MZ Biolabs
1635 E 18th St
Tucson, AZ 85719
contact@mzbiolabs.com
www.mzbiolabs.com

Certificate of Analysis

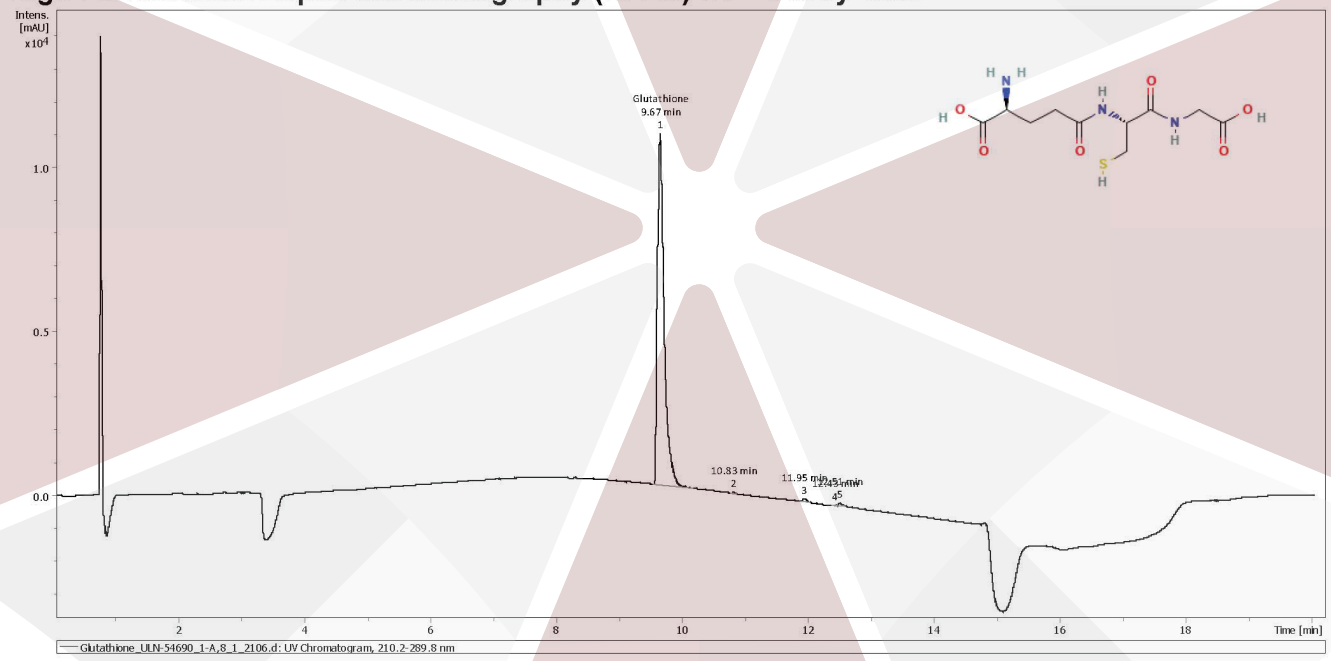
Glutathione

(2S)-2-amino-5-[[(2R)-1-(carboxymethylamino)-1-oxo-3-sulfanylpropan-2-yl]amino]-5-oxopentanoic acid

Compound	: **Glutathione**	**Client :**	**UMBRELLA.us**
Lot number	: **ULN-54960**		**3280 E Hemisphere Loop**
Analysis date	: **2024-05-02**		**Tucson, Arizona 85706**
Purity %	: **99.00%**		
Method	: **HPLC-UV-MS**		

PubChem CID: 124886
https://pubchem.ncbi.nlm.nih.gov/compound/124886

High Performance Liquid Chromatography (HPLC) UV – Purity Test



PEAK LIST	Number of detected peaks: 5		
	Time (min)	Area	%Area	
1	**9.67**	**7.97E+04**	**99.00**	**Glutathione**
2	10.83	9.41E+01	0.12	
3	11.95	3.59E+02	0.45	
4	12.43	5.06E+01	0.06	
5	12.51	3.01E+02	0.37	

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
Ken Pendarvis, ChE
Analytical Chemist
MZ Biolabs
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2024-05-06

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Mass Spectrometry (MS) – Identity Test

Identity confirmed using HPLC-MS

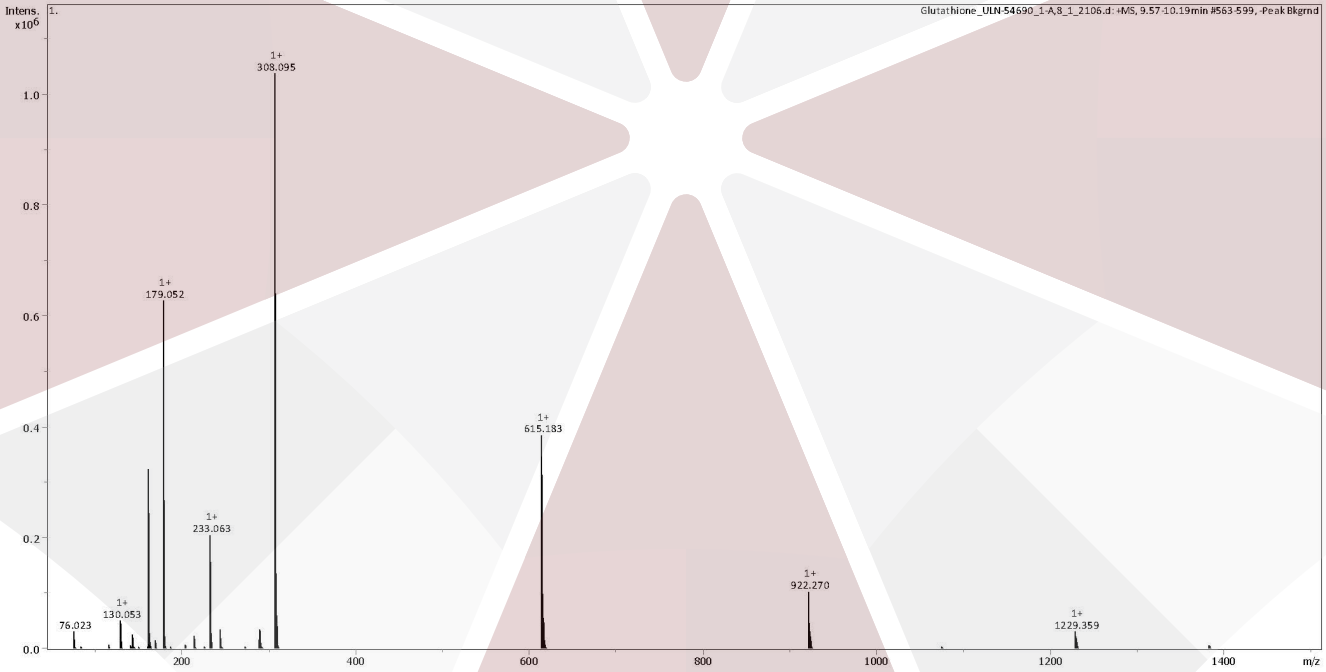
Molecular weight calculated using monoisotopic m/z values from mass spectrum

Expected monoisotopic mass :	307.08	Da
Measured monoisotopic mass :	307.10	Da

Molecular weight confirmed

Note : Monoisotopic m/z values are not easily seen in full spectrum view for larger molecules and peptides. The dominant isotopic peak (base peak) shown in the spectrum below can be used to approximate the average molecular weight frequently reported by vendors and databases as a secondary means of confirmation.

Recorded MS spectrum



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