# Alpha Tides

**CERTIFICATE OF ANALYSIS · LOT RELEASE**

alphatides.net

CERTIFICATE NO.
**PL-26-00065**

VERIFICATION KEY
**MEJFDY2D**

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

**CERTIFICATE OF ANALYSIS · LOT RELEASE · ISSUED FOR ALPHA TIDES**

## MT-1 (Melanotan I) 10 mg

Lot **PL-2609-065** · Lyophilized powder · Label claim **10 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-2609-065 | 2026-09-18 | 2026-09-19 | 2026-10-03 |
| **RETEST / EXPIRY** | **UNITS IN LOT / SAMPLED** | **STORAGE** | **CERTIFICATE TYPE** |
| 2028-09-18 | 250 / 2 | −20 °C, desiccated, dark | Lot COA, 2 pages |

**COMPOUND**
**Melanotan I**
Afamelanotide; [Nle4, D-Phe7]-α-MSH

**CAS NUMBER**
75921-69-6

**MOLECULAR FORMULA**
$C_{78}H_{111}N_{21}O_{19}$

**THEORETICAL MASS (AVG.)**
1646.9 Da

**SEQUENCE**
Ac-SYS-Nle-EH-[D-Phe]-RWGKPV-$NH_2$ (13 residues; N-acetyl; C-terminal amide)

**PURITY · RP-HPLC, AREA %**
**99.62%**
Specification 99.0 % • main peak at 4.98 min

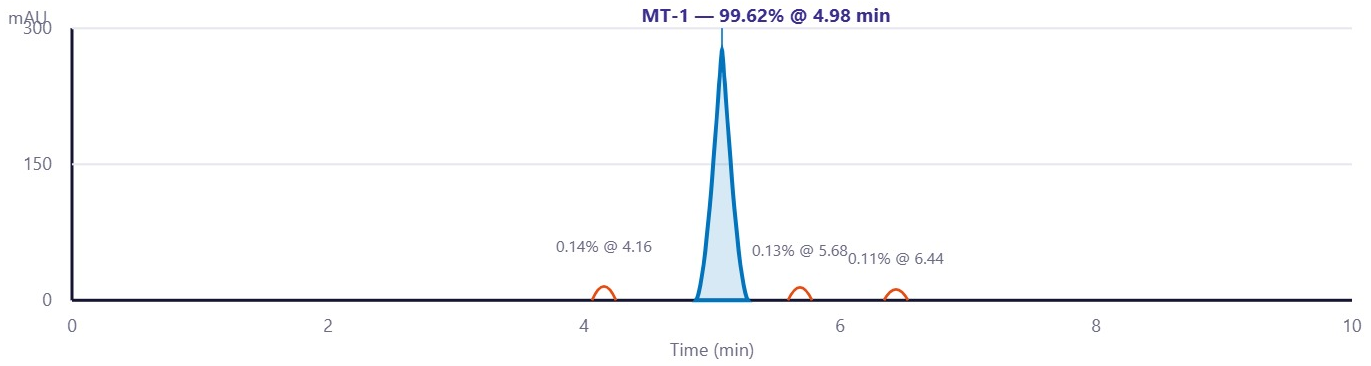
**IDENTITY · OBSERVED MASS**
**1647.1 Da**
Theoretical 1646.9 Da • +0.2 Da (121 ppm)

**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 | 1647.1 Da | **PASS** |
| **Purity** | RP-HPLC, UV 214 nm, area% | 99.0 % | 99.62 % | **PASS** |
| **Largest impurity** | RP-HPLC, area% | 1.0 % | 0.14 % at 4.16 min (des-Ser 1 fragment) | **PASS** |
| **Water content** | Karl Fischer | 5.0 % | 1.8 % | **PASS** |
| **Bacterial endotoxin** | LAL, kinetic | ≤ 5.0 EU/mg | 0.03 EU/mg | **PASS** |
| **Sterility / bioburden** | USP <71>, membrane filtration | No growth after 14 days | No growth; conforms | **PASS** |

### 1 HPLC CHROMATOGRAM

**Data file:** MT1_PL-2609-065_20260919_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-26-00065 · key MEJFDY2D

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

## 2 HPLC METHOD · MT1_PL-2609-065_20260919_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 MT-1 reference, lot PL-RS-MT1-01, RT 4.96 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 (des-Ser 1) | 4.16 | 6,020 | 0.14 |
| **2** | **4.98** | **4,283,660** | **99.62** |
| 3 (desamide) | 5.68 | 5,590 | 0.13 |
| 4 | 6.44 | 4,730 | 0.11 |
| Total | | 4,300,000 | 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)
1647.8 (1+ [M+H]) · 824.6 (2+ [M+2H])

DECONVOLUTED MASS
1647.1 Da

THEORETICAL MASS
1646.9 Da (linear tridecapeptide, free base)

DIFFERENCE
+0.2 Da (121 ppm)

DATA FILE
MT1_PL-2609-065_MS_20260919_01

ACCEPTANCE
Within ± 1.0 Da

## 6 ADDITIONAL TESTS

| TEST | PERFORMED BY | DATE | REPORT / FILE |
|---|---|---|---|
| Water content | PrymaLab | 2026-09-20 | RPT-KF-PL-2609-065 |
| Endotoxin | PrymaLab | 2026-09-21 | RPT-ET-PL-2609-065 |
| Sterility | PrymaLab | 2026-10-02 | RPT-ST-PL-2609-065 |

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: 2026-09-19

**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-26-00065 and key MEJFDY2D 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.