
5.0 STRAINS WITH SPECIAL APPLICATIONS

A list of strains with special applications was compiled from information supplied by depositors of the strains. Because NCIM does not verify each organism for its reported biochemical performance by the inclusion of a strain in the list is no guarantee that it will respond in the reported manner.

5.1 BACTERIA

Acetic acid

Production

- Acetobacter xylinum 2526
- Lactobacillus plantarum 2912

Acidophilus milk

Production

- Lactobacillus acidophilus 2902, 2909

Actinomycin

Production

- Streptomyces antibioticus 2123

α -acetolactate-D-carboxylate

Production

- Bacillus licheniformis 2051

Acetone

Production

- Clostridium acetobutylicum 2337, 2877, 2878

Acetyl cholin

Production

- Lactobacillus plantarum 2593

Actioctin

Production

- Streptomyces sp. 2630

Adenylate cyclase

Production

- Brevibacterium liquifaciens 2269

Adhesives

Testing

- Pseudomonas aeruginosa 5032

Alanine

Assay

- Lactobacillus casei var. Rhamnosus 2125
- Lactobacillus delbrukii subsp. delbrukii 2025
- Lactobacillus fermentum 2165
- Pediococcus pentosaceus 2295

Alkanol

Degradation

- Enterobacter sp. 5221

Alkaline phosphatase

Production

- Escherichia coli 2911
- Bacillus lentus 5327

Alkyl amines

Degradation

- Protaminobacter alboblavus 2172

Alcohols

Degradation

- Nocardia hydrocarbonoxydans 2386

Amidase

Production

- Escherichia coli 2568, 2569, 2570

Amikacin

Assay

- Staphylococcus aureus 2079, 2901, 5021

Amino acids

Assay

- Lactobacillus casei var. rhamnosus 2361, 2362, 2363
- Lactobacillus plantarum 2083, 2912
- Pediococcus acidilactici 2292
- Streptococcus zymogenes 2182

Amino acid decarboxylase

Production

- Escherichia coli 2067

Para-aminobenzoic acid

Assay

- Clostridium acetobutylicum 2337
- Gluconobacter melanogenus 2048
- Lactobacillus plantarum 2083, 2372

5-amino-imidazole carboxamide riboside

Production

- Arthrobacter albidus 2447

6-aminopenicillanic acid

Production

- Arthrobacter viscosus 2451
- Escherichia coli 2563
- Micrococcus leuteus 2170
- Sarcina lutea 2103

Amoxicillin

Assay

- Bacillus subtilis 2063
- Sarcina lutea 2103

AmpicillinAssay

Sarcina lutea 2103
Staphylococcus aureus 2901, 5021,
5022
Streptococcus faecalis 5025

Production

Escherichia coli 2563

AmylaseProduction

Bacillus licheniformis 2051
Bacillus polymyxa 2539
Bacillus subtilis 2439, 2479, 2717
Klebsiella aerogenes 2239
Bacillus sp. 5250
Sternotrophomonas maltophila
5323
Streptomyces lonarensis 5435

Androgen precursorsSynthesis

Mycobacterium fortuitum 5239

Antibacterial agentsAssay

Bacillus subtilis 2920

AntibioticsAssay

Escherichia coli 2574, 2931, 5347
Pseudomonas aeruginosa 5029
Staphylococcus aureus 2079, 5021,
5345

Production

Myxococcus xanthus 2384
Pseudomonas aeruginosa 2053

Antifungal activity

Bacillus sp. 2722
Streptomyces sp. 5205

Antimicrobial activityAssay

Enterobacter aerogenes 5139
Escherichia coli 2065
Pseudomonas aeruginosa 2200
Streptomyces thermonitrificans
2007
Streptomyces sp. 5205

Antineoplastic agentsProduction

Streptomyces peuceticus 5207

AnthracyclinesProduction

Streptomyces peuceticus 5207

ArginineAssay

Citrobacterium freundii 2489
Escherichia coli 2067, 2343
Lactobacillus plantarum 2083
Pediococcus pentosaceus 2295
Streptococcus faecalis 2080

L-AsparaginaseProduction

Serratia marscescens 2919
Bacillus aryabhattai 5503

Aspartic acidAssay

Lactobacillus casei var rhamnosus
2360
Nocardia sp. 2291

Aureomycin (Chlortetracyclin)Assay

Bacillus cereus 2322
Bacillus cereus subsp. mycoides
2106

Production

Streptomyces aureofaciens 2417

AutobacteriumProduction

Clostridium acetobutylicum 2337

Azalomycin BProduction

Streptomyces hygroscopicus 2959

AzathioprineAssay

Lactobacillus casei var. rhamnosus
2364

Azo dyesDecolorization

Bacillus safensis 5332
Lysinibacillus fisisiformis 5333
Bacillus subtilis 5433

Degradation

Bacillus fusiformis 5294

Bacillomycin BProduction

Bacillus subtilis 2236

BacitracinAssay

Micrococcus flavus 2376, 2378
Micrococcus luteus 2704, 2871
Sarcina subflava 2395, 2704, 2816
Staphylococcus aureus 2127, 5021

