

## Certificate of Analysis

Date of Testing: 2023-10-07 15:17:28  
Date of Next Testing: 2027-10-06 15:17:28  
Product Name: **n-Butanol**  
CAS Number: 71-36-3  
Specifications & Purity: for HPLC,  $\geq 99.7\%$ (GC)  
Lot #: I2321248  
SKU #: **B111575**  
**Analysis:** **274569**  
Storage Temperature: Argon charged, Desiccated

| Parameter   | Limit Values          | Result                |
|---|-----------------------|-----------------------|
| UV Absorbance 220nm                               | 0-0.7                 | 0.35                  |
| Refractive index n <sub>20</sub> /D               | 1.398-1.4             | 1.40                  |
| UV Absorbance 280nm                               | 0-0.01                | 0.00                  |
| UV Absorbance 225nm                               | 0-0.5                 | 0.19                  |
| Purity(GC)  | 99.7-100 (%)          | 99.89%                |
| Evaporation Residue                               | 0-2 (mg/L)            | 0.00 mg/L             |
| UV Absorbance 235nm                               | 0-0.1                 | 0.06                  |
| free acid (as C <sub>3</sub> H <sub>7</sub> COOH) | 0-0.002 (%)           | 0.00%                 |
| UV Absorbance 400nm                               | 0-0.01                | 0.00                  |
| Water by Karl Fischer                             | 0-0.1 (%)             | 0.01%                 |
| UV Absorbance 240nm                               | 0-0.1                 | 0.04                  |
| UV Absorbance 260nm                               | 0-0.04                | 0.01                  |
| UV Absorbance 210nm                               | 0-1                   | 0.99                  |
| Appearance (B111575)                              | Colorless liquid      | Colorless liquid      |
| Infrared spectrum                                 | Conforms to Structure | Conforms to Structure |



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A handwritten signature in black ink that reads "John Su".

John Su  
QA & QC Manager