

Effect of odor-treatment biofilter on bioaerosols from an indoor wastewater treatment plant

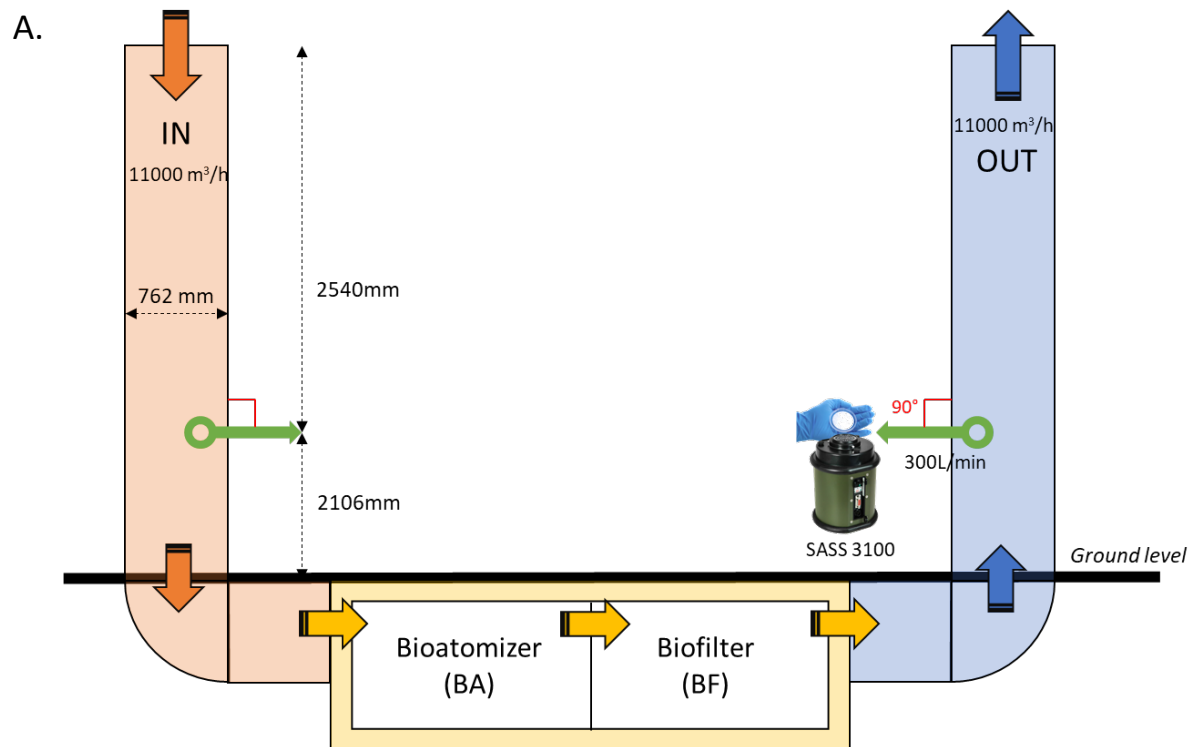
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Supplemental Material

Figure S1: Detailed schematic of the air sampling before and after the biofilter

Table S1: Sequence of primers and probes used for targeted 16S, ARGs and MGEs

Table S2. Plasmid sequence used for qPCR detection of targeted ARGs and MGEs



B.



Figure S1. Detailed schematic of the air sampling before and after the biofilter (A) and sampler connection to the air channel (B)

