Electronic Supplementary Material (ESI) for Environmental Science: Processes & Impacts.

The influence of carbon sources on the expression of the *recA* gene and genotoxicity detection by an *Acinetobacter* bioreporter

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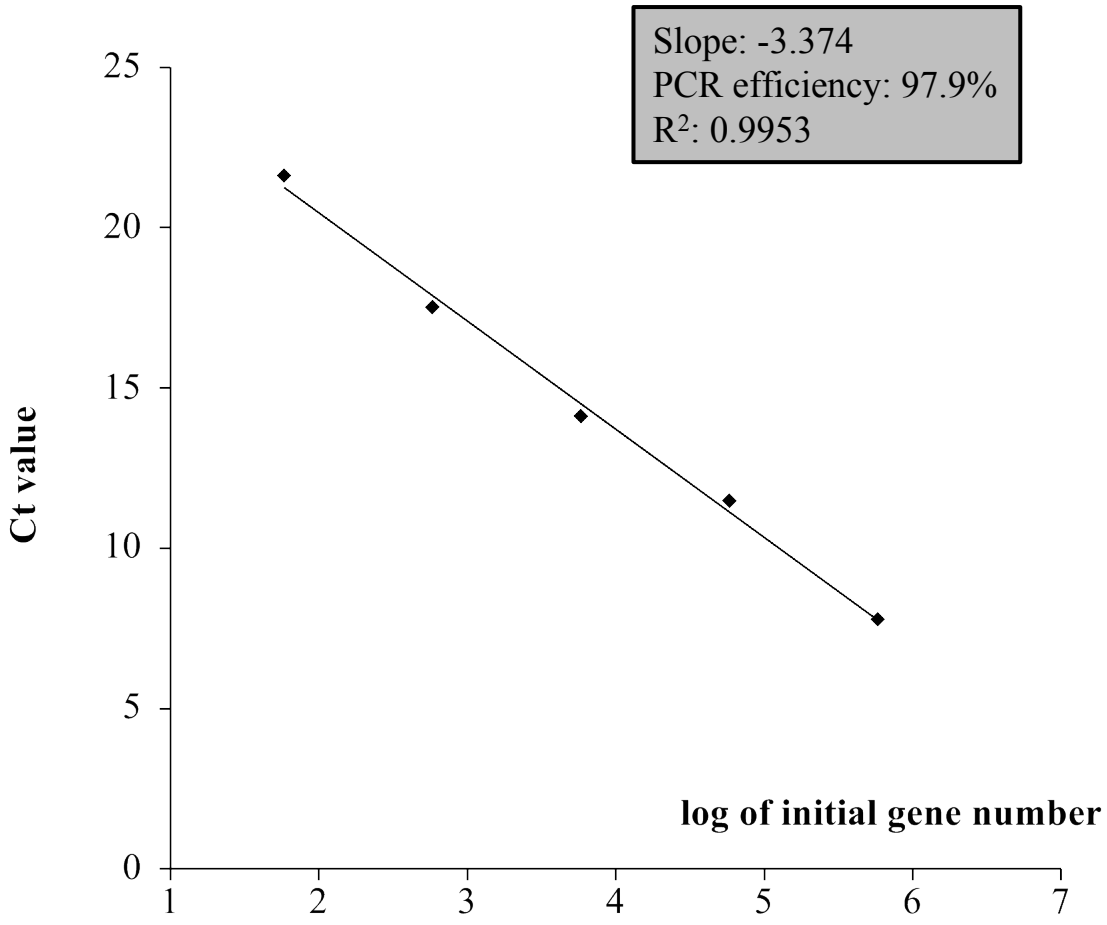
(A)


Slope: -3.374
PCR efficiency: 97.9%
R2: 0.9953
Ct value
log of initial gene number
25
20
15
10
5
0
1
2
3
4
5
6
7

(B)

