

CERTIFICATE OF ANALYSIS

1. PRODUCT INFORMATION

| | |
|--------------------|---|
| Product Name | Glutathione |
| CAS Number | 70-18-8 |
| Molecular Formula | C ₁₀ H ₁₇ N ₃ O ₆ S |
| Form | Crystalline powder |
| Molecular Weight | 307.32 Da |
| Batch / Lot Number | PE20251101Z |
| Manufacturing Date | 11/10/2025 |
| Report Date | 11/27/2025 |
| Retest Date | 11/09/2027 |
| Quantity | 1500 mg |
| Storage Conditions | Sealed, stored in a cool and dry place |

2. GENERAL PROPERTIES

| No. | Test Parameter | Specification | Result | Status |
|-----|---------------------|--|--------------------------|--------|
| 2.1 | Description | White crystal or crystalline powder | White crystalline powder | Pass |
| 2.2 | Solubility | Soluble in water, insoluble in ethanol/DCM | Conforms | Pass |
| 2.3 | Identification (IR) | Consistent with reference product | Conforms | Pass |
| 2.4 | Specific Rotation | -15.5° ~ -17.5° | -15.7° | Pass |

3. RESIDUAL SOLVENTS

| No. | Test Parameter | Specification | Result | Status |
|-----|---------------------|---------------|---------|--------|
| 3.1 | Chlorides | NMT 0.02% | < 0.02% | Pass |
| 3.2 | Sulfate | NMT 0.03% | < 0.03% | Pass |
| 3.3 | Loss on Drying | NMT 0.5% | 0.28% | Pass |
| 3.4 | Residue on Ignition | NMT 0.1% | 0.05% | Pass |

4. RELATED SUBSTANCES (HPLC)

| No. | Test Parameter | Specification | Result | Status |
|-----|-----------------------------|---------------|----------|--------|
| 4.1 | Heavy Metals (Pb) | NMT 10 ppm | Conforms | Pass |
| 4.2 | Iron (Fe) | NMT 10 ppm | Conforms | Pass |
| 4.3 | Oxidized Glutathione (GSSG) | NMT 1.5% | 0.4% | Pass |
| 4.4 | Purity (HPLC) | NLT 98.0% | 99.2% | Pass |

5. BIOLOGICAL TESTING

| No. | Test Parameter | Specification | Result | Status |
|-----|---------------------|----------------|----------|--------|
| 5.1 | Total Aerobic Count | NMT 1000 cfu/g | Conforms | Pass |
| 5.2 | Yeast and Mold | NMT 100 cfu/g | Conforms | Pass |
| 5.3 | Escherichia coli | N.D. | Conforms | Pass |
| 5.4 | Salmonella | N.D. | Conforms | Pass |

6. ASSAY

| No. | Test Parameter | Specification | Result | Status |
|-----|----------------|---------------|--------|--------|
| 6.1 | Assay | NLT 98.0% | 99.1% | Pass |

7. CONCLUSION

The product tested complies with the specifications.

--- End of Certificate ---