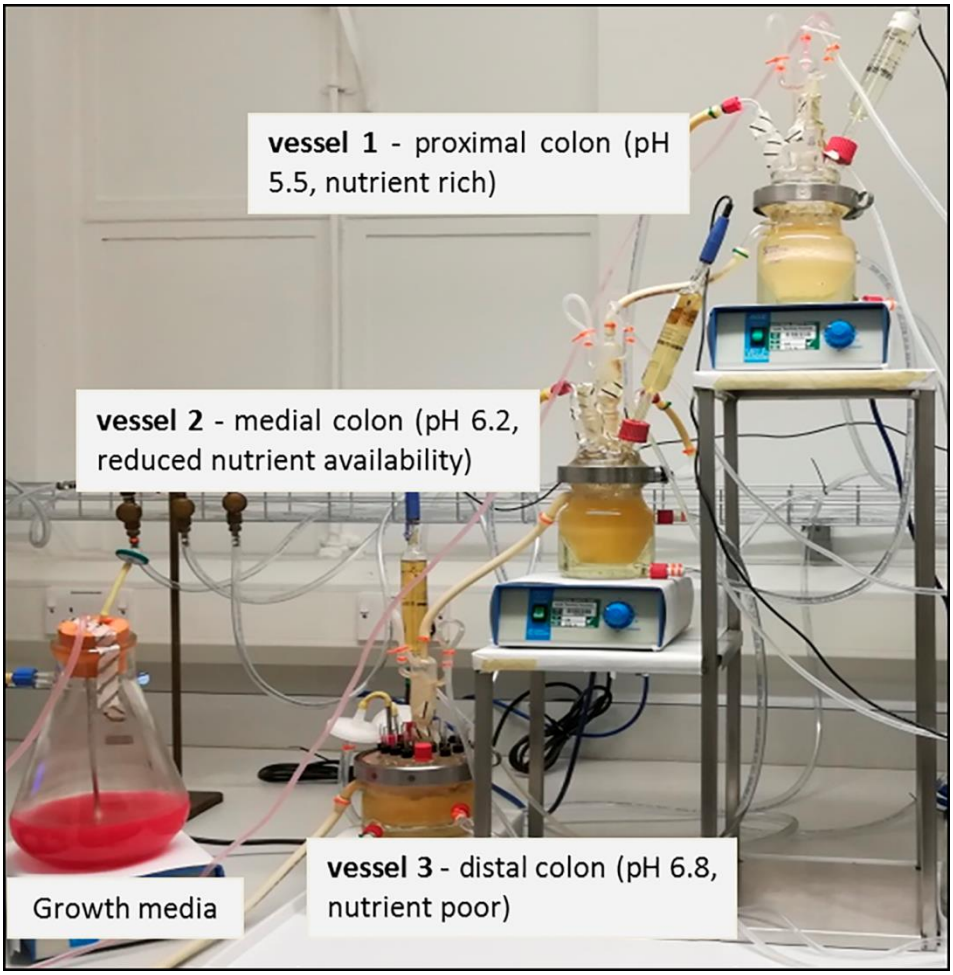
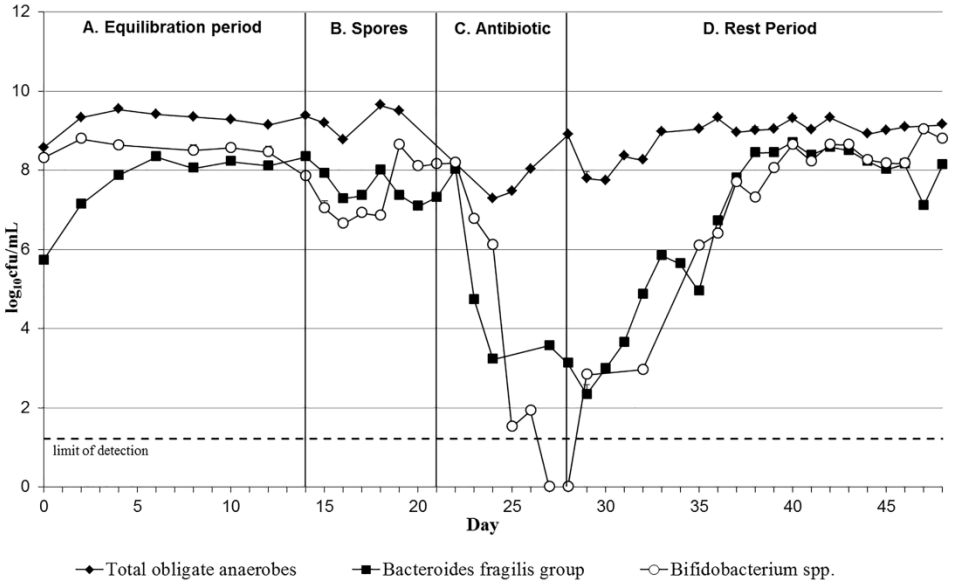
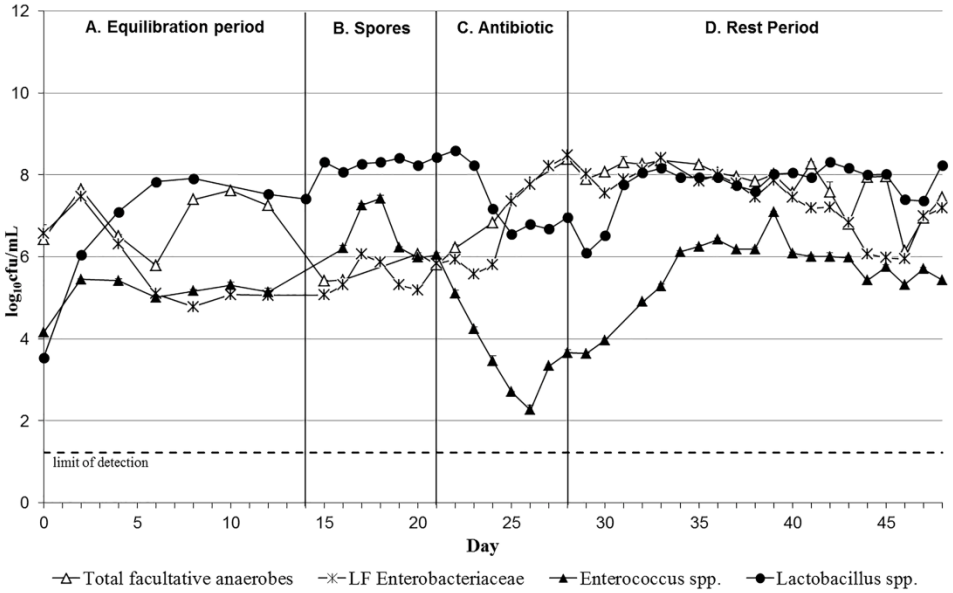


