Table S1. Primer sequences of *LacZ* gene

Gene	Primer Forward[a] 5′-3′ (*LacZ*-F)	Primer Reverse[a] 5′-3′ (*LacZ*-R)	Amplicon length
LacZ	GGATCTGCCATTGT CAGACATG	CTGTTGACTGTAGCG GCTGATG	142 bp

[a]Primers reported by Foulds et al. [30]

Table S2. Viability test of biofilter functionalized with *Mo*Se.

Samples	PMA (10 μL)	
Control	-	+
R1	-	+
R2	-	+
CDBS	-	+
CLBS	-	+

Absence of PMA (−), presence of PMA (+), granulated cork biofilter not functionalized with *Mo*Se (Control), functionalized biofilter replicates (R1 and R2), CDBS (Control of dead bacteria in suspension solution) and CLBS (Control of live bacteria in suspension solution).

Table S3. Effect of the biofiltration system on *E. coli* at the initial time zero h using qPCR with and without PMA

Samples	copies/ml	Log (copies/mL)	CT
CP	1.19×10^7	7.08	21.84
CP	1.32×10^7	7.12	21.79
CPF	4.82×10^7	7.68	21.08
CPF	8.87×10^8	8.95	19.51
R1P	2.90×10^6	6.46	23.61
R1P	5.42×10^6	6.73	23.27
R1PF	8.61×10^6	6.94	22.03
R1SF	2.10×10^7	7.32	21.53
R2P	3.00×10^6	6.48	22.59
R2P	3.90×10^6	6.59	22.44
R2PF	1.47×10^7	7.17	21.73
R2PF	1.58×10^7	7.20	21.69
CDBP	5.10×10^1	1.71	33.56
CDBP	2.4×10^1	1.38	33.95
CDBF	3.77×10^6	6.58	23.47
CDBF	1.26×10^7	7.10	21.81
CLBP	4.44×10^6	6.65	23.38
CLBP	4.03×10^7	7.61	21.18
CLBF	4.80×10^7	7.68	21.06
CLBF	8.86×10^8	8.95	19.5

Biofilter control without *f*-cork with PMA (CP), Biofilter control without *f-cork* and without PMA (CPF), Replicate of biofilter with *f*-Cork and PMA (R1P), Replicate of biofilter with *f*-Cork and without PMA (R1PF), Control of dead bacteria with PMA (CDBP), Control of dead bacteria without PMA (CDBF), Control of live bacteria with PMA (CLBP), Control of live bacteria without PMA (CLBF), cycle threshold value (CT).

Table S4. Effect of the biofiltration system on *E. coli* in the final time 6 h using qPCR with and without PMA.

Samples	copies/ml	Log (copies/mL)	CT
CP	3.65×10^5	5.56	25.02
CP	1.40×10^5	6.15	23.87
CPF	7.33×10^7	7.86	21.66
CPF	1.70×10^7	7.23	21.15
R1P	7.04×10^2	2.85	31.81
R1P	1.31×10^2	3.12	31.55
R1PF	2.12×10^3	3.32	29.76
R1SF	1.43×10^3	3.16	29.14
R2P	1.13×10^2	2.05	30.72
R2P	2.46×10^2	2.39	31.96
R2PF	6.25×10^3	3.79	29.24
R2PF	3.73×10^3	3.57	29.42
CDBP	1.06×10^2	5.02	25.08
CDBP	1.98×10^2	5.30	25.62
CDBF	1.16×10^8	8.06	19.58
CDBF	1.24×10^8	8.09	19.11
CLBP	7.42×10^6	6.87	23.53
CLBP	3.48×10^6	6.54	23.84
CLBF	7.69×10^7	7.89	21.86
CLBF	7.62×10^7	7.88	21.88

Biofilter control without *f*-cork with PMA (CP), Biofilter control without *f-cork* and without PMA (CPF), Replicate of biofilter with *f*-Cork and PMA (R1P), Replicate of biofilter with *f*-Cork and without PMA (R1PF), Control of dead bacteria with PMA (CDBP), Control of dead bacteria without PMA (CDBF), Control of live bacteria with PMA (CLBP), Control of live bacteria without PMA (CLBF), cycle threshold value (CT).

