

Article

Different secondary metabolite profiles of phylogenetically almost identical *Streptomyces griseus* strains originating from geographically remote locations

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Table of contents

Alignment of 16S rRNA	1
Summary table of <i>Streptomyces</i> dereplication-HRLCMS	2
Supplementary material: dereplication-HRLCMS	3
Dereplication-HRLCMS of <i>Streptomyces</i> SN25_8.1	4
Albidopyrone	5
Cyclizidine	6
Gancidin W	7
YF-0200-R-B	8
Emycin E	9
6-beta-deoxy-5-hydroxy-tetracycline	10
Epithienamycin C	11
SF-733 C	12
Cycloheximide	13
Phenatic acid	14
Netropsin	15
N-Valyldihydroxyhomoproline	16
Actiphenol	17
TMC-86B	18
Protomycin	19
Unknown	20
Dereplication-HRLCMS of <i>Streptomyces griseus</i> subsp. <i>griseus</i> DSM 40236T	21
Gancidin W	22
YF-0200-R-B	23
Emycin E	24
6-beta-deoxy-5-hydroxy-tetracycline	25
Fortimicin KK1	26
Phenatic acid	27
Netropsin	28
Actiphenol	29
TMC-86B	30
Capromycin	31
Halstoctacosanolide B	32
YO-7625	33
Unknown	34
<i>Streptomyces griseus</i> 16S rRNA comparison	35
Phylogenetic results: <i>Streptomyces</i> sp. SN25_8.1	36
Phylogenetic results: <i>Streptomyces griseus</i> subsp. <i>griseus</i> DSM 40236T	42
Antibiotic test	48
HPLC-ELSD Abundance profile for <i>Streptomyces</i> sp. SN25_8.1	49
HPLC-ELSD Abundance profile for <i>Streptomyces griseus</i> subsp. <i>griseus</i> DSM 40236T	50

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Easter_Island 1 UGAGUUUGAUCUUGGUCAGGACGAACCGUUGGGGGCCUUAACACAUUGCAAGUCGAACGAUGAAGCCUUUCGGGUGGAUUAGUGGC
Russia 1 -GAGUUUGAUCUUGGUCAGGACGAACCGUUGGGGGCCUUAACACAUUGCAAGUCGAACGAUGAAGCCUUUCGGGUGGAUUAGUGGC

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Easter_Island 1441 GUCGAAGGUGGGACUGGGCAUUGGACGAAGUCGUAAAC
Russia 1440 GUCGAAGGUGGGACUGGGCAUUGGACGAAGUCGUAAAC

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Supplementary Figure 1 Alignment of the 16S rRNA gene sequences of two *Streptomyces* strains. Easter Island: *Streptomyces* sp. SN25_8.1 (NCBI access# MK734066), Russia: *Streptomyces griseus* subsp. griseus DSM 40236^T (NCBI access# MK734067)

Dereplication - HRLCMS

Table 1 Dereplication overview

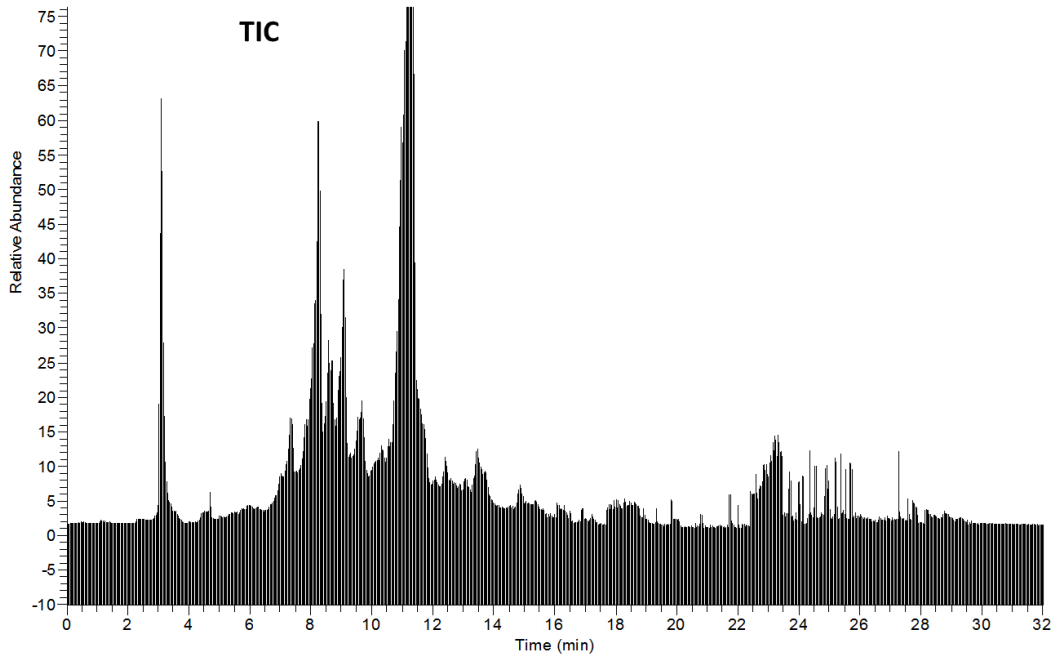
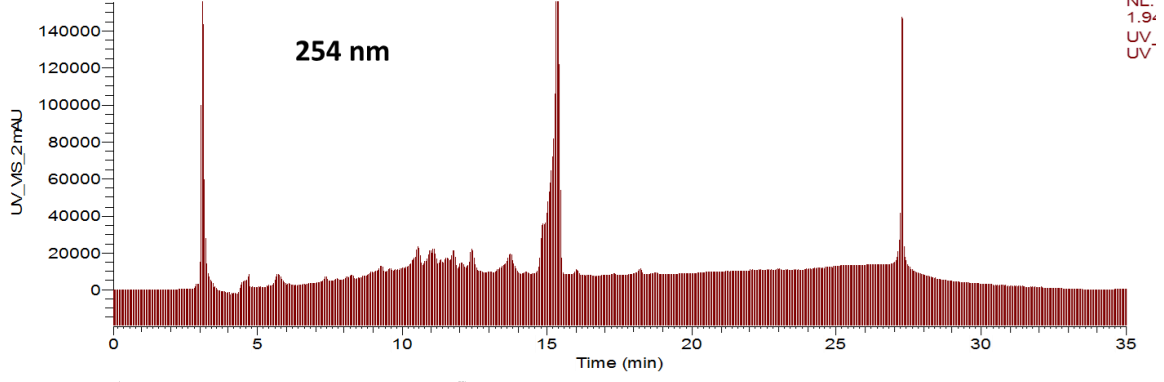
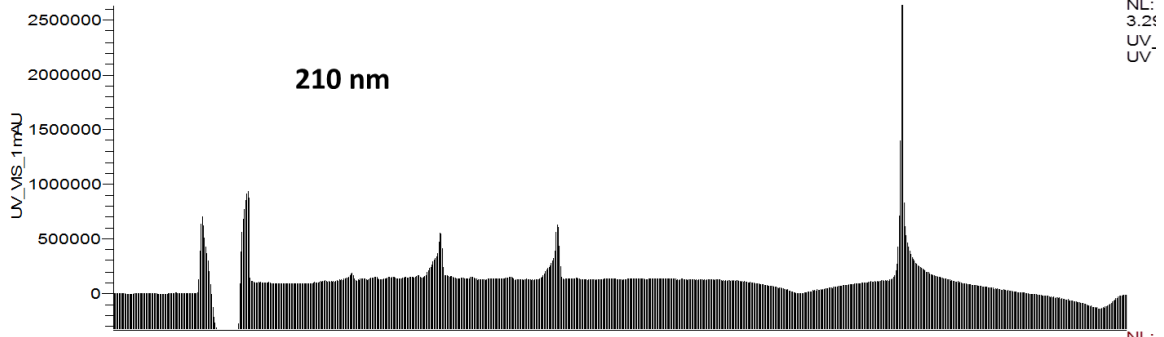
<i>Streptomyces</i> sp. SN25_8.1			<i>Streptomyces griseus</i> subsp. <i>griseus</i> DSM 40236 τ		
rt	mass	compounds	rt	mass	compounds
3.1	259.0844	Albidopyrone			
5.38	292.19019	Cyclizidine			
8.58	211.14388	Gancidin W	8.58	211.14388	Gancidin W
9.33	245.12811	YF-0200-R-B	9.33	245.12811	YF-0200-R-B
9.54	311.13843	Emycin E	9.54	311.13843	Emycin E
10	445.23267	Tetracycline	10	445.23267	Tetracycline
10.56	315.13336	Epithienamycin C			
			10.65	367.26843	Fortimicin KK1
11.33	282.16956	Cycloheximide			
11.6	340.1748	SF-733 C			
12.39	294.13306	Phenatic acid	12.39	294.13306	Phenatic acid
13.12	431.20593	Netropsin	13.12	431.20593	Netropsin
13.73	261.18454	N-Valyldihydroxyhomoproline			
15.3	276.12268	Actiphenol	15.3	276.12268	Actiphenol
17.26	415.21118	TMC-86B	17.26	415.21118	TMC-86B
18.46	352.2164	Protomycin			
			18.97	669.47778	Capromycin
			19.18	831.60242	Halstoctacosanolide B
			20.42	889.64447	YO-7625
			24.98	813.59229	Unknown
24.8	579.53381	Unknown			

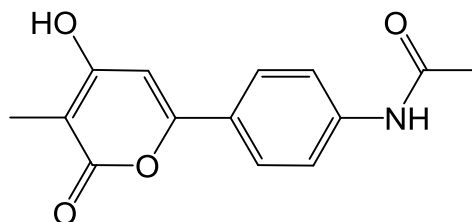
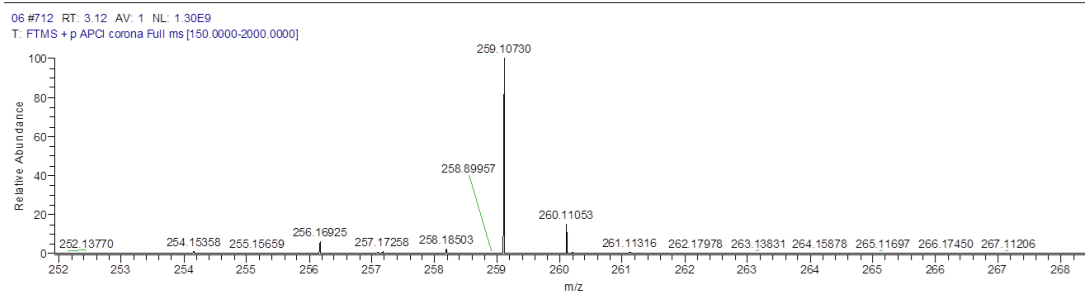
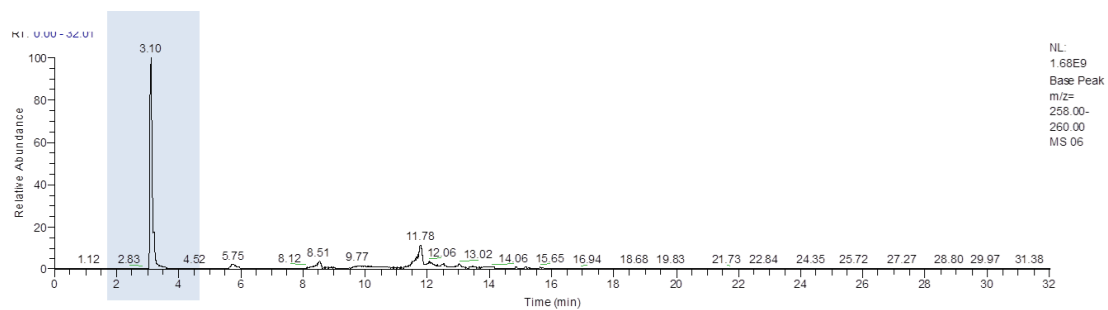
Supplementary material

Dereplication - HRLCMS

Streptomyces sp. SN25_8.1

RT: 0.00 - 35.00



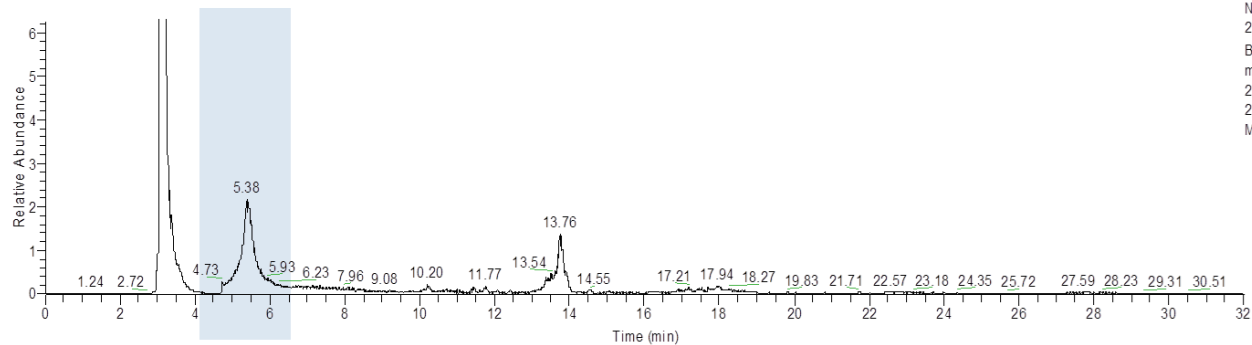


Albidopyrone

Chemical Formula: C₁₄H₁₃NO₄

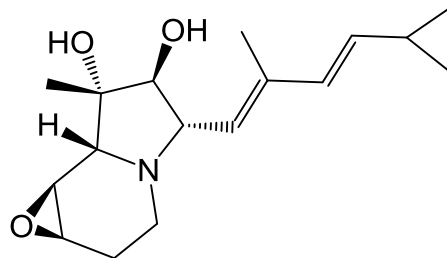
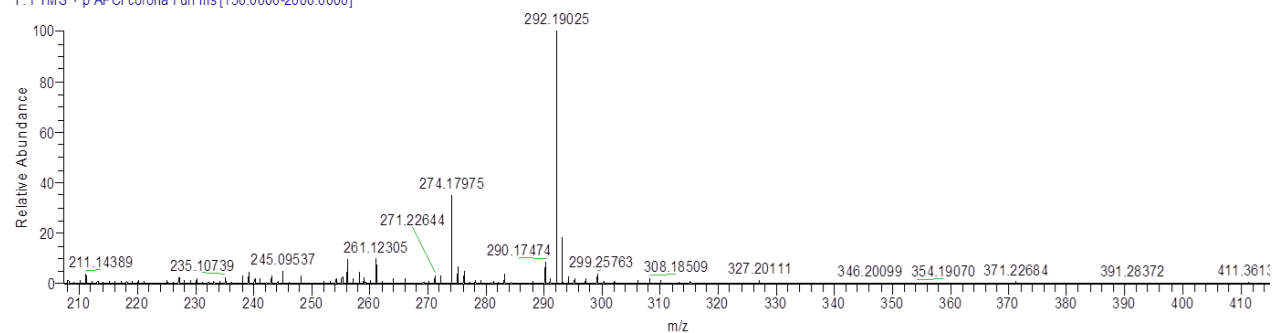
Exact Mass: 259.08

Albidopyrone



NL:
2.20
Base
m/z=
291
292
MS (

06 #1223 RT: 5.36 AV: 1 NL: 3.89E7
T: FTMS + p APCI corona Full ms [150.0000-2000.0000]

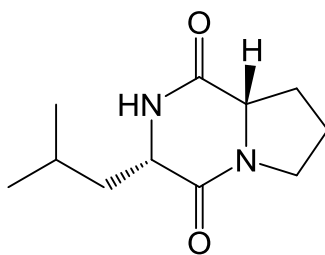
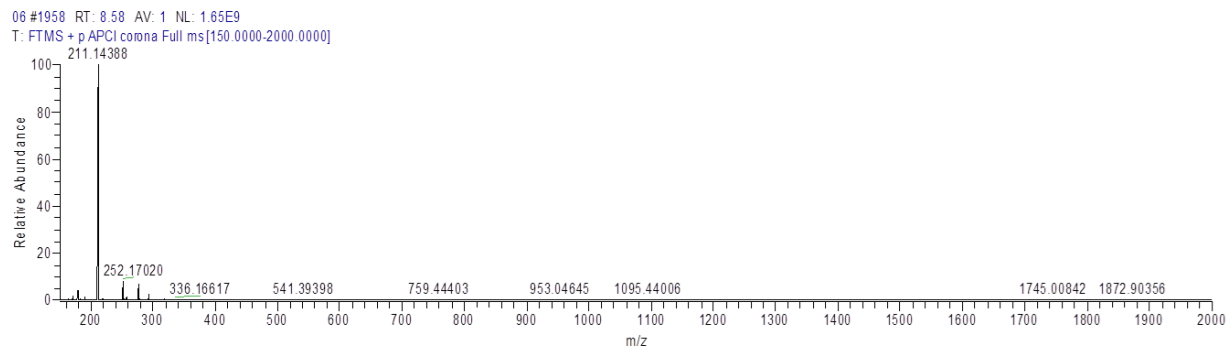
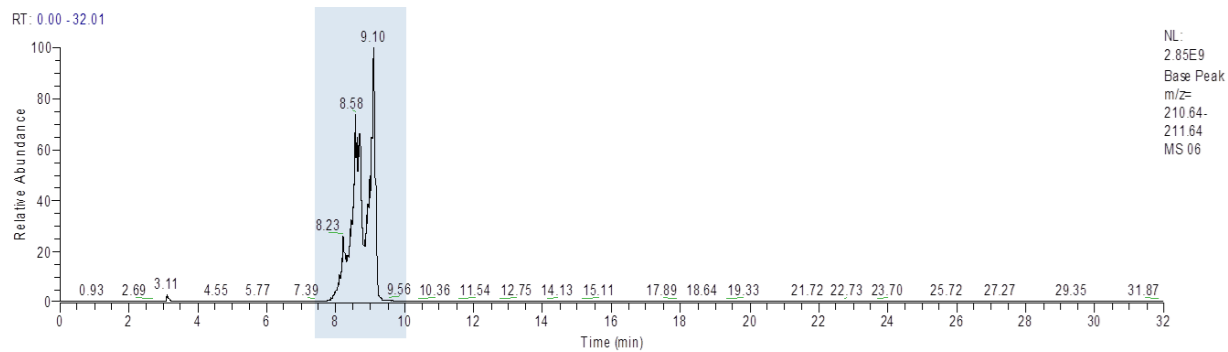


Cyclizidine

Chemical Formula: $C_{17}H_{25}NO_3$

Exact Mass: 291.18

Cyclizidine

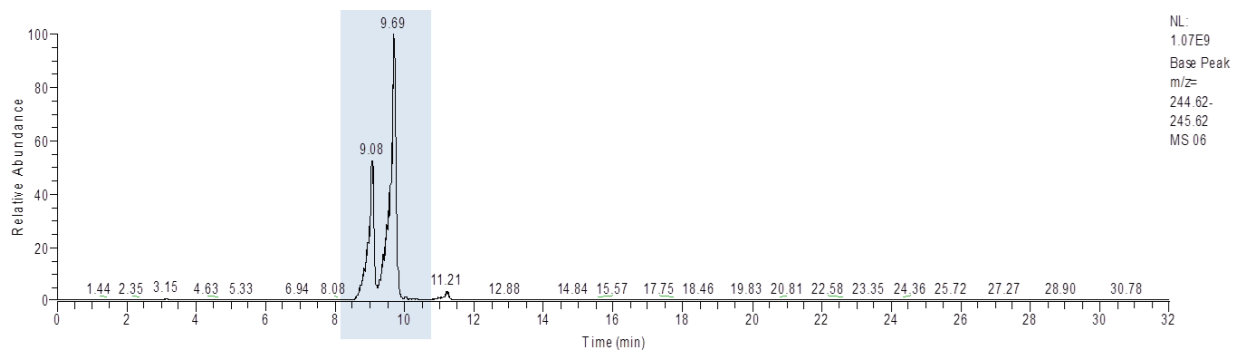


Gancidin W

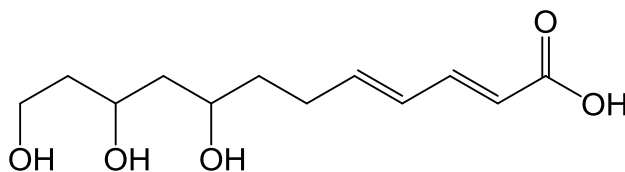
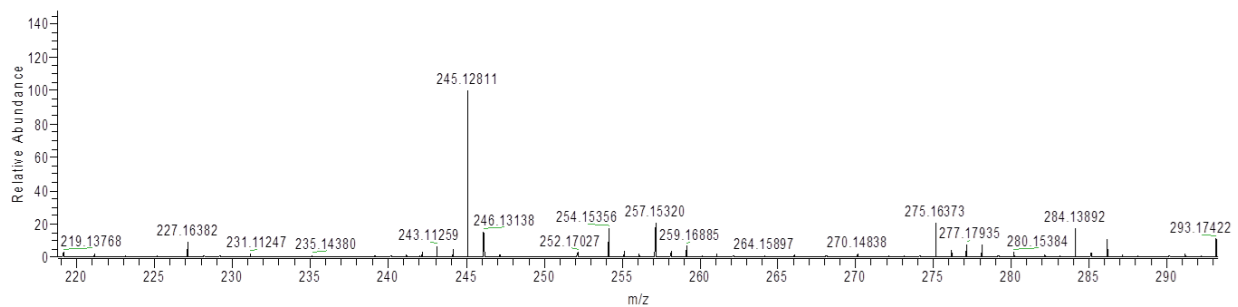
Chemical Formula: $C_{11}H_{18}N_2O_2$

