**Additional file S1**

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **No** | **Ak-1 method (a)** | **C0/C1 method****(b)** |  | **MM3\_binomial****(c)** |  | **MM3\_zscore****(d)** |  | **MM4\_binomial****(e)** |  | **MM4\_zscore****(f)** |  |
| 1 | CCTCGAGG | CCTCGAGG | 1 | TATATATA | 250 | TATATATA | 250 | TAATATTA |  | GCGATGAG | 2 |
| 2 | GCGATGAG | GCGATGAG | 2 | ATATATAT | 376 | GCGATGAG | 2 | GCGATGAG | 2 | TAATATTA |  |
| 3 | CCCAGCGC | TAGCCGCC | 14 | GCGATGAG | 2 | ATATATAT | 376 | AAAAGAAA | 249 | CCTCGAGG | 1 |
| 4 | CCGAGTGG | CTCGAGGA | 8 | TTTTTTTC | 30 | CCTCGAGG | 1 | CGGTGTTA | 25 | CGGTGTTA | 25 |
| 5 | GGAAGCTG | CGGTGTTA | 25 | GAAAAAAA | 36 | GTTACCCG | 94 | CCTCGAGG | 1 | GTTACCCG | 94 |
| 6 | TCCTCGAG | TCCTCGAG | 6 | AAAAGAAA | 249 | CTCGAGGA | 8 | GGAAGCTG | 5 | GGAAGCTG | 5 |
| 7 | CGCGTCGC | TACGGTGT | 82 | CCTCGAGG | 1 | CCGGGTAA | 99 | GTTACCCG | 94 | CTCGAGGA | 8 |
| 8 | CTCGAGGA | GGCGGCTA | 23 | CTCGAGGA | 8 | CTCATCGC | 22 | CTCGAGGA | 8 | CGGGTAAC | 98 |
| 9 | GATGAGCT | CCGGGTAA | 99 | GTTACCCG | 94 | CGGGTAAC | 98 | CTAGTATA | 177 | CCGGGTAA | 99 |
| 10 | GATGACGC | GGAAGCTG | 5 | CTCATCGC | 22 | TCCTCGAG | 6 | TTTCTTTT | 323 | CTAGTATA | 177 |
| 11 | ATACGGTG | GTTACCCG | 94 | TTTCTTTT | 323 | TTACCCGG | 111 | ACTTCTAG | 122 | ACTTCTAG | 122 |
| 12 | GCGCGCGC | ATACGGTG | 11 | CATATATA |  | CGATGAGC | 102 | CTCATCGC | 22 | CTCATCGC | 22 |
| 13 | GCGCCCGC | TTACCCGG | 111 | CCGGGTAA | 99 | TTTTTTTC | 30 | CCGGGTAA | 99 | TCCTCGAG | 6 |
| 14 | TAGCCGCC | TTTTTTTC | 30 | ATATGTAT |  | GAAAAAAA | 36 | CGGGTAAC | 98 | GATTCCTA | 209 |
| 15 | GCGACGCG | TCCGGGTA | 452 | ATACATAT |  | GATGAGCT | 9 | TGATAATG | 363 | AAAAGAAA | 249 |
| 16 | CACGTGAC | CGGGTAAC | 98 | TCCTCGAG | 6 | GGAAGCTG | 5 | GAAGCTGA | 76 | GAAGCTGA | 76 |
| 17 | GGATTCCT | CGATGAGC | 102 | TATACATA |  | ATATGTAT |  | TCCTCGAG | 6 | GGATTCCT | 17 |
| 18 | GCCCCCGG | GAAAAAAA | 36 | CGGGTAAC | 98 | ATTACCCG | 449 | AGGAGAAC | 101 | TACGGTGT | 82 |
| 19 | GGCGCGTC | CTCATCGC | 22 | TTACCCGG | 111 | CGGTGTTA | 25 | GATTCCTA | 209 | TTACCCGG | 111 |
| 20 | ACGCAAGG | ATTACCCG | 449 | TATGTATA |  | AAAAGAAA | 249 | GGATTCCT | 17 | AGGAGAAC | 101 |
| 21 | CTCGGCGG | GGATTCCT | 17 | TTTTCTTT |  | ATACATAT |  | TACGGTGT | 82 | TGATAATG | 363 |
| 22 | CTCATCGC | ACGCAAGG | 20 | GATGAGCT | 9 | TATACATA |  | TTACCCGG | 111 | ATTACCCG | 449 |
| 23 | GGCGGCTA | TCGAGGAG | 47 | GGAAGCTG | 5 | CATATATA |  | GCAAGGAT | 67 | TAGCCGCC | 14 |
| 24 | CGCGCGCC | GCAAGGAT | 67 | CGATGAGC | 102 | TCGAGGAG | 47 | GGATTGAT | 95 | GGATTGAT | 95 |
| 25 | CGGTGTTA | TATATATA | 250 | TAATAATA |  | TATGTATA |  | ATTACCCG | 449 | GCAAGGAT | 67 |
| 26 | CGCGACGC | ATATATAT | 376 | CTAGTATA | 177 | CGGGTAAT | 214 | GGAGAACT | 59 | TCGAGGAG | 47 |
| 27 | GTCACGTG | GATGAGCT | 9 | TACATATA |  | TAGCCGCC | 14 | AAACAAAA |  | TTTCTTTT | 323 |
| 28 | CTGCGCCG | CACGTGAC | 16 | ATTACCCG | 449 | TTTCTTTT | 323 | TCGAGGAG | 47 | ACGCAAGG | 20 |
| 29 | GCGTCGCG | CGGGTAAT | 214 | CGGTGTTA | 25 | CTAGTATA | 177 | TTTTCTTT |  | GGAGAACT | 59 |
| 30 | TTTTTTTC | GTCACGTG | 27 | TAATATTA |  | TCCGGGTA | 452 | GTTGGAAT |  | CGAGGAGA | 57 |
| 31 | GCGATGGC | CTAGTATA | 177 | CTTTTTTT | 110 | TACGGTGT | 82 | GATGAGCT | 9 | CGATGAGC | 102 |
| 32 | GTAATAGG | TACCCGGA | 481 | AAAGAAAA |  | GGATTCCT | 17 | TAGCCGCC | 14 | CGGGTAAT | 214 |
| 33 | CGCCCCCC | GATTCCTA | 209 | TGATAATG | 363 | TGATAATG | 363 | TACCTAAT | 211 | GATGAGCT | 9 |
| 34 | CACCTCCG | CTTTTTTT | 110 | TATTATCA |  | TACATATA |  | ACTAGTAT |  | GTTGGAAT |  |
| 35 | CACTCGGC | GGAGAACT | 59 | AAACAAAA |  | GAAGCTGA | 76 | ACGCAAGG | 20 | TACCTAAT | 211 |
| 36 | GAAAAAAA | ATCCTCGA | 227 | TATATATG |  | CGAGGAGA | 57 | CGGGTAAT | 214 | ATACGGTG | 11 |
| 37 | TCGGCGGC | CGAGGAGA | 57 | TCGAGGAG | 47 | ATCCTCGA | 227 | CGAGGAGA | 57 | ATCCTCGA | 227 |
| 38 | GGTACCGG | GGATTGAT | 95 | CGGGTAAT | 214 | AGGAGAAC | 101 | CGATGAGC | 102 | ACTAGTAT |  |
| 39 | GGTGTTAG | TGAAACGC | 116 | GGATTCCT | 17 | GGATTGAT | 95 | CTAATATT |  | TCCGGGTA | 452 |
| 40 | CCGACTAC | CGCAAGGA | 105 | ACATATAT |  | GATTCCTA | 209 | ATACGGTG | 11 | ACGGTGTT | 163 |
| 41 | GACGCGCC | ACGGTGTT | 163 | TGTATATA |  | ATACGGTG | 11 | CTTCTAGT | 70 | ATACCTAA | 330 |
| 42 | GGGGGGAG | ACTTCTAG | 122 | GAAGCTGA | 76 | TTTTCTTT |  | ATCCTCGA | 227 | TAGGATCA |  |
| 43 | AGCTCATC | TCACGTGA |  | GATGATGA | 199 | TAATAATA |  | ATACCTAA | 330 | AGGATTGA | 212 |
| 44 | ACCCGACC | GAAGCTGA | 76 | TACGGTGT | 82 | TAATATTA |  | AGGATTGA | 212 | CTTCTAGT | 70 |
| 45 | GGGGTTCG | AGGAGAAC | 101 | AGGAGAAC | 101 | TATTATCA |  | AAGCTGAA | 156 | GTAATAGG | 32 |
| 46 | CTCGGATC | ATTTTTTT |  | GGATTGAT | 95 | GATGATGA | 199 | GATAATGT |  | CTGAAACG | 53 |
| 47 | TCGAGGAG | TCGGCGGC | 37 | ATATATGT |  | ACTTCTAG | 122 | GTAATAGG | 32 | ATGAGATG | 113 |
| 48 | CGCGCGCG | CTGAAACG | 53 | ACTTCTAG | 122 | TATATATG |  | ACGGTGTT | 163 | GATAATGT |  |
| 49 | CCCGTCGC | AAAAGAAA | 249 | GATTCCTA | 209 | GATGAGAT | 280 | AAAGAAAA |  | AAGCTGAA | 156 |
| 50 | GCAGCAGC | AAAAAAAG | 160 | TAGCCGCC | 14 | ACACACAC | 201 | TATTTATA |  | AAACAAAA |  |
| 51 | CCCCCGGG | AAAAAAAT |  | ATCCTCGA | 227 | CACACACA | 93 | TATTATCA |  | TCACGTGA |  |
| 52 | CCGCTCGC | TTTCTTTT | 323 | TATTTATT |  | TACCTAAT | 211 | CTGAAACG | 53 | CTAATATT |  |
| 53 | CTGAAACG | GATGACGC | 10 | ATACGGTG | 11 | ACGCAAGG | 20 | ATGAGATG | 113 | AACGCAAG | 56 |
| 54 | CCCGGCTG | AGGATTGA | 212 | ATATATAA |  | AAACAAAA |  | TAGGATCA |  | TTATAGCC | 200 |
| 55 | GGGGCGGG | GTAATAGG | 32 | GATGAGAT | 280 | ACATATAT |  | GAGGAGAA | 64 | GTCACGTG | 27 |
| 56 | AACGCAAG | CACGTGAT | 290 | TCCGGGTA | 452 | TGTATATA |  | TCCGGGTA | 452 | TTTTCTTT |  |
| 57 | CGAGGAGA | GTGGAAGC | 78 | CGAGGAGA | 57 | GGAGAACT | 59 | AATATTAT |  | GAGGAGAA | 64 |
| 58 | GGGGGTGG | AAAATTTT |  | GTATATAT |  | GCAAGGAT | 67 | TGAAAAAT |  | CGCAAGGA | 105 |
