**Table S1.** Details of categories and concentration ranges of antimicrobials tested using the AST-P645 card.

|  |  |  |
| --- | --- | --- |
| **Category** | **Antimicrobial** | **Range** |
| Cephalomycins | Cefoxitin Screen | Negative or Positive |
| Penicillins | Oxacillin | 0.25 – 4 μg/mL |
| Non-Extended Spectrum Cephalosporins | Cefuroxime | 1 – 64 μg/mL |
| Cefuroxime Axetil | 1 – 64 μg/mL |
| Aminoglycosides | Gentamicin High Level (synergy) | Susceptible or Resistant |
| Gentamicin | 0.5 – 16 μg/mL |
| Fluoroquinolones | Ciprofloxacin | 0.5 – 8 μg/mL |
| Moxifloxacin | 0.25 – 8 μg mL |
| Lincosamides | Inducible Clindamycin Resistance | Negative or Positive |
| Clindamycin | 0.125 – 4 μg/mL |
| Macrolides | Erythromycin | 0.25 – 8 μg/mL |
| Telithromycin | 0.25 – 4 μg/mL |
| Oxazolidinones | Linezolid | 0.5 – 8 μg/mL |
| Lipopeptides | Daptomycin | 0.12 – 8 μg/mL |
| Glycopeptides | Teicoplanin | 0.5 – 32 μg/mL |
| Vancomycin | 0.5 – 32 μg/mL |
| Tetracyclines | Tetracycline | 1 – 6 μg/mL |
| Nitrofuran | Nitrofurantoin | 16 – 512 μg/mL |
| Fucidanes | Fusidic Acid | 0.5 – 32 μg/mL |
| Carboxylic Acids | Mupirocin | 1 – 512 μg/ mL |
| Ansamycins | Rifampicin | 0.5 – 32 μg/ mL |
| Folate Pathway Inhibitors | Trimethoprim/ Sulfamethoxazole | 10 – 320 μg/ mL |

**Table S2.** Details of categories and concentration ranges of antimicrobials tested using the AST-N256 card.

|  |  |  |
| --- | --- | --- |
| **Category** | **Antimicrobial** | **Range** |
| Penicillins | Ampicillin | 2 – 32 μg/mL |
| Penicillin and -Lactam Inhibitors | Amoxicillin/ Clavulanic acid | 2/ 1 – 32/ 16 μg/mL |
| Anti-Pseudomonal Penicillins | Piperacillin/ Tazobactam | 4/ 4 – 128/ 4 μg/mL |
| Non-Extended Spectrum Cephalosporins | Cefuroxime | 1 – 64 μg/mL |
| Cefuroxime-Axetil | 1 – 64 μg/mL |
| Cephalomycins | Cefoxitin | 4 – 64 μg/mL |
| Extended Spectrum Cephalosporins | Cefotaxime | 1 – 64 μg/mL |
| Ceftazidime | 1 – 64 μg/mL |
| Cefepime | 1 – 64 μg/mL |
| Carbapenems | Ertapenem | 0.5 – 8 μg/mL |
| Imipenem | 0.25 – 16 μg/mL |
| Meropenem | 0.25 – 16 μg/mL |
| Aminoglycosides | Amikacin | 2 – 64 μg/mL |
| Gentamicin | 1 – 16 μg/mL |
| Tobramycin | 1 – 16 μg/mL |
| Fluoroquinolones | Ciprofloxacin | 0.25 – 4 μg/mL |
| Glycylcyclines | Tigecycline | 0.5 – 8 μg/mL |
| Polymixins | Colistin | 0.5 – 16 μg/mL |
| Folate pathway inhibitors | Trimethoprim/ Sulfamethoxazole | 20 – 320 μg/mL |

