

# CERTIFICATE OF ANALYSIS

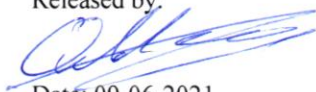
Product : **L-ISOLEUCINE**  
 Product number : I0711  
 Batch number : 016241  
 Date of analysis : 14-01-2021  
 Date of expiry : 31-01-2024  
  
 Packaging and storage : in a well closed container

	SPECIFICATION	RESULT	UNITS	REMARKS
Appearance	white or almost white crystalline powder or flakes	complies		
Solubility	sparingly soluble in water, slightly soluble in alcohol, it dissolves in dilute mineral acids and in dilute solutions of alkali hydroxides	complies		
Appearance of solution	clear and colour $\leq$ BY6	complies		
Identification	conform	complies		IR-spectrum
Specific rotation	+40.0 – +43.0	+41.6	°	dried substance
Related substances	conform	complies		HPLC
Impurity A	$\leq$ 0.3	0.1	%	
Impurity C	$\leq$ 0.3	0.1	%	
Any other impurities	$\leq$ 0.2	< 0.05	%	
Total impurities	$\leq$ 1.0	0.2	%	
Chlorides	$\leq$ 200	complies	ppm	
Sulfate	$\leq$ 300	complies	ppm	
Ammonium	$\leq$ 0.02	< 0.02	%	
Iron	$\leq$ 10	complies	ppm	
Loss on drying	$\leq$ 0.5	0.0	%	105°C
Residue on ignition	$\leq$ 0.1	0.0	%	
Assay	98.5 – 101.0	99.9	%	dried substance, titration

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

Conclusion: approved

Released by:



Date: 09-06-2021

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

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

Duchefa Biochemie B.V.