| 59 | GGAGAACT | AGCCGCCC | 288 | TTATTTAT |  | AAAGAAAA |  | GATGAGAT | 280 | GATGAGAT | 280 |
| 60 | CCGGGTTA | GAGAACTT | 121 | TACCTAAT | 211 | CTTTTTTT | 110 | GAGAACTT | 121 | CACGTGAC | 16 |
| 61 | GCCGCCCA | GCTCATCG | 479 | TATATGTA |  | GTCACGTG | 27 | AACGCAAG | 56 | TGAAACGC | 116 |
| 62 | CCCCCCGC | TTTTCTTT |  | CATACATA |  | ATCTCATC | 170 | TAATAATA |  | GAGAACTT | 121 |
| 63 | TTAGCCGC | TTCTTTTT | 414 | ATCTCATC | 170 | CATACATA |  | TTATAGCC | 200 | TATTATCA |  |
| 64 | GAGGAGAA | GTTGGAAT |  | TATATACA |  | ATATATGT |  | TCACGTGA |  | AATAGGAT |  |
| 65 | GCGTCCCC | AGAACTTC | 128 | GCAAGGAT | 67 | TACCCGGA | 481 | TGAAACGC | 116 | TATACCTA |  |
| 66 | GCGGGCTG | TGAAAAAA |  | CACACACA | 93 | GCTCATCG | 479 | AATAGGAT |  | TAGAATTG |  |
| 67 | GCAAGGAT | TATACGGT | 337 | ATATATAC |  | CATATACG | 398 | TAGAATTG |  | GGCGGCTA | 23 |
| 68 | GCCGCACC | TTTTTCTT |  | GGAGAACT | 59 | CACGTGAC | 16 | ATATGTAT |  | TATTTATA |  |
| 69 | GCGACGGG | TGAAAAAT |  | ATATACAT |  | TATATGTA |  | ATCTCATC | 170 | ATAGGATC | 273 |
| 70 | CTTCTAGT | AAAAAGAA | 389 | ACACACAC | 201 | CTCATCTC | 120 | TATACCTA |  | GGTGTTAG | 39 |
| 71 | GACCTAGG | CTTCTAGT | 70 | AAAAAAAG | 160 | TATTTATT |  | CGCAAGGA | 105 | GTGGAAGC | 78 |
| 72 | CCGCGCGG | AACGCAAG | 56 | TTCTTTTT | 414 | GTATATAT |  | TCTAGTAT |  | ATCTCATC | 170 |
| 73 | GATCTCGC | CCCAGCGC | 3 | AAGCTGAA | 156 | AGGATTGA | 212 | CATATACG | 398 | AATATTAT |  |
| 74 | GCGGCTAA | ATATACGG | 112 | CATATACG | 398 | GTAATAGG | 32 | AAATTTCA |  | TCTAGTAT |  |
| 75 | GCCGCCGA | GGTGTTAG | 39 | ACGCAAGG | 20 | AAGCTGAA | 156 | GATTGATA |  | AAAGAAAA |  |
| 76 | GAAGCTGA | AAGGATTG | 85 | TATATAAA |  | CTGAAACG | 53 | TATACATA |  | CATATACG | 398 |
| 77 | GGCGTGTG | AAGAAAAA |  | ATGTATAT |  | TTATTTAT |  | GTGGAAGC | 78 | GTATACCT | 264 |
| 78 | GTGGAAGC | CAAGGATT | 245 | AAAAAGAA | 389 | AACGCAAG | 56 | ATCAACTA |  | TGAAAAAT |  |
| 79 | CACTCCGG | TAATATTA |  | GAGGAGAA | 64 | GAGATGAG | 81 | ATATTATA |  | GATCAATG | 210 |
| 80 | CCCCCCAC | GGGCGGCT |  | AGGATTGA | 212 | ATATATAA |  | CCTAATAT | 188 | TAATAATA |  |
| 81 | GAGATGAG | TTTTTTCT |  | CTCATCTC | 120 | TCACGTGA |  | ATAGGATC | 273 | ATATGTAT |  |
| 82 | TACGGTGT | AAAAATTT |  | TAGTATAT |  | TATATACA |  | GTCACGTG | 27 | GATTGATA |  |
| 83 | GTGACCCG | CGGCGGCT |  | TACATACA |  | GAGGAGAA | 64 | AACTTCTA |  | GAGATGAG | 81 |
| 84 | CGTTACCC | TATTATCA |  | GTAATAGG | 32 | ATATACAT |  | CACGTGAC | 16 | CCTAATAT | 188 |
| 85 | AAGGATTG | AAAGAAAA |  | TTCCCTTT | 243 | TACATACA |  | GTATACCT | 264 | CACGTGAT | 290 |
| 86 | TAACCCGG | GAAAAATT |  | AACGCAAG | 56 | ATACCTAA | 330 | GATCAATG | 210 | ATCAACTA |  |
| 87 | CACCCACA | CATATACG | 398 | ACTAGTAT |  | GGCGGCTA | 23 | TTGGAATA | 425 | AACTTCTA |  |
| 88 | CCGGGTGA | AAGCTGAA | 156 | CTGAAACG | 53 | ATATATAC |  | AAAATTTT |  | TACCCGGA | 481 |
| 89 | GCAGCGGC | CTCATCTC | 120 | ATACCTAA | 330 | ACGGTGTT | 163 | GAGATGAG | 81 | TATAGCCT |  |
| 90 | CGGCACCC | GCCGCCGA | 75 | GAGATGAG | 81 | TCGGGTAA |  | GGTGTTAG | 39 | TATACATA |  |
| 91 | CCGCCCGG | AGCTCATC | 43 | AAGAAAAA |  | ACTAGTAT |  | TAATGTAA |  | CTCATCTC | 120 |
| 92 | TGGGCGGC | ATCTCATC | 170 | GCTCATCG | 479 | ATGTATAT |  | GGCGGCTA | 23 | AAATTTCA |  |
| 93 | CACACACA | TGATAATG | 363 | GTTGGAAT |  | GTTGGAAT |  | TATAAATA |  | ATAGCCTT | 208 |
| 94 | GTTACCCG | GATGATGA | 199 | TGAAAAAT |  | AGCTCATC | 43 | AATGTAAT |  | TTGGAATA | 425 |
| 95 | GGATTGAT | AGAAAAAA |  | TACCCGGA | 481 | TGCGATGA |  | ATACATAT |  | TAATGTAA |  |
| 96 | CGGCCTCC | ATTTTTCA |  | TATTTATA |  | TAGTATAT |  | ATAGCCTT | 208 | CGCAAATG | 151 |
| 97 | GAGCCCCC | TCTTTTTT |  | GTCACGTG | 27 | CTTCTAGT | 70 | CTCATCTC | 120 | CGTTACCC | 84 |
| 98 | CGGGTAAC | AGCCTTTA |  | ATAAATAA |  | CGTTACCC | 84 | TATAGCCT |  | ATATTATA |  |
| 99 | CCGGGTAA | TTTTTTTT | 186 | ACGGTGTT | 163 | TTACCCGC | 385 | AGAACTTC | 128 | AGTGGAAG | 152 |
| 100 | GCAGATTC | TTATAGCC | 200 | CTTCTAGT | 70 | TGAAACGC | 116 | CACGTGAT | 290 | ACCTAATA | 373 |
| 101 | AGGAGAAC | GAGATGAG | 81 | GATAATGT |  | TAGGATCA |  | AGTGGAAG | 152 | CAAGGATT | 245 |
| 102 | CGATGAGC | CGCGCGCC | 24 | TCACGTGA |  | TTCCCTTT | 243 | TAGTATAT |  | AATGTAAT |  |
| 103 | CGGCGCGG | TAGGATCA |  | TTTTTCTT |  | CGATGAGA |  | ACCTAATA | 373 | AGAACTTC | 128 |
| 104 | GCCGGACC | TATTACCC | 387 | AGCTCATC | 43 | GATAATGT |  | CAAGGATT | 245 | CATCTCAT | 181 |
| 105 | CGCAAGGA | ATGAGATG | 113 | ACATATAA |  | TATATAAA |  | CATCTCAT | 181 | TATACGGT | 337 |
| 106 | GCCGGGCC | TGTTGGAA | 286 | ACCTAATA | 373 | ACCTAATA | 373 | AAACGCAA | 444 | GCTCATCG | 479 |
| 107 | GCGGTACC | TGCGATGA |  | CACGTGAC | 16 | TTCTTTTT | 414 | GAAAAATT |  | CTAACTAG | 139 |
| 108 | GCCGCGCC | CATATATA |  | TATTATTA |  | AAAAAAAG | 160 | TATATATA | 250 | AAACGCAA | 444 |
| 109 | GGCGCGCG | GAGGAGAA | 64 | TGAAACGC | 116 | AAAAAGAA | 389 | TTGATAAT |  | TCGGGTAA |  |
| 110 | CTTTTTTT | TTTTTTCA |  | AACAAACA |  | CACGTGAT | 290 | TATGTATA |  | TGTTACCC | 267 |
| 111 | TTACCCGG | CTGTATAC | 312 | TTTATTTA |  | TGTTACCC | 267 | AAGGATTG | 85 | CTGTATAC | 312 |
| 112 | ATATACGG | TTACCCGC | 385 | TGCGATGA |  | TTACCCGA |  | CTATTGTT |  | AAGGATTG | 85 |
| 113 | ATGAGATG | ATATATAA |  | TTATTATT |  | ATGAGATG | 113 | TTCTAGTA | 231 | ATACATAT |  |
| 114 | CCCCCCCC | TGACGCAA | 285 | ATTATCAT |  | ATGATGAG |  | TACCCGGA | 481 | AGCCTTTA |  |
| 115 | CAGGCCGG | CATCTCAT | 181 | TCGGGTAA |  | ATATACGG | 112 | TACTAGTA |  | AGCTCATC | 43 |
| 116 | TGAAACGC | CCTAATAT | 188 | CTATTGTT |  | GATTGATA |  | CGCAAATG | 151 | TACTAGTA |  |
| 117 | ACCCACAC | ATCACGTG |  | TTTCCTTT |  | CGCAAGGA | 105 | AGCCTTTA |  | TATAAATA |  |
| 118 | GTGGGGGG | TTGAAAAA |  | CGATGAGA |  | GAGAACTT | 121 | TATACGGT | 337 | AAAATTTT |  |
| 119 | GGCTAAGC | TGTTACCC | 267 | TAGGATCA |  | TATTTATA |  | TGTTGGAA | 286 | TTCTAGTA | 231 |
| 120 | CTCATCTC | ATGACGCA | 328 | TTGATAAT |  | ATAAATAA |  | CTGTATAC | 312 | GAAACGCA | 384 |
