



PASS — ALL SPECIFICATIONS MET

5 of 5 layers complete

■ L1
Identity

■ L2
Purity

■ L3
Net Peptide Content

■ L4
Sterility

■ L8
Fentanyl Screen

Sample & Vial Validation



Vial A: as received & analyzed

MORE VIEWS OF VIAL A



Vial A - right

Client	Retro Tide Labs	Product	MOTS-c
Lot / Batch	T-MOT-0063	Label Claim	40 mg
Matrix	lyophilized powder	Sample Count	1
Cap Color	Black	Crimp Color	Silver / Aluminum
Contents Color	White	Seal Intact	Yes
Condition	sealed, intact	Received	Sep 24, 2026
Sampling	client submitted		



Test Results

Test	Specification	Result	
Identity research screen	every vial within ± 1 Da of 2174.621 Da	2174.654 Da	PASS
Purity research screen	Expected Purity ≥ 99.25 area % · Acceptance NLT 99.25 area % · Units area % · Source Axiom Analytics SPEC-PURITY-001, Revision 1, effective 2026-08-31	99.88%	PASS
Net Peptide Content research screen	every vial within $\pm 10\%$ of 40 mg	Vial A: 42.15 mg	PASS
Sterility · Rapid PCR research screen	Rapid PCR screen	Target DNA not detected	PASS
Fentanyl Screen research screen	no fentanyl or analog at or above 1 ng/mg	none detected	PASS

Layer Results



1 Identity

LC-MS (ESI+)

1 physical-vial mass observation

each +/- 1 Da (theor. 2174.621)

PASS

Mass consistent with MOTS-c

Theoretical mass **2174.621 Da** Acceptance **+/- 1 Da**

Vial	Observed mass	Mass error	Status
Vial A	2174.654 Da	+0.033 Da	PASS

2174.654 Da **PASS**

2 Purity

RP-HPLC 214nm (USP 621)

Expected Purity ≥ 99.25 area % · Acceptance NLT 99.25 area % · Units area % · Source Axiom Analytics SPEC-PURITY-001, Revision 1, effective 2026-08-31

1 physical-vial purity observation

PASS

Expected Purity ≥ 99.25 area % · Acceptance NLT 99.25 area % · Units area % · Source Axiom Analytics SPEC-PURITY-001, Revision 1, effective 2026-08-31

Vial	Purity	Status
Vial A	99.88%	PASS

99.88% **PASS**

limit 99.25%

3 Net Peptide Content

Quantitative HPLC vs reference std

42.15 mg

each within +/- 10% of 40 mg

PASS

42.15 mg **PASS**

Vial	Measured	Status
Vial A	42.15 mg	PASS

4 Sterility

Rapid Microbial DNA Screen (qPCR target panel)

Sterility · Rapid PCR: Target DNA not detected

No microbial target DNA detected

PASS

Sterility · Rapid PCR

PASS

Result **Target DNA not detected** Specification **Rapid PCR screen**



SCAN TO VERIFY

8

Fentanyl Screen

LC-MS/MS targeted adulterant screen

Not detected

detection limit 1 ng/mg

PASS

 Analytes
screened

**Fentanyl, Acetylfentanyl, Acrylfentanyl, Butyrylfentanyl,
 Carfentanil, Cyclopropylfentanyl, Furanylfentanyl,
 Methoxyacetylfentanyl, ortho-Fluorofentanyl,
 Valerylfentanyl, 4-ANPP (despropionyl fentanyl)**

Detection limit

1 ng/mg

Source container

A
Reporting Scope & Limitations

[Sterility · Rapid PCR] DNA-target research screen only. It detects microbial DNA from viable and non-viable organisms alike, and is neither viable-CFU enumeration under USP <61> nor a batch sterility determination under USP <71>.

[Fentanyl Screen] Targeted LC-MS/MS adulterant screen, reported as detected or not detected against its stated detection limit. A harm-reduction research screen, not an exhaustive adulterant panel.

Digital Signatures

Analyst

Alana Reeves

Analyst Signature

ed25519:d29f34e550271f0d4edc63c3...

Technical Reviewer

Michael Niles

Reviewer Signature

ed25519:f675b1529b0e0f2b0f3e75cc...

Laboratory Director

Daniel Brennan

Director Signature

ed25519:3286f245b29c0bcf1f45f266...

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Seal: ed25519:1b17e56c68ffc93ca6648cf9804e2ffb40b608ed...

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