FIG S1 Representation of the triple stage *in vitro* gut model.

(a)


A. Equilibration period
B. Spores
C. Antibiotic
D. Rest Period
log10cfu/mL
limit of detection
Day
Total obligate anaerobes
Bacteroides fragilis group
Bifidobacterium spp.

(b)


A. Equilibration period
B. Spores
C. Antibiotic
D. Rest Period
log10cfu/mL
limit of detection
Day
Total facultative anaerobes
LF Enterobacteriaceae
Enterococcus spp.
Lactobacillus spp.

(c)

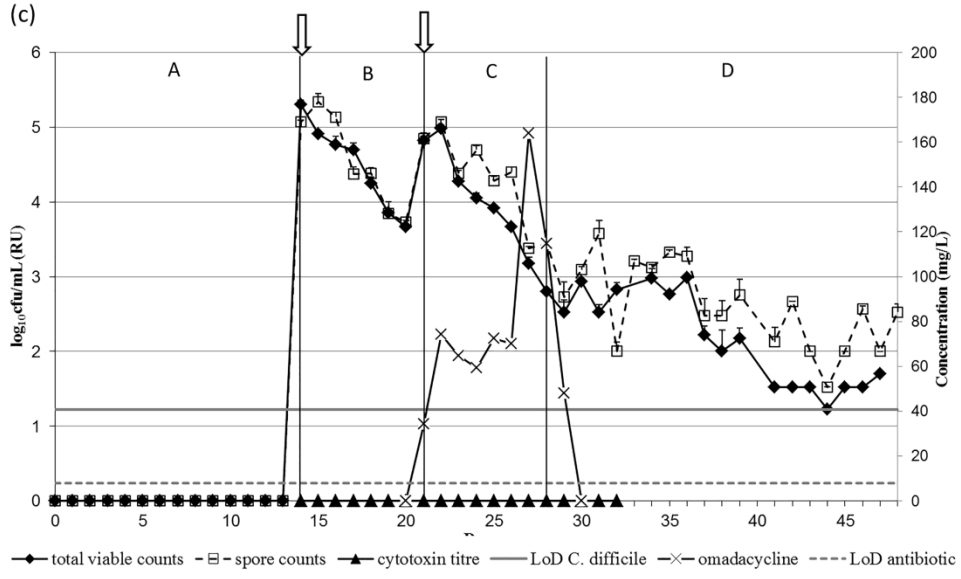

A
B
C
D
log10cfu/mL (RU)
Concentration (mg/L)
total viable counts
spore counts
cytotoxin titre
LoD C. difficile
omadacycline
LoD antibiotic

