



SUPPLEMENT CERTIFIED
BY NRCI WATERFORD IRELAND

Certificate of Analysis

Carriganore House
Waterford Institute of Technology
West Campus, Waterford
X91 K236 Ireland
Tel: +353 (0)51 834191

Certificate number: CoA-21-01-36

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: PAO GOLD 21.10.2021
Lot number: 0071021
Distributor: Pharma Marine, Sjøvik (Norway)

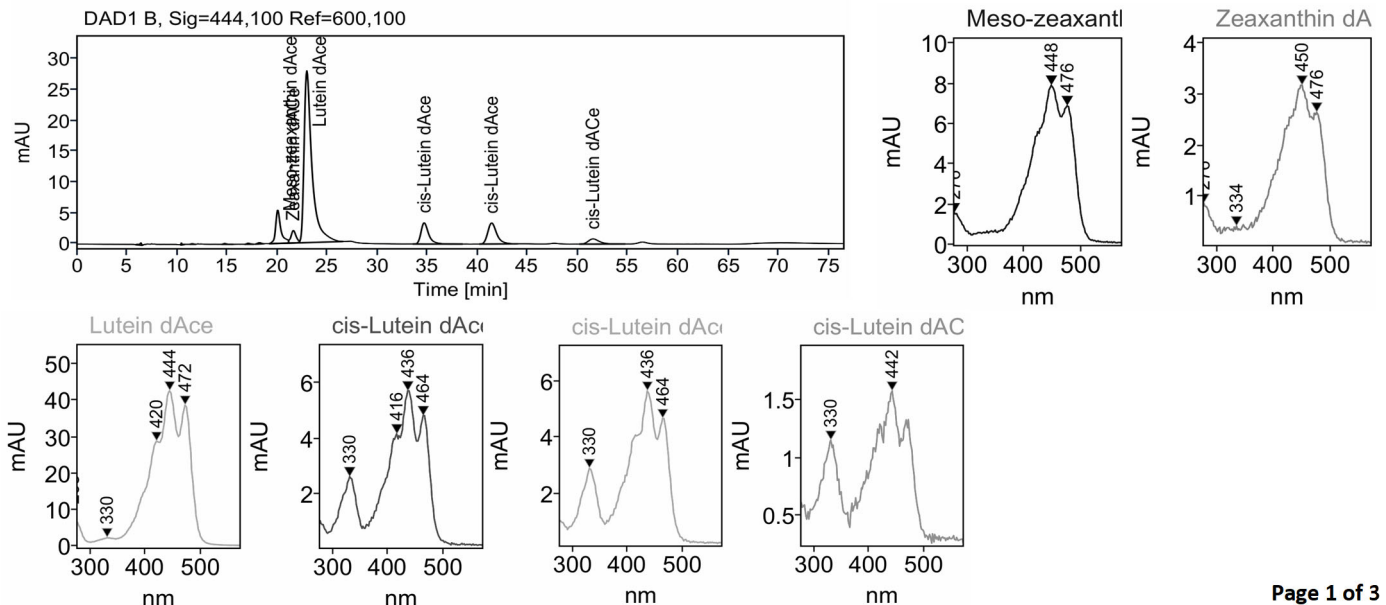
Expiry date: Nd
Serving size: Nd
Formulation: Bottle

Analyte	Declared mg/g	Measured* mg/g ± U95%	Heterogeneity (RSD, %)	Confidence (%)	Method	Conformance
Meso-zeaxanthin	Nd	0.13 ± 0.01	2.3	-	AM-HPLC-1807v2	-
Zeaxanthin	Nd	0.06 ± 0.00	1.9	-	AM-HPLC-1807v2	-
Lutein	Nd	1.14 ± 0.06	2.5	-	AM-HPLC-1807v2	-
cis-Lutein	Nd	0.35 ± 0.02	2.6	-	AM-HPLC-1807v2	-
Total carotenoids	Nd	1.68	-	-	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	Specifications#	Raw value	Value	Method	Result
Micro Mic 5% Lutein Emulsion; Lot 070220; Analyte: Lutein diAce (50 mg/g)					
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 %	-	1.60%	AM-HPLC-1807v2	Conform

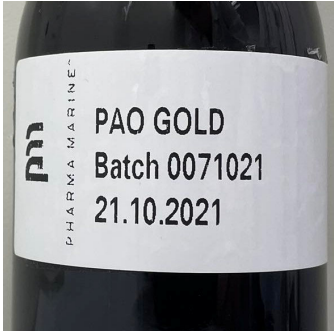
As defined by the Guideline On Bioanalytical Method Validation (EMA, European Medicines Agency) (EMA/CHMP/EWP/192217/2009 Rev. 1 Corr. 2**), authored by the Committee for Medicinal Products for Human Use (CHMP) 21 July 2011. LQC, MQC and HQC: Low, Medium and High Quality Control sample.





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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 value) and by HPLC (using the current external calibration line). The 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 shown 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 12:30 GMT)

Approved by: Dr Alfonso Prado-Cabrero


Alfonso Prado-Cabrero (Nov 9, 2021 12:08 GMT)







CoA-21-01-36 PAO GOLD Batch 0071021

Final Audit Report

2021-11-09

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