## Biofilm raw data

| Isolates no | Absorbance | Average absorbance | Biofilm classification | serotype | Isolates source |
|-------------|------------|--------------------|------------------------|----------|-----------------|
| 1           | 0.522      | 0.467              | Weak                   | nt       | sp              |
|             | 0.533      |                    |                        |          |                 |
|             | 0.346      |                    |                        |          |                 |
| 2           | 0.82       | 0.602667           | Weak                   | nt       | sp              |
|             | 0.465      |                    |                        |          |                 |
|             | 0.523      |                    |                        |          |                 |
| 3           | 0.589      | 0.636              | Weak                   | 2a       | sp              |
|             | 0.573      |                    |                        |          |                 |
|             | 0.746      |                    |                        |          |                 |
| 4           | 0.467      | 0.346333           | Negative               | 2a       | sp              |
|             | 0.266      |                    |                        |          |                 |
|             | 0.306      |                    |                        |          |                 |
| 5           | 0.332      | 0.355333           | Negative               | nt       | sp              |
|             | 0.345      |                    |                        |          |                 |
|             | 0.389      |                    |                        |          |                 |
| 6           | 0.386      | 0.324667           | Negative               | nt       | sp              |
|             | 0.181      |                    |                        |          |                 |
|             | 0.407      |                    |                        |          |                 |
| 1           | 0.698      | 0.611              | Weak                   | nt       | Rs              |
|             | 0.544      |                    |                        |          |                 |
|             | 0.591      |                    |                        |          |                 |
| 1           | 0.331      | 0.360667           | Negative               | nt       | ps              |
|             | 0.393      |                    |                        |          |                 |
|             | 0.358      |                    |                        |          |                 |
| 2           | 0.327      | 0.371333           | Negative               | nt       | ps              |
|             | 0.391      |                    |                        |          |                 |
|             | 0.396      |                    |                        |          |                 |
| 3           | 0.448      | 0.423333           | Weak                   | nt       | ps              |
|             | 0.361      |                    |                        |          |                 |
|             | 0.461      |                    |                        |          |                 |
