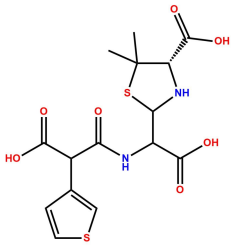
# CERTIFICATE OF ANALYSIS

**Date:** 09-11-2026

| | | | |
|---|---|---|---|
| **Product Name** | **Ticarcillin Sodium Impurity D** | | |
| **Chemical Name** | (4S)-2-(Carboxy(2-carboxy-2-(thiophen-3-yl)acetamido)methyl)-5,5-dimethylthiazolidine-4-carboxylic acid | | |
| **Structure** |  | | |
| **Batch No.** | - | **CAS No.** | NA |
| **Analysis Date** | - | **Retest Date** | - |
| **Mol. Formula** | $C_{15}H_{18}N_2O_7S_2$ | **Molecular Wt.** | 402.44 |
| **Long term Storage Condition** | | Store at 2-8 °C in well closed container | |
| **Handling and Transit Condition** | | 25-30 °C in well closed container | |

| **Test** | **Result** |
|---|---|
| Appearance | - |
| Solubility | - |
| 1H-NMR | Conforms to structure |
| MASS | Conforms to structure |
| Chromatographic Purity | >90% |

**Note: This material should be used for research purpose and not for human or animal consumption. Any patent applicable for this product in any country is not applicable for this analytical standard/research chemical.**

| | **Prepared By** | **Checked By** | **Approved By** |
|---|---|---|---|
| **Signature** | | | |
| **Date** | | | |

Sample COA

CLEANCHEM LABORATORIES LLP
Plot No. A-737/2, TTC Industrial Area, MIDC Khairane, Navi Mumbai, Maharashtra, INDIA- 400710
sales@cleanchemlab.com +91-9324132198 www.cleanchemlab.com