

**CERTIFICATE OF ANALYSIS**

<b>Product Name</b>	Plantaricin S alpha chain, Cat.#: 303479 (TFA removed)
<b>Lot No.</b>	MTFA31054-1-0228
<b>Sequence</b>	RNKLAYNMGHYAGKATIFGLAAWALLA (Acetate Salt)
<b>Dissolution condition</b>	100%H2O
<b>Length</b>	27AA
<b>Modification</b>	acetate salt
<b>Molecular Weight (MW)</b>	2922.39
<b>Storage</b>	-20°C

<b>Test Items</b>	<b>Specifications</b>	<b>Results</b>
<b>MW by MS</b>	2922.80	Conforms
<b>Purity by HPLC</b>	>95%	95.008%
<b>Peptide content</b>	N/A	N/A
<b>Moisture content</b>	N/A	N/A
<b>Acetic acid content</b>	N/A	N/A
<b>Appearance</b>	White to off-white lyophilized powder	Conforms
<b>Quantity</b>	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

Apr/01/2024

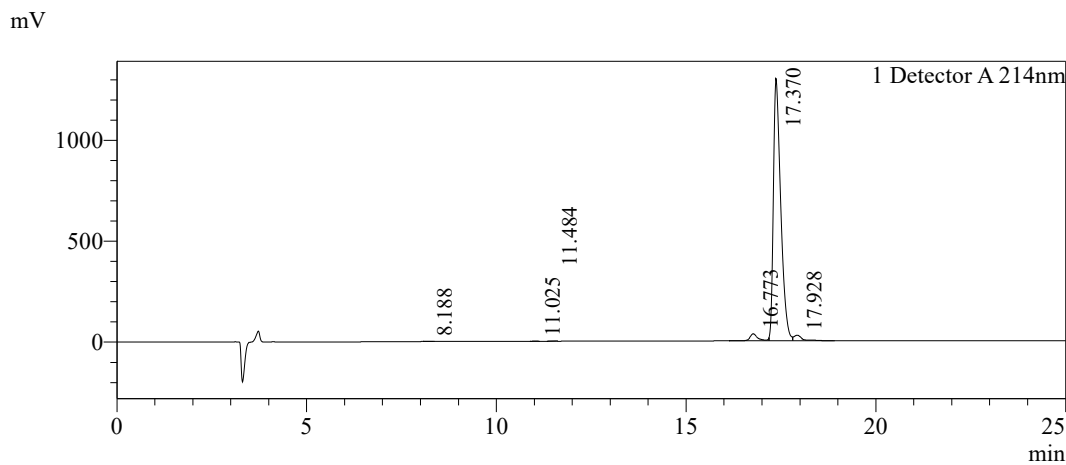


### Sample Information

Order ID :MTFA31054-1  
 Name :Plantaricin S alpha chain  
 Sequence :RNKLAYNMGHYAGKATIFGLAAWALLA (Acetate Salt)  
 Lot. No :MTFA31054-1-0228  
 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%H2O  
 Inj. Volume : 35ul

Time	Module	Action	Value
0.01	Pumps	B.Conc	25
25.00	Pumps	B.Conc	50
33.00	Pumps	B.Conc	100
38.00	Pumps	B.Conc	100
40.00	Pumps	B.Conc	25
50.00	Controller	Stop	