Exact Mass: 210.14

Gancidin W



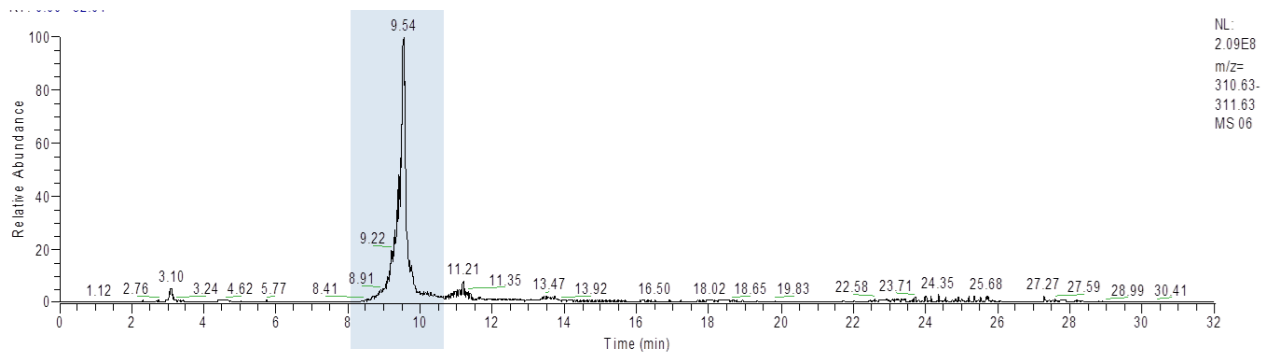
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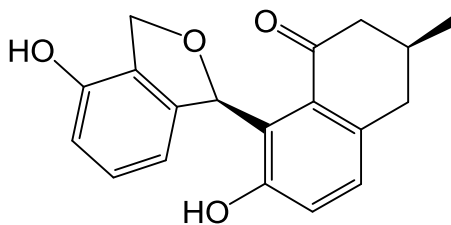
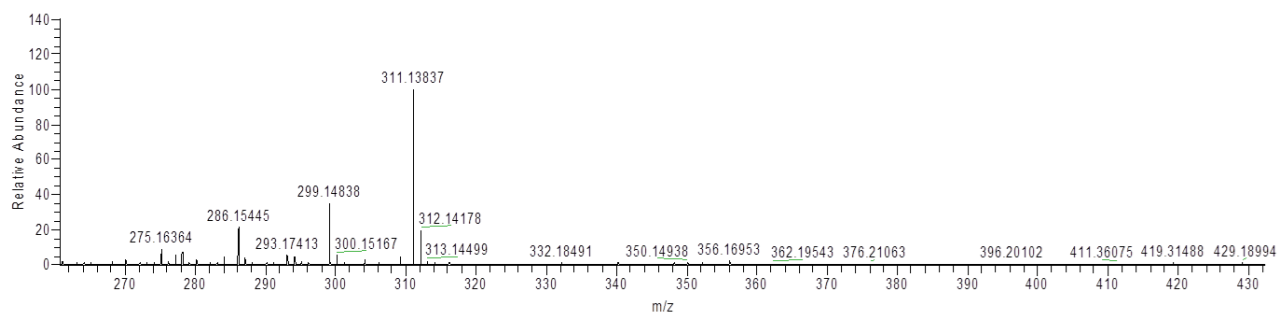
YF-0200-R-B

Exact Mass: 244.13
 Molecular Weight: 244.29

YF-0200-R-B



06 #2168 RT: 9.50 AV: 1 NL: 1.33E8
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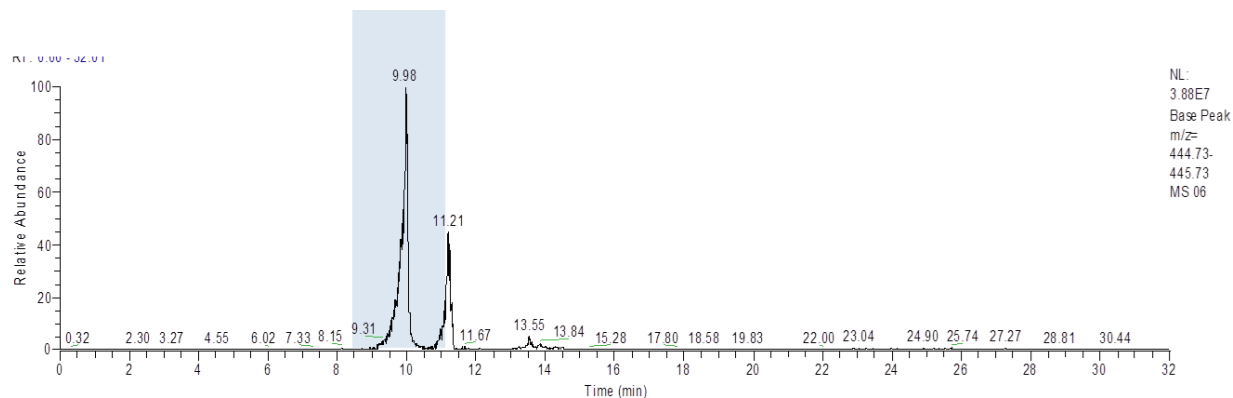


Emycin-E

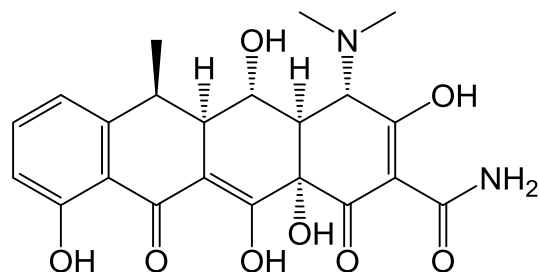
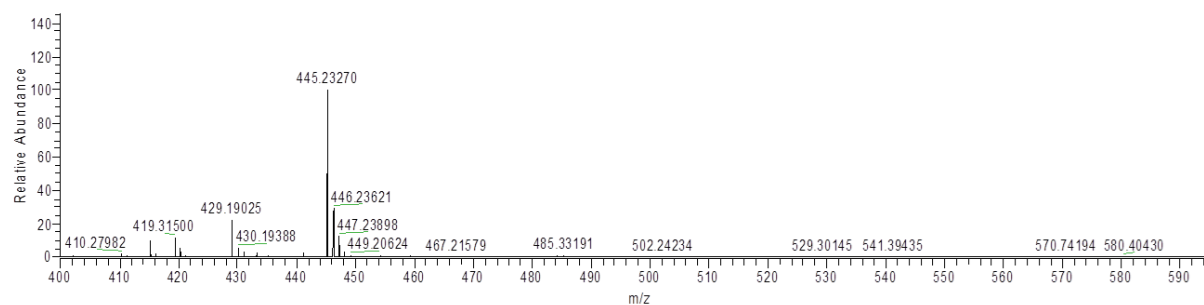
Chemical Formula: $C_{19}H_{18}O_4$

Exact Mass: 310.12

Emycin E



06 #2264 RT: 9.92 AV: 1 NL: 1.85E7
 T: FTMS + p APCI corona Full ms[150.0000-2000.0000]



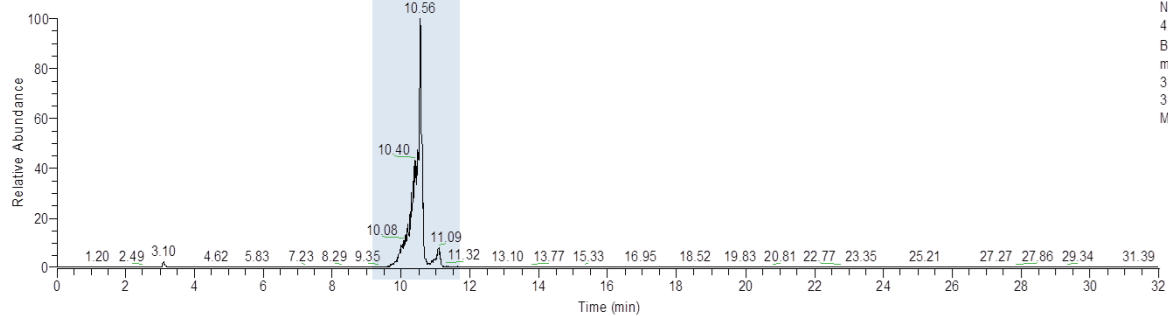
6-beta-deoxy-5-hydroxy-tetracycline

Chemical Formula: $C_{22}H_{24}N_2O_8$

Exact Mass: 444.15

6-beta-deoxy-5-hydroxy-tetracycline

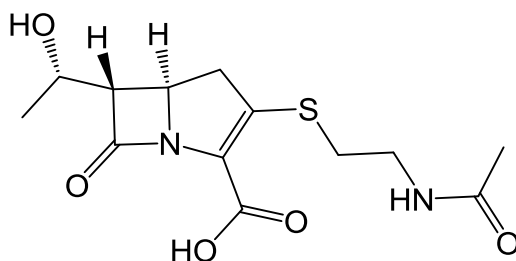
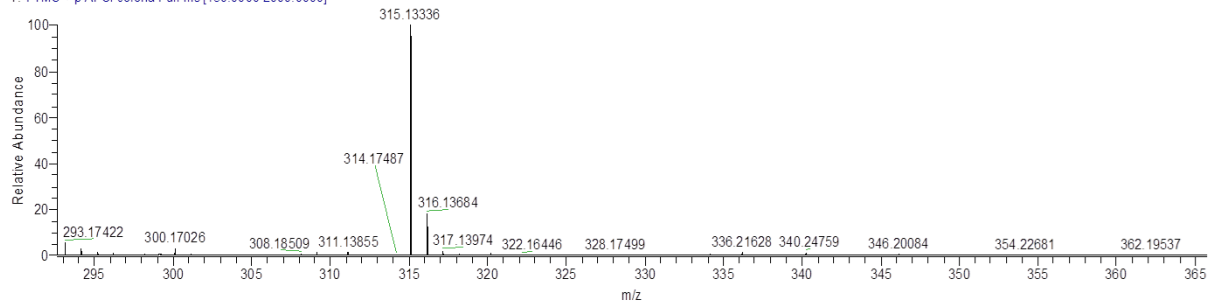
RT: 0.00 - 32.01



NL:
4.87E8
Base Peak
m/z=
314.63-
315.63
MS 06

06 #2386 RT: 10.45 AV: 1 NL: 1.59E8

T: FTMS + p APCI corona Full ms [150.0000-2000.0000]

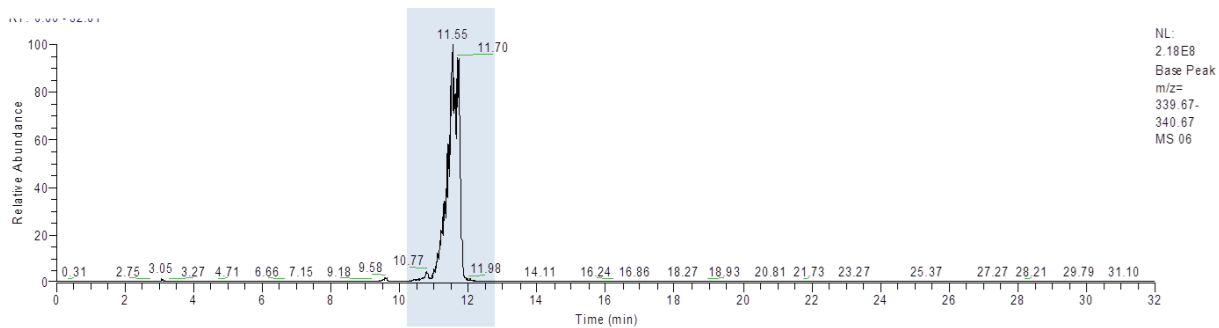


Epithienamycin-C

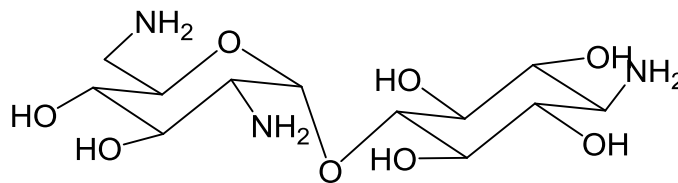
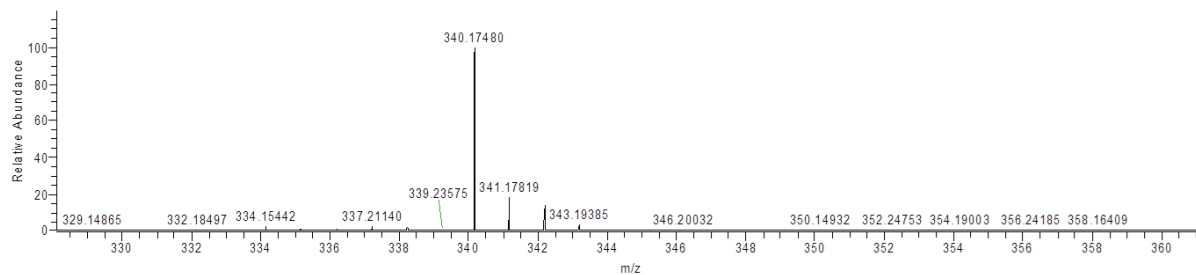
Chemical Formula: $C_{13}H_{18}N_2O_5S$

Exact Mass: 314.09

Epithienamycin C



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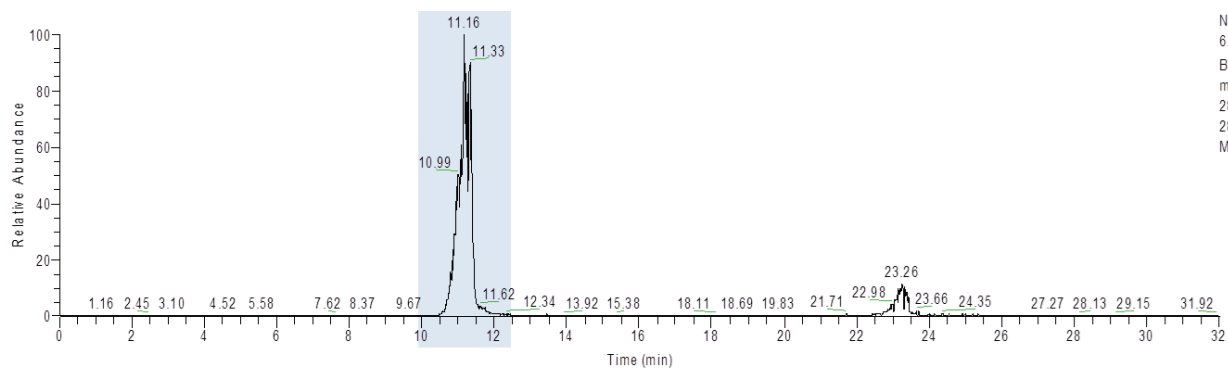


SF-733C

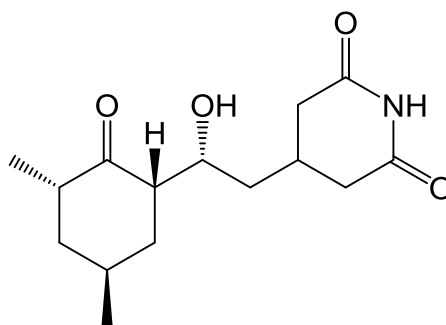
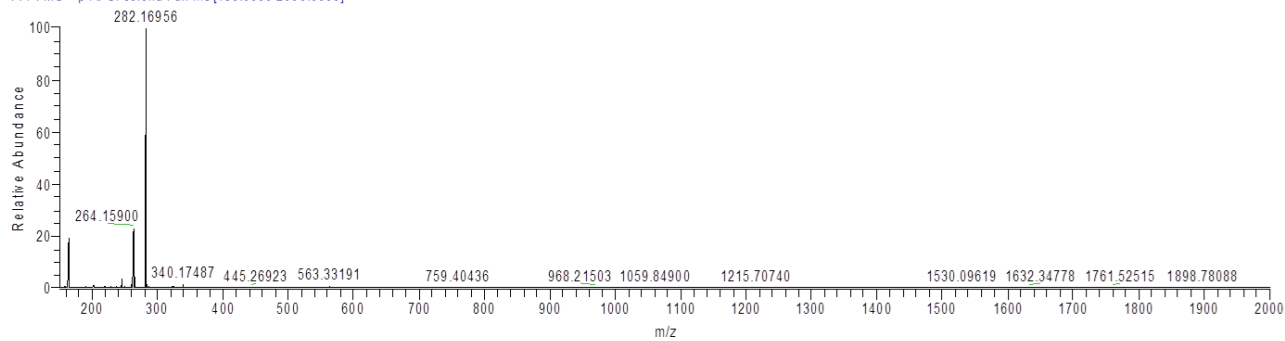
Chemical Formula: $C_{12}H_{25}N_3O_8$

Exact Mass: 339.16

SF-733 C



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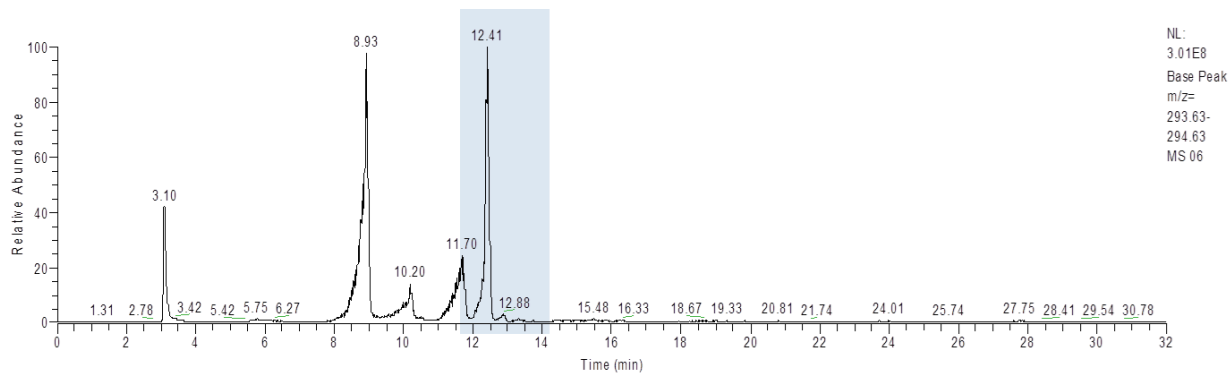


Cycloheximide

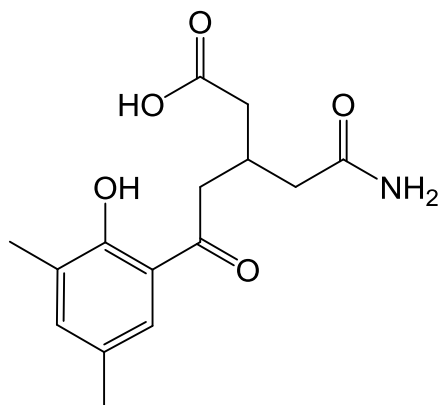
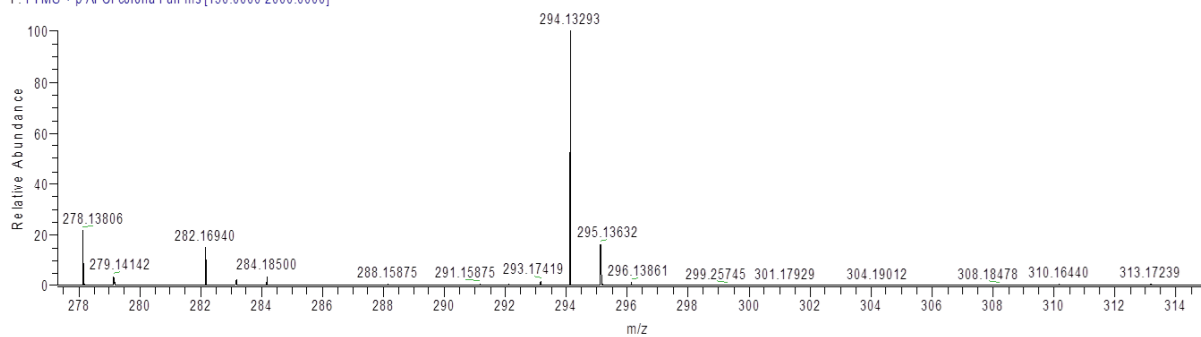
Chemical Formula: $C_{15}H_{23}NO_4$