Table S1. Sequence of primers and probes used for targeted 16S, ARGs and MGEs

Target gene	Gene ID (Stedtfeld et al. 2018)	Sequence of primers and probes
16S rRNA	16S rRNA	Forward: GAC ARC CAT GCA SCA CCT G Reverse: GGT AGT CYA YGC MST AAA CG Probe: FAM/TKC GCG TTG/ZEN/CDT CGA ATT AAW CCA C/3IABkFQ
aac(6')-II	aac(6')-II (8)	Forward : CGACCCGACTCCGAACAA Reverse: GCACGAATCCTGCCTTCTCA
aac(6')-Ib	aac(6')-Ib (95)	Forward: CGTCGCCGAGCAACTTG Reverse: CCGTACCTTGCCCTCTCAAACC
aac(3)	aac(3)-iid_iii_iif_iaa_iae (410)	Forward: CGATGGTCGCGGTTGGTC Reverse: TCGGCGTAGTGCAATGCG
blaCMY2	blaCMY2 (108)	Forward: AAAGCCTCATGGGTGCATAAA Reverse: ATAGCTTTTGTTCGCCAGCATCA
blaGES	blaGES (120)	Forward: GCAATGTGCTCAACGTTCAAG Reverse: GTGCCTGAGTCAATTCTTTCAAAG
blaVEB	blaVEB (38)	Forward: CCCGATGCAAAGCGTTATG Reverse: GAAAGATTCCCTTTATCTATCTCAGACAA
blaTEM	blaTEM (164)	Forward: AGCATCTTACGGATGGCATGA Reverse: TCCTCCGATCGTTGTCAGAAAGT
blaVIM	blaVIM (147)	Forward: GCACTTCTCGCGGAGATTG Reverse: CGACGGTGATGCGTACGTT
blaIMP	blaIMP (324)	Forward: GGAATAGAGTGGCTTAATTC Reverse: GGTTAACAAAACAACCACC
blaMOX	blaMOX (34)	Forward: CTATGTCAATGTGCCGAAGCA Reverse: GGCTTGTCCTCTTTCGAATAGC
blaSHVII	blaSHVII (1110)	Forward: TTGACCGCTGGGAAACGG Reverse: TCCGGTCTTATCGGCGATAAAC
blaOXA	blaOXA (1506)	Forward: CGCAATTATCGGCCTAGAAACT Reverse: TTGGCTTTCCGTCCCATTT
blaCTX-M-1	blaCTX-M-1 (Pas dans l'article)	Forward: CGG GCR ATG GCG CAR AC Reverse: TGC RCC GGT SGT ATT GCC Probe: FAM/CCA RCG GGC/ZEN/GCA GYT GGT GAC/3IABkFQ
ermB	ermB (804)	Forward: GAACACTAGGGTTGTTCTTGCA Reverse: CTGGAACATCTGTGGTATGGC
ermF	ermF (23)	Forward: CAGCTTTGGTTGAACATTTACGAA Reverse: AAATTCCTAAAATCACAACCGACAA
ermT	ermT (137)	Forward: GTTCACTAGCACTATTTTAAATGACAGAAGT Reverse: GAAGGGTGTCTTTTAAATACAATTAACGA
ermX	ermX (209)	Forward: GCTCAGTGGTCCCCATGGT Reverse: ATCCCCCGTCAACGTT
erm35	erm35 (815)	Forward: CCTTCAGTCAGAACCGGCAA Reverse: GCTGATTGACAGTTGGTGGTG
tet32	tet32 (54)	Forward: CCATTACTTCGGACAACGGTAGA Reverse: CAATCTCTGTGAGGGCATTTAACA
tetA	tetA (180)	Forward: CTCACCAGCCTGACCTCGAT Reverse: CACGTTGTTATAGAAGCCGCATAG
tetL	tetL (195)	Forward: ATGGTTGTAGTTGCGCGCTATAT Reverse: ATCGCTGGACCGACTCCTT

