

# SUNNY CHEMGROUP CO., LIMITED

218 C 5/F JAFFE MANSION 218 JAFFE RD WAN CHAI HONGKONG

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## Certificate of analysis

INVOICE NO.:TTSFC450/22

PO No.:6493

|               |           |                     |            |
|---------------|-----------|---------------------|------------|
| SAMPLE NAME   | L-Leucine | BATCH NO.           | 20220829   |
| QUANTITY      | 1500 KGS  | DATE OF MANUFACTURE | 2023.08.29 |
| SPECIFICATION | USP43     | RE-TEST DATE:       | 2025.08.28 |

| ITEM  | Standards   | RESULT   |
|---|---|----------|
| Appearance  | White crystalline powder  | Conform  |
| Specific Rotation   | + 14.9° ~ +17.3°  | 15.5°    |
| Chloride  | ≤500ppm   | <300ppm  |
| Ammonium  | ≤0.02%  | <0.02%   |
| Sulfate   | ≤300ppm   | <200ppm  |
| Iron  | ≤30ppm  | <10ppm   |
| Heavy Metals  | ≤15ppm  | <5ppm    |
| Loss on drying  | ≤0.20%  | <0.20%   |
| Residue on ignition                                       | ≤0.40%  | 0.08%    |
| Related compounds   | Not more than 0.5% of any individual impurity is found; not more than 2.0% of total impurities is found | conforms |
| Specific rotation [ $\alpha$ ] <sub>D</sub> <sup>25</sup> | +14.9°~ + 17.3 °  | + 15.5°  |
| PH  | 5.5~7.0   | 6.0      |
| Assay   | 98.5%~101.5%  | 99.6%    |

Conclusion: This product conforms to USP43 standard.

Ref: PT-25184-777 lote

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