



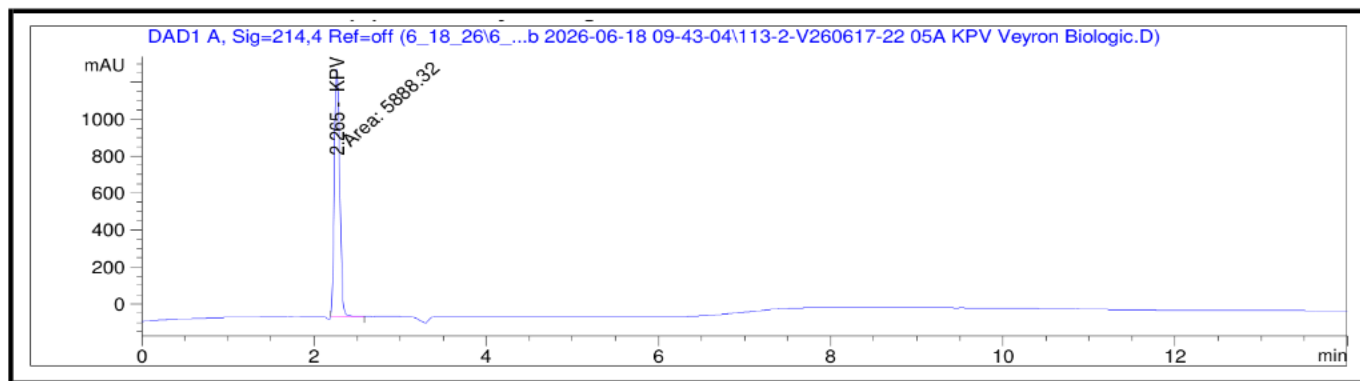
Vanguard Laboratory
2635 Parkmont Ln
Olympia, Wa 98502
360-967-7010

Certificate of Analysis

KPV 10 mg

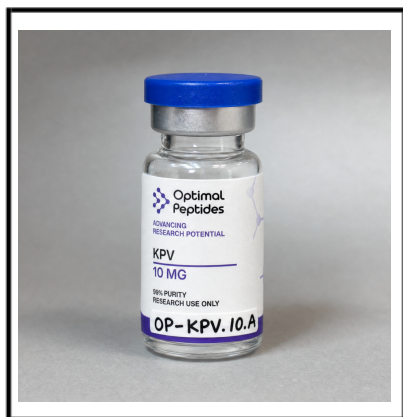
Report To:
Optimal

Compound: KPV
Quantity: 10 mg
Laboratory ID: V260617-22 005
Lot Number: OP-KPV.10.A
Date Reported: 7/20/2026



Chromatogram for Vial "A" shown above.

Analysis	Method	Result (per Vial)		
Chromatographic Purity	HPLC-UV/VIS	>99.80%	>99.80%	>99.80%
Quantity	HPLC-UV/VIS	11.70 mg	11.42 mg	12.12 mg



Report By: Dustin Newman, Laboratory Director on 7/20/2026

Approved By: Tori Johnson, Operations Manager on 7/20/2026



Please consult A2LA Certificate #6377.01.01 for a list of accredited tests. Samples were received in acceptable condition. The result(s) in this report relate only to the portion of the sample(s) tested. All analyses were performed consistent with the Vanguard Laboratory Quality Management System. Vanguard Laboratory and its staff did not observe or participate in the sample selection process, and cannot confirm the authenticity of the sample or its representativeness of the associated lot/batch.



Vanguard Laboratory
2635 Parkmont Ln
Olympia, Wa 98502
360-967-7010

Certificate of Analysis

KPV 10 mg

Report To:
Optimal

Compound: KPV
Quantity: 10 mg
Laboratory ID: V260617-22 005
Lot Number: OP-KPV.10.A
Date Reported: 7/20/2026

Analyte	Method	LOQ (ppm)	Result (ppm)
Arsenic (As)	ICP-MS	0.01	ND
Cadmium (Cd)	ICP-MS	0.01	ND
Lead (Pb)	ICP-MS	0.01	ND
Mercury (Hg)	ICP-MS	0.005	ND

Run ID: 260625

Analysis	Method	Result
Endotoxins	LAL	Pass - <5.00 EU/mg*
BioBurden	USP <61>	Pass - No Growth Detected

*Pass/Fail criteria based on the USP/FDA threshold of 5 EU/kg (350 EU total for a 70 kg adult)

Report By: Dustin Newman, Laboratory Director on 7/20/2026

Approved By: Tori Johnson, Operations Manager on 7/20/2026

ND: Non-Detect

LOD: Limit of Quantification



Please consult A2LA Certificate #6377.01.01 for a list of accredited tests. Samples were received in acceptable condition. The result(s) in this report relate only to the portion of the sample(s) tested. All analyses were performed consistent with the Vanguard Laboratory Quality Management System. Vanguard Laboratory and its staff did not observe or participate in the sample selection process, and cannot confirm the authenticity of the sample or its representativeness of the associated lot/batch.