tetO	tetO (192)	Forward: CAACATTAACGGAAAGTTTATTGTATACCA Reverse: TTGACGCTCCAAATTCATTGTATC
tetQ	tetQ (185)	Forward: CGCCTCAGAAAGTAAGTTCATACACTAAG Reverse: TCGTTCATGCGGATATTATCAGAAT
tetS	tetS (200)	Forward: TTAAGGACAAACTTTCTGACGACATC Reverse: TGTCTCCCATTGTTCTGGTTCA
tetW	tetW (191)	Forward: ATGAACATTCCCACCGTTATCTTT Reverse: ATATCGGCGGAGAGCTTATCC
tetX	tetX (196)	Forward: AAATTTGTTACCGACACGGAAGTT Reverse: CATAGCTGAAAAAATCCAGGACAGTT
tetM	tetM (1513)	Forward: GGAGCGATTACAGAATTAGGAAGC Reverse: TCCATATGTCCTGGCGTGTCT
vanA	vanA (1514)	Forward: GGGCTGTGAGGTCGGTTG Reverse: TTCAGTACAAATGCGGCCGTTA
vanB	vanB (211)	Forward: TTGTCGGCGAAGTGGATCA Reverse: AGCCTTTTTCCGGCTCGTT
vanRA	vanRA (216)	Forward: CCCTTACTCCCACCGAGTTTT Reverse: TTCGTCGCCCCATATCTCAT
vanSA	vanSA (218)	Forward: CGCGTCATGCTTTCAAAATTC Reverse: TCCGCAGAAAGCTCAATTTGTT
sul1	sul1 (363)	Forward: GCCGATGAGATCAGACGTATTG Reverse: CGCATAGCGCTGGGTTTC
sul2	sul2 (133)	Forward: TCATCTGCCAACTCGTCGTTA Reverse: GTCAAAGAACGCCGCAATGT
qnrB	qnrB (1202)	Forward: TCACCACCCGCACCTG Reverse: GGATATCTAAATCGCCCAGTCC
mcr-1	mcr-1 (pas dans l'article)	Forward: ATGGCACGGTCTATGATA Reverse: CGGATAATCCACCTTAACA Probe: FAM/CTA CAG ACC/ZEN/GAC CAA GCC GA/3IABkFQ/-3'
is26	is26 (1546)	Forward: ATGGATGAAACCTACGTGAAGGTC Reverse: CGGTACTTAATCTGTCGGTGTTCA
tnpA	tnpA (207)	Forward: AATTGATGCGGACGGCTTAA Reverse: TCACCAAACTGTTTATGGAGTCGTT
int1-A	int1-A (336)	Forward: CGAAGTCGAGGCATTTCTGTC Reverse: GCCTTCCAGAAAACCGAGGA

Stedtfeld, R.D., Guo, Xueping, Stedtfeld, Tiffany M., Sheng, Hongjie, Williams, Maggie R., Hauschild, Kristin, Gunturu, Santosh, Tift, Leo, Wang, Fang, Howe, Adina, Chai, Benli, Yin, Daqiang, Cole, James R., Tiedje, James M., Hashsham, Syed A., Primer set 2.0 for highly parallel qPCR array targeting antibiotic resistance genes and mobile genetic elements. FEMS Microbiology Ecology, 2018. 94(9)

