



## CERTIFICATE OF ANALYSIS

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### 1. Identification

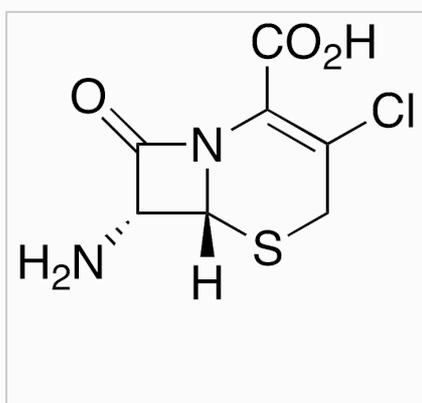
**Catalogue Number:** A603305

**CAS Number:** 53994-69-7

**Product:** 7-Amino-3-chloro-3-cephem-4-carboxylic Acid

**Synonym:** (6R,7R)-7-Amino-3-chloro-8-oxo-5-thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic Acid; 3-Chloro-7-amino-3-cephem-4-carboxylic Acid; (6R-trans)-7-amino-3-chloro-8-oxo-5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid; 7-Amino-3-chlorocephalosporanic Acid; Cefaclor EP Impurity E; Cefaclor EP Impurity B

**Structure:**



**Molecular Formula:**

C<sub>7</sub>H<sub>7</sub>ClN<sub>2</sub>O<sub>3</sub>S

**Molecular weight:**

234.66

**Source of Product:**

N/A

**Solubility:**

Aqueous Acid (Slightly, Heated), DMSO (Slightly, Heated, Sonicated)

**Lot Number:** 11-MIC-18-1

**Purity:** 95%

**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:
Appearance	Pale Yellow Solid	Pale Yellow Solid
NMR	Conforms to Structure	Conforms
Elemental Analysis	Conforms	%C: 35.25, %H: 3.01, %N: 11.69
Specific Rotation	Report Result	+70.4° (c = 0.2, 1N HCl)
HPLC Purity	Report Result	99.30% (270 nm)

**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 ± 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
Hanxiang Li	Toni Rantanen	Chanell Chu	5/22/2021	5/20/2031