FIG S2 Mean (a) obligate anaerobic gut microbiota populations (log_{10} cfu/mL) including standard error bars, (b) facultative anaerobic gut microbiota populations (log_{10} cfu/mL), (c) *C. difficile* total viable counts and spore counts (log_{10} cfu/mL), cytotoxin titres (relative units, RU) and antimicrobial concentration (mg/L), in vessel 3 of model OMC. Vertical arrows mark the addition of *C. difficile* spores to the model, horizontal arrow marks the period of antibiotic instillation. LF *Enterobacteriaceae*, lactose-fermenting *Enterobacteriaceae*; LoD, limit of detection.

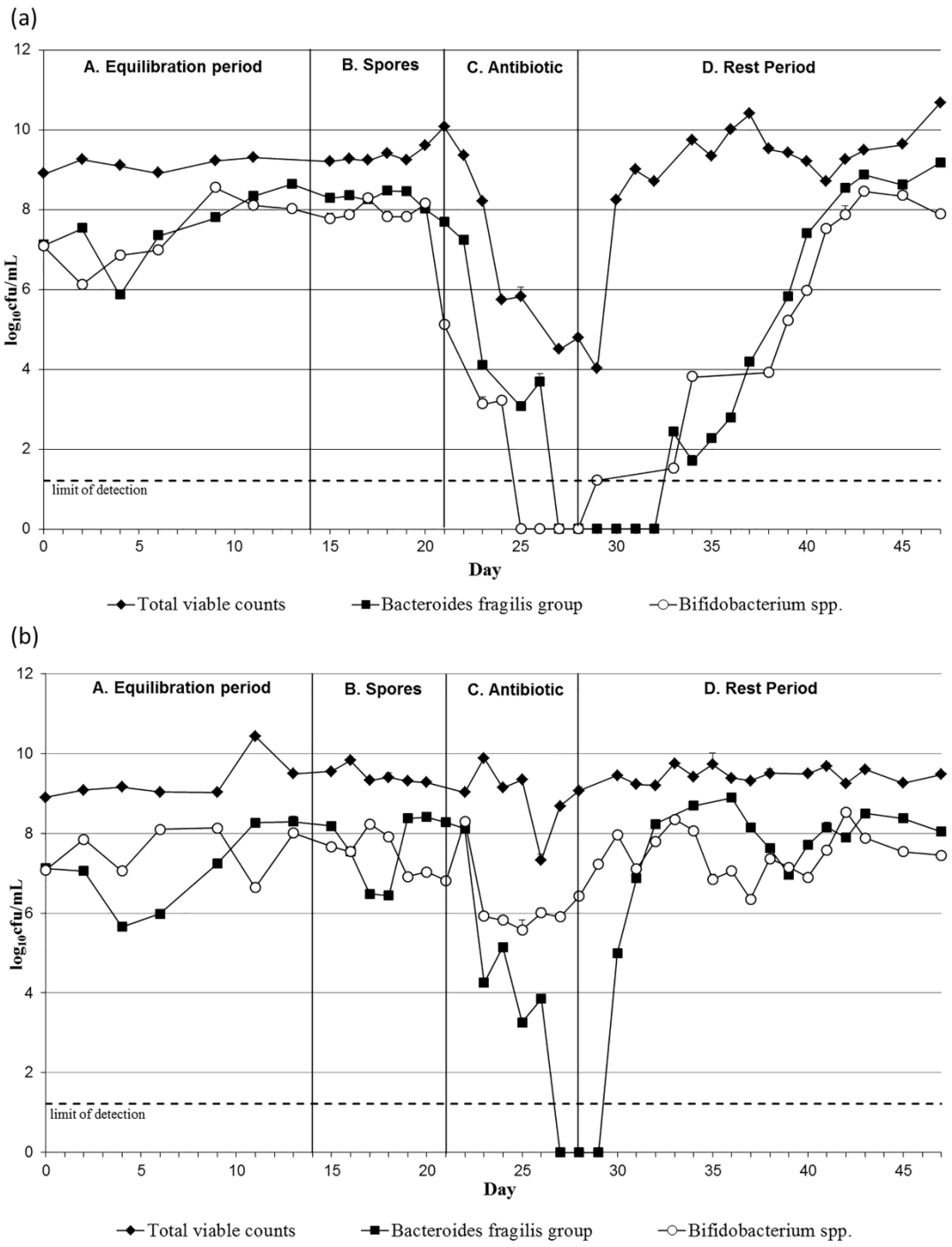


FIG S3 Mean obligate anaerobic gut microbiota populations (log_{10} cfu/mL) including standard error bars, in vessel 3 of (a) model OMC1 (omadacycline dosing), (b) model MOX (moxifloxacin dosing).