Table S2. Plasmid sequence used for qPCR detection of targeted ARGs and MGEs

Gene	Plasmid sequence for qPCR detection
<i>16S rDNA</i>	AAATTGAAGAGTTTGATCATGGCTCAGATTGAACGCTGGCGGCAGGCCTAACACATGCA AGTCGAACGGTAACAGGAAGAAGCTTGCTCTTTGCTGACGAGTGGCGGACGGGTGAGTA ATGTCTGGGAAACTGCCTGATGGAGGGGGATAACTACTGGAAACGGTAGCTAATACCGC ATAACGTCGCAAGACCAAAGAGGGGGACCTTCGGGCCTCTTGCCATCGGATGTGCCAG ATGGGATTAGCTAGTAGGTGGGGTAACGGCTCACCTAGGCGACGATCCCTAGCTGGTCT GAGAGGATGACCAGCCACACTGGAACAGAGACACGGTCCAGACTCCTACGGGAGGCAG CAGTGGGGAATATTGCACAATGGGCGCAAGCCTGATGCAGCCATGCCGCGTGTATGAAG AAGGCCTTCGGGTGTAAAGTACTTTCAGCGGGGAGGAAGGGAGTAAAGTTAATACCTT TGCTCATTGACGTTACCCGCAGAAGAAGCACC GGCTAACTCCGTGCCAGCAGCCGCGGT AATACGGAGGGTGCAAGCGTTAATCGGAATTACTGGGCGTAAAGCGCACGCAGGCGGTT TGTTAAGTCAGATGTGAAATCCCCGGGCTCAACCTGGGAACTGCATCTGATACTGGCAA GCTTGAGTCTCGTAGAGGGGGGTAGAATTCAGGTGTAGCGGTGAAATGCGTAGAGATC TGGAGGAATACCGGTGGCGAAGGCGGCCCTTGACGAAGACTGACGCTCAGGTGCGA AAGCGTGGGGAGCAAACAGGATTAGATACCCTGGTAGTCCACGCCGTAAACGATGTCG ACTTGAGGTTGTGCCCTTGAGGCGTGGCTTCCGGAGCTAACGCGTTAAGTCGACCGCCT GGGGAGTACGGCCGCAAGGTTAAACTCAAATGAATTGACGGGGGCCCGCACAAAGCGG TGGAGCATGTGGTTTAATTCGATGCAACGCGAAGAACCTTACCTGGTCTTGACATCCACG GAAGTTTTAGAGATGAGAATGTGCCTTCGGGAACCGTGAGACAGGTGCTGCATGGCTG TCGTCAGCTCGTGTGTGAAATGTTGGGTAAAGTCCCGCAACGAGCGCAACCCCTATCCT TTGTTGCCAGCGGTCCGGCCGGGAACTCAAAGGAGACTGCCAGTGATAAACTGGAGGAA