**Supplementary Information**

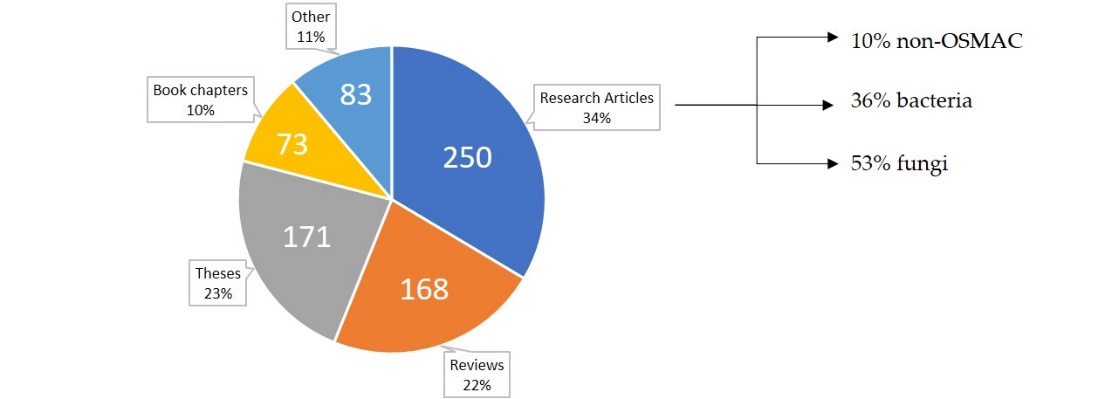


Figure S1. Distribution of Google Scholar-based literature survey results for the keywords “bacteria OSMAC” from 2002-2019. Despite the keyword “bacteria”, many research paper hits deal with fungi. Molecular biology research and analytics publications have been categorized as non-OSMAC.

Table S1. NCBI Accession numbers of candidate strains examined with antiSMASH.

|  |  |  |  |
| --- | --- | --- | --- |
| **Strain** | **NCBI Accession #** | **Strain** | **NCBI Accession #** |
| *Bacillus cereus* NC4701 | AP007209 | *Myxococcus xanthus* DK 1622 | CP000113 |
| *Bacillus thuringiensis* Bc60 | CP015150 | *Corallococcus coralloides DSM2259* | NC\_017030 |
| *Bacillus subtilis* TOA-JPC | NZ\_CP011882 | *Myxococcus stipitatus* DSM14675 | CP004025 |
| *Bacillus subtilis* PS832 | NZ\_CP010053 | *Pyxidicoccus fallax HKI727* | Obtained from Prof. Nett’s group of Technical Biology, TU Dortmund University |
| *Bacillus atrophaeus* UCMB5137 | CP011802 | *Streptomyces nodosus* ATCC14899 | CP009313 |
| *Bacillus amyloliquefaciens* DSM7 | NC\_014551 | *Rhodococcus erythropolis* BG43 | CP011295 |
| *Pseudomonas putida* JBC17 | CP029693 | *Rhodococcus pyridinivorans* SB3094 | NC\_023150 |
| *Escherichia coli* CFT-073 | AE014075 | *Rhodococcus jostii DSM44719* | NZ\_FNTL01000004 |
| *Pseudomonas fluorescens* LBUM223 | NZ\_CP011117 | *Streptomyces laurentii* ATCC31255 | AP017424 |
| *Pseudomonas protegens* Pf-5 | NC\_04129 | *Rhodococcus aetherivorans* IcdP1 | NZ\_CP011341 |
| *Streptomyces rapamycinicus* NRRL5491 | CP006567 | *Streptomyces avermitilis* DSM46492 | NZ\_KQ948581 |
| *Sorangium cellulosum* So ce56 | AM746676 | *Streptomyces griseochromogenes DSM40499* | NZ\_CP016279 |
| *Paenibacillus polymyxa* strain J | NZ\_CP015423 | *Actinosynnema mirum* DSM43827 | NC\_013093 |
| *Saccharopolyspora erythraea* NRRL2338 | NC\_009142 | *Streptomyces bingchenggensis* BCW-1 | NC\_016582 |
| *Pseudomonas aeruginosa* AR0110 | CP029745 | *Pseudomonas aeruginosa* PB350 | CP025055 |
| *Streptomyces violaceusniger* Tu 4113 | CP002994 | *Rhodococcus opacus* B4 | NC\_012522 |
| *Rhodococcus erythropolis* R138 | NZ\_CP007255 | *Kribbella flavida* DSM 17836 | NC\_013729 |
| *Bacillus amyloliquefaciens* FZB42 | NC\_009725 | *Pseudomonas fluorescens* str. PCL1751 | NZ\_CP010896 |
| *Pseudomonas fluorescens* str. FW300-N2C3 | NZ\_CP012831 | *Bacillus coagulans* | CP025437 |
| *Melittangium boletus* DSM 14713 | CP022163 | *S. aurantiaca* DW4/3-1 | CP002271 |
| *Archangium gephyra DSM 2261* | CP011509 | *S. amylolyticus DSM 53668* | NZ\_CP011125 |
| *Chondromyces crocatus* Cm c5 | CP012159 |  |  |

Table S2. List of chemicals, chemical formulae, and supplier. Chemicals were used in the purest form available.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Chemical** | **Chemical formula** | **Supplier** | **Chemical** | **Chemical formula** | **Supplier** |
| BactoPeptone | - | Beckto Dickinson | magnesium sulfate heptahydrate | MgSO4 x 7 H2O | Carl Roth |
| meat extract | - | Fluka | dipotassium-phosphate | K2HPO4 | Carl Roth |
| raffinose D(+) pentahydrate | C18H32O16 x 5 H2O | Sigma Aldrich | calcium chloride dihydrate | CaCl2 x 2 H2O | Carl Roth |
| sucrose D(+) | C12H22O11 | Carl Roth | vitamin B12 | C63H88CoN14O14P | Carl Roth |
| galactose D(+) | C6H12O6 | Carl Roth | EDTA | C10H16N2O8 | Carl Roth |
| soluble starch | (C6H10O5)n | Carl Roth | iron (II) sulfate heptahydrate | FeSO4 x 7 H2O | Carl Roth |
| BactoCasitone | - | Beckto Dickinson | zinc sulfate heptahydrate | ZnSO4 x 7 H2O | AppliChem |
| boric Acid | H3BO3 | Carl Roth | manganese (II) cloride tetrahydrate | MnCl2 x 4 H2O | Carl Roth |
| cobalt (II) chloride hexahydrate | CoCl2 x 6 H2O | Carl Roth | copper (II) chloride dihydrate | CuCl2 x 2 H2O | Carl Roth |
| nickel (II) chloride dihydrate | NiCl2 x 6 H2O | Alfa Aesar | sodium molybdate dihydrate | MoNa2O4 x 2 H2O | Carl Roth |
| peptone from soybean | - | Carl Roth | D (+) glucose | C6H12O6 | Carl Roth |
| sodium chloride | NaCl | Carl Roth | Bacto yeast extract | - | Beckto Dickinson |
| malt extract | - | Carl Roth | HEPES | C8H18N2O4S | Carl Roth |
| tryptone | - | Carl Roth | L-glutamic acid | C5H9NO4 | AppliChem |
| potassium chloride | KCl | Carl Roth | sodium nitrate | NaNO3 | Carl Roth |
| potassium dihydrogen phosphate | KH2PO4 | Carl Roth | thiamine-HCl | C12H17ClN4OS x HCl | Carl Roth |
| L-phenyl-alanine | C9H11NO2 | Carl Roth | L-proline | C5H9NO2 | Carl Roth |
| manganese (II) sulfate hydrate | MnSO4 x H2O | Carl Roth | disodium hydrogen phosphate | Na2HPO4 x 2 H2O | AppliChem |
| copper (II) sulfate pentahydrate | CuSO4 x 5 H2O | Carl Roth | ammonium chloride | NH4Cl | Carl Roth |
| ethyl acetate | C4H8O2 | VWR | methanol | CH4O | Carl Roth |
| acetonitrile | C2H3N | Carl Roth | dimethyl sulfoxide | C2H6OS | Fisher Scientific |
| ethanol | C2H6O | Merck | toluene | C7H8 | Fisher Scientific |
| surfactin | C53H93N7O13  C52H89N7O13 | Santa Cruz Biotechno-logy | myxochelin A | C20H24N2O7 | Biomol |
| cyclo-(tyr-pro) | C14H16N2O3 | Carbo-synth Limited | nocardamin | C27H48N6O9 | Biomol |
| desferrioxa-mine B | C25H48N6O8 | Sigma |  |  |  |

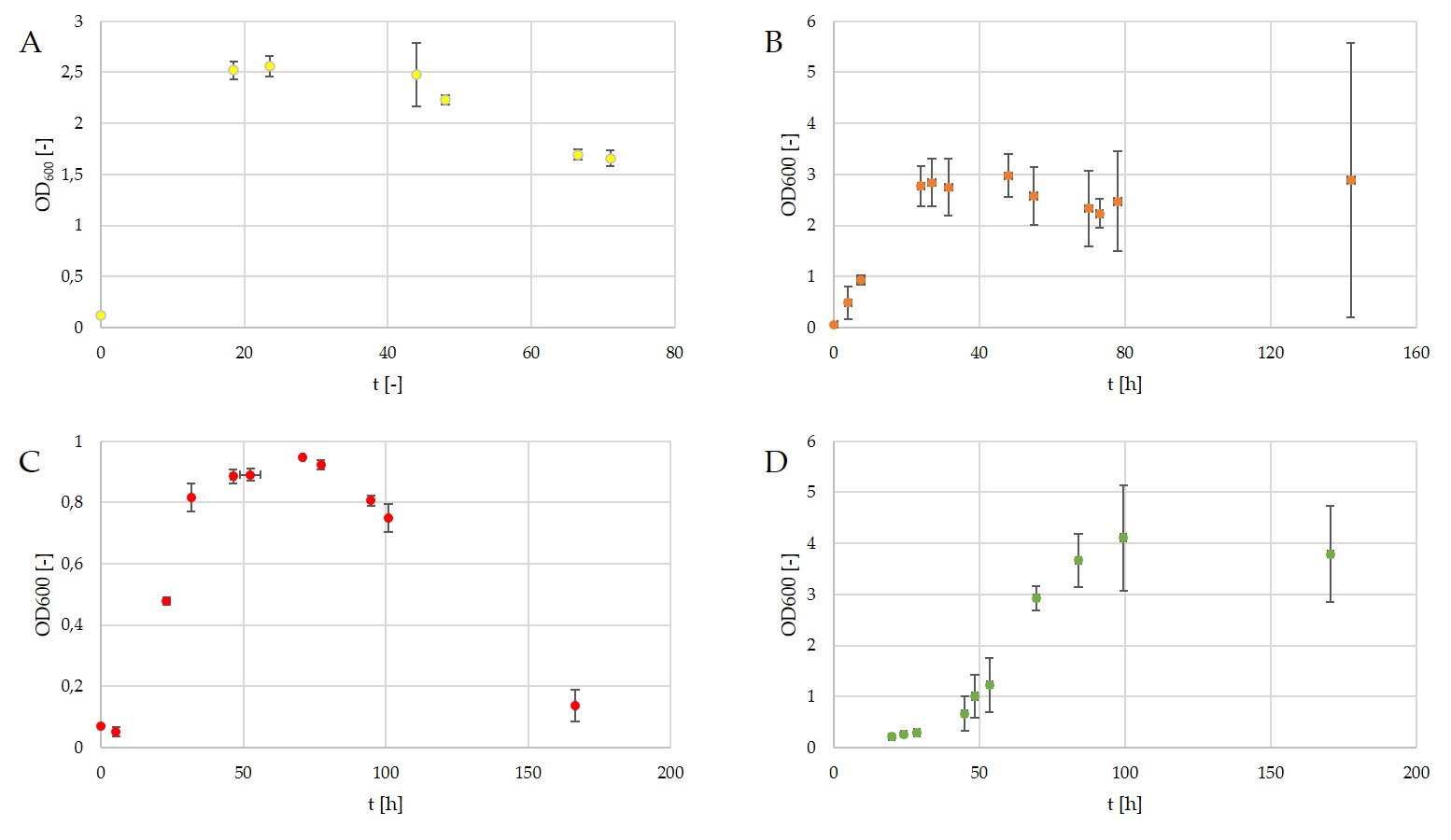


Figure S2. Growth curves of selected bacterial under control group conditions. A-*B. amyloliquefaciens* on NB medium at 30°C, B- *C. corallloides* on SP medium at 30°C, C- *P. fallax* on MD1 medium at 30°C, D- *R. jostii* on TSB medium at 28°C.

Table S3. Composition of CY/H medium

. Solutions A and B are to be autoclaved separately. 1 mL of each solution B and C will be added to solution A. Final pH = 7.4.[1]

|  |  |
| --- | --- |
| **components** | **amount [g∙L-1]** |
| **solution A** | |
| Bacto® Casitone | 1.5 |
| yeast extract | 1.5 |
| starch | 4.0 |
| soy flour | 1.0 |
| D-(+)-Glucose | 1.0 |
| CaCl2 x 2 H2O | 1.0 |
| MgSO4 x 7 H2O | 0.5 |
| HEPES | 11.9 |
| **solution B** | |
| EDTA-iron | 0.8 g |
| distilled water | 100.0 ml |
| **solution C** | |
| Vitamin B12 | 0.05 g |
| distilled water | 100.0 ml |

Table S4. Composition of LB medium. Final pH = 7.0.

|  |  |
| --- | --- |
| **Components** | **amount [g∙L-1]** |
| tryptone | 10.0 |
| yeast extract | 5.0 |
| NaCl | 10.0 |

Table S5. Composition of MD1+G medium. Final pH = 7.4.

|  |  |
| --- | --- |
| **Components** | **amount [g∙L-1]** |
| MD1 recipe |  |
| D-(+)-Glucose | 2.2 |

Table S6. Composition of Landy medium. Final pH = 7.0.[2]

|  |  |
| --- | --- |
| **Components** | **amount [g∙L-1]** |
| D-(+)-Glucose | 20.0 |
| L-glutamic acid | 5.0 |
| L-phenylalanine | 2.0 |
| MgSO4 x 7 H2O | 0.5 |
| KCl | 0.5 |
| KH2PO4 | 1.0 |
| 1% FeSO4 | 15 µL/L |
| 1% MnSO4 | 500 µL/L |
| 1% CuSO4 | 16 µL/L |

Table S7. Composition of Glucose Minerals Salts (GMS) medium. Final pH = 7.0. (No longer available at DSMZ.)

|  |  |
| --- | --- |
| **Components** | **amount [g∙L-1]** |
| NaNO3 | 2.0 |
| K2HPO4 | 0.5 |
| MgSO4 x 7 H2O | 0.2 |
| MnSO4 x 5 H2O | 0.02 |
| FeSO4 x 7 H2O | 0.02 |
| CaCl2 x 7 H2O | 0.02 |
| D-(+)-Glucose | 5.0 |

Table S8. Composition of M9 medium and 1% PO43- M9 medium. Final pH = 7.4.[3]

|  |  |
| --- | --- |
| **components** | **amount [mL]** |
| 1 M MgSO4 | 1.0 |
| 0.1 M CaCl2 | 1.0 |
| 1 M thiamine-HCl x 2 H2O | 1.0 |
| D-(+)-glucose | 2.01 g |
| L-proline | 20.0 mg |
| distilled water | 900.0 |
| salt solution | 100.0 |
| **salt solution for M9 medium** | |
| Na2HPO4 | 6.0 g |
| KH2PO4 | 3.0 g |
| NH4Cl | 1.0 g |
| NaCl | 0.5 g |
| distilled water | 100.0 |
| **salt solution for M9 medium 1% PO43-** | |
| Na2HPO4 | 0.06 g |
| KH2PO4 | 0.03 g |
| NH4Cl | 0.01 g |
| NaCl | 0.005 g |
| distilled water | 100.0 |

Table S9. Settings for vendor format raw data conversion with msConvert according to GNPS website instructions.[4]

|  |  |
| --- | --- |
| **Parameter** | **Setting** |
| output format | mzXML |
| binary encoding precision | 32 bit |
| write idex | ✓ (check) |
| TPP compatibility | ✓ (check) |
| use zlib compresion | uncheck |
| Filters | Peak Picking with algorithm = vendor and MS Level 1- |

Table S10. Steps for raw data preparation with MZmine 2.35.

|  |  |  |  |
| --- | --- | --- | --- |
| **Input** | **Step** | **Settings** | **Output** |
| raw data, mzXML-format | Peak Detection -> Mass Detection | MS level: 1  Mass Detector: Centroid  Noise level: 1.0E4 | mass list |
| mass list | Peak Detection -> Chromatogram Builder | MS level: 1  Min time span: 0.01 min  Min height: 3.0E4  *m/z* tolerance: 0.0 *m/z* or 20 ppm | peak lists, suffix:  chromatograms |

