

TEST REPORT

Sample 10/10

«07» October 2019

Analyte Name: EPITHALON – a peptide which normalizes the work of the pineal gland.
Purification:> 98%, 10 mg. Manufacturing date: 01/03/2019; Use until: 01/03/2022.

Appearance of the preparation: lyophilized powder in a clear glass vial with a yellow cap (Figure 1).



Figure 1 – Test sample

Analysis method:

Purity determination: HPLC with a diode array detector (Agilent 1260, HPLC-DAD).
Detection $\lambda = 210$ nm.

Qualitative analysis: HPLC with a tandem quadrupole-time-of-flight mass detector (Agilent 6530 Accurate-Mass Q-TOF, HPLC-MS).

Chromatographic analysis conditions: Thermo Hypersil Gold aQ 150 * 2.1 mm 5 μ m;
mobile phase: A: 0.1% HCOOH in deionized water; B: 0.1% HCOOH / 10% H₂O in acetonitrile;
flow rate: 0.4 ml / min; temperature thermostat: 35 °C; volume of input: 20 μ l.

HPLC-DAD Analysis Results:

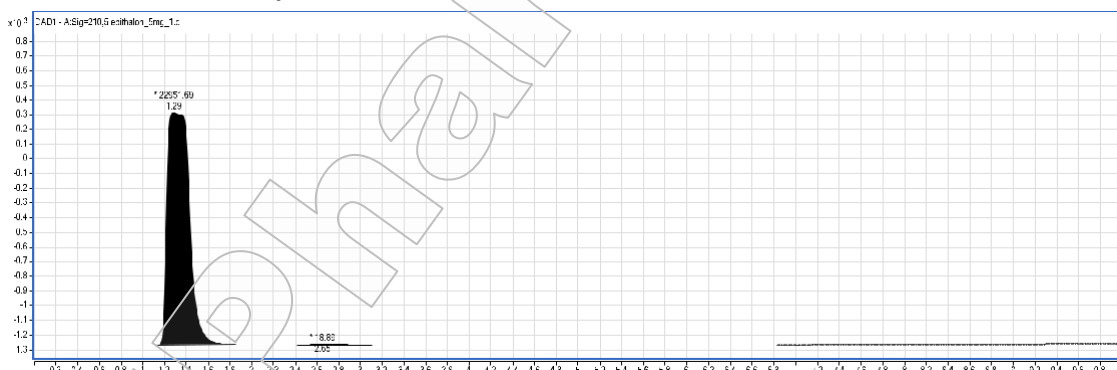


Figure 2 - Chromatogram of the analyzed sample

Figure 2 shows the chromatogram of the solution of the analyzed sample. The UV spectrum of the sample is shown in Figure 3.

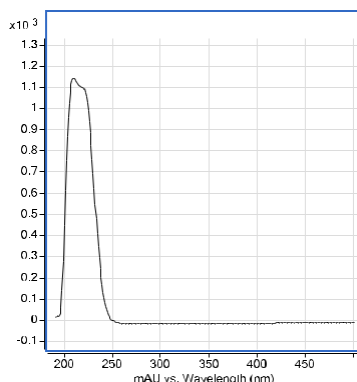


Figure 3 - UV spectrum of the analyzed sample

Table 1 shows the relative contents of the components of the test sample. The content of the main component is 99.92%.

Table 1 - The results of the integration of HPLC-DAD chromatograms BЭЖХ-DAD

№	Time, min	Area, cond. unit	Rel. content, %
1	1,29	22951,69	99,92
2	2,65	18,89	0,08
Sum		22970,58	

HPLC-MS Analysis Results:

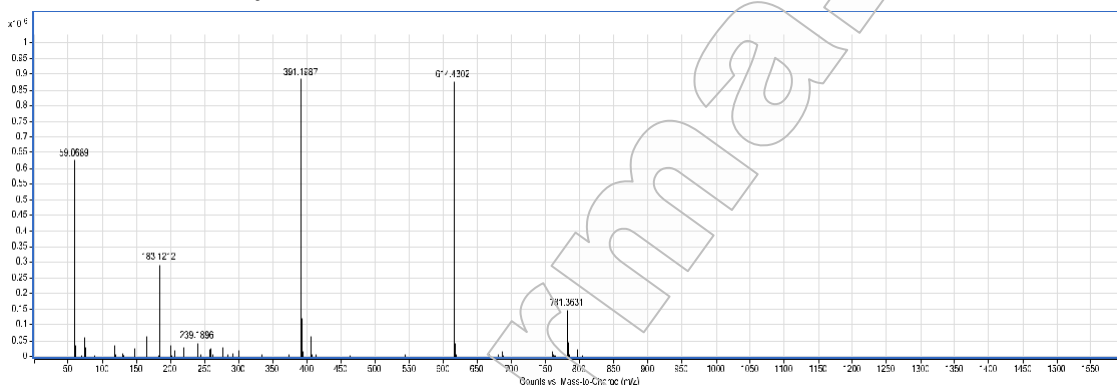


Figure 4 - Mass spectrum of the analyzed sample, RT = 1.29 min

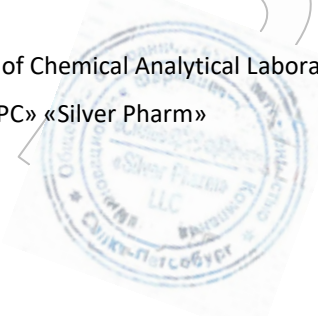
In the mass spectrum (Figure 4) of one of the peaks of the EPITHALON sample, the mass peak with $m/z = 391.1987 \pm 0.5$ and the isotopic distribution correspond to the singly charged peptide $[\text{Epithalon} + \text{H}]^+$. According to the analysis, the molecular weight of the peptide is 390 Da.

Conclusion:

In the EPITHALON sample, the main component is the Epithalon peptide, which normalizes the pineal gland. The purity of the sample is 99.92%.

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