Counteracting Sanitizer Interference in Microbiology

A question that has faced Microbiologists since the science began is “what precisely is the true count”. Selective media either inhibit other microbial species or enhance growing conditions for specific species and usually it’s a bit of both. Modern media have included dyes or chromogenic media to enhance selection. But in either instance the actual counts are rarely close to the real counts. But at least the counts you get on test 1, test 2, test 3… will be “relative”.

A second concern is that if you swab and then plate later (your own lab or an outside lab) microbes present will grow or die off in transit. Counts will always be truer if you can test immediately. Residual chemicals (sanitizers) on test swabs or picked up by contact plates can seriously decrease counts even further through inhibition.

To complicate matters, most media give at best between 10-50% recovery of the target species (with no interference). Even generic media do not give 100% recovery. One problem has been that while swabbing a surface we are not just recovering bacteria but also residual chemicals and with COVID19, sanitizers are being used every where. These sanitizers if not neutralized will inhibit the microbes on the test agar leading to further reduction or even false negative results.
If you have been trying to compare your inhouse results to reference labs or even contact plates to swabs in house you can easily see why your results are so variable and not agreeing the way you expect?

Traditionally when doing swabs or sponges microbiologists have used a range of neutralizing buffers to help resolve this chemical inhibition and it is proven method. But with modern methods we have seen faster methods developed that were not always better. Film based agars or traditional dipslides do not have neutralizers and therefore when applied direct to surfaces that have chemicals or sanitizers on them the results can be low or false negatives.

The good news is that we finally have a line of Microbial Dipslides that are made with Neutralizers included in the agar to help give true counts. These allow for immediate testing (no transit growth or die off), they neutralize the sanitizers (decreasing false negatives) and finally allow for faster and less costly test results because you can begin incubation immediately. Because dipslides are incubated in sealed tubes you can read them through the clear walls without opening. This then reduces cross contamination or exposure to potential pathogens. With film-based methods you must peel back the cover risking aerosols containing pathogens.
Call us today for more details on the range of microbial displides now available.
See:
PLATE COUNT AGAR/MACCONKEY 3 AGAR DIPSLIDE WITH NEUTRALIZER
PLATE COUNT AGAR WITH TTC/MACCONKEY 3 AGAR DIPSLIDE WITH NEUTRALIZER
PLATE COUNT AGAR WITH TTC/NEUTRALIZERS DIPSLIDE
BAIRD PARKER AGAR/VRBG AGAR DIPSLIDE + NEUTRALIZER
Or contact us for other options.

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