in phosphoinositide metabolism (223,224) and for designing therapeutic pharmacological agents. The compounds are evaluated by ¹H and ³¹P NMR to guarantee enantiomeric purity of >98%. **See Literature References on page 99.**



Catalog number 1779

1779	Phosphatidylinositol, dipalmitoyl, (NH₄⁺ salt)	0.5 mg	263.00
1779-1	PI; DPPI (NH ₄ ⁺ salt) C ₄₁ H ₇₈ O ₁₃ P•NH ₄	1 mg	469.00

Source: synthetic **Mol. Wt.:** 828 **Purity:** 98+% by ¹H NMR, ³¹P NMR
Appearance: solid **Solubility:** chloroform/methanol/water 5:1:0.1 **Storage:** -20°C
References: 105,106,107,108

1773	Phosphatidylinositol 3-phosphate, dipalmitoyl, (NH₄⁺ salt)	100 µg	51.00
1773-1	DPPI-3-P; PI-3-P dipalmitoyl (NH ₄ ⁺ salt) C ₄₁ H ₇₇ O ₁₆ P ₂ •3NH ₄	1 mg	352.00
1773-5		5 mg	1,650.00

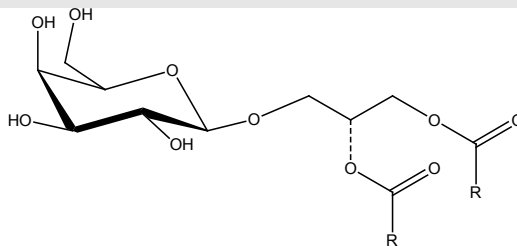
Source: synthetic **Mol. Wt.:** 942 **Purity:** 98+% by ¹H NMR, ³¹P NMR,
Appearance: solid **Solubility:** chloroform/methanol/water 1:1:0.3 **Storage:** -20°C
References: 51,52,53,54

1919	Phosphatidylinositol 4-phosphate, dipalmitoyl, (NH₄⁺ salt)	100 µg	51.00
1919-1	DPPI-4-P; PI-4-P dipalmitoyl (NH ₄ ⁺ salt) C ₄₁ H ₇₇ O ₁₆ P ₂ •3NH ₄	1 mg	352.00
1919-5		5 mg	1,650.00
<p>Source: synthetic Mol. Wt.: 942 Purity: 98+% by ¹H NMR, ³¹P NMR Appearance: solid Solubility: methanol, chloroform/methanol/water 1:1:0.3, slightly soluble in water Storage: -20°C</p>			
1784	Phosphatidylinositol bis-4,5-phosphate, dioctanoyl, (NH₄⁺ salt)	100 µg	51.00
1784-1	DOPI-4,5-P2; PI-4,5-P2 dioctanoyl (NH ₄ ⁺ salt) C ₂₅ H ₄₉ O ₁₉ P ₃ •5NH ₄	1 mg	352.00
1784-5		5 mg	1,650.00
<p>Source: synthetic Mol. Wt.: 831 Purity: 98+% by ¹H NMR, ³¹P NMR Appearance: solid Solubility: chloroform/methanol/water 1:1:0.3 Storage: -20°C</p>			
1778	Phosphatidylinositol bis-4,5-phosphate, dioctanoyl, (Na⁺ salt)	100 µg	51.00
1778-1	DOPI-4,5-P2; PI-4,5-P2 dioctanoyl (Na ⁺ salt) C ₂₅ H ₄₄ O ₁₉ P ₃ •5Na	1 mg	352.00
1778-5		5 mg	1,650.00
<p>Source: synthetic Mol. Wt.: 856 Purity: 98+% by ¹H NMR, ³¹P NMR Appearance: solid Solubility: water Storage: -20°C</p>			
1783	Phosphatidylinositol tris-3,4,5-phosphate, dipalmitoyl, (NH₄⁺ salt)	100 µg	44.00
1783-1	DPPI-3,4,5-P3; PI-3,4,5-P3 dipalmitoyl (NH ₄ ⁺ salt) C ₄₁ H ₇₅ O ₂₂ P ₄ •7NH ₄	1 mg	330.00
1783-5		5 mg	1,430.00
<p>Source: synthetic Mol. Wt.: 1170 Purity: 98+% by ¹H NMR, ³¹P NMR Appearance: solid Solubility: chloroform/methanol/water 1:1:0.3 Storage: -20°C</p>			
1775	Phosphatidylinositol tris-3,4,5-phosphate, dipalmitoyl, (Na⁺ salt)	100 µg	39.00
1775-1	DPPI-3,4,5-P3; PI-3,4,5-P3 dipalmitoyl (Na ⁺ salt) C ₄₁ H ₇₅ O ₂₂ P ₄ •7Na	1 mg	275.00
1775-5		5 mg	1,265.00
<p>Source: synthetic Mol. Wt.: 1205 Purity: 98+% by ¹H NMR, ³¹P NMR Appearance: solid Solubility: water Storage: -20°C References: 55,56,88,89,90,91</p>			

Bacterial Tetraethers

1303	Main phospholipid (MPL) of <i>Thermoplasma acidophilum</i>, (>95% pure)	5 mg	681.00
	Purified MPL of <i>Thermoplasma acidophilum</i> (>95% pure) C ₉₅ H ₁₈₈ O ₁₆ P		
<p>Source: natural, Archaeobacteria Mol. Wt.: 1618 Purity: >95% by TLC, HPLC Appearance: solid Solubility: chloroform/methanol 2:1, hexane/2-propanol/DI water 30:40:5 Storage: 4-8°C References: 57,58,59,60</p>			
1303-2	Main phospholipid (MPL) of <i>Thermoplasma acidophilum</i>, (>50% pure)	50 mg	1,747.00
	MPL of <i>Thermoplasma acidophilum</i> (>50% pure) C ₉₅ H ₁₈₈ O ₁₆ P		
<p>Source: natural, Archaeobacteria Mol. Wt.: 1618 Purity: >50% by TLC Appearance: liquid Solubility: chloroform/methanol 2:1, hexane/2-propanol/DI water 30:40:5 Storage: 4-8°C highly hygroscopic References: 57,58,59,60</p>			

Glycosyl Glycerides



Catalog number 1058

1058	Monogalactosyldiglyceride MGDG (hydrogenated) C ₄₅ H ₈₆ O ₁₀ CAS#: 41670-62-6	10 mg	170.00
	<p>Source: natural, plant Mol. Wt.: 787 (stearoyl) Purity: 98+% by TLC Appearance: solid Solubility: chloroform/methanol/water 4:1:0.1 Storage: -20°C References: 61,62,63</p>		
1059	Digalactosyldiglyceride DGDG (hydrogenated) C ₅₁ H ₉₆ O ₁₅ CAS#: 92457-02-8	5 mg	201.00
	<p>Source: natural, plant Mol. Wt.: 949 (distearoyl) Purity: 98+% by TLC Appearance: solid Solubility: chloroform/methanol/water 4:1:0.1 Storage: -20°C References: 151,152,153</p>		

Fatty Acids

Simple Fatty Acids

Saturated Fatty Acids and Methyl Esters

These products are 99% pure by GC. They are stable at room temperature and are supplied neat.

1200	Methyl hexanoate Methyl caproate; C6:0 methyl ester C ₇ H ₁₄ O ₂ CAS#: 106-70-7	1 g	38.00
	<p>Source: natural, plant Mol. Wt.: 130 Purity: 99% by TLC, GC Appearance: liquid Solubility: chloroform, ethanol, ethyl ether Storage: room temperature</p>		
1196	Heptanoic acid C7:0 fatty acid C ₇ H ₁₄ O ₂ CAS#: 111-14-8	1 g	60.00
	<p>Source: natural, plant Mol. Wt.: 130 Purity: 99% by TLC, GC Appearance: liquid Solubility: chloroform, ethanol, ethyl ether Storage: room temperature</p>		
1197	Methyl heptanoate C7:0 fatty acid methyl ester C ₈ H ₁₆ O ₂ CAS#: 106-73-0	1 g	60.00
	<p>Source: natural, plant Mol. Wt.: 144 Purity: 99% by TLC, GC Appearance: liquid Solubility: chloroform, ethanol, ethyl ether Storage: room temperature</p>		

1198	Octanoic acid Caprylic acid; C8:0 acid $C_8H_{16}O_2$ CAS#: 124-07-2	1 g	38.00
	Source: natural, plant Mol. Wt.: 144 Purity: 99% by TLC, GC Appearance: liquid Solubility: chloroform, ethanol, ethyl ether Storage: room temperature		
1199	Methyl octanoate Methyl caprylate; C8:0 methyl ester $C_9H_{18}O_2$ CAS#: 111-11-5	1 g	38.00
	Source: natural, plant Mol. Wt.: 158 Purity: 99% by TLC, GC Appearance: liquid Solubility: chloroform, ethanol, ethyl ether Storage: room temperature		
1163	Nonanoic acid C9:0 fatty acid; pelargonic acid $C_9H_{18}O_2$ CAS#: 112-05-0	100 mg	30.00
	Source: synthetic Mol. Wt.: 158 Purity: 99% by TLC, GC Appearance: liquid Solubility: chloroform, ethanol, ethyl ether Storage: room temperature		
1164	Methyl nonanoate C9:0 methyl ester $C_{10}H_{20}O_2$ CAS#: 1731-84-6	100 mg	30.00
	Source: synthetic Mol. Wt.: 172 Purity: 99% by TLC, GC Appearance: liquid Solubility: chloroform, ethanol, ethyl ether Storage: room temperature		
1261	Methyl decanoate Methyl caprate; C10:0 methyl ester $C_{11}H_{22}O_2$ CAS#: 110-42-9	500 mg	30.00
	Source: natural, plant Mol. Wt.: 186 Purity: 99% by TLC, GC Appearance: liquid Solubility: chloroform, hexane Storage: room temperature		
1165	Undecanoic acid C11:0 fatty acid $C_{11}H_{22}O_2$ CAS#: 112-37-8	100 mg	30.00
	Source: synthetic Mol. Wt.: 186 Purity: 99% by TLC, GC Appearance: solid Solubility: chloroform, ethanol, ethyl ether Storage: room temperature		
1166	Methyl undecanoate C11:0 methyl ester $C_{12}H_{24}O_2$ CAS#: 1731-86-8	100 mg	30.00
	Source: synthetic Mol. Wt.: 200 Purity: 99% by TLC, GC Appearance: liquid Solubility: chloroform, ethanol, ethyl ether Storage: room temperature		
1008	Dodecanoic acid Lauric acid; C12:0 acid $C_{12}H_{24}O_2$ CAS#: 143-07-7	1 g	38.00
	Source: natural, plant Mol. Wt.: 200 Purity: 99% by TLC, GC Appearance: solid Solubility: chloroform, ethanol, ethyl ether Storage: room temperature		
1009	Methyl dodecanoate Methyl laurate; C12:0 methyl ester $C_{13}H_{26}O_2$ CAS#: 111-82-0	1 g	38.00
	Source: natural, plant Mol. Wt.: 214 Purity: 99% by TLC, GC Appearance: liquid Solubility: chloroform, ethanol, ethyl ether Storage: room temperature		

1161	Tridecanoic acid C13:0 fatty acid C ₁₃ H ₂₆ O ₂ CAS#: 638-53-9	100 mg	54.00
	Source: synthetic Mol. Wt.: 214 Purity: 99% by TLC, GC Appearance: solid Solubility: chloroform, ethanol, ethyl ether Storage: room temperature		
1162	Methyl tridecanoate C13:0 methyl ester C ₁₄ H ₂₈ O ₂ CAS#: 1731-88-0	100 mg	54.00
	Source: synthetic Mol. Wt.: 228 Purity: 99% by TLC, GC Appearance: liquid Solubility: chloroform, ethanol, ethyl ether Storage: room temperature		
1010	Tetradecanoic acid Myristic acid; C14:0 acid C ₁₄ H ₂₈ O ₂ CAS#: 544-63-8	1 g	35.00
	Source: natural, plant Mol. Wt.: 228 Purity: 99% by TLC, GC Appearance: solid Solubility: chloroform, ethanol, ethyl ether Storage: room temperature		
1011	Methyl tetradecanoate Methyl myristate; C14:0 methyl ester C ₁₅ H ₃₀ O ₂ CAS#: 124-10-7	1 g	35.00
	Source: natural, plant Mol. Wt.: 242 Purity: 99% by TLC, GC Appearance: liquid Solubility: chloroform, ethanol, ethyl ether Storage: room temperature		
1012	Pentadecanoic acid C15:0 fatty acid C ₁₅ H ₃₀ O ₂ CAS#: 1002-84-2	1 g	102.00
	Source: synthetic Mol. Wt.: 242 Purity: 99% by TLC, GC Appearance: solid Solubility: chloroform, ethanol, ethyl ether Storage: room temperature		
1013	Methyl pentadecanoate C15:0 methyl ester C ₁₆ H ₃₂ O ₂ CAS#: 7132-64-1	1 g	102.00
	Source: synthetic Mol. Wt.: 256 Purity: 99% by TLC, GC Appearance: liquid Solubility: chloroform, ethanol, ethyl ether Storage: room temperature		
1014	Hexadecanoic acid Palmitic acid; C16:0 fatty acid C ₁₆ H ₃₂ O ₂ CAS#: 57-10-3	1 g	30.00
	Source: natural, plant Mol. Wt.: 256 Purity: 99% by TLC, GC Appearance: solid Solubility: chloroform, ethanol, ethyl ether Storage: room temperature		
1015	Methyl hexadecanoate Methyl palmitate; C16:0 methyl ester C ₁₇ H ₃₄ O ₂ CAS#: 112-39-0	1 g	30.00
	Source: natural, plant Mol. Wt.: 270 Purity: 99% by TLC, GC Appearance: solid Solubility: chloroform, ethanol, ethyl ether Storage: room temperature		

1018	Heptadecanoic acid Margaric acid; C17:0 fatty acid $C_{17}H_{34}O_2$ CAS#: 506-12-7	1 g	132.00
	Source: synthetic Mol. Wt.: 270 Purity: 99% by TLC, GC Appearance: solid Solubility: chloroform, ethanol, ethyl ether Storage: room temperature		
1019	Methyl heptadecanoate Methyl margarate; C17:0 methyl ester $C_{18}H_{36}O_2$ CAS#: 1731-92-6	1 g	132.00
	Source: synthetic Mol. Wt.: 284 Purity: 99% by TLC, GC Appearance: solid Solubility: chloroform, ethanol, ethyl ether Storage: room temperature		
1020	Octadecanoic acid Stearic acid; C18:0 fatty acid $C_{18}H_{36}O_2$ CAS#: 57-11-4	1 g	30.00
	Source: natural, plant Mol. Wt.: 284 Purity: 99% by TLC, GC Appearance: solid Solubility: chloroform, ethanol, ethyl ether Storage: room temperature		
1021	Methyl octadecanoate Methyl stearate; C18:0 methyl ester $C_{19}H_{38}O_2$ CAS#: 112-61-8	1 g	30.00
	Source: natural, plant Mol. Wt.: 298 Purity: 99% by TLC, GC Appearance: solid Solubility: chloroform, ethanol, ethyl ether Storage: room temperature		
1028	Nonadecanoic acid C19:0 fatty acid $C_{19}H_{38}O_2$ CAS#: 646-30-0	100 mg	64.00
	Source: synthetic Mol. Wt.: 298 Purity: 99% by TLC, GC Appearance: solid Solubility: chloroform, ethyl ether Storage: room temperature		
1029	Methyl nonadecanoate C19:0 methyl ester $C_{20}H_{40}O_2$ CAS#: 1731-94-8	100 mg	64.00
	Source: synthetic Mol. Wt.: 312 Purity: 99% by TLC, GC Appearance: solid Solubility: chloroform, ethyl ether Storage: room temperature		
1030	Eicosanoic acid Arachidic acid; C20:0 fatty acid $C_{20}H_{40}O_2$ CAS#: 506-30-9	500 mg	64.00
	Source: natural, plant Mol. Wt.: 312 Purity: 99% by TLC, GC Appearance: solid Solubility: chloroform, ethyl ether Storage: room temperature		
1031	Methyl eicosanoate Methyl arachidate; C20:0 methyl ester $C_{21}H_{42}O_2$ CAS#: 1120-28-1	500 mg	64.00
	Source: natural, plant Mol. Wt.: 326 Purity: 99% by TLC, GC Appearance: solid Solubility: chloroform, ethyl ether Storage: room temperature		
1241	Heneicosanoic acid C21:0 fatty acid $C_{21}H_{42}O_2$ CAS#: 2363-71-5	100 mg	60.00
	Source: synthetic Mol. Wt.: 326 Purity: 99% by TLC, GC Appearance: solid Solubility: chloroform, ethyl ether Storage: room temperature		

1242	Methyl heneicosanoate C21:0 methyl ester C ₂₂ H ₄₄ O ₂ CAS#: 6064-90-0	100 mg	60.00
	Source: synthetic Mol. Wt.: 341 Purity: 99% by TLC, GC Appearance: solid Solubility: chloroform, ethyl ether Storage: room temperature		
1035	Docosanoic acid Behenic acid; C22:0 fatty acid C ₂₂ H ₄₄ O ₂ CAS#: 112-85-6	500 mg	60.00
	Source: natural, plant Mol. Wt.: 341 Purity: 99% by TLC, GC Appearance: solid Solubility: chloroform, ethyl ether Storage: room temperature		
1036	Methyl docosanoate Methyl behenate; C22:0 methyl ester C ₂₃ H ₄₆ O ₂ CAS#: 929-77-1	500 mg	60.00
	Source: natural, plant Mol. Wt.: 354 Purity: 99% by TLC, GC Appearance: solid Solubility: chloroform, ethyl ether Storage: room temperature		
1186	Tricosanoic acid C23:0 fatty acid C ₂₃ H ₄₆ O ₂ CAS#: 2433-96-7	100 mg	70.00
	Source: synthetic Mol. Wt.: 355 Purity: 99% by TLC, GC Appearance: solid Solubility: chloroform, ethyl ether Storage: room temperature		
1187	Methyl tricosanoate C23:0 methyl ester C ₂₄ H ₄₈ O ₂ CAS#: 2433-97-8	100 mg	70.00
	Source: synthetic Mol. Wt.: 368 Purity: 99% by TLC, GC Appearance: solid Solubility: chloroform, ethyl ether Storage: room temperature		
1037	Tetracosanoic acid Lignoceric acid; C24:0 fatty acid C ₂₄ H ₄₈ O ₂ CAS#: 557-59-5	100 mg	70.00
	Source: synthetic Mol. Wt.: 369 Purity: 99% by TLC, GC Appearance: solid Solubility: chloroform, ethyl ether Storage: room temperature		
1038	Methyl tetracosanoate Methyl lignocerate; C24:0 methyl ester C ₂₅ H ₅₀ O ₂ CAS#: 2442-49-1	100 mg	70.00
	Source: synthetic Mol. Wt.: 382 Purity: 99% by GC Appearance: solid Solubility: chloroform, ethyl ether Storage: room temperature		
1251	Hexacosanoic acid Cerotic acid; C26:0 acid C ₂₆ H ₅₂ O ₂ CAS#: 506-46-7	25 mg	76.00
	Source: synthetic Mol. Wt.: 370 Purity: 99% by TLC, GC Appearance: solid Solubility: chloroform, ethyl ether Storage: room temperature		
1252	Methyl hexacosanoate Methyl cerotate; C26:0 methyl ester C ₂₇ H ₅₄ O ₂ CAS#: 5802-82-4	25 mg	76.00
	Source: synthetic Mol. Wt.: 411 Purity: 99% by TLC, GC Appearance: solid Solubility: chloroform, ethyl ether Storage: room temperature		

Unsaturated Fatty Acids and Methyl Esters

Unsaturated fatty acids are easily oxidized. Flush open containers with argon or nitrogen and store at -20°C, in dark.