Table S11. Steps for peak list processing with MZmine 2.35 with tR = retention time.

|  |  |  |  |
| --- | --- | --- | --- |
| **Input** | **Step** | **Settings** | **Output** |
| peak lists, suffix:  chromatograms | Peak Detection -> Chromatogram Deconvolution | Algorithm: Baseline cut-off | peak lists, suffix:  chromatograms deconvoluted |
| peak lists, suffix:  chromatograms deconvoluted | Isotopes -> Isotopic peaks grouper | m/z tolerance: 0.0 m/z or 20 ppm  tR tolerance: 0.1 min  Maximum charge: 3  Representative isotope: lowest *m/z* | peak lists, suffix:  chromatograms deconvoluted deisotoped |
| peak lists, suffix:  chromatograms deconvoluted deisotoped | Alignment -> Join Aligner | *m/z* tolerance: 0.0 *m/z* or 20 ppm  Weight for *m/z*: 75  tR tolerance: 0.1 min  Weight for tR : 25 | aligned peak list |
| aligned peak list | Filtering -> Peak list rows filter | Minimum peaks in a row: 2  remove rows that match all criteria | aligned peak list, suffix:  filtered |
| aligned peak list, suffix:  filtered | Filtering -> Peak list rows filter | tR : 1.0-11.0 min  keep rows that match all criteria | aligned peak list, suffix:  filtered filtered |

Table S12. Numbers of BGCs of different natural product classes present on the genomes of selected strains. Some BGCs were not clearly identified and were labeled as two classes by antiSMASH. Those BGCs have been counted twice. Therefore, the total number of BGCs does not necessarily equal the sum of listed gene clusters. PKS = polyketides, NRPs = non-ribosomal peptides, PKs-NRPs = PKs-NRPs-hybrid.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Natural product class** | **# BGCs on DSM7 genome** | **# of BGCs on DSM2259 genome** | **# of BGCs on HKI727 genome** | **# of BGCs on DSM44719 genome** | **# BGCs on DSM40499 genome** |
| PKs | 2 | 3 | 7 | 2 | 7 |
| NRPs | 3 | 4 | 8 | 11 | 3 |
| PKs-NRPs | 2 | 8 | 9 | 0 | 8 |
| Terpenes | 2 | 4 | 1 | 2 | 8 |
| Lantipeptides | 4 | 5 | 0 | 0 | 6 |
| Bacteriocins | 0 | 5 | 5 | 2 | 7 |
| Other | 1 | 5 | 3 | 3 | 14 |
| Total | **11** | **34** | **33** | **18** | **49** |
| Orphan clusters | **5** | **22** | **11** | **5** | **11** |

Table S13. Color code used for natural product classes in genome maps.

|  |  |
| --- | --- |
| Color | Natural Product Class |
|  | Non-ribosomal peptide (NRPS) |
|  | Siderophore |
|  | Lantipeptide |
|  | Bacteriocin |
|  | Polyketides (PKS) |
|  | Terpenes |
|  | PKS-NRPS-hybrids |
|  | Ectoine |
|  | Other group |
|  | lassopeptide |

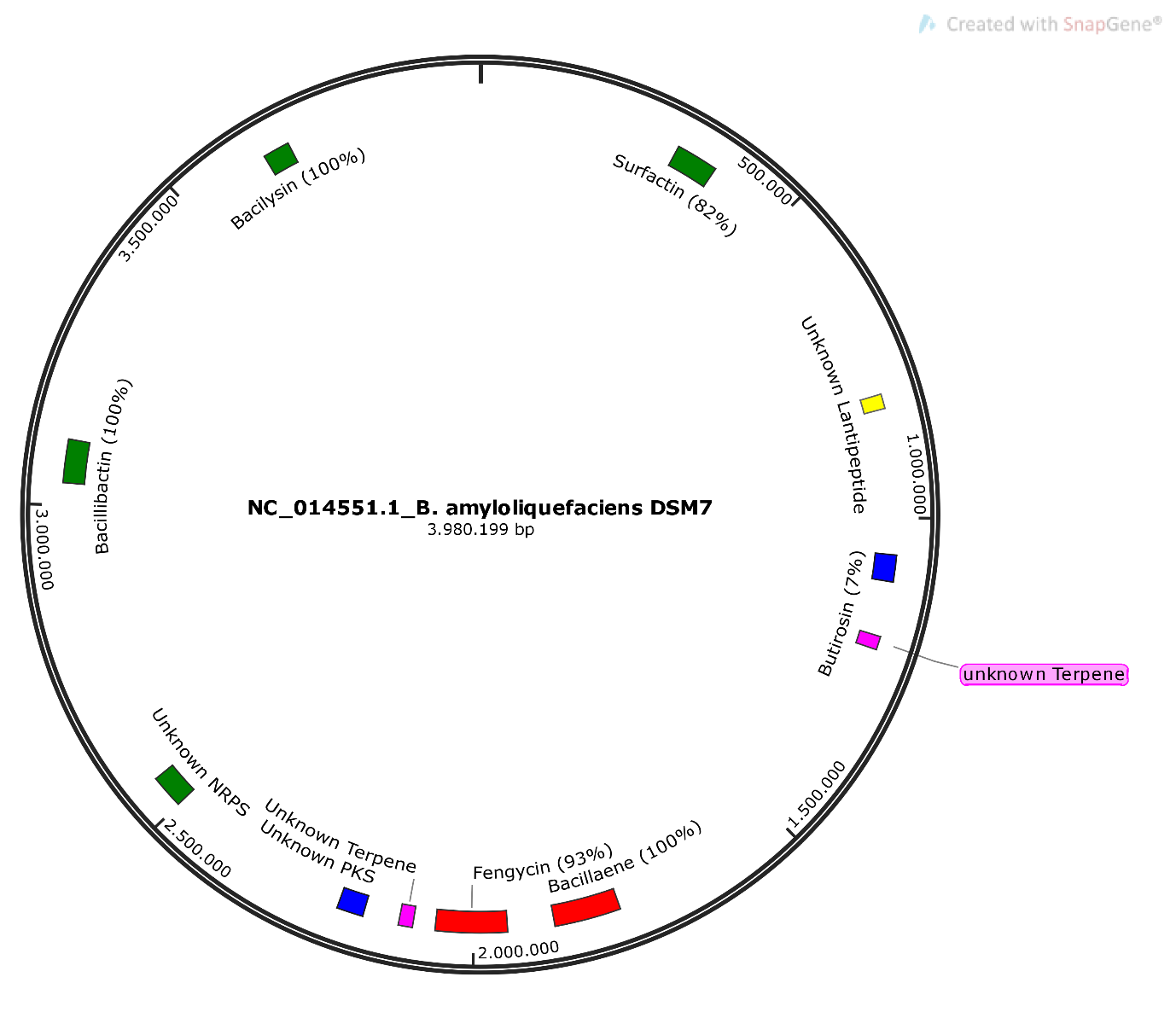


Figure S3. antiSMASH predictions for *Bacillus amyloliquefaciens* DSM7.

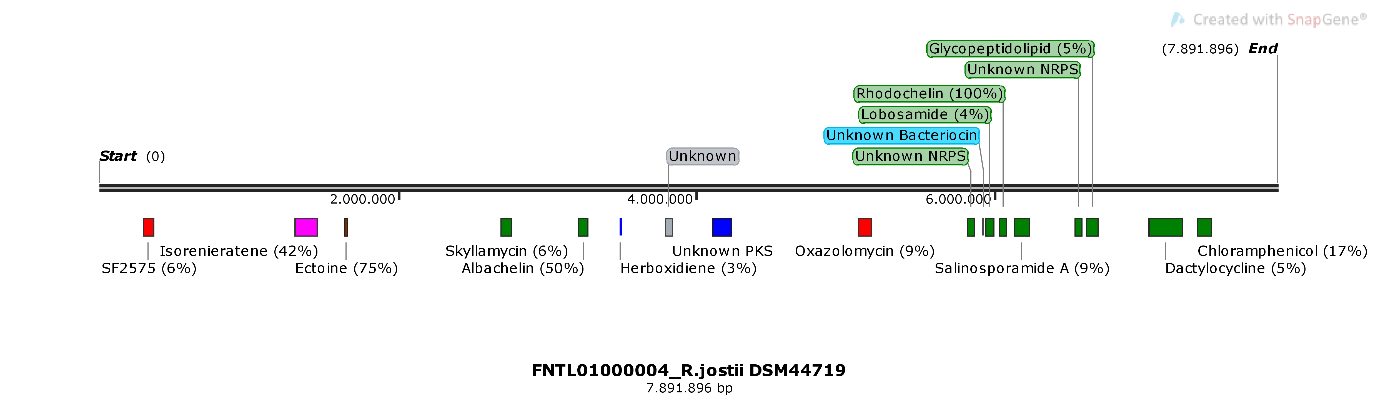


Figure S4. antiSMASH predictions for *Rhodococcus jostii* DSM44719.

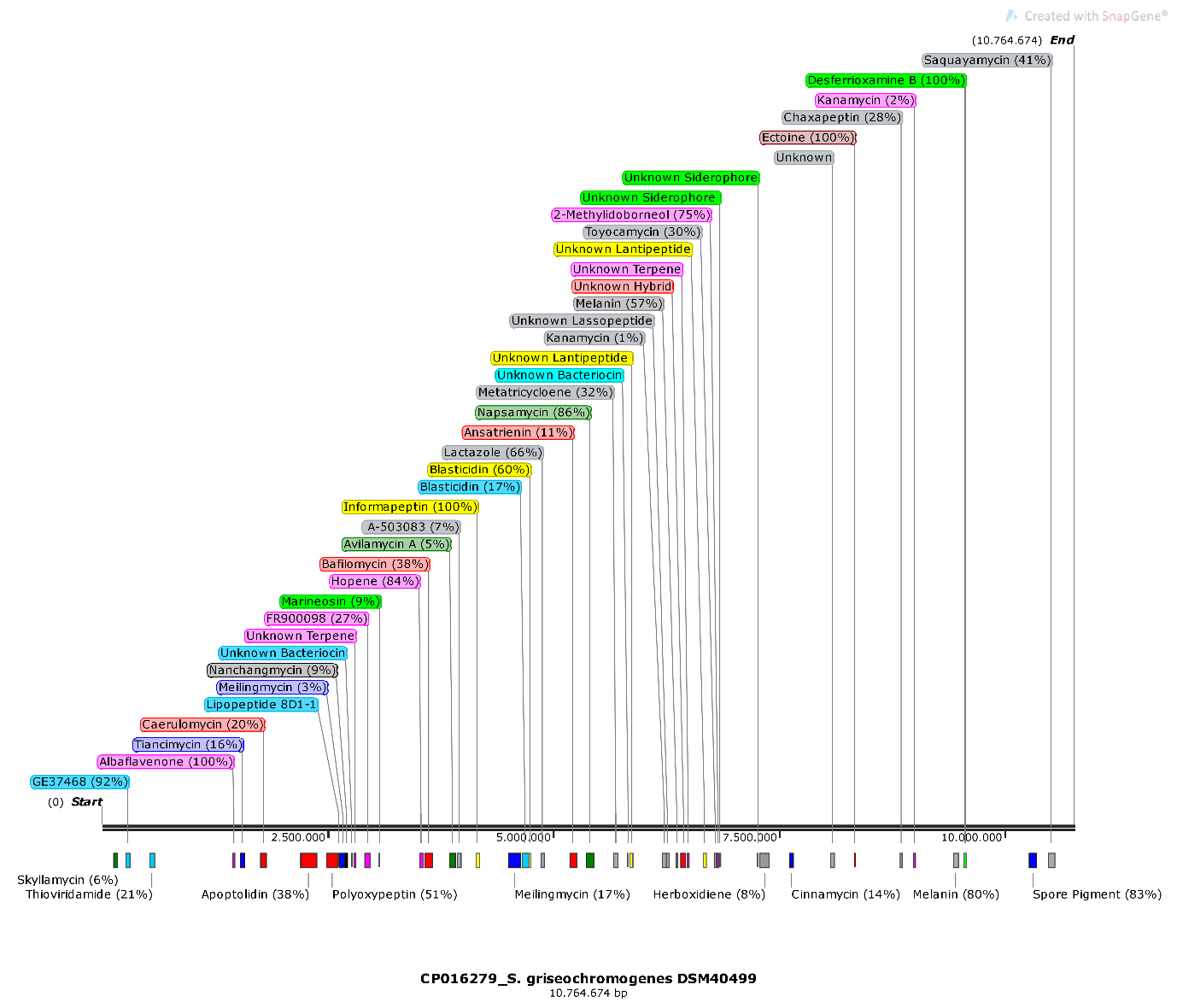


Figure S5. antiSMASH predictions for *Streptomyces griseochromogenes* DSM40499.

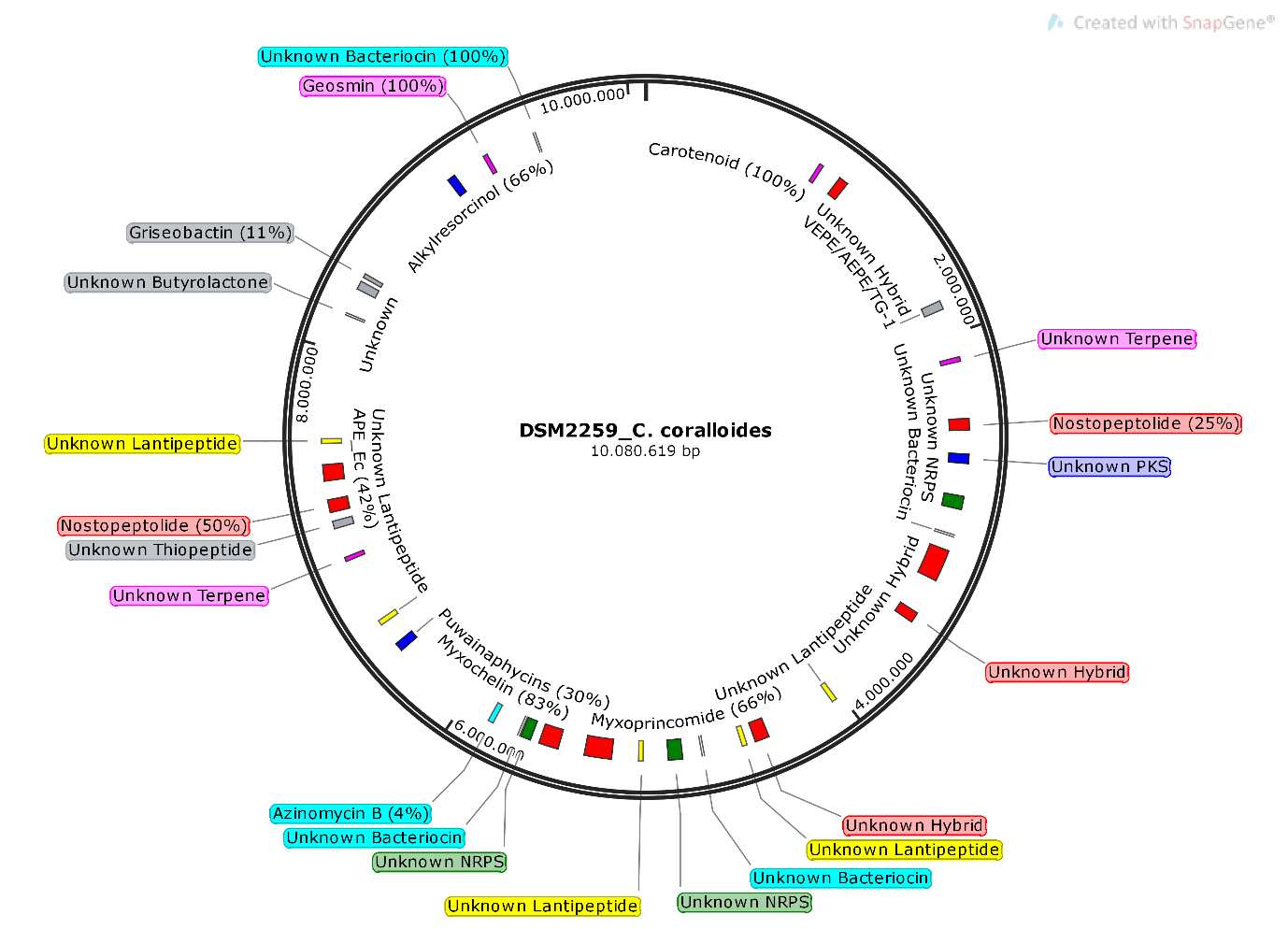


Figure S6. antiSMASH predictions for *Corallococcus coralloides* DSM2259.