Exact Mass: 281.16

Cycloheximide



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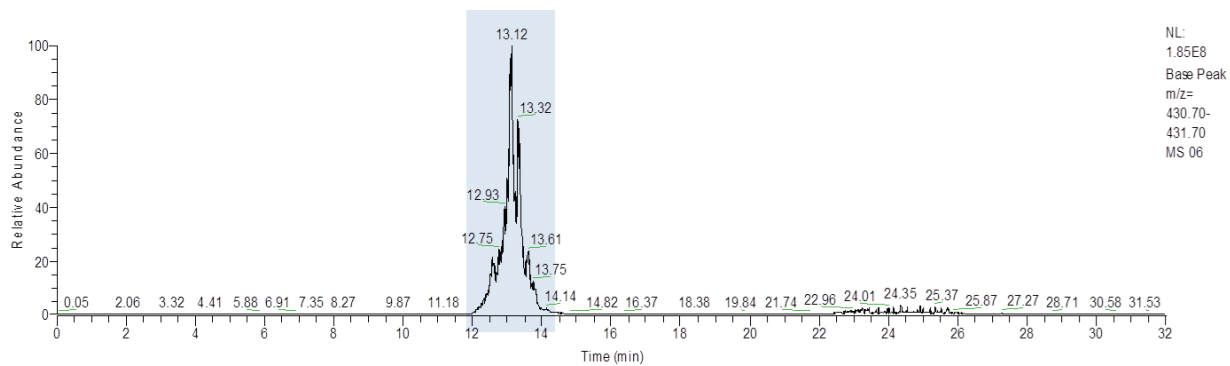


Phenetic acid

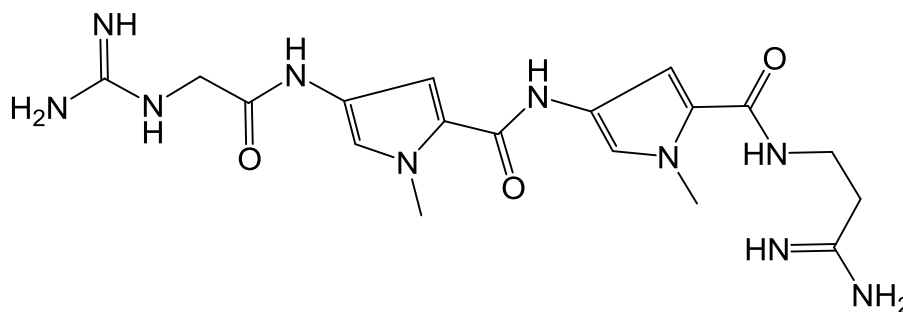
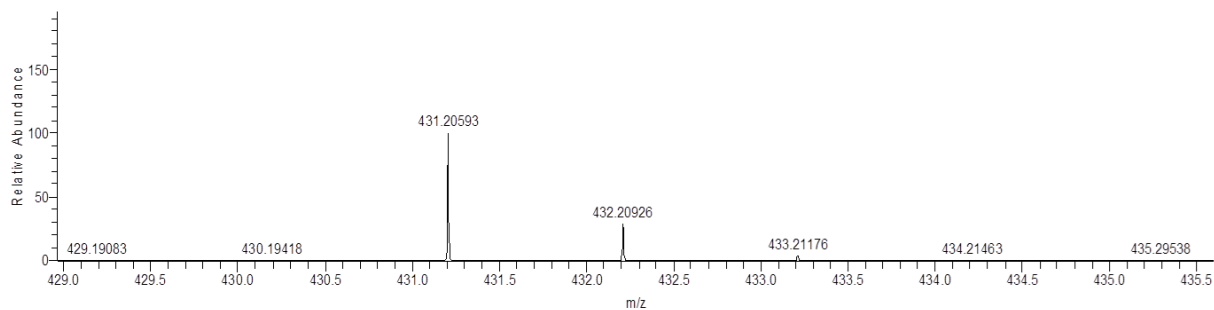
Chemical Formula: $C_{15}H_{19}NO_5$

Exact Mass: 293.13

Phenetic acid



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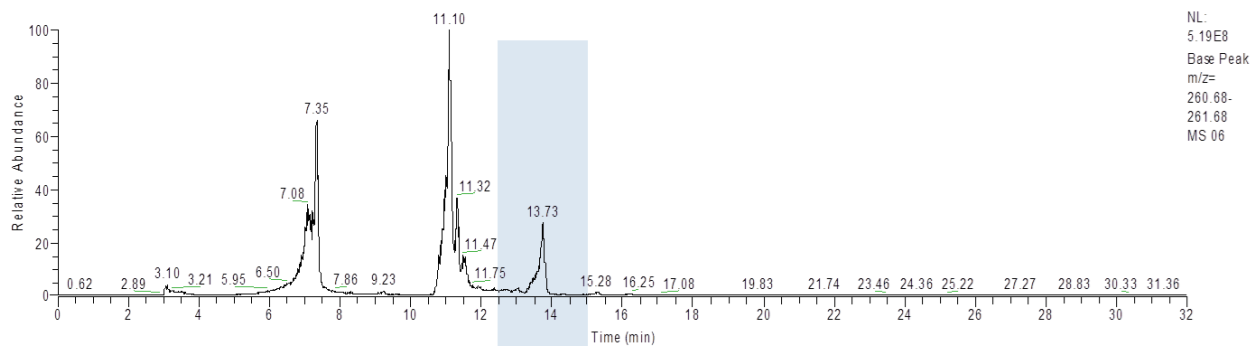


Netropsin

Chemical Formula: $C_{18}H_{26}N_{10}O_3$

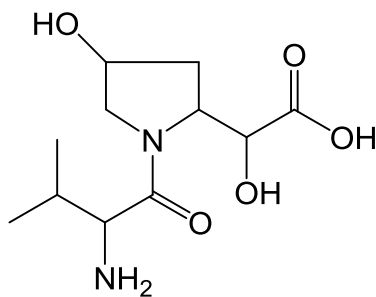
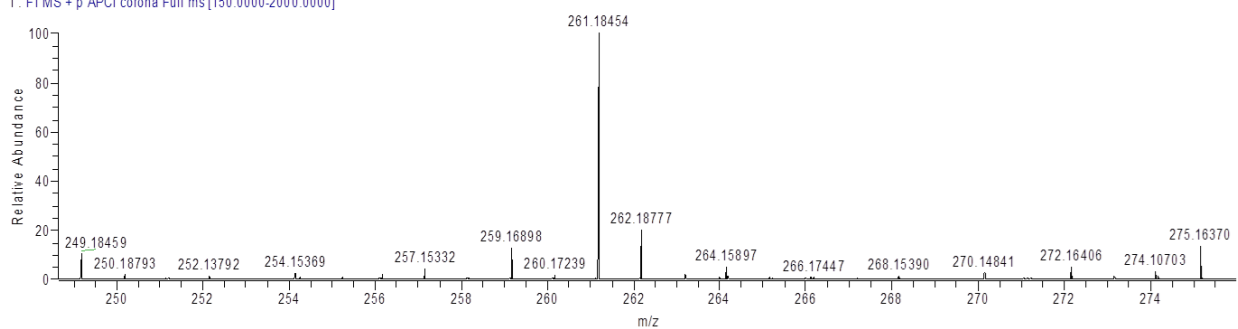
Exact Mass: 430.22

Netropsin



NL:
5.19E8
Base Peak
m/z=
260.68-
261.68
MS 06

06 #3122 RT: 13.68 AV: 1 NL: 7.63E7
T: FTMS + p APCI corona Full ms [150.0000-2000.0000]



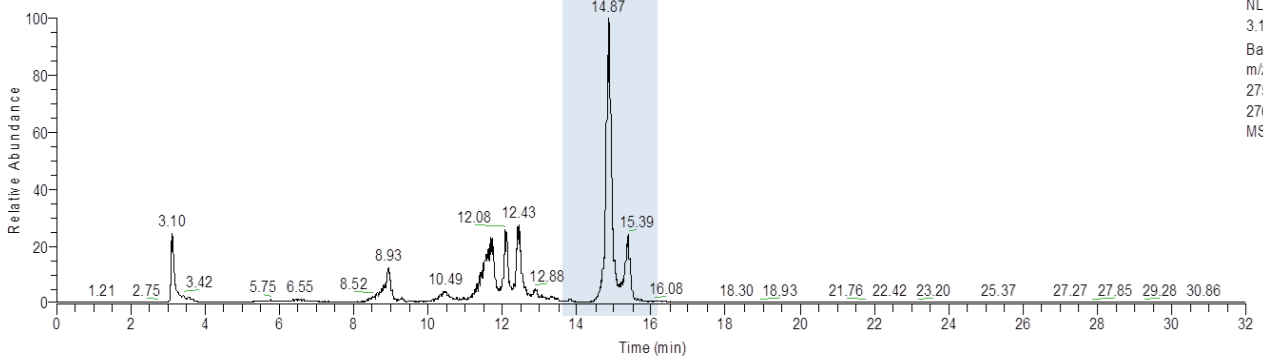
N-Valyldihydroxyhomoproline

Chemical Formula: $C_{11}H_{20}N_2O_5$

Exact Mass: 260.14

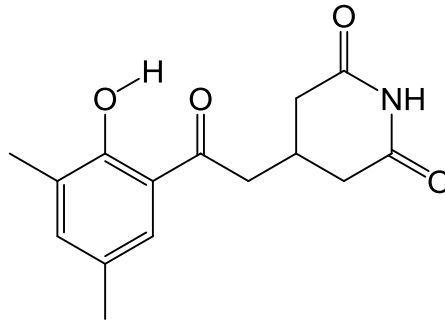
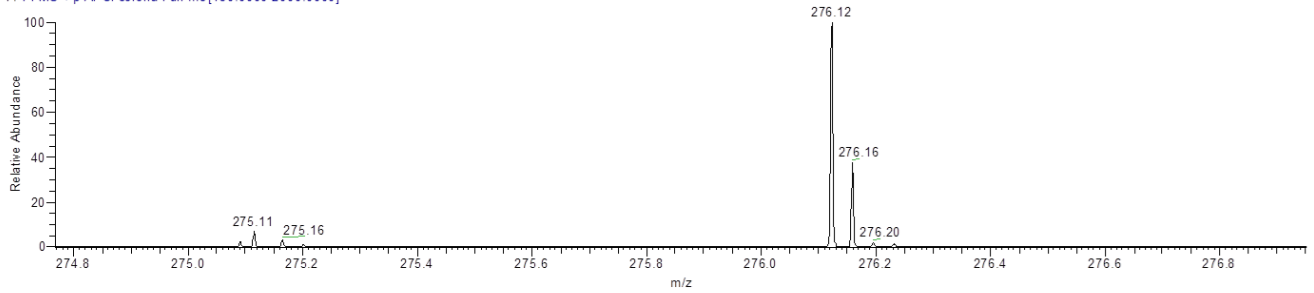
N-Valyldihydroxyhomoproline

RT: 0.00 - 32.01



NL:
3.15E8
Base Peak
m/z=
275.50-
276.50
MS 06

06 #3483 RT: 15.26 AV: 1 NL: 276E7
T: FT MS + p APCI corona Full ms [150.0000-2000.0000]

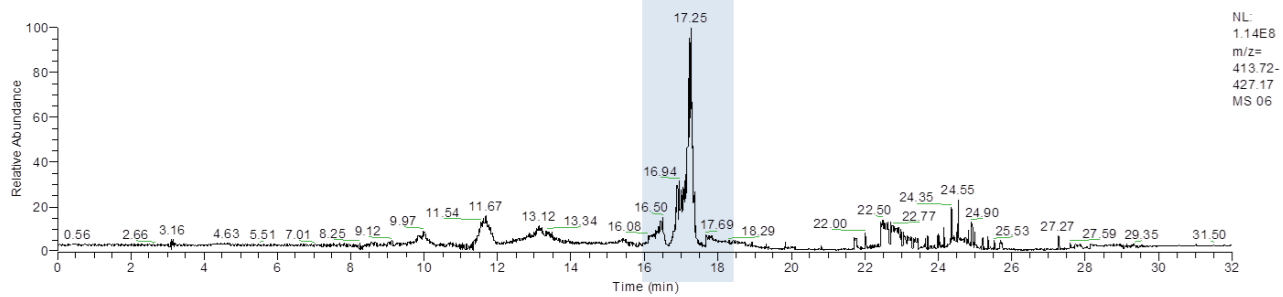


Actiphenol

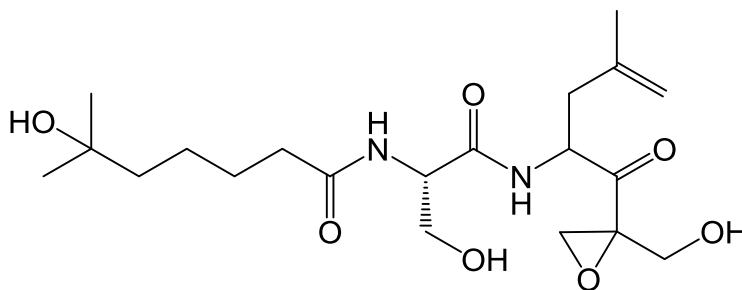
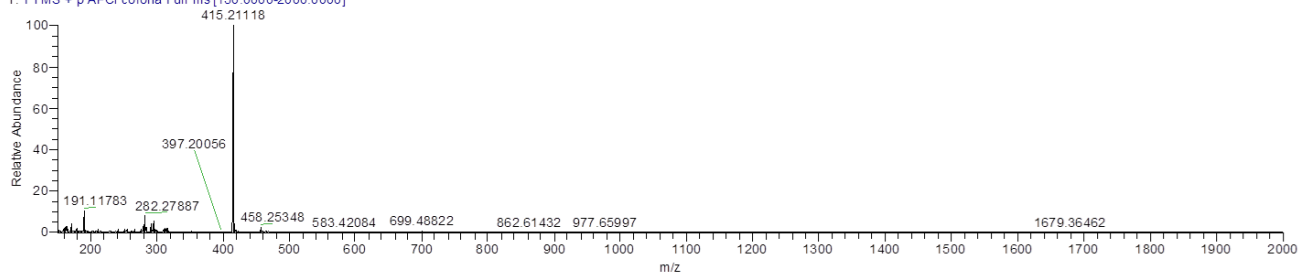
Chemical Formula: $C_{15}H_{17}NO_4$

Exact Mass: 275.12

Actiphenol



06 #3926 RT: 17.21 AV: 1 NL: 7.57E7
 T: FTMS + p APCI corona Full ms [150.0000-2000.0000]

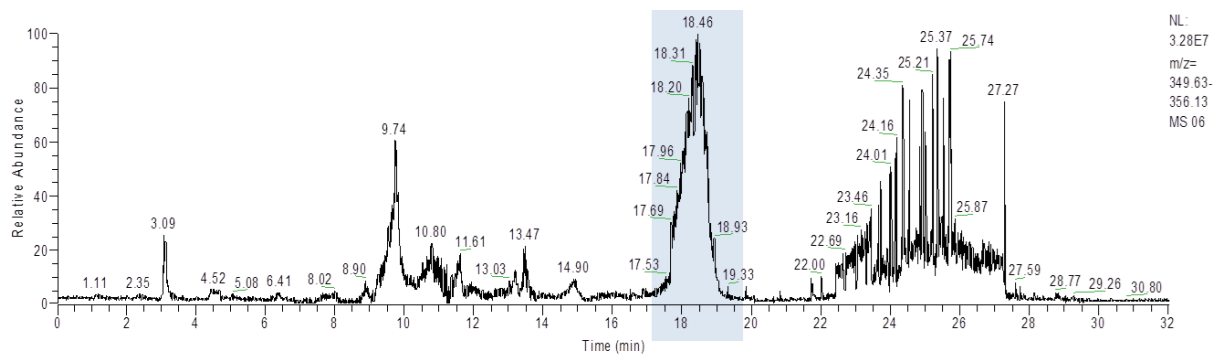


TMC-86B

Chemical Formula: C₂₀H₃₄N₂O₇

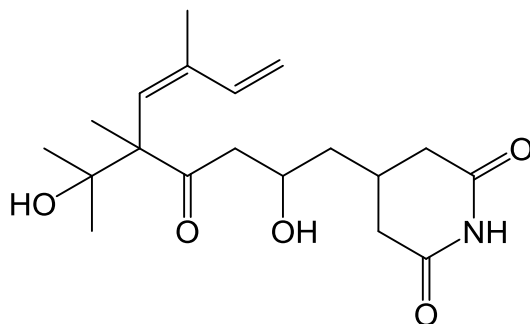
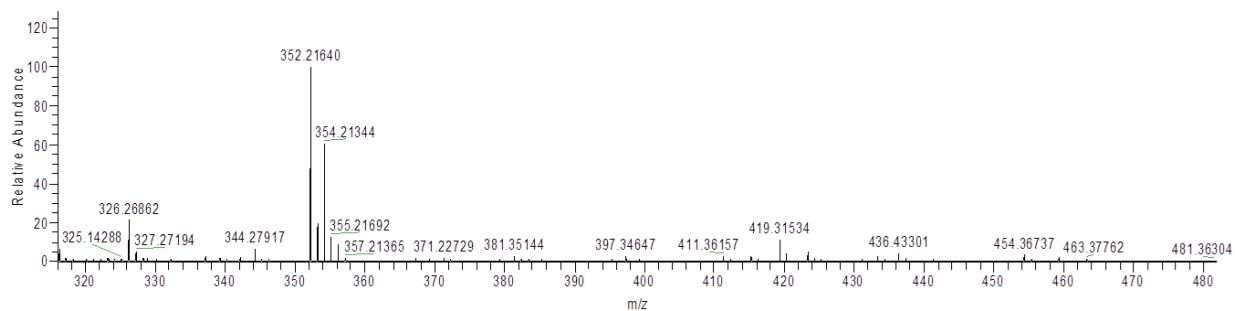
Exact Mass: 414.24

TMC-86B



NL:
3.28E7
m/z=
349.63-
356.13
MS 06

06 #4210 RT: 18.45 AV: 1 NL: 1.21E7
T: FTMS + p APCI corona Full ms [150.0000-2000.0000]