| 4           | 0.343      | 0.384333           | Negative               | nt       | ps              |
|             | 0.354      |                    |                        |          |                 |
|             | 0.456      |                    |                        |          |                 |
| 1           | 0.445      | 0.438              | Negative               | nt       | fs              |
|             | 0.515      |                    |                        |          |                 |
|             | 0.354      |                    |                        |          |                 |
| 7           | 0.423      | 0.424667           | Weak                   | 4b       | sp              |
|             | 0.461      |                    |                        |          |                 |
|             | 0.39       |                    |                        |          |                 |
| 8           | 0.396      | 0.424667           | Weak                   | 4b       | Sp              |
|   |   |   |   |   |
|---|---|---|---|---|
| 0.41 | | | | |
| 0.468 | | | | |
| 9 | 0.43 | 0.505333 | Weak | nt | Sp |
| 0.54 | | | | |
| 0.546 | | | | |
| 10 | 0.785 | 0.566667 | Weak | nt | Sp |
| 0.43 | | | | |
| 0.485 | | | | |
| 5 | 0.39 | 0.428 | Weak | 2b | ps |
| 0.448 | | | | |
| 0.446 | | | | |
| 6 | 0.333 | 0.467333 | Weak | nt | ps |
| 0.671 | | | | |
| 0.398 | | | | |
| 7 | 0.527 | 0.463 | Weak | 2b | ps |
| 0.536 | | | | |
| 0.326 | | | | |
| 2 | 0.75 | 0.609 | Weak | 2b | rs |
| 0.797 | | | | |
| 0.28 | | | | |
| 1 | 0.389 | 0.686667 | Weak | 2b | fc |
| 0.474 | | | | |
| 1.197 | | | | |
| 2 | 0.501 | 0.512 | Weak | 2b | fc |
| 0.498 | | | | |
| 0.537 | | | | |
| 1 | 0.465 | 0.491667 | Weak | 2b | ch |
| 0.541 | | | | |
| 0.469 | | | | |
| 2 | 1.116 | 0.855667 | Moderate | 2b | ch |
| 0.779 | | | | |
| 0.672 | | | | |
| 3 | 0.45 | 0.653 | Weak | 2b | ch |
| 0.589 | | | | |
| 0.92 | | | | |
| 11 | 0.503 | 0.507333 | Weak | 2b | sp |
| 0.685 | | | | |
| 0.334 | | | | |
| 12 | 0.347 | 0.371333 | Negative | 2b | sp |
| 0.483 | | | | |
| 0.284 | | | | |
| 133 | 0.881 | 0.835667 | Moderate | 2b | sp |
| 0.829 | | | | |
|   |   |   |   |   |
|---|---|---|---|---|
| 14 | 0.472 | 0.533333 | Weak | 2b | sp |
|    | 0.928 |   |   |   |
|    | 0.2  |   |   |   |
| 15 | 0.472 | 563 | Weak | 2b | sp |
|    | 0.601 |   |   |   |
|    | 0.616 |   |   |   |
| 1  | 0.579 | 480667 | Weak | nt | muffins |
|    | 0.315 |   |   |   |
|    | 0.548 |   |   |   |
| 2  | 0.982 | 1.035667 | Moderate | 2b | muffins |
|    | 1.066 |   |   |   |
|    | 1.059 |   |   |   |
| 1  | 0.904 | 1.024 | Moderate | 2b | ff |
|    | 1.056 |   |   |   |
|    | 1.112 |   |   |   |
| 2  | 0.802 | 706 | Weak | 2b | ff |
|    | 0.66  |   |   |   |
|    | 0.656 |   |   |   |
| 3  | 0.689 | 729333 | Weak | 2b | ff |
|    | 0.608 |   |   |   |
|    | 0.891 |   |   |   |
| 4  | 0.831 | 0.756667 | Weak | 2b | ff |
|    | 0.708 |   |   |   |
|    | 0.731 |   |   |   |
| 4  | 0.915 | 868 | Moderate | 2b | ch |
|    | 0.782 |   |   |   |
|    | 0.907 |   |   |   |
| 5  | 0.779 | 0.808667 | Moderate | 2b | Ch |
|    | 0.745 |   |   |   |
|    | 0.902 |   |   |   |
| 6  | 0.581 | 0.698333 | Weak | 2b | Ch |
|    | 0.593 |   |   |   |
|    | 0.921 |   |   |   |
| 5  | 0.777 | 0.721333 | Weak | 2b | ff |
