

## Certificate of Analysis

Date of Testing: 2023-06-21 09:48:32  
Date of Next Testing: 2027-06-20 09:48:32  
Product Name: **Fludarabine**  
CAS Number: 21679-14-1  
Specifications & Purity: 98%  
Lot #: F2316128  
SKU #: **F122998**  
Version: **0**  
Analysis #: **092543**  
Storage Temperature: Store at 2-8°C, Argon charged

Parameter	Limit Values	Result
Purity(HPLC)	98-100 (%)	99.87900%
Nitrogen by Elemental Analysis (anhydrous)	24.05-25.05 (%)	24.22%
Carbon by Elemental Analysis(anhydrous)	41.61-42.61 (%)	41.97%
Specific Rotation [α] <sub>20</sub> /D(0.90 - 1.10 mg/ml in 10% DMF in EtOH)	15-19 (°)	17.71°
Appearance (F122998)	White or light yellow powder	White or light yellow powder
Proton NMR spectrum	Conforms to Structure	Conforms to Structure
Solubility in Heating DMF	Colorless to Light Yellow Clear, 19.60-20.40 mg/ml	Colorless to Light Yellow Clear, 19.60-20.40 mg/ml



John Su  
QA & QC Manager