### Chromatogram

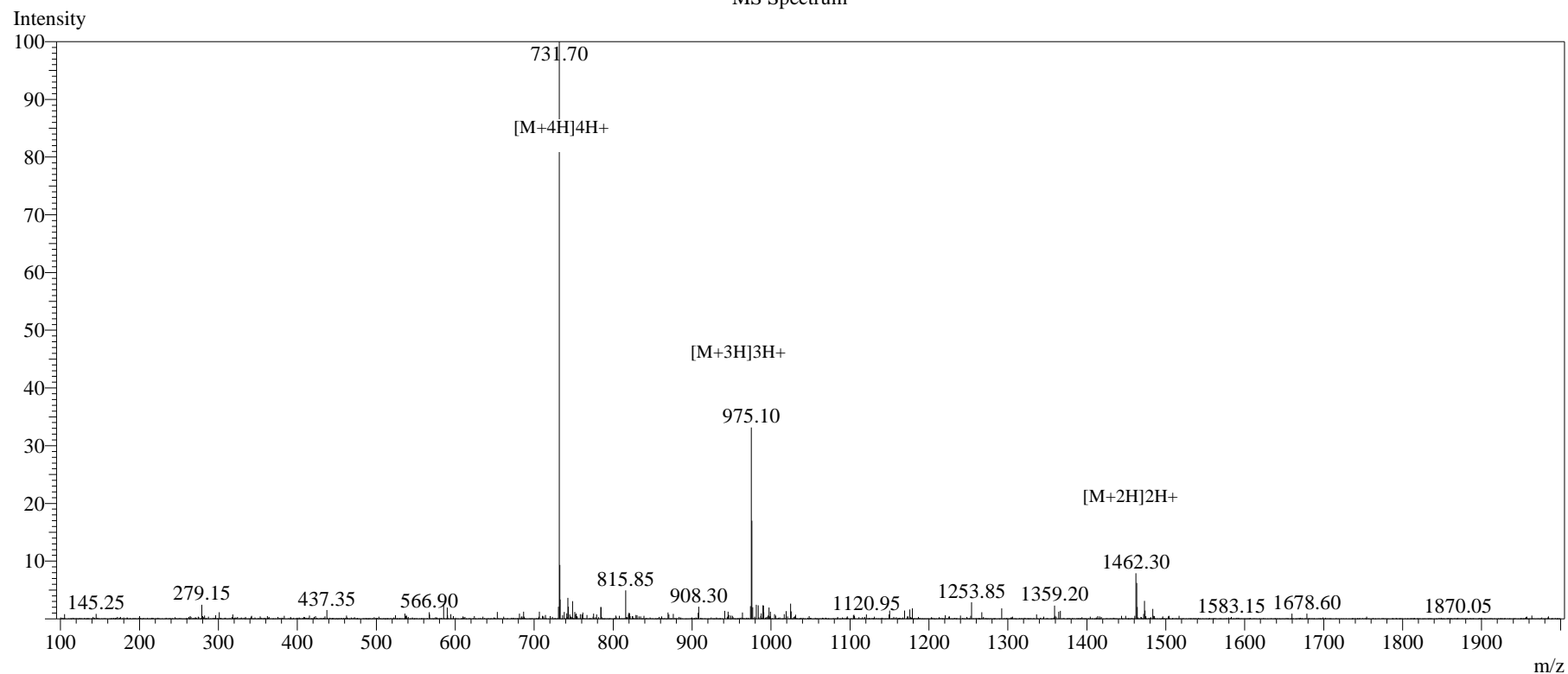


### Peak Table

Detector A 214nm

Peak#	Ret. Time	Area	Height	Area%
1	8.188	4096	552	0.022
2	11.025	3657	465	0.019
3	11.484	2284	275	0.012
4	16.773	514872	34780	2.724
5	17.370	17957481	1300456	95.008
6	17.928	418598	27504	2.215
Total		18900988	1364033	100.000

## MS Spectrum



## Sample Information

Dissolution method	:15% ACN+85% H <sub>2</sub> O	Interface	:ESI	Prerod Bias	:+4.5kv
Date Acquired	:2024/03/29 14:18:36	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	:MTFA31054-1
Name	:Plantaricin S alpha chain
Sequence	:RNKLAYNMGHYAGKATIFGLAAWALLA (Acetate Salt)
Lot.No	:MTFA31054-1-0228
Theoretical	:2922.39
Observed	:2922.80

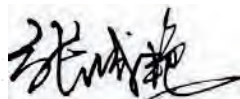
**CERTIFICATE OF ANALYSIS**

<b>Product Name</b>	Plantaricin S beta chain, Cat.# 303479 (TFA removed)
<b>Lot No.</b>	MTFA31054-2-0228
<b>Sequence</b>	KKKKQSWYAAAGDAIVSFGEGFLNAW (Acetate Salt)
<b>Dissolution condition</b>	100%H2O
<b>Length</b>	26AA
<b>Modification</b>	acetate salt
<b>Molecular Weight (MW)</b>	2873.23
<b>Storage</b>	-20°C

<b>Test Items</b>	<b>Specifications</b>	<b>Results</b>
<b>MW by MS</b>	2873.80	Conforms
<b>Purity by HPLC</b>	>95%	97.489%
<b>Peptide content</b>	N/A	N/A
<b>Moisture content</b>	N/A	N/A
<b>Acetic acid content</b>	N/A	N/A
<b>Appearance</b>	White to off-white lyophilized powder	Conforms
<b>Quantity</b>	20mg	5.0mg*4

