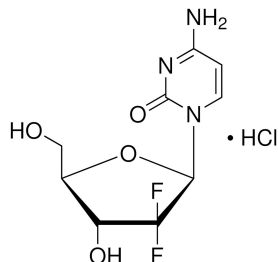


# Certificate of Analysis

**Product Name :** Gemcitabine hydrochloride  $\geq 98\%$  (HPLC)  
**Product Number :** G6423-BULK  
**Batch Number :** 0000025312  
**CAS Number :** 122111-03-9  
**Molecular Formula :**  $C_9H_{11}F_2N_3O_4 \cdot HCl$   
**Formula Weight :** 299.66  
**Quality Release Date :** 10 Jan 2018



Test	Specification	Result
Appearance (Color)	White to Beige	White
Appearance (Form)	Powder	Powder
Solubility (Turbidity)	Clear	Clear
Solubility (Color)	Conforms to Requirements	Colorless
Concentration	$\geq 10.0$ mg/ml	52.0 mg/ml
H <sub>2</sub> O		
Purity (HPLC)	$\geq 97.5\%$	100.0 %
Identity	Confirmed	Confirmed
Water Content	0.0 - 3.0 mol	0.0 mol
Salt Content	0.9 - 1.1 mol	1.0 mol
Elemental Composition	Pass	Pass
Optical Rotation	40.0 - 50.0 °	49.8 °
c=1, H <sub>2</sub> O		

Brendan Nye, QC Supervisor  
 Quality Control  
 Natick, Massachusetts  
 US