**Table S3.** Antimicrobial susceptibility profiles Gram-positive cocci subjected to AST.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Lab no.** | **Organism** | **Cefoxitin Screen** | **Oxacillin** | **Cefuroxime** | **Cefuroxime Axetil** | **Gentamicin High Level (synergy)** | **Gentamicine** | **Ciprofloxacin** | **Moxifloxacin** | **Inducible Clindamycin Resistance** | **Erythromycin** | **Telithromycin** | **Clindamycin** | **Linezolid** | **Daptomycin** | **Teicoplanin** | **Vancomycin** | **Tetracycline** | **Nitrofrantoin** | **Fusidic Acid** | **Mupirocin** | **Rifampicin** | **Trimethoprim/ Sulfamethoxazole** | **No of categories NS** | **NS to 0 categories** | **NS to 1 - 2 categories** | **MDR (NS to 3 or more)** | **XDR (NS to 13 or more)** | **PDR (NS to all 15 categories)** |
| JR1h | *Enterococcus faecalis* |  |  |  |  | R |  | R |  |  | R |  |  | S |  | R | R | S | R |  |  |  |  | 6 | 0 | 0 | 1 | 0 | 0 |
| JR2g | *Enterococcus faecalis* |  |  |  |  | R |  | R |  |  | R |  |  | S |  | R | R | S | R |  |  |  |  | 6 | 0 | 0 | 1 | 0 | 0 |
| JR2h | *Enterococcus faecalis* |  |  |  |  | R |  | R |  |  | R |  |  | S |  | R | R | R | R |  |  |  |  | 7 | 0 | 0 | 1 | 0 | 0 |
| JR2j | *Enterococcus faecalis* |  |  |  |  | S |  | I |  |  | R |  |  | S | S | R | R | S | I |  |  |  |  | 5 | 0 | 0 | 1 | 0 | 0 |
| JR3x | *Staphylococcus cohnii cohnii* |  |  |  |  |  | S | S | R |  | R | S | S |  |  | I | S | S | S | R |  | S | R | 5 | 0 | 0 | 1 | 0 | 0 |
| JR5k | *Staphylococcus haemolyticus* |  | R |  |  |  | R | R | R |  | S | S | R |  |  | I | I | R | S | S |  | S | R | 8 | 0 | 0 | 1 | 0 | 0 |
| JR5l | *Staphylococcus cohnii cohnii* |  |  |  |  |  | S | I | R |  | R | S |  |  |  | I | S | S | I | R |  | S | R | 6 | 0 | 0 | 1 | 0 | 0 |
| JR8f | *Staphylococcus warneri* |  | R |  |  |  | S | R | R |  | R |  |  |  | S |  |  | R |  |  |  |  | S | 4 | 0 | 0 | 1 | 0 | 0 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 0 | 0 | 8 | 0 | 0 |

|  |  |
| --- | --- |
| S | Susceptible |
| I | Intermediately resistant |
| R | Resistant |

