Phytosphingosine
Item No. 20217

CAS Registry No.: 554-62-1
Formal Name: 2S-amino-1,3S,4R-octadecanetriol
Synonym: D-ribo Phytosphingosine
MF: C_{18}H_{39}NO_3
FW: 317.5
Purity: ≥95%
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥2 years
Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

**Laboratory Procedures**

Phytosphingosine is supplied as a crystalline solid. A stock solution may be made by dissolving the phytosphingosine in the solvent of choice. Phytosphingosine is soluble in organic solvents such as DMSO and dimethyl formamide, which should be purged with an inert gas. The solubility of phytosphingosine in these solvents is approximately 2 and 10 mg/ml, respectively. Phytosphingosine is also miscible in ethanol.

**Description**

Phytosphingosine is a sphingolipid with a hydroxyl group at the C4 position that is found mainly in fungi and plants but also in animals, including humans.\(^1\)\(^2\) It is metabolized to odd-numbered fatty acids with 2-hydroxy palmitic acid (Item No. 22679) as an intermediate.\(^3\) Phytosphingosine dose-dependently induces cell death of CHO cells and inhibits carbachol-induced activation of phospholipase D (PLD) in CHO cells transfected with *C. elegans* muscarinic acetylcholine receptors.\(^4\) It is essential in the heat stress response in *S. cerevisiae*.\(^5\)

**References**