GGTGGGGATGACGTCAAGTCATCATGGCCCTTACGACCAGGGCTACACACGTGCTACAA TGGCGCATACAAAGAGAAGCGACCTCGCGAGAGCAAGCGGACCTCATAAAGTGCCTCG TAGTCCGATTGGAGTCTGCAACTCGACTCCATGAAGTCGGAATCGCTAGTAATCGTGGA TCAGAAATGCCACGGTGAATACGTTCCCGGGCCTGTACACACCGCCCGTCACACCATGG GAGTGGGTTGAAAAGAAGTAGGTAGCTTAACCTTCGGGAGGGCGCTTACCACCTTTGTG ATTCATGACTGGGGTGAAGTCGTAACAAGGTAACCGTAGGGGAACCTGCGGTTGGATCA CCTCCTTA
<i>aac(6')-II</i>	ATCTTCTCCCGCACGAATCCTGCCTTCTCATAGCAGCGTATGGCTCGATGGTTGTTCCGAG TCGGGTCCGTCTGAATCT
<i>aac(6')-Ib</i>	TTAGGCATCACTGCGTGTTTCGCTCGAATGCCTGGCGTGTTTGAACCATGTACACGGCTGG ACCATATGGGGTGGTTA
<i>aac(3)- iid_iii_iiif_ii a_iiie</i>	CTAACCTGAAGGCTCGAAGAGCGCTCGACGGCCTCGTGCGGAGGCACGATCGGAGTG GTTCCGAAATGCTTCTCAA GATAGGTGACGCCGAACGTCACGATGTCCTGCGCGTCGAACAGGTAGCACTGAGCAAA GCCCACGACACCTTCTCGAT GGCGACCGAGCTTACGTAAGCATTTGCTATAGTTTCAACCGCATCCGGCTTTCCTTCGAT AGCAAAGCAATCGAGAATG CCGTTTGAATCGTAATCCGATGCCGTTTTCCAGGCGACTTCACCGTCTCTTCCAAGCATCG GCATCTCATACGTCACCCAC CGTTTGTTGGGGATATCGGCAACCGCC
<i>bla_{CMY2}</i>	CCCCGAGTGAAAGCCTCATGGGTGCATAAAACGGGCTCCACTGGTGGATTTGGCAGCT ACGTAGCCTTCGTTCCAGAAAAA AACCTTGGCATCGTGATGCTGGCAAACAAAAGCTATCCTAACCCTG
<i>bla_{GES}</i>	GCAGCGTTTTGCAATGTGCTCAACGTTCAAGTTTCCGCTAGCCGCGCTGGTCTTTGAAAG AATTGACTCAGGCACCGAGCGGGGG
<i>bla_{VEB}</i>	ACTTCCATTTCCCGATGCAAAGCGTTATGAAATTTCCGATTGCTTTAGCCGTTTTGTCTGA GATAGATAAAGGGAATCTTTCTTTTGAACAA