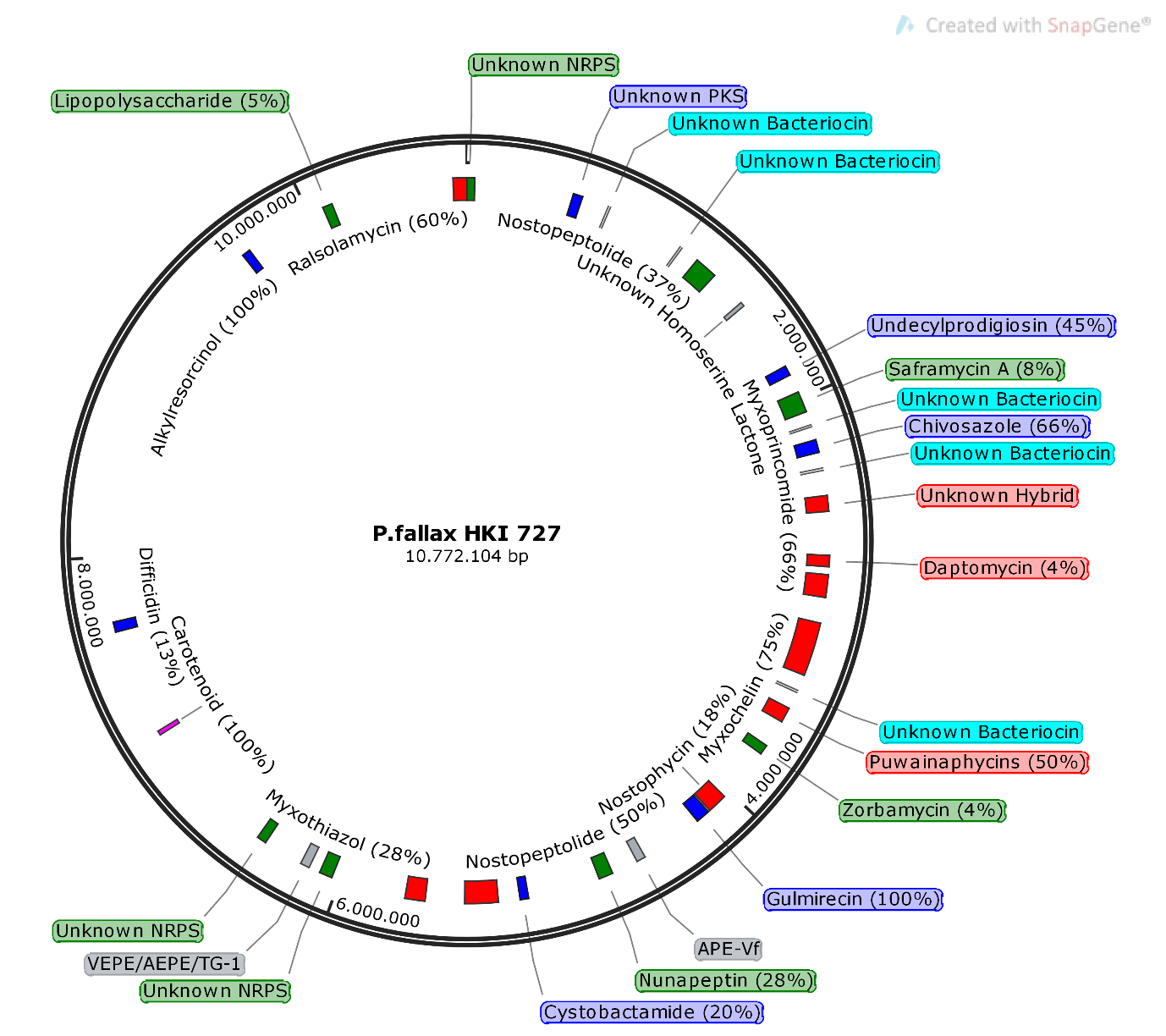


Figure S7. antiSMASH predictions for Pyxidicoccus fallax HKI727.

Table S14. Overview of compounds and corresponding producing conditions from selected strains. Bold print indicates that the compounds were not detected in control group samples.

|  |  |  |
| --- | --- | --- |
| **Strain** | **Detected compound**  **(% similarity)** | **Producing conditions** |
| *B. amyloliquefaciens* DSM 7 | **surfactin** (82%) | 40°C, GMS medium, Fe3+-limited GMS medium (GMS FeX), 3% EtOH, 3% Tol, addition of sterile-filtered supernatant of *P. fallax* |
| **bacillibactin** (100%) | Fe3+-limited GMS medium (GMS FeX), |
| putative bacillaene (100%) | control, LB medium, 40°C, Fe3+-limited GMS medium (GMS FeX), 3% EtOH, 3% Tol, addition of sterile-filtered supernatant of *P. fallax* |
| *P. fallax* HKI727 | **myxochelin A** (75%) | NB medium, SP medium, M9 medium, M9 medium with 1% PO43-,25°C, 35°C, 0.5%/1%/3% DMSO, 0.5%/1% EtOH, addition of *C. coralloides* or *S. griseochromogenes* pellet. |
| **nostophycin** (18%) | GMS medium, Fe3+-limited GMS medium (GMS FeX), Mg2+-limited GMS medium (GMS MgX), 6% EtOH, 6% Tol |
| *S. griseochromogenes* DSM 40499 | desferrioxamine B (100%) | all tested conditions **BUT**: TSB medium, GMS medium, Mg2+-limited GMS medium (GMS MgX), 6% ACN, addition of Tol, 8% EtOH |
| putative **albaflavenone** (100%) | oxygen limitation, SP medium, GMS medium, Fe3+-limited GMS medium (GMS FeX), Mg2+-limited GMS medium (GMS MgX) |

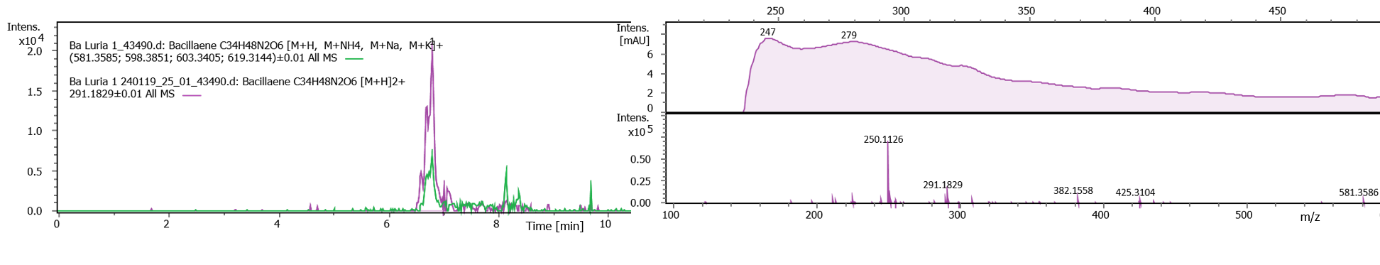


Figure S8: Extracted Ion Chromatograms (EICs) of singly and double charged of putative bacillaene from *B. amyloliquefaciens* cultures grown on LB medium and corresponding MS-spectrum. The UV spectrum is shown above the MS spectrum. Δppm = 0.7.

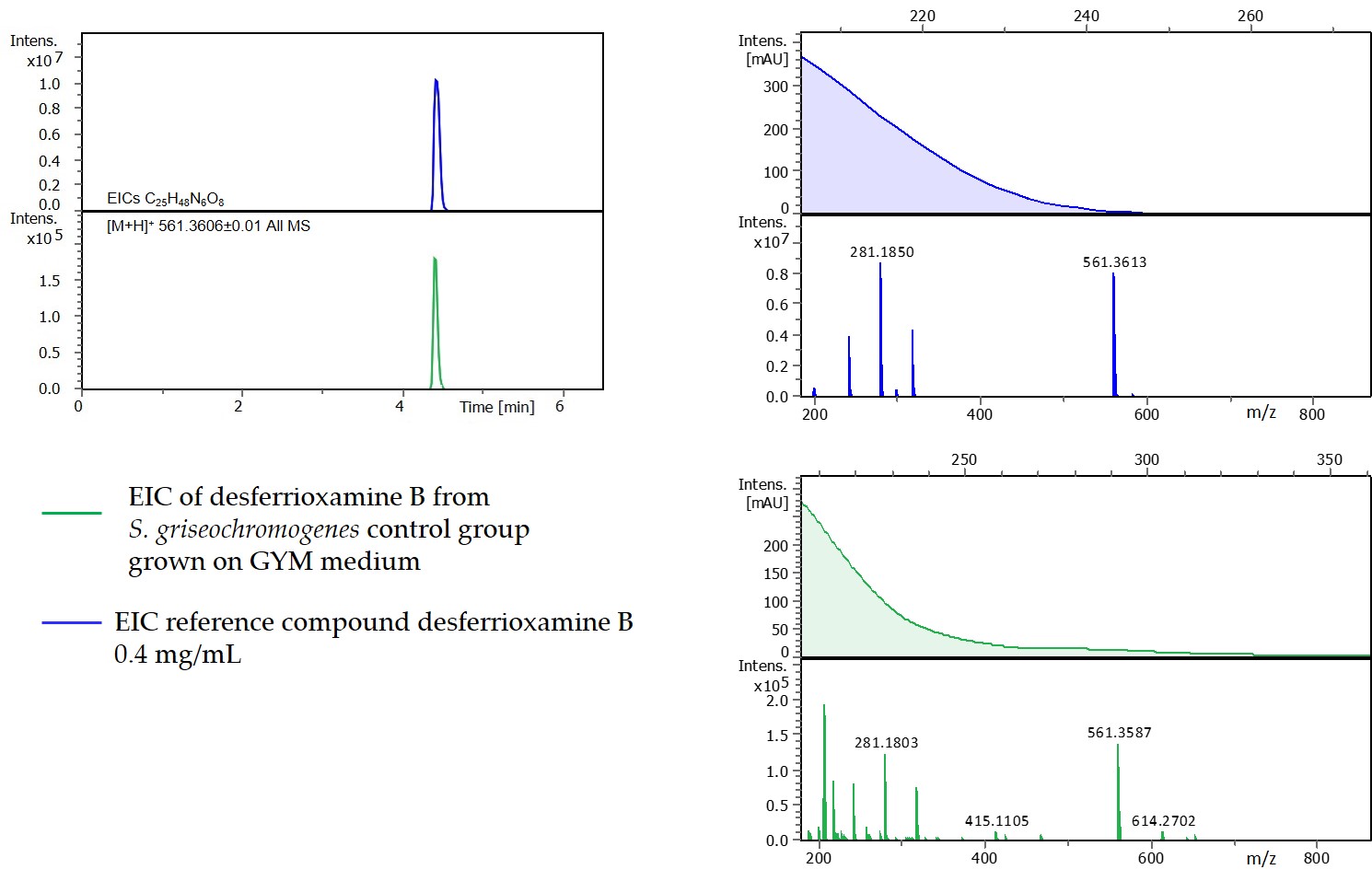


Figure S9. Comparison of chromatograms (EICs) and MS-spectra of desferrioxamine B reference compound (blue) and EIC of *S. griseochromogenes* control group sample (green). The UV spectrum is shown above the MS spectrum. Δppm = 4.6.

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Figure S10. ( a ) Comparison of chromatograms of surfactin reference compund (contains C14- and C15-variant) (blue) and Extracted Ion Chromatograms (EICs) from sample *B. amyloliquefaciens* grown at 40°C (green). ( b ) Comparison of MS-spectra of surfactin reference compound and sample *B. amyloliquefaciens* grown at 40°C. Δppm = 4.9 for C14, Δppm = 2.2 for C15.

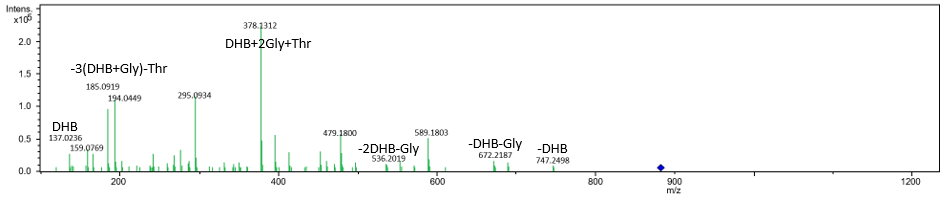


Figure S11. Experimental fragmentation pattern of bacillibactin with 45eV in accordance to [32]. Blue diamond marks the precursor molecule with *m/z* = 883.2424. Δppm = 1.4.

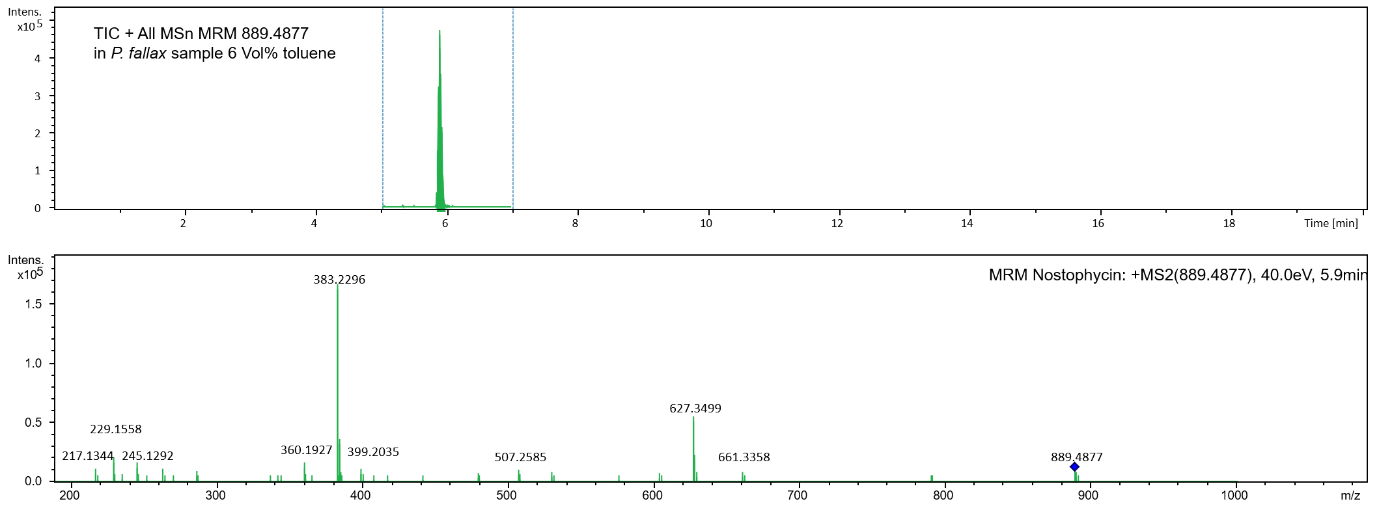


Figure S12. Total Ion Chromatogram (TIC) and fragmentation pattern of putative nostophycin in sample *P. fallax* 6 Vol% toluene. CE = 40eV. Δppm = 7.0.

Table S15. *m/z* of fragments generated through MS2 experiment of sample *P. fallax* 6 Vol% toluene and corresponding intensities used for *in silico* fragmentation of PubChem entry #101945102 for verification of nostophycin.

|  |  |
| --- | --- |
| ***m/z*fragment** | **Intensity [%]** |
| 383.2296 | 100 |
| 627.3499 | 31.15 |
| 229.1558 | 10.26 |
| 360.1927 | 7.2 |
| 245.1292 | 7.2 |
| 263.1394 | 4.1 |
| 399.2035 | 4.0 |
| 217.1344 | 3.9 |
| 507.2585 | 3.5 |
| 286.1776 | 2.5 |
| 661.3358 | 2.0 |

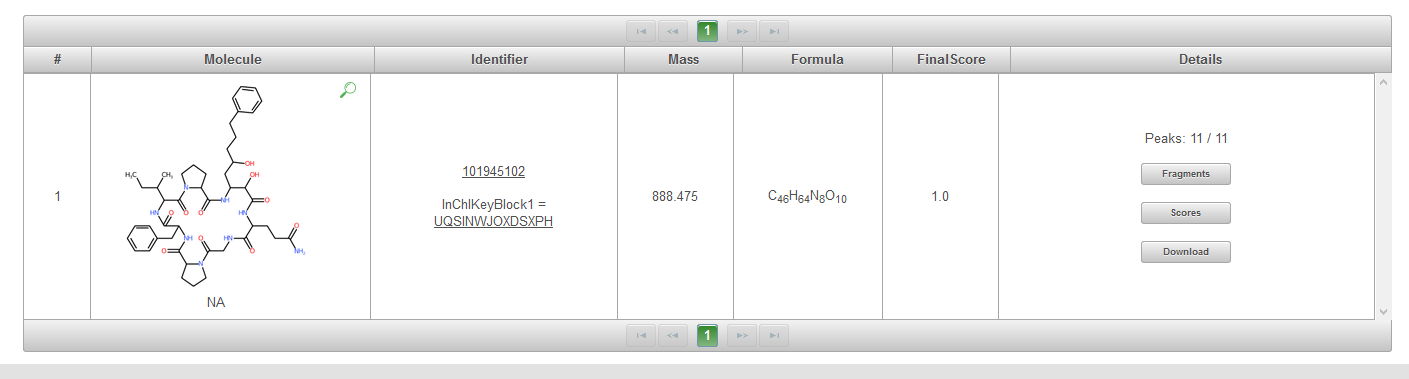


Figure S13. MetFrag results of in silico fragmentation of PubChem entry #101945102 compared with experimental MS2 spectrum of putative nostophycin. (Figure S12,Table S15)

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Figure S14. Comparison of chromatograms and MS-spectra of myxochelin A reference compound (blue) and EIC of sample *P. fallax* M9 1% PO43- (green). Δppm = 10.1.