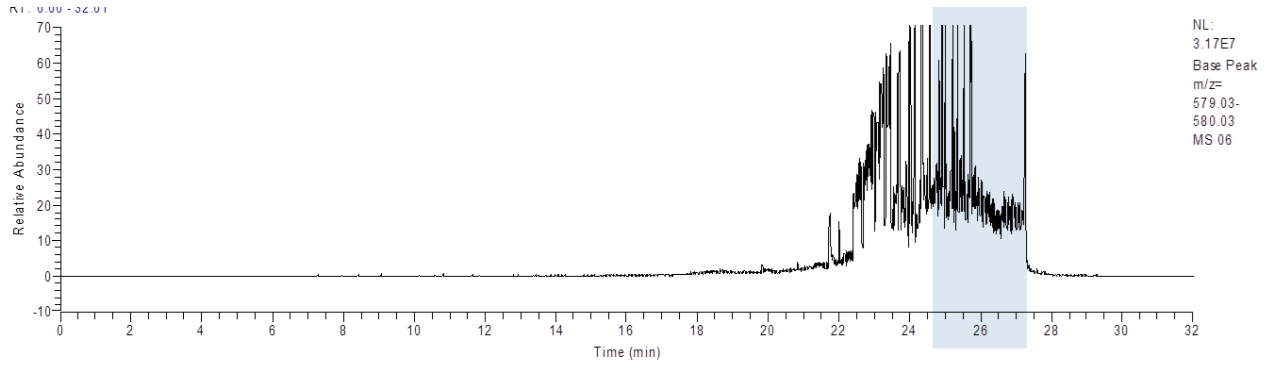


Protomycin

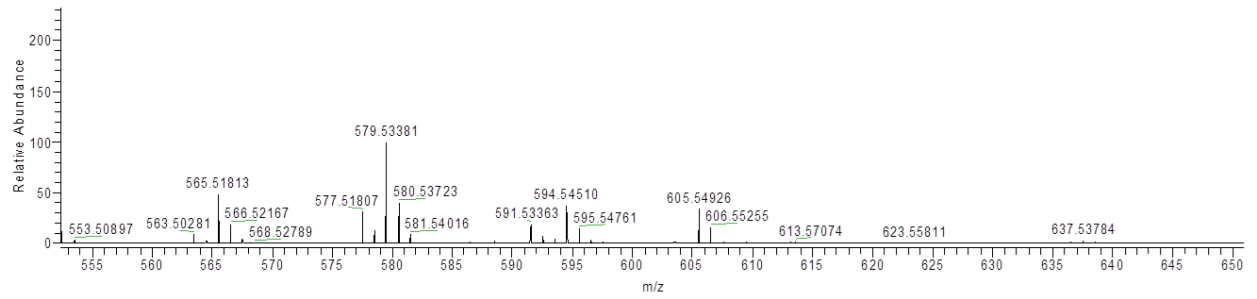
Chemical Formula: $C_{19}H_{29}NO_5$

Exact Mass: 351.20

Protomycin

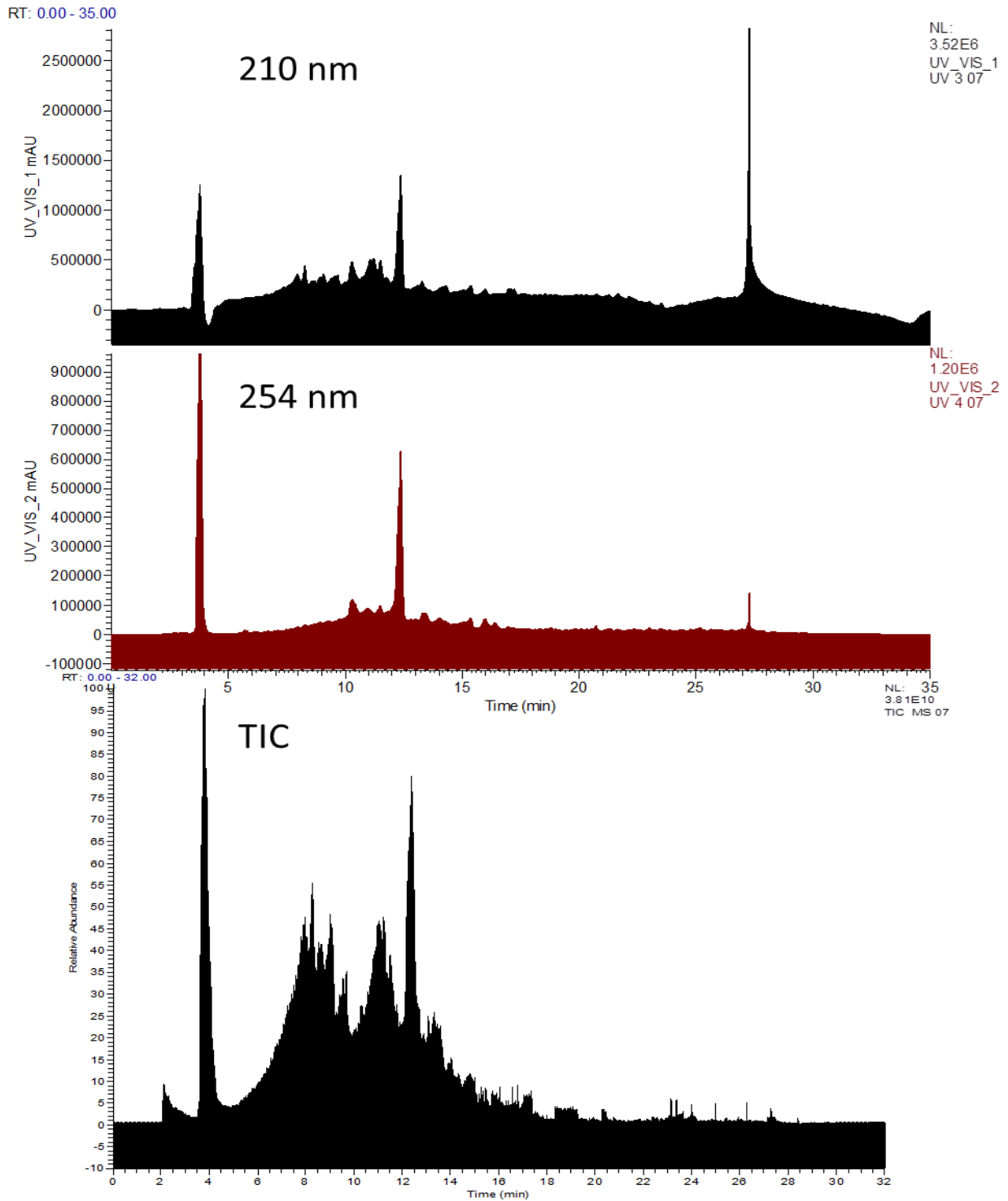


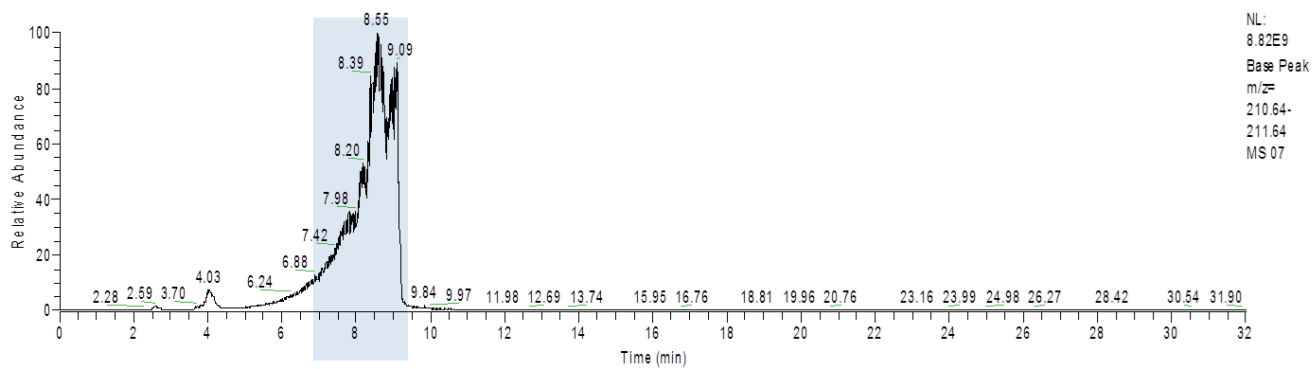
06 #6073 RT: 26.62 AV: 1 NL: 5.53E6
T: FTMS + p APCI corona Full ms [150.0000-2000.0000]



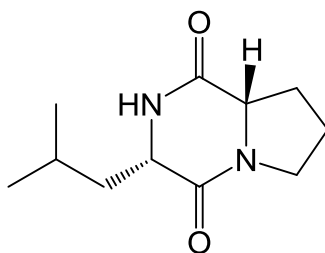
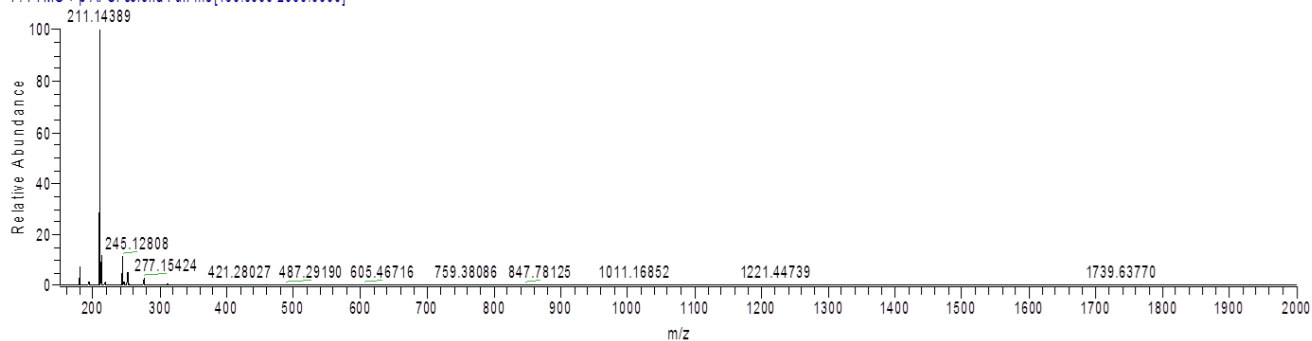
Unknown

Streptomyces griseus subsp. *griseus* DSM 40236^T





07#1927 RT: 8.44 AV: 1 NL: 6.31E9
 T: FTMS + p APCI corona Full ms[150.0000-2000.0000]

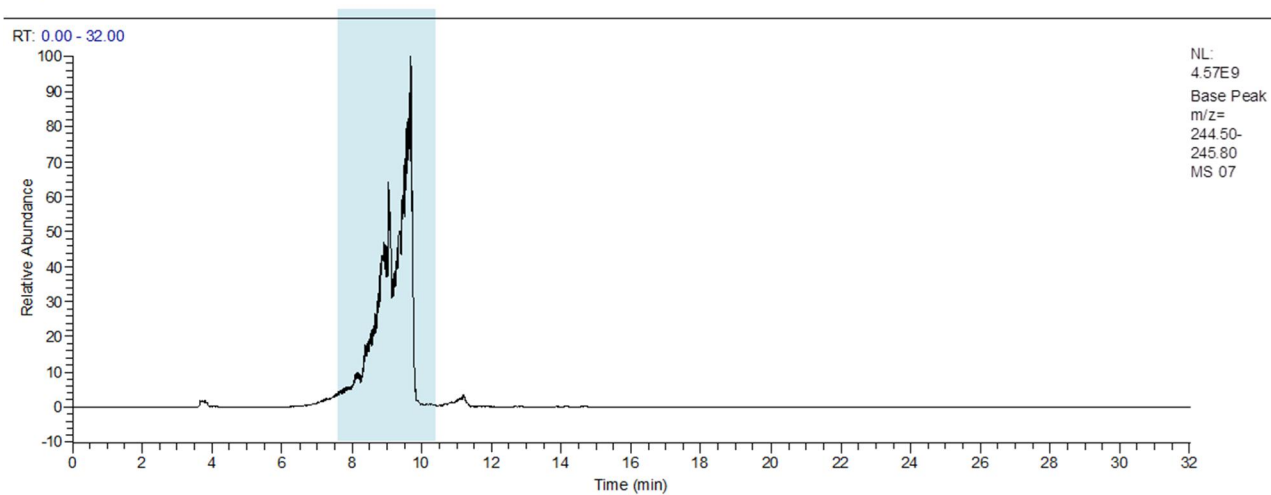


Gancidin W

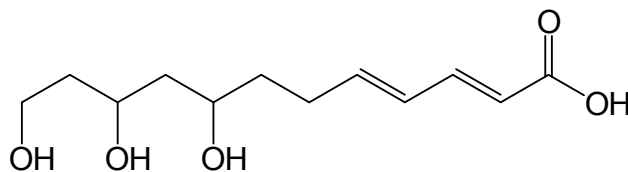
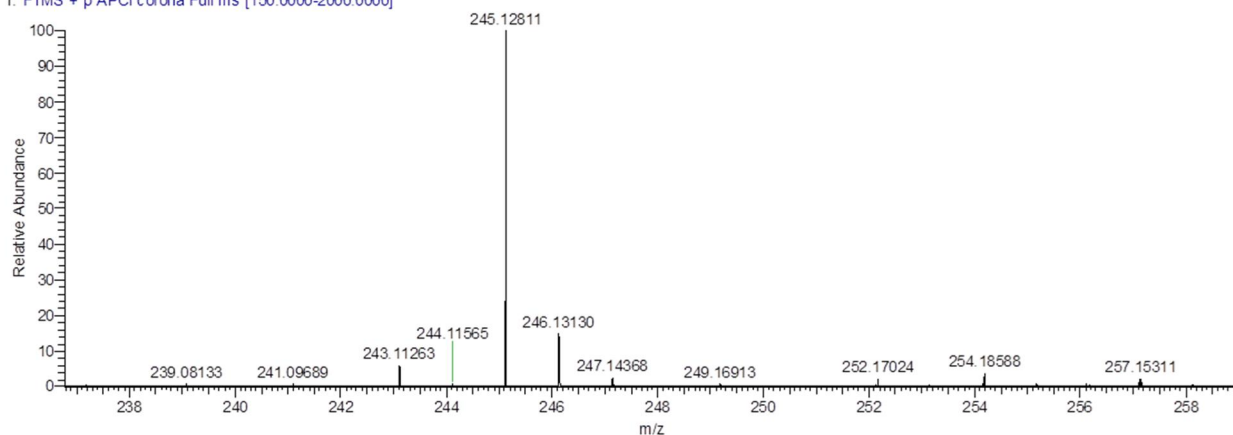
Chemical Formula: C₁₁H₁₈N₂O₂

Exact Mass: 210.14

Gancidin W



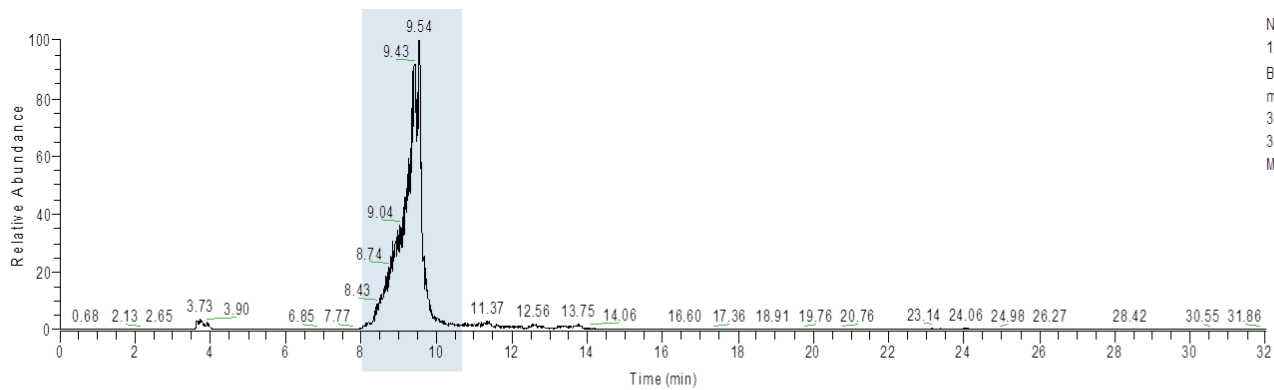
07 #2108 RT: 9.24 AV: 1 NL: 1.59E9
T: FTMS + p APCI corona Full ms [150.0000-2000.0000]



YF-0200-R-B

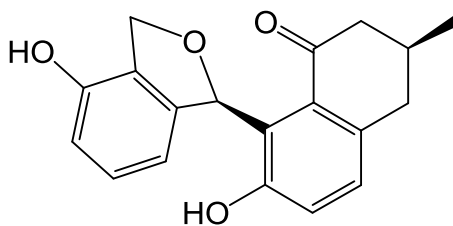
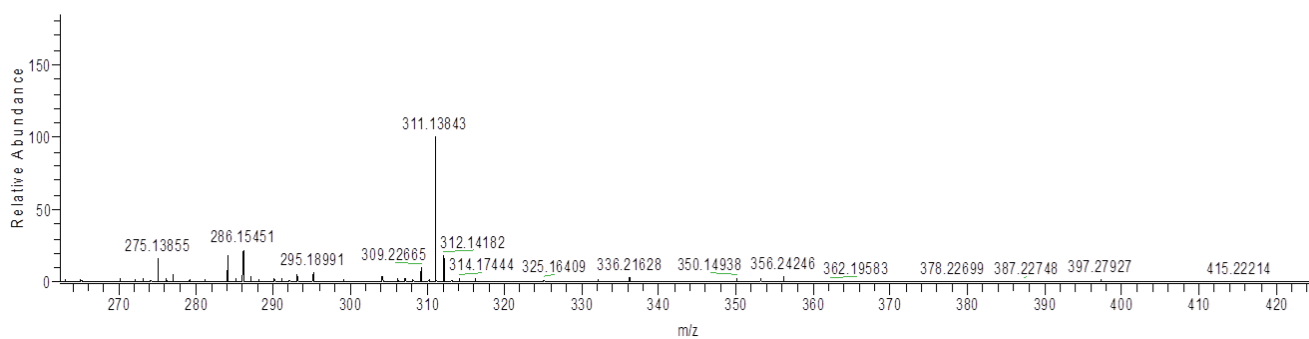
Exact Mass: 244.13
Molecular Weight: 244.29

YF-0200-R-B



NL:
1.08E9
Base Peak
m/z=
310.63-
311.63
MS 07

07 #2131 RT: 9.34 AV: 1 NL: 8.02E8
T: FTMS + p APCI corona Full ms [150.0000-2000.0000]

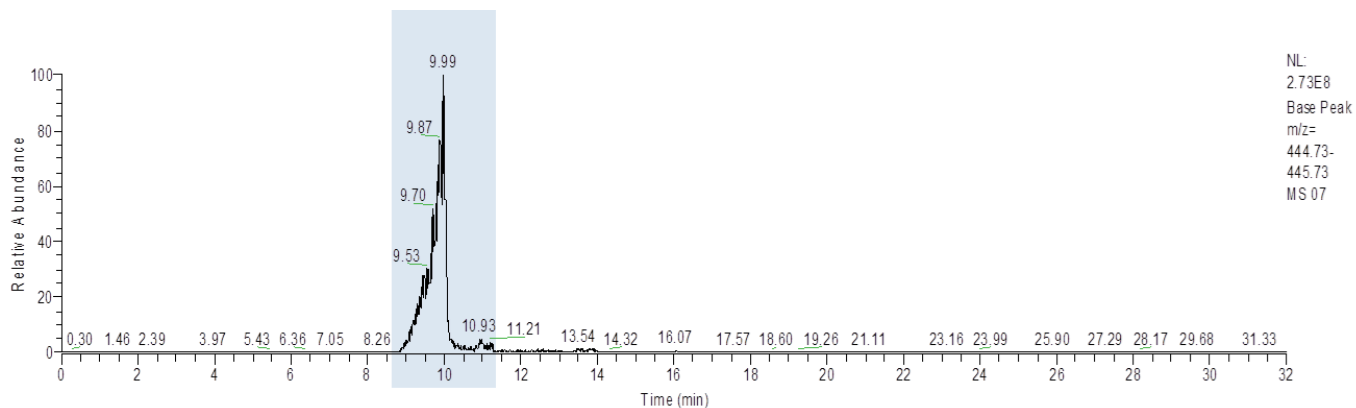


Emycin-E

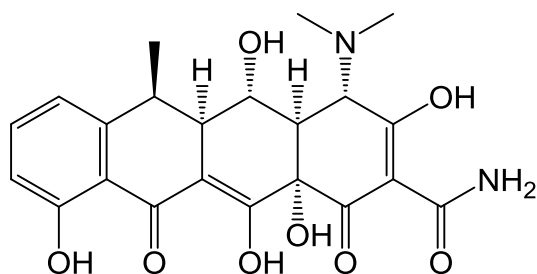
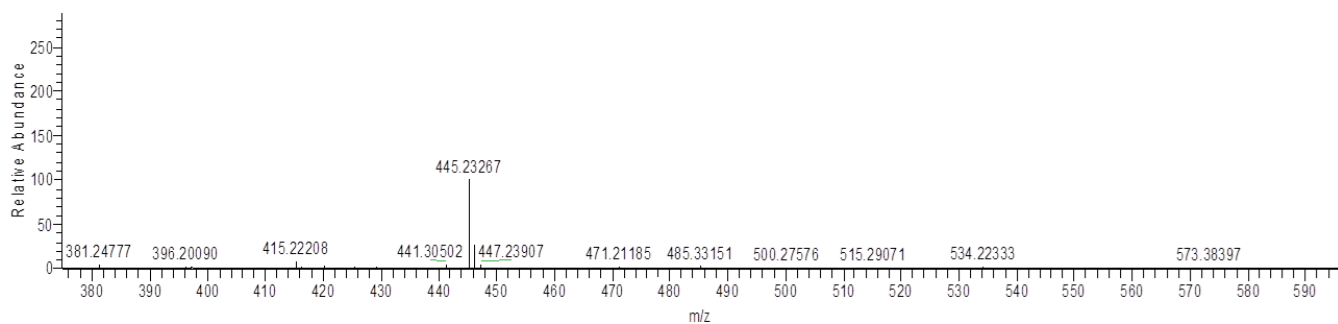
Chemical Formula: $C_{19}H_{18}O_4$

Exact Mass: 310.12

Emycin E



07 #2275 RT: 9.97 AV: 1 NL: 1.79E8
 T: FTMS + p APCI corona Full ms [150.0000-2000.0000]

