

# Certificate of Analysis

## Vasoactive intestinal peptide

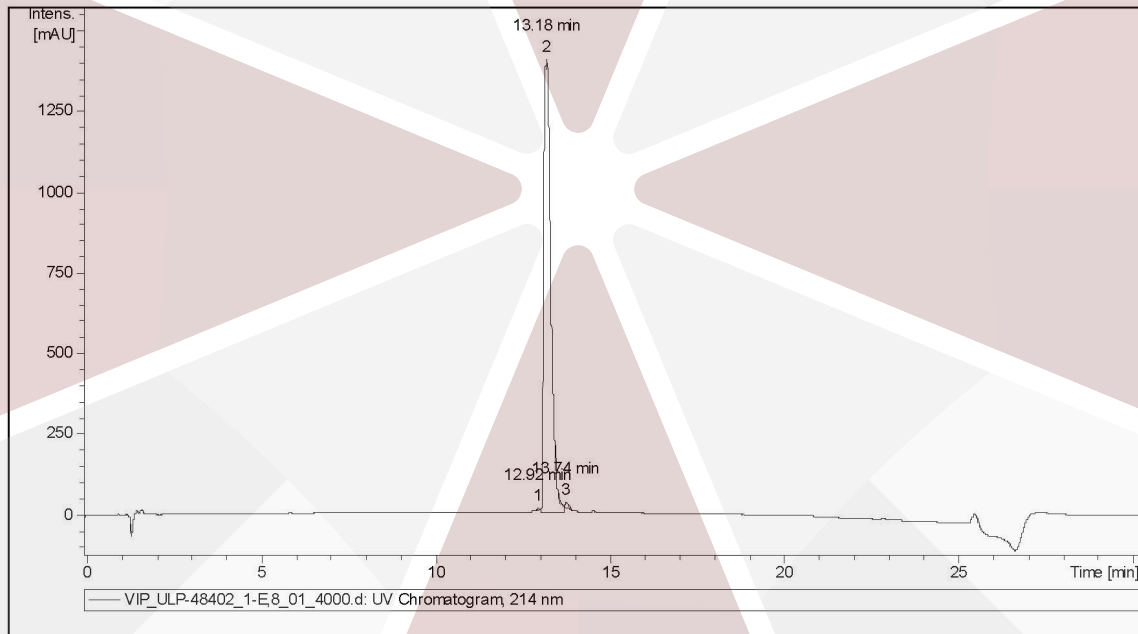
H-His-Ser-Asp-Ala-Val-Phe-Thr-Asp-Asn-Tyr-Thr-Arg-Leu-Arg-Lys-Gln-Met-Ala-Val-Lys-Lys-Tyr-Leu-Asn-Ser-Ile-Leu-Asn-NH2

**Compound** : VIP  
**Lot number** : ULP-48402  
**Analysis date** : 2023-09-10  
**Purity %** : 99.3%  
**Method** : Mass Spectrometry and UV

**Client** : UMBRELLA.us  
 3280 E Hemisphere Loop  
 Tucson, Arizona 85706

PubChem CID: 66577104

<https://pubchem.ncbi.nlm.nih.gov/compound/66577104>



| Time (min)   | Area            | %Area       |            |
|--------------|-----------------|-------------|------------|
| 12.92        | 3.07E+01        | 0.2         |            |
| <b>13.18</b> | <b>1.98E+04</b> | <b>99.3</b> | <b>VIP</b> |
| 13.74        | 1.03E+02        | 0.5         |            |

Purity determined using UV detection  
 Peak identity confirmed by mass spectrum evaluation  
 Expected mass : 3323.76 g  
 Measured mass : 3323.72 g  
 Molecular weight confirmed

Note: Injectable peptides may contain salts and sugars to aid in solubility and act as pH buffers. These are not normally detected using UV and are not considered impurities.

Analysis Performed by  
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2023-09-11