

## Certificate of Analysis

Date of Testing: 2023-04-11 11:50:42  
Date of Next Testing: 2025-04-10 11:50:42  
Product Name: **Mitoxantrone dihydrochloride**  
CAS Number: 70476-82-3  
Specifications & Purity:  $\geq 97\%$   
Lot #: C23241057  
SKU #: **M129460**  
**Analysis:** **172216**  
Storage Temperature: Store at  $-20^{\circ}\text{C}$

Parameter	Limit Values	Result
Carbon by Elemental Analysis	50.4-51.3 (%)	50.58 %
Nitrogen by Elemental Analysis	10.5-11 (%)	10.85 %
Water by Karl Fischer	0-6 (%)	2.61 %
Purity(HPLC)	97-100 (%)	98.46500 %
Oxygen by Elemental Analysis	18.2-18.8 (%)	18.63 %
Purity (Argentmetric Titration)	96.5-103.5 (%)	96.53 %
Appearance (M129460)	Blue to black powder or crystals	Blue to black powder or crystals
Solubility in EtOH , Dark Blue(1 mg/ml)	pass	Pass
Infrared spectrum	Conforms to Structure	Conforms to Structure



John Su  
QA & QC Manager