# CERTIFICATE OF ANALYSIS

| | | |
|---|---|---|
| Product | : | **L-TRYPTOPHAN** |
| Product number | : | T0720 |
| Batch number | : | 011875 |
| Date of analysis | : | 06-01-2016 |
| Expiry date | : | 31-01-2021 |
| Packaging and storage | : | store protected from light |

| | SPECIFICATION | RESULT | UNITS | REMARKS |
|---|---|---|---|---|
| Description | white to almost white crystalline powder | complies | | |
| Identification | conform | complies | | |
| Appearance of solution | conform | complies | | 1% in 1M HCl |
| Specific optical rotation | -33.0 – -30.0 | -31.93 | ° | 1% in $H_2O$ |
| Ninhydrin-positive substances | conform | < 0.5 | % | TLC |
| Impurity A and other related substances | conform | conform | | HPLC |
| pH | 5.5 – 7.0 | 5.84 | | 1% in $H_2O$ |
| Chlorides | ≤ 200 | < 200 | ppm | |
| Sulphates | ≤ 300 | < 300 | ppm | |
| Ammonium | ≤ 200 | < 200 | ppm | |
| Iron | ≤ 20 | < 20 | ppm | |
| Heavy metals | ≤ 10 | < 10 | ppm | |
| Loss on drying | ≤ 0.5 | 0.00 | % | 105 °C |
| Sulphated ash | ≤ 0.1 | < 0.1 | % | |
| Assay | 98.5 – 101.0 | 99.62 | % | dried substance |

This certificate of analysis is conform the results of the manufacturer.

Conclusion: approved
Released by: drs. M. van Wissen, pharmacist
Department of Quality Control Duchefa B.V.

02-02-2016

The buyer is responsible to test each batch to ensure the product is suitable for their specific purpose.

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