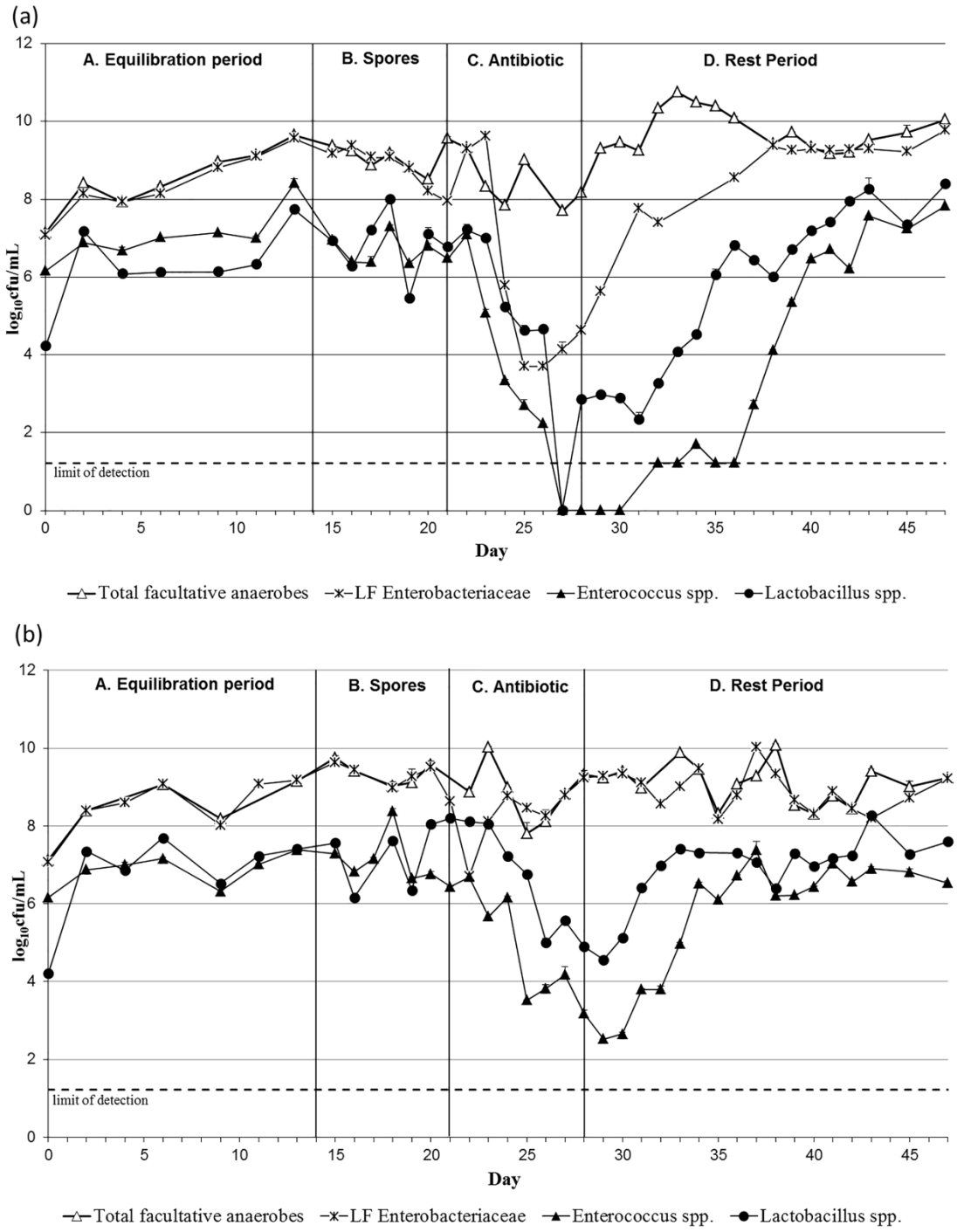


FIG S4 Mean facultative anaerobic gut microbiota populations (log_{10} cfu/mL) including standard error bars, in vessel 3 of (a) model OMC1 (omadacycline dosing), (b) model MOX (moxifloxacin dosing). LF *Enterobacteriaceae*, lactose-fermenting *Enterobacteriaceae*.

