

CERTIFICATE OF ANALYSIS

Product : METHIONINE (L-)

Product number : M0715
Batch number : 011971
Date of manufacturing : 05-03-2010
Date of analysis : 22-09-2011
Date of expiration : 30-09-2017

Packaging and storage : store in a well-closed container at room temperature.

Appearance	SPECIFICATION white or almost white, crystalline powder or colourless crystals	RESULT complies	UNITS	REMARKS
Solubility	soluble in water, very slightly soluble in alcohol	complies		
Identification:				
- A (specific optical rotation)	+22.5 - +24.0	complies	0	
- B (IR-spectrum)	conform	complies		
Appearance of solution	clear and colourless	complies		
pH	5.5 - 6.5	5.8		
Specific optical rotation	+22.5 - +24.0	+23.4	0	
Ninhydrin-positive substances	≤ 0.5	complies	%	TLC
Chloride	≤ 200	complies	ppm	
Sulphate	≤ 300	< 200	ppm	
Ammonium	≤ 200	complies	ppm	
Iron	≤ 10	complies	ppm	
Heavy metals	≤ 10	complies	ppm	
Loss on drying	≤ 0.5	0.01	%	$100 - 105^{\circ}C$
Sulphated ash	≤ 0.1	0.01	%	
Assay	99.0 - 101.0	100.1	%	dried substance

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

Conclusion: approved

Released by:

drs. M. van Wissen, pharmacist

Department of Quality Control Duchefa B.V.

Date: 16-03-2016

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

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