**Table S4.** Antimicrobial susceptibility profiles Gram-negative bacilli subjected to AST.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Lab no.** | **Organism** | **Ampicillin** | **Amoxicillin/ Clavulanic acid** | **Piperacillin/ Tazobactam** | **Cefuroxime** | **Cefuroxime/ Axetil** | **Cefoxitin** | **Cefotaxime** | **Ceftazidime** | **Cefepime** | **Ertapenem** | **Imipenem** | **Meropenem** | **Amikacin** | **Gentamicin** | **Tobramycin** | **Ciprofloxacin** | **Tigecycline** | **Colistin** | **Trimethoprim/ Sulfamethoxazole** | **No of categories NS** | **NS to 0 categories** | **NS to 1 - 2 categories** | **MDR (NS to 3 or more)** | **XDR (NS to 11 or more)** | **PDR (NS to all 13 categories)** |
| JR1a1 | *Aeromonas sobria* |  | S | S | S |  | S |  | S | S |  | S |  | S | S |  | S | S |  | S | 0 | 1 | 0 | 0 | 0 | 0 |
| JR1a2 | *Aeromonas hydrophila/caviae* |  | S | S | S |  | S |  | S | S |  | S |  | S | S |  | S | S |  | S | 0 | 1 | 0 | 0 | 0 | 0 |
| JR1b | *Aeromonas hydrophila/caviae* |  | I | S | R |  | S |  | S | S |  | S |  | S | S |  | S | S |  | R | 3 | 0 | 0 | 1 | 0 | 0 |
| JR1c | *Aeromonas sobria* |  | R |  | R |  | R |  | S | S |  | S |  | S | S |  | S | S |  | S | 3 | 0 | 0 | 1 | 0 | 0 |
| JR1g | *Kluyvera ascorbata* | R | R | S | R | R | I | R | R | S | S | I | I | S | S | R | S | S | S | R | 8 | 0 | 0 | 1 | 0 | 0 |
| JR1i | *Pseudomonas stutzeri* |  |  | S |  |  |  | S | S | S |  | S | S | I | S | S | S | S |  | R | 2 | 0 | 1 | 0 | 0 | 0 |
| JR1j1 | *Escherichia coli* | R | R | R | R | R | S | R | R | R | S | S | S | I | I | R | R | S | S | R | 8 | 0 | 0 | 1 | 0 | 0 |
| JR1j2 | *Escherichia coli* | R | R | R | R | R | S | R | R | R | S | I | S | I | I | R | R | S | S | R | 9 | 0 | 0 | 1 | 0 | 0 |
| JR2a | *Pseudomonas aeruginosa* |  |  | R |  |  |  | R | R | R |  | S | S | S | S | S | S | R | S |  | 3 | 0 | 0 | 1 | 0 | 0 |
| JR2c | *Aeromonas hydrophila/caviae* |  | R | S | R |  | R |  | R | S |  | S |  | S | S |  | S | S |  | S | 4 | 0 | 0 | 1 | 0 | 0 |
| JR2d | *Aeromonas hydrophila/caviae* |  | I |  | S |  | S |  | S | R |  | I |  | S | S |  | S | S |  | S | 3 | 0 | 0 | 1 | 0 | 0 |
| JR2e | *Aeromonas sobria* |  | S |  | S |  | S |  | S | S |  | I |  | S | S |  | S | S |  | S | 1 | 0 | 1 | 0 | 0 | 0 |
| JR2k | *Escherichia coli* | R | R | R | R | R | R | R | R | R | I | I | R | S | S | S | R | S | S | R | 9 | 0 | 0 | 1 | 0 | 0 |
| JR3a | *Escherichia coli* | R | R | R | R | R | R | R | R | R | I | I | I | S | R | R | R | S | S | R | 10 | 0 | 0 | 1 | 0 | 0 |
| JR3c | *Escherichia coli* | R | R | R | R | R | R | R | R | R | I | I | I | I | S | R | R | S | S | S | 9 | 0 | 0 | 1 | 0 | 0 |
| JR3f | *Citrobacter braakii* |  | R | R | R | R | R | R | R | R | S | R | S | I | R | R | S | S | S | S | 7 | 0 | 0 | 1 | 0 | 0 |
| JR3g | *Aeromonas sobria* |  | I |  | S |  | S |  | S | S |  | I |  | S | S |  | S | S |  | S | 2 | 0 | 1 | 0 | 0 | 0 |
| JR3i | *Aeromonas hydrophila/caviae* |  | S | S | S |  | S |  | S | S |  | S |  | S | S |  | S | S |  | S | 2 | 0 | 1 | 0 | 0 | 0 |
| JR3p | *Raoultella planticola* | R | S | S | R | R | S | S | I | S | S | R | R | S | S | S | S | S | S | S | 4 | 0 | 0 | 1 | 0 | 0 |
| JR4a | *Escherichia coli* | R | R | R | R | R | R | R | R | R | I | I | R | S | R | R | R | S | S | R | 10 | 0 | 0 | 1 | 0 | 0 |
| JR4b | *Acinetobacter baumannii complex* |  |  | R |  |  |  | R | S | S |  | S | S |  | S | S | S | S | S | R | 3 | 0 | 0 | 1 | 0 | 0 |
| JR4d2 | *Citrobacter braakii* |  | R | R | R | R | R | R | R | R | S | I | S | I | R | R | S | S | S | S | 7 | 0 | 0 | 1 | 0 | 0 |
| JR4h | *Enterobacter asburiae* |  | R | I | R | R | R | S | R | S | S | R | S | S | S | S | I | S | S | R | 8 | 0 | 0 | 1 | 0 | 0 |
| JR5d | *Shewanella putrefaciens* |  |  | S |  |  |  | S | S | S |  | R | R | S | S | S | S | S | R | S | 2 | 0 | 1 | 0 | 0 | 0 |
| JR5i | *Serratia plymuthica* |  | S | S | S | S | S | S | R | S | S | S | S | S | S | S | S | S | R | R | 3 | 0 | 0 | 1 | 0 | 0 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 2 | 5 | 18 | 0 | 0 |

|  |  |
| --- | --- |
| S | Susceptible |
| I | Intermediately resistant |
| R | Resistant |