



# PARSOL® MCX

## CERTIFICATE OF ANALYSIS

Productcode : 5015784  
Lot No. : 0522060036  
Analysis No. : 03F28349

Test	Result	Limits / Specifications	Dimension / Units
<b>Appearance</b> visual	liquid	liquid	
<b>Colour</b> visual	pale yellow	pale yellow	
<b>Assay (trans-Isomer)</b> GC (USP 621)	100.2	95.0 to 105.0	%
<b>Identity</b> IR (USP 197F)	corresponds	corresponds	
<b>Identity</b> GC (USP 621)	corresponds	corresponds	
<b>Specific gravity (25°C)</b> Pycnometer (USP 841)	1.010	1.005 to 1.013	
<b>Refractive index (20°C)</b> Refractometer (USP 831)	1.546	1.542 to 1.548	
<b>Acidity (0.1N NaOH)</b> Titration (USP)	0.2	max. 0.8	mL
<b>UV specific extinction</b> (E 1%, 1 cm at 310 nm in ethanol) Spectrophotometry	859	835 to 865	
<b>Chromatographic purity</b> Each impurity GC (USP 621)	0.1	max. 0.5	%
Total impurities GC (USP 621)	0.8	max. 1.0	%
cis-isomer GC (USP 621)	0.1	max. 0.5	%
<b>2-Ethylhexanol</b> GC (USP 621)	7	max. 50	ppm
<b>Heavy metals</b> Lead ICP-MS (USP 232/233)	corresponds*	max. 1	ppm
Cadmium ICP-MS (USP 232/233)	corresponds*	max. 0.5	ppm
Mercury ICP-MS (USP 232/233)	corresponds*	max. 0.1	ppm
Cobalt ICP-MS (USP 232/233)	corresponds*	max. 1	ppm
Chromium ICP-MS (USP 232/233)	corresponds*	max. 1	ppm
Nickel ICP-MS (USP 232/233)	corresponds*	max. 1	ppm

DSM Nutritional Products Ltd  
Branch Site Sisseln  
Quality Management  
CH-4334 Sisseln

1 / 2

Date of issue : 05-Sep-2022

**CERTIFICATE OF ANALYSIS**

Productcode : 5015784  
 Lot No. : 0522060036  
 Analysis No. : 03F28349

Test	Result	Limits / Specifications	Dimension / Units
Antimony ICP-MS (USP 232/233)	corresponds*	max. 1	ppm
Arsenic ICP-MS (USP 232/233)	corresponds*	max. 1	ppm
<b>Microbiological purity</b>			
Total aerobic plate count USP/EP	corresponds*	max. 100	CFU/g
Total yeast and moulds count USP/EP	corresponds*	max. 100	CFU/g
Pseudomonas aeruginosa USP/EP	corresponds*	negative in 1g	
Staphylococcus aureus USP/EP	corresponds*	negative in 1g	
Escherichia coli USP/EP	corresponds*	negative in 1g	
Candida Albicans USP/EP	corresponds*	negative in 1g	

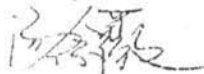
\*) checked at regular intervals

This lot has been analyzed and released. The manufacturing and control records have been reviewed by our authorized Quality organization. This lot meets substance specifications as given here above and has been produced in conformity with applicable Good Manufacturing Practices (GMP).

The product meets all requirements of the following valid compendia when tested accordingly:

USP

DSM Nutritional Products Ltd  
 The Quality Assurance Manager



Tang Yu-Wei