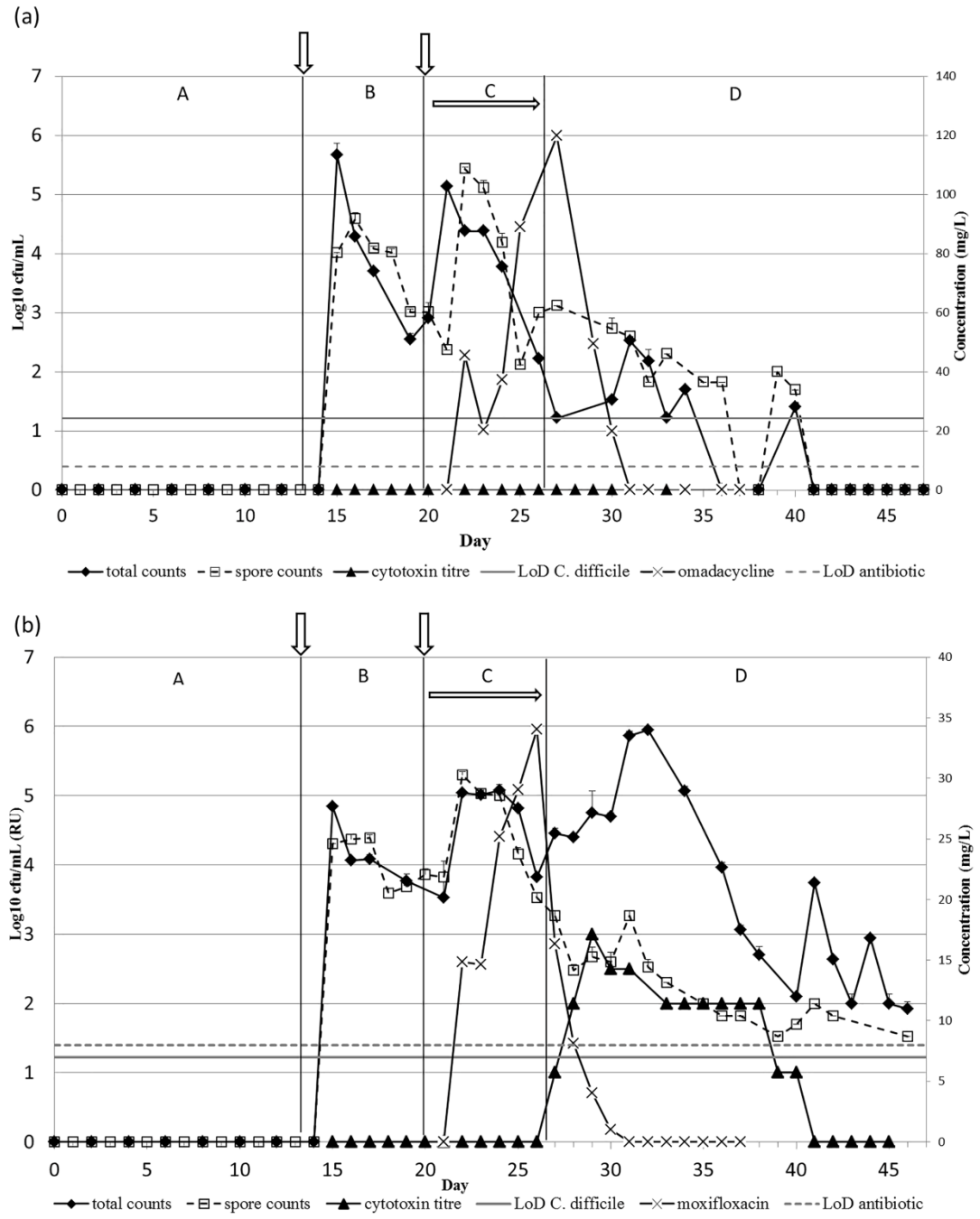


FIG S5 Mean *C. difficile* total viable counts and spore counts (log_{10} cfu/mL), cytotoxin titres (relative units, RU) and antimicrobial concentration (mg/L) in vessel 2 of (a) model OMC1 (omadacycline dosing), (b) model MOX (moxifloxacin dosing). Periods A–D are defined in Figure 5. Vertical arrows mark the addition of *C. difficile* spores to the model, horizontal arrow marks the period of antibiotic instillation. LoD, limit of detection.