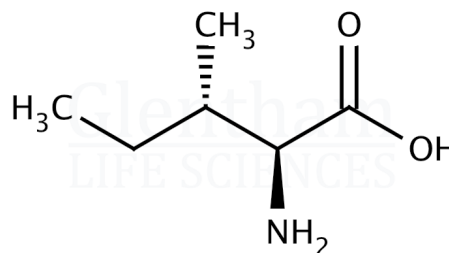


## Certificate of Analysis

|               |              |
|---------------|--------------|
| Product Name  | L-Isoleucine |
| Glentham Code | GM6591       |
| CAS Number    | 73-32-5      |
| EINECS        | 200-798-2    |
| MDL Number    | MFCD00064222 |
| PubChem SID   | 310275405    |
| Batch Number  | 650EXH       |

|                   |  |
|-------------------|--|
| Molecular Weight  | 131.18   |
| Molecular Formula | C <sub>6</sub> H <sub>13</sub> NO <sub>2</sub> |
| Storage Temp.     | +20°C  |



| Property   | Specification                         | Batch 650EXH             |
|--|---------------------------------------|--------------------------|
| Physical Description                             | White to off-white powder or crystals | White crystalline powder |
| Identification (IR)                              | To conform to standard                | Conforms                 |
| pH (1% in water)                                 | 5.5 - 7.0                             | 5.8                      |
| Specific Optical Rotation ([α] <sub>20</sub> /D) | +38.9 - +41.8 ° (C=4, 6M HCl)         | +39.3°                   |
| Residue on Ignition                              | ≤ 0.3%                                | 0.11%                    |
| Loss on Drying                                   | ≤ 0.3%                                | 0.13%                    |
| Chloride (Cl)                                    | ≤ 500ppm                              | ≤ 200ppm                 |
| Iron (Fe)  | ≤ 30ppm                               | ≤ 10ppm                  |
| Sulphate (SO <sub>4</sub> )                      | ≤ 300ppm                              | Conforms                 |
| Ammonium (NH <sub>4</sub> )                      | ≤ 200ppm                              | Conforms                 |
| Heavy Metals                                     | ≤ 10ppm                               | Conforms                 |
| Lead (Pb)  | ≤ 3ppm                                | Conforms                 |
| Arsenic (As <sub>2</sub> O <sub>3</sub> )        | ≤ 1ppm                                | Conforms                 |
| Cadmium (Cd)                                     | ≤ 1ppm                                | Conforms                 |
| Mercury (Hg)                                     | ≤ 0.1ppm                              | Conforms                 |
| Assay  | 98.5 - 101.0 %                        | 99.7%                    |
| Pharmacopoeia Specification(s)                   | USP                                   | Conforms                 |

|                       |            |
|-----------------------|------------|
| Specification Version | v1.1       |
| Manufacture Date      | 2021-06-10 |
| Re-Test Date          | 2029-09-29 |

Glentham Life Sciences confirm that the above referenced product conformed to the information displayed in this document on the quality release date. Please check [www.glentham.com](http://www.glentham.com) or contact us using the details above for the current version of this document.

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