



Application Note

The contact plate method using MC-Media Pad

MC-Media Pad, ready-to-use dry medium, can be applied to contact plate method for monitoring of surface microorganisms since it has unique sheet construction of the medium. In case of this, MC-Media Pad needs to be added 1mL of sterilized diluent (e.g. phosphate buffered saline) before 30 min. of use, and is cultured according to instruction.

The evaluation of contact plate method for monitoring of surface microorganisms using MC-Media Pad is described in this application note.

How to evaluation

Ten μ L of bacterial suspension of *Pseudomonas aeruginosa* NBRC 12689, *Bacillus subtilis* NBRC 3134, and *Staphylococcus aureus* NBRC 100910 was spotted on stainless steel (SUS430) board, and dried by air.

One mL of sterile phosphate buffered saline was added onto MC-Media Pad ACplus (for total viable count) to rehydrate medium before 30 min. of use. MC-Media Pad ACplus was contacted on spiked stainless steel board for 10 sec. and was then rotated 30°. After close upper film, MC-Media Pad was cultured for 48h at 35°C. The contact agar plate was used for the reference method. After contact on spiked stainless steel board for 10 sec. according to its insert, it cultured for 48h at 35°C. After cultured, grown colonies on both methods were counted.

Results

The evaluation of contact plate method for monitoring of surface microorganisms using MC-Media Pad was conducted in 15 places for each bacteria. As shown in below table, the means \pm standard deviation (SD) of *P. aeruginosa* recovered from MC-Media Pad ACplus and contact agar plate were 8.47 ± 7.39 cfu/plate and 1.67 ± 2.09 cfu/plate, respectively. For *B. subtilis*, the means \pm standard deviation (SD) of recovered numbers from MC-Media Pad ACplus and contact agar plate were 165.40 ± 21.17 cfu/plate and 90.20 ± 19.60 cfu/plate, respectively. For *S. aureus*, the means \pm standard deviation (SD) of recovered numbers from MC-Media Pad ACplus and contact agar plate

were 75.93 ± 21.28 cfu/plate and 62.40 ± 10.60 cfu/plate, respectively.

These results show that recovered numbers obtained from MC-Media Pad was higher than those of contact agar plate. However, it is important to rotate 30° with press since MC-Media Pad had less recovery without rotate.

These results demonstrated that contact plate method using MC-Media Pad has higher recovery than that of contact agar plate, and are a useful alternative for monitoring of surface microorganisms since it can be used for not only flat surface but also rounded surface.

Table : Recovery of surface bacteria from stainless steel board (SUS430)

<i>P. aeruginosa</i>	No. of samples	Mean	Standard deviation
MC-Media Pad	15	8.47	7.39
Contact agar plate	15	1.67	2.09

<i>B. subtilis</i>	No. of samples	Mean	Standard deviation
MC-Media Pad	15	165.40	21.17
Contact agar plate	15	90.20	19.60

<i>S. aureus</i>	No. of samples	Mean	Standard deviation
MC-Media Pad	15	75.93	21.28
Contact agar plate	15	62.40	10.60