1157	Myristoleic acid C14:1 (cis-9) fatty acid C ₁₄ H ₂₆ O ₂ CAS#: 544-64-9	100 mg	76.00
	Source: natural, plant Mol. Wt.: 226 Purity: 99% by TLC, GC Appearance: liquid Solubility: chloroform, hexane, ethyl ether Storage: -20°C		
1040	Methyl cis-9-tetradecenoate Methyl myristoleate; C14:1 (cis-9) methyl ester C ₁₅ H ₂₈ O ₂ CAS#: 56219-06-8	100 mg	83.00
	Source: natural, plant Mol. Wt.: 240 Purity: 99% by TLC, GC Appearance: liquid Solubility: chloroform, hexane, ethyl ether Storage: -20°C		
1243	cis-6-Hexadecenoic acid Sapienic acid C ₁₆ H ₃₀ O ₂	25 mg	158.00
	Source: synthetic Mol. Wt.: 254 Purity: 99% by TLC, GC Appearance: liquid Solubility: ethanol, methanol, chloroform, ethyl ether Storage: -20°C		
1016	Palmitoleic acid C16:1 (cis-9) fatty acid C ₁₆ H ₃₀ O ₂ CAS#: 373-49-9	100 mg	51.00
	Source: natural, plant Mol. Wt.: 254 Purity: 99% by TLC, GC Appearance: liquid Solubility: chloroform, hexane, ethyl ether Storage: -20°C		
1017	Methyl cis-9 hexadecenoate, C16:1 (cis-9) Methyl palmitoleate, C16:1 (cis-9) methyl ester C ₁₇ H ₃₂ O ₂ CAS#: 1120-25-8	100 mg	51.00
	Source: natural, plant Mol. Wt.: 268 Purity: 99% by TLC, GC Appearance: liquid Solubility: chloroform, hexane, ethyl ether Storage: -20°C		
1147	Palmitelaidic acid C16:1 (trans-9) acid C ₁₆ H ₃₀ O ₂ CAS#: 10030-73-6	100 mg	70.00
	Source: synthetic Mol. Wt.: 254 Purity: 99% by TLC, GC Appearance: liquid Solubility: chloroform, hexane, ethyl ether Storage: -20°C		
1148	Methyl palmitelaidate C16:1 (trans-9) methyl ester C ₁₇ H ₃₂ O ₂ CAS#: 10030-74-7	100 mg	70.00
	Source: synthetic Mol. Wt.: 268 Purity: 99% by TLC, GC Appearance: liquid Solubility: chloroform, hexane, ethyl ether Storage: -20°C		

1208	11-Hexadecenoic acid, (92% cis, 8% trans) C16:1 (cis-11) acid C ₁₆ H ₃₀ O ₂ Source: synthetic Mol. Wt.: 254 Purity: >98%, by TLC Appearance: liquid Solubility: chloroform, ethanol, hexane, methanol Storage: -20°C 92% cis, 8% trans by GC	50 mg	112.00
1204	Heptadecenoic acid C17:1 (cis-10) acid C ₁₇ H ₃₂ O ₂ CAS#: 29743-97-3 Source: synthetic Mol. Wt.: 268 Purity: 99% by TLC, GC Appearance: liquid Solubility: chloroform, hexane, ethyl ether Storage: -20°C	100 mg	66.00
1203	Methyl cis-10-heptadecenoate Methyl heptadecenoate; C17:1 (cis-10) methyl ester C ₁₈ H ₃₄ O ₂ CAS#: 75190-82-8 Source: synthetic Mol. Wt.: 282 Purity: 99% by TLC, GC Appearance: liquid Solubility: chloroform, hexane, ethyl ether Storage: -20°C	100 mg	66.00
1022	Oleic acid C18:1 (cis-9) acid C ₁₈ H ₃₄ O ₂ CAS#: 112-80-1 Source: natural, plant Mol. Wt.: 282 Purity: 99% by TLC, GC Appearance: liquid Solubility: chloroform, hexane, ethyl ether Storage: -20°C	1 g	41.00
1023	Methyl cis-9 octadecenoate, C18:1 (cis-9) Methyl oleate; C18:1 (cis-9) methyl ester C ₁₉ H ₃₆ O ₂ CAS#: 112-62-9 Source: natural, plant Mol. Wt.: 296 Purity: 99% by TLC, GC Appearance: liquid Solubility: chloroform, hexane, ethyl ether Storage: -20°C	1 g	41.00
1149	Elaidic acid C18:1 (trans-9) acid C ₁₈ H ₃₄ O ₂ CAS#: 112-79-8 Source: synthetic Mol. Wt.: 282 Purity: 99% by TLC, GC Appearance: solid Solubility: chloroform, hexane, ethyl ether Storage: -20°C	1 g	95.00
1150	Methyl trans-9 octadecenoate, C18:1 (trans-9) Methyl elaidate; C18:1 (trans-9) methyl ester C ₁₉ H ₃₆ O ₂ CAS#: 1937-62-8 Source: natural, plant Mol. Wt.: 296 Purity: 99% by TLC, GC Appearance: liquid Solubility: chloroform, hexane, ethyl ether Storage: -20°C	1 g	95.00
1262	trans 11-Octadecenoic acid C18:1 (trans-11) acid; trans vaccenic acid C ₁₈ H ₃₄ O ₂ CAS#: 693-72-1 Source: synthetic Mol. Wt.: 282 Purity: 99% by TLC, GC Appearance: solid Solubility: chloroform, hexane, ethyl ether Storage: -20°C	100 mg	83.00

1263	Methyl trans 11-octadecenoate Methyl trans vaccenate; C18:1 (trans-11) methyl ester C ₁₉ H ₃₆ O ₂ CAS#: 6198-58-9 Source: synthetic Mol. Wt.: 296 Purity: 99% by TLC, GC Appearance: liquid Solubility: chloroform, hexane, ethyl ether Storage: -20°C	100 mg	83.00
1024	Linoleic acid C18:2 (cis,cis-9,12) acid C ₁₈ H ₃₂ O ₂ CAS#: 60-33-3 Source: natural, plant Mol. Wt.: 280 Purity: 99% by TLC, GC Appearance: liquid Solubility: ethyl ether, ethanol, hexane Storage: -20°C	1 g	41.00
1025	Methyl cis 9,12-octadecadienoate, C18:2 (all cis 9,12) Methyl linoleate; C18:2 (all cis 9,12) methyl ester C ₁₉ H ₃₄ O ₂ CAS#: 112-63-0 Source: natural, plant Mol. Wt.: 294 Purity: 99% by TLC, GC Appearance: liquid Solubility: chloroform, hexane, ethyl ether Storage: -20°C	1 g	41.00
1151	Linoelaidic acid C18:2 (trans, trans-9, 12) acid C ₁₈ H ₃₂ O ₂ CAS#: 506-21-8 Source: natural, plant Mol. Wt.: 280 Purity: 99% by TLC, GC Appearance: liquid Solubility: chloroform, hexane, ethyl ether Storage: -20°C	100 mg	51.00
1152	Methyl trans-9,12-octadecadienoate Methyl linoelaidate; C18:2 (trans, trans-9,12) methyl ester C ₁₉ H ₃₄ O ₂ CAS#: 2566-97-4 Source: natural, plant Mol. Wt.: 294 Purity: 99% by TLC, GC Appearance: liquid Solubility: chloroform, hexane, ethyl ether Storage: -20°C	100 mg	51.00
1266	cis-11-Octadecenoic acid cis-vaccenic acid; C18:1(cis-11) acid C ₁₈ H ₃₄ O ₂ CAS#: 506-17-2 Source: natural, plant Mol. Wt.: 282 Purity: 99% by TLC, GC Appearance: liquid Solubility: chloroform, hexane, ethyl ether Storage: -20°C	100 mg	83.00
1267	Methyl cis-11-octadecenoate Methyl cis-vaccenate; C18:1(cis-11) methyl ester C ₁₉ H ₃₆ O ₂ CAS#: 1937-63-9 Source: semi-synthetic, plant Mol. Wt.: 296 Purity: 99% by TLC, GC Appearance: liquid Solubility: chloroform, hexane, ethyl ether Storage: -20°C	100 mg	83.00
1026	Linolenic acid C18:3 (all cis-9,12,15) acid C ₁₈ H ₃₀ O ₂ CAS#: 463-40-1 Source: natural, plant Mol. Wt.: 278 Purity: 99% by TLC, GC Appearance: liquid Solubility: chloroform, hexane, ethyl ether Storage: -20°C	500 mg	95.00

1027	Methyl cis-9,12,15-octadecatrienoate Methyl linolenate; C18:3 (all cis-9,12,15) methyl ester C ₁₉ H ₃₂ O ₂ CAS#: 301-00-8 Source: natural, plant Mol. Wt.: 292 Purity: 99% by TLC, GC Appearance: liquid Solubility: chloroform, hexane, ethyl ether Storage: -20°C	500 mg	95.00
1153	gamma-Linolenic acid C18:3 (all cis-6,9,12) acid C ₁₈ H ₃₀ O ₂ CAS#: 506-26-3 Source: natural, plant Mol. Wt.: 278 Purity: 99% by TLC, GC Appearance: liquid Solubility: chloroform, hexane, ethyl ether Storage: -20°C	100 mg	58.00
1154	Methyl cis-6,9,12-octadecatrienoate Methyl gamma-linolenate; C18:3 (all cis-6,9,12) methyl ester C ₁₉ H ₃₂ O ₂ CAS#: 16326-32-2 Source: natural, plant Mol. Wt.: 292 Purity: 99% by TLC, GC Appearance: liquid Solubility: chloroform, hexane, ethyl ether Storage: -20°C	100 mg	58.00
1205	Nonadecenoic acid C19:1 (cis-10) acid C ₁₉ H ₃₆ O ₂ CAS#: 73033-09-7 Source: synthetic Mol. Wt.: 296 Purity: 99% by TLC, GC Appearance: liquid Solubility: chloroform, hexane, ethyl ether Storage: -20°C	100 mg	75.00
1206	Methyl nonadecenoate C19:1 (cis-10) methyl ester C ₂₀ H ₃₈ O ₂ CAS#: 19788-74-0 Source: synthetic Mol. Wt.: 310 Purity: 99% by TLC, GC Appearance: liquid Solubility: chloroform, hexane, ethyl ether Storage: -20°C	100 mg	75.00
1032	Eicosenoic acid C20:1 (cis-11) acid C ₂₀ H ₃₈ O ₂ CAS#: 5561-99-9 Source: natural, plant Mol. Wt.: 310 Purity: 99% by TLC, GC Appearance: liquid Solubility: chloroform, hexane, ethyl ether Storage: -20°C	100 mg	51.00
1033	Methyl cis-11 eicosenoate Methyl eicosenoate; C20:1 (cis-11) methyl ester C ₂₁ H ₄₀ O ₂ CAS#: 2390-09-2 Source: natural, plant Mol. Wt.: 324 Purity: 99% by TLC, GC Appearance: liquid Solubility: chloroform, hexane, ethyl ether Storage: -20°C	100 mg	51.00
1192	Eicosadienoic acid C20:2 (cis, cis-11, 14) acid C ₂₀ H ₃₆ O ₂ CAS#: 2091-39-6 Source: synthetic Mol. Wt.: 309 Purity: 99% by TLC, GC Appearance: liquid Solubility: chloroform, hexane, ethyl ether Storage: -20°C	100 mg	58.00

1193	Methyl cis-11,14-eicosadienoate Methyl eicosadienoate; C20:2 (cis, cis-11, 14) methyl ester C ₂₁ H ₃₈ O ₂ CAS#: 2463-02-7	100 mg	58.00
	Source: synthetic Mol. Wt.: 322 Purity: 99% by TLC, GC Appearance: liquid Solubility: chloroform, hexane, ethyl ether Storage: -20°C		
1179	Methyl 5,8,11-eicosatrienoate C20:3 (all cis-5,8,11) methyl ester; mead acid methyl ester C ₂₁ H ₃₆ O ₂ CAS#: 14602-39-2	1 mg/ml, 1 ml	163.00
	Source: natural, plant Mol. Wt.: 320 Purity: 90% by TLC, GC Appearance: liquid Solvent: hexane Solubility: chloroform, hexane, ethyl ether Storage: -20°C		
1269	Methyl 8,11,14-eicosatrienoate Methyl homogamma linolenate, C20:3n6 C ₂₁ H ₃₆ O ₂	50 mg	90.00
	Source: semi-synthetic, plant Mol. Wt.: 321 Purity: 99% by TLC, GC Appearance: liquid Solubility: hexane, ethyl ether, chloroform Storage: -20°C		
1042	Arachidonic acid C20:4 (all cis-5,8,11,14) acid C ₂₀ H ₃₂ O ₂ CAS#: 506-32-1	100 mg	80.00
	Source: natural, plant Mol. Wt.: 304 Purity: 99% by TLC, GC Appearance: liquid Solubility: ethyl ether, hexane, methylene chloride Storage: -20°C Dry Ice Charge Applies		
1034	Methyl cis-5,8,11,14-eicosatetraenoate Methyl arachidonate; C20:4 (all cis-5,8,11,14) methyl ester C ₂₁ H ₃₄ O ₂ CAS#: 2566-89-4	100 mg	80.00
	Source: natural, plant Mol. Wt.: 318 Purity: 99% by TLC, GC Appearance: liquid Solubility: chloroform, hexane, ethyl ether Storage: -20°C Dry Ice Charge Applies		
1167	Eicosapentaenoic acid EPA ; omega-3 fatty acid; C20:5 (all cis-5,8,11,14,17) acid C ₂₀ H ₃₀ O ₂ CAS#: 10417-94-4	25 mg	88.00
	Source: natural, fish oil Mol. Wt.: 302 Purity: 99% by TLC, GC Appearance: liquid Solubility: chloroform, hexane, ethyl ether, ethanol, DMSO, DMF Storage: -20°C Dry Ice Charge Applies Anti-hyperlipoproteinemic agent; 5-LOX inhibitor		
1194	Methyl eicosapentaenoate Methyl ester of omega-3 fatty acid; C20:5 (all cis-5,8,11,14,17) methyl ester C ₂₁ H ₃₂ O ₂ CAS#: 2734-47-6	25 mg	88.00
	Source: natural, fish oil Mol. Wt.: 316 Purity: 99% by TLC, GC Appearance: liquid Solubility: chloroform, ethyl ether, hexane Storage: -20°C References: 170,171,172 Dry Ice Charge Applies		

1264	Docosenoic acid C22:1 (cis-13), erucic acid C ₂₂ H ₄₂ O ₂ CAS#: 112-86-7 Source: natural, plant Mol. Wt.: 339 Purity: >99% by TLC, GC Appearance: solid Solubility: chloroform, ethyl ether, hexane Storage: -20°C	100 mg	44.00
1265	Methyl docosenoate C22:1 (cis-13) methyl ester; methyl erucate C ₂₃ H ₄₄ O ₂ CAS#: 1120-34-9 Source: natural, plant Mol. Wt.: 352 Purity: >99% by TLC, GC Appearance: liquid Solubility: chloroform, ethyl ether, hexane Storage: -20°C	100 mg	44.00
1175	Docosapentaenoic acid C22:5 (all cis-7,10,13,16,19) acid C ₂₂ H ₃₄ O ₂ CAS#: 24880-45-3 Source: semi-synthetic Mol. Wt.: 330 Purity: 98+% by TLC, GC Appearance: liquid Solubility: chloroform, ethyl ether, hexane Storage: -20°C Dry Ice Charge Applies	25 mg	88.00
1244	Methyl docosapentaenoate C22:5 (all cis-7,10,13,16,19) methyl ester C ₂₃ H ₃₆ O ₂ CAS#: 108698-02-8 Source: semi-synthetic Mol. Wt.: 344 Purity: 98+% by TLC, GC Appearance: liquid Solubility: ethyl ether, ethanol, hexane, Storage: -20°C Dry Ice Charge Applies	25 mg	88.00
1136	Docosahexaenoic acid DHA; C22:6, (all cis-4,7,10,13,16,19) omega-3 fatty acid C ₂₂ H ₃₂ O ₂ CAS#: 6217-54-5 Source: natural, plant Mol. Wt.: 328 Purity: 99% by TLC, GC Appearance: liquid Solubility: ethyl ether, hexane, methylene chloride, ethanol, DMSO, DMF Storage: -20°C Dry Ice Charge Applies	100 mg	80.00
1041	Methyl docosahexaenoate C22:6 (all cis-4,7,10,13,16,19) methyl ester; methyl ester of omega-3 fatty acid C ₂₃ H ₃₄ O ₂ CAS#: 2566-90-7 Source: natural, plant Mol. Wt.: 342 Purity: 99% by TLC, GC Appearance: liquid Solubility: chloroform, hexane, ethyl ether Storage: -20°C Dry Ice Charge Applies	100 mg	80.00
1155	Nervonic acid C24:1 (cis-15) acid C ₂₄ H ₄₆ O ₂ CAS#: 506-37-6 Source: synthetic Mol. Wt.: 367 Purity: 99% by TLC, GC Appearance: liquid Solubility: chloroform, hexane, ethyl ether Storage: -20°C	100 mg	80.00
1156	Methyl cis-15-tetracosenoate Methyl nervonate; C24:1 (cis-15) methyl ester C ₂₅ H ₄₈ O ₂ CAS#: 2733-88-2 Source: synthetic Mol. Wt.: 381 Purity: 99% by TLC, GC Appearance: liquid Solubility: chloroform, hexane, ethyl ether Storage: -20°C	100 mg	80.00

Trans Fatty Acids and Methyl Esters

1147	Palmitelaidic acid C16:1 (trans-9) acid C ₁₆ H ₃₀ O ₂ CAS#: 10030-73-6	100 mg	70.00
	Source: synthetic Mol. Wt.: 254 Purity: 99% by TLC, GC Appearance: liquid Solubility: chloroform, hexane, ethyl ether Storage: -20°C		
1148	Methyl palmitelaidate C16:1 (trans-9) methyl ester C ₁₇ H ₃₂ O ₂ CAS#: 10030-74-7	100 mg	70.00
	Source: synthetic Mol. Wt.: 268 Purity: 99% by TLC, GC Appearance: liquid Solubility: chloroform, hexane, ethyl ether Storage: -20°C		
1149	Elaidic acid C18:1 (trans-9) acid C ₁₈ H ₃₄ O ₂ CAS#: 112-79-8	1 g	95.00
	Source: synthetic Mol. Wt.: 282 Purity: 99% by TLC, GC Appearance: solid Solubility: chloroform, hexane, ethyl ether Storage: -20°C		
1150	Methyl elaidate C18:1 (trans-9) methyl ester C ₁₉ H ₃₆ O ₂ CAS#: 1937-62-8	1 g	95.00
	Source: natural, plant Mol. Wt.: 296 Purity: 99% by TLC, GC Appearance: liquid Solubility: chloroform, hexane, ethyl ether Storage: -20°C		
1262	trans 11-Octadecenoic acid C18:1 (trans-11) acid; trans vaccenic acid C ₁₈ H ₃₄ O ₂ CAS#: 693-72-1	100 mg	83.00
	Source: synthetic Mol. Wt.: 282 Purity: 99% by TLC, GC Appearance: solid Solubility: chloroform, hexane, ethyl ether Storage: -20°C		
1263	Methyl trans 11-octadecenoate Methyl trans vaccenate; C18:1 (trans-11) methyl ester C ₁₉ H ₃₆ O ₂ CAS#: 6198-58-9	100 mg	83.00
	Source: synthetic Mol. Wt.: 296 Purity: 99% by TLC, GC Appearance: liquid Solubility: chloroform, hexane, ethyl ether Storage: -20°C		
1151	Linoelaidic acid C18:2 (trans, trans-9, 12) acid C ₁₈ H ₃₂ O ₂ CAS#: 506-21-8	100 mg	51.00
	Source: natural, plant Mol. Wt.: 280 Purity: 99% by TLC, GC Appearance: liquid Solubility: chloroform, hexane, ethyl ether Storage: -20°C		
1152	Methyl linoelaidate C18:2 (trans, trans-9,12) methyl ester C ₁₉ H ₃₄ O ₂ CAS#: 2566-97-4	100 mg	51.00
	Source: natural, plant Mol. Wt.: 294 Purity: 99% by TLC, GC Appearance: liquid Solubility: chloroform, hexane, ethyl ether Storage: -20°C		

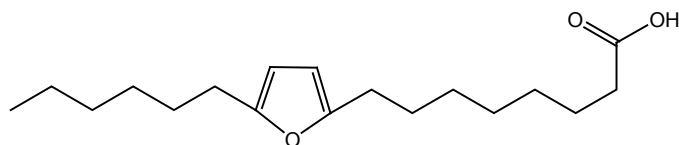
1245	9(Z),11(E)-Octadecadienoic acid	25 mg	95.00
1245-1	9-cis, 11-trans CLA C ₁₈ H ₃₂ O ₂ CAS#: 2540-56-9	1 g	304.00
1245-10		10 g	1,473.00
<p>Source: synthetic Mol. Wt.: 280 Purity: 98+% by TLC, GC Appearance: liquid Solubility: chloroform, ethanol, hexane, methanol, DMSO Storage: -20°C References: 67,68,69,70</p>			
1255	Methyl 9(Z), 11(E)-octadecadienoate	25 mg	95.00
<p>Methyl ester of CLA (9-cis, 11-trans) C₁₉H₃₄O₂</p> <p>Source: synthetic Mol. Wt.: 294 Purity: 98+% by TLC, GC Appearance: liquid Solubility: chloroform, ethanol, hexane, methanol Storage: -20°C References: 67,68,69,70</p>			
1181	9(E),11(E)-Octadecadienoic acid	25 mg	95.00
<p>9-trans, 11-trans CLA C₁₈H₃₂O₂ CAS#: 544-71-8</p> <p>Source: synthetic Mol. Wt.: 280 Melting Point (°C): 55-57 Purity: 98+% by TLC, GC Appearance: solid Solubility: chloroform, ethanol, hexane, methanol Storage: -20°C References: 67,182,183</p>			
1257	Methyl 9(E),11(E)-octadecadienoate	25 mg	95.00
<p>Methyl ester of CLA (9-trans, 11-trans) C₁₉H₃₄O₂</p> <p>Source: synthetic Mol. Wt.: 294 Purity: 98+% by TLC, GC Appearance: liquid Solubility: chloroform, ethanol, hexane, methanol Storage: -20°C</p>			
1248	9(Z),11(Z)-Octadecadienoic acid	25 mg	95.00
1248-1	9-cis, 11-cis CLA C ₁₈ H ₃₂ O ₂ CAS#: 544-40-7	1 g	1,747.00
<p>Source: synthetic Mol. Wt.: 280 Melting Point (°C): 40-42 Purity: 96+% by TLC, GC Appearance: solid Solubility: chloroform, ethanol, methanol, ethyl ether Storage: -20°C References: 67,166</p>			
1256	Methyl 9(Z), 11(Z)-octadecadienoate	25 mg	95.00
<p>Methyl ester of CLA (9-cis, 11-cis) C₁₉H₃₄O₂</p> <p>Source: synthetic Mol. Wt.: 294 Purity: 96+% by TLC, GC Appearance: liquid Solubility: chloroform, ethanol, hexane, methanol Storage: -20°C</p>			
1249	10(E),12(Z)-Octadecadienoic acid	25 mg	95.00
1249-1	10-trans, 12-cis CLA C ₁₈ H ₃₂ O ₂ CAS#: 2420-44-2	1 g	275.00
1249-10		10 g	1,373.00
<p>Source: synthetic Mol. Wt.: 280 Purity: 98+% by TLC, GC Appearance: liquid Solubility: chloroform, ethanol, hexane, methanol Storage: -20°C References:</p>			
1254	Methyl 10(E), 12(Z)-octadecadienoate	25 mg	95.00
<p>Methyl ester of CLA (10-trans, 12-cis) C₁₉H₃₄O₂</p> <p>Source: synthetic Mol. Wt.: 294 Purity: 98+% by TLC, GC Appearance: liquid Solubility: chloroform, ethanol, hexane, methanol Storage: -20°C References: 67,167,168,169</p>			

1259	11(Z), 13(E)-Octadecadienoic acid 11-cis, 13-trans CLA C ₁₈ H ₃₂ O ₂	5 mg	95.00
Source: synthetic Mol. Wt.: 280 Purity: 77% cis, trans; 2 % cis, cis; 6% trans, trans by TLC, GC Appearance: liquid Solubility: chloroform, ethanol, hexane, methanol Storage: -20°C			

1247-1 1247-10	9(Z),11(E)-Octadecadienoic acid 9-cis, 11-trans CLA C ₁₈ H ₃₂ O ₂ CAS#: 2540-56-9	1 g 10 g	150.00 950.00
Source: synthetic Mol. Wt.: 280 Purity: 74% 9(Z),11(E); 17%(Z),(Z); 1%(E),(E) by TLC, GC Appearance: liquid Solubility: ethanol, ethyl ether, hexane Storage: -20°C			

1258	Methyl 9(Z),11(E)-octadecadienoate Methyl ester of CLA (9-cis, 11-trans) C ₁₉ H ₃₄ O ₂	25 mg	72.00
Source: synthetic Mol. Wt.: 294 Purity: 74% 9(Z),11(E); 17%(Z),(Z); 1% (E),(E) by TLC, GC Appearance: liquid Solubility: chloroform, ethyl ether, hexane Storage: -20°C			

Other CLA Products and Derivatives



Catalog number 1793

1793	8-(5-Hexyl-2-furyl)-octanoic acid Furan fatty acid; 9,12-epoxy-9,11-octadecadienoic acid C ₁₈ H ₃₀ O ₃ CAS#: 4179-44-6	25 mg	132.00
Source: synthetic Mol. Wt.: 294 Purity: 98+% by TLC, GC Appearance: liquid Solubility: chloroform, ethanol, ethyl ether Storage: -20°C			

1409	1-Stearoyl-2-linoleoyl-sn-glycero-3-phosphorylcholine C ₄₄ H ₈₄ NO ₈ P	25 mg/ml, 1 ml	175.00
Source: synthetic Mol. Wt.: 786 Purity: 98+% by TLC Appearance: liquid Solvent: chloroform Solubility: chloroform, ethanol Storage: -20°C			

1410	1-Stearoyl-2-[9(Z),11(E)-octadecadienoyl]-sn-glycero-3-phosphorylcholine C ₄₄ H ₈₄ NO ₈ P	25 mg/ml, 1 ml	175.00
Source: synthetic Mol. Wt.: 786 Purity: 98+% by TLC Appearance: liquid Solvent: chloroform Solubility: chloroform, ethanol Storage: -20°C			

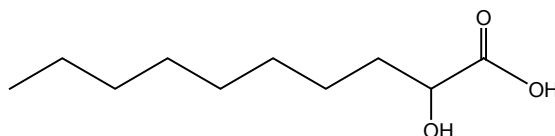
1411	1-Stearoyl-2-[10(E),12(Z)-octadecadienoyl]-sn-glycero-3-phosphorylcholine C ₄₄ H ₈₄ NO ₈ P	25 mg/ml, 1 ml	175.00
Source: synthetic Mol. Wt.: 786 Purity: 98+% by TLC Appearance: liquid Solvent: chloroform Solubility: chloroform, ethanol Storage: -20°C			

1794	Methyl 8-(5-hexyl-2-furyl)-octanoate Methyl ester of furan fatty acid C ₁₉ H ₃₂ O ₃ CAS#: 10038-16-1	25 mg	132.00
Source: synthetic Mol. Wt.: 308 Purity: 98+% by TLC, GC Appearance: liquid Solubility: chloroform, ethanol, ethyl ether Storage: -20°C			

Hydroxy Fatty Acids

2-Hydroxy Fatty Acids and Methyl Esters

These products are racemic and 98+% pure by GC and TLC. The 2-hydroxy fatty acids are components of glycosphingolipids and are involved in fatty acid degradation. They are stable and are supplied neat in vials.