<i>bla_{TEM}</i>	GTCACAGAAAAGCATCTTACGGATGGCATGACAGTAAGAGAATTATGCAGTGCTGCCAT AACCATGAGTGATAAACTGCTGCCAACTTAC TTCTGACAACGATCGGAGGACCGAAGGAGC
<i>bla_{VIM}</i>	ATGTTCAAACCTTTTGAGTAAGTTATTGGTCTATTTGACCGCTCTATCATGGCTATTGCGA GTCCGCTCGCTTTTCCGTAGATTCTAGCGGTG AGTATCCGACAGTCAGCGAAATTCCGGTCCGGGAGGTCCGGCTTTACCAGATTGCCGAT GGTGTTTGGTTCGCATATCGCAACGCAGTCGTTT GATGGCGCAGTCTACCCGTCCAATGGTCTCATTGTCCGTGATGGTGATGAGTTGCTTTTGA TTGATACAGCGTGGGGTGCGAAAAACACAGCG
<i>bla_{IMP}</i>	ATGAGCAAGTTATCTGTATTCTTTATATTTTTGTTTTGTAGCATTGCTACCGCAGCAGAGC CTTTGCCAGATTTAAAAAATTGAAAACTTGATGAA GGCGTTTATGTTCACTTCGTTTGAAGAAGTTAACGGGTGGGGCGTTTTTCCTAAACATG GTTTGGTTGTTCTTGTAGATGCTGAAGCTTATCT AATTGACACTCCATTTACGGCTAAAGATACTGAAAAGTTAGTCACTTGTTTTGTGGAACG TGGCTATAAAATAAAAGGCAGTATTTCCTCTCATTT TCATAGTGACAGCACGGGC
<i>bla_{MOX}</i>	ATGCAACAACGACAATCCATCCTGTGGGGCGCTCTGGCCACCCTGATGTGGGCCGGTCT GGCCCATGCAGGTGAGACTTCACCGGTCGATCCC CTGCGCCCCGTGGTGATGCCAGCATCCGGCCGCTGCTCAAGGAGCACAGGATCCCGGG CATGGCGGTGGCCGTGCTCAAGGATGGCAAGGC CCACTATTTCAACTACGGTGTGGCCGATCGGGAGCGCGCAGTCGGTGTGAGCGAGCAGA CCCTGTTGAGATAGGCTCCGTGAGCAAGCCCCT GACCGCGACCCTAGGAGCCTATGCGGTGGTCAAGGGAGCGATGCAACTGGATGACAAG GCGAGCCGGCACGCCCCCTGGCTCAAGGGATCCG CCTTTGACAGCATCACCATGGGGGAGCTGGCTACCTACAGCGCGGGCGGCTTGCCGCTG CAATTCCTCCGAGGAGGTGGATTGCTCGAGAAGA TGCAGGCCTACTACCGCCAGTGACCCCGAGCCTACTCGCCGGGTTCCTATCGCCAGTACT CTAACCCAGCATAGGGCTGTTGCGCCACCTGG CGGCGAGCAGCATGAAGCAGCCGTTTGCCAGTTGATGGAGCAGACGCTCCTGCCGGGG CTTGGCCTGCACCACAC
<i>bla_{SHVII}</i>	TTAGCGTTGCCAGTGCTCGATCAGCGCCGCGCCGATCCCGGCGATTTGCTGATTTGCTC GGCCATGCTCGCCGGCGTATCCCGCAGA TAAATCACCACAATGCGCTCTGCTTTGTTATTGCGGGCCAAGCAGGGCGACAATCCCGCGC GCACCCCGCTTGCTAGC-TCCGGTCTTATC GGCGATAAAC- CAGCCCGCCGGCAGCACGGAGCGGATCAACGGTCCGGCGACCCGATCGTCCACCATCC ACTGCAGCAGCTGCCGTTG CGAACGGGCGCTCAGACGCTGGCTGGTCAGCAGCTTGCGCAGGGTCGCGGCCATGCTGG CCGGGGTAGTGGTGTGCGGGGCGTCGC CGGGAAGCGCCTATTCAATTCCGTTTCCAGCGGTCAAGGCGGGTGACGTTGTGCGCCGA TCTGGCGCAAAAAGGCAGTCAATCCTGCG GGGCCGCCGACGGTGGCCAGCAGCAGATTGGCGGCGCTGTTATCGCTCATGGTAATGGC GGCGGCGCAGAGTTCGCCGACCGTCATGC CGTCGGCAAGGTGTTTTTCGCTGACCGGCGAGTAGTCCACCAGATCCTGCTGGCGATAGT GGATCTTTGCTCCAGCTGTTGCTACCGG CATCCACCCGCGCCAGCACTGCGCCGAGAGCACTACTTTAAAGGTGCTCATCATGGGA AAGCGTTCATCGGCGCGCCAGGCGGTGAGC GTGCGGCCGCTGGCCAGATCCATTTCTATCATGCCTACGCGGCCCGACAGCTGGCTTTG CTTTGTTTAATTTGCTCAAGCGGCTGCGGG CTGGCGTGTACCGCCAGCGGCAGGGTGGCTAACAGGGAGATAATACACAGGCGAATAT AACGCAT