|    | 0.494 |   |   |   |
|    | 0.893 |   |   |   |
| 6  | 0.971 | 0.976 | Moderate | 2b | ff |
|    | 0.978 |   |   |   |
|    | 0.979 |   |   |   |
| 7  | 0.758 | 0.836667 | Moderate | nt | ff |
|    | 0.893 |   |   |   |
|    | 0.859 |   |   |   |
|   |       |       |   |   |
|---|-------|-------|---|---|
| 1 | 0.773 | 0.764667 | Weak | 2b | p |
|   | 0.75  |       |     |    |   |
|   | 0.771 |       |     |    |   |
| 1 | 1.453 | 1.54733 | Moderate | nt | Cc |
|   | 1.492 |       |     |    |   |
|   | 1.697 |       |     |    |   |
| 7 | 1.212 | 1.180333 | Moderate | 2b | ch |
|   | 1.243 |       |     |    |   |
|   | 1.086 |       |     |    |   |
| 3 | 0.87  | 1.038333 | Moderate | 2b | rs |
|   | 1.093 |       |     |    |   |
|   | 1.152 |       |     |    |   |
| 1 | 0.734 | 0.709  | Weak | nt | bread |
|   | 0.763 |       |     |    |   |
|   | 0.63  |       |     |    |   |
| 2 | 0.773 | 0.75   | Weak | 2b | P |
|   | 0.759 |       |     |    |   |
|   | 0.718 |       |     |    |   |
| 3 | 0.825 | 0.795  | Weak | 2b | P |
|   | 0.73  |       |     |    |   |
|   | 0.83  |       |     |    |   |
| 16| 0.935 | 0.930667 | Moderate | 2b | sp |
|   | 0.858 |       |     |    |   |
|   | 0.999 |       |     |    |   |
| 17| 0.821 | 0.754333 | Weak | 2b | sp |
|   | 0.734 |       |     |    |   |
|   | 0.708 |       |     |    |   |
| 18| 1.556 | 1.291667 | Moderate | 2b | sp |
|   | 1.221 |       |     |    |   |
|   | 1.098 |       |     |    |   |
| 19| 1.11  | 1.014667 | Moderate | 2b | sp |
|   | 0.97  |       |     |    |   |
|   | 0.964 |       |     |    |   |
| 2 | 0.717 | 0.827333 | Moderate | 2b | Cc |
|   | 0.908 |       |     |    |   |
|   | 0.857 |       |     |    |   |
| 8 | 1.13  | 1.033667 | Moderate | nt | ch |
|   | 1.103 |       |     |    |   |
|   | 0.868 |       |     |    |   |
| 9 | 1.596 | 1.58233 | Moderate | 2b | ch |
|   | 1.632 |       |     |    |   |
|   | 1.519 |       |     |    |   |
| 4 | 1.031 | 1.143333 | Moderate | 2b | rs |
|   |   |   |   |   |   |
|---|---|---|---|---|---|
| 1.313 |   |   |   |   |   |
| 1.086 |   |   |   |   |   |
| 4 | 0.995 | 1.033 | Moderate | 2b | p |
| 1.147 |   |   |   |   |   |
| 0.957 |   |   |   |   |   |
| 2 | 0.738 | 0.604 | Weak | 2b | fs |
| 0.544 |   |   |   |   |   |
| 0.53 |   |   |   |   |   |
| 3 | 0.726 | 0.662 | Weak | nt | muffins |
| 0.723 |   |   |   |   |   |
| 0.537 |   |   |   |   |   |
| 1194 | 0.661 | 0.744333 | Weak |   |   |
| 0.775 |   |   |   |   |   |
| 0.797 |   |   |   |   |   |
| 1 | 0.788 | 0.754667 | Weak | 2b | As |
| 0.812 |   |   |   |   |   |
| 0.664 |   |   |   |   |   |
| 2 | 0.941 | 0.901667 | Moderate | nt | As |
| 0.894 |   |   |   |   |   |
| 0.87 |   |   |   |   |   |
| 3 | 2.835 | 2.232333 | Strong | 2b | As |
| 2.078 |   |   |   |   |   |
| 1.784 |   |   |   |   |   |
| 3 | 1.981 | 2.106667 | Strong | 2b | fs |
| 1.932 |   |   |   |   |   |
| 2.407 |   |   |   |   |   |
| 4 | 1.497 | 1.581333 | Moderate | 2b | fs |
| 1.197 |   |   |   |   |   |
| 2.05 |   |   |   |   |   |
| 4 | 1.715 | 1.861667 | Strong | 2b | muffins |
| 1.942 |   |   |   |   |   |
| 1.928 |   |   |   |   |   |
| 5 | 1.194 | 1.22 | Moderate | 2b | muffins |
| 1.224 |   |   |   |   |   |
| 1.242 |   |   |   |   |   |
| 6 | 0.996 | 0.947333 | Moderate | 2b | muffins |
| 0.928 |   |   |   |   |   |
| 0.918 |   |   |   |   |   |