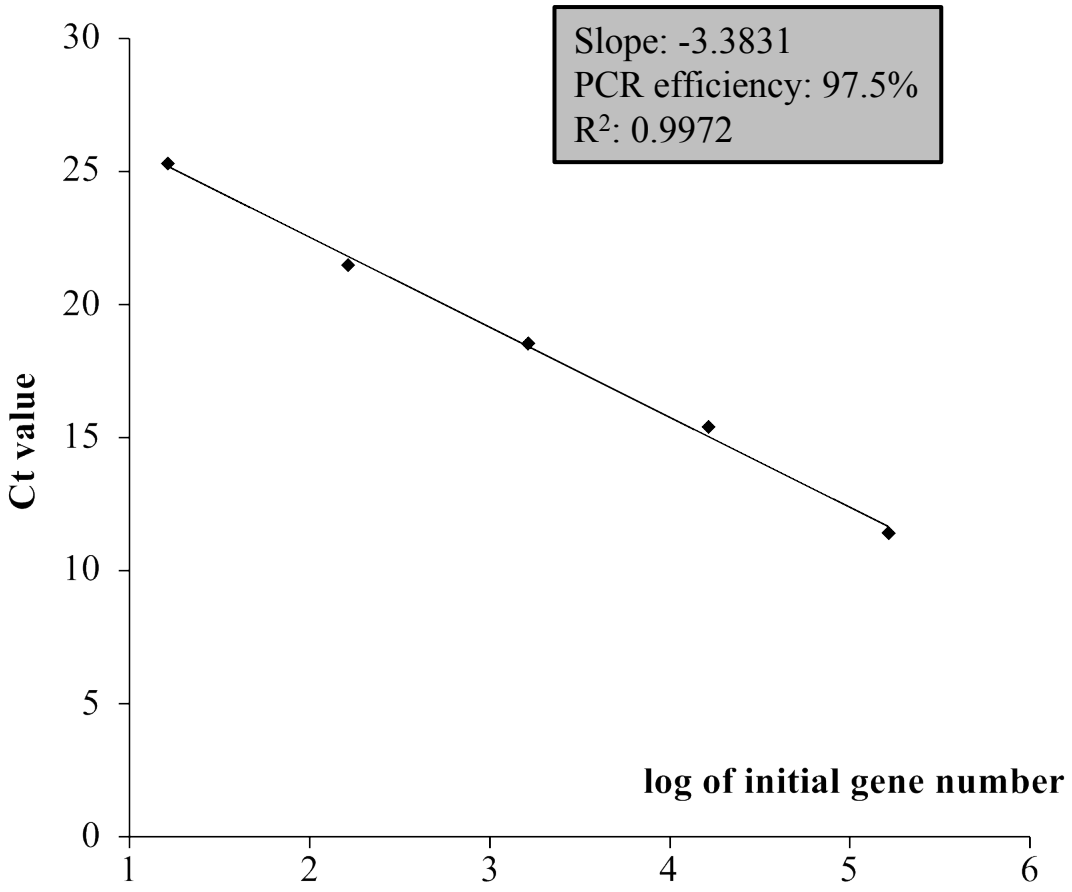


Figure S1. Calibration curve using 16S rRNA (A) and *recA* (B) as template. Error bars were the standard derivations of all replicates.

