Peptidology
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Scottsdale, AZ 85254
(480) 974-4660

Note: COA located on Page 3

Beyond Purity: Why Comprehensive Testing Matters

Peptidology products undergo rigorous testing to ensure they're safe for research use. While many understand the importance of product purity, less known but equally crucial are sterility and endotoxin testing. This document explains these testing methods and why they all matter for your safety.

Understanding the Tests

Purity Testing

Purity testing measures how much of the desired compound is present compared to other related substances. Using techniques like High-Performance Liquid Chromatography (HPLC), laboratories measure the "peak area percentage" to determine purity. A pharmaceutical with 99% purity means 99% of the substance contains the active ingredient, with 1% being related compounds. Purity above 95% is considered pharmaceutical grade.

Assay Testing

While purity focuses on related substances, assay testing determines the exact amount of active ingredient by comparing it to a reference standard. This test confirms the correct dosage is present in your research peptides, ensuring effectiveness.

USP 71 - Sterility Testing

USP 71 refers to the United States Pharmacopeia standard for sterility testing. This test verifies products are free from living microorganisms. Using either membrane filtration or direct inoculation methods, laboratories confirm no bacteria, fungi, or other organisms are present in products labeled "sterile".

USP 85 - Bacterial Endotoxin Testing

Even when bacteria are killed during manufacturing, they can leave behind toxic fragments called endotoxins. USP 85 testing detects these fragments, which can cause serious reactions even in sterile products.

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The Limitations of Purity Testing Alone

While high purity is essential for pharmaceutical quality, it doesn't tell the complete safety story. A product can be 99.9% pure yet still contain dangerous contaminants:

1. Purity tests don't detect viable microorganisms that could cause infections
2. Purity analysis doesn't identify bacterial endotoxins, which remain toxic even after sterilization

Why Sterility and Endotoxin Testing Are Critical

Sterility Testing (USP 71)

If sterility testing isn't performed or fails:

- Patients could receive products contaminated with living microorganisms
- Infections ranging from mild to life-threatening could develop, especially in immunocompromised patients
- Multiple organ system failures could occur in severe cases

Endotoxin Testing (USP 85)

If endotoxin testing isn't performed or fails:

- Human or animal models could experience fever, inflammation, and potentially septic shock
- Endotoxin levels as low as 0.5 EU/mL can trigger serious immune responses
- Effects can be particularly dangerous for children, elderly, or immunocompromised patients
- Even sterile products can cause harm if endotoxin levels are high

The Complete Picture

The pharmaceutical industry uses a multi-layered approach to ensure safety.

Purity testing confirms the right ingredient is present, assay testing verifies the correct amount, sterility testing ensures no living organisms remain, and endotoxin testing confirms no toxic bacterial fragments are present. Only when all tests are passed can a product be considered truly safe. This comprehensive approach protects researchers from both visible and invisible threats, ensuring compounds are safe for research use.

Certificate of Analysis

Client:
Peptidology

Laboratory:
TrustPointe Analytics LLC
1743 142nd Ave Suite 4
Dorr, MI 49323

Key=2UF0GT9R5L4H

Sample Information

Sample Name	BPC-157 10mg	**Client SID**	BPC 10mg 120008	**Published**	2025-02-08 09:41

Results

Sample ID	SPL-0359	
TM-1006 BPC-157 Assay	11.23	*mg*
TM-1006 BPC-157 ID by RT	1.00	
TM-1006 BPC-157 ID by Spectral	1000	
TM-1006 BPC-157 Purity	99.416	*%*
TM-1006 BPC-157 Coelution Control	999	
TM-1006 BPC-157 System Suit	1.1	*%RSD*

Approvals

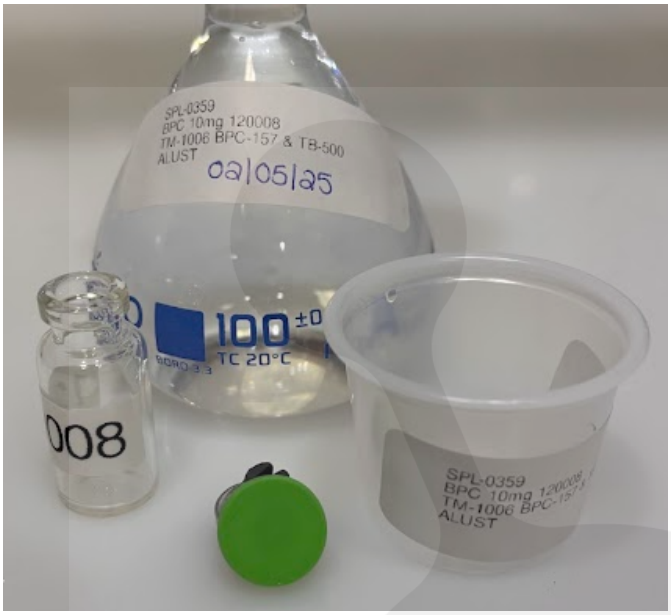
Created by

Ashlee Lust
President

Reviewed by

Joshua Lust
Managing Director

Attachments for SPL-0359



Attachment for SPL-0359
Filename: SPL-0359.png

Certificate of Analysis

Client:
Peptidology

Laboratory:
TrustPointe Analytics LLC
1743 142nd Ave Suite 4
Dorr, MI 49323

Key=586OKE8K6XPS

Sample Information

Sample Name	BPC-157 10mg	**Client SID**	BPC 10mg 120009	**Published**	2025-02-21 12:40

Results

Sample ID	SPL-0360
USP <71> Sterility Test	Pass

Comments for SPL-0360

General

Commercially prepared Tryptic Soy Broth (TSB): TSB 24-1, Lot: 33RJ69, Exp: 2025-08-10
Fluid Thioglycolate Medium (FTM): Lot: UK319487-349, Exp: 10-31-2025

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