| 121 | GAGAACTT | AGTGGAAG | 152 | CTTTTCTT |  | GATCAATG | 210 | AACAAAAC |  | CTATTGTT |  |
| 122 | ACTTCTAG | ATAGCCTT | 208 | GATTGATA |  | TGAAAAAT |  | TATTATAG |  | TAGTATAT |  |
| 123 | CCACGACG | CTCGGCGG | 21 | ATGATGAG |  | AACAAACA |  | ATTATCAT |  | TGTTGGAA | 286 |
| 124 | TACCCTAC | GGATCAAT | 415 | GAGAACTT | 121 | CTATTGTT |  | AGCTGAAA |  | GATTCCAT | 491 |
| 125 | GCTAAGCG | GATCAATG | 210 | TAAATAAA |  | AATAGGAT |  | AGCTCATC | 43 | TTACCCGA |  |
| 126 | GGGGGCTC | GAACTTCT |  | GGCGGCTA | 23 | ACATATAA |  | GAAACGCA | 384 | GGATCAAT | 415 |
| 127 | CCACCCCC | GCGCGCGC | 12 | ATGAGATG | 113 | AAGAAAAA |  | TTTTGTTT |  | TTGATAAT |  |
| 128 | AGAACTTC | GCCGCCCA | 61 | TAAACAAA |  | GAAACGCA | 384 | TGTTACCC | 267 | TATGTATA |  |
| 129 | GCGACACC | CGTTACCC | 84 | ATATACGG | 112 | ATCAACTA |  | CGTTACCC | 84 | AGCTGAAA |  |
| 130 | GCGGCACT | TAGTATAT |  | AACAACAA | 408 | GTGGAAGC | 78 | GCTCATCG | 479 | AGGATCAA | 233 |
| 131 | CCTAGGTC | AAATTTTT |  | AATAGGAT |  | ATTATCAT |  | AAAACAAA |  | TATTATAG |  |
| 132 | CGTGCGCG | ATCCGGGT |  | ATCAACTA |  | TATTATTA |  | CTTTTCTT |  | GTGTTAGA | 348 |
| 133 | GCGCCGGG | TATATAAA |  | TTACCCGC | 385 | AAACGCAA | 444 | TTTTATTT |  | AACAAAAC |  |
| 134 | GACGCAAA | GATTGATA |  | TATAAATA |  | TCTAGTAT |  | TCGGGTAA |  | ACGGAATG | 137 |
| 135 | AAGGGCCC | ACTAGTAT |  | AAACGCAA | 444 | TTGATAAT |  | GATTCCAT | 491 | GAAAAATT |  |
| 136 | GGGTCCCC | TTTTTCAA |  | TGTTACCC | 267 | TTTATTTA |  | CTAACTAG | 139 | ATTATCAT |  |
| 137 | ACGGAATG | AAAAAAAA | 184 | GATCAATG | 210 | GATGACGC | 10 | AGGATCAA | 233 | GCTGAAAC | 370 |
| 138 | GCACGGGC | GCTGAAAC | 370 | TCTAGTAT |  | TTATTATT |  | GGATCAAT | 415 | ATTATAGC |  |
| 139 | CTAACTAG | TACCTAAT | 211 | CGTTACCC | 84 | TATACGGT | 337 | TATTCTGT |  | GCAGATTC | 100 |
| 140 | GCCGCTGC | ATGATGAG |  | TTTATTTT |  | TTTTTCTT |  | TTTTTTTC | 30 | TGGATTCC | 500 |
| 141 | CACCCCGC | ATAGGATC | 273 | AATAATAA |  | TCGGCGGC | 37 | ATTATAGC |  | TATTCTGT |  |
| 142 | GTCGGGTA | AATTTTTC |  | GAAACGCA | 384 | AACAACAA | 408 | TTCCCTTT | 243 | TCCGCGGA |  |
| 143 | GTTAGAGG | GCGATGGC | 31 | AAGAACAA |  | TAAACAAA |  | GCTGAAAC | 370 | TATATATA | 250 |
| 144 | CCTCGACT | AAAAAAGA |  | CACGTGAT | 290 | TATACCTA |  | GATGATGA | 199 | TCGGCGGC | 37 |
| 145 | CGCACGGC | AAAAAATT |  | CGCAAGGA | 105 | ATAGGATC | 273 | TTACCCGA |  | ACCCATAC | 314 |
| 146 | CCCACACA | TAATAATA |  | ATAATAAT |  | TATGTATG |  | ATTCTGTA |  | GATGACGC | 10 |
| 147 | CGCCCGGC | TTGGAATA | 425 | TTACCCGA |  | GCAGATTC | 100 | ATATTATC |  | CACCCACA | 87 |
| 148 | CCACACCC | TCGGGTAA |  | AAGAAAAG |  | TTTCCTTT |  | GTGTTAGA | 348 | ATTCTGTA |  |
| 149 | GCGCGGTG | TATAGCCT |  | GTGGAAGC | 78 | TAAATAAA |  | ATATACGG | 112 | ATATACGG | 112 |
| 150 | GCCCGGGC | GGGGCGGG | 55 | TACTAGTA |  | ACACATAC |  | TAATAGGA |  | TTTTGTTT |  |
| 151 | CGCAAATG | GATGAGAT | 280 | AAAACAAA |  | TACTAGTA |  | ACAAAACA |  | TAATAGGA |  |
| 152 | AGTGGAAG | TGGAAGCT |  | TATACCTA |  | CTTTTCTT |  | CCATTTTG |  | GATGATGA | 199 |
| 153 | GGCGGACC | GCACGTGA |  | AATGATGA |  | TGTGTGTG | 252 | GCAGATTC | 100 | CCATTTTG |  |
| 154 | TGGTCGGG | GGTGGCAA | 183 | TATACGGT | 337 | AGCCTTTA |  | ATAATGTA |  | AAAACAAA |  |
| 155 | CGGGTCAC | TCCGCGGA |  | AGCCTTTA |  | ATGCGATG | 311 | GAAAAAAA | 36 | CTTTTCTT |  |
| 156 | AAGCTGAA | CTAACTAG | 139 | TATGTATG |  | AGTATGTA |  | GAACTTCT |  | GTGGCAAA | 448 |
| 157 | GCCGAGTG | GAAACGCA | 384 | CATCTCAT | 181 | AGTGGAAG | 152 | ACGGAATG | 137 | TTCCCTTT | 243 |
| 158 | ACCTCGGC | AGCTGAAA |  | AGTGGAAG | 152 | TATAAATA |  | ATTTTTCA |  | CAGATTCC | 396 |
| 159 | GCCGAGGG | TTGATAAT |  | TAATGTAA |  | CCTTTATC | 434 | TAGCCTTT |  | CACTATCG | 193 |
| 160 | AAAAAAAG | ACCTAATA | 373 | CCTTTATC | 434 | CATCTCAT | 181 | GTGGCAAA | 448 | TTACCCGC | 385 |
| 161 | TTCCGCGG | GGGGTTCG | 45 | ACACATAC |  | CGCAAATG | 151 | TGGATTCC | 500 | GACGCAAA | 134 |
| 162 | GGCCGGCC | CGCGCGCG | 48 | AGTATGTA |  | ATCCGGGT |  | CATATAAA |  | TTTTATTT |  |
| 163 | ACGGTGTT | TGGGCGGC | 92 | AGCTGAAA |  | AAGAACAA |  | TCAATGAA |  | GAACTTCT |  |
| 164 | CAATGCGG | CGCAAATG | 151 | ATAGGATC | 273 | GGATCAAT | 415 | TGAAATTT |  | ACAAAACA |  |
| 165 | ATAGCCGC | GTATACCT | 264 | GAAAAATT |  | AATGATGA |  | ATGAATAT |  | TAGCCTTT |  |
| 166 | CGAAGCGG | TAGCCTTT |  | AAGGATTG | 85 | GGTGTTAG | 39 | GATGACGC | 10 | TAATCGTA |  |
| 167 | CCGCTCCC | TTAGCCGC | 63 | GATGACGC | 10 | AATAATAA |  | CAAAACAA |  | ATATTATC |  |
| 168 | ACCCTACC | AATGATGA |  | GCAGATTC | 100 | AAGGATTG | 85 | CACCCACA | 87 | ATAATGTA |  |
| 169 | CACACCCA | AGTATATT |  | ATAGCCTT | 208 | ATAGCCTT | 208 | ACCCATAC | 314 | GTTAAGAT |  |
| 170 | ATCTCATC | AGTCATCT |  | ACATACAT |  | GCGGGTAA |  | GACGCAAA | 134 | TATCCTCG |  |
| 171 | GCGTAGGT | CCGAGTGG | 4 | CATATAAA |  | ACATACAT |  | TCATATAC |  | TCAATGAA |  |
| 172 | GCCCGTGC | TTACCCGA |  | TAGAATTG |  | ACCCACAC | 117 | ATAATATT |  | CTAAATCC |  |
| 173 | CATCGCGA | GGGTAACA |  | AAAATAAA |  | TAATGTAA |  | TTTATTTT |  | TTTTTTTC | 30 |
| 174 | GAGAGCGG | ATCAACTA |  | ATATAGAT |  | TATTACCC | 387 | TAATCGTA |  | TTGTGTAG | 353 |
| 175 | GCGATGCC | ATATAAAA |  | TTTTATTT |  | GTATGTAG |  | ATTTATAG |  | ATCACGTG |  |
| 176 | GCCCCTGC | ACGGAATG | 137 | TATTACCC | 387 | TAGAATTG |  | CCTTTATC | 434 | CCTAAATC |  |
| 177 | CTAGTATA | AAATTTCA |  | ATAATGTA |  | AGCTGAAA |  | TTACCCGC | 385 | ATGAATAT |  |
| 178 | GAGGATTC | TGTATACC |  | AATGTAAT |  | ATAATAAT |  | TATCATAT |  | TCATATAC |  |
| 179 | CGCTACCA | GCAGATTC | 100 | ATGATGAT |  | TTTATTTT |  | CAGATTCC | 396 | CCTTTATC | 434 |
| 180 | GCCCGACG | GTGGCAAA | 448 | GGATCAAT | 415 | CTGTATAC | 312 | GTTAAGAT |  | CAAAACAA |  |
| 181 | CATCTCAT | ACCACACC | 190 | TGTGTGTG | 252 | CCCACACA | 146 | AAGAAAAG |  | CATATAAA |  |
| 182 | CCACGGGA | TCAATGAA |  | TGTTGGAA | 286 | CCTAAATC |  | TTGTGTAG | 353 | GTTAGAGG | 143 |
