# Certificate of Analysis

**ILS Laboratories**
8222 Vickers St, Suite 106, San Diego, CA 92111
(619) 329-3999 | ils-lab.com

## Wolverine - 20mg

**PASS**

**Tested for: Crush Research**
https://www.crushresearch.shop/

| | | | |
|---|---|---|---|
| COA #: | **COA-2026-Y6EVEO** | Method: | **Full QC Panel** |
| Lot Number: | **CR-BPTB20-2605-1** | Analysis Date: | **06/01/2026** |
| Accession #: | **ACC-2026-3296** | Appearance: | **Good** |
| Labeled Content: | **20mg** | Vial Size: | **3mL** |
| Sample Matrix: | **Lyophilized** | Date Received: | **05/27/2026** |

Scan to verify authenticity at ils-lab.com
**Access Code: 6FFUFDWG**

| Identity | Peptide Purity | |
|---|---|---|
| **Wolverine** | **99.90%** | **Fentanyl Free** |

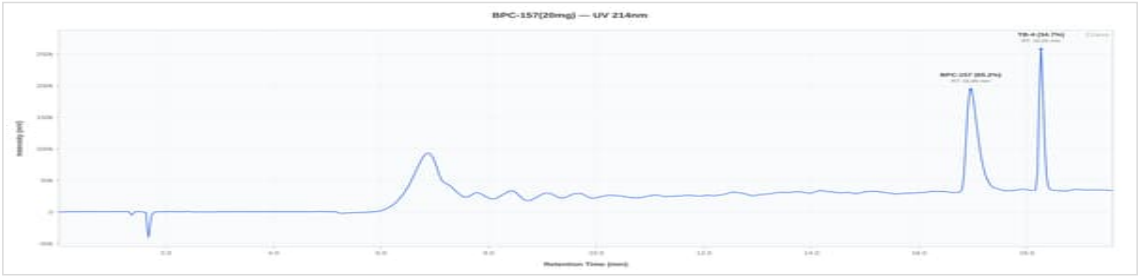


*Wolverine 20mg - CR-BPTB20-2605-1*

### Blend Purity & Quant (HPLC)

| Analyte | Specification | Result | Unit | Status |
|---|---|---|---|---|
| **Peptide Purity (HPLC)** | >= 95.0% | **99.90%** | % | **PASS** |
| **Net Blend Peptide Content** | Report Only | **21.14** | mg | N/A |
| *-- BPC-157* | | *10.78* | *mg* | |
| *-- TB-500* | | *10.36* | *mg* | |
| **Identity (HPLC-RTM)** | BPC-157 + TB-500 | **Confirmed** | - | **PASS** |
| **Fentanyl Screen** | Immunoassay, 50 ng/mL cutoff | **Not Detected** | - | **PASS** |

### HPLC Chromatogram




*Representative chromatogram, Dedicated V0 (99.85% purity, closest to batch mean of 99.88%)*

**Dr. Greg Kalyuzhny**
Lab Director
6/1/2026

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Verify: portal.ils-lab.com/verify/GvPD0HBzSy6i8iJy
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### HPLC Conformity Testing Results (2 samples tested)

| Sample | Purity | NPC | ID | Result |
|---|---|---|---|---|
| **Dedicated V0** | 99.85% | 21.19 mg | Confirmed | **PASS** |
| **Conformity V1** | 99.90% | 21.14 mg | Confirmed | **PASS** |
| **Mean** | **99.88%** | **21.16 mg** | — | — |
| **Std Dev** | **0.0250%** | **0.0250 mg** | — | — |

### Heavy Metals Analysis (ICP-MS)

| Test | Specification | Result | Status |
|---|---|---|---|
| **Arsenic (As)** | NMT 1.5 ppm | *Not Detected* | **PASS** |
| **Cadmium (Cd)** | NMT 0.5 ppm | *Not Detected* | **PASS** |
| **Chromium (Cr)** | NMT 10 ppm | *Not Detected* | **PASS** |
| **Mercury (Hg)** | NMT 1.5 ppm | *Not Detected* | **PASS** |
| **Lead (Pb)** | NMT 1 ppm | *Not Detected* | **PASS** |

### Sterility Testing (PCR)

| Test | Specification | Result | Status |
|---|---|---|---|
| **Sterility (PCR)** | No Growth | **No Growth** | **PASS** |

### Endotoxin Testing (USP <85>)

| Test | Specification | Result | Status |
|---|---|---|---|
| **Endotoxin (USP <85>)** | Report Result | **NMT 0.05 EU/mL** | **Reported** |

*About this result: Endotoxin is reported as a quantitative value. Acceptable limits vary by product type and matrix, so no universal pass/fail threshold applies to RUO products. This result is below commonly referenced endotoxin thresholds.*

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### Notes & Methodology

1. Date Tested: 06/01/2026. Methods: Blend Purity & Quant (HPLC).
2. The sample was confirmed to be Wolverine by HPLC. Identification by chromatographic retention time comparison with a reference standard.
3. Elemental impurities analyzed by ICP-MS per USP <233> methodology. Acceptance criteria are internal laboratory quality screening limits for research-use materials and do not represent evaluation against any specific pharmacopeial monograph or product specification.
4. Endotoxin tested per USP <85> kinetic turbidimetric method. Acceptance criteria per client specification.
5. Peptide purity determined by RP-HPLC area normalization at 214 nm. Value represents the percentage of the target peptide relative to all peptide-related peaks. Non-peptide process-related impurities, if detected, are excluded from the calculation.
6. Per-component content calculated from total net peptide content using the manufacturer's stated formulation ratio (BPC-157, TB-500). All components confirmed present by HPLC identity testing, unless explicitly stated otherwise.
7. Chromatogram shown is representative: Dedicated V0 (99.85% purity, closest to batch mean of 99.88%).

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Lab Director
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