



CERTIFICATE OF ANALYSIS

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| Product | MU-GLU |
| Grade | Ultra Pure |
| Product Code | MB1137 |
| Formula | C16H18O8 |
| MW | 338.32 |
| CAS# | 18997-57-4 |
| Lot No | |

| Test Items | Specifications | Results |
|---|-----------------------------------|---------|
| Appearance | White to off-white powder | |
| Color of Solution (3 % in water/acetone 1:2) | Colorless | |
| Turbidity (NTU) (3 % in water/acetone 1:2) | ≤11 NTU | |
| Water Content (K. Fischer) | ≤2.0 % | |
| Specific Optical Rotation [alpha]D (c = 0.3 in water, 20 °C) | -102.0 - -98.0 | |
| purity(HPLC) (100 mg in 3 ml of water/acetone 1:2; 1- butanol/acetic acid/water 6:3:1; UV 254 nm, sulfuric acid) | ≥99 area-% | |
| Free 4-MU (100 mg in 3 ml of water/acetone 1:2; toluene/acetone 5:1; UV 366 nm after treating with ammonia) | ≤10 mg/kg | |
| FT-IR Spectrum | corresponds to reference spectrum | |

Storage: -20°C