| 4 | 1.099 | 1.438667 | Moderate | 2b | As |
| 1.034 |   |   |   |   |   |
| 2.183 |   |   |   |   |   |
| 5 | 0.833 | 0.934333 | Moderate | 2b | As |
| 0.947 |   |   |   |   |   |
|   | X | Y   | Z1  | Z2  | Z3  |
|---|---|-----|-----|-----|-----|
| 6 | 1.023 | 0.692 | 0.916 | Moderate | 2b | As |
|   | 0.949 |     |     |      |     |    |
|   | 1.107 |     |     |      |     |    |
| 7 | 0.819 | 0.694 | Weak | 2b | As |
|   | 1.084 |     |     |      |     |    |
|   | 0.989 |     |     |      |     |    |
| 8 | 1.08 | 1.066667 | Moderate | 2b | As |
|   | 0.848 |     |     |      |     |    |
|   | 1.272 |     |     |      |     |    |
| 10 | 1.041 | 1.215667 | Moderate | 2b | Ch |
|   | 1.082 |     |     |      |     |    |
|   | 1.524 |     |     |      |     |    |
| 5 | 1.024 | 1.293 | Moderate | 2b | Rs |
|   | 1.097 |     |     |      |     |    |
|   | 1.758 |     |     |      |     |    |
| 6 | 1.145 | 1.083333 | Moderate | 2b | Rs |
|   | 1.044 |     |     |      |     |    |
|   | 1.061 |     |     |      |     |    |
| 8 | 1.014 | 1.217333 | Moderate | 2b | Ps |
|   | 1.104 |     |     |      |     |    |
|   | 1.534 |     |     |      |     |    |
| 9 | 1.269 | 1.283 | Moderate | 2b | Ps |
|   | 1.085 |     |     |      |     |    |
|   | 1.495 |     |     |      |     |    |
| 5 | 1.083 | 1.213667 | Moderate | 2b | Fs |
|   | 1.338 |     |     |      |     |    |
|   | 1.22 |     |     |      |     |    |
| 6 | 1.028 | 1.166 | Moderate | 2b | Fs |
|   | 1.162 |     |     |      |     |    |
|   | 1.308 |     |     |      |     |    |
| 10 | 0.793 | 0.998667 | Moderate | nt | Ps |
|   | 1.017 |     |     |      |     |    |
|   | 1.186 |     |     |      |     |    |
| 11 | 1.075 | 1.25333 | Moderate | 2b | Ch |
|   | 1.227 |     |     |      |     |    |
|   | 1.458 |     |     |      |     |    |
| 12 | 1.235 | 1.212667 | Moderate | 2b | Ch |
|   | 1.348 |     |     |      |     |    |
|   | 1.055 |     |     |      |     |    |
| 13 | 1.275 | 1.163333 | Moderate | 2b | Ch |
|   | 1.111 |     |     |      |     |    |
|   | 1.104 |     |     |      |     |    |
|   |   |   |     | |
|---|---|---|-----|---|
| 14 | 1.418 | 1.407667 | Moderate | 2b | Ch |
|   | 1.383 |   |   |   |
|   | 1.422 |   |   |   |
| 15 | 1.108 | 1.363333 | Moderate | 2b | Ch |
|   | 1.388 |   |   |   |
|   | 1.594 |   |   |   |
| 16 | 1.381 | 1.450333 | Moderate | nt | Ch |
|   | 1.493 |   |   |   |
|   | 1.477 |   |   |   |
| 5  | 1.25  | 1.170333 | Strong   | 4b | P  |
|   | 1.173 |   |   |   |
|   | 1.088 |   |   |   |
| 6  | 1.309 | 1.309333 | Moderate  | 4b | P  |
|   | 1.226 |   |   |   |
|   | 1.393 |   |   |   |
| 7  | 1.988 | 1.941  | Strong   | 2b | P  |
|   | 1.805 |   |   |   |
|   | 2.03  |   |   |   |
| 8  | 0.475 | 0.415667 | Medium   | 2b | P  |
|   | 0.408 |   |   |   |
|   | 0.364 |   |   |   |
| 9  | 0.382 | 0.484333 | Medium   | 2b | P  |
|   | 0.561 |   |   |   |
|   | 0.51  |   |   |   |
| 10 | 0.574 | 0.442  | Medium   | 2b | P  |
|   | 0.361 |   |   |   |
|   | 0.391 |   |   |   |
| 11 | 0.368 | 0.566667 | Strong   | 2b | P  |
|   | 0.387 |   |   |   |
|   | 0.945 |   |   |   |
| 12 | 0.369 | 0.387333 | Medium   | 2b | P  |
|   | 0.372 |   |   |   |
|   | 0.421 |   |   |   |
| 13 | 0.347 | 0.35333 | Medium   | 2b | P  |
|   | 0.341 |   |   |   |
|   | 0.372 |   |   |   |