Catalog number 1758

1758	2-Hydroxydecanoic acid	50 mg	98.00
1758-1	2-Hydroxy C10:0 acid C ₁₀ H ₂₀ O ₃ CAS#: 5393-81-7	1 g	565.00
Source: synthetic Mol. Wt.: 188 Purity: 98+% by TLC, GC Appearance: solid Solubility: chloroform, methanol Storage: -20°C			

1759	Methyl 2-hydroxydecanoate	50 mg	98.00
1759-1	2-Hydroxy C10:0 methyl ester C ₁₁ H ₂₂ O ₃ CAS#: 71271-24-4	1 g	565.00
Source: synthetic Mol. Wt.: 202 Purity: 98+% by TLC, GC Appearance: solid Solubility: chloroform, methanol Storage: -20°C			

1701	2-Hydroxydodecanoic acid	50 mg	98.00
1701-1	2-Hydroxy C12:0 acid C ₁₂ H ₂₄ O ₃ CAS#: 2984-55-6	1 g	565.00
Source: synthetic Mol. Wt.: 216 Purity: 98+% by TLC, GC Appearance: solid Solubility: chloroform, methanol Storage: -20°C			

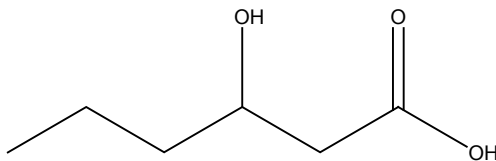
1702	Methyl 2-hydroxydodecanoate	50 mg	98.00
1702-1	2-Hydroxy C12:0 methyl ester C ₁₃ H ₂₆ O ₃ CAS#: 51067-85-7	1 g	565.00
Source: synthetic Mol. Wt.: 230 Purity: 98+% by TLC, GC Appearance: solid Solubility: chloroform, ethyl ether, methanol Storage: -20°C			

1703 1703-1	2-Hydroxytetradecanoic acid 2-Hydroxy C14:0 acid C ₁₄ H ₂₈ O ₃ CAS#: 2507-55-3	50 mg 1 g	98.00 565.00
Source: synthetic Mol. Wt.: 244 Melting Point (°C): 81-82 Purity: 98+% by TLC, GC Appearance: solid Solubility: chloroform, methanol Storage: -20°C			
1704 1704-1	Methyl 2-hydroxytetradecanoate 2-Hydroxy C14:0 methyl ester C ₁₅ H ₃₀ O ₃ CAS#: 56009-40-6	50 mg 1 g	98.00 565.00
Source: synthetic Mol. Wt.: 258 Purity: 98+% by TLC, GC Appearance: solid Solubility: chloroform, ethyl ether, methanol Storage: -20°C			
1705 1705-1	2-Hydroxyhexadecanoic acid 2-Hydroxy C16:0 acid C ₁₆ H ₃₂ O ₃ CAS#: 764-67-0	50 mg 1 g	98.00 565.00
Source: synthetic Mol. Wt.: 272 Melting Point (°C): 86-87 Purity: 98+% by TLC, GC Appearance: solid Solubility: chloroform/methanol 2:1, methanol Storage: -20°C			
1706 1706-1	Methyl 2-hydroxyhexadecanoate 2-Hydroxy C16:0 methyl ester C ₁₇ H ₃₄ O ₃ CAS#: 16742-51-1	50 mg 1 g	98.00 565.00
Source: synthetic Mol. Wt.: 286 Melting Point (°C): 59-60 Purity: 98+% by TLC, GC Appearance: solid Solubility: chloroform, ethyl ether, methanol Storage: -20°C			
1707 1707-1	2-Hydroxyoctadecanoic acid 2-Hydroxy C18:0 acid C ₁₈ H ₃₆ O ₃ CAS#: 629-22-1	50 mg 1 g	98.00 565.00
Source: synthetic Mol. Wt.: 300 Melting Point (°C): 92-93 Purity: 98+% by TLC, GC Appearance: solid Solubility: chloroform/methanol 5:1 Storage: -20°C			
1708 1708-1	Methyl 2-hydroxyoctadecanoate 2-Hydroxy C18:0 methyl ester C ₁₉ H ₃₈ O ₃ CAS#: 2420-35-1	50 mg 1 g	98.00 565.00
Source: synthetic Mol. Wt.: 315 Melting Point (°C): 64-66 Purity: 98+% by TLC, GC Appearance: solid Solubility: chloroform, ethyl ether, methanol Storage: -20°C			
1709 1709-0.5	2-Hydroxyeicosanoic acid 2-Hydroxy C20:0 acid C ₂₀ H ₄₀ O ₃ CAS#: 16742-48-6	25 mg 0.5 g	98.00 565.00
Source: synthetic Mol. Wt.: 329 Melting Point (°C): 91-92 Purity: 98+% by TLC, GC Appearance: solid Solubility: chloroform/methanol 5:1 Storage: -20°C			
1710 1710-0.5	Methyl 2-hydroxyeicosanoate 2-Hydroxy C20:0 methyl ester C ₂₁ H ₄₂ O ₃ CAS#: 16742-49-7	25 mg 0.5 g	98.00 565.00
Source: synthetic Mol. Wt.: 343 Melting Point (°C): 62-64 Purity: 98+% by TLC, GC Appearance: solid Solubility: chloroform, ethyl ether Storage: -20°C			
1711 1711-0.5	2-Hydroxydocosanoic acid 2-Hydroxy C22:0 acid C ₂₂ H ₄₄ O ₃ CAS#: 13980-14-8	25 mg 0.5 g	98.00 565.00
Source: synthetic Mol. Wt.: 366 Melting Point (°C): 96-97 Purity: 98+% by TLC, GC Appearance: solid Solubility: chloroform/methanol 5:1 Storage: -20°C			

1712	Methyl 2-hydroxydocosanoate	25 mg	98.00
1712-0.5	2-Hydroxy C22:0 methyl ester C ₂₃ H ₄₆ O ₃ CAS#: 13980-17-1	0.5 g	565.00
	Source: synthetic Mol. Wt.: 371 Melting Point (°C): 72-73 Purity: 98+% by TLC, GC Appearance: solid Solubility: chloroform, ethyl ether Storage: -20°C		
1713	2-Hydroxytricosanoic acid	10 mg	139.00
	2-Hydroxy C23:0 acid C ₂₃ H ₄₆ O ₃ CAS#: 2718-37-8		
	Source: synthetic Mol. Wt.: 371 Melting Point (°C): 98-99 Purity: 98+% by TLC, GC Appearance: solid Solubility: chloroform/methanol 5:1 Storage: -20°C		
1714	Methyl 2-hydroxytricosanoate	10 mg	139.00
	2-Hydroxy C23:0 methyl ester C ₂₄ H ₄₈ O ₃ CAS#: 118745-41-8		
	Source: synthetic Mol. Wt.: 385 Melting Point (°C): 68-70 Purity: 98+% by TLC, GC Appearance: solid Solubility: chloroform, ethyl ether Storage: -20°C		
1715	2-Hydroxytetracosanoic acid	5 mg	139.00
	2-Hydroxy C24:0 acid; cerebronic acid C ₂₄ H ₄₈ O ₃ CAS#: 544-57-0		
	Source: synthetic Mol. Wt.: 385 Melting Point (°C): 101-104 Purity: 98+% by TLC, GC Appearance: solid Solubility: chloroform/methanol 5:1 Storage: -20°C		
1716	Methyl 2-hydroxytetracosanoate	5 mg	139.00
	2-Hydroxy C24:0 methyl ester C ₂₅ H ₅₀ O ₃ CAS#: 2433-95-6		
	Source: synthetic Mol. Wt.: 399 Melting Point (°C): 77-80 Purity: 98+% by TLC, GC Appearance: solid Solubility: chloroform, ethyl ether Storage: -20°C		
1722	2-Hydroxy methyl ester mix	10 mg/ml, 1 ml	98.00
	Quantitative mixture		
	Source: synthetic Appearance: liquid Solvent: methylene chloride Solubility: methylene chloride Storage: -20°C		
	Contains: 2-OH C14:0, 20%; 2-OH C16:0, 20%; 2-OH C18:0, 15%; 2-OH C20:0, 15.0%; 2-OH C22:0, 10%; 2-OH C23:0, 10%; 2-OH C24:0, 10%		

3-Hydroxy Fatty Acids and Methyl Esters

These products are racemic and 98+% pure by GC and TLC. 3-Hydroxy fatty acids occur in the lipid fraction of many microorganisms and are useful in the typing of microbial isolates. They are stable and are supplied neat in vials.



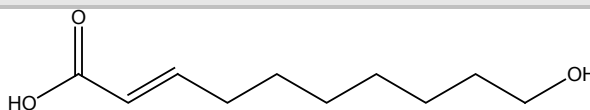
Catalog number 1747

1747 1747-0.5	3-Hydroxyhexanoic acid 3-Hydroxy C6:0 acid C ₆ H ₁₂ O ₃ CAS#: 10191-24-9	25 mg 0.5 g	119.00 594.00
Source: synthetic Mol. Wt.: 132 Purity: 98+% by TLC, GC Appearance: liquid Solubility: chloroform, ethanol, methanol Storage: -20°C			
1748 1748-0.5	Methyl 3-hydroxyhexanoate 3-Hydroxy C6:0 methyl ester C ₇ H ₁₄ O ₃ CAS#: 21188-58-9	25 mg 0.5 g	119.00 594.00
Source: synthetic Mol. Wt.: 146 Purity: 98+% by TLC, GC Appearance: liquid Solubility: chloroform, ethanol, methanol Storage: -20°C			
1745 1745-0.5	3-Hydroxyoctanoic acid 3-Hydroxy C8:0 acid C ₈ H ₁₆ O ₃ CAS#: 88930-08-9	25 mg 0.5 g	108.00 594.00
Source: synthetic Mol. Wt.: 160 Purity: 98+% by TLC, GC Appearance: liquid Solubility: chloroform, ethanol, methanol Storage: -20°C			
1746 1746-0.5	Methyl 3-hydroxyoctanoate 3-Hydroxy C8:0 methyl ester C ₉ H ₁₈ O ₃ CAS#: 85549-54-8	25 mg 0.5 g	108.00 594.00
Source: synthetic Mol. Wt.: 174 Purity: 98+% by TLC, GC Appearance: liquid Solubility: chloroform, ethanol, ethyl ether Storage: -20°C			
1725 1725-0.5	3-Hydroxynonanoic acid 3-Hydroxy C9:0 acid C ₉ H ₁₈ O ₃ CAS#: 88930-09-0	25 mg 0.5 g	119.00 594.00
Source: synthetic Mol. Wt.: 174 Melting Point (°C): 60-62 Purity: 98+% by TLC, GC Appearance: solid Solubility: chloroform, ethanol, methanol Storage: -20°C			
1726 1726-0.5	Methyl 3-hydroxynonanoate 3-Hydroxy C9:0 methyl ester C ₁₀ H ₂₀ O ₃ CAS#: 83968-06-3	25 mg 0.5 g	119.00 594.00
Source: synthetic Mol. Wt.: 188 Purity: 98+% by TLC, GC Appearance: liquid Solubility: chloroform, ethanol, ethyl ether Storage: -20°C			
1727 1727-0.5	3-Hydroxydecanoic acid 3-Hydroxy C10:0 acid C ₁₀ H ₂₀ O ₃ CAS#: 5561-87-5	25 mg 0.5 g	139.00 594.00
Source: synthetic Mol. Wt.: 188 Melting Point (°C): 57-60 Purity: 98+% by TLC, GC Appearance: solid Solubility: chloroform, ethanol, methanol Storage: -20°C			

1728	Methyl 3-hydroxydecanoate	25 mg	139.00
1728-0.5	3-Hydroxy C10:0 methyl ester C ₁₁ H ₂₂ O ₃ CAS#: 62675-82-5	0.5 g	594.00
Source: synthetic Mol. Wt.: 202 Purity: 98+% by TLC, GC Appearance: liquid Solubility: chloroform, ethanol, methanol Storage: -20°C			
1729	3-Hydroxyundecanoic acid	25 mg	126.00
1729-0.5	3-Hydroxy C11:0 acid C ₁₁ H ₂₂ O ₃ CAS#: 40165-88-6	0.5 g	594.00
Source: synthetic Mol. Wt.: 202 Melting Point (°C): 74-76 Purity: 98+% by TLC, GC Appearance: solid Solubility: chloroform, ethanol, methanol Storage: -20°C			
1730	Methyl 3-hydroxyundecanoate	25 mg	126.00
1730-0.5	3-Hydroxy C11:0 methyl ester C ₁₂ H ₂₄ O ₃ CAS#: 127593-21-9	0.5 g	594.00
Source: synthetic Mol. Wt.: 216 Purity: 98+% by TLC, GC Appearance: liquid Solubility: chloroform, ethanol, methanol Storage: -20°C			
1731	3-Hydroxydodecanoic acid	25 mg	119.00
1731-0.5	3-Hydroxy C12:0 acid C ₁₂ H ₂₄ O ₃ CAS#: 1883-13-2	0.5 g	594.00
Source: synthetic Mol. Wt.: 216 Melting Point (°C): 71-72 Purity: 98+% by TLC, GC Appearance: solid Solubility: ethanol, methanol Storage: -20°C			
1732	Methyl 3-hydroxydodecanoate	25 mg	126.00
1732-0.5	3-Hydroxy C12:0 methyl ester C ₁₃ H ₂₆ O ₃ CAS#: 85464-97-7	0.5 g	594.00
Source: synthetic Mol. Wt.: 230 Purity: 98+% by TLC, GC Appearance: liquid Solubility: chloroform, ethanol, ethyl ether Storage: -20°C			
1733	3-Hydroxytridecanoic acid	25 mg	126.00
1733-0.5	3-Hydroxy C13:0 acid C ₁₃ H ₂₆ O ₃ CAS#: 32602-69-0	0.5 g	594.00
Source: synthetic Mol. Wt.: 230 Melting Point (°C): 80-83 Purity: 98+% by TLC, GC Appearance: solid Solubility: chloroform, ethanol, methanol Storage: -20°C			
1734	Methyl 3-hydroxytridecanoate	25 mg	126.00
1734-0.5	3-Hydroxy C13:0 methyl ester C ₁₄ H ₂₈ O ₃	0.5 g	594.00
Source: synthetic Mol. Wt.: 244 Purity: 98+% by TLC, GC Appearance: liquid Solubility: chloroform, ethyl ether Storage: -20°C			
1735	3-Hydroxytetradecanoic acid	25 mg	119.00
1735-0.5	3-Hydroxy C14:0 acid C ₁₄ H ₂₈ O ₃ CAS#: 3422-31-9	0.5 g	594.00
Source: synthetic Mol. Wt.: 244 Melting Point (°C): 80-81 Purity: 98+% by TLC, GC Appearance: solid Solubility: chloroform, ethanol, methanol Storage: -20°C			
1736	Methyl 3-hydroxytetradecanoate	25 mg	119.00
1736-0.5	3-Hydroxy C14:0 methyl ester C ₁₅ H ₃₀ O ₃ CAS#: 55682-83-2	0.5 g	594.00
Source: synthetic Mol. Wt.: 258 Melting Point (°C): 36-37 Purity: 98+% by TLC, GC Appearance: solid Solubility: chloroform, ethyl ether, methanol Storage: -20°C			

1739 1739-0.5	3-Hydroxyhexadecanoic acid 3-Hydroxy C16:0 acid C ₁₆ H ₃₂ O ₃ . CAS#: 928-17-6	25 mg 0.5 g	119.00 594.00
Source: synthetic Mol. Wt.: 272 Melting Point (°C): 85-86 Purity: 98+% by TLC, GC Appearance: solid Solubility: chloroform, ethanol, methanol Storage: -20°C			
1740 1740-0.5	Methyl 3-hydroxyhexadecanoate 3-Hydroxy C16:0 methyl ester C ₁₇ H ₃₄ O ₃ CAS#: 51883-36-4	25 mg 0.5 g	119.00 594.00
Source: synthetic Mol. Wt.: 286 Melting Point (°C): 43-45 Purity: 98+% by TLC, GC Appearance: solid Solubility: ethanol, methanol Storage: -20°C			
1741 1741-0.5	3-Hydroxyheptadecanoic acid 3-Hydroxy C17:0 acid C ₁₇ H ₃₄ O ₃ CAS#: 40165-89-7	25 mg 0.5 g	108.00 594.00
Source: synthetic Mol. Wt.: 286 Melting Point (°C): 93-95 Purity: 98+% by TLC, GC Appearance: solid Solubility: ethanol, methanol Storage: -20°C			
1742 1742-0.5	Methyl 3-hydroxyheptadecanoate 3-Hydroxy C17:0 methyl ester C ₁₈ H ₃₆ O ₃	25 mg 0.5 g	108.00 594.00
Source: synthetic Mol. Wt.: 300 Melting Point (°C): 53-55 Purity: 98+% by TLC, GC Appearance: solid Solubility: ethanol, methanol Storage: -20°C			
1743 1743-0.5	3-Hydroxyoctadecanoic acid 3-Hydroxy C18:0 acid C ₁₈ H ₃₆ O ₃ CAS#: 45261-96-9	25 mg 0.5 g	108.00 594.00
Source: synthetic Mol. Wt.: 300 Melting Point (°C): 52-54 Purity: 98+% by TLC, GC Appearance: solid Solubility: ethanol, methanol Storage: -20°C			
1744 1744-0.5	Methyl 3-hydroxyoctadecanoate 3-Hydroxy C18:0 methyl ester C ₁₉ H ₃₈ O ₃ CAS#: 14531-40-9	25 mg 0.5 g	108.00 594.00
Source: synthetic Mol. Wt.: 314 Melting Point (°C): 52-54 Purity: 98+% by TLC, GC Appearance: solid Solubility: ethanol, methanol Storage: -20°C			

Omega Hydroxy Fatty Acids



Catalog number 1754

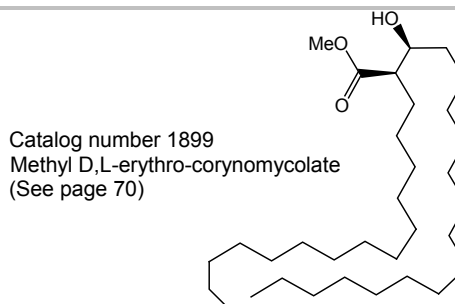
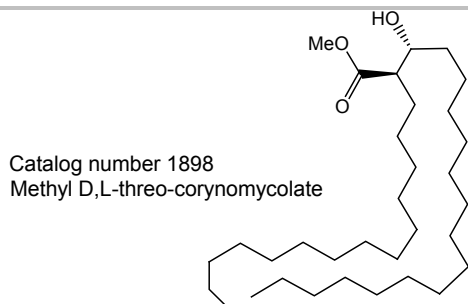
1754 1754-0.5	Royal Jelly acid 10-Hydroxy-2-(E)-decanoic acid; omega-hydroxy C10:1 (2-trans) C ₁₀ H ₁₈ O ₃ CAS#: 14113-05-4	50 mg 0.5 g	158.00 690.00
Source: synthetic Mol. Wt.: 186 Melting Point (°C): 63-65 Purity: 98+% by TLC, GC Appearance: solid Solubility: chloroform, ethanol, methanol Storage: -20°C			