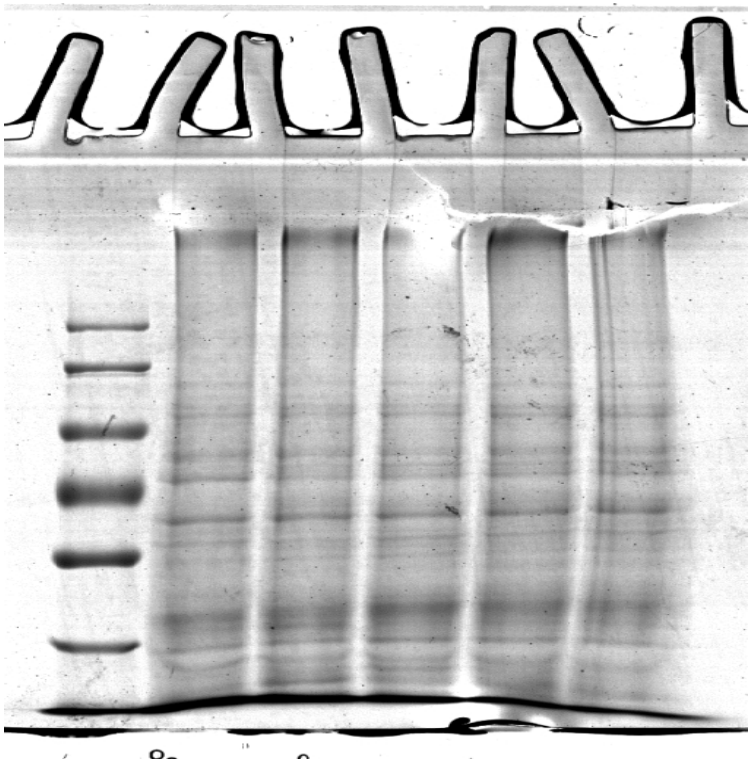
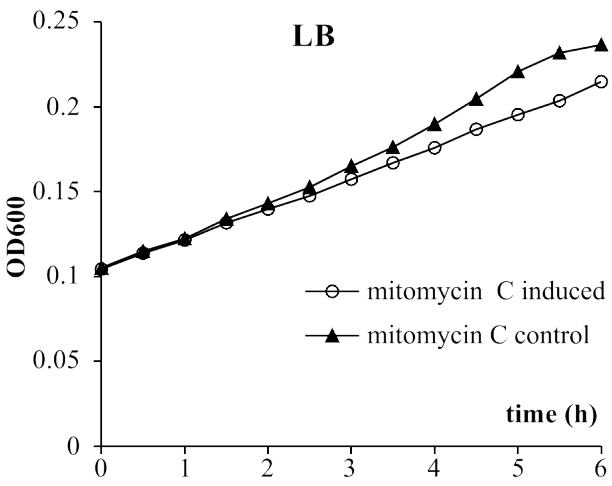
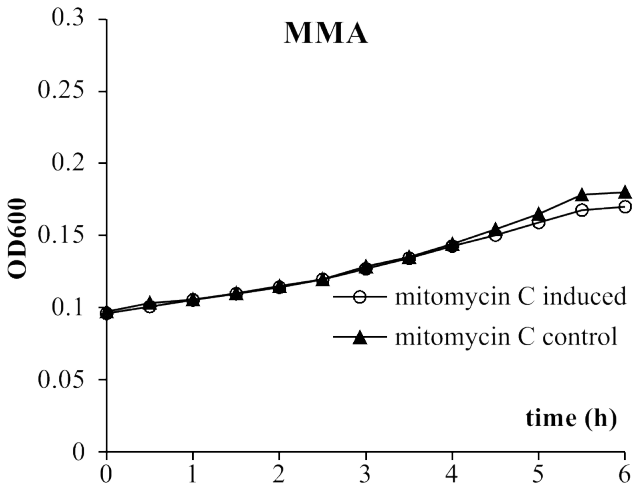
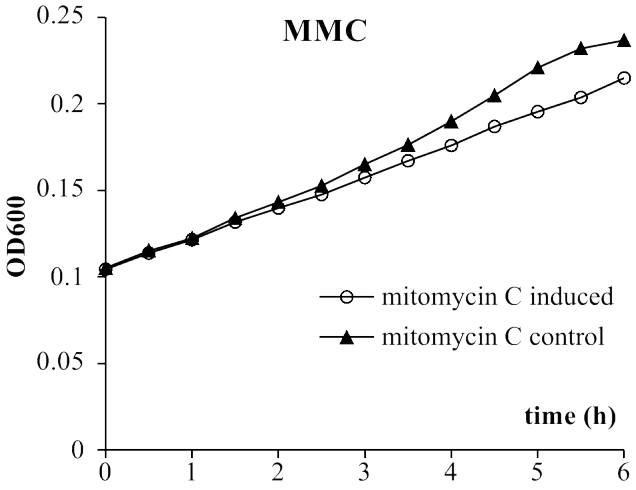


