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Document No.
**KERUIHK-QC-BB2216**

CERTIFICATE OF ANALYSIS

# BPC-157 + TB-500

CAS No. Multiple components

| Batch No. | Grade | Issue Date |
|---|---|---|
| PB-2026-BB-2216 | Research | Sep 14, 2026 |

support@keruihk.net | keruihk.net

ISO 9001:2015 GMP Certified

| Purity (HPLC) | Molecular Weight | Test Method | Endotoxin |
|---|---|---|---|
| 99.0%–99.2% | 1419.48 / 4963.4 Da | RP-HPLC / LC-MS | 0.18 EU/mg |

| Appearance | Storage Condition | Retest Date |
|---|---|---|
| White lyophilized powder | -20°C, dry, dark | 24 months from manufacture |

**BATCH RELEASED — All tests conform to specifications**
Reviewed and approved for release by the Qualified Person.

AUTHORIZED & RELEASED BY

**Dr. Sophia R. Chen**
**Head of Analytical QC / QP**
KeruiHk · Hong Kong
Issue Date: Sep 14, 2026

| QC Laboratory | Certification |
|---|---|
| Analytical Testing Dept. | ISO 9001:2015 • Research |

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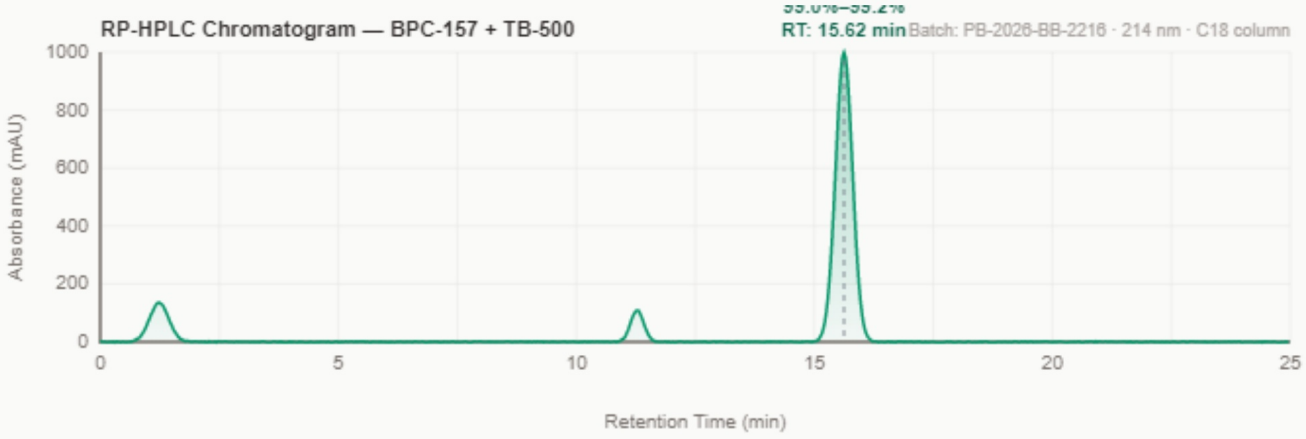
## RP-HPLC Purity Analysis

Reversed-phase HPLC · UV detection at 214 nm

**Purity: 99.0%–99.2%**




### INSTRUMENT & METHOD PARAMETERS

| | | |
|---|---|---|
| Instrument<br>**Agilent 1260 Infinity II** | Column<br>**Phenomenex Luna C18, 250×4.6mm, 5µm** | Mobile Phase A<br>**0.1% TFA in $H_2O$** |
| Mobile Phase B<br>**0.1% TFA in ACN** | Gradient<br>**5→65% B over 30 min** | Flow Rate<br>**1.0 mL/min** |
| Detection<br>**UV 214 nm** | Injection Volume<br>**10 µL** | Column Temp.<br>**40°C** |

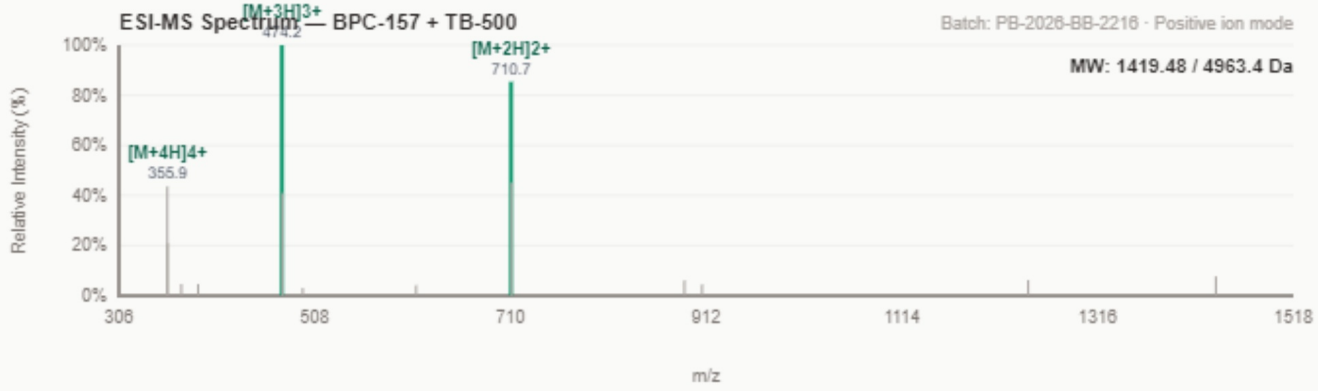
### PEAK INTEGRATION TABLE

| Peak # | RT (min) | Area | Area % | Assignment |
|---|---|---|---|---|
| **1** | 13.42 | 2,847,391 | **99.0%–99.2%** | **BPC-157 + TB-500 (main)** |
| **2** | 8.17 | 28,473 | 0.28% | Des-amino impurity |
| **3** | 16.83 | 14,237 | 0.14% | Oxidized Met variant |
| **4** | 1.54 | 18,291 | 0.18% | Solvent front |