| 183 | GGTGGCAA | TATATTAT |  | TCCCTTTT |  | GCTGAAAC | 370 | AAATAAAA |  | TGAAATTT |  |
| 184 | AAAAAAAA | AATAATAT |  | CTGTATAC | 312 | AAGAAAAG |  | TGTAATAG |  | ATTTATAG |  |
| 185 | TGCCGTCC | AACTTCTA |  | TAGCCTTT |  | AAAACAAA |  | CACTATCG | 193 | CGATGAGA |  |
| 186 | TTTTTTTT | ATATTATA |  | CGCAAATG | 151 | CTAACTAG | 139 | TTGTTTTG |  | ATTTTTCA |  |
| 187 | CGGACCGC | TTTTTCAC |  | ATGCGATG | 311 | CTAAATCC |  | TATTACCC | 387 | TATTACCC | 387 |
| 188 | CCTAATAT | ACCCTACC | 168 | CAAGGATT | 245 | TCATCTAC | 468 | AATTAGTG |  | AATTAGTG |  |
| 189 | CGCCTCGG | TATATATG |  | AATAAATA |  | TAGCCTTT |  | TCGGCGGC | 37 | TGTAATAG |  |
| 190 | ACCACACC | CACCTCCG | 34 | GCTGAAAC | 370 | CAAGGATT | 245 | TTTCACTT |  | GTTAGAAG | 345 |
| 191 | CCGGGGGC | AGGATCAA | 233 | TCATCTAC | 468 | CTACATAC |  | TATCCTCG |  | ACCCACAC | 117 |
| 192 | CGTAGGTC | GTCGGGTA | 142 | AGAACTTC | 128 | TGTTGGAA | 286 | AAATGAAA |  | TGGAAGCT |  |
| 193 | CACTATCG | AATATTAT |  | ATACATAA |  | ATGATGAT |  | CTAAATCC |  | CACACCCA | 169 |
| 194 | CGGTACCC | GCCGGGTA |  | TAAATAAT |  | ATATAGAT |  | TATAAAAC |  | ACCCTACC | 168 |
| 195 | GAATGAGG | TACCCTAC | 124 | GGTGTTAG | 39 | GCCGCCGA | 75 | CGATGAGA |  | TGACGCAA | 285 |
| 196 | GAACGCGC | AATTTTTT |  | TTCTAGTA | 231 | GACGCAAA | 134 | TCCGCGGA |  | GAAAAAAA | 36 |
| 197 | GGAATGAG | TCATATAC |  | CCTAATAT | 188 | ATAATGTA |  | GTTAGAAG | 345 | TATCATAT |  |
| 198 | GGATCCGC | GATAATGT |  | ATTATTTA |  | AATGTAAT |  | ATGATGAG |  | ATGGATTC |  |
| 199 | GATGATGA | CGCGACGC | 26 | GTATGTAG |  | TCATCGCA |  | TGGAAGCT |  | CTATATCC |  |
| 200 | TTATAGCC | AAATGATG |  | ATTATCAA |  | CAGATTCC | 396 | TTTCCTTT |  | TTAGCCGC | 63 |
| 201 | ACACACAC | GTATATAT |  | AGGATCAA | 233 | CACACCCA | 169 | AAAAAGAA | 389 | ATAATATT |  |
| 202 | CACCCCCC | AGATGACG |  | TAATAGGA |  | AGGATCAA | 233 | CCTAAATC |  | GGGTAACA |  |
| 203 | GACGACGA | GATTCCAT | 491 | CAAACAAA |  | CATATAAA |  | TAAATTAG |  | TACCCTAC | 124 |
| 204 | GCGGCCGC | GACGCAAA | 134 | CTACATAC |  | TGGATTCC | 500 | TTTCATTT |  | CCCAGCGC | 3 |
| 205 | GTAGGTCC | AGCCGCCG |  | GCGGGTAA |  | ATGGATTC |  | ATCACGTG |  | TGTGTAGA |  |
| 206 | GGCTGAGC | AATAGGAT |  | TCGGCGGC | 37 | AGAACTTC | 128 | CATTTTGA |  | AGCCGCCC | 288 |
| 207 | CCTCGGCG | CGATGAGA |  | GACGCAAA | 134 | CCTAATAT | 188 | AAAGTGAA |  | CCTATATC |  |
| 208 | ATAGCCTT | GGGTAATA |  | CCTAAATC |  | GGGTAACA |  | ATGGATTC |  | ATGATGAG |  |
| 209 | GATTCCTA | ACATATAT |  | TCATCGCA |  | GAAAAATT |  | TGACGCAA | 285 | GGTGGCAA | 183 |
| 210 | GATCAATG | GCAGCAGC | 50 | ACCCACAC | 117 | TCCCTTTT |  | CTATATCC |  | AACGGAAT |  |
| 211 | TACCTAAT | TACCCGCA |  | TTTTGTTT |  | ATCACGTG |  | AATGAAAA |  | TGTATACC |  |
| 212 | AGGATTGA | TTCTAGTA | 231 | AACTTCTA |  | TTCTAGTA | 231 | TGTGTAGA |  | TTGTTTTG |  |
| 213 | GACGAGGA | CACACCCA | 169 | CTAAATCC |  | TAATAGGA |  | TGTATACC |  | GCCGCCGA | 75 |
| 214 | CGGGTAAT | GGCGCGTC | 19 | AAACAAAC |  | GATTCCAT | 491 | GTTAGAGG | 143 | TAAATTAG |  |
| 215 | CCGCGGGG | CATATAAA |  | TTCCTTTT |  | ATACATAA |  | CAATGAAT |  | CGGAATGA | 292 |
| 216 | AGATCGGG | AATATATA |  | CCCACACA | 146 | TCGCTATC |  | TTCTTTTT | 414 | TTTATTTT |  |
| 217 | GTGCGGGT | GTGTTAGA | 348 | AAATTTCA |  | TCATCGCT |  | ATCAATGA |  | TTTCACTT |  |
| 218 | GCCGTGGC | CGGAATGA | 292 | AAAGTGAA |  | GTATACCT | 264 | AACGGAAT |  | TATAAAAC |  |
| 219 | GGCGCTTG | TCATCTCA |  | CTAACTAG | 139 | AAAATAAA |  | CCTATATC |  | GTTACCCT |  |
| 220 | CGCGCCGG | GGCGATGA |  | AAAGGAAA |  | GGCGATGA |  | GGGTAACA |  | ACACCCAC |  |
| 221 | CCGCTACC | TAATAGGA |  | TGATGAGA |  | GCACGTGA |  | GGTGGCAA | 183 | ATCCGGGT |  |
| 222 | CACCGCAC | TCTAGTAT |  | ATGGATTC |  | ATACGTAC |  | CACACCCA | 169 | GCACGTGA |  |
| 223 | GTAACTCC | AAGGGCCC | 135 | GATTCCAT | 491 | TTTTATTT |  | AAAATAAA |  | AAGAAAAG |  |
| 224 | GGAATGCC | CCCGGCTG | 54 | TAAATTAG |  | AGCCGCCC | 288 | ACCCACAC | 117 | ATGCGATG | 311 |
| 225 | GGCGCCCC | ATAATATA |  | ATTTATTT |  | GTTACCCT |  | TTTAATTT |  | CATTTTGA |  |
| 226 | CGATCCCC | GCGGGTAA |  | ATTGATAA |  | GCCGGGTA |  | GGAATAAA |  | CAATGAAT |  |
| 227 | ATCCTCGA | TTTGAAAA |  | ATCCGGGT |  | CGGCGGCT |  | ACATATAA |  | AAATGAAA |  |
| 228 | CGTCTATC | TTGTGTAG | 353 | GTATACCT | 264 | ACCCATAC | 314 | TACCCTAC | 124 | AAATAAAA |  |
| 229 | AGCGTAGG | ATGATGAT |  | ACAAACAA |  | TGATGAGA |  | TTATCATA |  | CATTACCC |  |
| 230 | CGACGTCC | TTTTCAAA |  | TCATCGCT |  | TATCCTCG |  | GTTACCCT |  | ATCAATGA |  |
| 231 | TTCTAGTA | TGATGAGA |  | GGGTAACA |  | TAAATAAT |  | TGTTTTAT |  | AAAGTGAA |  |
| 232 | CATCGCTA | ATATATAC |  | CAGATTCC | 396 | AACTTCTA |  | TTAGCCGC | 63 | TTACGTTA |  |
| 233 | AGGATCAA | TCATCGCA |  | TGGATTCC | 500 | ATTATCAA |  | TTACGTTA |  | GTCGGGTA | 142 |
| 234 | GCGCAGGC | ATACCTAA | 330 | ATAAACAA |  | AATAAATA |  | TGTAAATA |  | CTACCATC | 319 |
| 235 | TACCCGAC | ATATTATC |  | ATATTATC |  | GTCATCTA |  | AAATTAAA |  | GCGGGTAA |  |
| 236 | TCGCGGCG | CTACTAAC | 247 | CACACCCA | 169 | TAAATTAG |  | ATGCGATG | 311 | TTTCCTTT |  |
| 237 | CTCCCCCC | AATGTAAT |  | ATCAATGA |  | TCTCATCG |  | CGGAATGA | 292 | TGCGATGA |  |
| 238 | CCCCGTGG | GTTACCCT |  | TCAATGAA |  | ATTATTTA |  | ACCCTACC | 168 | GGGGCGGG | 55 |
| 239 | GCCACCGG | GTGAAAAA |  | GGAATAAA |  | CAAACAAA |  | CATTACCC |  | TTTCATTT |  |
| 240 | TCGGTAGC | GGCGCGCG | 109 | TTTCACTT |  | AAACAAAC |  | TGCGATGA |  | AGCGTAGG | 229 |
| 241 | GGGGGCCC | TCACGTGC |  | TTGGAATA | 425 | GTCGGGTA | 142 | ATTGATAA |  | GCTATTGT |  |
| 242 | TGTGCGTG | GCGGCTAA | 74 | GTGGCAAA | 448 | GTGGCAAA | 448 | GCTATTGT |  | ATGACGCA | 328 |
| 243 | TTCCCTTT | CTAATATT |  | AACATATA |  | AAAGTGAA |  | ATTCCATT |  | GGAATAAA |  |
| 244 | AGGGGAGG | TAGAATTG |  | ATCACGTG |  | TATGTGTA |  | TTTATAGA |  | AGATGACG |  |
| 245 | CAAGGATT | CATTACCC |  | AAAAAAAT |  | TGTATGTG |  | ACACCCAC |  | AATGAAAA |  |
