

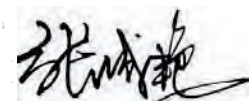
**CERTIFICATE OF ANALYSIS**

<b>Product Name</b>	Dynorphin A(1-17), Cat.#: 317044
<b>Lot No.</b>	MTFA31014-0219
<b>Sequence</b>	YGGFLRRIRPKLKWDNE
<b>Dissolution condition</b>	100%H2O
<b>Length</b>	17AA
<b>Modification</b>	N/A
<b>Molecular Weight (MW)</b>	2148.47
<b>Storage</b>	-20°C

<b>Test Items</b>	<b>Specifications</b>	<b>Results</b>
MW by MS	2148.90	Conforms
Purity by HPLC	>95%	98.959%
Peptide content	N/A	N/A
Moisture content	N/A	N/A
Acetic acid content	N/A	N/A
Appearance	White to off-white lyophilized powder	Conforms
Quantity	20mg	5.0mg*4

NovoPro Bioscience Inc. (hereafter NovoPro) warrants material of said quality at the time of sale. It is the sole responsibility of the customers to determine the adequacy of all materials for any intended or specific purpose or use. NovoPro's sole obligation is to replace the material up to the extent of the purchase price. This warranty applies only to products in original packaging and does not apply to a product which has been tampered with or altered in any way in or which has been misused or damaged by accident or negligence. All claims must be received writing (by fax or email) within 30 days from date when product arrive at the destination city and failure to do so shall constitute a waiver by customers for any and all such claims.

Certified by:



Quality Assurance Department

Mar/06/2024

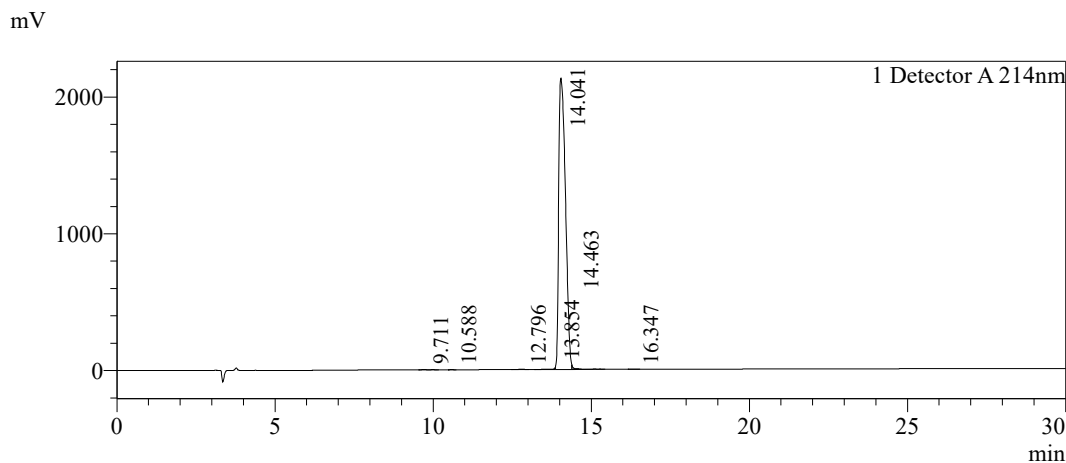


### Sample Information

Order ID :MTFA31014  
 Name :Dynorphin A(1-17)  
 Sequence :YGGFLRRIRPKLKWDE  
 Lot. No :MTFA31014-0219  
 Pump A :0.1%Trifluoroacetic in 100% water  
 Pump B :0.1%Trifluoroacetic in 100% acetonitrile  
 Total Flow :1ml/min  
 Wavelength :214nm  
 Analytical column type :Phenomenex Luna® 5 µm C18(2) (4.6\*250mm\*5 µm)  
 Dissolution method :100%H<sub>2</sub>O  
 Inj. Volume : 15ul

Time	Module	Action	Value
0.01	Pumps	B.Conc	15
30.00	Pumps	B.Conc	45
33.00	Pumps	B.Conc	100
38.00	Pumps	B.Conc	100
40.00	Pumps	B.Conc	15
50.00	Controller	Stop	

