

DOSPA Chloride

Catalog Number: 14477

INTRODUCTION

DOSPA is a cationic lipid and synthesized derivative of DOTMA. It has a functionalized spermine head group attached via a peptide bond to the hydrophobic chains allowing for efficient packaging of DNA. For transfection applications, DOSPA is routinely used with a neutral helper lipid such as DOPE.

SPECIFICATIONS:

Synonym(s):

1-Propanaminium, N-[2-[[[2,5-bis[(3-aminopropyl)amino]-1-oxopentyl]amino]ethyl]-N,N-dimethyl-2,3-bis[(9Z)-9-octadecen-1-yloxy]-, chloride, hydrochloride; DOSPA Chloride; DOSPA

Linear Formula: C₅₄H₁₁₅Cl₅N₆O₃

CAS Number:	282533-23-7
Purity:	≥ 97%
Molecular Weight:	1073.8
Storage:	-20°C
Stability:	≥ 2 years
Appearance:	Off-white to yellow solid

LIPOSOME SYNTHESIS PROTOCOL

MATERIALS:

- DOSPA Chloride
- Dry Nitrogen or Argon
- Purified H₂O
- Chloroform

EQUIPMENT:

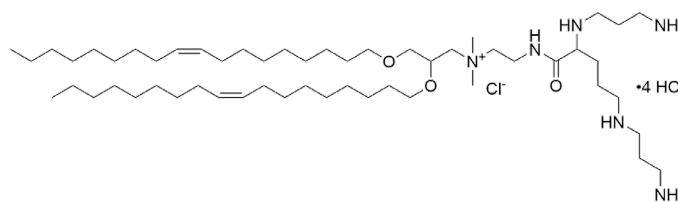
- 5 mL Glass beaker
- Glass round bottom flask
- Rotary evaporator
- Sterile polystyrene storage tube
- Micropipette and tips
- Calibrated scale
- Laminar flow hood with vacuum

PREPARE STOCK SOLUTION:

1. Remove DOSPA Chloride from freezer (-20 °C) and thaw to room temperature
2. Weigh 20 mg of DOSPA Chloride into glass vial
3. Add 2 mL of chloroform to glass vial; agitate until dissolved
4. (Optional: Store stock solution at -20 °C under nitrogen or argon)

SAFETY

See Safety Data Sheet



PREPARATION OF LIPID FILM:

1. Place stock solution in round bottom flask and remove solvent using a rotary evaporator
2. Evaporate chloroform with dry nitrogen flow in fume hood
3. Place vial in vacuum pump until lipid film is created (~2-3 hours)

REHYDRATION AND LIPOSOME FORMATION:

1. Add 2 mL filtered H₂O to lipid film
2. Sonicate 5-20 minutes or to clarity
3. Store suspension in glass vial under nitrogen or argon at 4 °C until use, up to 1 month

ORDERING INFORMATION

Cat. #	Description
14477	DOSPA Chloride

Visit [Polysciences.com](https://www.polysciences.com) any time to place an order.

Contact us at info@polysciences.com to learn about our cGMP grade DOSPA Chloride manufactured under 21 CFR part 210, 211.