

Analytical information

Name: Quality Controlled Standard of 3-desmethyl microcystin-LF

Code: 00-3dmMCLF

Batch: 24-001

General description:

Product Specification	
MOLECULAR FORMULA:	C ₅₁ H ₆₉ N ₇ O ₁₂
MOLECULAR WEIGHT:	972.150
MONOISOTOPIC MW	971.500
CAS NUMBER:	1309100-78-4
SOURCE / HOST	<i>Microcystis aeruginosa</i>
CONCENTRATION:	(10.3 ± 0.7) µg / mL [†]
PURITY:	≥ 98 % [‡]
FORMULATION:	Liquid. Acetonitrile
SHIPPING:	SHIPPED ON ICE
LONG TERM STORAGE:	-20 °C
HAZARD:	See MSDS.

[†] 24-001 batch concentration of 3-desmethyl microcystin-LF (alternative name: [D-Asp³] microcystin-LF) was settled by ¹H-qNMR.

[‡] [D-Asp³] microcystin-LF was purified via preparative HPLC-MS/MS from batch cultures of *Microcystis aeruginosa*. UPLC-MS/MS were used to quantify and check congener impurities. Traces of minor analogues are detected at 986.5, 1000.6 and 1003.6 m/z values in ESI(+). These isomers could not be perfectly resolved by qNMR technique; therefore, the concentration is the sum of compounds present in solution.

Instructions for proper handling use: This material contains toxic material, and should be handled with care. Read MSDS before using. Material Safety Data sheet for information regarding 00-3dmMCLF is enclosed in the package. Use proper disposal methods.

Before opening an ampoule, it must be guaranteed that the content is a liquid and properly mixed to ensure homogeneity. Sample aliquots for analysis should be withdrawn at 15 °C to 25 °C immediately after opening the ampoules and should be processed without delay for the concentration value to be valid within the stated uncertainty. Ampoule should not remain open longer than five minutes due to solvent volatility and air contamination.

Instructions for appropriate conditions of storage: The original sealed ampoules should be stored at temperatures below/at -20 °C (freezer) until use. Unopened ampoules should be stored upright under normal laboratory conditions inside the original container supplied.

Property values:

Date of analysis:	May 03 rd 2024
Concentration of [D-Asp ³] microcystin-LF	(10.3 ± 0.7) µg / mL

The statement of uncertainty is reported with a coverage factor of k=2.

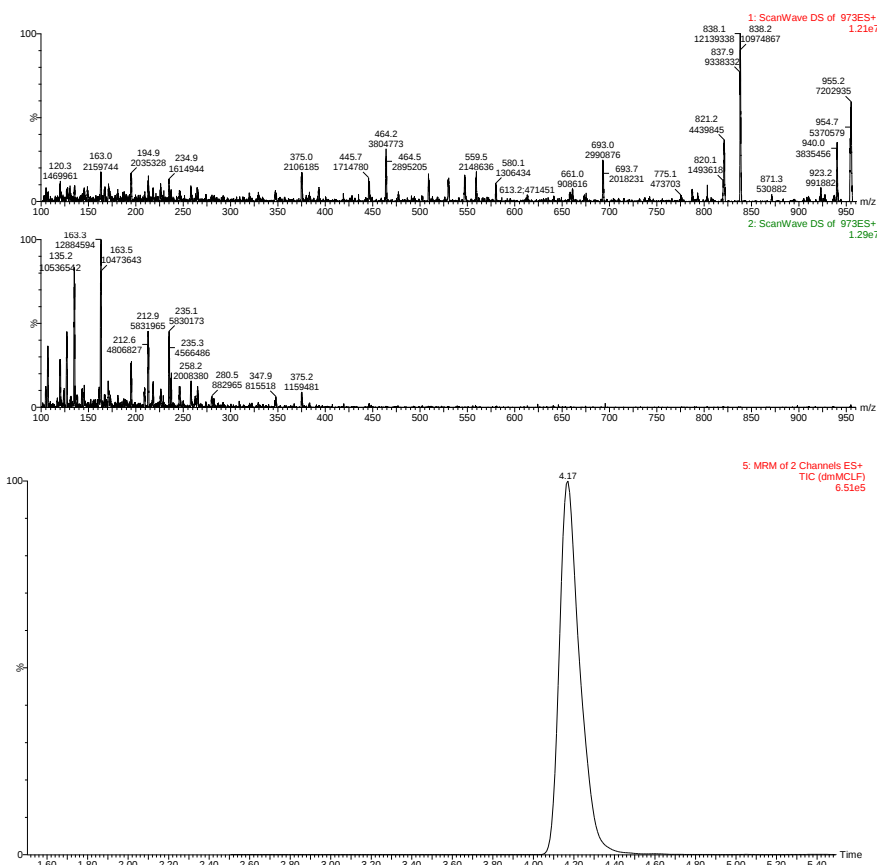


Figure 1. Analysis of the [D-Asp³] microcystin-LF by UPLC-MS/MS. Conditions: ACQUITY UPLC HSS T3 1.7µm, 100x2.1 mm, UPLC column. Main elution conditions, gradient mode with mobile phases: (A) Water and (B) acetonitrile, both with 0.1% formic acid; Gradient: 0 min 30% B; 0.8 min 30% B; 2.5 min 60% B; 5.0 min 100% B; 5.5 min 100% B; 5.6 min 30% B; flow rate: 0.3 mL/min. Temperature: 30°C. The MS analysis includes MRM transitions of the most relevant Microcystins and main expected impurities. Superimposed spectrum: [D-Asp³] microcystin-LF fragmentation pattern.

Inquiries concerning this material should be directed to:

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RM PRODUCER'S APPROVING OFFICER:

Certification Manager: Álvaro Antelo

This Analytical Information is only valid if the product was obtained directly from Laboratorio CIFGA S.A. or one of our authorized distributors.

Certificate Revision History: July, 15th 2024. Original certificate issue date (certificate rev. 1).

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