<i>bla_{oxA}</i>	ATGAACATTAAAGCACTCTTACTTATAACAAGCGCTATTTTTATTTACAGCTGCTCACCTT ATATAGTGACTGCTAATCCAAATCACAGCGC TTCAAAATCTGATGTAAAAGCAGAGAAAATTAATAATTTATTTAACGAAGCACACACTA CGGGTGTTTTAGTTATCCAACAAGGCCAAACTC AACAAAGCTATGGTAATGATCTTGCTCGTGCTT
<i>bla_{CTX-M-1}</i>	TGCACCGGTGGTATTGCCTTTCATCCATGTCACCAGCTGCGCCCGTTGGCTGTCGCCCAAT GCTTTACCCAGCGTCAGATTCCGCAGAGT TTGCGCCATTGCCCG
<i>ermB</i>	ATGAACAAAAATATAAAATATTCTCAAAACTTTTTAACGAGTGAAAAAGTACTCAACCA AATAATAAAACAATTGAATTTAAAAGAAACCGATA CCGTTTACGAAATTGGAACAGGTAAAGGGCATTTAACGACGAAACTGGCTAAAATAAGT AAACAGGTAACGTCTATTGAATTAGACAGTCAT CTATTCAACTTATCGTCAGAAAAATTAATACTGAATACTCGTGTCATTTAATTCACCAA GATATTCTACAGTTTCAATTCCTAACAAACAGA GGTATAAAATTGTTGGGAATATTCCTTACCATTTAAGCACACAAATTATTAATAAAAGTGG TTTTTGAAAGCCATGCGTCTGACATCTATCTGA TTGTTGAAGAAGGATTCTACAAGCGTACCTTGGATATTCACC
<i>ermF</i>	TGAAAACGACACAGCTTTGGTTGAACATTTACGAAAATTATTTTCTGATGCCCCGAAATGT TCAAGTTGTCGGTTGTGATTTTAGGAATTTTGC AGTCCG
<i>ermT</i>	AATACAAATCGTTCAGTACTATTTTTAATGACAGAAGTTGATATATCCATATTAAGT AAAATCCCTAGAGAATACTTTCATCCAAAACCTAG AGTTAATAGCTCGTTAATTGTATTAAAAAGACACCCTTCAAAAATATCA
<i>ermX</i>	GATGATGACGGCTCAGTGGTCCCCATGGTTCACATTTACCTGGGTCTCGGGTACCAAG GTCTGCTTTCCGGCCACAGCCAAACGTTGACG GGGGGATCTTAGTGATC
<i>erm35</i>	GAATTCAGTATTCACCTGTAAGAAGTAAATAATGACAAAAAAGAAATTGCCCGTTTCGT TTTACGGGTCAGCACTTTACTATTGACAAAGTGCTT ATTAAAGATGCAATAAAAGAATCAAATATAAATCAACACGATACAGTTTTAGATATTGG AGCTGGTAAGGGTTTTCTAACTGTTTCATCTCTTAAAA AATGTCGATAAAAGTTATTGCCATTGAAAACGATGTTGCATTAAGTCAACATTTGCGCAAA AAATTCATTACGCTCAAAACGTTCAAGTGGTTAG TTGTGATTATAGAAATTTTGTGGTTCCGAAAGTTCCATTTAAAGTAGTTTCAAATATTCT TTTGGTATTACATCTGATATTTTGTAGTCTGATG TTTGAAAATGTCGAATATTTTCTATGCGGTTCAATTAT
<i>tet32</i>	TAATCCCATGCCATTACTTCGGACAACGGTAGAGCCGCAAAAGCCGGAGCAAAGGGAA GCCCTGTAAATGCCCTCACAGAGATTGCTGATACAGA
<i>tetA</i>	ACTGGCGGCGCTCACCAGCCTGACCTCGATCGTCGGACCCCTCCTCTCACGGCGATCTA TGCGGCTTCTATAACAACGTGGAACGGGTGG
<i>tetL</i>	AGCACTCGTAATGGTTGTAGTTGCGCGCTATATTCCAAAGGAAAATAGGGGTAAAGCAT TTGGTCTTATTGGATCGATAGTACCATGGGAGAA GGAGTCGGTCCAGCGATTGGTGGAATG
<i>tetO</i>	GCAGGAAAGACAACATTAACGGAAAGTTTATTGTATACCAGTGGTGCAATTGCAGAACT AGGGAGCGTAGATGAAGGCACAACAAGGACAGAT ACAATGAATTTGGAGCGTCAAAGGGGAATCA
<i>tetQ</i>	GTAAAGACTACGCCTCAGAAGTAAGTTCATACACTAAGGGCTTAGGCGTTTTATGGTCA AGCCATGCGGGTATCAAATAACAAAAGGCGATTA TTCTGATAATATCCGCATGAACGAAAAAGATAAA
<i>tetS</i>	TATCAAGATATTAAGGACAACTTTCTGACGACATCATAATTAAGCAGACTGTGAATCTA AATTTGAAACCTTATGTAATAGATTATACTGAACCA GAACAATGGGAGACAGTAATTGTGG

