

## CERTIFICATE OF ANALYSIS

Product : **L-TRYPTOPHAN**  
 Product number : T0720  
 Batch number : 015627  
 Date of analysis : 13-07-2020  
 Expiry date : 31-07-2025

Packaging and storage : store protected from light

Description	SPECIFICATION	RESULT	UNITS	REMARKS
Identification	white to almost white crystalline powder	complies		
Appearance of solution	conform	complies		1% in 1M HCl
Specific optical rotation	-33.0 – -30.0	-30.1	°	1% in H <sub>2</sub> O
Ninhydrin-positive substances	conform	conform	%	HPLC
Impurity A and other related substances	conform	conform	%	HPLC
pH	5.5 – 7.0	5.8		1% in H <sub>2</sub> O
Chlorides	≤ 0.02	≤ 0.02	%	
Sulphates	≤ 0.03	≤ 0.03	%	
Ammonium	≤ 0.02	≤ 0.02	%	
Iron	≤ 0.002	≤ 0.002	%	
Heavy metals	≤ 0.0015	≤ 0.0015	%	
Loss on drying	≤ 0.3	0.2	%	3 hr, 105 °C
Sulphated ash	≤ 0.1	≤ 0.1	%	
Assay	98.5 – 101.0	99.7	%	dried substance

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

Conclusion: approved

Released by:

drs. Q. de Hoog, pharmacist  
 Department of Quality Control Duchefa B.V.

Date: 10-08-2020

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

Duchefa Biochemie B.V.