

## Certificate of Analysis

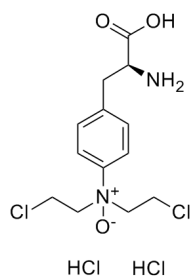
**Product Name:** PX-478  
**Cat. No.:** HY-10231  
**CAS No.:** 685898-44-6  
**Batch No.:** 18561  
**Chemical Name:** L-Phenylalanine, 4-[bis(2-chloroethyl)oxidoamino]-, (Hydrochloride) (1:2)

### 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 brown 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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