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Apr/01/2024

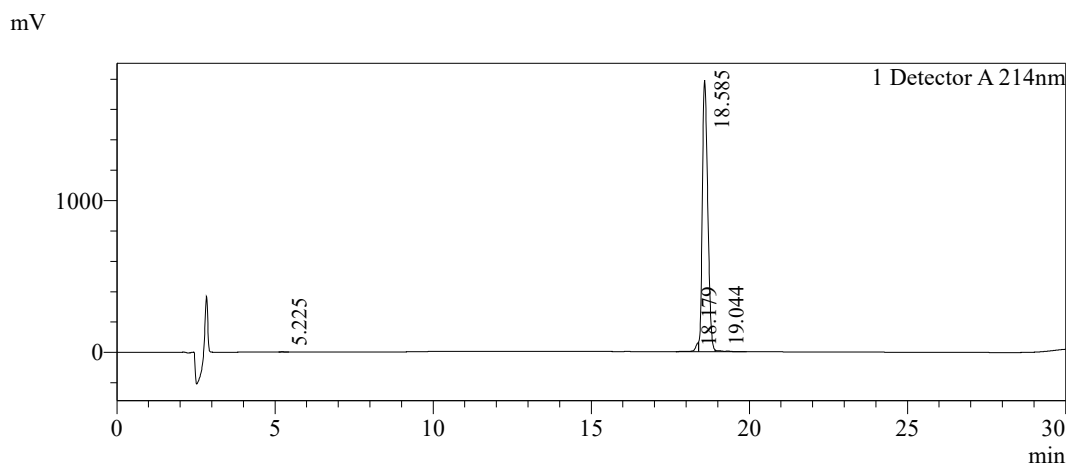


### Sample Information

Order ID : MTF31054-2  
 Name : Plantarin S beta chain  
 Sequence : KKKKQSWYAAAGDAIVSFGEGFLNAW (Acetate Salt)  
 Lot. No : MTF31054-2-0228  
 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 : Kromasil 100-5-C18 (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	30
30.00	Pumps	B.Conc	60
33.00	Pumps	B.Conc	100
38.00	Pumps	B.Conc	100
40.00	Pumps	B.Conc	30
50.00	Controller	Stop	

### Chromatogram

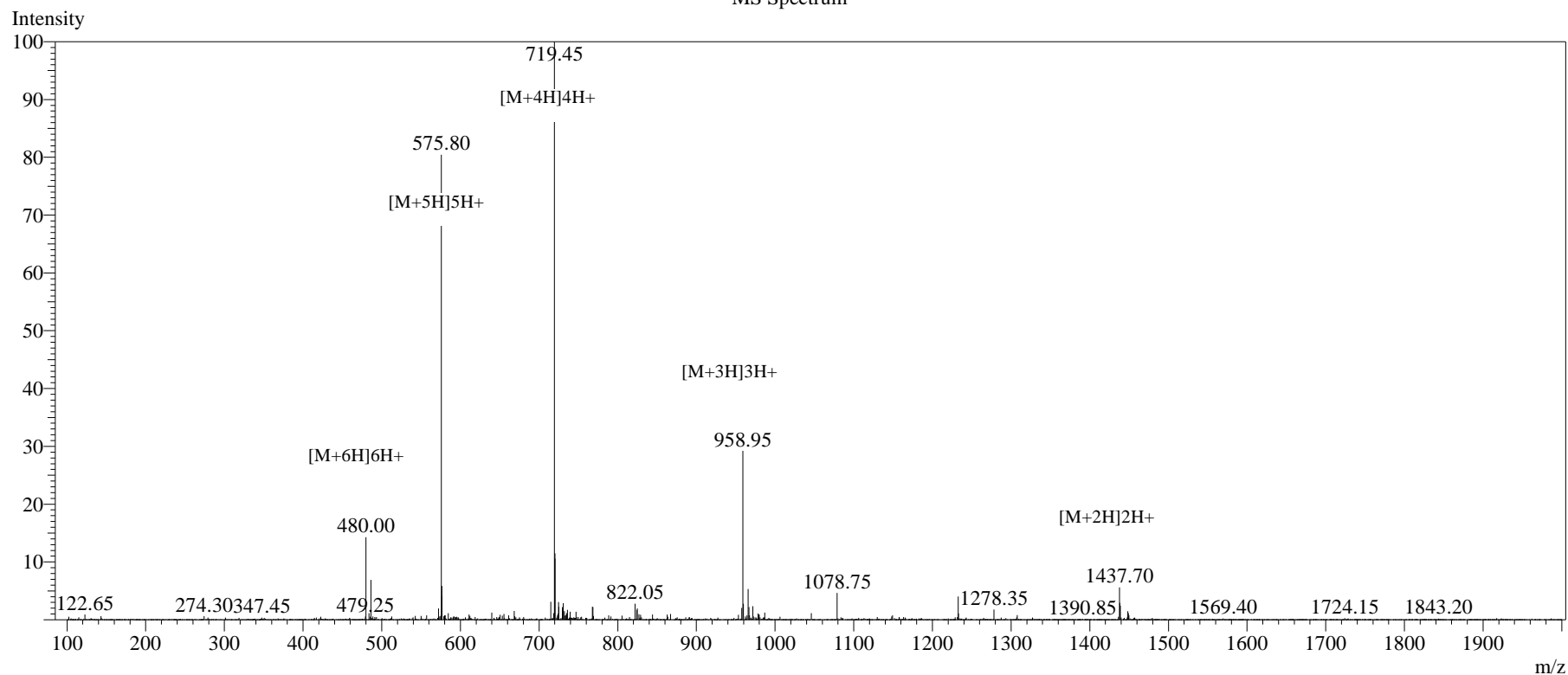


### Peak Table

Detector A 214nm

Peak#	Ret. Time	Area	Height	Area%
1	5.225	22614	3615	0.103
2	18.179	385285	2908	1.756
3	18.585	21392583	1787484	97.489
4	19.044	143156	5611	0.652
Total		21943639	1799619	100.000

### MS Spectrum



### Sample Information

Dissolution method	:15% ACN+85% H <sub>2</sub> O	Interface	:ESI	Prerod Bias	:+4.5kv
Date Acquired	:2024/03/15 13:39:06	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	:MTFA31054-2
Name	:Plantaricin S beta chain
Sequence	:KKKKQSWYAAAGDAIVSFGEGFLNAW (Acetate Salt)
Lot.No	:MTFA31054-2-0228
Theoretical	:2873.23
Observed	:2873.80