



CERTIFICATE OF ANALYSIS

Issued by an ISO/IEC 17025-accredited laboratory · raw data appended (page 2)

PASS

QC released for dispatch



Scan to verify

DSIP — 10mg

Delta Sleep-Inducing Peptide

1. PRODUCT IDENTIFICATION

Synonym	Delta Sleep-Inducing Peptide	Label claim	10mg
Sequence / structure	Trp-Ala-Gly-Gly-Asp-Ala-Ser-Gly-Glu	Lot / Batch	ZX260512-179 / B98983
Mol. formula	C35H48N10O15	Manufacture date	14 May 2026
Mol. weight	848.81 g/mol	Date of analysis	17 May 2026
CAS number	62568-57-4	Storage	-20 °C, dark, desiccated
Salt form	Acetate salt		

2. ANALYTICAL TEST RESULTS

Test	Method	Specification	Result	Verdict
Appearance	Visual	White/off-white powder	White to off-white lyophilized powder	PASS
Identity (ESI-MS)	LC-MS	Matches 848.81 Da	848.82 Da (Δ 12 ppm)	PASS
Purity	RP-HPLC, UV 220 nm	$\geq 98.0\%$ area	99.66%	PASS
Related substances	RP-HPLC	Single ≤ 1.0 / Total $\leq 2.0\%$	0.24 / 0.34%	PASS
Water content	Karl Fischer (USP <921>)	$\leq 8.0\%$	3.7%	PASS
Counter-ion: acetate	Ion chromatography	Report (3.0–15.0%)	7.9%	PASS
Net peptide content	Amino-acid analysis	$\geq 80.0\%$	87.4%	PASS
Bacterial endotoxin	LAL kinetic (USP <85>)	< 5.0 EU/mg	0.13 EU/mg	PASS
Heavy metals	ICP-MS (ICH Q3D)	Conforms	Conforms	PASS

CONCLUSION

All tested parameters CONFORM to the acceptance specifications. The batch is of high chromatographic purity ($\geq 98\%$) with an impurity profile, identity and residual/contaminant results meeting pharmaceutical-grade quality requirements. Material released. Supporting RP-HPLC chromatogram and ESI-MS spectrum are appended on page 2.

DLW.

Dr. Li Wenhua

Analyst · 17 May 2026 · Zhongxi Research Institute

DFH.

Dr. Fang Hong (QC Manager)