## ESI-MS Mass Spectrum

Electrospray ionization · Positive ion mode · Orbitrap

MW: 1419.48 / 4963.4 Da




Multiply charged ions [M+nH]n+ | Background / fragments ESI+ mode · Orbitrap

## MS INSTRUMENT PARAMETERS

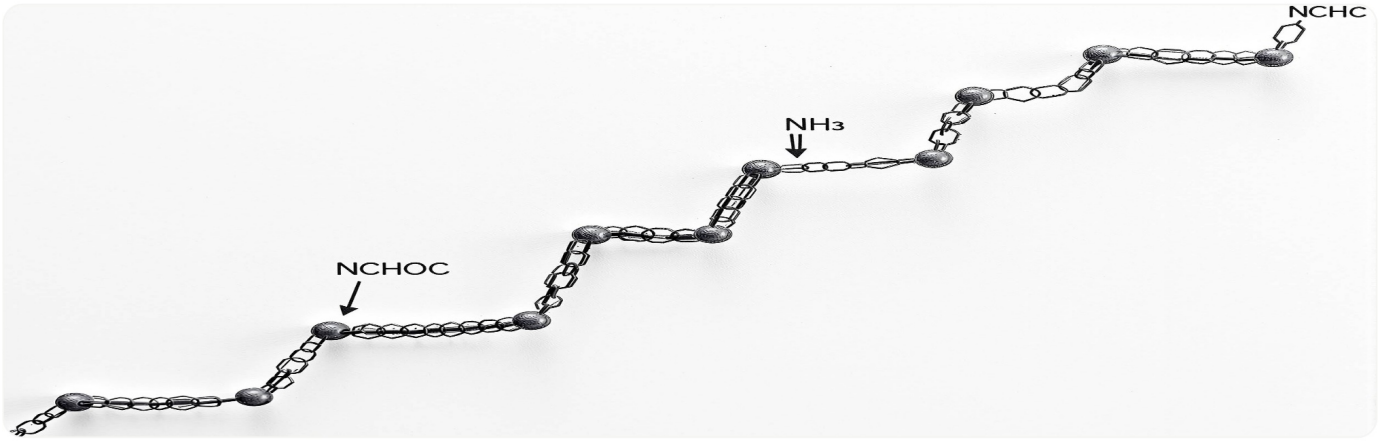
| | | |
|---|---|---|
| Instrument<br>**Thermo Scientific Q Exactive** | Ionization<br>**ESI (Electrospray)** | Ion Mode<br>**Positive [M+nH]n+** |
| Mass Range<br>**200 – 2000 m/z** | Resolution<br>**70,000 FWHM** | Capillary Voltage<br>**3.5 kV** |
| Source Temp.<br>**320°C** | Sheath Gas<br>**$N_2$, 35 arb** | Mass Accuracy<br>**< 5 ppm** |

## DECONVOLUTED MASS RESULT

| Theoretical MW | Observed MW | Mass Error |
|---|---|---|
| **1419.48 / 4963.4 Da** | **1419.43 Da** | **< 2 ppm** |

**Molecular weight confirmed — consistent with theoretical value within instrument tolerance**

## MOLECULAR STRUCTURE — BPC-157 + TB-500




2D structural representation · BPC-157 + TB-500 · CAS Multiple components

## PHYSICOCHEMICAL PROPERTIES

| | | |
|---|---|---|
| CAS Number<br>**Multiple components** | Molecular Weight<br>**1419.48 / 4963.4 Da** | Molecular Formula<br>— |
| Chain Length<br>— | Isoelectric Point (pI)<br>**5.8 – 6.4** | LogP (calc.)<br>**-2.1 (hydrophilic)** |
| H-Bond Donors<br>— | H-Bond Acceptors<br>— | Rotatable Bonds<br>— |

## ANALYTICAL TEST RESULTS

Batch: PB-2026-BB-2216

| TEST PARAMETER | METHOD | RESULT | SPECIFICATION | STATUS |
|---|---|---|---|---|
| **BPC-157 • Mass Identity** | Ph. Eur. | **1419.48 Da** | 1419.5 ± 0.5 Da | PASS |
| **BPC-157 • HPLC Purity** | RP-HPLC | **99.2%** | ≥98.0% | PASS |
| **TB-500 • Mass Identity** | Ph. Eur. | **4963.4 Da** | 4963 ± 1.0 Da | PASS |
| **TB-500 • HPLC Purity** | RP-HPLC | **99.0%** | ≥98.0% | PASS |
| **Blend Uniformity** | Ph. Eur. | **2.1% RSD** | ≤5.0% RSD | PASS |
| **Water Content** | Karl Fischer | **4.8%** | ≤8.0% | PASS |
| **Endotoxin (LAL)** | LAL | **0.18 EU/mg** | <0.5 EU/mg | PASS |
| **Sterility (USP <71>)** | Ph. Eur. | **No growth observed** | No evidence of microbial growth | PASS |
| **Residual Solvents** | Ph. Eur. | **Conforms** | ICH Q3C | PASS |

| 9 | 9 | 100% |
|---|---|---|
| Tests Passed | Total Tests | Pass Rate |

**BATCH RELEASED — All tests conform to specifications**
Approved by QP: Dr. Sophia R. Chen · Sep 14, 2026