### Chromatogram

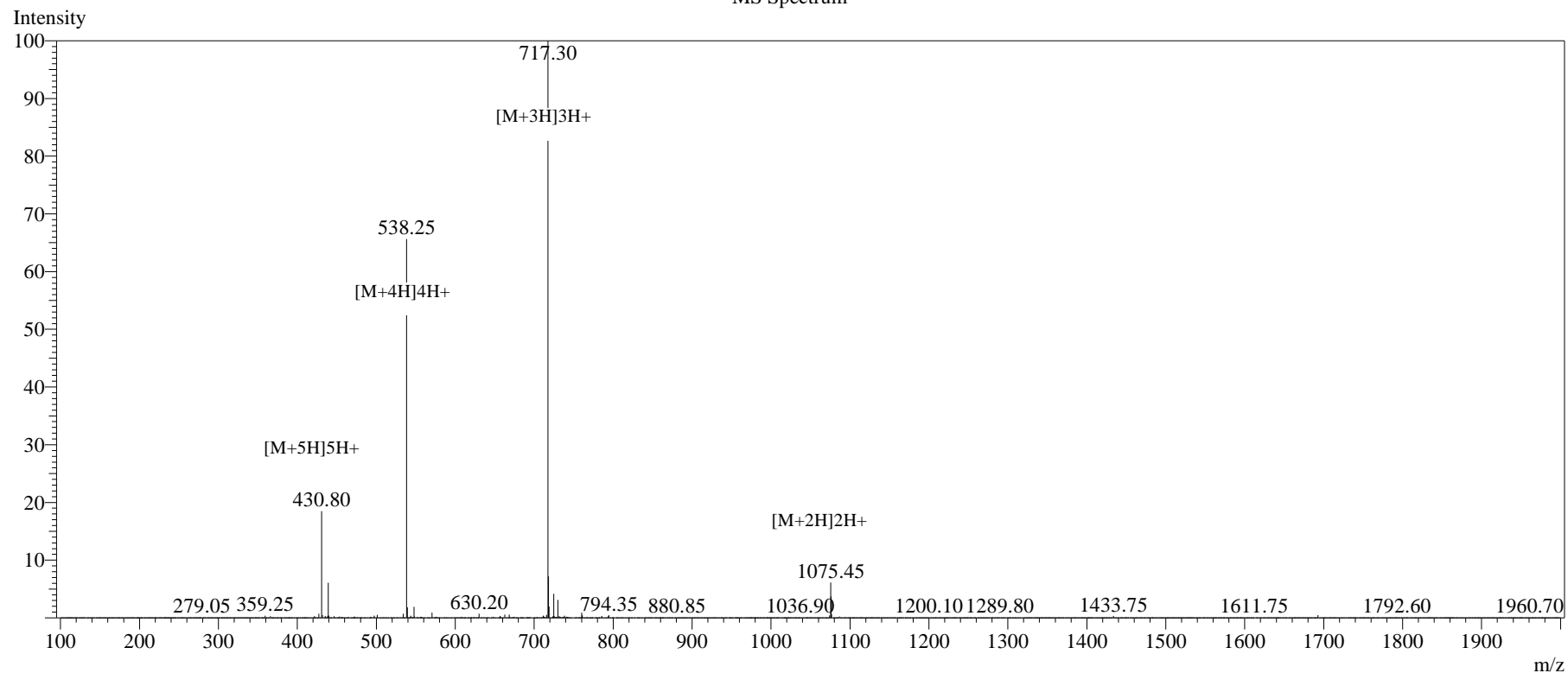


### Peak Table

Detector A 214nm

Peak#	Ret. Time	Area	Height	Area%
1	9.711	27199	1675	0.085
2	10.588	3514	494	0.011
3	12.796	30501	2560	0.095
4	13.854	63439	10255	0.199
5	14.041	31621729	2129174	98.959
6	14.463	192679	7430	0.603
7	16.347	15249	1494	0.048
Total		31954311	2153082	100.000

### MS Spectrum



### Sample Information

Dissolution method	:15% ACN+85% H <sub>2</sub> O	Interface	:ESI	Prerod Bias	:+4.5kv
Date Acquired	:2024/02/29 10:06:42	Nebulizing Gas Flow	:1.50L/min	Detector	:-0.2kv
Injection Volume	:0.2ul	CDL Temp	:250°C	T.Flow	:0.2ml/min
Block Temp	:200	CDL Volt	:0v	B.conc	:50% H <sub>2</sub> O/50% MEOH

Order ID	:MTFA31014
Name	:Dynorphin A(1-17)
Sequence	:YGGFLRRIRPKLKWDNE
Lot.No	:MTFA31014-0219
Theoretical	:2148.47
Observed	:2148.90