

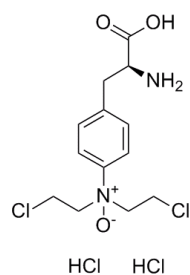
## Certificate of Analysis

Product Name: PX-478  
Cat. No.: HY-10231  
CAS No.: 685898-44-6  
Batch No.: 18561  
Chemical Name: L-Phenylalanine, 4-[bis(2-chloroethyl)oxidoamino]-, (Hydrochloride) (1:2)

### PHYSICAL AND CHEMICAL PROPERTIES

Molecular Formula: C<sub>13</sub>H<sub>20</sub>Cl<sub>4</sub>N<sub>2</sub>O<sub>3</sub>  
Molecular Weight: 394.12  
Storage: Powder -20°C 3 years  
4°C 2 years  
In solvent -80°C 6 months  
-20°C 1 month

Chemical Structure:



### ANALYTICAL DATA

Appearance: Light yellow to khaki (Solid)  
<sup>1</sup>H NMR Spectrum: Consistent with structure  
LCMS: Consistent with structure  
Purity (NMR): >98.0%  
Conclusion: The product has been tested and complies with the given specifications.

**Caution: Product has not been fully validated for medical applications. For research use only.**

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