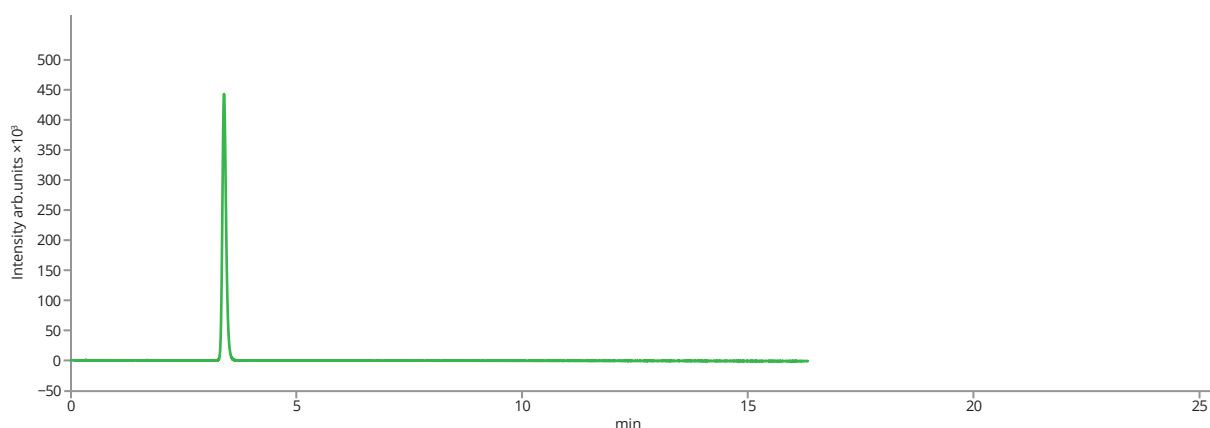
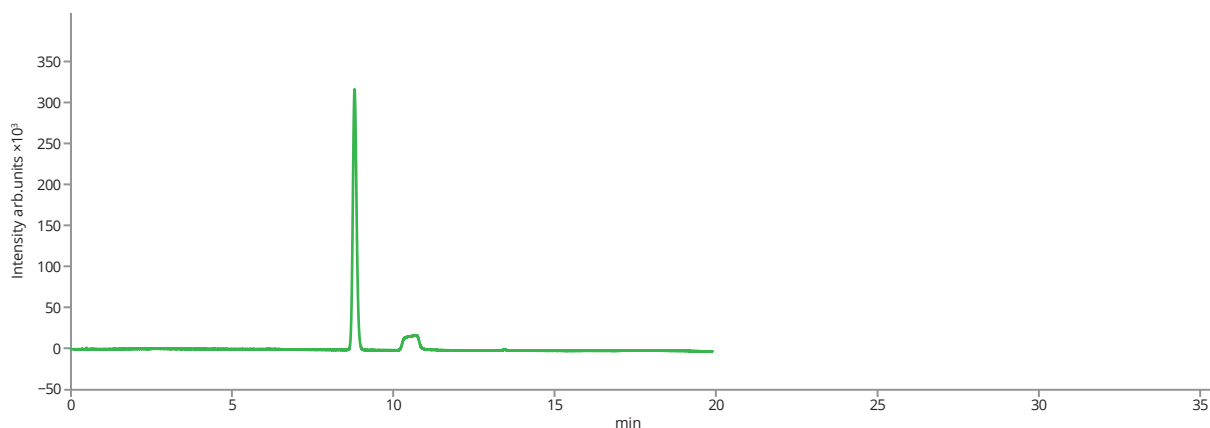


## Melatonin

Melatonin is a natural compound produced by various organisms. In human body this hormone is secreted in the brain, playing a crucial role in regulating the sleep-wake cycle. In addition to its endogenous functions, it is administered as a medication in the treatment of sleep disorders, such as insomnia and various circadian rhythm sleep disorders. In this application two different ASTRA® C18-HE columns were tested according to Ph. Eur. Monograph method for melatonin. Both columns show the excellent peak symmetry in conditions of assay determination and related substances method.