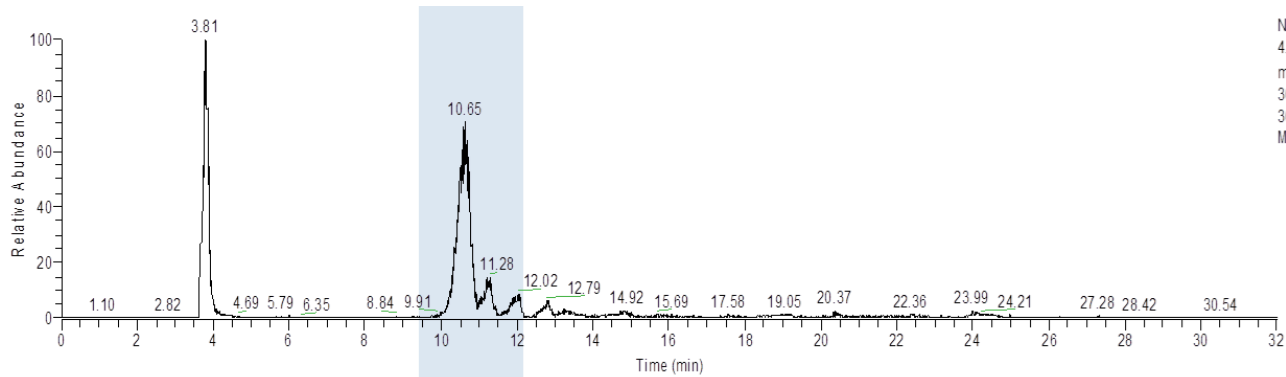


6-beta-deoxy-5-hydroxy-tetracycline

Chemical Formula: $C_{22}H_{24}N_2O_8$

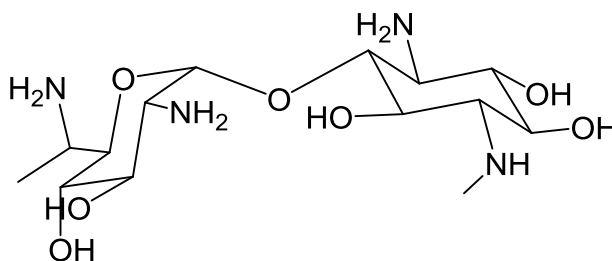
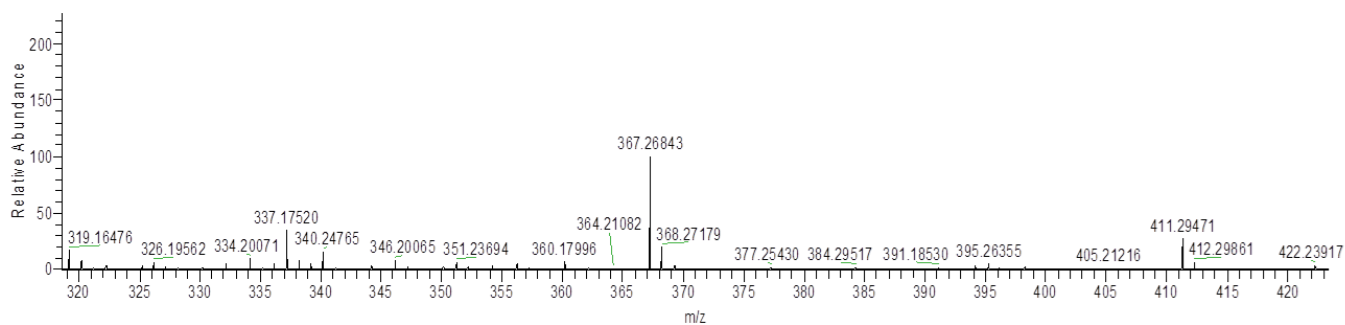
Exact Mass: 444.15

6-beta-deoxy-5-hydroxy-tetracycline



NL:
4.59E8
m/z=
365.96-
368.19
MS 07

07 #2416 RT: 10.58 AV: 1 NL: 2.73E8
T: FTMS + p APCI corona Full ms [150.0000-2000.0000]

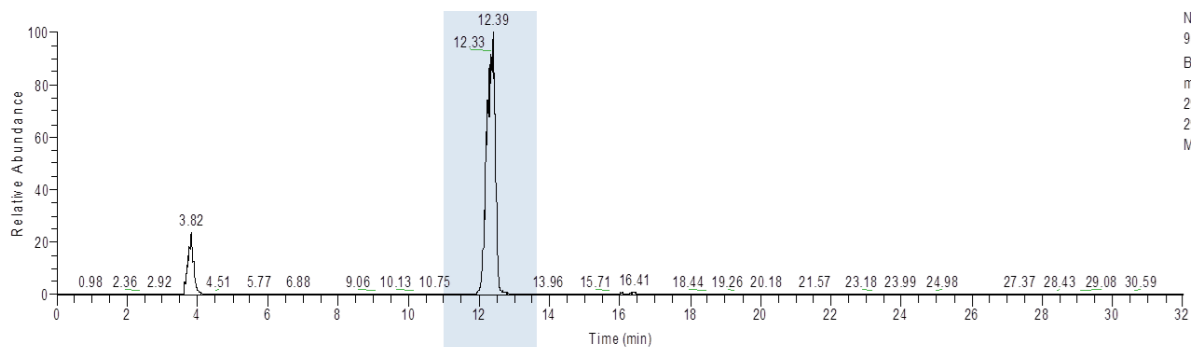


Fortimicin-KK1

Chemical Formula: $C_{14}H_{30}N_4O_7$

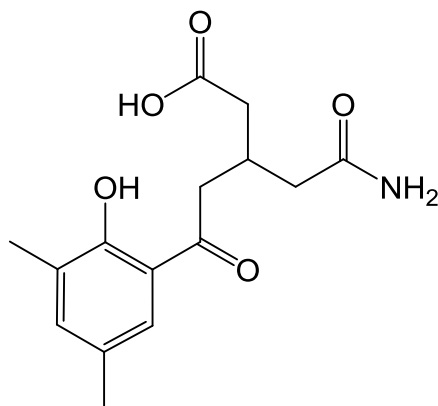
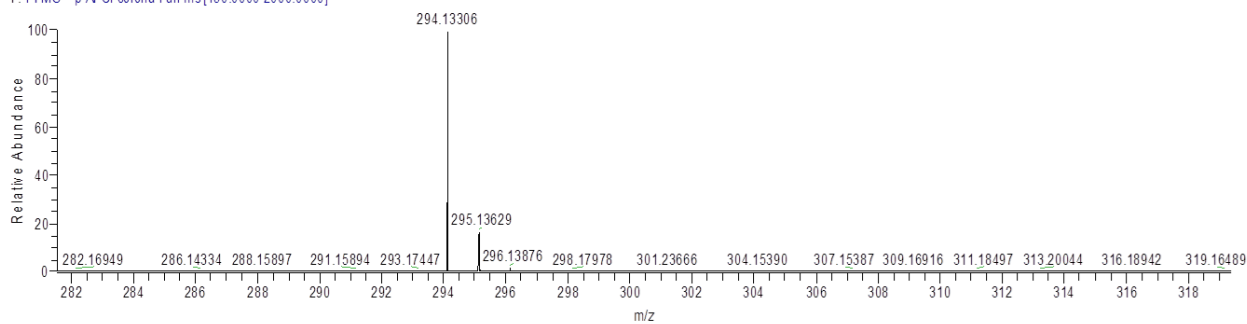
Exact Mass: 366.21

Fortimicin KK1



NL:
9.90E9
Base Peak
m/z=
293.63-
294.63
MS 07

07 #2805 RT: 12.29 AV: 1 NL: 8.07E9
T: FTMS + p APCI corona Full ms[150.0000-2000.0000]

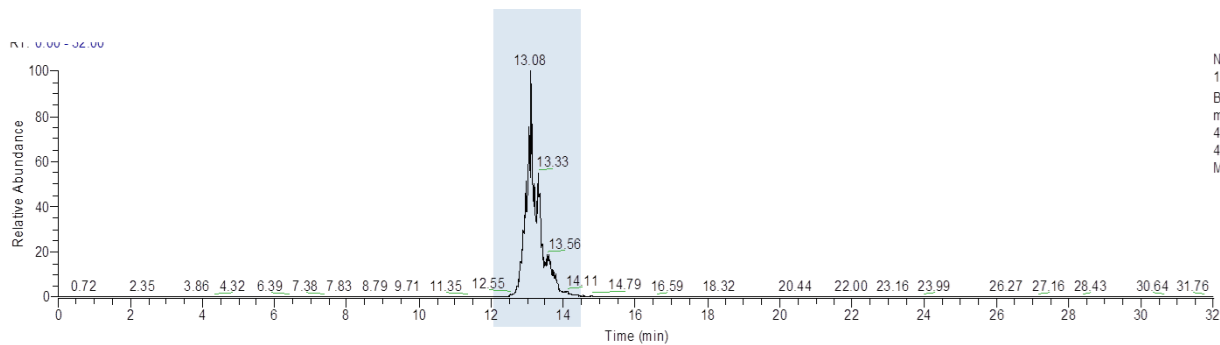


Phenetic acid

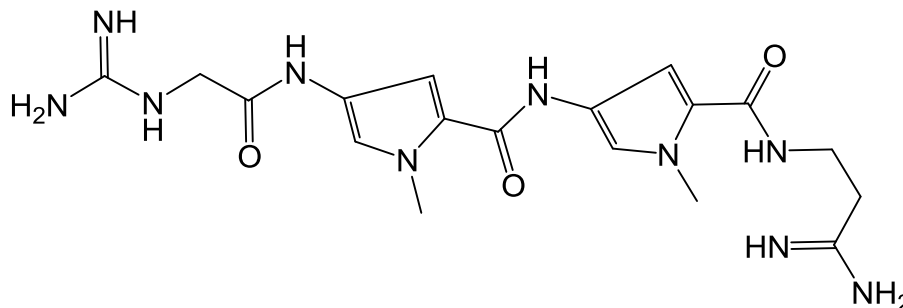
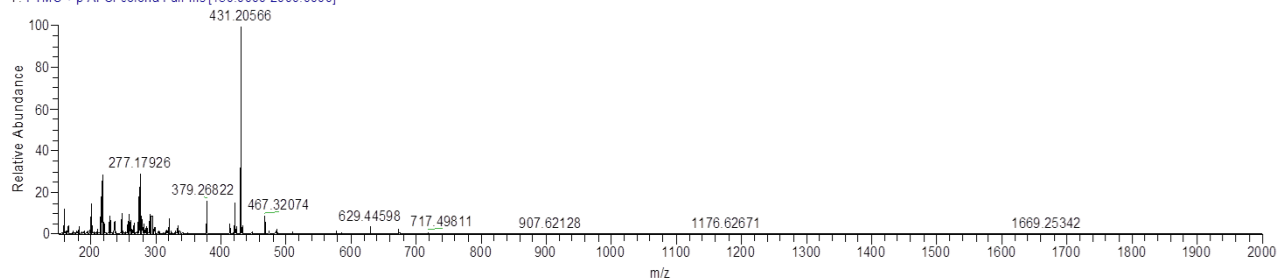
Chemical Formula: $C_{15}H_{19}NO_5$

Exact Mass: 293.13

Phenetic acid



07 #2998 RT: 13.13 AV: 1 NL: 9.14E8
 T: FTMS + p APCI corona Full ms [150.0000-2000.0000]



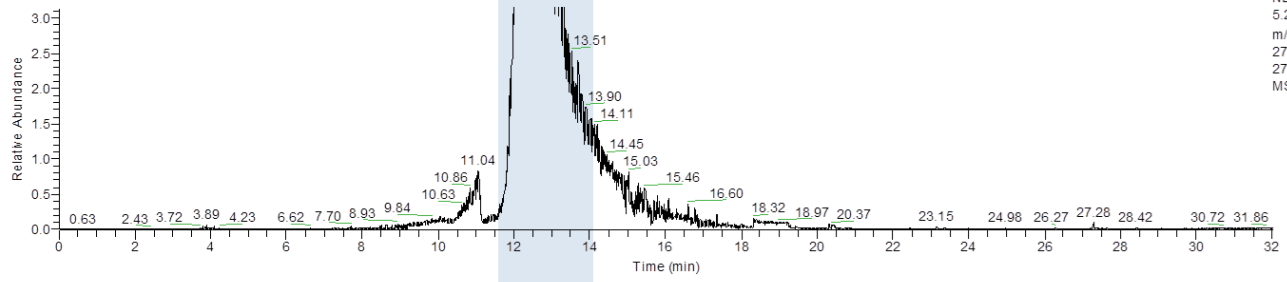
Netropsin

Chemical Formula: $C_{18}H_{26}N_{10}O_3$

Exact Mass: 430.22

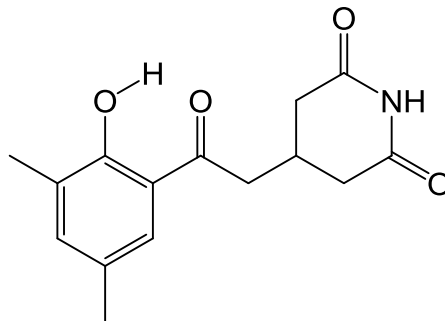
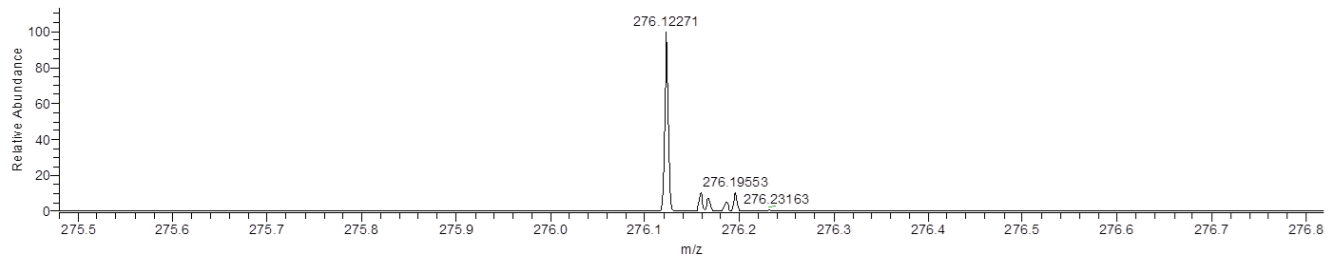
Netropsin

RT: 0.00 - 32.00



NL:
5.23E9
m/z=
276.12-
276.13
MS 07

07 #3496 RT: 15.31 AV: 1 NL: 2.56E7
T: FTMS + p APCI corona Full ms [150.0000-2000.0000]

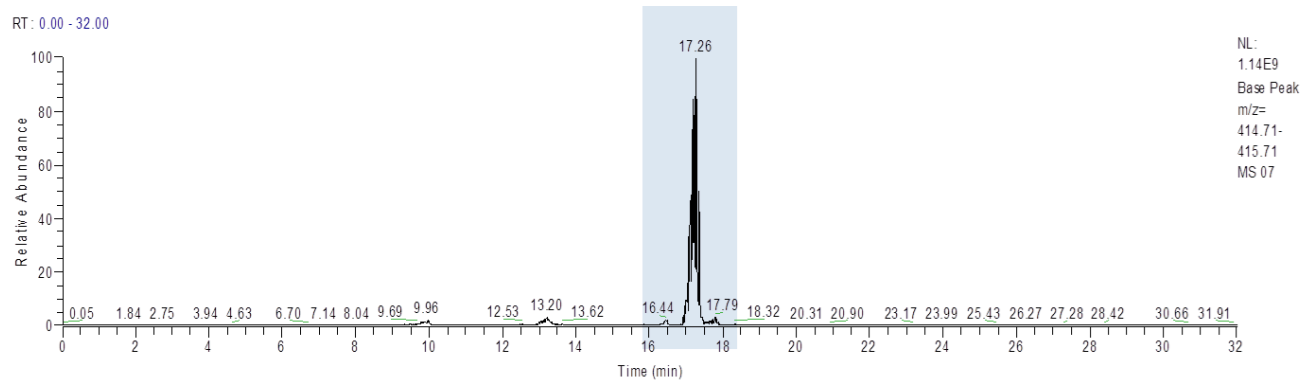


Actiphenol

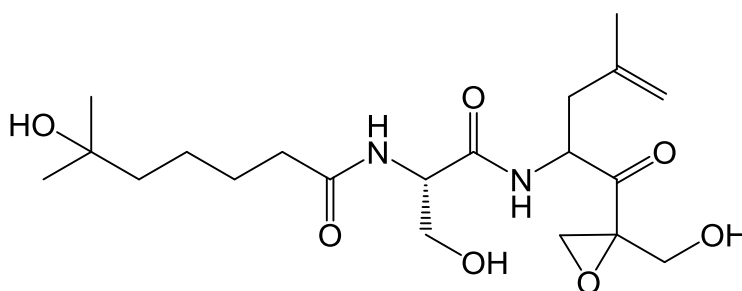
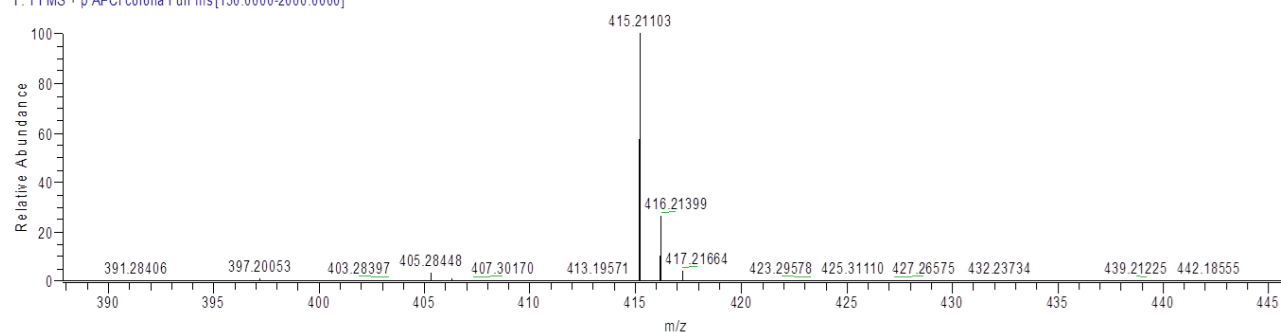
Chemical Formula: $C_{15}H_{17}NO_4$

Exact Mass: 275.12

Actiphenol



07 #3917 RT: 17.16 AV: 1 NL: 5.80E8
T: FTMS + p APCI corona Full ms[150.0000-2000.0000]

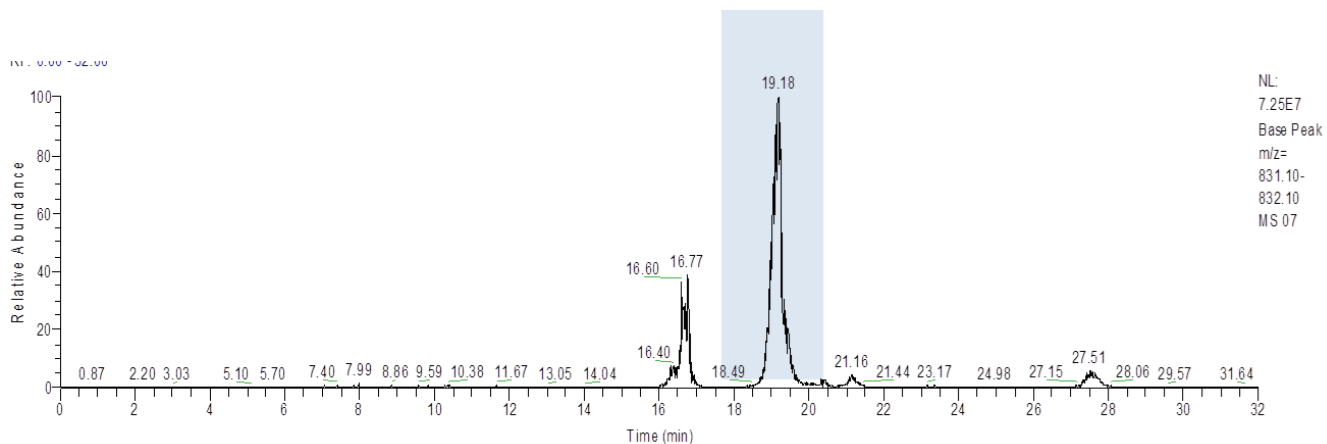


TMC-86B

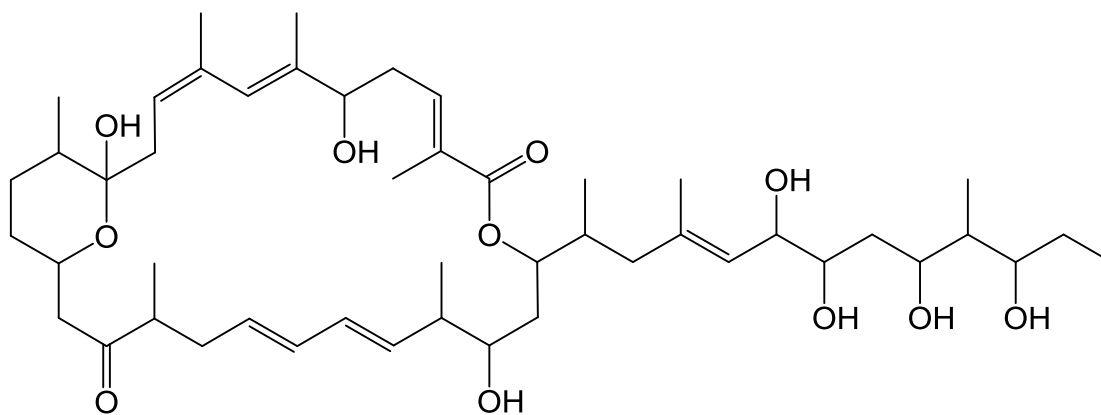
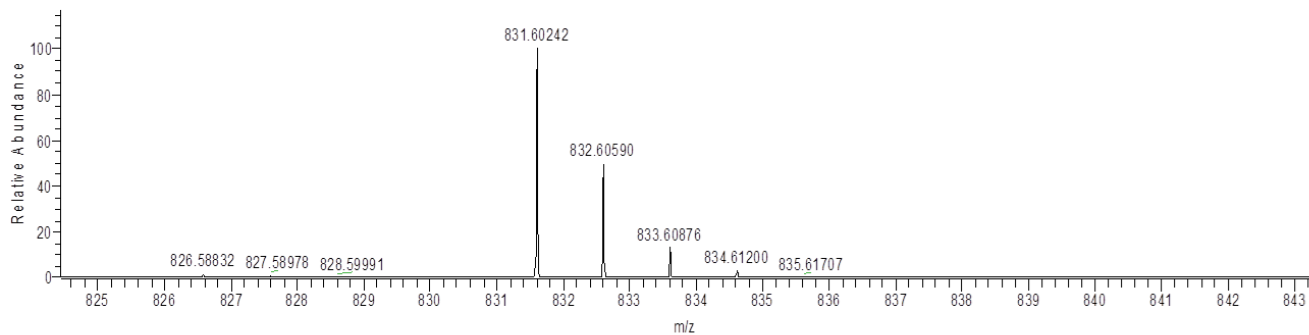
Chemical Formula: $C_{20}H_{34}N_2O_7$