1881	15-Hydroxypentadecanoic acid omega-Hydroxy C15:0 C ₁₅ H ₃₀ O ₃ CAS#: 4617-33-8	25 mg	64.00
	Source: synthetic Mol. Wt.: 258 Melting Point (°C): 84-86 Purity: 98+% by TLC, GC Appearance: solid Solubility: chloroform, ethanol, methanol Storage: room temperature		
1882	Methyl 15-hydroxypentadecanoate omega-Hydroxy C15:0 fatty acid methyl ester C ₁₆ H ₃₂ O ₃ CAS#: 76529-42-5	25 mg	64.00
	Source: synthetic Mol. Wt.: 272 Melting Point (°C): 50-52 Purity: 98+% by TLC, GC Appearance: solid Solubility: chloroform, warm ethanol, ethyl ether Storage: room temperature		
1760	17-Hydroxyheptadecanoic acid omega-Hydroxy C17:0 fatty acid C ₁₇ H ₃₄ O ₃ CAS#: 13099-34-8	25 mg	158.00
	Source: synthetic Mol. Wt.: 286 Melting Point (°C): 93-95 Purity: 98+% by TLC, GC Appearance: solid Solubility: chloroform, warm ethanol, ethyl ether Storage: room temperature		
1761	Methyl 17-hydroxyheptadecanoate omega-Hydroxy C17:0 fatty acid methyl ester C ₁₈ H ₃₆ O ₃ CAS#: 94036-00-7	25 mg	158.00
	Source: synthetic Mol. Wt.: 300 Melting Point (°C): 59-63 Purity: 98+% by TLC, GC Appearance: solid Solubility: chloroform, warm ethanol, ethyl ether Storage: room temperature		
1877	20-Hydroxyeicosanoic acid omega-Hydroxy C20:0 fatty acid C ₂₀ H ₄₀ O ₃	25 mg	139.00
	Source: synthetic Mol. Wt.: 328 Melting Point (°C): 96-98 Purity: 98+% by TLC, GC Appearance: solid Solubility: chloroform, warm ethanol Storage: room temperature		
1878	Methyl 20-hydroxyeicosanoate omega-Hydroxy C20:0 fatty acid methyl ester C ₂₁ H ₄₂ O ₃	25 mg	139.00
	Source: synthetic Mol. Wt.: 342 Melting Point (°C): 69-71 Purity: 98+% by TLC, GC Appearance: solid Solubility: chloroform, warm ethanol, ethyl ether Storage: room temperature		
1880	Methyl 21-hydroxyheneicosanoate omega-Hydroxy C21:0 fatty acid methyl ester C ₂₂ H ₄₄ O ₃	25 mg	158.00
	Source: synthetic Mol. Wt.: 356 Melting Point (°C): 73-76 Purity: 98+% by TLC, GC Appearance: solid Solubility: chloroform, warm ethanol, ethyl ether Storage: room temperature		
1818	22-Hydroxydocosanoic acid omega-hydroxy C22:0 fatty acid C ₂₂ H ₄₄ O ₃	25 mg	167.00
	Source: synthetic Mol. Wt.: 356 Melting Point (°C): 100-102 Purity: 98+% by TLC, GC Appearance: solid Solubility: chloroform, warm ethanol Storage: room temperature		

1819	Methyl 22-hydroxydocosanoate omega-Hydroxy C22:0 fatty acid methyl ester C ₂₃ H ₄₆ O ₃	25 mg	167.00
<p>Source: synthetic Mol. Wt.: 370 Melting Point (°C): 73-75 Purity: 98+% by TLC, GC Appearance: solid Solubility: chloroform, warm ethanol, ethyl ether Storage: room temperature</p>			
1883	Methyl 27-hydroxyheptacosanoate omega-Hydroxy C27:0 fatty acid methyl ester C ₂₈ H ₅₆ O ₃	25 mg	167.00
<p>Source: synthetic Mol. Wt.: 440 Melting Point (°C): 85-89 Purity: 97+% by TLC, GC Appearance: solid Solubility: chloroform Storage: room temperature</p>			
1884	Methyl 30-hydroxytriacontanoate omega-Hydroxy C30:0 fatty acid methyl ester C ₃₁ H ₆₂ O ₃	25 mg	167.00
<p>Source: synthetic Mol. Wt.: 482 Melting Point (°C): 88-91 Purity: 97+% by TLC, GC Appearance: solid Solubility: chloroform Storage: room temperature</p>			

Other Hydroxy Fatty Acids

1182	Ricinelaidic acid 12-Hydroxy C18:1 (9-trans) fatty acid C ₁₈ H ₃₄ O ₃ CAS#: 82188-83-8	100 mg	54.00
<p>Source: synthetic Mol. Wt.: 298 Melting Point (°C): 50-53 Purity: 98+% by TLC, GC Appearance: solid Solubility: ethanol, methanol Storage: -20°C</p>			
1183	Methyl ricinelaidate 12-Hydroxy C18:1 (9-trans) methyl ester C ₁₉ H ₃₆ O ₃ CAS#: 7706-01-6	100 mg	54.00
<p>Source: synthetic Mol. Wt.: 312 Purity: 98+% by TLC, GC Appearance: solid Solubility: ethanol, methanol Storage: -20°C</p>			
1766	6-Hydroxyoctadecanoic acid 6-Hydroxy C18:0 fatty acid C ₁₈ H ₃₆ O ₃	10 mg	151.00
<p>Source: synthetic Mol. Wt.: 300 Melting Point (°C): 80-82 Purity: 98+% by TLC, GC Appearance: solid Solubility: ethanol, methanol Storage: room temperature</p>			

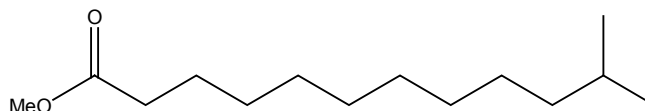


1898	Methyl D,L-threo-corynomycolate Hydroxy fatty acid with long branched chain C ₃₃ H ₆₆ O ₃	25 mg	151.00
<p>Source: synthetic Mol. Wt.: 511 Melting Point (°C): 70 Purity: 98+% by TLC Appearance: solid Solubility: chloroform Storage: room temperature</p>			

1899	Methyl D,L-erythro-corynomycolate Hydroxy fatty acid with long branched chain $C_{33}H_{66}O_3$	25 mg	151.00
<p>Source: synthetic Mol. Wt.: 511 Melting Point (°C): 58 Purity: 98+% by TLC Appearance: solid Solubility: chloroform Storage: room temperature</p>			

Branched and Cyclic Fatty Acids

Iso-Fatty Acids and Esters



Catalog number 1656

1656	Methyl 11-methyldodecanoate iso-Tridecanoic methyl ester; iso C13 methyl ester $C_{14}H_{28}O_2$ CAS#: 5129-57-7	20 mg	250.00
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Source: synthetic **Mol. Wt.:** 228 **Purity:** 98+% by GC **Appearance:** liquid
Solubility: hexane, ethyl ether, methylene chloride **Storage:** -20°C

1657	Methyl 12-methyltridecanoate iso-Tetradecanoic methyl ester; iso C14 methyl ester $C_{15}H_{30}O_2$ CAS#: 5129-58-8	20 mg	250.00
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Source: synthetic **Mol. Wt.:** 242 **Purity:** 98+% by GC **Appearance:** liquid
Solubility: chloroform, ethyl ether, ethanol **Storage:** -20°C

1605	13-Methyltetradecanoic acid iso-Pentadecanoic acid; iso C15 acid $C_{15}H_{30}O_2$ CAS#: 27836-87-9	20 mg	250.00
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Source: synthetic **Mol. Wt.:** 242 **Purity:** 98+% by GC **Appearance:** solid
Solubility: chloroform, ethyl ether, ethanol **Storage:** -20°C

1600	Methyl 13-methyltetradecanoate iso-Pentadecanoic methyl ester; iso C15 methyl ester $C_{16}H_{32}O_2$ CAS#: 5129-59-9	20 mg	250.00
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Source: synthetic **Mol. Wt.:** 256 **Purity:** 98+% by GC **Appearance:** liquid
Solubility: chloroform, ethyl ether, ethanol **Storage:** -20°C

1601	Methyl 14-methylpentadecanoate iso-Palmitic methyl ester; iso C16 methyl ester $C_{17}H_{34}O_2$ CAS#: 5129-60-2	20 mg	250.00
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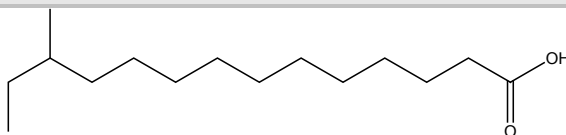
Source: synthetic **Mol. Wt.:** 270 **Purity:** 98+% by GC **Appearance:** liquid
Solubility: chloroform, ethyl ether, ethanol **Storage:** -20°C

1606 **15-Methylhexadecanoic acid** **20 mg** **250.00**
iso-Heptadecanoic acid; iso C17 acid $C_{17}H_{34}O_2$ **CAS#:** 1603-03-8
Source: synthetic **Mol. Wt.:** 270 **Purity:** 98+% by GC **Appearance:** solid
Solubility: chloroform, ethyl ether, ethanol **Storage:** $-20^{\circ}C$

1602 **Methyl 15-methylhexadecanoate** **20 mg** **250.00**
iso-Heptadecanoic methyl ester; iso C17 methyl ester $C_{18}H_{36}O_2$
CAS#: 6929-04-0
Source: synthetic **Mol. Wt.:** 284 **Purity:** 98+% by GC **Appearance:** liquid
Solubility: chloroform, ethyl ether, ethanol **Storage:** $-20^{\circ}C$

1603 **Methyl 17-methyloctadecanoate** **20 mg** **250.00**
iso-Nonadecanoic methyl ester; iso C19 methyl ester $C_{20}H_{40}O_2$
CAS#: 55124-97-5
Source: synthetic **Mol. Wt.:** 313 **Purity:** 98+% by GC **Appearance:** solid
Solubility: chloroform, ethyl ether, ethanol **Storage:** $-20^{\circ}C$

Anteiso-Fatty Acids and Esters



Catalog number 1615

1615 **12-Methyltetradecanoic acid** **20 mg** **250.00**
anteiso-Pentadecanoic acid; anteiso C15 acid $C_{15}H_{30}O_2$ **CAS#:** 5502-94-3
Source: synthetic **Mol. Wt.:** 242 **Purity:** 98+% by GC **Appearance:** solid
Solubility: chloroform, ethyl ether, ethanol **Storage:** $-20^{\circ}C$

1612 **Methyl 12-methyltetradecanoate** **20 mg** **250.00**
anteiso-Pentadecanoic methyl ester; anteiso C15 methyl ester $C_{16}H_{32}O_2$
CAS#: 5129-66-8
Source: synthetic **Mol. Wt.:** 256 **Purity:** 98+% by GC **Appearance:** liquid
Solubility: chloroform, ethyl ether, ethanol **Storage:** $-20^{\circ}C$

1613 **Methyl 13-methylpentadecanoate** **20 mg** **250.00**
anteiso-Palmitic methyl ester; anteiso C16 methyl ester $C_{17}H_{34}O_2$
CAS#: 5487-50-3
Source: synthetic **Mol. Wt.:** 270 **Purity:** 98+% by GC **Appearance:** liquid
Solubility: chloroform, ethyl ether, ethanol **Storage:** $-20^{\circ}C$

1616 **14-Methylhexadecanoic acid** **20 mg** **250.00**
anteiso-Heptadecanoic acid; anteiso C17 acid $C_{17}H_{34}O_2$ **CAS#:** 5918-29-6
Source: synthetic **Mol. Wt.:** 270 **Purity:** 98+% by GC **Appearance:** solid
Solubility: chloroform, ethyl ether, ethanol **Storage:** $-20^{\circ}C$

1614	Methyl 14-methylhexadecanoate anteiso-Heptadecanoic methyl ester; anteiso C17 methyl ester C ₁₈ H ₃₆ O ₂ CAS#: 2490-49-5	20 mg	250.00
Source: synthetic Mol. Wt.: 284 Purity: 98+% by GC Appearance: liquid Solubility: chloroform, ethyl ether, ethanol Storage: -20°C			

Methylated Fatty Acids

1207	D,L-2,6-Dimethylheptanoic acid 2,6-Dimethyl C7:0 fatty acid C ₉ H ₁₈ O ₂	50 mg	81.00
Source: synthetic Mol. Wt.: 158 Purity: 98+% by TLC, GC Appearance: liquid Solubility: chloroform Storage: room temperature			

1791	10-Methylhexadecanoic acid 10-Methyl C16:0 fatty acid C ₁₇ H ₃₄ O ₂	25 mg	151.00
Source: synthetic Mol. Wt.: 270 Purity: 98+% by TLC, GC Appearance: liquid Solubility: chloroform Storage: room temperature			

1792	Methyl 10-methylhexadecanoate 10-Methyl C16:0 fatty acid methyl ester C ₁₈ H ₃₆ O ₂	25 mg	151.00
Source: synthetic Mol. Wt.: 284 Purity: 98+% by TLC, GC Appearance: liquid Solubility: chloroform Storage: room temperature			

1195	Phytanic acid 3,7,11,15-Tetramethylhexadecanoic acid C ₂₀ H ₄₀ O ₂ CAS#: 14721-66-5	25 mg	216.00
Source: semi-synthetic Mol. Wt.: 312 Purity: 97+% by GC Appearance: solid Solubility: chloroform, methanol Storage: -20°C			

Cyclopropyl Fatty Acids and Esters

1822	Dihydrosterculic acid cis-9,10-Methyleneoctadecanoic acid C ₁₉ H ₃₆ O ₂ CAS#: 4675-61-0	25 mg	116.00
Source: synthetic Mol. Wt.: 296 Melting Point (°C): 38-42 Purity: 98+% by TLC, GC Appearance: solid Solubility: chloroform, ethanol, methanol, hexane Storage: -20°C References: 242, 243, 244			

1823	Methyl cis-9,10-methylene-octadecanoate, C19:0 delta (all cis-9,10) Methyl dihydrosterculate C ₂₀ H ₃₈ O ₂ CAS#: 3971-54-8	25 mg	116.00
Source: synthetic Mol. Wt.: 310 Purity: 98+% by TLC, GC Appearance: liquid Solubility: chloroform, ethanol, methanol, hexane Storage: -20°C References: 242, 243, 244			

Unusual Fatty Acids and Derivatives

1751 **N-Oleoylethanolamine** **100 mg** **140.00**

NOE $C_{20}H_{39}NO_2$ **CAS#:** 111-58-0

Source: synthetic **Mol. Wt.:** 326 **Melting Point (°C):** 63-66 **Purity:** 98+% by TLC, GC **Appearance:** solid **Solubility:** chloroform, ethanol, methanol, ethyl ether, DMSO
Storage: -20°C **References:** 91,92,93

Activity: acid ceramidase inhibitor

1786 **N-Hexadecanoylethanolamine** **100 mg** **98.00**

$C_{18}H_{37}NO_2$ **CAS#** 544-31-0

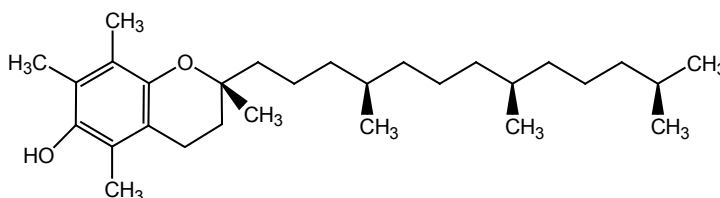
Source: synthetic **Mol. Wt.:** 299 **Melting Point (°C):** 99-102 **Purity:** 98+% by TLC **Appearance:** solid **Solubility:** chloroform, ethanol, methanol, **Storage:** -20°C
References: 91,92,93

Activity: inactive as acid ceramidase inhibitor

Other Lipids

Tocopherols

Catalog number 1072

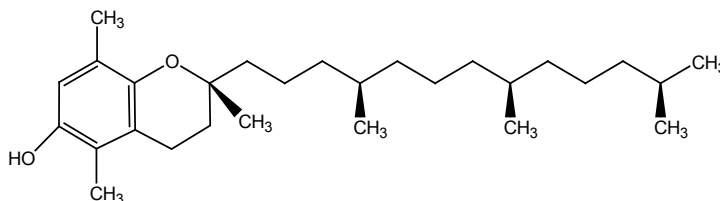


1072 **rac-alpha-Tocopherol** **50 mg/ml, 1 ml** **88.00**

5,7,8-Trimethyltolcol $C_{29}H_{50}O_2$ **CAS#:** 59-02-9

Source: synthetic **Mol. Wt.:** 431 **Purity:** 95% by TLC, 98% by GC
Appearance: liquid **Solvent:** hexane **Solubility:** chloroform, ethanol, hexane, methanol **Storage:** -20°C **References:** 173,174,175,176

Catalog number 1071

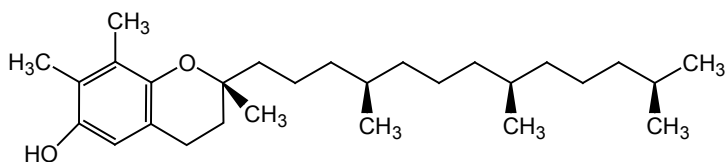


1071 **rac-beta-Tocopherol** **50 mg/ml, 1 ml** **132.00**

5,8-Dimethyltolcol $C_{28}H_{48}O_2$ **CAS#:** 148-03-8

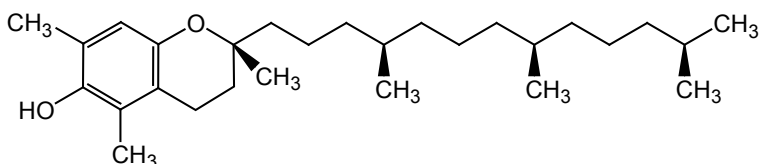
Source: synthetic **Mol. Wt.:** 417 **Purity:** 95% by TLC, 98% by GC
Appearance: liquid **Solvent:** hexane **Solubility:** chloroform, ethanol, hexane, methanol **Storage:** -20°C

Catalog number 1073



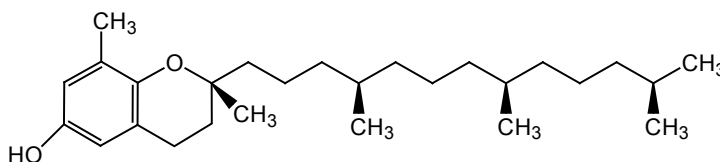
- 1073** **rac-gamma-Tocopherol** **50 mg/ml, 1 ml** **132.00**
7,8-Dimethyltolcol $C_{28}H_{48}O_2$ **CAS#:** 73980-80-0
- Source:** synthetic **Mol. Wt.:** 417 **Purity:** 95% by TLC, 97% by GC
Appearance: liquid **Solvent:** hexane **Solubility:** chloroform, ethanol, hexane, methanol **Storage:** -20°C

Catalog number 1074



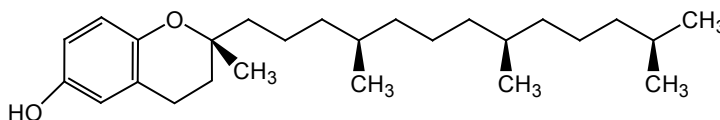
- 1074** **rac-5,7-Dimethyltolcol** **50 mg/ml, 1 ml** **132.00**
 $C_{28}H_{48}O_2$ **CAS#:** 493-35-6
- Source:** synthetic **Mol. Wt.:** 417 **Purity:** 95% by TLC, 98% by GC
Appearance: liquid **Solvent:** hexane **Solubility:** hexane, ethyl ether, chloroform, alcohols **Storage:** -20°C

Catalog number 1790



- 1790** **(+)-delta-Tocopherol** **50 mg/ml, 1 ml** **119.00**
8-Methyltolcol $C_{27}H_{46}O_2$ **CAS#:** 119-13-1
- Source:** natural, plant **Mol. Wt.:** 403 **Purity:** 95% by TLC, 98% by GC
Appearance: liquid **Solvent:** hexane **Solubility:** chloroform, ethanol, hexane, methanol **Storage:** -20°C

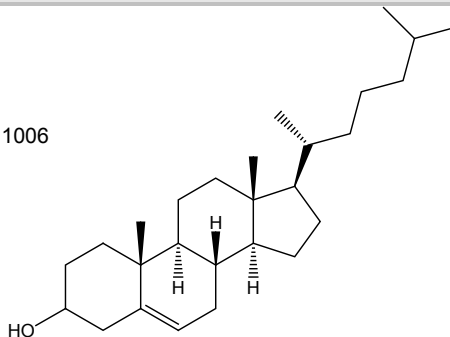
Catalog number 1797



- 1797** **Tocol** **50 mg/ml, 1 ml** **124.00**
rac-Tocol $C_{26}H_{44}O_2$
- Source:** synthetic **Mol. Wt.:** 389 **Purity:** 95% by TLC, 98% by GC
Appearance: liquid **Solvent:** hexane **Solubility:** hexane, methanol, ethanol **Storage:** -20°C

Cholestane Derivatives

Catalog number 1006



1006	Cholesterol C ₂₇ H ₄₆ O CAS#: 57-88-5	500 mg	48.00
	Source: natural, ovine Mol. Wt.: 387 Melting Point (°C): 147-148 Purity: 98+% by TLC, GC Appearance: solid Solubility: chloroform, ethanol Storage: -20°C		
1115	5-alpha-Cholestane C ₂₇ H ₄₈ CAS#: 481-21-0	100 mg	72.00
	Source: synthetic Mol. Wt.: 373 Purity: 98+% by GC Appearance: solid Solubility: chloroform, ethyl ether, hexane Storage: -20°C		
1116	Coprostanol 5-beta-Cholestan-3-beta-ol C ₂₇ H ₄₈ O CAS#: 360-68-9	25 mg	132.00
	Source: semi-synthetic Mol. Wt.: 389 Melting Point (°C): 101-103 Purity: 98+% by GC Appearance: solid Solubility: chloroform, ethyl ether, warm methanol Storage: -20°C		

Plant Sterols and Steryl Glucosides

1119	Plant sterol mix Sterol mixture, qualitative	25 mg/ml, 1 ml	80.00
	Source: natural, plant Appearance: liquid Solvent: chloroform Solubility: chloroform Storage: -20°C		
	Contains: Brassicasterol (13%), campesterol (26%), stigmasterol (7%), β-sitosterol (53%) in order of elution		
1123	Plant sterols kit Sterols kit	1 kit	333.00
	Source: synthetic or plant Appearance: liquid/solid Solvent: chloroform Solubility: chloroform Storage: -20°C		
	Contains in individual packages: steryl glucosides 25 mg, esterified steryl glucosides 10 mg, plant sterol mixture 25 mg, β-sitosterol (55%) 100 mg, desmosterol (85%) 2 mg, lanosterol (55%) 100 mg, stigmasterol 25 mg, ergosterol 25 mg, coprostanol 5 mg, cholestanol 100 mg		

1113	β-Sitostanol Stigmastanol C ₂₉ H ₅₂ O CAS#: 19466-47-8	50 mg	62.00
	Source: synthetic Mol. Wt.: 417 Melting Point (°C): 127-132 Purity: 98+% by TLC, 97+% by GC Appearance: solid Solubility: chloroform Storage: -20°C		
1120	Lanosterol C ₃₀ H ₅₀ O CAS#: 79-63-0	500 mg	62.00
	Source: synthetic or plant Mol. Wt.: 427 Purity: 55% by TLC, GC Appearance: solid Solubility: chloroform Storage: -20°C		
1121	Stigmasterol 5,22-cholestadien-24-beta-ethyl-3-beta-ol C ₂₉ H ₄₈ O CAS#: 83-48-7	100 mg	62.00
	Source: synthetic Mol. Wt.: 413 Melting Point (°C): 165-167 Purity: 95% by TLC, GC Appearance: solid Solubility: chloroform Storage: -20°C		
1122	Ergosterol C ₂₈ H ₄₄ O CAS#: 57-87-4	100 mg	48.00
	Source: synthetic or plant Mol. Wt.: 397 Melting Point (°C): 156-158 Purity: 95% by TLC, GC Appearance: solid Solubility: chloroform Storage: -20°C		
1117	Steryl glucosides C ₃₅ H ₆₀ O ₆	25 mg	75.00
	Source: natural, plant Mol. Wt.: 577 (based on β-sitosteryl glucoside) Melting Point (°C): 283-287 Purity: 98+% by TLC Appearance: solid Solubility: chloroform/methanol/water, 2:1:0.1 (warm) Storage: -20°C		
1118	Esterified steryl glucosides 1:1:1, sterol:glucose:fatty acid C ₅₁ H ₉₀ O ₇	10 mg	85.00
	Source: natural, plant Mol. Wt.: 815 (based on β-sitosteryl glucoside palmitate) Purity: 98+% by TLC Appearance: solid Solubility: chloroform, ethyl ether, pyridine Storage: -20°C		
	Sterol, glucose and fatty acid in a molar ratio 1:1:1.		