| 9  | 0.31  | 0.405333 | Medium   | 2b | As |
|   | 0.475 |   |   |   |
|   | 0.431 |   |   |   |
| 7  | 0.69  | 0.826333 | Strong   | 2b | Fs |
|   | 1.136 |   |   |   |
|   | 0.653 |   |   |   |
| 8  | 0.642 | 0.67   | Strong   | 2b | Fs |
|    |   |   |   |   |   |
|----|---|---|---|---|---|
| 9  | 0.379 | 0.468667 | Medium | 2b | Fs |
| 10 | 0.66  | 0.581   | Strong | 2b | Fs |
| 11 | 0.751 | 0.581   | Strong | nt | Fs |
| 12 | 0.378 | 0.390333| Medium | nt | Fs |
| 7  | 0.404 | 0.392667| Medium | 2b | muffins |
| 8  | 0.357 | 0.401333| Medium | 2b | muffins |
| 9  | 0.491 | 0.770667| Strong | nt | muffins |
| 10 | 0.911 | 0.813333| Strong | 2b | mufffins |
| 3  | 0.738 | 0.612   | Strong | 2b | Cup cakes |
| 7  | 0.615 | 0.501333| Medium | 2b | Rs |
| 8  | 0.915 | 0.664333| Strong | 2b | Rs |
| 9  | 0.748 | 0.819   | Strong | 2b | Rs |
| 10 | 0.589 | 0.502333| Medium | 2b | Rs |
| 10 | 0.411 | 0.387667| Medium | 2b | Ps |
| 0.345 |   |   |   |   |   |
|   | 0.407 |  |  |  |  |
|---|---|---|---|---|---|
| 11 | 0.368 | 0.493 | Medium | 2b | Ps |
|   | 0.66 |  |  |  |  |
|   | 0.451 |  |  |  |  |
| 12 | 0.825 | 0.796333 | Strong | 2b | Ps |
|   | 0.768 |  |  |  |  |
|   | 0.796 |  |  |  |  |
| 13 | 0.721 | 0.796333 | Strong | nt | Ps |
|   | 0.742 |  |  |  |  |
|   | 0.64 |  |  |  |  |
| 14 | 0.765 | 0.68 | Strong | nt | Ps |
|   | 0.649 |  |  |  |  |
|   | 0.626 |  |  |  |  |
| 15 | 1.226 | 0.858 | Strong | 2b | Ps |
|   | 0.735 |  |  |  |  |
|   | 0.613 |  |  |  |  |
| 8  | 1.681 | 1.03333 | Strong | 2b | Ff |
|   | 0.745 |  |  |  |  |
|   | 0.674 |  |  |  |  |
| 13 | 0.635 | 0.674 | Strong | 2b | Fs |
|   | 0.654 |  |  |  |  |
|   | 0.733 |  |  |  |  |
| 14 | 0.745 | 0.973667 | Strong | 2b | Fs |
|   | 0.92 |  |  |  |  |
|   | 1.256 |  |  |  |  |
| 15 | 0.878 | 0.994233 | Strong | 2b | Fs |
|   | 1.066 |  |  |  |  |
|   | 0.883 |  |  |  |  |
| 16 | 0.469 | 0.404 | Medium | 2b | Fs |
|   | 0.373 |  |  |  |  |
|   | 0.37 |  |  |  |  |
| 17 | 0.396 | 0.372 | Medium | 2b | Fs |
|   | 0.338 |  |  |  |  |
|   | 0.382 |  |  |  |  |
| 18 | 0.622 | 0.684333 | Strong | 2b | Fs |
|   | 0.755 |  |  |  |  |
|   | 0.676 |  |  |  |  |
| 2  | 0.498 | 0.454333 | Medium | nt | bread |
|   | 0.411 |  |  |  |  |
|   | 0.454 |  |  |  |  |
| 3  | 0.447 | 0.383 | Medium | 2b | bread |
|   | 0.353 |  |  |  |  |
|   | 0.349 |  |  |  |  |
|   |      |      |       |   |   |
|---|------|------|-------|---|---|
| 19| 0.332| 0.355| Medium| 2b| Fs |
|   |      |      |       |   |   |
| 20| 0.405| 0.417| Medium| 2b| Fs |
|   |      |      |       |   |   |
|   |      |      |       |   |   |
| 4 | 0.343| 0.542333| Strong| 2b| bread |
|   |      |      |       |   |   |
| 5 | 0.541| 0.518333| Strong| 2b| bread |
|   |      |      |       |   |   |
| 21| 0.938| 0.897667| Strong| 2b| Fs |
|   |      |      |       |   |   |
| 22| 0.68 | 0.834667| Strong| 2b| Fs |
|   |      |      |       |   |   |
| 6 | 0.748| 0.686667| Strong| 2b| bread |
|   |      |      |       |   |   |
| 7 | 0.571| 0.652 | Strong| 2b| bread |
|   |      |      |       |   |   |
| 23| 0.851| 0.838333| Strong| 2b| Fs |
|   |      |      |       |   |   |
| 24| 0.614| 0.548667| Medium| 2b| Fs |
|   |      |      |       |   |   |
| 25| 0.413| 0.404 | Medium| 2b| Fs |
|   |      |      |       |   |   |
| 26| 0.341| 0.471333| Medium| 2b| Fs |
