Alpha Tides

CERTIFICATE OF ANALYSIS · LOT RELEASE

alphatides.net

CERTIFICATE NO.
PL-26-00064

VERIFICATION KEY
LX8XZZJL

Scan or enter both at prymalab.net/testing/verify

CERTIFICATE OF ANALYSIS · LOT RELEASE · ISSUED FOR ALPHA TIDES

MOTS-c 40 mg

Lot **PL-2609-064** · Lyophilized powder · Label claim **40 mg/vial**

TESTED IN-HOUSE BY PRYMALAB

In-house analytical result, not an independent third-party test

LOT / BATCH NUMBER	DATE MADE	DATE OF ANALYSIS	DATE ISSUED
PL-2609-064	2026-09-05	2026-09-07	2026-10-03

RETEST / EXPIRY	UNITS IN LOT / SAMPLED	STORAGE	CERTIFICATE TYPE
2028-09-05	250 / 2	−20 °C, desiccated, dark	Lot COA, 2 pages

COMPOUND	CAS NUMBER	MOLECULAR FORMULA	THEORETICAL MASS (AVG.)
MOTS-c Mitochondrial open reading frame of the 12S rRNA type-c	1627580-64-6	$C_{101}H_{152}N_{28}O_{22}S_2$	2174.6 Da

SEQUENCE

H-MRWQEMGYIFYPRKLR-OH (16 residues; free N- and C-termini)

PURITY · RP-HPLC, AREA %
99.56%
Specification 99.0% • main peak at 6.44 min

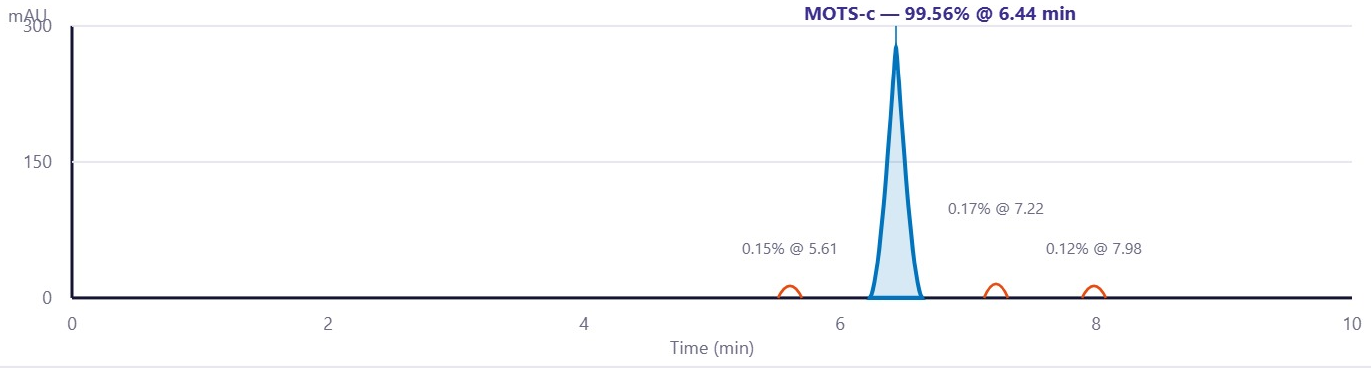
IDENTITY · OBSERVED MASS
2174.8 Da
Theoretical 2174.6 Da • +0.2 Da (92 ppm)

OVERALL CONCLUSION
PASS
Meets every specification for the tests performed

TEST	METHOD	SPECIFICATION	RESULT	CONCLUSION
Appearance	Visual inspection	White to off-white lyophilized powder	White lyophilized powder	PASS
Identity (mass)	LC-MS, ESI positive	Theoretical ± 1.0 Da	2174.8 Da	PASS
Purity	RP-HPLC, UV 214 nm, area%	99.0%	99.56%	PASS
Largest impurity	RP-HPLC, area%	1.0%	0.17% at 7.22 min	PASS
Water content	Karl Fischer	5.0%	1.7%	PASS
Bacterial endotoxin	LAL, kinetic	≤ 5.0 EU/mg	0.06 EU/mg	PASS
Sterility / bioburden	USP <71>, membrane filtration	No growth after 14 days	No growth; conforms	PASS

1 HPLC CHROMATOGRAM

Data file: MOTS_PL-2609-064_20260907_01 · Column C18, 150 × 4.6 mm · UV 214 nm



Baseline uncropped; main peak and impurities labeled with retention times. Peak table on page 2.