Exact Mass: 414.24

TMC-86B



07 #4358 RT: 19.09 AV: 1 NL: 4.18E7
 T: FTMS + p APCI corona Full ms [150.0000-2000.0000]

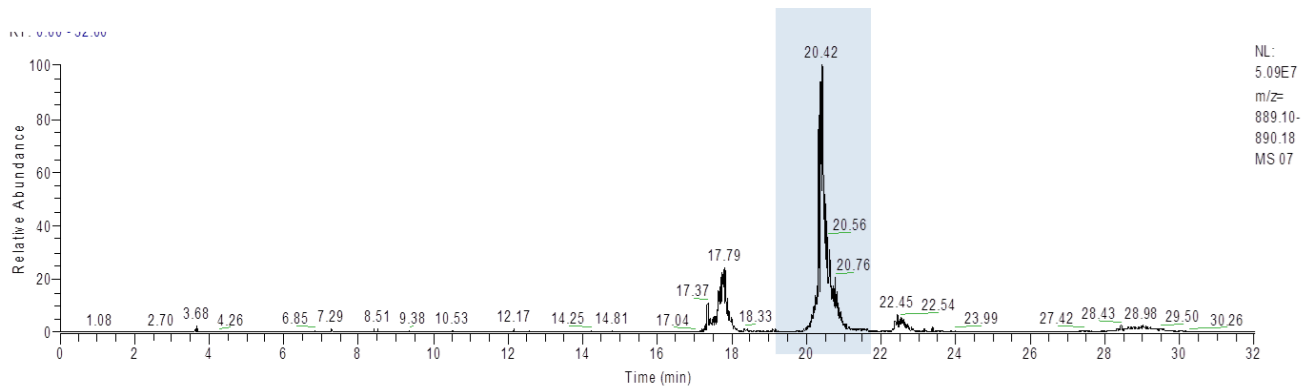


Halstoctacosanolide B

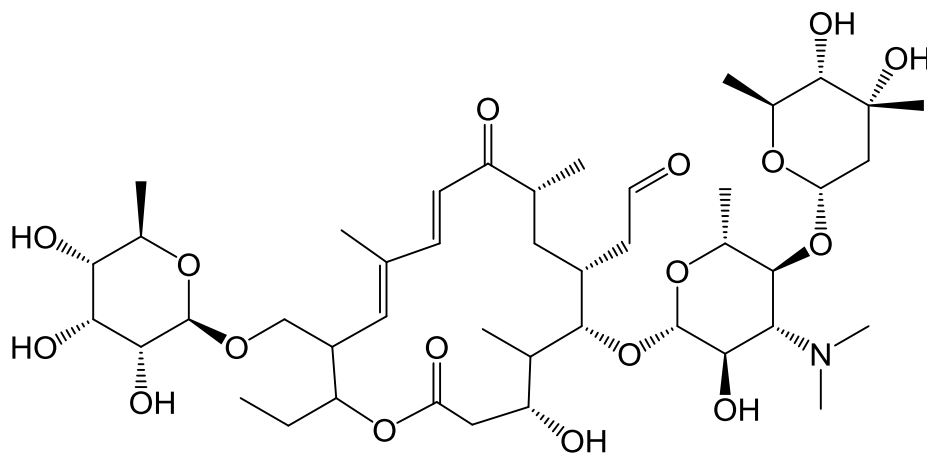
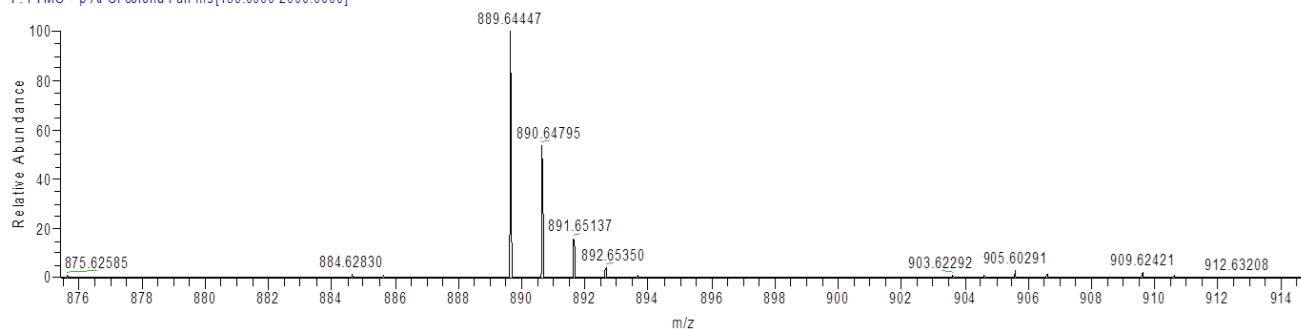
Chemical Formula: $C_{48}H_{78}O_{11}$

Exact Mass: 830.55

Halstoctacosanolide B



07 #4632 RT: 20.29 AV: 1 NL: 6.69E6
 T: FTMS + p APCI corona Full ms[150.0000-2000.0000]

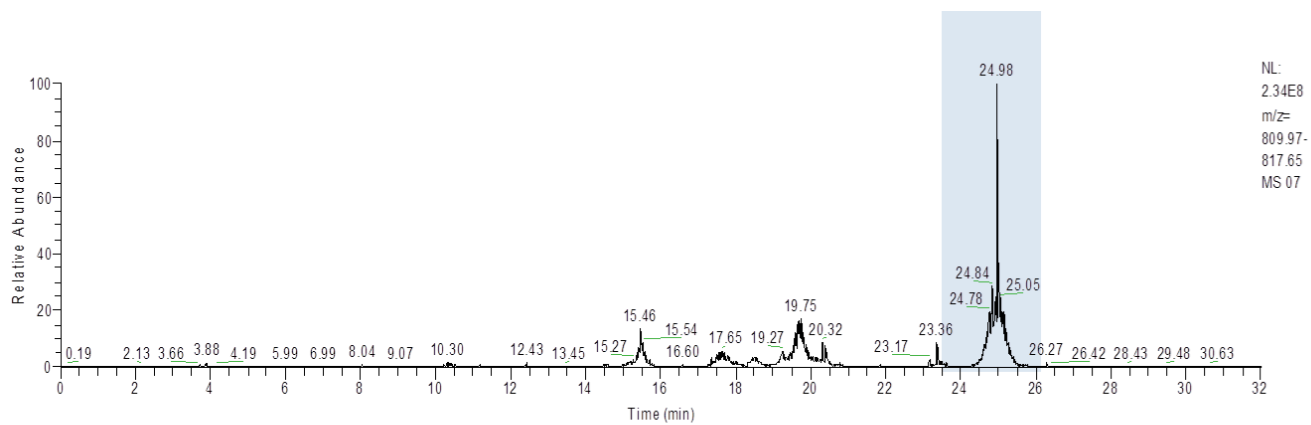


YO - 7625

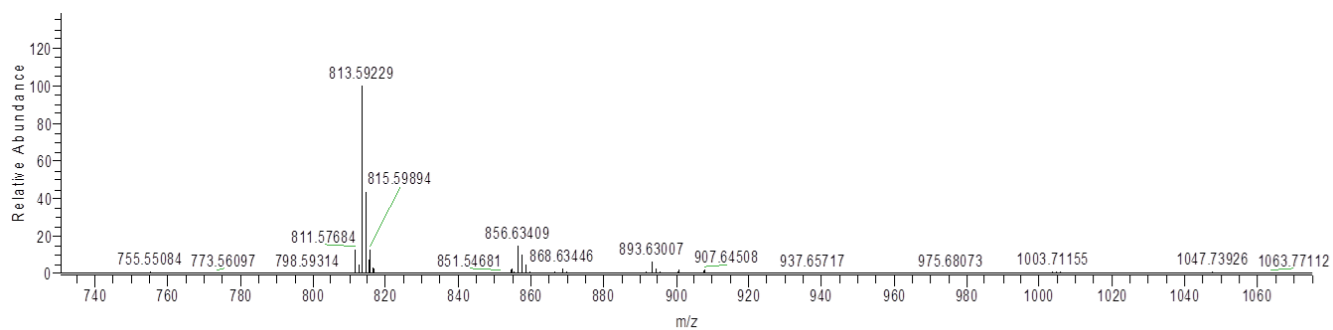
Chemical Formula: $C_{44}H_{73}NO_{17}$

Exact Mass: 887.49

YO-7625



07 #5742 RT: 25.16 AV: 1 NL: 1.20E7
 T: FTMS + p APCI corona Full ms [150.0000-2000.0000]



Unknown

Streptomyces griseus 16S rRNA comparison

3_1525: *Streptomyces* sp. SN25_8.1 from Easter Island marine sediment.

4_1525: *Streptomyces griseus* subsp. *griseus* DSM 40236^T from a Russian garden soil.

BLAST Results

[Questions/comments](#)

Job title: 3_1525

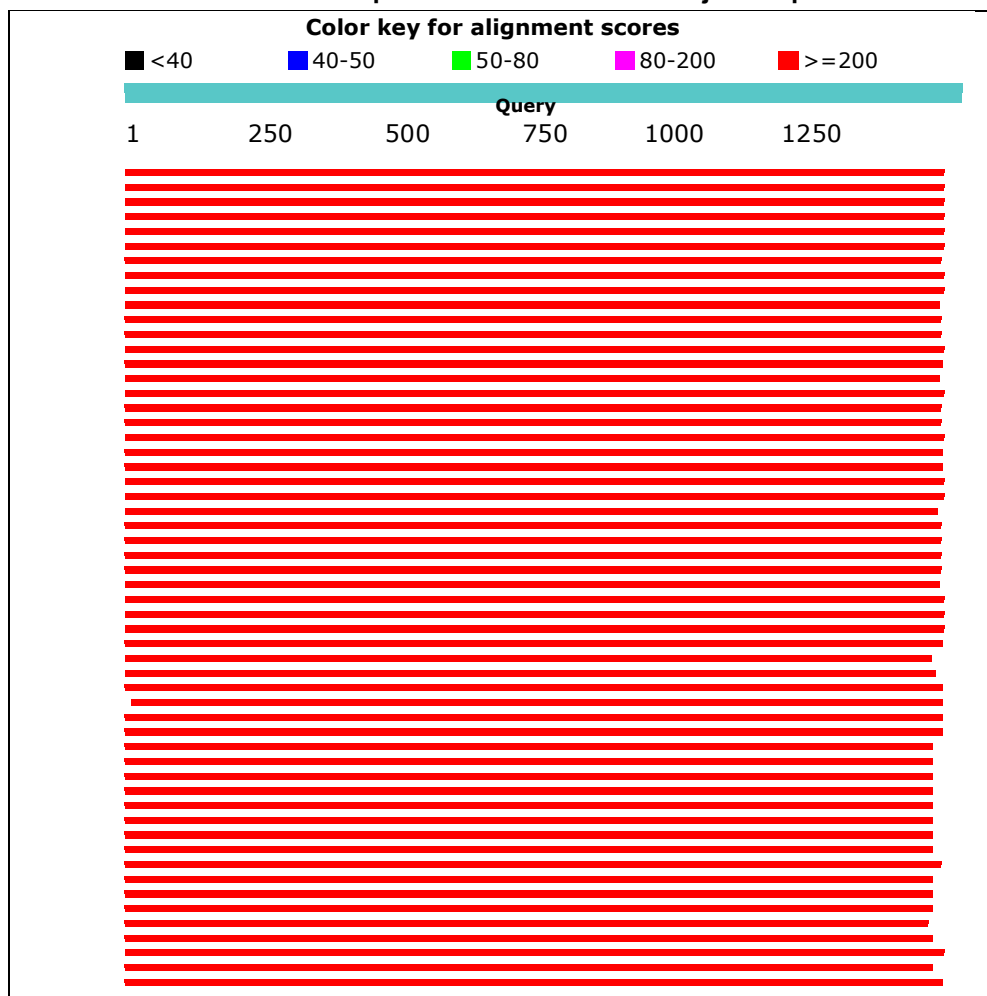
RID [TYT6T7XZ01R](#) (Expires on 09-18 16:24 pm)

Query ID lcl|Query_122625
Description 3_1525
Molecule type nucleic acid
Query Length 1477

Database Name nr
Description Nucleotide collection (nt)
Program BLASTN 2.8.0+

Graphic Summary

Distribution of the top 190 Blast Hits on 100 subject sequences



Descriptions

Sequences producing significant alignments:

Description	Max score	Total score	Query cover	E value	Ident	Accession
<i>Streptomyces griseus</i> subsp. <i>griseus</i> NBRC 13350 DNA, complete genome	2721	16327	99%	0.0	99%	AP009493.1
<i>Streptomyces pratensis</i> ATCC 33331, complete genome	2715	16238	99%	0.0	99%	CP002475.1
<i>Streptomyces globisporus</i> strain TFH56 chromosome, complete genome	2710	16238	99%	0.0	99%	CP029361.1
<i>Streptomyces fulvissimus</i> strain DSM 40593 16S ribosomal RNA, partial sequence	2710	2710	99%	0.0	99%	NR_103947.1
<i>Streptomyces fulvissimus</i> DSM 40593, complete genome	2710	16260	99%	0.0	99%	CP005080.1
<i>Streptomyces</i> sp. PAMC26508, complete genome	2710	16257	99%	0.0	99%	CP003990.1
<i>Streptomyces pratensis</i> strain ch24 16S ribosomal RNA, partial sequence	2706	2706	99%	0.0	99%	NR_125621.1
<i>Streptomyces globisporus</i> C-1027, complete genome	2704	16227	99%	0.0	99%	CP013738.1
<i>Streptomyces luridiscabiei</i> strain S63 16S ribosomal RNA, partial sequence	2704	2704	99%	0.0	99%	NR_025155.1
<i>Streptomyces flavolimosus</i> strain CGMCC 2027 16S ribosomal RNA gene, partial sequence	2702	2702	99%	0.0	99%	EF688620.1
<i>Streptomyces praecox</i> strain CGMCC 4.1782 clone 3 16S ribosomal RNA gene, complete sequence	2700	2700	99%	0.0	99%	JQ924404.1
<i>Streptomyces pratensis</i> strain ch24 16S ribosomal RNA, partial sequence	2700	2700	99%	0.0	99%	NR_125619.1
<i>Streptomyces</i> sp. SM18 chromosome, complete genome	2699	16183	99%	0.0	99%	CP029342.1
<i>Streptomyces flavofuscus</i> strain CGMCC 4.1938 clone 3 16S ribosomal RNA gene, complete sequence	2699	2699	99%	0.0	99%	JQ924409.1
<i>Streptomyces griseus</i> strain NRRL B-8030 16S ribosomal RNA gene, partial sequence	2699	2699	99%	0.0	99%	DQ026671.1
<i>Streptomyces</i> sp. Tue6075, complete genome	2695	16157	99%	0.0	99%	CP010833.1
<i>Streptomyces praecox</i> strain CGMCC 4.1782 clone 2 16S ribosomal RNA gene, complete sequence	2695	2695	99%	0.0	99%	JQ924403.1
<i>Streptomyces pratensis</i> strain ch24 16S ribosomal RNA, partial sequence	2695	2695	99%	0.0	99%	NR_125618.1
<i>Streptomyces violaceoruber</i> strain S21, complete genome	2693	16161	99%	0.0	99%	CP020570.1
<i>Streptomyces flavofuscus</i> strain CGMCC 4.1938 clone 2 16S ribosomal RNA gene, complete sequence	2693	2693	99%	0.0	99%	JQ924408.1
<i>Streptomyces flavofuscus</i> strain CGMCC 4.1938 clone 1 16S ribosomal RNA gene, complete sequence	2693	2693	99%	0.0	99%	JQ924407.1
<i>Streptomyces</i> sp. SirexAA-E, complete genome	2693	16133	99%	0.0	99%	CP002993.1
<i>Streptomyces flavofuscus</i> strain NRRL B-2594 16S ribosomal RNA gene, partial sequence	2693	2693	100%	0.0	99%	EF178690.1

Description	Max score	Total score	Query cover	E value	Ident	Accession
Streptomyces microflavus strain NRRL B-2156 16S ribosomal RNA gene, partial sequence	2691	2691	99%	0.0	99%	DQ445795.1
Streptomyces praecox strain CGMCC 4.1782 clone 5 16S ribosomal RNA gene, complete sequence	2689	2689	99%	0.0	99%	JQ924406.1
Streptomyces praecox strain CGMCC 4.1782 clone 4 16S ribosomal RNA gene, complete sequence	2689	2689	99%	0.0	99%	JQ924405.1
Streptomyces praecox strain CGMCC 4.1782 clone 1 16S ribosomal RNA gene, complete sequence	2689	2689	99%	0.0	99%	JQ924402.1
Streptomyces pratensis strain ch24 16S ribosomal RNA, partial sequence	2689	2689	99%	0.0	99%	NR_125620.1
Streptomyces anulatus strain NRRL B-2000 16S ribosomal RNA gene, partial sequence	2689	2689	99%	0.0	99%	DQ026637.1
Streptomyces baarnensis strain NRRL B-1902 16S ribosomal RNA gene, partial sequence	2687	2687	100%	0.0	99%	EF178688.1
Streptomyces flavogriseus partial 16S rRNA gene, type strain CBS 101.34T	2687	2687	99%	0.0	99%	AJ494864.1
Streptomyces sp. CFMR 7 strain CFMR-7, complete genome	2682	15924	99%	0.0	99%	CP011522.1
Streptomyces flavovirens strain CGMCC 4.575 clone 1 16S ribosomal RNA gene, complete sequence	2682	2682	99%	0.0	99%	JQ924386.1
Streptomyces griseus subsp. griseus gene for 16S rRNA, partial sequence, strain: NBRC 15744	2680	2680	98%	0.0	99%	AB184699.1
Streptomyces argenteolus strain JCM 4623 16S ribosomal RNA, partial sequence	2680	2680	99%	0.0	99%	NR_112120.1
Streptomyces flavovirens strain CGMCC 4.575 clone 2 16S ribosomal RNA gene, complete sequence	2678	2678	99%	0.0	99%	JQ924387.1
Streptomyces sp. YM5-799 gene for 16S rRNA, partial sequence	2678	2678	98%	0.0	99%	AB534176.1
Streptomyces flavovirens strain CGMCC 4.575 clone 5 16S ribosomal RNA gene, complete sequence	2676	2676	99%	0.0	99%	JQ924389.1
Streptomyces flavovirens strain CGMCC 4.575 clone 4 16S ribosomal RNA gene, complete sequence	2676	2676	99%	0.0	99%	JQ924388.1
Streptomyces microflavus strain NRRL B-1332 16S ribosomal RNA gene, partial sequence	2675	2675	98%	0.0	99%	EF178673.1
Streptomyces paresii 16S rRNA gene, type strain LMG 23704T	2675	2675	98%	0.0	99%	AJ969177.1
Streptomyces anulatus gene for 16S rRNA, partial sequence, strain: NBRC 13369	2673	2673	98%	0.0	99%	AB184875.1
Streptomyces cavourensis subsp. washingtonensis gene for 16S rRNA, partial sequence, strain: NBRC 15391	2673	2673	98%	0.0	99%	AB184642.1
Streptomyces acidoresistans gene for 16S rRNA, partial sequence, strain: NBRC 13442	2673	2673	98%	0.0	99%	AB184406.1
Streptomyces praecox gene for 16S rRNA, partial sequence, strain: NBRC 13073	2673	2673	98%	0.0	99%	AB184293.1
Streptomyces albobiridis gene for 16S rRNA, partial sequence, strain: NBRC 13013	2673	2673	98%	0.0	99%	AB184256.1