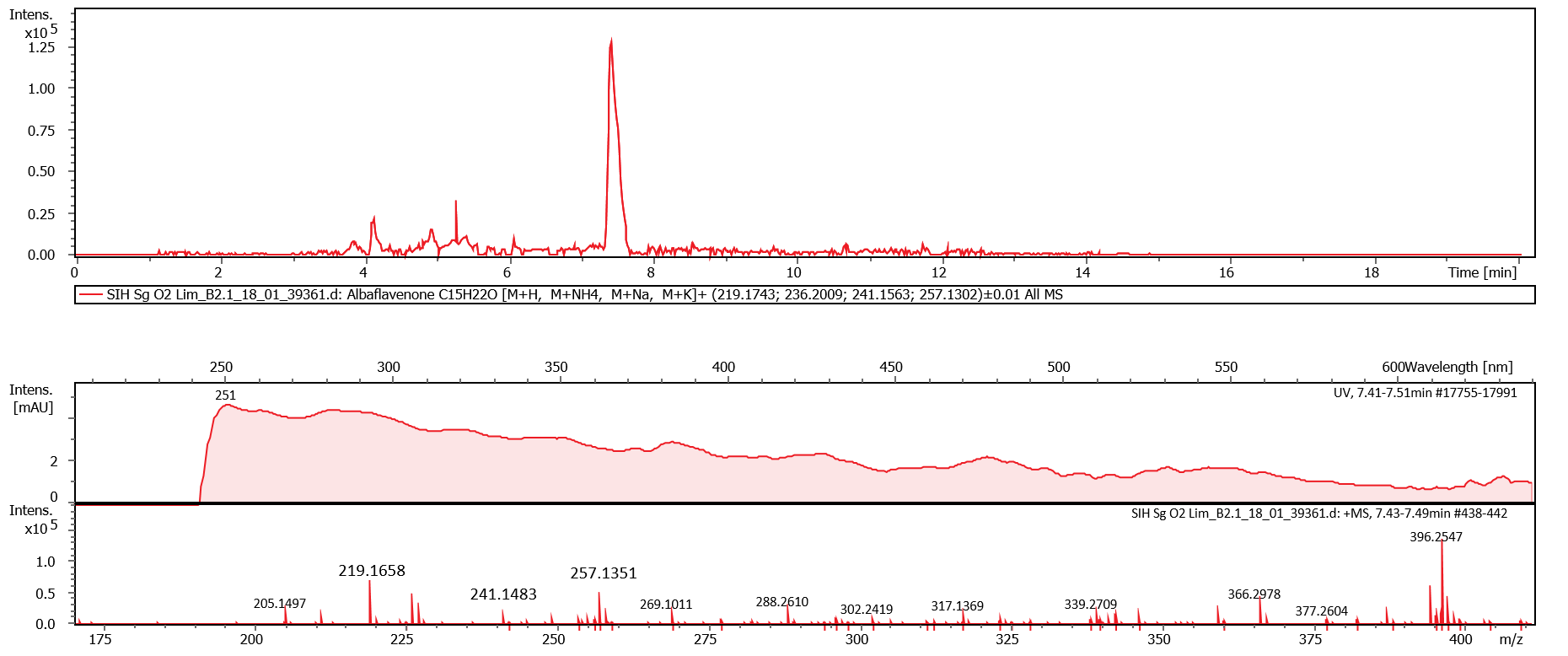


Figure S15. Extracted Ion Chromatogram and corresponding MS-spectrum of putative albaflavenone from oxygen limitation sample of *S. griseochromogenes* culture. The UV spectrum is shown above the MS spectrum. Δppm = 38.8.

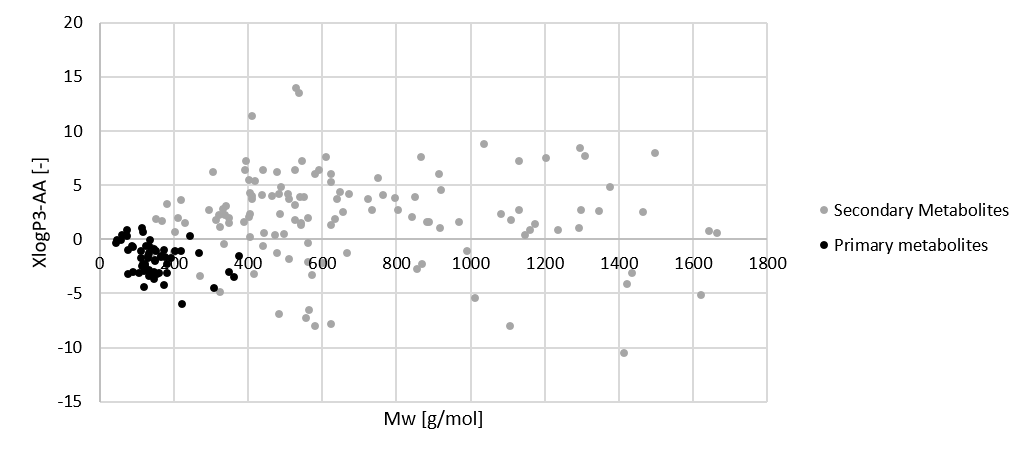


Figure S16. Comparison of physicochemical data of bacterial primary and secondary metabolites taken from PubChem.

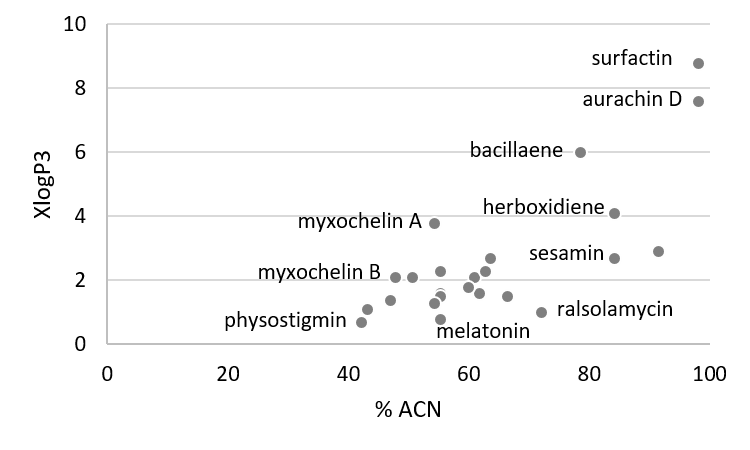
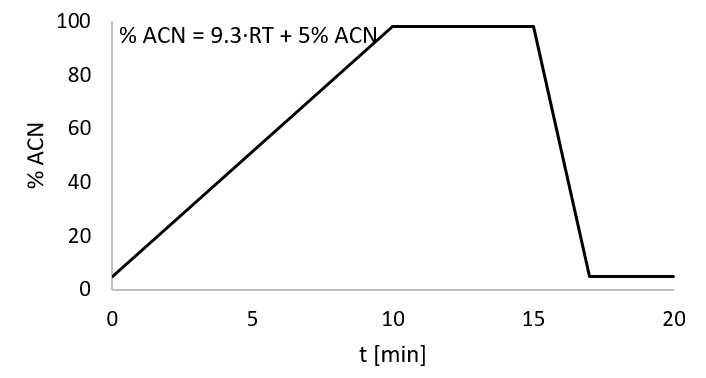


Figure S17. Visualization of employed HPLC method and correlation of logP values and ACN percentage at tR.

Table S16. List of new mass features detected in extracts from *B. amyloliquefaciens* DSM7 including mass feature ID, *m/z*measured, retention time (tR), number of activating conditions and activating conditions.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **ID** | ***m/z*measured**  **[-]** | **tR [min]** | **# of**  **a.c.** | **activating conditions (a.c.)** |
| **Ba1** | 304.3004 | 8.51 | 1 | Landy Medium |
| **Ba2** | 332.3315 | 9.22 | 1 | Landy Medium |
| **Ba3** | 261.1232 | 4.5 | 4 | GMS MgX, 40°C, LB Medium, Landy Medium |
| **Ba4** | 338.1392 | 7.92 | 4 | Landy Medium |
| **Ba5** | 227.1389 | 3.92 | 3 | GMS FeX, LB Medium, Landy Medium |
| **Ba6** | 458.1596/  436.172 | 5.9 | 1 | Landy Medium |
| **Ba7** | 277.1194 | 4.78 | 1 | Landy Medium |
| **Ba8** | 1057.57 | 7.21 | 1 | LB Medium |
| **Ba9** | 1071.5832 | 7.57 | 1 | LB Medium |
| **Ba10** | 1085.6 | 7.89 | 1 | LB Medium |
| **Ba11** | 250.1126 | 6.67 | 4 | 3% EtOH, 3% Tol, 40°C, LB Medium |
| **Ba12** | 360.1934 | 4.45 | 1 | LB Medium |
| **Ba13** | 382.1563 | 6.64 | 2 | GMS, LB Medium |
| **Ba14** | 316.2487 | 7.7 | 2 | + Sg sup sf, + Pf sup auto |
| **Ba18** | 418.2748 | 6.44 | 1 | SP Medium |
| **Ba19** | 346.2602 | 7.35 | 3 | 3% ACN, 25°C, + Sg sup sf |
| **Ba20** | 510.3197 | 8.78 | 1 | 25°C |
| **Ba21** | 233.1316 | 6.1 | 1 | 25°C |
| **Ba22** | 363.1955 | 6.1 | 1 | 25°C |
| **Ba23** | 228.223 | 10.33 | 1 | 40°C |
| **Ba24** | 243.0854 | 6.13 | 1 | 40°C |
| **Ba25** | 211.1408 | 6.13 | 1 | 40°C |
| **Ba27** | 227.1728 | 5.79 | 3 | 3% EtOH, 3% Tol, 40°C |
| **Ba28** | 311.1368 | 5.21 | 1 | 40°C |
| **Ba29** | 225.041 | 6.69 | 1 | 40°C |
| **Ba30** | 213.1574 | 5.3 | 2 | 3% EtOH, 40°C |
| **Ba31** | 453.2702 | 4.09 | 1 | 40°C |
| **Ba32** | 227.1529 | 5.41 | 1 | GMS |
| **Ba35** | 398.2633/  382.2858 | 10.27 | 3 | GMS MgX, GMS FeX, GMS |
| **Ba36** | 495.2603 | 9.81 | 5 | 3% EtOH, 3% Tol, GMS MgX, GMS FeX, GMS |
| **Ba38** | 370.2349 | 5.97 | 2 | GMS FeX, GMS |
| **Ba39** | 537.1458 | 4.77 | 2 | GMS FeX, GMS |
| **Ba41** | 412.2427/  426.2224 | 7.16 | 1 | GMS |
| **Ba42** | 480.2127 | 7.41 | 1 | GMS |
| **Ba43** | 433.2961 | 10.43 | 5 | 3% EtOH, 3% Tol, GMS MgX, GMS FeX, GMS |
| **Ba44** | 390.1644 | 7.43 | 1 | GMS |
| **Ba46** | 298.2746 | 9.94 | 1 | GMS |
| **Ba48** | 296.2594 | 9.49 | 1 | GMS |
| **Ba52** | 623.3655 | 8.36 | 1 | GMS |
| **Ba53** | 328.1826 | 9.81 | 2 | GMS FeX, GMS |
| **Ba54** | 263.2369 | 9.05 | 1 | GMS |
| **Ba55** | 317.2691 | 8.36 | 1 | GMS |
| **Ba56** | 607.1897 | 5.21 | 1 | GMS FeX |
| **Ba57** | 265.1273 | 3.74 | 1 | GMS FeX |
| **Ba58** | 883.2646 | 6.07 | 1 | GMS FeX |
| **Ba60** | 708.2496 | 4.85 | 1 | GMS FeX |
| **Ba61** | 218.1372 | 4.51 | 1 | GMS FeX |
| **Ba62** | 384.2504 | 6.4 | 1 | GMS FeX |
| **Ba63** | 901.275 | 5.85 | 1 | GMS FeX |
| **Ba64** | 225.1371 | 10.96 | 1 | GMS FeX |
| **Ba65** | 287.1968 | 5.43 | 1 | M9 1% PO43- |
| **Ba68** | 341.1802 | 8.8 | 2 | M9 Medium, + Cc Pellet |
| **Ba69** | 359.1908 | 7.14 | 1 | M9 Medium |
| **Ba70** | 401.2043 | 8.1 | 1 | M9 Medium |
| **Ba71** | 354.4145 | 9.85 | 1 | M9 Medium |
| **Ba72** | 325.2259 | 6.91 | 1 | 3% EtOH |
| **Ba73** | 240.1379 | 8.8 | 2 | 3% EtOH, 3% Tol |
| **Ba74** | 269.2005 | 5.88 | 2 | 3% EtOH, 3% Tol |
| **Ba75** | 343.2944 | 7.19 | 2 | 3% EtOH, 3% Tol |
| **Ba77** | 250.118 | 9.36 | 2 | 3% EtOH, 3% Tol |
| **Ba78** | 284.1386 | 6.02 | 2 | 3% EtOH, 3% Tol |
| **Ba79** | 249.2057 | 8.48 | 2 | 3% EtOH, 3% Tol |
| **Ba80** | 285.1047 | 6.25 | 2 | 3% EtOH, 3% Tol |
| **Ba81** | 234.0579 | 8.31 | 2 | 3% EtOH, 3% Tol |
| **Ba82** | 252.1074 | 9.47 | 1 | 3% EtOH |
| **Ba85** | 296.2571 | 10.18 | 1 | 3% EtOH |
| **Ba86** | 292.1067 | 5.88 | 2 | 3% EtOH, 3% Tol |
| **Ba87** | 987.1246 | 8.33 | 1 | 3% EtOH |
| **Ba88** | 328.2837 | 6.77 | 2 | 3% EtOH, 3% Tol |
| **Ba89** | 443.2566 | 4.99 | 2 | + Sg sup sf, + Sg sup auto |
| **Ba90** | 625.3203 | 4.21 | 1 | + Sg sup sf |
| **Ba91** | 243.1407 | 4.19 | 1 | + Sg sup sf |
| **Ba92** | 654.2732 | 4.31 | 1 | + Sg sup sf |
| **Ba93** | 401.2462 | 5.07 | 1 | + Sg sup sf |
| **Ba94** | 496.1674 | 4.04 | 1 | + Sg sup sf |
| **Ba95** | 565.1014 | 10.79 | 5 | + Rj sup sf, + Cc sup sf, + Pf sup auto, + Pf Pellet |
| **Ba96** | 553.3055 | 4.5 | 1 | + Rj sup sf |
| **Ba97** | 396.9055 | 6.32 | 2 | + Rj sup sf, + Pf Pellet |
| **Ba98** | 252.0972 | 10.79 | 2 | + Rj sup sf, + Pf Pellet |
| **Ba99** | 279.1207 | 5.44 | 1 | + Rj sup sf |
| **Ba100** | 727.5254 | 8.53 | 1 | + Rj sup sf |
| **Ba101** | 256.2317 | 5.91 | 1 | + Cc sup sf |
| **Ba102** | 274.2421 | 5.91 | 1 | + Cc sup sf |
| **Ba103** | 268.1930 | 5.54 | 1 | + Cc sup sf |
| **Ba104** | 743.411 | 7.3 | 1 | + Cc sup sf |
| **Ba105** | 370.198 | 7.23 | 2 | + Cc sup sf, + Pf sup auto |
| **Ba106** | 254.1079 | 4.76 | 1 | + Rj sup auto |
| **Ba107** | 440.2823 | 8.46 | 1 | + Pf sup auto |
| **Ba108** | 553.3378 | 4.36 | 1 | + Pf sup auto |
| **Ba109** | 385.2492 | 4.28 | 1 | + Pf sup auto |
| **Ba110** | 439.1387 | 9.25 | 1 | + Pf sup auto |
| **Ba111** | 424.134 | 9.3 | 1 | 3% DMSO |
| **Ba112** | 279.0808 | 5.04 | 1 | 3% DMSO |
| **Ba113** | 257.1294 | 7.62 | 1 | 3% ACN |
| **Ba114** | 226.1469 | 8.95 | 1 | 3% ACN |
| **Ba115** | 376.1669 | 8.71 | 1 | 3% ACN |
| **Ba116** | 415.2023 | 9.28 | 1 | 3% ACN |
| **Ba117** | 297.1603 | 8.32 | 1 | 3% ACN |
| **Ba118** | 399.2079 | 8.95 | 1 | 3% ACN |
| **Ba119** | 269.1392 | 8.19 | 1 | 3% ACN |
| **Ba120** | 301.1651 | 8.19 | 1 | 3% ACN |
| **Ba121** | 273.1487 | 9.37 | 1 | 3% ACN |
| **Ba122** | 283.1449 | 8.42 | 1 | 3% ACN |
| **Ba123** | 222.1129 | 5.49 | 1 | 3% ACN |
| **Ba124** | 230.0814 | 5.29 | 1 | 3% ACN |
| **Ba125** | 241.1227 | 9.37 | 1 | 3% ACN |
| **Ba126** | 529.2658 | 6.37 | 1 | 3% ACN |
| **Ba127** | 310.1668 | 5.9 | 1 | 3% ACN |
| **Ba128** | 260.1863 | 7.21 | 1 | 3% ACN |
| **Ba129** | 360.275 | 7.51 | 1 | 3% ACN |
| **Ba130** | 255.1499 | 7.95 | 2 | 3% ACN, + Cc Pellet |
| **Ba131** | 305.1752 | 9.37 | 1 | 3% ACN |
| **Ba132** | 274.202 | 7.5 | 1 | 3% ACN |
| **Ba133** | 310.1408 | 6.1 | 1 | 3% ACN |
| **Ba134** | 340.1774 | 6.15 | 1 | 3% ACN |
| **Ba135** | 233.1257 | 8.24 | 1 | 3% ACN |
| **Ba136** | 463.286 | 7.9 | 1 | 3% ACN |
| **Ba137** | 421.2402 | 7.9 | 1 | 3% ACN |
| **Ba138** | 403.2243 | 8.78 | 1 | 3% ACN |
| **Ba139** | 243.135 | 3.81 | 1 | 3% ACN |
| **Ba140** | 236.1285 | 5.95 | 1 | 3% ACN |
| **Ba141** | 357.1615 | 8.56 | 1 | 3% ACN |
| **Ba142** | 269.2034 | 5.74 | 1 | + Cc Pellet |
| **Ba143** | 279.106 | 9.16 | 1 | + Cc Pellet |
| **Ba144** | 250.1234 | 8.15 | 1 | + Cc Pellet |
| **Ba145** | 445.2617 | 8.96 | 1 | + Cc Pellet |