Propyleneglycol Monoesters

1862	2-Hydroxypropyl hexadecanoate Propyleneglycol monopalmitate C ₁₉ H ₃₈ O ₃	100 mg	105.00
	Source: synthetic Mol. Wt.: 314 Purity: 98+% by TLC, GC Appearance: solid Solubility: hexane, ethyl ether, alcohol, chloroform, Storage: -20°C		
1863	2-Hydroxypropyl octadecanoate Propyleneglycol monostearate C ₂₁ H ₄₂ O ₃	100 mg	105.00
	Source: synthetic Mol. Wt.: 342 Purity: 98+% by TLC, GC Appearance: solid Solubility: hexane, ethyl ether, alcohol, chloroform, Storage: -20°C		

Standards and Reference Compounds

Food Industry Mixes

Each methyl ester mix is carefully prepared by weight.

4210	KEL-FIM-FAME-5 mix Methyl ester mix	15.5 mg/ml 1 ml	72.00
<p>Source: synthetic or plant Appearance: liquid Solvent: heptane Solubility: heptane Storage: -20°C</p> <p>Contains the methyl esters of the following fatty acids (mg/ml in brackets): C8:0 [0.3], C10:0 [0.5], C12:0 [1.0], C13:0 [0.5], C14:0 [0.5], C14:1 [0.3], C15:0 [0.3], C16:0 [2.0], C16:1 [1.0], C17:0 [0.5], C18:0 [1.0], C18:1tr [0.4], C18:1c [3.0], C18:2 [2.0], C20:0 [0.3], C18:3 [1.0], C20:1 [0.3], C22:0 [0.3], C22:1 [0.3], listed in order of their elution.</p>			
2009	FIM-FAME-6 mix Methyl ester mix	33 mg/ml, 1 ml	98.00
<p>Source: synthetic or plant Appearance: liquid Solvent: heptane Solubility: Storage: -20°C</p> <p>Contains the methyl esters of these fatty acids. Each methyl ester is 3.03% of the mixture except C16:0 which is 6.06%. C4:0, C6:0, C8:0, C10:0, C11:0, C12:0, C13:0, C14:0, C14:1(cis-9), C15:0, C15:1(cis-10), C16:0, C16:1(cis-9), C17:0, C17:1(cis-10), C18:0, C18:1(trans-9), C18:1(cis-9), C18:2(all-cis-9,12), C20:0, C18:3(all-cis 6,9,12), C20:1(cis-11), C18:3(all-cis 9,12,15), C20:2(all-cis 11,14), C22:0, C20:3(all-cis 8,11,14), C22:1(cis 13), C20:3(all-cis 11,14,17), C20:4(all-cis 5,8,11,14), C22:2(all-cis 13,16), C24:1(cis-15), C22:6(all-cis 4,7,10,13,16,19), listed in order of their elution.</p>			
2010	FIM-FAME-7 mix Methyl ester mix	30 mg/ml, 1 ml	98.00
<p>Source: synthetic or plant Appearance: liquid Solvent: methylene chloride Solubility: methylene chloride Storage: -20°C</p> <p>Contains the methyl esters of these fatty acids (weight percent in [brackets]): C4:0 [4.0], C6:0 [4.0], C8:0 [4.0], C10:0 [4.0], C11:0 [2.0], C12:0 [4.0], C13:0 [2.0], C14:0 [4.0], C14:1(cis-9) [2.0], C15:0 [2.0], C15:1(cis-10) [2.0], C16:0 [6.0], C16:1(cis-9) [2.0], C17:0 [2.0], C17:1(cis-10) [2.0], C18:0 [4.0], C18:1(trans-9) [2.0], C18:1(cis-9) [4.0], C18:2(all-trans-9,12) [2.0], C18:2(all-cis-9,12) [2.0], C18:3(all-cis 6,9,12) [2.0], C20:0 [4.0], C20:1(cis-11) [2.0], C18:3(all-cis 9,12,15) [2.0], C21:0 [2.0], C20:2(all-cis 11,14) [2.0], C20:3 (all-cis 8,11,14) [2.0], C22:0 [4.0], C22:1(cis 13) [2.0], C20:3(all-cis 11,14,17) [2.0], C20:4(all-cis 5,8,11,14) [2.0], C23:0 [2.0], C22:2(all-cis 13,16) [2.0], C20:5(all-cis 5,8,11,14,17) [2.0], C24:0 [4.0], C24:1(cis-15) [2.0], C22:6(all-cis 4,7,10,13,16,19) [2.0], listed in order of their elution.</p>			

Polyunsaturated Fatty Acid Methyl Esters Mixes

These are complex qualitative standard mixtures of polyunsaturated fatty acid methyl esters. Because they are extracted from natural materials, relative peak sizes may vary from lot to lot.

1093	PUFA-1 Qualitative mix	100 mg	95.00
Source: natural, fish oil Appearance: liquid Solubility: chloroform, ethanol, hexane, methanol Storage: -20°C References: 148,149,150			
Contains: C14:0, C16:0, C16:1 ω 7, C18:1 ω 9, C18:1 ω 7, C18:2 ω 6, C20:1 ω 9, C18:4 ω 3, C22:1 ω 11, C22:1 ω 9, C20:5 ω 3, C22:5 ω 3, C22:6 ω 3			
1081	PUFA-2 Qualitative mix	100 mg	104.00
Source: natural, porcine Appearance: liquid Solubility: alcohols, hexane, chloroform Storage: -20°C References: 148,149,150			
Contains: C14:0, C16:0, C16:1 ω 7, C18:0, C18:1 ω 9, C18:1 ω 7, C18:2 ω 6, C18:3 ω 6, C18:3 ω 3, C20:1 ω 9, C20:2 ω 6, C20:3 ω 6, C20:4 ω 6, C20:5 ω 3, C22:4 ω 6, C22:5 ω 3, C22:6 ω 3			
1177	PUFA-3 Qualitative mix	100 mg	104.00
Source: natural, menhaden oil Appearance: liquid Solubility: alcohols, hexane, chloroform Storage: -20°C References: 157,158,159			
Contains: C14:0, C16:0, C16:1 ω 7, C16:2 ω 4, C16:3 ω 4, C16:4 ω 1, C18:0, C18:1 ω 9, C18:1 ω 7, C18:2 ω 6, C18:2 ω 4, C18:3 ω 4, C18:3 ω 3, C18:4 ω 3, C20:1 ω 9, C20:4 ω 6, C20:4 ω 3, C20:5 ω 3, C21:5 ω 3, C22:5 ω 3, C22:6 ω 3			

Carbohydrate Mixes

1124	Alditol acetate mix-1 Quantitative carbohydrate mix	50 mg/ml, 1 ml	120.00
Source: synthetic Appearance: liquid Solvent: chloroform Solubility: chloroform Storage: -20°C			
Contains: rhamnitol, fucitol, ribitol and arabinitol pentaacetates, 12.5 mg/ml each			
1125	Alditol acetate mix-2 Quantitative carbohydrate mix	50 mg/ml, 1 ml	120.00
Source: synthetic Appearance: liquid Solvent: chloroform Solubility: chloroform Storage: -20°C			
Contains: mannitol, galactitol, glucitol and inositol hexaacetates, 12.5 mg/ml each			

Other Fatty Acid Methyl Ester Mixes

1722	2-Hydroxy methyl ester mix Source: synthetic Appearance: liquid Solvent: methylene chloride Solubility: methylene chloride Storage: -20°C Quantitative mix contains: C14:0, 20%; C16:0, 20%; C18:0, 15%; C20:0, 15%; C22:0, 10%; C23:0, 10%; C24:0, 10%	10 mg/ml, 1 ml	98.00
1131	Cis-trans isomer standard Source: margarine Appearance: liquid Solvent: 5ml methylene chloride Solubility: methylene chloride, chloroform Storage: -20°C Analysis of positional cis-trans fatty acid isomers is ever more important in light of the new food industry rules. These isomers can be resolved on Supelco SP-2560 or an equivalent capillary GC column. Use this specially formulated mix to ensure proper operation of your column for this tricky separation. Mix consists of cis-trans fatty acid isomers as methyl esters in methylene chloride. This is a qualitative standard containing in order of elution: C16:0, C18:0, C18:1 trans isomers (4 peaks), C18:1 cis & trans isomers (2 peaks), C18:1 cis isomers (4 peaks), C18:2, C20:0, C20:1 and C18:3 (same peak), C22:0	5 mg/ml, 5 ml	116.00

AOCS Animal and Vegetable Oil Reference Mixes (RM mixes)

By studying problems with the quantitative analysis of animal and vegetable oils and fats, the American Oil Chemists' Society has found certain mixtures to be useful as reference standards. The composition of each mixture (see Table I below) is similar to the fatty acid distribution of certain oils. All mixtures are in methyl ester form and ready for GC analysis

Table I. AOCS Oil Reference Mixes

Each methyl ester mixture is carefully prepared by weight and the composition verified by gas chromatography. The weight percentage of each component is indicated in the Table.

Mix No. Catalog No.	RM-1 1084	RM-2 1085	RM-3 1086	Rapeseed 1083	RM-4 1087	RM-5 1088	RM-6 1089
C8:0 Caprylate						7.0	
C10:0 Caprate						5.0	
C12:0 Laurate						48.0	
C14:0 Myristate			1.0	1.0		15.0	2.0
C16:0 Palmitate	6.0	7.0	4.0	4.0	11.0	7.0	30.0
C16:1 Palmitoleate							3.0
C18:0 Stearate	3.0	5.0	3.0	3.0	3.0	3.0	14.0
C18:1 Oleate	35.0	18.0	45.0	60.0	80.0	12.0	41.0
C18:2 Linoleate	50.0	36.0	15.0	12.0	6.0	3.0	7.0
C18:3 Linolenate	3.0	34.0	3.0	5.0			3.0
C20:0 Arachidate	3.0		3.0	3.0			
C20:1 Eicosenoate				1.0			
C22:0 Behenate			3.0	3.0			
C22:1 Erucate			20.0	5.0			
C24:0 Lignocerate			3.0	3.0			

1083 Rapeseed oil reference mixture 25 mg/ml, 1 ml 46.00

AOCS rapeseed oil reference mix

Source: synthetic or plant **Appearance:** liquid **Solvent:** methylene chloride
Solubility: ethyl ether, methylene chloride **Storage:** -20°C

Suitable standard for low erucic acid oil

1084 RM-1 mix 50 mg 46.00

AOCS reference mix RM-1

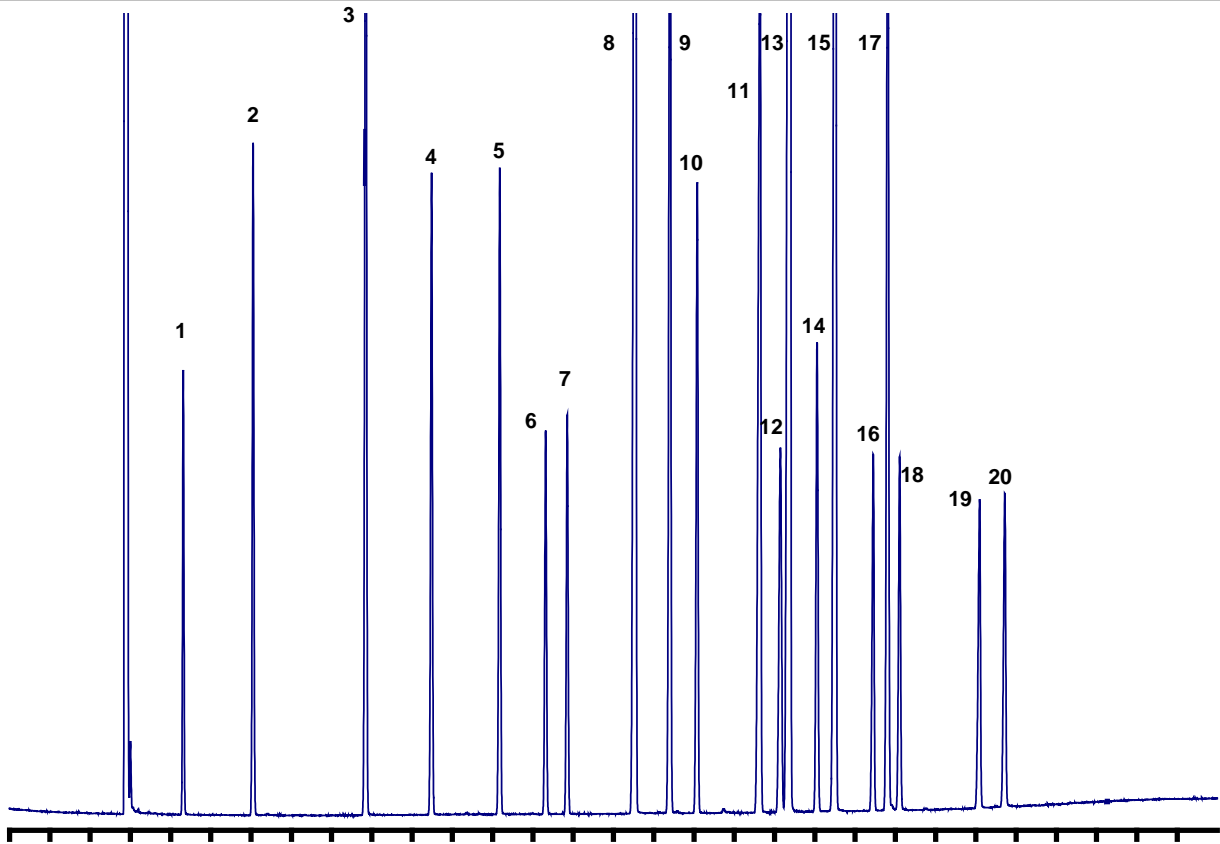
Source: synthetic or plant **Appearance:** liquid **Solubility:** chloroform, ethyl ether
Storage: -20°C **References:** 148,150

Suitable standard for corn, cottonseed, soybean, safflower, sesame, poppy seed, walnut kapok, and rice oils

1085	RM-2 mix AOCS reference mix RM-2	50 mg	46.00
	Source: synthetic or plant Appearance: liquid Solubility: chloroform, ethanol, ethyl ether Storage: -20°C		
	Suitable standard for linseed, perilla, hempseed, and rubberseed oils		
1086	RM-3 mix AOCS reference mix RM-3	50 mg/ml, 1 ml	46.00
	Source: synthetic or plant Appearance: liquid Solvent: methylene chloride Solubility: ethyl ether, methylene chloride Storage: -20°C		
	Suitable standards for peanut, rapeseed, and mustard seed oils		
1087	RM-4 mix AOCS reference mix RM-4	50 mg	46.00
	Source: synthetic or plant Appearance: liquid Solubility: chloroform, ethyl ether Storage: -20°C		
	Suitable standard for olive, teaseed, and neatsfoot oils		
1088	RM-5 mix AOCS reference mix RM-5	50 mg	46.00
	Source: synthetic or plant Appearance: liquid Solubility: chloroform Storage: -20°C		
	Suitable standard for coconut, palm kernel, babassu and ouri-ouri oils		
1089	RM-6 mix AOCS reference mix RM-6	50 mg	46.00
	Source: synthetic or plant Appearance: liquid Solubility: ethyl ether, methylene chloride Storage: -20°C		
	Suitable standard for lard, beef tallow, mutton tallow, and palm oil		
1082	RM-7 kit AOCS reference mix RM-7 kit	50 mg ampules	270.00
	Source: synthetic or plant Appearance: liquid Solvent: methylene chloride Solubility: methylene chloride Storage: -20°C		
	50 mg ampules of RM-1, RM-2, RM-3, RM-4, RM-5, RM-6, and 25 mg of Rapeseed oil reference mixture		

Custom Mixes

Custom fatty acid methyl ester mixes can be prepared to your specification. Minimum quantity requirements apply to these orders.



Cat# 4210 spiked with 0.4 mg/ml C18:2t ester (methyl linoleidate) and chromatographed on a Supelco SP 2330 fused silica column.

Peak number	FAME
1	C8:0
2	C10:0
3	C12:0
4	C13:0
5	C14:0
6	C14:1
7	C15:0
8	C16:0
9	C16:1
10	C17:0
11	C18:0
12	C18:1t-9
13	C18:1c-9
14	C18:2t,t-9,12
15	C18:2c,c-9,12
16	C20:0
17	C18:3
18	C20:1
19	C22:0
20	C22:1

Table II. Standards for GC Analysis

GLC Standard Mixes

GLC-10 through GLC-100 standards are **equal weight measures** of fatty acid methyl esters. They are quantitative standards, useful for determining relative **retention times and response factors**.

Each methyl ester mixture is carefully prepared by weight and the composition verified by gas chromatography. The weight percentage of each component is indicated below. All double bonds are *cis*.

Mixture Number Catalog Number	GLC-10 1095	GLC-30 1097	GLC-40 1098	GLC-50 1099	GLC-60 1100	GLC-70 1101	GLC-80 1102	GLC-90 1103	GLC-100 1104
C8:0 Caprylate		20.0				20.0			
C9:0 Nonanoate						20.0			
C10:0 Caprate		20.0				20.0			
C11:0 Undecanoate						20.0			
C12:0 Laurate		20.0				20.0			
C13:0 Tridecanoate							20.0	20.0	
C14:0 Myristate		20.0					20.0		
C15:0 Pentadecanoate							20.0	20.0	
C16:0 Palmitate	20.0	20.0	25.0				20.0		
C16:1 Palmitoleate-9 cis				20.0					
C17:0 Heptadecanoate							20.0	20.0	
C18:0 Stearate	20.0		25.0						20.0
C18:1 Oleate-9 cis	20.0			20.0					
C18:2 Linoleate-9,12 all cis	20.0								
C18:3 Linolenate-9,12,15 all cis	20.0								
C19:0 Nonadecanoate								20.0	20.0
C20:0 Arachidate			25.0		25.0				20.0
C20:1 Eicosenoate-11 cis				20.0	25.0				
C20:2 Eicosadienoate-11,14 all cis					25.0				
C20:3 Eicosatrienoate-11,14,17 all cis					25.0				
C21:0 Heneicosanoate								20.0	20.0
C22:0 Behenate			25.0						20.0
C22:1 Erucate-13				20.0					
C24:1 Nervonate				20.0					

1095 **GLC-10 mix** **50 mg** **46.00**
Quantitative GC mix

Source: synthetic or plant **Appearance:** liquid **Solubility:** methylene chloride
Storage: -20°C

1097 **GLC-30 mix** **50 mg** **46.00**
Quantitative GC mix

Source: synthetic or plant **Appearance:** liquid **Solubility:** methylene chloride
Storage: -20°C

1098	GLC-40 mix Quantitative GC mix	50 mg/ml, 1 ml	46.00
	Source: synthetic or plant Appearance: liquid Solvent: methylene chloride Solubility: methylene chloride Storage: -20°C		
1099	GLC-50 mix Quantitative GC mix	50 mg/ml, 1 ml	46.00
	Source: synthetic or plant Appearance: liquid Solvent: methylene chloride Solubility: methylene chloride Storage: -20°C		
1100	GLC-60 mix Quantitative GC mix	50 mg/ml, 1 ml	46.00
	Source: synthetic or plant Appearance: liquid Solvent: methylene chloride Solubility: methylene chloride Storage: -20°C		
1101	GLC-70 mix Quantitative GC mix	50 mg	46.00
	Source: synthetic or plant Appearance: liquid Solubility: methylene chloride Storage: -20°C		
1102	GLC-80 mix Quantitative GC mix	50 mg/ml, 1 ml	46.00
	Source: synthetic or plant Appearance: liquid Solvent: methylene chloride Solubility: methylene chloride Storage: -20°C		
1103	GLC-90 mix Quantitative GC mix	50 mg/ml, 1 ml	46.00
	Source: synthetic or plant Appearance: liquid Solvent: methylene chloride Solubility: methylene chloride Storage: -20°C		
1104	GLC-100 mix Quantitative GC mix	50 mg/ml, 1 ml	110.00
	Source: synthetic or plant Appearance: liquid Solvent: methylene chloride Solubility: methylene chloride Storage: -20°C		

Water Soluble Fatty Acid Mixes

1106	WSFA-2 mix Water soluble fatty acid qualitative mix	5 ml	91.00
	Appearance: liquid Solvent: water Solubility: water Storage: Room Temp		
	Contains: acetic, propionic, isobutyric, n-butyric, isovaleric and n-valeric acids		

1108 **WSFA-4 mix** **5 ml** **91.00**
 Water soluble fatty acid qualitative mix

Appearance: liquid **Solvent:** water **Solubility:** water **Storage:** Room Temp

Contains: acetic, propionic, isobutyric, n-butyric, 2-methylbutyric, isovaleric and n-valeric acids

Microbiology Standard Mixes

1105 **GLC-110 mix** **10 mg/ml, 1 ml** **110.00**
 Bacterial lipid standard, qualitative mix

Source: various **Appearance:** liquid **Solvent:** chloroform **Solubility:** methylene chloride, chloroform **Storage:** -20°C

Contains:

methyl 12-methyltridecanoate	(iso-C14:0)	methyl 14-methylpentadecanoate	(iso-C16:0)
methyl myristate	(C14:0)	methyl palmitate	(C16:0)
methyl 12-methyltetradecanoate	(anteiso-C15:0)	methyl 14-methylhexadecanoate	(anteiso-C17:0)
methyl pentadecanoate	(C15:0)		

1114 **Bacterial acid methyl esters CP mix** **10 mg/ml, 1 ml** **151.00**
 Qualitative mix

Source: various **Appearance:** liquid **Solvent:** methyl caproate **Solubility:** hexane, ethanol, methanol **Storage:** -20°C **References:** 186,187,188

A qualitative standard. Mixture consists of equal amounts of the compounds listed.