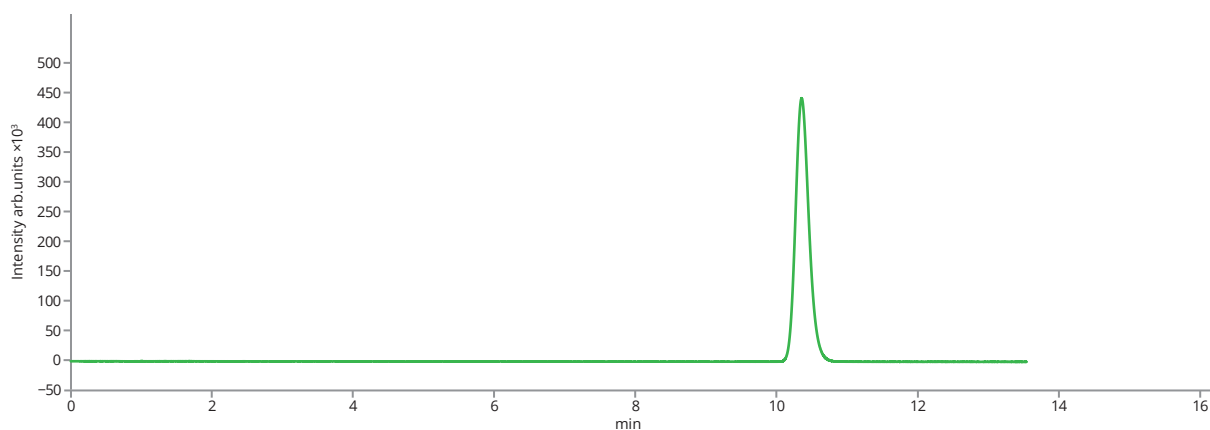
Reference solution on column ASTRA® C18-HE 50 × 4.6 mm, 2 µm, isocratic elution



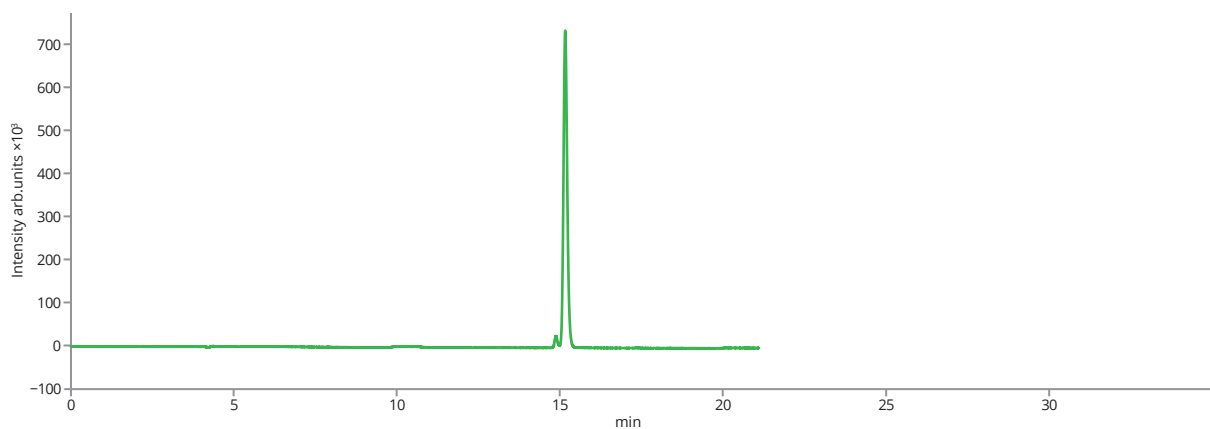
Reference solution on column ASTRA® C18-HE 50 × 4.6 mm, 2 µm, gradient elution



## Melatonin



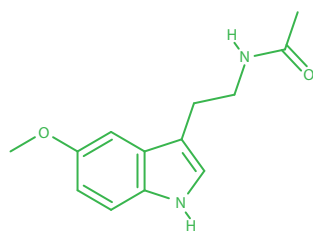
*Reference solution on column ASTRA® C18-HE 150  $\times$  4.6 mm, 3  $\mu$ m, isocratic elution*



*Reference solution on column ASTRA® C18-HE 150  $\times$  4.6 mm, 3  $\mu$ m, gradient elution*

## Melatonin

<b>Column</b>	ASTRA® C18-HE, 2 µm		
<b>Dimensions</b>	50 mm × 4.6 mm		
<b>Part number</b>	AST-5732-TG46		
<b>Column</b>	ASTRA® C18-HE, 3 µm		
<b>Dimensions</b>	150 mm × 4.6 mm		
<b>Part number</b>	AST-5732-IK46		
<b>Mobile phase</b>	A: 2.45 g/L solution of KH <sub>2</sub> PO <sub>4</sub> , previously adjusted to pH 3.0 with a 235 g/L solution of H <sub>3</sub> PO <sub>4</sub> B: ACN		
<b>Isocratic elution</b>	mobile phase B : mobile phase A 20/80 (V/V)		
<b>Gradient elution</b>	<b>Time</b>	<b>A (%)</b>	<b>B (%)</b>
	0–2	90 → 70	10 → 30
	2–36	70 → 30	30 → 70
<b>Flow rate</b>	1.5 mL/min		
<b>Temperature</b>	25 °C		
<b>Injection volume</b>	2 µL		
<b>Detection</b>	UV at 225 nm		
<b>Analytes</b>	<b>1. Melatonin, CAS number 73-31-4</b>		



Melatonin