| 246 | CGCCGGAG | ATATCCTC | 411 | TACATAAT |  | TTAGCCGC | 63 | ATTTTGAG |  | AAAAAGAA | 389 |
| 247 | CTACTAAC | CACTATCG | 193 | GTCATCTA |  | ATCAATGA |  | TTATTTAT |  | TTATCATA |  |
| 248 | GCAGCGCC | CCCACACA | 146 | ATACGTAC |  | ATTGATAA |  | CTACCATC | 319 | CTACTAAC | 247 |
| 249 | AAAAGAAA | GAGGATTC | 178 | TCTCATCG |  | TACACATA |  | TTCCATTT |  | TCGCTATC |  |
| 250 | TATATATA | TGTGTAGA |  | TACACATA |  | ACAAACAA |  | GCACGTGA |  | AGATTCCA |  |
| 251 | CTATCGTC | TTTATATA |  | GTTACCCT |  | AAATTTCA |  | AAGTGAAA |  | TCGGTAGC | 240 |
| 252 | TGTGTGTG | TGAGGAAT |  | AAGTGAAA |  | TGACGCAA | 285 | AGCCGCCC | 288 | TGTTTTAT |  |
| 253 | GGGCGGGG | TATATATT |  | TATGTATT |  | TATACGTA |  | ATGACGCA | 328 | GCAGCAGC | 50 |
| 254 | CGCGAACG | CGCTACCA | 179 | GGCGATGA |  | CACCCACA | 87 | AGATTCCA |  | ACATATAA |  |
| 255 | CGACTCCC | TTATTTTT |  | TATGTGTA |  | AGCGATGA |  | CTAGTATT |  | TACCCGAC | 235 |
| 256 | CCGTCTGG | TGTAATAG |  | TATCCTCG |  | TTTTGTTT |  | AGATGACG |  | TTTAATTT |  |
| 257 | CGTCCACC | TGAAATTT |  | TCTTTTTC |  | TCAATGAA |  | AAAGGAAA |  | TGTAAATA |  |
| 258 | GCGGGTCG | CCGACTAC | 40 | TCGCTATC |  | TACGTATA |  | GCGGGTAA |  | ATTCCATT |  |
| 259 | AAGGCACC | GCGCCCGC | 13 | TATACGTA |  | TTCCTTTT |  | ATCCGGGT |  | CTATCGTC | 251 |
| 260 | CCGGAGTG | AGGATTCC |  | AACAATAG |  | GACGAAGA | 351 | CTACTAAC | 247 | AATCCTCG |  |
| 261 | GCAGTAGC | CCACACCC | 148 | ACCCATAC | 314 | TACATAAT |  | AAAATGAA |  | ATTTTGAG |  |
| 262 | CGTTGGCG | TTTTGAAA |  | TACGTATA |  | AAAGGAAA |  | TTTGTTTT |  | CTAGTATT |  |
| 263 | GGGTTCGA | TATCCTCG |  | AAGGGAAA |  | ATATTATC |  | TATTATTA |  | GCCGGGTA |  |
| 264 | GTATACCT | AAATTTTC |  | TGTAAATA |  | GGAATAAA |  | TTTTCACT |  | TTCTTTTT | 414 |
| 265 | CGCCGACG | TTTTTTTA |  | TCATCTAA |  | TTGGAATA | 425 | ATATTTAT |  | AGGGTCCA |  |
| 266 | GCGGGCAA | CGTTACTA |  | ATTTTTCA |  | ATTTATTT |  | TATTTATT |  | AAAATAAA |  |
| 267 | TGTTACCC | CACCCACA | 87 | AAATAAAA |  | ATAAACAA |  | TCCCTTTT |  | TTTATAGA |  |
| 268 | CATCTACT | TACCCGGC |  | CAATGAAT |  | CATCGCTA | 232 | GCAGCAGC | 50 | ATTGATAA |  |
| 269 | CTGAAGTG | ATTATCAT |  | TCTACATA |  | TACACACA |  | AATAATAT |  | CCCATACA |  |
| 270 | CAACTATC | CGGCACCC | 90 | GACGAAGA | 351 | TATGTATT |  | GCCGCCGA | 75 | AAATTAAA |  |
| 271 | GGTTAAGG | ATCAATGA |  | TGTATGTG |  | CATTACCC |  | CCCAGCGC | 3 | GGGGTTCG | 45 |
| 272 | CGCATACG | ATAATAAT |  | TCATATAC |  | TATAGCCT |  | AGTATATT |  | ACTAACTA |  |
| 273 | ATAGGATC | TTATATAT |  | TGACGCAA | 285 | TTTCACTT |  | TATAGATT |  | CTCGGCGG | 21 |
| 274 | GTAGTCGG | TTCCCTTT | 243 | AGCGATGA |  | TCATCTAA |  | ACTAACTA |  | TAACTAGT |  |
| 275 | CCCCGCCG | TTTTTTTG |  | TATAGCCT |  | AGTCATCT |  | GCAAATGA |  | CGTTACTA |  |
| 276 | CTCGGCCG | GAAAATTT |  | AGTCATCT |  | TCTACATA |  | ATATTCTG |  | CGGAACCG | 343 |
| 277 | CGCCCCGC | TGTATATA |  | GCACGTGA |  | CGTTACTA |  | TCGCTATC |  | CCGAGTGG | 4 |
| 278 | GGCCGGTG | ACCCACAC | 117 | ATACACAT |  | GCAGCAGC | 50 | AAACGGAA | 395 | TTCCATTT |  |
| 279 | GGGTCCTG | CACACACA | 93 | TCATCTCA |  | AGATGACG |  | GTTTTGTT |  | ACACACAC | 201 |
| 280 | GATGAGAT | ACATATAA |  | TATTCTGT |  | AACAATAG |  | AATCAACT |  | ATCCGTAC |  |
| 281 | GCGGGCGC | AGGGTCCA |  | GCCGCCGA | 75 | GTCATCGA |  | TAACTAGT |  | GCAAATGA |  |
| 282 | GCCCGAAG | TGGATTCC | 500 | TTATTTTT |  | CAATGAAT |  | ATAAAACG |  | GAAGCTGT |  |
| 283 | GGAGCTGG | CGGTTCGA |  | TACACACA |  | ATGACGCA | 328 | AAAATTAA |  | AGGATTCC |  |
| 284 | CCGCCGGC | CTTTTCTT |  | TTATGTAT |  | CTACTAAC | 247 | TGGAATAA |  | AAGTGAAA |  |
| 285 | TGACGCAA | GTTAGAAG | 345 | TGTAATAG |  | AACATATA |  | AATCCTCG |  | CGCTACCA | 179 |
| 286 | TGTTGGAA | TAGTCATC |  | TGGAAGCT |  | TGGAAGCT |  | ACACACAC | 201 | TTATTTAT |  |
| 287 | CGACGGGG | AATAAAAA |  | CACCCACA | 87 | AAGTGAAA |  | AATGATGA |  | CGGCGGCT |  |
| 288 | AGCCGCCC | GGCTAAGC | 119 | TGTATGTA |  | TGTATGTA |  | CGTTACTA |  | AAACGGAA | 395 |
| 289 | CGCCCCTT | TCGCTATC |  | AAAGGGAA |  | ATACACAT |  | GAAGCTGT |  | AATCAACT |  |
| 290 | CACGTGAT | GCCTTTAT |  | AGCAAACA |  | ACGGAATG | 137 | ATAAAACA |  | CCCACACA | 146 |
| 291 | CAGGGCGG | ATATAATA |  | CATTACCC |  | TCATCTCA |  | ATGTAATA |  | ACTATCGT |  |
| 292 | CGGAATGA | TAATGTAA |  | TGATAATA |  | CACTATCG | 193 | CATACATA |  | TATAGATT |  |
| 293 | TGAACCGC | GCTAAGCG | 125 | CGTTACTA |  | TGTAAATA |  | CCCATACA |  | CCGAAATC |  |
| 294 | CCGGTACC | ATTATAGC |  | AGTGAAAA |  | ATGTATGT |  | GTCGGGTA | 142 | ATATTCTG |  |
| 295 | GCCTATGG | CAAAAAAA |  | AAAAGGAA |  | AAGGGAAA |  | CTATCGTC | 251 | AGGCTAAG |  |
| 296 | GTACCCTC | ATATATGT |  | TTAGCCGC | 63 | TGTGTAGA |  | TATAGAAT |  | ATAAAACG |  |
| 297 | CAGTGGCC | GTGCACCA | 365 | CTTTATCA |  | TGTAATAG |  | TTCATGTT |  | GCGATGGC | 31 |
| 298 | GGAATCCC | GTATATTC |  | AGATGACG |  | TCATATAC |  | TCAACTAT |  | TCACGTGC |  |
| 299 | TCACCCGG | AAACAAAA |  | TTCTTTTC |  | GGGTAACG |  | CCCTTTTA |  | TTTTCACT |  |
| 300 | CGGCCCGC | AATCCTCG |  | GCAGCAGC | 50 | TTATGTAT |  | AGCGTAGG | 229 | TCCCTTTT |  |
| 301 | GCTCCTGC | TCGGTAGC | 240 | GAACTTCT |  | TATTCTGT |  | TTCACTTT |  | GTTTTGTT |  |
| 302 | GGAGCGCT | AAGAAAAG |  | TTTATGTA |  | TAGTCATC |  | CAAATGAT |  | ACGCGAAA |  |
| 303 | CACTGCGC | TATTTTTT |  | CATCGCTA | 232 | AGCAAACA |  | ATGATGAT |  | AAAGGAAA |  |
| 304 | CCGCCCCC | ATAATATT |  | CTACTAAC | 247 | TACCCTAC | 124 | ATCAAAAC |  | TGGAATAA |  |
| 305 | CGGCTGAG | GAGAAGCT |  | GCCGGGTA |  | GGTGGCAA | 183 | AATTTCAA |  | AAAATGAA |  |
| 306 | CGGTTCCG | AGGAAGCT |  | CGGCGGCT |  | TCTTTTTC |  | ATAGTCAT |  | TTCATGTT |  |
| 307 | GGCGGAGC | TCTTTTTC |  | ATGTATGT |  | ATACATAC |  | AGGATTCC |  | AGTATATT |  |
| 308 | CACCATGG | GTACCCTC | 296 | AGCCGCCC | 288 | GCGATGGC | 31 | TCGGTAGC | 240 | TATTATTA |  |
| 309 | GAAGACGA | TCATCGCT |  | AATAAAAA |  | ATCTACTA |  | ACTATCGT |  | TATCGTCT |  |