Approved by · 17 May 2026 · Zhongxi Research Institute



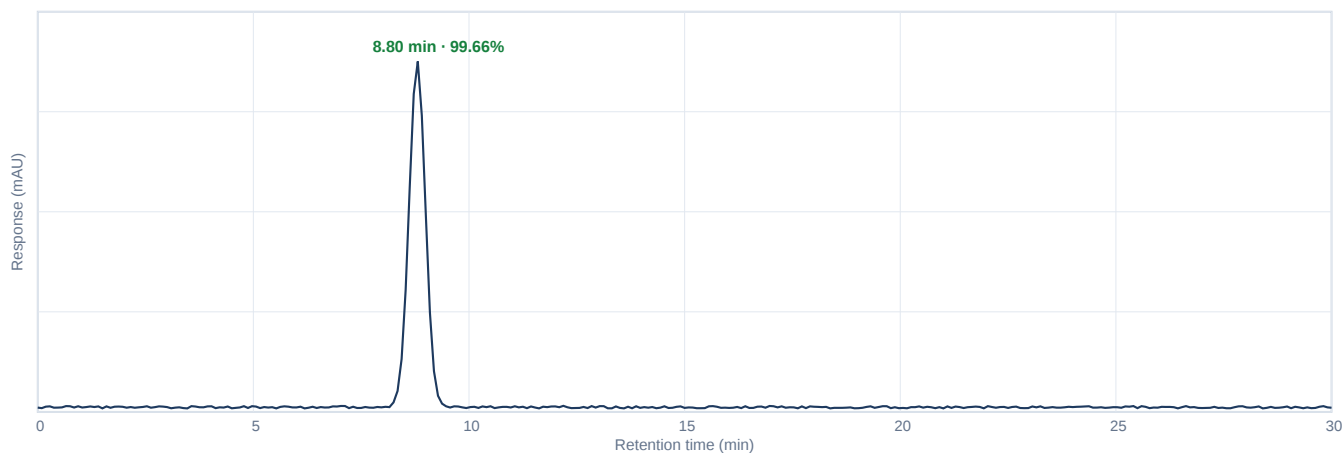
APPENDIX — ANALYTICAL RAW DATA

DSIP 10mg · Lot ZX260512-179 · Cert. ZXR-COA-2026-13717



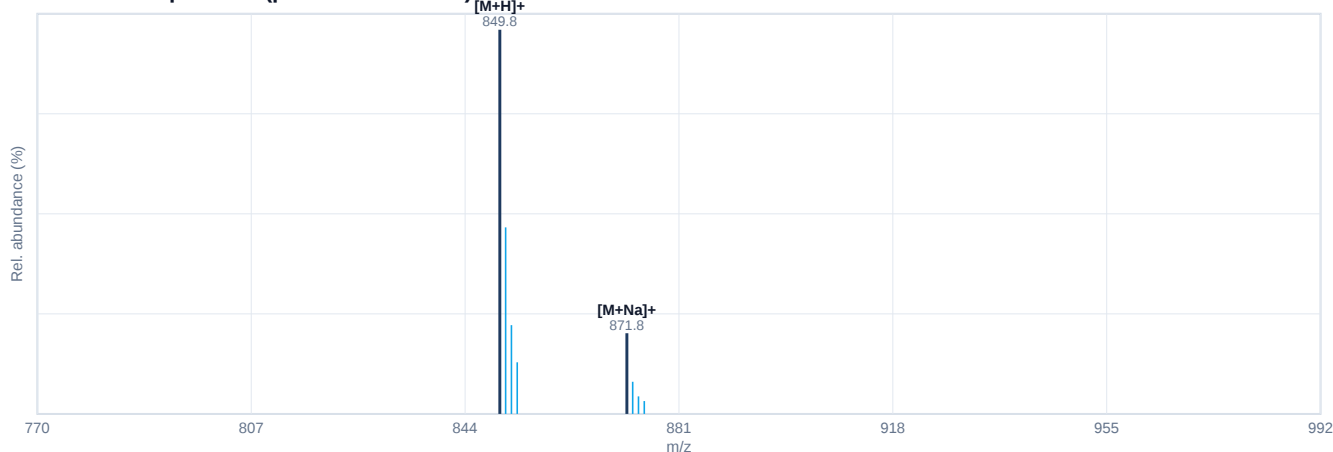
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Figure 1. RP-HPLC Chromatogram (UV 220 nm)



Peak #	RT (min)	Area (μV·s)	Area %	Assignment
1	8.80	991546	99.66	Main (target)
2	12.15	1168	0.11	Impurity / related substance
3	7.11	843	0.09	Impurity / related substance
4	16.93	743	0.07	Impurity / related substance
5	25.70	649	0.07	Impurity / related substance

Figure 2. ESI-MS Spectrum (positive ion mode)



Interpretation

Identity confirmed by ESI-MS. Observed ions $[M+H]^+$ 849.8, $[M+Na]^+$ 871.8 deconvolute to a neutral monoisotopic-average mass of 848.82 Da (theoretical 848.81 Da; mass error 12 ppm), consistent with DSIP. No co-eluting species above 0.5% indicative of misidentification.

Methods — RP-HPLC: Agilent 1260 Infinity II; Zorbax SB-C18 4.6×250 mm, 5 μm; A: 0.1% TFA in water, B: 0.1% TFA in MeCN; 10–70% B over 30 min; 1.0 mL/min; 25 °C; 20 μL injection. MS: AB Sciex TripleTOF, ESI+, capillary 4.5 kV, deconvolution by Bio Tool Kit. KF: Metrohm 901. IC: Thermo Dionex ICS-6000. ICP-MS: Agilent 7900.