Production

Bacillus licheniformis 2467

Bacterial kojiProduction

Lactobacillus casei var. rhamnosus
2586

BacteriocineProduction

Bacillus cereus 5293
Enterococcus durans 5427
Enterococcus faecium 5421, 5422,
5423,
Lactobacillus paracasei 5445
Pediococcus acidilactici 5419, 5424
Pediococcus pentosaceus 5420,
5425
Streptococcus faecalis 2603
Streptococcus faecium 2605
Streptococcus equines 5418,

Benzalkonium chlorideAssay

Micrococcus flavus 2376, 2377

Benzoic acidDegradation

Pseudomonas fluorescens 2141
Rhodococcus erythropolis 5228

3&4-hydroxy benzoic acidDegradation

Bacillus sp. 5220

Benzyl penicillinAssay

Staphylococcus aureus 5021

Bioemulsifier & BiosurfactantProduction

Acinetobacter junii 5150
Bacillus cereus 5391

BiotinAssay

Lactobacillus casei var. rhamnosus
2364
Lactobacillus plantarum 2083, 2374
Micrococcus luteus 2379

Bleomycin A & BProduction

Streptoverticillium mobaraense
5209

BryamycinProduction

Streptomyces hawaiiensis 2627

ButanediolProduction

Bacillus cereus 2185
Bacillus licheniformis 2051
Bacillus polymyxa 2541, 2725
Enterobacter cloacae 2164, 2562
Klebsiella aerogenes 2239

ButanolProduction

Clostridium acetobutylcum 2337,
2877, 2878

2-3 Butylene glycolProduction

Bacillus polymyxa 2726
Klebsiella aerogenes 2239

CampheneDegradation

Pseudomonas sp. 2876

CandididinProduction

Streptomyces griseus 2625

CapreomycinAssay

Klebsiella pneumoniae 2957

Caproic acidDegradation

Pseudomonas putida 2872

CarbenicillinAssay

Pseudomonas aeruginosa 5031
Staphylococcus aureus 5022
Streptococcus faecalis 5025

CarbomycinAssay

Sarcina lutea 2103

Carbon compoundsDegradation

Acinetobacter calcoaceticus 2886,
2890

CaratenoidsProduction

Flavobacterium dehydrogenans
2278

CaseinaseProduction

Shewanella sp. 5387, 5388

CatacholDegradation

Rhodococcus erythropolis 5228

CefadroxilAssay

Staphylococcus aureus 2079

CefamandoleAssay

Staphylococcus aureus 2079

CefazolinAssay

Staphylococcus aureus 2079

CefotaximeAssay

Staphylococcus aureus 2079

CelesticetinProduction

Streptomyces caelestis 2870

CelluloseProduction

Acetobacter hansenii 2529

Acetobacter xylinum 2526

Gluconacetobacter hansenii 5415

Degradation

Bacillus aporrhoeus 2234

Cellulomonas bibula 2333,

Cellulomonas biazotea 2550

Cellulomonas cartae 2551,

Cellulomonas fimi 5015

Cellulomonas flavigena 2481

Cellulomonas gelida 2482, 2483

Cellulomonas uda 2353

Cytophaga hutchinsonii 2338

CellulasesProduction

Cellulomonas uda 2353, 5351

Streptomyces sp. 2214

Thermomonospora sp. 5193

CephalexinAssay

Bacillus subtilis 2063

Sarcina lutea 2103

Staphylococcus aureus 2079, 2127,
2901, 5021

CephaloglycinAssay

Bacillus subtilis 2063

Sarcina lutea 2103

Staphylococcus aureus 2127, 5021

CephalothinAssay

Bacillus subtilis 2063

Sarcina lutea 2103

Staphylococcus aureus 2901, 5021,
5022

Streptococcus faecalis var.

liquefaciens 5025

CephaloridineAssay

Bacillus subtilis 2063

Sarcina lutea 2103

Staphylococcus aureus 5021

CephalosporinAssay

Alcaligenes faecalis 2105

CephradineAssay

Staphylococcus aureus 2079, 2901

CetrimideAssay

Bacillus subtilis 2063

Staphylococcus aureus 2127

CheeseProduction

Lactobacillus acidophilus 2902

Streptococcus lactis 2114, 2180,
2407, 2408

Streptococcus sp. 2888

ChitinDegradation

Serratia marcescens 2919

Paenibacillus pasadenensis 5434

Cholesterol oxydaseProduction

Streptomyces sp 5500

ChloramphenicolAssay

Escherichia coli 2345

Micrococcus luteus 2704

Sarcina lutea 2103

Staphylococcus aureus 5021, 5022

Streptococcus faecalis var.

