

Certificate of Analysis Tacrolimus Monohydrate

| CAS No. | 109581-93-3 | Code | BIOJTCM001 |
|-------------|--------------|------------------|--------------|
| Lot No | HNTN2505503U | Manufacture Date | May.30, 2025 |
| Retest Date | May.29, 2028 | Quantity | 100G |

| Testing Items | Specifications | Results | |
|----------------------|--|--|--|
| Appearance | White crystals or white crystalline powder | White crystalline powder | |
| Identification | A: Infrared absorption | Complies | |
| | B: The retention time of the major peak of the sample solution corresponds to that of the standard solution as obtained in the assay | Complies | |
| Residue on ignition | ≤0.1% | 0.1% | |
| Heavy metals | ≤10ppm | <10ppm | |
| Optical rotation | -110° to -115° | -111° | |
| Water | ≤4.0% | 2.2% | |
| Organic impurities | Ascomycin 19-epimer≤0.1% Ascomycin≤0.50% Desmethyl tacrolimus≤0.1% Tacrolimus 8-epimer≤0.15% Tacrolimus 8-propyl analog≤0.15% Any individual unspecified impurity≤0.1% Total impurities≤1.0% | Not detected | |
| Assay | 98.0%~102.0% (on the anhydrous and solvent-free basis) | 100.3% | |
| Residual solvent | Ethanol $\leq 0.5\%$ Acetone $\leq 0.5\%$ Ethyl acetate $\leq 0.5\%$ Isopropyl ether $\leq 0.05\%$ | Not detected Not detected 0.004% Not detected | |
| Conclusion | This product conforms to current USP standard | | |

^{*}Storage condition: Store between 2°C~8°C, Protect from moisture and light.

