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**CERTIFICATE OF ANALYSIS**


<b>Product Name</b>	Bacteriocin peptide PlnE (TFA removed)
<b>Lot No.</b>	MTFB20812-01-260506
<b>Sequence</b>	FNRGGYNFGKSVRHVVDAIGSVAGIRGILKSIR (Acetate Salt)
<b>Dissolution condition</b>	100%H <sub>2</sub> O
<b>Modification</b>	Acetate salt
<b>Molecular Weight (MW)</b>	3545.10
<b>Storage</b>	-20°C

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<b>Test Items</b>	<b>Specifications</b>	<b>Results</b>
<b>MW by MS</b>	3545.50	Conforms
<b>Purity by HPLC</b>	>95%	95.178%
<b>Endotoxin Content</b>	N/A	N/A
<b>TFA solubility</b>	N/A	N/A
<b>Moisture content</b>	N/A	N/A
<b>Peptide content</b>	N/A	N/A
<b>Appearance</b>	White to off-white lyophilized powder	Conforms
<b>Quantity</b>	10 mg	5.0mg*2

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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

May/15/2026

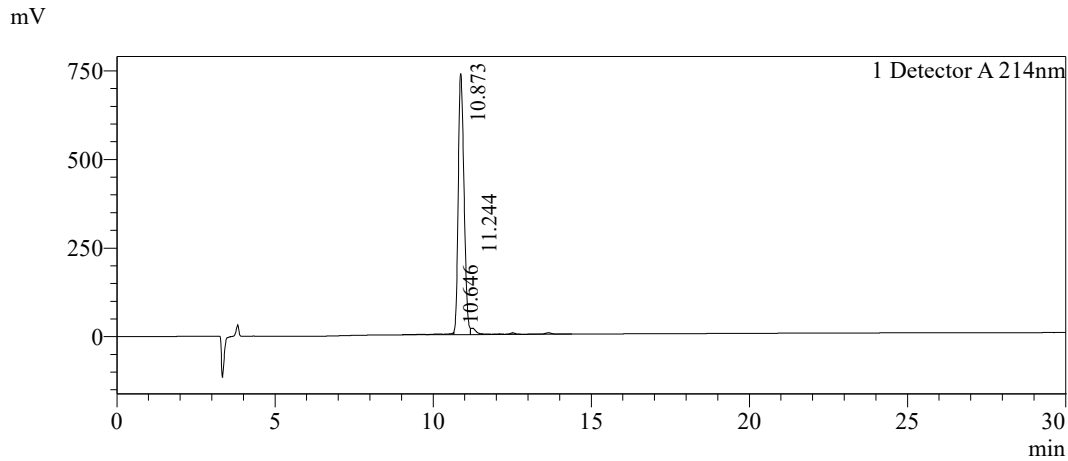


Sample Information

Order ID :MTFB20812-01  
 Name :PInE  
 Sequence :FNRRGGYNFGKSVRHVVDAIGSVAGIRGILKSIR (Acetate Salt)  
 Lot. No :MTFB20812-01-260506  
 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 : 25ul