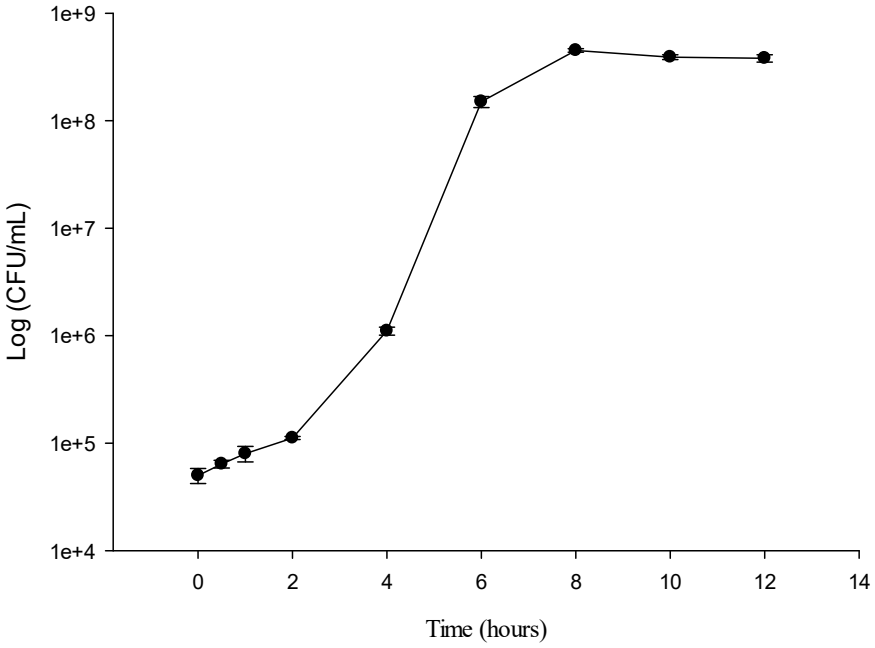

Figure S1. Growth kinetic of *E. coli* strain NBRC 102203 as Log CFU/mL.

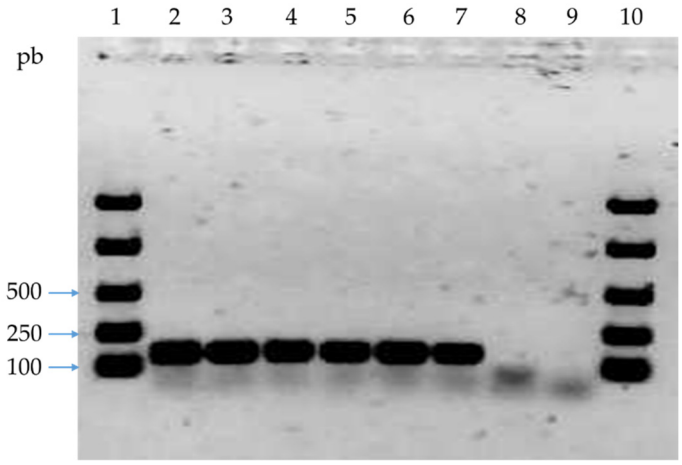

Figure S2. Electrophoresis of the amplification from *LacZ* gene. Lane 1 and 10: DNA molecular size marker (EasyLadder™, Meridian Bioscience™); lane 2: positive control; lanes 3 to 7: PCR product with *LacZ* gene (142 bp) from *E. coli* NBRC 102203; lanes 8 and 9: negative control.

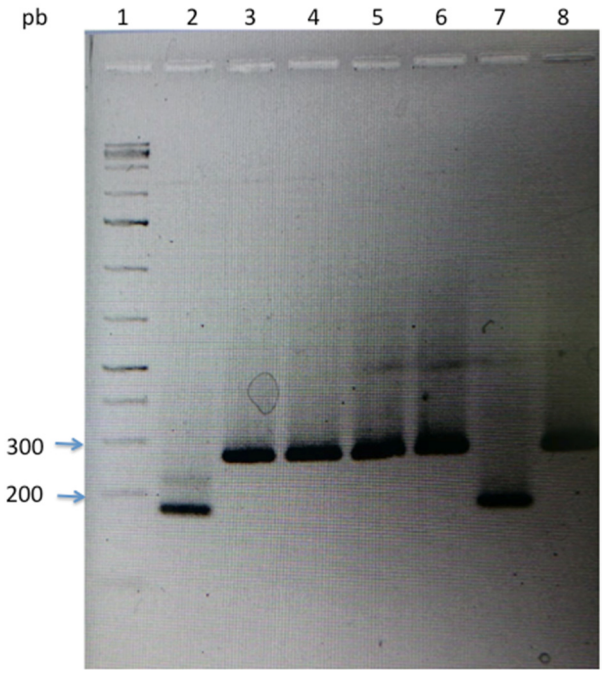

Figure S3. Electrophoretic analysis of the PCR products obtained by "Colony PCR" to detect the candidate clones carrying out the construct *LacZ*/pJET1.2. Lane 1: DNA molecular size marker (GeneRuler 1 kb plus, Thermo Fisher Scientific), lanes 2 and 7: PCR product without *LacZ* gene (120 bp), lanes 3,4,5,6 and 8: PCR product containing the *LacZ* gene plus a fragment from pJET1.2/blunt vector (262 bp).