Description	Max score	Total score	Query cover	E value	Ident	Accession
Streptomyces argenteolus gene for 16S rRNA, partial sequence, strain: NBRC 12841	2673	2673	98%	0.0	99%	AB184187.1
Streptomyces finlayi strain CGMCC 4.1436 clone 1 16S ribosomal RNA gene, complete sequence	2669	2669	99%	0.0	99%	JQ924390.1
Streptomyces rubiginosohelvolus gene for 16S rRNA, partial sequence, strain: NBRC 12912	2669	2669	98%	0.0	99%	AB184240.2
Streptomyces microflavus gene for 16S rRNA, partial sequence, strain: NBRC 13062	2669	2669	98%	0.0	99%	AB184284.1
Streptomyces fulvoroebus gene for 16S rRNA, partial sequence, strain: NBRC 15897	2667	2667	98%	0.0	99%	AB184711.1
Streptomyces griseus subsp. griseus gene for 16S rRNA, partial sequence, strain: NBRC 12875	2667	2667	97%	0.0	99%	AB184211.1
Streptomyces griseinus gene for 16S rRNA, partial sequence, strain: NBRC 12869	2667	2667	98%	0.0	99%	AB184205.1
Streptomyces sp. S8, complete genome	2665	15950	99%	0.0	99%	CP015362.1
Streptomyces flavofuscus gene for 16S rRNA, partial sequence, strain: NBRC 100768	2665	2665	98%	0.0	99%	AB249935.1
Streptomyces clavifer strain NRRL B-2557 16S ribosomal RNA gene, partial sequence	2663	2663	99%	0.0	99%	DQ026670.1
Streptomyces albovinaceus gene for 16S rRNA, partial sequence, strain: NBRC 12739	2663	2663	98%	0.0	99%	AB249958.1
Streptomyces erumpens gene for 16S rRNA, partial sequence, strain: NBRC 15403	2663	2663	97%	0.0	99%	AB184654.1
Streptomyces baarnensis gene for 16S rRNA, partial sequence, strain: NBRC 14727	2663	2663	98%	0.0	99%	AB184615.1
Streptomyces fimicarius gene for 16S rRNA, partial sequence, strain: NBRC 13037	2663	2663	98%	0.0	99%	AB184269.1
Streptomyces globisporus subsp. globisporus gene for 16S rRNA, partial sequence, strain: NBRC 12867	2663	2663	98%	0.0	99%	AB184203.1
Streptomyces cavourensis strain TJ430 chromosome, complete genome	2662	15856	99%	0.0	99%	CP030930.1
Streptomyces bacillaris strain ATCC 15855 chromosome, complete genome	2662	15972	99%	0.0	99%	CP029378.1
Streptomyces cavourensis strain 1AS2a chromosome, complete genome	2662	15928	99%	0.0	99%	CP024957.1
Streptomyces globisporus subsp. globisporus strain NRRL B-2872 16S ribosomal RNA gene, partial sequence	2662	2662	98%	0.0	99%	EF178686.1
Streptomyces griseolus gene for 16S rRNA, partial sequence, strain: NBRC 3415	2662	2662	98%	0.0	99%	AB184768.1
Streptomyces puniceus gene for 16S rRNA, partial sequence, strain: NBRC 12811	2662	2662	98%	0.0	99%	AB184163.1
Streptomyces halstedii gene for 16S rRNA, partial sequence, strain: NBRC 12783	2662	2662	98%	0.0	99%	AB184142.1

Description	Max score	Total score	Query cover	E value	Ident	Accession
Streptomyces atratus strain SCSIO_ZH16 chromosome, complete genome	2660	15961	99%	0.0	99%	CP027306.1
Streptomyces flavovirens strain NRRL B-2685 16S ribosomal RNA gene, partial sequence	2660	2660	99%	0.0	99%	DQ026635.1
Streptomyces pluricolorscens gene for 16S rRNA, partial sequence, strain: NBRC 12808	2660	2660	98%	0.0	99%	AB184162.1
Streptomyces olivoviridis strain CGMCC 4.1739 clone 2 16S ribosomal RNA gene, complete sequence	2658	2658	99%	0.0	99%	JQ924394.1
Streptomyces finlayi strain CGMCC 4.1436 clone 2 16S ribosomal RNA gene, complete sequence	2658	2658	99%	0.0	99%	JQ924391.1
Streptomyces californicus gene for 16S rRNA, partial sequence, strain: NBRC 12750	2658	2658	98%	0.0	99%	AB184116.2
Streptomyces cinereorectus gene for 16S rRNA, partial sequence, strain: NBRC 15395	2658	2658	98%	0.0	99%	AB184646.1
Streptomyces mutomycini strain CGMCC 4.1747 clone 3 16S ribosomal RNA gene, complete sequence	2656	2656	99%	0.0	99%	JQ924399.1
Streptomyces halstedii strain NRRL B-1238 16S ribosomal RNA gene, partial sequence	2656	2656	98%	0.0	99%	EF178695.1
Streptomyces parvus gene for 16S rRNA, partial sequence, strain: NBRC 3388	2656	2656	98%	0.0	99%	AB184756.1
Streptomyces californicus gene for 16S rRNA, partial sequence, strain: NBRC 3386	2656	2656	98%	0.0	99%	AB184755.1
Streptomyces badius gene for 16S rRNA, partial sequence, strain: NBRC 12745	2656	2656	98%	0.0	99%	AB184114.1
Streptomyces lunaelactis strain MM109 chromosome, complete genome	2654	15660	99%	0.0	99%	CP026304.1
Streptomyces nitrosporeus strain CGMCC 4.1973 clone 4 16S ribosomal RNA gene, complete sequence	2654	2654	99%	0.0	99%	JQ924413.1
Streptomyces anulatus strain NRRL B-2873 16S ribosomal RNA gene, partial sequence	2654	2654	97%	0.0	99%	DQ026639.1
Streptomyces sindenensis gene for 16S rRNA, partial sequence, strain: NBRC 3399	2654	2654	98%	0.0	99%	AB184759.1
Streptomyces mediolani gene for 16S rRNA, partial sequence, strain: NBRC 15427	2654	2654	98%	0.0	99%	AB184674.1
Streptomyces olivoviridis strain CGMCC 4.1739 clone 5 16S ribosomal RNA gene, complete sequence	2652	2652	99%	0.0	99%	JQ924396.1
Streptomyces olivoviridis strain CGMCC 4.1739 clone 4 16S ribosomal RNA gene, complete sequence	2652	2652	99%	0.0	99%	JQ924395.1
Kitasatospora albolonga strain YIM 101047, complete genome	2651	15858	99%	0.0	99%	CP020563.1
Streptomyces mutomycini strain CGMCC 4.1747 clone 1 16S ribosomal RNA gene, complete sequence	2651	2651	99%	0.0	99%	JQ924397.1

Description	Max score	Total score	Query cover	E value	Ident	Accession
Streptomyces flavovirens gene for 16S rRNA, partial sequence, strain: NBRC 3197	2651	2651	98%	0.0	99%	AB184827.1
Streptomyces ornatus gene for 16S rRNA, partial sequence, strain: NBRC 13069	2651	2651	97%	0.0	99%	AB184290.1
Streptomyces flavogriseus gene for 16S rRNA, partial sequence, strain: NBRC 13040	2651	2651	98%	0.0	99%	AB184271.1
Streptomyces flavovirens gene for 16S rRNA, partial sequence, strain: NBRC 12771	2651	2651	98%	0.0	99%	AB184133.1
Streptomyces nitrosporeus strain CGMCC 4.1973 clone 3 16S ribosomal RNA gene, complete sequence	2649	2649	99%	0.0	99%	JQ924412.1
Streptomyces nitrosporeus strain CGMCC 4.1973 clone 1 16S ribosomal RNA gene, complete sequence	2649	2649	99%	0.0	99%	JQ924411.1
Streptomyces olivoviridis strain CGMCC 4.1739 clone 1 16S ribosomal RNA gene, complete sequence	2647	2647	99%	0.0	99%	JQ924393.1
Streptomyces naraensis gene for 16S rRNA, partial sequence, strain: NBRC 13421	2647	2647	98%	0.0	99%	AB184391.2
Streptomyces fulvorobeus 16S rRNA gene, type strain LMG 19901	2647	2647	97%	0.0	99%	AJ781331.1
Streptomyces parvus gene for 16S rRNA, partial sequence, strain: NBRC 14599	2643	2643	98%	0.0	99%	AB184603.1
Streptomyces setonii gene for 16S rRNA, partial sequence, strain: NBRC 13085	2643	2643	97%	0.0	99%	AB184300.1

Alignments

Streptomyces griseus subsp. griseus NBRC 13350 DNA, complete genome
Sequence ID: **AP009493.1** Length: 8545929 Number of Matches: 6
Range 1: 2102343 to 2103819

Score	Expect	Identities	Gaps	Strand	Frame
2721 bits(1473)	0.0()	1476/1477(99%)	1/1477(0%)	Plus/Plus	

Features:

rRNA-16S ribosomal RNA

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Query	60	GGCCACCGGCTTCGGGTGTTACCGACTTTCGTGACGTGACGGGCGGTGTGTACAAGGCC	119
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Sbjct	2102523	 GTCGAGTTGCAGACCCCAATCCGAACGAGACCGGCTTTTTGAGATTTCGCTCCGCCTCGC	2102582
Query	240	GGCATCGCAGCTCATTGTACCGCCATTGTAGCACGTGTGCAGCCCAAGACATAAGGGGC	299
Sbjct	2102583	 GGCATCGCAGCTCATTGTACCGCCATTGTAGCACGTGTGCAGCCCAAGACATAAGGGGC	2102642
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Sbjct	2102643	 ATGATGACTTGACGTCGTCCCCACCTTCCTCCGAGTTGACCCCGGCAGTCTCCTGTGAGT	2102702
Query	360	CCCCATCACCCCGAAGGGCATGCTGGCAACACAGAACAAGGGTTGCGCTCGTTGCGGGAC	419
Sbjct	2102703	 CCCCATCACCCCGAAGGGCATGCTGGCAACACAGAACAAGGGTTGCGCTCGTTGCGGGAC	2102762
Query	420	TTAACCCAACATCTCACGACACGAGCTGACGACAGCCATGCACCACCTGTATACCGACCA	479

BLAST Results

[Questions/comments](#)

Job title: 4_1525

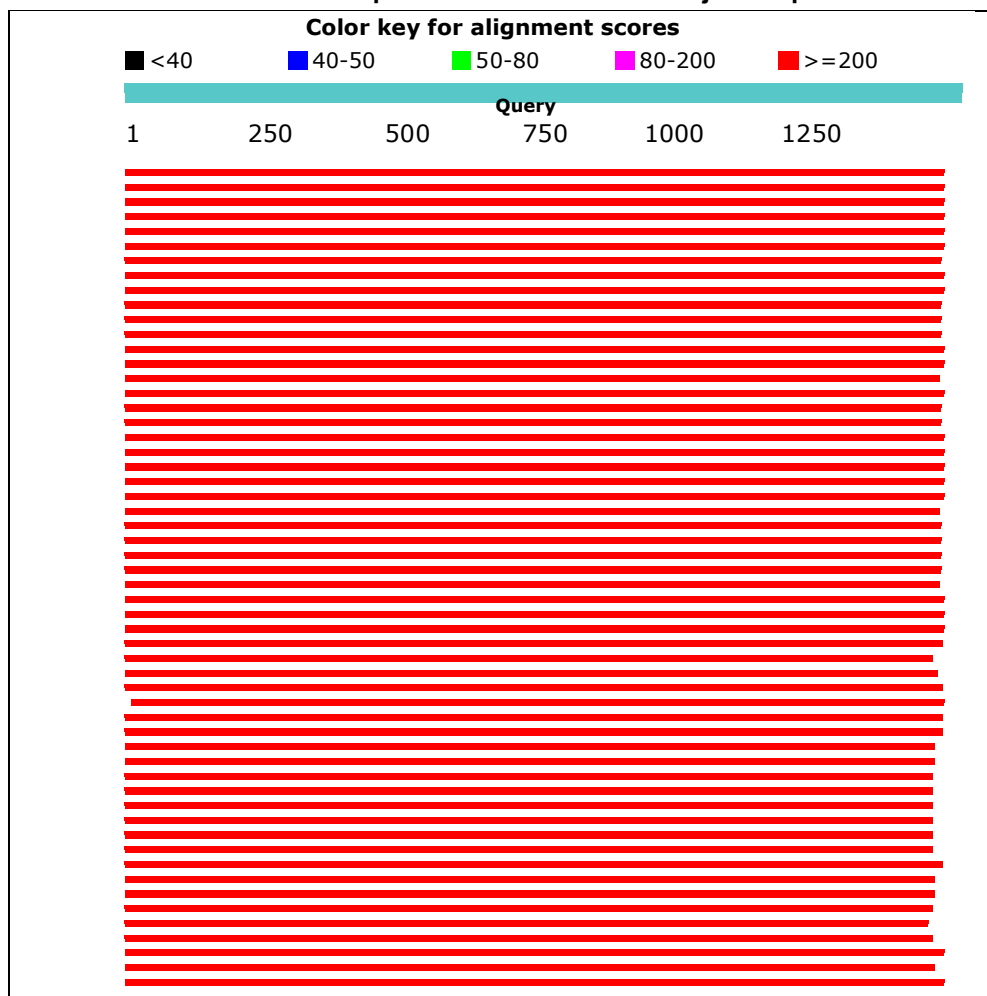
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Query ID lcl|Query_130761
Description 4_1525
Molecule type nucleic acid
Query Length 1476

Database Name nr
Description Nucleotide collection (nt)
Program BLASTN 2.8.0+

Graphic Summary

Distribution of the top 190 Blast Hits on 100 subject sequences



Descriptions

Sequences producing significant alignments:

Description	Max score	Total score	Query cover	E value	Ident	Accession
<i>Streptomyces griseus</i> subsp. <i>griseus</i> NBRC 13350 DNA, complete genome	2721	16327	100%	0.0	99%	AP009493.1
<i>Streptomyces pratensis</i> ATCC 33331, complete genome	2715	16238	100%	0.0	99%	CP002475.1
<i>Streptomyces globisporus</i> strain TFH56 chromosome, complete genome	2710	16238	100%	0.0	99%	CP029361.1
<i>Streptomyces fulvissimus</i> strain DSM 40593 16S ribosomal RNA, partial sequence	2710	2710	100%	0.0	99%	NR_103947.1
<i>Streptomyces fulvissimus</i> DSM 40593, complete genome	2710	16260	100%	0.0	99%	CP005080.1
<i>Streptomyces</i> sp. PAMC26508, complete genome	2710	16257	100%	0.0	99%	CP003990.1
<i>Streptomyces pratensis</i> strain ch24 16S ribosomal RNA, partial sequence	2706	2706	99%	0.0	99%	NR_125621.1
<i>Streptomyces globisporus</i> C-1027, complete genome	2704	16227	100%	0.0	99%	CP013738.1
<i>Streptomyces luridiscabiei</i> strain S63 16S ribosomal RNA, partial sequence	2704	2704	100%	0.0	99%	NR_025155.1
<i>Streptomyces flavolimosus</i> strain CGMCC 2027 16S ribosomal RNA gene, partial sequence	2702	2702	99%	0.0	99%	EF688620.1
<i>Streptomyces praecox</i> strain CGMCC 4.1782 clone 3 16S ribosomal RNA gene, complete sequence	2700	2700	99%	0.0	99%	JQ924404.1
<i>Streptomyces pratensis</i> strain ch24 16S ribosomal RNA, partial sequence	2700	2700	99%	0.0	99%	NR_125619.1
<i>Streptomyces</i> sp. SM18 chromosome, complete genome	2699	16183	100%	0.0	99%	CP029342.1
<i>Streptomyces flavofuscus</i> strain CGMCC 4.1938 clone 3 16S ribosomal RNA gene, complete sequence	2699	2699	99%	0.0	99%	JQ924409.1
<i>Streptomyces griseus</i> strain NRRL B-8030 16S ribosomal RNA gene, partial sequence	2699	2699	99%	0.0	99%	DQ026671.1
<i>Streptomyces</i> sp. Tue6075, complete genome	2695	16157	100%	0.0	99%	CP010833.1
<i>Streptomyces praecox</i> strain CGMCC 4.1782 clone 2 16S ribosomal RNA gene, complete sequence	2695	2695	99%	0.0	99%	JQ924403.1
<i>Streptomyces pratensis</i> strain ch24 16S ribosomal RNA, partial sequence	2695	2695	99%	0.0	99%	NR_125618.1
<i>Streptomyces violaceoruber</i> strain S21, complete genome	2693	16161	100%	0.0	99%	CP020570.1
<i>Streptomyces flavofuscus</i> strain CGMCC 4.1938 clone 2 16S ribosomal RNA gene, complete sequence	2693	2693	99%	0.0	99%	JQ924408.1
<i>Streptomyces flavofuscus</i> strain CGMCC 4.1938 clone 1 16S ribosomal RNA gene, complete sequence	2693	2693	99%	0.0	99%	JQ924407.1
<i>Streptomyces</i> sp. SirexAA-E, complete genome	2693	16133	100%	0.0	99%	CP002993.1
<i>Streptomyces flavofuscus</i> strain NRRL B-2594 16S ribosomal RNA gene, partial sequence	2691	2691	100%	0.0	99%	EF178690.1

Description	Max score	Total score	Query cover	E value	Ident	Accession
Streptomyces microflavus strain NRRL B-2156 16S ribosomal RNA gene, partial sequence	2691	2691	99%	0.0	99%	DQ445795.1
Streptomyces praecox strain CGMCC 4.1782 clone 5 16S ribosomal RNA gene, complete sequence	2689	2689	99%	0.0	99%	JQ924406.1
Streptomyces praecox strain CGMCC 4.1782 clone 4 16S ribosomal RNA gene, complete sequence	2689	2689	99%	0.0	99%	JQ924405.1
Streptomyces praecox strain CGMCC 4.1782 clone 1 16S ribosomal RNA gene, complete sequence	2689	2689	99%	0.0	99%	JQ924402.1
Streptomyces pratensis strain ch24 16S ribosomal RNA, partial sequence	2689	2689	99%	0.0	99%	NR_125620.1
Streptomyces anulatus strain NRRL B-2000 16S ribosomal RNA gene, partial sequence	2689	2689	99%	0.0	99%	DQ026637.1
Streptomyces flavogriseus partial 16S rRNA gene, type strain CBS 101.34T	2687	2687	100%	0.0	99%	AJ494864.1
Streptomyces baarnensis strain NRRL B-1902 16S ribosomal RNA gene, partial sequence	2686	2686	100%	0.0	99%	EF178688.1
Streptomyces sp. CFMR 7 strain CFMR-7, complete genome	2682	15924	100%	0.0	99%	CP011522.1
Streptomyces flavovirens strain CGMCC 4.575 clone 1 16S ribosomal RNA gene, complete sequence	2682	2682	99%	0.0	99%	JQ924386.1
Streptomyces griseus subsp. griseus gene for 16S rRNA, partial sequence, strain: NBRC 15744	2680	2680	98%	0.0	99%	AB184699.1
Streptomyces argenteolus strain JCM 4623 16S ribosomal RNA, partial sequence	2680	2680	99%	0.0	99%	NR_112120.1
Streptomyces flavovirens strain CGMCC 4.575 clone 2 16S ribosomal RNA gene, complete sequence	2678	2678	99%	0.0	99%	JQ924387.1
Streptomyces sp. YM5-799 gene for 16S rRNA, partial sequence	2678	2678	99%	0.0	99%	AB534176.1
Streptomyces flavovirens strain CGMCC 4.575 clone 5 16S ribosomal RNA gene, complete sequence	2676	2676	99%	0.0	99%	JQ924389.1
Streptomyces flavovirens strain CGMCC 4.575 clone 4 16S ribosomal RNA gene, complete sequence	2676	2676	99%	0.0	99%	JQ924388.1
Streptomyces microflavus strain NRRL B-1332 16S ribosomal RNA gene, partial sequence	2675	2675	98%	0.0	99%	EF178673.1
Streptomyces paresii 16S rRNA gene, type strain LMG 23704T	2675	2675	98%	0.0	99%	AJ969177.1
Streptomyces anulatus gene for 16S rRNA, partial sequence, strain: NBRC 13369	2673	2673	98%	0.0	99%	AB184875.1
Streptomyces cavourensis subsp. washingtonensis gene for 16S rRNA, partial sequence, strain: NBRC 15391	2673	2673	98%	0.0	99%	AB184642.1
Streptomyces acidoresistans gene for 16S rRNA, partial sequence, strain: NBRC 13442	2673	2673	98%	0.0	99%	AB184406.1
Streptomyces praecox gene for 16S rRNA, partial sequence, strain: NBRC 13073	2673	2673	98%	0.0	99%	AB184293.1
Streptomyces albobiridis gene for 16S rRNA, partial sequence, strain: NBRC 13013	2673	2673	98%	0.0	99%	AB184256.1