Table S17. List of new mass features detected in extracts from *C. coralloides* DSM2259 including mass feature ID, *m/z*measured, retention time (tR), number of activating conditions and activating conditions.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **ID** | ***m/z*measured**  **[-]** | **tR [min]** | **# of**  **a.c.** | **activating conditions (a.c.)** |
| **Cc1** | 360.3602 | 9.4 | 1 | M9 1% PO43- |
| **Cc6** | 385.1893 | 9.2 | 1 | + Sg sup auto |
| **Cc8** | 793.3483 | 8.06 | 1 | MD1 medium |
| **Cc11** | 707.3117 | 7.7 | 1 | MD1 medium |
| **Cc12** | 332.3299 | 8.7 | 3 | 0,5% Tol, M9 medium, M9 1% PO43- |
| **Cc18** | 284.2593 | 7.7 | 1 | MD1+G medium |
| **Cc21** | 304.2975 | 8.0 | 5 | M9 1% PO43-, M9 medium, + Rj sup sf, + Pf sup sf, + Ba sup sf |
| **Cc22** | 357.1579 | 10.2 | 2 | 0,5% Tol, GMS FeX |
| **Cc27** | 349.2323 | 6.5 | 1 | + Ba P |
| **Cc29** | 361.265 | 7.23 | 1 | + Ba sup sf |
| **Cc42** | 601.3558 | 4.68 | 3 | + Sg sup sf, + Ba sup sf, + Rj sup sf |
| **Cc49** | 343.2947 | 6.97 | 1 | 3% EtOH |
| **Cc50** | 371.3278 | 7.82 | 1 | 3% EtOH |
| **Cc58** | 348.322 | 6.79 | 1 | + Pf sup sf |
| **Cc59** | 342.3742 | 7.46 | 2 | + Ba sup sf, + Pf sup sf |
| **Cc63** | 587.3396 | 4.49 | 4 | + Rj sup auto, + Pf sup auto, + Ba sup auto, + Ba sup sf |
| **Cc84** | 347.1532 | 6.18 | 1 | + Ba sup sf |
| **Cc90** | 393.2525 | 3.13 | 1 | + Rj sup auto |
| **Cc102** | 243.0859 | 5.48 | 1 | 40°C |
| **Cc104** | 268.0811 | 5.26 | 1 | 40°C |
| **Cc105** | 231.1141 | 5.95 | 1 | 40°C |
| **Cc146** | 443.2531 | 4.6 | 1 | + Sg sup auto |
| **Cc147** | 487.199 | 5.98 | 1 | + Sg sup auto |
| **Cc148** | 399.172 | 9.3 | 1 | + Sg sup auto |
| **Cc149** | 435.2194 | 6.52 | 1 | + Sg sup auto |
| **Cc154** | 521.2413 | 3.01 | 1 | + Ba sup auto |
| **Cc155** | 387.2056 | 5.51 | 1 | + Pf sup auto |
| **Cc167** | 254.1018 | 5.14 | 1 | 40°C |
| **Cc181** | 242.2838 | 7.82 | 2 | GMS FeX, GMS MgX |
| **Cc183** | 214.2525 | 7.13 | 3 | GMS, GMS FeX, GMS MgX |
| **Cc186** | 371.1742 | 5.59 | 1 | GMS FeX |
| **Cc187** | 359.1737 | 5.83 | 1 | GMS FeX |
| **Cc189** | 375.1688 | 6.22 | 1 | GMS FeX |
| **Cc190** | 284.1579 | 6.45 | 1 | + Pf sup sf |
| **Cc193** | 359.1737 | 8.33 | 1 | GMS FeX |
| **Cc210** | 566.2988 | 9.64 | 1 | GMS FeX |
| **Cc243** | 380.2758 | 6.67 | 1 | M9 FeX |
| **Cc244** | 330.2638 | 5.81 | 1 | M9 FeX |
| **Cc249** | 340.2847 | 6.67 | 3 | M9 FeX, + Rj sup sf, + Pf sup sf |
| **Cc250** | 293.2003 | 6.64 | 1 | M9 FeX |
| **Cc274** | 585.3623 | 4.82 | 1 | O2-Lim |
| **Cc275** | 373.1203 | 7.18 | 1 | O2-Lim |
| **Cc276** | 337.1464 | 10.57 | 1 | O2-Lim |

Table S18. List of new mass features detected in extracts from *P. fallax* HKI727 including mass feature ID, *m/z*measured, retention time (tR), number of activating conditions and activating conditions.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **ID** | ***m/z*measured**  **[-]** | **tR [min]** | **# of**  **a.c.** | **activating conditions (a.c.)** |
| **Pf2** | 312.2872 | 7.92 | 1 | NB medium |
| **Pf12** | 441.1847 | 1.19 | 1 | NB medium |
| **Pf17** | 300.324 | 8.78 | 1 | NB medium |
| **Pf22** | 276.1065 | 1.12 | 1 | NB medium |
| **Pf24** | 330.2622 | 8.66 | 1 | SP medium |
| **Pf27** | 521.2367 | 2.74 | 1 | TSB medium |
| **Pf31** | 247.1279 | 1.8 | 1 | 1% DMSO @35°C |
| **Pf43** | 313.2007 | 6.17 | 1 | 1% EtOH @25°C |
| **Pf48** | 314.3031 | 7.99 | 2 | + Ba Pellet, NB medium |
| **Pf54** | 353.2053 | 5.49 | 1 | SP medium |
| **Pf55** | 433.1931 | 6.18 | 2 | SP medium, + Cc sup auto |
| **Pf56** | 356.1453 | 1.85 | 1 | 1% DMSO @35°C |
| **Pf57** | 340.3579 | 8.43 | 1 | TSB medium |
| **Pf60** | 325.1764 | 4.89 | 2 | SP medium, + Cc sup sf |
| **Pf61** | 342.3715 | 8.36 | 1 | 1% Tol |
| **Pf62** | 312.3621 | 8.95 | 2 | 1% DMSO @35°C, SP medium |
| **Pf63** | 272.1582 | 4.46 | 8 | 1% DMSO @35°C, 0,5% DMSO, SP medium, + Cc sup sf, + Ba sup sf, + Cc Pellet, + Ba Pellet, 35°C |
| **Pf69** | 298.3445 | 8.63 | 5 | 1% DMSO @35°C, 1% Tol, 0,5% Tol @ 25°C, TSB medium, SP medium |
| **Pf77** | 255.1692 | 4.72 | 1 | TSB medium |
| **Pf92** | 358.1384 | 4.24 | 3 | 1% DMSO @35°C, 3% EtOH, 25°C |
| **Pf93** | 316.182 | 3.74 | 1 | 25°C |
| **Pf95** | 383.2239 | 4.06 | 1 | 25°C |
| **Pf96** | 343.1938 | 2.27 | 2 | 1% DMSO @35°C, 25°C |
| **Pf97** | 295.1247 | 3.33 | 1 | 25°C |
| **Pf98** | 250.9953 | 7.87 | 2 | 35°C, 25°C |
| **Pf99** | 316.243 | 9.29 | 1 | 25°C |
| **Pf103** | 451.1426 | 3.72 | 5 | 1% DMSO @35°C, 3% DMSO, 0,5% DMSO, 3% EtOH, 1% EtOH @25°C |
| **Pf104** | 619.2468 | 4.82 | 2 | 0,5% DMSO, 1% EtOH @25°C |
| **Pf105** | 375.1246 | 4.83 | 1 | 0,5% DMSO |
| **Pf106** | 387.1464 | 4.55 | 7 | 1% DMSO @35°C, 3% DMSO, 0,5% DMSO, 3% EtOH, 1% EtOH @25°C, 1% Tol, 0,5% Tol @ 25°C |
| **Pf108** | 716.4562 | 5.14 | 7 | 1% DMSO @35°C, 3% DMSO, 0,5% DMSO, 3% EtOH, 1% EtOH @25°C, 1% Tol, 0,5% Tol @ 25°C |
| **Pf109** | 315.2194 | 6.3 | 6 | 0,5% DMSO, + Cc sup sf, + Ba sup sf, + Ba sup auto, + Cc Pellet, + Ba Pellet |
| **Pf110** | 575.5 | 8.14 | 9 | 1% DMSO @35°C, 3% DMSO, 0,5% DMSO, 3% EtOH, 1% EtOH @25°C, 0,5% EtOH @ 35°C, 3% Tol @ 35°C, 1% Tol, 0,5% Tol @ 25°C |
| **Pf111** | 705.4926 | 8.14 | 9 | 1% DMSO @35°C, 3% DMSO, 0,5% DMSO, 3% EtOH, 1% EtOH @25°C, 0,5% EtOH @ 35°C, 3% Tol @ 35°C, 1% Tol, 0,5% Tol @ 25°C |
| **Pf112** | 900.6918 | 8.14 | 9 | 1% DMSO @35°C, 3% DMSO, 0,5% DMSO, 3% EtOH, 1% EtOH @25°C, 0,5% EtOH @ 35°C, 3% Tol @ 35°C, 1% Tol, 0,5% Tol @ 25°C |
| **Pf114** | 272.2238 | 9.64 | 9 | 1% DMSO @35°C, 3% DMSO, 0,5% DMSO, 3% EtOH, 1% EtOH @25°C, 0,5% EtOH @ 35°C, 3% Tol @ 35°C, 1% Tol, 0,5% Tol @ 25°C |
| **Pf115** | 406.106 | 1.,76 | 1 | 0,5% DMSO |
| **Pf120** | 586.1848 | 3.91 | 5 | 1% DMSO @35°C, 3% DMSO, 3% EtOH, 1% EtOH @25°C, 0,5% Tol @ 25°C |
| **Pf122** | 351.1488 | 3.38 | 3 | 3% EtOH, 0,5% Tol @ 25°C |
| **Pf123** | 723.2384 | 3.91 | 5 | 1% DMSO @35°C, 3% DMSO, 3% EtOH, 1% EtOH @25°C, 0,5% Tol @ 25°C |
| **Pf124** | 243.1353 | 3.97 | 1 | 1% DMSO @35°C |
| **Pf125** | 1015.4444 | 4.82 | 6 | 1% DMSO @35°C, 3% DMSO, 3% EtOH, 1% EtOH @25°C, 1% Tol, 0,5% Tol @ 25°C |
| **Pf129** | 532.2226 | 10.71 | 3 | 3% DMSO, 3% EtOH, 1% EtOH @25°C |
| **Pf131** | 321.1285 | 5.27 | 1 | 3% DMSO |
| **Pf132** | 292.1819 | 5.46 | 2 | 3% DMSO, 1% EtOH @25°C |
| **Pf134** | 421.2044 | 10.42 | 1 | 3% DMSO |
| **Pf144** | 332.176 | 10.3 | 1 | 3% EtOH |
| **Pf159** | 270.1444 | 5.07 | 3 | 3% DMSO, 3% EtOH, 1% EtOH @25°C |
| **Pf160** | 421.1298 | 4.63 | 1 | 1% EtOH @25°C |
| **Pf161** | 505.2129 | 5.38 | 1 | 3% EtOH |
| **Pf163** | 270.1459 | 5.02 | 3 | 3% EtOH, 1% Tol, 0,5% Tol @ 25°C |
| **Pf164** | 383.2291 | 3.72 | 1 | 3% EtOH |
| **Pf165** | 523.2568 | 4.82 | 2 | 3% EtOH, 0,5% Tol @ 25°C |
| **Pf167** | 1258.5694 | 4.8 | 1 | 0,5% Tol @ 25°C |
| **Pf169** | 1187.9476 | 8.14 | 3 | 3% DMSO, 3% EtOH, 1% EtOH @25°C |
| **Pf171** | 342.1983 | 6.27 | 3 | 3% DMSO, GMS FeX, M9 1% PO43- |
| **Pf175** | 354.2189 | 6.37 | 1 | 1% EtOH @25°C |
| **Pf176** | 415.2124 | 8.11 | 1 | 3% EtOH |
| **Pf178** | 356.1772 | 6.85 | 1 | 3% EtOH |
| **Pf184** | 274.0961 | 9.22 | 1 | 3% DMSO |
| **Pf185** | 245.1278 | 9.31 | 3 | 3% DMSO, 3% EtOH, 1% EtOH @25°C |
| **Pf186** | 799.178 | 9.36 | 2 | 3% EtOH, 1% EtOH @25°C |
| **Pf192** | 229.1219 | 2.22 | 1 | 1% DMSO @35°C |
| **Pf201** | 243.1963 | 8.07 | 1 | 3% EtOH |
| **Pf202** | 244.2295 | 8.33 | 2 | 1% DMSO @35°C, 3% EtOH |
| **Pf204** | 456.264 | 10.74 | 1 | 3% EtOH |
| **Pf205** | 299.2589 | 10.47 | 1 | 3% EtOH |
| **Pf208** | 357.1772 | 10.28 | 1 | 3% EtOH |
| **Pf213** | 393.2579 | 4.48 | 2 | 3% EtOH, 0,5% Tol @ 25°C |
| **Pf214** | 475.2567 | 4.09 | 1 | 3% EtOH |
| **Pf217** | 314.2695 | 8.38 | 1 | 3% EtOH |
| **Pf218** | 378.2036 | 3.45 | 1 | 3% EtOH |
| **Pf220** | 225.149 | 8.93 | 1 | 3% EtOH |
| **Pf221** | 328.2241 | 3.99 | 1 | 3% EtOH |
| **Pf222** | 298.2747 | 9.68 | 1 | 3% EtOH |
| **Pf223** | 320.1758 | 5.95 | 1 | 3% EtOH |
| **Pf224** | 338.2677 | 7.87 | 1 | 3% EtOH |
| **Pf228** | 342.2395 | 4.36 | 1 | 3% EtOH |
| **Pf231** | 943.6278 | 5.37 | 1 | 3% EtOH |
| **Pf232** | 440.2512 | 3.54 | 1 | 3% EtOH |
| **Pf240** | 467.2943 | 4.43 | 1 | 0,5% Tol @ 25°C |
| **Pf245** | 583.4444 | 10.42 | 2 | 1% DMSO @35°C, 0,5% Tol @ 25°C |
| **Pf258** | 330.2033 | 1.98 | 1 | 1% DMSO @35°C |
| **Pf259** | 333.1697 | 6.18 | 1 | 1% EtOH @25°C |
| **Pf260** | 334.2294 | 7.01 | 1 | 1% EtOH @25°C |
| **Pf261** | 242.0869 | 3.15 | 1 | 1% EtOH @25°C |
| **Pf279** | 254.1054 | 5.09 | 1 | + Cc sup auto |
| **Pf280** | 327.2079 | 5.41 | 1 | + Cc sup auto |
| **Pf282** | 314.3063 | 8.07 | 3 | + Sg sup sf, + Ba sup sf, + Sg sup auto |
| **Pf285** | 300.2911 | 7.82 | 1 | + Sg sup auto |
| **Pf286** | 316.3225 | 8.31 | 4 | + Sg sup sf, + Ba sup sf, + Sg sup auto, + Ba Pellet |
| **Pf287** | 316.3225 | 6.94 | 1 | + Sg sup auto |
| **Pf290** | 290.1301 | 8.76 | 2 | + Sg sup auto, + Rj sup auto |
| **Pf292** | 235.1094 | 1.33 | 1 | + Rj sup auto |
| **Pf293** | 381.1715 | 9.42 | 1 | + Rj sup auto |
| **Pf294** | 274.1636 | 10.33 | 3 | + Sg sup sf, + Cc sup sf, + Ba sup sf |
| **Pf295** | 269.2061 | 5.75 | 1 | + Sg sup sf |
| **Pf297** | 358.206 | 8.78 | 3 | + Sg sup sf, + Cc sup sf, + Ba sup sf |
| **Pf298** | 243.1388 | 3.87 | 1 | + Sg sup sf |
| **Pf300** | 445.2646 | 8.95 | 3 | + Sg sup sf, + Cc sup sf, + Ba sup sf |
| **Pf301** | 387.1976 | 5.98 | 6 | + Sg sup sf, + Cc sup sf, + Ba sup sf, + Sg Pellet, + Cc Pellet, + Ba Pellet |
| **Pf304** | 231.0816 | 4.46 | 2 | + Sg sup sf, + Cc sup sf |
| **Pf307** | 298.1009 | 1.83 | 1 | + Sg sup sf |
| **Pf308** | 418.2292 | 8.07 | 1 | + Sg sup sf |
| **Pf309** | 255.1543 | 7.67 | 2 | + Sg sup sf, + Ba sup sf |
| **Pf310** | 365.348 | 6.36 | 1 | + Ba sup sf |
| **Pf311** | 263.1417 | 5.01 | 4 | + Cc sup sf, + Ba sup sf, + Cc Pellet, + Ba Pellet |
| **Pf314** | 279.188 | 6.43 | 1 | + Cc sup sf |
| **Pf315** | 296.1378 | 1.86 | 1 | + Cc sup sf |
| **Pf316** | 496.1834 | 7.82 | 2 | GMS FeX, M9 1% PO43- |
| **Pf317** | 331.2029 | 5.53 | 1 | GMS FeX |
| **Pf318** | 351.1692 | 5.61 | 1 | GMS FeX |
| **Pf319** | 339.1856 | 6.67 | 1 | GMS MgX |
| **Pf321** | 470.2255 | 5.83 | 1 | M9 medium |
| **Pf322** | 427.0937 | 5.26 | 1 | M9 medium |
| **Pf323** | 289.0578 | 4.87 | 2 | M9 1% PO43-, M9 medium |
| **Pf324** | 348.2185 | 6.0 | 1 | M9 medium |
| **Pf325** | 459.0651 | 5.54 | 1 | M9 medium |
| **Pf326** | 311.1916 | 5.8 | 1 | M9 medium |
| **Pf327** | 659.139 | 3.67 | 1 | M9 medium |
| **Pf328** | 486.2024 | 6.18 | 2 | M9 1% PO43-, M9 medium |
| **Pf329** | 491.1096 | 4.09 | 1 | M9 medium |
| **Pf330** | 691.1106 | 4.11 | 1 | M9 medium |
| **Pf331** | 509.1023 | 4.43 | 1 | M9 medium |
| **Pf332** | 428.2193 | 7.69 | 1 | M9 1% PO43- |
| **Pf333** | 395.1362 | 6.39 | 1 | M9 1% PO43- |
| **Pf334** | 435.1762 | 5.8 | 1 | M9 1% PO43- |
| **Pf335** | 390.1625 | 7.35 | 1 | M9 1% PO43- |
| **Pf336** | 405.1645 | 5.38 | 1 | M9 1% PO43- |
| **Pf337** | 360.2178 | 6.1 | 1 | M9 1% PO43- |
| **Pf338** | 227.1541 | 8.38 | 1 | M9 1% PO43- |
| **Pf339** | 206.1022 | 4.97 | 1 | M9 1% PO43- |
| **Pf340** | 448.2318 | 4.95 | 1 | M9 1% PO43- |
| **Pf342** | 394.3477 | 8.38 | 1 | M9 1% PO43- |
| **Pf343** | 398.1851 | 8.04 | 1 | M9 1% PO43- |
| **Pf344** | 226.1465 | 6.0 | 1 | M9 1% PO43- |
| **Pf345** | 336.0843 | 4.92 | 1 | M9 1% PO43- |
| **Pf347** | 230.2108 | 6.2 | 1 | M9 1% PO43- |
| **Pf348** | 387.1569 | 6.73 | 1 | M9 1% PO43- |
| **Pf350** | 313.2025 | 6.42 | 1 | + Ba sup auto |
| **Pf351** | 309.1455 | 5.63 | 1 | + Ba sup auto |