liquefaciens 5025

Streptomyces venenzuli 2215, 2425

Production

Rhodococcus erythropolis 5229

Chlorhexidin diacetateAssay

Micrococcus flavus 2376, 2377

Chlorhexidin gluconateAssay

Micrococcus flavus 2376, 2377

ChlortetracyclineAssay

Bacillus cereus 2322

Bacillus cereus subsp.
mycoides 2106

Bacillus pumilus 2327

Bacillus subtilis 2480

Escherichia coli 2345

Proteus vulgaris 2813

Staphylococcus aureus 2079,
2127, 2901

Production

Streptomyces aureofaciens 2417

Streptomyces viridifaciens 2506

Citric acidProduction

Rhodococcus erythropolis 5231

CloxacillinAssay

Staphylococcus aureus 2079, 2901

Citraconic acidDegradation

Pseudomonas sp. 2220

Citrovorum factorAssay

Pediococcus pentosaceus
2295

CitrullinProduction

Streptococcus faecalis 2403

ClindamycinAssay

Sarcina lutea 2103

Staphylococcus aureus 2079, 2901,
5021, 5022

Streptococcus faecalis var.
liquefaciens 5025

CobalamineAssay

Lactobacillus leichmannii
2070, 2071

Coenzyme Q - 10Production

Pseudomonas diminuta 2865

ColistinAssay

Bordetella bronchiseptica 2267

Escherichia coli 2563

Staphylococcus aureus 5022

Streptococcus faecalis 5025

Bordetella bronchiseptica 5389,
5390

CreatineDegradation

Arthobacter ureafaciens 2450

CreatinineDegradation

Arthobacter ureafaciens 2450

Creatinine amidohydrolaseProduction

Micrococcus luteus 2169

Creatinine amidinohydrolaseProduction

Micrococcus luteus 2169

m - CresolDegradation

Pseudomonas cruciviae 2004

Rhodococcus erythropolis 5228

Curd (Dahi)Production

Lactobacillus acidophilus 2903

CyclacillinAssay

Sarcina lutea 2103

Cyclodextrin glycosyltransferaseProduction

Bacillus macerans 2131

CycloheximideProduction

Streptomyces griseus 2622, 2624

CycloserineAssay

Staphylococcus aureus 2079, 2901

Streptomyces lavendulae 2827

CystineAssay

Lactobacillus leichmannii 2071

Pediococcus pentosaceus 2295

CytosineAssay

Lactobacillus brevis 2090, 2356

DactinomycinAssay

Bacillus subtilis 2063

DaunomycinProduction

Streptomyces peuceticus 5207

DeacetylcephaloglycinAssay

Sarcina lutea 2103

Dehydroshikimic acidProduction

Escherichia coli 2575

DemeclocyclineAssay

Bacillus cereus subsp. mycoides

2106

Staphylococcus aureus 2079, 2127,

2901

DeoxycyclineAssay

Bacillus cereus subsp. mycoides

2106

DextranProduction

Leuconostoc mesenteroids 2073,

2198

DiacetylProduction

Streptococcus lactis 2606

Diaminopimelic acidProduction

Escherichia coli 2347, 2680

Diaminopropionate lyaseProduction

Pseudomonas ovalis 2043

DiastaseProduction

Bacillus subtilis 2010, 2045

DicloxacillinAssay

Sarcina lutea 2103

Staphylococcus aureus 2079, 2901

1*, 2* dihydrorotenoneBiotransformation

Streptomyces griseus 2622

DihydrostreptomycinAssay

Bacillus subtilis 2063

Klebsiella pneumoniae 2957

DisinfectantsAssay

Escherichia coli 2067, 2346

Pseudomonas aeruginosa 2862

2, 5 – Diketogluconic acidProduction

Gluconobacter melanogenus 2441

DoxycyclineAssay

Bacillus cereus subsp. mycoides

2106

Sarcina lutea 2103

Staphylococcus aureus 2079, 2901

Engine oilDegradation

Pseudomonas sp. 5360

Bacillus sp. 5361

Exiguobacterium sp. 5362

ErythromycinAssay

Bacillus pumilus 2327

Sarcina lutea 2103

Staphylococcus aureus 2127, 5021,

5022

Streptococcus faecalis 5024, 5025

Estrogen precursorsSynthesis

Mycobacterium sp. 5240

EthanolProduction

Clostridium acetobutylicum 2877,

2878

Zymomonas mobilis 2873

Staphylococcus epidermis 2493

Streptococcus faecalis 5025

Flavin – adenin dinucleotideProduction

Brevibacterium linens 2149

Flavobacterium devorans 2581

Rhodococcus erythropolis 5229

Folic acidAssay

Bacillus coagulans 2323

Lactobacillus casei var. rhamnosus

2364

Pediococcus pentosaceus 2295

Streptococcus faecalis 2080

Streptococcus sp.2613

FormateDegradation

Protaminobacter albobflavus 2172

Framycetin See Neomycin B**D – Fucosamine**Production

Janthinobacter lividum 2335

FumagillinAssay

Staphylococcus aureus 2079

 α -GalactosidaseProduction

Bacillus megaterium 5393

Bacillus streptomyces 5397

Bacillus sp 5509

 β -GalactosidaseProduction

Thalassospira frigidophilosprofundus
5438

Bacillus sp 5509

GelatinaseProduction

Sternotrophomonas maltophila