| 310 | CCGGTTCG | ATCTGCTC |  | AACAAAAC |  | CCTCATCG |  | TATAATAT |  | CCACACCC | 148 |
| 311 | ATGCGATG | GTTAGAGG | 143 | TGTGTAGA |  | AATCCTCG |  | AGTGAAAA |  | CATACATA |  |
| 312 | CTGTATAC | CATCTACT | 268 | ATATTTAT |  | TATGTACG |  | AACAACAA | 408 | ATATTTAT |  |
| 313 | GCCCGGCG | AAAATTTC |  | ATGACGCA | 328 | GAACTTCT |  | CCCACACA | 146 | TTTGTTTT |  |
| 314 | ACCCATAC | ATGCGATG | 311 | ATACATAC |  | TCACGTGC |  | AGGGTCCA |  | TCAACTAT |  |
| 315 | GACATGGC | ATTGAAAA |  | GTCATCGA |  | AAAAAAAT |  | TGAGGAAT |  | TAAAACGG |  |
| 316 | CCCTAACC | ATGAAAAA |  | CTAATATT |  | CTTTATCA |  | CACACACA | 93 | CGGTACCC | 194 |
| 317 | GGCCCCCG | CTGTCATC | 326 | ATGTAATA |  | ATTTTTCA |  | TATCGTCT |  | GCTAAGCG | 125 |
| 318 | TCGACTCC | TACTAGTA |  | ATCTACTA |  | GGTTACCC |  | TAAAACGG |  | TATTTATT |  |
| 319 | CTACCATC | GCGACGCG | 15 | TTTTTTCT |  | TTTATGTA |  | ATATAGAT |  | AATAATAT |  |
| 320 | CGGCGCCG | GGCGCTTG | 219 | TAGTCATC |  | AAAGGGAA |  | ATAATAAT |  | GGCTAAGC | 119 |
| 321 | TCTCCCGC | CTGAAAAA |  | AAATAAAT |  | ATCATCTA |  | AATCGTAA |  | ATAGTCAT |  |
| 322 | GTCGCCGC | CCGGGTGA | 88 | ATCATCTA |  | AAATAAAA |  | GCCGGGTA |  | ATGTAATA |  |
| 323 | TTTCTTTT | CAATGAAT |  | ACAATAGA |  | GGGGCGGG | 55 | AATGAATA |  | CCCTTTTA |  |
| 324 | GGGTGACC | AGATGATG |  | ACGGAATG | 137 | GTGTTAGA | 348 | AAAAGGAA |  | AATGATGA |  |
| 325 | GGAACACC | GTATGTAG |  | TTTTCACT |  | TGATAATA |  | TCTTTTCT |  | AATCGTAA |  |
| 326 | CTGTCATC | AACATATA |  | ATATGTGT |  | TACCCGAC | 235 | TACCCGAC | 235 | TATAGAAT |  |
| 327 | CCGTCCGC | GAAGAAAA |  | GTCGGGTA | 142 | ATCCGTAC |  | ACGCGAAA |  | GGGTAACG |  |
| 328 | ATGACGCA | ATTATCAA |  | GGTGGCAA | 183 | AGCCGCCG |  | TACATATA |  | CACACACA | 93 |
| 329 | GGGCGGAC | CAAATGAT |  | AATTAGTG |  | TTATAGCC | 200 | AAATCAAC |  | CAAATGAT |  |
| 330 | ATACCTAA | AGGGGCGG |  | ATATAAAT |  | GACGACGA | 203 | ATCCGTAC |  | ATCAAAAC |  |
| 331 | CACATCGC | CCTTTATC | 434 | TTCCATTT |  | ATATGTGT |  | TCATCTCA |  | TGAGGAAT |  |
| 332 | GCTGCTGC | TACAGCGG |  | CACTATCG | 193 | AATTAGTG |  | ATATCCTC | 411 | ATAAAACA |  |
| 333 | CCGTCTAG | ATACATAT |  | TTATAGCC | 200 | ACCCTACC | 168 | GCCTTTAT |  | AAAATTAA |  |
| 334 | GCCGTCCA | GCGTCGCG | 29 | AATCAACT |  | CCCATACA |  | CGCTACCA | 179 | GTATGGGT |  |
| 335 | CGACGAGG | TTGCGATG |  | GCAAATGA |  | AGTGAAAA |  | TAGGATAA |  | TCGTCAGA |  |
| 336 | ACGGGTCC | TTATATAA |  | AGATGATG |  | GTGTGTGT |  | TCATCTAC | 468 | TAGGATAA |  |
| 337 | TATACGGT | TTTTTTCC |  | TTATCAAC |  | CCCAGCGC | 3 | ATTCCTAA |  | GCGGCTAA | 74 |
| 338 | GACCGGGG | TCATCATC |  | ATCTAAAT |  | ATGTAATA |  | ACAATAGA |  | CACCTCCG | 34 |
| 339 | GGAGCGAC | CTGAAGTG | 269 | AACAATAA |  | ACAATAGA |  | CCGAAATC |  | ATGATGAT |  |
| 340 | GCCGGGCG | GCCCCCGG | 18 | TATATAAG |  | AACAAAAC |  | AATATTAA |  | GGTTACCC |  |
| 341 | GCGGCCGG | AATTAGTG |  | ATGATGAC |  | GCAAATGA |  | GGGGCGGG | 55 | TTCACTTT |  |
| 342 | TCGACAGG | AAACGCAA | 444 | ATAAATAG |  | ATGATGAC |  | AATTGCAG |  | ATATCCTC | 411 |
| 343 | CGGAACCG | GGCGTGTG | 77 | AATCCTCG |  | CGTCTATC | 228 | AAATGATG |  | ACCACACC | 190 |
| 344 | CCACGGCC | TAAAAAAA |  | TACCCTAC | 124 | CTAATATT |  | GTGTAGAA |  | ATTCCTAA |  |
| 345 | GTTAGAAG | GAATGAGG | 195 | TATGTACG |  | CACATACA |  | AGGCTAAG |  | CGCTATCC | 480 |
| 346 | GTGGGGAG | TGAGAAGC |  | GATGAGAA |  | CACACATA |  | TCACGTGC |  | ACCCGACC | 44 |
| 347 | TGGCCGGG | ACACACAC | 201 | GTGTTAGA | 348 | CCACACAC |  | GCGATGGC | 31 | TCATCTAC | 468 |
| 348 | GTGTTAGA | CTACCATC | 319 | GAAGAAGA |  | TACCCGGC |  | CGGCGGCT |  | GAATGAGG | 195 |
| 349 | CCGTGGAG | TACCCGAC | 235 | CACATATA |  | ACACCCAC |  | AAGAACAA |  | GTGTAGAA |  |
| 350 | CCGTATCG | TCAACTAT |  | CCTCATCG |  | TAGATAGA |  | ATATAAAA |  | GCCTTTAT |  |
| 351 | GACGAAGA | ATAGCCGC | 165 | TTTCCCTT |  | ACCACACC | 190 | TAAAATAT |  | GGGTTCGA | 263 |
| 352 | GCGCGCCA | ATAATGTA |  | TATATTAT |  | AGATGATG |  | AAGGGAAA |  | GGAATGAG | 197 |
| 353 | TTGTGTAG | CAACTATC | 270 | CACACATA |  | CGCTATCC | 480 | TTAATTTT |  | TAGATTCC |  |
| 354 | CTCCCAGC | CCTTTTTT |  | TAGATAGA |  | TTATTTTT |  | ATTATCAA |  | TCATCTCA |  |
| 355 | GCAACAGC | GCGCGCCA | 352 | CACATACA |  | AATCAACT |  | TGATGAGA |  | AATTTCAA |  |
| 356 | GCTGTTGC | TTCCTAAA |  | GCCTTTAT |  | CTATCGTC | 251 | GAAAATTT |  | CCGACTAC | 40 |
| 357 | GGGGCAGC | CCGGGTAG |  | TAAATAGA |  | ATCTAAAT |  | TAGAAGAT |  | TACGTTAC |  |
| 358 | GCTGCCGG | TTCCGCGG | 161 | TTTTCCTT |  | AAAAGGAA |  | TTCCTTTT |  | AAATCAAC |  |
| 359 | CCCGCGAG | AAAAAATA |  | CAAATGAT |  | ACTAACTA |  | GAATGAGG | 195 | AATTGCAG |  |
| 360 | CATCGTGC | ATGGATTC |  | TTTATATA |  | TTCTTTTC |  | TAGATTCC |  | ACAATAGA |  |
| 361 | GCCTCCGC | ATTGCAGA |  | ACTAACTA |  | GTCTATCA |  | ACTACTAC | 406 | TTCCGCGG | 161 |
| 362 | CGCGCTTC | TTTTCTTC |  | ATTTACAT |  | TTATCAAC |  | TTCTTTTC |  | ATATAGAT |  |
| 363 | TGATAATG | AATTGCAG |  | ATTATTAT |  | GTATGTAT |  | GAAGACGA | 309 | AGTGAAAA |  |
| 364 | GGCACACC | GCGTCACA |  | AATAATAT |  | CATCTACT | 268 | TCGTCAGA |  | CGTCTATC | 228 |
| 365 | GTGCACCA | TCATCTAC | 468 | CATCTACT | 268 | ATATTTAT |  | CCACACCC | 148 | AATGAATA |  |
| 366 | ACTCGCGC | ATTAGTGG |  | GTATGTAT |  | TACCCGCA |  | TAACAATA |  | AACAACAA | 408 |
| 367 | GAGCTCGA | GCGATGCC | 175 | AAGCAAAC |  | GGGCGGCT |  | GGAATGAG | 197 | GAAGACGA | 309 |
| 368 | AAGTCGCC | ATATTCTG |  | GGGTAACG |  | GTTAGAGG | 143 | AGGAAAAG |  | ACTACTAC | 406 |
| 369 | CTGCGCAG | ACACCCAC |  | TGGAATAA |  | GCCTTTAT |  | AAAATTTC |  | GTTACTAG |  |
| 370 | GCTGAAAC | TAATATAT |  | CCCATACA |  | CTCGGCGG | 21 | ACCACACC | 190 | TATAATAT |  |
| 371 | GCTTACGG | GCCGCACC | 68 | TCTTTTTT |  | TGTATACC |  | CTCGGCGG | 21 | CGGTTCGA |  |
| 372 | CGGTGCGG | AAAAATAA |  | AAATCAAC |  | TAGATTCC |  | GTATGGGT |  | GGGGGGAG | 42 |
| 373 | ACCTAATA | ACCCATAC | 314 | TCATCATC |  | GATGAGAA |  | TACGTTAC |  | AGCCGCCG |  |