<i>tetW</i>	CCCTGCGGAAAATGAACATTCCCACCGTTATCTTTATCAACAAGATCGACCAGGTTGGCG TTGATTTGCAGGGCGTGTATCAGTCTGTTCCGG ATAAGCTCTCCGCCGATATTATCATCAAG
<i>tetX</i>	GTTTCCATTGCATAGCTGAAAAAATCCAGGACAGTTTATCTCTGGTTGATGAATATCGGC TTGTATATTGAAAGTACCTGTTTCTTCAACTTCCG TGTCGGTAACAAATTTTCTTACCTTG
<i>tetM</i>	ATGGAGGAAAATCACATGAAAATTATTAATATTGGAGTTTATAGCTCATGTTGATGCGGGA AAAACCTACCTTAACAGAAAGCTTATTATATAACAGT
<i>vanA</i>	TCACCCCTTTAACGCTAATACGATCAAGCGGTCAATCAGTTCGGGAAGTGCAATACCTGC AGCGGCCATCATACGGGGATAACGACTGTATGA CGTGAAACCGGGCAGAGTATTGACTTCG
<i>vanB</i>	GATGATTTGATTGTCGGCGAAGTGGATCAAATCCGGTTGAGCCACGGTATCTTCCGCATC CATCAGGAAAACGAGCCGGAAAAAGGCTCAGAGAATGC
<i>vanRA</i>	TGCTGAAATATTTCGTCGCCCCATATCTCATGAAATAGCAGCTCGGAGCTAACCACATTCC CCTTGTTTTACAGAGGATTTCGCAGTATTGAAAAAC TCGGTGGGAGTAAGGGATAACTGCTT
<i>vanSA</i>	TATTCTATGTCGCGTCATGCTTTCAAATTCGAAAATACTTTGACGAGATAAATACCGG CATTGATGTACTTATTCAGAACGAAGATAAACAAA TTGAGCTTCTGCGGAAATGGATGTT
<i>sul1</i>	ATGGTGACGGTGTTTCGGCATTCTGAATCTCACCGAGGACTCCTTCTTCGATGAGAGCCGG CGGCTAGACCCCGCCGGCGCTGTCACCGCG GCGATCGAAATGCTGCGAGTCGGATCAGACGTCGTGGATGTCGGACCGGCCGCCAGCCA TCCGGACGCGAGGCCTGTATCGCCG
<i>sul2</i>	ATGAATAAATCGCTCATCATTTTTCGGCATCGTCAACATAACCTCGGACAGTTTCTCCGAT GGAGGCCGGTATCTGGCGCCAGACGCAGCC ATTGCGCAGGCGCGTAAGCTGATGGCCGAGGGGGCAGATGTGATCGACCTCGGTCCGGC ATCCAGCAATCCCGACGCGCGCCTGTTT CGTCCGACACAGAAATCGCGCGTATCGCGCCGGTGCTGGACGCGCTCAAGGCAGATGGC ATTCCCGTCTCGCTCGACAGTTATCAACCC GCGACGCAAGCCTATGCCTTGTCGCGTGGTGTGGCCTATCTCAATGATATTTCGCGGTTTTTC CAGACGCTGCGTTCTATCCGCAATTGGCGAAA
<i>qnrB</i>	TTAACCCATGACAGCGATACCAAGACGTTCCAGGAGCAACGATGCCTGGTAGCTGTCCA GTTTGACGCCTTGCAAATCAACCCCGC
<i>mcr-1</i>	ATGGCACGGTCTATGATACGACCATGCTCCAAAATGCCCTACAGACCGACCAAGCCGAG ACCAAGGATCTATTAAACGCAGCGTTATCA TGCGTATCATTGGTTTGGGTGTGCTACCAAGTTTGCTTGTGGCTTTTGTTAAGGTGGATTAT CCG
<i>is26</i>	TTACATTTCAAAAACCTCTGCTTACCAGGCGCATTTCGCCCAGGGGATCACCATAATAAAA TGCTGAGGCCTGGCCTTTGCGTAGTG CACGCATCACCTCAATACCTTTGATGGTGGCGTAAGCCGTCTTCATGGATTAAATCCCA GCGTGGCGCCGATTATCCGTTTCAGT TTGCCATGATCGCATTCAATCACGTTGTTT
<i>tnpA</i>	TTTATCGTGCAATTGATGCGGACGGCTTAACCTTAGATATCTGGTTACGAAAGAAATGGG ATACGCAAGCAGCCTATGCTTTCTTAA AACGACTCCATAAACAGTTTGGTGAGCCGAAAGCA
<i>int1-A</i>	ATGAAAACCGCCACTGCGCCGTTACCACCGCTGCGTTCGGTCAAGGTTCTGGACCAGTTG CGTGAGCGCATACGCTACTTGCAATT ACAGCTTACGAACCGAACAGGCTTATGTCCACTGGGTTCGTGCCTTCATCCGTTTCCACG GTGTGCGTCACCCGGCAACCTTGGGCAGCAG