|   |      |      |       |   |   |
| 8 | 0.505| 0.479667| Medium| 2b| bread |
|   |      |      |       |   |   |
| 1 | 0.528| 0.494 | Medium| 2b| Rv |
|   |      |      |       |   |   |
| 2 | 0.457| 0.366333| Medium| 2b| Rv |
|   |   |   |   |
|---|---|---|---|
| 3 | 0.622 | 0.618333 | Strong | 2b | Rv |
| 4 | 0.65 | 0.689667 | Strong | 2b | Rv |
| 9 | 0.892 | 0.689667 | Strong | 2b | Ff |
| 14 | 0.484 | 0.642667 | Strong | n | P |
| 15 | 0.643 | 0.71 | Strong | n | P |
| 16 | 0.776 | 0.672 | Strong | 2b | P |
| 17 | 0.777 | 0.688 | Strong | n | P |
| 18 | 0.657 | 0.617 | Strong | 2b | P |
| 19 | 2.321 | 1.207 | Strong | n | P |
| 20 | 0.467 | 0.443667 | Medium | 2b | P |
| 20 | 0.525 | 0.544667 | Medium | 2b | Sp |
| 21 | 0.39 | 0.429667 | Medium | n | Sp |
| 22 | 0.819 | 0.572 | Medium | n | Sp |
| 23 | 0.338 | 0.557667 | Medium | 2b | Sp |
|   | 0.355 |          |          |          |          |
|---|-------|----------|----------|----------|----------|
| 4 | 0.739 | 0.774667 | Strong   | n        | Cc       |
|   | 0.743 |          |          |          |          |
|   | 0.842 |          |          |          |          |
| 5 | 1.007 | 0.689    | Strong   | 4b       | Cc       |
|   | 0.704 |          |          |          |          |
|   | 0.356 |          |          |          |          |
| 6 | 0.57  | 0.622    | Strong   | 2b       | Cc       |
|   | 0.623 |          |          |          |          |
|   | 0.673 |          |          |          |          |
| 7 | 0.606 | 0.669667 | Strong   | 4b       | Cc       |
|   | 0.662 |          |          |          |          |
|   | 0.741 |          |          |          |          |
| 8 | 0.791 | 0.716333 | Strong   | 2b       | Cc       |
|   | 0.67  |          |          |          |          |
|   | 0.688 |          |          |          |          |
| 9 | 0.585 | 0.453333 | Medium   | 2b       | Cc       |
|   | 0.375 |          |          |          |          |
|   | 0.4   |          |          |          |          |
| 16| 0.715 | 0.587    | Strong   | 2b       | Ps       |
|   | 0.537 |          |          |          |          |
|   | 0.509 |          |          |          |          |
| 17| 0.443 | 0.456667 | Medium   | 2b       | Ps       |
|   | 0.479 |          |          |          |          |
|   | 0.448 |          |          |          |          |
| 18| 0.516 | 0.644    | Strong   | 2b       | Ps       |
|   | 0.817 |          |          |          |          |
|   | 0.599 |          |          |          |          |
| 19| 0.56  | 0.489    | Medium   | n        | Ps       |
|   | 0.513 |          |          |          |          |
|   | 0.394 |          |          |          |          |
| 20| 0.412 | 0.379333 | Medium   | n        | Ps       |
|   | 0.353 |          |          |          |          |
|   | 0.373 |          |          |          |          |
| 21| 0.767 | 0.695667 | Strong   | n        | Ps       |
|   | 0.671 |          |          |          |          |
|   | 0.649 |          |          |          |          |
| 22| 0.651 | 0.618667 | Strong   | n        | Ps       |
|   | 0.61  |          |          |          |          |
|   | 0.595 |          |          |          |          |
| 20| 0.501 | 0.462    | Medium   | n        | ff       |
|   | 0.364 |          |          |          |          |