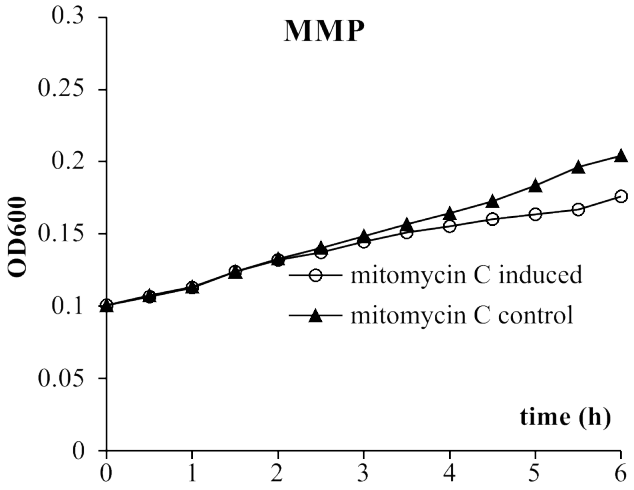
Figure S2. SDS-PAGE gel image of proteins extracted after bioreporters exposed (3 h) to mitomycin C in different carbon sources. Samples from left to right were marker, LB, MMA, MMC, MMP and MMS, respectively.

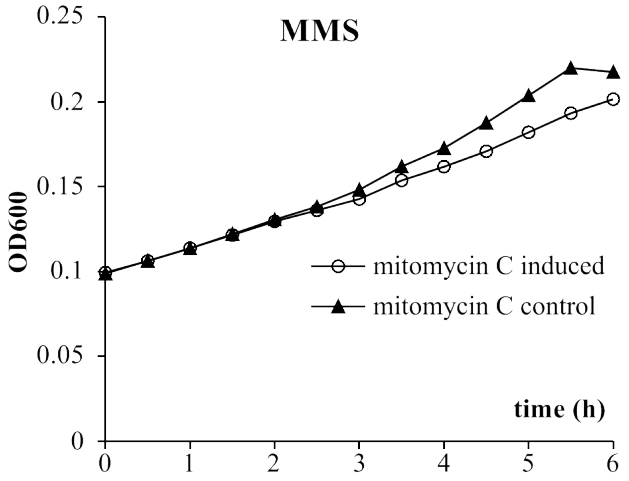
(A)