Table S19. List of new mass features detected in extracts from *R. jostii* DSM44719 including mass feature ID, *m/z*measured, retention time (tR), number of activating conditions and activating conditions.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **ID** | ***m/z*measured**  **[-]** | **tR [min]** | **# of**  **a.c.** | **activating conditions (a.c.)** |
| **Rj1** | 271.1523 | 6.72 | 4 | + Sg sup auto, + Cc sup auto, + Sg Pellet, + Cc Pellet |
| **Rj4** | 480.2788 | 4.26 | 1 | + Sg Pellet |
| **Rj6** | 331.0206 | 5.04 | 1 | + Sg Pellet |
| **Rj9** | 217.1016 | 4.75 | 4 | LB Medium, + Pf sup auto, + Ba sup auto, + Cc Pellet |
| **Rj10** | 220.1203 | 4.83 | 1 | + Ba sup auto |
| **Rj11** | 254.1763 | 6.37 | 3 | O2-Lim., + Cc sup auto, + Cc Pellet |
| **Rj13** | 250.1136 | 6.37 | 4 | O2-Lim., + Pf sup auto, + Ba sup auto, + Cc Pellet |
| **Rj15** | 287.2589 | 9.57 | 1 | GMS MgX |
| **Rj16** | 269.2126 | 8.88 | 2 | GMS, Landy Medium |
| **Rj18** | 271.2283 | 9.34 | 1 | Landy Medium |
| **Rj20** | 257.2124 | 8.63 | 2 | GMS, Landy Medium |
| **Rj22** | 255.2332 | 8.76 | 3 | GMS MgX, GMS, Landy Medium |
| **Rj24** | 213.1855 | 7.18 | 4 | GMS MgX, GMS FeX, GMS, Landy Medium |
| **Rj26** | 227.2015 | 7.72 | 4 | GMS MgX, GMS FeX, GMS, Landy Medium |
| **Rj31** | 203.1395 | 3.84 | 1 | + Pf sup auto |
| **Rj45** | 296.138 | 1.92 | 1 | + Pf Pellet |
| **Rj47** | 319.2868 | 10,17 | 2 | + Pf Pellet, 23°C |
| **Rj65** | 243.1308 | 3.91 | 1 | + Sg sup auto |
| **Rj88** | 261.1225 | 4.08 | 1 | NB Medium |
| **Rj89** | 453.2682 | 3.79 | 1 | NB Medium |
| **Rj90** | 292.1063 | 5.71 | 1 | NB Medium |
| **Rj91** | 521.2382 | 4.03 | 1 | NB Medium |
| **Rj92** | 300.1362 | 3.96 | 1 | NB Medium |
| **Rj93** | 275.0838 | 4.28 | 1 | NB Medium |
| **Rj94** | 297.1359 | 4.94 | 1 | NB Medium |
| **Rj95** | 240.0687 | 6.17 | 1 | O2-Lim. |
| **Rj98** | 237.2205 | 10.33 | 1 | 23°C |
| **Rj120** | 285.1345 | 1.87 | 1 | O2-Lim. |
| **Rj141** | 435.3022 | 8.1 | 1 | M9 FeX |
| **Rj142** | 414.2576 | 8.63 | 1 | M9 1% PO43- |
| **Rj144** | 307.2184 | 7.01 | 1 | M9 FeX |
| **Rj146** | 354.2854 | 8.58 | 1 | M9 1% PO43- |
| **Rj165** | 230.2121 | 6.23 | 1 | M9 FeX, M9 1% PO43- |
| **Rj166** | 216.1963 | 5.75 | 1 | M9 FeX |
| **Rj185** | 240.233 | 7.16 | 1 | Landy Medium |
| **Rj214** | 342.235 | 4.53 | 1 | 0,5% EtOH |
| **Rj215** | 328.218 | 4.26 | 1 | 0,5% EtOH |
| **Rj217** | 318.1992 | 3.84 | 1 | 0,5% EtOH |
| **Rj239** | 430.1826 | 10.4 | 1 | Landy Medium |
| **Rj240** | 250.1454 | 4.1 | 1 | Landy Medium |
| **Rj241** | 228.1038 | 8.07 | 1 | Landy Medium |
| **Rj242** | 303.2547 | 7.92 | 3 | GMS MgX, GMS FeX, Landy Medium |
| **Rj243** | 271.2279 | 7.45 | 2 | GMS MgX, Landy Medium |
| **Rj245** | 354.1506 | 10.18 | 1 | Landy Medium |
| **Rj246** | 456.1609 | 6.81 | 1 | Landy Medium |
| **Rj247** | 370.1819 | 9.25 | 1 | Landy Medium |
| **Rj248** | 393.1829 | 5.83 | 1 | Landy Medium |
| **Rj249** | 264.1609 | 4.94 | 1 | Landy Medium |
| **Rj250** | 475.1665 | 8.87 | 1 | Landy Medium |
| **Rj251** | 306.1502 | 8.88 | 1 | Landy Medium |
| **Rj252** | 287.2237 | 8.04 | 2 | GMS FeX, Landy Medium |
| **Rj253** | 267.1954 | 7.81 | 4 | GMS MgX, GMS FeX, GMS, Landy Medium |
| **Rj254** | 503.1978 | 9.09 | 1 | Landy Medium |
| **Rj255** | 254.2478 | 7.87 | 2 | GMS FeX, Landy Medium |
| **Rj256** | 463.2859 | 7.89 | 2 | GMS FeX, GMS |
| **Rj257** | 271.1878 | 7.33 | 3 | GMS MgX, GMS FeX, GMS |
| **Rj258** | 533.4829 | 10.81 | 2 | GMS FeX, GMS |
| **Rj259** | 239.1619 | 6.84 | 2 | GMS FeX, GMS |
| **Rj260** | 321.1475 | 4.46 | 2 | GMS FeX, GMS |
| **Rj261** | 281.2092 | 8.34 | 3 | GMS MgX, GMS FeX, GMS |
| **Rj262** | 293.2093 | 8.43 | 2 | GMS FeX, GMS |
| **Rj263** | 270.2415 | 7.53 | 2 | GMS FeX, GMS |
| **Rj264** | 263.158 | 10.49 | 2 | GMS FeX, GMS |
| **Rj265** | 241.265 | 8.34 | 1 | GMS |
| **Rj266** | 325.235 | 7.94 | 1 | GMS |
| **Rj267** | 245.0939 | 5.22 | 2 | GMS FeX, GMS |
| **Rj269** | 253.1411 | 5.48 | 2 | GMS FeX, GMS |
| **Rj270** | 235.2048 | 7.53 | 2 | GMS FeX, GMS |
| **Rj271** | 284.2574 | 7.99 | 2 | GMS FeX, GMS |
| **Rj272** | 253.2166 | 8.43 | 3 | GMS MgX, GMS FeX, GMS |
| **Rj273** | 267.1574 | 5.81 | 2 | GMS FeX, GMS |
| **Rj275** | 307.2246 | 8.92 | 1 | GMS |
| **Rj276** | 229.143 | 5.81 | 1 | GMS |
| **Rj277** | 275.2206 | 7.03 | 2 | GMS FeX, GMS |
| **Rj278** | 456.31 | 10.54 | 1 | GMS |
| **Rj279** | 393.2475 | 3.27 | 2 | GMS FeX, GMS |
| **Rj280** | 244.2266 | 6.96 | 2 | GMS FeX, GMS |
| **Rj281** | 311.2192 | 7.48 | 2 | GMS MgX, GMS |
| **Rj282** | 247.19 | 6.15 | 2 | GMS FeX, GMS |
| **Rj284** | 482.3627 | 8.88 | 1 | GMS |
| **Rj285** | 257.2117 | 6.47 | 1 | GMS FeX |
| **Rj286** | 265.1777 | 7.33 | 1 | GMS FeX |
| **Rj287** | 257.2111 | 7.03 | 1 | GMS FeX |
| **Rj288** | 241.2165 | 8.33 | 2 | GMS MgX, GMS FeX |
| **Rj289** | 226.2165 | 6.96 | 1 | GMS FeX |
| **Rj290** | 428.2183 | 8.06 | 1 | GMS FeX |
| **Rj291** | 279.1933 | 7.85 | 1 | GMS FeX |
| **Rj292** | 479.1797 | 10.59 | 1 | GMS FeX |
| **Rj293** | 295.1878 | 7.55 | 1 | GMS FeX |
| **Rj294** | 274.2367 | 6.29 | 1 | GMS FeX |
| **Rj295** | 319.2428 | 6.71 | 1 | GMS FeX |
| **Rj296** | 256.227 | 7.74 | 1 | GMS FeX |
| **Rj297** | 301.2369 | 7.04 | 1 | GMS FeX |
| **Rj298** | 272.258 | 7.89 | 1 | GMS FeX |
| **Rj299** | 275.2275 | 8.02 | 1 | GMS FeX |
| **Rj300** | 307.1883 | 7.26 | 1 | GMS FeX |
| **Rj301** | 275.2212 | 6.47 | 1 | GMS FeX |
| **Rj302** | 259.1918 | 7.06 | 1 | GMS FeX |
| **Rj303** | 245.0419 | 4.31 | 1 | GMS FeX |
| **Rj304** | 243.1948 | 6.05 | 1 | GMS FeX |
| **Rj305** | 256.2543 | 5.61 | 1 | GMS FeX |
| **Rj306** | 511.2551 | 6.37 | 1 | GMS FeX |
| **Rj307** | 325.2851 | 6.89 | 1 | GMS FeX |
| **Rj308** | 243.1951 | 6.57 | 1 | GMS FeX |
| **Rj309** | 233.1723 | 5.75 | 1 | GMS FeX |
| **Rj310** | 269.211 | 7.18 | 1 | GMS FeX |
| **Rj311** | 255.1949 | 8.26 | 1 | GMS FeX |
| **Rj312** | 291.1935 | 8.11 | 1 | GMS FeX |
| **Rj313** | 210.0218 | 4.19 | 1 | GMS FeX |
| **Rj314** | 375.1819 | 8.09 | 1 | + Sg sup sf |
| **Rj315** | 243.1338 | 4.06 | 1 | + Sg sup sf |
| **Rj316** | 443.2487 | 4.9 | 1 | + Sg sup sf |
| **Rj317** | 227.1387 | 3.76 | 1 | + Sg sup sf |
| **Rj318** | 507.2416 | 4.06 | 1 | + Sg sup sf |
| **Rj319** | 255.2306 | 9.84 | 1 | + Sg sup sf |
| **Rj320** | 385.1935 | 9.22 | 1 | GMS MgX |
| **Rj321** | 363.1419 | 7.06 | 1 | GMS MgX |
| **Rj322** | 277.1001 | 5.27 | 1 | GMS MgX |
| **Rj323** | 226.1489 | 8.93 | 1 | GMS MgX |
| **Rj324** | 348.1733 | 6.56 | 1 | GMS MgX |
| **Rj325** | 326.1915 | 6.59 | 1 | GMS MgX |
| **Rj326** | 329.1726 | 4.82 | 1 | GMS MgX |
| **Rj327** | 399.2094 | 8.93 | 1 | GMS MgX |
| **Rj328** | 281.0945 | 6.1 | 1 | GMS MgX |
| **Rj329** | 398.1896 | 8.26 | 1 | GMS MgX |
| **Rj330** | 381.183 | 7.96 | 1 | GMS MgX |
| **Rj331** | 262.11 | 5.33 | 1 | GMS MgX |
| **Rj332** | 243.1518 | 8.28 | 1 | GMS MgX |
| **Rj333** | 227.203 | 8.12 | 1 | GMS MgX |
| **Rj334** | 258.11541 | 5.87 | 1 | GMS MgX |
| **Rj336** | 298.2339 | 7.33 | 1 | GMS MgX |
| **Rj337** | 415.2042 | 9.25 | 1 | GMS MgX |
| **Rj338** | 255.0788 | 5.92 | 1 | GMS MgX |
| **Rj339** | 400.2045 | 6.79 | 1 | GMS MgX |
| **Rj340** | 259.229 | 8.63 | 1 | GMS MgX |
| **Rj341** | 334.2575 | 5.55 | 1 | GMS MgX |
| **Rj342** | 222.115 | 568 | 1 | GMS MgX |
| **Rj343** | 224.1293 | 6.35 | 1 | GMS MgX |

