

# Certificate of Analysis

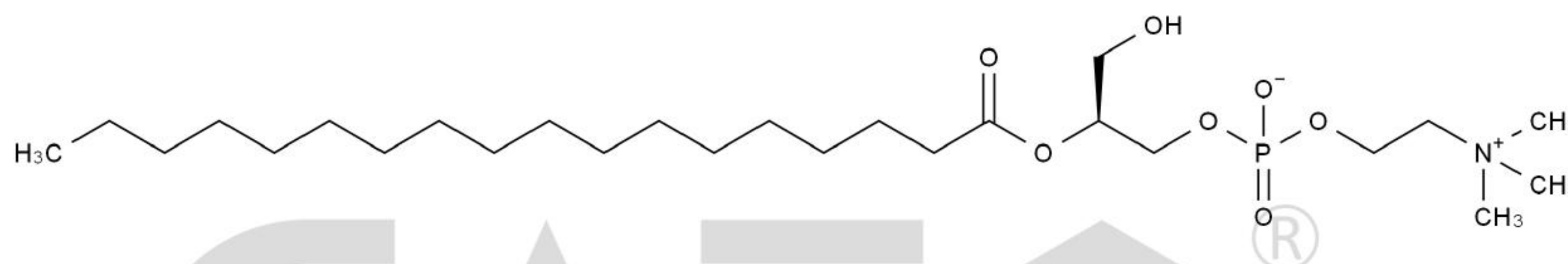
## Reference Material & Standard

|                    |                                                   |                   |                                           |
|--------------------|---------------------------------------------------|-------------------|-------------------------------------------|
| Product Name:      | Citicoline Impurity 109                           | Catalogue Number: | C4X-2120109                               |
| Synonyms:          | 2-Stearoyl-sn-glycero-3-phosphocholine            | Lot Number:       | 0912-RG-0014                              |
| CAS Number:        | 4421-58-3                                         | Expiry Date:      | Jan 27, 2027                              |
| Molecular Formula: | C <sub>26</sub> H <sub>54</sub> NO <sub>7</sub> P | Storage:          | -80°C±5°C Protected from light and Sealed |
| Molecular Weight:  | 523.68                                            |                   |                                           |

Warning:



Chemical Structure:



| Test Items     | Method            | Results                  |
|----------------|-------------------|--------------------------|
| Appearance     | Visual inspection | White to Off-White Solid |
| Identification | LCMS&PNMR&HNMR    | Confirmed                |
| Purity         | ELSD              | 97.8%                    |

CATO Research Chemicals Inc.

Signature:

Prepared by:

*Lily*

Reviewed by:

*Hinlam*

Approved by General Manager:

*David*

Date: Sep 17, 2025

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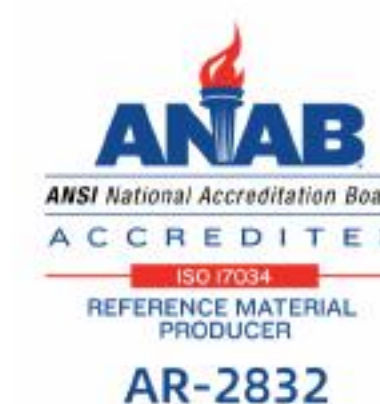
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