# L-Tryptophan 98% Feed Grade

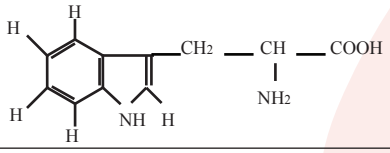
## Description

Growing animals need Tryptophan as an essential nutrient not only for protein deposition but also for various metabolic functions. CJ L-Tryptophan 98% Feed Grade is produced by fermentation from natural raw materials of agricultural origin (such as raw sugar or SOD). CJ L-Tryptophan 98% serves for the adequate supply of the essential amino acid tryptophan. This product is used only for animals.

## Appearance

Light yellow crystalline powder

## Chemical description

| | |
|---|---|
| Chemical structure |  |
| Chemical formula | $C_{11}H_{12}N_2O_2$ |
| Molecular weight | 204.23 |
| Isomer | L (Laevo-rotatory) |

## Regulatory affairs

L-Tryptophan, technically pure(L-Tryptophan 98 % Feed Grade) is registered at the Ministry of Agriculture, Indonesia.
Livestock and Supply under number DEPTAN RI No. D.08093491 BOH

## Guarantee

| | | | |
|---|---|---|---|
| L-Tryptophan, % | 98 | Minimum | HPLC analysis |
| Moisture, % | 1.0 | Maximum | 105°C for 4 hours |
| Purity, % | 98 | Minimum | L-Tryptophan on dry matter |

## Nutritional Specifications

| | | | |
|---|---|---|---|
| Dry matter, % | 99.0 | Minimum | 105°C for 4 hours |
| Tryptophan content, % | 98.0 | Minimum | HPLC analysis |
| Digestibility coefficient, % | 100 | | INRA - 2002 |
| Crude Protein, % | 84.0 | Minimum | Dumas Method (N % x 6.25). AOAC 968.06 |
| GE, cal/g | 6,201 | Average | Bomb Calolimeter |

## Packaging

10 kg net , 3-Ply Kraft Paper Bag with 1-Ply PE inner tube

## Storage

Store in dry conditions and fresh place in a sealed or closed container that is to be protected from water, sunlight and heat.
Avoid direct contact with floor and any source of combustion.

## Stability

Product is stable for at least 2 years if stored under recommended conditions.
Kraft Paper bag unopened : product is stable for at least 2 years if stored under recommended conditions.
The batch number and the production date are printed on the bags.

## Additional information

**Complementary Information**
**Do not constitute any commercial guarantee**

**General specifications**

| | | |
|---|---|---|
| pH | 4.5 to 7 | solution at 10% |
| Bulk density, g/ml | 0.35 to 0.5 | |
| Melting point / Decomposition temperature | 289°C | |
| Solubility in water | 1.06g/100g water | at 20°C |

**Chemical characteristics (average values based on 2011 analyses)**

| Nutrient Information | Average | Minimum | Maximum | STD |
|---|---|---|---|---|
| Dry matter, % | 99.84 | 99.67 | 99.89 | 0.09 |
| Crude Ash, % | 0.20 | 0.14 | 0.32 | 0.07 |
| Gross Energy, cal/g | 6,201.00 | 6,090.00 | 6,287.00 | 74.12 |
| Heavy Metals and Hazardous substance | | | | |
| Melamin, ppm | ND | | | |
| Salmonella | ND | | | |
| BSE | ND | | | |
| Pb, ppm | ND | | | |
| Hg, ppm | ND | | | |
| Cd, ppm | ND | | | |
| Residue on ignition,% | | | 1.0 | |
| Specific rotation, ° | -28.4 to -33 | | | at 20°C, C1%, H2O |

CJ BIO BU CJ Bldg, 292, Ssangrim-dong, Jung-gu, Seoul, KOREA
www.cjbio.net