Table S20. List of new mass features detected in extracts from *S. griseochromogenes* DSM40499 including mass feature ID, *m/z*measured, retention time (tR), number of activating conditions and activating conditions.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **ID** | ***m/z***  **measured**  **[-]** | **tR [min]** | **# of**  **a.c.** | **activating conditions (a.c.)** |
| **Sg1** | 252.1864 | 4.06 | 1 | TSB Medium |
| **Sg3** | 236.1812 | 5.09 | 1 | TSB Medium |
| **Sg4** | 231.0645 | 7.04 | 1 | TSB Medium |
| **Sg9** | 998.5606 | 7.99 | 3 | 3% DMSO, 1% DMSO, CYH-Medium |
| **Sg11** | 639.3028 | 5.09 | 1 | CYH-Medium |
| **Sg12** | 423.2058 | 8.36 | 1 | CYH-Medium |
| **Sg13** | 444.1734 | 3.84 | 1 | CYH-Medium |
| **Sg14** | 393.1806 | 6.56 | 1 | Landy Medium |
| **Sg16** | 425.1706 | 6.03 | 1 | Landy Medium |
| **Sg18** | 333.1586 | 6.56 | 1 | Landy Medium |
| **Sg19** | 393.1806 | 5.93 | 1 | Landy Medium |
| **Sg21** | 266.1162 | 6.4 | 1 | Landy Medium |
| **Sg23** | 305.2212 | 6.37 | 1 | Landy Medium |
| **Sg30** | 307.1419 | 6.88 | 1 | Landy Medium |
| **Sg38** | 259.1777 | 8.78 | 1 | 40°C |
| **Sg39** | 208.0583 | 4.43 | 2 | 1% DMSO, 40°C |
| **Sg42** | 209.042 | 5.34 | 1 | 40°C |
| **Sg43** | 351.1784 | 6.44 | 1 | 40°C |
| **Sg44** | 234.121 | 3.84 | 1 | 40°C |
| **Sg45** | 414.1396 | 4.53 | 1 | 40°C |
| **Sg47** | 447.0908 | 5.19 | 2 | 1% DMSO, 40°C |
| **Sg53** | 365.1722 | 7.31 | 1 | 40°C |
| **Sg54** | 235.1047 | 4.7 | 1 | 40°C |
| **Sg68** | 325.2347 | 5.73 | 3 | 3% EtOH, 1% EtOH, SP-Medium |
| **Sg71** | 269.066 | 4.83 | 1 | 3% EtOH |
| **Sg72** | 297.0606 | 5.73 | 1 | 3% EtOH |
| **Sg73** | 410.1465 | 7.07 | 1 | 3% EtOH |
| **Sg74** | 532.2989 | 7.19 | 2 | 3% EtOH, 3% ACN |
| **Sg77** | 301.217 | 5.95 | 2 | 3% EtOH, O2-Lim. |
| **Sg84** | 359.1568 | 6.6 | 3 | GMS FeX, GMS Medium, O2-Lim. |
| **Sg85** | 386.3099 | 6.3 | 1 | O2-Lim. |
| **Sg87** | 420.2615 | 4.99 | 1 | O2-Lim. |
| **Sg89** | 379.184 | 5.02 | 1 | GMS Medium |
| **Sg90** | 362.2402 | 4.85 | 1 | GMS Medium |
| **Sg91** | 325.2652 | 5.04 | 1 | GMS Medium |
| **Sg92** | 378.1779 | 5.04 | 1 | GMS Medium |
| **Sg94** | 339.2226 | 10.12 | 1 | GMS Medium |
| **Sg96** | 337.2226 | 10.12 | 1 | GMS FeX |
| **Sg97** | 336.1746 | 4.75 | 1 | GMS FeX |
| **Sg101** | 290.2841 | 7.87 | 1 | GMS FeX |
| **Sg103** | 256.1512 | 8.53 | 1 | GMS FeX |
| **Sg104** | 312.37 | 8.64 | 1 | GMS FeX |
| **Sg106** | 418.3013 | 10.12 | 1 | GMS FeX |
| **Sg107** | 369.2497 | 10.12 | 1 | GMS FeX |
| **Sg109** | 353.219 | 9.69 | 1 | GMS FeX |
| **Sg115** | 379.2431 | 6.49 | 2 | M9 FeX, M9 1% PO43- |
| **Sg117** | 587.3468 | 4.53 | 1 | M9 FeX |
| **Sg118** | 295.1597 | 4.89 | 2 | M9 FeX, M9 Medium Cyclo-(Phe-Phe) |
| **Sg119** | 583.3485 | 4.36 | 1 | M9 FeX |
| **Sg120** | 823.4818 | 5.46 | 1 | M9 FeX |
| **Sg121** | 243.1311 | 4.26 | 1 | SP-Medium |
| **Sg130** | 585.3593 | 4.94 | 2 | 3% DMSO, 1% DMSO |
| **Sg134** | 342.3789 | 8.44 | 1 | M9 1% PO43- |
| **Sg135** | 430.1457 | 7.0 | 1 | M9 FeX |
| **Sg143** | 340.3619 | 8.17 | 1 | M9 1% PO43- |
| **Sg145** | 257.109 | 5.61 | 1 | 0,5% ACN |
| **Sg146** | 208.0661 | 4.04 | 1 | M9 1% PO43- |
| **Sg147** | 348.2248 | 6.05 | 1 | M9 1% PO43- |
| **Sg148** | 428.2258 | 7.68 | 1 | M9 1% PO43- |
| **Sg149** | 317.1929 | 6.48 | 1 | M9 1% PO43- |
| **Sg150** | 395.1427 | 6.39 | 1 | M9 1% PO43- |
| **Sg151** | 327.1753 | 6.39 | 1 | M9 1% PO43- |
| **Sg152** | 515.4181 | 9.61 | 1 | M9 1% PO43- |
| **Sg153** | 259.1877 | 8.32 | 1 | M9 1% PO43- |
| **Sg154** | 390.1706 | 7.36 | 1 | M9 1% PO43- |
| **Sg155** | 345.225 | 8.27 | 1 | M9 1% PO43- |
| **Sg156** | 217.1394 | 6.26 | 1 | M9 1% PO43- |
| **Sg157** | 289.0644 | 4.94 | 1 | M9 1% PO43- |
| **Sg158** | 269.1721 | 9.0 | 1 | M9 1% PO43- |
| **Sg159** | 226.1524 | 6.05 | 1 | M9 1% PO43- |
| **Sg160** | 388.1754 | 5.78 | 1 | M9 1% PO43- |
| **Sg161** | 415.1217 | 4.04 | 1 | M9 1% PO43- |
| **Sg163** | 275.1451 | 4.33 | 1 | M9 1% PO43- |
| **Sg164** | 415.1316 | 4.33 | 1 | M9 1% PO43- |
| **Sg165** | 303.1781 | 6.63 | 1 | M9 1% PO43- |
| **Sg167** | 386.1801 | 6.71 | 1 | M9 1% PO43- |
| **Sg168** | 499.2702 | 6.51 | 1 | M9 1% PO43- |
| **Sg172** | 464.2239 | 6.12 | 1 | M9 1% PO43- |
| **Sg175** | 269.1178 | 5.24 | 1 | M9 1% PO43- |
| **Sg176** | 386.1798 | 6.75 | 1 | M9 1% PO43- |
| **Sg181** | 331.2088 | 7.78 | 1 | M9 1% PO43- |
| **Sg184** | 415.1232 | 4.11 | 1 | M9 1% PO43- |
| **Sg185** | 311.1457 | 4.84 | 1 | M9 1% PO43-  Cyclo-(Phe-Tyr) |
| **Sg187** | 573.3914 | 5.53 | 1 | M9 1% PO43- |
| **Sg198** | 573.3304 | 4.45 | 1 | M9 FeX |
| **Sg199** | 599.345 | 4.87 | 2 | M9 FeX, + Pf sup auto |
| **Sg201** | 393.2592 | 7.15 | 1 | M9 FeX |
| **Sg203** | 421.2689 | 7.8 | 1 | M9 FeX |
| **Sg206** | 471.2689 | 10.3 | 1 | M9 FeX |
| **Sg207** | 276.0933 | 5.11 | 1 | M9 FeX |
| **Sg214** | 363.2865 | 8.56 | 1 | M9 FeX |
| **Sg217** | 328.1495 | 7.65 | 1 | GMS MgX |
| **Sg220** | 220.1151 | 1.26 | 1 | 1% DMSO |
| **Sg221** | 458.3749 | 10.03 | 1 | 1% DMSO |
| **Sg222** | 532.2887 | 7.59 | 1 | 1% DMSO |
| **Sg224** | 225.1171 | 5.22 | 1 | 1% DMSO |
| **Sg227** | 584.3468 | 4.94 | 1 | 1% DMSO |
| **Sg228** | 273.177 | 5.34 | 1 | 1% DMSO |
| **Sg242** | 320.252 | 9.96 | 1 | 3% DMSO |
| **Sg251** | 243.1386 | 3.86 | 2 | 0,5% ACN, + Rj sup sf |
| **Sg252** | 836.6292 | 10.13 | 2 | + Ba Pellet |
| **Sg253** | 354.3058 | 9.86 | 1 | 0,5% ACN |
| **Sg255** | 266.1126 | 4.78 | 3 | 0,5% ACN, + Rj sup sf, + Ba sup sf |
| **Sg257** | 457.4401 | 7.04 | 1 | + Ba Pellet |
| **Sg258** | 431.4251 | 6.86 | 1 | + Ba Pellet |
| **Sg264** | 425.2848 | 5.26 | 1 | 3% ACN |
| **Sg272** | 240.2293 | 7.57 | 1 | 3% Tol |
| **Sg273** | 230.2091 | 6.59 | 1 | 3% Tol |
| **Sg274** | 244.2246 | 7.08 | 1 | 3% Tol |
| **Sg275** | 272.2555 | 8.34 | 1 | 3% Tol |
| **Sg276** | 267.2289 | 9.09 | 1 | 3% Tol |
| **Sg277** | 216.1934 | 6.1 | 1 | 3% Tol |
| **Sg278** | 255.2291 | 9.0 | 1 | 3% Tol |
| **Sg279** | 270.2399 | 6.79 | 1 | 3% Tol |
| **Sg280** | 264.2292 | 6.44 | 1 | 3% Tol |
| **Sg285** | 284.2557 | 8.16 | 1 | 3% Tol |
| **Sg286** | 270.2403 | 6.22 | 1 | 3% Tol |
| **Sg287** | 264.2299 | 7.74 | 1 | 3% Tol |
| **Sg288** | 228.1931 | 5.53 | 1 | 3% Tol |
| **Sg290** | 271.2241 | 8.8 | 1 | 3% Tol |
| **Sg291** | 284.2196 | 7.04 | 1 | 3% Tol |
| **Sg293** | 266.2409/ 282.2395 | 6.5 | 1 | 3% Tol |
| **Sg294** | 253.2133 | 8.53 | 1 | 3% Tol |
| **Sg296** | 301.2348 | 8.33 | 1 | 3% Tol |
| **Sg297** | 300.2499 | 6.69 | 1 | 3% Tol |
| **Sg299** | 284.2197 | 6.3 | 1 | 3% Tol |
| **Sg302** | 252.2294 | 7.69 | 1 | 3% Tol |
| **Sg308** | 271.2352 | 6.72 | 1 | 3% Tol |
| **Sg309** | 266.2092 | 7.84 | 1 | 3% Tol |
| **Sg310** | 254.2449 | 8.06 | 1 | 3% Tol |
| **Sg312** | 300.2512 | 7.38 | 1 | 3% Tol |
| **Sg335** | 1030.578 | 7.15 | 1 | + Pf Pellet |
| **Sg336** | 279.138 | 3.28 | 6 | + Pf sup auto, + Cc sup auto, + Rj Pellet, + Pf Pellet, + Ba Pellet, + Cc Pellet |
| **Sg337** | 219.1166 | 4.04 | 2 | + Rj Pellet, + Pf Pellet |
| **Sg340** | 1040.741 | 9.93 | 1 | + Ba Pellet |
| **Sg341** | 597.3904 | 5.6 | 3 | + Rj Pellet, + Ba Pellet, + Cc Pellet |
| **Sg342** | 414.2611 | 8.31 | 1 | + Ba Pellet |
| **Sg345** | 252.1871 | 3.73 | 2 | + Ba sup sf, + Rj Pellet |
| **Sg346** | 401.343 | 3.73 | 1 | + Rj Pellet |
| **Sg352** | 434,.3177 | 5.12 | 1 | + Rj sup sf |
| **Sg353** | 420.3018 | 4.78 | 1 | + Rj sup sf |
| **Sg354** | 290.1655 | 4.78 | 1 | + Rj sup sf |
| **Sg357** | 763.4162 | 4.63 | 1 | + Cc sup sf |
| **Sg358** | 545.3635 | 4.2 | 1 | + Ba sup auto |
| **Sg359** | 487.3471 | 6.78 | 1 | + Ba sup auto |
| **Sg363** | 205.0963 | 3.18 | 1 | + Pf sup auto |
| **Sg364** | 615.3323 | 5.77 | 1 | + Pf sup auto |
| **Sg366** | 229.0996 | 3.86 | 1 | + Rj sup auto |
| **Sg367** | 258.132 | 5.82 | 1 | + Rj sup auto |
| **Sg368** | 201.1228 | 2.25 | 1 | + Rj sup auto |

Ein Bild, das Gebäude, Licht, Verkehr, sitzend enthält.

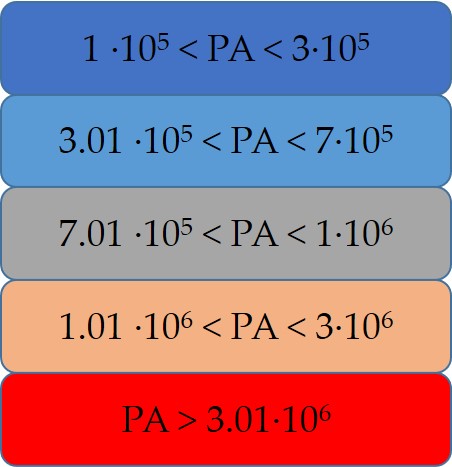
Automatisch generierte Beschreibung 

Figure S18. Heat map for new mass features of *B. amyloliquefaciens* DSM7 and utilized color code. PA = peak area. Rows = mass features, columns = producing conditions. Conditions which did not provoke any new mass features are not shown in the heat map. See separate excel file for detailed heat map.

Ein Bild, das Gebäude enthält.

Automatisch generierte Beschreibung

Figure 19. ( a ) Heat map of *S. griseochromogenes* DSM40499; ( b ) Heat map of *C. coralloides* DSM2259. Rows = mass features, columns = producing conditions. Conditions which did not provoke any new mass features are not shown in the heat map. See separate excel file for detailed heat map.

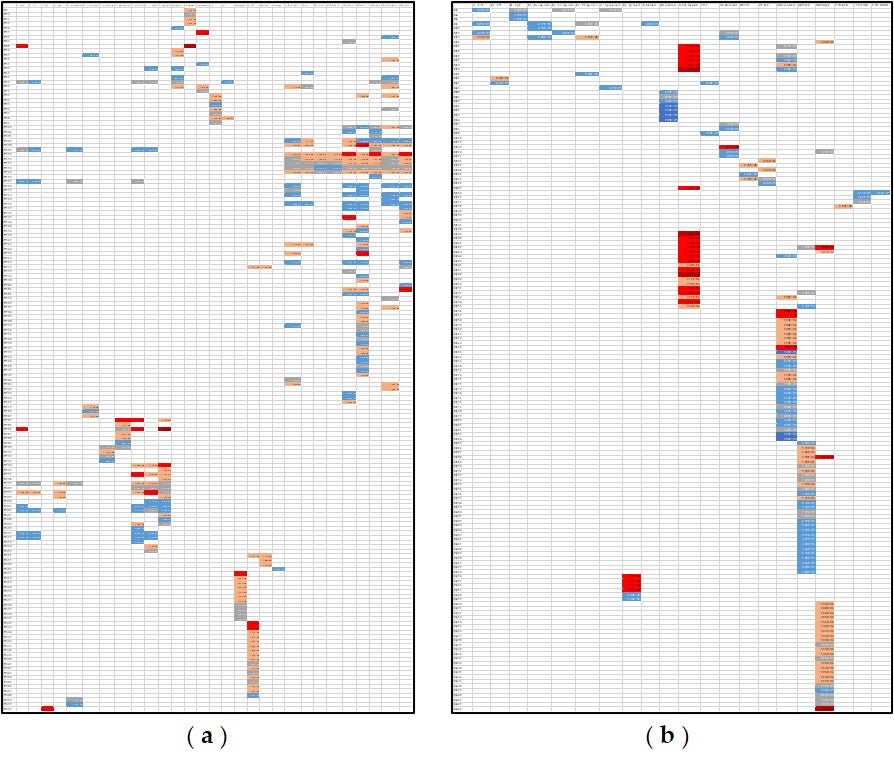


Figure 20. ( a ) Heat map of *P. fallax* HKI727; ( b ) Heat map of *R. jostii* DSM44719. Rows = mass features, columns = producing conditions. Conditions which did not provoke any new mass features are not shown in the heat map. See separate excel file for detailed heat map.

