



Solvipuritý

ANALYTICAL LABORATORY · REYKJAVÍK, IS

SVP-2026-00367

ISSUED 2026-03-16 · ACCREDITATION AL-1142
ISO/IEC 17025 · GMP · GLP

CERTIFICATE OF ANALYSIS

AUTHENTIC

TB-500 (Thymosin β 4) 5mgBjörn Healthcare ehf. · Sterile lyophilizate, 5 mg per 3 ml clear glass vial, rubber s
topper + aluminium flip-off (white cake)

REPRESENTATIVE CHROMATOGRAM · HPLC-UV 205 NM



BATCH NO.

BJRN-20JVVKKE

ANALYTICAL METHODS

RP-HPLC-UV 220 nm · LC-ESI-MS · AAA
(amino acid analysis) · Ion chromatography
(counter-ion) · Karl Fischer 2.5.32 · GC-MS
(headspace) · ICP-MS · Kinetic chromogenic
LAL 2.6.14 · Ph. Eur. 2.6.1 sterility · Ph. Eur. 2.6.12
microbial limits

MANUFACTURED

2026-11-20

EXPIRY

2028-08-20

RECEIVED

2026-03-16

RELEASE

2026-03-16

DECLARED COMPOSITION

TB-500 (Thymosin β 4) 5mg — synthetic peptide; sequence:
Ac-Leu-Lys-Lys-Thr-Glu-Thr-Gln-Glu-Lys-Asn-Pro-Leu-Pro-Ser-Lys-Glu-Thr; CAS 77591-33-4;
theoretical MW 1964.26 Da

Analytical results

19 TESTS · ALL METHODS VALIDATED

SUBSTANCE / PARAMETER	RESULT	LOQ	LIMIT	METHOD
Appearance — sterile lyophilized cake, white to off-white	Conforms	—	homogeneous white cake, no particulates	Visual

● Solubility (water for injection, 2 mg/ml, 25 °C)	Complete within 60 s – clear colourless solution	–	Clear, no visible particles	Visual (Ph. Eur. 2.2.1)
● Identification — HPLC retention time	Matches reference	–	±2.0 % of ref	RP-HPLC-UV 220 nm
● Identification — sequence / mass match	Confirmed CAS 77591-33-4	–	Match theoretical within ±1 Da	LC-ESI-MS
● Molecular weight (measured)	1964.21 Da Δ = -0.05 Da	0.5 Da	1964.26 Da ± 1.0 Da (theoretical)	ESI-MS
● Chromatographic purity (main peak)	98.92 %	0.05 %	≥ 98.0 %	RP-HPLC-UV 220 nm
● Any single impurity (max)	0.13 %	0.05 %	≤ 1.00 %	RP-HPLC-UV 220 nm
● Peptide content (amino acid analysis)	90.2 % w/w	0.5 %	≥ 80.0 % w/w	AAA (6 N HCl, 110 °C, 24 h)
● Trifluoroacetate (TFA counter-ion)	0.76 % w/w	0.05 %	≤ 1.00 % w/w	IC (ion chromatography)
● Water content (Karl Fischer)	2.58 % w/w	0.1 %	≤ 5.0 % w/w	Ph. Eur. 2.5.32
● Residual acetonitrile	88 ppm	10 ppm	≤ 410 ppm (ICH Q3C Class 2)	GC-MS (headspace)
● Residual DMF	37 ppm	10 ppm	≤ 880 ppm (ICH Q3C Class 2)	GC-MS (headspace)
● Lead (Pb)	0.044 ppm	0.02 ppm	≤ 0.5 ppm (ICH Q3D parenteral)	ICP-MS
● Arsenic + Cadmium + Mercury (total)	0.080 ppm	0.02 ppm	≤ 1.5 ppm (ICH Q3D parenteral)	ICP-MS
● Bacterial endotoxins (LAL)	4.78 EU/mg	0.125 EU/mg	< 10.0 EU/mg	Kinetic chromogenic LAL (Ph. Eur. 2.6.14)
● TAMC (aerobic bacteria, pre-lyophilization bulk)	1 CFU/g	1 CFU/g	≤ 10 ² CFU/g	Ph. Eur. 2.6.12
● TYMC (yeast / molds, pre-lyophilization bulk)	2 CFU/g	1 CFU/g	≤ 10 ¹ CFU/g	Ph. Eur. 2.6.12
● Sterility (final lyophilized vial)	Complies – no growth	–	No growth, 14 d incubation	Ph. Eur. 2.6.1 (direct inoculation)
● Container closure integrity	Pass	–	No dye uptake	Dye ingress (0.05 % methylene blue, 2 h vacuum)

Solvipurity