LB
OD600
time (h)
mitomycin C induced
mitomycin C control

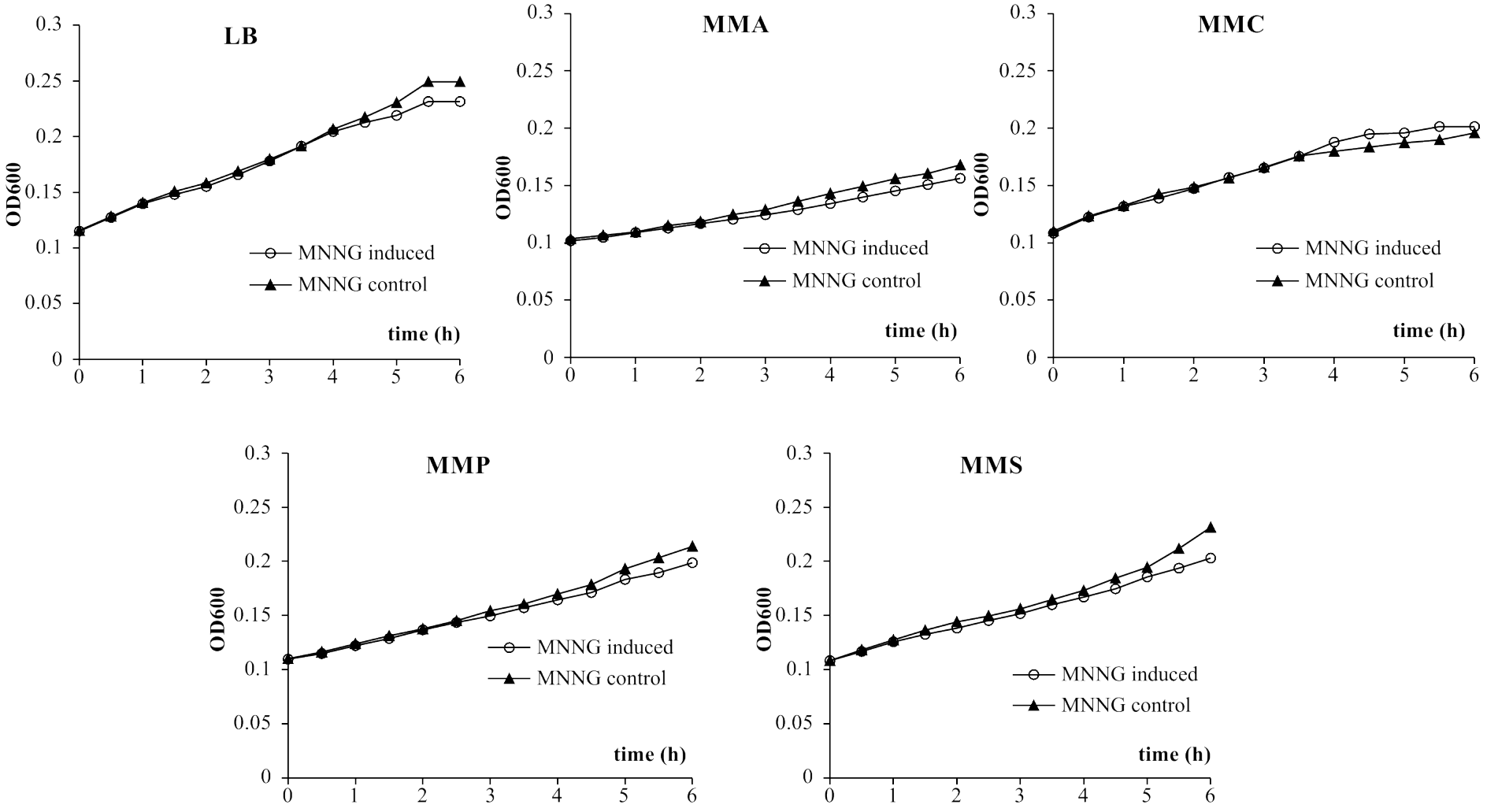

MMA
OD600
time (h)
mitomycin C induced
mitomycin C control


MMC
OD600
time (h)
mitomycin C induced
mitomycin C control


MMP
OD600
time (h)
mitomycin C induced
mitomycin C control


MMS
OD600
time (h)
mitomycin C induced
mitomycin C control

(B)


LB
MMA
MMC
MMP
MMS
OD600
time (h)
MNNG induced
MNNG control
0
0.05
0.1
0.15
0.2
0.25
0.3
0
1
2
3
4
5
6