Methyl undecanoate	C11:0	Methyl cis-9-hexadecenoate (palmitoleate)	C16:1(cis-9)
Methyl 2-hydroxydecanoate	2-OH C10:0	Methyl hexadecanoate (palmitate)	C16:0
Methyl dodecanoate (laurate)	C12:0	Methyl 15-methylhexadecanoate	iso-C17:0
Methyl tridecanoate	C13:0	Methyl cis-9,10-methylenehexadecanoate	C17:0Δ (all cis-9,12)
Methyl 2-hydroxydodecanoate	2-OH C12:0	Methyl heptadecanoate (margarate)	C17:0
Methyl 3-hydroxydodecanoate	3-OH C12:0	Methyl 2-hydroxyhexadecanoate	2-OH C16:0
Methyl tetradecanoate (myristate)	C14:0	Methyl cis-9,12-octadecadienoate (linoleate)	C18:2 (all cis-9,12)
Methyl 13-methyltetradecanoate	iso-C15:0	Methyl cis-9-octadecenoate (oleate)	C18:1(cis-9)
Methyl 12-methyltetradecanoate	anteiso-C15:0	Methyl trans-9-octadecenoate (elaidate)	C18:1 (trans-9)
Methyl pentadecanoate	C15:0	Methyl octadecanoate (stearate)	C18:0
Methyl 2-hydroxytetradecanoate	2-OH C14:0	Methyl cis-9,10-methyleneoctadecanoate	C19:0Δ (all cis-9,10)
Methyl 3-hydroxytetradecanoate	3-OH C14:0	Methyl nonadecanoate	C19:0
Methyl 14-methylpentadecanoate	iso-C16:0	Methyl eicosanoate (arachidate)	C20:0

1075 **Volatile acid mix** **100 ml** **114.00**
 Qualitative mix

Appearance: liquid **Solvent:** water **Solubility:** water
Storage: 4-8°C

Contains: formic, acetic, propionic, isobutyric, n-butyric, isovaleric, n-valeric, isocaproic, n-caproic, and heptanoic acids

1077 **Non-volatile acid mix** **100 ml** **114.00**
 Qualitative mix

Appearance: liquid **Solvent:** water **Solubility:** water
Storage: 4-8°C

Contains: pyruvic, lactic, oxalacetic, oxalic, methyl malonic, malonic, fumaric and succinic acids.

Biochemical Research Standard Mixes

These mixtures are prepared by precise gravimetric technique. All mixes contain equal amounts of listed components. A data sheet is supplied with each mixture.

1127	Polar lipid mix TLC standards mix	25 mg/ml, 1 ml	88.00
	Source: natural, egg, ovine Appearance: liquid Solvent: chloroform/methanol 2:1 Solubility: chloroform/methanol 2:1 Storage: -20°C		
	Contains: cholesterol, phosphatidylethanolamine, lecithin, and lyso-lecithin		
1128	Sphingolipid mix TLC standards mix	25 mg/ml, 1 ml	88.00
	Source: natural, bovine Appearance: liquid Solvent: chloroform/methanol 2:1 Solubility: chloroform/methanol 2:1 Storage: -20°C		
	Contains: cerebrosides, sulfatides, and sphingomyelin		
1129	Non-polar lipid mix A TLC standards mix	25 mg/ml, 1 ml	80.00
	Source: natural, plant, ovine Appearance: liquid Solvent: chloroform Solubility: chloroform Storage: -20°C		
	Contains: cholesteryl palmitate, tripalmitin, palmitic acid, and cholesterol		
1130	Non-polar lipid mix B TLC standards mix	25 mg/ml, 1 ml	80.00
	Source: natural, plant, ovine Appearance: liquid Solvent: chloroform Solubility: chloroform Storage: -20°C		
	Contains: cholesteryl oleate, methyl oleate, triolein, oleic acid, and cholesterol		

Glycosphingolipid Mixtures for TLC

These mixtures are qualitative standards prepared from our purified glycosphingolipids.

1505	Neutral glycosphingolipid qualmix, Glycosylceramides, qualitative mix	1 mg/ml, 1 ml	117.00
	Source: natural, bovine and porcine Appearance: liquid Solvent: chloroform/methanol 2:1 Solubility: chloroform/methanol 2:1 Storage: -20°C		
	Contains: cerebrosides, lactosylceramide, ceramide trihexoside, globoside		

1508	Monosialoganglioside mix GM ₃ , GM ₂ , GM ₁ qualitative mix	0.5 mg/ml, 1 ml	117.00
<p>Source: natural, bovine Appearance: liquid Solvent: chloroform/methanol/water 2:1:0.1 Solubility: chloroform/methanol/water 2:1:0.1 Storage: -20°C</p> <p>Contains: GM₃, GM₂, GM₁</p>			
1509	Disialoganglioside mix GD ₃ , GD _{1a} , GD _{1b} , qualitative mix	0.5 mg/ml, 1 ml	126.00
<p>Source: natural, bovine Appearance: liquid Solvent: chloroform/methanol/water 2:1:0.1 Solubility: chloroform/methanol/water 2:1:0.1 Storage: -20°C</p> <p>Contains: GD₃, GD_{1a}, GD_{1b}</p>			
1510	Lactosylceramide and sialosyl derivatives mix LC, GM ₃ , GD ₃ qualitative mix	0.5 mg/ml, 1 ml	145.00
<p>Source: natural, bovine Appearance: liquid Solvent: chloroform/methanol/water 2:1:0.1 Solubility: chloroform/methanol/water 2:1:0.1 Storage: -20°C</p> <p>Contains: LC, GM₃, GD₃</p>			
1511	Gangliotetraosylceramide and sialosyl derivatives mix asialo-GM ₁ , GM ₁ , GD _{1a} , GD _{1b} , GT _{1b} qualitative mix	0.5 mg/ml, 1 ml	108.00
<p>Source: natural, bovine Appearance: liquid Solvent: chloroform/methanol/water 2:1:0.1 Solubility: chloroform/methanol/water 2:1:0.1 Storage: -20°C</p> <p>Contains: asialo-GM₁, GM₁, GD_{1a}, GD_{1b}, GT_{1b}</p>			

Biochemicals and Reagents

Stable Isotope Labeled Compounds

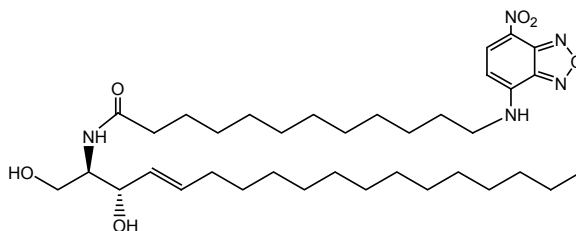
1914	N-Stearoyl-D₃₅-psychosine, perdeuterated Cerebrosides with N-C18:0-D ₃₅ fatty acid side chain C ₄₂ H ₄₆ D ₃₅ NO ₈	5 mg	263.00
<p>Source: semisynthetic, bovine Mol. Wt.: 762 Purity: 98+% by TLC Appearance: solid Solubility: chloroform, hot ethanol, chloroform/methanol 2:1 Storage: -20°C</p>			
1533	N-Palmitoyl-D₃-glucopsychosine, deuterated N-C16:0-D ₃ -Glucopsychosine; glucocerebroside with C16:0-D ₃ fatty acid side chain C ₄₀ H ₇₄ D ₃ NO ₈	1 mg	250.00
<p>Source: semisynthetic, bovine buttermilk Mol. Wt.: 703 Purity: 98+% by TLC Appearance: solid Solubility: chloroform/methanol 2:1 Storage: -20°C</p>			

1534	N-Palmitoyl-D₃-lactosylceramide, deuterated N-C16:0-D ₃ -Lactosylceramide; lactosylceramide with C16:0-D ₃ fatty acid side chain C ₄₆ H ₈₄ D ₃ NO ₁₃	1 mg	324.00
	Source: semisynthetic, bovine buttermilk Mol. Wt.: 864 Purity: 98+% by TLC Appearance: solid Solubility: chloroform/methanol/water 5:1:0.1 Storage: -20°C		
2200	N-1-¹³C-Palmitoyl-sphingosylphosphorylcholine D-erythro-Sphingomyelin with 1- ¹³ C-palmitic acid; SPM with ¹³ C labeled fatty acid ¹² C ₃₈ ¹³ CH ₇₉ N ₂ O ₆ P	1 mg	238.00
	Source: semisynthetic, bovine Mol. Wt.: 703 Purity: 98+% by TLC Appearance: solid Solubility: chloroform, ethanol, methanol Storage: -20°C		
1536	N-Octadecanoyl-D₃-sulfatide N-C18:0-D ₃ -Sulfatide C ₄₂ H ₇₈ D ₃ NO ₁₁ S	1 mg	357.00
	Source: semisynthetic, bovine Mol. Wt.: 833 Purity: 98+% by TLC Appearance: solid Solubility: chloroform/methanol/DI water 2:1:0.1 Storage: -20°C		
1537	N-Octadecanoyl-D₃-ceramide trihexoside C18:0-D ₃ -CTH; C18:0-D ₃ -Gb3; N-Octadecanoyl-D ₃ -globotriaosylceramide C ₅₄ H ₉₈ D ₃ NO ₁₈	0.5 mg	405.00
	Source: semisynthetic, porcine Mol. Wt.: 1055 Purity: 98+% by TLC Appearance: solid Solubility: chloroform/methanol 2:1, DMSO Storage: -20°C		

Fluorescent Compounds

1841	N-Hexanoyl-NBD-D-erythro-sphingosine	100 µg	175.00
1841-001	N-C6:0-NBD-ceramide; N-C6:0-NBD-D-erythro-sphingosine, fluorescent; N-(NBD-aminocaproyl)-D-erythro-sphingosine C ₃₀ H ₄₉ N ₅ O ₆ CAS#: 86701-10-2	1 mg	453.00
	Source: synthetic Mol. Wt.: 575 Melting Point (°C): 85-88 Purity: 98+% by TLC Appearance: solid Solubility: chloroform, ethanol, methanol Storage: -20°C Reference: 9		

Catalog number 1618



Excitation: 460 nm
Emission: 535 nm

1618	N-Dodecanoyl-NBD-D-erythro-sphingosine	100 µg	126.00
1618-001	N-C12:0-NBD-ceramide; N-C12:0-NBD-D-erythro-sphingosine, fluorescent; N-(NBD-aminolauroyl)-D-erythro-sphingosine C ₃₆ H ₆₁ N ₅ O ₆	1 mg	453.00
	Source: synthetic Mol. Wt.: 660 Purity: 98+% by TLC Appearance: solid Solubility: chloroform/methanol 2:1, methanol Storage: -20°C		

1857 1857-001	N-Hexanoyl-NBD-L-threo-sphingosine N-C6:0-NBD-ceramide; N-C6:0-NBD-L-threo-sphingosine, fluorescent; N-(NBD-aminocaproyl)-L-threo-sphingosine C ₃₀ H ₄₉ N ₅ O ₆	100 µg 1 mg	139.00 453.00
Source: synthetic Mol. Wt.: 575 Purity: 98+% by TLC Appearance: solid Solubility: chloroform, ethanol, methanol Storage: -20°C Reference: 9			
1620 1620-001	N-Dodecanoyl-NBD-L-threo-sphingosine N-C12:0-NBD-ceramide; N-C12:0-NBD-L-threo-sphingosine, fluorescent; N-(NBD-aminolauroyl)-L-threo-sphingosine C ₃₆ H ₆₁ N ₅ O ₆	100 µg 1 mg	139.00 453.00
Source: synthetic Mol. Wt.: 660 Purity: 98+% by TLC Appearance: solid Solubility: chloroform/methanol 2:1, methanol Storage: -20°C			
1624 1624-001	N-Hexanoyl-NBD-L-threo-dihydrosphingosine N-C6:0-NBD-dihydroceramide; N-C6:0-NBD-L-threo-dihydrosphingosine, fluorescent; N-(NBD-aminocaproyl)-L-threo-dihydrosphingosine C ₃₀ H ₅₁ N ₅ O ₆	100 µg 1 mg	126.00 453.00
Source: synthetic Mol. Wt.: 578 Purity: 98+% by TLC Appearance: solid Solubility: chloroform/methanol 2:1, methanol Storage: -20°C			
1623 1623-001	N-Dodecanoyl-NBD-L-threo-dihydrosphingosine N-C12:0-NBD-dihydroceramide; N-C12:0-NBD-L-threo-dihydrosphingosine, fluorescent; N-(NBD-aminolauroyl)-L-threo-dihydrosphingosine C ₃₆ H ₆₃ N ₅ O ₆	100 µg 1 mg	126.00 453.00
Source: synthetic Mol. Wt.: 662 Purity: 98+% by TLC Appearance: solid Solubility: chloroform/methanol 2:1, methanol Storage: -20°C			
1626 1626-001	N-Hexanoyl-NBD-D-erythro-dihydrosphingosine N-C6:0-NBD-dihydroceramide; N-C6:0-NBD-D-erythro-dihydrosphingosine, fluorescent; N-(NBD-aminocaproyl)-D-erythro-dihydrosphingosine C ₃₀ H ₅₁ N ₅ O ₆	100 µg 1 mg	108.00 453.00
Source: synthetic Mol. Wt.: 578 Purity: 98+% by TLC Appearance: solid Solubility: chloroform/methanol 2:1, methanol Storage: -20°C			
1625 1625-001	N-Dodecanoyl-NBD-D-erythro-dihydrosphingosine N-C12:0-NBD-dihydroceramide; N-C12:0-NBD-D-erythro-dihydrosphingosine, fluorescent; N-(NBD-aminolauroyl)-D-erythro-dihydrosphingosine C ₃₆ H ₆₃ N ₅ O ₆	100 µg 1 mg	114.00 453.00
Source: synthetic Mol. Wt.: 662 Purity: 98+% by TLC Appearance: solid Solubility: chloroform/methanol 2:1, methanol Storage: -20°C			
1628 1628-001	N-Hexanoyl-NBD-phytosphingosine N-C6:0-NBD-phytoceramide; N-C6:0-NBD-phytosphingosine, fluorescent; N-(NBD-aminocaproyl)-phytosphingosine C ₃₀ H ₅₁ N ₅ O ₇	100 µg 1 mg	108.00 453.00
Source: semisynthetic, bacteria Mol. Wt.: 594 Purity: 98+% by TLC Appearance: solid Solubility: chloroform/methanol 2:1, methanol Storage: -20°C			

1627 1627-001	N-Dodecanoyl-NBD-phytosphingosine N-C12:0-NBD-phytoceramide; N-C12:0-NBD-phytosphingosine, fluorescent; N-(NBD-aminolauroyl)-phytosphingosine C ₃₆ H ₆₃ N ₅ O ₇	100 µg 1 mg	114.00 453.00
Source: semisynthetic, bacteria Mol. Wt.: 678 Purity: 98+% by TLC Appearance: solid Solubility: chloroform/methanol 2:1, methanol Storage: -20°C			
1912 1912-001	N-Hexanoyl-NBD-sphingosylphosphorylcholine N-C6:0-NBD-sphingomyelin, fluorescent; N-C6:0-NBD-sphingosylphosphorylcholine; fluorescent sphingomyelin; N-(NBD-aminocaproyl)-sphingomyelin C ₃₅ H ₆₁ N ₆ O ₉ P CAS#: 94885-04-8	100 µg 1 mg	175.00 453.00
Source: semisynthetic, bovine buttermilk Mol. Wt.: 740 Purity: 98+% by TLC Appearance: solid Solubility: chloroform, ethanol, methanol Storage: -20°C Mixture of D-erythro and L-threo isomers			
1619 1619-001	N-Dodecanoyl-NBD-sphingosylphosphorylcholine N-C12:0-NBD-sphingomyelin, fluorescent; N-C12:0-NBD-sphingosylphosphorylcholine; fluorescent sphingomyelin; N-(NBD-aminolauroyl)-sphingomyelin C ₄₁ H ₇₃ N ₆ O ₉ P	100 µg 1 mg	126.00 453.00
Source: semisynthetic, bovine buttermilk Mol. Wt.: 825 Purity: 98+% by TLC Appearance: solid Solubility: chloroform/methanol 2:1, methanol Storage: -20°C Mixture of D-erythro and L-threo isomers			
1621 1621-001	N-Hexanoyl-NBD-galactosylceramide N-C6:0-NBD-beta-D-galactosylsphingosine; N-C6:0-NBD-cerebrosides; N-C6:0-NBD-galactosylceramide, fluorescent; N-(NBD-aminocaproyl)-beta-D-galactosylsphingosine C ₃₆ H ₅₉ N ₅ O ₁₁	100 µg 1 mg	101.00 453.00
Source: semisynthetic, bovine Mol. Wt.: 738 Purity: 98+% by TLC Appearance: solid Solubility: chloroform/methanol 5:1, methanol Storage: -20°C			
1633 1633-001	N-Dodecanoyl-NBD-galactosylceramide N-C12:0-NBD-beta-D-galactosylsphingosine; N-(NBD-aminododecanoyl)-beta-D-galactosylsphingosine; N-C12:0-NBD-cerebroside; N-C12:0-NBD-galactosylceramide, fluorescent; C ₄₂ H ₇₁ N ₅ O ₁₁	100 µg 1 mg	101.00 453.00
Source: semisynthetic, bovine spinal cord Mol. Wt.: 822 Purity: 98+% by TLC Appearance: solid Solubility: chloroform/ methanol, 2:1; chloroform; DMSO Storage: -20°C			
1622 1622-001	N-Hexanoyl-NBD-glucosylceramide N-C6:0-NBD-beta-D-glucosylsphingosine; N-C6:0-NBD-glucosylceramide, fluorescent; N-(NBD-aminocaproyl)-beta-D-glucosylsphingosine C ₃₆ H ₅₉ N ₅ O ₁₁	100 µg 1 mg	126.00 453.00
Source: semisynthetic, bovine Mol. Wt.: 738 Purity: 98+% by TLC Appearance: solid Solubility: chloroform/methanol 5:1, methanol Storage: -20°C			

1629	N-Hexanoyl-NBD-lactosylceramide	50 ug	158.00
1629-001	N-Hexanoyl-NBD-beta-D-lactosylsphingosine; N-C6:0-NBD-beta-D-lactosylsphingosine; N-C6:0-NBD-lactosylceramide, fluorescent; fluorescent LC; N-(NBD-aminocaproyl)-beta-D-lactosylsphingosine $C_{42}H_{69}N_5O_{16}$	1 mg	684.00
Source: semisynthetic, bovine buttermilk Mol. Wt.: 900 Purity: 98+% by TLC Appearance: solid Solubility: chloroform/methanol 2:1 Storage: -20°C			
1630	N-Dodecanoyl-NBD-lactosylceramide	50 ug	175.00
1630-001	N-Dodecanoyl-NBD-beta-D-lactosylsphingosine; N-C12:0-NBD-beta-D-lactosylsphingosine; N-C12:0-NBD-lactosylceramide, fluorescent; fluorescent LC; N-(NBD-aminolauroyl)-beta-D-lactosylsphingosine $C_{48}H_{81}N_5O_{16}$	1 mg	684.00
Source: semisynthetic, bovine buttermilk Mol. Wt.: 984 Purity: 98+% by TLC Appearance: solid Solubility: chloroform/methanol 2:1 Storage: -20°C			
1631	N-Dodecanoyl-NBD-ceramide trihexoside	100 ug	158.00
1631-001	N-C12:0-NBD-CTH; N-C12:0-NBD-globotriaosylceramide; N-(NBD-aminolauroyl)-ceramide trihexoside $C_{54}H_{91}N_5O_{21}$	1 mg	684.00
Source: semisynthetic, porcine Mol. Wt.: 1145 Purity: 98+% by TLC Appearance: solid Solubility: chloroform/methanol 2:1; DMSO; hot methanol Storage: -20°C			
1632	N-Dodecanoyl-NBD-sulfatide	100 ug	102.00
1632-001	N-C12:0-NBD-sulfatide; N-Dodecanoyl-NBD-lyso-sulfatide; N-Dodecanoyl-NBD-sphingosyl-beta-D-galactoside-3-sulfate; N-(NBD-aminolauroyl)-sulfatide $C_{42}H_{71}N_5O_{14}S$	1 mg	453.00
Source: semisynthetic, bovine Mol. Wt.: 901 Purity: 98+% by TLC Appearance: solid Solubility: chloroform/methanol 2:1 Storage: -20°C			

Appendix

Table III. Typical Fatty Acid Composition of Natural Lipids Made by Matreya LLC.
 (actual composition may vary according to dietary history and growth condition of the source)