5323

Shewanella sp. 5387, 5388

GentamycinAssay

Bacillus pumilus 2327

Bacillus subtilis 2063

Staphylococcus aureus 2079, 5021,
5022

GlucanasesProduction

Bacillus circulans 5049

Gluconic acidProduction

Gluconobacter roseus 2524

 β -glucuronidase

Bacillus sp 5509

GlucoseAssay

Lactobacillus casei var. rhamnosus
2364

Proteus mirabilis 2388

Glucose isomeraseProduction

Actinoplane missouriensis 2838

Arthobacter sp. 2934, 2935, 2936,
2937, 2938

Chainia sp. 2980

Streptomyces griseus 2020

 α - GlucosidaseProduction

Bacillus sp 5509

 β - GlucosidaseProduction

Alcaligenes faecalis 2444

Cellulomonas uda 2353

L – glutamic acidAssay

Escherichia coli 2067

Lactobacillus casei var.rhamnosus
2360

Production

Bacillus circulans 2160

Brevibacterium diverticum 2634

Brevibacterium immariophilum
2237

Brevibacterium roseum 2270

Brevibacterium saccharolyticum
2238

Clostridium tetanomorphum 2835

Micrococcus glutamicus 2168, 2705

Rhodococcus sp. 2891

Rhodococcus erythropolis 5229

Rhodococcus erythropolis 5231

Rhodococcus sp. 5233, 5234

GlutaminaseProduction

Serratia marcescens 2919

Streptomyces griseus 2622

GlutamineAssay

Lactobacillus sp.2658

Glycoside hydrolaseProduction of inhibitor

Bacillus subtilis 2921

GlycosyltransferaseProduction

Bacillus macerans 2131

GramicidinAssay

Enterococcus hirae 5416

Production

Bacillus brevis 2531, 2532, 2533

Guanosine 2 – 3 ' cyclic phosphateProduction

Janthinobacter lividum 2335

HaemolysinProduction

Clostridium perfringens 2677

HemicelluloseDegradation

Bacillus macerans 2131

HexachloropheneAssay

Bacillus subtilis 2063

HexoseFermentation

Lactobacillus plantarum 2912

HistamineProduction

Klebsiella aerogenes 2281

HistidineAssay

Escherichia coli 2067

Lactobacillus fermentum 2165

Streptococcus lactis 2080

HydantoinaseProduction

Agrobacterium radiobacter 2986

Pseudomonas acidivorans 2861

Pseudomonas aeruginosa 2862

Pseudomonas aureofaciens 2026

Pseudomonas desmolyticum 2112

Pseudomonas fluorescens 2100, 2141

Pseudomonas oleovorans 2867

Pseudomonas pseudoalcaligenes 2864

Pseudomonas sp. 2667, 2875, 5070,
5109

HydrocarbonsDegradation

Nocardia hydrocarbonoxydans 2386

Rhodococcus terrae 5126

Novosphingovium subterraneum 5501

HydrogenaseProduction

Desulfovibrio desulfuricans 2047

Hygromycin BAssay

Bacillus subtilis 2063

Staphylococcus aureus 2127

Production

Streptomyces atrofaciens 2951

Indole acetic acidProduction

Acinetobacter baumannii 5152,
5154, 5156, 5157, 5158, 5159,
5180

Acinetobacter calcoaceticus 5165,
5179

Acinetobacter genospecies 5151,
5169

Acinetobacter haemolyticus 5155,
5168, 5171, 5173, 5174, 5175,
5176, 5177, 5178, 5181, 5182,
5183

Acinetobacter junii 5153, 5160,
5166, 5167, 5170, 5172

Pantoea dispersa 5417

Indole glycerol phosphate synthetaseProduction

Escherichia coli 2572

Insect pathogenProduction

Bacillus thuringiensis 2130, 2159
2513, 2514, 2515, 2975, 2976,
2977, 2978, 2979, 5019, 5110,
5111, 5112,

InulinaseProduction

Sternotrophomonas maltophila 5323

Iron pyriteRemoval from coal

Thiobacillus ferrooxidans 5068,
5069

Isokoijic acidProduction

Gluconobacter roseus 2280

L – isoleucineProduction

Brevibacterium ammoniagenes 2268

Itaconic acidDegradation

Pseudomonas sp. 2221, 2302

KanamycinAssay

Bacillus pumilus 2327

Staphylococcus aureus 2079, 2901,
5021, 5022

Staphylococcus epidermidis 2493

Streptococcus faecalis 5025

Production

Streptomyces kanamyceticus 2497

Kanamycin BAssay

Bacillus subtilis 2063

Keto gluconic acidProduction

Pseudomonas ovalis 2101

2 - Keto gluconic acidProduction

Pseudomonas fluorescens 2390

Pseudomonas fragi 2201, 2391

5 - Keto gluconic acidProduction

Gluconobacter melanogenus 2048

Gluconobacter roseus 2049, 2050

 α - ketoglutaric acidProduction

Escherichia intermedia 2490

Escherichia irregular 2579

Rhodococcus sp. 5233

 β - lactamaseProduction

Escherichia coli 2571

Lactic acidProduction

Bacillus laevolacticus 2464

Lactobacillus plantarum 2084, 2912

Lactobacillus sp. 2734

D (-) lactic acidProduction

Lactobacillus casei

var.rhamnosus 2125,2364

L (+) lactic acidProduction

Lactobacillus delbrueckii subsp.