Table S21. Overview of new mass features, proposed compounds, and corresponding producing conditions from selected strains.

|  |  |  |
| --- | --- | --- |
| **ID** | **Proposed compound** | **producing conditions** |
| Ba3 | cyclo(Tyr-Pro) | Landy medium, LB medium, 40°C, Mg2+-limited GMS medium (GMS MgX) |
| Ba8 | iturin A-4 | LB medium |
| Ba9 | iturin A-6 | LB medium |
| Ba10 | iturin A-8 | LB medium |
| Ba58 | bacillibactin | Fe3+-limited GMS medium (GMS FeX) |
| Cc42 | nocardamin | addition of sterile-filtered supernatant of *B. amyloliquefaciens*, *R. jostii* and *S. griseochromogenes* (separately) |
| Pf336 | myxochelin A | M9 medium with 1% PO43- |
| Sg117 | desmethyl enyl nocardamin | Fe3+-limited GMS medium (GMS FeX) |
| Sg130 | desferrioxamine B + Al | addition of 1% and 3% DMSO |

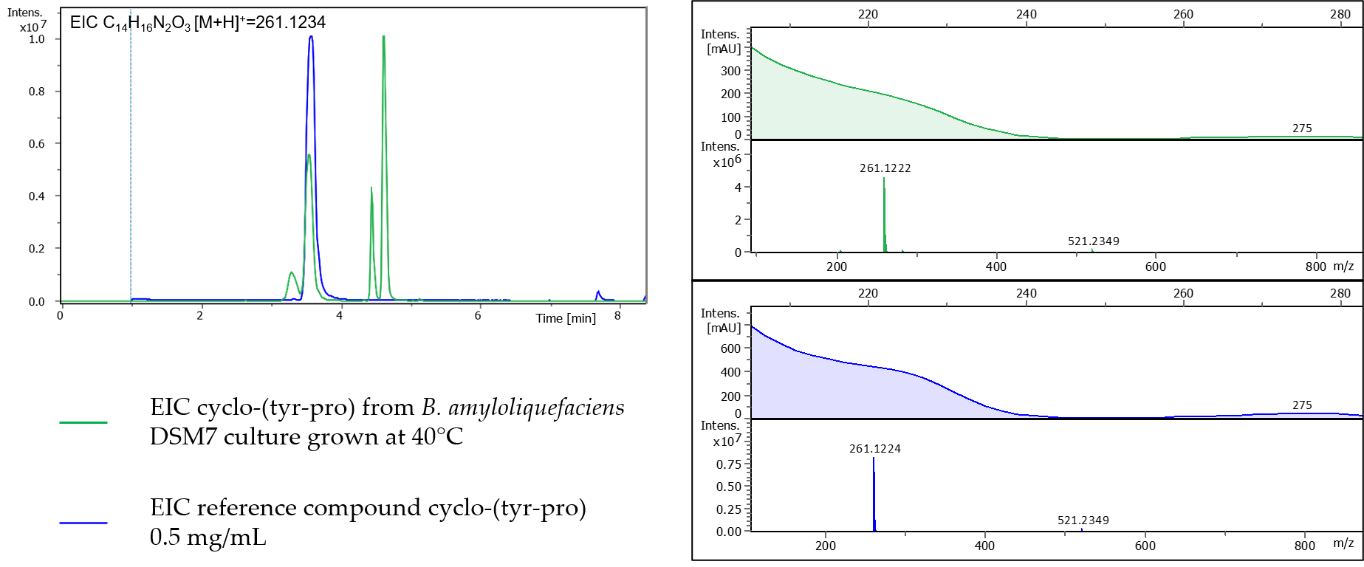


Figure S21. Comparison of Extracted Ion Chromatograms (EICs) and MS spectra of cyclo-(tyr-pro) reference compound (blue) and cyclo-(tyr-pro) in *B. amyloliquefaciens* sample grown at 40°C (green). The UV spectrum is shown above the MS spectrum. Δppm = 0.7.

Ein Bild, das Screenshot enthält.

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Figure S22. Extracted Ion Chromatograms of putative iturins A4, A-6 and A-8 from *B. amyloliquefaciens* sample grown on LB medium and Total Ion Chromatogram of MS2-experiment from the same sample.

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Figure S23. MS2-spectra of putative iturin A-4, A-6 and A-8 masses in *B. amyloliquefaciens* sample grown on LB medium. The UV spectrum is shown above the MS spectrum. Δppm = 12.8 for Iturin A-4, Δppm = 11.5 for Iturin A-6, Δppm = 10.5 for Iturin A-8.

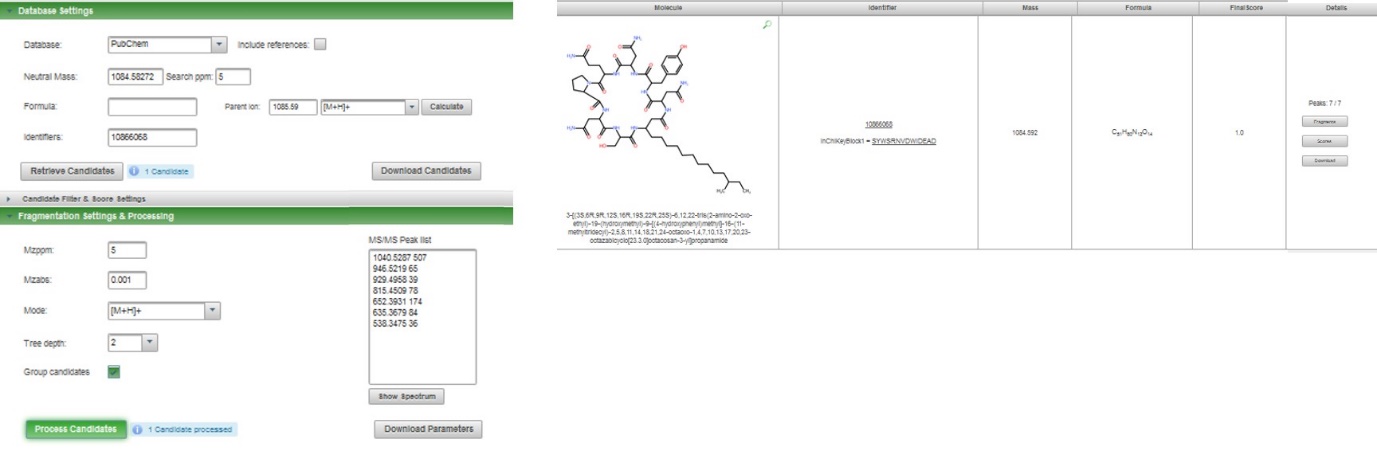


Figure S24. MetFrag settings used for the verification of MS2-fragments of putative iturin A-8 with corresponding PubChem entry #10866068

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Figure S25. MetFrag explanations of fragments obtained through MS2-analysis of mass 1085.59 (putative iturin A-8) in *B. amyloliquefaciens* DSM7 sample grown on LB medium.

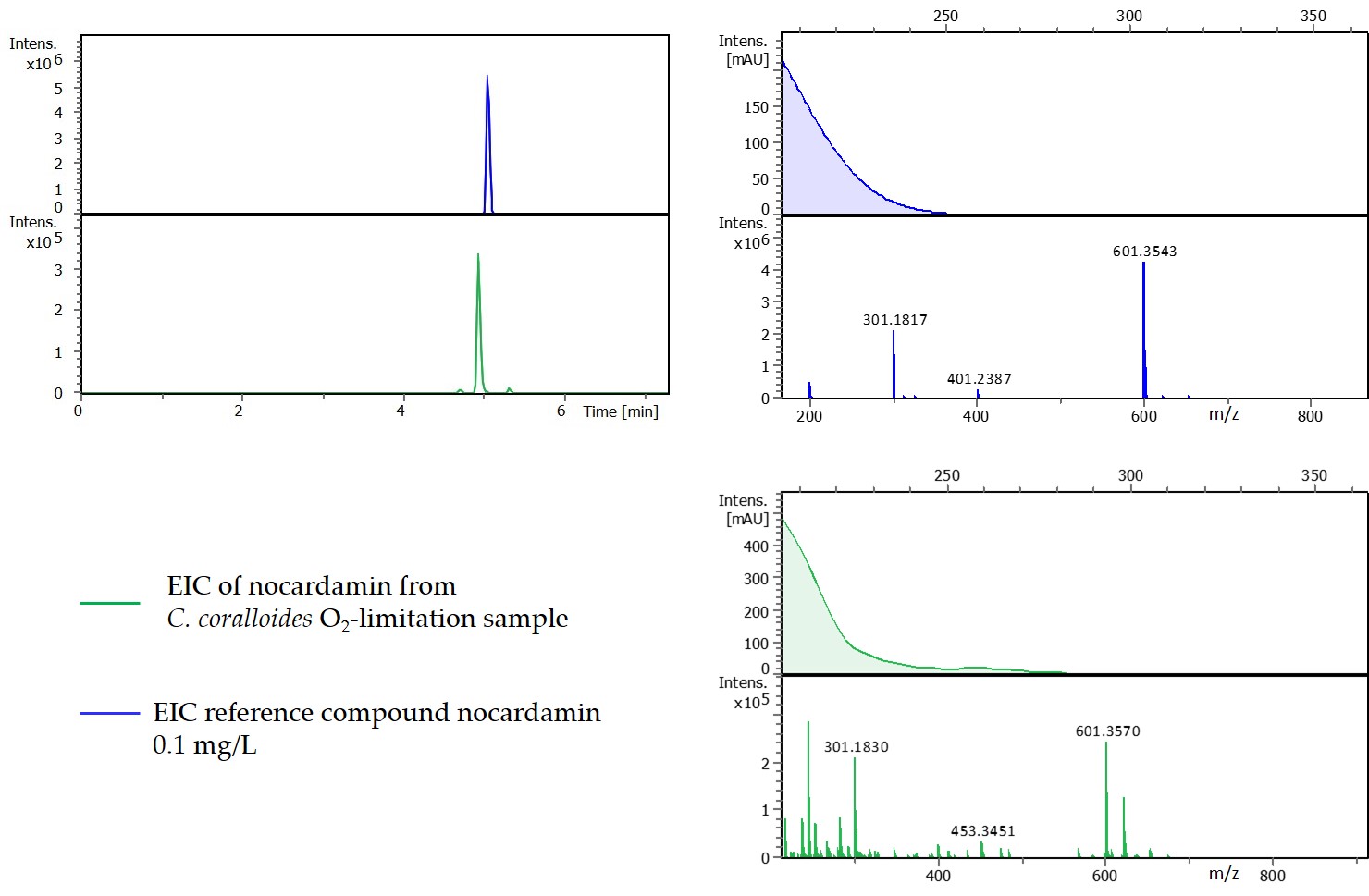


Figure S26. Comparison of Extracted Ion Chromatograms (EICs) and MS spectra of nocardamin reference compound (blue) and nocardamin in *C.coralloides* sample grown under O2-limitation (green). The UV spectrum is shown above the MS spectrum. Δppm = 4.4.

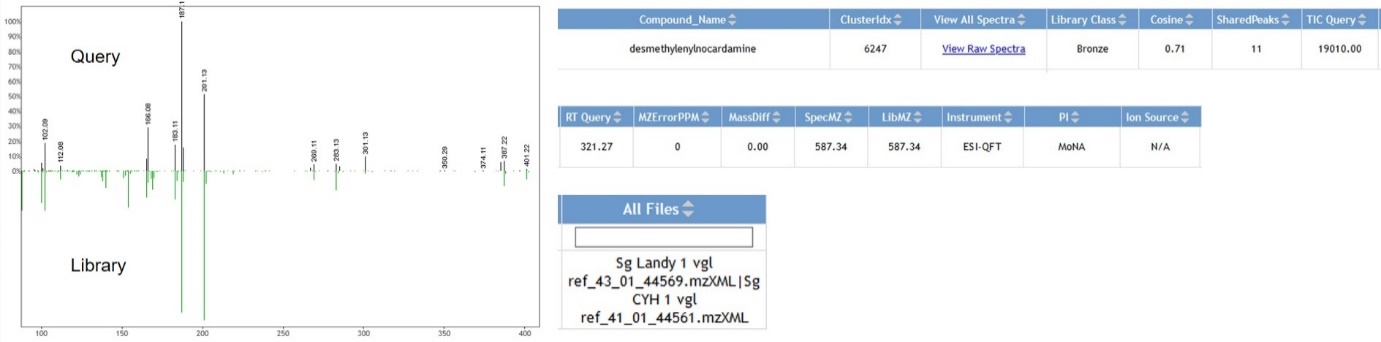


Figure 27. Results of GNPS search of desmethyl enyl nocardamin MS2-spectrum (mirror match and overview). Δppm = 0.

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Figure S28. Results of GNPS search of desferrioxamine B + Al MS2-spectrum (mirror match and overview). Δppm = 13.

Table S22. Summary of fragmentation patterns and collision energies (CE) of compounds identified among the new mass features.

|  |  |
| --- | --- |
| **Compound and Collision Energy** | **Fragmentation pattern** |
| cyclo(Tyr-Pro)  CE = 35 eV | 107.05 1000  136.08 501  98.06 217  113.07 154  154.07 246  188.11 24 |
| iturin A-4  CE = 60 eV | 1040.53 517  1023.51 301  1006.48 159  946.52 398  929.49 254  912.47 162  895.45 100  846.46 165  815.45 387  798.43 216  781.41 158  763.42 177  746.40 130  718.40 161  701.38 156  684.36 108  652.39 1000  635.37 611  538.35 256  406.17 154  299.13 311  212.10 314 |
| bacillibactin  CE = 45 eV | 137.02 99  159.08 132  166.05 89  185.09 395  194.04 468  242.11 102  277.08 119  295.09 490  378.13 1000  396.14 237  414.15 104  453.16 117  479.18 235  589.18 219  672.22 51  690.23 44 |
| nocardamin  CE = 33 eV | 201.1 1000  183.11 230  168.08 170  102.09 170  100.03 170  283.13 70  301.13 40  401.24 110 |
| desmethylenyl-nocardamin  CE = 28 eV | 102.09 190  112.06 40  166.08 290  183.11 180  187.1 1000  201.13 501  269.11 40  283.13 50  301.13 100  387.22 70  401.22 10 |
| desferrioxamine B + Al  CE = 37.6 eV | 585.31 1000 parent ion  485.21 32  467.20 100  439.21 33  385.19 116  368.17 29  303.11 16 |

Table S23. Summary of detected compounds and level of confidence for their identification according to [5].

|  |  |
| --- | --- |
| **Compound** | **Level of Confidence** |
| surfactin | 1 |
| myxochelin A | 1 |
| desferrioxamine B | 1 |
| cyclo(Tyr-Pro) | 1 |
| nocardamin | 1 |
| bacillibactin | 2 |
| nostophycin | 2 |
| bacillaene | 3 |
| albaflavenone | 3 |
| iturin | 3 |

[1] DSMZ GmbH, “CY/H Medium Composition,” available at https://www.dsmz.de/microorganisms/medium/pdf/DSMZ\_Medium1542.pdf, **2012**.

[2] P. Thonart, E. Akpa, B. Wathelet, R. Fuchs, M. Paquot, P. Jacques, H. Budzikiewicz, *Appl. Biochem. Biotechnol.* **2003**, *91*–*93* (1–9), 551–562. DOI: 10.1385/abab:91-93:1-9:551.

[3] DSMZ GmbH, “M9 Medium Composition,” available at https://www.dsmz.de/microorganisms/medium/pdf/DSMZ\_Medium1542.pdf, **2007**.

[4] M. Wang, “GNPS Documentation: Mass Spectrometry File Conversion,” available at https://ccms-ucsd.github.io/GNPSDocumentation/fileconversion/#conversion-with-msconvert, **n.d.**

[5] A. C. Schrimpe-Rutledge, S. G. Codreanu, S. D. Sherrod, J. A. McLean, *J. Am. Soc. Mass Spectrom.* **2016**, *27* (12), 1897–1905. DOI: 10.1007/s13361-016-1469-y.