



SUPPLEMENT CERTIFIED  
BY NRCI WATERFORD IRELAND

# Certificate of Analysis

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**Certificate number:** CoA-21-01-39

**Requested by:** Pharma Marine  
Terøy Industriområde 3  
6280 Sjøvik, Norway

**Date received:** 2021/11/03

**Storage temp:** 8 °C  
**Storage hum:** Nd  
**Date analysed:** 2021/11/04  
**Date reported:** 2021/11/09

**Product name:** MicroMic 5% LUTEIN PM SP SUN without TW80  
**Lot number:** 2106 O 992080  
**Distributor:** Pharma Marine, Sjøvik (Norway)

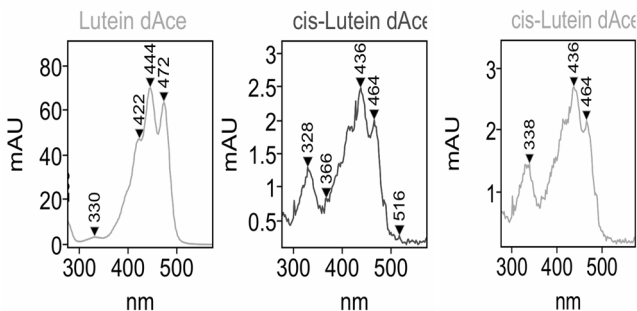
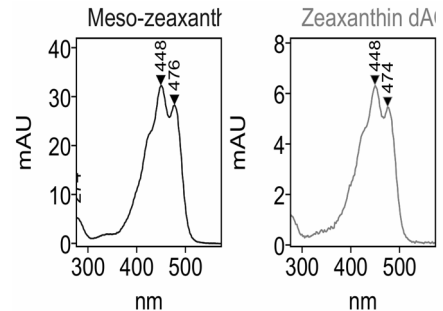
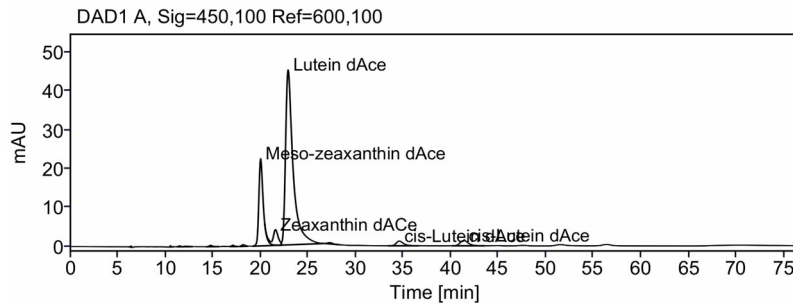
**Expiry date:** Nd  
**Serving size:** Nd  
**Formulation:** Bottle

Analyte	Declared mg/g	Measured* mg/g ± U95%	Heterogeneity (RSD, %)	Confidence (%)	Method	Conformance
Meso-zeaxanthin	Nd	9.57 ± 0.90	4.8	-	AM-HPLC-1807v2	-
Zeaxanthin	Nd	2.27 ± 0.22	5	-	AM-HPLC-1807v2	-
Lutein	Nd	41.66 ± 4.82	5.9	-	AM-HPLC-1807v2	-
cis-Lutein	Nd	2.57 ± 0.08	1.5	-	AM-HPLC-1807v2	-
Total carotenoids	Nd	56.07	-	-	AM-HPLC-1807v2	-

\* The reported expanded measurement uncertainty (U95%) is stated as the combined standard measurement uncertainty multiplied by the coverage factor k = 1.96 such that the coverage probability corresponds to approximately 95% (ILAC Guidelines for Measurement Uncertainty in Testing, ILAC-G17:01/2021).

Quality Control Sample	Micro Mic 5% Lutein Emulsion; Lot 70220; Analyte: Lutein diAce (50 mg/g)				
	Specifications#	Raw value	Value	Method	Result
Within-run Accuracy	85 - 115 %	Spec: 64.9 ± 2.4; HPLC: 63.2 ± 3.2	93.10%	AM-HPLC-1807v2	Conform
Within-run Precision	RSD < 15 %	-	1.40%	AM-HPLC-1807v2	Conform

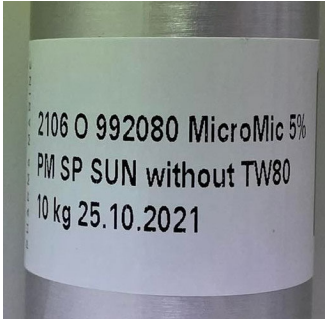
# As defined by the Guideline On Bioanalytical Method Validation (EMA, European Medicines Agency) (EMA/CHMP/EWP/192217/2009 Rev. 1 Corr. 2\*\*), authored by the Committee for Medicinal Products for Human Use (CHMP) 21 July 2011. LQC, MQC and HQC: Low, Medium and High Quality Control sample.





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### Product pictures



### Comments

### Conclusions



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**Supplement Certified criteria:** Supplement Certified, performed by the Nutrition Research Centre Ireland, means that the supplement product analysed has undergone independent 3rd party analysis to confirm that each active ingredient (carotenoid and/or omega-3 fatty acid) present in the dietary supplement matches 100% of quantity label claim, excluding expanded uncertainty of 95% (U95%). Also, heterogeneity of each measurand must be below 10% (relative standard deviation, RSD).

**Quality control criteria (Within-run accuracy):** Closeness of the determined value obtained by the method to the nominal concentration of the analyte (expressed in percentage). Three quality control (QC) samples, representative of the external calibration line's low, medium, and high concentrations, are quantified by spectrophotometry (nominal concentration) and by HPLC (using the current external calibration line). Concentration of the analyte obtained by both techniques is averaged and shown (Raw value). The QC sample whose value is farthest from its nominal value is taken as the within-run accuracy (Value). This value must be within 15% of its nominal value to conform.

**Quality control criteria (Within-run precision):** Closeness of repeated individual measures of one of the analytes assessed. The QC sample representative of the high concentration of the external calibration line is analysed at the beginning, middle and end of the run. The resulting RSD (Value) must be below 15% to conform.

**Disclaimers and Terms:** The testing results in this certificate relate only to the samples described above. Unless otherwise stated, all results are expressed on an as received basis. This report shall not be altered, modified, supplemented or abstracted in any manner. Any violation of these conditions renders the report and its results void.

**Analysis performed by: Tommy Power**

  
Tommy Power (Nov 9, 2021 12:32 GMT)

**Approved by: Dr Alfonso Prado-Cabrero**

  
Alfonso Prado-Cabrero (Nov 9, 2021 12:18 GMT)







# CoA-21-01-39 Micromic 5% PM SP SUN without TW80 2106O992080 10kg 25.10.2021

Final Audit Report

2021-11-09

Created:	2021-11-09
By:	Alfonso Prado-Cabrero (aprado-cabrero@wit.ie)
Status:	Signed
Transaction ID:	CBJCHBCAABAAJsEKQsZkVhZfGc3HAQSTYfIVLcBAyiMf

## "CoA-21-01-39 Micromic 5% PM SP SUN without TW80 2106O9 92080 10kg 25.10.2021" History

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