delbrueckii 2025, 2365, 5219

Lecithinase CProduction

Clostridium perfringens 2677

LeucineAssay

Proteus mirabilis 2241, 2300, 2387,
2388

Proteus vulgaris 2027, 2857

LeucomycinProduction

Streptoverticillium cinnamom 2618

LeuovorinAssay

Pediococcus pentosaceus 2295

LevanProduction

Acetobacter xylinum 2526

Pseudomonas fluorescens

var laevaniformans 2059

LevendulinProduction

Streptomyces lavendulae 2500

Levulinic acidDegradation

Arthrobacter simplex 2449

LincomycinAssay

Sarcina lutea 2103

Staphylococcus aureus 2079, 2901

LipaseProduction

Pseudomonas aeruginosa 5210

L-lysineAssay

Hafnai alvei 2351

Streptococcus lactis 2080

Production

Escherichia coli 2347

LymecyclineAssay

Bacillus pumilus 2327

LysineAssay

Leuconostoc mesenteroides 2199

Lytic enzymesProduction

Bacillus circulans 5049

Bacillus megaterium 2326, 2475

Oerskovia xanthineolytica 2839

MagnamycinProduction

Streptoverticillium cinnamoneum
2618

MaltohexoseProduction

Klebsiella aerogenes 2239

 β -MannanaseProduction

Panibacillus sp. 5410

MarcescinProduction

Serratia plymuthica var. illiensis
2600

MeclocyclineAssay

Staphylococcus aureus 2079

MelaninSynthesis

Klebsiella sp. 5338

MeleateDegradation

Pseudomonas sp. 2248

6 – MercaptopurineAssay

Lactobacillus casei var.
rhamnosus 2364

Mesaconic acidDegradation

Pseudomonas sp. 2223

MethacyclineAssay

Bacillus cereus subsp. mycoides
2106
Staphylococcus aureus 2079, 2901

MethicillinAssay

Sarcina lutea 2103
Staphylococcus aureus 2079,
2901, 5021, 5022
Streptococcus faecalis 5025

MethionineAssay

Escherichia coli 2344
Lactobacillus plantarum 2083
Pediococcus pentosaceus 2295

β – methyl aspartaseProduction

Clostridium tetanomorphum 2835

MinocyclineAssay

Bacillus cereus subsp. mycoides
2106
Staphylococcus aureus 2079, 2901

MitomycinAssay

Bacillus subtilis 2063

Production

Streptoverticillium sp. 5206

MonensinAssay

Bacillus subtilis 2063
Staphylococcus aureus 2127
Streptococcus lactis 2080

NafcillinAssay

Staphylococcus aureus 2079, 2901

NapthaleneDegradation

Pseudomonas desmolyticum 2028,
2112

NeomycinAssay

Bacillus pumilus 2327
Bacillus subtilis 2063
Staphylococcus aureus 2079, 5021
Staphylococcus epidermidis 2493

Production

Streptomyces albogriseolus 2438
Streptomyces fradiae 2418

Resistant

Bordetella bronchiseptica 2267

Neomycin B (= Framycetin)Assay

Bacillus pumilus 2327
Staphylococcus aureus 2079

NetilmicinAssay

Staphylococcus epidermidis 2493

NicotineDegradation

Arthrobacter nicotinae 2460

Nicotinic acid (= Niacin)Assay

Escherichia coli 2133
Gluconobacter melanogenus
2048
Lactobacillus casei var. rhamnosus
2364
Lactobacillus plantarum 2083

