

Certificate of Analysis

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|---------------|----------------------------|--------------|----------------------------|
| PRODUCT NAME: | TELAPREVIR | CAS NO.: | 402957-28-2 |
| PACKING: | FIBER DRUM | QTY : | 50G |
| MFG.DATE: | 07 TH ,MAY,2013 | BATCH NO: | 201305001 |
| TEST DATE: | 09 TH ,MAY,2013 | EXPIRY DATE: | 06 TH ,MAY,2015 |

| Tests | Specifications | Test results |
|--|-----------------------------------|--------------|
| Appearance | Yellow-white to yellow powder | Complies |
| Specific rotation | -38° ~-44° | -41° |
| Impurity (by HPLC) | TLPD1 ≤ 0.15% | Undetected |
| | TLPD2 ≤ 0.15% | Undetected |
| | TLPD3 ≤ 0.15% | 0.02% |
| | TLP-6 ≤ 0.15% | Undetected |
| | TLP-7 ≤ 0.15% | Undetected |
| | Single impurity ≤ 0.10% | 0.06% |
| | Total impurities ≤ 1.0% | 0.07% |
| Enantiomer | ≤ 0.15% | Undetected |
| Solvents residue | Ethanol ≤ 5000ppm | 1045ppm |
| | Isopropanol ≤ 5000ppm | Undetected |
| | Ethyl acetate ≤ 5000ppm | 350ppm |
| | Dichloromethane ≤ 600ppm | Undetected |
| | Toluene ≤ 890ppm | Undetected |
| | Methyl tert-butyl ether ≤ 5000ppm | Undetected |
| Assay | ≥ 99.0% | 99.9% |
| Conclusion: The Product complies with in-house standard. | | |



Tested by: Wu Yanping Checked by: Huang Guoliang Approved by: Xu Hangfei