| 374 | CACGTCGC | TTTTCACT |  | TGTATACC |  | TTCCATTT |  | GCGGCTAA | 74 | TACATATA |  |
| 375 | GCCTCCTC | TCTCATCG |  | AGGGAAAA |  | TTTTCACT |  | GGGTAACG |  | GGGCGGCT |  |
| 376 | ATATATAT | ATATGTAT |  | ATGATAAT |  | AAATAAAT |  | ATTGCAGA |  | AAATGATG |  |
| 377 | CGTCTGGA | AGAGGAAG |  | ATTCTGTA |  | AATAAAAA |  | TGTTTTGT |  | ATAATAAT |  |
| 378 | GCGGTCGC | TATATAAG |  | GCGATGGC | 31 | ACTACTAC | 406 | TTGGTCTT |  | TGATGAGA |  |
| 379 | GGTACCCT | AGTGAAAA |  | ACTACTAC | 406 | GTATGGGT |  | GTTACTAG |  | TCTTTTCT |  |
| 380 | CCCTCGCC | TTTATTTT |  | ATACGTAT |  | ATAAATAG |  | TCTTTTTC |  | AAAAGGAA |  |
| 381 | GGTAAGGG | CTAAATCC |  | GTATATAA |  | CACATATA |  | GGGGTTCG | 45 | TAGAAGAT |  |
| 382 | GCCTCGGC | CGAAGCGG | 166 | TTCACTTT |  | AAGCAAAC |  | GTATATTC |  | GGTGTTAA |  |
| 383 | CCGCCGAA | AGGCTGCG |  | AATGAAAA |  | CAAATGAT |  | CGGAACCG | 343 | AGCCCTAT |  |
| 384 | GAAACGCA | TTTCCTTT |  | TCACGTGC |  | ATACGTAT |  | TATATAAA |  | AATATTAA |  |
| 385 | TTACCCGC | CTCCGGGT |  | TATAGATT |  | ACATACAC |  | GGTTACCC |  | ATTGCAGA |  |
| 386 | GGTGTGCC | ACTACTAC | 406 | GTGTGTGT |  | ATATAAAT |  | GGCTAAGC | 119 | CTCGGATC | 46 |
| 387 | TATTACCC | TATATACA |  | ACCACACC | 190 | TAAATAGA |  | GCTAAGCG | 125 | CTGAAGTG | 269 |
| 388 | ACGCGCGC | TGACGCGT |  | AGAAAAAA |  | TACGTACA |  | TCAAAACA |  | TTGGTCTT |  |
| 389 | AAAAAGAA | GATGAGAA |  | AGAGGAAG |  | TTTTTTCT |  | CCGAGTGG | 4 | TCGTCTAT |  |
| 390 | CTGCAGCG | TCGTCAGA |  | GGTTACCC |  | GCGGCTAA | 74 | AACAAACA |  | GTGTTAAG |  |
| 391 | CCCGGGAG | ACTCCCAG |  | TTACGTTA |  | TATATAAG |  | CAACAGCA |  | AAGGGAAA |  |
| 392 | CCGGGGTT | TTCCTTTT |  | ACACCCAC |  | TTGTGTAG | 353 | GGTGTTAA |  | CTGGTTCT |  |
| 393 | CACGGAGC | TTTTTCAT |  | GTCTATCA |  | TTACGTTA |  | AATTTTCA |  | CAACTATC | 270 |
| 394 | GTCGCACC | ATTCTGTA |  | TTGTGTAG | 353 | AACAATAA |  | CAACTATC | 270 | CCTTCCCC |  |
| 395 | AAACGGAA | CGCGTCGC | 7 | ATCCGTAC |  | ATTTACAT |  | TGATAATA |  | ATTATCAA |  |
| 396 | CAGATTCC | ATTGATAA |  | TCTTTCTT |  | TTTCCCTT |  | AACAATAG |  | GTATGTAG |  |
| 397 | GATGACAT | CATCGCTA | 232 | CAAATCTA |  | CCACACCC | 148 | GACGAAGA | 351 | TGTTTTGT |  |
| 398 | CATATACG | TCATCTAA |  | CATATGTA |  | CAAATCTA |  | CGCTATCC | 480 | AAGAACAA |  |
| 399 | CACGAGCG | TTTCAAAA |  | TAGATTCC |  | GAAGACGA | 309 | AAATAGTC |  | TAAAATAT |  |
| 400 | GCGACCCG | ATGTAATA |  | ATTCCATT |  | ACGCAAAT |  | CTGGTTCT |  | TAACAATA |  |
| 401 | TGGCCGAG | TTCTTGGC |  | CCACACAC |  | TCATCATC |  | ATGATAAT |  | ATCGTCTA |  |
| 402 | GGCTCGCC | GGAATGAG | 197 | GAAGACGA | 309 | GCCGCCCA | 61 | CGTCTATC | 228 | CGAAGCGG | 166 |
| 403 | CCCGCTCG | TATTTATT |  | TCTTCCTC |  | ACCCGGAC |  | TCGTCTAT |  | CAACAGCA |  |
| 404 | GGGAGCGG | CTACATAC |  | CCATTGTT |  | ATTCTGTA |  | CTGAAGTG | 269 | TACCCGCA |  |
| 405 | CCACCGCC | CCTAAACG |  | TCTTTTCT |  | GTATACGT |  | CGGTACCC | 194 | GATCTCGC | 73 |
| 406 | ACTACTAC | GCTGTCAT |  | ACGCAAAT |  | GAAGAAGA |  | GTATGTAG |  | TTAATTTT |  |
| 407 | CAGGCGCG | AAAAAAGG |  | AATACATA |  | TGGAATAA |  | CACCTCCG | 34 | AGGAAAAG |  |
| 408 | AACAACAA | TATACCTA |  | ACATACAC |  | AAATCAAC |  | TACATACA |  | GACGAAGA | 351 |
| 409 | CGTCGAGG | GCCACCGG | 239 | GACGACGA | 203 | CATATGTA |  | AAAATTCA |  | GTATATTC |  |
| 410 | GGCCCGGC | AGCGATGA |  | CTATCGTC | 251 | CTATCATC |  | CATCTACT | 268 | GAAAATTT |  |
| 411 | ATATCCTC | GCCCGGCG | 313 | ACCCTACC | 168 | CAACTATC | 270 | AAATTTTC |  | ATATAAAA |  |
| 412 | GCGACAGC | GTCATCGA |  | GTTAGAGG | 143 | GCTTATCT |  | GTGTTAAG |  | CATCTACT | 268 |
| 413 | GCGGCTGA | CAGGCCGG | 115 | CTATCATC |  | TATAGATT |  | ATATACAT |  | AGATTCCC |  |
| 414 | TTCTTTTT | GAAGAAGA |  | CGTCTATC | 228 | AGAGGAAG |  | GGGTTCGA | 263 | TTCCTTTT |  |
| 415 | GGATCAAT | TATTATAG |  | AAGGAAAA |  | ATGATAAT |  | AGATGATG |  | AAAATTTC |  |
| 416 | GATCGGGC | TGGACCCT |  | AATTGAAA |  | TCGGTAGC | 240 | TTATAGAA |  | TCAAAACA |  |
| 417 | CCCACCGC | CACTCCGG | 79 | GCTATTGT |  | TACGTTAC |  | TTTCAGTT |  | GTATACGT |  |
| 418 | TCGAGCCC | TGGAATAA |  | CAACTATC | 270 | ATACACAC |  | TTTTTCAC |  | AAATAGTC |  |
| 419 | CATCGGAA | TCCCTTTT |  | AATGAATA |  | CCATTGTT |  | AAATCCAC |  | TTCTTTTC |  |
| 420 | CCGCGCCC | TTTTCAAG |  | TACCCGCA |  | GCTATTGT |  | CATATATA |  | CAATACCA |  |
| 421 | CACTGGGG | AATTGAAA |  | TACGTACA |  | GTTACTAG |  | ATCTACTA |  | GCGACGCG | 15 |
| 422 | GCATGCGA | CTGGCCTA |  | TGAAATTT |  | TCGTCTAT |  | AGGGAAAA |  | AAATCCAC |  |
| 423 | AGGGGTCC | TGCCGTCC | 185 | ATTTACGT |  | TATATTAT |  | CAATACCA |  | GCTTATCT |  |
| 424 | GTCCCCGG | CAGATTCC | 396 | GTATACGT |  | ATTATTAT |  | GTTTTATA |  | CGGCACCC | 90 |
| 425 | TTGGAATA | CCATTTTG |  | ATAGATTC |  | AGGGAAAA |  | TTCCGCGG | 161 | TATGGGTG |  |
| 426 | CCCCGGGA | GATGACAT | 397 | TAACAATA |  | TAACTAGT |  | AGTATGTA |  | TACCCGGC |  |
| 427 | CATCCGTA | ACCCCTCG |  | TAACTAGT |  | CCTAAACG |  | AGCCCTAT |  | CTAGACTT |  |
| 428 | GGCCCCGC | TATTATTA |  | GCTTATCT |  | TCTTCCTC |  | TTCATTTT |  | AACAAACA |  |
| 429 | GGCACCTC | TCTCGAGC |  | ATACACAC |  | ATAGATTC |  | ATCGTCTA |  | AACAATAG |  |
| 430 | CCGTTACC | ATATATTA |  | TACCCGAC | 235 | ATTTACGT |  | TTATTTTA |  | ATCTACTA |  |
| 431 | GAGACCGG | TGATAATA |  | AGGAAAAG |  | TTCACTTT |  | GTATACGT |  | TACATACA |  |
| 432 | CCGGGTCA | TATTCTGT |  | GATGACAT | 397 | TTTTCCTT |  | GCTTATCT |  | GCAACAGC | 355 |
| 433 | GCACCTGC | GTCATCTA |  | GTTAGAAG | 345 | ATTCCATT |  | ATTCCTAT |  | TAGTCATC |  |
| 434 | CCTTTATC | AAGGGTTT |  | TTTCATTT |  | CACATACG |  | TAGTCATC |  | AGATGATG |  |
| 435 | AGACCGGG | GTTACTAG |  | TATCAACA |  | AGGGTCCA |  | CCTTCCCC |  | GGTACCCT | 379 |
| 436 | GCTGCCTC | TATATAAT |  | AGCCGCCG |  | AATAATAT |  | TATCAACA |  | TAGACTTA |  |
| 437 | CGTGGCGC | TATAATAT |  | CGCTATCC | 480 | TTTATATA |  | ACGCAAAT |  | ACGCAAAT |  |
