

ALADDIN SCIENTIFIC CORPORATION

14078 Meridian Parkway, Riverside, CA. 92518

## Certificate of Analysis

Date of Testing: 2023-03-01 13:35:03  
Date of Next Testing: 2025-02-18 13:35:03  
Product Name: **Vitamin K1**  
CAS Number: 84-80-0  
Specifications & Purity: 98%(sum of Cis-trans)  
Lot #: B23241025  
SKU #: **V104147**  
Version: **0**  
Analysis #: **142179**  
Storage Temperature: Store at 2-8°C, Protected from light, Argon charged

Parameter	Limit Values	Result
Cis-isomer	0-21 (%)	0.00 %
Refractive index n <sub>20</sub> /D	1.525-1.529	1.53
Purity(Mixture of cis and trans isomers ,HPLC)	98-100 (%)	99.00 %
Appearance (V104147)	yellow to orange liquid	yellow to orange liquid
Solubility in CHCL <sub>3</sub> , Yellow to Dark Yellow Clear 100 ul/ml	pass	Pass
Proton NMR spectrum	Conforms to Structure	Conforms to Structure



John Su  
QA & QC Manager