	Lecithin (egg)	Lecithin (bovine)	Lecithin (plant)	Phosphatidyl-ethanolamine (egg)	Phosphatidyl-ethanolamine (plant)	lyso-Lecithin (egg)	Phosphatidylserine (bovine)	Phosphatidylinositol (plant)
Catalog Number	#1044	#1070	#1302	#1045	#1301	#1046	#1047	#1048
Fatty Acids								
C14:0		trace						
C16:0	31	35	14	17	22	72	1	42
C16:1		1						
C18:0	16	14	4	29	3	24	42	
C18:1	31	33	11	17	7	3	27	6
C18:2	16		65	11	60			47
C18:3			6		8			5
C20:0							1	
C20:1							4	
C20:4				12			4	
C21:0								
C22:0							1	
C22:1							1	
C22:6							7	
C23:0								
C24:0								
C24:1								
C25:0								
C25:1								
C26:0								
C26:1								
C27:0								
C27:1								
C14:0 2-OH								
C16:0 2-OH								
C18:0 2-OH								
C20:0 2-OH								
C22:0 2-OH								
C23:0 2-OH								
C24:0 2-OH								
C24:1 2-OH								
C25:0 2-OH								
C25:1 2-OH								
C26:0 2-OH								
C26:1 2-OH								
C16 cis 9,10 methylene								
C18 cis 9,10 methylene								
Others	6	17	0	14	0	1	12	0
Total	100	100	100	100	100	100	100	100

Typical Fatty Acid Composition of Natural Lipids Made by Matreya LLC (continued)
(actual composition may vary according to dietary history and growth condition of the source)

	Sphingomyelin (bovine)	Sphingomyelin (porcine RBC)	Phosphatidic acid (semi-synthetic)	Monogalactosyl- diglycerides (plant)	Digalactosyl- diglyceride (plant)	Monosialo- ganglioside GM ₁	Disialoganglioside GD _{1a}
Catalog Number	#1051	#1328	#1053	#1058	#1059	#1061	#1062
Fatty Acids							
C14:0							1
C16:0	4	25	39	23	9	2	1
C16:1							
C18:0	40	7	12	77	91	90	89
C18:1			34				
C18:2			15				
C18:3							
C20:0	3	3				3	2
C20:1							
C20:4							
C21:0							
C22:0	13	9				1	1
C22:1							
C22:6							
C23:0	2	1					
C24:0	9	22					
C24:1	22	22				1	
C25:0							
C25:1							
C26:0							
C26:1							
C27:0							
C27:1							
C14:0 2-OH							
C16:0 2-OH							
C18:0 2-OH							
C20:0 2-OH							
C22:0 2-OH							
C23:0 2-OH							
C24:0 2-OH							
C24:1 2-OH							
C25:0 2-OH							
C25:1 2-OH							
C26:0 2-OH							
C26:1 2-OH							
C16 cis 9,10 methylene							
C18 cis 9,10 methylene							
Others	7	11	0	0	0	3	6
Total	100	100	100	100	100	100	100

Typical Fatty Acid Composition of Natural Lipids Made by Matreya LLC (continued)
(actual composition may vary according to dietary history and growth condition of the source)

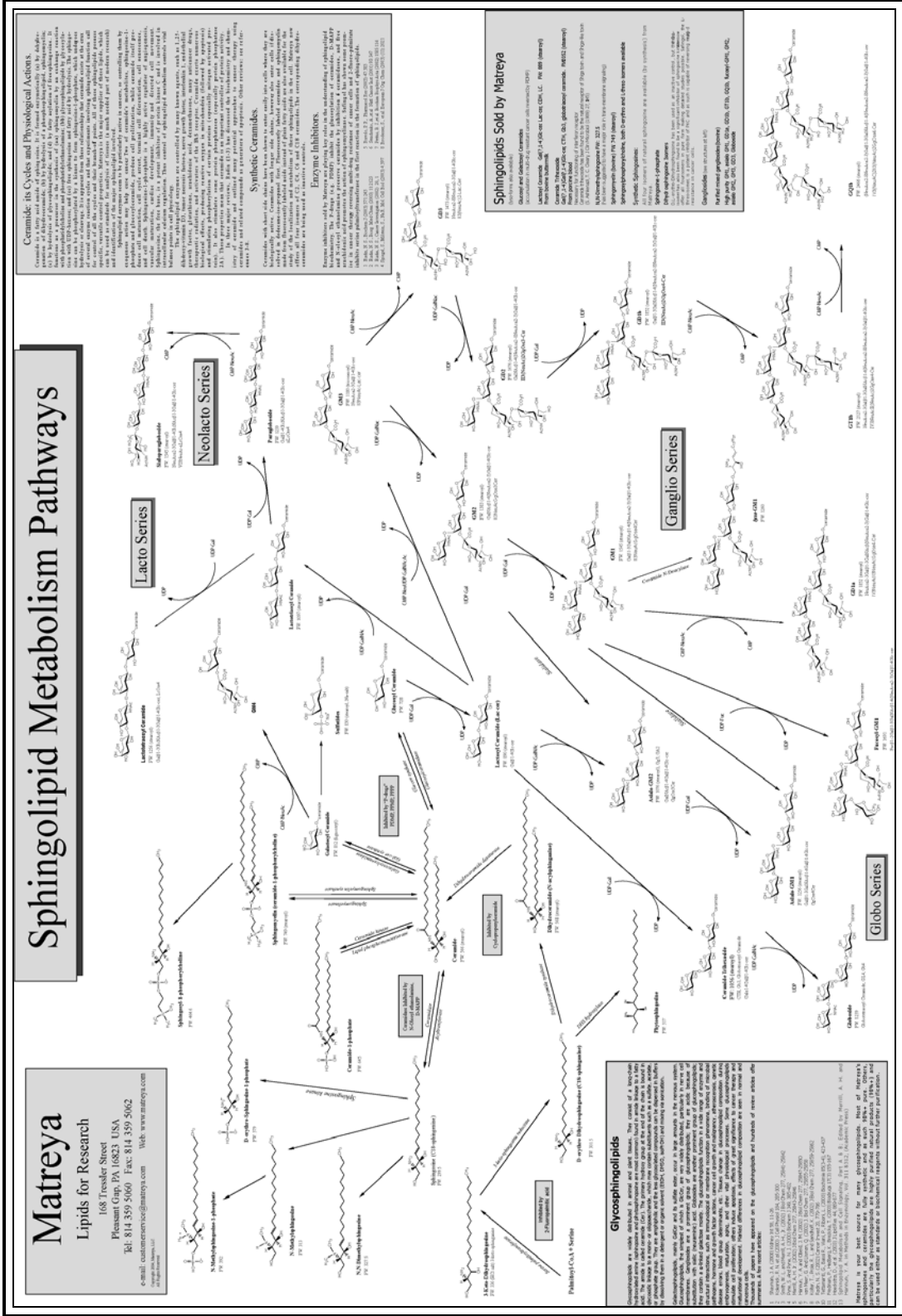
	Trisialoganglioside GT _{1b}	Gangliotetraosylceramide	Purified mixed gangliosides (bovine)	Disialoganglioside GD _{1b}	Cerebrosides (bovine)	Cerebrosides Kerasin (bovine)	Cerebrosides Phrenosin (bovine)	Sulfatides (bovine)
Catalog Number	#1063	#1064	#1065	#1501	#1050	#1066	#1138	#1049
Fatty Acids								
C14:0		trace	trace	trace				
C16:0	1	1	1	1	trace	trace		trace
C16:1								
C18:0	87	86	86	86	4	5		5
C18:1	1	3	3	3				trace
C18:2								
C18:3								
C20:0	4	4	4	4	1	1		1
C20:1								
C20:4								
C21:0								
C22:0	1	2	2	2	4	9		7
C22:1						trace		trace
C22:6								
C23:0	1	1	1	1	2	5		
C24:0	1	1	1	1	10	25		18
C24:1	1	2	2	2	15	43		29
C25:0					3	3		2
C25:1					1	3		2
C26:0					2	2		1
C26:1					1	4		3
C27:0					2			1
C27:1					2			
C14:0 2-OH								
C16:0 2-OH								
C18:0 2-OH					15		36	5
C20:0 2-OH					1		1	trace
C22:0 2-OH					6		8	3
C23:0 2-OH					5		6	
C24:0 2-OH					17		25	10
C24:1 2-OH					6		9	6
C25:0 2-OH					3		4	2
C25:1 2-OH							2	
C26:0 2-OH							2	
C26:1 2-OH							2	
C16 cis 9,10 methylene								
C18 cis 9,10 methylene								
Others	3	0	0	0	0	0	5	5
Total	100	100	100	100	100	100	100	100

Typical Fatty Acid Composition of Natural Lipids Made by Matreya LLC (continued)
(actual composition may vary according to dietary history and growth condition of the source)

	Ceramide trihexoside (porcine)	Globosides (porcine)	Esterified steryl glucoside	Ceramides (bovine)	Ceramides (non-hydroxy)	Ceramides (hydroxy)	Monosialoganglioside GM ₄	Sphingomyelin, (egg, chicken)	Tetrasialoganglioside GQ _{1b}
Catalog Number	#1067	#1068	#1118	#1056	#1322	#1323	#1535	#1332	#1516
Fatty Acids									
C14:0								trace	
C16:0	3	2	34	trace			4	72	5
C16:1									1
C18:0	2	2	8	4	11		2	8	80
C18:1	2		8					3	2
C18:2			36						3
C18:3			4						
C20:0	2	2	1	1	2		trace	2	4
C20:1							trace		
C20:4									
C21:0									
C22:0	17	20	4	4	10		3	5	2
C22:1							4		
C22:6									
C23:0	1	2	2	2	6		4	1	
C24:0	29	33	2	10	24		6	2	
C24:1	5	5		15	31		4	4	
C25:0				9	3				
C25:1				1	3				
C26:0		2		2	2				
C26:1				1	3				
C27:0				2					
C27:1				2					
C14:0 2-OH									
C16:0 2-OH									
C18:0 2-OH				15		24	1		
C20:0 2-OH				1		1	3		
C22:0 2-OH	3	4		6		8	25		
C23:0 2-OH	1			5		6	17		
C24:0 2-OH	19	19		17		35	18		
C24:1 2-OH	10	9				17	7		
C25:0 2-OH				3		4			
C25:1 2-OH									
C26:0 2-OH									
C26:1 2-OH						2			
C16 cis 9,10 methylene									
C18 cis 9,10 methylene									
Others	6	0	1	0	5	3	2	3	3
Total	100	100	100	100	100	100	100	100	100

Typical Fatty Acid Composition of Natural Lipids Made by Matreya LLC (continued)
(actual composition may vary according to dietary history and growth condition of the source)

	Sphingomyelin (buttermilk)	Lactosyl ceramide (porcine)	Lactosyl ceramide (buttermilk)	Monosialoganglioside GM2	Monosialoganglioside GM3 (buttermilk)	Disialoganglioside GD3 (buttermilk)	Glucocerebrosides (buttermilk)	Glucocerebrosides (plant)
Catalog Number	#1329	#1500	#1507	#1502	#1503	#1504	#1521	#1522
Fatty Acids								
C14:0	1							
C16:0	14	14	12	2	6	8	7	
C16:1								
C18:0	3	6	1	82	1	1	2	
C18:1		4						
C18:2								
C18:3								
C20:0	1	1	1	7	1	1	1	
C20:1								
C20:4								
C21:0					1	2	1	
C22:0	26	9	25	4	23	24	27	
C22:1								
C22:6								
C23:0	30	1	36	trace	36	35	36	
C24:0	21	15	21	1	22	21	23	
C24:1	3	5		2	3	3		
C25:0			1				1	
C25:1								
C26:0								
C26:1								
C27:0								
C27:1								
C14:0 2-OH								trace
C16:0 2-OH								79
C18:0 2-OH		trace						trace
C20:0 2-OH								
C22:0 2-OH		8						8
C23:0 2-OH								1
C24:0 2-OH		24						9
C24:1 2-OH		13						
C25:0 2-OH								
C25:1 2-OH								
C26:0 2-OH								
C26:1 2-OH								
C16 cis 9,10 methylene								
C18 cis 9,10 methylene								
Others	1	0	3	2	7	5	2	3
Total	100	100	100	100	100	100	100	100



Ceramide: Its Cycles and Physiological Actions.
 Ceramide is a key and stable component of the cell membrane. It is formed approximately 10% by hydrolysis of sphingomyelin, and 90% by de novo synthesis of sphingosine. In addition, ceramide is formed by the condensation of sphingosine with fatty acids. Sphingosine is synthesized from serine and palmitate. Sphingosine is phosphorylated by sphingosine kinase to form sphingosine-1-phosphate, which undergoes several steps to form sphingosine-1-phosphate. Sphingosine-1-phosphate is a key signaling molecule in the cell. It is involved in the regulation of cell growth, differentiation, and survival. Sphingosine-1-phosphate is also involved in the regulation of the immune system. Sphingosine-1-phosphate is a key component of the cell membrane. It is involved in the regulation of cell growth, differentiation, and survival. Sphingosine-1-phosphate is also involved in the regulation of the immune system.

Synthetic Ceramides.
 Ceramides with short side chains have been shown to enter easily into cells where they are hydrolyzed to sphingosine and fatty acids. These synthetic ceramides are used in the treatment of skin conditions. They are also used in the treatment of certain types of cancer. Synthetic ceramides are also used in the treatment of certain types of neurodegenerative diseases.

Enzyme Inhibitors.
 Enzyme inhibitors are used in the treatment of certain types of cancer. They are also used in the treatment of certain types of neurodegenerative diseases. Enzyme inhibitors are used in the treatment of certain types of skin conditions. They are also used in the treatment of certain types of neurodegenerative diseases.

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Glycosphingolipids
 Glycosphingolipids are a class of sphingolipids that have one or more sugar molecules attached to the sphingosine backbone. They are found in the cell membrane and are involved in cell signaling and cell adhesion. Glycosphingolipids are also involved in the regulation of the immune system. They are also involved in the regulation of cell growth and differentiation. Glycosphingolipids are also involved in the regulation of cell survival.

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Sphingolipid Structures and Pathways Wall Chart

In a clear and straightforward manner, this wall chart indicates the structures and relationships between most commonly discussed sphingolipids. Full size copies (approximately 35 x 26 inches) are available on request to customer service.

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DSPE-MPEG-2000	45	Glucosylceramide	22	L-threo-Dihydrospingosine	3, 35
DSPG	44	Glucosylsphingosine	22	L-threo-PDMP	37
D-threo-1-Phenyl-2-decanoylamino-3-morpholino-1-propanol•HCl	37	Glycosylceramides, qualitative mix	32, 86	L-threo-PPMP	38
D-threo-1-Phenyl-2-hexadecanoylamino-3-morpholino-1-propanol•HCl	37	GM ₁	29, 91	L-threo-SPC	16
D-threo-Dihydrospingosine	4	GM ₂	30, 94	L-threo-Sphinganine, C18 chain	3, 35
D-threo-PDMP	37	GM ₃	30, 94	L-threo-Sphingosine	2
D-threo-PPMP	37	GM ₃ , GM ₂ , GM ₁ qualitative mix	32, 87	L-threo-Sphingosine, C18 chain	2
D-threo-Sphinganine, C18 chain	4	GM ₄	30	L-threo-Sphingosylphosphorylcholine	16
D-threo-Sphingosine	2	GQ _{1b}	31	lyso-Ceramide trihexoside	25
D-threo-Sphingosine, C18 chain	2	GT _{1b}	31, 92	lyso-Cerebroside	20
E		H		lyso-CTH	25
E-64-d	39	Heneicosanoic acid	50	lyso-Dihydrospingomyelin	17
Eicosadienoic acid	55	Heptadecanoic acid	50	lyso-globotriaosylsphingosine	25
Eicosanoic acid	50	Heptadecenoic acid	53	lyso-Glucocerebroside	22
Eicosapentaenoic acid	56	Heptanoic acid	47	lyso-GM ₁	30
Eicosenoic acid	55	Hexacosanoic acid	51	lyso-Lactosylceramide	24
Elaidic acid	53, 58	Hexadecanoic acid	49	lyso-LC	24
EPA	56	Hydroxy fatty acid with long branched chain	69, 70, 71	lyso-Lecithin	40, 93
Ergosterol	76	I		lyso-Phosphatidylcholine	40, 90
ERG	39	iso-C13 methyl ester	70	lyso-Monosialoganglioside GM ₁	30
EST	39	iso-C14 methyl ester	70	lyso-Phosphatidylcholine	40
Esterified steryl glucosides	76 96	iso-C15 acid	70	lyso-PPC	43
F		iso-C15 methyl ester	70	lyso-Sphingomyelin	17
FAME mixes, custom	82	iso-C16 methyl ester	70	lyso-Sulfatide (NH ₄ ⁺ salt)	23
FIM-FAME-6 mix	77	iso-C17 acid	71	M	
FIM-FAME-7 mix	77	iso-C17 methyl ester	71	Mead acid methyl ester	56
Fluorescent sphingomyelin	18, 19	iso-C19 methyl ester	71		
Fluorescent LC	25, 27, 28, 91				
Fucosylated mono-sialoganglioside GM ₁	30				
Fucosyl-GM ₁	30				
Furan fatty acid	61				

Main phospholipid (MPL) of <i>Thermoplasma acidophilum</i> (>95% pure)	46	Methyl cis-6,9,12-octadecatrienoate	55	Methyl trans-9-octadecenoate	53
Main phospholipid (MPL) of <i>Thermoplasma acidophilum</i> (>50% pure)	46	Methyl cis-9-hexadecenoate	52	Methyl trans-9,12-octadecadienoate	54
Margaric acid	50	Methyl cis-9-octadecenoate	53	Methyl trans vaccenate	54, 58
Methyl 10(E), 12(Z)-octadecadienoate	60	Methyl cis-9-tetradecenoate	52	Methyl tricosanoate	51
Methyl 10-methylhexadecanoate	72	Methyl cis-9,10-Methyleneoctadecanoate	72	Methyl tridecanoate	49
Methyl 11-methyldodecanoate	70	Methyl cis-9,12,15-octadecatrienoate	55	Methyl undecanoate	48
Methyl 12-methyltetradecanoate	71	Methyl cis-9,12-octadecadienoate	54	MGDG (hydrogenated)	47, 91
Methyl 12-methyltridecanoate	70	Methyl cis-vaccenate	54	Mixed gangliosides	31, 92
Methyl 13-methylpentadecanoate	71	Methyl D,L-erythro-corynomycolate	70	Monoclonal antibody to GD ₃	33
Methyl 13-methyltetradecanoate	70	Methyl D,L-threo-corynomycolate	69	Monogalactosyldiglyceride	47, 94
Methyl 14-methylhexadecanoate	72	Methyl decanoate	48	Monosialoganglioside GM ₁	29, 94
Methyl 14-methylpentadecanoate	70	Methyl dihydrosterculate	72	Monosialoganglioside GM ₂	30, 97
Methyl 15-hydroxypentadecanoate	68	Methyl docosahexaenoate	57	Monosialoganglioside GM ₃	30, 97
Methyl 15-methylhexadecanoate	71	Methyl docosanoate	51	Monosialoganglioside GM ₄	30, 96
Methyl 17-hydroxyheptadecanoate	68	Methyl docosenoate	57	Monosialoganglioside mix	37, 87
Methyl 17-methyloctadecanoate	71	Methyl docosapentaenoate	57	MPL of <i>Thermoplasma acidophilum</i> (>50% pure)	46
Methyl 20-hydroxyeicosanoate	68	Methyl dodecanoate	48	Myristic acid	49
Methyl 21-hydroxyheneicosanoate	68	Methyl eicosadienoate	56	Myristoleic acid	52
Methyl 22-hydroxydocosanoate	69	Methyl eicosanoate	50	N	
Methyl 27-hydroxyheptacosanoate	69	Methyl eicosapentaenoate	56	N-[(1R, 2S)-2-hydroxy-1-hydroxymethyl-2-(2-tridecyl-1-cylopropenyl) ethyl] hexadecamide	36
Methyl 2-fluoropalmitate	38	Methyl eicosenoate	55	N-[(1R, 2S)-2-hydroxy-1-hydroxymethyl-2-(2-tridecyl-1-cylopropenyl) ethyl] octanamide	35
Methyl 2-hydroxydecanoate	62	Methyl elaidate	53, 58	N-1- ¹³ C-Palmitoyl-spingosylphosphorylcholine	16, 88
Methyl 2-hydroxydocosanoate	64	Methyl erucate	57	N,N-Dihexyl-D-erythro-sphingosine	5
Methyl 2-hydroxydodecanoate	62	Methyl ester of CLA (10-trans, 12-cis)	60	N,N-Dimethyl-D-erythro-sphingosine	5
Methyl 2-hydroxyeicosanoate	63	Methyl ester of CLA (9-cis, 11-cis)	60	N-Acetyl-D-erythro-dihydrosphingosine	10
Methyl 2-hydroxyhexadecanoate	63	Methyl ester of CLA (9-cis, 11-trans)	60, 61	N-Acetyl-D-erythro-sphinganine	10
Methyl 2-hydroxyoctadecanoate	63	Methyl ester of CLA(9-trans, 11-trans)	60	N-Acetyl-D-erythro-sphingosin (C14 sphingoid base)	7
Methyl 2-hydroxytetracosanoate	64	Methyl ester of furan fatty acid	62	N-Acetyl-L-erythro-sphingosine	7
Methyl 2-hydroxytetradecanoate	63	Methyl ester of omega-3 fatty acid	56, 57	N-Acetyl-L-threo-sphingosine	7
Methyl 2-hydroxytricosanoate	64	Methyl gamma-linolenate	55	N-Acetyl-phytosphingosine	12
Methyl 30-hydroxytriacontanoate	69	Methyl heneicosanoate	51	N-Acetyl-psychosine	20
Methyl 3-hydroxydecanoate	66	Methyl heptadecanoate	50	N-Acetyl-sphingosyl-beta-D-galactoside-3-sulfatide	23
Methyl 3-hydroxydodecanoate	66	Methyl heptadecenoate	53	N-Acetyl-sphingosylphosphorylcholine	15
Methyl 3-hydroxyheptadecanoate	67	Methyl heptanoate	47	N-Acetyl-sulfatide	23
Methyl 3-hydroxyhexadecanoate	67	Methyl hexacosanoate	51	N-C2:0 Ceramide of D-erythro-C14-sphingosine	10
Methyl 3-hydroxyhexanoate	65	Methyl hexadecanoate	49	N-C2:0-Cerebroside	20
Methyl 3-hydroxynonanoate	65	Methyl hexanoate	47	N-C2:0-D-erythro-Ceramide	7
Methyl 3-hydroxyoctadecanoate	67	Methyl homogamma linolenate	56	N-C2:0-D-erythro-Dihydroceramide	10
Methyl 3-hydroxyoctanoate	65	Methyl laurate	48	N-C2:0-L-erythro-Ceramide	7
Methyl 3-hydroxytetradecanoate	66	Methyl lignocerate	51	N-C2:0-L-threo-Ceramide	7
Methyl 3-hydroxytridecanoate	66	Methyl linoelaidate	54, 58	N-C2:0-Phytoceramide	12
Methyl 3-hydroxyundecanoate	66	Methyl linoleate	54	N-C2:0-sulfatide	23
Methyl 5,8,11-eicosatrienoate	56	Methyl linolenate	55	N-C6:0-D-erythro-Ceramide	7
Methyl 8,11,14-eicosatrienoate	56	Methyl margarate	50	N-C6:0-D-erythro-Dihydroceramide	10
Methyl 8-(5-hexyl-2-furyl)-octanoate	62	Methyl myristate	49	N-C6:0-L-erythro-Ceramide	7
Methyl 9(E),11(E)-octadecadienoate	60	Methyl myristoleate	52	N-C6:0-L-threo-Ceramide	7
Methyl 9(Z), 11(E)-octadecadienoate	60, 61	Methyl nervonate	57	N-C6:0-NBD-beta-D-galactosyl sphingosine	21, 27, 90
Methyl 9(Z), 11(Z)-octadecadienoate	60	Methyl nonadecanoate	50	N-C6:0-NBD-beta-D-glucosyl-sphingosine	21, 27, 90
Methyl arachidate	50	Methyl nonadecenoate	55	N-C6:0-NBD-beta-D-lactosyl-sphingosine	24, 27, 91
Methyl arachidonate	56	Methyl nonanoate	48		
Methyl behenate	51	Methyl octadecanoate	50		
Methyl caprate	48	Methyl octanoate	48		
Methyl caproate	47	Methyl oleate	53		
Methyl caprylate	48	Methyl palmitate	49		
Methyl cerotate	51	Methyl palmitelaidate	52, 58		
Methyl cis-10-heptadecenoate	53	Methyl palmitoleate	52		
Methyl cis-11,14-eicosadienoate	56	Methyl pentadecanoate	49		
Methyl cis-11-eicosenoate	55	Methyl ricinelaidate	69		
Methyl cis-11-octadecenoate	54	Methyl stearate	50		
Methyl cis-15-tetracosenoate	57	Methyl tetracosanoate	51		
Methyl cis-5,8,11,14-eicosatetraenoate	56	Methyl tetradecanoate	49		
		Methyl trans 11-octadecenoate	54, 58		