NiddamycinProduction

Streptoverticillium cinnamoneum
2618

NisinAssay

Streptococcus agalactae 2401

Production

Streptococcus lactis 2114

NitrofurantoinAssay

Staphylococcus aureus 5022

Streptococcus faecalis 5025

Nitrogen fixation

Azospirillum oryzae 5489

Azospirillum zeae 5493*

NitrosporinProduction

Streptomyces nitrosporeus 2958

NovobiocinAssay

Bacillus subtilis 2063, 2547

Sarcina lutea 2103

Staphylococcus aureus 5021

Staphylococcus epidermidis 2493

Streptococcus faecalis 5024

Production

Streptomyces niveus 2502

Resistant

Bacillus licheniformis 2324

5'- NucleotidesProduction

Alcaligenes viscosus 2446

Klebsiella aerogenes 2281

Nyastatin (Fungicidin)Production

Streptomyces noursei 2424

OleandomycinAssay

Sarcina lutea 2103

Staphylococcus aureus 5021

Staphylococcus epidermidis 2493

Streptococcus faecalis 5024

Production

Streptomyces antibiotics 2950

OlivaceinProduction

Streptomyces olivaceus 2503

Organic acidsDegradation

Nocardia hydrocarbonoxydans
2386

Organometallic compoundsDegradation

Bordetella sp. 5372

OrnithineProduction

Streptococcus faecalis 2403

Orotic acidAssay

Lactobacillus jugurti 2366

OxacillinAssay

Sarcina lutea 2103

Staphylococcus aureus 2079, 2901

OxytetracyclinAssay

Bacillus cereus 2322

Bacillus cereus subsp. mycoides
2106

Bacillus pumilus 2327

Escherichia coli 2345

Staphylococcus aureus 2079, 2127,
2901

Production

Streptomyces rimosus 2213

PaintTesting

Bacillus subtilis 2920

Enterobacter aerogenes 5139

Pseudomonas aeruginosa 2863

PanthenolAssay

Escherichia coli 2566

Gluconobacter roseus 2095

Pediococcus acidilactici 2292

Pantothenic acidAssay

Escherichia coli 2133

Gluconobacter melanogenus 2048

Lactobacillus plantarum 2083, 2912

Lactobacillus sp. 2658

ParomomycinAssay

Staphylococcus epidermidis 2493

Pectolytic enzymesProduction

Bacillus polymyxa 2539

PenicillinAssay

- Bacillus subtilis 2063, 2117, 2545, 2718
- Sarcina lutea 2103
- Staphylococcus aureus 2079, 2127, 2602, 2720, 2901, 5022
- Streptococcus faecalis 5024, 5025
- Streptococcus pyogenes 2608
- Streptococcus thermophilus 2412

Penicillin amidaseProduction

- Streptomyces lavendule 2828

Penicillin G amidaseProduction

- Arthrobacter viscosus 2451

Penicillinase (β -lactamase)Production

- Bacillus cereus 2156, 2185, 2458
- Bacillus licheniformis 2051, 2537
- Bacillus subtilis 2549, 2718

Penicillin derivativesAssay

- Bacillus subtilis 2718

Production

- Kluyvera cryocrescens 2716

PentosanasesProduction

- Bacillus subtilis 2479

PentoseFermentation

- Lactobacillus plantarum 2912

PergolideTransformation

- Streptomyces griseus 2622

PhenolDegradation

- Acinetobacter calcoaceticus 2886
- Mycoplana bullata 2382
- Mycoplana dimorpha 2383
- Pseudomonas aeruginosa 2074
- Pseudomonas cruciviae 2004
- Pseudomonas desmolyticum 2028
- Pseudomonas pictorum 2077
- Pseudomonas resinovorans 2599
- Rhodococcus erythropolis 5228

Phenols, mono,di &trichloroDegradation

- Rhodococcus erythropolis 5228

PhenoxymethylpenicillinAssay

- Bacillus subtilis 2718

PhenylketonuriaAssay

- Bacillus subtilis 2920

Phenylmercuric acetateAssay

- Micrococcus flavus 2376, 2377
- Staphylococcus aureus 2127

Phenylmercuric nitrateAssay

- Micrococcus flavus 2376, 2377

Phosphatic nodule solubilizer

- Bacillus firmus 2636, 2637
- Pseudomonas putida 2847
- Bacillus sphaericus 5149

