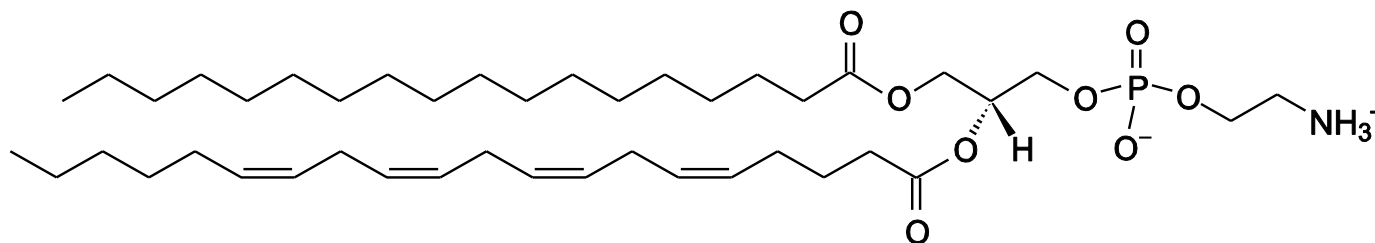


Research Certificate of Analysis

Heart PE

L- α -phosphatidylethanolamine (Heart, Bovine)

Molecular Weight: Average MW: 763.968
 Molecular Formula: $C_{43}H_{78}NO_8P$
 Storage: $-20^{\circ}C$
 Shelf Life (Unopened): 3 Months
 Physical Form: Chloroform
 Lot Number: HPE-147



Structure of predominant species

Product Specifications

Test	Limits	Results
UV/VIS Oxidation	Run and Report	234nm = 0.95% 268nm = 0.10% 278nm = 0.13%
TLC Analysis	>99%	>99%
Ninhydrin	Positive	Positive
Iodine	One Spot	One Spot
Phosphorus	Positive	Positive
Char	One Spot	One Spot
GC-FAME (AUC)	Consistent with Structure	Consistent with Structure
Mass Spec	Consistent with Structure	Consistent with Structure

Signed: Electronically Signed By QC
Release Date: September 9, 2013