Verify: prymalab.net/testing/verify · PL-26-00064 · key LX8XZZJL

For laboratory research use only. Not for human or veterinary use.

2 HPLC METHOD · MOTS_PL-2609-064_20260907_01

INSTRUMENT Waters Alliance e2695, SN E2695B742	DATA SYSTEM Empower 3, Build 3471	DETECTOR Waters 2998 PDA
DETECTION WAVELENGTH 214 nm	COLUMN C18, 150 × 4.6 mm, 3.5 µm	COLUMN PART / SERIAL 186003326 / USHX18211
MOBILE PHASE A 0.1% TFA in water	MOBILE PHASE B 0.1% TFA in MeCN	FLOW RATE 1.0 mL/min
COLUMN TEMPERATURE 30 °C	INJECTION VOLUME 20 µL	RUN TIME 10 min
SAMPLE DILUENT Water, 0.1% TFA	SAMPLE CONCENTRATION 0.5 mg/mL	BLANK INJECTED Yes

REFERENCE STANDARD

In-house MOTS-c reference, lot PL-RS-MOT-01, RT 6.42 min

3 GRADIENT PROGRAM

TIME (MIN)	% A	% B
0.0	95	5
3.0	95	5
7.0	55	45
8.0	20	80
9.0	20	80
10.0	95	5

4 PEAK TABLE

PEAK	RT (MIN)	AREA	AREA %
1	5.61	6,525	0.15
2	**6.44**	**4,330,860**	**99.56**
3	7.22	7,395	0.17
4	7.98	5,220	0.12
Total		4,350,000	100.00

Threshold 0.05% area · Blank subtracted: Y · Purity = main peak area ÷ total integrated area × 100, to two decimals; main peak shaded.

5 IDENTITY BY MASS SPECTROMETRY

INSTRUMENT Waters Acquity SQD	IONIZATION / MODE ESI, positive	OBSERVED M/Z (CHARGE) 1088.4 (2+ [M+2H]) · 725.9 (3+ [M+3H])
DECONVOLUTED MASS 2174.8 Da	THEORETICAL MASS 2174.6 Da	DIFFERENCE +0.2 Da (92 ppm)
DATA FILE MOTS_PL-2609-064_MS_20260907_01	ACCEPTANCE Within ± 1.0 Da	

6 ADDITIONAL TESTS

TEST	PERFORMED BY	DATE	REPORT / FILE
Water content	PrymaLab	2026-09-08	RPT-KF-PL-2609-064
Endotoxin	PrymaLab	2026-09-09	RPT-ET-PL-2609-064
Sterility	PrymaLab	2026-09-21	RPT-ST-PL-2609-064

A test with no row here was not performed on this lot. Outside-laboratory reports, when used, are attached and named below.

7 REVIEW AND APPROVAL

D. Reynolds
Analyst · performed the testing
Date: 2026-09-07

S. Calloway
Reviewer · checked against raw data
Date: 2026-10-02

M. Phelps
Lab Director · approved for release
Date: 2026-10-03

Raw data retained at: Empower 3 (Build 3471), project PL-2609, archive PL-ARC-2026; 7 years. Outside laboratory reports attached: None

This certificate applies only to the lot named above and describes the units sampled from it; it is not a guarantee for any other lot. Results were obtained by PrymaLab LLC's own laboratory (PrymaLab Analytical) and are not an independent third-party test unless an outside report is attached. This copy is issued for Alpha Tides, a distributor of the lot; the brand shown does not change the laboratory, the method or the results. Reference values (CAS, formula, theoretical mass, sequence) are literature values for the named compound. Authenticity: scan the QR code or enter certificate number PL-26-00064 and key LX8XZZJL at prymalab.net/testing/verify; any copy that does not match the record shown there is not a PrymaLab certificate. PrymaLab LLC products are supplied for laboratory research use only and not for human or veterinary use.