

## Certificate of Analysis

Date of Testing: 2023-11-27 15:26:09

Date of Next Testing: 2026-11-26 15:26:09

Product Name: **Isovaleryl-L-carnitine**

CAS Number: 31023-24-2

Specifications & Purity:  $\geq 94.0\%$  (HPLC)

Lot #: K2322431

SKU #: **I463320**

**Analysis:** **286084**

Storage Temperature: Store at 2-8°C, Argon charged

| Parameter                                                                   | Limit Values                                                         | Result                                                               |
|-----------------------------------------------------------------------------|----------------------------------------------------------------------|----------------------------------------------------------------------|
| Purity(HPLC area)                                                           | 94-100 (%)                                                           | 99.41 %                                                              |
| Water by Karl Fischer                                                       | 0-10 (%)                                                             | 5.53 %                                                               |
| Specific Rotation<br>[ $\alpha$ ] <sub>20</sub> /D(c=1 in H <sub>2</sub> O) | -25~-21 (°)                                                          | -21.72 °                                                             |
| NMR Spectrum 1H                                                             | Conforms to Structure                                                | Conforms to Structure                                                |
| Appearance(I463320)                                                         | White to Off White Powder or Crystals or<br>Colorless Viscous Liquid | White to Off White Powder or Crystals or<br>Colorless Viscous Liquid |



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