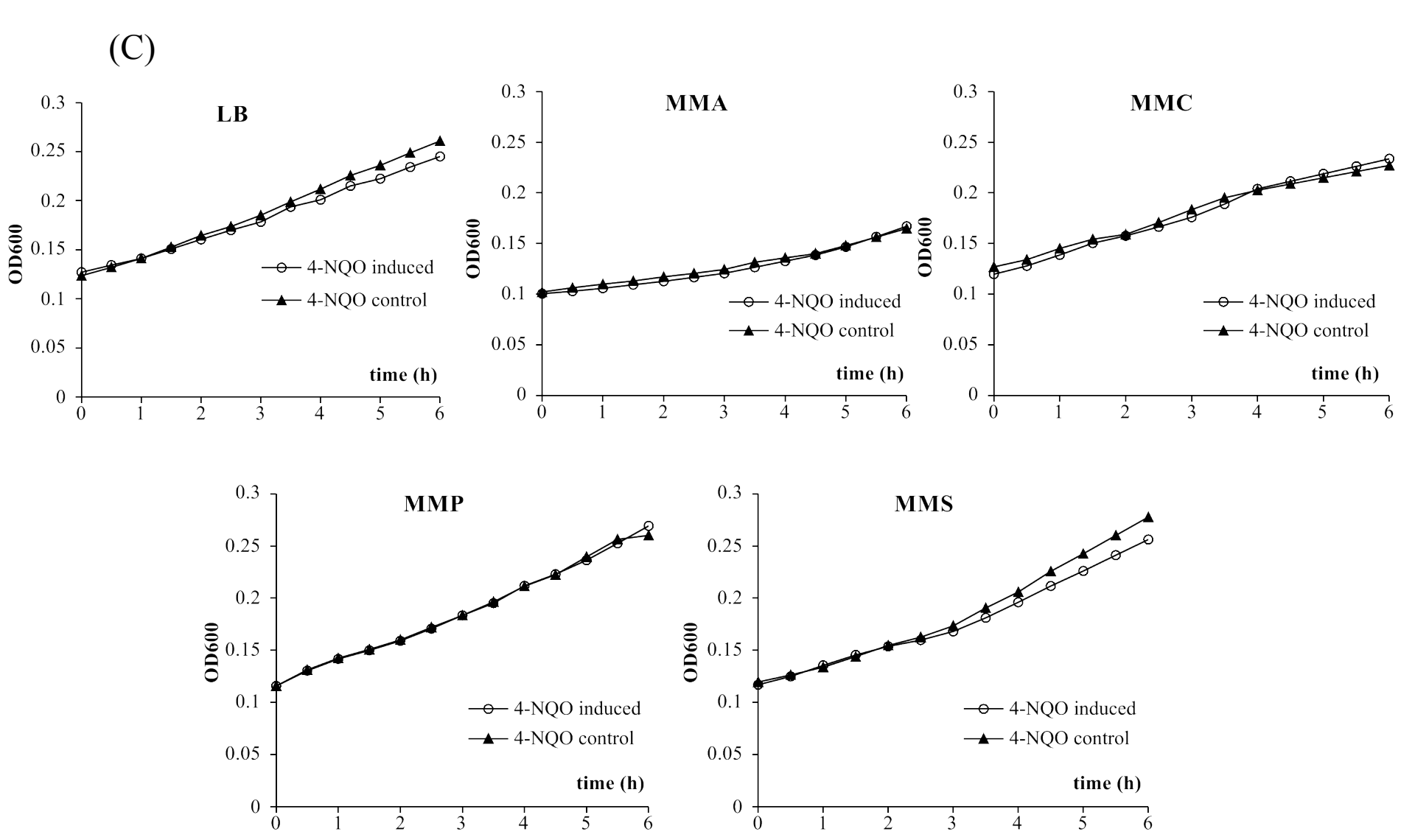


Figure S3. The time curve of OD_{600} values of the ADP1 genotoxicity bioreporter in the five carbon sources under different genotoxins treatments-(A) mitomycin C (0.6 μM), (B) MNNG (6.8 μM), and (C) 4-NQO (5.3 μM). Error bars were the standard derivations of all replicates.