N-C6:0-NBD-ceramide	13, 88, 89
N-C6:0-NBD-cerebroside	21, 27, 90
N-C6:0-NBD-D-erythro-dihydrosphingosine	14, 89
N-C6:0-NBD-D-erythro-sphingosine	13, 88
N-C6:0-NBD-dihydroceramide	13, 14, 89
N-C6:0-NBD-galactosylceramide	21, 27, 90
N-C6:0-NBD-glucosylceramide	21, 27, 90
N-C6:0-NBD-L-threo-dihydrosphingosine	13, 89
N-C6:0-NBD-L-threo-sphingosine	13, 89
N-C6:0-NBD-lactosylceramide	24, 27, 91
N-C6:0-NBD-phytoceramide	14, 89
N-C6:0-NBD-phytosphingosine	14, 89
N-C6:0-NBD-sphingomyelin	18, 90
N-C6:0-NBD-sphingosyl-phosphorylcholine	18, 90
N-C6:0-Phytoceramide	12
N-C8:0-CPPC	35
N-C8:0-Cyclopropenylceramide	35
N-C8:0-D-erythro-Ceramide	8
N-C8:0-D-erythro-Dihydroceramide	10
N-C8:0-D-threo-Ceramide	8
N-C8:0-Galactosylceramide	20
N-C8:0-L-threo-Ceramide	8
N-C8:0-Phytoceramide	12
N-C10:0-D-erythro-Ceramide	8
N-C12:0-NBD-beta-D-galactosylsphingosine	21, 90
N-C12:0-NBD-beta-D-lactosyl-sphingosine	25, 28, 91
N-C12:0-NBD-ceramide	13, 88, 89
N-C12:0-NBD-cerebroside	21, 90
N-C12:0-NBD-CTH	26, 28, 91
N-C12:0-NBD-D-erythro-dihydrosphingosine	14, 89
N-C12:0-NBD-dihydroceramide	13, 14, 89
N-C12:0-NBD-D-erythro-sphingosine	13, 88
N-C12:0-NBD-galactosylceramide	21, 90
N-C12:0-NBD-globotriaosylceramide	26, 28, 91
N-C12:0-NBD-L-threo-dihydrosphingosine	13, 89
N-C12:0-NBD-L-threo-sphingosine	13, 89
N-C12:0-NBD-lactosylceramide	25, 28, 91
N-C12:0-NBD-phytoceramide	14, 90
N-C12:0-NBD-phytosphingosine	14, 90
N-C12:0-NBD-sphingomyelin	18, 90
N-C12:0-NBD-sphingosyl-phosphorylcholine	18, 90
N-C12:0-NBD-sulfatide	23, 28, 91
N-C15:0-Cerebroside	20
N-C15:0-D-erythro-Ceramide	8
N-C16:0-D-erythro-Ceramide	8
N-C16:0-Ceramide-1-phosphate	17
N-C16:0-CPPC	36
N-C16:0-Cyclopropenylceramide	36
N-C16:0-D ₃ -Glucopsychosine	22, 27, 87
N-C16:0-D ₃ -Lactosylceramide	24, 27, 88
N-C16:0-D-erythro-Ceramide	8
N-C16:0-Phytoceramide	12
N-C17:0-Ceramide trihexoside	25
N-C17:0-D-erythro-Ceramide	8
N-C18:0-D-erythro-Ceramide	8
N-C18:0-D-erythro-Dihydroceramide	10
N-C18:0-D-threo-Ceramide	9
N-C18:0-D ₃ -Sulfatide	23, 27, 88
N-C18:0-L-erythro-Ceramide	9
N-C18:0-L-threo-Ceramide	9
N-C18:0-Phytoceramide	12
N-C19:0-D-erythro-Ceramide	9
N-C23:0-Ceramide trihexoside	26
N-C24:0-D-erythro-Ceramide	9
N-C24:0-Phytoceramide	12
N-C24:0-Sulfatide	23
N-D ₃ -Stearoyl-GM ₁	30
N-Decanoyl-D-erythro-sphingosine	8
N-Docosanoyl-beta-glucosylsphingosine	22
N-Docosanoyl-D-erythro-sphingosylphosphorylcholine	16
N-Docosanoyl-glucopsychosine	22
N-Dodecanoyl-NBD-beta-D-lactosyl-sphingosine	25, 28, 91
N-Dodecanoyl-NBD-ceramide trihexoside	26, 28, 91
N-Dodecanoyl-NBD-D-erythro-dihydrosphingosine	14, 89
N-Dodecanoyl-NBD-D-erythro-sphingosine	13, 88
N-Dodecanoyl-NBD-galactosylceramide	21, 90
N-Dodecanoyl-NBD-L-threo-dihydrosphingosine	13, 89
N-Dodecanoyl-NBD-L-threo-sphingosine	13, 89
N-Dodecanoyl-NBD-lactosylceramide	25, 28, 91
N-Dodecanoyl-NBD-lyso-sulfatide	23, 28, 91
N-Dodecanoyl-NBD-phytosphingosine	14, 90
N-Dodecanoyl-NBD-sphingosyl-beta-D-galactoside-3-sulfate	23, 28, 91
N-Dodecanoyl-NBD-sphingosyl-phosphorylcholine	18, 90
N-Dodecanoyl-NBD-sulfatide	23, 28, 91
N-Eicosanoyl-D-erythro-sphingosylphosphorylcholine	16
Nervonic acid	57
Neutral glycosphingolipid qualmix	32, 86
N-Heptadecanoyl ceramide trihexoside	25
N-Heptadecanoyl-D-erythro-sphingosine	8
N-Heptadecanoyl globotriaosylceramide	25
N-Heptadecanoyl-sphingosylphosphorylcholine	15
N-Hexadecanoyl-D-erythro-sphingosine	8
N-Hexadecanoyl-D-erythro-sphingosine-1-phosphate	17
N-Hexadecanoyl-phytosphingosine	12
N-Hexadecanoylethanolamine	34, 73
N-Hexanoyl-D-erythro-dihydrosphingosine	10
N-Hexanoyl-D-erythro-sphinganine	10
N-Hexanoyl-D-erythro-sphingosine	7
N-Hexanoyl-D-threo-sphingosine	7
N-Hexanoyl-L-erythro-sphingosine	7
N-Hexanoyl-L-threo-sphingosine	7
N-Hexanoyl-NBD-beta-D-lactosyl-sphingosine	24, 27, 91
N-Hexanoyl-NBD-D-erythro-dihydrosphingosine	14, 89
N-Hexanoyl-NBD-D-erythro-sphingosine	13, 88
N-Hexanoyl-NBD-galactosylceramide	21, 27, 90
N-Hexanoyl-NBD-glucosylceramide	21, 27, 90
N-Hexanoyl-NBD-L-threo-dihydrosphingosine	13, 89
N-Hexanoyl-NBD-L-threo-sphingosine	13, 89
N-Hexanoyl-NBD-lactosylceramide	24, 27, 91
N-Hexanoyl-NBD-phytosphingosine	14, 89
N-Hexanoyl-NBD-sphingosyl-phosphorylcholine	18, 90
N-Hexanoyl-phytosphingosine	12
N-Hexanoyl-sphingosylphosphorylcholine	15
N-(NBD-aminocaproyl)-beta-D-galactosylsphingosine	27, 90
N-(NBD-aminocaproyl)-beta-D-glucosylsphingosine	27, 90
N-(NBD-aminocaproyl)-beta-D-lactosylsphingosine	27, 91
N-(NBD-aminocaproyl)-D-erythro-dihydrosphingosine	14, 89
N-(NBD-aminocaproyl)-D-erythro-sphingosine	13, 88
N-(NBD-aminocaproyl)-galactosylsphingosine	21
N-(NBD-aminocaproyl)-lactosylsphingosine	24
N-(NBD-aminocaproyl)-L-threo-dihydrosphingosine	13, 89
N-(NBD-aminocaproyl)-L-threo-sphingosine	13, 89
N-(NBD-aminocaproyl)-phytosphingosine	14, 89
N-(NBD-aminocaproyl)-sphingomyelin	18, 90
N-(NBD-aminododecanoyl)-beta-D-galactosylsphingosine	21, 90
N-(NBD-aminolauroyl)-beta-D-lactosylsphingosine	25, 28, 91
N-(NBD-aminolauroyl) ceramide trihexoside	26, 28, 91
N-(NBD-aminolauroyl)-D-erythro-dihydrosphingosine	14, 89
N-(NBD-aminolauroyl)-D-erythro-sphingosine	13, 88
N-(NBD-aminolauroyl)-lactosylsphingosine	25
N-(NBD-aminolauroyl)-L-threo-dihydrosphingosine	13, 89
N-(NBD-aminolauroyl)-L-threo-sphingosine	13, 89

N-(NBD-aminolauroyl)-phytosphingosine	14, 90	N-(R,S)-alpha-Hydroxydodecanoyl-D-erythro-sphingosine	9	Phosphatidylinositol-bis-4,5-phosphate dioctanoyl	46
N-(NBD-aminolauroyl)-sphingomyelin	18, 90	N-(R,S)-alpha-Hydroxyhexadecanoyl-D-erythro-dihydrosphingosine	11	Phosphatidylinositol-tris-3,4,5-phosphate dipalmitoyl	46
N-(NBD-aminolauroyl) sulfatide	28, 91	N-(R,S)-alpha-Hydroxyoctadecanoyl-D-erythro-dihydrosphingosine	11	Phosphatidylserine	40, 93
N-Nonadecanoyl-D-erythro-sphingosine	9	N-(R,S)-alpha-Hydroxyoctadecanoyl-D-erythro-sphingosine	9	Phosphoglycerides kit	41
N-Octadecanoyl-D-erythro-dihydrosphingosine	10	N-Stearoyl-D ₃₅ -psychosine, perdeuterated	20, 26, 87	Phrenosin	20, 95
N-Octadecanoyl-D-erythro-sphinganine	10	N-Stearoyl-phytosphingosine	12	Phytanic acid	72
N-Octadecanoyl-D-erythro-sphingosine	8	N-Tetracosanoyl-D-erythro-sphingosine	9	Phytosphingosine	5
N-Octadecanoyl-D-threo-sphingosine	9	N-Tetracosanoyl-phytosphingosine	12	PI	40, 45
N-Octadecanoyl-D ₃ -ceramide trihexoside	26, 27, 88	N-Tetracosanoyl-sphingosyl-beta-D-galactoside-3-sulfate	23	PI-3,4,5-P3, dipalmitoyl	46
N-Octadecanoyl-D ₃ -globotriaosylceramide	26, 27, 88	N-Tetracosanoyl-sulfatide	23	PI-3-P dipalmitoyl	45
N-Octadecanoyl-D ₃ -monosialoganglioside GM ₁	30	N-Tricosanoyl ceramide trihexoside	26	PI-4,5-P2 dioctanoyl	46
N-Octadecanoyl-D ₃ -sulfatide	23, 27, 88	N-Tricosanoyl globotriaosylceramide	26	PI-4-P dipalmitoyl	46
N-Octadecanoyl-L-erythro-sphingosine	9	O		Plant sterol mix	75
N-Octadecanoyl-L-threo-sphingosine	9	Octadecadienoic acid-10(E),12(Z)	60	Plant sterols kit	75
N-Octadecanoyl-sphingosylphosphorylcholine	15	Octadecadienoic acid-11(Z), 13(E)	61	Polar lipid mix	86
N-Octanoyl-beta-D-galactosylceramide	20	Octadecadienoic acid-9(E),11(E)	60	Polyclonal antibody to asialo-GM ₁	33
N-Octanoyl-D-erythro-dihydrosphingosine	10	Octadecadienoic acid-9(Z),11(E)	60	Polyclonal antibody to asialo-GM ₂	33
N-Octanoyl-D-erythro-sphinganine	10	Octadecadienoic acid-9(Z),11(Z)	60	Polyclonal antibody to GL-4	34
N-Octanoyl-D-erythro-sphingosine	8	Octadecanoic acid	50	Polyclonal antibody to GM ₁	33
N-Octanoyl-D-threo-sphingosine	8	Octanoic acid	48	Polyclonal antibody to GM ₂ (NANA)	33
N-Octanoyl-L-threo-sphingosine	8	Oleic acid	53	Polyclonal antibody to GM ₄	33
N-Octanoyl-phytosphingosine	12	omega-3 fatty acid	56	POPC	42
NOE	34, 73	omega-hydroxy C10:1 (2-trans)	67	POPG	44
N-Oleylethanolamine	34, 73	omega-Hydroxy C15:0	68	PPMP	36, 37, 38
Nonadecanoic acid	50	omega-Hydroxy C15:0 fatty acid methyl ester	68	Propyleneglycol monopalmitate	76
Nonadecenoic acid	55	omega-Hydroxy C17:0 fatty acid	68	Propyleneglycol monostearate	76
Nonanoic acid	48	omega-Hydroxy C17:0 fatty acid methyl ester	68	PS	40, 90
Non-polar lipid mix A	86	omega-Hydroxy C20:0 fatty acid	68	Psychosine	20
Non-polar lipid mix B	86	omega-Hydroxy C20:0 fatty acid methyl ester	68	PUFA-1	78
Non-volatile acid mix	85	omega-Hydroxy C21:0 fatty acid methyl ester	68	PUFA-2	78
N-Palmitoyl serinol	6	omega-hydroxy C22:0 fatty acid	68	PUFA-3	78
N-Palmitoyl-D ₃ -glucopsychosine	22, 27, 87	omega-Hydroxy C22:0 fatty acid methyl ester	69	Purified mixed gangliosides	32, 95
N-Palmitoyl-D ₃ -lactosylceramide	24, 27, 88	omega-Hydroxy C27:0 fatty acid methyl ester	69	Purified MPL of <i>Thermoplasma acidophilum</i> (>95% pure)	46
N-Palmitoyl-lactosylceramide	24	omega-Hydroxy C30:0 fatty acid methyl ester	69	Q	
N-Palmitoyl-sphingosyl-beta-D-galactoside-3-sulfate	23	P		Qualitative mix, bacterial lipid standard	85
N-Palmitoyl-sulfatide	23	PA	40	Qualitative mix, cis-trans isomers	59, 78
N-Pentadecanoyl-D-erythro-sphingosine	8	Palmitelaidic acid	52, 58	Qualitative mix, disialogangliosides	87
N-Pentadecanoyl-psychosine	20	Palmitic acid	49	Qualitative mix, gangliotetraosyl ceramide and sialosyl derivatives	87
N-(R,S)-alpha-Hydroxy-C12:0-D-erythro-ceramide	9	Palmitoleic acid	52	Qualitative mix, glycosylceramides	86
N-(R,S)-alpha-Hydroxy-C12:0-D-erythro-dihydroceramide	10	Palmitoyl sulfatide	24	Qualitative mix, lactosylceramide and sialosyl derivatives	87
N-(R,S)-alpha-Hydroxy-C16:0-D-erythro-dihydroceramide	11	Palmitoyl serinol	6	Qualitative mix,	
N-(R,S)-alpha-Hydroxy-C18:0-D-erythro-ceramide	9	Palmitoyl lactosylceramide	24	monosialogangliosides	87
N-(R,S)-alpha-Hydroxy-C18:0-D-erythro-dihydroceramide	11	PC	39, 40	Qualitative mix, non-polar lipids	86
N-(R,S)-alpha-Hydroxydodecanoyl-D-erythro-dihydrosphingosine	10	PDMP	37	Qualitative mix, non-volatile acids	85
		PE	40, 41	Qualitative mix, polar lipids	86
		Pelargonic acid	48	Qualitative mix, PUFA	78
		Pentadecanoic acid	49	Qualitative mix, sphingolipids	86
		Phosphatidic acid	40, 94	Qualitative mix, TLC standards	86
		Phosphatidylcholine	39, 40	Qualitative mix, volatile acids	85
		Phosphatidylethanolamine	40, 41, 93	Qualitative mix, water soluble fatty acids	85
		Phosphatidylinositol	40, 93	Quantitative mix, bacterial fatty acid methyl esters	85
		Phosphatidylinositol 4-phosphate dipalmitoyl	46	Quantitative mix, carbohydrates	78
				Quantitative mix, GC	83, 84
				Quantitative mix, hydroxy methyl esters	64
				Quantitative mix, methyl esters	77
				R	
				rac-5,7-Dimethyltocol	74

rac-alpha-Tocopherol	73	Sphingosine	2	T	
rac-beta-Tocopherol	73	Sphingosine-1-galactoside-3-sulfate	23	Tetracosanoic acid	51
rac-gamma-Tocopherol	74			Tetracosanoyl sulfatide	23
rac-Tocol	74	Sphingosine with C12 chain	3	Tetradecanoic acid	49
Rapeseed oil reference mixture	80	Sphingosine with C14 chain	2	Tetramethylhexadecanoic acid-3,7,11,15	72
Ricinelaic acid	69	Sphingosine with C16 chain	3	Tetrasialoganglioside GQ _{1b}	31, 96
RM-1 mix	80, 81	Sphingosine with C20 chain	3	THI	38
RM-2 mix	80, 81	Sphingosine with C18 chain	2	TLC standards mix	85, 86
RM-3 mix	80, 81	Sphingosine, with tertiary amine group	5	Tocol	74
RM-4 mix	80, 81	Sphingosine, D-erythro	2	trans 11-Octadecenoic acid	53, 58
RM-5 mix	80, 81	Sphingosine, D-threo	2	trans vaccenic acid	53, 57
RM-6 mix	80, 81	Sphingosine, L-erythro	2	Tricosanoic acid	51
RM-7 kit	81	Sphingosine, L-threo	2	Tridecanoic acid	49
Royal Jelly acid	67	Sphingosylphosphorylcholine	17	Trimethyltolcol	73
S		SPM	14, 15	Trisialoganglioside GT _{1b}	31, 95
S-1-P	17	SPM with ¹³ C labeled fatty acid	16, 88	U	
Safingol	3, 35	Stearic acid	50	Undecanoic acid	48
Sapienic acid	52	Sterol mixture, plant	75	V	
S-P-A	17	Sterols kit	75	Volatile acid mix	85
SPC	17	Steryl glucosides	76	W	
Sphingolipid mix	86	Stigmastanol	76	Water soluble fatty acid qualitative mix	84, 85
Sphingomyelin 14, 15, 94, 96, 97		Stigmasterol	76	WSFA-2 mix	84
Sphingomyelin, C17:0 fatty acid	15	Sulfatide with C16:0 fatty acid side chain	23	WSFA-4 mix	85
Sphingomyelin, C18:0 fatty acid	15	Sulfatides	22, 95		
Sphingomyelin, C2:0 fatty acid	15				
Sphingomyelin, C20:0 fatty acid	16				
Sphingomyelin, C22:0 fatty acid	16				
Sphingomyelin, C6:0 fatty acid	15				

Matreya LLC Ordering Information

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• Terms

Prices and discounts are subject to change without notice. Freight charges are prepaid and added as a separate charge on the invoice. Orders placed are F.O.B. Pleasant Gap, PA. **Net 30 Days.**

• Shipping

Standard orders: FedEx 2nd-Day
Rush Orders: FedEx Priority or Standard overnight
International Orders: FedEx International Priority
Items requiring dry ice for shipping will be charged a \$40 fee.

• Return Policy

All returns must have prior authorization. Items incorrectly ordered by you and returned to Matreya are subject to a 25% (\$25 minimum) restocking charge. The following items may not be returned: frozen products, items which have passed their expiration dates, custom synthesized products and accommodation orders. If a product has been incorrectly sent to you due to an error on our part, a credit will be issued to your account immediately. Please inspect and verify your order upon receipt. No products will be returned after 30 days (assuming proper storage and handling by customer).

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