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

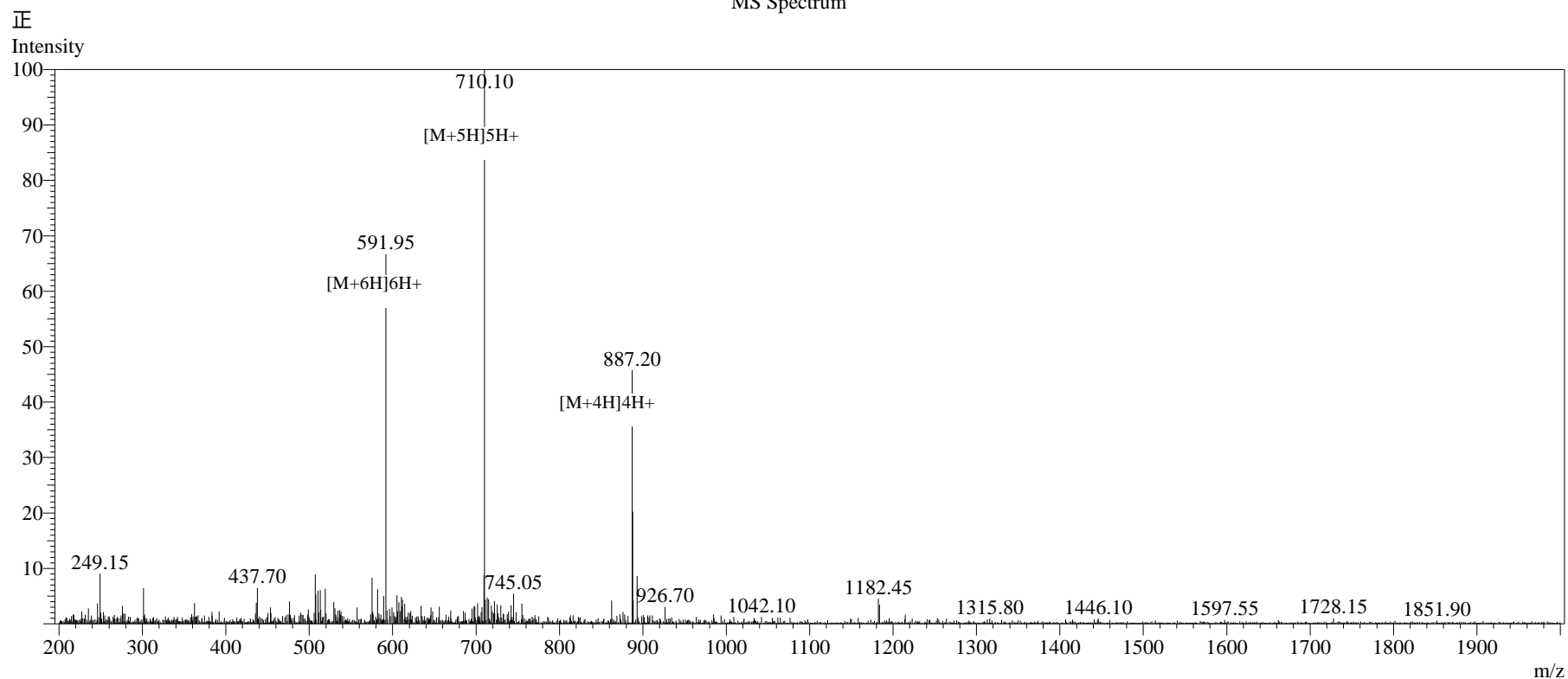


Peak Table

Detector A 214nm

Peak#	Ret. Time	Area	Height	Area%
1	10.646	104688	5566	1.062
2	10.873	9386206	736784	95.178
3	11.244	370850	17983	3.760
Total		9861745	760333	100.000

## MS Spectrum



## Sample Information

Dissolution method	:15% ACN+85% H <sub>2</sub> O	Interface	:ESI	Prerod Bias	:+4.5kv
Date Acquired	:2026/05/14 10:33:39	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	:MTFB20812-01
Name	:PlnE
Sequence	:FNRRGGYNFGKSVRHVVDAIGSVAGIRGILKSIR (Acetate Salt)
Lot.No	:MTFB20812-01-260506
Theoretical	:3545.10
Observed	:3545.50

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**CERTIFICATE OF ANALYSIS**

<b>Product Name</b>	Bacteriocin peptide PlnF (TFA removed)
<b>Lot No.</b>	MTFB20812-02-260507
<b>Sequence</b>	VFHAYSARGVRNNYKSAVGPADWVISAVRGIHG (Acetate Salt)
<b>Dissolution condition</b>	100%H <sub>2</sub> O
<b>Modification</b>	Acetate salt
<b>Molecular Weight (MW)</b>	3703.15
<b>Storage</b>	-20°C

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<b>Test Items</b>	<b>Specifications</b>	<b>Results</b>
<b>MW by MS</b>	3704.00	Conforms
<b>Purity by HPLC</b>	>95%	95.213%
<b>Endotoxin Content</b>	N/A	N/A
<b>TFA solubility</b>	N/A	N/A
<b>Moisture content</b>	N/A	N/A
<b>Peptide content</b>	N/A	N/A
<b>Appearance</b>	White to off-white lyophilized powder	Conforms
<b>Quantity</b>	10 mg	5.0mg*2

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Certified by:



May/15/2026

Quality Assurance Department

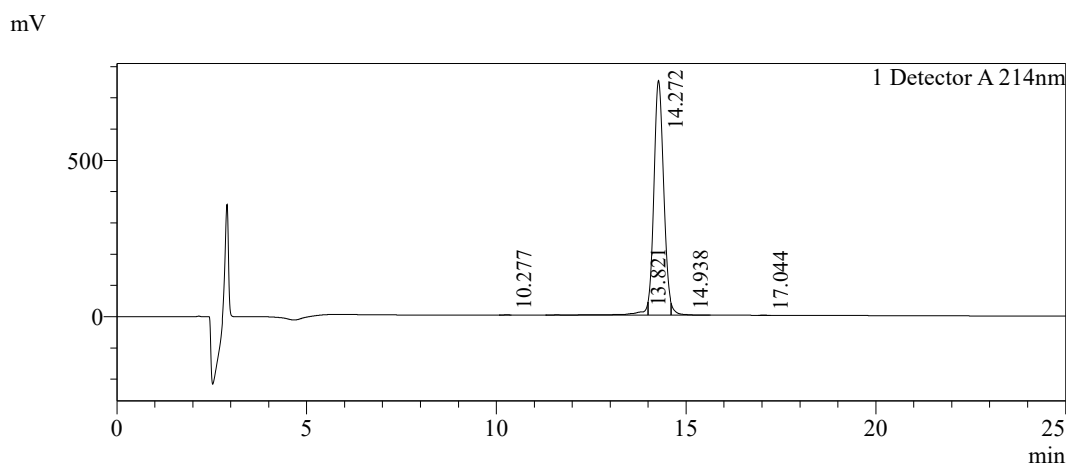


Sample Information

Order ID :MTFB20812-02  
 Name :PlnF  
 Sequence :VFHAYSARGVRNNYKSAVGPADWVISAVRGFIHG (Acetate Salt)  
 Lot. No :MTFB20812-02-260507  
 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%H2O  
 Inj. Volume : 15ul