Phospholipase CProduction

- Clostridium perfringens 2677

PhytaseProduction

- Bacillus subtilis 2712

 α – picolineDegradation

- Arthrobacter sp.2263

 α -Picolinic acidDegradation

- Pseudomonas sp. 2303, 2304, 2305

Piericidins A & BProduction

- Streptoverticillium mobaraense 5208

PigmentsProduction

- Acetobacter liquefaciens 2279
- Arthrobacter polychromogenes 2448

Platulin (claviformin)Assay

- Escherichia coli 2138

PlicamycinAssay

Staphylococcus aureus 2079, 2901

Polyethylene GlucolDegradation

Sphingomonas sanguinis 5495

Polyglutamic acidProduction

Bacillus subtilis 2162

PolyhydroxybutyrateProduction

Bacillus licheniformis 5373, 5377

Bacillus megaterium 5374, 5376,
5378, 5379, 5380, 5383, 5384,
5385, 5386

Bacillus sp. 5375, 5381, 5382,

PolymyxinAssay

Escherichia coli 2345

Staphylococcus aureus 5021

Bordetella bronchiseptica 5389

Production

Bacillus polymyxa 2538, 2540, 2955

PolysaccharideProduction

Agrobacterium radiobacter 2443

Alcaligenes faecalis 2949

Azospirillum brasilense 5135

Bacillus polymyxa 2539

Leuconostoc mesenteroides 2947

Pseudomonas aeruginosa 2945, 2948

Xanthomonas campestris 2954, 2956

ProactinomycinProduction

Streptomyces sp. 2631

ProteaseProduction

Bacillus licheniformis 2042, 2044

Bacillus subtilis 2724

Bacillus clausii 5448

Bacillus sp. 5447

ProteinDegradation

Streptococcus faecalis 2603

Pthalate-dimethylDegradation**Pullulanase**Production

Bacillus macerans 2131

Bacillus polymyxa 2539

Klebsiella aerogenes 2239

PumilinProduction

Bacillus pumilus 2108

PurineAssay

Escherichia coli 2137

Production

Lactobacillus plantarum 2912

PyocyaninProduction

Pseudomonas aeruginosa 2036

PyorubinProduction

Pseudomonas aeruginosa 2036

PyoverdinProduction

Pseudomonas aeruginosa 2036

Pseudomonas aeruginosa 5446

PyridoxalAssay

Lactobacillus delbrueckii

subsp. delbrueckii 2025, 2365

PyrimidineProduction

Lactobacillus plantarum 2912

PyrithiamineAssay

Lactobacillus fermentum 2165

ResinsDegradation

Pseudomonas resinivorans 2599

Restriction endonucleaseProduction

Acetobacter pasteurians 2318

Restriction enzymes

Production

AluI

Arthrobacter luteus 2800

AtuBVI

Agrobacterium tumefaciens 2146

BamHI

Bacillus amyloliquifaciens 2829

BbvI

Bacillus brevis 2798

BceR

Bacillus cereus 2797

BglI⁻

Bacillus globigii 2792

BglI⁺

Bacillus globigii 2793

BglII⁻

Bacillus globigii 2793

BglII⁺

Bacillus globigii 2792

BluI

Curtobacterium luteum 2923

BluII

Curtobacterium luteum 2923

EcoRI

Escherichia coli 2804

HaeIII

Bacillus subtilis 2796

MspI

Morexella sp. 2795

PstI

Providencia stuartii 2799

Ribonuclease I

Escherichia coli 2684

SalI

Streptomyces albus 2731

Sau3A

Staphylococcus aureus 2794

SmaI

Serratia marcescens 2801

Riboflavin

Assay

Lactobacillus casei var.
rhamnosus 2151, 2364, 2587

Production

Bacillus megaterium 2087
Lactobacillus plantarum 2912

5'-Ribosyl phosphates of 8-azapurine derivatives

Production

Brevibacterium ammoniagenes
2268

Rifampin (Rifamycin AMP)

Assay

Bacillus subtilis 2063
Sarcina lutea 2103

Rifamycin

Assay

Escherichia coli 2345

Production

Amycolatopsis mediterranei 5008

Rimocidin

Production

Streptomyces rimosus 2213

Ristocetin

Assay

Bacillus subtilis 2063
Bacillus subtilis 2546
Staphylococcus aureus 2079
Streptococcus faecalis 5024

