



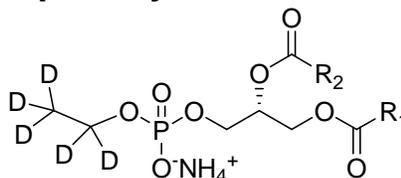
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Technical Data Sheet

For research use only

Not intended or approved for
diagnostic or therapeutic use.

Product Name: D₅-Phosphatidylethanol



Catalog #	Acyl Chains	Short Name	Formula	FW	Solubility
L-6051	R ₁ = C ₁₅ H ₃₁ (palmitoyl) R ₂ = C ₁₇ H ₃₃ (oleoyl)	D ₅ -POPEth	C ₃₉ H ₇₃ D ₅ NO ₈ P	725.04	chloroform, methanol > 1mg/mL
L-6052	R ₁ = C ₁₅ H ₃₁ (palmitoyl) R ₂ = C ₁₇ H ₃₁ (linoleoyl)	D ₅ -PLPEth	C ₃₉ H ₇₁ D ₅ NO ₈ P	723.03	
L-6053	R ₁ = C ₁₇ H ₃₅ (stearoyl) R ₂ = C ₁₇ H ₃₃ (oleoyl)	D ₅ -SOPEth	C ₄₁ H ₇₇ D ₅ NO ₈ P	753.01	
L-6054	R ₁ = C ₁₇ H ₃₅ (stearoyl) R ₂ = C ₁₇ H ₃₁ (linoleoyl)	D ₅ -SLPEth	C ₄₁ H ₇₅ D ₅ NO ₈ P	751.08	

Storage: Phosphatidylethanol (PEth) is stable for at least one year when stored as a solid, protected from moisture, and light at -20°C. Reconstitute with methanol and dilute with water or neutral pH, buffered salt solutions, i.e. PBS, TBS, etc. Should be stored in glass containers to prevent material loss due to adsorption to the vessel surface. Storage in basic (pH > 9) or acidic (pH < 4) buffers will result in slow decomposition of the product. After reconstitution, solutions of PEth should be stored at -20°C between uses. PEth is stable for at least three months when handled in this way. Repeated freeze/thaw cycles do not affect PEth. Do not store reconstituted PEth, at 4°C for more than 2-3 days.

Field of Interest: Ethanol (EtOH) has multiple effects on humans and other animals. Alcohol addiction and organ damage are active areas of research with a need for research reagents and tools.(1) Phosphatidylethanol (PEth) is a direct metabolite of EtOH and has been described as a long-lived biomarker for alcohol ingestion.(2) It is possible that PEth is involved in alcohol-induced organ damage, but the mechanisms and details are still being worked out.(3) D₅-Phosphatidylethanol has a fully deuterated ethanol headgroup and can be used as mass spectrometry standards

References:

- Freeman, W. M., and Vrana, K. E., Future prospects for biomarkers of alcohol consumption and alcohol-induced disorders, *Alcohol Clin Exp Res*, 34, 946 (2010).
- Viel, G., et al., Phosphatidylethanol in blood as a marker of chronic alcohol use: a systematic review and meta-analysis. *Int J Mol Sci*, 2012. 13(11): p. 14788-812.
- Esteban-Pretel, G., et al., Polyphosphoinositide metabolism and Golgi complex morphology in hippocampal neurons in primary culture is altered by chronic ethanol exposure. *Alcohol*, 2012. 48(1): p. 15-27.

Hazardous Properties and Cautions: The toxicological and pharmacological properties of this compound are not fully known. For further information see the MSDS on request. Phosphatidylethanol is manufactured and shipped only in small quantities, intended for research and development in a laboratory utilizing prudent procedures for handling chemicals of unknown toxicity, under the supervision of persons technically qualified to evaluate potential risks and authorized to enforce appropriate health and safety measures. As with all research chemicals, precautions should be taken to avoid unnecessary exposures or risks.

Warranty and Disclaimer: Echelon warrants the product conforms to the specifications stated herein. In the event of nonconformity, Echelon will replace products or refund purchase price, at its sole option, and Echelon shall not be responsible for any other loss or damage, whether known or foreseeable to Echelon. No other warranties, express or implied, including but not limited to warranty of fitness for any purpose or implied warranty of merchantability. Purchaser is solely responsible for all consequences of its use of the product and Echelon assumes no responsibility therefore, including success of purchaser's research and development, or health or safety of any uses of the product.