

## Certificate of Analysis

Date of Testing: 2022-12-10 16:52:53  
Date of Next Testing: 2026-12-09 16:52:53  
Product Name: **N-(2-Hydroxyethyl)piperazine-N'-(4-butanesulfonic acid)**  
CAS Number: 161308-36-7  
Specifications & Purity: 99%, moisture  $\leq$  0.5%  
Lot #: L22071027  
SKU #: **H492327**  
**Analysis: 166061**  
Storage Temperature: Room temperature

Parameter	Limit Values	Result
A290(33%W/W)	0-0.1	0.10
Water by Karl Fischer	0-0.5 (%)	0.34 %
Purity (T)	99-102.5 (%)	99.90 %
Heavy metal (as Pb)	0-5 (ppm)	0.00 ppm
Appearance(H492327)	White powder	White powder
NMR Spectrum 1H	Conforms to Structure	Conforms to Structure
Solubility in H <sub>2</sub> O , Colorless to Faint Yellow,Clear to Hazy,500mg/ml	pass	Pass



John Su  
QA & QC Manager