|   | 0.521 |          |          |          |          |
| 11 | 0.476 | 0.512333 | Medium | n | Rs |
|---|---|---|---|---|---|
|   | 0.436 |   |   |   |   |
|   | 0.625 |   |   |   |   |
| 12 | 0.557 | 0.535333 | Medium | n | Rs |
|   | 0.569 |   |   |   |   |
|   | 0.48 |   |   |   |   |
| 13 | 0.408 | 0.408333 | Medium | n | Rs |
|   | 0.425 |   |   |   |   |
|   | 0.392 |   |   |   |   |
| 14 | 0.384 | 0.344 | Medium | 2b | Rs |
|   | 0.318 |   |   |   |   |
|   | 0.33 |   |   |   |   |
| 10 | 0.469 | 0.514 | Medium | n | Ff |
|   | 0.491 |   |   |   |   |
|   | 0.582 |   |   |   |   |
| 11 | 0.427 | 0.434333 | Medium | 2b | Ff |
|   | 0.498 |   |   |   |   |
|   | 0.378 |   |   |   |   |
| 13 | 0.564 | 0.389 | Medium | n | Ff |
|   | 0.309 |   |   |   |   |
|   | 0.294 |   |   |   |   |
| 14 | 0.252 | 0.274 | Medium | 2b | Ff |
|   | 0.284 |   |   |   |   |
|   | 0.286 |   |   |   |   |
| 15 | 1.031 | 0.642667 | Strong | 2b | Ff |
|   | 0.476 |   |   |   |   |
|   | 0.421 |   |   |   |   |
| 16 | 0.358 | 0.336333 | Medium | n | Ff |
|   | 0.338 |   |   |   |   |
|   | 0.313 |   |   |   |   |
| 17 | 0.331 | 0.313 | Medium | 2b | Ff |
|   | 0.295 |   |   |   |   |
|   | 0.313 |   |   |   |   |
| 18 | 0.386 | 0.418333 | Medium | 2b | Ff |
|   | 0.404 |   |   |   |   |
|   | 0.465 |   |   |   |   |
| 19 | 1.185 | 0.731667 | Strong | 2b | Ff |
|   | 0.731 |   |   |   |   |
|   | 0.279 |   |   |   |   |
| 10 | 0.506 | 0.468333 | Medium | 2b | Cc |
|   | 0.409 |   |   |   |   |
|   | 0.49 |   |   |   |   |
| 11 | 0.656 | 0.497333 | Medium | 2b | Cc |
|   |   |   |   |   |
|---|---|---|---|---|
| 0.367 |   |   |   |   |
| 0.469 |   |   |   |   |
| 12 | 0.566 | 0.556333 | Medium | 2b | Cc |
| 0.471 |   |   |   |   |
| 0.632 |   |   |   |   |
| 9 | 0.444 | 0.297 | Medium | 2b | bread |
| 0.22 |   |   |   |   |
| 0.227 |   |   |   |   |
| 10 | 0.339 | 0.257333 | Weak | 2b | bread |
| 0.242 |   |   |   |   |
| 0.191 |   |   |   |   |
| 11 | 0.286 | 0.168 | Weak | 2b | bread |
| 0.089 |   |   |   |   |
| 0.129 |   |   |   |   |
| 27 | 0.125 | 0.239333 | Weak | 2b | fs |
| 0.268 |   |   |   |   |
| 0.325 |   |   |   |   |
| 28 | 0.236 | 0.216333 | Weak | 2b | fs |
| 0.225 |   |   |   |   |
| 0.188 |   |   |   |   |
| 29 | 0.31 | 0.278667 | Medium | 2b | fs |
| 0.262 |   |   |   |   |
| 0.264 |   |   |   |   |
| 30 | 0.055 | 0.138 | Negative | 2b | fs |
| 0.22 |   |   |   |   |
| 0.139 |   |   |   |   |
| 11 | 0.169 | 0.138 | Negative | 2b | muffins |
| 0.112 |   |   |   |   |
| 0.133 |   |   |   |   |
| 12 | 0.287 | 0.248333 | Weak | 2b | muffins |
| 0.221 |   |   |   |   |
| 0.237 |   |   |   |   |
| Negative control | 0.497 | 0.401667 | negative |   |   |
| 0.403 |   |   |   |   |
| 0.305 |   |   |   |   |
| Positive control Lm1 | 0.976 | 1.208667 |   |   |
| 1.351 |   |   |   |   |
| 1.299 |   |   |   |   |

Pol – polony, Spol - sliced polony, FS - fruit salad, Ch - chips, FF - fried fish, Rs - Russian sausage, Rv - red vienna, Bd – bread, Fc - fried chicken, Vk - vetkoek, Mps – pie, Cc – cupcakes, Mu - muffins, As - assorted sausages
**prs** gene raw gel for the amplification of *Listeria* genus

**iap** gene raw gel for the amplification of *L. monocytogenes*
raw gel for the amplification of \textit{L. monocytogenes} serotypes
raw gel for the amplification of *L. monocytogenes* virulence genes