

Hangzhou Hyper Chemicals Limited

Room No.1102 of 360 Space Building, Hangxing Road, Hangzhou, 310015, Zhejiang, China Tel:0086-571-87702781 Fax:0086-571-86056590 Email: info@hyper-chem.com

CERTIFICATE OF ANALYSIS

| Product Name: | Adenosine | | |
|------------------------|--|--------------------|---------------------------|
| Batch No. | 20200701 | Manufacturing Date | July 2, 2020 |
| Quantity | 500KG | Report Date | July 7, 2020 |
| Packing | 25kg/drum | Re-test Date | July 1, 2022 |
| Inspection No. | AR2020080 | | |
| Analytical Results | | | |
| Items | Specifications | | Results |
| Charateristics | White to off-white crystalline powder | | Complies |
| Identification | A. IR | | Complies |
| | B. The sample retention time of the major peak should match the reference standard | | |
| Specific rotation | -68°~-72° (USP) | | -69.66° |
| | -58°~-62° (KFDA) | | -61.09° |
| Loss on drying | ≤0.5% | | 0.32% |
| Heavy metals | ≤10ppm | | < 10ppm |
| Residue on ignition | ≤0.1% | | 0.03% |
| Acidity or alkalinity | Meet the requirements QS-018-01 | | Complies |
| Limit of Ammonia | ≤0.0004% | | Complies |
| Limit of Chloride | ≤0.007% | | Complies |
| Limit of Sulfate | ≤0.02% | | Complies |
| Chromatographic purity | Total impurities ≤0.5% | | 0.0245% |
| | Guanosine ≤0.1% | | 0.0000% |
| | Inosine ≤0.1% | | 0.0058% |
| | Uridine ≤0.1% | | 0.0000% |
| | Adenine ≤0.2% | | 0.0187% |
| Assay(HPLC) | 98.0%~102.0% | | 100.05% |
| Solubility | \ | | Slightly soluble in water |
| Sifting | HYPER CHEM | | ≥90% pass 40 mesh sieve |
| Conclusion | The product meets with USP and customer requirement | | |

Inspector: Carlifor Wu

www.hyper-chem.com 1/1