Rolitetracyclin

Assay

Bacillus cereus subsp. mycoides
2106
Staphylococcus aureus 2079, 2901

L-serine

Assay

Lactobacillus casei var. hamnosus
2360

Production

Arthrobacter citreus 2320

Shikimic acid

Assay

Escherichia coli 2576

SiderophoreProduction

Acinetobacter baumannii 5349

Single cell proteinProduction

Alcaligenes faecalis 2444

Cellulomonas cartea 2551

Cellulomonas uda 2353

SisomicinAssay

Staphylococcus epidermidis 2493

SorboseProduction

Gluconobacter melanogenus 2048

Sarcina lutea 2103

SpectinomycinAssay

Escherichia coli 2345

Starch degrading enzymesProduction

Bacillus circulans 5035, 5036, 5045,
5046, 5048

Bacillus macerans 5037, 5038, 5039,
5040

SterilityTesting

Bacillus pumilus 2327

Bacillus stearothermophilus 2328

Bacillus subtilis 2063, 2921

Clostridium sporogenes, 2559, 5113,
5114, 5125

Pseudomonas aeruginosa 2036,
2200

Sarcina lutea 2103

Staphylococcus aureus 2079

SteroidsProduction

Arthrobacter simplex 2449

Mycobacterium sp. 2984

StreptocinProduction

Streptomyces griseus 2624

StreptomycinAssay

Bacillus circulans 2107

Bacillus megaterium 2326

Bacillus subtilis 2063, 2117, 2480,
2545, 2546, 2709, 2718

Escherichia coli 2563

Klebsiella pneumoniae 2957

Staphylococcus aureus 2079, 2901,
5021

Production

Streptomyces griseus 2183, 2496,
2621, 2622, 2952

Streptomyces pseudogriseolus 5144

StreptonigrinAssay

Bacillus subtilis 2063

StreptothricinAssay

Bacillus subtilis 2545

Escherichia coli 2563

Production

Streptomyces lavendulae 2421,
2498, 2499, 2500

SubtilinAssay

Arthrobacter citreus 2320

Production

Bacillus subtilis 2063, 2548

SulfanilamideProduction

Lactobacillus plantarum 2912

TetracyclineAssay

Bacillus cereus subsp. mycoides
2106

Bacillus pumilus 2327

Escherichia coli 2345

Sarcina lutea 2103

Staphylococcus aureus 2079, 2127,
2901, 5021, 5022

Streptococcus faecalis 5024, 5025

Production

Streptomyces aureofaciens 2417,
2614, 2615, 2616,

Streptomyces rimosus 2213

Streptomyces viridifaciens 2506

Tetracyclin hydrochlorideAssay

Escherichia coli 2345

ThiaminaseProduction

Bacillus aneurinolyticus 2233

Bacillus brevis 2534

ThiamineAssay

Lactobacillus fermentum 2165

Lactobacillus viridescens 2167

ThimerosalAssay

Micrococcus flavus 2376, 2377

Staphylococcus aureus 2127

ThiostreptoneAssay

Staphylococcus aureus 2079

Streptococcus sp. 2611

ThreonineAssay

Pediococcus pentosaceus 2295

Serratia marcescens 2397

ThymineAssay

Escherichia coli 2348

Lactobacillus casei 2737

Lactobacillus fermentum 2165

TicarcillinAssay

Pseudomonas aeruginosa 2914

TobramycinAssay

Bacillus subtilis 2718

Staphylococcus aureus 2079, 2127,

2901, 5021, 5022

Streptococcus faecalis 5025

TolueneDegradation

Rhodococcus erythropolis 5228

Tomato juice factorAssay

Leuconostoc oenos 2219

Trans-aconitateDegradation

Pseudomonas sp. 2246

Tributyltin chlorideDegradation

Pseudomonas aeruginosa 5223,
5224, 5227

Pseudomonas fluorescens 5226

Pseudomonas stutzeri 5225

Trimethoprim-sulfa-methaxazoleAssay

Staphylococcus aureus 5022

Streptococcus faecalis 5025

Trimethylene glycolProduction

Citrobacter freundii 2488

L(-)TryptophaneAssay

Lactobacillus plantarum 2083

Streptococcus lactis 2080

Oxidation

Pseudomonas sp.2208

Production

Rhodococcus sp. 5233

TylosinAssay

Sarcina lutea 2103

TyrocidinProduction

Bacillus brevis 2532, 2533

TyrosinaseProduction

Streptomyces phaeochromogenes
2504

TyrosineAssay

Pediococcus pentosaceus 2295

Streptococcus faecalis 2080, 2403,
2404

TyrothricinAssay

Streptococcus sp. 2611

Streptococcus zymogenes 2181

Enterococcus hirae 5416

Ulenine

Transformation

Streptomyces rimosus 2213

Uracil

Assay

Lactobacillus brevis 2090, 2356

Lactobacillus casei 2737

Urea

Degradation

Brevibacterium ammoniagenes
2268

Urease

Production

Bacillus pasteurii 2477

Valine

Assay

Proteus mirabilis 2241, 2300,
2387, 2388

Proteus vulgaris 2027, 2857

Vancomycin

Assay

Bacillus cereus subsp. mycoides
2106

Bacillus subtilis 2063, 2718

Pseudomonas aeruginosa 5031

Staphylococcus aureus 5021

Staphylococcus epidermidis 2493

Vinegar

Production

Acetobacter aceti 2116, 2251

Acetobacter pasteurianus 2104,
2317, 2318

Acetobacter sp. 2432

Viomycin

Assay

Klebsiella pneumoniae 2957

Production

Streptomyces griseus subsp.
purpureus 2626

Streptomyces vinaceus 2505

Vitamins

Assay

Lactobacillus casei var. rhamnosus
2363

Lactobacillus plantarum 2912

Vitamins B₁₂

Assay

Escherichia coli 2066, 2068, 2400,
2567, 5346

Lactobacillus lactis 2368, 2369,
2589

Lactobacillus leichmanii 2070,2071

Production

Bacillus megaterium 2087

Bacillus sp. 5201

Flavobacterium devorans 2581

Propionibacterium Freudenreichii
2111

Streptomyces griseus 2420

Streptomyces olivaceus 2503

Vitamins B₁₂(Coenzyme)

Production

Clostridium tetanomorphum 2132,
2835

Wax esters

Production

Acinetobacter calcoaceticus 2886,
2890

Wood smoke condensate

Assay

Staphylococcus aureus 5021

Xanthan gum

Production

Xanthomonas campestris 2954,
2956, 2961, 5028

Xanthine

Degradation

Pseudomonas sp. 5235

Xylan

Degradation

Cellulomonas flavigena 2481

Clostridium acetobutylicum 2337

Xylanase

Production

Bacillus polymyxa 2539

Bacillus sp.2129

Cellulomonas uda 2353

Chainia sp.2980

Streptomyces sp. 5027

Thermomonospora sp. 5193

XylosePhosphorylation

Enterobacter cloacae 2164

Xylose isomeraseProduction

Chainia sp. 2980

YoghurtProduction

Lactobacillus helveticus 2733

Streptococcus thermophilus 2904