Description	Max score	Total score	Query cover	E value	Ident	Accession
Streptomyces argenteolus gene for 16S rRNA, partial sequence, strain: NBRC 12841	2673	2673	98%	0.0	99%	AB184187.1
Streptomyces finlayi strain CGMCC 4.1436 clone 1 16S ribosomal RNA gene, complete sequence	2669	2669	99%	0.0	99%	JQ924390.1
Streptomyces rubiginosohelvolus gene for 16S rRNA, partial sequence, strain: NBRC 12912	2669	2669	98%	0.0	99%	AB184240.2
Streptomyces microflavus gene for 16S rRNA, partial sequence, strain: NBRC 13062	2669	2669	98%	0.0	99%	AB184284.1
Streptomyces fulvorobeus gene for 16S rRNA, partial sequence, strain: NBRC 15897	2667	2667	98%	0.0	99%	AB184711.1
Streptomyces griseus subsp. griseus gene for 16S rRNA, partial sequence, strain: NBRC 12875	2667	2667	98%	0.0	99%	AB184211.1
Streptomyces griseinus gene for 16S rRNA, partial sequence, strain: NBRC 12869	2667	2667	98%	0.0	99%	AB184205.1
Streptomyces sp. S8, complete genome	2665	15950	100%	0.0	99%	CP015362.1
Streptomyces flavofuscus gene for 16S rRNA, partial sequence, strain: NBRC 100768	2665	2665	98%	0.0	99%	AB249935.1
Streptomyces clavifer strain NRRL B-2557 16S ribosomal RNA gene, partial sequence	2663	2663	99%	0.0	99%	DQ026670.1
Streptomyces albovinaceus gene for 16S rRNA, partial sequence, strain: NBRC 12739	2663	2663	98%	0.0	99%	AB249958.1
Streptomyces erumpens gene for 16S rRNA, partial sequence, strain: NBRC 15403	2663	2663	97%	0.0	99%	AB184654.1
Streptomyces baarnensis gene for 16S rRNA, partial sequence, strain: NBRC 14727	2663	2663	98%	0.0	99%	AB184615.1
Streptomyces fimicarius gene for 16S rRNA, partial sequence, strain: NBRC 13037	2663	2663	98%	0.0	99%	AB184269.1
Streptomyces globisporus subsp. globisporus gene for 16S rRNA, partial sequence, strain: NBRC 12867	2663	2663	98%	0.0	99%	AB184203.1
Streptomyces cavourensis strain TJ430 chromosome, complete genome	2662	15856	100%	0.0	99%	CP030930.1
Streptomyces bacillaris strain ATCC 15855 chromosome, complete genome	2662	15972	100%	0.0	99%	CP029378.1
Streptomyces cavourensis strain 1AS2a chromosome, complete genome	2662	15928	100%	0.0	99%	CP024957.1
Streptomyces globisporus subsp. globisporus strain NRRL B-2872 16S ribosomal RNA gene, partial sequence	2662	2662	98%	0.0	99%	EF178686.1
Streptomyces griseolus gene for 16S rRNA, partial sequence, strain: NBRC 3415	2662	2662	98%	0.0	99%	AB184768.1
Streptomyces puniceus gene for 16S rRNA, partial sequence, strain: NBRC 12811	2662	2662	98%	0.0	99%	AB184163.1
Streptomyces halstedii gene for 16S rRNA, partial sequence, strain: NBRC 12783	2662	2662	98%	0.0	99%	AB184142.1

Description	Max score	Total score	Query cover	E value	Ident	Accession
Streptomyces atratus strain SCSIO_ZH16 chromosome, complete genome	2660	15961	100%	0.0	99%	CP027306.1
Streptomyces flavovirens strain NRRL B-2685 16S ribosomal RNA gene, partial sequence	2660	2660	99%	0.0	99%	DQ026635.1
Streptomyces pluricolaroscens gene for 16S rRNA, partial sequence, strain: NBRC 12808	2660	2660	98%	0.0	99%	AB184162.1
Streptomyces olivoviridis strain CGMCC 4.1739 clone 2 16S ribosomal RNA gene, complete sequence	2658	2658	99%	0.0	99%	JQ924394.1
Streptomyces finlayi strain CGMCC 4.1436 clone 2 16S ribosomal RNA gene, complete sequence	2658	2658	99%	0.0	99%	JQ924391.1
Streptomyces californicus gene for 16S rRNA, partial sequence, strain: NBRC 12750	2658	2658	98%	0.0	99%	AB184116.2
Streptomyces cinereorectus gene for 16S rRNA, partial sequence, strain: NBRC 15395	2658	2658	98%	0.0	99%	AB184646.1
Streptomyces mutomycini strain CGMCC 4.1747 clone 3 16S ribosomal RNA gene, complete sequence	2656	2656	99%	0.0	99%	JQ924399.1
Streptomyces halstedii strain NRRL B-1238 16S ribosomal RNA gene, partial sequence	2656	2656	98%	0.0	99%	EF178695.1
Streptomyces parvus gene for 16S rRNA, partial sequence, strain: NBRC 3388	2656	2656	98%	0.0	99%	AB184756.1
Streptomyces californicus gene for 16S rRNA, partial sequence, strain: NBRC 3386	2656	2656	98%	0.0	99%	AB184755.1
Streptomyces badius gene for 16S rRNA, partial sequence, strain: NBRC 12745	2656	2656	98%	0.0	99%	AB184114.1
Streptomyces lunaelactis strain MM109 chromosome, complete genome	2654	15660	100%	0.0	99%	CP026304.1
Streptomyces nitrosporeus strain CGMCC 4.1973 clone 4 16S ribosomal RNA gene, complete sequence	2654	2654	99%	0.0	99%	JQ924413.1
Streptomyces anulatus strain NRRL B-2873 16S ribosomal RNA gene, partial sequence	2654	2654	97%	0.0	99%	DQ026639.1
Streptomyces sindenensis gene for 16S rRNA, partial sequence, strain: NBRC 3399	2654	2654	98%	0.0	99%	AB184759.1
Streptomyces mediolani gene for 16S rRNA, partial sequence, strain: NBRC 15427	2654	2654	98%	0.0	99%	AB184674.1
Streptomyces olivoviridis strain CGMCC 4.1739 clone 5 16S ribosomal RNA gene, complete sequence	2652	2652	99%	0.0	99%	JQ924396.1
Streptomyces olivoviridis strain CGMCC 4.1739 clone 4 16S ribosomal RNA gene, complete sequence	2652	2652	99%	0.0	99%	JQ924395.1
Kitasatospora albolonga strain YIM 101047, complete genome	2651	15858	100%	0.0	99%	CP020563.1
Streptomyces mutomycini strain CGMCC 4.1747 clone 1 16S ribosomal RNA gene, complete sequence	2651	2651	99%	0.0	99%	JQ924397.1

Description	Max score	Total score	Query cover	E value	Ident	Accession
Streptomyces flavovirens gene for 16S rRNA, partial sequence, strain: NBRC 3197	2651	2651	98%	0.0	99%	AB184827.1
Streptomyces ornatus gene for 16S rRNA, partial sequence, strain: NBRC 13069	2651	2651	97%	0.0	99%	AB184290.1
Streptomyces flavogriseus gene for 16S rRNA, partial sequence, strain: NBRC 13040	2651	2651	98%	0.0	99%	AB184271.1
Streptomyces flavovirens gene for 16S rRNA, partial sequence, strain: NBRC 12771	2651	2651	98%	0.0	99%	AB184133.1
Streptomyces nitrosporeus strain CGMCC 4.1973 clone 3 16S ribosomal RNA gene, complete sequence	2649	2649	99%	0.0	99%	JQ924412.1
Streptomyces nitrosporeus strain CGMCC 4.1973 clone 1 16S ribosomal RNA gene, complete sequence	2649	2649	99%	0.0	99%	JQ924411.1
Streptomyces olivoviridis strain CGMCC 4.1739 clone 1 16S ribosomal RNA gene, complete sequence	2647	2647	99%	0.0	99%	JQ924393.1
Streptomyces naraensis gene for 16S rRNA, partial sequence, strain: NBRC 13421	2647	2647	98%	0.0	99%	AB184391.2
Streptomyces fulvorobeus 16S rRNA gene, type strain LMG 19901	2647	2647	97%	0.0	99%	AJ781331.1
Streptomyces parvus gene for 16S rRNA, partial sequence, strain: NBRC 14599	2643	2643	98%	0.0	99%	AB184603.1
Streptomyces setonii gene for 16S rRNA, partial sequence, strain: NBRC 13085	2643	2643	97%	0.0	99%	AB184300.1

Alignments

Streptomyces griseus subsp. griseus NBRC 13350 DNA, complete genome
Sequence ID: **AP009493.1** Length: 8545929 Number of Matches: 6
Range 1: 2102343 to 2103819

Score	Expect	Identities	Gaps	Strand	Frame
2721 bits(1473)	0.0()	1476/1477(99%)	1/1477(0%)	Plus/Plus	

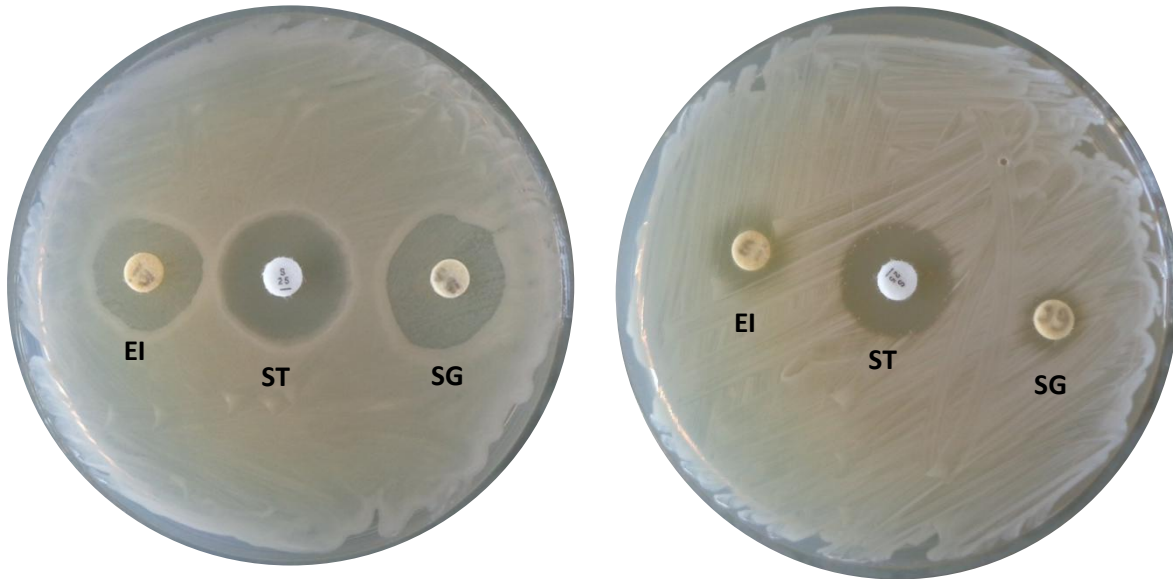
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rRNA-16S ribosomal RNA

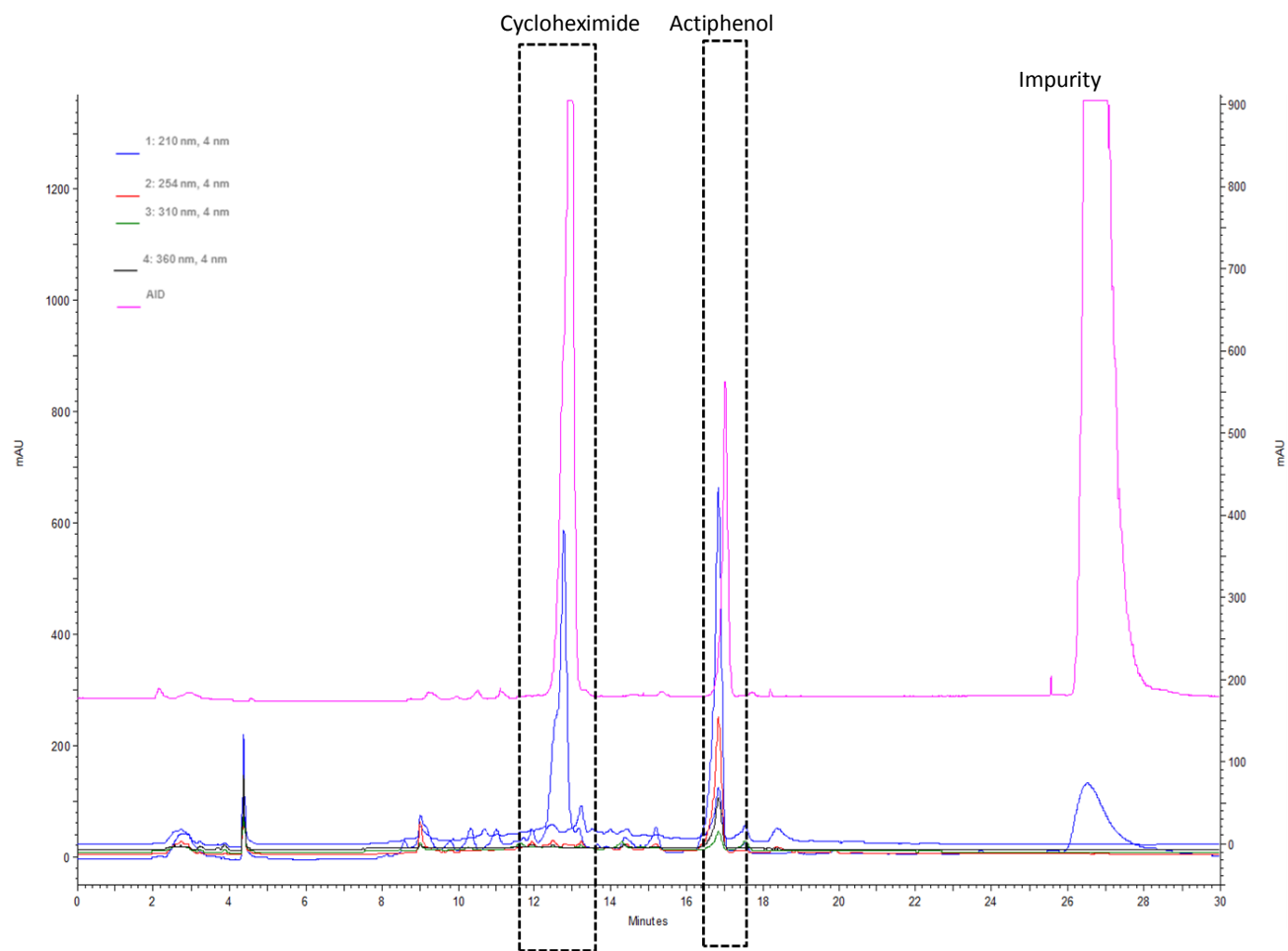
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Query	60	GGCCACCGGCTTCGGGTGTTACCGACTTTCGTGACGTGACGGGCGGTGTGTACAAGGCC	119
Sbjct	2102403	 GGCCACCGGCTTCGGGTGTTACCGACTTTCGTGACGTGACGGGCGGTGTGTACAAGGCC	2102462
Query	120	GGGAACGTATTACCCGAGCAATGCTGATCTGCGATTACTAGCAACTCCGACTTCATGGG	179
Sbjct	2102463	 GGGAACGTATTACCCGAGCAATGCTGATCTGCGATTACTAGCAACTCCGACTTCATGGG	2102522
Query	180	GTCGAGTTGCAGACCCCAATCCGAAGTACGACCGGCTTTTTGAGATTTCGCTCCGCCTCGC	239
Sbjct	2102523	 GTCGAGTTGCAGACCCCAATCCGAAGTACGACCGGCTTTTTGAGATTTCGCTCCGCCTCGC	2102582
Query	240	GGCATCGCAGCTCATTGTACCGCCATTGTAGCACGTGTGCAGCCCAAGACATAAGGGGC	299
Sbjct	2102583	 GGCATCGCAGCTCATTGTACCGCCATTGTAGCACGTGTGCAGCCCAAGACATAAGGGGC	2102642
Query	300	ATGATGACTTGACGTCGTCCCCACCTTCCTCCGAGTTGACCCCGGCAGTCTCCTGTGAGT	359
Sbjct	2102643	 ATGATGACTTGACGTCGTCCCCACCTTCCTCCGAGTTGACCCCGGCAGTCTCCTGTGAGT	2102702
Query	360	CCCCATCACCCCGAAGGGCATGCTGGCAACACAGAACAAGGGTTGCGCTCGTTGCGGGAC	419
Sbjct	2102703	 CCCCATCACCCCGAAGGGCATGCTGGCAACACAGAACAAGGGTTGCGCTCGTTGCGGGAC	2102762
Query	420	TTAACCCAACATCTCACGACACGAGCTGACGACAGCCATGCACCACCTGTATACCGACCA	479

Antibiotic test

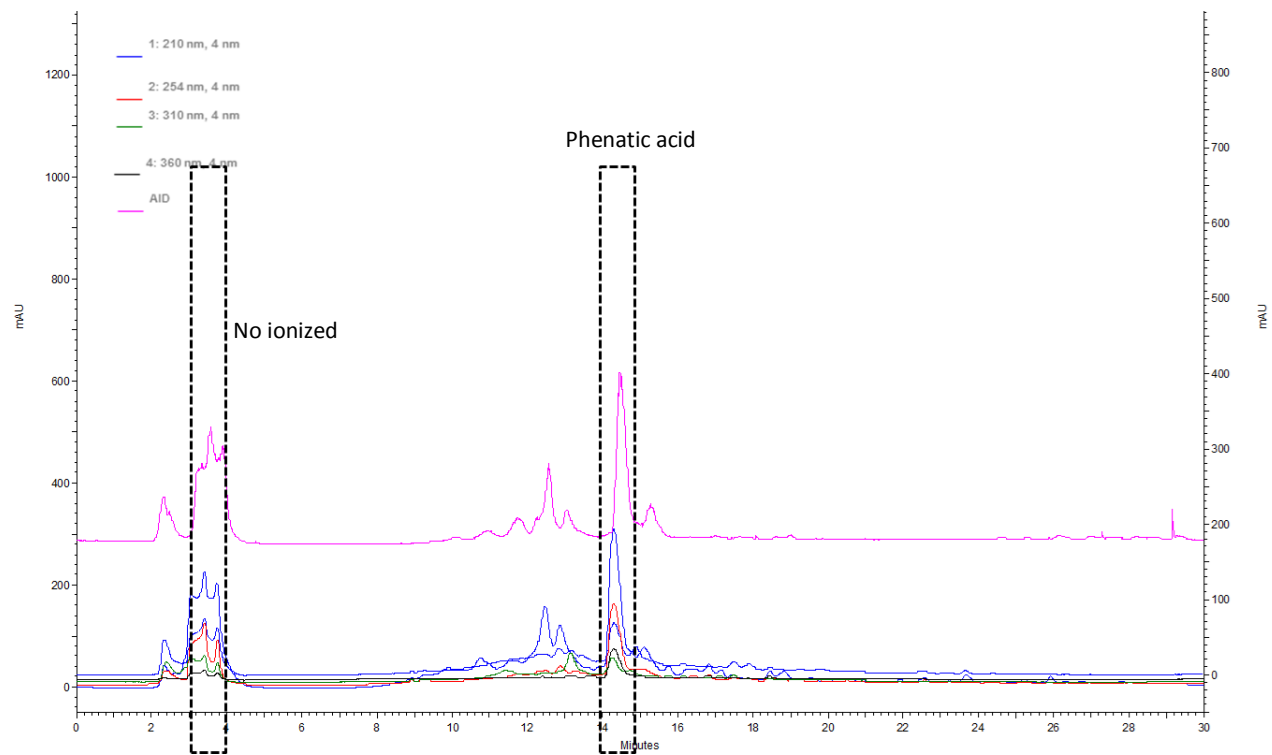
Antibiotic test	
EI:	<i>Streptomyces</i> sp. SN25_8.1
SG:	<i>Streptomyces griseus</i> subsp. <i>griseus</i> DSM 40236 ^T
ST:	Streptomycin



Antibiotic test Left plate: *E. coli* DSM 498, Right Plate: *S. lentus* DSM 20352



HPLC –ELSD profile of *Streptomyces* sp. SN25_8.1.



HPLC –ELSD profile of *Streptomyces griseus* subsp. *griseus* DSM 40236^T.