



## CERTIFICATE OF ANALYSIS

20 Martin Ross Avenue, North York, ON, M3J 2K8, CANADA  
Tel: (416) 665-9696, Fax: (416) 665-4439  
Email: orders.trc@lgcgroup.com Website: www.trc-canada.com

### 1. Identification

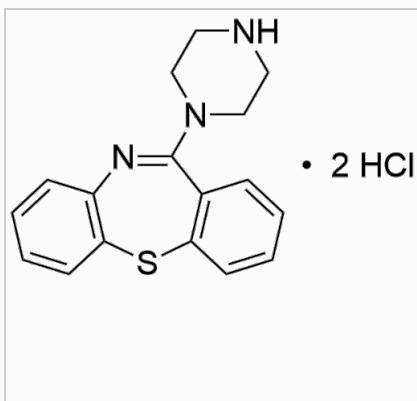
**Catalogue Number:** D288740

**CAS Number:** 111974-74-4

**Product:** N-Des[2-(2-hydroxyethoxy)ethyl]  
Quetiapine Dihydrochloride

**Synonym:** 11-(1-Piperazinyl)-dibenzo[b,f][1,4]thiazepine  
Dihydrochloride; DBTP; Norquetiapine;  
Quetiapine EP Impurity B;

**Structure:**



**Molecular Formula:**

C<sub>17</sub>H<sub>17</sub>N<sub>3</sub>S • 2HCl

**Molecular weight:**

295.4 + 2(36.46)

**Source of Product:**

N/A

**Solubility:**

DMSO (Slightly, Heated,  
Sonicated), Ethanol (Slightly,  
Heated), Methanol (Slight

**Lot Number:** 19-SBL-144-2

**Purity:** 97%

**Shipping Condition:** This Product Is Stable To Be  
Shipped At Room Temperature

**Storage Condition:** -20°C

### 2. Warning

**Warning 1:**

**Warning 2:**

**Warning 3:**

### 3. Analytical Information

Tests:	Specifications:	Results:
Elemental Analysis	Conforms	%C: 49.79, %H: 5.88, %N: 10.25
Appearance	White to Pale Yellow Solid	Off-White to Pale Yellow Solid
NMR	Conforms to Structure	Conforms
MS	Conforms to Structure	Conforms
HPLC Purity	Report Result	100.00% (210 nm)
Water Content	Report Result	7.9% by Karl Fischer
Chloride Content	Report Result	17.5%

**Additional Information:** N/A

Purity is based on the analytical results of the tests performed. NMR and Elemental Analysis (if available) may have an accuracy of  $\pm 2\%$ . Isotopic purity is based on mass distribution observed. The contents of the specifications are subject to change without advance notice, and the specification values displayed here are the most up to date values.

### 4. Signatures

Reviewed By	Reviewed By	C of A Approved By	Test Date	Retest Date
Neha Khanna	Toni Rantanen	Chanell Chu	11/22/2021	11/20/2025