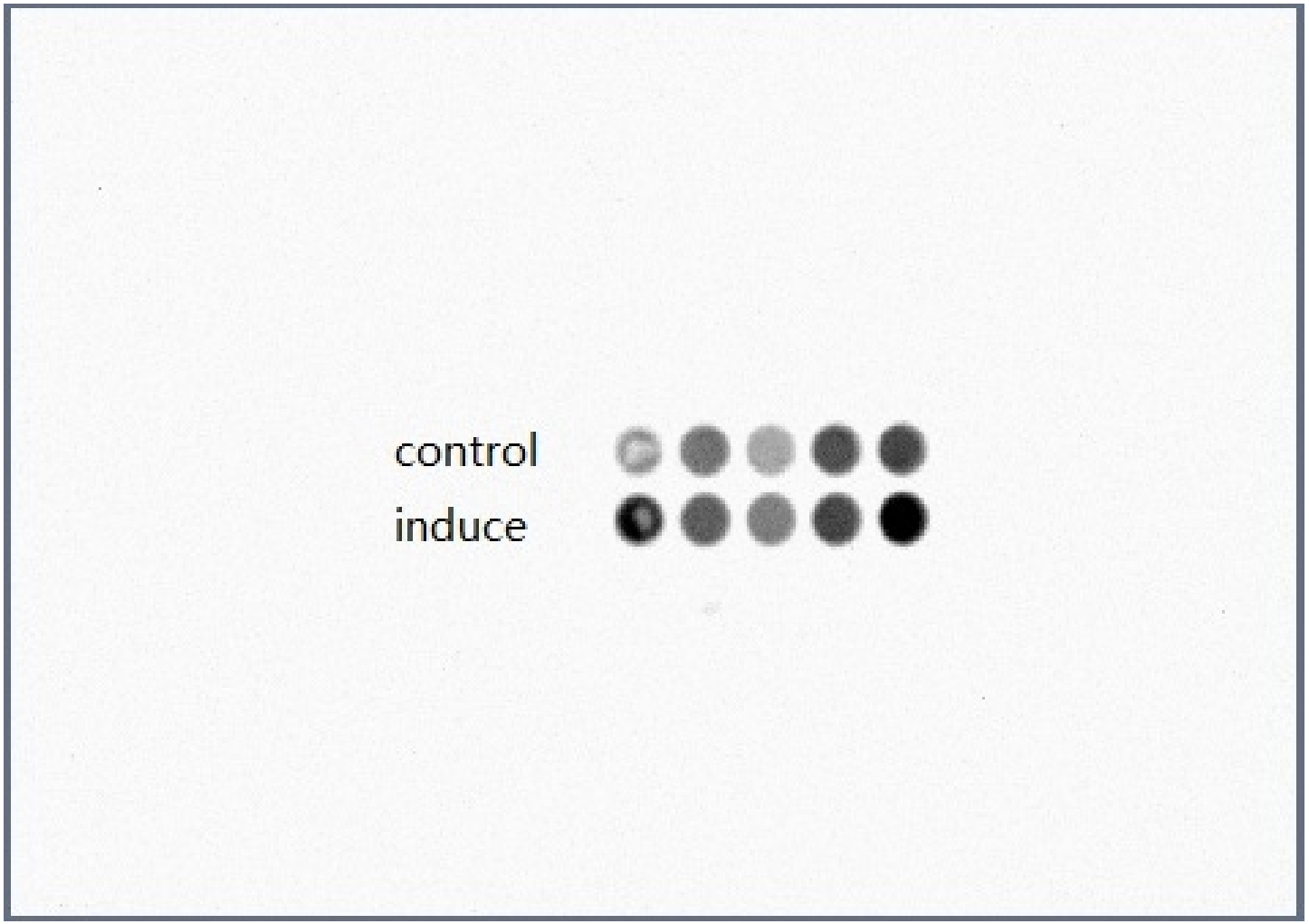


Figure S4. The visualized bioluminescence taken by Versa Doc (Biorad) of induced (1 μM of mitomycin C) and negative control samples, in which the carbon source from left to right was LB, MMA, MMC, MMP and MMS..