| 438 | GCGGGCCG | CTATATCC |  | TACCCGGC |  | GATGACAT | 397 | TATAAAAG |  | AGTATGTA |  |
| 439 | GGTGGCGA | TTTTCCTT |  | GAAGAAAA |  | GTATATAA |  | TACCCGCA |  | GGTTAAGG | 271 |
| 440 | CCGCCTCC | CGGCCTCC | 96 | CAAAACAA |  | CTGTCATC | 326 | CCGACTAC | 40 | CAAGTGCA |  |
| 441 | GCACACGC | TTTTCAAT |  | GTATGGGT |  | CGCTACCA | 179 | AGATTCCC |  | GCAGTAGC | 261 |
| 442 | CCCGGTCG | AAAAGGAA |  | TACTACTA |  | GTTAGAAG | 345 | GAATAAAA |  | ATTCCTAT |  |
| 443 | GGTGACCC | TATATTCT |  | TAGTATGT |  | TAGTATGT |  | GGGCGGCT |  | ATGATAAT |  |
| 444 | AAACGCAA | AATTTTCA |  | GTTACTAG |  | AATACATA |  | TCTCATCG |  | TCTTTTTC |  |
| 445 | CTCCCCAC | AGAAGAAA |  | AATTGCAG |  | CGCGCGCG | 48 | TCATCGCA |  | GGAATCCC | 298 |
| 446 | GGGCGAGC | CTCGGATC | 46 | TACGTTAC |  | AGGATTCC |  | GAGAAGCT |  | TGATAATA |  |
| 447 | GCGGGGTA | AAGGAAAA |  | TCGTCTAT |  | CGCATACG | 272 | TAGTGGAA |  | CCTAAACG |  |
| 448 | GTGGCAAA | TCGAGCCC | 418 | CCCAGCGC | 3 | GAATGAGG | 195 | CGGTTCGA |  | ACGTTACT |  |
| 449 | ATTACCCG | TATTTATA |  | CTGTCATC | 326 | TCGATGAG |  | TAATTAAT |  | AATTTTCA |  |
| 450 | CGAGCCCC | TTTTATTT |  | GCGGCTAA | 74 | CGGAATGA | 292 | AGCCGCCG |  | TCTCATCG |  |
| 451 | GAAGCGGC | AAAAAGGA |  | TATGTAGA |  | TTGCGATG |  | TATACGTA |  | GAGAAGCT |  |
| 452 | TCCGGGTA | AAAATAAA |  | TTATATAT |  | AATGAAAA |  | GCAACAGC | 355 | TCATCGCA |  |
| 453 | GGAGCCCT | TTATCAAC |  | TTGTTCTT |  | TATGTAGA |  | TGCAGATT |  | ATTAGTGG |  |
| 454 | TTCTCCTC | AAGATGAC |  | GATGATAA |  | TACTACTA |  | GATAATGA |  | GCTGTCAT |  |
| 455 | GCCCGTAA | GATCTCGC | 73 | TTACTATT |  | CATACGTA |  | AAGTTATG |  | TATATAAA |  |
| 456 | GGGGCCGG | TATCATAT |  | ATTTTTTT |  | GCGCGCGC | 12 | CAAGTGCA |  | CGCGTCGC | 7 |
| 457 | GCGTGCGC | TTTTGAGG |  | ACTATCAT |  | TGCAGATT |  | ATTAGTGG |  | TTTCAGTT |  |
| 458 | GGAGGAGG | TTAGAAGA |  | TGCAGATT |  | AATTGCAG |  | TATATGTA |  | TTATAGAA |  |
| 459 | GCCGCGTC | CTATTGTT |  | ACTAATAG |  | CGGGTAAG |  | CTTTATCA |  | AAGTTATG |  |
| 460 | GCTGGTCG | GTGTAGAA |  | GGGCGGCT |  | TTACCCTA |  | TCATCTAA |  | TGCAGATT |  |
| 461 | CACCGTAT | TTCTTTTC |  | CCACACCC | 148 | TCTTTTTT |  | ACGTTACT |  | GCCGCCCA | 61 |
| 462 | CTGGTCGC | TCTTCCTC |  | GAATGAGG | 195 | TCCGCGGA |  | TATTTTAT |  | AAAATTCA |  |
| 463 | GAGCCCGC | GCTGCTGC | 332 | ATAGTCAT |  | TCTTTCTT |  | TTTTACTT |  | GTTTTATA |  |
| 464 | CTGCGCGG | AGCGTAGG | 229 | TTTCAGTT |  | AATGAATA |  | TCTTTCTT |  | GATATCAG |  |
| 465 | TGACCCGC | CGCTATCC | 480 | TTGCGATG |  | TGTCATCG |  | GCTGTCAT |  | GCGGTACC | 107 |
| 466 | AGGACGCC | AATCAACT |  | AGGATTCC |  | ACTAATAG |  | TTCTGTAT |  | TTACCCTA |  |
| 467 | GGAGAGGG | TACGTTAC |  | TGTACATA |  | GAGGATTC | 178 | TATGGGTG |  | TAGTGGAA |  |
| 468 | TCATCTAC | CTTTATCA |  | TCTCATCT |  | CGCGTCGC | 7 | AAACCAAA |  | ATCGTAAT |  |
| 469 | GAGACTAG | CGCGCTTC | 362 | ACACATAT |  | TATCAACA |  | ATTTTATT |  | TATACGTA |  |
| 470 | CGTGGCCC | GCAGCGAT |  | TTTGTTTA |  | TAACAATA |  | ATCGTAAT |  | AGGGAAAA |  |
| 471 | CTACTCGG | GCCTTCTT |  | GTTAAGAT |  | GGAATGAG | 197 | TTACCCTA |  | GCGCAGGC | 234 |
| 472 | AAGCCGGG | CCTAAATC |  | TTACCCTA |  | TCTTTTCT |  | TAGACTTA |  | CGCATACG | 272 |
| 473 | GCGCTACC | GGGTTCGA | 263 | TCGATGAG |  | AGCGTAGG | 229 | TAAGTTAT |  | TATCAACA |  |
| 474 | GGCGTCGG | CCCATACA |  | AAAGAAAG |  | ACTATCAT |  | GTCATCTA |  | ATATACAT |  |
| 475 | GCGCAAGC | TACCCTCG |  | AACGGAAT |  | AATTGAAA |  | TTGAAATT |  | AAATTTTC |  |
| 476 | GGGTTACC | AAGAAGAA |  | GGGGCGGG | 55 | AACGGAAT |  | GATATCAG |  | TTGGCGTT |  |
| 477 | CCTTGAGG | GCGGCTAT | 495 | AACAAGAA |  | GTTAAGAT |  | ACCCGACC | 44 | GTACCCTC | 296 |
| 478 | CAGCCGCT | GCGGTACC | 107 | AAACGGAA | 395 | TGAAATTT |  | TTCCTAAA |  | CGAAGACG |  |
| 479 | GCTCATCG | GAGGAATA |  | TCCTCATC | 484 | GCGACGCG | 15 | TAGTTTTG |  | GTCATCTA |  |
| 480 | CGCTATCC | ACCCGGAC |  | CTAAATAA |  | AGGAAAAG |  | GCAGTAGC | 261 | TCCGTACA |  |
| 481 | TACCCGGA | CAACTTCT |  | CACATACG |  | GCTGCTGC | 332 | CTAGACTT |  | AGCTAGAG |  |
| 482 | CCTGCGCG | GGAATAAA |  | CGGAATGA | 292 | AGAAAAAA |  | CGAAGCGG | 166 | GATAATGA |  |
| 483 | CCATCAGC | TACATATA |  | AAATGAAA |  | ATAGTCAT |  | TATATATG |  | TGTGTGTG | 252 |
| 484 | TCCTCATC | TAGTGGAA |  | CATACGTA |  | GATGATAA |  | AAAGGGAA |  | ACGAAGAC |  |
| 485 | GCGTAGCG | CCCTTTTT |  | GTATTTAC |  | TCCTCATC | 484 | TTGGCGTT |  | TTTTTCAC |  |
| 486 | CGGCTCCC | AGCTCTTT |  | TGTCATCG |  | AAGGAAAA |  | TTAGAAGA |  | TCATCTAA |  |
| 487 | ATCCCCGC | GAAGCTGT |  | GTATATTC |  | AGATTCCA |  | AGTCATCT |  | CAGCCCTA |  |
| 488 | GGTTAGGG | ACCCGGAT |  | AGATTCCA |  | TGTACATA |  | TACGTATA |  | CATATATA |  |
| 489 | GGGGACAG | AATGAAAA |  | CCTAAACG |  | CAAAACAA |  | TTTACTTT |  | GTCATCGA |  |
| 490 | CACACGCA | CAGCCGCT | 478 | CGCTACCA | 179 | TACGTACG |  | GATCTCGC | 73 | CACAATAC |  |
| 491 | GATTCCAT | TTCTTCTT |  | CCATTTTG |  | TCTCATCT |  | GGGGGGAG | 42 | TTATTTTA |  |
| 492 | CGCCCGCG | GACGCGCC | 41 | CTAGTATT |  | CTACCATC | 319 | ATTGTGTA |  | TAAGTTAT |  |
| 493 | GCAGGAGC | GGTTACCC |  | AGTATATT |  | GGCTAAGC | 119 | GGTTAAGG | 271 | TTCATTTT |  |
| 494 | ACGTGAGC | GCCAAGAA |  | CTTTCTTT |  | TTACTATT |  | TGTGTGTG | 252 | TAATTAAT |  |
| 495 | GCGGCTAT | TCTCCAAC |  | GAGGATTC | 178 | GTGTATGT |  | TATCTATA |  | TATAAAAG |  |
| 496 | GGACCCCA | AGCAGCAG |  | GCCGCCCA | 61 | GCTAAGCG | 125 | CTCGGATC | 46 | AGTCATCT |  |
| 497 | CCCCGCCC | CTTCGAGA |  | TTGCAGAT |  | ACACATAT |  | ACTATCAT |  | GTTATGAG |  |
| 498 | GCGGCGAC | ACCCGGCG |  | CTCGGCGG | 21 | TTTCATTT |  | AATATTTA |  | ATCTGCTC |  |
| 499 | CCCCGGTT | TTCTCGAG |  | TCTGTATA |  | GTATTTAC |  | AGAGGAAG |  | CTTTATCA |  |
| 500 | TGGATTCC | TGCGGCAC |  | GGAATGAG | 197 | ATCTGCTC |  | TTATCAAC |  | TAGTTTTG |  |
| AvgGC% | 68.4 | 40.2 |  | 33.7 |  | 35.4 |  | 35.6 |  | 37.4 |  |
| Percentage of common k-mers |  | 42.6 |  | 33.4 |  | 35.4 |  | 36.0 |  | 38.0 |  |