

## Certificate of Analysis

Date of Testing: 2023-08-23 10:59:14  
Date of Next Testing: 2027-08-22 10:59:14  
Product Name: **Tris(hydroxymethyl)aminomethane hydrochloride**  
CAS Number: 1185-53-1  
Specifications & Purity: reagent grade, ≥99%  
Lot #: H2310568  
SKU #: **T105287**  
**Analysis: 213589**  
Storage Temperature: Argon charged

| Parameter   | Limit Values             | Result                   |
|---|--------------------------|--------------------------|
| Purity (Titration by NaOH)  | 99-100 (%)               | 99.44 %                  |
| Heavy metal (as Pb)   | 0-5 (ppm)                | 0.00 ppm                 |
| Water by Karl Fischer   | 0-1 (%)                  | 0.56 %                   |
| Appearance (T105287)  | white crystalline powder | white crystalline powder |
| Infrared spectrum   | Conforms to Structure    | Conforms to Structure    |
| Proton NMR spectrum   | Conforms to Structure    | Conforms to Structure    |
| Solubility, Colorless, Clear, 200 g plus 300 ml of H <sub>2</sub> O | pass                     | Pass                     |



John Su  
QA & QC Manager