Time	Module	Action	Value
0.01	Pumps	B.Conc	30
25.00	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	

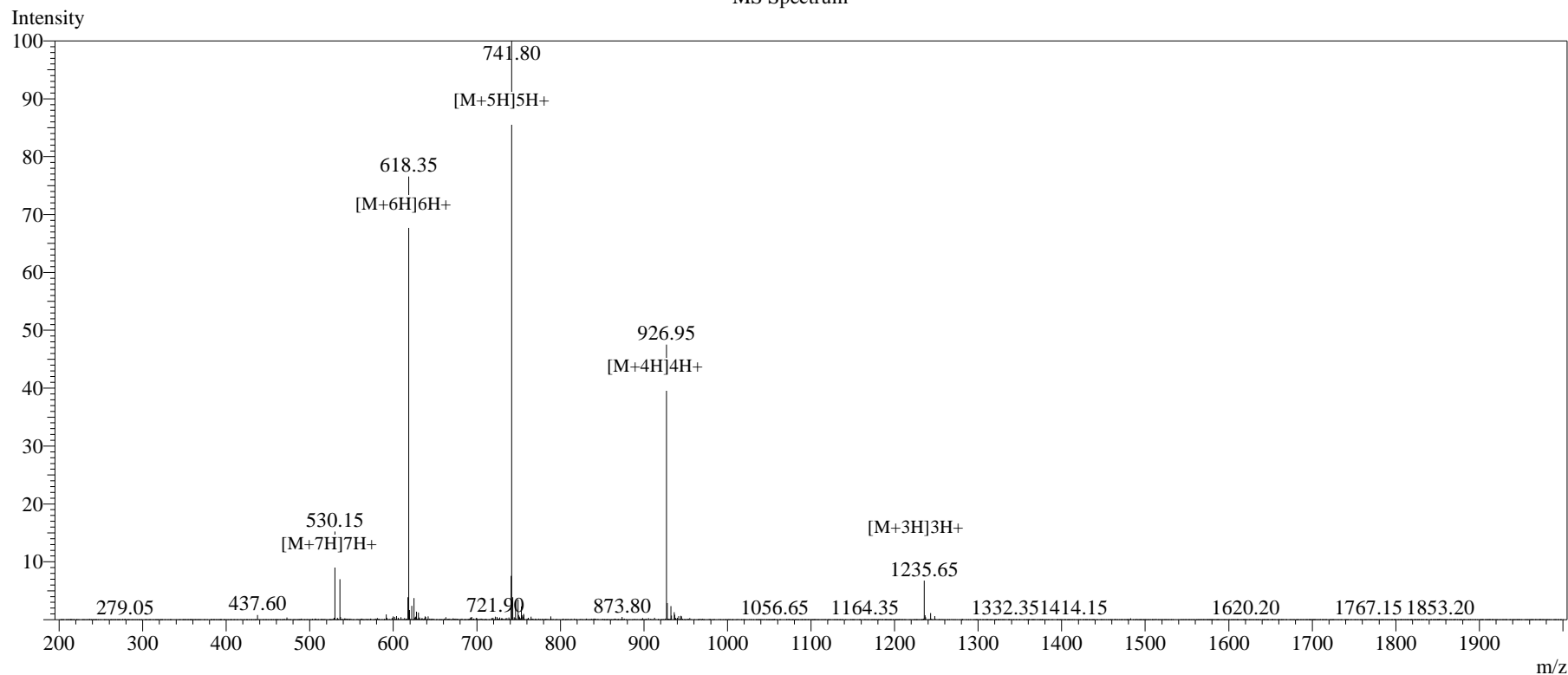
Chromatogram



Peak Table

Detector A 214nm				
Peak#	Ret. Time	Area	Height	Area%
1	10.277	1738	253	0.013
2	13.821	424645	9977	3.071
3	14.272	13163691	750311	95.213
4	14.938	232746	2489	1.683
5	17.044	2709	349	0.020
Total		13825529	763380	100.000

MS Spectrum



Sample Information

Dissolution method	:15% ACN+85% H <sub>2</sub> O	Interface	:ESI	Prerod Bias	:+4.5kv
Date Acquired	:2026/04/28 14:49:30	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	:MTFB20812-02
Name	:PlnF
Sequence	:VFHAYSARGVRNYYKSAVGPADWVISAVRGFIHG(Acetate Salt)
Lot.No	:MTFB20812-02-260507
Theoretical	:3703.15
Observed	:3704.00